



**MAGNETICAL AND METEOROLOGICAL OBSERVATIONS.**



*Presented by direction of the British Government,*

*to*

OBSERVATIONS

MADE AT THE

MAGNETICAL AND METEOROLOGICAL  
OBSERVATORY

AT

TORONTO IN CANADA.

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## INTRODUCTION.

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THE importance of obtaining a correct knowledge of the elementary facts of terrestrial magnetism, for the purpose of supplying a foundation whereon the advancement of that science on inductive principles may be based, has of late years been strongly and extensively felt.

The geographical determination of the direction and intensity of the magnetic forces at different points of the earth's surface has been regarded as a worthy object of especial research, in journeys and voyages undertaken to remote parts of the globe, by continental philosophers of great eminence—by men, as Humboldt, Hansteen, and Erman, whose names are among the most distinguished in the age in which we live, for devoted and successful cultivation of the sciences most intimately connected with the physical history of our planet. In our own country the example thus set has been, at least zealously, followed by officers of Her Majesty's naval and military services, who, in the interval of a long peace, have given a portion of their time to such pursuits; and recently the large and liberal aid which the British Government has extended in the equipment of maritime expeditions, and in the promotion of magnetic surveys in parts of the earth which are beyond the reach of individual enterprise, gives a reasonable prospect that, with such assistance and such encouragement, maps of the magnetic elements, corresponding to the present epoch, and based on observations extended to almost every accessible portion of the globe, will shortly be completed.

But valuable as are the researches which lead to such a result, they accomplish but one part of the determinations required for magnetic theory. The *periodical variations* of the magnetic direction and force, and their comparison with meteorological variations also of a periodical character,—and those *secular changes* which, with slow but systematic progression, alter the whole aspect of the magnetic phenomena on the surface of the globe from one century to the next, and which, in their nature, are not improbably intimately connected with the causes of the magnetism of the globe itself,—present subjects of scientific inquiry not less important in the view of those who, by the inductive process, would seek to ascend to general laws and to the discovery of physical causes.

But for investigations of this class a laborious and sustained system of observation is indispensable; and establishments are required possessing an observing staff whose attention



shall not be divided by other pursuits or other avocations. The absolute values of the magnetic elements,—*viz.*, of the Declination, the Inclination, and the Intensity of the Force,—and their periodical and secular variations, together with their mutual relations and dependencies, constitute the proper objects of research in a FIXED MAGNETIC OBSERVATORY. To these must also be added, as a distinct but connected branch, an investigation into the nature and laws of magnetic disturbances,—of those occasional and apparently irregular perturbations by which the magnetic elements have been found to be affected. These phenomena have attracted an extraordinary degree of interest since the rediscovery, in the present century, of their contemporaneous occurrence over large portions of the earth's surface;\* and sanguine expectations have been entertained, that co-operative and simultaneous observation in different parts of the globe would lead to a knowledge of their cause, and that by their means we might possibly be conducted to a knowledge of the physical nature of the more stable forces engaged in the phenomena of terrestrial magnetism. For this branch of the inquiry, also, systematic observation is manifestly required, conducted on principles of uniformity in respect to times of observation and to instrumental means, and extended particularly to those localities where the agency of the disturbing causes is most largely developed. In France and Russia, Germany and Italy, public establishments were formed for the purpose of aiding in the accomplishment of these objects; but, as yet, the part which Britain had taken was limited to the partial and desultory exertions of individual zeal, when, in 1836, the attention of British philosophers was specifically drawn,—by a letter from the Baron Alexander von Humboldt to His Royal Highness the Duke of Sussex, President of the Royal Society,—to the claims which magnetic science must be considered to have on a nation possessing such extensive dominions in all parts of the globe, and such unrivalled means of contributing to the advancement of the physical sciences, by the formation of suitable establishments in the localities in which researches might best be carried on.

The respect and consideration with which the Baron von Humboldt's letter was received in all parts of the United Kingdom, bear unquestionable testimony to the judgment of the illustrious individual by whom this appeal was adventured.

In the spring of 1837, the University of Dublin, at the instance of Dr. Lloyd, at that period Professor of Natural Philosophy in the University, voted the necessary funds for the establishment of an Observatory, in which all the researches connected with the sciences of terrestrial magnetism and meteorology might be systematically conducted; and, in the summer of the same year, on a representation to Government

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\* The first discovery of this remarkable fact appears to have been made on the 5th of April 1741, by the contemporaneous and preconcerted observations of Celsius at Upsala, and Graham in London. (Hansteen *Magnetismus der Erde*, page 412, *et seq.*) Its rediscovery in the present century is due to a series of corresponding observations undertaken by Arago in Paris, and Kupffer in Kasan, in the years 1825 and 1826.

from the Board of Visitors of the Royal Observatory at Greenwich, a site was allotted for a Magnetic Observatory, to be placed under the general superintendence of the Astronomer Royal, and the building was commenced in the following year.\*

From an early period of the meetings of the British Association for the Advancement of Science, the interests of terrestrial magnetism had received no inconsiderable share of the attention and exertions of its members. In the year 1834, a magnetic survey of the British Islands was commenced, and carried through in the two following years, by the joint labours of five of its members. This work, which though it did not require the aid of public funds, being gratuitously performed, may, with propriety, be regarded as a national work, was published in the annual volume of the Reports of the British Association for 1838, and has been followed by similar undertakings in other countries, conducted at the expense of their respective governments. In 1835, the Association called for a report from one of its members, on the state and progress of researches regarding the geographical distribution of the magnetic forces on the surface of the globe; proposing to ground on this preliminary examination an application to Government to aid in the prosecution of the inquiry in remote parts of the earth, unattainable by the means at the command of the Association itself, or of its individual members. This Report, presented in 1837, was taken into consideration at the meeting of the Association at Newcastle in 1838, and a memorial was addressed to Government, which, being favourably received by Her Majesty's ministers, originated the naval Expedition equipped in the following year for a magnetic survey of the high latitudes of the southern hemisphere.

Deeming the opportunity a fitting one, the British Association availed itself of the same occasion, to solicit the attention of Her Majesty's Government to the expediency of extending the researches to be accomplished by fixed observatories, to certain stations of prominent magnetic interest within the limits of the British colonial dominion. The stations named were Canada and Van Diemen Island, as approximate to the points of the greatest intensity of the magnetic force in the northern and southern hemispheres; St. Helena, as approximate to the point of least intensity on the globe; and the Cape of Good Hope, as a station where the secular changes of the magnetic elements presented features of peculiar interest. It was also suggested, that the observations at these stations should include meteorological as well as magnetical phenomena; and a committee was appointed to present the memorial on the part of the Association, and to offer to Her Majesty's Government such explanations as might be desired.

Regarding it as not improbable that they might be requested to offer an opinion in respect to the agency by which the Colonial establishments might be effectively and

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\* At a later period a third Magnetic Observatory has been established in Britain, *viz.*, at Makerstoun, near Kelso, in Scotland. The expense of this Observatory is defrayed by the private munificence of General Sir Thomas Macdougall Brisbane, Bart., G.C.B. and G.C.H.

economically conducted, and to the department of the State under whose general superintendence they might with propriety and advantage be placed, the Committee were naturally led to consider that the Ordnance department, and its military corps, by which the somewhat analogous service of the trigonometrical survey of Great Britain had been carried on for several years past with so much advantage and public satisfaction, combined effectiveness with economy in a higher degree than they were likely to be found united elsewhere. Having ascertained through one of the members of the Committee, himself an officer of Artillery,\* that a suggestion of this nature would not only be regarded as unobjectionable by the then Master-General of the Ordnance, Sir Hussey Vivian (the late Lord Vivian), but that it would be highly approved by him,—as promising to add to the public usefulness of the Ordnance corps in time of peace, and thereby to their claims on the consideration of the country,—the Committee expressed it as their opinion, that the Colonial Observatories might be advantageously placed under the superintendence of the Master-General and Board of Ordnance.

The Government having signified a wish that applications involving such extensive arrangements, and a considerable amount of expenditure, should be strengthened by the concurrent support of the Royal Society, a deputation was appointed to express the cordial participation of that Society, in the recommendation both of the naval Expedition and of the fixed Observatories.

Her Majesty's Government having acceded to this joint representation from the two principal philosophical institutions of Great Britain, the preparation of the instruments for the naval Expedition and for the fixed Observatories, was undertaken by a Committee of the Royal Society, by whom also instructions were drawn up relating to the use of the instruments, and to the objects they were designed to accomplish. The instructions were published under the title of "Report of the Committee of Physics and Meteorology of the Royal Society, relative to the Observations to be made in the Antarctic Expedition, and in the Magnetic Observatories." The portion of the Report which related to the fixed Observatories was drawn up chiefly by Dr. Lloyd, and is written with his accustomed perspicuity and elegance, and with a theoretical accuracy which inspires the fullest confidence. In some few respects the instruments have been found inadequate, or the methods of observation unsuited, to accomplish the proposed objects with the required precision; but when we recall to recollection the progressive improvement by which astronomical instruments have attained their present perfection, and astronomical observation its present precision, we shall not be surprised that magnetical science should have to pass through a somewhat analogous process; and that especially, when the endeavour is first made to place it on the footing of an exact science, unforeseen difficulties should present themselves, and practical inconveniences be found which had not been anticipated. The utmost attention has been paid at the

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\* The writer of these pages.

Colonial Observatories to adhere closely to the instructions, except in the few instances where a departure from them was manifestly necessary. These instances are noticed in their proper places in the present volume, and have been for the most part discussed and improvements introduced in a second edition of that part of the instructions, revised by Dr. Lloyd, and published by the Royal Society in 1842. It is evident, therefore, that the date at which the Observatories should be regarded as fully effective for the different objects proposed in the Instructions of the Royal Society, must be taken at a later period than that of the commencement of the observations.

Whilst these arrangements were in preparation, it was proposed that as the Antarctic Expedition was designed to winter in Van Diemen Island in the two first years of its operations, the personal establishment of the Observatory at that station should be furnished by the Expedition itself, for the purpose of ensuring the fullest co-operation between the two branches of the magnetic service in that quarter of the globe. This proposal was acceded to by the Lords Commissioners of the Admiralty, leaving the other three Observatories to be provided for under the Ordnance department.

The trigonometrical survey, which for some years after its commencement had been carried on jointly by officers of the Engineers and Artillery, having in later years been executed by the Engineers alone, Sir Hussey Vivian was pleased to direct that the magnetic service under the Ordnance department should be performed by the officers and soldiers of the Royal Artillery exclusively. Accordingly a selection was made from the junior ranks of that corps by the Deputy Adjutant-General of the Royal Artillery, the late Sir Alexander Dickson, of officers who he deemed most competent to place in charge of the Observatories to be established in Canada, St. Helena, and the Cape of Good Hope; and each officer was directed to select three, afterwards increased to four, non-commissioned officers from the head-quarter establishment at Woolwich, as assistant observers. The officers thus selected were Lieut. (since Captain) Frederick Eardley Wilmot for the Cape of Good Hope, Lieut. John Henry Lefroy for St. Helena, and Lieut. Charles James Buchanan Riddell for Canada. By the instructions which these officers received from the Master-General of the Ordnance, they were directed to "carefully observe, and carry into execution, the instructions they would receive direct from the Master-General, or through Major Sabine; and to report to the Master-General monthly their proceedings in the execution of the duties they were employed on, transmitting their reports through the Deputy Adjutant-General."

The personal establishment of each Observatory was fixed at one officer, three\* non-commissioned officers, and two gunners, one of the latter to act as an orderly, and the other as the officer's servant; the officers receiving the extra pay of staff-officers of their rank, and the non-commissioned officers and gunners a proportional increase of pay. A sum not exceeding 100*l.* a-year was allotted for each Observatory, to meet incidental expenses of all kinds, including the purchase of such new instruments as

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\* Increased in 1841 to four.

might from time to time be required. The total charge for each Observatory thus amounted to 392*l.* a-year. The officers and men stationed at the Observatories were on the spot in the respective colonies, should an emergency occur in which their military services might be required.\* But, except in cases of emergency, their regimental duties were taken by the other officers and men of the regiment. In this point of view, therefore, the observations at the three Ordnance Observatories, recorded in this and succeeding volumes, may be regarded as a contribution to science rendered by the officers and soldiers of the Royal Artillery as a corps. In this light it was designed to be viewed by Sir Hussey Vivian; and it was so viewed by Sir Alexander Dickson, whose watchful care extended to this as well as to every other branch of public duty intrusted to the corps; and it is no less due to the memory of that most distinguished officer, than pleasing to record, that, by the superior influence of his station as the chief staff-officer of the Artillery, difficulties were frequently overcome which could not but occur in a service somewhat removed from the usual course, and facilities were obtained which have in many ways contributed to its efficient performance.

By the Master-General's direction, and with Dr. Lloyd's permission, the officers appointed to take charge of the Magnetic Observatories were ordered to Dublin, to receive instructions from Dr. Lloyd in the manipulation of the magnetic instruments in the Dublin Observatory, to which those prepared for the Colonial Observatories were similar. Dr. Lloyd's kindness farther extended to subsequent explanatory correspondence with the officers.

In the autumn of 1839, the several parties quitted England for their respective destinations—the detachments for St. Helena and the Cape of Good Hope in the ships of the Antarctic Expedition.

Early in 1841, in consequence of a communication from the Marquis of Northampton, President of the Royal Society, to the Master-General,—recommending that steps should be taken for the reduction and publication of the observations of the Ordnance Observatories, which had been regularly transmitted to the Deputy Adjutant-General in the shape of monthly reports,—Sir Hussey Vivian, having communicated with the Lords Commissioners of the Treasury and received their sanction, placed the reduction and publication of the observations under my superintendence, with the assistance of Lieut.

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\* An instance of this nature occurred at the Cape of Good Hope in June 1842, when one of the lieutenants of the small force of artillery stationed in the colony being killed in action with the insurgent Boors at Port Natal, Capt. Wilmot placed his military services at the disposal of the Governor, Sir George Napier, and was ordered by him to take the garrison duty of his corps at Cape Town until the occasion for his services had ceased. It happened fortunately that a few months before, Sir Hussey Vivian (without application, and possibly with a view to some such occasion arising), had sent an additional officer, Lieut. Clerk of the Royal Artillery, to be attached to the Cape Observatory for instruction in the use of magnetical instruments. In this case, consequently, no interruption of the service of the Observatory took place, as it remained under the charge of Lieut. Clerk in Capt. Wilmot's absence.

Riddell (who had recently returned from Canada on account of health), and four military clerks, an office being allotted for the purpose in the Royal Military Repository at Woolwich.

In April of the same year, an application was made from the Lords Commissioners of the Admiralty to the Master-General and Board of Ordnance, with the sanction of the Treasury, proposing that the reduction and publication of the observations made at the Van Diemen Island Observatory, and by the Antarctic Expedition, should be comprehended in the arrangements made for the Ordnance Observatories: the Master-General and Board were pleased to assent to this proposal, and to direct accordingly.\*

The publications consequent on these arrangements, previous to the present volume, are as follows:—

1st. In 1842, the magnetic observations made at sea by the Antarctic Expedition on its passage from England to Kerguelen Island, were reduced and printed in the *Philosophical Transactions*, the expense of printing being in this instance defrayed by the Royal Society.

2nd. It appearing desirable that the observations made at the Observatories on days of unusual magnetic disturbance should be separated from those made daily at stated intervals, and published without delay for the purpose of comparison with each other and with similar observations made simultaneously in different parts of the globe,—the observations on such days made at the four Observatories, and by the Antarctic Expedition, in the years 1840 and 1841, were printed in a volume by themselves, at the expense of Her Majesty's Government, and published in 1843.

3rd. A continuation of the magnetic observations of the Antarctic Expedition, comprehending the observations made at sea in the first year of its operations within the antarctic circle, was also published in 1843, in the *Philosophical Transactions*, the expense of printing being defrayed as before by the Royal Society.

4th. "Magnetical instructions for the use of portable instruments adapted for magnetical surveys and portable observatories, and for the use of a set of small instruments for a fixed Magnetic Observatory, by Lieut. C. J. B. Riddell, R.A., F.R.S., Assistant-Superintendent of Ordnance Magnetic Observatories." This very useful work, which was much needed, was printed at the expense of Her Majesty's Government, and published in 1844.

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\* In consequence of an application from the Royal Society, made in April 1839, when the Ordnance Observatories were in preparation, the Court of Directors of the East India Company ordered the establishment of Magnetic Observatories at Simla, Singapore, Madras, and Aden (subsequently changed to Bombay). These Observatories are conducted by officers of the East India Company's Engineers, and their observations, as they arrive in England, are transmitted to the Royal Society. No arrangements have yet been made for the reduction and publication of these observations; but it may be hoped that the Royal Society will shortly take steps for that purpose.

5th. In the same year (1844), a third series of the magnetic observations of the Antarctic Expedition was reduced and printed in the Philosophical Transactions. This series contains the observations made in the second year of the operations of the Expedition within the antarctic circle.

In preparing the present volume for the press, the utmost attention has been paid to the condensation of the materials into the smallest compass within which they can be brought consistently with useful development and lucid arrangement. By printing the observations simply in the form of a journal, much labour and time would have been spared, but they would have occupied nearly three times the present bulk. In the portion of the volume appropriated to a discussion of the observations, conciseness and economy of space have also been much studied. In a work of such magnitude as that to which the present volume belongs, which is to include the results of the observations of four Observatories, an avoidance of all expense not strictly necessary seemed a public duty, even at the sacrifice, perhaps, in some measure, of that more handsome appearance which may with greater propriety be indulged in where the results of a single Observatory are concerned.

I gladly avail myself of this opportunity of expressing my sense of the valuable and cordial assistance which I have received from Lieut. Riddell, in the correspondence which is maintained with the Observatories, and in the preparation of the observations contained in this volume, as well as in training the non-commissioned officers to take part in the various processes of reduction which the observations require. His attention has been unwearied in the examination of the correctness of the coefficients, and in checking the reductions by every means which our small establishment will permit. In the remainder of the volume, his assistance has of course been of the most essential service in the description of the adjustments of the instruments at Toronto, which were chiefly made during the time that that Observatory was under his charge. And even in that part of the work which is necessarily most peculiarly my own, *viz.*, the discussion to which I have subjected the observations, I have found great pleasure and advantage in conversing with him over each sheet as it has passed through the press.

I have also great pleasure in expressing both Lieut. Riddell's satisfaction and my own with the non-commissioned officers who form the establishment of our office; their names are—

Serjeant John M'Grath,  
Bombardier Samuel Hendley,  
Bombardier Francis O'Sullivan,  
Acting Bombardier Charles Organ.

Their diligence in acquiring a competency to execute duties which were of course wholly new to them, and the zeal and fidelity with which they have fulfilled these duties, deserve every praise.

PROCEEDINGS AT TORONTO IN THE ESTABLISHMENT OF THE OBSERVATORY

Leaving his detachment to embark with the instruments in a vessel bound direct to Quebec, Lieut. Riddell proceeded himself to Canada by the more expeditious route of the United States; and having waited on the Governor-General at Montreal to present a letter of introduction with which he had been furnished by the Master-General of the Ordnance, and communicated with the Commanding Engineer, to whom he was the bearer of instructions and authority to build an Observatory, he proceeded to examine different localities which were suggested as convenient sites. The preference was finally given to Toronto, in the then province of Upper Canada, where a grant of two and a-half acres of ground, belonging to the University of King's College, was offered by the Council of the University, with the sole condition, that the buildings to be erected should not be appropriated to any other purpose than that of an Observatory, and should revert to the college when the Observatory should be discontinued. The sanction of the Governor-General for the acceptance of this offer was received in January 1840, and the building was commenced as soon as the season permitted.

Whilst the building was in progress, Lieut. Riddell was permitted to make use of a small unoccupied barrack in the city of Toronto, as a temporary Observatory; and the instruments having arrived under charge of the detachment, they were placed in one of the rooms of the barrack suitably prepared for them, all the iron which admitted of removal having been taken away. The observations made in the temporary Observatory form part of the present volume. The buildings were completed and possession received in September 1840.

The Observatory is situated in latitude  $43^{\circ} 39' 35''$ ,\* and longitude  $79^{\circ} 21' 30''$  west of Greenwich,† on a rising ground, about half a mile north of the city of Toronto, and 360 yards west of the University buildings. The height above the surface of Lake Ontario is 107·9 feet.

\* By circummeridional altitudes of the sun observed with a repeating reflecting circle, by Lieut. Lefroy, R.A.

† At all the Magnetic Observatories conforming to the instructions of the Royal Society, the time in which the magnetical and metereological phenomena are recorded is mean time, astronomical reckoning, at Göttingen; the difference between the meridians of Göttingen and Toronto, has been taken as  $5^{\text{h}} 57^{\text{m}} 12\cdot5^{\text{s}}$ , and is derived as follows:—

Göttingen, east of Greenwich, by the Nautical Almanac . . .	h. m. s. 0 39 46·5
Toronto Observatory, west of Greenwich :	
By 18 sets of M. C. Stars observed in 1840 . . .	h. m. s. 5 17 19
By Chronometric comparison with Boston, 1840 . . .	5 17 33
	5 17 26
Toronto, west of Göttingen . . . . .	5 57 12·5



The following description of the Observatory is furnished by Lieut. Riddell :—

“ The buildings consist of—

“ 1. An Observatory having two apartments, one 50 feet by 20 for the instruments, the other 18 feet by 12 for an office or computing room, with a hall or vestibule 12 feet by 6. A small circular room for the transit theodolite is connected by a covered passage with the instrument room, and is placed at a sufficient distance from it to obtain a view of the lower culmination of some of the circumpolar stars.

“ 2. A detached building, partly sunk in the ground with a view to obtain an uniform temperature, containing one room 18 by 12 for experimental determinations and observations of absolute intensity. It is situated about 80 feet from the Observatory, so that the instruments placed in it may neither affect nor be affected by the magnets in the Observatory. This building was erected in 1842, in conformity with the directions contained in the revised instructions of the Royal Society.

“ 3. An Anemometer house, constructed so as to support the vane and pressure-plate of Osler's anemometer at a height exceeding 30 feet above the roof of the Observatory, and above the neighbouring trees.

“ 4. A small shed for the Inclination circle.

“ 5. Barracks for the officer and detachment.

“ The whole of the ground granted by the college is enclosed by a picketing. The buildings numbered 1 to 4 are at the eastern end, within an inner enclosure. The barracks for the officer and party are at the western end.

“ The Observatory is built of twelve-inch logs, rough cast on the outside, and plastered on the inside, the laths being attached to battens projecting two inches from the logs so as to leave a stratum of air between the logs and plaster. The doors and windows are double, and the outer door has the further protection of a closed porch. The small room or office is provided with an open fire-place adapted for a wood fire ; the instrument room has neither stove nor fire-place. No iron whatsoever was used in the structure, the nails being of copper, and the locks and other fastenings of brass. The instruments are supported by massive stone pillars, each formed of a single stone about six or seven feet long, imbedded in masonry to the depth of three feet.”

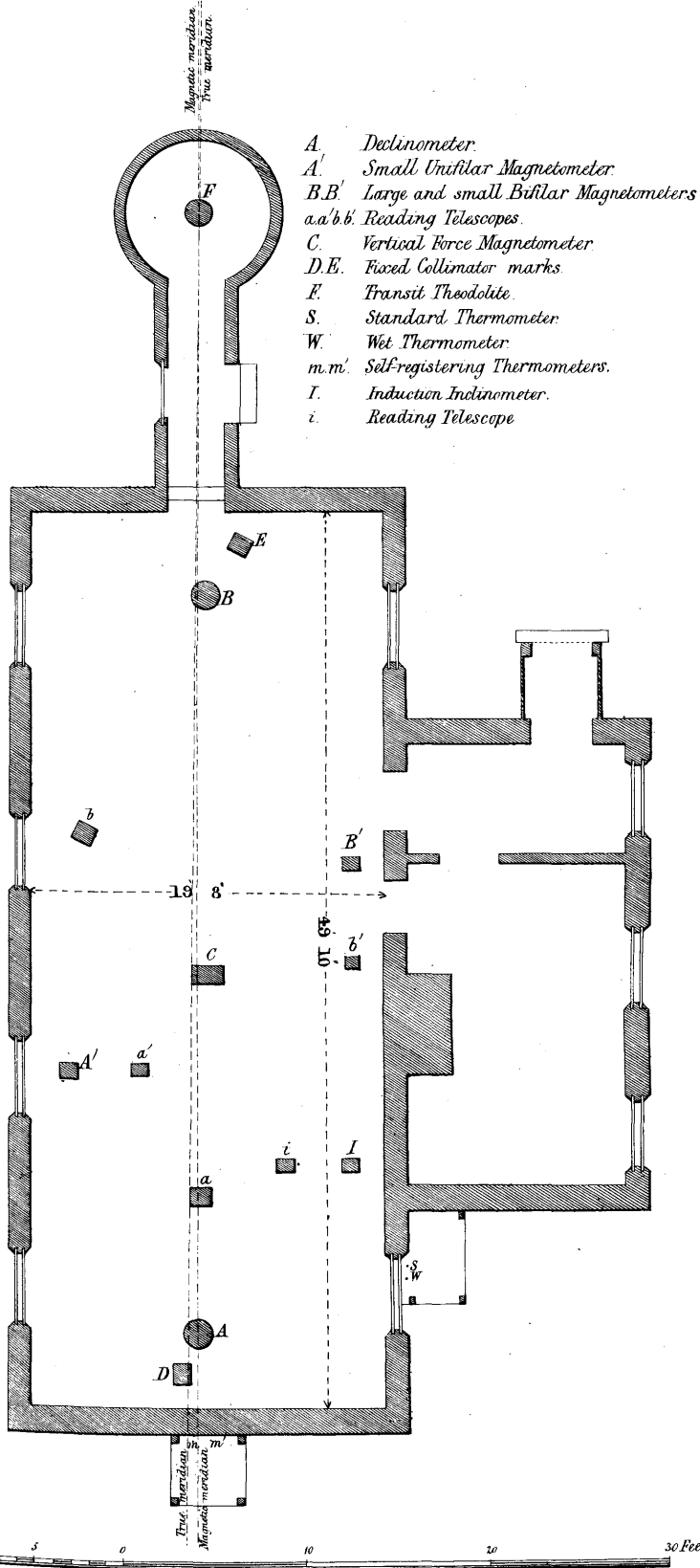
The arrangement of the several instruments is shown in the accompanying plate, from drawings by Lieut. Younghusband, R.A., and includes the instruments recently supplied.

The personal establishment at Toronto consisted, at the commencement, of its director, Lieut. Riddell, with three non-commissioned officers, named in the order of their seniority—

Corporal, now Serjeant, James Johnston,  
Bombardier, now Corporal, James Walker,  
Acting Bombardier Thomas Menzies.

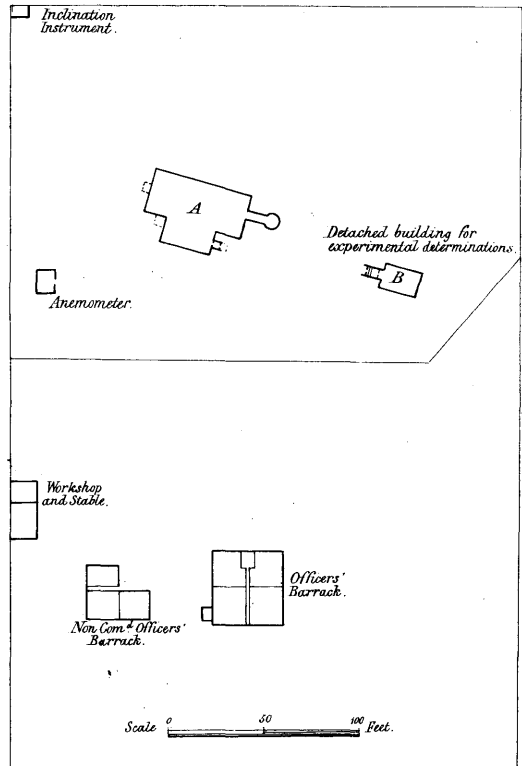
# Magnetical Observatory at Toronto.

Plan of the Toronto Observatory, shewing the Disposition of the Instruments.

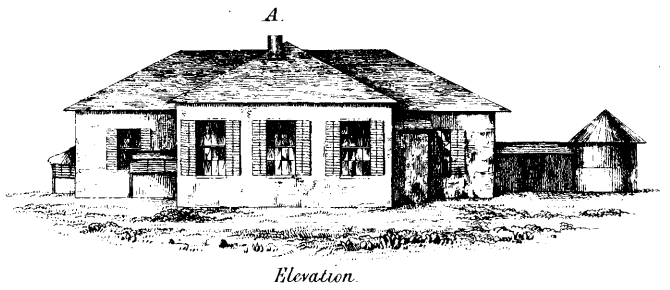


- A. Declinometer.
- A'. Small Unifilar Magnetometer.
- B, B'. Large and small Bifilar Magnetometers.
- a, a', b, b'. Reading Telescopes.
- C. Vertical Force Magnetometer.
- D, E. Fixed Collimator marks.
- F. Transit Theodolite.
- S. Standard Thermometer.
- W. Wet Thermometer.
- m, m'. Self-registering Thermometers.
- I. Induction Inclinator.
- i. Reading Telescope.

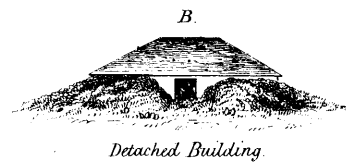
Ground Plan of the Observatory enclosure.



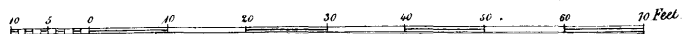
Elevation of the Toronto Observatory, and of The Auxiliary Building.



Elevation.



Detached Building.





A fourth non-commissioned officer, acting Bombardier Thomas Malines, was added to the strength in the summer of 1841, and was relieved in May 1844, by acting Bombardier Grace.

In February 1841, Lieut. Riddell's health obliged him to return to England, leaving the Observatory in the charge of Lieut. Charles Younghusband, of the Royal Artillery, who had been attached to the establishment for some months, by permission of the Master-General, for the purpose of making himself acquainted with the use of magnetic instruments. On Lieut. Riddell's appointment as my assistant at Woolwich in 1841, Lieut. Lefroy, then in charge of the St. Helena Observatory, was removed by Sir Hussey Vivian to the Toronto establishment, with a special view to his being employed on a magnetic survey in Canada, and of such portions of the countries north of the Canadian provinces, as should be conveniently accessible by opportunities which might be furnished by the Hudson's Bay Company. Lieut. Lefroy did not arrive at Toronto until September 1842, and quitted it again in April 1843, to join the brigade of canoes proceeding from Lachine to the Hudson's Bay territories, from whence he returned in the autumn of 1844. Lieut. Younghusband has, therefore, been effectively the director of the Toronto Observatory from the commencement of 1841 to nearly the end of 1844, with the exception of the six winter months of 1842-1843. The Observations contained in this Volume afford the best testimony to the practical merits of the system established at the Toronto Observatory by Lieut. Riddell, and to the intelligence and steady perseverance with which it has been maintained by Lieut. Younghusband.

During the period that the Observatory was under the direction of Lieut. Riddell, that officer spoke in the highest terms of the good conduct, intelligence, and zeal of the three non-commissioned officers, and of the thoroughly efficient and trustworthy manner in which they performed their duties; expressing himself particularly in approval of the senior non-commissioned officer Serjeant Johnston; and, in a report lately received, Lieut. Younghusband states, that the conduct of all the non-commissioned officers forming the present establishment has given him the highest satisfaction.

EDWARD SABINE.

*Woolwich, February 10, 1845.*



**ADJUSTMENTS, ABSTRACTS, AND COMMENTS.**

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**MAGNETICAL INSTRUMENTS.**



## ADJUSTMENTS, ABSTRACTS, AND COMMENTS.

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### MAGNETIC DECLINATION.

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*Declinometer.*—The adjustments of the Declinometer (as detailed in pp. 15 and 16 of the Royal Society's Instructions) are—

1st. To take out the torsion of the thread and bring the line of detorsion approximately into the magnetic meridian; this is done by suspending an un-magnetic brass bar, allowing it to swing freely, and, when at rest, or nearly so, turning the torsion circle through an angle equal to its estimated deviation from the magnetic meridian.

2nd. To suspend the magnet and bring it into a horizontal position, the distance between the sliders having been adjusted previously, so that the scale may be in the focus of the lens, and the centre of gravity of the sliders near the middle of the bar.

3rd. To determine the zero division of the scale, or point corresponding to the magnetic axis of the magnet, by placing the reading telescope so as to obtain a reading of some central division of the scale, and noting the division or point of the scale coinciding with the vertical wire with the magnet alternately erect and inverted; the mean of the readings in the two positions is the zero required.

4th. To fix the reading telescope *permanently* in its position of adjustment; the vertical wire coinciding nearly with the division corresponding to the magnetic axis of the magnet, the scale being in the centre of the field of view, and the divisions on either side seen with equal distinctness.

5th. To adjust the line of detorsion accurately to the magnetic meridian, or within such approximation that the angle by which it deviates may be too small to produce an appreciable deflection of the large magnet.

6th. To remove the brass bar and suspend the magnet, without affecting the direction of the line of detorsion of the suspension thread; the magnet will then hang truly in the magnetic meridian; and the absolute declination will be equal to the true azimuth of the line of collimation of the reading telescope, increased or diminished by the angle subtended by the zero division of the scale, and the division actually on the vertical wire.

The declinometer was adjusted in the temporary Observatory on the 5th February 1840; and again, in consequence of a breakage of the suspension thread, on the 28th



July. The first adjustment in the permanent Observatory was completed on the 12th September, and the telescope firmly fixed so that it might remain as nearly immovable as possible.

The instructions of the Royal Society directed that the absolute intensity of the horizontal force, and the value of the magnetic moment of the bifilar magnet, should be determined at least once in every month; this required the removal of the declinometer bar at those periods, for the purpose of substituting the bar to be used in experiments of vibration. In compliance with these directions the declinometer bar was removed on the 16th and 28th October 1840, which removals occasioned a fraying of the suspension thread, and its finally giving way altogether on the 30th October. The declinometer was re-adjusted on the 31st, and again with a new suspension thread on the 4th of November. The adjustments prior to the 4th November will not need any special notice, because the only declinometer observations which are published of earlier date than the 1st of January 1841, are those of the terms and disturbances. But it has appeared desirable to give a detailed record of the adjustments on the 4th of November and subsequent dates, for the purpose of showing the changes which were found to take place in the direction of the line of detorsion, when one bar was substituted for another, or when a bar was changed from the erect to the inverted position, however carefully the operations were performed; and of enabling a judgment to be formed of the probable amount of the discrepancies which may have been introduced thereby, whenever the magnet or suspension thread were touched, and by which the direct comparability of the observations made in the intervals separated by the removal of the magnet bar, may have been affected. The record of the adjustments is therefore given nearly as received from the Observatory.

1840, November 4th. Observed the end of a very fine detached fibre clinging to the glass, invisible except in a particular light; the thread was in many parts roughened. A new thread was formed of 26 fibres of white silk supplied by Mr. Grubb, of Dublin, each fibre untwisted and made finer by detaching one of its threads, and the brass bar and small magnet suspended; two of the fibres broke shortly afterwards, leaving 24 to sustain the weight. The apparatus was then left for the night.

November 5th. Readings of the brass bar were taken during the day, the bar alternately erect and inverted. The readings were very irregular, appearing to show that the torsion could not be out of the thread; the brass bar was, therefore, suspended without the small magnet, and left for the night.

November 6th. The arc of vibration of the brass bar being reduced to about  $20^\circ$ , the error of the line of detorsion was estimated at about  $15^\circ$  east of north. Torsion circle moved from  $75^\circ$  to  $89^\circ 55'$ ; the weak magnet attached; the scale reading was 116.2. Magnet (B) was suspended and observed regularly during the remainder of the week. After the last observation on Saturday night (Nov. 7th), the brass bar was suspended without the small magnet, and left for the night.

November 8th. Brass bar nearly at rest. Error of the line of detorsion  $45^{\circ}$  west of north. Torsion circle moved to  $54^{\circ} 03'$ .

November 15th. After the last observation on the preceding night (Saturday), the brass bar, without the small magnet, was suspended, and, on the following morning, when at rest, showed the line of detorsion to be about  $20^{\circ}$  east of north. Torsion circle was moved to  $73^{\circ} 03'$ , and the small magnet added. Readings of the scale, erect, 142.6; inverted, 110.0; and again erect, 217.5. The difference between the readings in the erect position, *viz.*, 142.6 and 217.5, showed, as no change had been made intermediately in the torsion circle, that it would be useless to attempt an exact determination of the zero division corresponding to the magnetic axis of the weak magnet, or an exact adjustment of the line of detorsion by its means.

November 29th (Sunday). The brass bar having been substituted after the last observation on the night preceding, was found at rest at 8 A.M., about  $20^{\circ}$  east of north; no change having taken place at 2 and 4 P.M., the torsion circle was moved to  $93^{\circ}$ , and magnet (B) suspended for the regular observations.

During December, 1840, and January, 1841, the magnet was untouched. On February 3rd it was removed, and the brass bar and small magnet suspended for the purpose of examining whether the line of detorsion was accurately adjusted. The small magnet had been previously magnetized to saturation. The readings obtained were, at 5<sup>h</sup> 12<sup>m</sup>, 214.0; 5<sup>h</sup> 32<sup>m</sup>, 181.0; 5<sup>h</sup> 53<sup>m</sup>, 178.0; 6<sup>h</sup> 12<sup>m</sup>, 171.0; 6<sup>h</sup> 40<sup>m</sup>, 170.0; and at 7<sup>h</sup> 25<sup>m</sup>, 199.0. Magnet (B) was replaced, and the torsion circle not touched. The magnet was removed on the 9th February, 16th March, 28th April, and 25th of May, and another bar suspended for experiments of vibration. Whilst removing the magnet on the 25th of May, the suspension thread broke. A new one was mounted the same evening, and the brass bar suspended; but the thread was found broken the following morning. A new thread was again mounted, the brass bar suspended, and the torsion circle moved until the bar rested approximately in the magnetic meridian. The small magnet was then suspended, and the line of detorsion brought more exactly in the meridian; reading of the scale 180.6. Magnet (1), a stronger magnet than the bar (B), which had been hitherto used, was then suspended for observation. On the 31st of May, the thread was frayed whilst inverting the magnet to determine the zero point of the scale corresponding to the magnetic axis. A new thread was mounted composed of thirty divided fibres of white silk; the adjustment was completed the same evening; the final reading of the brass bar and small magnet being 166.5, and of the vernier  $70^{\circ} 24'$ .

June 2nd. The brass bar with the small magnet was suspended for the purpose of examining the adjustment of the line of detorsion; after an interval of one hour, the reading was 130.9. The torsion circle was not disturbed.

June 3rd. The thread having stretched, it was wound up, and a new series of obser-

vations made to bring the line of detorsion into the magnetic meridian; after many trials the reading of the brass bar scale was  $147\cdot0$ , the torsion circle being at  $59^{\circ} 54'$ .

July 24th. One of the fibres of the suspension thread perceived to be broken, nothing having been previously touched in the vicinity of the instrument; the thread was wound up, and the broken fibre removed; the brass bar with small magnet was then suspended, and, after many trials, the torsion circle was left at  $300^{\circ} 26'$ , the readings of the scale being, erect,  $87\cdot6$ ; and, inverted,  $103\cdot7$ .

July 28th. Magnet removed, and brass bar with small magnet suspended; torsion circle, as before, at  $300^{\circ} 26'$ ; scale reading  $190\cdot3$ , and in half an hour  $188\cdot5$ . Bar removed, and again replaced; reading  $210\cdot0$ . Magnet (1) replaced for the noon observation, after which the brass bar with small magnet was again substituted; the readings were, erect,  $163\cdot0$ ; and, inverted,  $162\cdot0$ ; torsion circle was moved to  $303^{\circ} 59'$ , with which the reading was  $157\cdot0$ . The brass bar with the small magnet was again suspended on the following day; after the noon observation, reading  $121\cdot0$ . After the 2 P.M. observation,  $130\cdot0$ . Again removed and replaced, reading  $150\cdot0$ . The torsion circle remained during these observations at  $303^{\circ} 59'$ .

August 25th. The magnet was removed on account of the observations of absolute intensity.

August 30th. Magnet was discovered resting on the copper ring after the noon observation. The copper ring was lowered. After the observation at 10 P.M., a fibre of the suspension thread was found to be broken. A new thread was mounted, composed of nineteen whole fibres of white silk. The brass bar suspended, and the torsion approximately taken out. Vernier left at  $165^{\circ}$ , and moved at 22 hours to  $345^{\circ} 50'$ .

September 2nd. Brass bar without the small magnet suspended. Estimated error of the line of detorsion about  $15^{\circ}$  west of north. Torsion circle moved to  $328^{\circ} 50'$ . After the noon observation, the brass bar with the small magnet was suspended. Reading erect,  $226\cdot7$ ; inverted,  $212\cdot5$ . Torsion circle moved to  $327^{\circ} 50'$ . Reading inverted,  $205\cdot0$ . On the following day the brass bar with small magnet was again suspended. Reading inverted,  $195\cdot8$ ; erect,  $201\cdot2$ . Torsion circle moved to  $329^{\circ}$ . After the observation at 2 P.M., the brass bar with small magnet was again substituted, when the readings were erect,  $198\cdot0$ ; inverted,  $93\cdot6$ . The same was repeated after the 4 P.M. observation, when the readings were, erect,  $236\cdot5$ ; inverted,  $165\cdot0$ . After the observation at 10 A.M. on the 4th, the reading, erect, was  $204\cdot8$ . After the observation at noon, inverted,  $168\cdot5$ ; erect,  $174\cdot2$ . After 10 P.M., the brass bar with small magnet was suspended and put in rapid vibration; after 10 hours it rested at  $151\cdot8$ . It was then inverted, and after four hours, the reading was  $170\cdot0$ .

September 19th (Sunday). After the last observation of the preceding night, the brass bar with small magnet having been suspended and put in vibration, the reading when at rest after ten hours was, erect,  $124\cdot8$ , and the bar being inverted  $16\cdot4$ .

September 30th. The magnet was removed, and another bar substituted for experiments of vibration.

The 30th September, 1841, is the last occasion on which a removal of the magnet, or a replacement of the suspension thread, took place. It had become obvious, that the instructions of the Royal Society, requiring the monthly removal of the magnet, and the temporary substitution of another bar, could not be adhered to without incurring the risk of displacement of the line of detorsion on every such occasion; and of injury to the thread itself, causing the necessity of frequent new threads, with their concomitant inconveniences of stretching and readjustment. From that date, therefore, a series commences and continues throughout 1842, in which the declinometer was entirely undisturbed, and the observations with it are strictly comparable, except from such alterations in the direction of the line of detorsion, as may possibly have taken place without external disturbance of any part of the apparatus.

*Observations to Determine the Coefficient of the Torsion Force.*

TABLE I. 1840. Nov. 9th. Bar (B.) Thread of 24 Fibres.			TABLE II. 1841. JUNE 4th. Thread of 30 Fibres. Bar (1).			TABLE III. 1841. SEPT. 17th. Thread of 19 Fibres. Bar (1).					
Torsion Circle.		Declinometer.	Torsion Circle.		Declinometer.	Torsion Circle.		Declinometer.			
Diff.	° ' "	Sc. Div.	Diff.	° ' "	Sc. Div.	Diff.	° ' "	Sc. Div.			
90°	{ 234 02 144 02 234 02 324 02 234 02	{ 155·4 163·9 154·9 145·9 154·9	8·75 8·87	90°	{ 59 54 149 54 59 54 329 54 59 54	{ 130·4 123·8 129·9 135·8 128·7	6·35 6·42	90°	{ 331 241 331 61 331 241 331	{ 136·1 143·4 134·4 125·4 134·0 142·4 133·4	8·15 8·55
60°	{ 174 02 234 02 294 02 234 02	{ 158·7 153·4 148·1 152·5	4·65 4·70	60°	{ 119 54 59 54 359 54 59 54	{ 124·8 129·3 133·2 128·7	4·20 4·20	60°	{ 31 331 271 331 31 331	{ 129·1 134·7 140·1 133·9 126·9 132·4	4·95 5·67
30°	{ 204 02 234 02 264 02 234 02	{ 154·7 151·0 149·0 150·8	2·95 2·42	30°	{ 89 54 59 54 29 54 59 54	{ 126·0 127·5 129·3 127·1	2·10 2·05	30°	{ 301 331 361 331 301 331	{ 134·8 131·3 128·0 131·0 133·5 129·8	2·95 3·07
35° 53'	{ 198 09 234 02 269 55 234 02 198 09 234 02	{ 154·2 150·5 146·4 150·0 152·9 149·8	3·55 3·47	$\frac{H}{F}$ from the experiments of 90° torsion = 0·000858 60 " = 0·000842 30 " = 0·000822 Mean = 0·000841			30°	{ 301 331 361 331 301 331	{ 134·8 131·3 128·0 131·0 133·5 129·8	2·95 3·07	
$\frac{H}{F}$ from the experiments of 90° torsion = 0·00119 60 " = 0·00094 30 " = 0·00097 35 53' " = 0·00116 Mean = 0·00106			$\frac{H}{F}$ from the experiments of 90° torsion = 0·00114 60 " = 0·00114 30 " = 0·00123 Mean = 0·00117								

*Determination of the Zero Division of the Scale corresponding to the Magnetic Axis of the Declinometer Magnet.*

TABLE IV. For Magnet (B), NOVEMBER 11th, 1840.				TABLE V. For Magnet (1), JUNE 4th, 1841.			
Readings.		Alternate Means.	Partial Results.	Readings.		Alternate Means.	Partial Results.
	Scale Div.	Scale Div.	Scale Div.		Scale Div.	Scale Div.	Scale Div.
Erect . .	155·8	—	—	Erect . .	137·4	—	—
Inverted . .	154·6	156·00	155·30	Inverted . .	149·8	137·45	143·62
Erect . .	156·2	154·90	155·55	Erect . .	137·5	149·65	143·57
Inverted . .	155·2	154·65	154·93	Inverted . .	149·5	136·30	142·90
Erect . .	153·1	155·45	154·27	Erect . .	135·1	151·25	143·17
Inverted . .	155·7	153·60	154·65	Inverted . .	153·0	133·30	143·15
Erect . .	154·1	156·25	155·17	Erect . .	131·5	155·05	143·27
Inverted . .	156·8	153·90	155·35	Inverted . .	157·1	131·60	144·35
Erect . .	153·7	156·40	155·05	Erect . .	131·7	—	—
Inverted . .	156·0	154·20	155·10	Mean or Zero Division .			143·43
Erect . .	154·7	155·15	154·92				
Inverted . .	154·3	—	—				
Mean or Zero Division .			155·03				

The lens and scale of magnet (B) remained unaltered from November 1840, until May 27th, 1841, when magnet (1) was substituted in the declinometer. The zero division corresponding to the magnet (1), was determined (as above) on the 4th June 1841, and the lens and scale were not subsequently disturbed.

*Azimuth of the Line of Collimation of the Fixed Telescope of the Declinometer.*—The reading telescope was permanently fixed in September 1840, when the instruments were removed from the temporary to the permanent Observatory. It was immovably secured to a massive stone pillar, about 7 feet in length, bedded in a deep foundation of masonry, at a distance of about  $7\frac{1}{2}$  feet from the declinometer. In the course of the first year after its fixture, observations were frequently repeated to determine the azimuth of its line of collimation by means of the transit theodolite, which was nearly in its prolongation. These gave, on different occasions, the following azimuths, *viz.*:—

1840. Oct. 17 and 27	3 Observations	Mean	1° 11' 01" West of North
,, Dec. 1 ,, 23	2 ,,	,,	1 11 22 ,,
1841. Feb. 6 ,, 19	2 ,,	,,	1 11 53 ,,
,, May 26	1 ,,	,,	1 10 57 ,,
,, Aug. 1	1 ,,	,,	1 11 00 ,,
,, Sept. 5	1 ,,	,,	1 11 05 ,,

We have hence the azimuth of the line of collimation  $1^{\circ} 11' \cdot 2$  west of north.

*Absolute Declination.*—The divisions 155·0 of the collimator scale of magnet (B), and 143·4 of the collimator scale of magnet (1), being the zero divisions of those scales respectively, corresponded therefore each to  $1^{\circ} 11'2$  of west declination.

This approximate determination has been recently verified, and the unmoved position of the telescope assured, by determining, with a portable declinometer, the absolute declination corresponding to a certain division of the collimator scale of magnet (1). The observations, seven in number, were made on different days, between the 31st of August and the 7th of September, 1844. Their details have not properly, therefore, a place in this volume, but their results were as follows:—

1844		Declination corresponding to the 120th Scale Division of Magnet (1).
		° ' "
August	31	1 27·0 West
September	2	1 28·2 ,,
„	3	1 28·0 ,,
„	4	1 27·1 ,,
„	5	1 25·7 ,,
„	6	1 26·5 ,,
„	7	1 28·1 ,,
Mean	.	1 27·2 West

By these observations, therefore, the 120th scale division of magnet (1) was found to correspond with  $1^{\circ} 27'2$  west declination, which would make the 143·4 division of the same scale (or the azimuth of the line of collimation of the fixed telescope of the declinometer),  $1^{\circ} 10'3$  west of north. The azimuth determined by the transit theodolite in 1840–1841, was  $1^{\circ} 11'2$  west of north, as stated above.

*Secular Change of the Declination.*—The magnet bar (B) was employed in the declinometer from the 1st January 1841 to the 27th May 1841, when it was changed for a more powerful magnet, the bar (1), which has since been retained. The division of the scale of the collimator of magnet (B) corresponding with the magnetic axis of the bar, was ascertained, on the 11th of November 1840, to be 153·0; and the scale division of the collimator of magnet (1), corresponding with the magnetic axis of that bar, was determined on the 4th of June 1841, to be 143·4. The difference, or 11·6 scale divisions, applied with the sign — to the observations antecedent to the 27th May, (*i.e.*, applied to the observations made with magnet (B),) renders the whole series directly comparable. The fortnightly means with magnet (B), in Table VI., from January 1st to May 20th, 1841, have been thus corrected. We have seen that the 120th scale division of the collimator of magnet (1) corresponded to  $1^{\circ} 27'2$  west declination. Increasing values of the scale denote decreasing westerly declination; and

the value in arc of one scale division is  $0'721$ . We have hence the values of the declination corresponding to the means of the scale divisions observed in each interval of 14 days, from January 1st, 1841, to December 31st, 1842. The difference of the declination in the corresponding fortnights in the two years, should give us 26 determinations of the direction and amount of the secular change at Toronto in a single year, subject to errors of observation, and particularly to those which may have been occasioned by deviations of the line of detorsion from the magnetic meridian; a source of error by which we cannot but apprehend that the declinations observed antecedent to October 1841, must have been occasionally affected, by reason of the frequent removals of the

TABLE VI.

DATES.	MEANS.		WEST DECLINATION.		Annual Increase of West Declination.
	1841	1842	1841	1842	
	Sc. Div.	Sc. Div.	° ' "	° ' "	'
Jan. 1 to 14	142·40	137·42	1 11·1	1 14·6	3·5
" 15 „ 28	141·82	137·85	1 11·5	1 14·3	2·8
" 29 „ Feb. 11	139·54	136·93	1 13·1	1 15·0	1·9
Feb. 12 „ 25	141·96	133·17	1 11·4	1 17·7	6·3
" 26 „ Mar. 11	141·37	132·35	1 11·8	1 18·3	6·5
Mar. 12 „ 25	141·54	132·90	1 11·7	1 17·9	6·2
" 26 „ April 9	139·05	131·54	1 13·5	1 18·9	5·4
April 10 „ 22	138·54	132·07	1 13·8	1 18·5	4·7
" 23 „ May 6	138·94	131·47	1 13·6	1 18·9	5·3
May 7 „ 20	138·82	131·26	1 13·7	1 19·1	5·4
" 21 „ June 3	—	131·28	—	1 19·1	—
June 4 „ 17	135·56	130·18	1 16·0	1 19·9	3·9
" 18 „ July 1	133·75	128·80	1 17·3	1 20·9	3·6
July 2 „ 15	133·38	131·53	1 17·6	1 18·9	1·3
" 16 „ 29	135·66	132·83	1 15·9	1 17·9	2·0
" 30 „ Aug. 12	138·38	132·40	1 14·0	1 18·3	4·3
Aug. 13 „ 26	136·05	131·96	1 15·6	1 18·6	3·0
" 27 „ Sept. 9	—	132·56	—	1 18·2	—
Sept. 10 „ 23	137·37	132·74	1 14·7	1 18·0	3·3
" 24 „ Oct. 7	135·97	129·59	1 15·6	1 20·3	4·7
Oct. 8 „ 21	137·69	128·00	1 14·5	1 21·4	6·9
" 22 „ Nov. 4	137·48	127·67	1 14·6	1 21·7	7·1
Nov. 5 „ 18	137·63	127·45	1 14·5	1 21·8	7·3
" 19 „ Dec. 2	137·31	128·42	1 14·7	1 21·1	6·4
Dec. 3 „ 16	136·51	127·81	1 15·3	1 21·6	6·3
" 17 „ 31	136·72	128·11	1 15·1	1 21·4	6·3
Mean Annual Increase of West Declination . . .					4·77

magnet bar. In two fortnights in 1841, *viz.*, May 21 to June 3, and August 27 to September 9, no mean results have been taken, the observations having been rendered incomplete by the breaking of the suspension threads; the 26 results are thus reduced to 24. Every one of the 24 results shows that the westerly declination is increasing. Their differences in amount arise probably partly from error introduced by variations in the direction of the line of detorsion, and partly from actual magnetic irregularities. The mean is an annual increase of west declination, amounting to 4'77, with a probable error of 0'24.

If we collect the results into eight determinations, four for each year, for the purpose of examining whether they show any annual period in the secular change, we have as follows :—

			Mean Declination	° /		Differences.
1841.	Jan. 1 to Apr. 9			1 12·0	West	
	„ Apr. 10 „ July 1	„	„	1 14·9	„	+2·9
	„ July 2 „ Sept. 23	„	„	1 15·6	„	+0·7
	„ Sept. 24 „ Dec. 31	„	„	1 14·9	„	-0·7
1842.	Jan. 1 „ Apr. 9	„	„	1 16·7	„	+1·8
	„ Apr. 10 „ July 1	„	„	1 19·4	„	+2·7
	„ July 2 „ Sept. 23	„	„	1 18·4	„	-1·0
	„ Sept. 24 „ Dec. 31	„	„	1 21·3	„	+2·9

If we could place sufficient dependence on the observations, we might infer that we have here traces of an annual period; the secular increase appearing to be less considerable in the middle part of the year than at other periods. It is obvious, however, that in order to obtain an assured conclusion in regard to an annual period, it will be necessary to have observations of longer continuance, and in which all possible precaution shall have been taken to ensure precision. By the plan which is now adopted, it is hoped that instrumental uncertainty may be reduced within very narrow limits. A small unifilar magnetometer is kept in permanent adjustment, and is observed once on every day simultaneously with one of the regular hourly observations made with the declinometer of the Observatory. This daily comparison cannot fail to detect errors, except such as may be common to both instruments; whilst a check on the possible occurrence of the latter is furnished by comparison with a monthly determination of the absolute declination made with a third and independent instrument, *viz.*, the portable declinometer described in page 15 of Lieut. Riddell's Magnetical Instructions. This absolute determination consists of a sufficient number of wholly independent observations, made on the same day or nearly on the same day in each month, to give a very accurate mean result; each observation being connected with the others, and with the differential declinometer of the Observatory, by simultaneous readings of the scale of the latter instrument. There are thus, therefore, three concurrent but wholly independent processes in action for determining the annual period, if there should prove to be one; or



for showing which of the hourly observations in the course of the year corresponds most nearly to a uniform distribution of the secular change.

*Diurnal Variation of the Declination.*—Table VII. exhibits the diurnal variation of the declination derived from the monthly means, in every month of the years 1841 and 1842; and Table VIII. the same arranged according to the seasons. The values are expressed in minutes of arc. In these Tables the lowest monthly mean at any of the observation hours is taken as the zero for the month, and corresponds to the extreme westerly position of the north end of the magnet. In computing the Table for 1841, the only observations which have been omitted are,—from May 25<sup>d</sup> 12<sup>h</sup> to the end of the same month; from June 27<sup>d</sup> 18<sup>h</sup> to June 28<sup>d</sup> 6<sup>h</sup>; from July 13<sup>d</sup> 18<sup>h</sup> to July 24<sup>d</sup> 2<sup>h</sup>; and from August 30<sup>d</sup> 0<sup>h</sup> to August 31<sup>d</sup> 22<sup>h</sup>;—the observations during each of these periods having been rendered doubtful by the breakage of the suspension thread, or by its stretching, so as to bring the magnet in contact with the copper ring. In 1842, the only observations omitted are January 26<sup>d</sup> 0<sup>h</sup>, April 4<sup>d</sup> 0<sup>h</sup>, and May 3<sup>d</sup> 0<sup>h</sup>, 3<sup>d</sup> 4<sup>h</sup>, 27<sup>d</sup> 0<sup>h</sup>, and 29<sup>d</sup> 18<sup>h</sup>, having each been taken above 30 minutes after the prescribed time.

TABLE VII.

*Diurnal Variation of the Declination in the several Months of 1841 and 1842*

Hours of Göttingen Time } Hours of Toronto Time }	0	2	4	6	8	10	12	14	16	18	20	22
	18	20	22	0	2	4	6	8	10	12	14	16
1841	'	'	'	'	'	'	'	'	'	'	'	'
January . .	3·26	5·16	6·09	2·10	0·00	0·63	2·86	5·63	6·46	5·74	5·19	4·92
February . .	7·31	6·48	6·80	2·49	0·00	1·43	3·04	6·29	7·36	5·50	4·41	5·22
March . . .	8·01	9·84	6·68	1·37	0·00	1·95	4·80	5·90	6·86	6·47	6·84	7·30
April . . .	10·38	11·11	8·02	1·96	0·00	2·49	5·45	7·43	8·76	8·15	8·88	9·05
May . . . .	10·95	10·62	7·53	1·72	0·00	2·11	5·31	6·79	7·24	7·06	6·64	7·65
June . . . .	11·36	12·08	5·96	0·99	0·00	2·26	5·89	5·36	6·27	7·22	5·67	6·94
July . . . .	11·53	13·12	8·82	1·62	0·00	2·78	5·75	7·21	8·96	9·73	8·15	8·39
August . . .	12·17	13·37	7·82	0·61	0·00	3·63	4·96	9·21	11·11	7·66	8·31	7·51
September .	9·24	9·78	5·17	1·01	0·00	3·40	4·81	7·40	6·55	7·97	7·42	7·62
October . . .	5·54	7·10	5·80	0·49	0·00	2·56	5·10	6·62	6·65	6·06	6·70	6·69
November . .	3·43	5·80	3·63	0·15	0·00	2·02	4·70	6·08	5·07	5·08	5·07	5·10
December . .	5·54	4·38	4·39	0·84	0·00	2·64	6·45	6·78	5·62	5·35	4·16	4·66
1842												
January . . .	4·17	6·93	5·08	0·56	0·00	1·77	4·03	5·44	6·00	4·51	4·12	3·98
February . .	5·05	5·49	5·08	1·20	0·00	0·71	2·48	4·13	5·14	4·76	4·03	4·10
March . . . .	6·33	8·99	7·77	1·74	0·00	1·40	3·50	5·75	6·67	6·78	6·11	6·47
April . . . .	8·05	8·64	5·85	1·05	0·00	0·98	3·44	4·20	4·98	5·49	7·32	9·49
May . . . . .	9·42	9·73	5·20	0·25	0·00	2·73	5·16	5·35	6·22	5·96	6·34	6·72
June . . . . .	11·20	11·90	8·09	2·04	0·00	2·58	5·36	6·73	7·29	7·25	6·54	7·21
July . . . . .	9·54	12·28	7·89	1·69	0·00	2·22	5·19	8·37	7·82	8·64	5·81	6·13
August . . . .	11·12	12·00	5·15	0·00	0·87	4·79	6·62	7·56	7·03	7·38	6·50	7·92
September . .	9·39	9·67	5·01	0·00	0·04	3·31	4·93	7·01	5·98	6·51	5·92	7·66
October . . . .	5·28	8·19	5·11	0·27	0·00	1·95	3·65	5·05	6·21	4·05	3·32	4·73
November . . .	4·70	5·70	3·60	0·00	0·17	2·47	4·59	5·41	5·49	4·97	3·53	4·69
December . . .	3·55	4·56	4·40	0·49	0·00	1·67	3·23	4·02	4·45	3·09	2·93	3·27

MAGNETIC DECLINATION.

TABLE VIII.

*Diurnal Variation of the Declination in 1841 and 1842, in Quarterly Periods.*

Hours of Göttingen Time. } Hours of Toronto Time. }	0	2	4	6	8	10	12	14	16	18	20	22
	18	20	22	0	2	4	6	8	10	12	14	16
December, 1841 . . .	'	'	'	'	'	'	'	'	'	'	'	'
January ,, . . .	5·37	5·34	5·76	1·81	0·00	1·57	4·12	6·23	6·48	5·53	4·59	4·93
February ,, . . .												
December, 1842 . . .												
January ,, . . .	4·26	5·66	4·85	0·75	0·00	1·38	3·25	4·53	5·20	4·12	3·69	3·78
February ,, . . .												
Mean of Winter Quarters. }	4·82	5·50	5·31	1·28	0·00	1·48	3·69	5·38	5·84	4·83	4·14	4·35
March, 1841 . . .												
April ,, . . .	9·78	10·52	7·41	1·68	0·00	2·18	5·19	6·71	7·62	7·23	7·45	8·00
May ,, . . .												
March, 1842 . . .												
April ,, . . .	7·93	9·12	6·27	1·01	0·00	1·70	4·03	5·10	5·96	6·08	6·59	7·56
May ,, . . .												
Mean of Spring Quarters. }	8·86	9·82	6·84	1·35	0·00	1·94	4·61	5·91	6·79	6·65	7·02	7·78
June, 1841 . . .												
July ,, . . .	11·69	12·86	7·53	1·07	0·00	2·89	5·53	7·26	8·78	8·20	7·38	7·61
August ,, . . .												
June, 1842 . . .												
July ,, . . .	10·33	11·77	6·75	0·95	0·00	2·91	5·43	7·26	7·09	7·47	5·99	6·80
August ,, . . .												
Mean of Summer Quarters. }	11·01	12·32	7·14	1·01	0·00	2·90	5·48	7·26	7·93	7·83	6·69	7·20
September, 1841 . . .												
October ,, . . .	6·07	7·56	4·87	0·55	0·00	2·66	4·87	6·70	6·09	6·37	6·40	6·47
November ,, . . .												
September, 1842 . . .												
October ,, . . .	6·39	7·78	4·50	0·02	0·00	2·51	4·32	5·75	5·82	5·11	4·19	5·62
November ,, . . .												
Mean of Winter Quarters. }	6·23	7·67	4·69	0·29	0·00	2·59	4·60	6·23	5·96	5·74	5·30	6·05
Mean in 1841 . . .	8·23	9·07	6·39	1·28	0·00	2·32	4·93	6·72	7·24	6·83	6·46	6·75
Mean in 1842 . . .	7·23	8·58	5·59	0·68	0·00	2·13	4·26	5·66	6·02	5·69	5·12	5·94
Mean of 2 Years	7·73	8·83	5·99	0·98	0·00	2·23	4·60	6·19	6·63	6·26	5·79	6·34

We perceive by these Tables, that the mean diurnal variation of the declination at Toronto, as derived from the two-hourly observations of the two years under notice, consists in an easterly movement of the north end of the magnet from 2 to 10 hours inclusive; a small return movement towards the west then taking place till 14 hours; when the easterly progression is resumed, and continues until 20 hours, at which time the north end of the magnet reaches its eastern limit. From 20 hours the movement is continuous towards the west until 2 hours, which is the period of the extreme western limit.

If we examine the variation separately shown in the spring, summer, autumn, and winter quarters of each of the two years, we find that the alternate progression and retrogression, twice in the 24 hours, is manifested severally in all, though with somewhat less regularity in the turning points during the nocturnal hours than when the sun is above the horizon. This inferior degree of regularity during the night occasions in two of the eight quarters under notice the occurrence of a triple maximum and minimum; and in a third quarter, the substitution of 12 for 10 hours, as the time of the nocturnal eastern limit. In the remaining five quarters, the turning hours in the night are the same as those of the mean of the two years. The hours of the *day* at which the easterly and westerly limits are respectively attained are the same in each of the quarters as in the general mean, except in the winter quarter of 1841, when the forenoon easterly limit occurs at 22 instead of 20 hours.

The range of the diurnal variation is throughout greater in the summer than in the winter months: this is particularly the case with the easterly movement from 14 to 20 hours, and the subsequent return. The progressive increase in the extent of this movement may be traced from the midwinter, when it is barely perceptible, to the midsummer, when it is very considerable. In consequence of this inequality, it occasionally happens in the midwinter months that the *evening* eastern limit is the eastern extreme of the whole diurnal range, which is formed at other periods of the year by the *morning* eastern limit.

When we compare the corresponding quarters of 1841 and 1842 with each other, and the general mean in 1841 with that in 1842, we perceive on the one hand a very satisfactory degree of general accord; but, on the other hand, we must remark such partial and occasional differences, as show that a longer period than two years is required to give numerical values at the several observation hours, which we can regard as possessed of a sufficient degree of precision to be adopted as final conclusions.

That this should be the case will not appear surprising when we consider the frequency and occasional magnitude of the disturbances to which the magnetic direction is found to be subject, and of which the laws are as yet unknown to us. Observations at these periods being included in the general mass, must operate to a certain degree in deranging what would otherwise be the more regular diurnal march indicated by the mean positions.

If the disturbances take place without any systematic prevalence at certain hours rather than at others, and with no systematic inequality in regard to direction and amount, their influence should be limited to a lengthening of the time requisite for obtaining accurate mean values of the diurnal variation. But if, on the other hand, systematic inequalities should be found to prevail in those respects, it is obvious that no duration of the observations would eliminate their influence; and the diurnal variation obtained from the whole body of the observations, whatever might be the duration it represented, would include the effects of two distinct phenomena, *viz.*, of the disturbances,—and of the diurnal variation properly so called; these two phenomena having possibly distinct causes, or at least distinct laws. It appeared desirable, therefore, to examine whether the influence of the disturbances on the diurnal variation be of a systematic character, or of one which might in contradistinction be termed accidental; and, if the former, what is the nature of the effect produced on the diurnal variation. For this purpose it was necessary to determine on some arbitrary limits with respect to the normal position of the magnet, within which the great body of the observations should be retained, whilst a comparatively small number falling beyond them should be excluded. The *mean monthly irregular fluctuations*, which had been computed for the several months of 1841 (Observations of unusual Magnetic Disturbance, Pt. 1, Preface, pp. ix. to xiii.), and those for 1842 which have been subsequently computed, appeared to furnish an appropriate and suitable series of quantities for the purpose.\*

\* It may be desirable to repeat here the definition of the mean monthly irregular fluctuation, and the description of the process by which it is obtained. If we represent the declination observed at the several hours on any particular day by  $\psi_0, \psi_2, \psi_4 \dots \psi_{22}$ , (the small figures showing the hours of observation in mean Göttingen time), and the *mean* values at the respective hours in the *month* to which the day belongs, by  $\bar{\psi}_0, \bar{\psi}_2, \bar{\psi}_4 \dots \bar{\psi}_{22}$ , then  $\psi_0 - \bar{\psi}_0$  will be the effect of the irregular disturbing force at 0 hours, which we may represent by  $\nabla \psi_0$ ;  $\psi_2 - \bar{\psi}_2 = \nabla \psi_2$  is the same at 2 hours, and so forth; the regular or diurnal oscillation of the bar being by this process eliminated. The *fluctuation* of the declination due to the irregular action between the observations at 0 and 2 hours will then be  $\nabla \psi_2 - \nabla \psi_0$ , which we may express by  $F(\psi_2)$ ; the fluctuation between the observations at 2 and 4 hours  $\nabla \psi_4 - \nabla \psi_2 = F(\psi_4)$ ; and so forth: and the *mean* irregular fluctuation for the whole day will be  $\overline{F\psi} = \sqrt{\frac{1}{12} \sum (F\psi)^2}$  if the number of observation hours have been 12. In like manner the mean irregular fluctuation for each of the several months in the year will be

$$\overline{F\psi_{Jan.}} = \sqrt{\frac{1}{n} \sum (F\psi_{Jan.})^2}; \quad \overline{F\psi_{Feb.}} = \sqrt{\frac{1}{n} \sum (F\psi_{Feb.})^2}; \quad \&c.$$

and the mean irregular fluctuation for the year (1841 for example) will be

$$\overline{F\psi_{1841}} = \sqrt{\frac{1}{n} \sum (F\psi_{1841})^2}$$

In this notation the horizontal bar over the symbols is employed to signify mean values, the particular kind of mean appearing either from the circumstances, or being denoted by the smaller figures; and the horizontal part of the symbol  $\nabla$  implies the relation to mean values. The notation is equally applicable to the horizontal and vertical force, in both which however the observations require to be corrected for the varying temperature of the magnet before the process is commenced.

Twice the amount of the mean monthly fluctuation in each month was therefore adopted as the quantity, which, added to or subtracted from each of the mean positions in the month at the several observation hours, should give the limits within which observations should be retained. According to the notation employed, the limits are expressed for each of the observation hours respectively in any particular month (January, 1841, for example) by

$$\bar{\psi}_0 \pm 2 \bar{F} \bar{\psi}_{\text{Jan. 1841}}, \quad \bar{\psi}_2 \pm 2 \bar{F} \bar{\psi}_{\text{Jan. 1841}}, \quad \&c. ;$$

all the observations at 0 hours in January, 1841, which exceed  $\bar{\psi}_0 + 2 \bar{F} \bar{\psi}_{\text{Jan. 1841}}$ , and all which fall short of  $\bar{\psi}_0 - 2 \bar{F} \bar{\psi}_{\text{Jan. 1841}}$ , being regarded as disturbed observations.

The values of  $\bar{F} \bar{\psi}$ , in the several months of 1841 and 1842, are as follows:—

	1841		1842	
	Scale Div.	Arc.	Scale Div.	Arc.
January . . .	4·25	3·06	3·53	2·54
February . . .	6·52	4·70	4·41	3·18
March . . .	4·88	3·52	3·62	2·61
April . . .	4·16	3·00	7·47	5·38
May . . .	5·32	3·83	3·08	2·22
June . . .	4·65	3·35	4·60	3·31
July . . .	5·16	3·72	6·08	4·38
August . . .	8·09	5·83	4·12	2·97
September . . .	7·18	5·18	4·59	3·31
October . . .	4·85	3·40	3·35	2·41
November . . .	4·91	3·54	4·04	2·91
December . . .	5·18	3·73	2·20	1·59

Employing the limits thus described as giving the measure of a marked disturbance, we find 130 disturbed observations in a total number of 3652 in 1841, and 140 in a total number of 3726 in 1842. The proportion in each year being nearly the same, or about one observation in 27.

As a knowledge of the days and hours in which the observations thus characterised occurred at Toronto may be useful in furnishing a means of comparison for other observatories, they are shown in the following tables, in which the sign + signifies that the reading of the scale at the hour specified was in excess of the monthly mean at the same hour, and the sign — that it was in defect: + therefore indicates a deflection of the north end of the magnet towards the east, and — towards the west.



TABLE X.

Observation Hours in 1842, at which the Declination differed from the Monthly Mean at the same Hour more than twice the amount of the Mean Monthly irregular Fluctuation.

Mean Gött. Time.		Mean Toronto Time.		+ or -	Mean Gött. Time.		Mean Toronto Time.		+ or -	Mean Gött. Time.		Mean Toronto Time.		+ or -					
Days.	Hours.	Days.	Hours.		Days.	Hours.	Days.	Hours.		Days.	Hours.	Days.	Hours.						
JANUARY.					APRIL.					JULY—continued.					OCTOBER—continued.				
		Dec.			10	22	11	16	+	4	4	3	22	-	4	6	4	0	-
1	0	31	18	-	13	2	12	20	-	4	20	4	14	-	4	8	4	2	-
1	2	31	20	-	14	18	14	12	-	5	20	5	14	-	4	16	4	10	-
1	4	31	22	-	14	20	14	14	+	8	14	8	8	+	13	18	13	12	+
1	6	1	0	-	14	22	14	16	+	8	16	8	10	+	15	14	15	8	+
5	12	5	6	+	15	16	15	10	-	9	14	9	8	+	15	16	15	10	+
15	12	15	6	-	15	20	15	14	+	29	4	28	22	+	17	0	16	18	-
15	16	15	10	+	20	20	20	14	-	29	14	29	8	+	17	22	17	16	+
18	12	18	6	+	MAY.					29	18	31	12	+	18	16	18	10	+
18	14	18	8	+	AUGUST.					24	0	23	18	-	27	4	26	22	-
24	18	24	12	+	3	4	2	22	-	1	14	1	8	-	29	14	29	8	+
28	14	28	8	+	6	6	6	0	-	4	14	4	8	+	NOVEMBER.				
31	18	31	12	+	6	22	6	16	+	5	16	5	10	+	3	14	3	8	+
FEBRUARY.					7	0	6	18	-	5	18	5	12	+	9	14	9	8	+
1	14	1	8	+	10	16	10	10	+	5	20	5	14	+	9	16	9	10	+
7	4	6	22	+	10	18	10	12	-	11	22	11	16	+	10	0	9	18	+
7	10	7	4	+	16	2	15	20	-	13	14	13	8	+	10	18	10	12	+
18	10	18	4	-	16	16	16	10	+	16	14	16	8	+	21	16	21	10	+
18	22	18	16	-	16	22	16	16	-	19	4	18	22	-	21	18	21	12	+
19	2	18	20	-	17	0	16	18	-	19	6	19	0	+	21	20	21	14	+
19	4	18	22	-	24	2	23	20	+	19	10	19	4	+	21	22	21	16	-
20	20	20	14	-	28	16	28	10	+	20	14	20	8	+	22	2	21	20	-
24	6	24	0	-	JUNE.					26	12	26	6	+	22	4	21	22	-
24	10	24	4	-	4	6	4	0	+	SEPTEMBER.					28	22	28	16	+
24	12	24	6	-	4	8	4	2	-	1	22	1	16	+	30	12	30	6	+
24	14	24	8	-	10	2	9	20	+	2	18	2	12	-	DECEMBER.				
MARCH.					10	4	9	22	+	16	2	15	20	-	5	20	5	14	+
2	2	1	20	-	14	0	13	18	-	16	20	16	14	+	7	4	6	22	-
7	14	7	8	+	14	10	14	4	+	21	14	21	8	+	7	12	7	6	+
11	10	11	4	+	22	18	22	12	+	22	14	22	8	+	7	16	7	10	+
15	12	15	6	-	23	18	23	12	-	22	22	22	16	-	7	20	7	14	-
16	4	15	22	+	23	20	23	14	-	28	18	28	12	+	9	12	9	6	-
16	10	16	4	-	25	16	25	10	+	29	20	29	14	-	9	14	9	8	-
16	14	16	8	+	30	18	30	12	+	OCTOBER.					10	16	10	10	+
16	18	16	12	+	JULY.					OCTOBER.					19	22	19	16	-
24	12	24	6	+	1	18	1	12	+	1	6	1	0	+	21	22	21	16	+
29	16	29	10	+	2	8	2	2	+	1	8	1	2	+	29	22	29	16	+
					2	12	2	6	+	4	4	3	22	-	30	2	29	20	-

On examining the published volumes containing the magnetic observations made at Prague and at Greenwich in 1841 and 1842, we find, that about 4-5ths of the hours at which these disturbed observations occurred, were on days when extraordinary observations were made at one or other of those Observatories, or on days marked in M. Kreil's Catalogue as days of considerable magnetic disturbance at Prague.

If we now examine how many of the instances of disturbance were occasioned by causes producing a deflection of the north end of the magnet to the east, and how many to the west, we find, that in 1841 there were 70 instances of easterly deflection, and 60 of westerly; and that in 1842 there were 77 of easterly, and 63 of westerly deflection. The slight preponderance of easterly deflections is due in both years to their excess in the months of July and August. In other respects, the disturbances appear to be distributed throughout the year without any marked inequality either as to number or direction, though it may be noticed, that the number is somewhat higher in October than in the other months. The following Table shows the whole number of these disturbances in the two years, distinguished into easterly and westerly deflections:—

TABLE XI.

	Easterly Deflections.	Westerly Deflections.	Total.
January . . .	11	8	19
February . . .	6	12	18
March . . . .	14	8	22
April . . . .	13	9	22
May . . . . .	10	10	20
June . . . . .	12	9	21
July . . . . .	16	7	23
August . . . .	16	7	23
September . . .	11	12	23
October . . . .	16	15	31
November . . .	13	13	26
December . . .	9	13	22

When, however, we turn our attention to the distribution of the disturbances into the *hours* at which they severally occurred, we are far from finding that approximation to an equality of distribution, which we might expect to find, were there no regulating cause in nature to produce an inequality. The following Table exhibits for 1841 and 1842, the respective numbers of easterly and westerly deflections at the different observation hours.



TABLE XII.

Mean Gt't. Time.	Mean Toronto Time.	Easterly Deflections.		Westerly Deflections.		In the Two Years.		
		1841	1842	1841	1842	Easterly.	Westerly.	Total.
0	18	3	0	10	7	3	17	20
2	20	3	2	15	8	5	23	28
4	22	0	3	6	10	3	16	19
6	0	1	2	2	5	3	7	10
8	2	0	2	3	2	2	5	7
10	4	0	4	0	3	4	3	7
12	6	8	7	3	4	15	7	22
14	8	11	18	3	3	29	6	35
16	10	18	15	1	2	33	3	36
18	12	10	12	1	4	22	5	27
20	14	9	5	7	8	14	15	29
22	16	7	7	9	7	14	16	30

We perceive by this Table, that the hours from 6 to 12 inclusive (Toronto time), are characterised by a great preponderance of *easterly* deflections, and the hours from 18 to 22 inclusive, by a great preponderance of *westerly* deflections: that at the hours of 14 and 16, and 2 and 4, the disturbances are nearly equally divided into easterly and westerly deflections; but that at 2 and 4, the number of disturbances of both kinds is extremely small; whereas at 14 and 16, it is about the usual average.

The causes which produce easterly deflections have their maximum frequency of effect at 10 hours, and those which occasion the westerly deflections, their maximum at 20 hours. The minimum of both occurs nearly at the same hour, *viz.*, about 2 or 4 hours. The progression from the maximum to the minimum in both directions, and in both easterly and westerly deflections, is scarcely interrupted; and wears, therefore, a very strong appearance of being the result of some regular and systematic cause.

We may derive from this investigation the following practical inferences for the instruction of persons who may have occasion to employ the compass in surveying, and other similar purposes in Canada:—

1st. That large deviations from the mean monthly direction of the needle at the same hours are least likely to occur from noon to 4 in the afternoon.

2nd. That at all other hours of the day the liability to the occurrence of deflections, exceeding 5 or 6 minutes from the mean direction at the same hours, is about three times as great as at the hours of 2 and 4 P.M.; at 6 P.M. the liability, as it may be estimated from the two-hourly observations, is about one observation in twenty-eight; and at 8 and 10 P.M. rather greater.

3rd. That the disturbances are usually deflections of the north end of the needle *to the west* in the forenoon, and *to the east* from 6 P.M. to midnight inclusive.

We proceed to the consideration of the effect which the omission of the disturbed

observations would have on the diurnal variation. We must now, however, view the question of their omission in a very different light from what we might have done, had it been found, on examination, that the disturbances had fallen with that approach to equality in their distribution which we might have looked for if there were no regulating cause in nature to determine otherwise. The influence of the disturbances must now be regarded as a regular component part of the diurnal variation itself (mean quantities being considered); since we may infer, from the accordance in the order of their occurrence in 1841 and 1842, that a longer series of observations will only render their systematic character more assured. They now, therefore, pass from the domain of that portion of the observed phenomena to which we give the name of accidental or irregular, (from our present ignorance of the laws which regulate them,) to be classed with the other portion in which we recognise laws of order and succession, though as yet we may not be able to assign either causes, or precise numerical values. On the one hand, we cannot, with propriety, abstract their influence from the diurnal variation, because, though they are only of occasional occurrence, they yet form a permanent and regular part of its *mean* value; diminishing, in mean values, the easterly direction of the north end of the magnet in the forenoon, and increasing it in the evening. On the other hand, it becomes an object of much interest to learn, what portion of the diurnal variation is thus due to what is apparently an effect of a distinct and special cause, and how the residual portion of the variation would be affected by its separation; and this interest is increased when, even on a slight examination, we perceive, that the hours which are chiefly affected by disturbance, are those hours of the night when the continuous and otherwise regular easterly progression of the diurnal variation suffers interruption, occasioning a double, and even sometimes, in the winter months, a triple alternation of easterly and westerly movement.

If we represent the mean values of the declination observed at the several hours in any particular month by  $\bar{\psi}_0, \bar{\psi}_2, \bar{\psi}_4, \&c.$ , and the mean values, omitting the disturbed observations, by  $\bar{\psi}'_0, \bar{\psi}'_2, \bar{\psi}'_4, \&c.$ ; then  $\bar{\psi}_0 - \bar{\psi}'_0, \bar{\psi}_2 - \bar{\psi}'_2, \&c.$ , are the quantities by which the mean values at the several hours suffer alteration by the retention or omission of the disturbed observations. These quantities are given in the subjoined Table for the several months of the years 1841 and 1842; + signifying that the monthly means are increased, or the direction of the north end of the magnet rendered more easterly by the retention and influence of the disturbances; and — that the monthly means are diminished thereby, or the direction of the north end of the magnet rendered more westerly. The quantities are expressed in scale divisions, the value of a scale division being 0.721 of arc.

TABLE XIII.

*Mean Diurnal Influence of the Disturbed Observations on the Declination at Toronto, in the several Months of 1841.*

Hours of Mean } Göttingen Time. }	0	2	4	6	8	10	12	14	16	18	20	22
Hours of Mean } Toronto Time. }	18	20	22	0	2	4	6	8	10	12	14	16
January . . .	-0.36	-0.69	0.00	-0.38	0.00	0.00	0.00	+0.37	+0.93	+0.46	+0.44	0.00
February . . .	+0.73	-1.97	0.00	0.00	0.00	0.00	0.00	+1.21	+2.07	0.00	0.00	0.00
March . . .	0.00	+0.55	-0.60	0.00	0.00	0.00	+0.72	0.00	+0.55	0.00	+0.69	-0.39
April . . .	-0.36	-0.51	0.00	0.00	-0.34	0.00	0.00	+1.00	+1.98	+0.60	-0.37	+0.41
May . . .	+0.74	-1.78	0.00	0.00	0.00	0.00	0.00	+0.43	+0.56	0.00	-0.02	0.00
June . . .	-0.40	+0.08	-1.07	+0.53	0.00	0.00	+0.54	0.00	+0.44	+0.57	-0.60	-0.48
July . . .	-0.43	0.00	0.00	0.00	0.00	0.00	0.00	+0.80	+1.51	+1.60	+0.53	-0.45
August . . .	0.00	-0.90	0.00	0.00	0.00	0.00	+0.47	+2.21	+3.91	0.00	0.00	-0.92
September . . .	-0.09	-1.19	-1.06	0.00	-0.79	0.00	-0.62	+0.10	-0.72	0.00	+0.69	+1.18
October . . .	-0.95	-1.35	0.00	0.00	-0.39	0.00	+0.89	0.00	+0.47	+0.39	+1.61	+0.93
November . . .	-1.74	-0.87	0.00	0.00	0.00	0.00	+0.74	0.00	0.00	+1.04	+0.77	-0.03
December . . .	0.00	-1.36	-1.23	-0.61	0.00	0.00	+1.19	+0.54	0.00	0.00	-0.74	-0.44
Means of the } whole Year }	-0.24	-0.83	-0.33	-0.04	-0.13	0.00	+0.33	+0.56	+0.89	+0.39	+0.25	-0.02

TABLE XIV.

*Mean Diurnal Influence of the Disturbed Observations on the Declination at Toronto, in the several Months of 1842.*

Hours of Mean } Göttingen Time. }	0	2	4	6	8	10	12	14	16	18	20	22
Hours of Mean } Toronto Time. }	18	20	22	0	2	4	6	8	10	12	14	16
January . . .	-0.79	-0.32	-0.41	-0.32	0.00	0.00	+1.06	+0.88	+0.41	+0.64	0.00	0.00
February . . .	0.00	-0.86	-1.14	-0.42	0.00	-0.62	-0.59	-0.35	0.00	0.00	-0.43	-0.66
March . . .	0.00	-0.35	+0.34	0.00	0.00	+0.14	-0.03	+0.73	+0.30	+0.45	0.00	0.00
April . . .	0.00	-0.66	0.00	0.00	0.00	0.00	0.00	0.00	-0.74	-1.76	+0.32	+1.99
May . . .	-0.61	-0.04	-0.39	-0.36	0.00	0.00	0.00	0.00	+1.14	-0.29	+0.02	-0.12
June . . .	-0.51	+0.41	+0.43	+0.49	-0.59	+0.42	0.00	0.00	+0.40	+0.16	-0.42	0.00
July . . .	0.00	0.00	0.00	0.00	+0.66	0.00	+0.55	+2.05	+0.86	+1.79	-1.31	0.00
August . . .	0.00	0.00	-0.36	-0.49	0.00	+0.51	+0.41	+1.58	+0.45	+0.47	+0.31	-0.44
September . . .	0.00	-0.54	0.00	0.00	0.00	0.00	0.00	+1.05	0.00	+0.15	+0.04	+0.29
October . . .	-0.62	0.00	-0.62	0.00	+0.03	0.00	0.00	+0.66	+0.65	+0.29	0.00	-0.35
November . . .	-0.55	-0.78	-0.45	0.00	0.00	0.00	+0.44	+0.71	+1.39	+0.94	-0.71	-0.10
December . . .	0.00	-0.26	-0.20	0.00	0.00	0.00	+0.04	-0.18	+0.87	0.00	+0.16	+0.20
Means of the } whole Year }	-0.26	-0.29	-0.23	-0.09	+0.01	+0.04	+0.15	+0.60	+0.48	+0.24	-0.17	+0.07

MEAN OF THE TWO YEARS.

In Scale } Divisions. }	-0.25	-0.56	-0.28	-0.07	-0.06	+0.02	+0.24	+0.58	+0.68	+0.31	+0.04	+0.02
In Arc . . .	-0.18	-0.40	-0.20	-0.05	-0.04	+0.01	+0.17	+0.41	+0.49	+0.22	+0.03	+0.02

We learn by this investigation, that on the average of the two years the mean diurnal effect of the disturbed observations is as follows, *viz.*, commencing from the early part of the afternoon when their influence is scarcely sensible, they cause an easterly deflection, increasing in amount until 10 hours, when the mean declination deduced from the whole body of the observations is, on the average, 0'49 more easterly than it would be if the disturbed observations were not taken into the account. The easterly disturbance then diminishes and passes into westerly at (about) 16 hours, the westerly deflection continuing to increase until 20 hours, at which hour, on the average of the two years, the declination is 0'40 more westerly than it would have been without the disturbed observations. From 20 hours the westerly deflection rapidly diminishes and disappears between 2 and 4 in the afternoon.

Table XV. gives a comparative view of the mean diurnal variation when the disturbed observations are retained, and, when they are omitted. In both cases, the extreme westerly limit of the direction of the north end of the magnet occurs at 2<sup>h</sup>, and is taken as zero. The extreme easterly limit is at 20<sup>h</sup>, and is 0'36 more easterly when the disturbed observations are omitted than when they are retained, showing that the total range of the diurnal variation is slightly diminished at Toronto by the influence of the disturbances.

In examining the march from one observation hour to the next, shown in the column entitled "differences," the chief diversity between the results when the disturbed observations are retained, and when they are omitted, falls in the vicinity of the hour of 10. At that hour the magnet, when all the observations are retained, reaches the high easterly position of 6'63 (in reference to its western limit assumed as zero), and then retrogrades until 14<sup>h</sup>, when it is at 5'79, a difference of 0'84. When the disturbed observations are omitted, the easterly maximum at 10<sup>h</sup> is considerably less, being represented by 6'10; the interruption of the easterly march by a westerly retrogression is still found to take place, but it is reduced in amount more than half, the difference between 10<sup>h</sup> and 14<sup>h</sup> being 0'38, instead of 0'84.

It appears probable, therefore, that if a mode were devised of separating the whole effect of the cause, or causes, which produce disturbances of this systematic character, the westerly retrogression at the hours of 12 and 14 might disappear altogether, and the residual diurnal variation would then become a single progression. We perceive, in fact, that the westerly retrogression at 10 and 14 hours is, in great part, assuredly occasioned by the easterly excess superinduced by the disturbances at the hours of 6, 8, and 10. We cannot suppose, that by the exclusion of the observations which, from exceeding the limits of twice the mean monthly fluctuation, are characterised as of marked disturbance, we have eliminated the whole influence of the disturbing causes. These probably affect, though in a minor degree, many of the observations which fall within the assigned limits. The process which has been here adopted, is suited to make known the character, rather than to give the amount of the disturbance which they occasion; and there can be little doubt that we do not obtain by it the whole effect of the disturbing cause.

TABLE XV.

*Comparative View of the Mean Diurnal Variation when the Disturbed Observations are retained, and when they are omitted.*

The sign + in the column of Differences implies, that the Movement of the North End of the Magnet is towards the East from one Observation Hour to the next; and - that the Movement is towards the West.

Hours.	Mean Toronto Time.	Retaining the Disturbed Observations.		Omitting the Disturbed Observations.	
			Diff.		Diff.
18	7.73	+1.39	7.87	+1.59	
20	8.83	+1.10	9.19	+1.32	
22	5.99	-2.84	6.15	-3.04	
0	0.98	-5.01	0.99	-5.16	
2	0.00	-0.98	0.00	-0.99	
4	2.23	+2.23	2.18	+2.18	
6	4.60	+2.37	4.39	+2.21	
8	6.19	+1.59	5.74	+1.35	
10	6.63	+0.44	6.10	+0.36	
12	6.26	-0.37	6.04	-0.06	
14	5.79	-0.47	5.72	-0.32	
16	6.34	+0.55	6.28	+0.56	

The declinometer observations having been made *hourly* in the last six months of 1842, are capable of affording additional evidence of the systematic occurrence and character of the disturbances. With this view the disturbed observations at the alternate, or uneven hours of Göttingen time, have been marked in the mode already described, and the hours of their occurrence are specified in the following Table:—

TABLE XVI.

*Alternate or uneven Hours of Mean Göttingen Time in the last Six Months of 1842, at which the Declination differed from the Monthly Mean at the same hour more than twice the amount of the Mean Monthly Fluctuation.*

Mean Gött. Time.		+ or -	Mean Toronto Time.		+ or -	Mean Gött. Time.		+ or -	Mean Toronto Time.		+ or -	Mean Gött. Time.		+ or -	Mean Toronto Time.		+ or -						
Days	Hours.		Days	Hours.		Days	Hours.		Days	Hours.		Days	Hours.		Days	Hours.		Days	Hours.	Days	Hours.		
<b>JULY.</b>						<b>AUGUST—continued.</b>						<b>OCTOBER—continued.</b>						<b>NOVEMBER—continued.</b>					
1	21		1	15	+	8	21		8	15	-	3	15		3	9	-	20	19		20	13	-
1	23		1	17	+	19	1		18	19	+	3	23		3	17	-	21	15		21	9	+
3	19		3	13	-	19	5		18	23	+	4	7		4	1	-	21	17		21	11	+
4	1		3	19	-	<b>SEPTEMBER.</b>						4	13		4	7	-	22	3		21	21	-
4	3		3	21	-							4	17		4	11	-	22	17		22	11	+
4	23		4	17	-	<b>OCTOBER.</b>						4	19		4	13	-	<b>DECEMBER.</b>					
8	17		8	11	+							13	9		13	3	-						
8	19		8	13	+	13	17		13	11	+	5	21		5	15	+						
9	1		8	19	-	15	15		15	9	+	6	1		5	19	-						
10	23		10	17	-	17	15		17	9	+	7	5		6	23	-						
11	1		10	19	-	5	21		5	15	-	9	9		9	3	-						
15	17		15	11	+	16	19		16	13	+	9	11		9	5	-						
<b>AUGUST.</b>						16	23		16	17	+	9	11		9	5	-	14	23		14	17	-
						28	17		28	11	+	26	13		26	7	+	29	7		29	1	-
<b>OCTOBER.</b>						27	1		26	19	-	26	7		26	1	+	29	21		29	15	-
						27	13		27	7	+	27	1		26	19	-	32	21		32	15	-
<b>NOVEMBER.</b>						27	13		27	7	+	27	13		27	7	+	32	23		32	17	+
						30	21		30	15	-	30	21		30	15	-						
1	15		1	9	-	<b>NOVEMBER.</b>						9	23		9	17	+						
4	17		4	11	+							10	1		9	19	-						
4	23		4	17	-	1	9		1	3	+												
5	19		5	13	-	1	17		1	11	+												
6	13		6	7	+	2	23		2	17	-												

The following Table shows the whole number of the disturbed observations occurring in the six months of hourly observation, from July to December 1842 inclusive, distinguishing the easterly from the westerly deflections :—

TABLE XVII.

MONTHS.	Values of $2F\psi$ .	Easterly Deflections.	Westerly Deflections.	Total Number.
	Sc. Div.			
July . . .	12.16	14	10	24
August . . .	8.24	12	9	21
September . . .	9.18	10	5	15
October . . .	6.70	17	18	35
November . . .	8.08	12	8	20
December . . .	4.40	9	14	23
Total . . .		74	64	138
The Numbers derived from the Two-Hourly Observations in 1841 were . . .		70	60	130
Ditto in 1842 . . .		77	63	140

In the next Table is shown the number of disturbed observations at the several hours in the months from July to December 1842 inclusive.

TABLE XVIII.

Mean Gött. Time.	Mean Toronto Time.	Easterly Deflections.	Westerly Deflections.	Total.	Mean Gött. Time.	Mean Toronto Time.	Easterly Deflections.	Westerly Deflections.	Total.
H.	H.				H.	H.			
0	18	0	3	3	12	6	4	1	5
1	19	1	6	7	13	7	4	1	5
2	20	0	3	3	14	8	13	2	15
3	21	0	2	2	15	9	4	2	6
4	22	1	6	7	16	10	9	1	10
5	23	0	2	2	17	11	8	1	9
6	0	1	2	3	18	12	7	1	8
7	1	2	2	4	19	13	2	4	6
8	2	2	1	3	20	14	3	5	8
9	3	1	2	3	21	15	3	5	8
10	4	1	0	1	22	16	4	5	9
11	5	0	1	1	23	17	4	6	10

The hours from 6 to 12, Toronto time, have a decided predominance of easterly deflections; those from 18 to 23 hours, a predominance of westerly deflections; from noon to 5 hours inclusive, the deflections are nearly equally distributed into easterly and westerly, but the whole number is small; from 13 to 17 hours inclusive, the number

of disturbances at each hour does not differ materially from the general average number, and there is no marked inequality in their distribution into easterly and westerly deflections.

The mean diurnal effect of the disturbed observations on the direction of the declination magnet at the several hours of observation is shown in the following Table, in which the sign + prefixed signifies that the north end of the magnet was rendered more easterly by the disturbances; and the sign — that the north end was rendered more westerly by them.

TABLE XIX.

Mean Gött. Time.	Mean Toronto Time.	Mean Diurnal Effect of the Disturbed Observations.	Mean Gött. Time.	Mean Toronto Time.	Mean Diurnal Effect of the Disturbed Observations.	Mean Gött. Time.	Mean Toronto Time.	Mean Diurnal Effect of the Disturbed Observations.
H.	H.	Sc. Div.	H.	H.	Sc. Div.	H.	H.	Sc. Div.
0	18	-0.19	8	2	+0.11	16	10	+0.70
1	19	-0.43	9	3	-0.05	17	11	+0.79
2	20	-0.26	10	4	+0.09	18	12	+0.61
3	21	-0.24	11	5	-0.06	19	13	-0.16
4	22	-0.27	12	6	+0.24	20	14	-0.25
5	23	-0.19	13	7	+0.21	21	15	+0.08
6	0	-0.08	14	8	+0.98	22	16	-0.07
7	1	+0.04	15	9	+0.15	23	17	0.00

Table XX. shows the mean diurnal variation with and without the disturbed observations expressed in arc-values; with the differences from one observation hour to the next. The extreme westerly position of the north end of the magnet is in both cases taken as the zero. The sign + in the column of differences signifies that the north end of the magnet had moved since the preceding hour to the eastward, and — to the westward.

TABLE XX.

Toronto Time.	Retaining the Disturbed Observations.		Omitting the Disturbed Observations.		Toronto Time.	Retaining the Disturbed Observations.		Omitting the Disturbed Observations.	
H.	'	Diffs.	'	Diffs.	H.	'	Diffs.	'	Diffs.
18	7.45	+0.74	7.61	+0.87	6	5.24	+1.33	5.10	+1.11
19	8.54	+1.09	8.88	+1.27	7	5.44	+0.20	5.32	+0.22
20	8.91	+0.37	9.13	+1.25	8	6.42	+0.98	5.75	+0.43
21	7.87	-1.04	8.07	-1.06	9	5.88	-0.54	5.80	+0.05
22	5.38	-2.49	5.50	-2.57	10	6.34	+0.46	5.86	+0.06
23	2.57	-2.81	2.73	-2.77	11	6.35	+0.01	5.80	-0.06
0	0.59	-1.98	0.68	-2.05	12	5.95	-0.40	5.54	-0.26
1	0.00	-0.59	0.00	-0.68	13	5.11	-0.84	5.25	-0.29
2	0.36	+0.36	0.31	+0.31	14	4.85	-0.26	5.06	-0.19
3	1.64	+1.28	1.71	+1.40	15	5.49	+0.64	5.46	+0.40
4	2.91	+1.27	2.87	+1.16	16	5.92	+0.43	6.00	+0.54
5	3.91	+1.00	3.99	+1.12	17	6.71	+0.79	6.74	+0.74

It will be seen, that the conclusions in regard to the influence of the disturbances furnished by the hourly observations in the last six months of 1842, differ in no respect from those afforded by the two-hourly observations in the whole period comprising 1841 and 1842. Their chief effect was to render the mean position of the north end of the magnet more westerly from 19 to 22 hours, and more easterly from 8 to 12 hours; and, by the latter circumstance, to augment materially, if not altogether to occasion, the return to the westward, which usually appears in the diurnal variation of the declination between the hours of 10 and 14. If the disturbed observations in the last six months of hourly observations in 1842 were omitted, the westerly retrogression would be reduced in amount from 1'57 to 0'80; and, if we suppose these marked instances to represent about half the total effect of the disturbing causes, then, by the elimination of the whole effect, the westerly retrogression would disappear altogether.

The systematic character of the influence of the disturbed observations on the mean diurnal variation of the declination is frequently shown with great clearness in the observations even of a single month: November 1842, may be given as an example.

TABLE XXI.

*Mean Diurnal Influence of the disturbed Observations in November, 1842.*

+ signifies an Easterly Deflection, and — a Westerly.

Toronto Time.	Mean Diurnal Influence.	Toronto Time.	Mean Diurnal Influence.	Toronto Time.	Mean Diurnal Influence.	Toronto Time.	Mean Diurnal Influence.
H.	Sc. Div.	H.	Sc. Div.	H.	Sc. Div.	H.	Sc. Div.
18	-0.55	0	0.00	6	+0.44	12	+0.95
19	-0.85	1	0.00	7	0.00	13	-0.37
20	-0.78	2	0.00	8	+0.72	14	-0.71
21	-0.68	3	0.00	9	+0.43	15	0.00
22	-0.45	4	0.00	10	+1.39	16	-0.10
23	-0.00	5	0.00	11	+0.99	17	+0.58

*General Remarks.*—On a review of the discussion to which the disturbances of the declination have been subjected, it appears, that if we found our conclusions on an examination of that portion of the disturbed observations which exceeds a certain limit on either side of the mean direction of the magnet in the same month and at the same hour, we find—

1st. That the proportion in point of numbers which the observations thus marked as disturbed bear to the whole body, is about 1 in 27; that they occur without any very marked inequality in their distribution in the several months of the year; and that, (referring always to the north end of the magnet,) easterly deflections rather predominate on the whole over westerly, being, in 1841, in the proportion of 70 easterly to 60 westerly; and, in 1842, of 77 easterly to 63 westerly.



2nd. That the disturbances are found to follow a certain order, both as to number and direction, connected with the hours of the day. The easterly deflections have a maximum, both of frequency and effect, at 10 in the evening; and the westerly, at 8 in the morning. Easterly and westerly deflections both have their minimum about the same part of the day, *viz.*, 2 and 4 in the afternoon. The progression from the maximum to the minimum, and from the minimum to the maximum, both of the easterly and westerly deflections, is continuous.

3rd. That the deflections produced by the disturbances, in conformity with this law, are of sufficient magnitude and regularity of occurrence, to constitute a recognizable and systematic component part of the mean diurnal variation obtained from observations of a month's continuance, or more. By their action,—(1°) the total range of the diurnal variation is diminished, in consequence of the occurrence of their westerly maximum coincident with the extreme easterly elongation of the magnet, which takes place at 8 in the morning; whilst its extreme westerly elongation at 2 in the afternoon, is left undisturbed:—(2°) by their easterly maximum of deflection at 10 P.M. (together with the increasing prevalence of easterly deflections at the previous hours of 6 and 8), there is superinduced an excess of easterly direction at those hours, which appears to be in great measure the cause of the westerly retrogression of the magnet at the succeeding hours of midnight and 2 A.M.; and we are thus led to infer the probability, that if the whole effect of the disturbing cause, or causes, could be eliminated, the residual portion of the diurnal variation might appear as a single progression with but one maximum and one minimum in the 24 hours.

The connexion which thus appears between the systematic operation of the disturbances, and the occurrence of a double progression in the diurnal variation, would lead to an important inference in regard to the disturbances themselves, to which it may be well to advert, in order that the subject may receive further examination by the observations of other Observatories. The hours of the night at which the otherwise continuous easterly march of the diurnal variation is interrupted, appear to be the same, or very nearly the same, at all the Observatories at which results have yet been published. If this interruption be either wholly, or in great measure, occasioned by the influence of the disturbances, operating in a systematic manner as they are found to do at Toronto, the deflections which they produce at other stations must also have a similar systematic character, and be connected, as those of Toronto are, with the hour of the day at the particular station.

We should, in such case, arrive at the important conclusion, that whilst the disturbances must be attributed to general causes, inasmuch as they are found to prevail on the same days in different and very remote parts of the globe,—it must also be recognised, that their operation in every particular locality, is regulated by a law which respects the hours of the place.

HORIZONTAL FORCE.

*In Absolute Measure.*—The original instructions of the Royal Society contemplated that the determination of the horizontal intensity in absolute measure should be made monthly, with the same instrument which was used in the measurement of the declination and its changes; and no separate instrument was provided for the purpose. In conformity with this direction determinations were made, with occasional exceptions, up to September, 1841, when they were discontinued, partly on account of the interruption and derangement which they were found to occasion in the regular series of observations of the declination, and partly because the measurements of the horizontal intensity in the different months presented discordances of such magnitude, as to show the necessity either of a modification in the mode of observation, or of a new instrument being furnished more specially adapted for the purpose. Both these desiderata have been since supplied in the unifilar magnetometer, and in the directions for its use contained in Lieutenant Riddell's volume of Instructions. The observations with the last named instrument, however, do not fall within the period now under notice.

The subjoined Table contains the particulars of nine determinations made with the declinometer between October, 1840, and September, 1841. To these are added four

TABLE XXII.

MEAN GÖTTINGEN TIME.		Deflecting Magnet.	DEFLECTIONS.						VIBRATIONS.		TEMP. OF MAGNET.		BIFILAR.		RESULTS.		
			DISTANCES.			ANGLES.			Observed Times.	No.	During Deflect.	During Vibrat.	During Deflect.	During Vib.†	m	X	
D.	H.		Feet.	Feet.	Feet.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.			°	Sc. Div.	Sc. Div.			
1840.	Oct. 16	0	D.	5·1270	8·8804	—	195·68	37·84	—	15·9544	210	—	—	—	—	9·755	3·491
	Oct. 23	0	D.	6·2004	8·8900	—	107·37	36·49	—	15·9447	160	—	—	—	—	9·606	3·556
	Nov. 6	0	D.	5·6240	8·8670	—	142·72	36·71	—	15·9377	236	—	—	*	—	9·614	3·560
1841.	Feb. 9	1	D.	5·5441	8·7108	—	141·30	37·58	—	16·2536	276	—	41·0	417·7	432·9	9·351	3·514
	Mar. 16	6	D.	5·7467	8·8008	—	129·09	36·30	—	16·2601	188	—	41·2	425·9	458·3	9·262	3·540
	Apr. 28	6	D.	5·7467	8·8008	—	127·91	35·92	—	16·3375	200	—	58·0	445·3	440·0	9·178	3·549
	July 30	6	D.	5·7467	8·8008	—	129·22	35·74	—	16·3252	210	—	66·5	405·9	406·8	9·108	3·580
	Aug. 25	8	D.	5·7467	8·8008	—	127·52	35·70	—	16·3100	170	—	72·5	379·8	421·9	9·142	3·564
	Sept. 30	6	D.	5·7467	8·8008	—	127·97	35·84	—	16·4081	210	—	59·1	384·9	399·0	9·108	3·537
1842.	Oct. 28	0	IX.	1·3437	1·5437	1·8562	9 39·23	6 27·70	3 44·45	6·4983	—	50·0	51·0	—	—	0·748	3·511
	Oct. 28	0	13	1·3371	1·5371	1·8629	10 24·50	6 53·21	3 53·97	6·7072	306	50·5	47·0	—	—	0·777	3·529
	Dec. 19	0	13	1·3371	1·5371	1·8629	10 22·65	6 52·70	3 53·20	6·6755	—	33·5	32·0	—	—	0·780	3·547
	Dec. 19	0	IX.	1·3437	1·5437	1·8562	9 43·45	6 28·05	3 44·30	6·4884	—	32·5	33·0	—	—	0·744	3·540

\* In this experiment, the difference in the earth's horizontal force during the deflections and during the vibrations was measured by the difference of the times of horizontal vibration of a magnet; the times were, 11'·178 during the deflections, and 11'·177 during the vibrations.

† Corrected for temperature.

other determinations made in October and December, 1842, with one of Weber's transportable magnetometers, described in No. VIII. of Taylor's Scientific Memoirs, which had been obtained from Meyerstein of Göttingen, and taken to Toronto by Lieutenant Lefroy, who left England in the summer of 1842 to take charge of that Observatory. The whole of the results are uncorrected for the difference in the magnetic moment of the deflecting bar, produced by the earth's inducing action in the different positions in which the bar is placed in the experiments of deflection and in those of vibration. The data for this correction are yet unsupplied.

*Remarks on Table XXII.*—The magnets of the horizontal and vertical force magnetometers were removed from the Observatory during the first three determinations; their distances from the declinometer were respectively about 42 and 20 feet, and their influence was inappreciable in regard to these results. The times of vibration of magnet D, inserted in the Table, are the observed or uncorrected values. The corrections for rate and torsion, and, when the necessary data had been recorded, those for changes of temperature and horizontal force, have been included in the calculation of the results. The moment of inertia of magnet D has been calculated by the formula

$$K = \frac{a^2 + b^2}{12} M$$

in which  $a$  denotes the length of the bar, 1·2550 feet;  $b$  its breadth, 0·07292 feet; and  $M$  its mass, 6692·3 grains. The moment of inertia of the smaller magnets IX. and 13 were obtained experimentally, by observing the times of vibration with the addition of cylindrical weights, as described in p. 23 of the Instructions of the Royal Society. The moment of magnet IX. was determined by the mean of three separate experiments; that of No. 13 by the mean of four. The angles of deflection (or differences of scale readings corresponding to them), inserted in the table, were rendered independent, or nearly so, of declination changes, by taking at least four readings of the scale with the magnets on either side of the instrument, the north end of the magnet alternately east and west; the agreement, or otherwise, of the two partial results obtained for each position of the centre of the magnet, furnished a test of the probable accuracy of the observation, and indicated when a larger number of readings were required.

The computed values of  $X$ . in the final column of Table XXII. are those of the horizontal intensity in absolute measure, subject to the correction already noticed for the difference in the magnetic moment of the bar in its two positions produced by the earth's inducing action. The values of  $X$ . express (subject to this correction),\* “the ratio which the force of the earth's magnetism bears to the *unit of force*, the unit of force being that which, acting on the unit of *mass*, through the unit of *time*, generates

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\* Revised Instructions of the Royal Society, p. 25.

in it the unit of *velocity*. For the unit of mass, we take a *grain*; for the unit of time, a *second*; and, if a *foot* be taken as the unit of space, the unit of velocity will be that of one foot per second. As the magnetic force operates effectively only on the free or uncombined elements of the magnetic fluid, we are to understand by the earth's magnetic force, its action on the elementary unit of free magnetism; and we must take for that unit the quantity of free magnetism, which acting on another equal quantity at the unit of distance, exerts an effect equal to the unit of force already defined."

*Bifilar Magnetometer*.—The principal use for which this instrument was designed, and for which it has been employed, is in observing the variations in intensity of the horizontal part of the earth's magnetic force. By the principle of its construction, described in p. 24 of the Royal Society's Instructions, it serves to determine the moment of the force exerted by the earth upon the free magnetism of the suspended bar. This force ( $F$ ) is the product of the horizontal part ( $X$ ) of the earth's magnetic force into the moment ( $m$ ) of the free magnetism of the bar. The variations of  $m$  (as well as of  $X$ ), are therefore involved in the result, and must be eliminated before the true changes of the earth's magnetic force can be obtained. Now the magnetic moment of the bar varies with its temperature, and the coefficient ( $g$ ) representing the relative change corresponding to  $1^\circ$  of Fahrenheit, (assumed as constant within the limits of the natural temperature,) requires to be determined for the particular bar which is employed, as it is found to vary considerably in different magnets. The value of this coefficient for the bar in use in the bifilar magnetometer in the years 1841 and 1842, was determined in February, 1843, in the manner directed in the Revised Instructions of the Royal Society, pp. 38 to 41. The deflections were observed with a spare unifilar magnetometer in a detached building; the declinometer and bifilar magnetometer of the Observatory being observed simultaneously, in order to obtain the intermediate changes of declination and horizontal force. The bar, whose temperature correction it was desired to examine, was used as a deflecting magnet, and was placed in a copper trough filled with water, with its centre at a distance of about 4.9 feet from the centre of the suspended magnet. The temperature of the water was made to vary between  $32^\circ$  and  $90^\circ$ , and readings of the several instruments were taken at intervals of about  $20^\circ$ . The accordance of the different sets is hardly as perfect as could be wished, owing to the smallness of the angles of deflection employed, by reason of which the differences of scale readings occasioned by even large differences of temperature were too small in reference to the probable errors of observation. Cases even occurred in which the influence of obvious errors produced discordances of such magnitude as to occasion the rejection of the series to which they belonged. The tables which are subjoined fully explain the mode of observation, and show the results obtained. A similar series had been made with the same magnet in December, 1840, giving a

mean result of 0.00024; in this series the angles of deflection were little more than half the amount of those in February, 1843, and the results are proportionally inferior in value. A more precise determination than either of those now given may be expected to accompany the observations of succeeding years, as the Observatory is now supplied with a small unifilar magnetometer, having a scale of 2000 divisions; as well as with a portable unifilar magnetometer, with which angles of deflection of any extent may be observed on Lamont's principle.

TABLE XXIII.

FEBRUARY 22<sup>nd</sup>, 1843. *Experiments to determine the Temperature Coefficient of Magnet (2.) Ratio of the angular value of the Declinometer and Unifilar Scales 1.035. Reading of the Unifilar Scale before deflection 314.7. Coefficient of the Bifilar Magnetometer  $k = 0.000152$ : increasing numbers denote decreasing force.*

THERMOMETER. .		UNIFILAR.			SPARE DECLINOMETER.			BIFILAR.	
Readings.	Differences.	Readings.	Corrected Readings.	Differences.	Readings.	Differences.	Difference in Unifilar Scale.	Readings.	Differences.
°		Sc. Div.	Sc. Div.		Sc. Div.			Sc. Div.	
32.8	°	73.63	73.63	0.60	123.07	—	—	476.8	
53.0	20.2	74.21	74.23	1.70	123.05	+0.02	+0.02	475.6	-1.2
72.9	19.9	76.22	75.93	1.28	123.35	-0.28	-0.29	474.4	-1.2
90.8	17.9	77.56	77.21	1.18	123.41	-0.34	-0.35	474.0	-0.4
71.9	18.9	77.87	76.03	1.50	124.85	-1.78	-1.84	475.3	-1.3
52.5	19.4	77.47	74.53	1.15	125.92	-2.85	-2.94	474.3	+1.0
32.9	19.6	76.30	73.38		125.90	-2.83	-2.92	472.2	+2.1
	115.9			7.41					-1.0

$$q = \frac{7.41}{115.9 \times (314.7 - 75.4)} - \frac{1.0 \times 0.000152}{115.9} = 0.000266$$

The entries in the columns headed "readings" are each the mean of three observations at intervals of five minutes, the temperature being retained as nearly uniform as possible. The readings of the bifilar magnetometer are presumed to have been corrected for changes of temperature, though it is not expressly stated in the report received from the Observatory that they were so. The signs in the columns of differences denote the manner in which the several corrections are to be applied: in the case of the bifilar they refer to the direction in which the temperature of the deflecting magnet is changing, as well as to the change of force.

TABLE XXIV.

*Abstract of Six Experiments similar to the foregoing, made in February, 1843, to determine the Temperature Coefficient of Magnet (2.)*

1843	Total Deflections.	Sums of the Diffs. of Temperature.	Sums of the Diffs. of Deflection.	Sums of the Bifilar Corrections.	Results.	No. of Diffs. in the Series.
February 16 .	Sc. Div. 240·5	° 53·6	Sc. Div. 2·53	Sc. Div. +1·8	·000201	3
„ 16 .	239·3	54·5	3·45	+2·5	·000271	3
„ 18 .	240·3	109·9	6·31	+0·7	·000240	6
„ 18 .	238·3	111·8	6·27	-6·1	·000227	6
„ 20 .	244·0	104·4	7·35	-4·0	·000283	6
„ 22 .	239·3	115·9	7·41	-1·0	·000266	6
				Mean .	·000248	

If the two series on the 16th are considered as forming together one series of equal weight with each of the others, the mean becomes ·000250, which may be regarded as the mean result of the whole experiments at this period. The value thus obtained requires a correction for the effects of temperature upon the suspending wires, and upon the wheel and screw which determine their interval; their dimensions being increased by an augmentation of heat, and the directive force therefore altered. The correction is  $+2e - e'$ ,  $e$  denoting the coefficient of the expansion of brass, and  $e'$  that of silver, the metals of which the wheel and screw, and the suspending wires, are formed. The approximate numerical value of  $2e - e'$  is ·000010. Hence the whole effect of temperature will be corrected by taking

$$q = \frac{\text{change of force for } 1^{\circ} \text{ Fah}^{\circ}}{\text{whole force}} = \cdot 000260$$

The magnetic moment of the bar is also liable to vary from persistent changes which may take place in the amount of its free magnetism. The instructions of the Royal Society directed that observations to determine this amount should be made once in every month, and this direction was complied with in the first seven months of 1841. For this purpose it was necessary to remove the magnet temporarily from its suspension in the bifilar apparatus, replacing it after the necessary experiments had been made with it. It was, however, soon found that this could not be done without at the same time occasioning a discontinuity in the series of the intensity changes; the difference between the scale readings before and after the displacement being in many instances greater than could be ascribed with probability to changes in the earth's magnetic force. The magnet was removed on February 11, March 16, April 30, May 31, June 30, and July 31, 1841; the removal and replacement were always made with the utmost care, and, as was believed, without any alterations in the relative positions of the mirror and of

the plane of detorsion; nevertheless undue changes in the readings of the scale appeared on replacement, and in February the change was of so large an amount as to occasion a new adjustment. It was thus obvious, that the monthly removal of the magnet produced the very evil against which it was designed to guard; namely, the non-comparability of the results *inter se*; and that it was therefore inexpedient to adhere to the instructions in this respect. A series, in which the observations of each month should be disconnected from those of the preceding and following months, could yield no results, except in reference to the diurnal variation and to irregular fluctuations. These would equally be determined by a bar which should remain stationary, although its magnetism might not continue altogether unimpaired. Nothing whatsoever could be accomplished towards a knowledge either of the annual or of the secular changes by a bar removed monthly; but one untouched and undisturbed for many months *might* be available towards those determinations, if its magnetic moment on examination at the close of the series should be found unimpaired. A more certain and effective mode of obtaining the objects proposed by the instructions of the Royal Society was to provide an additional instrument, capable of determining the absolute horizontal intensity from one short interval to another, with a sufficient degree of accuracy to make known, by comparison with some one reading of the bifilar magnetometer at some one temperature of its magnet, the change, if any, which might take place in the magnetic moment of the bar. This is now done by observations made monthly with a small unifilar magnetometer. The additional precaution is also taken of keeping a small bifilar magnetometer in permanent adjustment, and observing it daily at some one of the observation hours simultaneously with the larger instrument. The strict intercomparability of the observations in the present volume subsequent to the 31st July 1841, which was the date of the last monthly removal of the bifilar bar, has not the advantage of being thus assured, because the necessity of this verification was not foreseen at the time of the establishment of the Observatories, and they were not provided with suitable instruments for the purpose until a later period.

The adjustments of the bifilar magnetometer were made in exact conformity with the instructions of the Royal Society, except that the collimator tube and stirrup, which had been used in the temporary Observatory in the earlier months of 1840, were removed at the first adjustment in the permanent Observatory, and a scale and mirror substituted; the range of the collimator scale having been found insufficient to meet occasional fluctuations of the force. On the 31st December, 1840, the magnet No. 2 was placed in the apparatus. The value of  $v$ , the angle through which the torsion circle required to be moved in order to deflect the magnet into a position at right angles to the magnetic meridian, was found to be  $56^{\circ} 30'$ ; the arc value (in parts of radius),  $\alpha$ , corresponding to a single division of the scale, was found =  $0.00011434$  by very careful

measurement of the magnitude of the divisions, and of the distance from the face of the scale to the face of the mirror; whence the value of one scale division in parts of the horizontal force was

$$k = 0.00011434 \times \cot. 56^\circ 30' = 0.0000757.$$

On the 11th February, 1841, the magnet having been removed in order to ascertain its magnetic moment, the reading of the scale on its replacement was 334.0, the reading before the removal having been 435.6; the process of adjustment was therefore again repeated, the value of  $v$  found  $56^\circ 59'$ , and  $k = 0.0000743$ .

The magnet was again removed for the same purpose March 16, April 30, May 31, June 30, and July 31. The experiments were completed, and the magnet replaced, in the interval between one observation hour and the next, with every care to avoid disturbance either of the mirror or of the plane of detorsion; but as the differences of the scale readings before and after the removals appeared in almost every instance to indicate that an undue alteration had taken place, the observations in the different monthly intervals during this period can only be viewed as forming separate and unconnected series.

No removal of the magnet or readjustment of the apparatus took place between the 1st August, 1841, and the close of the year 1842. The observations of this interval are therefore connected with each other and comparable, except on account of possible loss of magnetism in the bar, or stretching of the suspension wire; and though it appears probable that very little, if any, change took place from either of these causes, still it is a point on which certainty cannot be obtained, as at that time the Observatory was not provided with instruments capable of determining the absolute intensity with sufficient precision to supply the necessary test.

*Secular Change.*—From the 1st of January to the 30th of July, 1841, the magnet having been occasionally removed, and the connection thereby broken, the observations are not available for the determination of secular change; but from the 1st of August, 1841, to the end of 1842, the magnet having been undisturbed, the series is unbroken, and liable to no disqualification, except such as may arise from the causes already noticed, *viz.*, possible change in the magnetism of the bar, or possible stretching of the suspension wire.

In the following Table the observations, two-hourly in 1841 and in the first six months of 1842, and hourly in the last six months of 1842, are collected into fortnightly means. These are given in scale divisions as they were observed, and correspond to the temperatures placed in the succeeding column; they are also given in subsequent columns (still in scale divisions), reduced to a uniform temperature of  $32^\circ$ .



TABLE XXV.

*Fortnightly Means of the Observations of the Horizontal Force.*

PERIODS.	1841		1842		Scale Divisions at 32° F.		Increase of Force in one Year.
	Scale Div.	Temperature.	Scale Div.	Temperature.	1841	1842	
Jan. 1 to 14	448·42	37·71	486·17	38·78	468·41	509·90	—
„ 15 „ 28	439·72	39·78	478·60	42·18	466·95	514·23	—
„ 29 „ Feb. 11	441·18	39·74	470·06	44·36	468·27	513·32	—
Feb. 12 „ 25	467·61	39·27	482·28	39·33	493·05	507·93	—
„ 26 „ Mar. 11	461·07	41·22	466·59	46·92	493·37	518·81	—
Mar. 12 „ 25	447·28	45·36	462·85	48·10	494·04	519·20	—
„ 26 „ April 9	454·60	48·20	456·25	51·20	511·30	523·45	—
April 10 „ 23	453·53	48·80	432·76	55·68	512·33	515·64	—
„ 24 „ May 7	466·51	48·39	449·05	56·02	523·87	533·12	—
May 8 „ 21	468·15	57·20	444·26	56·67	556·35	530·60	—
„ 22 „ June 4	447·37	66·06	443·70	59·08	566·58	538·48	—
June 5 „ 18	435·87	68·64	435·31	60·04	564·11	533·45	—
„ 19 „ July 2	424·78	71·55	418·52	64·97	563·20	533·91	—
July 3 „ 16	402·27	69·82	406·96	68·07	534·64	533·20	—
„ 17 „ 30	394·41	72·76	403·21	71·39	537·07	542·07	—
„ 31 „ Aug. 13	383·05	70·41	412·38	67·76	517·48	537·54	20·06
Aug. 14 „ 27	383·03	71·22	402·92	71·37	520·30	540·71	20·41
„ 28 „ Sept. 10	380·86	72·73	409·90	68·05	523·41	536·07	12·66
Sept. 11 „ 24	395·77	67·01	426·16	60·75	518·30	526·78	8·48
„ 25 „ Oct. 8	412·52	57·52	433·16	60·67	501·84	533·50	31·66
Oct. 9 „ 22	433·94	54·17	441·93	55·39	511·53	523·79	12·26
„ 23 „ Nov. 5	435·84	52·71	447·06	53·66	508·32	522·87	14·55
Nov. 6 „ 19	451·13	48·12	459·83	48·78	507·55	518·56	11·01
„ 20 „ Dec. 3	465·85	44·83	477·97	43·10	510·75	516·82	6·07
Dec. 4 „ 17	462·35	45·14	481·02	42·42	508·34	517·49	9·15
„ 18 „ 31	489·50	37·21	487·73	40·65	507·73	518·00	10·27

For the determination of secular change, it is proper to take only observations made in successive years at precisely the same period of the year, in order to avoid involving the influence of other changes which may have an annual period, and which require to be examined apart. Commencing with August 1841 (from which date the magnet was undisturbed), the fortnightly means furnish us with 11 results in 1841, comparable with 11 results at the same dates in 1842, each showing the secular change cor-

responding to one year. Each of the 11 comparisons rests on 144 two-hourly observations in 1841, and on 288 hourly observations in 1842. All the 11 concur in indicating an increase of horizontal force between 1841 and 1842. If the amount of the increase be derived from the arithmetical mean of the 11 comparisons, it is 14·23 scale divisions. But, on viewing the separate results as shown in the last column of Table XXV., we perceive, that one of the number differs very widely from the others, and, on examining the date, the explanation is obvious. The observations belonging to it in 1841, include the period of the great disturbance which took place on the 25th of September in that year. We can scarcely doubt, therefore, that we shall obtain a more satisfactory mean by its omission. The mean of the other 10 comparisons gives an increase of 12·49 scale divisions, which is equal to 0·00092 of the whole horizontal force, or nearly to one-thousandth part of its amount.

In estimating the degree of confidence to which this amount may be entitled as a true measure of the secular change, it will not be forgotten that, during the period under consideration, we are not assured that the moment of free magnetism of the bar itself underwent no change; but, if we ascribe the result which the observations indicate, or any portion of it, to a change in the magnetism of the bar, we must suppose, that whilst remaining untouched and undisturbed, and in a position nearly at right angles to the magnetic meridian, the bar *gained* magnetic force, a supposition which can scarcely be regarded as otherwise than very improbable.

The possible elongation of the suspending wire has been noticed as another source from which error may have proceeded, and the effect of such an elongation would be to produce an apparent augmentation of the force.

Whatever doubts, however, may attach, from these or from any other possible instrumental causes of error, to the result of the observations as a true indication of secular change, they will serve but to make more obvious the expediency of the plan which has been since adopted, of keeping two distinct and independent bifilar magnetometers in permanent adjustment and under daily observation.

*Annual Variation.*—For the examination of an annual period in the changes of the horizontal force, we shall do well to confine our attention, in the first instance, to the year 1842, in which we have a complete series of comparable results from the beginning to the end of the year. On the first view of the fortnightly means of this year, the existence of an annual period in the observations is obvious, the stronger force taking place in summer, and weakening progressively towards either extremity of the year. For the purpose of allowing this to be seen more clearly by being disembarassed from minor fluctuations, we may collect the fortnightly means into six results, which are as follows:—

1842		Sc. Div.	Differences.
1	January 1 to February 25 . . . . .	511·35	+10·69
2	February 26 to May 7 . . . . .	522·04	+12·07
3	May 8 to July 2 . . . . .	534·11	+ 4·27
4	July 3 to August 27 . . . . .	538·38	- 9·78
5	August 28 to November 5 . . . . .	528·60	-10·88
6	November 6 to December 31 . . . . .	517·72	

The progressive increase from January and February to July and August, and decrease from the two latter months to November and December, is here distinctly seen. The differences appear far too large to be occasioned by any conceivable error in the determination of the temperature correction of the magnet or of the apparatus by which it was suspended. By combining Nos. 1 and 6 into one result, 2 and 5 into a second, and 3 and 4 into a third, the influence of secular change, or of possible alteration of the magnetic state of the bar, or elongation of the suspension wire, will be, in part at least, if not wholly, eliminated, and we shall obtain the differences of the force corresponding to the different seasons of the year.

1 and 6 . . . . .	514·53	} + 10·79	} + 21·71
2 ,, 5 . . . . .	525·32		
3 ,, 4 . . . . .	536·24		

We have, therefore, between the winter months and those of spring and autumn, an increase of } 10·79 Sc. Div. or 0·00080 parts of the force.

Between the spring and autumn, and the summer months, an increase of } 10·92 ,, or 0·00081 ,,

Between the winter and summer months, an increase of } 21·70 ,, or 0·00161 ,,

In the preceding year, 1841, the observations of the last five months are, as we have seen, the only ones which are intercomparable, and therefore suitable for the present investigation. It is obvious, that results extending over a less period than that of a year, are not capable of being treated so as to eliminate the effect of secular change; nevertheless, as far as they go, they indicate, with great clearness, (if we omit the mean which includes the great disturbance of the 25th of September,) a march similar to that which we have traced in 1842.

For the purpose of examining whether the annual period manifests itself at each of the several observation hours taken separately, we may collect into one view, as is done in the following Table, the monthly means of the readings of the bifilar magnetometer, reduced to a uniform temperature, at each observation hour in the several months of

1842. We shall perceive by this Table, that an augmentation of the force, during the summer months, takes place at every one of the observation hours, although its amount is greater at certain hours than at others. It is greatest at 2<sup>h</sup>, 4<sup>h</sup>, and 6<sup>h</sup>, and least at 20<sup>h</sup> and 22<sup>h</sup>. The highest number in the Table (and consequently the greatest intensity of horizontal force in the year), occurs at 4 hours in the month of August, and the lowest number (or weakest intensity) in February at 0 hours. The observation hour, whose mean (525·80) is nearest to the general mean of the whole year (525·73) is 16<sup>h</sup>; and the month whose mean in the final column (allowing for secular change at the rate of 1 scale division per month) is nearest the mean of the whole year is April.

TABLE XXVI.

Monthly Means of the readings of the Bifilar Magnetometer, reduced to an uniform Temperature of 32° Fah., at the different Observation Hours in the several Months of 1842.

Mean Toronto } Time.	18 <sup>h</sup>	20 <sup>h</sup>	22 <sup>h</sup>	0 <sup>h</sup>	2 <sup>h</sup>	4 <sup>h</sup>	6 <sup>h</sup>	8 <sup>h</sup>	10 <sup>h</sup>	12 <sup>h</sup>	14 <sup>h</sup>	16 <sup>h</sup>	Means.
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
January .	512·06	514·00	503·12	502·92	514·00	522·91	515·85	517·42	514·17	512·78	511·48	513·57	512·86
February .	511·83	509·95	507·79	501·59	511·40	518·28	515·40	510·82	508·00	505·78	507·27	509·47	509·80
March .	521·38	517·93	509·39	510·58	522·14	528·83	525·88	522·53	519·45	517·23	519·57	521·08	519·67
April .	521·64	519·83	512·10	517·50	530·84	537·62	534·20	527·00	521·75	526·55	521·39	522·30	524·39
May .	529·27	525·48	517·36	528·05	542·13	546·62	542·97	538·17	535·82	534·24	533·76	531·90	533·81
June .	536·53	534·47	525·07	528·53	539·07	550·53	546·21	542·43	538·85	534·98	533·66	535·32	537·14
July .	537·79	532·47	523·51	528·78	542·32	552·80	548·81	542·55	538·08	534·22	535·89	538·69	537·99
August .	538·11	528·95	519·20	532·42	548·39	555·15	550·25	544·37	543·02	539·36	539·96	538·29	539·79
September .	535·08	524·82	513·70	521·82	534·31	542·15	536·49	535·15	534·01	534·77	529·79	529·55	530·97
October .	529·38	523·11	511·51	512·95	524·91	530·95	532·14	529·08	529·06	527·45	528·55	528·72	525·65
November .	522·69	516·42	505·81	509·11	519·54	524·08	523·28	520·86	517·16	515·90	518·99	520·05	517·82
December .	522·75	520·88	511·26	508·78	516·57	525·31	524·06	521·30	518·66	517·77	518·52	520·65	518·88
Means .	526·54	522·36	513·32	516·92	528·80	536·27	532·96	529·31	526·50	525·09	524·90	525·80	525·73

Observations omitted.—January 25<sup>d</sup> 18<sup>h</sup>; April 3<sup>d</sup> 18<sup>h</sup>; May 2<sup>d</sup> 18<sup>h</sup> and 22<sup>h</sup>; 26<sup>d</sup> 18<sup>h</sup>; and 29<sup>d</sup> 12<sup>h</sup>, being above 30<sup>m</sup> late.  
 April 12<sup>d</sup> 16<sup>h</sup>, 14<sup>d</sup> 12<sup>h</sup>, 15<sup>d</sup> 12<sup>h</sup> and 14<sup>h</sup>; July from 1<sup>d</sup> 12<sup>h</sup> to 4<sup>d</sup> 2<sup>h</sup>; November 21<sup>d</sup> 14<sup>h</sup>, on account of excessive disturbance.

*Diurnal Variation.*—Table XXVII. exhibits the diurnal variation of the horizontal force derived from the monthly means reduced to an uniform temperature of the magnet bar, in every month of the years 1841 and 1842; and Table XXVIII., the same arranged according to the seasons. The values are in scale divisions, except at the close of Table XXVIII., where the diurnal variation derived from the observations of the two years is expressed in parts of the horizontal force. The lowest monthly mean at any of the observation hours has been taken as the zero for the month, and corresponds to the

weakest force. In computing the Table for 1841, the only observations which have been omitted are those on each of the following days in which the magnet was removed for the purpose of having its magnetic moment determined, *viz.*, February 11th, March 16th, April 30th, May 31st, June 30th, and July 31st. In the Table for 1842, the six observations noticed in Table XXVI. have been omitted, having been taken above 30 minutes after the prescribed time; and one observation July 3<sup>d</sup> 18<sup>h</sup> (at Göttingen), on account of excessive disturbance.

TABLE XXVII.

*Diurnal Variation of the Horizontal Force in the several Months of 1841 and 1842.*

Hours of Göttingen Time } Hours of Toronto Time }	0	2	4	6	8	10	12	14	16	18	20	22
	18	20	22	0	2	4	6	8	10	12	14	16
1841	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
January . . .	17.1	18.9	13.3	0.0	7.0	17.2	18.2	15.6	11.8	10.9	12.9	12.5
February . . .	15.2	12.7	4.8	0.0	5.2	15.7	17.3	12.3	14.7	11.3	12.3	13.2
March . . .	14.4	9.4	0.0	1.7	17.0	22.3	19.4	15.2	14.6	10.5	9.0	11.9
April . . .	19.5	11.5	0.0	0.0	20.1	29.0	29.3	20.4	19.5	16.5	18.6	18.8
May . . .	13.7	8.0	0.0	8.7	24.6	33.5	29.4	22.7	18.9	16.2	14.5	14.9
June . . .	13.0	6.9	0.0	9.6	20.0	26.4	22.6	13.4	10.4	9.8	13.4	9.2
July . . .	8.2	6.4	0.0	1.8	18.7	24.9	22.2	10.4	8.2	7.0	7.8	7.7
August . . .	13.8	11.6	0.0	10.0	28.9	35.9	28.6	13.8	10.1	10.2	8.5	10.9
September . . .	21.8	15.0	0.0	16.9	30.8	36.3	36.6	30.8	23.2	26.2	22.7	20.6
October . . .	12.0	6.3	2.2	0.0	12.5	19.6	17.9	14.4	11.8	7.8	12.8	13.9
November . . .	7.4	4.7	0.0	0.6	8.9	14.6	13.2	10.8	7.6	4.2	2.0	6.7
December . . .	16.5	10.1	6.2	0.0	9.4	15.0	11.4	11.7	11.7	10.5	9.2	9.8
Means . . .	12.1	7.9	0.0	1.9	14.7	22.0	20.0	13.8	11.3	9.6	9.8	10.3
1842												
January . . .	9.14	11.08	0.20	0.00	11.08	19.99	12.93	14.50	11.25	9.86	8.56	10.65
February . . .	10.24	8.36	6.20	0.00	9.81	16.69	13.81	9.23	6.41	4.19	5.68	7.88
March . . .	11.99	8.54	0.00	1.19	12.75	19.44	16.49	13.14	10.06	7.84	10.18	11.69
April . . .	9.54	7.73	0.00	5.40	18.74	25.52	22.10	14.90	9.65	1.85	3.61	5.91
May . . .	11.51	8.12	0.00	10.69	24.77	29.26	25.61	20.81	18.46	16.88	16.40	14.54
June . . .	11.46	9.40	0.00	3.46	14.00	25.46	21.14	17.36	13.78	9.91	8.59	10.25
July . . .	9.46	6.66	0.00	5.29	23.73	36.15	28.20	19.15	13.81	14.50	9.43	13.26
August . . .	18.91	9.75	0.00	13.22	29.19	35.95	31.05	25.17	23.82	20.16	20.76	19.09
September . . .	21.38	11.12	0.00	8.12	20.61	28.45	22.79	21.45	20.31	21.07	16.09	15.85
October . . .	17.87	11.60	0.00	1.44	13.40	19.44	20.63	17.57	17.55	15.94	17.04	17.21
November . . .	16.88	10.61	0.00	3.30	13.73	18.27	17.47	15.05	11.35	10.09	8.25	14.24
December . . .	13.97	12.10	2.48	0.00	7.79	16.53	15.28	12.52	9.88	8.99	9.74	11.87
Means . . .	12.79	8.85	0.00	3.60	15.89	23.52	19.88	15.16	13.12	11.03	10.45	11.96

HORIZONTAL COMPONENT OF THE MAGNETIC FORCE.

TABLE XXVIII.

*Diurnal Variation of the Horizontal Force in the Years 1841 and 1842, in Quarterly Periods.*

Hours of Göttingen Time. } Hours of Toronto Time. }	0	2	4	6	8	10	12	14	16	18	20	22
	18	20	22	0	2	4	6	8	10	12	14	16
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
December, 1841 . . . } January ,, . . . } February ,, . . . }	16·3	13·9	8·1	0·0	7·2	16·0	15·6	13·2	12·7	10·9	11·5	11·8
December, 1842 . . . } January ,, . . . } February ,, . . . }	11·1	10·5	3·0	0·0	9·6	17·7	14·0	12·1	9·2	7·7	8·0	10·1
Mean of Winter Quarters. }	13·7	12·2	5·5	0·0	8·4	16·9	14·8	12·6	10·9	9·3	9·7	11·0
March, 1841 . . . } April ,, . . . } May ,, . . . }	15·9	9·6	0·0	3·5	20·6	28·3	26·0	19·4	17·7	14·4	14·0	15·2
March, 1842 . . . } April ,, . . . } May ,, . . . }	11·0	8·1	0·0	5·8	18·7	24·7	21·4	16·3	12·7	8·9	10·1	10·7
Mean of Spring Quarters. }	13·5	8·9	0·0	4·6	19·7	26·5	23·7	17·8	15·2	11·6	12·0	13·0
June, 1841 . . . } July ,, . . . } August ,, . . . }	11·7	8·3	0·0	7·1	22·5	29·1	24·5	12·5	9·6	9·0	9·9	9·3
June, 1842 . . . } July ,, . . . } August ,, . . . }	13·3	8·6	0·0	7·3	22·3	32·5	26·8	20·6	17·1	14·9	12·9	14·2
Mean of Summer Quarter. }	12·5	8·5	0·0	7·2	22·4	30·8	25·6	16·5	13·4	11·9	11·4	11·7
September, 1841 . . } October ,, . . . } November, ,, . . . }	13·0	8·0	0·0	5·1	16·7	22·8	21·9	18·0	13·5	12·0	11·8	13·0
September, 1842 . . } October ,, . . . } November ,, . . . }	18·7	11·1	0·0	4·3	15·9	22·0	20·3	18·0	16·4	15·7	13·8	15·8
Mean of Autumn Quarter. }	15·9	9·6	0·0	4·7	16·3	22·4	21·1	18·0	14·9	13·8	12·8	14·4
Mean of the Year 1841. }	12·2	7·9	0·0	1·9	14·7	22·0	20·0	13·8	11·3	9·6	9·8	10·3
Mean of the Year 1842. }	12·8	8·8	0·0	3·6	15·9	23·5	19·9	16·0	13·1	11·0	10·4	12·0
Mean of 2 Years in Sc. Div. }	12·5	8·4	0·0	2·7	15·3	22·8	19·9	14·9	12·2	10·3	10·1	11·1
Mean in parts of the H. Force. }	·00092	·00062	·00000	·00020	·00113	·00169	·00147	·00110	·00090	·00076	·00075	·00082

The diurnal variation of the horizontal force shows two decided maxima and two decided minima. The two maxima take place at the same hours, *viz.*, 4 and 18, in every quarter, on the mean of the two years. In the spring, summer, and autumn quarters, the maximum at 4 hours is considerably the highest; in the winter quarter it is so much reduced in amount as to be little above the maximum at 18 hours, which is nearly equal throughout the year. The principal minimum, or the least force at any of the observation hours, occurs at 22 hours in the spring, summer, and autumn, and at 0 hours in the winter. The second minimum takes place during the hours of the night, or from 12 to 16 hours. The whole amount of the diurnal variation is nearly twice as great in summer as in winter; spring and autumn are intermediate, the range in spring being rather greater than in autumn.

We have proceeded thus far on the principle of including all the observations, with the exception only of those on days when the magnet was removed for the purpose of having the values of its magnetic moment examined, (being one day in each of the months from February to July 1841 inclusive;) and of six observations in 1842, omitted in consequence of having been taken above 30 minutes late of their appointed time, and one from excessive disturbance. The diurnal variation thus obtained necessarily includes the effect of all the remaining disturbances. Having learnt their systematic character in the case of the declination, we may examine, by a similar method, the effect produced by them on the diurnal variation of the horizontal force. The values of  $\overline{FX}$  for the several months of 1841, have been given in the volume of "Observations on Days of unusual Disturbances," Part I. preface, pages x. and xi., and are contained in Table XXIX., together with those of 1842, which have been since computed.

TABLE XXIX.

MONTHS.	1841		1842	
	Scale Div.	Parts of Hor. Force.	Scale Div.	Parts of Hor. Force.
January . . .	7·74	·00058	7·31	·00044
February . . .	8·59	·00065	10·26	·00076
March . . .	11·58	·00088	8·42	·00062
April . . .	9·32	·00071	22·23	·00165
May . . .	11·01	·00084	8·00	·00059
June . . .	11·69	·00089	10·90	·00081
July . . .	10·90	·00083	15·47	·00114
August . . .	13·89	·00103	9·40	·00070
September . . .	17·57	·00133	9·86	·00073
October . . .	10·36	·00079	7·08	·00052
November . . .	12·35	·00094	9·38	·00069
December . . .	10·92	·00083	5·30	·00039

The limits beyond which observations are classed as disturbed, are given for each month (January 1841 for example), by

$$\overline{X}_0 \pm 2 \overline{FX}_{\text{Jan. 1841}}; \overline{X}_2 \pm 2 \overline{FX}_{\text{Jan. 1841}}; \&c.$$

$\bar{X}_0, \bar{X}_2, \&c.$  being the mean values of the horizontal force (reduced to the temperature of  $32^\circ$  of the magnet bar) at the several observation hours in January 1841; and all the observations at 0 hours which exceed  $\bar{X}_0 + 2 \overline{FX}_{\text{Jan. 1841}}$ ; and all which fall short of  $\bar{X}_0 - 2 \overline{FX}_{\text{Jan. 1841}}$ , are accounted disturbed observations.

The days and hours on which the observations thus characterised occurred at Toronto are shown in the following Tables, in which + signifies that the readings of the scale divisions were increased, corresponding to increased force; and - that they were diminished, corresponding to diminished force.

TABLE XXX.

Observation Hours in 1841, at which the Horizontal Force differed from the Monthly Mean at the same hours more than twice the amount of the Mean Monthly irregular Fluctuation. The observations were made two-hourly, at the even hours of Mean Gettingen Time.

Mean Gött. Time.		Mean Toronto Time.		+ or -	Mean Gött. Time.		Mean Toronto Time.		+ or -	Mean Gött. Time.		Mean Toronto Time.		+ or -	Mean Gött. Time.		Mean Toronto Time.		+ or -
Days.	Hours.	Days.	Hours.		Days.	Hours.	Days.	Hours.		Days.	Hours.	Days.	Hours.		Days.	Hours.	Days.	Hours.	
JANUARY.					FEBRUARY—continued.					MARCH—continued.					APRIL—continued.				
6	6	6	0	+	7	18	7	12	-	14	22	14	16	-	18	18	18	12	-
6	8	6	2	+	7	20	7	14	-	15	0	14	18	-	18	20	18	14	-
7	0	6	18	+	7	22	7	16	-	15	2	14	20	-	19	4	18	22	-
8	14	8	8	-	8	0	7	18	-	15	4	14	22	-	19	18	19	12	-
12	10	12	4	+	8	4	7	22	-	15	6	15	0	-	19	22	19	16	-
12	12	12	6	+	9	0	8	18	+	15	12	15	6	-	20	6	20	0	-
12	14	12	8	+	9	2	8	20	-	15	16	15	10	-	20	12	20	6	-
12	18	12	12	+	9	6	9	0	-	15	18	15	12	-	20	16	20	10	-
12	20	12	14	+	9	8	9	2	-	15	20	15	14	-	20	18	20	12	-
18	2	17	20	-	9	10	9	4	-	17	0	16	18	-	20	22	20	16	-
18	4	17	22	-	9	12	9	6	-	22	4	21	22	-	26	6	26	0	+
19	6	19	0	-	12	16	12	10	+	22	6	22	0	-	26	8	26	2	+
19	14	19	8	-	22	10	22	4	+	22	8	22	2	+	27	6	27	0	+
19	16	19	10	-	22	12	22	6	+	22	20	22	14	-	27	8	27	2	+
19	18	19	12	-	23	2	22	20	-	23	16	23	10	-	28	6	28	0	+
19	20	19	14	-	23	4	22	22	-	26	16	26	10	+	28	8	28	2	+
19	22	19	16	-	23	6	23	0	-	26	18	26	12	+	29	18	29	12	+
20	0	19	18	-	23	8	23	2	-	26	20	26	14	+	29	20	29	14	+
20	4	19	22	-	23	12	23	6	-	26	22	26	16	+	29	22	29	16	+
20	6	20	0	-	23	14	23	8	-	27	0	26	18	+	MAY.				
20	8	20	2	-	23	16	23	10	-	APRIL.					5	16	5	10	-
20	10	20	4	-	23	18	23	12	-	8	2	7	20	-	5	22	5	16	-
25	16	25	10	-	24	2	23	20	-	8	6	8	0	-	6	4	5	22	-
26	16	26	10	+	26	0	25	18	-	12	8	12	2	-	6	6	6	0	-
27	14	27	8	+	26	16	26	10	-	12	16	12	10	-	6	16	6	10	-
31	18	31	12	-	MARCH.					16	18	16	12	+	8	14	8	8	-
31	20	31	14	-	6	16	6	10	-	16	20	16	14	+	9	18	9	12	-
FEBRUARY.					14	18	14	12	-	17	2	16	20	+	9	20	9	14	-
6	4	5	22	+	14	20	14	14	-	17	4	16	22	+	9	22	9	16	-
6	6	6	0	+															





HORIZONTAL COMPONENT OF THE MAGNETIC FORCE.

TABLE XXXI.

Observation Hours in 1842, at which the Horizontal Force differed from the Monthly Mean at the same Hours more than twice the amount of the Mean Monthly irregular Fluctuation. The Observations were made two-hourly, at the even Hours of Mean Göttingen Time.

Mean Gött. Time.		Mean Toronto Time.		+ or -	Mean Gött. Time.		Mean Toronto Time.		+ or -	Mean Gött. Time.		Mean Toronto Time.		+ or -	Mean Gött. Time.		Mean Toronto Time.		+ or -
Days.	Hours.	Days.	Hours.		Days.	Hours.	Days.	Hours.		Days.	Hours.	Days.	Hours.		Days.	Hours.	Days.	Hours.	
<b>JANUARY.</b>					<b>FEBRUARY—continued.</b>					<b>MAY—continued.</b>					<b>JULY—continued.</b>				
1	0	31	18	-	17	0	16	18	-	4	10	4	4	+	3	20	3	14	-
1	4	31	22	-	18	2	17	20	-	6	10	6	4	-	3	22	3	16	-
1	8	1	2	-	24	6	24	0	-	7	12	7	6	-	4	0	3	18	-
1	10	1	4	-	24	8	24	2	-	8	20	8	14	-	4	2	3	20	-
1	12	1	6	-	24	14	24	8	+	9	12	9	6	-	4	4	3	22	-
2	18	2	12	-	25	10	25	4	-	16	0	15	18	-	4	6	4	0	-
2	20	2	14	-						16	2	15	20	-	4	8	4	2	-
2	22	2	16	-	<b>MARCH.</b>					16	16	16	10	-	31	18	31	12	-
3	0	2	18	-						16	22	16	16	-					
3	2	2	20	-						17	0	16	18	-	<b>AUGUST.</b>				
5	12	5	6	-	4	20	4	14	-	17	14	17	8	-					
7	4	6	22	+	5	14	5	8	-	19	6	19	0	-	4	12	4	6	+
10	8	10	2	+	5	16	5	10	-	25	12	25	6	+	5	18	5	12	-
10	10	10	4	+	15	8	15	2	+	28	0	27	18	+	11	22	11	16	-
10	16	10	10	-	16	8	16	2	-	28	2	27	20	+	19	0	18	18	+
13	2	12	20	-	16	14	16	8	-	28	4	27	22	+	19	4	18	22	-
13	20	13	14	-	16	16	16	10	-	31	2	30	20	+	19	10	19	4	+
15	12	15	6	-	17	16	17	10	+	<b>JUNE.</b>					19	12	19	6	-
18	8	18	2	-	23	22	23	16	-										
18	16	18	10	-	27	18	27	12	-	4	8	4	2	-					
21	12	21	6	-	28	4	27	22	-	4	10	4	4	+					
24	10	24	4	-	28	12	28	6	+	4	12	4	6	+					
25	8	25	2	-	29	4	28	22	-	4	16	4	10	-					
26	0	25	18	+	29	8	29	2	-	6	16	6	10	-					
29	0	28	18	+						6	18	6	12	-					
29	2	28	20	+	<b>APRIL.</b>					6	22	6	16	-					
29	4	28	22	+						6	0	13	18	-					
29	12	29	6	+	12	14	12	8	-	14	0	13	18	-	1	6	1	0	+
29	16	29	10	+	12	20	12	14	-	22	14	22	8	+	1	8	1	2	+
<b>FEBRUARY.</b>					12	22	12	16	-	23	20	23	14	-	1	10	1	4	+
3	18	3	12	+	13	2	12	20	-	25	16	25	10	+	1	14	1	8	+
7	2	6	20	-	14	18	14	12	-						1	20	1	14	-
8	12	8	6	-	14	22	14	16	-	<b>JULY.</b>					9	6	9	0	-
8	14	8	8	-	15	4	14	22	-						13	16	13	10	-
11	14	11	8	-	15	16	15	10	-	1	18	1	12	+	13	18	13	12	-
11	16	11	10	-	15	18	15	12	-	1	20	1	14	-	16	18	16	12	-
11	18	11	12	-	15	20	15	14	-	1	22	1	16	-	16	20	16	14	-
11	20	11	14	-	<b>MAY.</b>					2	0	1	18	-	19	14	19	8	-
16	14	16	8	-						2	8	2	2	+	19	16	19	10	-
16	16	16	10	-	2	2	1	20	+	2	10	2	4	+	19	16	19	10	-
16	18	16	12	-	3	6	3	0	+	2	14	2	8	-	20	8	20	2	-
16	20	16	14	-	4	6	4	0	+	2	16	2	10	-	21	4	20	22	-
16	22	16	16	-						3	18	3	12	-	22	8	22	2	-
															22	18	22	12	-
															22	22	22	16	-
															24	10	24	4	-
															28	4	27	22	+
															28	6	28	0	+
															28	18	28	12	+

ADJUSTMENTS, ABSTRACTS, AND COMMENTS.

TABLE XXXI.—*Observation Hours in 1842, &c.—continued.*

Mean Gött. Time.			Mean Toronto Time.			+ or -	Mean Gött. Time.			Mean Toronto Time.			+ or -	Mean Gött. Time.			Mean Toronto Time.			+ or -			
Days.	Hours.		Days.	Hours.			Days.	Hours.		Days.	Hours.			Days.	Hours.		Days.	Hours.					
OCTOBER.						NOVEMBER.						DECEMBER—continued.						DECEMBER—continued.					
1	2	30	20	+		3	2	2	20	+		2	8	2	2	+		9	22	9	16	-	
1	4	30	22	+		8	14	8	8	+		2	20	2	14	+		10	0	9	18	-	
1	6	1	0	+		9	16	9	10	-		2	22	2	16	+		13	6	13	0	+	
5	8	5	2	+		10	4	9	22	-		3	6	3	0	+		13	14	13	8	-	
6	10	6	4	+		10	6	10	0	-		3	8	3	2	+		17	14	17	8	+	
7	10	7	4	+		10	12	10	6	-		3	10	3	4	+		17	16	17	10	+	
8	10	8	4	-		10	14	10	8	-		3	12	3	6	+		21	8	21	2	+	
8	14	8	8	+		10	20	10	14	-		5	6	5	0	+		21	14	21	8	+	
11	10	11	4	+		20	18	20	12	-		5	8	5	2	+		21	16	21	10	+	
11	14	11	8	+		21	10	21	4	-		5	10	5	4	+		21	22	21	16	+	
14	4	13	22	-		21	12	21	6	-		5	20	5	14	-		22	14	22	8	-	
15	16	15	10	-		21	14	21	8	-		7	10	7	4	-		22	16	22	10	-	
17	6	17	0	-		21	16	21	10	-		7	12	7	6	-		22	18	22	12	-	
17	22	17	16	-		21	18	21	12	-		8	8	8	2	-		22	22	22	16	-	
18	4	17	22	-		21	20	21	14	-		9	0	8	18	+		23	0	22	18	-	
18	10	18	4	-		21	22	21	16	-		9	2	8	20	+		23	2	22	20	-	
18	12	18	6	-		22	2	21	20	-		9	6	9	0	-		23	4	22	22	-	
18	14	18	8	-		DECEMBER.						9	8	9	2	-		23	6	23	0	-	
18	16	18	10	-								9	10	9	4	-		24	4	23	22	-	
25	8	25	2	-		1	0	30	18	+		9	12	9	6	-		24	6	24	0	-	
25	16	25	10	+		1	22	1	16	+		9	14	9	8	-		28	8	28	2	-	
26	12	26	6	-		2	6	2	0	+		9	16	9	10	-		31	18	31	12	-	
29	14	29	8	-								9	20	9	14	-		31	22	31	16	-	

The following Table contains a summary of the whole number of disturbed observations occurring in the two years, distinguishing them into disturbances in excess and in defect of the normal horizontal force at the same month and hour.

TABLE XXXII.

MONTHS.	1841			1842			Total in both Years.		
	Disturbances		Total.	Disturbances		Total.	Disturbances		Total.
	in Excess.	in Defect.		in Excess.	in Defect.		in Excess.	in Defect.	
	January . .	10	17	27	9	20	29	19	37
February . .	6	21	27	2	17	19	8	38	46
March . . .	6	17	23	3	11	14	9	28	37
April . . .	13	14	27	0	10	10	13	24	37
May . . . .	10	15	25	9	11	20	19	26	45
June . . . .	9	6	15	4	7	11	13	13	26
July . . . .	3	8	11	3	14	17	6	22	28
August . . .	3	10	13	3	4	7	6	14	20
September .	2	23	25	7	14	21	9	37	46
October . .	2	19	21	10	13	23	12	32	44
November . .	0	26	26	2	15	17	2	41	43
December . .	3	14	17	22	27	49	25	41	66
Total . . .	67	190	257	74	163	237	141	353	494

The number of disturbed observations in the winter months appears to exceed those in the summer months, and the disproportion is very considerable between the disturbances in excess and in defect; the latter, or disturbances occasioning a diminution of the force, being between two and three times as numerous as those which augment the force.

In the next Table the disturbed observations are arranged according to the hours of their occurrence, distinguishing, as before, between those in excess and those in defect.

TABLE XXXIII.

Hours of Mean Time.		1841			1842			Number of Disturbances in the two Years.		
		Number of Disturbances in			Number of Disturbances in					
Göttingen.	Toronto.	Excess.	Defect.	Total.	Excess.	Defect.	Total.	Excess.	Defect.	Total.
0	18	4	16	20	6	10	16	10	26	36
2	20	4	16	20	7	9	16	11	25	36
4	22	7	17	24	5	12	17	12	29	41
6	0	10	15	25	9	9	18	19	24	43
8	2	11	12	23	9	14	23	20	26	46
10	4	4	9	13	11	10	21	15	19	34
12	6	8	11	19	6	14	20	14	25	39
14	8	2	12	14	8	16	24	10	28	38
16	10	3	27	30	6	19	25	9	46	55
18	12	5	21	26	3	17	20	8	38	46
20	14	6	15	21	1	17	18	7	32	39
22	16	3	19	22	3	16	19	6	35	41
Total .		67	190	257	74	163	237	141	353	494

On examining this Table we perceive that the general predominance of disturbances in defect is principally occasioned by their great preponderance at the hours (of Toronto time) of 10, 12, 14, and 16; at which hours the proportion which they bear to disturbances augmenting the force is about 5 to 1. At but a single observation hour in the two years (10 hours in 1842), does the number in excess equal the number in defect; but at the hours of 0, 2, and 4, Toronto time, the proportion of disturbances in defect to those in excess is reduced to about 1.3 to 1. The tendency of the disturbances then is, 1°, to weaken the force at all the observation hours; and, 2°, to weaken it at certain hours of the twenty-four more than at others. These effects are clearly not accidental, but systematic. No length of time during which the observations might be continued would therefore serve to eliminate the influence on the periodical variations of what have been hitherto called the "irregular changes;"\* and it is necessary, therefore, to investigate the character at least, though we may not be able to ascertain the correct numerical amount of the influence which they exercise on the diurnal variation of the horizontal force. We may proceed to do this by a method similar to that adopted in the case of the declination.

\* Revised Instructions of the Royal Society, page 5.

If we represent the mean values of the horizontal force observed at the several hours in any particular month by  $\bar{X}_0, \bar{X}_2, \bar{X}_4, \&c.$ ; and the mean values, omitting the disturbed observations, by  $\bar{X}'_0, \bar{X}'_2, \bar{X}'_4, \&c.$ ; then  $\bar{X}_0 - \bar{X}'_0, \bar{X}_2 - \bar{X}'_2, \&c.$ , are the quantities by which the mean values at the several hours suffer alteration by the retention or omission of the disturbed observations. These quantities are given in the following Table for the different hours of observation in the several months of each of the years 1841 and 1842. They are expressed in scale divisions, each scale division being  $\cdot 000074$  of the whole horizontal force; the sign + signifies that the monthly means are increased, and the force augmented, by the retention and influence of the disturbances; and the sign - that they are diminished thereby.

TABLE XXXIV.

*Mean Diurnal Influence of the Disturbed Observations on the Horizontal Force at Toronto, in the several Months of 1841 and 1842.*

Mean Gött. Time }	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .
	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .
1841												
January .	-0.2	-0.6	-1.4	-1.0	-0.6	0.0	+0.8	-0.3	-0.9	-1.0	-0.6	-0.9
February .	-2.7	-3.1	-2.3	-2.4	-2.9	-0.2	-1.4	-1.0	-0.7	-2.6	-1.4	-1.5
March .	-1.6	-1.4	-3.5	-3.8	+1.2	0.0	-1.4	0.0	-2.1	-3.1	-5.7	-2.3
April .	0.0	-0.3	+0.2	+0.7	+1.9	0.0	-1.0	0.0	-1.9	-2.3	+0.3	-1.5
May .	-3.4	-3.5	-2.3	+2.7	+5.8	-0.2	+0.7	-1.1	-3.5	-2.5	-3.0	-3.8
June .	+1.2	0.0	-2.0	0.0	+1.0	+1.2	0.0	0.0	-1.6	-0.0	+2.6	+1.0
July .	-0.9	-1.9	0.0	+0.1	-1.0	+0.6	+2.5	-0.1	-2.2	-0.8	+0.1	-1.1
August .	-1.9	-1.3	+0.6	+1.0	+0.4	+0.8	+4.0	-3.1	-6.0	-2.5	+0.1	-2.8
September	-9.2	-6.5	-9.3	-1.6	-3.0	-1.7	+1.5	+2.8	-9.5	-4.5	-7.1	-9.8
October .	-2.9	-2.8	0.0	-1.8	-0.9	-2.7	-1.1	-1.9	-2.9	-5.3	-1.7	-1.5
November	-6.6	-3.3	-0.8	-0.3	-3.1	-1.8	-3.2	-3.6	-5.4	-4.8	-7.8	-5.2
December	0.0	-1.1	0.0	-1.3	0.0	-1.4	-6.1	-1.1	-1.1	-1.1	0.0	-2.8
Mean of the whole Year }	-2.4	-2.2	-1.7	-0.6	-0.1	-0.4	-0.4	-0.8	-3.3	-2.5	-1.9	-2.7
1842												
January .	-1.15	-0.24	+1.11	0.00	-1.76	-1.40	-2.66	0.00	-0.50	-0.79	-1.55	-0.74
February .	-1.73	-2.17	0.00	-1.60	-1.03	-1.06	-1.90	-3.20	-3.07	-2.73	-2.34	-1.00
March .	0.00	0.00	-1.47	0.00	-1.10	0.00	+0.68	-2.09	-1.68	-1.21	-0.74	-0.88
April .	0.00	-2.16	-1.98	0.00	0.00	0.00	0.00	-1.98	-1.97	-12.60	-9.25	-8.11
May .	-1.36	+0.15	+0.71	+0.87	0.00	-0.03	-0.65	-0.66	-0.84	0.00	-0.65	-1.10
June .	-1.42	0.00	0.00	0.00	-1.62	+1.78	+1.41	+1.26	-1.58	-0.88	-1.02	-0.91
July .	-7.18	-4.60	-6.68	-1.56	+2.56	+4.50	+0.54	-2.25	-3.12	0.00	-5.31	-4.28
August .	+0.75	0.00	-1.24	0.00	0.00	+0.74	0.00	0.00	0.00	-1.21	-0.00	-0.90
September	0.00	0.00	+0.16	+1.31	-1.10	-0.20	0.00	-0.74	-2.12	-2.58	-1.94	-1.52
October .	0.00	+0.61	-0.79	-0.29	0.00	+0.13	-1.81	-0.92	-1.67	0.00	-0.00	-0.87
November	0.00	-0.34	-1.61	-0.98	0.00	-0.88	-2.50	-1.62	-4.20	-4.34	-5.80	-1.13
December.	-0.13	-0.08	-1.51	+0.05	-0.29	-0.70	-0.81	-0.54	-0.81	-1.29	-0.80	-0.07
Mean of the whole Year }	-1.02	-0.74	-1.11	-0.18	-0.36	+0.24	-0.64	-1.07	-1.80	-2.30	-2.45	-1.79

*Mean Influence in each Year, and in both.*

Hours of Toronto Time. } 1841 . . 1842 . .	18	20	22	0	2	4	6	8	10	12	14	16	
	-2.40	-2.20	-1.70	-0.60	-0.10	-0.40	-0.40	-0.80	-3.30	-2.50	-1.90	-2.70	
	-1.02	-0.74	-1.11	-0.18	-0.36	+0.24	-0.64	-1.07	-1.80	-2.30	-2.45	-1.79	
Mean {	Scale Divs.	-1.71	-1.47	-1.40	-0.39	-0.23	-0.08	-0.52	-0.93	-2.55	-2.40	-2.17	-2.24
	In parts of the Hor. Force .	.00013	.00011	.00010	.00003	.00002	.00001	.00004	.00007	.00019	.00018	.00016	.00017

*Diurnal Variation with and without the Disturbed Observations.*

In parts of the Horizontal Force.

When retained .	.00092	.00062	.00000	.00020	.00113	.00169	.00147	.00110	.00090	.00076	.00075	.00082
When omitted .	.00105	.00073	.00010	.00023	.00115	.00170	.00151	.00117	.00109	.00094	.00091	.00099
Or, reduced to Zero at 22 <sup>h</sup> .	.00095	.00063	.00000	.00013	.00105	.00160	.00137	.00107	.00099	.00084	.00081	.00089

We perceive by this Table that the average influence of the portion of the disturbances which we have thus separated and made the subject of examination forms no insignificant part of the diurnal variation of the horizontal force. Commencing with the maximum at 4 hours, when the force is very nearly the same whether the disturbed observations are retained or omitted, the curves separate, and do not again rejoin until the same hour is approached. Their widest separation is at the time of the nocturnal minimum, or generally at the hours of 10, 12, 14 and 16, Toronto time; from these hours they progressively approach each other in both directions. In the curve which is obtained when the disturbed observations are omitted, none of the peculiarities of the curve resulting from the whole body of the observations are obliterated (*viz.*, a double maximum and a double minimum); but the amount of inflexion is lessened, so that the curve in which the disturbed observations are omitted approaches more nearly to a straight line, than does the curve in which they are retained. In the diurnal variation derived from the whole body of the observations, the diurnal range is greater than we have reason to suppose it would be if no disturbances existed, or if their influence could be eliminated. A longer observation basis is desirable for the full confirmation of the systematic character here ascribed to the disturbances; but, if it be confirmed, and if we suppose the disturbances,—and the diurnal variation such as it would be without their influence,—to have distinct causes, no duration of the observations can give correct

numerical values due to the one cause, until a mode be devised of eliminating the whole numerical effect of the other.

We have yet to examine the degree of confirmation which is afforded by the last six months of 1842, when the observations were made hourly. Table XXXV. exhibits the disturbed observations at the alternate or uneven hours in those months; Table XXXVI. the diurnal variation for each hour; and Table XXXVII. the mean diurnal influence of the disturbed observations at each hour.

In considering the Table showing the mean diurnal influence of the disturbed observations in these six months, we perceive on the one hand that, as might naturally be expected, the curve which would represent them is of less perfect symmetry than the one derived from the larger observation basis afforded by the longer period of two years; but, on the other hand, that the general character of the two curves is so similar as greatly to confirm the conclusion that the features which we have traced are the features of a system; that we have rightly apprehended the character of the disturbances, as connected with and dependent on the hour of the day; and that the continuance of observations, even for a few months, is sufficient to indicate the regularity of phenomena, which have hitherto borne the appellation of irregular.

We may notice the principal minor difference between the two curves, which is, that at the hours from 1<sup>h</sup> to 4<sup>h</sup> inclusive, the mean influence of the disturbances in the six monthly curve is somewhat to *augment* the force; whereas in the curve derived from the two years' observations, the mean influence of the disturbances was to *weaken* the force, more or less, at all the hours without exception, although from 0<sup>h</sup> to 4<sup>h</sup> inclusive, the weakening effect was so small as to have given occasion to the remark, that the force was then "very nearly the same, whether the disturbed observations were retained or omitted." The extreme weakening effect of the disturbed observations occurs in both curves, between the hours of 10<sup>h</sup> and 16<sup>h</sup> Toronto time. If we take the difference between their mean effect at the hours from 0<sup>h</sup> to 4<sup>h</sup> inclusive, and from 10<sup>h</sup> to 16<sup>h</sup> inclusive, so as to give in the two years, and in the six months, a comparison of the mean amount of the disturbance which these observations occasion in the horizontal force, we find this difference to be in the two years 2.11 scale divisions, or 0.000156 of the whole horizontal force; and in the six months 2.28 scale divisions, or 0.000169 of the whole horizontal force. These values are given for the purpose of showing the accordance of the testimony respecting the general character of the influence of the disturbances, which is borne alike by the observations of the two years, and of the six months; but it must be remembered that as numerical values, they represent only that portion of the disturbances which we have been able to separate from the mass of the observations, and which is concerned in producing those large affections of the force which cause it to differ from its normal state more than twice the amount of the mean monthly fluctuation.

HORIZONTAL COMPONENT OF THE MAGNETIC FORCE.

TABLE XXXV.

Alternate or uneven Hours of Mean Göttingen Time in the last Six Months of 1842, at which the Horizontal Force differed from the Monthly Mean at the same hours more than twice the amount of the mean monthly fluctuation.

Mean Göttingen Time.			Mean Toronto Time.			+ or -	Mean Göttingen Time.			Mean Toronto Time.			+ or -	Mean Göttingen Time.			Mean Toronto Time.			+ or -			
Days.	Hours.		Days.	Hours.			Days.	Hours.		Days.	Hours.			Days.	Hours.		Days.	Hours.			Days.	Hours.	
JULY.						SEPTEMBER—continued.						OCTOBER—continued.						DECEMBER—continued.					
1	19		1	13	-	3	3	2	21	-	18	5	17	23	-	3	5	2	23	+			
1	21		1	15	-	3	13	3	7	-	18	7	18	1	-	3	7	3	1	+			
1	23		1	17	-	9	7	9	1	-	18	9	18	3	-	3	9	3	3	+			
2	9		2	3	+	12	17	12	11	-	18	11	18	5	-	3	11	3	5	+			
2	11		2	5	+	13	11	13	5	-	19	1	18	19	-	3	13	3	7	+			
2	13		2	7	-	16	19	16	13	-	20	1	19	19	-	5	5	4	23	+			
2	15		2	9	-	20	9	20	3	-	20	21	20	15	-	5	7	5	1	+			
2	17		2	11	-	20	13	20	7	-	22	15	22	9	+	5	9	5	3	+			
3	19		3	13	-	21	5	20	23	-	26	23	26	17	-	7	9	7	3	-			
3	21		3	15	-	21	11	21	5	-	27	13	27	7	-	7	11	7	5	-			
3	23		3	17	-	22	7	22	1	-	27	15	27	9	-	7	13	7	7	-			
4	1		3	19	-	22	17	22	11	-	29	17	29	11	-	9	3	8	21	+			
4	3		3	21	-	22	19	22	13	-	NOVEMBER.						9	7	9	1	-		
4	5		3	23	-	22	21	22	15	-							9	9	9	3	-		
9	1		8	19	-	28	3	27	21	+	9	11	9	5	-								
10	23		10	17	-	28	5	27	23	+	9	13	9	7	-								
31	19		31	13	-	28	7	28	1	+	9	15	9	9	-								
						28	17	28	11	+	9	19	9	13	-								
AUGUST.						OCTOBER.						DECEMBER.											
1	1		31	19	-	1	1	Sept.	19	+	8	21	8	15	+	9	15	9	9	-			
4	13		4	7	+	1	3	30	21	+	10	1	9	19	-	9	21	9	15	-			
4	15		4	9	-	1	5	30	23	+	10	13	10	7	-	9	23	9	17	-			
4	23		4	17	-	1	7	1	1	+	10	19	10	13	-	10	3	9	21	-			
5	13		5	7	-	1	7	1	1	+	10	21	10	15	-	12	19	12	13	+			
5	19		5	13	-	5	7	5	1	+	21	11	21	5	-	13	15	13	9	-			
5	23		5	17	-	7	7	7	1	+	21	13	21	7	-	17	15	17	9	+			
13	11		13	5	+	7	9	7	3	+	21	15	21	9	-	21	7	21	1	+			
19	7		19	1	+	7	11	7	5	+	21	17	21	11	-	21	9	21	3	+			
19	9		19	3	+	8	7	8	1	-	21	19	21	13	-	21	13	21	7	+			
						11	13	11	7	+	22	3	21	21	-	21	15	21	9	+			
SEPTEMBER.						13	17	13	11	-	22	23	22	17	-	21	21	21	15	+			
1	7		1	1	+	15	11	15	5	-	22	15	22	9	-	22	15	22	9	-			
1	9		1	3	+	15	15	15	9	-	22	17	22	11	-	22	17	22	11	-			
1	17		1	11	+	15	17	15	11	-	23	1	22	19	-	22	23	22	17	-			
2	13		2	7	-	16	23	16	17	-	23	3	22	21	-	23	1	22	19	-			
2	23		2	17	-	17	5	16	23	-	23	5	22	23	-	23	3	22	21	-			
						17	7	17	1	-	23	7	23	7	-	23	5	22	23	-			
						18	3	17	21	-	24	3	23	3	-	23	7	23	1	-			
												2	23	2	17	+	23	9	23	3	-		
												2	5	1	23	+	24	3	23	21	-		
												2	7	2	1	+	24	5	23	23	-		
												2	9	2	3	+	31	19	31	13	-		
												2	19	2	13	+	31	21	31	15	-		
												2	21	2	15	+							
												2	23	2	17	+							



TABLE XXXVI.

*Diurnal Variation of the Horizontal Force derived from the Hourly Observations in the last Six Months of 1842.*

The only observations omitted in computing these Tables are July 23<sup>d</sup> 23<sup>h</sup>, having been taken above 30 minutes after the prescribed time; and July 3<sup>d</sup>, 18<sup>h</sup>, 19<sup>h</sup>, and 21<sup>h</sup>, on account of excessive disturbance.

Mean Gött. Time } Mean Toronto Time }	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .
	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
July . .	9.46	12.39	6.66	3.74	0.0	2.05	5.29	17.57	23.73	33.53	36.15	33.33
August .	18.91	17.66	9.75	3.24	0.0	3.71	13.22	21.97	29.19	36.27	35.95	30.40
September	21.38	17.68	11.12	3.21	0.0	3.42	8.12	15.25	20.61	24.77	28.45	23.59
October .	17.93	14.86	11.66	3.18	0.06	0.0	1.50	6.82	13.46	18.63	19.50	21.45
November	16.88	14.16	10.61	5.13	0.0	0.0	3.30	8.07	13.73	16.58	18.27	17.31
December.	16.22	15.01	14.35	10.65	4.73	0.0	2.25	5.21	10.04	15.49	18.78	18.29
Means .	15.99	14.49	9.89	4.06	0.00	0.73	4.81	11.68	17.66	23.41	25.38	23.26

Mean Gött. Time } Mean Toronto Time }	12 <sup>h</sup> .	13 <sup>a</sup> .	14 <sup>a</sup> .	15 <sup>a</sup> .	16 <sup>b</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>a</sup> .	21 <sup>h</sup> .	22 <sup>b</sup> .	23 <sup>b</sup> .
	6 <sup>b</sup> .	7 <sup>h</sup> .	8 <sup>b</sup> .	9 <sup>h</sup> .	10 <sup>b</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
July . .	18.20	24.03	19.15	16.15	13.81	15.57	14.45	14.66	9.43	6.20	13.26	7.49
August .	31.05	27.61	25.17	24.88	23.82	25.11	20.16	18.66	20.76	20.69	19.09	18.51
September	22.79	21.38	21.45	22.89	20.31	19.06	21.07	18.80	16.09	16.48	15.85	19.08
October .	20.69	20.27	17.63	18.04	17.61	15.10	16.00	15.98	17.10	15.76	17.27	16.78
November	17.47	16.09	15.05	13.56	11.35	12.19	10.09	10.32	8.25	13.71	14.25	15.72
December.	17.53	16.86	14.77	13.18	12.13	12.86	11.24	10.52	11.99	11.89	14.12	16.96
Means .	22.16	21.24	18.07	17.32	15.71	15.85	14.70	14.02	13.14	13.32	14.84	14.96

TABLE XXXVII.

*Mean Diurnal Influence of the Disturbed Observations of the Horizontal Force in the last Six Months of 1842; the Sign + signifies that the Force was augmented by their Influence, and - that it was diminished thereby.*

Mean Gött. Time. } Mean Toronto Time. }	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>
	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>	0 <sup>h</sup>	1 <sup>h</sup>	2 <sup>h</sup>	3 <sup>h</sup>	4 <sup>h</sup>	5 <sup>h</sup>
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
	-1.09	-1.78	-0.73	-0.93	-1.94	-0.45	-0.25	+0.26	+0.20	+1.12	+0.60	-0.31

Mean Gött. Time. } Mean Toronto Time. }	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>	18 <sup>h</sup>	19 <sup>h</sup>	20 <sup>h</sup>	21 <sup>h</sup>	22 <sup>h</sup>	23 <sup>h</sup>
	6 <sup>h</sup>	7 <sup>h</sup>	8 <sup>h</sup>	9 <sup>h</sup>	10 <sup>h</sup>	11 <sup>h</sup>	12 <sup>h</sup>	13 <sup>h</sup>	14 <sup>h</sup>	15 <sup>h</sup>	16 <sup>h</sup>	17 <sup>h</sup>
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
	-0.93	-1.29	-1.01	-0.98	-1.99	-1.79	-1.57	-2.28	-2.31	-1.82	-1.46	-1.29

## VERTICAL FORCE.

*Vertical Force Magnetometer.*—The instrument in use at Toronto was made by Robinson, and sent to the Observatory in September 1840, in exchange for the one of the same kind which had been first made, and which had become injured during its earlier adjustments. The new instrument was of improved construction, the needle being heavier and more powerful.

The magnetometer was fixed on its stand in September 1840; the base being carefully levelled, and the azimuth adjusted so that the magnet should be nearly in a position at right angles to the magnetic meridian. The angular value of one division on each of the micrometer heads was ascertained to be exactly 1'00. The fixed wires were brought into the same horizontal plane, and the magnet made horizontal in the manner pointed out in the Instructions of the Royal Society. The time of vibration in the horizontal plane was observed on the 11th December 1840, and on the 19th February, 16th March, 26th May, 1st August, and 30th September 1841, and its value at those dates found to be 11·221, 11·212, 11·236, 11·236, 11·257, and 11·496 seconds. The times of vibration in the vertical plane,—observed at intervals of from 4 to 7 days in 1841 and at somewhat greater intervals in 1842,—are given in Table XXXVIII., with the corresponding values of the coefficient,  $k$ , for computing the changes of vertical force from the observed changes of angle.

The observations of the vertical force magnetometer require to be corrected for variations in the temperature of the magnet, in the same manner as the observations of the horizontal force. Experiments for determining the value of the co-efficient,  $q$ , or the relative change of the magnetic moment of the bar for 1° of Fahrenheit, were made at the close of 1843 and in January 1844. They were conducted with great care, and the partial results show as satisfactory an accordance as could be expected, viewing the small angles through which the suspended magnet was deflected; the deflections having amounted only to about 62·0 scale divisions. They will probably be repeated at a future time, using larger deflections, and bringing the magnet nearer to the magnetometer. The experiments were made in the detached Observatory, the magnet being placed at a distance of about four times its length from the magnet of the unifilar magnetometer, in a water-tight copper vessel, glazed on its upper side, so as to allow the thermometer to be read off. The vessel was immersed in a trough filled with water, the temperature of which was made to vary alternately from about 32° to 90°. At each temperature, three observations were taken each being the mean of seven consecutive readings of the scale. The intervals between the observations at the same temperature were at first five, then four, and finally three minutes. The intervals

ADJUSTMENTS, ABSTRACTS, AND COMMENTS.

TABLE XXXVIII.

*Vibrations of the Vertical Force Magnet and Values of the Coefficient.*

Date.	Arcs.		No. of Vibrations	Time of One Vibration.	Value of <i>k</i> .	Date.	Arcs.		No. of Vibrations	Time of One Vibration.	Value of <i>k</i> .
	Initial.	Terminal.					Initial.	Terminal.			
1841	° /	° /		Sec.		1841	° /	° /		Sec.	
Jan. 1	1 20	0 20	100	10·385	0·000089	Aug. 12	1 20	0 7	180	10·244	0·000093
1	1 20	0 10	140	10·362	0·000090	13	1 20	0 15	178	10·236	0·000093
19	1 20	0 18	132	10·407	0·000089	16	1 20	0 05	180	10·220	0·000093
26	1 20	0 23	190	10·406	0·000089	20	1 20	0 10	180	10·255	0·000092
						23	1 20	0 20	180	10·253	0·000093
Feb. 1	1 20	0 07	150	10·424	0·000089	26	1 20	0 06	180	10·255	0·000092
5	1 20	0 20	154	10·400	0·000089	30	1 20	0 04	180	10·240	0·000093
6	1 20	—	64	10·468	0·000088						
19	1 20	0 25	160	10·392	0·000089	Sept.*2	1 20	0 15	180	10·240	0·000093
19	1 20	0 10	170	10·472	0·000088	6	1 20	0 10	180	10·271	0·000092
19	1 20	0 25	140	10·462		9	1 20	0 07	180	10·272	0·000096
19	1 20	0 20	244	10·472		13	2 20	0 03	110	10·227	0·000097
						16	1 30	0 10	118	10·803	0·000087
Mar. 1	1 20	0 25	100	10·407	0·000089	20	2 00	0 03	98	10·707	0·000089
1	1 20	0 15	138	10·432	0·000089	28	3 00	0 03	58	10·814	0·000087
8	1 20	—	186	10·380	0·000090						
15	1 30	04 0	136	10·398	0·000089	Oct. 2	2 00	0 10	182	10·479	0·000092
16	1 20	0 20	218	10·381	0·000090	5	3 00	0 10	180	10·472	0·000093
16	1 10	—	96	10·375	0·000090	9	3 00	0 30	180	10·478	0·000092
24	1 20	0 30	152	10·287	0·000092	11	3 00	0 15	180	10·485	0·000092
27	1 20	0 25	150	10·326	0·000091	14	3 00	0 20	180	10·476	0·000092
						18	3 00	0 15	180	10·482	0·000092
Apr. 5	1 20	0 20	160	10·285	0·000092	27	3 00	0 10	180	10·500	0·000092
12	1 20	0 20	158	10·311	0·000091						
26	1 20	0 27	162	10·304	0·000091	Nov. 1	3 00	0 01	180	10·462	0·000093
30	1 20	0 30	162	10·282	0·000092	4	3 00	0 20	180	10·480	0·000092
						8	3 00	0 15	180	10·482	0·000092
May 12	1 20	0 25	174	10·309	0·000091	11	3 00	0 30	180	10·488	0·000092
25	1 20	0 30	170	10·321	0·000091	15	3 00	0 01	178	10·504	0·000092
26	1 20	0 05	170	10·329	0·000091	18	3 00	0 05	160	10·477	0·000092
31	1 20	0 07	154	10·190	0·000093	23	3 00	0 07	150	10·476	0·000092
						25	3 20	0 05	160	10·473	0·000093
June 4	1 20	0 15	160	10·291	0·000091	29	3 20	0 03	110	10·453	0·000093
8	1 20	0 20	180	10·270	0·000092						
14	1 20	0 15	180	10·223	0·000093	Dec. 3	4 10	0 05	168	10·485	0·000092
17	1 20	0 10	180	10·212	0·000093	6	4 10	0 15	150	10·485	0·000092
23	1 20	0 15	160	10·232	0·000092	10	4 10	0 10	162	10·491	0·000092
28	1 20	0 02	178	10·214	0·000093	13	4 10	0 10	150	10·493	0·000092
						27	4 10	0 03	108	10·435	0·000093
July 1	1 20	0 15	156	10·237	0·000093	30	4 10	0 20	150	10·474	0·000092
6	1 20	0 18	180	10·238	0·000093						
9	1 20	0 17	180	10·236	0·000093	1842					
12	1 20	0 02	180	10·288	0·000092	Jan. 10	5 50	0 05	130	10·413	0·000094
15	1 20	0 10	184	10·238	0·000093	19	5 50	0 20	150	10·458	0·000093
19	1 20	0 10	180	10·241	0·000093	23	5 50	0 06	152	10·384	0·000094
23	1 20	0 15	158	10·220	0·000093						
28	1 20	0 10	180	10·266	0·000093	Feb. 2	5 50	0 05	150	10·449	0·000093
						7	5 50	0 20	150	10·445	0·000093
Aug. 1	1 20	0 10	156	10·252	0·000093	12	5 50	0 10	150	10·439	0·000093
1	1 20	—	74	10·310	0·000091	18	5 50	0 05	110	10·463	0·000093
3	1 20	0 07	180	10·219	0·000093	18	5 50	0 05	110	10·466	0·000093
7	1 20	0 10	182	10·243	0·000093	25	5 50	0 10	120	10·497	0·000092
9	1 20	0 10	180	10·266	0·000092	28	5 50	0 10	150	10·503	0·000092

\* The discrepancies in the times of vibration of September were occasioned by minute insects, which had made their way within the magnetometer case, and were discovered on the needle on an examination to which the discrepancies gave rise.

TABLE XXXVIII.—*continued.*

*Vibrations of the Vertical Force Magnet and Values of the Coefficient.*

Date.	Arcs.		No. of Vibrations	Time of One Vibration.	Value of $k$ .	Date.	Arcs.		No. of Vibrations	Time of One Vibration.	Value of $k$ .
	Initial.	Terminal.					Initial.	Terminal.			
1842	° /	° /		Sec.		1842	° /	° /		Sec.	
Mar. 8	5 50	0 10	150	10·487	0·000092	Aug. 4	3 00	0 02	110	10·249	0·000097
15	5 50	0 10	144	10·482	0·000092	11	3 00	0 02	112	10·313	0·000095
28	5 50	0 06	114	10·507	0·000092	25	3 00	0 05	150	10·227	0·000097
28	5 50	—	90	10·433	0·000093	29	3 00	0 05	150	10·403	0·000094
28	5 50	0 15	130	10·405	0·000094	30	4 00	0 05	150	10·407	0·000094
Apr. 6	5 50	0 20	150	10·431	0·000093	Sept. 7	3 20	0 05	150	10·335	0·000095
11	5 50	0 10	152	10·449	0·000093	13	3 20	0 03	150	10·443	0·000093
19	5 50	0 20	150	10·513	0·000092	21	3 20	0 10	130	10·442	0·000093
26	6 00	0 05	130	10·441	0·000093	27	3 20	0 10	126	10·295	0·000096
30	5 50	0 05	150	10·422	0·000093	Oct. 5	3 20	0 05	150	10·358	0·000094
May 3	3 00	0 02	150	10·409	0·000094	10	3 50	0 10	150	10·422	0·000093
11	3 00	0 02	150	10·368	0·000094	18	4 00	0 20	150	10·463	0·000093
20	3 00	0 02	150	10·365	0·000094	Nov. 8	3 50	0 15	150	10·320	0·000095
June 2	3 00	0 05	130	10·334	0·000095	19	3 50	0 10	110	10·359	0·000095
10	3 00	0 05	150	10·376	0·000094	Dec. 10	3 40	0 20	110	10·438	0·000093
13	3 00	0 05	150	10·437	0·000093	17	3 50	0 10	110	10·354	0·000095
20	3 00	0 10	110	10·388	0·000094	27	3 50	0 10	150	10·464	0·000093
25	3 00	0 01	150	10·369	0·000094	31	3 40	0 10	110	10·447	0·000093
July 12	3 00	0 05	150	10·313	0·000095						
19	3 00	0 07	150	10·399	0·000094						

between the observations at alternate temperatures varied according to the time which it was thought necessary to leave the magnet that it might acquire a steady temperature corresponding with that of the thermometer. The simultaneous observations of declination and horizontal force were made with the large instruments of the Observatory. The values of  $q$ , in Table XL., are the mean results derived from the several series of experiments, one of which, *viz.*, that on the 16th of January 1844, is given in detail in Table XXXIX. as a specimen. The differences of temperature were nearly the same in each series; the number of alternations in each is noticed for the purpose of showing, if desired, the relative value of the several results.

ADJUSTMENTS, ABSTRACTS, AND COMMENTS.

TABLE XXXIX.

Toronto, 1844, January 16th. Temperature Experiments. Vertical Force Magnet.

Times Chron. 2393	Temperature of Vertical Force Magnet.			Unifilar Magnetometer.				SIMULTANEOUS OBSERVATIONS.										
	Readings.	Means.	Differences.	Readings.	Means.	Corrected Means.	Differences	Declinometer.				Bifilar Magnetometer.						
								Readings.	Means.	Differences.	Correc-tions.	Readings.	Means.	Thermo-meter.	Cor-rected Means.	Diff. or Cor-rections.		
H. M.	°	°	°	a				a			b			°				
4 09	Magnet away.			187.93	188.00	188.00		126.12	126.12			485.5	485.4	42.8	485.4			
4 12				188.03				126.15				485.4						
4 15				188.04				126.10				485.3						
4 21	88.5	56.2		125.79	125.21	126.33	0.87	125.60	125.19	0.93	1.12	485.1	485.7	—	485.4			
4 24				125.18				125.07				485.4						
4 27				124.66				124.90				486.7						
4 33	32.3	56.1		123.88	123.64	125.46	0.49	124.80	124.60	1.52	1.82	486.8	486.4	43.0	485.8		-0.4	
4 36				123.46				124.49				486.3						
4 39				123.58				124.50				486.2						
4 48	88.4	56.2		123.97	123.11	125.95	0.49	123.84	123.75	2.37	2.84	486.3	486.2	—	485.0		-0.8	
4 51				122.82				123.70				486.1						
4 54				122.53				123.70				486.2						
5 00	32.2	55.8		122.02	121.84	125.46	0.21	123.20	123.10	3.02	3.62	487.2	487.1	43.4	485.3		-0.3	
5 03				121.79				123.01				487.0						
5 06				121.71				123.09				487.0						
5 15	88.0	55.6		121.62	121.27	125.67	0.30	122.80	122.45	3.67	4.40	487.0	486.9	—	484.5		-0.8	
5 18				121.16				122.27				487.0						
5 21				121.04				122.27				486.6						
5 27	32.3	53.8		120.69	120.35	125.37	0.38	122.10	121.94	4.18	5.02	486.0	486.1	43.8	483.1		+1.4	
5 30				120.29				122.00				486.1						
5 33				120.06				121.71				486.2						
5 42	86.2	54.1		120.09	119.88	125.75	0.43	121.59	121.23	4.89	5.87	485.9	486.0	—	482.7		-0.4	
5 45				119.88				121.10				486.1						
5 48				119.66				121.00				486.1						
5 54	32.1	57.7		119.15	119.09	125.32	0.16	121.00	120.93	5.19	6.23	486.0	485.4	44.1	481.5		+1.2	
5 57				119.13				120.90				485.4						
6 00				118.98				120.90				484.7						
6 09	89.8			119.21	119.01	125.48		120.80	120.73	5.39	6.47	483.7	483.6	—	479.4		-2.1	
6 12				119.01				120.80				483.5						
6 15				118.82				120.60				483.6						
6 21	Magnet away.			181.06	181.02	187.55		120.50	120.68	5.44	6.53	482.9	483.0	44.4	478.2			
6 24				180.94				120.74				483.2						
6 27				181.05				120.80				482.8						
Sums . . .		445.5		Sums . . . . .			3.33					Sum . . . . .					-2.2	
Means . . .		55.69		Means . . . . .			0.41625					Means . . . . .						-0.27

$$q = \frac{0.41625}{55.7 \times (187.8 - 125.6)} - \frac{0.27 \times .000087}{55.7} = .0001201 - .0000004 = .0001197$$

\* Each of the numbers in these two columns is the mean of seven consecutive readings of the Scale.

† The numbers in this column are the Declinometer differences multiplied by 1.20, the ratio of the Declinometer and Unifilar Scale values.

TABLE XL.

*Abstract of Experiments for determining the Value of the Temperature Coefficient of the Vertical Force Magnet.*

DATES.	Mean Alternation of Temperature.	No. of Alternations.	Value of $q$ .	DATES.	Mean Alternation of Temperature.	No. of Alternations.	Value of $q$ .
1843	o			1843	o		
October 17	46.7	6	0.000150	December 20	52.8	6	0.000031
,, 20	52.7	8	0.000127	,, 22	55.3	10	0.000089
November 3	54.2	7	0.000101*	,, 23	55.1	8	0.000121
,, 4	53.3	10	0.000101	1844			
,, 8	54.4	8	0.000126	January 12	51.8	10	0.000115
,, 9	53.1	8	0.000115	,, 13	52.9	8	0.000148
,, 10	53.2	8	0.000077	,, 15	53.8	8	0.000096
December 8	51.6	10	0.000114	,, 16	55.7	8	0.000120
,, 9	54.6	9	0.000161				

The arithmetical mean of the values of  $q$  in the preceding table is 0.000112.

*Diurnal Variation.*—The revised instructions of the Royal Society state that “experience has shown that the vertical force magnetometer is unavailable for the determination of changes of long period; but that if originally well constructed, and with proper management, it seems to exhibit the laws of the diurnal changes, as well as those of the momentary fluctuations, with tolerable fidelity.” We will therefore proceed at once to the consideration of the diurnal variation of the vertical force shown by this instrument at Toronto.† In consequence of changes in the value of the coefficient ( $k$ ), the diurnal variation of the vertical force is given in parts of the force instead of in scale divisions.

\* Previous to the experiment of November 3rd, slips of paper were fastened round the box to render it more close.

† It may be proper to notice, that since the original instructions of the Royal Society were issued, Dr. Lloyd has proposed the substitution of a different method for determining the variations of the third element, by an instrument to which he has given the name of the Induction Inclinator. Although this instrument is not noticed in the Revised Instructions, I have considered it proper to direct that the Observatories under my superintendence should be furnished with it, in consideration of the weight which so justly attaches to Dr. Lloyd’s authority in relation to magnetical instruments, and of the great importance of adding to the determinations of the other two elements, the best attainable data respecting the changes which the third may undergo. The observations with the vertical force magnetometer continue to be made as before; those with the induction inclinometer being additional. The observations with the latter instrument, however, do not fall within the period comprehended in this volume.

TABLE XLI.

*Diurnal Variation of the Vertical Force in the several Months of 1841 and 1842.*

Hours of Gött. Time	0	2	4	6	8	10	12	14	16	18	20	22
Hours of Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16
<b>1841</b>												
January . .	•00005	•00019	•00007	•00013	•00029	•00034	•00035	•00034	•00030	•00018	•00007	•00000
February . .	•00000	•00008	•00002	•00013	•00027	•00034	•00037	•00035	•00029	•00015	•00001	•00002
March . . .	•00024	•00031	•00019	•00024	•00033	•00046	•00053	•00051	•00042	•00024	•00000	•00013
April . . .	•00009	•00013	•00004	•00003	•00023	•00034	•00054	•00035	•00026	•00007	•00010	•00000
May . . . .	•00018	•00010	•00000	•00009	•00024	•00042	•00041	•00031	•00027	•00016	•00018	•00015
June . . . .	•00020	•00019	•00004	•00000	•00011	•00034	•00041	•00033	•00017	•00002	•00003	•00009
July . . . .	•00017	•00021	•00017	•00019	•00030	•00045	•00052	•00048	•00024	•00002	•00000	•00011
August . . .	•00047	•00034	•00042	•00049	•00062	•00072	•00090	•00073	•00039	•00025	•00000	•00016
September .	•00008	•00033	•00033	•00036	•00054	•00058	•00063	•00056	•00034	•00018	•00017	•00000
October . . .	•00025	•00033	•00028	•00037	•00049	•00054	•00052	•00049	•00040	•00014	•00000	•00011
November . .	•00000	•00028	•00027	•00032	•00042	•00046	•00044	•00042	•00037	•00015	•00013	•00019
December . .	•00010	•00015	•00006	•00015	•00028	•00031	•00039	•00029	•00020	•00014	•00000	•00003
<b>1842</b>												
January . . .	•00002	•00009	•00000	•00008	•00011	•00012	•00018	•00017	•00014	•00003	•00006	•00002
February . . .	•00013	•00014	•00000	•00010	•00018	•00022	•00027	•00032	•00026	•00017	•00013	•00007
March . . . .	•00008	•00013	•00000	•00002	•00012	•00024	•00028	•00026	•00015	•00007	•00006	•00004
April . . . .	•00026	•00034	•00032	•00036	•00056	•00062	•00067	•00052	•00032	•00000	•00003	•00010
May . . . . .	•00002	•00000	•00001	•00003	•00015	•00021	•00025	•00018	•00015	•00007	•00005	•00005
June . . . . .	•00023	•00021	•00013	•00006	•00021	•00038	•00046	•00041	•00011	•00000	•00002	•00013
July . . . . .	•00027	•00029	•00029	•00021	•00030	•00045	•00045	•00042	•00031	•00010	•00000	•00014
August . . . .	•00017	•00020	•00014	•00018	•00030	•00040	•00034	•00028	•00020	•00002	•00000	•00013
September . .	•00016	•00015	•00018	•00021	•00037	•00044	•00043	•00035	•00025	•00000	•00002	•00001
October . . . .	•00015	•00014	•00000	•00011	•00017	•00023	•00026	•00026	•00024	•00019	•00012	•00014
November . . .	•00003	•00001	•00002	•00007	•00019	•00018	•00020	•00019	•00013	•00006	•00000	•00001
December . . .	•00006	•00005	•00004	•00010	•00016	•00016	•00014	•00019	•00013	•00010	•00000	•00003

VERTICAL COMPONENT OF THE MAGNETIC FORCE.

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TABLE XLII.

*Diurnal Variation of the Vertical Force in 1841 and 1842, in Quarterly Periods.*

Hours at Göttingen	0	2	4	6	8	10	12	14	16	18	20	22
Hours at Toronto .	18	20	22	0	2	4	6	8	10	12	14	16
December, 1841 } January ,, } February ,, }	·00003	·00012	·00003	·00012	·00026	·00031	·00035	·00031	·00024	·00014	·00001	·00000
December, 1842 } January ,, } February ,, }	·00006	·00008	·00000	·00008	·00014	·00016	·00019	·00022	·00017	·00009	·00005	·00003
Mean of Winter Quarters. }	·00004	·00010	·00001	·00010	·00020	·00023	·00027	·00026	·00020	·00011	·00003	·00001
March, 1841 . } April ,, . } May ,, . }	·00009	·00010	·00000	·00004	·00019	·00033	·00041	·00031	·00024	·00008	·00001	·00001
March, 1842 . } April ,, . } May ,, . }	·00007	·00011	·00006	·00009	·00023	·00031	·00035	·00027	·00016	·00000	·00000	·00001
Mean of Spring Quarters. }	·00008	·00011	·00003	·00006	·00021	·00032	·00038	·00029	·00020	·00004	·00000	·00001
June, 1841 . . } July ,, . . } August ,, . . }	·00027	·00024	·00020	·00022	·00033	·00050	·00060	·00050	·00025	·00009	·00000	·00011
June, 1842 . . } July ,, . . } August ,, . . }	·00021	·00022	·00018	·00014	·00026	·00040	·00041	·00036	·00020	·00003	·00000	·00012
Mean of Summer Quarters. }	·00024	·00023	·00019	·00018	·00030	·00045	·00050	·00043	·00023	·00006	·00000	·00012
September, 1841 } October ,, } November ,, }	·00001	·00021	·00019	·00025	·00038	·00042	·00043	·00039	·0.027	·00006	·00000	·00000
September, 1842 } October ,, } November ,, }	·00006	·00005	·00002	·00008	·00019	·00023	·00025	·00021	·00016	·00003	·00000	·00001
Mean of Autumn Quarters. }	·00004	·00013	·00010	·00016	·00029	·00033	·00034	·00030	·00021	·00004	·00000	·00000
Mean of 1841 .	·00009	·00016	·00010	·00015	·00029	·00038	·00044	·00037	·00024	·00009	·00000	·00002
Mean of 1842 .	·00009	·00011	·00005	·00009	·00019	·00026	·00029	·00025	·00016	·00003	·00000	·00003
Mean of 2 Years	·00009	·00013	·00007	·00012	·00024	·00032	·00037	·00031	·00020	·00006	·00000	·00003



The vertical component of the earth's magnetic force has its principal maximum at 6 hours (Toronto time), on the mean of each year and of each quarter taken separately, with the single exception of the winter quarter of 1842, when the maximum occurs at the succeeding observation hour of 8. The force then diminishes uninterruptedly until its lowest minimum, which it reaches on the mean of each year, and of the spring, summer, and autumn quarters, at 14 hours; and in the winter quarter at the succeeding observation hour of 16. The vertical force then increases again uninterruptedly until it reaches a second maximum, which is attained in each year, and in each quarter at 20 hours, with only two exceptions, *viz.*, the summer of 1841, and the autumn of 1842, when it occurred at the preceding observation hour of 18. This secondary maximum at 20 hours is followed at the next observation hour by a secondary minimum, which occurs at 22 hours in each year and in each quarter with a single exception, *viz.*, the summer of 1841, when it occurs at 0 hours. The force then increases progressively, until the principal maximum at 6 hours is again attained.

Or, apart from the few exceptions which have been noticed, it may be more briefly stated that the vertical force has

A principal maximum . . . .	at 6 hours.
A principal minimum . . . .	at 14 hours.
A secondary maximum . . . .	at 20 hours.
A secondary minimum . . . .	at 22 hours.

In every one of the eight quarters of the two years taken separately, the diurnal march of the vertical force is a double progression, having two maxima and two minima; but on looking at the months separately (Table XLI.), there are 3 out of the 24 which show only a single maximum and a single minimum, *viz.*, September, 1841,\* and September and November, 1842.

The numbers expressing the vertical magnetic force from 2 hours to 10 hours inclusive, are high at all seasons; those at 14 and 16 hours are always low, and those at 12 hours occasionally so.

The diurnal change is greatest in summer, and least in winter.

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\* September 1841, was a month in which very considerable magnetic disturbances took place, and the movements of the magnet during a part of the month were affected by insects, *vide* page liv. *ante*.

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DIURNAL VARIATIONS OF THE INCLINATION AND TOTAL FORCE.

Having thus the diurnal variations both of the horizontal and the vertical force, we may derive from them the diurnal variation of the inclination, and the diurnal variation of the total force, of which they are the theoretical equivalents.

The diurnal variations of the horizontal and of the vertical force brought into one view are as follows :—

Hours.	Hor. Force.	Vert. Force.
18	.00092	.00009
20	.00062	.00013
22	.00000	.00007
0	.00020	.00012
2	.00113	.00024
4	.00169	.00032
6	.00147	.00037
8	.00110	.00031
10	.00090	.00020
12	.00076	.00006
14	.00075	.00000
16	.00082	.00003

The combination of these numbers gives a minimum of inclination at 4 hours, and a minimum of the total force at 14 hours, and the diurnal variation of the two elements as follows :—

Hours.	Inclination.	Total Force.
18	0.45	.00010
20	0.74	.00011
22	1.21	.00002
0	1.08	.00008
2	0.40	.00025
4	0.00	.00036
6	0.22	.00039
8	0.48	.00031
10	0.56	.00019
12	0.56	.00006
14	0.52	.00000
16	0.48	.00003

These numbers show a diurnal march of the inclination, increasing from the lowest minimum at 4 hours until 10 and 12 hours, thence decreasing until 18 hours, and increasing again until 22 hours the time of the principal maximum; from this hour the inclination constantly diminishes, until its principal minimum at 4 hours is again attained.

Or the inclination has

- A principal maximum . . . . at 22 hours.
- A principal minimum . . . . at 4 hours.
- A secondary maximum . . . . at 10 hours.
- A secondary minimum . . . . at 18 hours.

the intermediate march being always uninterrupted.

The diurnal march of the total force shows an increase from the lowest minimum at 14 hours until a secondary maximum at 20 hours, followed at the next observation

hour, that of 22, by a secondary minimum, at which the force exceeds by only a very small quantity its lowest amount at 14 hours. From 22 hours there is a constant increase until the highest maximum at 6 hours; from which time the force diminishes until the lowest minimum, at 14 hours, is again attained.

Or the total force shows

A principal maximum . . . .	at 6 hours.
A principal minimum . . . .	at 14 hours.
A secondary maximum . . . .	at 20 hours.
A secondary minimum . . . .	at 22 hours.

the intermediate march being always uninterrupted.

In comparing the diurnal variations of the horizontal and vertical force with those of the inclination and total force, of which they are the theoretical equivalents, we perceive how greatly the deduction of the variations of the total force is dependent, in so high a magnetic latitude as Toronto, on the accuracy with which the variations of the vertical force may have been obtained, and the consequent importance of using every endeavour to add to, or improve the efficiency of, the means by which the latter element is observed. If we refer to Table XLII., in which the mean variation of the vertical force is given for each of the two years of observation, we shall perceive, that although the *march* in the two years is very satisfactorily accordant, the *amount* is considerably different in 1841 and 1842.\* It is obvious, that the determinations which are to be accomplished by means of the vertical force magnetometer, require, even in a greater degree than those of the other instruments, a patient continuance in that "persevering and laborious system of observation" which the Instructions of the Royal Society justly state to be "requisite for a complete determination of the hourly and monthly changes of the magnetic elements."

In the case of the inclination, the deduction of the hours and amounts of its daily maximum and minimum is chiefly influenced by the observed variations of the horizontal force, which we must view as determined with considerably more precision than those of the vertical force. It will be remarked, however, that the combination of the variations of the horizontal and vertical force, shows a coincidence of low total force with the maximum of inclination at 22 hours, and of high total force with the minimum of inclination at 4 hours.

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\* The difference in the amount of the diurnal variation in the two years may possibly have been occasioned by a loss of magnetism in the vertical force magnet in the latter period, which should have been compensated by a corresponding alteration in the value of  $k$ . The vibrations in the horizontal plane appear to have been discontinued in 1841 (the last observation of which a record has been received at Woolwich being on September 30 of that year), probably from a desire to interfere as little as possible with the magnetometers. In the case of the vertical force observations this precaution is not so important as in that of the two other magnetometers. Occasional vibrations in the horizontal plane will therefore be resumed (should they have been discontinued), and the comparison of the times of vibration with those of 1841 will show whether any and what loss of magnetism has taken place since that period. If we regard the amount of the diurnal variation obtained in 1841 as possibly the more correct, the amount of the diurnal variation of the total force will be slightly augmented, but the progression will remain very nearly as before.

## MAGNETIC INCLINATION.

In the original instructions of the Royal Society, observations of the inclination were directed to be made monthly; but, by a supplemental instruction issued in January 1841, it was directed that eight determinations should be made in each month, at nearly equal intervals throughout the month, taking for this purpose Tuesdays in the forenoon, and Fridays in the afternoon, as the days of observation, and the time being not less than three hours distant from mean noon on both days. Observations, agreeably to this plan, commenced in April 1841, and have since continued, having been previously made monthly at irregular intervals, first in the temporary Observatory at Bathurst Barracks from January 1840 until September of the same year; and subsequently, from September 1840 to March 1841 inclusive, in the permanent Observatory. The observations in the temporary Observatory must be regarded as forming a separate determination, as there appears to have been a difference of about 10' or 11' in the inclination at the two localities.

In magnetising the needles for observations of the inclination, the usual method (*i. e.*, by taking a bar magnet in each hand, and passing them over the face of the needle from the axle to the ends), was employed from the first establishment of the Observatory until the 15th of June 1842 inclusive. From that date until the 3rd of August 1842 inclusive, the bar magnets were fixed vertically in a frame, and the needle drawn over their poles. The old method was employed on the 6th of August, and the new method on the 10th of August. From this last date until the 7th of September, the old method was again followed; and, from the 7th of September 1842, to the present time (December 1844), the new method has been invariably adhered to. When the change was first made from the old method of magnetising to the new, the accordance of the partial results in the different positions of the needle was obviously impaired. This is particularly shown in the results between the middle of June and the beginning of August 1842. It does not appear to have been a consequence of any actual inferiority in the new method, because, in its subsequent employment, the needle has been found to give fully as satisfactory results as when magnetised in the old manner. The temporary disadvantage is probably to be ascribed partly to defective manipulation in the first trial of a new method, and partly to the weak state of the magnets themselves, which at that period may have become deteriorated. New and very powerful compound magnets, each consisting of several thin plates of hard steel, according to an arrangement suggested by Dr. Scoresby, were sent to the Observatory in the summer of 1842, taken into use on the 6th of September of that year, and have been in use from that date to the present time. The results of five of the observations at the period when the change was first made in the method of magnetising, *viz.*, July 6, 9, 16, and 20, and August 3, have been omitted in the monthly means in

consequence of the great discordance in the partial results in the different positions of the needle.

No record appears to have been made of the dates at which the horizontality of the agate planes was examined and compared with the levels attached to the frame of the circle, but the Director of the Observatory states, that this has occasionally been done.

During 1840, the observations of inclination were made either by the director, or by the senior non-commissioned officer, Serjeant Johnston. Since the commencement of the regular series in April, 1841, they have been made by all the non-commissioned officers in rotation.

In the following Table the monthly means of the regular series are collected in one view, distinguishing the forenoon from the afternoon results, and showing the mean results of both.

TABLE XLIII.

*Monthly Means of the Observations of Inclination from April, 1841, to December, 1842, inclusive*

MONTHS.	1841				1842			
	8 A.M.	4 P.M.	Mean.	No. of Determinations.	8 A.M.	4 P.M.	Mean.	No. of Determinations.
January . . .	—	—	—	—	75 19·7	75 16·5	75 17·9	9
February . . .	—	—	—	—	75 15·1	75 17·1	75 16·1	8
March . . .	—	—	—	—	75 20·6	75 14·7	75 18·0	9
April . . .	75 15·1	75 17·1	75 16·1	7	75 21·7	75 17·6	75 19·0	9
May . . .	75 16·7	75 16·4	75 16·5	9	75 18·3	75 15·7	75 17·0	8
June . . .	75 17·1	75 16·4	75 16·8	9	75 13·1	75 09·9	75 11·7	9
July . . .	75 13·2	75 15·4	75 14·3	7	75 14·7	75 17·1	75 16·1	5
August . . .	75 14·0	75 13·9	75 13·9	8	75 17·1	75 15·5	75 16·3	8
September . . .	75 17·5	75 20·4	75 18·8	9	75 15·7	75 14·1	75 14·9	8
October . . .	75 18·7	75 19·1	75 18·9	9	75 16·7	75 15·6	75 16·1	9
November . . .	75 17·3	75 18·5	75 17·9	8	75 16·4	75 18·3	75 17·3	9
December . . .	75 21·0	75 18·8	75 19·9	8	75 16·5	75 15·8	75 16·2	9
Means . . .	75 16·7	75 17·3	75 17·0	—	75 17·1	75 15·7	75 16·4	—

In examining this Table, we perceive no certain indication either of secular change or of annual variation. In respect to secular change, we may divide the observations which have been made in the permanent Observatory into three portions; those from September, 1840, to March, 1841, before the regular series commenced; those from April to December, 1841; and those in 1842. These observations were all made on the same spot, and with the same instrument. Their results are as follows:—

September, 1840, to March, 1841 . . . . .	75 16·1
April, 1841, to December, 1841 . . . . .	75 17·0
January to December, 1842 . . . . .	75 16·4

We can draw from these results no other conclusion than that the secular change of the inclination at Toronto at this period was probably extremely small. The observations do not even indicate in which direction it was taking place.

In respect to a difference in the amount of the inclination in the forenoon and afternoon, the only decided conclusion to which the results in Table XLIII. lead is, that it must be extremely small. We have seen that the diurnal variations obtained by the horizontal and vertical force magnetometers indicate a difference of  $0' \cdot 74$  in the inclination at 4 hours and 20 hours, the amount being highest at 20 hours. A mean of the absolute determinations in 1841 and 1842 at 20 hours is  $75^\circ 16' \cdot 9$ , and at 4 hours  $75^\circ 16' \cdot 5$ ; the difference is in the same direction as that shown by the magnetometer observations; but it is obvious that we can attach little or no weight to the coincidence in this respect. We may, however, consider the two methods as concurring in testimony, that the diurnal variation of the inclination at Toronto is of very inconsiderable amount.

#### CONSTANT CORRECTIONS FOR THE MUTUAL ACTION OF THE MAGNETS, &c.

The following very satisfactory Report regarding the constant corrections for the mutual action of the magnets, and for other circumstances affecting the correct reading of the magnetometers, has been furnished by Lieut. Riddell, who was Director of the Observatory when the instruments were established in their permanent places.

“The magnetic Observatory was built in conformity with the Royal Society’s instructions, no iron whatever being used in any part of the structure; the dimensions were sufficient to render the mutual action of the magnets nearly inappreciable. The disturbing causes capable of influencing the direction of the declinometer magnet were— $1^\circ$ , the action of the copper ring used as a damper for checking the vibrations of the magnet;  $2^\circ$ , of the bifilar and vertical force magnets;  $3^\circ$ , of the gridiron pendulum of an astronomical clock within the Observatory, near the bifilar telescope;  $4^\circ$ , of an iron wire fender in the adjoining office, at a distance of about 22 feet;  $5^\circ$ , the prismatic error of the circular piece of parallel glass closing the aperture in front of the magnetometer box. The effects of these several causes were determined by separate experiments, which gave the following mean results expressed in scale divisions:—

The copper ring . . . . .	+ 0·5
Bifilar and vertical force magnets . . . . .	- 0·5
Clock pendulum . . . . .	- 0·04
Iron fender . . . . .	+ 0·2
Prismatic error of glass . . . . .	+ 0·15

“The sum of these effects is + 0·3, denoting that their joint action had the effect of decreasing the scale readings by that amount, or of increasing by 0·2 the observed westerly declination,—if derived by means of the azimuth of the reading telescope, and

the angular deflection of the magnet from its zero point. The application of this correction would, therefore, have reduced the absolute declination corresponding to the 143·4 scale division of magnet (1) from  $1^{\circ} 11'2$  (the azimuth of the reading telescope) to  $1^{\circ} 11'0$ ; but as the declinations in page x., Table VI., are deduced from the value  $1^{\circ} 10'3$  obtained by means of a separate instrument, they are independent of all corrections.

“The effect of these disturbing causes is obviously inappreciable in regard to the declination changes. The corrections have remained constant, with the exception possibly of that for the copper ring, which may have been increased or diminished by the alteration of the interval between the ring and magnet produced by the stretching of the suspension thread. The possible error which may thus be occasioned by the proximity of the copper ring, is an additional reason for the determination of the absolute declination by a separate instrument.

“The disturbing causes capable of influencing the direction of the bifilar magnet were the same with those already mentioned; and their effects have been determined in a similar manner. The copper ring was of Dr. Lloyd’s earlier construction,—a flat ring forming a complete circle; the more powerful damper, similar to the damper of the declinometer, not having been employed in consequence of its appearing to exert too strong an influence on the magnet. The effect of the damper employed was ascertained to be nearly inappreciable. The changes of reading produced by the other causes were found to be

Declinometer magnet (B) . . . . .	0·0
Vertical force magnet . . . . .	+ 0·6
Clock pendulum . . . . .	− 0·1
Prismatic error of glass . . . . .	+ 0·5

“These corrections having been constant during 1841 and 1842 have not been applied. Their effect on the directive force or coefficient of reduction may be regarded as inappreciable.

“Observations were made to determine the change of reading produced by placing the deflecting magnet on its supports east and west of the declinometer, and by the substitution in May 1841, of bar (1) for bar (B) as the declinometer magnet. The changes produced amounted respectively to 0·2 and − 0·3. The correction for the change of the declinometer magnet has not been applied, as the connexion of the series of the bifilar observations was broken a few days after the change was made.

“The stone, of which the pillars supporting the magnetometers were formed, was tested before it was used, in the following manner: readings of the bifilar magnetometer were taken with a block from the same quarry about 2 feet in length, 10 inches broad, and 8 inches thick, alternately placed about 6 inches to the north of one extremity of the suspended magnet, and removed to a distance. The observations gave as a mean effect a decrease of reading of 0·02 scale divisions; the partial results, 9 in number, ranging

from  $-0.10$  to  $+0.25$ . A smaller block, 6 inches in breadth and depth, and 20 inches in length, was tested in the same manner, and gave a result of  $-0.03$ , the partial results varying from  $-0.14$  to  $+0.12$ . The larger block had been previously tested when heated considerably beyond the natural temperature; and its effects at a distance of 4 inches from the ends of the magnets found to be,  $0.2$  on the reading of the declinometer, and  $0.4$  on the reading of the bifilar. These observations showed that the magnetic influence of the pillars might be regarded as inappreciable at the heights above the pillars at which the magnets were suspended."

## TERM DAY OBSERVATIONS.

For the purpose of elucidating the laws of the irregular fluctuations of the magnetic elements, and specially with a view of ascertaining whether they are of a local or universal character, the Instructions of the Royal Society directed that the magnetometers should be observed on certain days simultaneously at all the Observatories, at very short intervals of time, and for twenty-four hours together. Twelve days, entitled Term days, were named in each year for this kind of observation, one in each month of the year;\* the intervals between the observations to be of five minutes for the declinometer, and of ten minutes for each of the two other magnetometers.† The Magnetic Observatories instituted by other nations were invited to co-operate in the simultaneous observations on those days; and this invitation was quickly responded to in the United States, by the Magnetic Observatories established at Harvard University at Boston, and at Girard College at Philadelphia. From the directors of these Observatories, Messrs. Lovering and Bond at Boston, and Dr. Bache at Philadelphia, permission has been obtained to exhibit the curves derived from their Term observations in the plates of this volume in comparison with those of the Toronto Observatory. The Toronto curves commence with the Term day of the month of May 1840. The Term observations of the Observatory at Philadelphia have not hitherto been published; but manuscripts have been obligingly furnished by Dr. Bache, from May 1840 to December 1842 inclusive, comprising observations of the three elements on each Term day. The observations at Harvard University to March 1841, are of the declination only; this portion has been printed in the Memoirs of the American Academy, from which record the curves have been projected, omitting June and July, 1840, as the observations were incomplete

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\* Four of these days, *viz.*, those in the months of February, May, August, and November, were the same appointed by the German Magnetic Confederation.

† By a subsequent instruction from the Royal Society this arrangement was changed for the term days of the year 1842, into observations of the three magnetometers, each at intervals of six minutes; and by a later instruction from the same authority, the intervals were altered from six to five minutes, commencing with January 1843.



in those months. From April 1841 to December 1842 inclusive, the curves have been laid down from the manuscripts which the directors of the Observatory have been so obliging as to furnish, comprehending for this period observations both of the declination and of the horizontal force. The observations from Philadelphia and Boston were transmitted in scale divisions, and those of the magnetic force were uncorrected for temperature. The reductions of the declinometer observations to arc values, and of the magnetic force to an uniform temperature of the magnet and parts of force at the respective stations, have been made at Woolwich, by Bombardier Hendley of the Royal Artillery, by whom also the curves in the thirty-five plates in this volume, illustrating the Term observations, have been projected.\* A uniform scale has been adopted in all these plates, *viz.*, an inch to 10' of arc, and to  $\cdot 002$  parts of the force, with one exception only, namely, in the plate of the horizontal force for May, 1840, when the magnitude of the fluctuations required that the scale should be reduced to half the usual size; and in that plate consequently an inch corresponds to  $\cdot 004$  parts of the force. One plate has been assigned to each Term day, comprehending the curves both of the declination and of the horizontal force, except on three occasions, *viz.*, May 1840, August 1840, and October 1841, when the range of the fluctuations of the two elements required that they should be exhibited on separate plates. The harmony in the curves of the three American Observatories on every one of the term days attests the reality of the phenomena, of which each affords an independent representation. The perturbations which take place at Toronto in the magnetic direction and in the intensity of the magnetic force are obviously common to a large portion of the North American continent.

By the well known publication of MM. Gauss and Weber,† we were apprised that the magnetic perturbations which take place in Europe are common throughout the whole of that large portion of the continent comprehended by the observations of the *Magnetischen Verein*. A comparison of the European and American curves was therefore desirable for the purpose of meeting yet more fully the question propounded in the Instructions of the Royal Society, respecting the local or universal nature of these phenomena. M. Kreil, director of the Imperial Magnetic Observatory at Prague, a station nearly central in respect to Europe, having made the simultaneous observations on the term days proposed by the Royal Society, has kindly supplied manuscript copies of his

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\* In reducing the term observations of the horizontal force at Toronto to an uniform temperature, for the purpose of projection, the coefficient  $\cdot 00022$  was employed, instead of the more correct coefficient  $\cdot 00026$ , obtained by the experiments of February 1843, related in page xxxiii. The error thus occasioned amounts to  $\cdot 00004$  parts of the force for each degree of Fah°. The cross lines on the plates are at intervals of one-tenth of an inch, which, in the case of the horizontal force, are each equivalent to  $\cdot 0002$  parts of the force. Consequently, it requires that the temperature at one hour of the term-day should differ  $5^\circ$  from the mean temperature of the same day, to cause the error to amount to the smallest subdivision which the plate represents.

† *Resultate aus den Beobachtungen des Magnetischen Vereins.*

observations, with permission to project the curves in the plates accompanying this volume. I had previously received from M. Boguslawski, director of the Magnetic Observatory at Breslau, manuscript copies of the observations made at that Observatory on the German term days of February, May, August, and November, 1841, and the plates in which the curves from those observations had been laid down were already lithographed, when the more complete series from M. Kreil arrived. For the object in view, namely, the comparison of the European and American term observations, it was immaterial whether the former should be represented by Breslau or by Prague, or sometimes by one and sometimes by the other; accordingly the plates in which the Breslau observations were projected have been retained, and the remaining thirty-one plates have been completed from the Prague observations. The European term observations were received in scale divisions, those of the horizontal force being uncorrected for temperature; the reductions of these observations have also been made by Bombardier Hendley, and the curves projected by him on the same scale with the American curves.

The observations at Prague and at Harvard University, furnished no term observations of the vertical force. The observations of this element at Toronto and Philadelphia have been reduced and a portion of them projected; but the accordancy which prevails throughout in the movements of the declinometer and bifilar at those stations is but occasionally noticed when the indications of their vertical force magnetometers are compared; and, as it is not likely that the agreement, so generally perceived in two elements, should be really wanting in the third, we are rather led to attribute the failure of accord in such cases in the movements of the vertical force magnetometers to imperfection in one or other of the instruments. Under these circumstances it has appeared inexpedient to incur the expense of lithographing the projections for the purpose of comparison of the vertical force results.

The curves of each term day are accompanied by curves of the diurnal variation of the declination and horizontal force at Toronto, corresponding to the month to which the term day belongs.\* These diurnal curves may be considered to apply alike to each of the American stations: and, inasmuch as there is reason to believe that the amount of the diurnal variation at Prague and at Breslau differs but little from that at Toronto, the influence of the diurnal variation on the European term curves may also be approximately inferred by applying a correction for the difference of time, the European observations being about 7 hours in advance of those in America. The correspondence which is so strikingly manifested in the fluctuations of the declination and horizontal force in America,—and which has its counterpart in the correspondence shown by the

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\* The projections of the diurnal variation of the horizontal force differ occasionally from the tabular numbers, having been computed with approximate coefficients before the more correct values were received. The differences are wholly insignificant.

term observations at the different stations in Europe,—is not found to prevail in anything like the same degree between the curves of the two continents when they are exhibited in comparison. Nevertheless, indications are not wanting of participation in disturbances having a common cause. The character of the term day, in respect to the degree of disturbance by which the magnetometers are affected, may be always derived alike, whether we view the European or the American curves; and instances are not infrequent of individual perturbations, common to both continents, having their culminating points at the same observation instant. These are sometimes disturbances in the same direction in both continents, and sometimes in opposite directions. On the other hand, there are perturbations, and occasionally of considerable magnitude, on the one continent, of which no trace is visible in the observations on the other.

The term day observations in this volume bear testimony, therefore, to the manifestation of simultaneous disturbances on the two continents; and, from the volume of "Observations on Days of unusual Disturbance," we know, that this simultaneity extends to stations much more remote from each other than Europe and America. In reviewing this result we must combine with it the no less certain conclusion, derived from the discussion to which the disturbances occurring at the regular observation hours at Toronto have been subjected, that these interesting and remarkable phenomena exhibit at Toronto a systematic action connected with, and apparently having relation to, the hours of the day.

**ADJUSTMENTS, ABSTRACTS, AND COMMENTS.**

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**METEOROLOGICAL INSTRUMENTS.**



## ADJUSTMENTS, ABSTRACTS, AND COMMENTS.

### METEOROLOGICAL INSTRUMENTS.

THE Observatory was furnished with two barometers, one standard, and the other portable; both were made by Newman, according to the description given in page 53 of the Royal Society's Instructions.

The tube of the standard is 0·6 inches in interior diameter. The scale, which is of brass, is moveable, and terminates at its lower extremity in a conical ivory point, which is carefully brought down, when an observation is to be made, to the surface of the mercury in the cistern, and the two are known to be accurately in contact when the point and its reflexion appear just to touch one another. The ivory point is the zero of the scale, which was graduated from an authentic standard at 32° Fah°. In measuring the height of the mercury in the tube, the eye is kept in a proper position by bringing the back and front edge of the vernier at the upper end of the scale to coincide; and they are made to form a tangent to the highest portion of the upper surface of the mercury, so that the light is just excluded between them. The reduction of the reading to the equivalent length of a column of mercury at the temperature of 32° Fah°. is taken from Table II. in the Royal Society's Instructions. The ball of the attached thermometer is immersed in the mercury of the barometer cistern. No correction has been applied for capillarity; the diameter of the tube being 0·6 inches, and the mercury having been boiled, the correction usually estimated would amount to + 0·002.

A very careful comparison with the standard barometer in the Royal Society's apartments in Somerset House was made before the instruments left England. The Toronto standard was found to stand 0·004 inches higher than the flint-glass standard of the Royal Society. This correction has not been applied. The portable barometer was compared at the same time, and its index correction determined. After the instruments were established in the temporary Observatory at Toronto, the difference of the standard and portable barometers was examined by between thirty and forty comparisons in March, April, and May, 1840, which gave a mean difference within 0·001 inches of the difference observed between them in London. Another portable barometer has been recently, (*i. e.* in the autumn of 1844,) sent to Toronto, to effect a new comparison between the standard of that Observatory and of the Royal Society. It was compared at Somerset House before it was sent from England, and the comparison will be repeated on its return. The comparisons at Toronto have been made and transmitted to England; and assuming provisionally that the portable barometer reached Toronto uninjured, they indicate that the standard barometer of that Observatory has not undergone a deterioration amounting to one-hundredth of an inch in the four years during which it has been observed.

The barometer was fixed to the south wall of the Observatory in September, 1840, and has not been disturbed since. The exact height of the cistern above a fixed mark in the University of Toronto, (distant about 350 yards,) has yet to be determined. The height above the surface of Lake Ontario in summer obtained by levelling is 107·9 feet. The height of Lake Ontario above the sea is given in the maps of the Society for diffusing Useful Knowledge at 234 feet. By information obligingly communicated by Professor Renwick of New York, recently one of the commissioners on the part of the United States for the determination of the north-east boundary line, the height of Lake Ontario, derived from the levels of the Erie and Oswego Canals, is 191 feet above the level of the tide at Albany. Whether high or low water, or the mean of these is meant, is not stated in the survey; but on this point, as well as on the difference of level between the tide at Albany and the sea, Professor Renwick has been so obliging as to promise to obtain further information. In the mean time the approximate height of the barometer above the sea, employing provisionally the statement in the Useful Knowledge Maps, may be taken at  $107\cdot9 + 234 = 341\cdot9$  feet.

The standard and wet thermometers are placed beneath a roof on the outside of the Observatory, in the angle towards the north formed by the walls of the principal room of the Observatory and of the smaller apartment. The height of the roof is about seven feet from the ground; the sides are closed from the roof downwards, as far as six inches below the balls of the thermometers, by Venetian blind shutters, the slope of which is sufficient to admit a free current of air, whilst it completely protects the thermometers from rain. The shutters and the walls in the vicinity are coloured green; the ground beneath is a grass-plat, and several minor precautions are taken to guard against radiation. The thermometers are attached to narrow strips of wood, running from side to side of the thermometer porch or house; the balls are perfectly free; the interval between them is from four to six inches; and the distance from the Observatory window through which they are read is about eight or nine inches. The window is a double one.

The standard thermometer was made by Newman, and was carefully compared with an authentic standard. The wet thermometer was made by Adie of Liverpool, under Dr. Apjohn's superintendence; its scale is graduated to 0·2 of a degree of Fah<sup>t</sup>., and Lieut. Younghusband states that when the ball is not moistened, and other circumstances are similar, the two thermometers rarely differ as much as 0°·1. From the indications of these instruments, and from the height of the barometer, the tension of the aqueous vapour, and the degree of humidity in the air, in a scale wherein air saturated with moisture is accounted as 100 and totally deprived of moisture as 0, have been computed, as they are given in the Tables in this volume, by Bombardier O'Sullivan of the Royal Artillery, from M. Kupffer's *Tables Psychrométriques et Barométriques à l'usage des Observatoires Météorologiques de l' Empire de Russie*.

The self-registering thermometers are suspended under a separate roof against the north wall of the principal room. They are read off daily at 8 A.M. of Toronto time,

and the indices re-adjusted. The solar and terrestrial radiation thermometers are freely exposed to the sun and clear sky in the manner directed in the Royal Society's Instructions; but the observations of this nature have been frequently interrupted by the instruments being either broken or out of order. The records of the self-registering and radiation thermometers are contained in the Meteorological Journal.

The various thermometers have all been compared with the standard at different temperatures. The Observatory is furnished with a spare standard in case of accident. The two standards were found to agree at all temperatures. The others differed more or less at different temperatures, and a table of corrections for every ten degrees was formed for each from the mean of a large number of observations. The readings of the thermometers have all received these corrections when necessary.

Daniell's hygrometer was unfortunately broken in the winter of 1840-41, and one sent to replace it, when the navigation opened in the following spring, failed in reaching its destination. The deficiency has since been supplied, and careful comparisons are now made of the indications of this instrument with those of the wet and dry thermometers, particularly during the severe cold of the winter and spring at Toronto.

We may derive from Tables XLIV. and XLV., in pages lxxvi and lxxvii, the following particulars relative to the variations of the temperature. The highest temperature of the day on the average of the year is between 2 and 4 hours; and the coldest between 16 and 18 hours. In the winter months the minimum is at the later, and the maximum at the earlier hour; in summer the reverse takes place. The mean daily difference in the height of the thermometer in the several quarters is as follows:—

QUARTERS.	Maximum.	Minimum.	Difference.	
Winter . . . { 1841 { 1842	28·1 32·0	21·2 25·9	6·9 6·1	6·50
Spring . . . { 1841 { 1842	47·3 50·7	33·1 37·4	14·2 13·3	13·75
Summer . . . { 1841 { 1842	74·3 71·3	57·1 54·2	17·2 17·1	17·15
Autumn . . . { 1841 { 1842	51·8 51·0	41·9 40·1	9·9 10·9	10·40
In the Years. . { 1841 { 1842	50·1 50·9	38·6 39·7	11·5 11·2	11·35

In 1841 June was the hottest month in the year, and February the coldest; the respective mean temperatures were 66·2 and 23·2. In 1842 August was the hottest month, and January the coldest; the temperatures being 65·7 and 27·9.



TABLE XLIV.

Monthly Means of the Temperature at every Second Hour from December 1st, 1840, to November 30th, 1841, inclusive.

	Hours of Göttingen Time												Monthly and Annual Means.	
	0	2	4	6	8	10	12	14	16	18	20	22		
	Hours of Toronto Time													
	18	20	22	0	2	4	6	8	10	12	14	16		
1840	°	°	°	°	°	°	°	°	°	°	°	°	°	°
December . . .	23·0	22·9	25·5	27·2	28·2	26·9	25·2	24·2	23·7	24·3	23·6	22·9	24·8	
1841														
January . . .	22·3	22·4	25·6	28·1	28·7	28·2	27·1	26·9	26·3	24·6	24·0	23·2	25·6	
February . . .	18·4	19·0	22·9	25·8	27·4	27·6	25·5	24·7	24·1	21·8	21·0	19·9	23·2	
March . . .	21·6	25·0	30·1	32·6	33·9	34·5	32·1	28·5	27·5	25·4	23·4	22·9	28·1	
April . . .	34·0	38·4	41·8	44·6	45·9	47·4	44·9	39·3	36·5	34·8	33·3	33·2	39·5	
May . . .	45·0	50·2	54·2	56·7	59·3	60·1	58·3	50·8	46·7	45·3	44·3	43·2	51·2	
June . . .	59·9	64·7	68·8	71·6	74·4	75·8	73·9	65·3	61·9	59·9	59·1	58·3	66·2	
July . . .	58·6	64·7	68·4	71·8	73·7	74·2	73·7	64·9	61·2	59·3	57·7	56·2	65·4	
August . . .	57·2	64·0	68·2	71·3	73·5	73·0	71·1	63·5	60·6	58·9	57·3	56·6	64·6	
September . . .	55·6	60·5	63·7	66·6	68·1	67·5	63·7	60·7	59·0	58·1	56·5	55·8	61·3	
October . . .	36·6	40·6	45·2	47·7	48·6	48·4	43·2	40·5	39·2	38·1	37·7	37·5	41·9	
November . . .	33·6	34·2	36·8	38·5	38·6	37·2	35·6	34·2	33·7	34·1	33·8	33·1	35·3	
Hourly Means	38·8	42·2	45·9	48·5	50·0	50·1	47·8	43·6	41·7	40·4	39·3	38·6	43·9	

From December 1st, 1841, to November 30th, 1842, inclusive.

1841														
December . . .	28·0	27·8	29·8	31·3	32·2	31·8	30·8	30·4	29·6	29·0	28·8	28·4	29·8	
1842														
January . . .	24·7	25·2	28·7	31·4	32·3	31·6	29·1	28·1	27·5	25·4	25·3	25·0	27·9	
February . . .	24·9	24·8	28·2	30·4	31·6	31·1	28·9	27·7	27·3	27·3	27·1	26·5	28·0	
March . . .	31·9	34·0	37·7	39·9	41·9	41·9	38·7	36·1	34·7	33·1	32·0	32·2	36·2	
April . . .	37·2	41·5	45·0	47·7	49·8	50·6	48·9	44·1	42·0	39·9	38·6	37·9	43·6	
May . . .	43·5	48·6	52·6	55·6	58·4	59·7	57·0	49·5	45·5	43·4	42·5	42·2	49·8	
June . . .	50·9	55·5	59·1	62·1	64·0	65·0	63·7	56·4	53·0	50·8	49·8	48·7	56·6	
July . . .	57·6	64·0	67·7	71·4	74·6	74·7	73·5	64·4	60·4	58·0	56·5	55·0	64·8	
August . . .	58·9	64·1	68·9	71·3	73·1	74·1	72·0	64·3	62·2	61·0	59·7	58·9	65·7	
September . . .	49·5	54·1	58·5	61·4	62·8	63·1	58·9	54·7	52·2	52·3	51·3	50·5	55·8	
October . . .	39·8	43·4	48·5	51·6	52·9	51·8	47·4	45·3	43·1	41·6	40·6	39·9	45·5	
November . . .	30·9	32·1	35·0	36·8	37·3	35·9	33·7	32·5	32·4	31·6	31·3	30·8	33·4	
Hourly Means	39·8	42·9	46·6	49·2	50·9	50·9	48·6	44·5	42·5	41·1	40·3	39·7	44·8	

METEOROLOGICAL INSTRUMENTS.

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TABLE XLV.

*The Temperature in 1841 and 1842 shown in Quarterly and Annual Means.*

Hours of Göttingen Time. } Hours of Toronto Time. }	0	2	4	6	8	10	12	14	16	18	20	22	Means.
	18	20	22	0	2	4	6	8	10	12	14	16	
December, 1840 . . . } January, 1841 . . . } February ,, . . . }	°	°	°	°	°	°	°	°	°	°	°	°	°
December, 1841 . . . } January, 1842 . . . } February ,, . . . }	21.2	21.4	24.7	27.0	28.1	27.6	25.9	25.3	24.7	23.6	22.9	22.0	24.6
Mean of Winter Quarters }	23.5	23.7	26.8	29.0	30.1	29.6	27.7	27.0	26.4	25.4	25.0	24.3	26.5
March, 1841 . . . } April ,, . . . } May ,, . . . }	33.5	37.9	42.0	44.6	46.4	47.3	45.1	39.5	36.9	35.2	33.7	33.1	39.6
March, 1842 . . . } April ,, . . . } May ,, . . . }	37.5	41.4	45.1	47.7	50.0	50.7	48.2	43.2	40.7	38.8	37.7	37.4	43.2
Mean of Spring Quarters }	35.5	39.6	43.5	46.2	48.2	49.0	46.7	41.3	38.8	37.0	35.7	35.2	41.4
June, 1841 . . . } July ,, . . . } August ,, . . . }	58.6	64.5	68.5	71.6	73.9	74.3	72.9	64.6	61.2	59.4	58.2	57.0	65.4
June, 1842 . . . } July ,, . . . } August ,, . . . }	55.8	61.2	65.2	68.3	70.6	71.3	69.7	61.7	58.5	56.6	55.3	54.2	62.4
Mean of Summer Quarters. }	57.2	62.8	66.8	70.0	72.2	72.8	71.3	63.1	59.8	58.0	56.8	55.6	63.9
September, 1841 . . } October ,, . . . } November ,, . . . }	41.9	45.1	48.6	50.9	51.8	51.0	47.5	45.1	44.0	43.4	42.7	42.1	46.2
September, 1842 . . } October ,, . . . } November ,, . . . }	40.1	43.2	47.3	49.9	51.0	50.3	46.7	44.2	42.6	41.8	41.1	40.4	44.9
Mean of Autumn Quarters }	41.0	44.1	48.0	50.4	51.4	50.7	47.1	44.6	43.3	42.6	41.9	41.3	45.5
Means from Dec., 1840, to Nov. 1841 }	38.8	42.2	45.9	48.5	50.0	50.1	47.8	43.6	41.7	40.4	39.3	38.6	43.9
Means from Dec., 1841, to Nov. 1842 }	39.8	42.9	46.6	49.2	50.9	50.9	48.6	44.5	42.5	41.1	40.3	39.7	44.8
Mean of 2 Years	39.3	42.6	46.3	48.9	50.4	50.5	48.2	44.1	42.1	40.7	39.8	39.1	44.35

TABLE XLVI.

Monthly Means of the Barometer at every Second Hour, from December, 1840, to November, 1841, inclusive.

Barometer at 32° Fah°. = 29 English inches + the numbers in the Table.

Hours at Göttingen	0	2	4	6	8	10	12	14	16	18	20	22	Monthly and Annual Means.
Hours at Toronto .	18	20	22	0	2	4	6	8	10	12	14	16	
1840													
December . .	·647	·664	·673	·636	·619	·635	·657	·668	·669	·646	·649	·657	·652
1841													
January . . .	·684	·691	·694	·656	·636	·643	·646	·656	·653	·663	·674	·669	·664
February . . .	·493	·519	·526	·508	·468	·471	·483	·486	·478	·483	·475	·476	·489
March . . . .	·671	·683	·682	·664	·635	·627	·633	·645	·646	·672	·669	·664	·658
April . . . .	·638	·647	·642	·619	·604	·595	·604	·624	·629	·621	·613	·607	·620
May . . . . .	·557	·565	·561	·543	·526	·517	·526	·550	·564	·549	·539	·543	·545
June . . . . .	·566	·577	·570	·556	·531	·516	·513	·526	·541	·536	·537	·549	·543
July . . . . .	·641	·651	·649	·627	·608	·595	·592	·602	·615	·616	·616	·625	·620
August . . . .	·722	·731	·730	·716	·694	·682	·672	·681	·687	·687	·684	·690	·698
September . .	·616	·628	·631	·622	·600	·587	·587	·597	·602	·597	·596	·603	·605
October . . . .	·651	·667	·663	·640	·622	·622	·634	·643	·643	·650	644	·640	·643
November . . .	·554	·580	·585	·568	·559	·570	·587	·597	·596	·548	·542	·544	·569
Hourly Means	·620	·634	·634	·613	·592	·588	·595	·606	·610	·606	·603	·606	·609

7th December, 1841, to November, 1842, inclusive.

1841													
December . .	·610	·621	·629	·590	·569	·574	·581	·585	·581	·607	·613	·602	·597
1842													
January . . .	·528	·534	·531	·490	·474	·482	·491	·485	·483	·533	·535	·532	·508
February . . .	·529	·562	·574	·562	·545	·554	·569	·571	·559	·524	·511	·512	·548
March . . . .	·633	·663	·671	·662	·635	·628	·631	·640	·636	·607	·620	·627	·638
April . . . .	·578	·584	·580	·559	·538	·525	·526	·545	·547	·537	·528	·531	·548
May . . . . .	·590	·601	·603	·595	·579	·576	·582	·597	·607	·579	·575	·580	·589
June . . . . .	·607	·617	·613	·596	·579	·568	·560	·565	·573	·575	·575	·584	·584
July . . . . .	·667	·678	·679	·671	·651	·634	·632	·637	·648	·660	·650	·654	·655
August . . . .	·728	·739	·741	·732	·714	·697	·692	·701	·703	·702	·695	·698	·712
September . .	·677	·690	·696	·683	·663	·648	·651	·659	·657	·638	·635	·642	·662
October . . . .	·640	·659	·657	·632	·614	·602	·620	·630	·632	·648	·642	·646	·635
November . . .	·635	·642	·640	·612	·596	·599	·605	·606	·606	·618	·614	·610	·615
Hourly Means	·619	·632	·635	·615	·596	·591	·595	·602	·603	·602	·599	·602	·608

By direct comparison with the barometer in the Royal Society's apartments in London, made in 1839, the standard barometer of the Toronto Observatory stood 0·004 higher than the barometer of the Royal Society.

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TABLE XLVII.

The Height of the Barometer shown in Quarterly and Annual Means.

Barometer at 32° Fah' = 29 English inches + the numbers in the Table.

Hours at Göttingen . .	0	2	4	6	8	10	12	14	16	18	20	22	Means.
Hours at Toronto . .	18	20	22	0	2	4	6	8	10	12	14	16	
December, 1840. . .	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
January, 1841. . .	.608	.625	.631	.600	.574	.583	.595	.603	.600	.597	.599	.601	.601
February ,, . . .													
December, 1841. . .													
January, 1842. . .	.556	.572	.578	.547	.529	.537	.547	.547	.541	.555	.553	.549	.551
February ,, . . .													
Mean of Winter Quarters. }	.582	.599	.605	.574	.552	.560	.571	.575	.571	.576	.576	.575	.576
March, 1841 . . .													
April ,, . . .	.622	.632	.628	.608	.588	.580	.588	.606	.613	.614	.607	.605	.608
May ,, . . .													
March, 1842 . . .													
April ,, . . .	.600	.616	.618	.605	.584	.576	.580	.594	.597	.574	.574	.579	.591
May ,, . . .													
Mean of Spring Quarters. }	.611	.624	.623	.607	.586	.578	.584	.600	.605	.594	.591	.592	.600
June, 1841 . . .													
July ,, . . .	.643	.653	.650	.633	.611	.598	.592	.603	.614	.613	.612	.621	.620
August ,, . . .													
June, 1842 . . .													
July ,, . . .	.667	.678	.678	.666	.648	.633	.628	.634	.641	.646	.640	.645	.650
August ,, . . .													
Mean of Summer Quarters. }	.655	.666	.664	.650	.630	.616	.610	.619	.628	.630	.626	.633	.635
September, 1841 . .													
October ,, . . .	.607	.625	.626	.610	.594	.593	.603	.613	.614	.598	.594	.596	.606
November ,, . . .													
September, 1842 . .													
October ,, . . .	.651	.664	.664	.642	.624	.616	.625	.632	.632	.635	.630	.633	.637
November ,, . . .													
Mean of Autumn Quarters. }	.629	.645	.645	.626	.609	.605	.614	.623	.623	.617	.612	.615	.622
Mean from Dec. 1840 to Nov. 1841. }	.620	.634	.634	.613	.592	.588	.595	.606	.610	.606	.603	.606	.609
Mean from Dec. 1841 to Nov. 1842. }	.619	.632	.635	.615	.596	.591	.595	.602	.603	.602	.599	.602	.608
Mean of 2 Years . .	.620	.633	.635	.614	.594	.590	.595	.604	.607	.604	.601	.604	.608

We may derive from these Tables the following particulars relative to the diurnal variation of the barometric pressure, *viz.* :—

1. The morning maximum takes place at 20 hours in the summer quarter, and at 22 hours in the winter quarter; in the spring and autumn quarters, it is almost equally divided between those hours.

2. The afternoon minimum takes place at 2 hours in the winter quarter, at 6 hours in the summer quarter, and at 4 hours in the spring and autumn quarters, and in the annual means.

3. The second maximum occurs at 8 hours in the winter quarter, is equally divided between 8 and 10 hours in the autumn quarter, is at 10 hours in the spring quarter, and at 12 hours in the summer quarter. On the average of the whole year it is at 10 hours.

4. The second minimum is at 14 hours in the spring, summer, and autumn quarters, and on the average of the year; but in the winter quarter it occurs 2 hours, and occasionally 4 hours earlier.

The average daily difference in the height of the barometer is in the several quarters as follows :—

QUARTERS.	Maximum.	Minimum.	Difference.	
			In.	In.
Winter . . . { 1841 1842	29·631 29·578	29·574 29·529	·057 ·049	} ·053
Spring . . . { 1841 1842	29·632 29·618	29·580 29·574	·052 ·044	} ·048
Summer . . . { 1841 1842	29·653 29·678	29·592 29·628	·061 ·050	} ·0555
Autumn . . . { 1841 1842	29·626 29·664	29·593 29·616	·033 ·048	} ·0405
In the Year . . { 1841 1842	29·634 29·635	29·588 29·591	·046 ·044	} ·045

In viewing the average heights of the barometer in the several quarters, we perceive that the winter and spring quarters are below, and the summer and autumn quarters above, the general mean. The mean height in August is higher than that of any other month, both in 1841 and 1842; February in 1841, and January in 1842, have the lowest barometric pressures in those years respectively.

TABLE XLVIII.

Monthly Means of the Elastic Force of the Aqueous Vapour at every Second Hour, from December 1st, 1840, to November 30th, 1841, inclusive.

Hours of Mean Göttingen Time. } Hours of Mean Toronto Time. }	0	2	4	6	8	10	12	14	16	18	20	22	Monthly and Annual Means.
	18	20	22	0	2	4	6	8	10	12	14	16	
<b>1840</b>	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
December . . .	·115	·115	·122	·131	·131	·127	·123	·124	·124	·121	·118	·117	·122
<b>1841</b>													
January . . .	·128	·128	·143	·142	·144	·142	·133	·136	·136	·138	·125	·119	·135
February . . .	·098	·099	·109	·111	·114	·113	·110	·111	·108	·103	·102	·101	·107
March . . .	·113	·123	·138	·147	·149	·148	·137	·134	·131	·121	·114	·117	·131
April . . .	·162	·174	·180	·191	·197	·198	·187	·163	·162	·157	·152	·152	·173
May . . .	·254	·264	·264	·285	·296	·270	·263	·251	·238	·243	·239	·234	·258
June . . .	·444	·465	·490	·495	·505	·472	·467	·440	·422	·414	·414	·408	·453
July . . .	·432	·454	·473	·497	·495	·482	·469	·445	·425	·424	·408	·398	·450
August . . .	·431	·487	·511	·541	·547	·551	·520	·476	·450	·439	·422	·419	·483
September . . .	·413	·469	·480	·498	·494	·476	·463	·449	·441	·432	·416	·409	·453
October . . .	·190	·210	·219	·222	·227	·226	·220	·211	·201	·196	·204	·194	·210
November . . .	·177	·175	·180	·181	·180	·176	·164	·167	·164	·170	·173	·168	·173
Hourly Means	·246	·264	·276	·287	·290	·282	·271	·258	·250	·246	·241	·236	·262

From December 1st, 1841, to November 30th, 1842, inclusive.

<b>1841</b>													
December . . .	·147	·148	·152	·155	·158	·159	·160	·158	·152	·149	·148	·146	·153
<b>1842</b>													
January . . .	·124	·126	·132	·138	·141	·141	·133	·134	·131	·120	·118	·120	·130
February . . .	·125	·126	·133	·143	·145	·146	·140	·138	·143	·143	·138	·134	·138
March . . .	·152	·161	·175	·182	·171	·168	·162	·163	·162	·153	·152	·148	·162
April . . .	·181	·194	·204	·217	·222	·216	·204	·203	·204	·184	·183	·181	·199
May . . .	·217	·227	·241	·249	·246	·248	·228	·215	·212	·216	·214	·209	·227
June . . .	·315	·342	·365	·380	·399	·393	·381	·352	·337	·306	·301	·296	·347
July . . .	·411	·450	·470	·475	·492	·482	·474	·427	·422	·390	·389	·378	·438
August . . .	·445	·491	·508	·530	·548	·547	·525	·485	·472	·458	·445	·439	·491
September . . .	·318	·355	·361	·373	·368	·363	·363	·350	·341	·349	·336	·326	·350
October . . .	·223	·252	·268	·275	·277	·270	·256	·249	·241	·240	·231	·229	·251
November . . .	·163	·167	·182	·184	·184	·184	·177	·171	·170	·164	·163	·162	·173
Hourly Means	·235	·253	·266	·275	·279	·276	·267	·254	·249	·239	·235	·231	·255

TABLE XLIX.

*The elastic Force of the Vapour shown in Quarterly and Annual Means.*

Hours of Mean Göttingen Time. } Hours of Mean Toronto Time. }	0	2	4	6	8	10	12	14	16	18	20	22	Means.
	18	20	22	0	2	4	6	8	10	12	14	16	
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
December, 1840. } January, 1841. } February ,, . }	·114	·114	·125	·128	·130	·127	·122	·124	·123	·121	·115	·112	·121
December, 1841 } January, 1842 } February ,, . }	·132	·133	·139	·145	·148	·149	·144	·143	·142	·137	·135	·133	·140
Mean of Winter Quarters. }	·123	·124	·132	·136	·139	·138	·133	·133	·132	·129	·125	·122	·131
March, 1841 . . } April ,, . . } May ,, . . }	·176	·187	·194	·208	·214	·205	·196	·183	·177	·174	·168	·168	·188
March, 1842 . . } April ,, . . } May ,, . . }	·183	·194	·207	·216	·213	·211	·198	·194	·193	·184	·183	·179	·196
Mean of Spring Quarters. }	·180	·191	·201	·212	·214	·208	·197	·189	·185	·179	·176	·174	·192
June, 1841 . . . } July ,, . . . } August ,, . . . }	·436	·469	·491	·511	·516	·502	·485	·454	·432	·428	·415	·408	·462
June, 1842 . . . } July ,, . . . } August ,, . . . }	·390	·428	·448	·462	·480	·474	·460	·421	·410	·385	·378	·371	·426
Mean of Summer Quarters. }	·413	·448	·469	·486	·498	·488	·472	·437	·421	·406	·396	·389	·444
September, 1841 . } October ,, . . } November ,, . . }	·260	·285	·293	·300	·300	·293	·282	·276	·269	·266	·264	·257	·279
September, 1842 . } October ,, . . } November ,, . . }	·235	·258	·272	·277	·276	·272	·265	·257	·251	·251	·243	·239	·258
Mean of Autumn Quarters. }	·247	·272	·283	·288	·288	·283	·273	·266	·260	·258	·254	·248	·269
Mean from Dec. 1840 to Nov. 1841. }	·246	·264	·276	·287	·290	·282	·271	·258	·250	·246	·241	·236	·262
Mean from Dec. 1841 to Nov. 1842. }	·235	·253	·266	·275	·279	·276	·267	·254	·249	·239	·235	·231	·255
Mean of 2 Years .	·241	·259	·271	·281	·285	·279	·269	·256	·250	·243	·238	·234	·259

The elastic force of the vapour at Toronto has but one maximum and one minimum in the 24 hours. The maximum occurs at 2 hours on the average of each year, and of each quarter separately. The minimum takes place at 16 hours on the average of each year, and in every separate quarter, except the autumn of 1842, when it is at 18 hours. It may be inferred from the numbers at the respective hours that, if the observations were at shorter intervals than two hours, the minimum would be found to take place earlier in spring and summer than in winter and autumn.

The average daily difference between the greatest and the least elastic force of the vapour is, in each of the two years, and in each quarter, as follows:—

PERIODS.		Maximum.	Minimum.	Difference.	
		In.	In.	In.	In.
Winter . . .	{ 1841	·130	·112	·018	} ·0175
	{ 1842	·149	·132	·017	
Spring . . .	{ 1841	·214	·168	·046	} ·0415
	{ 1842	·216	·179	·037	
Summer. . .	{ 1841	·516	·408	·108	} ·1085
	{ 1842	·480	·371	·109	
Autumn . . .	{ 1841	·300	·257	·043	} ·0425
	{ 1842	·277	·235	·042	
In the Year . .	{ 1841	·290	·236	·054	} ·0510
	{ 1842	·279	·231	·048	

In viewing the average amount of the tension of the vapour shown in Tables XLVIII. and XLIX., we perceive that it is less in the winter and spring quarters, and greater in the summer, than the mean of the year. Autumn approaches nearly to the mean, but is somewhat higher. Both in 1841 and 1842, the month of August has the greatest elastic force of vapour. February in 1841, and January in 1842, have the least in the respective years. These are the same months which have the highest and lowest mean heights of the barometer in the same years.



TABLE L.

*Mean Monthly Degree of Humidity at Toronto, at every Second Hour, from December 1st, 1840, to November 30th, 1841, inclusive.*

Hours of Göttingen Time.	0	2	4	6	8	10	12	14	16	18	20	22	Monthly and Annual Means.
Hours of Toronto Time.	18	20	22	0	2	4	6	8	10	12	14	16	
1840													
December . . .	86	86	82	84	81	81	83	86	85	83	84	87	84
1841													
January . . .	92	90	88	81	84	84	84	89	90	91	88	88	87
February . . .	89	87	82	76	72	71	75	78	78	79	82	85	80
March . . .	83	83	78	77	75	73	73	80	81	81	80	82	79
April . . .	80	73	66	64	64	60	63	66	74	75	78	77	70
May . . .	81	70	61	60	58	52	53	65	72	77	79	80	67
June . . .	86	78	70	65	59	54	58	71	76	81	82	84	72
July . . .	88	75	69	65	61	59	58	73	79	84	86	88	74
August . . .	94	84	75	72	68	70	71	82	86	89	90	92	81
September . . .	92	88	81	76	71	70	78	84	87	88	89	90	83
October . . .	86	82	72	67	65	65	77	82	83	83	87	84	78
November . . .	88	85	79	74	74	77	77	82	82	85	87	86	81
Hourly Means	87	82	76	72	69	68	71	78	81	83	84	85	78

*From December 1st, 1841, to November 30th, 1842, inclusive.*

1841													
December . . .	90	90	87	83	82	83	87	87	87	87	87	88	86
1842													
January . . .	87	87	82	74	74	76	79	83	82	85	82	84	81
February . . .	87	88	81	79	77	79	81	84	87	87	87	88	84
March . . .	83	81	75	73	66	64	70	76	80	80	82	80	76
April . . .	81	74	69	66	64	61	61	71	77	75	78	80	71
May . . .	76	66	62	57	51	49	49	60	69	74	76	76	64
June . . .	84	80	73	69	67	65	65	75	83	82	83	85	76
July . . .	87	77	71	62	59	59	60	72	81	82	85	87	74
August . . .	90	83	73	70	69	66	69	82	85	86	87	88	79
September . . .	87	83	74	68	64	63	73	81	86	87	87	87	78
October . . .	90	89	79	73	69	70	78	83	86	92	91	92	83
November . . .	89	88	85	81	80	84	87	88	89	89	89	89	86
Hourly Means	86	82	76	71	69	68	72	79	83	84	84	85	78

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TABLE LI.  
*Degree of Humidity in Quarterly and Annual Means.*

Hours of Göttingen Time. } Hours of Toronto Time. }	0	2	4	6	8	10	12	14	16	18	20	22	Means.
	18	20	22	0	2	4	6	8	10	12	14	16	
December, 1840 . . . } January, 1841 . . . } February ,, . . . }	89	88	84	80	79	79	81	84	84	84	85	87	84
December, 1841 . . . } January, 1842 . . . } February ,, . . . }	88	88	83	79	78	79	82	85	85	86	85	87	84
Mean of Winter Quarters. }	89	88	84	80	79	79	82	85	85	85	85	87	84
March, 1841 . . . } April ,, . . . } May ,, . . . }	81	75	68	67	66	62	63	70	76	78	79	80	72
March, 1842 . . . } April ,, . . . } May ,, . . . }	80	74	69	65	60	58	60	69	75	77	79	79	70
Mean of Spring Quarters. }	81	75	69	66	63	60	62	70	75	77	79	80	71
June, 1841 . . . } July ,, . . . } August ,, . . . }	89	79	71	67	63	61	62	75	80	85	86	88	76
June, 1842 . . . } July ,, . . . } August ,, . . . }	87	80	72	67	65	63	65	76	83	83	85	87	76
Mean of Summer Quarters. }	88	80	72	67	64	62	64	76	82	84	86	88	76
September, 1841 . . } October ,, . . . } November ,, . . . }	89	85	77	72	70	71	77	83	84	85	88	87	81
September, 1842 . . } October ,, . . . } November ,, . . . }	89	87	79	74	71	72	79	84	87	89	89	89	82
Mean of Autumn Quarters. }	89	86	78	73	71	72	78	84	86	87	88	88	82
Mean from Dec. 1840 to Nov. 1841. }	87	82	76	72	69	68	71	78	81	83	84	85	78
Mean from Dec. 1841 to Nov. 1842. }	86	82	76	71	69	68	72	79	82	84	84	85	78
Mean of 2 Years .	87	82	76	72	69	68	71	78	82	83	84	85	78

The mean degree of humidity in both years is 78; or, on the average of the whole year, the air contains a proportion of vapour of which the elastic force is 78 parts in 100 of the amount required for saturation. The spring is the driest quarter; then the summer; then the autumn; and the winter is the most humid quarter. May is the driest month of the year, and December the least so.

The diurnal variation of the humidity has one minimum, which on the average of the year occurs at 4 hours; but in autumn and winter is frequently at 2 hours. The maximum takes place at 18 hours on the average of the year, and in each separate quarter.

TABLE LII.

*Monthly Means of the Pressure of the Gaseous Atmosphere at every Second Hour from December 1840 to November 1841, inclusive.*

Height of Barometer — Elastic Force of vapour = 29 English inches + the numbers in the Table.

Hours of Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Monthly and Annual Means.
	18	20	22	0	2	4	6	8	10	12	14	16	
1840	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
December . .	·532	·549	·551	·505	·488	·508	·534	·544	·545	·525	·531	·540	·529
1841													
January . . .	·556	·563	·551	·514	·492	·501	·513	·520	·517	·525	·549	·550	·529
February . .	·395	·420	·417	·397	·354	·358	·373	·375	·370	·380	·373	·375	·382
March . . .	·558	·560	·544	·517	·486	·479	·496	·511	·515	·551	·555	·547	·527
April . . . .	·476	·473	·462	·428	·407	·397	·417	·461	·467	·464	·461	·455	·447
May . . . . .	·303	·301	·297	·258	·230	·247	·263	·299	·326	·306	·300	·309	·287
June . . . . .	·122	·112	·080	·061	·026	·044	·046	·086	·119	·122	·123	·141	·090
July . . . . .	·209	·197	·176	·130	·113	·113	·123	·157	·190	·192	·208	·227	·170
August . . . .	·291	·244	·219	·175	·147	·131	·152	·205	·237	·248	·262	·271	·215
September . .	·203	·159	·151	·124	·106	·111	·124	·148	·161	·165	·180	·194	·152
October . . . .	·461	·457	·444	·418	·395	·396	·414	·432	·442	·454	·440	·446	·433
November . . .	·377	·405	·405	·387	·379	·394	·423	·430	·432	·378	·369	·376	·396
Hourly Means	·374	·370	·358	·326	·302	·307	·323	·347	·360	·359	·363	·369	·346

*From December 1841 to November 1842, inclusive.*

1841													
December . .	·463	·473	·477	·435	·411	·415	·421	·427	·429	·458	·465	·456	·444
1842													
January . . .	·404	·408	·399	·352	·333	·341	·358	·351	·352	·413	·417	·412	·378
February . .	·404	·436	·441	·419	·400	·409	·429	·433	·416	·381	·373	·378	·410
March . . . .	·481	·502	·496	·480	·464	·460	·469	·477	·474	·454	·468	·479	·475
April . . . .	·397	·390	·376	·342	·316	·309	·322	·342	·343	·353	·345	·350	·349
May . . . . .	·373	·374	·362	·346	·333	·328	·354	·382	·395	·363	·361	·371	·362
June . . . . .	·292	·275	·248	·216	·180	·175	·179	·213	·236	·269	·274	·288	·237
July . . . . .	·256	·228	·209	·196	·159	·152	·158	·210	·226	·270	·261	·276	·217
August . . . .	·283	·248	·233	·202	·166	·150	·167	·216	·231	·244	·250	·259	·221
September . .	·359	·335	·335	·310	·295	·285	·288	·309	·316	·289	·299	·316	·311
October . . . .	·417	·407	·389	·357	·337	·332	·364	·381	·391	·408	·411	·417	·384
November . . .	·472	·475	·458	·428	·412	·415	·428	·435	·436	·454	·451	·448	·443
Hourly Means	·383	·379	·369	·340	·317	·315	·328	·348	·354	·363	·365	·371	·353

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TABLE LIII.

*Pressure of the Gaseous Atmosphere shown in Quarterly and Annual Means.*

29 English inches + the numbers in the Table.

Hours of Göttingen Time.	0	2	4	6	8	10	12	14	16	18	20	22	Means.
Hours of Toronto Time.	18	20	22	0	2	4	6	8	10	12	14	16	
December, 1840 .	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
January 1841 .	.494	.511	.506	.472	.445	.456	.473	.480	.477	.477	.484	.488	.480
February ,, .													
December, 1841 .	.424	.439	.439	.402	.381	.388	.403	.404	.399	.417	.418	.415	.411
January 1842 .													
February ,, .													
Mean of Winter Quarters.	.459	.475	.472	.437	.413	.422	.438	.442	.438	.447	.451	.452	.446
March, 1841 . .	.446	.445	.434	.401	.374	.374	.392	.424	.436	.440	.439	.437	.420
April ,, . .													
May ,, . .													
March, 1842 . .	.417	.422	.411	.389	.371	.366	.382	.400	.404	.390	.391	.400	.395
April ,, . .													
May ,, . .													
Mean of Spring Quarters.	.432	.434	.423	.395	.373	.370	.387	.412	.420	.415	.415	.419	.408
June, 1841 . .	.207	.184	.158	.122	.095	.096	.107	.149	.182	.187	.198	.213	.158
July ,, . .													
August ,, . .													
June, 1842 . .	.277	.250	.230	.205	.168	.159	.168	.213	.231	.261	.262	.274	.225
July ,, . .													
August ,, . .													
Mean of Summer Quarters.	.242	.217	.194	.164	.132	.128	.138	.181	.207	.224	.230	.244	.192
September, 1841 .	.347	.340	.333	.310	.293	.300	.320	.337	.345	.332	.330	.339	.327
October ,, . .													
November ,, . .													
September, 1842 .	.416	.406	.394	.365	.348	.344	.360	.375	.381	.384	.387	.394	.379
October ,, . .													
November ,, . .													
Mean of Autumn Quarters.	.382	.373	.363	.338	.321	.322	.340	.356	.363	.358	.358	.367	.353
Mean from Dec., 1840, to Nov. 1841	.374	.370	.358	.326	.302	.307	.323	.347	.360	.359	.363	.369	.346
Mean from Dec., 1841, to Nov. 1842	.383	.379	.369	.340	.317	.314	.328	.348	.354	.363	.365	.371	.353
Mean of 2 Years	.379	.375	.364	.333	.310	.311	.326	.348	.357	.361	.364	.370	.349

The diurnal pressure of the gaseous atmosphere has one maximum which occurs about the coldest hour of the day, and one minimum which occurs about the warmest hour of the day. In the summer months the maximum is nearest to 16 hours; in the autumn months to 18 hours; in the spring months to 20 hours; and, in the winter months, is intermediate between 20 and 22 hours. In spring and summer the minimum is at 4 hours; in autumn, is intermediate between 2 and 4 hours; and, in winter, is at 2 hours. These differences are all obviously connected with the variations of temperature in the different seasons.

The average amount of the difference in the daily pressure in the several quarters is as follows, *viz.*:—

QUARTERS.		Maximum.	Minimum.	Difference.	
		In.	In.	In.	
Winter . . .	{ 1841	29·511	29·445	·066 } ·058 }	·062
	{ 1842	29·439	29·381		
Spring . . .	{ 1841	29·446	29·374	·072 } ·056 }	·064
	{ 1842	29·422	29·366		
Summer . . .	{ 1841	29·213	29·095	·118 } ·117 }	·1175
	{ 1842	29·276	29·159		
Autumn . . .	{ 1841	29·347	29·293	·054 } ·074 }	·064
	{ 1842	29·416	29·342		
In the Years. .	{ 1841	29·374	29·302	·072 } ·069 }	·0705
	{ 1842	29·383	29·314		

The average diurnal variation in summer is nearly double the amount at any of the three other seasons of the year.

The diurnal variation of the gaseous atmosphere exceeds the diurnal variation of the barometer in every quarter, as well as on the average of each year.

The annual variation consists of a maximum pressure in midwinter, and a minimum in midsummer. Small irregularities present themselves in the otherwise well marked progress from the maximum to the minimum, and back to the maximum; they are such as may reasonably be expected in an annual progression derived from observations of single years. With the exception perhaps of the pressure in excess in March, which forms a somewhat prominent feature in both years, the interruptions of the progression do not exceed irregularities which may be expected to disappear when a longer observation basis is obtained.

TABLE LIV.

Means of the Meteorological Phenomena in the several Months of 1841 and 1842, with their Differences from the general Means.

+ signifies above the general Mean, and - below it.

1841 & 1842.	Thermometer	Barometer.	Elastic Force of Vapour.	Humidity.	Gaseous Pressure.	Differences from the Mean.				
						Thermo- meter.	Barometer.	Elastic Force of Vapour.	Humidity.	Gaseous Pressure.
	°	In.	In.		In.	°	In.	In.		In.
January .	26·7	29·586	0·132	84·0	29·454	-17·7	-·022	-·127	+ 6·0	+·105
February .	25·6 Min.	29·519	0·123	82·0	29·396	-18·8	-·089	-·136	+ 4·0	+·047
March .	32·1	29·648	0·146	77·5	29·502	-12·3	+·040	-·113	- 0·5	+·153
April . .	41·6	29·584	0·186	70·5	29·398	- 2·8	-·024	-·073	- 7·5	+·049
May . .	50·5	29·567	0·242	65·5	29·325	+ 6·1	-·041	-·017	-12·5	-·024
June . .	61·4	29·564	0·400	74·0	29·164	+17·0	-·044	+·141	- 4·0	-·185
July . .	65·1	29·637	0·444	74·0	29·193	+20·7	+·029	+·185	- 4·0	-·156
August .	65·2 Max.	29·705	0·487	80·0	29·218	+20·8	+·097	+·128	+ 2·0	-·131
September	58·5	29·634	0·402	80·5	29·232	+14·1	+·026	+·143	+ 2·5	-·117
October .	43·7	29·639	0·230	80·5	29·409	- 0·7	+·031	-·029	+ 2·5	+·060
November	34·3	29·592	0·173	83·5	29·419	-10·1	-·016	-·086	+ 5·5	+·070
December.	27·8	29·624	0·137	85·0	29·487	-17·1	+·016	-·122	+ 7·0	+·138
General Means }	44·37	29·608	0·259	78·0	29·349	—	—	—	—	—

TABLE LV.

Means of the Meteorological Phenomena at the several Observation Hours of Toronto Time in 1841 and 1842, with their Differences from the general Means.

+ signifies above the general Mean, and - below it.

Hours.	Thermo- meter.	Barometer.	Elastic Force of Vapour.	Humidity.	Gaseous Pressure.	Differences from the Mean.				
						Thermo- meter.	Barometer.	Elastic Force of Vapour.	Humidity.	Gaseous Pressure.
	°	In.	In.		In.	°	In.	In.		In.
18	39·3	29·620	0·241	86·5	29·379	-5·1	+·012	-·018	+ 8·5	+·030
20	42·6	29·633	0·259	82·0	29·374	-1·8	+·025	·000	+ 4·0	+·025
22	46·3	29·635	0·271	76·0	29·364	+1·9	+·027	+·012	- 2·0	+·015
0	48·9	29·614	0·281	71·5	29·333	+4·5	+·006	+·022	- 6·5	-·016
2	50·5	29·594	0·285	69·0	29·309	+6·1	-·014	+·026	- 9·0	-·040
4	50·5	29·590	0·279	68·0	29·311	+6·1	-·018	+·020	-10·0	-·038
6	48·2	29·595	0·269	71·5	29·326	+3·8	-·013	+·010	- 6·5	-·023
8	44·1	29·604	0·256	78·5	29·348	-0·3	-·004	-·003	+ 0·5	-·001
10	42·1	29·607	0·250	82·0	29·357	-2·3	-·001	-·009	+ 4·0	+·008
12	40·8	29·604	0·243	83·5	29·361	-3·6	-·004	-·016	+ 5·5	+·012
14	39·8	29·601	0·238	84·0	29·363	-4·6	-·007	-·021	+ 6·0	+·014
16	39·2	29·604	0·234	85·0	29·370	-5·2	-·004	-·025	+ 7·0	+·021
General Means }	44·4	29·608	0·259	78·0	29·349	—	—	—	—	—



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TABLE LVI.

Vapour, and Humidity of the Air, in the several Months of 1841 and 1842, and the Dates of the Minima in Toronto Time.

1841											MONTHS.
Elastic Force of Vapour.					Humidity.						
Maximum.		Minimum.		Range.	Maximum.		Minimum.		Range.		
Amount.	Date.	Amount.	Date.		Amount.	Date.	Amount.	Date.			
In.	D. H.	In.	D. H.	In.		D. H.		D. H.			
·246	9 16	·038	27 12	·208	100	Frequent.	40	31 4	60	1840 December.	
·206	26 14	·044	3 16	·162	100	Frequent.	62	30 6	38	1841 January.	
·185	22 2	·046	10 20	·139	100	Frequent.	47	27 4	53	February.	
·312	26 4	·017	14 18	·295	100	Frequent.	30	20 6	70	March.	
·379	24 6	·075	27 8	·304	99	Twice.	24	27 8	75	April.	
·586	24 2	·098	30 16	·488	100	24 18	23	15 6	77	May.	
·766	30 2	·160	15 10	·606	97	24 16	30	9 4	67	June.	
·860	23 4	·156	2 6	·704	100	4 18	22	2 6	78	July.	
·785	18 2	·287	23 14	·498	100	11 18	47	5 6	53	August.	
·743	2 0	·176	30 14	·567	98	Frequent.	51	14 2	47	September.	
·442	Twice.	·105	Twice.	·337	100	Twice.	40	Twice.	60	October.	
·423	1 0	·062	29 8	·361	100	Frequent.	40	2 6	60	November.	
·860	July	·017	March	·843	100	Frequent.	22	July	78	In the Year.	
1842											
·281	9 4	·057	20 22	·224	100	Frequent.	62	7 22	38	1841 December.	
·237	29 8	·052	2 14	·185	100	Frequent.	43	25 2	57	1842 January.	
·340	3 2	·049	8 12	·291	100	Frequent.	47	10 2	53	February.	
·349	3 22	·074	15 4	·275	100	Frequent.	22	Twice.	78	March.	
·394	22 0	·111	14 6	·283	100	Frequent.	25	22 2	75	April.	
·481	18 2	·109	8 16	·372	95	Frequent.	23	Twice.	72	May.	
·654	30 6	·128	6 2	·526	100	Twice.	24	24 6	76	June.	
·730	19 1	·238	Twice.	·492	98	25 17	26	19 3	72	July.	
·741	27 6	·241	1 12	·500	100	4 18	42	Twice.	58	August.	
·713	1 2	·140	22 20	·573	100	Twice.	34	30 4	66	September.	
·434	7 10	·141	20 20	·293	100	Frequent.	42	Twice.	58	October.	
·348	1 0	·067	27 15	·281	100	Frequent.	55	Twice.	45	November.	
·741	August	·049	February	·692	100	Frequent.	22	March	78	In the Year.	



## DIRECTION AND FORCE OF THE WIND.

Osler's Anemometer, as made by Newman for the Observatories, appears to have fully answered its purpose in recording the *direction* of the wind, but to have performed less satisfactorily in recording its *pressure*. In pressures of less than 1 lb., the plate either did not move at all, or the record of its motion is stated to have been very uncertain. In higher winds the instrument worked well, but even then the Director remarks, that the spring was insufficient to bring the pencil back again to the zero, so that until corrected by hand the pencil might continue to mark high pressures after the wind had lulled. Springs of an improved construction have been sent to Toronto in the present year, and improvements in other respects have been made, in consequence of which the anemometer is reported to perform much more satisfactorily than before.\* In the years at present under notice, the record of the pressure results of the Toronto Anemometer comprises only pressures of 1 lb. and upwards. The desirability of a good system of recording the wind by estimation, independent of the instrumental records, was early felt, and a scale was adopted in which thirteen gradations of the force of the wind were designated by corresponding terms. The non-commissioned officers were trained to the observance of this scale, and the force of the wind was registered by estimation at every second hour up to the end of June 1842, and subsequently at every hour. The estimated values in pounds pressure of the different terms of the scale have been assigned by Lieut. Younghusband, principally from Table IV., p. 88, of the Royal Society's Instructions. The terms of the scale, and their corresponding values, are as follows:—

	lbs.		lbs.
Very light	} . . . . . 0·2	Fresh . . . . .	3·0
Nearly calm		Fresh, with squalls . . . . .	5·0
Light . . . . .	0·5	High . . . . .	7·0
Moderate . . . . .	1·0	High, with squalls . . . . .	8·0
Moderate, with gusts . . . . .	1·5	Very high . . . . .	10·0
Brisk . . . . .	2·0	Storm . . . . .	15·0
Brisk, with gusts . . . . .	2·5	Great storm . . . . .	20·0

\* The Anemometer-house is of the form of an octagonal-pyramid, with stout beams of wood at each angle; these all meet together at the apex. About 19 feet from the bottom two of these beams on opposite sides of the pyramid have been cut away, and cross pieces run through as the foundation of a platform. On this platform a small house has been built, 6 × 6 × 6 feet, to contain the table on which the pencil acts: the length of the wire from the friction-roller at the top is thus reduced from 31 to 12 feet. The small house has a flat roof, to which stays are attached for the purpose of steadying the wire.

On comparing in detail the records by estimation, and by the anemometer (within the limits of the anemometer registry), the accord appears in general tolerably satisfactory, except in the very few cases when very high winds prevailed, when the *instrumental* pressure was usually higher than the *estimated*. Both methods record in each year a preponderance of pressure from the north and from the west; and in both years the number of hours in which the wind blew from the points included between the north and the west, exceed the number of hours in which the wind blew from any one of the other three quarters. A great majority of the cases of high wind were also from the same direction. The hours of calm were 2669 in 1841, and 2409 in 1842; those at which there was more or less wind were in the respective years 6010 and 6250; the hours of wind being to the hours of calm, in a proportion differing little in either year from that of 5 to 2. The number of hours of wind is, however, we perceive, greater in 1842 than in 1841; the sum of the pressures is also greater both by the anemometer and by estimation.

With reference to a diurnal variation in the force of the wind, it appears that its pressure is considerably greater during the hours of the day than during those of the night; that the force begins to increase between 6 and 8 A.M., reaches a maximum at noon or soon after, and diminishes again until 10 or 12 P.M., and that it undergoes little change during the remainder of the night. These facts appear alike in the results of the anemometer and of the estimated force. In respect to the ratio of the force at the different hours, the record by estimation is perhaps preferable to that of the anemometer, as the latter did not register pressures of less than 1 lb., and the lesser pressures must have a material influence. The diurnal progression shown in Table LXIV., which gives the sum of the pressures by estimation at the different observation hours on the average of the two years, exhibits, in a very striking manner, the correspondence with the diurnal variation of the temperature, which Mr. Osler, the inventor of the anemometer, noticed in the first employment of that instrument at Birmingham.

## ADJUSTMENTS, ABSTRACTS, AND COMMENTS.

TABLE LVII.

Number of Hours in 1841, at which the several Winds prevailed; taken from the Register kept by Osler's Anemometer.

MONTHS.	N.	N.N.W.	N.W.	W.N.W.	W.	W.S.W.	S.W.	S.S.W.	S.	S.S.E.	S.E.	E.S.E.	E.	E.N.E.	N.E.	N.N.E.	Total Winds.	Calms.	Total Observations.
1840																			
December .	40	18	20	68	110	35	34	61	20	17	4	23	23	8	35	27	543	201	744
1841																			
January .	14	7	71	20	72	32	35	36	20	3	0	49	21	30	48	6	464	280	744
February .	41	7	31	83	38	60	57	32	15	0	19	18	11	30	21	18	481	191	672
March .	113	35	26	14	28	18	19	6	46	7	32	30	47	35	47	67	570	155	725 <sup>a</sup>
April .	55	80	38	11	28	17	13	20	16	19	58	32	58	21	34	30	530	190	720
May .	74	90	18	9	22	1	15	30	20	39	34	38	33	13	33	21	490	230	720 <sup>b</sup>
June .	71	8	9	8	17	6	29	57	42	44	40	60	47	12	10	22	482	238	720
July .	60	56	13	18	6	24	18	48	63	52	24	17	20	23	7	27	476	268	744
August .	59	18	17	2	14	7	9	27	46	52	34	24	44	19	17	18	407	337	744
September .	89	39	7	4	2	12	17	14	16	44	18	51	34	46	30	45	468	235	703 <sup>c</sup>
October .	140	29	38	22	45	20	12	17	5	22	22	25	47	28	10	38	520	224	744
November .	39	26	69	67	2	50	47	15	6	2	41	28	75	45	38	29	579	120	699 <sup>d</sup>
Total for the Year }	795	413	357	326	384	282	305	363	315	301	326	395	460	310	330	348	6010	2669	8679

<sup>a</sup> Instrument out of order . . . 19 hours.

<sup>b</sup> " " " " . . . 24 "

<sup>c</sup> " " " " . . . 17 "

<sup>d</sup> " " " " . . . 21 "

Total . . . 81 hours.

TABLE LVIII.

Sums of the Pressures of the several Winds in every Month in 1841; taken from the Register kept by Osler's Anemometer.

MONTHS.	N.	N.N.W.	N.W.	W.N.W.	W.	W.S.W.	S.W.	S.S.W.	S.	S.S.E.	S.E.	E.S.E.	E.	E.N.E.	N.E.	N.N.E.	Monthly Sums.
1840	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
December .	4·2	16·2	25·0	192·0	83·7	9·5	30·2	86·8	21·0	3·0	1·5	1·0	8·3	3·6	21·7	—	507·7
1841																	
January .	—	—	33·1	25·7	39·2	9·0	34·6	—	1·0	—	—	20·4	13·9	5·1	4·2	—	186·2
February .	90·5	9·0	108·4	84·8	64·5	53·4	29·9	22·3	16·2	—	25·0	28·0	11·1	13·4	—	4·5	561·0
March .	96·5	33·5	35·4	7·5	18·0	19·0	16·5	10·4	25·0	4·8	57·2	13·1	54·4	36·5	51·3	49·9	529·0
April .	36·8	124·1	66·4	12·2	40·0	9·9	3·9	12·2	0·5	11·7	38·0	15·2	43·9	9·9	29·1	14·8	468·6
May .	34·3	73·7	27·1	7·4	13·0	—	3·8	1·0	3·0	—	—	—	—	—	18·7	1·2	183·2
June .	13·1	2·0	5·5	2·2	—	—	—	—	—	2·7	3·0	4·0	7·9	2·4	12·0	12·2	67·0
July .	18·3	31·8	7·9	3·8	—	7·0	1·7	7·0	3·3	3·3	0·5	—	5·0	9·3	—	11·4	110·3
August .	15·7	4·5	3·0	1·5	8·9	—	—	1·0	2·8	—	—	—	1·0	—	—	1·5	39·9
September .	76·8	9·9	4·8	31·0	2·0	4·5	20·9	—	—	—	—	—	6·3	—	—	20·7	176·9
October .	136·0	22·6	44·5	9·0	46·4	45·1	3·2	22·0	10·6	19·8	8·1	16·1	75·3	36·2	5·0	41·9	541·8
November .	20·9	57·7	142·0	162·4	—	71·2	59·8	16·0	3·2	4·0	101·7	37·9	96·9	15·2	22·3	63·9	875·1
Total for the Year }	543·1	385·0	503·1	539·5	315·7	228·6	204·5	178·7	86·6	49·3	235·0	135·7	324·0	131·6	164·3	222·0	4246·7

METEOROLOGICAL INSTRUMENTS.

TABLE LIX.

Number of Hours in 1842 at which the several Winds prevailed; taken from the Register kept by Osler's Anemometer.

MONTHS.	N.	N.N.W.	N.W.	W.N.W.	W.	W.S.W.	S.W.	S.S.W.	S.	S.S.E.	S.E.	E.S.E.	E.	E.N.E.	N.E.	N.N.E.	Total Winds.	Calms.	Total Observations.
1841																			
December .	71	24	31	95	36	40	18	104	16	11	6	21	24	31	25	40	593	151	744
1842																			
January .	13	74	37	29	76	74	86	33	35	6	30	2	5	13	18	18	549	195	744
February .	16	41	62	25	34	47	77	44	18	19	10	10	74	3	1	7	488	184	672
March .	51	71	29	35	27	2	14	33	29	5	12	24	38	63	29	58	520	224	744
April .	48	18	21	22	47	11	35	16	41	19	15	32	115	73	1	37	551	161	712 <sup>a</sup>
May .	38	119	35	12	4	15	16	68	31	30	20	8	36	25	28	5	490	167	657 <sup>b</sup>
June .	54	33	8	15	14	13	10	30	48	21	31	48	86	28	9	33	481	234	715 <sup>c</sup>
July .	71	44	36	7	4	5	44	91	46	21	42	15	32	5	3	40	506	237	743 <sup>d</sup>
August .	18	15	13	0	0	0	19	39	38	25	50	42	61	91	20	32	463	281	744
September .	37	19	28	69	20	28	15	36	14	44	52	20	8	16	45	52	503	217	720
October .	30	50	98	49	34	29	30	10	46	19	15	31	22	59	0	4	526	218	744
November .	3	5	14	42	60	82	84	43	11	44	50	25	18	63	29	7	580	140	720
Total for the Year }	450	513	412	400	356	346	448	547	373	264	333	278	519	470	208	333	6250	2409	8659

<sup>a</sup> Instruments out of order . . . 8 hours.  
<sup>b</sup> " " " . . . 87 " "  
<sup>c</sup> " " " . . . 5 " "  
<sup>d</sup> " " " . . . 1 " "

Total . . . . 101 hours.

TABLE LX.

Sums of the Pressures of the several Winds in every Month in 1842; taken from the Register kept by Osler's Anemometer.

MONTHS.	N.	N.N.W.	N.W.	W.N.W.	W.	W.S.W.	S.W.	S.S.W.	S.	S.S.E.	S.E.	E.S.E.	E.	E.N.E.	N.E.	N.N.E.	Monthly Sums.
1841	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
December .	108·1	84·5	47·1	58·7	42·1	106·8	103·7	135·3	36·1	—	—	103·3	41·6	31·1	92·1	87·8	1078·3
1842																	
January .	1·7	160·2	169·2	48·2	130·2	231·0	232·4	27·0	40·2	4·5	47·9	5·4	4·5	—	30·6	45·1	1178·1
February .	43·0	155·4	208·0	40·7	14·1	21·7	33·7	12·5	—	—	—	27·4	123·1	—	—	10·5	690·1
March .	93·9	114·9	95·0	103·0	42·4	4·7	11·6	17·0	8·7	—	25·7	32·6	16·2	74·2	24·1	81·5	745·5
April .	7·0	20·7	24·2	27·2	61·5	14·2	12·4	10·4	—	8·8	3·2	23·2	147·7	55·3	0·5	6·8	423·1
May .	56·1	162·0	29·6	13·4	3·6	10·7	3·5	18·1	13·8	17·0	4·7	1·4	1·7	—	10·2	—	345·8
June .	68·2	51·5	—	—	2·5	—	—	—	—	1·5	3·0	7·2	6·5	41·7	8·1	54·6	244·8
July .	8·5	22·4	3·0	—	1·2	—	3·4	4·0	—	3·0	—	—	—	—	1·5	3·0	50·0
August .	12·0	7·5	20·2	—	—	—	31·4	—	—	—	22·1	13·9	32·7	50·2	19·9	10·9	220·8
September .	109·1	86·3	27·7	1·7	—	2·5	23·5	—	—	—	—	—	—	—	8·7	34·3	293·8
October .	2·0	15·0	33·2	10·2	—	2·2	18·3	1·2	1·5	2·4	—	—	—	—	—	—	86·0
November .	3·2	5·6	11·4	115·8	—	358·4	104·2	29·4	2·7	14·2	31·2	83·5	54·4	65·1	6·8	7·8	893·7
Total for the Year }	512·8	886·0	668·6	418·9	297·6	752·2	578·1	254·9	103·0	51·4	137·8	297·9	428·4	317·6	202·5	342·3	6250·0

ADJUSTMENTS, ABSTRACTS, AND COMMENTS.

TABLE LXI.

Number of Two-hourly Observations in the several Months of 1841, at which the different Winds prevailed, according to the Register by estimation.

MONTHS.	N.	N.N.W.	N.W.	W.N.W.	W.	W.S.W.	S.W.	S.S.W.	S.	S.S.E.	S.E.	E.S.E.	E.	E.N.E.	N.E.	N.N.E.	Total Winds.	Calms.	Total Observations.
1840																			
December .	23	7	51	5	35	11	26	8	12	1	15	2	1	5	16	2	220	101	321 <sup>a</sup>
1841																			
January .	11	10	51	0	15	13	11	4	5	2	13	5	9	14	24	0	187	135	322
February .	18	10	29	0	33	12	40	4	20	2	9	0	5	6	13	0	201	95	296
March .	56	13	10	1	5	13	18	2	24	6	11	2	46	1	40	11	259	71	330 <sup>b</sup>
April .	25	33	29	1	9	11	9	5	13	14	21	0	31	8	8	3	220	90	310
May .	40	50	18	1	12	2	6	0	16	8	32	4	6	7	4	6	212	110	322
June .	35	11	7	2	6	1	27	10	10	9	36	10	8	5	11	12	200	120	320
July .	31	14	21	2	8	4	19	8	28	25	8	1	8	1	12	11	201	131	332
August .	22	8	6	0	12	0	16	7	21	7	14	2	30	0	16	5	166	156	322
September .	60	15	15	0	3	0	7	2	12	5	14	5	48	1	10	3	200	119	319 <sup>c</sup>
October .	68	19	34	0	10	9	14	1	2	2	5	0	20	4	22	2	212	110	322
November .	24	18	47	5	15	9	29	7	8	2	3	2	41	6	41	3	260	60	320
Total for the Year }	413	208	318	17	163	85	222	58	171	83	181	33	253	58	217	58	2538	1298	3836

<sup>a</sup> One observation not taken.

<sup>b</sup> Two observations not taken.

<sup>c</sup> One observation not taken.

TABLE LXII.

Sums of the Pressures of the several Winds in every Month in 1841; taken from the Register kept by estimation.

MONTHS.	N.	N.N.W.	N.W.	W.N.W.	W.	W.S.W.	S.W.	S.S.W.	S.	S.S.E.	S.E.	E.S.E.	E.	E.N.E.	N.E.	N.N.E.	Monthly Sums.
1840	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
December .	14.8	12.5	28.1	3.7	24.4	7.0	15.6	4.5	13.7	1.0	12.4	1.0	0.5	7.5	9.5	1.5	157.7
1841																	
January .	5.9	5.7	26.0	0.0	20.9	14.5	10.2	3.5	1.6	1.0	12.7	3.5	6.7	10.2	11.9	0.0	134.3
February .	17.8	15.0	38.5	0.0	24.4	7.4	38.0	6.0	12.9	1.0	5.5	0.0	5.9	4.0	5.1	0.0	181.5
March .	29.6	7.3	4.3	0.5	2.9	8.0	7.8	1.0	6.3	2.4	9.9	2.5	63.9	1.0	30.5	5.4	183.3
April .	12.7	36.6	27.7	20.0	8.9	4.9	3.3	2.7	6.0	9.2	8.2	0.0	28.3	6.0	4.7	1.5	180.7
May .	23.5	37.8	11.8	1.0	7.0	1.0	2.3	0.0	6.5	2.5	10.6	2.0	3.2	3.6	2.7	3.0	118.5
June .	30.7	10.4	4.3	1.0	5.7	0.5	6.0	4.8	13.4	3.5	2.6	4.4	22.6	8.9	2.5	4.9	126.2
July .	16.0	11.6	11.5	1.0	2.8	1.1	11.2	4.0	13.7	8.0	2.5	0.2	2.5	0.5	4.4	6.9	97.9
August .	6.9	5.7	6.0	0.0	4.9	0.0	6.4	3.2	6.0	3.0	4.3	1.5	14.1	0.0	5.0	2.7	69.7
September .	31.0	7.3	5.3	0.0	3.4	0.0	6.2	1.0	4.5	1.6	5.8	2.2	21.0	0.2	3.5	0.9	93.9
October .	24.1	9.8	26.2	0.0	3.5	12.0	6.4	0.5	0.7	0.4	1.9	0.0	11.7	1.7	8.5	0.7	108.1
November .	8.6	13.7	29.8	6.0	16.5	6.4	23.1	8.5	5.7	2.5	1.7	4.0	47.0	7.5	34.4	2.5	217.9
Total for the Year }	221.6	173.4	219.5	33.2	125.3	62.8	136.5	39.7	91.0	36.1	78.1	21.3	227.4	51.1	122.7	30.0	1669.7

METEOROLOGICAL INSTRUMENTS.

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TABLE LXIII.

Number of Observations in the several Months of 1842, at which the different Winds prevailed, according to the Register by estimation.

In the first seven months the Observations were Two-hourly, and in the last five months Hourly.

MONTHS.	N.	N.N.W.	N.W.	W.N.W.	W.	W.S.W.	S.W.	S.S.W.	S.	S.S.E.	S.E.	E.S.E.	E.	E.N.E.	N.E.	N.N.E.	Total Winds.	Calms.	Total Observations.	
1841																				
December .	51	16	24	4	15	6	39	5	17	2	8	0	28	6	16	4	241	81	322	
1842																				
January .	19	15	37	8	32	6	41	2	27	6	12	1	7	1	7	2	223	99	322	
February .	16	16	37	2	18	2	32	2	24	5	11	0	34	2	3	0	204	92	296	
March .	39	23	27	2	18	3	12	1	15	6	2	1	34	6	10	9	208	113	321 <sup>a</sup>	
April .	24	8	20	2	28	3	21	0	28	8	7	1	53	17	14	1	235	85	320	
May .	24	38	39	5	8	4	17	6	38	5	14	1	17	1	5	1	223	99	322	
June .	23	16	15	1	4	0	18	6	30	8	15	2	49	8	5	3	203	117	320	
July .	73	53	19	0	11	0	34	16	79	18	29	3	32	4	20	4	395	239	634	
August .	58	10	19	0	5	0	12	4	66	8	59	3	76	16	38	9	383	272	655 <sup>a</sup>	
September .	92	27	50	3	22	12	38	10	34	8	23	2	41	15	24	9	410	222	632	
October .	52	26	89	11	20	12	41	3	61	3	18	4	23	19	22	3	407	226	633 <sup>a</sup>	
November .	12	0	30	3	46	41	97	15	48	23	14	4	57	50	30	18	488	143	631 <sup>a</sup>	
Total for the Year }	483	248	406	41	227	89	402	70	467	100	212	22	451	145	194	63	3620	1788	5408	

<sup>a</sup> One observation missed :—Total, 4 observations missed.

TABLE LXIV.

Sums of the Pressures of the several Winds in the several Months of 1842, taken from the Register by estimation.

MONTHS.	N.	N.N.W.	N.W.	W.N.W.	W.	W.S.W.	S.W.	S.S.W.	S.	S.S.E.	S.E.	E.S.E.	E.	E.N.E.	N.E.	N.N.E.	Monthly Sums.
1841	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
December .	43·5	27·2	13·6	2·2	9·5	16·0	36·4	6·4	6·4	0·7	17·1	0·0	31·4	17·0	40·4	2·0	269·8
1842																	
January .	7·9	14·3	22·6	6·2	36·0	12·7	33·3	1·0	12·7	2·7	5·9	0·5	3·2	0·2	2·0	0·7	161·9
February .	6·6	49·2	74·0	4·0	20·0	1·0	13·6	0·4	12·8	1·6	4·0	0·0	54·0	2·0	0·6	0·0	243·8
March .	22·4	33·5	37·5	7·5	14·9	1·4	3·3	0·5	5·1	2·4	3·0	0·5	27·3	4·4	2·0	4·9	170·6
April .	12·1	6·5	14·6	3·5	16·8	2·5	11·2	0·0	9·7	2·8	2·6	0·5	54·7	23·0	4·0	0·5	165·0
May .	15·8	28·9	46·0	4·0	7·7	2·7	8·9	2·7	19·2	1·3	5·6	0·2	8·8	0·5	1·6	0·2	154·1
June .	10·8	16·9	10·1	0·5	0·8	0·0	6·8	2·1	10·9	3·6	4·5	0·7	23·7	3·9	1·0	1·2	97·5
July .	22·1	27·1	5·9	0·0	3·1	0·0	11·1	6·7	18·8	3·2	5·2	0·7	7·7	0·7	5·8	1·2	119·3
August .	11·0	3·4	8·3	0·0	0·7	0·0	4·0	3·5	28·7	1·9	10·7	0·2	19·9	4·0	6·2	2·5	105·0
September .	42·0	15·9	20·7	0·7	5·9	7·0	9·6	3·7	7·6	2·2	3·3	0·0	5·8	3·9	5·7	2·5	136·5
October .	13·9	12·6	35·7	5·2	4·5	7·5	8·2	0·0	14·5	0·5	2·5	1·5	6·9	5·1	3·7	0·5	122·8
November .	1·5	0·0	4·5	2·2	8·9	39·9	75·5	19·1	12·8	5·9	20·5	3·0	45·6	70·2	6·6	4·7	320·9
Total for the Year }	209·6	235·5	293·5	36·0	128·8	90·7	221·9	46·1	159·2	28·8	84·9	7·8	289·0	134·9	79·6	20·9	2067·2

ADJUSTMENTS ABSTRACTS, AND COMMENTS.

TABLE LXV.

*Sums of the Pressures of the several Winds registered by the Anemometer resolved into Pressure in the four Cardinal directions.*

Direction.	By Anemometer, 1841						By Anemometer, 1842					
	Number of Hours during which the several Winds prevailed.	Whole recorded Pressure.	Resolved Pressure in the direction of				Number of Hours during which the several Winds prevailed.	Whole recorded Pressure.	Resolved Pressure in the direction of			
			N.	E.	S.	W.			N.	E.	S.	W.
		lbs.	lbs.	lbs.	lbs.	lbs.		lbs.	lbs.	lbs.	lbs.	
North .	795	543·1	543·1	—	—	—	450	512·8	512·8	130·6	—	—
N.N.E. .	348	222·0	205·1	84·9	—	—	333	341·3	315·3	143·2	—	—
N.E. .	330	164·3	116·2	116·2	—	—	208	202·5	143·2	293·4	—	—
E.N.E. .	310	131·6	50·4	121·6	—	—	470	317·6	121·6	428·4	—	—
East .	460	324·0	—	324·0	—	—	519	428·4	—	273·5	113·3	—
E.S.E. .	395	135·7	—	125·4	51·9	—	278	295·9	—	97·4	97·4	—
S.E. .	326	235·0	—	166·2	166·2	—	333	137·8	—	19·7	47·5	—
S.S.E. .	301	49·3	—	18·9	45·6	—	264	51·4	—	—	103·0	—
South .	315	86·6	—	—	86·6	—	373	103·0	—	—	235·5	97·5
S.S.W. .	363	178·7	—	—	165·1	68·4	547	254·9	—	—	408·8	408·8
S.W. .	305	204·5	—	—	144·6	144·6	448	578·1	—	—	287·8	694·9
W.S.W. .	282	228·6	—	—	87·4	211·2	346	752·2	—	—	—	297·6
West .	384	315·7	—	—	—	315·7	356	297·6	—	—	—	387·0
W.N.W. .	326	539·5	206·4	—	—	498·5	400	418·9	160·3	—	—	472·6
N.W. .	357	503·1	355·7	—	—	355·7	412	668·6	472·6	—	—	339·0
N.N.W. .	413	385·0	355·7	—	—	147·3	513	886·0	818·6	—	—	—
Total .	6010	4246·7	1832·6	957·2	747·4	1741·4	6250	6247·0	2544·4	1386·2	1293·3	2697·4

TABLE LXVI.

*Sums of the Pressures of the several Winds registered by estimation, resolved into Pressure in the four Cardinal directions.*

Direction.	By Estimation, 1841						By Estimation, 1842					
	Number of Hours during which the several Winds prevailed.	Whole recorded Pressure.	Resolved Pressure in the direction of				Number of Hours during which the several Winds prevailed.	Whole recorded Pressure.	Resolved Pressure in the direction of			
			N.	E.	S.	W.			N.	E.	S.	W.
		lbs.	lbs.	lbs.	lbs.	lbs.		lbs.	lbs.	lbs.	lbs.	
North .	413	221·6	221·6	—	—	—	483	209·6	209·6	—	—	—
N.N.E. .	58	30·0	27·7	11·5	—	—	63	20·9	19·3	7·8	—	—
N.E. .	217	122·7	86·8	86·8	—	—	194	79·6	56·3	56·3	—	—
E.N.E. .	58	51·1	19·6	47·2	—	—	145	134·9	51·7	124·7	—	—
East .	253	227·4	—	227·4	—	—	451	289·0	—	289·0	—	—
E.S.E. .	33	21·3	—	19·7	8·1	—	22	7·8	—	7·2	3·0	—
S.E. .	181	78·1	—	55·3	55·3	—	212	84·9	—	60·0	60·0	—
S.S.E. .	83	36·1	—	13·8	33·4	—	100	29·8	—	11·4	27·5	—
South .	171	91·0	—	—	91·0	—	467	159·2	—	—	159·2	—
S.S.W. .	58	39·7	—	—	36·7	15·2	70	45·1	—	—	41·7	17·3
S.W. .	222	136·5	—	—	96·5	96·5	402	221·9	—	—	157·0	157·0
W.S.W. .	85	62·8	—	—	24·0	58·0	89	90·7	—	—	34·0	83·8
West .	163	125·3	—	—	—	125·3	227	128·8	—	—	—	128·8
W.N.W. .	17	33·2	12·7	—	—	30·6	41	36·0	13·8	—	—	33·3
N.W. .	318	219·5	155·2	—	—	155·2	406	293·9	207·9	—	—	207·9
N.N.W. .	208	173·4	160·2	—	—	66·3	248	235·3	217·4	—	—	90·1
Total .	2538	1669·7	683·8	461·7	345·0	547·1	3620	2067·4	776·0	556·4	482·4	718·2

METEOROLOGICAL INSTRUMENTS.

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TABLE LXVII.

*Sums of the Pressures (of 1 lb. and upwards) shown by the Anemometer at every Hour of Toronto Time, from December 1840 to November 1841 inclusive.*

HOURS.	1840 December	1841 January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November	Hourly Sums.
18	20·6	5·9	27·8	24·2	11·1	7·5	4·1	5·6	0·7	4·9	22·7	31·3	166·4
19	21·3	4·5	24·1	23·0	14·8	7·7	4·2	4·6	0·7	4·9	28·7	29·9	168·4
20	23·0	5·4	28·5	20·0	23·4	7·7	5·7	2·9	3·2	11·4	29·9	39·9	201·0
21	22·5	6·4	25·1	21·0	26·2	7·7	5·7	4·1	2·5	9·2	34·2	40·0	204·6
22	26·5	9·6	27·1	24·3	31·3	7·9	3·0	3·4	1·7	10·9	34·0	48·7	228·4
23	26·8	11·3	37·0	30·4	33·7	6·4	4·0	3·7	3·2	14·2	34·7	48·8	254·2
0	30·6	12·6	19·3	32·8	29·8	7·6	2·7	3·2	2·2	14·2	40·8	60·5	256·3
1	29·6	12·9	19·0	35·6	27·0	8·4	4·2	7·7	3·2	13·2	39·6	57·3	257·7
2	29·3	7·4	20·3	27·4	28·8	6·3	4·2	2·9	0·7	14·2	38·2	39·3	219·0
3	21·7	6·9	21·3	22·0	16·2	6·1	1·7	2·6	1·7	8·6	22·9	31·8	163·5
4	21·2	7·2	20·3	21·9	22·7	7·6	3·0	7·8	2·4	8·6	20·7	34·0	177·4
5	17·9	6·7	20·1	19·9	22·0	12·2	3·0	6·3	3·2	8·3	20·9	34·2	174·7
6	18·1	6·7	22·4	17·5	23·6	12·8	2·0	4·5	2·9	8·3	17·5	36·0	172·3
7	17·1	7·2	19·4	17·6	19·8	9·6	0·7	11·3	1·4	8·3	12·6	34·2	159·2
8	17·6	6·2	20·7	19·2	19·6	9·6	0·5	4·3	0·7	7·3	12·6	37·0	155·3
9	18·1	6·2	19·3	16·4	19·0	8·1	1·5	4·3	0·7	7·6	13·6	37·1	151·9
10	18·6	7·2	21·8	16·5	18·2	8·1	1·5	4·6	2·2	7·8	17·3	32·9	156·7
11	17·3	7·7	21·3	16·5	18·7	8·1	1·5	5·9	2·2	7·8	17·3	30·2	154·5
12	17·6	7·4	21·5	18·8	11·3	6·4	2·2	2·5	1·5	4·2	16·1	31·2	140·7
13	21·8	8·1	15·6	18·5	8·6	4·7	2·2	2·2	1·5	4·2	16·1	32·6	136·1
14	21·3	9·4	25·4	21·7	8·6	6·2	2·5	3·5	0·0	4·2	14·6	28·6	146·0
15	16·1	9·0	21·9	20·9	8·3	6·4	1·5	4·4	0·0	4·2	14·6	27·8	135·1
16	16·8	8·2	20·4	22·0	15·3	6·4	2·7	4·4	0·7	4·2	16·1	28·6	145·8
17	17·3	5·9	27·4	20·9	10·6	6·5	2·7	4·4	0·7	4·2	16·1	23·2	139·9
Monthly Sums	508·7	186·0	547·0	529·0	468·6	186·0	67·0	111·1	39·9	194·9	551·8	875·1	4265·1
No. of Hours of Wind in each Month.	543	464	481	570	530	490	482	476	407	468	520	579	—



## ADJUSTMENTS, ABSTRACTS, AND COMMENTS.

TABLE LXVIII.

*Sums of the Pressures (of 1 lb. and upwards), shown by the Anemometer at every Hour of Toronto Time, from December 1841 to November 1842 inclusive.*

HOURS.	1841 December	1842 January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November	Hourly Sums.
18	49·3	33·3	22·2	25·9	16·5	15·6	7·9	3·9	10·1	6·9	1·2	32·9	225·7
19	52·7	37·8	21·5	25·2	17·8	16·1	7·9	3·7	10·1	7·1	1·2	34·6	235·7
20	53·5	40·8	23·4	24·9	20·8	16·6	10·4	3·7	11·3	8·1	1·5	48·4	263·4
21	50·5	51·5	27·9	29·7	21·4	15·8	8·6	3·5	11·5	10·4	1·5	42·5	274·8
22	49·1	58·0	29·7	30·6	23·1	15·5	8·6	3·5	16·1	16·4	5·0	42·1	297·7
23	57·2	60·4	34·9	28·8	26·1	16·3	5·4	3·5	17·9	18·7	3·5	44·3	317·0
0	53·1	68·7	43·8	39·3	28·0	17·1	8·6	3·5	20·7	21·4	4·0	42·5	350·7
1	50·8	68·1	39·2	44·3	27·9	19·2	16·4	5·2	17·4	21·4	6·4	42·3	358·6
2	48·0	54·2	31·5	42·5	25·3	22·4	14·9	3·7	10·4	13·4	6·7	38·3	311·3
3	36·8	48·5	28·2	37·3	21·8	21·4	11·4	1·2	7·9	15·4	6·7	41·9	278·5
4	35·6	49·3	33·7	39·6	22·1	22·8	14·4	1·2	9·1	15·2	8·1	41·2	292·3
5	42·8	45·7	33·2	38·8	18·9	25·6	14·2	1·5	7·9	16·7	8·4	41·0	294·7
6	37·8	43·8	36·4	32·4	17·7	19·4	14·2	5·5	7·9	20·7	6·4	38·0	280·2
7	38·3	42·8	33·8	31·7	13·7	9·9	12·5	1·5	8·2	18·2	3·4	35·0	249·0
8	36·6	45·8	29·4	28·9	13·5	10·3	12·5	0·0	8·2	17·5	4·7	35·0	242·4
9	33·6	48·8	28·2	32·7	12·5	10·8	8·5	0·0	4·0	15·9	2·0	37·4	234·4
10	28·7	44·8	22·2	27·8	12·4	9·3	8·5	0·0	4·0	9·4	4·0	34·2	205·3
11	37·4	53·1	22·9	25·9	11·5	6·1	8·7	0·0	4·2	7·9	5·2	30·0	212·9
12	36·5	50·7	23·7	23·6	13·7	7·9	8·7	0·0	6·2	8·7	3·2	30·0	212·9
13	38·2	58·2	25·9	23·4	13·3	5·9	8·7	0·0	3·7	4·4	1·2	31·8	214·7
14	43·4	50·4	28·7	23·0	12·7	8·3	8·7	0·0	5·2	1·7	1·2	25·6	208·9
15	52·2	46·4	22·7	32·4	13·7	8·3	8·7	0·0	5·2	5·7	1·2	28·8	225·3
16	52·9	38·8	24·1	27·4	12·7	11·6	7·7	1·7	4·2	5·9	1·2	34·8	223·0
17	55·3	38·0	22·9	29·4	11·8	12·6	7·7	3·2	8·4	6·9	1·2	38·1	235·5
Monthly Sums	1070·3	1177·9	690·1	745·5	428·9	344·8	243·8	50·0	219·8	294·0	89·1	890·7	6244·9
No. of Hours of Wind in each Month.	593	549	488	520	551	490	481	506	463	503	526	580	—

METEOROLOGICAL INSTRUMENTS.

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TABLE LXIX.

*Sums of the Pressures registered by estimation at every Second Hour of Mean Toronto Time, from December 1840 to November 1841 inclusive.*

Hours of Mean Time at Toronto.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September	October.	November	Two-Hourly Sums.
18	10.2	6.9	14.7	14.6	7.2	5.0	7.0	3.1	3.0	6.4	5.9	12.0	96.0
20	14.4	10.6	15.8	22.2	15.1	13.0	16.3	9.2	6.8	13.3	10.5	16.3	164.5
22	17.6	11.4	14.6	16.3	17.7	15.5	14.8	10.8	5.6	9.4	14.2	19.9	167.8
0	18.6	10.4	17.2	17.2	14.2	18.2	17.8	13.5	9.0	10.9	15.9	23.1	186.0
2	16.7	16.6	19.5	19.0	22.7	16.3	17.6	13.5	11.2	11.9	15.9	22.8	203.7
4	13.7	10.1	14.2	15.4	21.3	14.4	16.3	12.8	11.7	8.0	11.5	19.1	168.5
6	7.4	7.3	13.1	12.9	17.6	10.0	10.0	7.6	4.7	5.7	5.9	18.4	120.6
8	10.2	12.3	11.6	13.3	12.7	5.6	6.8	4.4	4.8	6.6	6.1	15.0	109.4
10	13.2	18.4	10.4	13.3	11.6	4.4	6.7	6.8	4.8	7.5	5.9	18.6	121.6
12	17.5	13.0	15.8	11.9	9.2	5.0	5.2	2.4	4.6	4.2	6.5	15.7	111.0
14	10.2	9.8	17.4	13.6	5.7	4.9	3.5	8.4	2.2	5.2	4.5	17.4	102.8
16	8.0	7.5	17.2	13.6	7.7	6.2	4.4	5.4	1.3	4.8	5.3	19.6	101.0
Monthly Sums.	157.7	134.3	181.5	183.3	162.7	118.5	126.4	97.9	69.7	93.9	108.1	217.9	1651.9

*Sums of the Pressures registered by estimation at every Second Hour of Mean Toronto Time, from December 1841 to November 1842 inclusive.*

18	23.8	4.3	15.0	10.4	9.6	8.1	5.3	4.0	4.7	4.1	3.5	33.6	126.4
20	22.6	11.3	18.3	14.1	11.9	9.5	8.2	9.6	6.6	8.1	5.2	31.1	156.5
22	17.3	13.1	19.2	14.9	15.3	16.9	11.5	12.1	12.1	19.7	12.7	36.5	201.3
0	19.8	20.8	21.6	19.2	18.7	29.9	12.0	11.8	16.7	21.1	18.8	27.7	238.1
2	24.1	29.1	36.8	26.7	25.1	27.5	15.5	18.6	19.4	18.2	21.7	25.7	288.4
4	29.7	16.2	33.7	24.5	23.3	22.5	15.2	16.9	16.5	15.2	21.6	21.1	256.4
6	28.5	11.9	16.3	18.3	13.9	13.2	7.5	13.2	6.4	16.6	12.3	22.5	180.6
8	21.2	14.3	17.0	7.9	9.5	4.8	4.9	5.8	4.4	7.3	8.4	17.5	123.0
10	20.9	14.6	11.1	9.2	9.5	3.0	3.1	7.6	3.6	3.8	5.3	21.1	112.8
12	20.1	10.1	13.1	5.1	11.3	4.8	5.4	8.7	5.4	5.6	3.9	18.5	112.0
14	20.7	6.7	19.5	12.3	8.7	5.8	5.0	5.2	4.2	7.7	3.9	29.0	128.7
16	21.1	9.5	22.2	8.0	8.2	8.1	3.9	5.8	5.0	9.1	5.5	36.6	143.0
Monthly Sums.	269.8	161.9	243.8	170.6	165.0	154.1	97.5	119.3	105.0	136.5	122.8	320.9	2067.2

TABLE LXX.

*Sums of the Pressures registered by the Anemometer at the several Hours on the average of the two Years.*

MEAN OF THE TWO YEARS.							
Hours of the Day.				Hours of the Night.			
Toronto Time.	Sums of the Pressures.	Toronto Time.	Sums of the Pressures.	Toronto Time.	Sums of the Pressures.	Toronto Time.	Sums of the Pressures.
h	lbs.	h.	lbs.	h.	lbs.	h.	lbs.
18	196	0	304	6	226	12	177
19	202	1	308	7	204	13	176
20	232	2	265	8	198	14	178
21	240	3	221	9	193	15	180
22	263	4	235	10	181	16	184
23	285	5	235	11	185	17	188

TABLE LXXI.

*Sums of the Pressures registered by estimation at the several Observation Hours on the average of the two Years.*

Hours of the Day.		Hours of the Night.	
Mean Toronto Time.	Sums of the Pressures.	Mean Toronto Time.	Sums of the Pressures.
h.	lbs.	h.	lbs.
18	111	6	150
20	160	8	111
22	184	10	117
0	212	12	112
2	244	14	116
4	212	16	122

METEOROLOGICAL INSTRUMENTS.

TABLE LXXII.

*Days on which the greatest Pressures of the Wind were recorded by Osler's Anemometer, between December 1st, 1840, and November 30th, 1842.*

Date.	Pressure.	Direction.	Date.	Pressure.	Direction.
1840	lbs.		1842	lbs.	
December 22	10·0	W.N.W.	January . 22	8·5	W.N.W.
„ 24	7·5	E.N.E.	„ 29	8·5	S.E.
1841			February 5	7·5	N.
January . 18	3·7	W.	„ 8	6·5	N.W.
February. 3	15·0	N.W.	„ 14	7·5	N.W.
„ 22	9·0	N. by W.	„ 16	11·5	N.N.W.
March . 12	3·5	N.E. & E.	„ 17	11·0	N.W.
April . 2	7·0	N.W.	„ 25	5·0	E.
„ 14	7·0	N.	March . 9	7·0	N.W.
„ 19	7·0	NW.	„ 11	7·5	by W.
„ 29	7·0	S.E.	„ 15	7·0	N.W. by W.
September 26	10·0	W.N.W.	„ 27	9·0	N.N.W.
October . 25	8·0	W.S.W.	April . 18	5·0	E.
November 2	8·0	S.S.W.	May . . 19	4·0	N.N.W.
„ 12	7·0	N.W.	June. . 6	4·0	N.
„ 14	7·5	N.N.W.	„ 10	4·0	N. by W.
December. 4	7·4	S.W.	August . 1	6·0	N.W.
„ 10	9·0	N.E.	September 21	7·5	N.
„ 17	8·5	N.	„ 22	5·0	N.N.W.
„ 18	7·0	N.W.	October . 12	3·5	N.W.
„ 23	10·0	S.S.W.	November 7	4·0	E.N.E.
„ 24	8·0	W.S.W.	„ 12	4·0	S.E.
1842			„ 17	6·0	S.W.
January . 1	8·5	S.W.	„ 18	9·5	W.S.W.
„ 2	12·0	S.W.	„ 19	7·5	W.S.W.
„ 14	12·5	W.S.W.	„ 29	11·0	E.S.E.
„ 21	7·5	W.			

TOTAL.

23 Days between N. and W.  
 11 „ „ S. and W.  
 4 „ „ N. and E.  
 4 „ „ S. and E.  
 5 „ from N.  
 2 „ „ W.  
 2 „ „ E.  
 0 „ „ S.

TABLE LXXIII.  
*Record of the Anemometer Rain Gauge.*

MONTHS.	1841.	1842.
	In.	In.
January . . .	2·15	2·17
February . . .	—	3·63
March . . .	1·16	3·15
April . . .	1·36	3·74
May . . .	2·34	1·28
June . . .	1·54	5·76
July . . .	8·14	3·05
August . . .	6·17	2·50
September . . .	3·33	6·16
October . . .	1·35	5·17
November . . .	2·45	5·31
December . . .	6·59	0·88
Sum . . .	36·58	42·80

The receiving surface of the anemometer rain-gauge was about 9 feet above the ground.

**T O R O N T O , 1 8 4 0 .**

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**M A G N E T I C A L A N D M E T E O R O L O G I C A L T E R M O B S E R V A T I O N S .**

March 18th and 19th.		MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.		Angular Value of one Scale Division = 0'.721.					DECLINATION.					
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
3	23	—	58.5	57.9	57.4	58.0	58.6	—	58.8	59.2	59.2	59.1
8	23	—	57.7	57.9	57.6	58.3	58.7	58.4	58.7	59.4	59.1	59.2
13	23	—	57.8	57.9	57.8	58.6	58.5	58.2	58.8	58.7	59.0	59.1
18	23	57.2	57.9	57.9	—	58.5	58.5	58.5	58.8	58.8	58.9	59.3
23	23	59.0	58.0	57.8	57.8	58.1	58.6	58.6	58.7	59.0	58.8	59.5
28	23	58.2	58.1	57.8	57.9	58.1	58.4	58.4	58.6	59.0	59.0	59.4
33	23	57.5	58.1	57.6	58.1	58.1	58.9	58.3	58.6	59.3	58.9	59.4
38	23	57.5	57.8	57.3	57.7	58.1	58.8	58.6	58.6	59.1	58.9	59.4
43	23	58.6	58.0	57.4	58.0	58.4	58.6	58.6	58.6	59.1	59.0	59.5
48	23	57.7	57.9	57.6	58.2	58.5	58.2	58.4	59.0	59.0	59.0	59.7
53	23	58.0	57.8	57.8	58.1	58.4	58.1	58.7	58.9	59.1	59.1	59.7
58	23	57.8	58.0	57.5	57.7	58.6	58.0	58.7	58.9	59.0	59.0	59.9

M. S.		One Scale Division = .000166 parts of the H. F.					HORIZONTAL FORCE.					
5	53	—	43.7	44.4	44.4	44.2	43.3	43.4	44.2	45.9	48.6	48.6
15	53	40.5	43.8	44.1	—	43.3	43.4	43.3	43.7	46.5	48.9	48.6
25	53	41.4	43.8	44.3	44.2	43.6	43.6	43.6	44.5	46.9	48.9	48.2
35	53	43.1	44.3	44.0	44.3	43.3	43.6	43.9	44.6	46.9	48.6	47.9
45	53	43.3	44.5	44.1	43.4	43.1	43.3	43.2	45.5	48.1	48.9	47.7
55	53	44.1	44.8	44.0	43.7	42.7	43.0	44.2	45.5	48.4	48.9	48.0

Thermometer	5 <sup>o</sup> .4	5 <sup>o</sup> .4	5 <sup>o</sup> .4	5 <sup>o</sup> .7	5 <sup>o</sup> .9	5 <sup>o</sup> .2	5 <sup>o</sup> .4	5 <sup>o</sup> .0	5 <sup>o</sup> .4	5 <sup>o</sup> .4	5 <sup>o</sup> .4

VERTICAL FORCE.											

Increasing numbers denote decreasing westerly  
The observations were made accidentally 3<sup>m</sup> 23<sup>a</sup> after the appointed times;

METEOROLOGICAL OBSERVATIONS.											
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.			
				Dry.	Wet.	Direction.	Force.				
D.	H.	M.	In	°	°						
18	10	0	29.706	49.2	41.9	W. b. N.		Partially clouded; stratus and cirro-cumulus. Zenith clear.			
	11	0	29.726	—	—						
	12	0	29.716	44.0	38.1	W. b. N.	Mod.	§ clouded to the N.E. and N.W., with strati and cirri.			
	13	0	29.754	—	—						
	14	0	29.731	37.8	34.2	N.W.	Mod.	Cirri extending across the zenith from E. to W.			
	15	0	29.744	36.2	33.2	N.N.W.	Fresh.	Gusts. Hazy and clouded in the S. with light stratus.			
	16	0	29.740	35.6	32.6	N.N.W.	Fresh.	Gusts; partially clouded, clouds rising from N.N.W.			
	17	0	29.682	34.6	32.2	N. b. W.	Mod.	Clouded; cirro-cumuli except near the S. horizon.			
	18	0	29.714	33.8	31.6	N. b. W.	Light.	Clouded; cirro-cumuli except near the S. horizon.			
	19	0	29.696	34.4	32.2	N.	Mod.	Clouded; cirro-cum. and cirro-strati; heaviest along the N. horizon.			
	20	0	29.696	34.5	32.7	N.	Mod.	Clouded.			
	21	0	29.660	35.0	33.2	N.	Fresh.	Clouded.			

**MAGNETICAL OBSERVATIONS.** March 18th and 19th.

DECLINATION.						Angular Value of one Scale Division = 0'.721.						
21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
59.9	60.5	61.4	62.5	66.1	68.1	69.3	67.0	57.7	51.6	46.0	48.7	49.2
59.7	60.4	61.4	63.1	67.7	68.5	69.4	65.8	57.1	50.8	46.7	47.2	49.3
60.0	60.4	61.7	63.4	66.5	68.8	69.2	64.8	55.6	52.5	46.8	48.0	49.3
59.9	60.7	61.4	63.7	67.1	69.1	69.5	64.9	56.2	51.0	46.7	48.3	50.2
59.9	60.6	61.3	64.1	67.2	69.7	69.2	64.9	59.1	50.0	48.6	49.2	50.6
60.1	60.7	60.5	65.3	66.8	69.9	68.5	64.7	57.2	49.7	49.3	49.2	50.4
60.2	60.5	60.8	65.6	67.3	70.4	68.2	63.3	56.5	48.6	48.6	49.1	50.8
60.2	61.0	60.5	65.3	67.2	69.3	68.5	62.4	56.1	48.6	47.1	49.5	50.5
60.5	61.2	61.0	64.8	67.4	75.0	68.9	62.0	55.4	48.9	47.5	49.2	51.5
60.5	61.4	61.5	67.0	65.1	74.2	68.4	60.6	54.2	46.9	47.9	49.9	52.5
60.5	61.6	62.2	66.5	67.4	71.9	67.2	59.8	53.5	47.6	48.9	49.3	52.6
60.7	61.5	62.2	66.7	67.5	70.1	67.8	57.6	52.5	47.5	46.5	48.8	52.7

HORIZONTAL FORCE.						Change in the magnetic moment of the Bar for 1° Fah <sup>t</sup> . = .00034.						
47.6	47.0	46.1	43.9	45.8	44.8	41.8	37.5	34.0	37.6	39.0	49.9	44.9
47.8	46.7	45.6	44.5	46.4	44.3	41.3	36.8	33.6	37.8	39.2	47.9	46.9
47.7	46.6	46.3	43.3	45.9	42.4	39.6	36.2	35.1	38.9	43.7	48.1	45.0
47.1	46.2	44.3	44.5	45.8	42.3	39.2	35.8	34.3	41.2	45.1	—	46.5
47.0	45.8	44.3	45.6	45.6	41.4	38.6	35.7	35.1	40.7	40.1	46.0	45.8
46.8	45.8	44.7	47.0	45.3	42.9	36.8	35.1	36.0	42.0	46.2	47.3	45.0
54.4	53.4	52.4	52.4	51.9	51.6	51.2	50.4	49.8	49.6	49.6	49.1	49.1

VERTICAL FORCE.												

Declination, and increasing Horizontal Force, those of the Horizontal Force are reduced to a uniform temperature of 54°.4.

**METEOROLOGICAL OBSERVATIONS.**

Mean Göttingen Time.	Barometer at 32°.	Thermometers.		Wind.		Weather.
		Dry.	Wet.	Direction.	Force.	
D. H. M.	In.	°	°			
18 22 0	29.582	35.4	33.7	N.N.E.	Fresh.	Clouded.
23 0	29.570	35.2	34.8	N. b. E.	Fresh.	Clouded; clouds moving rapidly from E. to W.
19 0 0	29.513	36.2	35.6	E.	Fresh.	Clouded; upper strat. passing to the E., lower to the W.
1 0	29.518	36.4	36.0	E. b. S.	Squally.	Ditto; ditto.
2 0	29.482	36.5	36.4	E. b. N.	Squally.	Heavy rain, with hail; thunder and lightning. [becoming fainter.]
3 0	29.459	36.4	36.2	N.E.	Squally.	Raining slightly; overcast; thunder and lightning passing to the W., and
4 0	29.434	36.6	36.6	E.N.E.	Squally.	Overcast; raining slightly.
5 0	29.427	37.0	36.8	E. b. N.	Squally.	Raining heavily.
6 0	29.415	37.8	37.4	E. b. N.	Squally.	Light rain, overcast with dense haze.
7 0	29.401	38.2	38.2	E.N.E.	Fresh.	Abating; light rain, overcast with haze.
8 0	29.387	39.5	39.4	E.N.E.	Mod.	Overcast; dense haze.
9 0	29.427	40.4	40.2	E.N.E.	Mod.	Overcast; dense haze.





MAGNETICAL OBSERVATIONS.													April 22nd and 23rd.	
DECLINATION.											Angular Value of one Scale Division = 0'.721.			
21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .		
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.		
61.5	60.5	63.0	64.9	63.2	65.5	64.2	64.3	55.4	51.1	48.5	46.6	46.8		
62.1	61.1	62.6	65.3	63.9	64.8	64.1	63.1	55.3	51.5	48.3	46.8	47.0		
62.0	60.7	61.6	65.2	63.5	65.0	63.4	62.6	54.8	51.3	47.6	46.5	47.3		
61.6	60.9	62.8	65.5	63.9	66.3	63.1	62.6	54.4	50.7	47.7	46.6	47.1		
61.5	61.3	63.5	64.3	65.4	67.0	63.6	62.4	55.6	50.3	47.4	46.6	47.1		
61.3	51.6	63.7	65.1	65.1	66.2	63.0	61.7	54.5	50.0	47.2	46.9	47.1		
60.6	61.8	64.1	65.9	64.3	66.6	65.3	61.7	54.5	49.9	47.4	46.9	48.2		
61.0	61.9	64.3	65.3	63.6	65.5	65.8	59.0	54.6	49.6	46.7	46.8	48.6		
61.0	62.3	65.1	64.6	65.8	66.8	65.3	57.4	53.5	49.8	46.7	47.1	48.4		
60.2	62.0	65.4	63.7	66.2	64.7	65.4	56.3	52.2	49.1	46.6	47.1	48.8		
60.1	62.7	65.5	63.7	66.0	64.4	63.7	55.5	52.1	49.6	46.7	47.3	49.3		
61.0	62.5	65.0	63.5	65.6	64.3	65.0	55.3	51.2	49.1	46.6	47.3	49.7		

HORIZONTAL FORCE.													Change in the magnetic moment of the Bar for 1° Fah <sup>t</sup> . = .00034.	
51.3	52.2	52.6	49.2	45.6	44.2	48.9	40.8	39.5	39.0	41.7	48.8	51.8		
50.7	52.7	51.6	48.9	45.1	45.8	48.6	41.0	39.5	40.0	41.0	51.7	52.0		
50.6	52.8	51.4	48.9	45.4	45.0	48.3	40.9	41.1	40.2	42.2	49.1	51.2		
50.8	52.9	50.6	48.5	44.7	46.4	46.4	39.4	40.4	41.2	45.3	46.8	48.7		
51.7	52.8	49.9	47.1	44.1	47.1	44.2	39.0	39.2	42.6	45.9	47.0	51.2		
51.4	52.9	49.9	46.5	44.3	47.7	42.6	39.7	38.7	41.8	48.9	48.6	52.0		
59°3	59°3	59°3	59°3	59°3	59°3	59°5	59°5	59°7	59°9	60°2	61°2	61°5		

VERTICAL FORCE.												

Declination, and increasing Horizontal Force. reduced to a uniform temperature of 59° 3.

METEOROLOGICAL OBSERVATIONS.												
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.				
				Dry.	Wet.	Direction.	Force.					
D.	H.	M.	In.	°	°							
22	22	0	29.261	49.7	49.3	W. b. S.	Light.	Clear; small lunar halo of an orange tint, diam. 4°.				
	23	0	29.297	56.5	55.8	W. b. S.	Light.	Clear, except round horizon.				
23	0	0	29.269	58.0	56.2	S.W.b.W.	Mod.	‡ clouded; detached cirro-cum. passing rapidly from Westward.				
	1	0	29.420	60.6	57.6	S. W.	Mod.	‡ clouded; cirro-cumuli and cirri.				
	2	0	29.442	61.8	56.0	S.W.b.W.	Light.	‡ overcast; light cirri.				
	3	0	29.524	63.0	56.0							
	4	0	29.492	66.4	57.6	S.W.b.W.	Light.	Cirri in all directions.				
	5	0	29.500	67.2	57.6	S.W.b.W.						
	6	0	29.512	67.5	55.4	S.W.b.W.	Mod.	Cirri in all directions.				
	7	0	29.517	68.2	56.6	S. W.	Light.	Haze round horizon; light cirri in zenith.				
	8	0	29.502	68.3	55.9	S. W.	Mod.	Overcast; haze and cirri.				
	9	0	29.510	67.5	56.9	S. W.	Mod.	Overcast with haze.				

May 29th and 30th.		MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.		Angular Value of one Scale Division = 0'.721.						DECLINATION.				
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0	153.4	161.6	123.3	159.6	177.4	151.3	136.5	185.4	173.2	122.1	174.9
5	0	154.8	155.0	161.1	158.1	176.8	155.9	81.9	183.1	175.0	—	172.2
10	0	152.5	152.6	151.3	171.1	181.2	159.3	114.2	163.6	171.6	—	173.6
15	0	150.8	166.9	164.8	168.3	185.0	164.5	82.4	157.3	166.8	136.0	174.4
20	0	154.2	159.4	160.0	171.7	185.2	168.1	31.0	176.7	168.0	147.4	175.2
25	0	156.1	150.8	148.7	164.4	183.3	170.4	25.4	187.7	157.3	150.4	180.0
30	0	156.2	164.4	143.5	177.0	174.5	170.5	56.0	166.0	156.0	149.2	181.8
35	0	153.6	175.9	142.1	180.1	171.3	164.9	162.7	153.6	137.8	152.0	182.9
40	0	147.6	141.6	146.5	182.3	173.9	179.6	159.0	157.0	127.3	157.9	178.7
45	0	150.3	145.1	153.7	184.6	176.1	138.8	123.0	153.4	121.6	164.6	178.2
50	0	154.9	159.5	157.0	175.3	168.9	133.7	154.1	164.0	102.3	169.3	176.2
55	0	163.8	138.4	157.1	173.5	157.8	148.4	175.3	165.5	99.9	172.3	174.7

M. S.		One Scale Division = .00021 parts of the H. F.						HORIZONTAL FORCE.					
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
2	30	160.8	184.8	214.8	137.3	111.6	84.9	Beyond Scale.	75.8	115.3	72.4	114.0	
12	30	158.5	185.0	160.9	137.7	99.2	80.8		79.8	119.3	78.9	118.2	
22	30	160.1	214.0	152.9	127.4	98.8	97.3		84.9	99.6	93.4	115.7	
32	30	165.1	203.3	143.2	119.8	101.5	84.6	Scale re-appearing.	99.6	45.5	98.2	123.3	
42	30	159.0	207.7	135.9	125.8	110.3	67.2		9.6	99.7	21.1	102.6	125.1
52	30	156.7	198.8	133.8	118.4	99.7	36.6		87.5	98.6	21.4	106.8	129.6

Thermometer		69.0	68.7	69.4	69.7	70.2	70.4	69.7	70.2	—	69.4	69.1
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M. S.		One Scale Division = .00015 parts of the V. F.						VERTICAL FORCE.					
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
7	30	70.8	84.2	87.5	77.2	59.8	40.1 <sup>a</sup>	Out of the Field.	10.4 <sup>a</sup>	53.1 <sup>a</sup>	30.3 <sup>a</sup>	50.6	
17	30	71.3	91.6	78.5	72.1	54.6	44.2		17.5	51.6	27.6	48.9	
27	30	—	101.2	75.2	74.5	55.1	53.4		25.1	—	28.5	49.9	
37	30	75.2	89.5	75.4	74.8	56.5	27.5	Out of the Field.	22.4 <sup>a</sup>	28.9	31.4	55.6	
47	30	79.0	93.3	73.0	72.9	53.3	30.7		24.0	34.3	20.6	38.4	56.5
57	30	80.4	87.3	74.7	70.5	51.2			30.7	36.9	23.0	—	57.4

Thermometer		68.4	68.8	69.2	69.4	69.4	69.6	69.4	70.4	—	69.9	69.4
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Increasing numbers denote decreasing westerly Declination,  
 \* The observations of the Vertical Force during the hours of 15, 16, 17,

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
29	10	0	29.569	66.6	58.0	E.	Light.	Haze round horizon to alt. 12°; a bank of cirro-strati in S. horizon.
	11	0	29.563	65.4	58.6	—	Calm.	Haze round horizon; remainder clear.
	12	0	29.566	66.0	54.8	—	—	Haze round horizon; remainder clear. [horizon.
	13	0	29.570	65.0	55.9	—	—	Haze in hor., alt. about 10°; a few cirro-strati appearing in N. and W.
	14	0	29.589	59.2	55.0	—	—	Haze in horizon.
	15	0	29.619	57.6	53.8	—	—	{ Haze in hor., faint light in N.; at 15 <sup>h</sup> 16 <sup>m</sup> faint streamers shot up from N.E. to alt. 60°; a most brilliant Aurora followed.
	16	0	29.629	55.0	52.0	—	—	{ Aurora most brilliant; * at 16 <sup>h</sup> 5 <sup>m</sup> a perfect arch from N.W. to N.E. splendid streamers rising from it, and almost a continued gleam of light from the incessant flashes or pulsations.
	17	0	29.623	53.6	51.0	—	—	Streamers disappeared; faint patches of light and a few pulsations.
	18	0	29.617	52.0	49.8	—	—	Very faint light arch, dark clouds rising in N. hor., remainder of sky clear.
	19	0	29.607	50.4	48.5	N.	Very light	Bright Aurora.
	20	0	29.607	49.8	48.5	Calm.	Calm.	Bright Aurora.
	21	0	29.608	49.0	47.4	—	—	Sky clear.

\* For a detailed description of this Aurora, see the Volume of Observations on Days of unusual Magnetic Disturbance, Part I, pp. 2-4.

MAGNETICAL OBSERVATIONS.

May 29th and 30th.

DECLINATION.

Angular Value of one Scale Division = 0'.721

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
169.6	154.7	156.5	158.0	165.0	153.1	145.1	143.6	145.1	143.9	146.7	149.0	154.5
165.3	156.5	156.6	157.4	163.0	150.9	143.1	143.3	145.0	143.5	146.7	149.9	155.1
163.8	—	155.6	159.6	163.0	151.0	140.0	142.7	144.7	143.8	147.0	150.1	154.6
163.5	150.4	153.9	158.2	161.8	153.6	140.9	142.6	144.8	143.9	147.3	151.2	153.8
163.2	161.3	155.2	160.7	160.7	158.3	139.8	142.5	144.4	144.1	147.3	151.3	154.8
162.9	162.0	155.9	161.6	159.5	155.6	140.3	143.8	144.1	144.2	147.1	150.8	155.7
161.1	161.2	154.9	163.4	158.7	153.1	140.7	143.7	144.8	144.7	147.1	150.8	161.4
160.4	161.7	155.6	163.7	157.3	148.5	141.6	143.7	145.2	145.3	147.2	151.1	155.6
160.5	161.7	155.4	162.6	157.7	147.6	142.6	143.6	144.9	145.5	147.6	150.7	156.9
159.4	160.2	157.8	163.7	156.7	147.2	143.7	144.3	144.3	145.7	148.0	151.2	158.6
157.3	159.9	158.7	165.9	155.1	144.1	143.5	145.1	143.5	146.0	148.2	153.1	161.9
156.0	158.8	160.0	165.2	154.9	145.4	143.9	145.5	143.8	146.2	148.7	155.1	166.6

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00034.

133.4	125.3	123.6	124.0	117.6	115.0	109.4	119.4	135.0	138.3	146.5	148.0	159.7
130.8	—	126.3	129.1	115.7	119.4	110.8	121.6	136.7	139.7	145.7	148.7	159.7
129.3	130.7	125.2	131.4	112.3	111.4	111.0	121.1	137.2	142.2	145.0	149.4	157.2
126.6	130.0	127.7	128.5	115.4	117.7	111.0	124.9	137.6	143.7	144.0	148.0	159.1
127.1	126.9	124.4	121.8	117.3	114.6	113.2	128.1	138.3	144.9	144.5	150.8	149.1
125.2	127.1	125.4	119.6	117.4	109.4	116.7	131.8	138.2	145.8	146.3	156.5	155.9
68.2	67.6	66.7	66.2	66.2	66.2	66.7	66.7	66.7	72.0	67.2	67.2	67.5

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .0002

58.1	58.4	58.1	57.1	58.4	59.0	57.2	60.8	63.9	63.2	63.2	64.7	68.6
59.3	59.8	57.4	57.0	58.6	59.2	58.1	60.9	63.5	62.9	62.9	64.9	69.5
60.1	60.6	57.2	57.5	58.5	59.3	57.7	62.9	63.5	62.9	60.0	65.3	—
60.0	60.3	57.0	58.1	58.5	59.6	58.6	63.9	64.0	62.8	58.7	65.9	71.0
59.5	60.2	57.1	57.9	58.9	57.1	59.3	64.4	64.0	62.9	60.0	67.1	72.0
—	60.3	56.8	58.1	59.5	56.3	60.1	64.4	63.5	63.3	59.1	68.0	72.4
68.7	68.2	66.9	66.6	66.2	65.8	66.0	66.0	66.0	71.2	66.4	66.6	66.6

and increasing Horizontal and Vertical Force.  
18, and 19, were taken 24<sup>m</sup> before the times specified.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.	Barometer at 32°.	Thermometers.		Wind.		Weather.
		Dry.	Wet.	Direction.	Force.	
D. H. M.	In.	°	°			
29 22 0	29.612	48.2	46.8	—	Calm.	Sun rising red, haze round horizon.
23 0	29.610	50.2	48.9	—	—	Clear.
30 0 0	29.615	57.2	54.2	—	—	Clear; haze round horizon.
1 0	29.616	64.8	56.2	—	—	Clear; haze round horizon.
2 0	29.625	62.4	54.4	—	—	Clear; haze round horizon.
3 0	29.614	63.2	56.0	N.E.	Very light	A few light cirri and haze round horizon.
4 0	29.611	64.0	56.0	—	—	Clouded with cirri round horizon.
5 0	29.610	62.8	56.4	—	—	Clouded with cirri round horizon.
6 0	29.603	63.2	58.8	—	—	Clouded; heavy cirri and haze, heaviest in N.W.
7 0	29.587	66.0	60.2	—	—	Detached cirri and haze.
8 0	29.568	67.2	60.1	—	—	Yellowish haze in N. hor.; cirri and cumulo-strati in S.W.
9 0	29.555	69.0	60.4	—	—	Light haze round hor., remainder interspersed with light cirri.

June 24th and 25th.			MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.723.					DECLINATION.					
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		50.5	50.8	52.1	51.1	52.8	49.0	52.4	53.5	51.4	52.9	53.0
5	0		51.1	50.8	51.9	51.5	52.0	49.8	51.9	53.2	51.7	52.5	53.1
10	0		51.3	50.9	51.7	52.1	51.7	49.7	50.7	54.3	52.6	52.9	53.3
15	0		51.1	51.2	51.7	51.9	50.7	50.1	53.7	54.9	52.2	52.7	53.4
20	0		50.5	51.4	51.8	52.5	50.1	50.3	53.5	55.3	52.6	53.0	53.9
25	0		50.7	51.3	52.0	52.3	50.1	50.3	55.3	56.0	52.8	52.7	53.9
30	0		50.5	51.9	52.0	53.2	50.2	50.7	57.7	55.5	52.2	52.5	54.1
35	0		50.9	51.5	52.2	52.5	49.9	50.9	59.3	55.1	52.4	52.8	54.1
40	0		51.0	51.9	52.0	52.9	49.6	52.0	59.5	53.3	52.4	52.9	54.2
45	0		51.1	52.1	52.1	53.2	48.7	52.7	59.2	52.5	52.8	52.9	54.4
50	0		51.3	52.1	51.6	54.7	48.4	52.9	57.2	52.4	52.7	52.8	54.4
55	0		50.8	52.3	51.3	54.1	49.1	53.0	54.3	51.5	52.8	52.9	54.6
			One Scale Division = .00021 parts of the H. F.					HORIZONTAL FORCE.					
M.	S.												
2	30		61.6	61.8	62.3	62.7	63.3	61.0	60.0	60.1	60.9	60.2	60.6
12	30		60.9	62.7	63.1	63.2	61.9	60.6	62.8	59.2	59.7	60.4	61.0
22	30		60.5	64.4	64.8	63.3	60.1	60.3	64.2	59.6	60.0	60.7	61.0
32	30		61.3	65.2	64.4	63.7	60.8	59.3	62.3	60.0	60.3	61.0	61.0
42	30		62.0	65.2	65.0	64.3	61.2	58.6	59.9	60.3	60.5	60.8	60.7
52	30		61.5	63.8	63.6	65.7	61.6	59.0	61.4	60.1	60.2	60.8	60.5
Thermometer			71.1	71.6	72.3	72.6	72.8	73.1	73.6	73.6	73.6	73.4	73.2
			One Scale Division = .00019 parts of the V. F.					VERTICAL FORCE.					
M.	S.												
7	30		43.3	43.5	43.6	44.6	44.7	45.2	45.3	43.5	45.0	45.3	45.4
17	30		42.9	43.7	43.7	44.4	44.9	45.3	43.4	43.9	45.5	45.1	45.3
27	30		43.2	43.7	44.1	44.5	44.4	45.4	43.0	44.3	45.2	45.1	44.9
37	30		43.6	43.8	44.2	44.4	44.6	45.3	43.0	43.9	45.1	44.8	45.0
47	30		43.5	43.7	44.0	44.7	44.6	45.4	42.9	45.0	45.2	45.6	44.9
57	30		43.7	43.5	43.9	44.6	45.0	45.6	42.9	45.3	45.6	45.4	44.8
Thermometer			70.8	71.3	71.8	72.5	72.3	72.8	73.3	73.3	73.5	73.3	73.3

Increasing numbers denote decreasing westerly Declination,  
The observations of the Horizontal Force are reduced to a uniform temperature

## METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
24	10	0	29.660	74.6	68.0	—	Calm.	½ clouded; cum. and cirri; patches of clear sky.
	11	0	29.643	73.5	68.1	—	Calm.	¾ overcast, with haze and light cirri.
	12	0	29.637	74.5	69.2	—	Calm.	¾ overcast, light cirri; cumulo-strati about N. horizon.
	13	0	29.633	73.6	68.8	—	Calm.	½ ditto ditto.
	14	0	29.637	71.2	66.3	—	Calm.	Clouded round horizon to alt. 20°, remainder clear.
	15	0	29.646	68.0	63.2	—	Calm.	Clouded in zenith; clear to S. near horizon.
	16	0	29.642	72.2	66.2	—	Calm.	Clear, except a few light clouds in W. horizon.
	17	0	29.641	70.0	65.0	—	Calm.	Ditto ditto.
	18	0	29.641	69.0	64.0	—	Calm.	Ditto ditto.
	19	0	29.643	69.2	65.8	—	Light.	Partially clouded in zenith.
	20	0	29.651	66.2	63.0	—	Calm.	½ clouded with cumuli and cirri.
	21	0	29.657	65.2	62.0	—	Calm.	½ clouded.

MAGNETICAL OBSERVATIONS.

June 24th and 25th

DECLINATION.

Angular Value of one Scale Division = 0'.723.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
54.5	55.7	57.8	60.9	61.5	61.0	61.6	60.4	57.8	54.6	49.5	47.9	47.1
54.4	55.6	57.4	61.1	62.2	60.9	62.0	59.4	56.1	54.2	49.4	47.7	47.0
54.6	55.8	57.8	61.4	61.8	60.5	61.9	59.7	54.8	53.9	49.0	47.5	47.2
54.7	56.0	58.0	61.4	61.2	60.5	61.3	59.5	57.0	53.5	49.0	48.0	47.8
54.9	56.0	58.3	61.4	60.8	60.4	61.6	59.1	56.4	52.7	48.4	47.6	47.9
55.0	56.3	58.6	61.6	60.7	60.5	61.0	59.1	55.9	52.2	48.3	47.7	47.8
55.0	56.7	59.0	61.6	60.8	60.8	60.6	58.9	55.4	52.2	48.0	47.6	47.7
55.2	56.9	59.1	61.6	60.0	61.1	60.2	58.5	54.9	52.0	48.1	47.4	47.8
55.1	56.7	59.6	61.7	60.0	61.2	60.0	58.8	54.7	51.1	47.9	47.7	47.7
55.5	56.8	60.2	61.6	59.8	61.7	60.0	58.7	55.0	50.5	47.5	47.2	47.7
55.9	57.1	60.0	61.4	60.7	61.3	59.8	58.1	55.1	50.2	47.7	47.5	47.7
55.5	57.3	60.8	61.2	61.0	61.4	61.4	57.5	55.0	49.9	48.0	47.3	48.0

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00034.

60.6	60.8	61.7	61.5	59.3	58.9	56.4	53.8	54.2	56.4	55.3	58.0	59.5
60.6	60.7	61.6	61.4	59.7	58.5	55.8	53.3	56.1	56.0	55.7	58.8	63.0
60.5	60.9	61.8	60.4	59.6	58.1	55.0	53.3	55.9	55.0	54.7	59.3	63.0
60.5	61.4	62.0	60.9	59.3	57.4	54.8	53.6	55.7	55.8	55.3	58.5	63.4
60.7	61.5	61.4	60.4	59.1	56.8	54.8	53.8	55.9	54.0	55.6	59.8	60.5
60.4	61.4	61.6	59.2	59.3	56.5	54.4	53.7	56.9	55.2	57.5	59.3	61.4
72.6	72.0	71.6	71.4	71.1	71.4	71.1	71.1	71.0	70.8	70.8	70.5	70.6

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .0002.

44.8	44.0	43.6	42.9	42.8	41.4	41.4	41.6	41.2	40.5	40.5	40.6	40.8
44.7	43.3	43.1	42.8	42.5	41.6	41.6	41.6	41.2	40.7	40.7	40.9	41.2
44.7	43.0	42.9	42.7	42.4	41.4	41.5	41.5	41.1	40.9	40.5	40.6	41.3
44.8	44.1	42.8	42.6	42.3	41.4	41.6	41.3	41.0	40.5	40.5	41.0	41.2
44.8	42.7	43.0	42.7	42.1	41.4	41.6	..	40.7	40.5	40.6	40.7	41.0
44.4	43.1	42.9	42.6	42.1	41.4	41.6	41.2	40.6	40.6	40.6	40.7	41.3
72.8	72.3	71.7	71.6	71.5	71.3	71.3	70.9	70.7	70.7	70.7	70.3	70.3

and increasing Horizontal and Vertical Force.  
of 72°·6; of the Vertical Force to a uniform temperature of 72°·3.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°	—	Calm.	Clear.
24	22	0	29.651	63.6	61.1	—	Calm.	Ditto.
	23	0	29.669	66.8	62.8	—	Calm.	½ clouded with cumuli and cirri.
25	0	0	29.669	67.5	62.4	N. b. W.	Light.	Clouded with light cumuli; patches of clear sky.
	1	0	29.697	72.2	63.6	N.E.	Light.	½ clouded; cum. and cirri, chiefly in E.
	2	0	29.707	72.6	62.2	N.N.E.	Mod.	¾ clouded; cirri, cirro-cum., and strati, in S. horizon.
	3	0	29.710	70.8	60.6	N.E.	Mod.	¾ clouded; cum. and cirri, chiefly in E.
	4	0	29.708	69.2	60.4	E.N.E.	Mod.	¾ clouded; cum. and cirri, chiefly in E.
	5	0	29.714	70.0	59.6	N.E.	Brisk.	Overspread with cirri and cumuli.
	6	0	29.698	71.0	60.0	N.E.	Light.	Covered with light fluxuous cirri.
	7	0	29.681	69.7	60.0	N.E.	Light.	Ditto ditto.
	8	0	29.656	68.6	59.8	E. b. N.	Mod.	¾ clouded with cirri and cirro-strati.
	9	0	29.652	68.4	59.9	E. b. N.	Mod.	¾ overcast, with light cirri and cirro-strati.

July 22nd and 23rd.			MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.723.						DECLINATION.				
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
0	0		52.9	57.1	58.0	52.6	54.7	56.1	56.6	61.5	61.9	48.2	70.3
5	0		53.7	57.3	58.0	52.6	54.2	56.8	59.3	59.9	61.9	52.5	72.0
10	0		54.0	57.8	57.9	52.3	53.6	57.1	64.2	58.0	62.2	58.3	73.0
15	0		54.1	57.9	52.6	52.9	52.8	57.2	69.6	66.2	61.3	64.2	72.2
20	0		54.9	57.3	52.2	52.9	51.9	57.2	76.9	66.2	61.0	67.5	73.1
25	0		55.0	57.4	52.3	53.7	51.2	57.0	79.3	59.8	61.0	65.0	73.5
30	0		55.1	57.2	52.3	54.0	51.0	57.9	74.7	58.0	60.5	62.8	73.1
35	0		55.2	57.5	52.3	54.1	55.5	58.6	70.2	59.3	58.2	61.3	72.7
40	0		55.8	57.5	52.5	54.1	56.4	59.3	65.6	59.4	56.5	59.6	71.8
45	0		56.0	57.5	52.3	54.0	56.0	55.0	59.6	60.1	54.5	61.1	70.1
50	0		56.1	58.0	52.3	53.9	55.5	55.6	58.4	59.2	52.3	63.5	68.0
55	0		56.4	58.0	52.6	53.9	57.3	55.7	60.4	60.4	52.2	67.1	65.9

M. S.		One Scale Division = .00021 parts of the H. F.						HORIZONTAL FORCE.				
		86.8	87.8	83.1	85.5	86.0	84.8	82.3	65.5	65.4	65.0	68.0
2	30	87.5	87.1	83.2	85.6	84.9	85.0	71.4	66.6	65.5	65.9	67.4
12	30	87.9	86.3	83.5	85.6	84.2	84.0	70.5	63.8	65.8	74.8	64.6
22	30	88.5	85.6	83.6	85.7	84.3	83.1	71.8	67.7	68.8	74.3	64.3
32	30	88.6	84.4	84.1	86.0	85.2	82.6	70.1	67.3	71.3	75.3	63.4
42	30	87.1	84.0	84.8	85.6	85.1	82.4	69.1	65.3	73.9	70.8	66.6

Thermometer		71.4	71.8	70.6	71.6	71.6	71.1	71.4	72.1	71.1	71.1	71.1

M. S.		One Scale Division = .00019 parts of the V. F.						VERTICAL FORCE.				
		46.5	47.4	47.3	47.5	47.8	47.9	47.6	43.4	40.1	35.4	36.3
7	30	46.5	47.5	47.4	47.7	47.8	48.0	47.9	42.6	40.7	36.9	36.2
17	30	46.7	47.2	47.3	47.8	47.8	48.0	48.6	42.2	38.1	38.2	36.8
27	30	46.8	47.2	47.3	49.5	48.1	47.2	49.2	41.3	35.2	37.0	37.2
37	30	47.3	47.3	47.4	47.9	47.8	48.3	45.5	40.0	35.8	36.5	38.5
47	30	47.2	47.3	47.4	47.9	47.8	48.0	44.2	39.1	34.1	36.5	40.3

Thermometer		71.1	71.5	71.3	71.3	71.3	71.3	71.6	71.8	71.3	71.6	71.5

Increasing numbers denote decreasing westerly Declination,  
The observations of the Horizontal and Vertical Force

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
22	10	0	29.685	73.6	68.2	S. S. E.	Light.	Clouded; light cirri.
	11	0	29.667	69.4	65.2	S. S. E.	Light.	Overcast; light cirri, but fair.
	12	0	29.665	67.8	64.2	S. S. E.	Light.	Overcast, with cirri and haze.
	13	0	29.655	67.6	63.6	—	Calm.	Overcast; cumulo-strati, haze and cirro-strati.
	14	0	29.637	66.5	63.3	—	Calm.	Overcast; heavy cumuli and haze.
	15	0	29.633	65.8	63.0	—	Calm.	Overcast, with heavy cumuli.
	16	0	29.626	66.3	64.2	E.	Very light	Densely overcast.
	17	0	29.626	66.6	62.9	E.	Very light	Clouded but clearing; arch of cirro-cum. from N. W. to S. E.
	18	0	29.601	66.8	63.5	—	Calm.	Clouded; broken cirro-cumuli; raining.
	10	0	29.570	65.6	62.8	—	Calm.	Clouded; broken cirro-cumuli; slight rain.
	20	0	29.545	66.0	63.7	—	—	Raining heavily at intervals; distant thunder.
	21	0	29.556	67.2	66.0	—	—	Raining heavily till 20 <sup>h</sup> 50 <sup>m</sup> .

MAGNETICAL OBSERVATIONS.

July 22nd and 23rd.

DECLINATION.

Angular Value of one Scale Division = 0'.723.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 64.0	Sc. Div. 61.7	Sc. Div. 61.0	Sc. Div. 66.3	Sc. Div. 70.5	Sc. Div. 61.7	Sc. Div. 56.7	Sc. Div. 57.7	Sc. Div. 53.9	Sc. Div. 45.7	Sc. Div. 45.1	Sc. Div. 44.2	Sc. Div. 44.3
62.1	61.7	60.5	66.3	70.1	60.3	55.0	56.4	55.0	45.3	45.7	44.6	44.7
61.9	61.8	62.0	66.3	69.0	60.1	55.0	54.6	55.4	46.5	44.9	44.1	44.9
61.6	61.8	65.2	66.4	68.9	58.8	54.4	53.9	54.2	46.0	44.6	45.1	45.1
61.6	62.3	65.0	66.1	68.0	58.6	54.2	53.2	53.6	45.7	44.5	45.0	45.0
62.0	61.8	65.1	66.0	67.5	59.6	55.4	55.0	52.8	45.6	43.8	45.1	45.6
61.7	62.0	64.0	66.6	66.8	58.3	56.9	54.8	51.8	45.3	44.4	44.8	45.9
60.8	61.1	65.4	66.7	65.5	57.5	56.0	54.1	50.6	45.5	44.2	44.6	46.2
60.0	62.0	64.5	66.5	64.9	57.5	56.4	53.1	49.2	45.4	44.5	44.1	46.6
60.5	61.5	64.9	67.2	63.3	56.6	57.7	52.1	47.6	45.0	44.3	44.5	46.9
61.6	60.9	65.5	68.4	62.6	57.0	57.1	51.7	47.0	45.2	44.4	44.4	46.8
61.9	60.8	66.1	70.4	61.7	59.0	56.9	52.3	46.5	45.0	44.5	44.2	47.0

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00034.

71.5	76.1	84.3	85.3	81.0	74.2	77.1	72.7	72.0	72.9	79.0	76.3	81.5
74.0	78.3	84.2	84.6	81.2	74.4	76.9	71.1	71.7	72.5	75.8	76.9	82.3
75.8	80.5	86.0	83.9	81.0	75.1	76.4	70.5	71.9	73.3	77.0	79.2	83.3
78.5	81.5	86.4	83.9	80.2	73.7	75.7	74.0	73.1	73.5	74.6	79.7	83.9
76.5	82.4	87.5	83.3	78.0	76.2	74.0	75.0	72.6	73.4	76.4	79.8	84.8
75.9	33.3	87.3	82.1	75.6	74.4	73.9	74.0	72.6	75.1	76.7	80.1	85.7
72.1	71.1	71.0	71.0	71.0	71.4	70.8	69.6	69.4	68.8	68.6	67.3	68.3

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .0002.

40.3	42.2	45.7	47.5	45.6	43.0	43.0	43.2	42.7	42.9	42.5	39.7	39.3
41.2	43.4	46.3	47.1	45.4	41.0	43.0	43.1	42.5	42.9	42.4	39.8	39.5
41.7	44.1	46.8	48.1	44.7	42.4	43.0	43.2	42.8	42.9	42.8	39.8	39.4
41.7	43.4	47.4	43.5	44.5	42.1	43.1	43.4	42.9	42.8	42.2	39.5	39.4
40.9	43.3	47.9	46.1	43.7	42.2	43.1	43.3	42.8	..	41.2	39.5	39.4
40.9	45.1	47.8	45.8	43.4	40.8	43.1	43.2	43.0	41.6	40.4	39.5	39.4
71.3	71.3	71.3	71.3	71.1	71.1	70.3	70.3	69.7	69.5	68.8	68.8	68.8

and increasing Horizontal and Vertical Force.  
are reduced to a uniform temperature of 70°.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
22	22	0	29.537	64.0	62.8	—	Calm.	Clouded with cumuli and strati.
	23	0	29.544	63.8	62.8	—	Nearly calm	Heavily clouded; cirro-cum. and cirro-strati.
23	0	0	29.547	63.8	63.0	—	Calm.	Raining heavily since 23 <sup>h</sup> 5 <sup>m</sup> .
	1	0	29.554	63.5	63.0	—	Calm.	Raining heavily.
	2	0	29.551	63.4	63.2	—	Calm.	Raining; slightly abated about 1 <sup>h</sup> 30 <sup>m</sup> .
	3	0	29.531	64.4	64.1	—	Calm.	Raining moderately.
	4	0	29.526	64.8	64.0	—	Calm.	Overcast; haze and cumuli; raining moderately.
	5	0	29.521	62.8	62.2	—	Calm.	Raining; dense haze.
	6	0	29.497	63.4	62.8	—	Calm.	Overcast; raining; 6 <sup>h</sup> 30 <sup>m</sup> rain abating.
	7	0	29.491	64.8	63.0	—	Calm.	Rain ceased; overcast.
	8	0	29.477	64.8	64.2	—	Calm.	Raining heavily; overcast.
	9	0	29.483	65.0	64.4	—	Calm.	Raining moderately; 9 <sup>h</sup> 30 <sup>m</sup> raining heavily.



August 28th and 29th.		MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.		Angular Value of one Scale Division = 0'.723.					DECLINATION.					
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0	146.7	166.5	144.6	142.7	149.1	207.0	183.8	161.3	153.1	149.7	140.5
5	0	146.2	161.4	143.6	142.1	150.4	199.6	174.0	163.5	136.4	160.6	143.4
10	0	146.7	158.0	141.0	141.9	155.0	202.8	171.0	152.0	184.1	170.6	145.1
15	0	145.5	155.6	139.9	144.6	166.1	211.5	163.2	133.6	189.8	168.9	128.9
20	0	146.9	152.5	136.1	141.7	187.9	205.4	151.6	114.6	180.3	171.6	132.5
25	0	146.7	148.8	135.4	139.0	207.6	203.0	152.0	136.1	163.5	168.0	140.8
30	0	153.7	143.2	135.6	141.1	219.2	199.6	162.4	154.0	160.0	162.3	137.4
35	0	157.1	141.8	137.3	144.7	242.9	175.0	163.9	172.6	174.2	157.0	149.3
40	0	165.0	143.1	138.7	148.3	258.5	163.9	155.2	181.2	172.0	153.5	157.6
45	0	177.0	145.3	140.2	147.6	243.9	169.3	151.8	153.1	147.3	167.5	157.0
50	0	177.0	148.0	141.3	146.7	223.1	183.4	150.1	171.6	135.2	194.5	161.4
55	0	172.0	146.3	141.0	147.0	227.4	180.7	155.1	180.5	144.2	170.5	164.4

M. S.		One Scale Division = .00022 parts of the H. F.					HORIZONTAL FORCE.					
2	30	163.5	153.6	146.0	151.0	146.8	142.0	143.7	114.7	110.2	74.9 <sup>a</sup>	128.0
12	30	164.5	154.2	144.7	153.1	144.9	131.6	131.8	84.9	124.3	92.1 <sup>b</sup>	131.0
22	30	165.2	146.7	144.9	145.8	149.2	148.2	136.1	91.3	113.9	83.8	109.0
32	30	165.4	142.5	146.5	158.1	157.4	157.6	121.0	119.8	90.9	79.5	100.4
42	30	154.0	146.2	146.8	155.3	162.8	141.1	116.4	222.8	99.7	115.4	108.2
52	30	158.6	155.2	148.9	149.9	150.7	140.0	103.8	134.8	96.6	173.0	120.7

Thermometer	72.1	72.6	72.6	72.8	73.2	73.6	73.6	73.6	73.6	73.6	73.6
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M. S.		One Scale Division = .00016 parts of the V. F.					VERTICAL FORCE.					
7	30	55.8	55.2	54.8	53.5	60.1	36.7	33.3	38.3	45.6	31.1 <sup>c</sup>	42.1 <sup>c</sup>
17	30	55.4	53.8	54.2	52.3	60.7	36.3	28.6	35.2	29.0	32.6 <sup>c</sup>	32.1 <sup>c</sup>
27	30	63.8	54.2	53.3	52.7	69.7	34.6	34.5	59.1	19.6 <sup>c</sup>	36.4 <sup>c</sup>	33.6 <sup>c</sup>
37	30	61.3	54.1	53.1	54.4	63.5	31.0	27.9	49.3	18.4 <sup>c</sup>	32.2 <sup>c</sup>	37.0 <sup>c</sup>
47	30	59.2	55.5	53.6	53.1	46.0	38.2	30.0	35.8	35.0 <sup>c</sup>	44.1 <sup>c</sup>	36.5 <sup>c</sup>
57	30	56.2	55.0	52.9	54.5	42.6	36.3	34.2	36.5	30.8 <sup>c</sup>	41.2 <sup>c</sup>	39.7 <sup>c</sup>

Thermometer	71.8	72.3	72.3	73.1	73.5	74.1	73.9	74.3	74.3	74.3	74.5
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Increasing numbers denote decreasing westerly Declination,  
<sup>a</sup> 21<sup>a</sup> late. <sup>b</sup> 30<sup>a</sup> late.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°	—	Calm.	Overcast.
28	10	0	29.604	74.4	70.2	—	Calm.	Clouded; heavy and broken cumuli; yellow haze along N. horizon.
	11	0	29.616	73.8	70.2	—	Calm.	overcast; cirro-cum. (mackerel sky); bright sunset; haze in N. hor.
	12	0	29.621	73.0	70.2	—	Calm.	Light cirri and cirro-cum. round hor.; zenith clear. [splendid Aurora. <sup>d</sup>
	13	0	29.628	71.5	69.0	—	Calm.	Low bank of cirri and strati round hor.; zenith clear; at 14 <sup>h</sup> 30 <sup>m</sup>
	14	0	29.638	69.8	67.6	—	Calm.	Haze round hor.; heavy clouds rising in N. W.; Aurora visible at in-
	15	0	29.654	70.1	68.1	—	Calm.	Overcast, haze and cirri; air close and oppressive. [tervals.
	16	0	29.655	69.6	67.8	—	Calm.	Densely clouded, air close and oppressive; at 17 <sup>h</sup> 30 <sup>a</sup> Aurora very
	17	0	29.661	70.2	69.0	—	Calm.	splendid.
	18	0	29.661	70.2	68.0	—	Calm.	Clouds rising in N.W. and covering the sky; auroral light obscured
	19	0	29.653	69.1	66.5	—	Calm.	Overcast; no streamer or pulsations visible. [by the clouds.
	20	0	29.649	68.6	66.6	—	Calm.	Densely clouded.
	21	0	29.652	68.1	67.6	—	Calm.	Cleared up; Aurora again visible.

<sup>d</sup> For a detailed description of this Aurora, see the Volume of Observations on Days of unusual Magnetic Disturbance, Part I., pages 12, 13.

MAGNETICAL OBSERVATIONS.

August 28th and 29th.

DECLINATION.

Angular Value of one Scale Division = 0'.723.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 158.6	Sc. Div. 160.2	Sc. Div. 155.5	Sc. Div. 165.8	Sc. Div. 177.0	Sc. Div. 168.0	Sc. Div. 155.3	Sc. Div. 145.0	Sc. Div. 138.4	Sc. Div. 136.6	Sc. Div. 137.2	Sc. Div. 139.5	Sc. Div. 142.0
154.7	161.1	157.7	167.9	165.5	165.3	154.1	143.9	138.6	136.3	137.5	140.0	142.2
153.9	155.9	156.5	167.0	174.1	166.3	153.1	143.9	138.8	136.8	138.0	140.3	142.0
154.9	155.6	159.4	..	174.2	167.2	152.8	143.7	139.2	137.1	138.1	140.9	142.2
157.2	162.3	160.6	167.5	175.9	164.5	151.2	143.0	137.6	137.1	138.3	141.0	143.7
..	159.2	165.7	168.4	173.7	163.5	150.9	142.8	137.0	137.4	139.0	141.7	143.7
159.1	156.7	164.6	169.3	171.9	161.2	151.3	141.6	138.0	136.3	138.8	141.6	143.9
158.7	154.7	158.9	171.7	170.1	159.7	149.7	141.1	138.0	137.1	138.8	141.4	143.8
159.5	155.9	159.3	167.7	168.1	159.9	150.2	141.9	137.8	137.0	139.2	141.6	144.0
158.9	153.4	162.4	166.6	167.3	159.1	148.3	141.4	137.5	137.2	138.9	140.5	143.9
156.9	153.5	162.6	168.1	168.9	157.0	145.7	140.0	137.0	137.2	139.0	141.8	143.7
155.8	154.1	166.0	169.8	168.9	156.1	145.1	139.0	137.0	137.6	139.1	141.8	143.9

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00034.

129.9	128.4	132.4	136.1	141.3	138.7	133.1	135.4	138.6	143.4	142.1	150.4	155.3
127.4	123.7	132.9	..	140.6	145.3	132.5	135.3	139.3	144.7	148.0	150.1	161.4
132.8	133.0	134.1	136.7	141.0	..	133.2	136.5	138.9	144.8	149.4	150.6	149.1
135.8	134.9	137.0	136.1	141.0	135.9	133.6	137.2	141.2	146.1	150.8	159.5	147.7
138.1	130.8	131.7	137.9	138.8	134.2	134.6	137.4	141.7	147.0	150.2	162.4	153.2
135.0	128.4	135.8	138.6	137.7	133.6	134.7	139.7	142.9	142.4	150.7	157.9	150.7
73.6	73.4	73.4	73.1	72.6	72.6	72.1	72.4	72.4	72.6	72.6	72.6	72.6

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .0002.

41.5 <sup>c</sup>	48.9	47.8	47.2	53.4	50.7	48.3	47.5	48.5	50.9	51.3	51.4	52.0
47.9	50.0	48.5	50.9	53.3	51.5	48.1	48.2	49.2	51.3	51.3	51.2	51.9
49.5	52.1	48.9	54.0	53.5	51.5	47.8	48.7	50.4	51.4	51.2	53.7	50.7
50.5	49.3	46.8	53.3	53.5	48.2	47.7	48.7	50.7	51.8	51.2	53.5	51.1
51.3	46.8	48.3	53.0	..	48.6	48.0	48.7	50.6	51.5	51.2	52.5	50.9
48.9	49.3	48.2	53.4	50.3	48.4	47.9	48.7	50.6	51.6	51.2	52.1	50.8
74.8	74.3	74.3	73.8	73.3	73.3	72.8	72.7	72.5	72.6	72.8	72.8	72.8

and increasing Horizontal and Vertical Force.

<sup>c</sup> 2<sup>m</sup> 30<sup>s</sup> before the times specified.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°	—	Calm.	Overcast.
28	22	0	29.662	67.0	65.8	—	Calm.	Overcast with dense haze.
	23	0	29.661	67.1	66.1	—	Calm.	ditto.
29	0	0	29.671	68.2	66.8	—	Calm.	ditto.
	1	0	29.681	70.3	68.7	—	Calm.	ditto.
	2	0	29.683	70.2	69.0	—	Calm.	ditto.
	3	0	29.682	71.2	69.9	—	Calm.	ditto, and fog.
	4	0	29.693	72.0	69.3	—	Calm.	Overcast, with cumuli and haze.
	5	0	29.679	75.2	71.2	—	Calm.	Overcast; cumuli, cirro-cum., and haze.
	6	0	29.679	72.6	69.0	—	Calm.	Overcast; haze and strati. [heavily; at 7 <sup>h</sup> 30 <sup>m</sup> rain ceased.
	7	0	29.671	71.8	68.4	—	Calm.	Overcast; haze; at 7 <sup>h</sup> 15 <sup>m</sup> raining slightly; at 7 <sup>h</sup> 20 <sup>m</sup> raining
	8	0	26.669	71.4	69.2	—	Calm.	Overcast, with dense haze.
	9	0	29.659	71.4	69.1	—	Calm.	Overcast, with cumuli and haze.

September 23rd and 24th.			MAGNETICAL OBSERVATIONS.									
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.723.					DECLINATION.				
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		75.7	76.1	54.1	56.5	75.8	60.7	54.3	59.8	55.9	55.6
5	0		76.8	73.1	54.4	57.1	70.7	61.2	62.7	61.7	55.6	48.6
10	0		80.1	67.6	55.6	58.0	68.9	59.3	63.3	62.1	55.0	51.9
15	0		79.8	64.8	54.9	60.5	69.1	57.3	57.3	63.4	54.1	50.7
20	0		78.4	62.4	54.7	62.3	67.8	56.2	55.1	63.2	55.8	49.4
25	0		79.7	60.9	55.0	65.4	70.7	55.8	57.6	60.3	58.0	47.0
30	0		84.3	60.7	56.1	67.4	71.6	58.1	58.4	56.5	60.8	48.0
35	0		86.9	59.4	54.9	68.5	67.5	58.0	57.2	56.2	58.4	50.7
40	0		91.4	55.8	54.1	77.1	66.2	50.7	55.1	58.8	51.8	51.1
45	0		89.7	54.8	54.0	82.8	65.5	47.0	54.3	59.4	50.9	51.7
50	0		84.5	54.1	54.0	85.5	63.2	48.0	56.9	58.2	52.7	51.6
55	0		79.9	53.5	55.0	82.2	60.4	51.4	59.0	56.4	56.1	54.0
			One Scale Division = .00008 parts of the H. F.					HORIZONTAL FORCE.				
M.	S.											
2	30		617.9	586.2	603.9	616.5	621.6	602.8	622.1	613.0	595.8	606.6
12	30		603.7	593.3	613.7	608.1	608.9	605.3	634.8	608.7	607.2	603.4
22	30		591.8	596.9	610.4	608.5	607.8	605.6	634.3	618.5	609.0	600.8
32	30		592.7	601.0	617.3	608.5	615.2	610.4	637.5	603.6	613.7	609.3
42	30		598.9	603.1	611.5	616.1	611.2	622.4	632.7	600.5	598.4	614.2
52	30		591.1	604.0	611.4	635.2	608.8	619.2	621.0	597.8	602.9	616.1
Thermometer			63.4	62.9	62.1	61.6	61.4	60.8	60.6	60.2	59.8	59.1
			One Scale Division = .000071 parts of the V. F.					VERTICAL FORCE.				
M.	S.											
7	30		49.5	49.6	49.2	49.0	48.5	48.8	..	47.9	47.8	47.9
17	30		49.7	49.6	49.1	49.0	48.4	48.9	48.3	48.2	47.8	..
27	30		49.8	49.5	49.1	49.1	48.5	49.0	48.6	48.2	47.8	48.0
37	30		49.9	49.4	49.1	49.0	48.7	48.7	48.4	48.2	47.8	48.2
47	30		49.9	49.5	49.0	48.1	48.7	48.6	48.0	48.2	47.7	48.3
57	30		49.7	49.1	49.0	48.6	48.6	48.7	48.0	47.9	47.9	48.5
Thermometer			62.5	62.2	61.7	62.0	62.0	61.5	61.5	61.0	60.8	60.5
Increasing numbers denote decreasing westerly Declination, The observations of the Horizontal Force are reduced to a uniform												
METEOROLOGICAL OBSERVATIONS.												
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.				
				Dry.	Wet.	Direction.	Force.					
D.	H.	M.	In.	°	°							
23	10	0	29.827	65.8	59.4	—	Calm.	Clear, except haze round horizon.				
	11	0	29.831	64.4	59.3	—	Calm.	Overcast with light haze; sun very red.				
	12	0	29.839	58.6	56.0	—	Calm.	Clear, except haze round horizon.				
	13	0	29.863	55.8	54.0	—	Calm.	Ditto ditto.				
	14	0	29.867	52.8	51.6	—	Calm.	Ditto ditto.				
	15	0	29.881	50.2	49.1	—	Calm.	Clear.				
	16	0	29.890	49.2	48.7	—	Calm.	Ditto.				
	17	0	29.905	48.0	47.7	—	Calm.	Ditto.				
	18	0	29.915	46.8	46.5	—	Calm.	Ditto.				
	19	0	29.924	46.6	46.7	—	Calm.	Ditto; except a light fog and haze near the ground.				
	20	0	29.920	47.8	47.8	—	Calm.	Clear, very damp.				
	21	0	29.921	49.2	48.1	—	Calm.	Ditto ditto.				

MAGNETICAL OBSERVATIONS.

September 23rd and 24th.

DECLINATION.

Angular Value of one Scale Division = 0'.723.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 61.3	Sc. Div. 44.3	Sc. Div. 33.9	Sc. Div. 42.1	Sc. Div. 38.4	Sc. Div. 62.3	Sc. Div. 50.3	Sc. Div. 46.0	Sc. Div. 48.6	Sc. Div. 48.3	Sc. Div. 48.8	Sc. Div. 49.1	Sc. Div. 65.2
58.9	43.2	37.9	43.2	38.5	57.6	48.0	44.0	48.8	47.8	47.1	51.1	63.0
56.7	43.6	41.5	44.0	41.6	55.2	44.5	44.5	49.2	48.4	48.2	52.3	60.7
53.9	40.9	47.4	44.8	42.0	53.9	43.5	42.9	50.3	48.1	47.7	53.0	61.3
52.8	44.0	47.0	40.1	44.6	57.9	46.8	41.1	49.3	48.8	48.0	53.6	61.2
50.0	34.5	47.7	35.6	46.8	57.3	46.7	41.5	48.7	48.5	48.8	57.4	59.8
48.3	30.5	48.2	33.3	53.9	58.9	45.6	37.9	49.0	49.2	47.9	60.0	58.9
48.7	29.3	49.0	32.4	55.0	60.3	41.6	38.8	49.6	49.3	46.7	60.9	57.3
47.6	28.5	47.4	33.0	57.9	58.9	41.6	40.0	49.3	49.1	47.0	62.0	57.1
46.9	27.3	47.0	38.4	59.8	..	48.9	45.1	49.3	48.0	47.0	63.1	57.9
44.3	26.3	42.7	37.5	62.2	56.2	45.6	49.1	50.1	46.1	47.9	64.7	58.4
42.9	29.4	40.8	37.3	61.1	50.8	44.9	48.1	49.3	46.8	48.2	65.1	58.7

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

606.5	579.1	614.8	595.3	595.4	596.2	577.3	579.5	596.7	606.6	610.5	623.7	644.1
587.1	594.3	609.4	587.4	607.2	586.4	595.6	578.1	598.7	608.9	610.6	626.4	631.8
568.2	596.6	618.1	588.2	608.3	584.9	578.6	576.8	606.1	610.8	619.5	616.8	630.2
569.2	599.4	618.4	583.1	610.8	590.5	594.5	585.8	610.6	611.3	612.9	631.0	627.6
532.5	610.2	609.9	584.3	614.3	589.8	582.1	579.8	607.3	610.5	606.0	617.0	638.1
544.7	619.5	590.7	585.2	606.7	577.1	575.6	590.5	604.8	606.3	610.3	638.0	631.9
58.6	58.9	58.3	58.1	57.9	57.6	57.6	57.7	57.9	58.3	58.5	58.6	59.1

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00011.

48.0	46.5	46.1	45.6	45.9	47.4	48.4	48.5	48.7	48.9	49.2	49.3	50.0
47.3	47.4	45.8	45.6	46.4	47.4	48.2	48.6	49.0	49.0	49.1	49.3	49.6
46.6	47.0	46.0	45.5	46.8	47.8	48.5	48.7	49.0	49.0	49.2	49.6	49.6
45.6	47.3	45.9	45.5	46.9	48.2	48.5	48.8	49.0	49.0	49.1	49.6	49.4
45.1	46.8	45.6	45.6	47.2	48.0	48.5	48.8	49.0	49.1	49.0	49.6	49.5
45.7	46.1	45.7	46.0	47.3	47.9	48.4	48.8	49.0	49.0	49.3	50.0	49.5
60.0	59.5	59.0	59.0	58.7	58.5	58.5	58.5	58.5	58.6	59.0	59.3	59.5

and increasing Horizontal and Vertical Force.

temperature of 57°.6; those of the Vertical Force to 58°.5.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.	Barometer at 32°.	Thermometers.		Wind.		Weather.
		Dry.	Wet.	Direction.	Force.	
D. H. M.	In.	°	°			
23 22 0	29.930	48.0	47.5	—	Calm.	Clear.
23 0 0	29.951	45.6	45.3	—	Calm.	Ditto.
24 0 0	29.981	44.2	44.1	—	Calm.	Dense haze round horizon; clear in zenith.
1 0	30.001	48.2	48.3	—	Calm.	Dense haze covering the sky.
2 0	30.012	51.2	51.1	—	Calm.	Ditto ditto.
3 0	30.034	52.5	52.3	—	Calm.	Ditto ditto.
4 0	30.032	54.6	53.8	—	Calm.	Light drizzling rain; thick haze.
5 0	30.021	55.6	54.4	—	Calm.	Overcast, with dense haze.
6 0	30.015	56.5	54.6	—	Calm.	Clouded, cumulus haze; occasional drizzling rain.
7 0	29.999	58.0	54.9	—	Calm.	Clouded, but clearing.
8 0	29.978	60.8	56.6	—	Calm.	Fair, light haze.
9 0	29.954	60.4	56.2	—	Calm.	Ditto ditto.

October 21st and 22nd.			MAGNETICAL OBSERVATIONS.									
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.732.					DECLINATION.				
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		29.6	37.4	34.0	50.1	39.9	44.3	69.6	40.7	44.0	40.6
5	0		29.3	34.8	36.9	48.2	39.5	40.2	60.1	37.2	44.2	40.3
10	0		30.1	34.3	37.0	48.8	39.4	39.9	54.4	37.0	44.0	40.1
15	0		31.1	36.0	37.8	46.6	40.2	36.1	52.4	41.4	44.0	40.1
20	0		31.3	39.3	41.8	46.5	40.3	37.0	37.9	45.7	43.6	41.7
25	0		30.1	37.1	42.0	45.8	38.3	41.7	22.7	47.3	43.5	42.1
30	0		31.3	37.0	40.7	46.1	38.3	44.5	17.9	48.0	43.3	43.3
35	0		34.4	37.2	40.9	46.5	40.2	45.5	13.3	46.8	43.1	44.9
40	0		35.8	36.4	43.6	46.2	45.1	45.1	37.1	44.3	43.6	45.7
45	0		40.4	36.5	49.3	43.5	46.7	45.6	39.6	44.0	42.5	46.6
50	0		42.6	34.1	53.0	43.5	51.8	48.6	43.4	45.3	41.2	46.2
55	0		38.8	33.7	51.7	41.6	46.9	57.8	41.6	45.0	41.7	47.0

M. S.		One Scale Division = .000074 parts of the H. F. HORIZONTAL FORCE.										
2	30	388.5	399.0	385.4	385.3	388.0	394.7	408.0	391.9	392.9	392.7	383.2
12	30	391.7	384.0	389.9	387.4	381.0	396.0	413.5	379.4	388.0	391.7	371.9
22	30	389.1	398.9	387.2	387.8	383.3	382.6	413.6	383.1	387.5	387.6	363.3
32	30	390.6	401.5	387.0	389.4	379.7	379.6	362.2	390.2	391.0	389.5	357.5
42	30	386.0	399.7	386.8	392.5	383.3	384.3	373.0	390.4	390.8	383.4	350.0
52	30	396.6	393.9	389.0	391.4	396.4	393.2	392.3	394.5	394.0	383.5	376.6

Thermometer	53.0	52.7	52.6	52.6	52.6	52.2	52.2	52.0	52.6	51.4	51.2
	°	°	°	°	°	°	°	°	°	°	°

M. S.		One Scale Division = .00009 parts of the V. F. VERTICAL FORCE.										
7	30	51.3	50.9	50.9	50.9	50.8	50.5	49.1	49.1	49.8	50.0	49.4
17	30	51.6	50.9	50.9	50.9	50.9	50.5	48.7	49.5	49.7	49.9	49.1
27	30	51.2	51.0	51.1	50.9	51.0	50.6	48.0	49.8	49.8	49.8	48.9
37	30	51.5	50.9	50.9	50.8	50.9	50.5	48.5	49.8	49.9	49.7	48.6
47	30	51.5	50.9	50.8	50.8	50.5	50.4	48.9	49.9	50.0	49.6	48.4
57	30	51.1	50.9	50.8	50.8	50.4	49.9	49.1	49.9	50.1	49.4	48.8

Thermometer	53.5	53.3	53.5	53.5	53.8	53.7	53.2	..	53.0	53.0	52.7
	°	°	°	°	°	°	°	°	°	°	°

Increasing numbers denote decreasing westerly Declination,  
The observations of the Horizontal Force, are reduced to

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
21	10	0	29.484	43.2	42.1	N.N.E.	Light.	Raining since 7 <sup>h</sup> .
	11	0	29.498	42.3	41.5	N.N.E.	Mod.	Raining without intermission.
	12	0	29.504	41.6	40.8	N.N.E.	Mod.	Ditto ditto.
	13	0	29.508	41.6	40.5	N.N.E.	Mod.	Ditto ditto.
	14	0	29.512	41.5	40.0	N.N.E.	Mod.	Ditto ditto.
	15	0	29.512	41.0	39.7	N.	Mod.	Gusty, drizzling rain.
	16	0	29.516	40.5	39.2	N.	—	Totally overcast, raining slightly.
	17	0	29.542	39.9	38.4	—	—	Heavy clouds and dense haze round horizon.
	18	0	29.570	40.5	40.1	N.N.E.	Mod.	Dense haze and heavy clouds round horizon, most in S.
	19	0	29.605	40.3	38.5	N.	Light.	Almost entirely clouded with cumuli and dense haze.
	20	0	29.619	39.7	37.6	N.	Nearly calm	Clear to W., and in zenith; remainder clouded.
	21	0	29.637	37.2	35.8	—	Calm.	Clear.

MAGNETICAL OBSERVATIONS.

October 21st and 22nd.

DECLINATION.

Angular Value of one Scale Division = 0'.723.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
26.2	41.1	40.0	41.6	44.1	48.4	41.5	34.2	23.4	30.8	32.9	32.3	32.1
27.2	40.4	40.1	40.0	45.2	44.6	40.8	33.6	23.2	29.5	33.6	32.4	31.3
31.9	39.1	40.1	41.6	45.4	46.8	39.3	30.1	22.9	29.8	33.7	31.9	32.2
34.5	39.6	40.1	41.7	46.1	45.8	38.1	27.7	23.2	30.2	34.3	31.4	32.4
35.6	40.0	40.1	42.3	42.8	46.5	37.1	28.6	28.9	30.4	34.8	31.3	32.9
37.8	40.4	40.5	42.6	45.8	47.0	36.3	29.5	26.7	29.5	34.0	31.5	32.6
37.7	40.2	40.3	43.1	45.5	48.8	33.5	28.0	27.1	30.9	33.0	31.2	33.2
38.7	39.8	40.5	43.1	45.4	48.2	32.1	29.0	26.9	33.8	33.9	30.8	34.1
40.0	39.3	39.9	42.8	46.0	47.2	33.5	28.9	28.0	34.1	33.0	31.3	34.3
43.7	39.7	40.0	43.1	46.1	44.4	36.1	27.9	28.0	35.1	33.2	31.7	34.9
43.0	40.1	40.1	42.9	46.1	44.2	36.0	26.3	29.8	34.0	32.9	30.9	35.5
42.6	40.3	40.9	43.0	46.3	43.3	34.6	25.8	31.8	33.5	32.1	30.7	36.1

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00022.

382.0	410.3	410.2	412.0	404.0	401.2	384.8	349.3	354.0	378.0	394.7	391.8	387.7
388.7	406.5	409.5	406.4	403.8	402.0	378.8	348.0	350.0	380.4	394.7	392.8	388.5
396.8	409.0	409.7	407.4	399.3	403.0	376.2	348.3	362.2	380.0	397.0	392.7	393.6
400.7	410.7	410.0	405.5	402.4	393.4	375.7	348.7	361.4	380.6	393.0	393.0	399.7
401.1	408.0	410.3	405.0	402.5	395.3	365.5	352.4	361.7	390.3	393.4	387.7	400.7
409.7	409.5	405.7	403.2	401.4	390.0	358.3	348.2	380.3	395.2	393.3	390.6	399.7
51.2	51.2	50.7	50.7	50.4	50.8	53.6	52.2	52.6	53.0	53.2	53.5	53.7

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00011.

48.6	49.9	50.3	50.4	50.4	50.2	50.1	50.3	50.6	50.6	50.5	50.5	50.6
48.5	50.0	50.3	50.4	50.4	50.2	50.2	50.4	50.7	50.6	50.6	50.5	50.6
48.9	50.1	50.3	50.4	50.3	50.2	50.1	50.5	50.6	50.6	50.5	50.5	50.7
49.3	50.2	50.3	50.4	50.3	50.2	50.1	—	50.7	50.7	50.5	50.5	50.8
49.5	50.2	50.4	50.4	50.3	50.2	50.1	50.7	50.7	50.6	50.5	50.5	50.9
49.8	50.3	50.4	50.4	50.3	50.1	50.1	50.6	50.7	50.5	50.5	50.5	50.9
53.0	53.0	52.5	52.6	51.9	52.1	52.6	53.2	53.2	53.4	53.5	53.6	54.0

and increasing Horizontal and Vertical Force.

a uniform temperature of 51°.2; the Vertical Force to 52°.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
21	22	0	29.655	35.4	34.4	—	Calm.	Clear.
	23	0	29.656	34.8	33.8	—	Calm.	Clear.
22	0	0	29.671	33.8	32.9	N.	Nearlly calm	Clear.
	1	0	29.681	35.1	34.4	—	Calm.	Clear.
	2	0	29.697	38.2	37.1	—	Calm.	Clear, except a few light cirri and cirro-strati near E. horizon.
	3	0	29.689	42.4	40.7	—	Calm.	A few light cirri and strati in zenith.
	4	0	29.673	44.4	42.9	—	Calm.	A few light cirri in zenith; bank of cumulo-strati in S. horizon.
	5	0	29.672	45.8	44.3	S. b. W.	Light.	Masses of cumuli rising in W.
	6	0	29.646	49.3	47.1	S. b. W.	Light.	¾ clouded with cumuli in N. and W.; remainder clear.
	7	0	29.624	49.4	46.5	S. W.	Mod.	Dense masses of clouds between the S. and W. horizon.
	8	0	29.598	50.6	46.7	S. W.	Light.	¾ overcast with cumuli and cirro-cumuli.
	9	0	29.566	51.2	47.1	S. W.	Light.	Fresh gusts; overcast with cumuli and cirro-cumuli.

November 27th and 28th.			MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.722.					DECLINATION.					
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
0	0		48.6	52.6	51.2	53.7	56.0	55.5	55.0	55.5	54.3	55.1	55.7
5	0		..	52.9	51.0	54.0	56.4	55.0	55.4	55.4	54.0	55.0	55.8
10	0		48.8	53.9	51.2	54.9	56.0	55.4	55.5	55.2	..	55.0	56.6
15	0		48.4	52.9	51.9	55.2	55.7	55.1	55.7	55.0	55.0	54.6	55.9
20	0		47.9	52.9	52.0	55.5	55.4	55.4	55.4	54.8	55.1	54.3	57.1
25	0		47.3	52.9	52.2	55.7	55.0	54.9	55.7	54.8	55.7	54.9	57.0
30	0		47.6	52.8	53.1	55.6	56.0	54.9	55.4	54.9	55.3	55.1	56.1
35	0		47.9	52.7	53.8	56.0	56.0	55.4	55.5	55.1	55.1	55.2	55.5
40	0		48.6	53.3	53.3	56.0	56.0	55.1	55.5	55.1	56.2	55.8	54.1
45	0		48.8	53.4	53.0	56.0	55.5	55.1	55.3	55.4	56.1	55.6	54.4
50	0		50.8	53.0	53.0	56.1	55.5	55.1	55.5	55.3	55.9	56.0	55.1
55	0		50.9	52.3	53.0	56.0	55.4	55.0	55.4	54.8	55.4	56.0	54.8

M. S.		One Scale Division = .000073 parts of the Force.										HORIZONTAL FORCE.	
2	30	84.8	76.0	83.0	81.6	83.3	80.0	82.4	75.3	74.2	76.9	76.3	
12	30	84.4	79.2	83.7	80.2	81.7	79.8	80.3	75.0	73.8	76.0	75.5	
22	30	78.3	80.2	84.0	81.6	80.0	80.3	77.3	75.0	75.7	74.0	75.4	
32	30	74.0	83.4	85.0	81.3	82.2	80.2	76.8	73.4	74.2	77.1	74.7	
42	30	73.3	87.3	84.4	82.4	81.0	81.0	75.0	74.8	75.6	76.6	73.5	
52	30	75.2	86.8	82.0	82.6	81.0	80.5	75.0	74.5	77.6	77.2	76.5	

M. S.		One Scale Division = .00009 parts of the Force.										VERTICAL FORCE.	
7	30	42.4	40.9	40.6	40.9	40.7	40.8	40.8	—	41.2	41.5	41.2	
17	30	41.7	41.3	40.7	40.9	40.6	40.8	41.1	41.2	41.3	41.3	41.3	
27	30	41.3	41.3	40.8	40.9	40.7	40.9	41.0	41.3	41.4	41.4	41.2	
47	30	41.4	41.2	41.1	40.9	40.9	40.9	41.0	41.3	41.4	41.4	41.6	
57	30	41.1	41.2	41.2	40.9	40.7	40.8	41.0	41.2	41.7	41.3	41.5	
		41.0	41.0	41.1	40.7	40.8	40.8	41.1	41.2	41.5	41.4	41.2	

Thermometer												
		43.4	43.5	43.4	43.6	43.6	43.8	44.2	44.0	44.4	44.4	44.4

Thermometer												
		44.5	45.2	45.0	45.2	45.2	45.5	45.4	45.4	45.6	45.8	46.0

Increasing numbers denote decreasing westerly Declination,  
The observations of the Horizontal and Vertical Force are

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
27	10	0	29.701	31.4	28.9	S. b. W.	Light.	Overcast with cirri, cumuli, and haze.
	11	0	29.694	31.0	28.7	S.W.	Light.	Overcast; heavy range of cumuli along S. horizon.
	12	0	29.692	30.0	28.7	—	Calm.	Clouded, except a small clear space in W. horizon.
	13	0	29.692	31.0	29.0	S.W.	Light.	Densely clouded.
	14	0	29.692	31.2	29.3	S.W.	Light.	Ditto ditto.
	15	0	29.668	31.8	30.1	S.W.	Light.	Ditto ditto.
	16	0	29.679	31.0	29.5	S.W.	Light.	Bank of clouds round S. hor. Zenith clear.
	17	0	29.677	29.6	27.9	W.	Nearly calm	Overcast with light haze; a few stars visible in zenith.
	18	0	29.673	30.8	29.2	N.W.	Light.	Overcast with dense haze.
	19	0	29.648	31.8	29.9	—	Calm.	Ditto ditto.
	20	0	29.662	32.4	30.4	—	Calm.	Ditto ditto.
	21	0	29.640	32.6	30.3	—	Calm.	Ditto ditto.

MAGNETICAL OBSERVATIONS.												November 27th and 28th.	
DECLINATION.						Angular Value of one Scale Division = 0'.722.							
21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
55.0	60.0	57.2	59.1	61.3	58.2	58.5	47.3	50.5	50.3	44.1	45.4	45.1	
55.6	59.4	55.5	58.8	59.9	60.0	59.8	49.9	50.7	50.1	44.5	45.7	45.0	
56.6	57.4	53.4	59.1	59.8	63.4	57.2	49.8	52.7	50.5	44.9	46.1	45.5	
57.1	56.7	53.4	58.8	58.6	64.1	57.0	49.9	51.6	50.8	44.5	46.0	46.2	
57.8	56.3	53.8	59.8	58.4	63.7	52.9	51.5	51.5	50.1	44.4	46.3	47.0	
56.1	57.0	54.3	58.5	59.2	62.7	50.9	50.4	50.3	51.0	43.8	47.2	48.1	
57.5	58.2	56.7	58.3	59.3	61.7	50.9	50.4	51.1	49.8	43.6	46.6	48.8	
58.7	59.3	58.8	58.9	60.0	61.6	50.3	50.7	50.3	48.4	43.9	47.0	49.2	
59.3	61.7	58.0	59.4	60.1	60.9	49.9	49.8	49.6	46.8	43.7	47.1	50.0	
58.3	61.4	57.0	60.3	59.0	59.9	50.5	47.6	48.5	44.9	43.5	47.0	49.9	
58.2	60.4	59.1	59.7	58.3	59.6	47.2	48.5	49.0	43.4	44.0	46.5	51.1	
59.0	58.5	59.5	59.9	59.3	59.3	46.5	48.9	50.1	43.6	45.0	45.7	52.2	

HORIZONTAL FORCE.												Change in the magnetic moment of the Bar for 1° Fah. = .00022.	
78.0	79.0	76.2	83.0	83.6	72.5	51.0	54.3	67.6	68.6	43.6	64.5	62.2	
79.2	82.0	73.6	82.3	81.7	70.3	48.4	59.0	69.5	65.3	49.6	62.0	62.5	
80.6	—	77.0	82.0	74.4	72.3	41.2	55.7	70.7	54.8	54.6	61.2	63.4	
76.6	81.0	78.0	80.0	75.2	68.0	34.0	58.0	74.4	49.4	51.2	62.3	65.3	
79.2	75.5	83.7	82.0	77.7	61.0	38.6	56.5	74.0	47.0	54.0	64.3	68.6	
79.0	77.8	83.0	84.8	76.2	55.4	46.6	62.6	68.6	42.8	62.0	67.0	71.8	
44.4	44.6	44.6	44.7	44.7	44.6	44.6	44.4	45.7	46.2	46.7	47.4	47.9	

VERTICAL FORCE.												Change in the magnetic moment of the Bar for 1° Fah. = .00011.	
41.1	41.6	40.5	39.7	40.5	41.7	41.4	44.1	42.0	42.8	45.7	45.5	46.0	
41.1	41.8	40.5	39.9	40.4	41.9	41.5	43.1	42.1	42.0	45.9	44.8	45.9	
40.7	40.6	39.8	40.3	40.9	41.8	41.9	42.7	42.4	42.4	45.7	45.5	46.0	
40.9	39.9	39.9	40.5	41.6	41.5	42.7	41.7	42.8	42.6	45.6	45.2	46.0	
41.1	39.7	39.7	40.3	41.5	41.1	43.9	42.3	42.6	43.9	45.8	45.9	45.9	
40.6	40.3	39.4	40.3	41.7	41.4	43.3	42.0	42.8	44.5	45.9	46.0	45.9	
45.9	46.0	46.3	46.2	46.2	46.0	45.8	46.0	46.5	46.8	47.4	47.8	48.0	

and increasing Horizontal and Vertical Force.  
reduced to a uniform temperature of 44°.5.

METEOROLOGICAL OBSERVATIONS.											
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.			
				Dry.	Wet.	Direction.	Force.				
D.	H.	M.	In.	°	°						
27	22	0	29.632	32.5	30.8	—	Calm.	Densely clouded with cirro-cumuli and haze; very dark.			
	23	0	29.613	33.2	31.3	—	Calm.	Overcast; cirro-cumuli and haze; very dark in S.			
28	0	0	29.625	33.8	31.9	—	Calm.	Overcast; cirro-cumuli and haze.			
	1	0	29.610	33.6	31.9	—	Calm.	Ditto; ditto.			
	2	0	29.584	35.2	33.8	S.W.	Light.	Overcast cirri and cirro-strati.			
	3	0	29.584	36.8	34.3	S.W.	Light.	Clouded with strati; cirro-cumuli and haze.			
	4	0	29.570	37.4	35.6	S.W.	Light.	Overcast with light cirri and cirro-cumuli in S., and haze in zenith.			
	5	0	29.534	38.2	36.4	S.W.	Light.	Overcast with light cirri and cirro-cumuli. [S. horizon.			
	6	0	29.513	39.8	37.2	S.W.	Light.	¾ overcast with light cirri and cirro-strati; dense range of cumulo-strati in			
	7	0	29.485	40.6	38.3	S.W.	Light.	Overcast with light cirri and haze; fair.			
	8	0	29.477	40.4	38.3	—	Calm.	Overcast with light cirri and haze.			
	9	0	29.481	40.7	38.2	—	Calm.	Overcast; cirri, cirro-strati, and haze.			



December 23rd and 24th.		MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.		Angular Value of one Scale Division = 0'.722.					DECLINATION.					
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0	42.0	40.6	43.3	52.8	50.8	58.5	57.9	53.5	57.0	42.8	51.1
5	0	41.9	41.7	45.3	61.4	45.2	52.1	55.6	54.7	—	48.4	51.0
10	0	42.0	44.9	45.7	64.5	40.1	52.4	53.9	57.1	59.5	51.5	50.0
15	0	41.2	45.6	45.8	62.1	38.0	56.7	53.3	58.8	63.1	51.4	49.3
20	0	40.0	45.5	45.2	59.4	35.0	64.8	53.3	58.8	62.0	53.2	50.2
25	0	40.2	46.6	47.2	54.2	44.4	63.2	55.2	58.6	61.6	53.2	52.0
30	0	40.5	44.7	46.4	56.2	47.5	61.5	54.6	58.5	55.6	51.7	51.6
35	0	40.6	43.6	43.9	58.9	44.2	56.5	53.3	58.0	51.2	48.6	50.2
40	0	40.6	44.3	44.0	59.2	44.3	58.4	53.0	57.8	47.0	48.6	50.9
45	0	40.5	47.7	44.9	54.2	50.7	58.2	52.9	57.0	40.6	49.0	53.1
50	0	40.5	46.7	45.6	51.6	54.4	61.2	53.1	57.3	36.5	50.2	52.7
55	0	39.9	44.0	46.1	53.5	57.4	60.0	53.7	57.2	37.8	50.3	50.8
		One Scale Division = .000074 parts of the Force.					HORIZONTAL FORCE.					
M.	S.											
2	30	33.0	22.2	41.4	32.0	36.0	37.6	33.0	27.0	19.8	18.3	29.7
12	30	—	29.6	48.0	44.0	37.2	29.0	29.0	23.8	28.0	20.3	29.0
22	30	29.3	34.0	45.3	43.6	31.2	35.0	28.0	19.8	40.7	22.6	30.0
32	30	33.4	37.0	48.0	31.5	38.0	23.0	30.0	22.0	46.2	29.4	31.7
42	30	31.8	35.6	40.2	40.8	25.7	30.7	29.0	20.0	38.7	30.2	26.0
52	30	27.0	48.6	43.4	33.2	22.5	34.6	28.7	20.0	23.5	28.7	30.0
Thermometer		38.2	38.5	38.9	39.4	39.5	39.9	40.0	40.0	40.0	39.7	39.5
		One Scale Division = .00009 parts of the Force.					VERTICAL FORCE.					
M.	S.											
7	30	23.6	25.1	27.0	30.3	30.4	34.6	35.2	28.6	24.6	11.2	22.2
17	30	23.6	26.7	27.8	28.1	33.5	34.6	32.3	26.7	23.8	13.1	22.6
27	30	23.9	27.8	27.8	28.3	33.6	32.8	30.8	25.8	17.6	15.5	21.9
37	30	24.9	26.5	27.3	28.0	32.7	38.9	29.4	25.5	17.5	18.3	22.4
47	30	24.5	28.2	29.0	28.0	35.4	45.8	28.7	24.7	9.1	20.1	21.8
57	30	24.6	27.2	29.7	29.4	35.5	41.7	28.6	24.6	9.9	21.6	22.8
Thermometer		38.7	39.7	40.3	40.3	40.7	40.9	41.2	41.3	41.2	41.0	40.8

Increasing numbers denote decreasing westerly Declination,  
The observations of the Horizontal and Vertical Force

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
23	10	0	29.275	30.4	27.5	S. S. W.	Light.	Overcast with dense cirro-cumuli and cumulo-strati.
	11	0	29.265	30.4	27.1	S. W.	Light.	Densely overcast with cirro-cumuli and cumulo-strati.
	12	0	29.243	31.7	28.7	S. W.	Mod.	Densely overcast with haze and strati.
	13	0	29.239	31.5	28.9	W.	Very light	Overcast with cumuli and cirro-cumuli.
	14	0	29.219	31.4	29.5	W.	Light.	Clear in zenith; cirro-cumuli round horizon.
	15	0	29.194	30.9	29.3	W.	Mod.	Brisk puffs; partially clouded with cirri.
	16	0	29.210	29.5	29.5	W.	Brisk.	Fresh squalls with snow at intervals; commenced about 15 <sup>h</sup> 30 <sup>m</sup> .
	17	0	29.270	26.5	24.3	W.	Brisk.	Heavy squalls with snow; bank of auroral light in N.; faint streamers.
	18	0	29.308	24.6	20.7	W.	Fresh.	Squally; heavy bank of clouds in S. and S. W.; zenith clear; auroral light in N., patches of light and streamers.
	19	0	29.364	21.2	18.6	N. W.	Brisk.	Clouded round horizon to S., remainder clear; faint auroral light in N.
	20	0	29.423	19.4	17.2	N. W.	Mod.	Clear; no auroral light.
	21	0	29.466	17.8	15.8	N. W.	Mod.	Clear, except a low bank of haze in S., near horizon.

MAGNETICAL OBSERVATIONS.

December 23rd and 24th.

DECLINATION.

Angular Value of one Scale Division = 0'.722.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
—	51.4	49.9	47.5	53.6	53.1	55.2	53.0	50.1	45.5	45.6	42.7	46.4
50.4	52.1	50.4	46.7	53.6	52.2	49.1	51.7	49.9	46.5	47.0	42.8	46.2
49.7	53.3	49.9	48.3	54.5	55.7	52.1	55.1	51.9	46.3	46.8	43.0	45.0
50.0	55.5	48.1	52.1	53.6	54.0	52.9	52.6	51.1	46.0	48.8	43.8	45.2
51.3	57.3	45.6	52.3	51.6	56.8	57.4	51.3	50.1	45.7	48.1	45.3	46.6
52.0	55.7	46.0	51.7	52.8	57.9	54.9	52.5	49.6	44.9	47.3	44.5	47.5
51.1	58.5	47.6	49.1	55.5	55.2	55.8	52.9	49.7	44.8	47.0	44.5	48.7
52.2	49.5	48.5	48.2	54.9	52.8	56.1	50.7	48.9	45.1	46.2	42.6	48.2
52.4	47.2	47.9	47.8	53.6	53.6	56.6	52.5	50.1	45.4	45.4	43.4	48.8
52.0	48.2	47.1	—	49.8	52.9	54.7	52.1	47.5	46.7	45.0	44.9	48.5
52.3	49.4	46.8	51.0	50.9	56.3	55.1	52.1	48.5	46.1	44.5	45.0	48.1
52.2	50.6	47.3	51.4	51.5	60.6	52.5	52.0	47.4	45.1	43.2	46.5	48.5

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah<sup>t</sup>. = .00022.

30.0	24.4	22.3	27.8	34.0	38.3	36.5	23.0	20.4	15.8	11.2	24.7	8.2
31.0	19.0	23.0	22.0	38.8	34.2	27.7	23.2	21.0	12.6	9.7	23.9	15.0
26.7	19.8	18.7	29.3	35.8	31.0	25.5	21.3	17.0	10.0	19.7	12.5	21.0
27.7	22.0	19.7	33.7	34.7	38.2	25.0	24.6	21.6	4.6	17.0	18.3	31.3
27.0	16.6	24.5	30.2	47.0	35.0	24.2	21.5	17.8	5.7	19.4	9.6	31.5
26.0	22.6	28.8	31.0	41.5	27.0	16.2	21.8	19.3	6.4	24.7	5.5	32.6
39.2	38.4	39.0	38.4	38.2	37.5	37.6	37.4	37.4	37.9	38.0	38.0	38.0

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah<sup>t</sup>. = .00011.

22.8	21.3	20.6	19.7	22.6	20.6	20.0	19.8	19.8	21.3	21.9	24.2	22.6
22.1	19.7	20.8	19.8	22.7	20.9	—	19.9	20.8	21.7	21.8	23.0	23.1
22.0	20.4	20.9	20.7	22.2	20.7	20.8	19.7	21.0	21.8	22.0	22.7	23.6
22.6	20.4	21.0	21.1	22.0	20.8	20.3	19.4	21.2	21.5	22.4	24.2	24.7
22.5	19.4	20.9	21.2	20.8	20.5	20.0	19.5	21.3	21.6	22.3	21.3	24.2
22.4	19.7	20.8	21.3	20.6	19.8	20.0	19.5	21.6	21.8	23.6	21.3	23.4
40.7	40.5	40.4	40.0	40.0	39.6	39.0	38.2	38.3	38.5	38.7	38.5	38.5

and increasing Horizontal and Vertical Force.  
are reduced to a uniform temperature of 38°.

METEOROLOGICAL OBSERVATIONS.

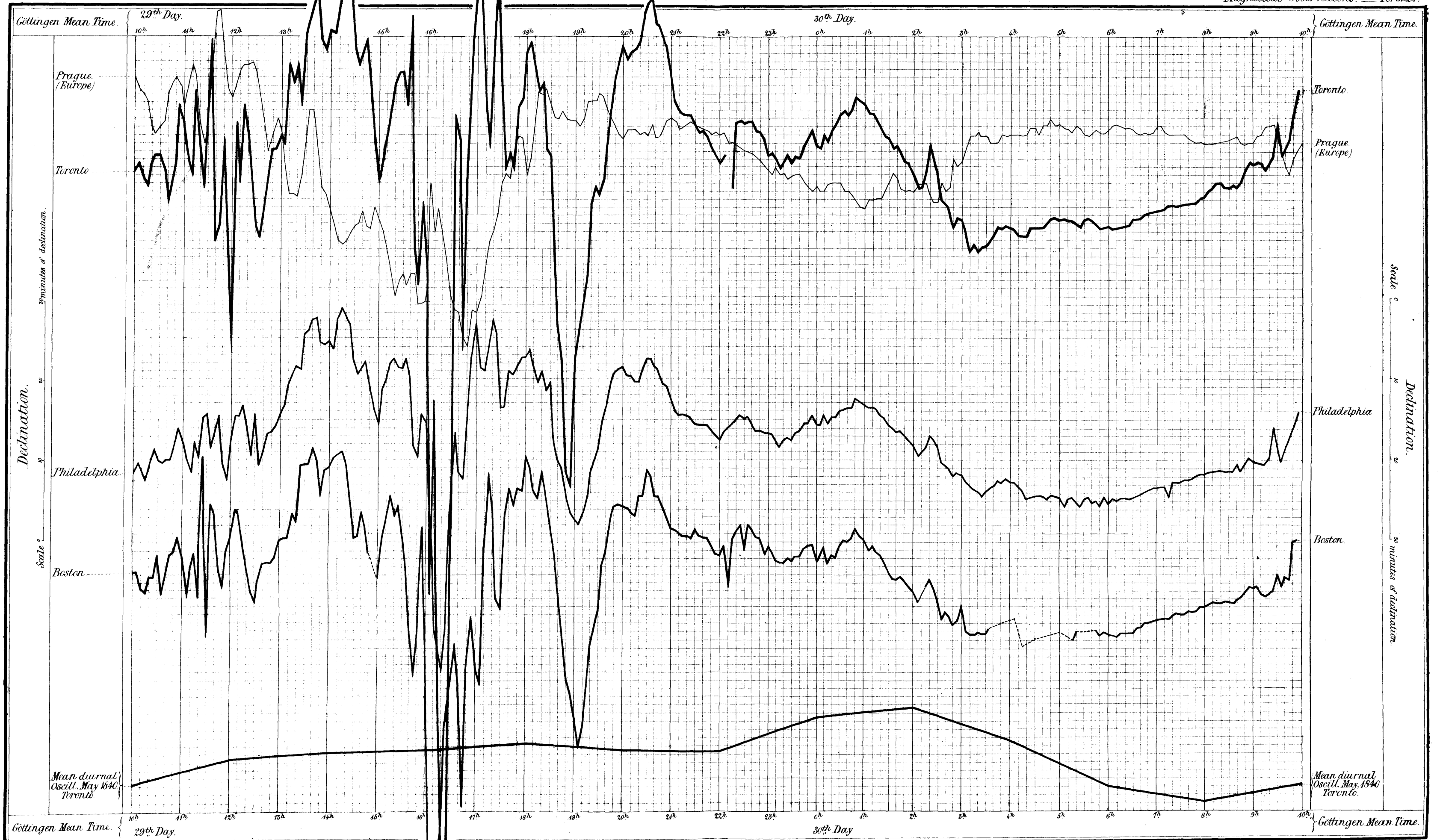
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
23	22	0	29.462	16.6	14.8	N. W.	Light.	Clear. Clear. Clear. ¼ overcast with cirro-strati; a range of cumulo-strati in S. horizon. Nearly overcast with cumuli and cirro-cumuli. ⅓ overcast with dense cirro-cumuli and cumuli. ⅔ overcast with light cirro-cumuli and cirri; fair. Masses of cirro-cumuli scattered over the sky. Overcast with cumuli and cumulo-strati, with clear patches; fair. Overcast with cirro-cumuli and cumuli; lightest in S.; fair. Overcast with dense cirro-cumuli and cumuli in N. E. and W.; sun breaking through in S. W.
	23	0	29.478	15.4	13.9	N. W.	Light.	
24	0	0	29.505	15.8	14.0	N. W.	Mod.	
	1	0	25.559	15.0	12.7	N. W.	Brisk.	
	2	0	29.615	13.3	12.1	N. W.	Light.	
	3	0	29.648	13.2	12.1	N. W.	Mod.	
	4	0	29.666	13.2	11.8	N. W.	Light.	
	5	0	29.670	14.2	12.8	N. W.	Light.	
	6	0	29.678	15.0	14.2	N. W.	Mod.	
	7	0	29.681	15.8	14.6	N. W.	Mod.	
	8	0	29.685	17.0	15.2	N. W.	Light.	
	9	0	29.705	17.0	15.2	N. W.	Light.	





Declination, May 29<sup>th</sup> & 30<sup>th</sup> 1840.

Magnetical Observations. — Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination.

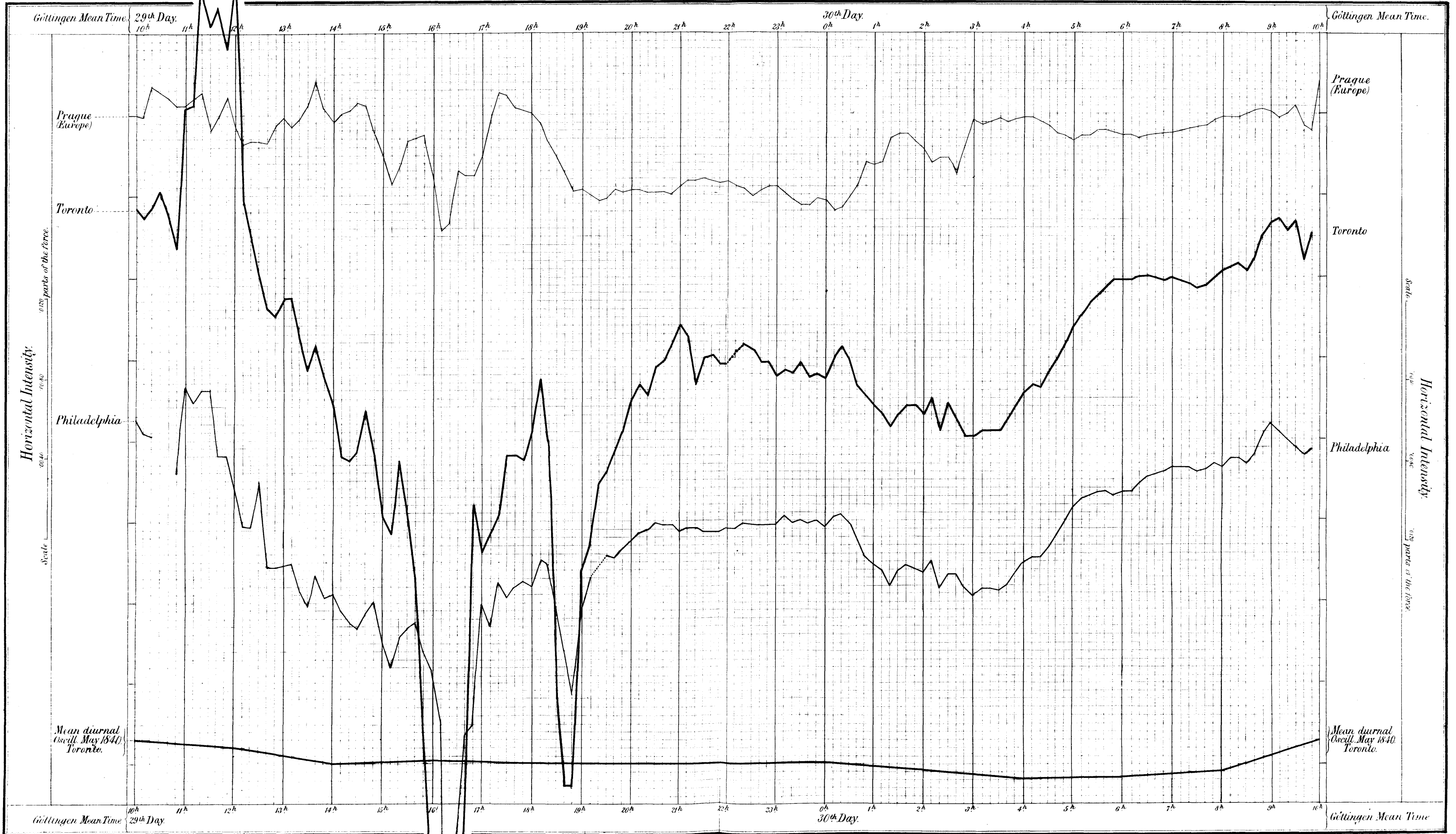
Standidge & Co<sup>o</sup> Litho. London.





Horizontal Force, May 29<sup>th</sup> & 30<sup>th</sup> 1840.

Magnetical Observations - Toronto.



Ascending curves denote increasing horizontal force.

Stanbridge & Co. Litho. London

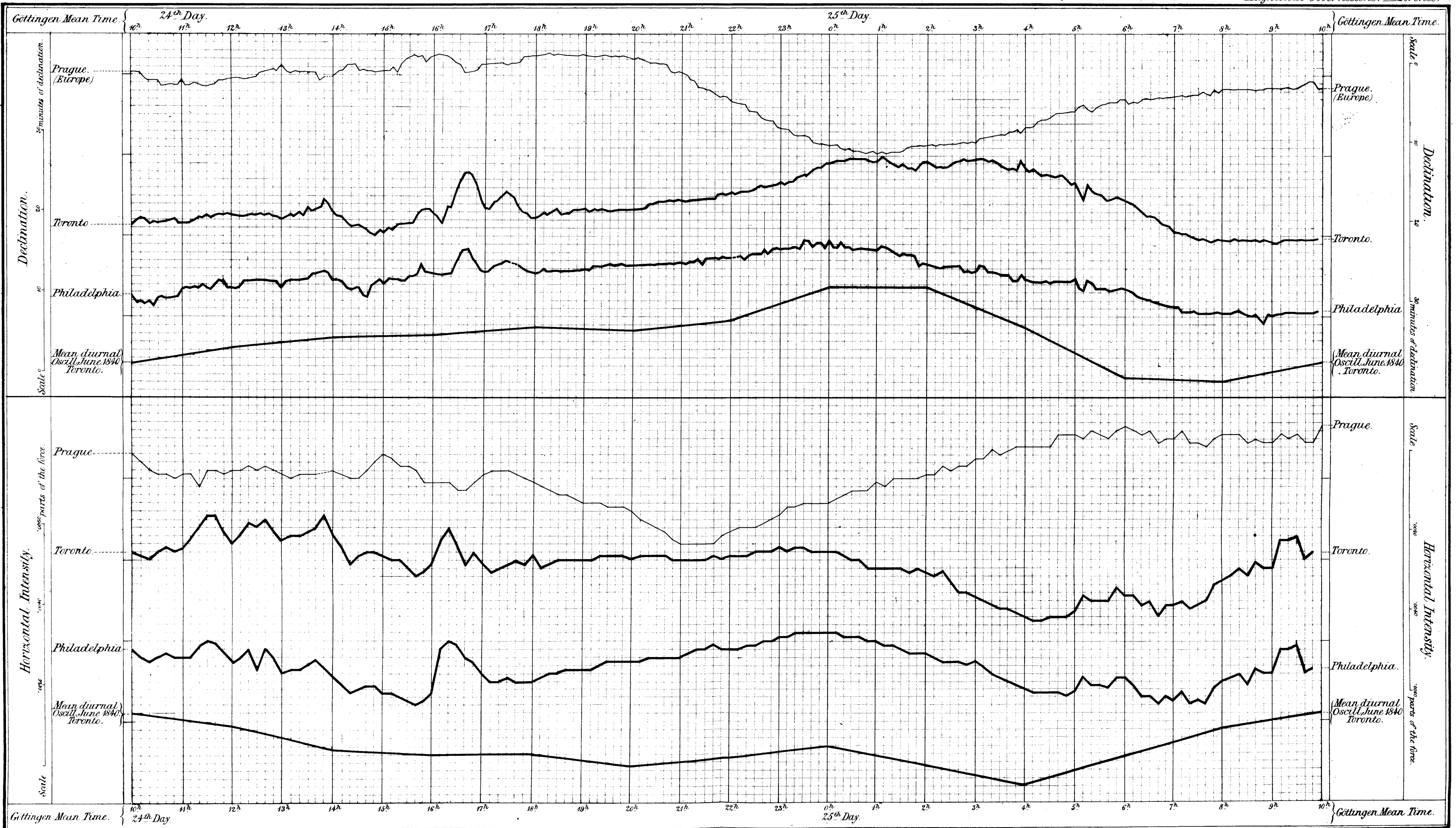






Declination and Horizontal Intensity, June 24<sup>th</sup> & 25<sup>th</sup> 1840.

Magnetical Observations. — Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

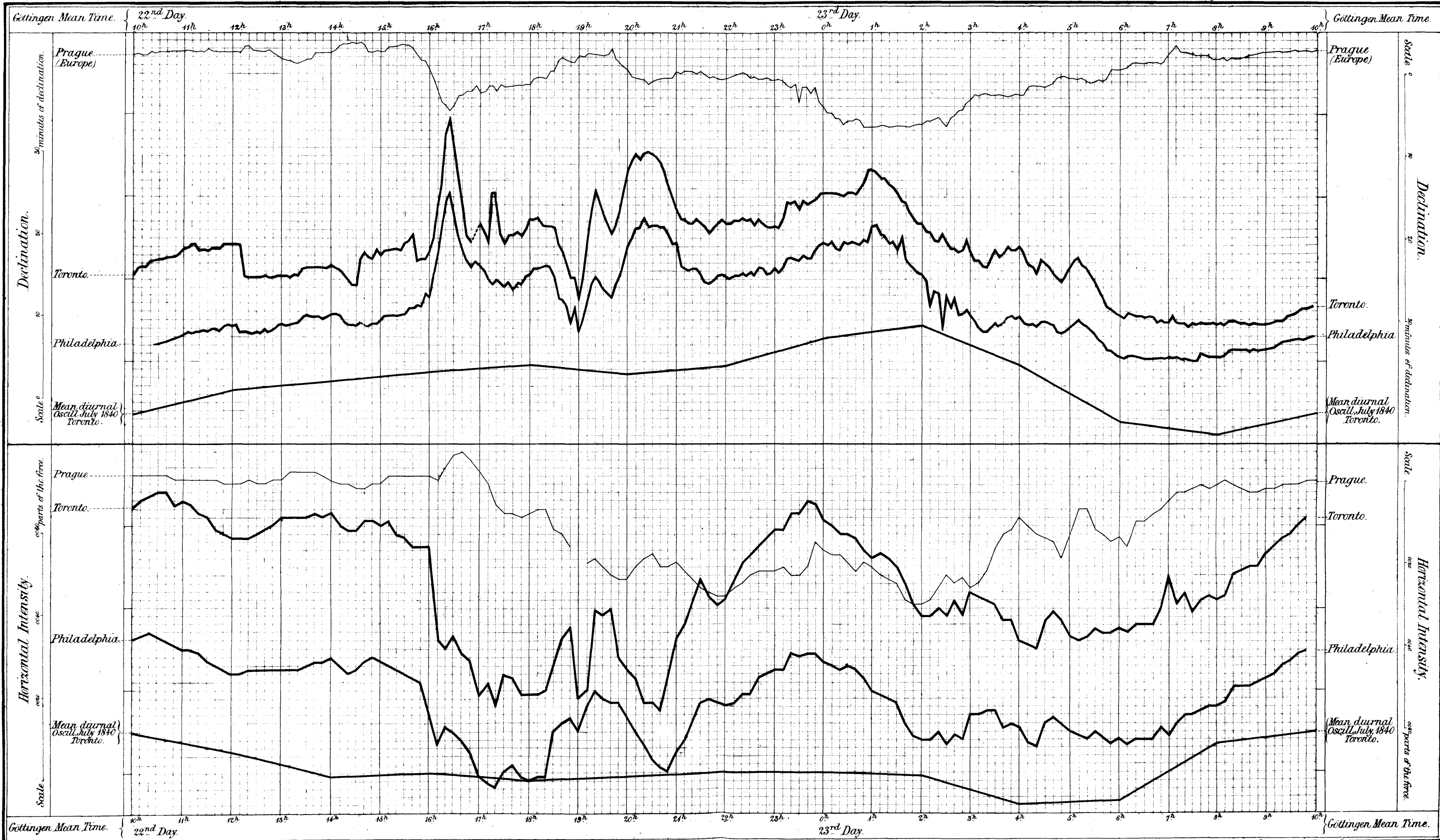
Standidge & Co. Litho. London.





Declination and Horizontal Intensity, July 22<sup>nd</sup> & 23<sup>rd</sup> 1840.

Magnetical Observations. — Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

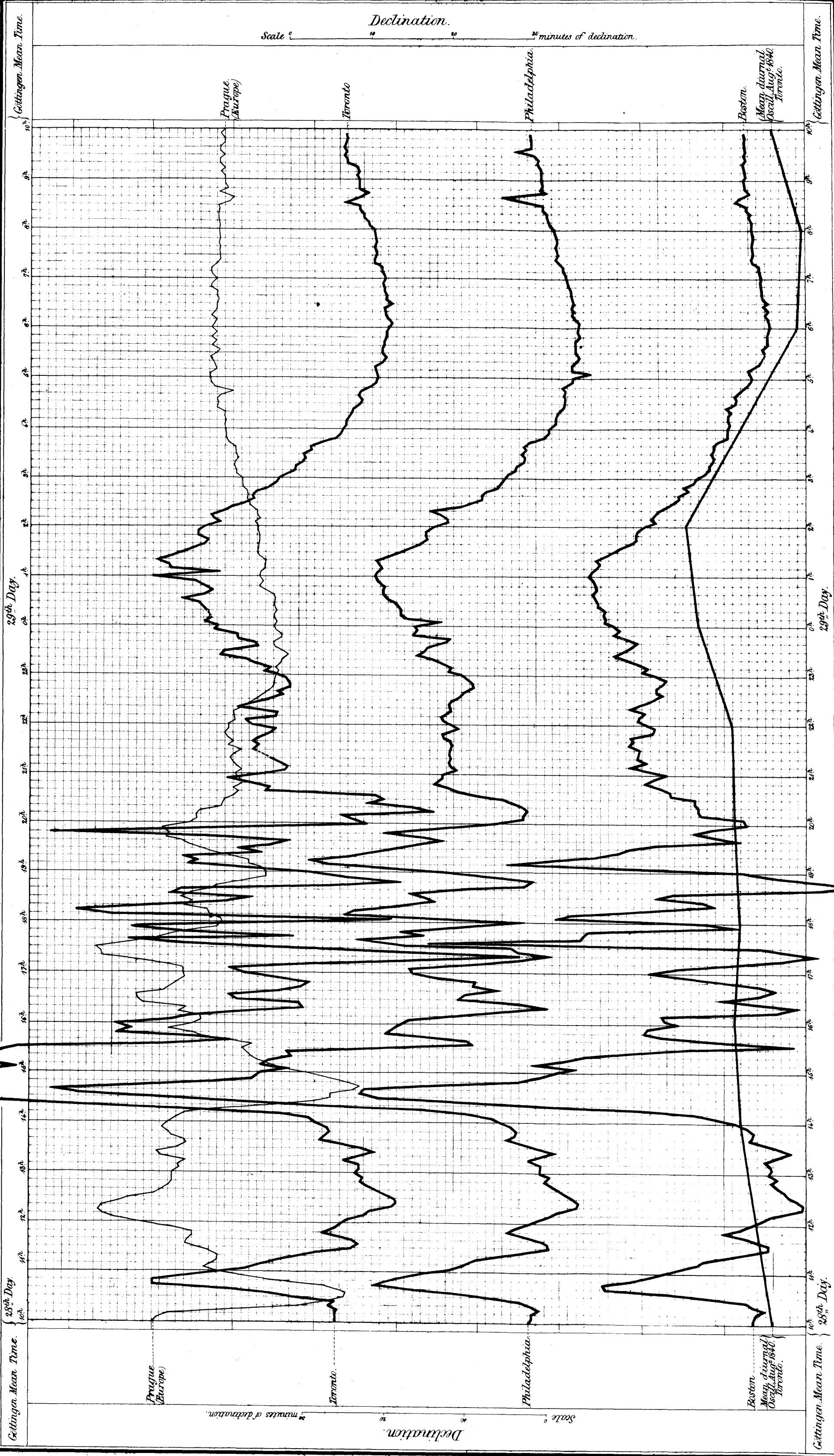






Declination, August 28<sup>th</sup> & 29<sup>th</sup> 1840.

Magnetical Observations. Toronto.



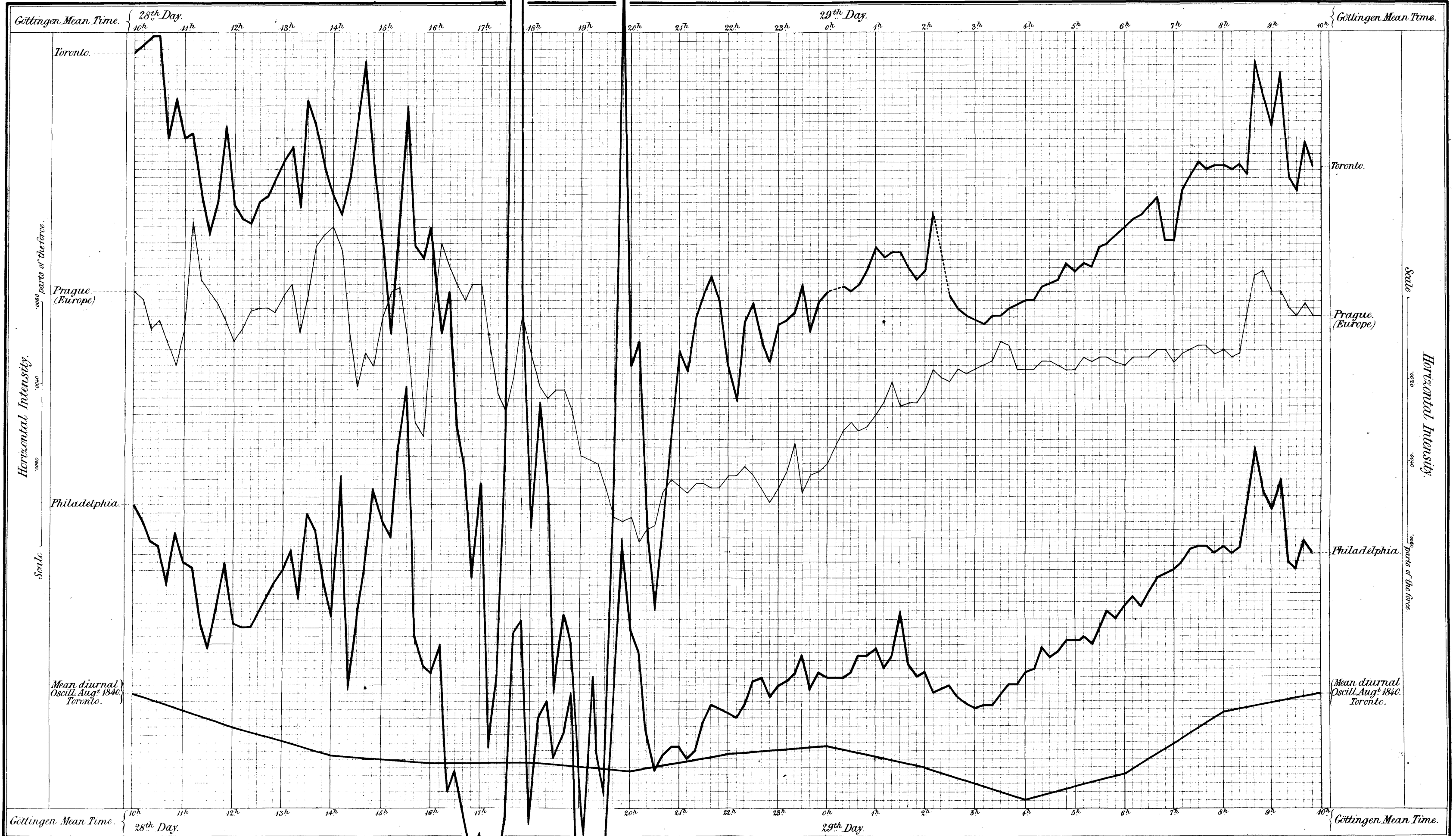
Ascending curves denote increasing easterly or decreasing westerly declination.





Horizontal Intensity, August 28<sup>th</sup> & 29<sup>th</sup>, 1840.

Magnetical Observations. — Toronto.



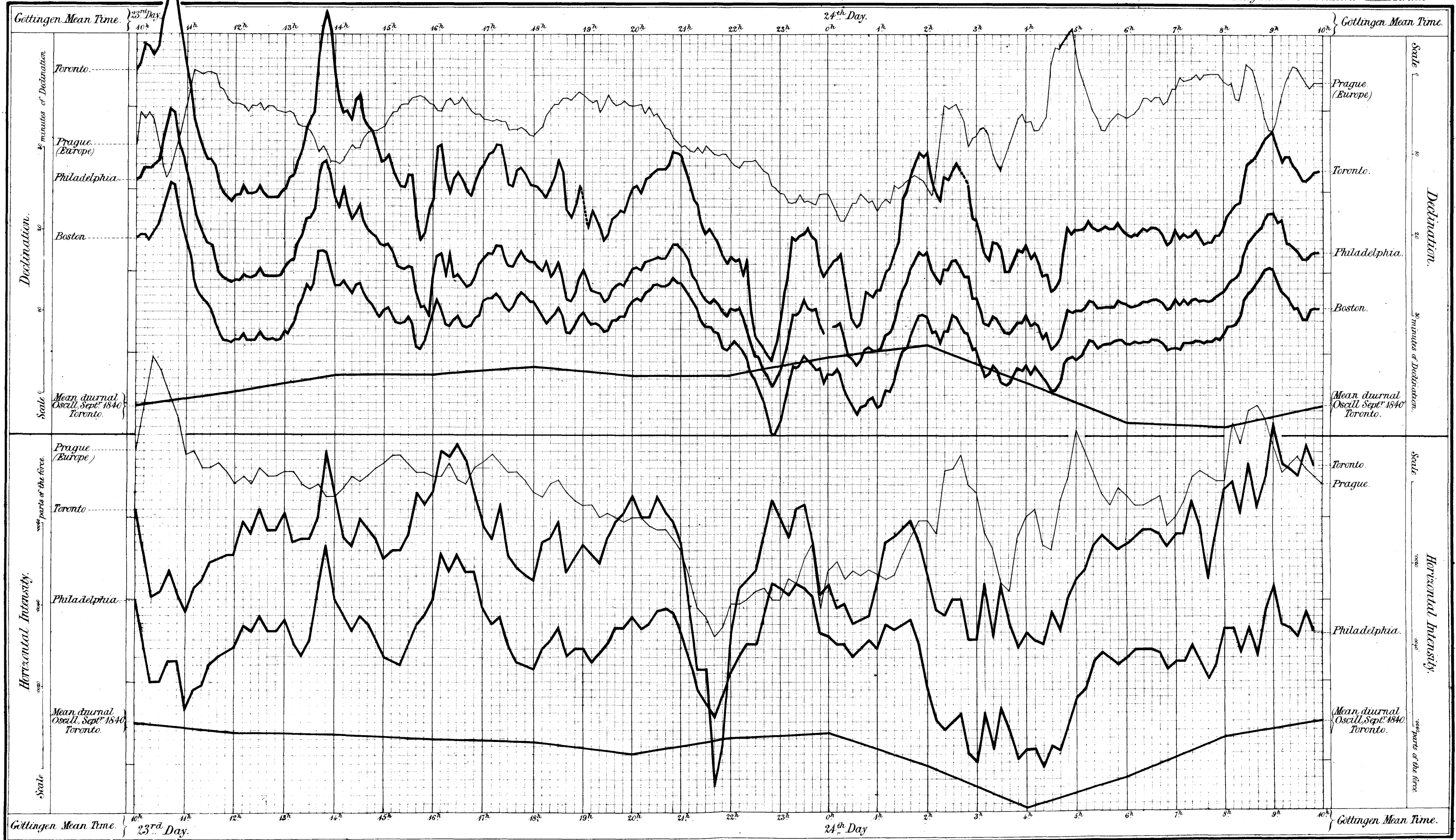
Ascending curves denote increasing horizontal force.





Declination and Horizontal Intensity, September. 23<sup>rd</sup> & 24<sup>th</sup> 1840.

Magnetical Observations. — Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

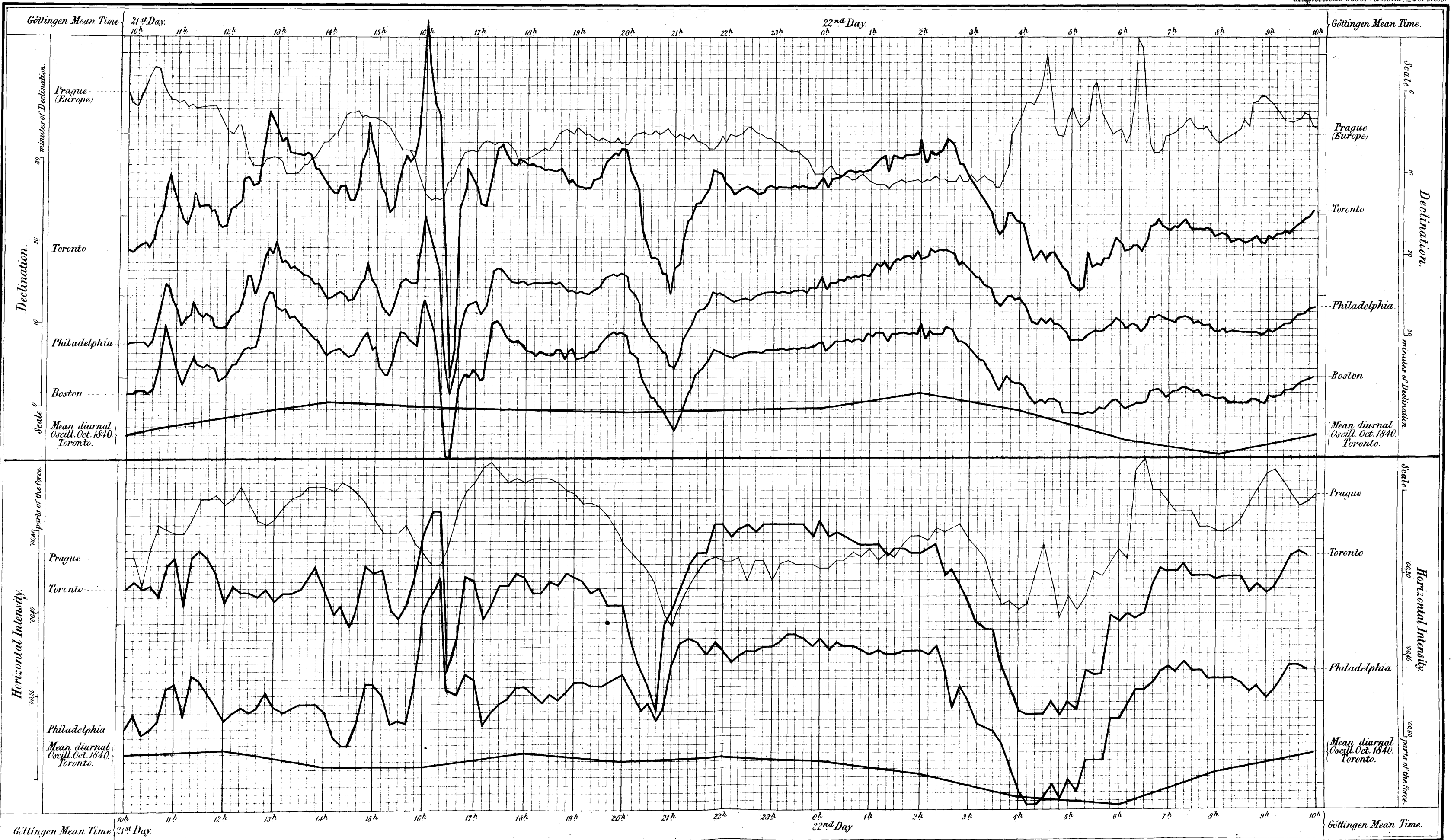






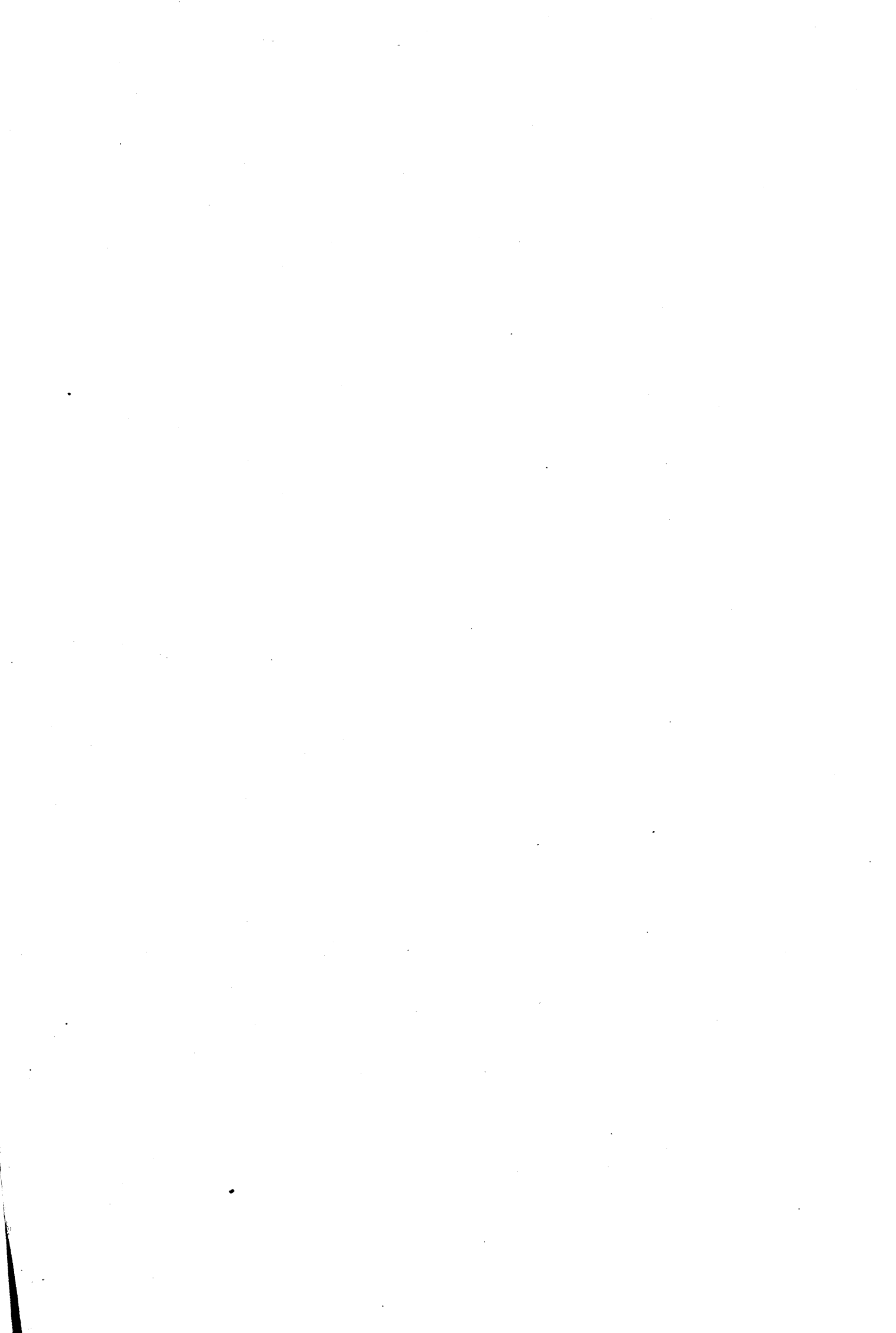
# Declination and Horizontal Intensity, October 21<sup>st</sup> & 22<sup>nd</sup> 1840

Magnetical Observations - Toronto.



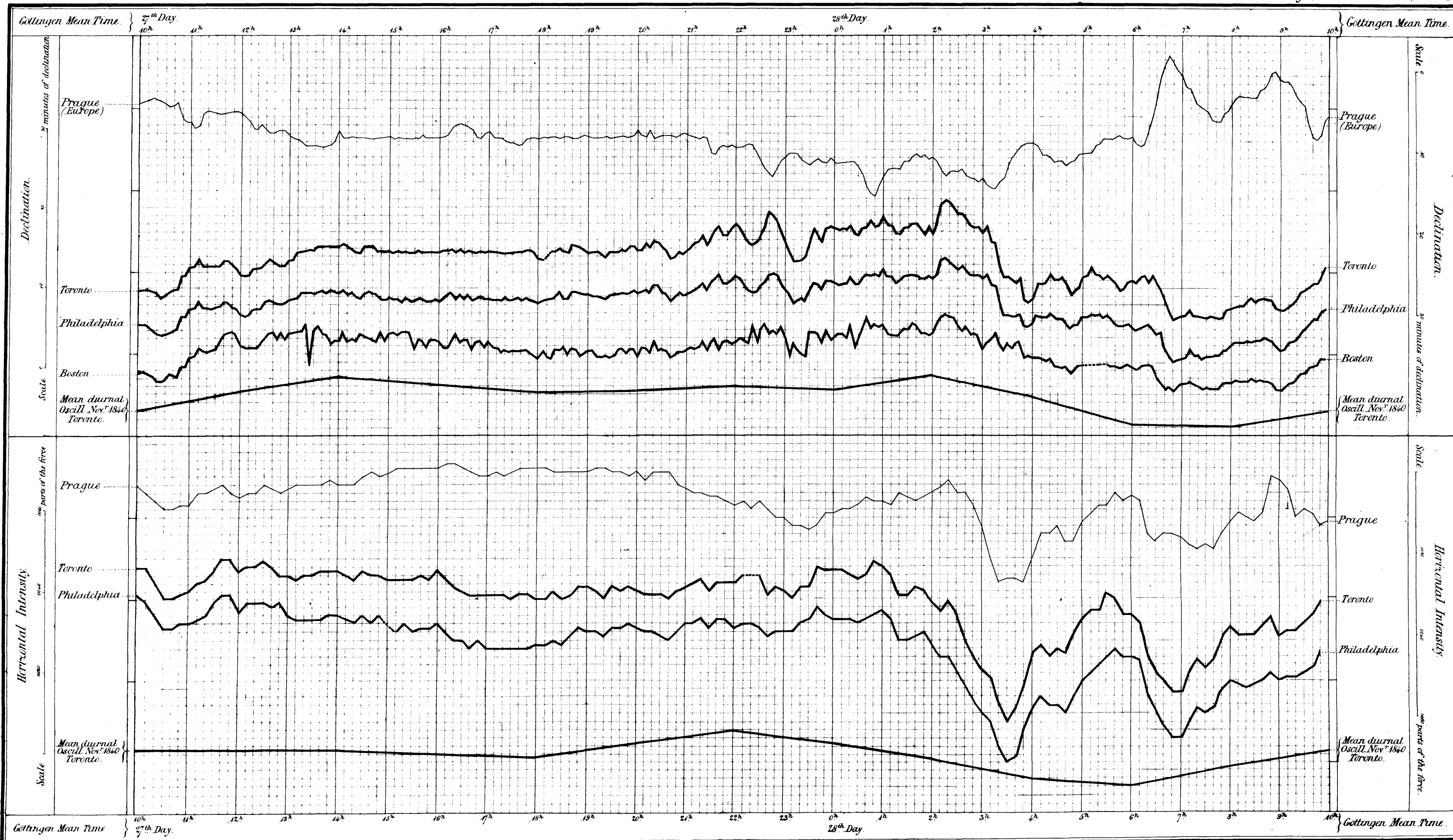
Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.





Declination and Horizontal Intensity, November 27<sup>th</sup> & 28<sup>th</sup> 1840.

Magnetical Observations, Toronto.



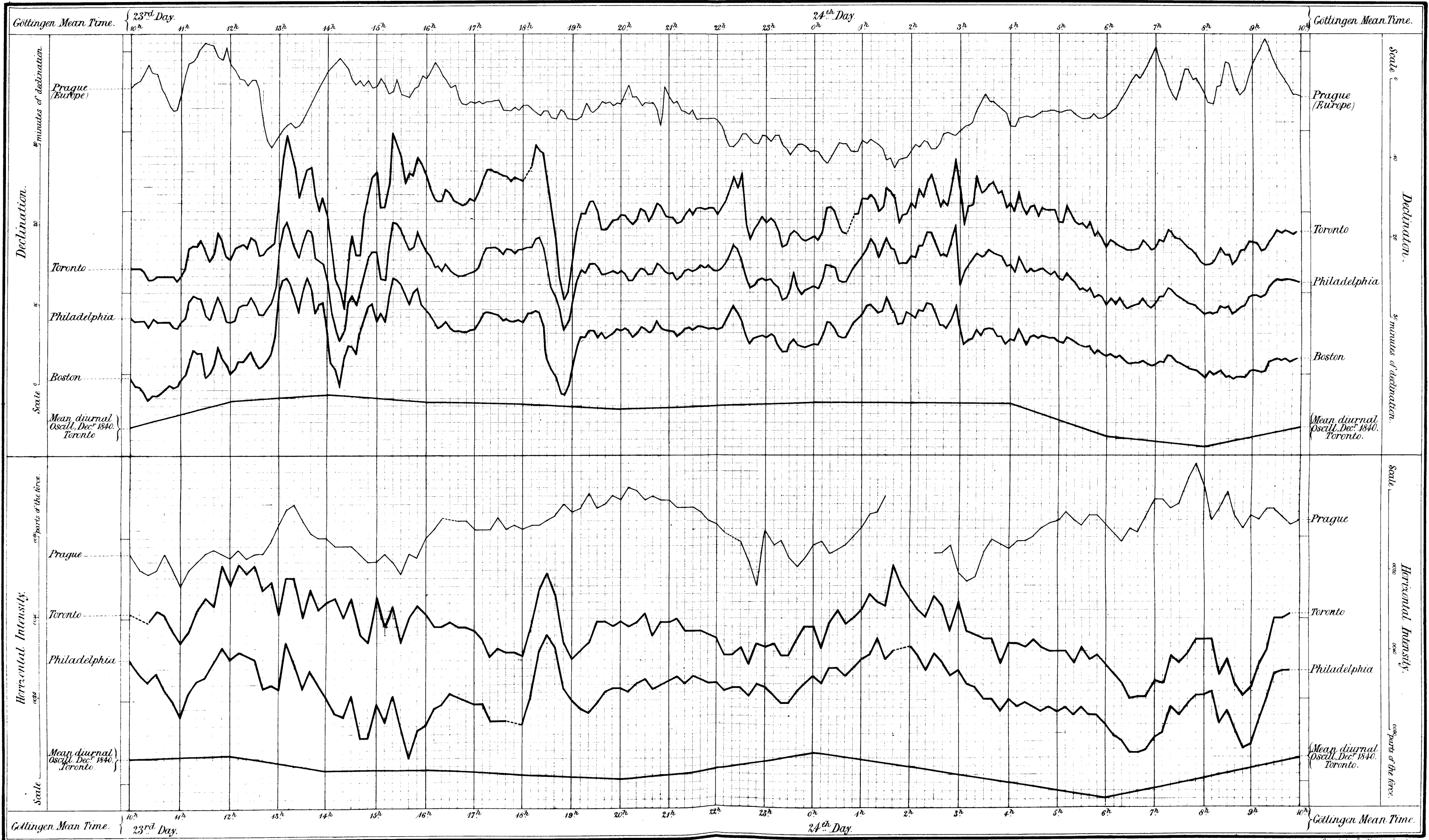
Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.





Declination and Horizontal Intensity, December 23<sup>rd</sup> & 24<sup>th</sup> 1840.

Magnetical Observations, Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.





TORONTO, 1840.

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METEOROLOGICAL OBSERVATIONS.

BAROMETRIC PRESSURE.														
Barometer at 32° = 27 English inches + the numbers in the Table.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
MARCH.	1	—	—	—	—	—	—	—	—	2.544	2.548	2.590	2.591	
	2	2.642	2.702	2.698	2.702	2.692	2.686	2.693	2.688	2.664	2.638	2.618	2.604	2.669
	3	2.592	2.597	2.573	2.526	2.469	2.446	2.425	2.408	2.365	2.352	2.293	2.269	2.443
	4	2.259	2.265	2.233	2.164	2.099	2.161	2.229	2.295	2.352	2.421	2.493	2.533	2.292
	5	2.584	2.630	2.639	2.626	2.575	2.548	2.552	2.577	2.531	2.477	2.421	2.340	2.542
	6	2.320	2.300	2.302	2.311	2.427	2.365	2.421	2.427	2.396	2.351	2.287	2.230	2.345
	7	2.287	2.474	2.567	2.641	2.657	2.686	2.718	2.774	2.787	—	—	—	2.473
	8	—	—	—	—	—	—	—	—	—	2.061	2.025	2.004	2.070
	9	2.040	2.027	2.050	2.102	2.106	2.108	2.118	2.104	2.055	1.988	1.981	2.059	2.479
	10	2.159	2.284	2.359	2.392	2.422	2.472	2.535	2.585	2.619	2.614	2.646	2.667	2.698
	11	2.676	2.698	2.706	2.696	2.679	2.687	2.720	2.732	2.716	2.696	2.677	—	2.601
	12	2.651	2.654	2.620	2.592	2.546	2.542	2.564	2.586	2.587	2.615	2.620	2.637	2.842
	13	2.680	2.699	2.790	2.822	2.819	2.837	2.770	2.910	—	2.964	2.977	2.996	2.808
	14	—	3.036	3.038	3.010	2.949	2.905	2.840	2.814	2.773	—	—	—	2.465
	15	—	—	—	—	—	—	—	—	—	2.512	2.506	2.500	2.455
	16	2.536	2.540	2.536	2.511	2.489	2.482	2.474	2.475	2.437	2.407	2.354	2.343	2.662
	17	2.366	2.376	2.387	2.423	2.423	2.435	2.469	2.504	2.558	2.566	2.562	2.548	2.464
	18	2.584	2.564	—	2.619	2.625	2.706	2.716	2.731	2.740	2.714	2.696	2.583	2.715
	19	2.513	2.482	2.434	2.415	2.387	—	2.448	2.467	2.478	2.491	2.455	2.540	2.970
	20	2.502	2.535	2.552	2.558	2.612	2.669	2.752	2.813	2.863	2.878	2.917	2.930	2.690
	21	2.947	2.972	2.986	2.978	2.948	2.977	3.016	3.064	3.090	—	—	—	2.264
	22	—	—	—	—	—	—	—	—	—	2.889	2.892	2.878	2.440
	23	2.872	2.871	2.845	2.796	2.678	2.747	2.708	2.684	2.622	2.556	2.490	2.411	2.409
	24	2.351	2.259	2.219	2.170	2.139	2.162	2.219	2.283	2.312	2.325	2.351	2.380	2.593
	25	2.401	2.449	2.468	2.453	2.418	2.416	2.427	2.449	2.457	2.459	2.445	2.442	2.555
	26	2.461	2.465	2.454	2.431	2.390	2.365	2.354	2.380	2.383	2.390	2.408	2.422	2.295
	27	2.474	2.518	2.554	2.551	2.573	2.583	2.612	2.639	2.648	2.669	2.662	2.630	2.452
	28	2.676	2.671	2.664	2.650	2.603	2.561	2.514	2.510	2.451	—	—	—	2.517
	29	—	—	—	—	—	—	—	—	—	2.484	2.468	2.411	—
	30	2.385	2.336	2.306	2.271	2.231	2.233	2.270	2.295	2.295	2.305	2.305	2.310	—
	31	2.337	2.373	2.386	2.383	2.382	2.452	2.476	2.524	2.533	2.530	2.522	2.530	—
Hourly Means	2.492	2.530	2.534	2.530	2.513	2.529	2.540	2.566	2.548	2.515	2.504	2.492	2.517	
APRIL.	1	2.537	2.558	2.568	2.566	2.610	2.657	2.724	2.768	2.819	2.860	2.885	2.916	2.706
	2	2.947	2.985	2.988	2.938	2.864	2.816	2.762	2.820	2.702	2.635	2.544	2.514	2.793
	3	2.479	2.443	2.405	2.354	2.319	2.257	2.170	2.096	2.121	2.097	—	2.189	2.266
	4	2.222	2.278	2.317	2.341	2.413	2.442	2.493	2.565	2.583	—	—	—	2.521
	5	—	—	—	—	—	—	—	—	—	2.863	2.853	2.888	2.561
	6	2.940	2.958	2.936	2.929	2.910	2.923	2.942	3.012	3.034	3.025	3.054	3.072	3.084
	7	3.130	3.152	3.166	3.120	3.077	3.052	3.042	3.072	3.050	3.052	3.042	3.058	3.042
	8	3.067	3.077	3.076	3.059	3.033	3.008	3.013	3.033	3.054	3.042	3.029	3.016	2.836
	9	3.013	3.013	2.983	2.938	2.880	2.836	2.787	2.745	2.720	2.714	2.705	2.694	2.732
	10	2.724	2.727	2.717	2.698	2.689	2.700	2.707	2.763	2.772	2.784	2.760	2.741	2.647
	11	2.691	2.651	2.601	2.563	2.533	2.523	2.557	2.613	2.599	—	—	—	2.972
	12	—	—	—	—	—	—	—	—	—	2.678	2.846	2.914	2.761
	13	2.979	3.006	3.029	3.028	3.005	2.993	2.972	2.982	2.963	2.940	2.898	2.865	2.777
	14	2.825	2.786	2.756	2.717	—	2.696	—	2.764	2.769	2.768	2.760	2.774	2.505
	15	2.817	2.850	2.848	2.822	2.786	2.762	2.754	2.769	2.776	2.758	2.720	2.659	2.665
	16	2.714	2.717	2.696	2.643	2.571	2.521	2.523	2.511	2.486	—	—	—	3.033
	17 <sup>a</sup>	—	—	—	—	—	—	—	—	—	2.215	2.226	2.238	2.782
	18	2.270	2.343	2.430	2.509	2.561	2.614	2.688	2.798	2.806	—	—	—	2.311
	19	—	—	—	—	—	—	—	—	—	2.958	2.988	3.016	2.526
	20	3.048	3.068	3.076	3.029	3.016	2.996	3.014	3.036	3.040	3.032	3.026	3.018	2.630
	21	3.013	3.006	2.960	2.887	2.834	2.770	2.730	2.700	2.656	2.651	2.601	2.577	2.542
	22	2.533	2.449	2.367	2.318	2.294	2.267	2.255	2.248	2.234	2.276	2.234	2.260	3.090
	23	2.269	2.442	2.492	2.512	2.502	2.524	2.527	2.562	2.585	2.617	2.632	2.660	2.938
	24	2.692	2.725	2.729	2.719	2.663	2.626	2.626	2.615	2.590	2.544	2.513	2.515	2.612
	25	2.531	2.513	2.490	2.467	2.444	2.435	2.422	2.450	2.486	—	—	—	2.497
	26	—	—	—	—	—	—	—	—	—	2.636	2.704	2.926	—
	27	3.010	3.077	3.108	3.120	3.112	3.140	3.111	3.118	3.118	3.068	3.054	3.041	—
	28	3.043	3.045	3.030	2.998	2.980	2.946	2.929	2.924	2.900	2.853	2.824	2.780	—
	29	2.789	2.754	2.728	2.678	2.619	2.589	2.543	2.530	2.527	2.523	2.511	2.548	—
	30	2.581	2.572	2.569	—	2.482	2.472	2.484	2.498	2.510	2.449	2.455	2.399	—
Hourly Means	2.755	2.768	2.762	2.748	2.716	2.703	2.699	2.720	2.716	2.721	2.744	2.731	2.732	

<sup>a</sup> Good Friday.

BAROMETRIC PRESSURE.

Barometer at 32° = 27 English inches + the numbers in the Table.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16	
MAY.	1	2.406	2.355	2.309	2.243	2.291	2.345	2.380	2.446	2.508	2.521	2.487	2.461	2.396
	2	2.473	2.420	2.348	2.305	2.270	2.245	2.241	2.263	2.287	—	—	—	
	3	—	—	—	—	—	—	—	—	—	1.784	1.718	1.694	
	4	1.694	1.724	1.811	1.959	2.102	2.241	2.325	2.412	2.457	2.505	2.534	2.566	2.194
	5	2.610	2.658	2.680	2.688	2.696	2.712	2.747	2.784	2.815	2.840	2.840	2.837	2.742
	6	2.865	2.871	2.861	2.842	2.828	2.832	2.837	2.844	2.842	2.832	2.826	2.828	2.842
	7	2.831	2.817	2.780	2.755	2.766	2.736	2.727	2.735	2.734	2.728	2.747	2.740	2.758
	8	2.746	2.719	2.720	2.692	2.626	2.558	2.539	2.524	2.519	2.457	2.441	2.428	2.581
	9	2.345	2.459	2.474	2.483	2.508	2.526	2.553	2.576	2.579	—	—	—	2.546
	10	—	—	—	—	—	—	—	—	—	2.685	2.677	2.691	
	11	2.717	2.741	2.746	2.729	2.716	2.704	2.715	2.733	2.740	2.749	2.758	2.783	2.736
	12	2.816	2.824	2.811	2.784	2.771	2.741	2.749	2.769	2.780	2.779	2.790	2.799	2.784
	13	2.817	2.837	2.748	2.814	2.782	2.743	2.725	2.719	2.729	2.720	2.695	2.674	2.750
	14	2.693	2.689	2.666	2.613	2.572	2.562	2.551	2.578	2.574	2.547	2.538	2.500	2.590
	15	2.516	2.517	2.525	2.540	2.553	2.570	2.596	2.571	2.695	2.714	2.733	2.776	2.609
	16	2.816	2.866	2.839	2.832	2.813	2.789	2.779	2.758	2.758	—	—	—	2.767
	17	—	—	—	—	—	—	—	—	—	2.651	2.649	2.660	
	18	2.675	2.697	2.685	2.653	2.617	2.599	2.579	2.604	2.610	2.629	2.640	2.679	2.639
	19	2.677	2.693	2.692	2.672	2.642	2.610	2.586	2.590	2.586	2.566	2.546	2.542	2.617
	20	2.545	2.533	2.526	2.489	2.448	2.412	2.421	2.404	2.392	2.360	2.333	2.303	2.430
	21	2.307	2.292	2.257	2.291	2.284	2.300	2.328	2.360	2.384	2.380	2.377	2.380	2.328
	22	2.412	2.430	2.446	2.479	2.496	2.526	2.537	2.557	2.585	2.604	2.627	2.646	2.529
	23	2.675	2.699	2.725	—	2.713	2.709	2.713	2.727	2.737	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	2.931	2.935	2.955	
	25	2.997	3.027	3.043	3.035	2.919	2.995	2.984	2.987	2.991	2.991	2.990	2.990	2.996
	26	3.008	3.003	2.995	2.956	2.909	2.867	2.839	2.825	2.817	2.802	2.799	2.787	2.884
	27	2.798	2.790	2.786	2.761	2.730	2.697	2.658	2.658	2.649	2.633	2.626	2.620	2.700
	28	2.625	2.613	2.607	2.576	2.535	2.500	2.493	2.491	2.508	2.504	2.488	2.511	2.537
	29	2.562	2.604	2.623	2.622	2.602	2.571	2.568	2.591	2.630	2.617	2.608	2.613	2.600
	30	2.616	2.625	2.612	2.604	2.569	2.548	2.533	2.548	2.562	—	—	—	2.572
	31	—	—	—	—	—	—	—	—	—	2.566	2.531	2.546	
Hourly Means		2.624	2.634	2.627	2.616	2.606	2.601	2.604	2.617	2.633	2.619	2.613	2.616	2.617
JUNE.	1	2.544	2.544	2.548	2.574	2.589	2.607	2.608	2.641	2.683	2.577	2.593	2.593	2.59
	2	2.608	2.586	2.551	2.535	2.544	2.469	2.474	2.455	—	2.403	2.355	2.352	
	3	2.313	2.318	2.293	2.294	2.250	2.214	2.192	2.180	2.196	2.190	2.178	2.180	2.232
	4	2.205	2.222	2.232	2.260	2.295	2.311	2.360	2.394	2.391	2.412	2.439	2.452	2.331
	5	2.483	2.525	2.534	2.526	2.495	2.458	2.420	2.463	2.458	2.438	2.369	2.384	2.463
	6	2.367	2.333	2.319	2.324	2.312	2.276	2.282	2.381	2.435	—	—	—	2.487
	7	—	—	—	—	—	—	—	—	—	2.916	2.930	2.967	
	8	2.994	3.029	3.026	2.996	2.977	2.949	2.945	2.949	2.965	2.957	2.955	2.984	5.977
	9	3.014	3.054	3.049	3.026	2.991	2.971	2.957	2.943	2.945	2.940	2.951	2.974	2.984
	10	2.990	3.018	2.978	2.943	2.914	2.873	2.862	2.865	2.847	2.829	2.822	2.822	2.897
	11	2.841	2.822	2.795	2.732	2.705	2.657	2.633	2.662	2.656	2.640	2.613	2.614	2.697
	12	2.632	2.634	2.628	2.629	2.557	2.494	2.410	2.468	2.455	2.405	2.397	2.437	2.512
	13	2.526	2.586	2.613	2.617	2.619	2.626	2.640	2.662	2.707	—	—	—	2.634
	14	—	—	—	—	—	—	—	—	—	2.673	2.671	2.673	
	15	2.692	2.713	2.712	2.691	2.679	2.665	2.655	2.687	2.731	2.746	2.737	2.743	2.705
	16	2.773	2.791	2.783	2.747	2.725	2.710	2.717	2.735	2.761	2.768	2.783	2.805	2.758
	17	2.819	2.821	2.815	2.777	2.742	2.710	2.677	2.652	2.642	2.542	2.488	2.484	2.681
	18	2.541	2.566	2.585	2.625	2.622	2.631	2.649	2.659	2.656	2.652	2.633	2.612	2.619
	19	2.597	2.576	2.572	2.559	2.556	2.574	2.591	2.593	2.593	2.566	2.546	2.545	2.572
	20	2.582	2.571	2.556	2.530	2.506	2.493	2.471	2.465	2.474	—	—	—	2.504
	21	—	—	—	—	—	—	—	—	—	2.452	2.471	2.481	
	22	2.532	2.556	2.614	2.633	2.636	2.653	2.669	2.709	2.747	2.758	2.769	2.780	2.671
	23	2.825	2.837	2.845	2.830	2.789	2.775	2.763	2.757	2.761	2.751	2.737	2.735	2.784
	24	2.772	2.767	2.750	2.712	2.681	2.659	2.637	2.637	2.642	2.641	2.651	2.651	2.683
	25	2.669	2.706	2.708	2.698	2.656	2.632	2.620	2.619	2.616	2.598	2.577	2.560	2.637
	26	2.563	2.565	2.567	2.570	2.542	2.534	2.508	2.506	2.511	2.506	2.484	2.486	2.528
	27	2.480	2.489	2.516	2.512	2.513	2.500	2.504	2.518	2.516	—	—	—	2.486
	28	—	—	—	—	—	—	—	—	—	2.456	2.404	2.424	
	29	2.445	2.461	2.480	2.491	2.457	2.416	2.408	2.424	2.444	2.450	2.455	2.482	2.451
	30	2.520	2.555	2.591	2.601	2.644	2.659	2.691	2.733	2.761	2.760	2.755	2.761	2.669
Hourly Means		2.628	2.640	2.641	2.632	2.615	2.597	2.590	2.606	2.624	2.616	2.606	2.615	2.617

BAROMETRIC PRESSURE.														
Barometer at 32° = 27 English inches + the numbers in the Table.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
JULY.	1	2.768	2.780	2.823	2.807	2.792	2.799	2.813	2.821	2.826	2.811	2.818	2.841	2.808
	2	2.878	2.894	2.913	2.910	2.907	2.892	2.893	2.917	2.932	2.930	2.937	2.956	2.913
	3	2.972	2.974	2.977	2.975	2.962	2.929	2.906	2.909	2.927	2.933	2.931	2.939	2.944
	4	2.958	2.968	2.967	2.951	2.935	2.922	2.915	2.917	2.935				2.935
	5										2.917	2.919	2.921	
	6	2.930	2.928	2.923	2.902	2.892	2.852	2.836	2.826	2.822	2.815	2.810	2.805	2.862
	7	2.827	2.834	2.837	2.821	2.802	2.793	2.774	2.754	2.761	2.755	2.730	2.714	2.783
	8	2.695	2.684	2.656	2.651	2.613	2.529	2.554	2.554	2.545	2.527	2.518	2.518	2.587
	9	2.532	2.546	2.553	2.542	2.550	2.539	2.544	2.564	2.597	2.616	2.620	2.635	2.570
	10	2.667	2.691	2.707	2.703	2.692	2.691	2.689	2.689	2.725	2.715	2.707	2.714	2.699
	11	2.739	2.739	2.707	2.686	2.783	2.662	2.639	2.651	2.657				2.611
	12										2.406	2.360	2.306	
	13	2.257	2.244	2.216	2.194	2.185	2.187	2.184	2.210	2.262	2.303	2.329	2.377	2.246
	14	2.404	2.460	2.458	2.469	2.454	2.447	2.461	2.510	2.522	2.538	2.549	2.595	2.489
	15	2.613	2.645	2.649	2.649	2.627	2.604	2.602	2.610	2.620	2.628	2.622	2.640	2.626
	16	2.641	2.625	2.615	2.596	2.568	2.568	2.555	2.570	2.588	2.580	2.602	2.600	2.592
	17	2.610	2.633	2.638	2.610	2.590	2.600	2.634	2.639	2.661	2.665	2.662	2.691	2.636
	18	2.695	2.723	2.725	2.707	2.684	2.640	2.600	2.578	2.558				2.690
	19										2.785	2.776	2.809	
	20	2.819	2.825	2.807	2.794	2.751	2.717	2.705	2.705	2.711	2.713	2.699	2.716	2.747
	21	2.724	2.741	2.739	2.718	2.702	2.704	2.694	2.710	2.747	2.743	2.744	2.766	2.728
	22	2.778	2.787	2.775	2.739	2.715	2.685	2.665	2.637	2.627	2.602	2.546	2.538	2.674
	23	2.548	2.551	2.527	2.498	2.477	2.462	2.456	2.463	2.473	2.484	2.488	2.528	2.496
	24	2.564	2.598	2.624	2.609	2.631	2.637	2.663	2.687	2.698	2.717	2.739	2.746	2.659
	25	2.788	2.825	2.827	2.826	2.795	2.790	2.783	2.786	2.797				2.816
	26										2.870	2.854	2.849	
	27	2.872	2.888	2.880	2.848	2.819	2.793	2.757	2.750	2.713	2.667	2.637	2.634	2.771
	28	2.570	2.532	2.511	2.496	2.440	2.445	2.439	2.465	2.488	2.501	2.529	2.551	2.497
	29	2.576	2.614	2.620	2.645	2.649	2.652	2.659	2.700	2.704	2.721	2.733	2.752	2.669
	30	2.770	2.784	2.795	2.776	2.755	2.716	2.701	2.696	2.717	2.731	2.739	2.743	2.743
	31	2.766	2.756	2.768	2.757	2.734	2.702	2.709	2.718	2.718	2.715	2.697	2.703	2.728
Hourly Means	2.702	2.714	2.712	2.699	2.685	2.665	2.660	2.668	2.679	2.681	2.677	2.651	2.686	
AUGUST.	1	2.712	2.710	2.716	2.700	2.679	2.661	2.670	2.674	2.693				2.602
	2										2.367	2.339	2.304	
	3	2.311	2.299	2.310	2.307	2.329	2.368	2.402	2.445	2.460	2.463	2.437	2.402	2.378
	4	2.373	2.325	2.293	2.273	2.293	2.338	2.401	2.458	2.477	2.485	2.476	2.463	2.388
	5	2.420	2.406	2.400	2.374	2.399	2.406	2.400	2.401	2.393	2.364	2.348	2.338	2.387
	6	2.340	2.407	2.343	2.334	2.324	2.311	2.326	2.354	2.379	2.398	2.405	2.412	2.361
	7	2.426	2.432	2.425	2.412	2.407	2.420	2.452	2.480	2.476	2.484	2.481	2.432	2.444
	8	2.487	2.496	2.504	2.500	2.504	2.520	2.580	2.614	2.639				2.619
	9										2.866	2.858	2.859	
	10	2.862	2.893	2.878	2.843	2.819	2.805	2.794	2.764	2.732	2.735	2.685	2.663	2.789
	11	2.662	2.651	2.634	2.628	2.600	2.562	2.541	2.591	2.579	2.567	2.569	2.552	2.596
	12	2.567	2.552	2.560	2.556	2.552	2.535	2.524	2.540	2.537	2.530	2.516	2.510	2.540
	13	2.517	2.521	2.506	2.494	2.480	2.456	2.428	2.434	2.428	2.409	2.388	2.382	2.453
	14	2.389	2.403	2.422	2.424	2.408	2.431	2.497	2.560	2.597	2.620	2.638	2.667	2.505
	15	2.719	2.768	2.787	2.784	2.779	2.762	2.761	2.803	2.824				2.812
	16										2.925	2.909	2.922	
	17	2.952	2.980	2.988	2.969	2.953	2.940	2.922	2.918	2.925	2.931	2.935	2.931	2.945
	18	2.954	2.963	2.971	2.944	2.909	2.884	2.880	2.878	2.881	2.883	2.888	2.880	2.910
	19	2.892	2.876	2.872	2.841	2.808	2.756	2.758	2.770	2.758	2.746	2.737	2.719	2.794
	20	2.723	2.712	2.713	2.707	2.666	2.627	2.621	2.638	2.641	2.639	2.624	2.630	2.662
	21	2.637	2.653	2.657	2.633	2.615	2.586	2.572	2.578	2.574	2.577	2.586	2.568	2.603
	22	2.592	2.601	2.583	2.543	2.488	2.481	2.523	2.522	2.530				
	23										2.558	2.556	2.576	2.546
	24	2.596	2.612	2.621	2.617	2.640	2.645	2.677	2.715	2.743	2.757	2.768	2.788	2.682
	25	2.840	2.856	2.872	2.851	2.847	2.826	2.819	2.852	2.861	2.857	2.832	2.843	2.846
	26	2.841	2.837	2.858	2.831	2.787	2.778	2.744	2.746	2.735	2.755	2.727	2.721	2.780
	27	2.718	2.691	2.717	2.698	2.683	2.675	2.661	2.659	2.656	2.648	2.626	2.606	2.670
	28	2.615	2.625	2.632	2.621	2.604	2.605	2.622	2.638	2.655	2.661	2.649	2.662	2.632
	29	2.671	2.683	2.692	2.679	2.669	2.650	2.636	2.643	2.639				
	30										2.481	2.500	2.520	2.622
	31	2.554	2.570	2.562	2.582	2.584	2.599	2.633	2.662	2.664	2.671	2.686	2.690	2.621
Hourly Means	2.629	2.635	2.635	2.621	2.609	2.601	2.609	2.628	2.634	2.630	2.622	2.617	2.622	

\* Approximate.

BAROMETRIC PRESSURE.														
Barometer at 32° = 27 English inches + the numbers in the Table.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
SEPTEMBER.	1	2.720	2.736	2.737	2.698	2.670	2.628	2.610	2.584	2.532	2.492	2.434	2.381	2.602
	2	2.371	2.384	2.395	2.400	2.418	2.458	2.510	2.569	2.588	2.613	2.620	2.633	2.496
	3	2.669	2.686	2.694	2.711	2.731	2.744	2.771	2.820	2.835	—	—	—	2.756
	4	Removing to Magnetic Observatory.												
	5	—	—	—	—	—	—	—	—	—	—	—	—	
	6	—	—	—	—	—	—	—	—	—	2.796	2.808	2.807	2.741
	7	2.835	2.843	2.828	2.802	2.759	2.731	2.719	2.719	2.706	2.678	2.650	2.628	
	8	2.601	2.564	2.552	2.499	2.441	2.414	2.412	2.430	2.427	2.437	2.437	2.442	2.471
	9	2.462	2.468	2.457	2.419	2.373	2.334	2.345	2.377	2.395	2.414	2.417	2.409	2.406
	10	2.424	2.425	2.418	2.405	2.384	2.399	2.421	2.453	2.470	2.474	2.482	2.520	2.440
	11	2.587	2.616	2.662	2.675	2.692	2.721	2.756	2.799	2.830	2.840	2.881	2.908	2.747
	12	2.943	2.967	2.967	2.954	2.934	2.925	2.929	2.941	2.943	—	—	—	2.951
	13	—	—	—	—	—	—	—	—	—	2.975	2.966	2.968	
	14	2.984	2.976	2.955	2.916	2.860	2.826	2.801	2.792	2.773	2.757	2.740	2.725	2.842
	15	2.714	2.715	2.705	2.685	2.649	2.633	2.653	2.675	2.672	2.667	2.675	2.685	2.677
	16	2.697	2.721	2.714	2.693	2.655	2.623	2.607	2.591	2.574	2.533	2.493	2.437	2.611
	17	2.394	2.326	2.284	2.258	2.239	2.269	2.339	2.369	2.414	2.433	2.430	2.434	2.349
	18	2.446	2.454	2.455	2.455	2.454	2.448	2.449	2.456	2.454	2.449	2.433	2.425	2.448
	19	2.442	2.452	2.437	2.406	2.372	2.343	2.311	2.286	2.220	—	—	—	2.399
	20	—	—	—	—	—	—	—	—	—	2.475	2.503	2.538	
	21	2.613	2.655	2.688	2.702	2.722	2.751	2.805	2.836	2.852	2.874	2.898	2.932	2.777
	22	2.968	2.982	2.976	2.949	2.893	2.848	2.828	2.832	2.831	2.841	2.819	2.813	2.882
	23	2.832	2.850	2.850	2.857	2.832	2.827	2.839	2.867	2.901	2.915	2.920	2.930	2.868
	24	2.981	3.012	3.032	3.015	2.978	2.948	2.928	2.930	2.920	2.886	2.877	2.862	2.947
	25	2.884	2.886	2.876	2.836	2.791	2.762	2.763	2.762	2.754	2.739	2.723	2.704	2.790
	26	2.714	2.704	2.677	2.643	2.591	2.565	2.524	2.476	2.440	—	—	—	2.642
	27	—	—	—	—	—	—	—	—	—	2.776	2.789	2.806	
	28	2.827	2.851	2.855	2.836	2.715	2.787	2.775	2.785	2.799	2.792	2.783	2.794	2.800
	29	2.798	2.799	2.777	2.744	2.715	2.699	2.685	2.677	2.678	2.669	2.656	2.650	2.712
	30	2.670	2.660	2.649	2.616	2.593	2.594	2.603	2.610	2.604	2.620	2.620	2.630	2.622
Hourly Means	2.691	2.697	2.693	2.674	2.644	2.636	2.641	2.652	2.651	2.673	2.669	2.669	2.666	
OCTOBER.	1	2.662	2.689	2.698	2.721	2.722	2.736	2.750	2.749	2.747	—	—	2.708	2.718
	2	2.697	2.682	2.647	2.596	2.524	2.444	2.377	2.322	2.242	2.194	2.157	2.300	2.432
	3	2.452	2.507	2.533	2.576	2.593	2.608	2.640	2.660	2.663	—	—	—	2.586
	4	—	—	—	—	—	—	—	—	—	2.596	2.605	2.604	
	5	2.605	2.575	2.555	2.515	2.457	2.437	2.488	2.504	2.531	2.555	2.570	2.573	2.530
	6	2.576	2.591	2.584	2.562	2.552	2.584	2.658	2.699	2.749	2.778	2.801	2.826	2.663
	7	2.856	2.881	2.868	2.734	2.784	2.747	2.730	2.718	2.701	2.689	2.678	2.684	2.756
	8	2.711	2.733	2.736	2.728	2.700	2.704	2.720	2.766	2.787	2.815	2.893	2.915	2.767
	9	2.942	2.993	3.012	3.017	3.002	3.012	3.036	3.040	3.026	3.009	2.997	2.987	3.006
	10	2.970	2.954	2.912	2.883	2.818	2.773	2.732	2.675	2.608	—	—	—	2.683
	11	—	—	—	—	—	—	—	—	—	2.268	2.291	2.315	
	12	2.363	2.437	2.459	2.467	2.490	2.507	2.560	2.595	2.593	2.607	2.607	2.617	2.525
	13	2.606	2.612	2.587	2.533	2.480	2.447	2.445	2.444	2.421	2.403	2.381	2.393	2.479
	14	2.457	2.506	2.550	2.550	2.546	2.580	2.647	2.684	2.693	2.714	2.728	2.777	2.619
	15	2.798	2.840	2.847	2.848	2.840	2.842	2.883	2.914	2.927	2.927	2.935	2.948	2.879
	16	2.958	3.006	3.012	2.994	2.955	2.943	2.916	2.898	2.878	2.861	2.819	2.781	2.918
	17	2.761	2.766	2.783	2.772	2.764	2.769	2.785	2.802	2.804	—	—	—	2.726
	18	—	—	—	—	—	—	—	—	—	2.588	2.569	2.549	
	19	2.491	2.468	2.419	2.381	2.343	2.359	2.455	2.540	2.594	2.604	2.618	2.640	2.493
	20	2.686	2.718	2.719	2.702	2.686	2.681	2.679	2.704	2.708	2.679	2.657	2.662	2.690
	21	2.674	2.642	2.601	2.515	2.487	2.485	2.505	2.513	2.517	2.571	2.620	2.656	2.565
	22	2.672	2.697	2.674	2.647	2.599	2.551	2.499	2.492	2.432	2.381	2.339	2.299	2.524
	23	2.278	2.278	2.263	2.296	2.327	2.423	2.501	2.553	2.588	2.631	2.675	2.718	2.461
	24	2.761	2.800	2.800	2.777	2.770	2.768	2.794	2.785	2.763	—	—	—	2.688
	25	—	—	—	—	—	—	—	—	—	2.434	2.412	2.397	
	26	2.438	2.512	2.547	2.581	2.613	2.661	2.723	2.754	2.797	2.819	2.817	2.807	2.672
	27	2.802	2.807	2.789	2.755	2.710	2.675	2.687	2.683	2.636	2.601	2.612	2.593	2.696
	28	2.588	2.591	2.574	2.559	2.538	2.548	2.574	2.586	2.606	2.619	2.631	2.617	2.586
	29	2.625	2.611	2.555	2.508	2.448	2.428	2.394	2.386	2.382	2.381	2.398	2.418	2.461
	30	2.435	2.441	2.432	2.422	2.424	2.422	2.453	2.469	2.457	2.456	2.452	2.456	2.443
	31	2.472	2.492	2.500	2.488	2.527	2.563	2.601	2.628	2.662	—	—	—	2.622
	32	—	—	—	—	—	—	—	—	—	2.830	2.843	2.854	
Hourly Means	2.642	2.660	2.654	2.634	2.618	2.618	2.638	2.650	2.648	2.616	2.619	2.633	2.636	

BAROMETRIC PRESSURE.														
Barometer at 32° = 27 English inches + the numbers in the Table.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
NOVEMBER.	1	—	—	—	—	—	—	—	—	2·830 <sup>a</sup>	2·843 <sup>a</sup>	2·854 <sup>a</sup>	—	
	2	2·881	2·904	2·904	2·872	2·855	2·834	2·850	2·856	2·857	2·860	2·862	2·857	2·866
	3	2·868	2·878	2·869	2·844	2·804	2·785	2·791	2·789	2·780	2·774	2·756	2·766	2·809
	4	2·796	2·824	2·823	2·804	2·780	2·792	2·800	2·810	2·822	2·800	2·800	2·806	2·805
	5	2·812	2·829	2·817	2·790	2·758	2·764	2·785	2·803	2·791	2·788	2·787	2·798	2·793
	6	2·821	2·821	2·822	2·793	2·770	2·762	2·764	2·758	2·752	2·745	2·735	2·724	2·772
	7	2·728	2·727	2·717	2·651	2·605	2·593	2·555	2·519	2·469	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	2·177	2·219	2·257	2·518
	9	2·322	2·387	2·431	2·468	2·503	2·551	2·588	2·637	2·682	2·729	2·768	2·814	2·573
	10	2·876	2·946	2·954	2·953	2·941	2·956	2·974	2·950	2·932	2·951	2·955	2·924	2·943
	11	2·922	2·911	2·880	2·835	2·771	2·755	2·716	2·688	2·642	2·600	2·533	2·506	2·730
	12	2·483	2·480	2·470	2·437	2·398	2·395	2·424	2·410	2·410	2·428	2·431	2·428	2·433
	13	2·461	2·485	2·495	2·480	2·498	2·540	2·576	2·600	2·603	2·606	2·612	2·609	2·547
	14	2·589	2·595	2·574	2·501	2·417	2·361	2·291	2·220	2·126	—	—	—	—
	15	—	—	—	—	—	—	—	—	—	2·392	2·396	2·404	2·405
	16	2·424	2·446	2·451	2·448	2·449	2·471	2·479	2·486	2·476	2·464	2·464	2·445	2·459
	17	2·439	2·419	2·397	2·375	2·368	2·388	2·424	2·433	2·428	2·427	2·429	2·429	2·413
	18	2·428	2·450	2·468	2·456	2·433	2·443	2·464	2·462	2·446	2·439	2·436	2·434	2·446
	19	2·453	2·491	2·512	2·499	2·504	2·531	2·573	2·597	2·614	2·630	2·670	2·690	2·564
	20	2·721	2·760	2·777	2·762	2·736	2·748	2·760	2·764	2·770	2·767	2·786	2·790	2·762
	21	2·794	2·811	2·808	2·796	2·770	2·758	2·755	2·721	2·718	—	—	—	—
	22	—	—	—	—	—	—	—	—	—	2·136	2·142	2·152	2·613
	23	2·164	2·212	2·237	2·264	2·288	2·356	2·424	2·466	2·496	2·542	2·588	2·622	2·388
	24	2·662	2·695	2·730	2·715	2·709	2·713	2·717	2·731	2·702	2·709	2·672	2·656	2·701
	25	2·640	2·639	2·628	2·563	2·518	2·501	2·470	2·461	2·428	2·416	2·411	2·389	2·505
	26	2·394	2·428	—	—	—	2·466	2·525	2·550	2·577	2·594	2·632	2·673	2·537
	27	2·723	2·752	2·778	2·735	2·710	2·702	2·692	2·692	2·680	2·674	2·662	2·632	2·703
	28	2·625	2·584	2·570	2·514	2·477	2·494	2·528	2·548	2·539	—	—	—	—
	29	—	—	—	—	—	—	—	—	—	2·325	2·368	2·384	2·496
	30	2·381	2·340	2·262	2·248	2·396	2·566	2·660	2·735	2·756	2·789	2·810	2·810	2·563
Hourly Means.	2·616	2·632	2·641	2·617	2·602	2·609	2·623	2·627	2·620	2·590	2·597	2·600	2·615	
DECEMBER.	1	2·818	2·860	2·874	2·858	2·844	2·862	2·858	2·848	2·837	2·809	2·812	2·808	2·846
	2	2·763	2·742	2·696	2·622	2·570	2·567	2·646	2·675	2·692	2·748	2·807	2·857	2·691
	3	2·935	3·022	3·080	3·082	3·100	3·142	3·176	3·212	3·229	3·225	3·234	3·234	3·139
	4	3·255	3·254	3·263	3·232	3·208	3·211	3·202	3·202	3·181	3·186	3·179	3·180	3·219
	5	3·181	3·191	3·224	3·195	3·157	3·175	3·163	3·134	3·111	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	2·942	2·951	2·966	3·111
	7	2·977	3·001	3·014	2·993	2·970	2·960	2·948	2·912	2·856	2·803	2·716	2·664	2·901
	8	2·623	2·587	2·573	2·544	2·546	2·560	2·579	2·596	2·577	2·579	2·579	2·664	2·584
	9	2·547	2·546	2·548	2·512	2·472	2·456	2·440	2·428	2·424	2·416	2·415	2·424	2·469
	10	2·488	2·564	2·608	2·588	2·587	2·619	2·652	2·682	2·710	2·744	2·786	2·817	2·654
	11	2·870	2·921	2·941	2·928	2·908	2·906	2·884	2·847	2·821	2·790	2·732	2·664	2·851
	12	2·596	2·552	2·540	2·509	2·487	2·480	2·480	2·464	2·423	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	2·333	2·331	2·498	2·474
	14	2·285	2·296	2·271	2·250	2·199	2·186	2·222	2·242	2·264	2·280	2·292	2·280	2·256
	15	2·220	2·206	2·134	2·022	1·954	1·960	1·996	2·084	2·215	2·298	2·349	2·377	2·151
	16	2·359	2·370	2·396	2·360	2·319	2·344	2·364	2·366	2·355	2·343	2·330	2·309	2·351
	17	2·299	2·332	2·376	2·387	2·403	2·453	2·524	2·538	2·526	2·506	2·552	2·595	2·457
	18	2·650	2·701	2·737	2·706	2·699	2·711	2·728	2·730	2·702	2·708	2·706	2·706	2·707
	19	2·742	2·751	2·781	2·746	2·738	2·768	2·792	2·815	2·826	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	2·697	2·710	2·750	2·759
	21	2·808	2·853	2·887	2·836	2·778	2·748	2·698	2·598	2·496	2·413	2·321	2·245	2·640
	22	2·213	2·209	2·231	2·233	2·341	2·465	2·598	2·684	2·760	2·801	2·838	2·849	2·518
	23	2·837	2·769	2·663	2·470	2·350	2·286	2·243	2·220	2·210	2·308	2·423	2·472	2·438
	24	2·507	2·616	2·667	2·678	2·689	2·717	2·749	2·780	2·884	—	—	—	—
	25 <sup>b</sup>	—	—	—	—	—	—	—	—	—	2·226	2·148	2·073	2·561
	26	2·018	2·007	2·009	1·997	2·022	2·120	2·210	2·283	2·243	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	2·656	2·636	2·625	2·236
	28	2·598	2·574	2·539	2·458	2·434	2·453	2·502	2·548	2·540	2·538	2·558	2·579	2·527
	29	2·593	2·617	2·654	2·638	2·654	2·699	2·741	2·797	2·833	2·824	2·846	2·874	2·731
	30	2·892	2·897	2·935	2·885	2·849	2·837	2·858	2·858	2·847	2·817	2·812	2·815	2·858
	31	2·808	2·832	2·861	2·818	2·822	2·835	2·835	2·835	2·828	2·811	2·801	2·748	2·820
Hourly Means	2·647	2·664	2·673	2·636	2·619	2·635	2·657	2·668	2·669	2·646	2·649	2·657	2·652	

<sup>a</sup> Not included in the hourly means.

<sup>b</sup> Christmas Day.

STANDARD THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
MARCH.	1	—	—	—	—	—	—	—	—	—	—	—	—	
	2	38.9	28.5	43.0	46.4	41.5	39.8	38.4	34.4	34.6	35.6	36.0	37.2	37.9
	3	38.0	38.1	37.6	40.8	43.7	43.2	40.4	38.2	37.8	36.0	36.0	40.0	39.1
	4	40.2	49.4	48.8	50.4	57.0	50.3	43.2	40.6	38.6	31.2	28.9	26.7	42.1
	5	25.5	28.9	32.9	39.2	38.5	37.9	38.8	33.6	30.5	30.0	29.9	30.0	33.0
	6	29.8	38.6	46.6	50.4	52.4	47.4	43.0	37.8	34.8	33.8	35.6	35.2	40.4
	7	32.8	26.2	25.0	24.6	26.0	23.0	19.2	17.0	16.6	—	—	—	27.0
	8	—	—	—	—	—	—	—	—	—	36.8	39.6	37.5	
	9	35.0	40.2	40.2	39.2	41.7	37.2	35.4	32.5	31.6	30.6	31.2	24.8	35.0
	10	17.1	18.6	19.4	22.4	23.2	20.0	15.5	13.4	13.2	12.0	11.8	10.4	16.4
	11	10.2	20.4	23.2	26.6	29.6	29.4	27.6	24.8	20.8	19.6	20.0	—	23.0
	12	21.2	26.8	33.4	34.4	36.2	32.0	31.2	29.0	28.8	27.3	26.2	25.0	29.3
	13	23.4	28.9	34.8	38.6	39.0	39.0	36.0	34.0	—	33.6	31.4	30.2	33.5
	14	29.7	—	36.6	36.8	37.2	34.4	32.2	32.4	33.2	—	—	—	31.3
	15	—	—	—	—	—	—	—	—	—	25.8	24.0	22.4	
	16	21.0	33.2	37.8	41.4	35.5	35.2	35.0	34.2	32.6	32.4	32.7	33.0	33.7
	17	32.6	34.9	41.2	38.4	38.4	39.2	37.7	36.2	34.4	32.4	31.6	29.6	35.5
	18	29.2	34.4	—	45.8	48.6	49.2	44.0	37.8	35.6	33.8	34.5	35.4	38.9
	19	36.2	36.5	36.6	37.8	39.5	—	39.0	37.2	37.4	37.4	37.7	39.1	37.7
	20	36.2	38.8	42.2	47.8	47.8	44.7	38.4	33.8	29.6	27.4	25.4	24.5	36.4
	21	22.6	29.4	29.7	31.8	32.2	30.8	27.3	25.2	24.3	—	—	—	28.3
	22	—	—	—	—	—	—	—	—	—	29.8	28.7	27.9	
	23	29.0	31.0	32.8	35.8	36.6	34.6	33.0	33.3	33.8	34.0	33.6	33.8	33.4
	24	32.8	31.2	30.8	32.4	31.8	30.0	28.0	27.4	27.4	27.4	26.8	26.6	29.4
	25	24.5	29.9	34.6	37.4	38.4	36.6	31.0	27.0	24.5	17.3	21.1	15.6	28.2
	26	14.0	29.8	35.0	37.0	40.2	38.2	37.2	36.1	35.6	35.0	36.8	33.4	34.0
	27	33.6	36.3	41.4	43.2	42.6	40.0	38.4	36.9	36.2	36.4	37.4	37.0	38.3
	28	37.2	38.8	40.0	40.2	40.0	39.2	39.0	38.8	38.0	—	—	—	38.7
	29	—	—	—	—	—	—	—	—	—	38.6	37.8	37.0	
	30	34.0	34.3	36.0	36.8	37.0	38.0	35.8	34.2	33.2	32.0	30.2	29.6	34.3
	31	29.5	32.0	33.2	35.5	36.0	36.0	33.6	30.6	28.1	28.2	28.1	29.2	31.7
Hourly Means	29.0	32.6	35.7	38.1	38.8	37.0	34.5	32.1	30.8	30.6	30.6	30.0	33.3	
APRIL.	1	29.2	32.8	34.4	35.0	35.4	35.4	34.6	31.8	30.2	28.2	26.4	25.8	31.6
	2	24.8	31.0	36.0	39.0	41.6	41.2	38.7	38.4	37.0	35.0	34.2	37.0	36.2
	3	38.0	41.1	45.5	46.6	46.7	46.8	45.2	47.0	50.0	45.8	—	40.0	44.8
	4	38.4	43.6	47.2	49.2	44.0	45.4	43.1	39.6	35.8	—	—	—	39.7
	5	—	—	—	—	—	—	—	—	—	30.2	29.8	30.0	
	6	30.2	35.7	49.4	42.0	42.8	40.6	35.8	31.6	29.4	27.8	27.2	26.1	34.9
	7	26.7	30.7	33.8	35.8	37.4	37.4	35.0	30.2	27.6	25.6	23.8	26.8	30.9
	8	32.6	36.6	38.4	36.8	36.0	35.6	34.4	30.0	28.0	26.9	25.4	26.0	32.2
	9	29.0	39.3	41.4	42.2	42.5	43.1	41.6	39.6	34.4	34.2	33.2	33.7	37.8
	10	36.5	51.4	53.4	52.0	55.2	55.2	55.2	53.9	51.0	47.2	47.2	45.6	50.3
	11	44.9	44.7	45.0	46.0	49.6	44.8	44.0	45.4	43.8	—	—	—	42.9
	12	—	—	—	—	—	—	—	—	—	36.7	35.9	33.8	
	13	35.7	35.9	43.6	43.8	45.4	44.6	42.3	40.9	39.0	35.4	34.2	33.6	39.5
	14	35.3	38.7	42.2	43.2	—	43.0	—	38.8	37.0	37.8	39.0	42.0	39.7
	15	40.9	40.4	45.2	48.9	49.7	45.0	44.2	41.4	37.6	34.4	33.5	31.7	41.1
	16	32.5	43.0	44.8	49.8	50.2	48.8	50.0	48.4	46.7	—	—	—	48.7
	17 <sup>a</sup>	—	—	—	—	—	—	—	—	—	58.4	58.8	52.8	
	18	53.7	48.6	45.8	45.4	49.0	45.4	46.8	37.6	34.8	—	—	—	42.9
	19	—	—	—	—	—	—	—	—	—	36.7	36.9	34.4	
	20	33.9	42.0	43.8	48.6	42.8	47.2	43.0	40.4	33.0	31.8	29.2	36.4	39.4
	21	38.5	42.4	45.0	45.4	48.6	50.4	47.4	43.8	38.8	38.8	41.0	44.8	43.7
	22	46.8	47.0	47.7	49.6	51.2	53.0	55.8	54.8	54.2	57.0	54.2	49.7	51.8
	23	58.0	61.8	66.4	67.5	68.3	66.2	63.2	58.8	52.4	49.6	47.4	44.6	58.7
	24	44.7	53.5	54.8	54.0	54.2	54.4	51.8	52.0	51.9	51.4	53.6	47.0	51.9
	25	50.6	59.5	55.5	58.0	60.4	66.4	65.4	60.8	58.6	—	—	—	52.6
	26	—	—	—	—	—	—	—	—	—	34.3	32.2	29.8	
	27	32.2	37.2	41.8	40.2	40.0	40.6	38.6	37.8	35.2	36.0	37.4	41.6	38.2
	28	38.3	40.2	43.2	43.0	45.8	47.0	48.2	45.0	44.8	44.8	46.0	45.2	44.3
	29	43.7	43.8	45.0	45.0	45.0	45.8	47.2	47.8	47.6	46.2	45.4	44.8	45.6
	30	48.8	51.2	51.0	—	64.6	63.8	61.0	56.4	53.8	48.6	44.8	44.8	53.3
Hourly Means	38.6	42.9	45.6	46.1	47.8	47.5	46.3	43.7	41.3	39.2	38.2	37.9	42.9	

<sup>a</sup> Good Friday.



STANDARD THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
MAY.	1	44.2	47.4	51.0	49.2	54.0	51.6	50.2	45.6	41.0	36.4	33.2	32.0	44.6
	2	40.2	42.8	48.8	52.6	55.8	61.0	57.8	53.2	50.6	—	—	—	51.2
	3	—	—	—	—	—	—	—	—	—	49.4	51.4	50.8	45.2
	4	51.9	54.2	52.9	48.8	47.8	45.0	43.2	41.8	40.6	39.8	38.5	37.6	42.4
	5	40.6	44.0	47.8	49.0	50.8	49.0	45.4	41.8	38.6	35.0	35.0	31.4	44.5
	6	37.8	43.0	47.8	50.8	50.4	50.0	48.4	43.8	42.3	41.0	40.0	38.4	49.3
	7	42.1	47.4	53.6	56.3	50.6	56.4	54.8	48.6	46.8	47.0	44.2	44.2	45.2
	8	43.7	44.6	44.8	46.8	47.0	48.6	48.0	45.8	43.8	44.2	42.8	42.2	40.7
	9	42.0	40.8	41.4	41.6	41.4	42.0	41.4	41.5	41.8	—	—	—	52.8
	10	—	—	—	—	—	—	—	—	—	40.2	37.5	37.2	50.9
	11	45.1	53.6	58.0	56.2	54.4	56.2	60.4	55.0	52.8	50.8	47.8	43.4	49.7
	12	46.0	53.6	60.2	58.8	55.4	55.0	57.4	51.4	47.7	45.0	42.4	38.4	58.3
	13	42.1	52.2	57.2	54.8	55.8	56.7	56.2	53.0	49.8	40.8	39.2	38.8	57.4
	14	47.2	55.8	61.4	62.2	66.8	70.2	62.8	58.4	55.2	53.0	53.0	54.2	55.0
	15	52.1	53.1	57.0	61.8	63.6	68.4	65.0	59.6	55.3	51.6	50.8	50.6	66.5
	16	50.5	54.2	58.6	56.4	57.4	57.9	54.6	52.4	50.8	—	—	—	59.6
	17	—	—	—	—	—	—	—	—	—	56.4	55.8	54.6	60.9
	18	62.0	67.8	73.2	75.0	75.2	71.4	67.4	66.4	62.8	59.0	61.4	56.4	53.1
	19	57.0	61.8	62.4	61.6	63.6	66.2	62.0	56.8	58.0	56.2	55.4	54.6	52.1
	20	55.3	63.5	66.2	66.6	68.8	66.8	56.8	57.8	60.0	58.2	55.6	55.8	57.9
	21	54.6	55.0	54.4	57.4	59.6	57.4	55.8	52.4	51.8	47.8	46.0	45.2	59.0
	22	50.4	52.4	55.3	57.0	56.7	55.5	53.6	53.4	49.6	47.0	48.8	46.0	60.4
	23	52.0	61.1	54.8	57.0	61.6	63.0	60.8	56.7	55.8	—	—	—	61.8
	24	—	—	—	—	—	—	—	—	—	58.0	57.2	56.4	69.8
	25	57.4	60.0	61.0	60.6	63.3	66.2	64.8	57.6	59.4	55.6	51.9	49.8	60.3
	26	55.8	58.6	63.8	63.2	70.2	70.4	67.5	61.9	58.0	54.2	51.8	49.6	60.8
	27	56.3	64.2	64.2	66.8	70.6	71.4	70.2	61.4	56.1	55.2	53.4	52.0	61.8
	28	61.4	74.8	73.1	73.7	74.4	74.2	72.8	67.8	66.0	66.6	69.6	63.8	69.8
	29	65.6	66.0	64.4	65.0	66.2	66.6	66.0	59.2	55.0	52.0	49.8	48.2	60.3
	30	57.2	62.4	64.0	63.2	67.2	67.4	66.8	61.8	62.8	54.4	51.8	51.2	60.8
Hourly Means	50.4	55.1	57.6	58.2	59.5	60.2	58.1	54.0	52.0	49.8	48.6	47.0	54.2	
JUNE.	1	51.9	51.0	49.2	49.4	50.0	51.8	51.1	50.3	50.2	50.4	49.8	48.6	50.3
	2	49.1	49.0	55.0	54.0	54.4	54.6	51.0	50.2	—	54.4	53.2	51.4	52.4
	3	52.2	55.2	60.4	61.0	61.6	62.6	62.6	61.6	58.4	57.6	56.2	55.6	58.8
	4	56.7	58.0	65.6	67.0	67.0	66.6	64.0	58.0	54.4	53.6	50.0	47.0	59.0
	5	54.4	62.2	60.4	65.4	65.0	64.8	61.6	59.0	56.7	58.4	56.2	55.2	59.9
	6	61.0	63.8	63.6	63.5	63.0	64.6	63.4	52.6	48.6	—	—	—	55.2
	7	—	—	—	—	—	—	—	—	—	41.2	39.4	37.2	51.8
	8	47.2	55.8	56.0	59.6	58.6	58.6	57.4	53.4	44.4	45.4	43.2	41.8	55.4
	9	50.0	56.6	63.0	63.3	64.8	64.0	60.8	56.8	49.2	47.4	45.6	43.4	60.1
	10	52.9	59.5	64.5	66.4	67.0	69.0	68.2	62.4	56.4	53.6	51.2	49.8	68.2
	11	58.8	65.0	73.6	73.2	73.8	72.4	72.2	72.6	66.1	62.6	64.6	63.0	68.2
	12	66.1	72.4	76.8	76.2	71.5	71.4	68.0	63.0	62.8	64.2	64.7	60.9	68.2
	13	59.0	61.4	66.0	66.6	63.4	64.0	63.9	60.8	55.8	—	—	—	58.5
	14	—	—	—	—	—	—	—	—	—	50.8	46.0	43.8	54.6
	15	48.6	59.2	64.2	63.8	60.0	61.6	60.0	54.6	48.6	47.0	44.5	43.3	57.0
	16	49.4	59.6	62.0	63.2	62.4	64.0	65.0	58.6	52.4	50.6	47.6	49.2	59.5
	17	55.5	62.0	62.2	61.6	61.2	62.8	60.8	58.8	57.6	57.3	57.2	57.4	59.5
	18	62.3	66.4	68.0	65.8	66.0	65.2	63.0	56.8	53.0	50.6	48.8	47.8	59.5
	19	51.5	60.6	64.2	60.4	63.6	63.2	61.8	58.5	54.5	51.0	51.8	54.6	58.0
	20	57.4	68.7	73.4	76.0	76.4	71.2	68.1	62.2	56.8	—	—	—	65.6
	21	—	—	—	—	—	—	—	—	—	59.2	59.5	58.8	61.2
	22	59.1	64.6	67.8	69.2	70.4	70.0	65.4	60.3	57.4	52.8	49.4	48.4	62.3
	23	53.5	64.8	68.5	67.2	66.6	68.6	67.4	64.6	60.9	57.4	54.8	53.4	70.3
	24	61.0	65.8	73.5	76.7	75.8	74.6	74.5	71.2	72.2	69.0	66.2	63.6	66.5
	25	67.5	72.6	69.2	71.0	68.6	68.4	66.8	63.3	61.6	62.6	63.4	63.6	62.8
	26	62.1	65.2	65.2	64.8	65.4	63.6	62.2	61.8	62.1	61.0	60.2	60.0	62.0
	27	60.7	61.2	59.4	60.0	61.2	63.4	64.0	62.4	60.6	—	—	—	62.0
	28	—	—	—	—	—	—	—	—	—	65.0	64.2	62.4	70.7
	29	66.4	68.3	76.0	75.6	79.0	75.8	74.6	71.0	70.0	68.8	61.6	61.6	60.9
	30	62.5	66.2	65.9	71.1	65.9	65.3	62.0	55.8	54.2	54.4	54.0	53.0	60.3
Hourly Means	56.8	62.1	65.1	65.8	65.5	65.5	63.8	60.0	57.0	55.6	54.0	52.9	60.3	

STANDARD THERMOMETER.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16		
JULY.	1	54.3	62.0	64.2	65.8	66.4	64.4	58.9	55.2	52.2	50.8	49.8	50.4	57.9	
	2	55.3	58.8	63.2	64.2	62.6	62.0	60.6	58.6	56.2	55.2	52.0	50.0	58.2	
	3	53.2	62.5	66.4	65.2	65.4	64.6	62.0	55.4	51.0	49.2	49.0	48.8	57.7	
	4	60.3	67.8	70.0	69.6	70.4	70.2	68.4	61.1	57.0	—	—	—	65.0	
	5	—	—	—	—	—	—	—	—	—	61.0	62.0	62.4		
	6	63.4	72.4	73.6	73.7	72.0	74.4	73.6	70.2	65.6	64.4	62.0	62.0	58.3	68.6
	7	63.5	69.2	71.6	70.4	72.4	69.2	69.7	67.5	66.2	64.2	62.8	62.8	63.2	67.5
	8	64.8	68.1	71.8	65.8	66.6	66.6	65.4	65.2	65.6	62.8	64.0	63.8	63.8	65.9
	9	67.0	71.4	73.2	74.8	75.2	77.7	71.4	67.2	64.4	63.0	62.2	60.8	60.8	69.0
	10	63.5	71.5	77.2	79.0	73.4	73.6	73.0	68.6	64.6	64.0	61.2	58.4	58.4	69.0
	11	64.4	72.7	75.2	78.4	74.4	76.4	76.4	71.8	70.0	—	—	—	—	72.7
	12	—	—	—	—	—	—	—	—	—	71.6	70.8	70.0	70.0	
	13	70.0	71.5	77.6	78.8	76.8	74.8	72.0	70.4	68.8	67.6	65.6	63.6	63.6	71.4
	14	69.2	72.8	73.5	76.8	75.6	74.6	74.2	73.2	70.8	68.2	66.4	64.2	64.2	71.6
	15	66.7	74.5	76.5	76.8	76.4	76.0	75.4	70.8	70.2	65.8	64.6	63.7	63.7	71.4
	16	69.4	74.2	79.4	79.8	79.8	76.8	77.4	74.0	72.0	72.8	69.4	67.8	67.8	74.4
	17	69.7	70.8	75.4	73.4	73.2	70.2	69.6	67.6	65.2	60.2	57.6	56.0	56.0	67.4
	18	59.2	64.1	70.2	74.2	73.6	73.7	73.2	65.8	60.8	—	—	—	—	64.5
	19	—	—	—	—	—	—	—	—	—	54.3	52.8	52.0	52.0	
	20	53.7	62.9	64.5	66.0	65.4	64.6	68.0	63.2	59.0	56.8	56.6	55.6	55.6	61.3
	21	59.5	69.2	72.2	73.7	72.4	73.6	70.0	64.0	59.6	58.4	55.9	54.6	54.6	65.2
	22	57.5	66.1	72.3	72.9	73.2	73.6	67.8	66.5	66.3	66.8	66.0	64.0	64.0	67.7
	23	63.8	63.4	64.8	63.4	64.8	65.6	68.2	65.4	64.2	63.0	63.0	61.2	61.2	64.2
	24	60.0	64.1	71.0	72.4	74.4	73.8	70.6	64.8	62.4	58.8	58.4	57.0	57.0	65.6
	25	55.5	65.9	70.9	71.4	70.9	69.0	67.4	63.4	60.6	—	—	—	—	65.7
	26	—	—	—	—	—	—	—	—	—	65.0	64.2	64.6	64.6	
	27	65.9	70.0	70.8	72.9	73.2	72.8	70.8	68.2	67.6	67.6	65.0	64.2	64.2	69.1
	28	67.1	69.8	72.2	70.8	71.7	72.0	66.4	64.8	61.4	58.8	62.8	60.6	60.6	66.5
	29	61.0	66.2	72.0	75.8	75.2	74.4	71.0	65.2	62.0	62.0	59.0	58.8	58.8	66.9
	30	58.7	67.9	68.5	70.9	72.8	71.7	69.2	64.4	64.4	62.0	61.4	59.6	59.6	66.0
	31	62.5	68.6	71.2	72.8	71.6	71.7	69.0	67.4	64.6	64.0	64.6	62.8	62.8	67.6
Hourly Means		62.2	68.1	71.5	72.2	71.8	71.4	69.6	65.9	63.4	62.2	61.1	59.9	66.6	
AUGUST.	1	62.5	70.9	71.6	71.0	70.2	72.0	71.9	67.0	64.2	—	—	—	68.8	
	2	—	—	—	—	—	—	—	—	—	69.0	67.5	68.0		
	3	67.3	70.2	73.1	79.9	80.4	77.7	72.8	65.6	59.2	59.8	57.6	58.7	68.5	
	4	64.8	66.3	67.2	66.4	67.6	70.0	66.4	58.5	54.6	56.2	55.8	51.8	62.1	
	5	55.0	62.9	69.6	73.0	73.6	70.8	68.4	64.0	61.3	60.7	59.4	57.2	64.6	
	6	57.1	64.7	72.3	70.2	69.9	68.7	67.1	60.8	57.4	58.0	55.7	53.4	62.9	
	7	52.3	59.7	67.2	69.6	65.2	69.4	66.4	60.7	60.0	59.8	59.0	58.0	62.2	
	8	57.4	60.1	63.1	66.4	67.6	67.0	63.0	57.0	53.8	—	—	—	58.8	
	9	—	—	—	—	—	—	—	—	—	51.3	50.2	49.2		
	10	52.7	58.0	61.8	61.2	64.4	62.6	60.6	60.7	60.8	61.2	59.8	60.2	60.3	
	11	60.5	64.4	69.0	71.0	72.3	70.0	66.2	65.6	64.2	62.4	61.4	62.6	65.8	
	12	63.4	64.0	65.8	65.8	63.1	61.3	61.4	57.5	54.8	53.2	54.3	52.9	59.8	
	13	55.6	63.9	67.2	66.4	66.8	68.0	65.0	56.8	53.8	52.4	54.2	55.4	60.5	
	14	57.1	62.7	63.4	68.5	68.2	69.6	65.0	57.6	50.0	48.4	47.9	48.8	58.9	
	15	49.5	57.0	62.1	64.4	64.9	65.3	63.4	57.0	53.0	—	—	—	59.1	
	16	—	—	—	—	—	—	—	—	—	57.6	57.8	57.4		
	17	60.0	69.9	72.7	73.6	72.8	72.0	70.8	68.0	65.2	60.2	64.0	64.5	67.8	
	18	65.1	69.0	74.8	72.5	74.4	72.6	71.2	70.0	67.6	64.6	63.1	62.7	69.0	
	19	63.0	73.2	74.2	75.0	76.0	76.4	73.9	68.8	67.0	65.0	62.8	62.2	69.8	
	20	64.9	70.0	77.7	77.9	77.2	77.2	74.6	71.6	68.8	67.1	65.0	65.6	71.5	
	21	65.0	73.5	76.5	79.2	79.1	77.6	76.0	74.2	71.2	68.8	66.3	65.1	72.7	
	22	67.4	74.5	78.2	80.4	80.2	79.2	75.9	72.5	67.6	—	—	—	71.8	
	23	—	—	—	—	—	—	—	—	—	64.0	61.4	60.0		
	24	60.0	67.8	74.3	73.0	66.0	67.7	66.9	62.5	58.8	54.8	54.1	50.8	63.0	
	25	51.0	60.7	68.4	69.4	68.8	66.6	65.2	56.8	53.5	51.8	52.4	50.0	59.5	
	26	54.5	63.2	69.7	68.7	67.6	68.0	66.0	65.8	65.8	62.8	61.3	61.3	64.5	
	27	62.7	66.6	70.0	68.9	67.5	65.8	65.5	64.5	64.6	65.8	66.2	66.5	66.2	
	28	67.0	69.1	72.4	73.6	74.2	74.4	73.0	69.8	69.6	70.2	68.6	67.0	70.7	
	29	68.2	70.2	72.0	72.6	71.4	71.8	69.8	69.4	70.0	—	—	—	68.5	
	30	—	—	—	—	—	—	—	—	—	63.5	62.4	60.8		
	31	62.1	65.2	67.7	69.4	70.8	67.0	60.3	57.8	55.3	55.9	55.4	54.2	61.8	
Hourly Means		60.2	66.0	70.0	71.0	70.7	70.3	67.9	63.8	61.2	60.2	59.4	58.6	64.9	

STANDARD THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
SEPTEMBER.	1	54.0	59.9	66.8	69.5	65.9	65.0	61.2	59.6	58.6	58.6	58.2	58.3	61.3
	2	59.0	61.5	64.3	67.4	65.2	63.8	59.2	55.0	50.8	48.2	45.4	44.2	57.0
	3	46.2	54.7	62.8	64.6	60.6	58.7	59.2	52.8	50.0	—	—	—	55.0
	4 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	—	—	
	5 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	—	—	61.0
	6	—	—	—	—	—	—	—	—	—	51.6	50.0	48.4	
	7	47.8	60.0	63.6	67.7	70.3	70.7	65.3	63.7	56.9	54.9	54.5	56.8	61.0
	8	57.4	61.7	63.0	63.3	62.9	64.2	63.6	64.5	63.2	61.4	56.8	55.2	61.4
	9	52.8	63.1	66.8	69.0	71.6	69.2	61.7	61.8	59.5	53.6	49.7	47.6	60.5
	10	47.8	56.8	61.8	62.0	65.4	64.4	58.6	55.0	54.2	52.0	52.0	50.5	56.7
	11	49.6	52.4	53.1	55.0	56.1	55.6	51.7	44.4	42.2	39.8	38.2	36.6	47.9
	12	37.7	49.8	54.0	56.2	56.0	59.0	56.3	51.8	51.4	—	—	—	51.9
	13	—	—	—	—	—	—	—	—	—	50.8	52.4	47.4	
	14	45.4	59.6	64.8	66.1	68.8	69.8	63.8	59.8	59.8	57.6	56.6	56.0	60.7
	15	56.4	62.0	68.8	68.6	71.6	69.7	67.4	60.6	54.6	50.5	49.0	48.4	60.6
	16	49.6	56.2	62.2	65.0	69.6	68.2	62.0	56.6	54.6	56.5	58.0	59.6	59.8
	17	60.2	60.4	60.2	59.6	58.8	58.2	55.6	51.2	45.8	44.6	40.8	41.8	53.1
	18	44.3	48.6	51.8	53.6	52.7	53.2	52.4	49.8	49.0	47.2	47.0	45.8	49.6
	19	45.8	48.6	55.8	59.7	60.6	61.5	57.6	55.6	55.0	—	—	—	51.3
	20	—	—	—	—	—	—	—	—	—	40.2	38.0	37.6	
	21	37.3	40.6	42.8	44.6	44.2	45.8	42.1	38.8	33.0	32.4	34.2	31.0	38.9
	22	29.8	38.5	45.7	53.2	56.3	56.2	52.2	48.1	50.0	46.4	44.6	40.3	46.8
	23	40.6	52.4	56.0	59.8	65.6	65.8	58.6	52.8	49.2	46.8	47.8	48.0	53.6
	24	44.2	51.2	54.6	56.5	60.8	58.5	54.0	50.0	47.2	46.7	45.0	45.6	51.2
	25	45.4	52.5	58.0	60.7	62.8	62.6	55.6	51.0	51.2	49.4	47.4	46.5	53.6
	26	46.6	56.7	61.8	64.8	65.2	63.2	60.7	58.4	59.8	—	—	—	55.7
	27	—	—	—	—	—	—	—	—	—	44.4	43.8	43.4	
	28	40.4	49.4	53.3	57.4	60.6	56.1	51.7	51.7	47.5	44.2	41.5	42.0	49.6
	29	42.4	48.8	55.3	59.2	61.3	57.8	55.0	54.6	53.0	52.6	52.8	53.4	53.8
	30	53.2	53.5	54.6	55.8	55.2	54.4	54.2	54.0	54.5	54.3	54.0	53.6	54.3
Hourly Means	47.2	54.1	58.4	60.8	62.0	61.3	57.5	54.2	52.1	49.4	48.2	47.4	54.4	
OCTOBER.	1	52.7	52.5	53.4	53.0	54.0	53.8	53.0	52.8	53.4	—	—	56.0	53.5
	2	56.0	56.9	59.0	62.0	61.7	63.8	62.8	62.1	61.2	61.6	59.8	51.4	59.9
	3	43.1	42.4	44.2	44.4	48.0	48.5	47.4	46.0	45.4	—	—	—	46.9
	4	—	—	—	—	—	—	—	—	—	53.1	53.1	47.4	
	5	47.3	55.4	59.9	62.7	64.2	64.6	59.7	55.8	50.2	45.8	46.8	44.0	54.7
	6	41.8	50.4	55.8	67.0	69.0	64.7	57.2	50.2	41.6	36.6	36.0	36.0	50.5
	7	34.4	45.7	53.0	56.4	58.6	57.0	49.4	49.8	47.8	46.2	44.4	41.9	48.7
	8	41.6	52.2	56.7	60.2	67.2	63.4	54.8	54.5	58.5	54.6	52.4	48.2	55.4
	9	44.3	43.4	44.6	45.8	46.2	46.8	44.8	43.4	41.8	41.2	39.0	37.2	43.2
	10	36.4	40.8	47.0	50.0	49.7	49.4	49.2	49.4	49.8	—	—	—	47.8
	11	—	—	—	—	—	—	—	—	—	53.0	50.2	48.4	
	12	47.2	46.7	47.6	49.6	50.0	49.0	42.8	42.5	34.0	32.0	31.4	30.5	41.9
	13	29.7	39.7	46.8	51.2	54.9	56.8	48.9	52.0	51.2	48.6	42.7	50.2	47.7
	14	48.2	50.9	52.9	55.6	56.2	54.2	46.6	43.9	39.0	37.0	29.6	31.4	45.4
	15	30.0	39.4	44.6	47.2	47.8	45.9	39.8	36.4	32.7	32.0	31.6	29.8	38.1
	16	29.2	34.7	39.1	47.4	43.6	43.6	38.6	39.4	40.6	39.6	40.6	41.5	39.8
	17	41.8	42.5	41.9	42.0	44.2	44.3	45.2	46.2	47.0	—	—	—	46.8
	18	—	—	—	—	—	—	—	—	—	55.4	55.5	56.0	
	19	55.0	55.9	61.2	60.8	58.5	58.4	57.4	53.6	44.6	41.8	39.5	38.3	52.1
	20	37.2	42.5	47.8	50.3	53.4	54.2	45.0	44.0	43.8	39.6	42.2	41.0	45.1
	21	38.3	44.8	48.7	49.2	46.0	43.2	41.6	41.5	40.5	40.5	39.7	35.4	42.4
	22	33.8	38.2	44.4	49.3	50.6	49.2	47.8	47.6	47.6	49.8	49.0	50.4	46.5
	23	50.2	51.9	56.9	56.8	54.2	46.8	40.5	38.4	36.0	36.2	36.8	35.6	45.0
	24	31.9	35.8	39.8	41.4	41.0	39.6	35.8	35.4	33.1	—	—	—	34.5
	25	—	—	—	—	—	—	—	—	—	26.1	25.0	29.0	
	26	30.4	31.4	33.8	35.8	36.0	34.6	30.6	28.4	26.2	24.4	26.2	27.2	30.4
	27	28.7	30.6	34.4	36.8	37.8	38.0	38.2	36.2	39.2	42.4	40.0	39.4	36.8
	28	38.6	39.4	41.4	42.2	44.6	44.8	36.5	33.4	33.2	33.0	33.6	35.2	38.0
	29	36.2	39.2	43.2	45.5	45.9	43.2	42.0	40.8	40.2	40.4	39.8	38.8	41.3
	30	38.7	39.4	40.6	40.4	39.8	39.0	38.0	37.2	36.4	34.2	34.4	32.8	37.6
	31	33.2	34.5	39.5	45.4	45.6	44.9	42.6	39.6	33.7	—	—	—	38.1
	32	—	—	—	—	—	—	—	—	—	33.8	33.2	30.8	
Hourly Means	39.8	43.6	47.3	49.9	50.7	49.7	45.8	44.5	42.5	41.5	40.5	40.1	44.8	

\* The instruments were removed from the temporary to the permanent Observatory on the 4th and 5th of September.

STANDARD THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
NOVEMBER.	2	30.7	36.5	45.0	48.8	53.8	52.4	41.0	38.3	36.0	33.4	32.4	32.0	40.0
	3	31.6	36.4	47.4	50.8	54.8	52.7	44.3	40.8	43.2	45.0	43.6	40.4	44.2
	4	39.6	41.6	49.7	53.0	54.7	53.1	49.8	47.8	45.3	45.8	45.4	44.4	47.5
	5	43.9	43.9	45.4	47.8	49.6	49.2	46.8	45.8	41.0	39.0	37.4	34.4	43.7
	6	31.7	36.8	44.8	46.4	46.9	47.2	35.8	33.0	33.8	31.8	38.0	42.2	39.0
	7	42.3	41.2	40.8	44.3	45.1	43.6	43.8	46.1	47.2	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	46.0	45.4	45.0	44.2
	9	45.4	46.2	48.8	47.8	47.2	45.8	43.9	43.6	42.6	41.4	40.0	38.6	44.3
	10	37.3	36.5	38.8	42.5	45.8	44.6	38.8	36.2	35.0	29.6	30.4	30.4	37.2
	11	29.4	32.2	37.8	38.8	39.2	39.0	39.0	39.5	40.2	40.6	41.2	40.8	38.1
	12	40.6	41.8	43.6	48.0	51.2	47.4	46.7	44.0	42.8	38.2	35.4	35.8	42.9
	13	32.1	35.6	39.9	44.2	44.7	41.2	36.5	32.4	31.6	28.2	27.4	27.9	35.1
	14	29.0	30.1	34.8	36.0	33.8	33.6	34.6	36.1	39.0	—	—	—	—
	15	—	—	—	—	—	—	—	—	—	27.8	26.4	26.4	32.3
	16	25.3	25.4	30.7	32.2	32.3	30.4	28.5	26.8	27.2	27.6	28.8	28.2	28.6
	17	28.4	28.9	30.6	30.8	32.4	30.4	28.6	28.3	27.6	26.5	25.2	24.8	28.5
	18	22.3	28.4	31.0	33.8	36.6	33.5	28.2	28.4	26.6	26.2	25.5	28.0	29.0
	19	29.5	30.1	31.7	33.6	35.4	35.4	33.8	31.0	31.9	31.5	30.8	30.5	32.1
	20	29.7	29.7	31.8	34.6	34.5	34.2	32.4	31.8	31.4	31.5	31.2	30.5	31.9
	21	30.2	29.9	30.4	30.2	29.2	28.5	27.5	27.3	27.3	—	—	—	—
	22	—	—	—	—	—	—	—	—	—	31.4	32.2	30.2	29.5
	23	31.7	31.8	32.6	34.6	34.6	34.2	35.9	36.0	36.0	34.0	31.4	33.4	33.8
	24	33.6	33.4	36.3	37.7	38.2	36.5	35.4	34.2	33.8	32.4	31.0	30.4	34.4
	25	30.4	31.2	34.5	37.9	37.4	35.4	34.0	32.6	31.4	30.2	29.4	29.3	32.8
	26	29.1	29.2	—	—	—	28.6	25.8	24.4	22.2	22.8	22.4	24.8	—
	27	23.2	21.2	29.0	32.6	32.6	31.4	30.0	31.2	31.0	30.8	32.4	32.5	29.8
	28	33.8	35.2	37.4	39.8	40.4	40.0	38.8	38.1	34.9	—	—	—	—
	29	—	—	—	—	—	—	—	—	—	42.6	39.4	36.4	38.1
	30	33.3	34.6	38.6	32.4	28.6	23.2	21.3	20.8	18.4	17.2	16.0	16.6	25.1
	Hourly Means	32.6	33.9	38.0	39.9	40.8	38.9	36.0	35.0	34.3	33.3	32.8	32.6	35.6
DECEMBER.	1	15.8	17.5	22.2	21.2	21.4	20.2	14.8	12.0	15.8	16.8	16.2	17.8	17.6
	2	17.1	22.2	30.0	33.1	35.8	36.4	36.0	33.9	33.4	32.4	30.5	27.5	30.7
	3	25.6	18.6	20.8	21.4	21.8	20.6	14.6	11.4	10.8	11.6	11.0	10.0	16.6
	4	11.9	12.4	19.3	23.4	26.0	24.2	23.2	23.1	22.4	22.6	21.2	19.8	20.8
	5	17.4	15.4	17.0	20.2	21.6	20.0	17.5	17.4	15.9	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	21.4	20.8	21.2	18.8
	7	21.6	22.2	24.7	26.2	25.6	25.8	27.0	27.6	28.7	30.2	31.6	31.6	26.9
	8	32.1	33.5	35.0	36.2	37.5	37.2	37.4	37.2	36.8	37.3	36.6	37.0	36.1
	9	36.6	37.7	38.6	38.6	38.6	38.4	38.0	38.6	39.2	39.6	39.4	39.8	38.6
	10	37.6	35.1	39.2	41.3	41.3	38.8	35.4	33.0	34.0	30.4	31.5	29.5	35.6
	11	25.9	24.3	30.2	32.2	33.8	31.4	27.2	25.0	25.7	32.0	33.6	34.6	29.6
	12	35.0	32.9	34.2	35.4	35.3	35.4	35.4	35.6	36.0	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	33.8	33.6	34.2	34.7
	14	35.1	35.4	35.0	35.6	36.8	37.2	35.3	35.0	33.5	31.8	31.0	31.0	34.4
	15	30.9	32.8	33.2	33.4	34.8	35.2	36.0	36.4	34.7	32.8	29.8	29.3	33.3
	16	29.8	29.1	31.5	32.4	31.7	28.8	27.0	25.6	24.5	23.6	21.0	20.8	27.1
	17	21.4	20.3	23.4	25.2	25.6	20.0	18.4	17.2	16.4	16.0	10.6	7.1	18.5
	18	3.3	2.3	7.4	10.4	16.5	14.2	11.2	13.0	12.8	15.0	16.4	19.0	11.8
	19	20.7	20.0	23.8	26.8	27.4	26.4	23.4	22.0	22.4	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	22.4	24.6	23.4	23.6
	21	21.4	21.4	22.2	24.0	25.0	25.6	27.4	28.6	28.6	29.4	28.7	30.8	26.1
	22	32.4	32.7	31.6	30.7	26.7	21.8	19.2	19.6	18.2	16.8	14.8	9.8	22.8
	23	11.5	15.4	22.4	28.4	31.4	30.4	31.7	31.4	29.5	24.6	19.4	16.6	24.4
	24	15.8	13.3	13.2	15.0	17.0	16.0	14.2	5.6	0.0	—	—	—	—
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	22.8	24.4	26.2	15.3
	26	24.6	21.6	19.9	18.6	19.4	15.7	13.4	10.4	9.4	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	1.8	2.2	8.2	13.8
	28	16.0	20.5	25.6	30.2	32.4	31.2	28.4	29.2	27.6	28.5	27.0	25.8	26.9
	29	27.9	28.2	30.8	31.5	30.6	31.0	30.0	27.8	26.2	24.8	22.8	20.4	27.7
	30	17.8	16.7	17.3	16.7	16.4	14.6	14.6	12.8	12.6	13.4	13.4	13.4	15.0
	31	13.8	14.0	15.2	19.4	22.6	22.0	19.7	19.4	21.0	20.4	20.5	9.6	18.1
Hourly Means	23.0	22.9	25.5	27.2	28.2	26.9	25.2	24.2	23.7	24.3	23.6	22.9	24.8	

<sup>a</sup> Christmas Day.

WET THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
MARCH.	2	38.5	27.3	40.7	43.9	39.7	38.4	37.4	33.8	34.0	35.0	35.7	36.8	36.8
	3	37.8	38.0	37.4	40.5	42.7	42.1	39.9	37.8	37.6	35.8	36.0	40.0	38.8
	4	40.0	45.5	45.2	46.4	47.9	43.6	39.4	37.2	35.6	28.7	26.7	25.3	38.5
	5	25.1	29.0	33.0	39.2	37.9	37.2	37.6	32.8	29.7	29.9	29.8	29.7	32.6
	6	29.7	37.8	45.5	49.7	51.2	46.7	42.3	38.4	34.6	33.8	35.1	34.9	40.0
	7	33.2	26.3	25.1	24.3	25.6	22.7	19.2	18.4	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	25.6
	9	—	—	—	—	—	—	—	—	—	30.8	31.4	24.9	—
	10	16.8	17.8	18.8	21.5	22.7	19.6	14.9	13.0	12.6	11.6	11.0	9.6	15.8
	11	9.4	20.1	23.1	26.7	29.3	29.3	27.7	24.9	20.7	18.8	20.0	—	22.7
	12	21.1	27.1	33.1	34.1	35.8	32.0	31.4	29.7	28.8	27.3	26.2	25.0	29.3
	13	23.3	28.8	34.4	38.4	39.1	39.0	36.2	30.7	—	32.8	31.6	30.5	33.2
	14	29.7	—	36.4	36.6	37.0	34.4	32.2	32.4	33.2	—	—	—	—
	15	—	—	—	—	—	—	—	—	—	25.9	24.1	22.3	31.4
	16	21.0	33.0	37.5	40.7	35.6	35.2	33.4	33.2	32.2	31.8	31.6	31.7	33.1
	17	31.4	33.0	37.2	35.8	36.4	36.8	34.8	34.9	33.6	31.2	29.7	29.1	33.7
	18	28.8	33.7	—	42.7	42.5	42.0	38.1	34.2	32.6	31.6	32.7	33.7	35.7
	19	35.6	36.4	36.6	37.4	39.4	—	39.0	37.2	37.4	37.4	37.8	39.1	37.6
	20	36.6	38.6	40.7	39.6	40.9	38.2	33.1	29.9	26.5	24.5	24.7	24.5	33.2
	21	22.5	26.9	26.3	30.6	31.4	30.8	27.4	25.3	24.3	—	—	—	—
	22	—	—	—	—	—	—	—	—	—	29.9	28.7	27.9	27.7
	23	29.1	31.0	33.0	35.4	35.0	32.6	31.1	33.4	33.8	34.0	33.6	34.0	33.0
	24	31.8	30.9	30.3	31.2	31.0	29.9	28.1	27.7	27.5	27.3	26.9	26.7	28.9
	25	24.3	25.7	28.9	30.8	36.2	30.8	25.3	24.1	23.3	16.9	20.5	15.1	25.2
	26	13.6	28.9	29.9	33.8	34.6	33.6	33.8	33.8	33.8	33.0	33.6	31.4	31.1
	27	32.4	34.8	38.2	38.0	38.8	37.0	36.1	35.0	34.6	34.8	35.8	36.4	36.0
	28	35.7	37.0	38.0	37.8	38.8	38.4	38.8	38.6	37.8	—	—	—	—
	29	—	—	—	—	—	—	—	—	—	37.0	37.0	36.2	37.6
	30	33.6	33.0	35.2	36.0	36.6	37.4	33.2	32.6	30.3	29.9	29.1	26.9	32.8
	31	26.7	28.5	31.4	31.6	33.2	33.2	30.3	28.3	26.9	27.2	27.5	27.4	29.3
	Hourly Means	28.3	31.2	33.9	36.1	36.7	35.0	32.8	31.1	30.5	29.5	29.5	29.1	32.0
APRIL.	1	27.7	30.1	31.6	32.2	32.6	33.2	30.8	29.6	27.7	25.9	24.7	24.5	29.2
	2	24.1	30.4	32.6	35.6	37.4	36.8	34.8	35.8	34.7	33.2	33.4	34.4	33.6
	3	35.6	38.3	41.8	42.9	44.1	44.3	42.7	43.3	48.7	44.7	—	35.6	42.0
	4	36.8	39.8	41.7	41.7	39.6	37.4	36.6	33.8	32.0	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	27.5	26.5	26.7	35.0
	6	28.4	31.8	32.7	34.9	34.9	33.0	29.7	26.7	25.5	25.1	24.7	24.0	29.3
	7	24.7	29.9	33.6	30.4	31.6	31.4	29.9	26.1	24.9	22.9	21.7	24.3	27.6
	8	25.2	34.4	35.6	32.6	31.0	31.0	30.4	27.7	26.4	25.6	24.7	25.1	29.1
	9	28.5	35.8	37.0	37.2	38.8	38.2	37.8	37.0	36.8	33.2	32.2	32.6	35.4
	10	35.1	46.7	49.1	48.1	50.8	50.6	53.2	52.4	49.7	46.1	46.7	45.5	47.8
	11	44.7	44.7	44.9	45.9	49.3	44.5	43.9	44.9	43.7	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	32.8	32.4	31.6	41.9
	13	33.7	32.4	40.3	39.4	40.7	40.9	38.8	37.6	36.6	33.8	32.6	32.2	36.6
	14	34.0	37.2	39.0	40.2	—	40.5	—	37.2	35.8	36.7	38.0	40.5	37.9
	15	39.7	39.0	42.3	45.0	45.7	42.1	41.5	40.2	36.8	34.0	33.0	31.0	39.2
	16	32.1	42.1	42.9	45.3	47.1	45.7	45.9	45.5	44.3	—	—	—	—
	17 <sup>a</sup>	—	—	—	—	—	—	—	—	—	56.4	57.0	51.8	46.3
	18	52.9	46.3	44.3	42.5	45.7	42.3	42.5	35.4	33.0	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	36.7	36.8	32.9	41.0
	20	31.6	36.6	36.2	39.6	42.7	39.2	42.8	35.2	30.3	29.5	27.7	32.4	35.3
	21	35.0	38.4	40.2	40.3	41.7	42.5	41.5	39.6	36.6	36.6	39.0	41.3	39.4
	22	43.5	46.7	47.3	49.3	50.8	52.4	55.2	54.2	53.8	56.4	53.9	49.3	51.1
	23	56.2	56.0	57.6	55.4	55.9	55.1	57.0	49.7	47.9	43.1	41.1	40.2	51.3
	24	40.7	45.2	45.7	45.1	45.9	48.1	42.9	45.5	43.7	44.5	43.9	43.3	44.5
	25	46.9	53.7	51.2	54.3	57.2	61.2	60.0	58.2	57.0	—	—	—	—
	26	—	—	—	—	—	—	—	—	—	32.7	28.9	29.1	49.2
	27	30.9	32.6	38.4	37.4	37.2	37.2	35.2	34.8	32.4	33.0	34.2	33.8	34.8
	28	36.1	37.6	39.8	39.2	40.7	42.5	43.3	42.1	43.5	44.1	45.5	44.9	41.6
	29	43.5	43.3	44.7	44.8	44.9	45.5	47.0	47.7	47.5	46.1	45.1	44.5	45.4
	30	48.0	49.1	48.7	—	54.8	51.0	47.7	45.9	46.3	45.8	43.5	43.7	47.7
Hourly Means	36.6	39.9	41.6	41.6	43.4	42.7	42.1	40.2	39.0	37.1	36.1	35.8	39.7	

<sup>a</sup> Good Friday.

WET THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
MAY.	1	42.4	45.7	47.9	45.8	46.5	42.3	40.3	37.6	35.4	33.4	31.1	30.1	39.9
	2	37.7	39.2	43.5	46.7	49.5	50.8	50.0	46.7	45.3	—	—	—	46.7
	3	—	—	—	—	—	—	—	—	—	49.3	51.4	50.8	—
	4	51.8	54.0	50.2	46.5	45.1	41.7	39.8	38.6	37.4	36.2	35.0	33.6	42.5
	5	37.0	39.8	41.7	42.1	42.9	40.0	38.2	35.8	34.2	32.6	32.6	30.1	37.2
	6	35.2	37.0	40.3	43.3	41.3	41.5	40.5	37.8	36.1	35.8	36.0	34.6	38.3
	7	37.7	41.1	45.0	47.0	45.3	47.7	46.7	43.1	44.5	42.7	41.1	39.9	43.2
	8	40.4	40.2	40.9	42.3	42.1	43.5	43.1	44.1	42.7	44.1	42.5	41.7	42.3
	9	41.3	40.8	40.2	40.7	40.9	41.5	40.7	40.9	41.3	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	38.6	36.4	35.8	40.0
	11	42.6	46.1	47.3	50.6	49.3	50.2	48.1	45.1	44.1	42.7	41.9	39.2	45.6
	12	40.1	44.9	48.3	46.9	48.5	47.7	43.9	41.7	40.0	38.8	35.6	35.0	42.6
	13	37.1	43.7	48.6	47.3	47.7	47.9	48.9	46.9	45.3	39.0	37.6	37.4	43.9
	14	44.7	50.8	53.8	53.8	57.2	58.6	56.6	53.4	51.6	50.8	51.2	52.4	52.9
	15	50.9	52.1	55.2	59.8	59.4	55.8	52.4	50.4	50.1	48.5	47.7	46.7	52.4
	16	47.4	49.3	49.9	49.3	48.3	50.1	46.1	45.5	46.3	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	55.4	54.4	53.4	49.6
	18	59.0	60.6	65.6	65.6	65.0	63.4	60.2	60.4	59.4	56.8	59.0	55.2	60.8
	19	54.2	58.2	58.8	58.4	58.4	59.4	55.2	51.6	52.4	52.0	51.6	51.6	55.1
	20	53.4	58.1	60.4	61.6	62.6	61.2	54.0	56.5	59.6	57.6	55.6	55.8	58.0
	21	54.6	55.0	54.4	57.2	57.0	54.6	52.2	51.8	50.4	47.5	45.7	44.7	52.1
	22	49.3	50.0	51.8	53.0	53.0	51.8	50.4	50.0	48.3	46.5	48.1	45.5	49.8
	23	50.0	56.1	52.2	54.2	56.2	56.2	56.4	53.8	53.4	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	56.6	56.0	55.4	54.7
	25	56.0	57.6	58.2	57.6	59.2	60.4	59.4	55.6	56.6	54.4	51.1	49.4	56.3
	26	54.3	55.6	60.6	59.4	60.6	60.6	58.4	57.0	54.6	52.8	50.8	47.5	56.0
	27	54.7	59.3	59.6	61.4	62.8	61.6	62.2	57.6	53.8	53.6	52.0	51.0	57.5
	28	58.2	65.4	63.4	64.0	63.8	64.1	64.8	63.6	60.0	59.8	64.2	60.1	62.6
	29	60.3	59.3	54.9	56.6	56.6	58.0	54.8	55.0	52.0	49.8	48.5	46.8	54.4
	30	54.2	54.4	56.0	58.8	60.1	58.6	58.6	56.0	56.2	52.6	49.1	47.8	55.2
Hourly Means	47.8	50.6	51.9	52.7	53.0	52.7	50.8	49.1	48.0	47.2	46.4	45.1	49.6	
JUNE.	1	47.1	47.5	48.3	47.9	48.3	48.9	48.9	48.5	48.1	47.1	47.5	45.9	47.8
	2	46.3	46.3	52.2	51.4	53.0	54.2	50.6	50.2	—	54.5	53.2	51.0	—
	3	52.0	54.8	59.0	59.3	59.5	59.6	59.6	59.0	56.8	56.8	55.6	55.0	57.2
	4	56.2	57.2	61.8	61.2	59.4	58.4	57.0	53.3	51.8	51.4	48.9	46.5	55.2
	5	51.5	57.0	56.6	59.4	60.0	60.0	57.8	56.0	54.6	55.6	54.6	54.0	56.4
	6	57.0	59.6	59.4	60.2	60.2	61.2	60.6	50.4	46.7	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	40.2	38.6	36.8	52.6
	8	44.4	46.4	48.9	51.8	50.2	50.8	49.7	48.1	44.4	44.3	42.5	41.3	46.9
	9	47.8	51.6	56.1	56.2	55.2	55.2	53.8	51.8	47.7	46.1	44.7	42.9	50.7
	10	50.7	52.7	56.9	58.4	60.0	60.2	60.2	58.3	53.6	51.4	49.9	49.1	55.1
	11	55.0	58.2	65.8	65.8	66.0	66.0	67.6	67.6	63.6	61.3	63.8	62.0	63.5
	12	64.1	67.4	69.2	70.0	67.2	65.6	62.8	61.8	60.6	63.2	64.0	59.4	64.6
	13	56.5	57.8	58.8	60.0	59.0	58.6	58.4	55.4	52.6	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	45.1	41.1	40.2	53.6
	15	43.7	50.4	51.8	54.2	53.1	54.0	53.0	51.2	46.5	44.5	43.1	42.3	49.0
	16	45.5	50.6	54.8	56.2	56.6	58.0	59.4	56.2	50.8	49.1	46.5	47.5	52.6
	17	52.6	56.0	56.0	55.4	55.0	56.0	54.6	52.8	54.4	53.2	56.0	56.6	54.9
	18	58.7	61.0	59.4	57.9	56.4	61.4	54.6	50.7	48.3	47.3	46.4	45.5	54.0
	19	47.7	51.6	54.8	58.8	53.8	56.2	59.8	51.6	49.8	47.5	47.9	49.7	52.4
	20	51.5	60.4	60.8	62.6	61.6	62.2	59.7	57.0	54.4	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	58.8	58.4	57.4	58.7
	22	58.4	59.2	61.6	62.0	61.0	59.0	59.8	57.5	53.6	51.2	48.7	47.7	56.6
	23	50.7	56.0	58.9	66.6	61.8	59.6	61.2	60.0	58.4	55.8	53.8	53.0	58.0
	24	56.9	60.0	67.1	69.0	68.8	68.0	69.2	66.3	66.2	64.0	63.0	61.1	65.0
	25	62.4	62.2	60.4	60.0	59.8	60.0	57.8	55.8	54.8	55.0	53.0	52.4	57.8
	26	53.7	57.0	58.8	60.4	62.6	63.0	61.6	60.6	60.3	59.3	58.6	59.0	59.6
	27	—	60.2	59.4	59.4	59.8	61.0	63.2	61.4	60.0	—	—	—	—
	28	60.2	—	—	—	—	—	—	—	—	64.4	63.2	61.6	61.2
	29	65.3	66.0	71.8	71.0	74.0	70.6	69.6	67.6	67.0	66.1	60.6	60.4	67.5
	30	58.6	61.0	62.0	63.3	59.4	58.7	57.2	52.0	52.6	51.8	52.4	50.8	56.6
Hourly Means	53.6	56.5	58.9	59.9	59.2	59.4	58.8	56.2	54.3	53.3	52.1	51.1	56.1	

WET THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
JULY.	1	50.0	55.0	54.8	53.8	55.2	53.2	50.6	47.8	46.7	45.7	46.5	47.9	50.6
	2	50.4	52.6	54.4	56.6	55.6	54.4	55.6	53.0	50.5	50.2	47.7	47.1	52.3
	3	47.9	54.7	61.2	58.8	57.6	54.8	55.0	52.2	49.1	47.9	47.5	47.4	52.8
	4	47.8	54.6	58.8	57.6	60.4	60.2	59.8	57.2	53.3	—	—	—	56.9
	5	—	—	—	—	—	—	—	—	—	57.0	58.2	57.6	63.1
	6	59.0	60.6	64.6	66.0	68.3	72.6	66.0	62.2	60.8	60.2	59.8	56.8	62.0
	7	60.2	62.8	64.8	64.2	64.2	63.4	61.1	60.4	61.4	60.8	60.2	60.2	64.0
	8	62.6	63.9	65.0	63.8	65.2	64.6	64.4	64.2	64.6	62.2	63.8	63.4	65.8
	9	65.0 <sup>a</sup>	68.2	68.8	69.4	71.0	69.5	67.2	65.2	62.8	61.8	61.0	59.6	63.6
	10	60.0	63.4	66.8	67.0	67.8	67.6	67.4	65.7	61.4	59.6	58.8	57.4	—
	11	62.2	67.7	69.0	71.4	69.4	69.6	69.8	69.6	68.0	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	—	—	—	—
	13	—	70.7	73.0	72.0	70.0	71.0	69.0	68.8	64.8	64.6	63.4	62.2	—
	14	66.4	64.4	65.7	70.0	68.6	69.4	69.0	68.4	64.8	65.0	64.2	61.4	66.4
	15	61.5	66.1	69.8	69.0	67.8	70.8	70.8	66.6	66.8	64.6	63.4	62.8	66.7
	16	66.2	67.2	72.2	74.2	72.4	70.0	73.4	69.6	69.2	69.0	66.6	66.2	69.7
	17	67.1	68.7	71.8	71.6	71.6	68.8	68.0	66.0	64.0	59.8	57.0	55.6	65.8
	18	57.3	58.2	63.3	67.6	66.7	66.4	64.6	63.0	59.4	—	—	—	59.9
	19	—	—	—	—	—	—	—	—	—	52.2	50.4	50.2	56.8
	20	50.0	54.5	59.1	59.7	59.8	59.6	60.8	58.2	56.0	55.0	55.0	54.2	60.2
	21	55.6	60.8	63.0	65.4	64.8	64.8	64.0	61.2	57.4	56.8	54.8	53.8	64.1
	22	56.6	61.3	65.8	67.6	67.8	68.2	64.2	63.3	64.2	63.5	63.7	62.8	63.2
	23	63.0	63.2	64.0	62.8	64.2	65.0	66.6	64.4	62.4	61.2	61.6	59.6	57.5
	24	56.5	57.1	60.5	60.3 <sup>a</sup>	60.0	61.2	69.6	55.6	53.2	52.2	52.5	51.8	61.0
	25	51.3	57.8	61.9	63.1	63.1	61.9	63.0	61.2	59.3	—	—	—	66.2
	26	—	—	—	—	—	—	—	—	—	63.8	62.8	62.8	64.5
	27	64.3	68.3	66.5	68.1	67.7	68.4	68.2	65.4	64.6	66.2	64.0	63.0	60.8
	28	65.5	67.2	68.9	70.0	68.7	66.4	65.2	63.2	60.6	58.4	60.8	58.8	60.8
	29	58.4	59.8	63.6	65.4	65.4	64.2	62.7	60.0	58.6	58.6	56.6	56.4	61.8
	30	56.5	62.1	62.0	63.4	66.3	64.1	63.8	61.8	62.1	60.5	60.3	58.4	63.5
	31	61.1	63.8	65.3	64.6	63.9	64.7	64.2	64.7	62.6	62.2	63.2	61.9	—
Hourly Means.	58.5	62.0	64.6	65.3	65.3	65.0	64.6	62.2	60.3	59.2	58.6	57.7	62.0	
AUGUST.	1	61.1	65.6	67.8	65.6	67.2	67.0	67.6	64.8	62.9	—	—	—	65.8
	2	—	—	—	—	—	—	—	—	—	68.2	65.6	65.9	62.8
	3	65.7	67.2	70.1	68.0	67.1	64.7	61.5	60.2	57.2	58.6	56.0	57.7	58.9
	4	63.5	63.6	64.4	65.2	66.0	61.0	59.1	54.7	52.4	53.8	53.4	50.0	58.7
	5	50.0	59.4	62.1	62.9	58.4	59.2	61.0	60.8	59.0	57.7	57.8	56.0	57.1
	6	54.3	56.3	63.9	58.7	60.4	61.4	59.5	56.4	54.4	55.0	53.6	51.7	56.5
	7	49.5	52.9	57.2	59.6	59.2	60.0	58.5	56.9	55.8	56.0	55.8	56.4	55.6
	8	56.1	58.6	59.7	62.4	62.5	59.0	55.6	53.2	50.8	—	—	—	58.5
	9	—	—	—	—	—	—	—	—	—	50.5	49.6	48.7	63.8
	10	51.8	56.0	57.0	57.0	60.2	60.0	59.6	59.8	60.8	61.0	59.4	59.8	58.3
	11	60.4	63.9	64.6	67.4	68.1	66.8	63.2	63.8	63.0	61.5	60.8	62.0	56.4
	12	62.8	62.0	63.1	63.2	61.3	58.5	60.0	56.4	53.4	53.0	53.9	52.6	54.8
	13	55.0	59.3	60.4	59.8	58.8	60.0	57.3	54.6	52.4	51.0	53.4	54.6	55.2
	14	55.9	58.1	60.2	63.7	63.4	59.4	56.4	51.6	48.2	47.3	46.4	47.6	64.1
	15	47.4	51.2	55.1	58.3	58.9	57.5	56.8	54.8	51.2	—	—	—	66.0
	16	—	—	—	—	—	—	—	—	—	56.8	57.2	56.8	66.7
	17	58.4	64.1	66.9	67.7	67.6	66.7	65.4	64.0	63.2	57.7	63.4	63.7	69.0
	18	63.4	66.8	68.6	67.6	69.9	68.2	67.6	66.8	65.6	63.4	62.5	62.1	69.5
	19	60.9	68.2	68.9	70.0	70.8	70.0	70.0	67.1	66.1	64.3	62.4	61.8	67.9
	20	63.8	69.4	72.5	72.5	72.8	72.0	71.4	70.0	67.7	66.4	64.4	65.0	59.7
	21	64.2	67.5	70.6	73.5	73.9	73.8	73.4	71.6	69.2	67.0	65.2	64.3	54.5
	22	66.7	69.9	73.0	74.6	74.2	73.0	68.8	68.7	66.2	—	—	—	59.1
	23	—	—	—	—	—	—	—	—	—	62.2	59.2	58.6	64.0
	24	58.5	63.8	66.1	67.0	62.4	64.6	61.0	58.2	56.6	53.8	53.9	50.1	68.2
	25	48.8	54.0	56.8	57.2	60.0	59.4	59.3	55.0	52.0	50.7	51.0	49.5	66.9
	26	53.2	56.2	60.6	62.3	58.8	59.4	59.6	59.4	60.8	60.2	59.7	59.4	58.0
	27	60.7	62.6	65.2	65.5	65.0	63.0	63.8	63.6	63.4	64.8	65.3	65.5	—
	28	65.8	67.5	69.4	69.4	69.8	70.2	70.2	67.6	67.8	68.0	66.6	65.8	—
	29	66.8	69.0	69.3	69.0	69.2	69.2	68.6	68.4	69.0	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	62.8	61.2	60.2	—
	31	60.5	60.0	60.5	64.9	61.2	59.4	56.9	56.6	54.4	54.6	54.4	52.8	—
Hourly Means.	58.6	62.0	64.4	65.1	64.9	64.0	62.7	60.9	59.3	58.7	58.1	57.6	61.4	

<sup>a</sup> Approx.



WET THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
	18	20	22	0	2	4	6	8	10	12	14	16		
SEPTEMBER.	1	51.8	53.7	58.8	60.3	59.5	58.8	56.6	57.0	56.4	56.8	55.0	56.2	56.7
	2	57.3	58.9	55.5	56.8	54.4	55.6	53.9	50.4	48.7	47.1	44.7	43.9	52.3
	3	45.0	50.6	56.8	56.6	54.6	54.7	53.6	49.6	48.3	—	—	—	51.4
	4	—	—	—	—	—	—	—	—	—	—	—	—	
	5 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	—	—	47.4
	6 <sup>a</sup>	—	—	—	—	—	—	—	—	—	50.2	49.0	47.4	
	7	47.4	55.9	57.0	62.9	62.4	62.0	58.4	58.0	54.6	53.2	53.4	56.4	56.8
	8	57.2	60.7	61.7	62.5	61.7	62.6	62.3	63.6	62.6	61.0	56.4	54.4	60.5
	9	51.6	62.2	63.0	61.4	61.6	60.4	58.3	59.6	56.0	52.2	48.0	46.8	56.8
	10	47.5	54.4	54.2	54.4	54.4	54.2	53.4	52.2	52.2	51.6	51.4	49.7	52.5
	11	47.9	48.8	47.4	46.9	46.8	47.5	45.6	42.0	40.3	38.8	38.1	35.8	43.8
	12	37.5	47.1	48.3	50.6	49.6	50.2	52.7	50.1	49.7	—	—	—	48.4
	13	—	—	—	—	—	—	—	—	—	48.6	49.8	46.2	
	14	45.1	52.8	60.2	59.3	59.2	59.8	59.4	54.8	55.4	54.2	52.8	51.8	55.4
	15	51.5	54.8	59.0	60.0	59.6	56.9	59.6	56.8	52.9	49.7	47.2	47.6	54.6
	16	48.8	54.8	62.0	59.8	60.4	59.6	57.8	54.6	53.6	55.1	57.1	58.0	56.8
	17	57.8	54.4	60.0	58.8	58.4	56.3	51.6	48.1	43.6	43.4	39.4	41.5	51.1
	18	44.3	47.8	47.2	48.8	48.5	49.4	49.1	48.1	48.3	45.8	46.0	43.4	47.2
	19	44.7	46.9	53.1	54.0	52.5	54.5	54.6	53.2	53.4	—	—	—	48.2
	20	—	—	—	—	—	—	—	—	—	38.5	36.9	36.2	
	21	36.0	37.5	38.0	39.2	39.2	40.2	37.7	37.6	31.8	31.5	33.4	30.2	36.0
	22	29.3	37.3	43.0	48.9	50.7	50.2	49.0	46.4	47.7	44.9	43.1	39.6	44.2
	23	39.8	49.2	52.5	55.3	57.3	59.4	56.0	51.6	48.7	46.5	47.8	47.5	51.0
	24	44.1	51.1	53.8	54.6	56.6	54.5	52.5	48.7	46.9	46.4	44.8	45.3	49.9
	25	45.1	51.4	56.3	57.1	58.6	58.1	53.6	50.2	50.8	49.1	46.8	46.3	51.9
	26	46.5	55.7	59.6	60.4	59.8	59.0	59.0	57.6	58.8	—	—	—	53.6
	27	—	—	—	—	—	—	—	—	—	42.9	42.5	42.1	
	28	39.5	47.8	51.3	53.8	54.8	51.3 <sup>b</sup>	47.8	50.2	45.4	43.5	40.7	41.8	47.3
	29	42.3	48.7	53.8	53.5	55.4	53.3	53.5	53.0	52.0	52.2	52.6	53.2	51.9
	30	52.8	53.1	53.4	54.6	54.5	53.7	53.4	53.5	53.9	54.0	53.8	53.4	53.7
Hourly Means	46.3	51.5	54.4	55.4	55.4	55.1	53.7	51.9	50.5	48.2	47.1	46.4	51.3	
OCTOBER.	1	52.5	52.1	52.3	52.6	53.0	52.8	52.6	52.6	53.4	—	—	55.8	53.0
	2	56.0	56.9	59.0	60.8	61.0	62.5	60.8	60.4	60.0	60.8	59.4	48.1	58.8
	3	39.5	38.4	39.6	37.7	40.1	39.6	41.0	39.8	38.9	—	—	—	41.8
	4	—	—	—	—	—	—	—	—	—	49.8	50.5	46.5	
	5	46.8	53.9	56.9	58.8	59.4	57.6	55.9	52.8	47.6	45.1	46.1	43.7	52.0
	6	41.5	50.4	53.8	53.8	54.0	47.0	45.1	42.7	37.9	35.3	34.8	34.2	44.2
	7	33.1	40.1	49.3	50.1	49.6	48.1	44.3	47.8	46.7	45.3	43.9	41.5	45.0
	8	41.4	51.9	54.3	57.2	60.8	58.8	53.2	53.0	55.6	50.6	49.5	47.1	52.8
	9	43.0	42.2	42.4	43.1	43.3	43.6	42.7	41.5	38.5	36.8	34.8	33.4	40.4
	10	33.0	37.4	44.7	47.7	47.4	47.1	47.5	48.5	48.8	—	—	—	45.2
	11	—	—	—	—	—	—	—	—	—	49.5	45.9	45.1	
	12	45.1	42.5	43.1	44.0	44.8	43.7	40.2	40.1	33.6	31.8	31.0	30.1	39.2
	13	29.2	39.6	44.8	48.2	51.4	52.6	47.9	50.4	49.7	47.3	41.9	46.6	45.8
	14	45.3	47.4	46.7	47.7	51.3	47.6	41.4	39.9	36.7	34.8	28.7	30.9	41.5
	15	29.0	36.4	38.9	41.3	42.8	40.7	36.0	33.8	30.4	30.2	29.7	28.3	34.8
	16	27.7	32.6	35.8	38.6	41.0	40.5	36.0	37.0	38.8	37.9	38.6	39.2	37.0
	17	39.8	40.7	41.1	41.9	44.1	44.3	45.2	46.3	46.9	—	—	—	46.4
	18	—	—	—	—	—	—	—	—	—	55.2	55.4	55.8	
	19	55.0	56.0	58.8	58.4	58.2	58.4	54.6	49.1	43.5	40.5	39.6	37.8	50.8
	20	37.0	42.5	46.5	46.9	49.9	50.2	43.9	43.5	42.9	39.4	41.1	40.3	43.7
	21	38.2	42.2	42.7	42.3	42.3	42.1	40.8	40.0	39.2	40.1	37.6	34.4	40.1
	22	32.9	37.1	42.9	47.1	46.7	46.1	45.3	45.8	46.3	47.7	47.4	47.7	44.4
	23	47.7	45.0	53.3	52.8	44.9	43.6	36.1	37.6	32.9	32.9	33.0	32.3	41.0
	24	26.5	30.2	38.0	36.4	35.6	35.4	33.6	33.2	31.2	—	—	—	31.5
	25	—	—	—	—	—	—	—	—	—	25.0	24.5	28.2	
	26	29.1	30.1	32.8	35.4	35.9	34.5	30.4	28.1	25.0	24.0	25.4	27.0	29.8
	27	28.5	30.6	31.6	34.4	34.8	33.9	34.6	36.1	38.7	42.2	40.2	39.4	35.4
	28	38.6	39.4	41.4	41.7	44.3	43.9	36.2	33.1	32.8	33.0	33.6	35.2	37.8
	29	36.2	39.2	42.9	45.2	45.2	42.5	41.4	40.3	39.6	39.6	38.6	37.9	40.7
	30	37.4	38.0	39.0	38.8	36.8	36.0	34.3	32.9	32.8	32.0	32.8	32.0	35.2
	31	32.7	32.8	37.6	40.3	40.6	40.4	39.4	37.2	32.9	—	—	—	35.8
	32	—	—	—	—	—	—	—	—	—	33.2	32.7	30.4	
Hourly Means	38.3	41.7	44.8	46.0	46.6	45.7	43.0	42.3	40.8	40.0	39.1	38.9	42.6	

<sup>a</sup> The Instruments were removed from the temporary to the permanent Observatory on the 5th and 6th instant.

<sup>b</sup> Approx.



TORONTO, 1840. METEOROLOGICAL OBSERVATIONS.

WET THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
NOVEMBER.	2	30.3	36.5	44.1	46.9	49.4	48.7	39.9	37.6	35.2	32.9	31.9	31.4	38.8
	3	31.0	36.0	45.6	47.5	50.2	48.2	42.4	40.0	42.1	43.3	42.8	40.0	42.5
	4	39.0	41.6	48.4	50.2	51.2	49.8	47.7	46.3	43.8	43.9	43.7	42.7	45.7
	5	42.5	42.7	43.3	45.3	46.3	46.7	43.7	43.0	39.1	37.6	36.5	33.4	41.7
	6	31.3	36.5	42.1	43.5	44.0	43.8	34.9	32.6	33.4	31.4	38.0	40.7	37.7
	7	41.4	40.0	39.9	43.5	43.7	42.5	42.8	44.7	45.5	—	—	—	43.4
	8	—	—	—	—	—	—	—	—	—	46.0	45.4	45.0	41.8
	9	45.2	45.4	45.7	43.9	43.0	42.0	40.8	41.2	41.6	39.2	37.8	36.4	41.8
	10	35.2	35.2	36.6	38.8	40.2	39.1	35.5	34.4	33.4	29.3	29.7	29.3	34.7
	11	28.3	31.1	36.4	37.0	36.8	36.9	37.1	38.1	38.9	39.6	39.4	39.0	36.5
	12	39.2	40.7	42.1	46.1	47.8	45.0	43.7	42.7	39.1	36.7	34.9	34.6	41.0
	13	31.2	35.1	38.1	39.2	38.4	36.8	33.4	30.4	29.1	26.9	26.9	27.2	32.7
	14	27.9	29.7	32.4	33.2	32.7	33.3	34.3	36.1	37.8	—	—	—	31.4
	15	—	—	—	—	—	—	—	—	—	27.3	25.6	26.1	27.8
	16	25.0	25.5	28.9	32.1	30.4	29.3	27.8	26.3	26.7	26.2	27.7	27.9	27.8
	17	28.1	28.5	30.0	29.5	31.5	30.0	28.2	28.2	26.3	25.3	24.0	23.9	27.8
	18	21.4	27.6	29.3	31.7	32.8	32.5	28.2	27.6	25.9	24.7	24.7	27.1	27.8
	19	28.6	28.7	29.9	31.4	32.6	32.4	31.6	29.3	30.3	29.9	29.7	28.1	30.2
	20	27.2	27.1	29.0	31.2	32.6	31.4	30.4	30.4	29.7	30.0	30.6	29.7	30.2
	21	29.9	30.5	30.4	29.9	28.5	28.1	27.3	27.0	27.0	—	—	—	29.3
	22	—	—	—	—	—	—	—	—	—	30.9	31.8	30.2	33.0
	23	31.7	31.8	32.4	33.4	33.9	33.6	34.6	34.4	34.1	32.3	32.6	31.6	32.3
	24	32.1	32.0	33.9	34.6	34.2	34.1	32.6	32.0	31.9	31.1	29.9	29.8	31.4
	25	29.8	30.6	32.4	35.2	35.2	33.6	32.3	31.1	31.2	29.1	28.7	28.3	28.3
	26	28.0	28.2	—	—	—	26.9	24.3	23.3	20.0	22.5	22.1	23.3	28.3
	27	21.7	20.5	27.3	31.1	31.9	28.9	28.7	29.3	29.5	29.2	30.4	30.8	28.3
	28	31.9	33.8	35.6	37.2	38.3	37.5	37.2	36.6	34.4	—	—	—	35.9
	29	—	—	—	—	—	—	—	—	—	38.8	35.8	33.4	23.8
	30	31.9	34.7	38.2	32.2	24.9	22.3	20.3	19.0	16.8	15.2	14.6	15.0	34.1
	Hourly Means	31.6	33.3	36.3	37.7	37.9	36.5	34.4	33.7	32.9	32.0	31.9	31.4	34.1
DECEMBER.	1	14.2	16.2	20.4	20.0	19.3	18.0	12.6	10.8	14.0	14.8	15.2	16.1	16.0
	2	15.4	20.0	28.2	30.4	32.2	32.6	32.6	31.0	30.9	30.1	29.0	25.1	28.1
	3	24.1	16.9	18.7	18.9	19.9	18.3	11.8	11.0	9.6	10.2	9.8	9.0	14.8
	4	10.7	11.2	16.8	22.6	24.9	23.7	21.5	22.5	21.5	21.5	20.2	18.2	19.6
	5	15.7	14.3	15.2	18.5	18.6	16.8	14.7	14.2	13.2	—	—	—	16.7
	6	—	—	—	—	—	—	—	—	—	20.0	19.4	19.9	25.8
	7	20.5	20.5	23.7	24.9	24.9	25.3	25.9	26.3	27.4	28.7	31.1	30.7	35.3
	8	30.7	31.9	34.0	35.6	36.3	36.4	36.8	36.6	36.5	36.8	36.0	36.6	38.4
	9	36.5	37.2	38.4	38.5	38.2	38.4	38.0	38.6	39.2	39.6	39.5	39.8	32.6
	10	35.4	32.8	35.6	36.4	36.6	34.8	32.3	31.4	31.8	29.1	28.6	26.8	27.9
	11	23.7	23.3	28.1	29.8	30.4	30.6	25.9	24.4	24.9	30.2	31.2	32.0	34.2
	12	32.5	32.3	34.0	35.2	35.8	35.4	35.4	35.6	36.0	—	—	—	33.7
	13	—	—	—	—	—	—	—	—	—	32.4	32.6	32.9	32.2
	14	33.8	34.0	33.8	34.5	35.0	35.6	35.2	34.7	32.9	31.5	32.6	31.0	25.0
	15	30.9	32.4	32.4	33.3	34.8	35.1	35.6	34.8	32.2	31.0	27.1	27.7	17.3
	16	28.2	26.4	28.8	29.4	28.7	25.9	23.7	24.6	23.3	21.7	19.4	19.9	10.4
	17	19.9	19.0	21.1	23.5	23.7	18.8	17.9	15.8	15.4	15.1	10.0	7.0	22.1
	18	3.1	2.2	7.0	10.0	13.8	11.8	10.0	11.2	11.1	12.8	15.0	17.4	25.2
	19	19.3	18.8	22.1	24.9	25.4	24.3	21.7	20.7	20.9	—	—	—	21.5
	20	—	—	—	—	—	—	—	—	—	21.2	23.6	22.0	22.4
	21	20.4	20.3	21.7	21.5	22.8	24.5	27.3	28.5	28.7	28.3	28.3	30.5	14.2
	22	31.6	31.5	30.4	29.1	25.0	20.4	18.6	18.6	17.4	15.0	12.0	8.9	13.3
	23	11.3	14.7	20.7	26.1	28.5	27.5	28.7	29.5	29.5	20.7	17.2	14.8	25.1
	24	14.0	12.1	11.8	14.2	15.2	13.8	11.0	5.4	0.2	—	—	—	13.8
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	22.6	24.2	25.9	17.0
	26	23.9	21.4	19.5	18.2	18.0	14.8	12.2	9.8	8.6	—	—	—	17.0
	27	—	—	—	—	—	—	—	—	—	2.6	2.4	8.2	23.4
	28	15.1	18.4	23.9	28.8	30.4	29.7	26.1	26.9	26.3	27.0	24.9	24.3	26.5
	29	26.6	26.9	29.3	29.2	30.0	30.1	29.3	26.9	25.5	24.1	21.6	19.0	13.8
	30	16.4	15.4	16.0	15.9	15.8	13.6	13.0	11.0	11.2	12.0	12.2	12.6	17.0
	31	13.0	13.3	14.8	17.8	20.8	20.3	18.5	18.2	19.6	19.1	18.9	9.4	23.4
Hourly Means	21.8	21.7	24.1	25.7	26.3	25.2	23.7	23.0	22.6	23.0	22.4	21.8	23.4	

<sup>a</sup> Christmas Day.

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	MARCH.	2	96	89	82	82	85	89	91	94	94	94	96	96	91	
		3	98	100	98	96	91	90	97	96	98	98	100	100	97	
		4	98	73	75	73	50	58	71	71	73	75	76	86	73	
		5	95	100	100	100	96	93	91	94	94	100	98	98	98	96
		6	100	93	91	95	91	93	93	88	99	100	94	98	98	95
		7	94	100	100	95	98	97	100	80	—	—	—	—	—	85
		8	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		9	—	—	100	63	50	82	100	98	100	98	98	98	100	89
		10	97	88	91	86	91	95	93	93	88	88	98	89	88	91
		11	88	95	97	100	96	98	100	100	100	83	88	100	—	95
		12	97	98	96	96	96	100	98	94	100	100	100	100	100	99
		13	97	98	98	98	100	100	100	100	70	—	96	100	98	96
		14	100	—	98	100	98	100	100	100	100	100	—	—	—	99
		15	—	—	—	—	—	—	—	—	—	—	98	100	97	99
		16	100	98	96	94	100	100	85	90	96	94	90	90	90	95
		17	90	81	67	77	82	79	75	88	92	90	83	94	94	83
		18	96	92	—	77	58	51	57	69	73	79	82	83	83	74
		19	94	100	100	96	100	—	100	100	100	100	100	100	100	99
		20	98	100	89	45	54	55	53	66	67	67	89	100	100	74
		21	97	76	65	90	94	100	98	100	95	—	—	—	—	92
		22	—	—	—	—	—	—	—	—	—	100	100	100	100	95
		23	100	100	100	96	84	81	83	100	100	100	100	100	100	97
		24	90	98	94	90	94	100	100	98	100	98	98	98	100	95
		25	97	59	53	49	80	69	57	67	89	97	96	90	90	75
		26	96	94	58	72	55	60	71	79	83	81	72	83	83	75
		27	90	86	75	61	71	74	79	82	82	84	86	96	96	80
		28	86	84	83	80	89	94	98	98	98	—	—	—	—	90
		29	—	—	—	—	—	—	—	—	—	84	92	94	94	90
		30	96	88	92	94	98	94	75	85	74	81	89	73	73	86
		31	73	68	86	68	90	74	72	77	90	90	96	51	51	78
		Hourly Means		94	86	87	84	84	85	86	88	90	92	93	93	88
Tension of the Vapour.	MARCH.	2	In. .227	In. .139	In. .226	In. .255	In. .221	In. .217	In. .209	In. .186	In. .188	In. .195	In. .202	In. .211	In. .206	
		3	.223	.228	.219	.247	.256	.248	.241	.221	.221	.206	.211	.246	.231	
		4	.243	.254	.256	.265	.227	.206	.196	.179	.171	.134	.122	.126	.198	
		5	.134	.203	.187	.238	.223	.210	.211	.179	.159	.167	.164	.164	.185	
		6	.166	.216	.287	.344	.354	.304	.255	.199	.201	.200	.195	.200	.243	
		7	.174	.144	.138	.128	.139	.123	.108	.090	—	—	—	—	.130	
		8	—	—	—	—	—	—	—	—	—	—	—	—	—	
		9	—	—	.248	.150	.130	.182	.206	.179	.177	.170	.175	.238	.185	
		10	.096	.093	.099	.108	.118	.107	.087	.080	.076	.078	.070	.065	.089	
		11	.065	.109	.124	.146	.159	.161	.153	.136	.096	.097	.113	—	.124	
		12	.114	.147	.182	.191	.204	.181	.175	.159	.160	.150	.144	.138	.162	
		13	.125	.158	.197	.229	.236	.236	.211	.138	—	.182	.177	.168	.187	
		14	.166	—	.211	.216	.215	.200	.182	.184	.188	—	—	—	—	
		15	—	—	—	—	—	—	—	—	—	.141	.131	.121	.178	
		16	.116	.184	.217	.244	.206	.205	.172	.175	.177	.172	.166	.168	.183	
		17	.166	.164	.174	.178	.191	.188	.168	.188	.182	.164	.148	.154	.172	
		18	.156	.182	—	.233	.195	.178	.161	.157	.153	.155	.165	.171	.173	
		19	.199	.214	.216	.217	.240	—	.236	.220	.222	.222	.224	.236	.222	
		20	.208	.234	.237	.149	.177	.158	.123	.129	.112	.102	.126	.133	.157	
		21	122	.125	.109	.160	.170	.172	.149	.139	.126	—	—	—	—	
		22	—	—	—	—	—	—	—	—	—	.166	.157	.154	.145	
		23	.161	.174	.187	.201	.182	.163	.156	.188	.194	.196	.192	.194	.182	
		24	.168	.172	.161	.164	.167	.167	.211	.151	.151	.148	.147	.146	.163	
		25	.130	.099	.106	.108	.187	.137	.167	.100	.120	.097	.111	.084	.120	
		26	.84	.154	.118	.158	.137	.138	.155	.168	.173	.164	.156	.159	.147	
		27	.171	.183	.194	.169	.190	.182	.183	.180	.178	.180	.191	.209	.184	
		28	.189	.197	.205	.198	.219	.224	.231	.229	.223	—	—	—	—	
		29	—	—	—	—	—	—	—	—	—	.197	.208	.205	.211	
		30	.187	.172	.195	.203	.213	.214	.157	.168	.139	.147	.150	.122	.173	
		31	.119	.121	.162	.139	.190	.155	.137	.131	.140	.141	.147	.084	.139	
		Hourly Means		.156	.169	.186	.194	.198	.186	.178	.164	.163	.159	.159	.162	.173

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.															
Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16		
Humidity of the Air.	APRIL.	1	84	94	74	74	74	79	68	81	77	77	80	85	79
		2	89	94	69	72	66	64	66	77	68	83	90	79	76
		3	79	78	72	74	80	80	80	73	91	91	—	63	78
		4	84	71	61	50	68	43	53	52	69	—	—	—	63
		5	—	—	—	—	—	—	—	—	—	74	67	68	63
		6	82	69	45	47	41	38	51	55	61	72	72	72	78
		7	79	94	98	55	55	55	58	59	72	70	76	71	70
		8	35	80	75	64	59	62	65	78	84	86	89	89	72
		9	94	72	64	62	72	65	70	78	94	90	92	92	79
		10	86	70	74	75	73	73	88	90	92	90	95	95	84
		11	94	100	100	100	97	96	98	96	100	—	—	—	91
		12	—	—	—	—	—	—	—	—	—	64	67	79	91
		13	82	67	74	68	66	72	74	73	81	86	85	88	76
		14	90	86	75	78	—	81	—	86	80	90	93	89	85
		15	89	87	76	73	73	76	80	91	92	96	96	94	85
		16	96	91	86	70	79	78	73	80	82	—	—	—	84
		17 <sup>a</sup>	—	—	—	—	—	—	—	—	—	88	89	94	84
		18	97	83	88	77	77	75	69	80	83	—	—	—	84
		19	—	—	—	—	—	—	—	—	—	100	98	85	84
		20	78	60	60	41	98	45	98	57	75	80	84	64	70
		21	70	71	66	63	53	48	58	69	82	82	84	73	68
		22	91	96	96	97	97	97	96	97	97	97	97	97	96
		23	89	70	58	46	45	47	68	51	72	56	55	69	61
		24	72	49	47	44	51	61	38	59	49	56	43	73	53
		25	77	68	74	78	82	74	72	86	89	—	—	—	79
		26	—	—	—	—	—	—	—	—	—	82	72	94	79
		27	90	60	75	74	76	71	70	73	74	72	73	40	71
		28	80	78	77	71	65	67	66	76	90	93	96	98	80
		29	98	97	96	98	100	98	98	100	98	98	96	96	98
		30	94	86	85	—	52	38	33	41	55	80	90	91	68
Hourly Means		84	79	75	69	71	67	70	75	80	82	82	82	76	
Tension of the Vapour.	APRIL.	1	In. .138	In. .160	In. .148	In. .151	In. .155	In. .162	In. .134	In. .146	In. .129	In. .121	In. .117	In. .120	In. .140
		2	.122	.163	.147	.168	.174	.165	.155	.178	.149	.167	.175	.172	.161
		3	.179	.199	.216	.233	.252	.254	.238	.232	.323	.278	—	—	.233
		4	.195	.200	.196	.173	.193	.129	.144	.127	.143	—	—	—	.233
		5	—	—	—	—	—	—	—	—	—	.124	.112	.113	.162
		6	.138	.141	.109	.123	.113	.097	.106	.097	.100	.111	.108	.111	.113
		7	.115	.160	.189	.117	.120	.120	.118	.101	.111	.099	.100	.105	.121
		8	.066	.174	.174	.140	.125	.130	.130	.131	.130	.128	.126	.129	.132
		9	.149	.170	.167	.163	.195	.176	.182	.187	.186	.175	.172	.176	.175
		10	.185	.260	.294	.284	.313	.313	.373	.369	.339	.290	.306	.297	.302
		11	.286	.291	.295	.305	.341	.283	.278	.290	.281	—	—	—	—
		12	—	—	—	—	—	—	—	—	—	.140	.143	.155	.257
		13	.169	.143	.209	.191	.198	.208	.195	.183	.190	.176	.168	.167	.183
		14	.183	.202	.200	.215	—	.222	—	.202	.175	.203	.218	.235	.205
		15	.227	.218	.229	.249	.256	.227	.227	.235	.206	.191	.182	.167	.218
		16	.177	.250	.253	.246	.283	.266	.259	.267	.257	—	—	—	.290
		17 <sup>a</sup>	—	—	—	—	—	—	—	—	—	.423	.433	.368	.290
		18	.388	.280	.267	.231	.263	.226	.216	.180	.166	—	—	—	.235
		19	—	—	—	—	—	—	—	—	—	.216	.213	.169	.235
		20	.153	.157	.154	.139	.266	.145	.269	.142	.141	.143	.138	.138	.165
		21	.162	.188	.194	.189	.180	.174	.189	.196	.193	.193	.213	.215	.190
		22	.265	.309	.316	.341	.359	.382	.418	.408	.402	.441	.402	.341	.365
		23	.422	.375	.366	.302	.300	.294	.382	.249	.279	.197	.179	.199	.295
		24	.208	.199	.199	.184	.210	.255	.144	.225	.186	.208	.172	.232	.202
		25	.278	.337	.320	.369	.422	.468	.440	.449	.433	—	—	—	.330
		26	—	—	—	—	—	—	—	—	—	.165	.130	.154	.330
		27	.163	.135	.196	.186	.187	.179	.164	.165	.153	.151	.162	.104	.162
		28	.185	.193	.211	.194	.195	.213	.219	.227	.263	.273	.295	.292	.230
		29	.275	.271	.286	.290	.295	.297	.316	.327	.321	.302	.290	.283	.296
		30	.320	.320	.312	—	.307	.220	.175	.184	.221	.269	.263	.268	.260
Hourly Means		.206	.220	.226	.216	.238	.224	.228	.220	.219	.207	.201	.195	.211	

\* Good Friday.

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time		18	22	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	MAY.	1	86	87	81	76	55	43	47	44	56	72	92	81	68	
		2	78	72	63	63	64	46	56	60	65	—	—	—	72	
		3	—	—	—	—	—	—	—	—	—	98	100	100	79	
		4	100	98	83	83	80	75	74	77	73	70	70	78	86	61
		5	69	70	57	52	33	41	50	55	63	78	78	78	67	56
		6	77	54	48	52	42	45	47	56	54	59	67	68	70	60
		7	66	55	49	48	65	51	52	62	62	69	98	97	97	79
		8	76	69	72	66	64	66	66	87	91	98	—	—	—	91
		9	94	100	91	93	65	97	94	97	97	—	—	—	—	57
		10	—	—	—	—	—	—	—	—	—	87	92	88	88	49
		11	82	55	42	67	70	65	37	43	47	48	60	68	70	64
		12	58	48	38	37	60	58	26	40	48	55	49	70	89	71
		13	62	47	52	56	53	51	58	63	70	85	87	89	89	71
		14	80	70	60	57	54	49	68	71	78	86	88	89	89	71
		15	93	94	89	88	48	44	40	51	73	80	81	74	74	68
		16	81	70	53	59	50	56	49	57	71	—	—	—	—	73
		17	—	—	—	—	—	—	—	—	—	92	92	92	92	76
		18	84	65	67	61	57	64	63	71	82	87	87	80	80	85
		19	84	81	81	83	73	67	64	70	68	87	77	100	100	93
		20	89	72	71	75	72	72	84	92	99	96	100	100	100	85
		21	100	100	100	97	85	84	79	96	91	98	98	94	94	85
		22	92	84	78	77	77	78	81	79	89	94	94	96	96	82
		23	87	73	83	84	71	65	77	82	85	—	—	—	—	86
		24	—	—	—	—	—	—	—	—	—	92	93	93	93	77
		25	92	87	85	84	79	71	73	88	84	93	93	98	98	78
		26	90	82	84	80	56	55	58	74	81	90	93	85	85	67
		27	91	75	77	74	65	57	63	79	86	90	91	93	93	69
		28	83	60	59	59	55	56	66	80	70	67	73	80	80	70
		29	72	67	54	59	55	50	47	76	82	85	91	90	90	—
		30	83	58	60	76	64	59	61	70	66	—	—	—	—	—
		31	—	—	—	—	—	—	—	—	—	89	82	78	78	—
Hourly Means		83	73	68	69	62	60	61	70	74	83	85	85	73		
Tension of the Vapour.	MAY.	1	In. .246	In. .281	In. .297	In. .261	In. .224	In. .160	In. .168	In. .131	In. .142	In. .154	In. .158	In. .147	In. .197	
		2	.193	.197	.216	.245	.277	.246	.265	.239	.235	—	—	—	.266	
		3	—	—	—	—	—	—	—	—	—	.343	.372	.364	.245	
		4	.378	.407	.327	.283	.264	.221	.205	.201	.183	.172	.162	.141	.141	.245
		5	.174	.198	.188	.181	.121	.143	.148	.142	.147	.160	.160	.152	.152	.159
		6	.174	.149	.161	.191	.151	.160	.160	.159	.142	.150	.165	.157	.157	.160
		7	.175	.179	.197	.214	.235	.227	.221	.210	.196	.218	.218	.200	.200	.207
		8	.214	.199	.210	.211	.204	.221	.217	.262	.256	.280	.262	.255	.255	.233
		9	.248	.254	.235	.242	.197	.253	.244	.249	.251	—	—	—	—	.232
		10	—	—	—	—	—	—	—	—	—	.216	.204	.194	.194	.221
		11	.241	.218	.198	.300	.289	.289	.189	.182	.183	.176	.196	.189	.189	.221
		12	.179	.193	.196	.180	.255	.215	.124	.149	.159	.162	.130	.162	.162	.175
		13	.161	.183	.240	.236	.234	.230	.256	.247	.246	.215	.206	.207	.207	.222
		14	.260	.305	.320	.312	.347	.354	.381	.341	.334	.338	.348	.366	.366	.334
		15	.353	.371	.405	.474	.447	.292	.243	.256	.304	.299	.294	.268	.268	.334
		16	.291	.289	.255	.265	.227	.265	.205	.220	.257	—	—	—	—	.290
		17	—	—	—	—	—	—	—	—	—	.415	.401	.385	.385	.290
		18	.455	.431	.531	.511	.485	.480	.417	.443	.457	.424	.460	.411	.411	.459
		19	.382	.436	.444	.445	.422	.419	.349	.316	.323	.358	.331	.336	.336	.380
		20	.379	.411	.445	.479	.484	.463	.379	.431	.497	.458	.433	.436	.436	.441
		21	.420	.423	.416	.453	.423	.389	.343	.370	.346	.321	.299	.283	.283	.374
		22	.333	.327	.334	.347	.349	.337	.325	.316	.314	.303	.320	.295	.295	.325
		23	.332	.382	.353	.382	.381	.366	.397	.371	.372	—	—	—	—	.384
		24	—	—	—	—	—	—	—	—	—	.435	.426	.417	.417	.384
		25	.424	.440	.446	.433	.446	.445	.434	.410	.419	.403	.353	.346	.346	.417
		26	.395	.397	.480	.452	.405	.403	.378	.397	.381	.372	.351	.298	.298	.392
		27	.402	.435	.449	.472	.470	.425	.451	.422	.381	.386	.366	.353	.353	.418
		28	.441	.503	.462	.470	.451	.460	.507	.528	.435	.427	.524	.460	.460	.472
		29	.444	.415	.315	.355	.342	.313	.291	.374	.348	.326	.320	.301	.301	.345
		30	.380	.320	.349	.434	.419	.385	.392	.375	.368	—	—	—	—	.366
		31	—	—	—	—	—	—	—	—	—	.369	.312	.288	.288	.366
Hourly Means		.311	.321	.326	.340	.329	.314	.296	.298	.295	.303	.299	.285	.309		

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.															
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	JUNE.	1	69	78	92	89	88	82	88	88	85	78	85	81	83
		2	80	80	83	83	90	97	98	100	—	100	100	97	92
		3	99	97	81	90	88	84	84	85	89	95	96	96	90
		4	97	94	79	71	64	61	65	72	83	86	94	94	80
		5	81	73	80	70	74	75	79	83	88	83	91	93	81
		6	78	79	78	82	85	82	85	86	86	—	—	—	85
		7	—	—	—	—	—	—	—	—	—	93	94	96	—
		8	79	46	60	58	54	56	58	67	100	90	93	97	71
		9	85	70	64	64	53	56	63	71	89	89	91	97	74
		10	86	63	63	62	65	59	62	78	86	86	95	95	75
		11	78	67	66	67	66	71	79	77	88	93	95	94	78
		12	89	77	68	72	81	74	75	93	88	95	96	92	83
		13	86	81	65	67	77	73	73	70	81	—	—	—	83
		14	—	—	—	—	—	—	—	—	—	63	65	74	72
		15	66	53	40	53	62	60	62	78	84	80	88	91	68
		16	73	52	63	64	52	70	72	86	88	89	90	88	74
		17	84	69	68	66	66	65	67	90	82	77	93	96	77
		18	82	73	60	63	55	80	58	65	71	78	84	76	70
		19	77	52	54	91	51	64	89	62	72	78	76	70	69
		20	66	61	47	46	41	59	61	73	87	—	—	—	68
		21	—	—	—	—	—	—	—	—	—	97	94	92	—
		22	97	73	71	66	58	51	71	85	78	90	94	95	77
		23	83	56	56	97	75	58	70	77	86	91	94	97	78
		24	78	71	72	67	69	71	76	77	73	76	95	97	77
		25	75	54	59	51	58	60	57	62	63	95	48	45	61
		26	57	59	67	77	85	96	77	94	90	91	94	95	82
		27	97	94	100	97	91	87	94	95	96	—	—	—	82
		28	—	—	—	—	—	—	—	—	—	96	95	96	95
		29	94	89	81	79	79	77	77	85	86	87	94	92	85
		30	81	74	79	65	68	68	75	77	90	71	90	86	77
		Hourly Means		81	71	69	71	69	71	74	80	84	86	89	89
Tension of the Vapour.	JUNE.	1	In. .262	In. .285	In. .319	In. .312	In. .311	In. .312	In. .322	In. .314	In. .304	In. .280	In. .298	In. .274	In. .299
		2	.275	.275	.353	.341	.375	.408	.361	.358	—	.416	.396	.361	.356
		3	.381	.415	.447	.471	.470	.467	.467	.457	.429	.440	.425	.415	.440
		4	.434	.448	.490	.460	.415	.388	.374	.339	.347	.346	.333	.303	.390
		5	.336	.395	.409	.427	.445	.447	.426	.406	.397	.400	.402	.397	.407
		6	.408	.454	.447	.469	.475	.488	.483	.335	.291	—	—	—	—
		7	—	—	—	—	—	—	—	—	—	.238	.226	.211	.377
		8	.255	.203	.263	.288	.260	.271	.265	.268	.288	.270	.257	.251	.262
		9	.301	.316	.359	.363	.312	.326	.327	.321	.309	.287	.278	.269	.314
		10	.338	.313	.369	.391	.422	.408	.415	.431	.378	.346	.342	.335	.374
		11	.379	.400	.526	.531	.531	.546	.608	.602	.548	.512	.564	.527	.523
		12	.555	.597	.603	.639	.603	.552	.498	.521	.490	.555	.570	.481	.555
		13	.418	.429	.403	.427	.437	.426	.422	.368	.354	—	—	—	—
		14	—	—	—	—	—	—	—	—	—	.231	.197	.209	.360
		15	.224	.261	.237	.305	.313	.323	.313	.328	.285	.257	.256	.252	.280
		16	.254	.261	.338	.363	.334	.406	.432	.415	.343	.325	.296	.303	.340
		17	.359	.372	.370	.358	.351	.362	.351	.372	.380	.350	.426	.442	.374
		18	.446	.462	.398	.386	.338	.487	.325	.295	.278	.282	.285	.259	.353
		19	.286	.272	.312	.467	.294	.363	.477	.295	.298	.285	.286	.295	.329
		20	.303	.417	.375	.399	.366	.441	.405	.395	.390	—	—	—	—
		21	—	—	—	—	—	—	—	—	—	.480	.471	.447	.407
		22	.476	.430	.467	.458	.416	.362	.433	.431	.360	.351	.328	.319	.403
		23	.333	.339	.380	.626	.479	.397	.455	.453	.453	.418	.397	.388	.426
		24	.408	.437	.572	.595	.598	.588	.628	.569	.557	.521	.551	.518	.545
		25	.489	.423	.412	.378	.397	.406	.367	.351	.340	.413	.272	.258	.375
		26	.309	.359	.408	.461	.520	.553	.485	.503	.487	.478	.472	.478	.459
		27	.503	.495	.496	.491	.482	.496	.552	.521	.496	—	—	—	—
		28	—	—	—	—	—	—	—	—	—	.580	.555	.528	.516
		29	.393	.595	.706	.680	.757	.669	.641	.623	.611	.590	.503	.497	.605
		30	.444	.465	.494	.478	.421	.410	.404	.337	.372	.321	.369	.338	.404
		Hourly Means		.368	.397	.410	.437	.424	.435	.432	.418	.391	.384	.375	.360

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	JULY.	1	74	63	73	44	47	45	55	57	65	67	77	84	63	
		2	72	66	56	63	63	61	72	67	66	71	73	81	67	
		3	67	61	74	68	61	52	63	81	88	91	89	90	74	
		4	37	41	50	47	55	54	59	79	78	—	—	—	—	61
		5	—	—	—	—	—	—	—	—	—	78	81	75	—	—
		6	77	49	61	67	82	92	67	63	75	78	88	91	91	74
		7	82	71	69	71	63	75	61	66	76	82	85	81	81	73
		8	88	80	70	89	93	90	94	94	94	96	99	99	99	90
		9	90	85	80	76	80	65	81	90	91	93	94	94	94	85
		10	81	66	58	53	74	73	75	86	84	78	86	92	92	75
		11	88	77	72	71	77	70	71	89	90	—	—	—	—	78
		12	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		13	—	97	80	72	71	83	85	91	81	85	88	91	91	84
		14	87	64	66	72	70	76	75	79	73	85	89	86	86	77
		15	74	63	71	68	63	76	79	81	84	94	94	95	95	78
		16	85	69	70	77	71	71	82	80	86	82	87	92	92	89
		17	88	90	84	92	93	92	94	91	93	97	96	97	97	92
		18	88	72	68	71	69	68	63	86	92	—	—	—	—	78
		19	—	—	—	—	—	—	—	—	—	87	86	88	88	—
		20	78	57	73	69	71	65	66	75	83	89	77	92	92	75
		21	78	62	59	65	65	61	73	86	87	89	92	94	94	76
		22	83	76	71	77	75	76	82	84	89	83	88	94	94	81
		23	96	99	95	96	96	97	92	94	90	90	93	91	91	94
		24	81	65	53	47	40	47	95	55	53	64	66	70	70	61
		25	74	60	59	63	64	67	78	88	92	—	—	—	—	—
		26	—	—	—	—	—	—	—	—	—	93	93	90	90	77
		27	91	92	80	78	75	80	88	87	85	92	94	94	94	85
		28	92	88	84	97	86	74	94	92	95	98	89	89	89	90
		29	86	68	63	61	59	56	63	73	83	83	87	87	87	72
		30	87	71	69	66	71	65	74	86	87	89	92	94	94	79
		31	93	76	73	64	65	68	77	86	89	90	93	94	94	81
Hourly Means.		81	71	70	70	70	70	76	81	83	86	88	89	78		
Tension of the Vapour.	JULY.	1	In. .306	In. .343	In. .363	In. .271	In. .297	In. .267	In. .269	In. .242	In. .250	In. .245	In. .272	In. .302	In. .285	
		2	.307	.321	.316	.365	.353	.331	.376	.326	.294	.301	.278	.286	.321	
		3	.265	.333	.468	.410	.376	.307	.343	.348	.322	.315	.306	.309	.342	
		4	.186	.271	.356	.330	.396	.390	.400	.414	.352	—	—	—	—	—
		5	—	—	—	—	—	—	—	—	—	.408	.436	.412	.363	
		6	.437	.380	.489	.534	.626	.757	.534	.451	.462	.459	.474	.432	.503	
		7	.469	.485	.520	.511	.488	.519	.426	.430	.477	.480	.477	.467	.479	
		8	.527	.532	.524	.551	.591	.569	.575	.570	.579	.536	.571	.567	.558	
		9	.578	.634	.629	.633	.683	.600	.603	.583	.539	.521	.510	.487	.583	
		10	.463	.493	.521	.508	.595	.592	.592	.583	.495	.451	.457	.443	.516	
		11	.518	.602	.613	.665	.636	.620	.629	.674	.642	—	—	—	.622	
		12	—	—	—	—	—	—	—	—	—	—	—	—	—	
		13	—	.720	.730	.683	.634	.690	.649	.659	.553	.556	.544	.526	.631	
		14	.599	.493	.529	.636	.600	.633	.621	.621	.530	.565	.557	.500	.574	
		15	.472	.523	.629	.598	.559	.666	.674	.588	.600	.579	.557	.547	.583	
		16	.590	.569	.684	.758	.690	.634	.750	.649	.657	.641	.603	.608	.653	
		17	.616	.657	.714	.729	.732	.662	.652	.600	.563	.495	.446	.428	.608	
		18	.435	.413	.485	.584	.554	.548	.404	.530	.481	—	—	—	—	
		19	—	—	—	—	—	—	—	—	—	.361	.335	.337	.455	
		20	.314	.318	.426	.428	.433	.418	.437	.420	.406	.402	.377	.398	.398	
		21	.389	.424	.456	.518	.510	.497	.514	.496	.436	.429	.405	.397	.456	
		22	.417	.473	.541	.602	.597	.608	.542	.529	.560	.531	.548	.544	.541	
		23	.553	.562	.568	.549	.575	.593	.616	.575	.527	.506	.521	.482	.552	
		24	.407	.374	.391	.367	.337	.383	.687	.328	.291	.309	.318	.319	.376	
		25	320	.377	.437	.466	.471	.460	.510	.501	.477	—	—	—	—	
		26	—	—	—	—	—	—	—	—	—	.559	.542	.536	.471	
		27	.562	.657	.581	.608	.597	.626	.642	.580	.556	.608	.565	.548	.594	
		28	.393	.621	.646	.703	.647	.566	.593	.547	.506	.478	.496	.464	.555	
		29	.453	.425	.479	.506	.500	.465	.458	.442	.449	.449	.424	.420	.456	
		30	.420	.471	.465	.485	.551	.491	.512	.505	.512	.481	.493	.468	.488	
		31	.509	.517	.539	.499	.491	.512	.529	.559	.530	.523	.550	.523	.523	
Hourly Means.		.442	.496	.522	.537	.538	.533	.538	.509	.483	.468	.464	.452	.498		

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.																																												
Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Hourly Means.																														
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16																															
Humidity of the Air.	AUGUST.	1	93	76	82	76	86	77	80	89	94	—	—	—	} 86																													
		2	—	—	—	—	—	—	—	—	—	97	91	90		} 75																												
		3	92	86	86	54	49	49	52	72	88	94	91	93			} 83																											
		4	93	87	86	94	91	59	64	78	86	85	85	88				} 72																										
		5	70	81	64	57	39	50	65	84	88	84	91	93					} 72																									
		6	84	61	63	49	56	66	63	77	83	82	88	88						} 71																								
		7	82	63	52	55	70	57	62	80	78	80	82	91							} 83																							
		8	92	94	82	80	74	61	62	78	81	—	—	—								} 90																						
		9	—	—	—	—	—	—	—	—	—	96	97	95									} 90																					
		10	94	88	75	77	78	85	95	95	100	99	99	97										} 92																				
		11	100	98	80	84	80	85	85	89	94	95	96	96											} 79																			
		12	96	89	86	87	90	85	91	95	92	98	98	98												} 78																		
		13	96	76	67	67	59	62	61	88	91	90	94	96													} 78																	
		14	95	76	82	77	77	54	50	66	88	92	89	92														} 82																
		15	86	66	63	70	70	61	65	87	88	—	—	—															} 82															
		16	—	—	—	—	—	—	—	—	—	95	84	96																} 83														
		17	92	72	73	73	77	75	76	80	89	86	98	96																	} 86													
		18	92	90	73	78	80	80	84	85	90	94	96	96																		} 85												
		19	89	78	76	78	76	72	81	92	94	95	98	97																			} 86											
		20	93	68	76	71	81	77	85	92	96	97	96	97																				} 86										
		21	95	73	75	75	79	83	88	87	90	92	96	95																					} 82									
		22	96	80	78	77	75	71	68	82	92	—	—	—																						} 83								
		23	—	—	—	—	—	—	—	—	—	90	88	94																							} 75							
		24	92	80	64	73	82	85	71	78	88	94	99	95																								} 73						
		25	86	65	47	46	59	65	70	89	91	93	90	97																									} 89					
		26	91	64	58	69	58	60	69	70	75	85	91	90																										} 88				
		27	89	80	78	84	87	86	91	96	94	96	96	96																											} 92			
		28	93	93	85	80	80	81	89	90	91	89	90	93																												} 92		
		29	93	94	86	82	89	87	95	96	95	—	—	—																													} 81	
		30	—	—	—	—	—	—	—	—	—	96	94	96																														} 82
		31	91	73	65	80	58	63	82	93	96	92	94	90																														
Hourly Means		91	79	73	73	73	71	75	85	90	92	93	94	82																														
Tension of the Vapour.	AUGUST.	1	In. .509	In. .557	In. .615	In. .557	In. .616	In. .587	In. .610	In. .571	In. .548	In. —	In. —	In. —	} .585																													
		2	—	—	—	—	—	—	—	—	—	.662	.595	.598		} .499																												
		3	.598	.616	.678	.529	.492	.443	.402	.444	.435	.475	.421	.453			} .458																											
		4	.555	.546	.555	.593	.600	.421	.403	.376	.361	.379	.372	.334				} .418																										
		5	.298	.455	.453	.548	.309	.363	.439	.483	.462	.433	.452	.426					} .395																									
		6	.382	.360	.483	.354	.401	.449	.409	.397	.383	.387	.381	.354						} .383																								
		7	.318	.316	.342	.387	.423	.396	.391	.413	.390	.398	.400	.428							} .400																							
		8	.424	.472	.461	.502	.486	.395	.348	.352	.328	—	—	—								} .461																						
		9	—	—	—	—	—	—	—	—	—	.353	.347	.330									} .555																					
		10	.368	.416	.400	.405	.459	.473	.490	.490	.519	.520	.493	.495										} .465																				
		11	.512	.573	.543	.615	.616	.603	.532	.551	.548	.521	.511	.532											} .399																			
		12	.549	.517	.530	.537	.506	.450	.486	.436	.385	.390	.407	.387												} .383																		
		13	.415	.438	.432	.423	.385	.411	.368	.397	.372	.348	.390	.412													} .381																	
		14	.429	.422	.469	.520	.516	.388	.323	.306	.311	.308	.293	.315														} .543																
		15	.301	.302	.343	.408	.419	.372	.373	.394	.348	—	—	—															} .592															
		16	—	—	—	—	—	—	—	—	—	.440	.425	.442																} .603														
		17	.466	.509	.577	.592	.602	.572	.552	.532	.542	.438	.565	.566																	} .653													
		18	.552	.616	.611	.605	.660	.619	.620	.603	.593	.557	.540	.532																		} .678												
		19	.501	.613	.623	.654	.666	.636	.665	.626	.608	.573	.543	.531																			} .628											
		20	.559	.610	.704	.696	.727	.701	.706	.693	.649	.622	.580	.593																				} .469										
		21	.573	.587	.661	.729	.757	.764	.765	.719	.667	.626	.596	.573																					} .362									
		22	.624	.660	.725	.768	.753	.702	.595	.636	.608	—	—	—																						} .430								
		23	—	—	—	—	—	—	—	—	—	.523	.466	.472																							} .557							
		24	.466	.528	.526	.577	.507	.556	.455	.431	.427	.397	.410	.347																								} .640						
		25	.318	.335	.316	.319	.404	.414	.423	.402	.366	.351	.348	.344																									} .623					
		26	.381	.363	.413	.469	.382	.398	.428	.427	.462	.477	.482	.475																										} .432				
		27	.493	.507	.552	.572	.573	.530	.553	.566	.557	.587	.596	.601																											} .499			
		28	.601	.639	.659	.646	.655	.667	.690	.636	.638	.639	.611	.601																												} .432		
		29	.624	.670	.657	.641	.664	.659	.667	.665	.672	—	—	—																													} .499	
		30	—	—	—	—	—	—	—	—	—	.549	.514	.500																														} .499
		31	.494	.442	.427	.552	.419	.409	.418	.437	.408	.405	.406	.372																														
Hourly Means		.473	.502	.529	.542	.539	.514	.504	.499	.484	.475	.467	.452	.499																														

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time.		18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	SEPTEMBER.	1	86	66	61	58	68	69	76	85	87	87	81	88	76	
		2	89	87	56	50	48	59	70	73	86	92	93	98	75	
		3	91	76	68	61	68	77	68	81	88	—	—	—	80	
		4 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	—	—		
		5 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	—	—		
		6 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	91	94	94	79
		7	98	79	66	77	63	60	67	72	88	89	93	93	93	
		8	98	94	88	95	91	91	91	96	96	97	99	99	96	
		9	93	95	81	65	55	59	82	89	81	91	88	94	94	81
		10	98	87	61	61	47	51	69	83	75	97	96	95	95	77
		11	86	77	67	54	48	53	63	81	85	91	98	92	92	75
		12	98	81	65	67	64	53	79	88	89	—	—	—	—	78
		13	—	—	—	—	—	—	—	—	—	—	86	82	90	
		14	96	62	76	67	56	54	78	73	76	80	76	75	75	
		15	70	63	55	59	48	44	62	79	89	95	96	95	95	71
		16	94	91	99	73	58	59	78	88	93	91	93	91	91	84
		17	87	68	99	94	100	88	76	80	85	91	89	98	98	88
		18	100	94	72	71	73	78	79	88	94	88	91	83	83	84
		19	91	89	82	69	57	63	83	85	90	—	—	—	—	81
		20	—	—	—	—	—	—	—	—	—	85	90	88	88	
		21	90	73	64	60	63	61	66	91	90	92	92	92	92	
		22	94	88	80	75	67	65	80	89	85	90	88	94	94	83
		23	93	80	79	75	58	69	84	93	95	96	100	96	96	85
		24	98	98	94	89	78	77	90	91	96	98	98	96	96	92
		25	96	93	89	92	78	76	88	96	97	97	95	98	98	91
		26	98	93	89	77	72	78	91	94	94	—	—	—	—	88
		27	—	—	—	—	—	—	—	—	—	90	90	88	88	
		28	91	88	87	79	68	71	75	91	85	94	94	98	98	
		29	98	98	92	67	68	73	90	89	94	97	98	98	98	88
		30	97	97	92	93	96	94	94	96	97	98	98	98	98	96
		Hourly Means		93	84	78	72	66	68	78	86	89	92	92	93	83
Tension of the Vapour.	SEPTEMBER.	1	In. .352	In. .332	In. .392	In. .403	In. .421	In. .413	In. .399	In. .423	In. .420	In. .424	In. .384	In. .420	In. .399	
		2	.437	.460	.330	.327	.293	.340	.345	.310	.315	.306	.281	.280	.335	
		3	.282	.318	.381	.360	.353	.374	.337	.319	.311	—	—	—	.335	
		4	—	—	—	—	—	—	—	—	—	—	—	—		
		5 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	—	—		
		6 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	.343	.333	.314	.409
		7	.321	.395	.377	.507	.458	.440	.404	.409	.397	.375	.387	.443	.443	
		8	.455	.503	.510	.538	.513	.538	.526	.566	.545	.518	.443	.408	.408	
		9	.362	.534	.517	.446	.415	.412	.438	.477	.400	.369	.309	.306	.306	.415
		10	.321	.390	.328	.331	.290	.297	.338	.353	.335	.370	.364	.344	.344	.338
		11	.304	.300	.262	.229	.211	.231	.235	.235	.227	.220	.225	.199	.199	.240
		12	.219	.288	.265	.300	.280	.258	.349	.334	.334	—	—	—	—	.296
		13	—	—	—	—	—	—	—	—	—	.315	.321	.293	.293	
		14	.290	.310	.454	.415	.384	.384	.447	.363	.381	.374	.344	.329	.329	
		15	.313	.338	.377	.404	.364	.310	.410	.406	.372	.344	.316	.319	.319	.356
		16	.331	.402	.537	.438	.407	.400	.424	.397	.391	.405	.441	.455	.455	.419
		17	.444	.349	.501	.475	.481	.420	.329	.294	.258	.265	.225	.255	.255	.358
		18	.285	.317	.270	.287	.286	.308	.304	.309	.322	.284	.292	.252	.252	.293
		19	.278	.301	.360	.346	.294	.340	.387	.368	.382	—	—	—	—	.306
		20	—	—	—	—	—	—	—	—	—	.211	.205	.198	.198	
		21	.198	.183	.174	.176	.181	.186	.175	.211	.168	.168	.180	.159	.159	
		22	.154	.205	.243	.297	.300	.289	.307	.293	.301	.280	.256	.234	.234	.263
		23	.234	.310	.346	.375	.360	.424	.408	.362	.330	.306	.327	.319	.319	.342
		24	.280	.363	.397	.399	.404	.370	.369	.323	.311	.308	.290	.292	.292	.342
		25	.290	.359	.422	.439	.439	.422	.381	.350	.359	.338	.308	.305	.305	.368
		26	.308	.420	.477	.461	.436	.439	.470	.456	.475	—	—	—	—	.391
		27	—	—	—	—	—	—	—	—	—	.259	.252	.245	.245	
		28	.227	.306	.346	.366	.353	.312	.281	.343	.277	.270	.244	.257	.257	
		29	.262	.335	.392	.333	.363	.342	.382	.372	.371	.379	.384	.393	.393	.369
		30	.385	.388	.385	.407	.408	.394	.390	.392	.405	.407	.404	.397	.397	.397
		Hourly Means		.305	.350	.377	.377	.362	.360	.348	.361	.349	.327	.324	.309	.347

<sup>a</sup> Removing to Magnetic Observatory.



HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	OCTOBER.	1	98	97	93	98	93	93	98	99	100	—	—	99	97	
		2	100	100	100	94	96	93	89	91	92	95	99	78	94	
		3	72	71	67	51	47	42	55	57	54	—	—	—	64	
		4	—	—	—	—	—	—	—	—	—	—	80	85	92	87
		5	96	92	84	79	76	65	100	81	84	94	93	98		
		6	98	100	88	39	35	20	34	51	72	86	88	84	66	
		7	85	74	78	63	51	50	64	86	92	93	96	97	77	
		8	98	98	85	84	69	76	78	90	83	76	81	92	84	
		9	91	90	83	80	79	77	83	84	75	64	65	67	78	
		10	68	73	82	85	85	83	88	92	94	—	—	—	81	
		11	—	—	—	—	—	—	—	—	—	79	71	77		
		12	84	70	67	61	66	63	81	82	96	98	96	96	80	
		13	96	82	85	81	78	76	92	90	91	90	90	94	86	
		14	80	78	61	55	70	61	66	71	81	80	89	94	74	
		15	91	77	59	58	66	63	69	76	79	83	81	84	74	
		16	84	81	73	41	79	76	77	78	84	87	84	82	77	
		17	85	87	93	100	98	100	100	100	100	—	—	—	97	
		18	—	—	—	—	—	—	—	—	—	99	100	99		
		19	100	100	85	87	98	100	94	73	91	91	100	96	93	
		20	98	100	90	79	79	76	91	96	94	98	91	94	90	
		21	100	80	60	53	72	90	93	89	89	97	83	92	83	
		22	92	88	90	85	74	77	82	85	89	86	89	82	85	
		23	84	57	78	76	46	77	64	93	72	70	68	90	73	
		24	96	86	85	61	58	65	100	78	94	—	—	—	83	
		25	—	—	—	—	—	—	—	—	—	89	92	91		
		26	96	86	91	96	100	98	98	96	87	95	92	99	95	
		27	43	100	81	80	77	66	70	98	96	98	98	100	84	
		28	100	100	100	97	96	93	98	96	96	100	100	100	98	
		29	100	100	98	98	94	93	97	97	94	93	91	94	96	
		30	89	89	85	85	74	75	68	63	66	79	82	92	79	
		31	96	82	82	63	65	68	74	79	94	94	96	96	82	
Hourly Means		93	87	82	75	75	75	82	84	87	88	89	90	84		
Tension of the Vapour.	OCTOBER.	1	In. .384	In. .376	In. .371	In. .387	In. .380	In. .377	In. .387	In. .390	In. .400	In. —	In. —	In. .433	In. .388	
		2	.439	.454	.488	.506	.515	.533	.496	.494	.489	.509	.493	.291	.475	
		3	.199	.188	.191	.147	.156	.142	.179	.175	.161	—	—	—	.207	
		4	—	—	—	—	—	—	—	—	—	.316	.333	.298		
		5	.311	.395	.421	.441	.442	.386	.500	.354	.299	.287	.295	.278	.367	
		6	.255	.364	.388	.255	.240	.119	.156	.182	.187	.187	.186	.177	.225	
		7	.169	.207	.305	.280	.249	.227	.234	.304	.301	.287	.278	.253	.258	
		8	.255	.378	.385	.425	.444	.431	.352	.375	.400	.318	.316	.306	.365	
		9	.261	.250	.241	.243	.243	.245	.243	.235	.196	.165	.152	.146	.218	
		10	.146	.183	.263	.301	.298	.291	.303	.322	.331	—	—	—	.272	
		11	—	—	—	—	—	—	—	—	—	.310	.256	.256		
		12	.269	.218	.220	.216	.234	.219	.220	.220	.187	.177	.170	.163	.209	
		13	.159	.216	.270	.299	.331	.344	.317	.343	.337	.306	.255	.273	.287	
		14	.264	.285	.242	.235	.310	.252	.204	.202	.190	.175	.147	.165	.223	
		15	.152	.183	.172	.187	.215	.193	.167	.163	.148	.150	.146	.140	.168	
		16	.138	.163	.173	.134	.223	.214	.180	.187	.211	.210	.211	.212	.188	
		17	.223	.234	.244	.263	.280	.285	.297	.308	.319	—	—	—	.312	
		18	—	—	—	—	—	—	—	—	—	.423	.430	.433		
		19	.423	.439	.454	.455	.474	.481	.389	.292	.265	.237	.240	.221	.364	
		20	.215	.267	.296	.283	.316	.312	.270	.273	.266	.237	.241	.240	.268	
		21	.230	.234	.200	.183	.221	.248	.242	.231	.223	.241	.201	.199	.221	
		22	.177	.203	.259	.293	.268	.266	.269	.279	.290	.304	.306	.296	.267	
		23	.299	.215	.352	.344	.190	.245	.160	.214	.151	.148	.136	.179	.219	
		24	.209	.180	.207	.157	.145	.157	.209	.159	.163	—	—	—	.166	
		25	—	—	—	—	—	—	—	—	—	.129	.126	.146		
		26	.157	.152	.220	.201	.211	.197	.171	.150	.127	.127	.133	.148	.162	
		27	.087	.171	.157	.174	.174	.150	.160	.208	.229	.262	.245	.240	.188	
		28	.234	.240	.258	.255	.280	.273	.210	.182	.181	.187	.192	.205	.225	
		29	.213	.238	.271	.294	.289	.257	.253	.243	.234	.232	.220	.220	.247	
		30	.207	.213	.215	.213	.180	.178	.154	.138	.142	.159	.165	.172	.178	
		31	.181	.165	.198	.189	.195	.199	.199	.192	.179	.180	.181	.166	.185	
Hourly Means		.232	.252	.277	.273	.278	.267	.256	.252	.245	.241	.233	.232	.254		

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16	
Humidity of the Air. NOVEMBER.	2	96	100	91	88	74	76	93	94	92	96	96	96	91
	3	94	96	87	80	73	72	86	94	90	86	93	97	87
	4	94	97	91	83	78	80	86	89	88	87	87	86	87
	5	88	90	83	82	76	81	77	80	84	89	89	61	90
	6	96	98	78	79	79	75	92	98	96	75	100	89	84
	7	94	91	94	94	90	74	93	90	87	—	—	—	92
	8	—	—	—	—	—	—	—	—	—	—	100	100	100
	9	89	94	78	73	70	72	76	81	93	82	82	80	81
	10	82	88	82	72	61	59	71	88	85	96	94	90	81
	11	87	90	88	84	79	83	83	85	89	91	85	85	86
	12	87	93	86	86	78	82	79	90	71	86	96	90	85
	13	94	91	85	63	56	64	72	81	79	89	96	93	80
	14	87	98	78	74	90	96	96	100	91	—	—	—	91
	15	—	—	—	—	—	—	—	—	—	90	92	96	91
	16	98	92	66	98	83	90	94	93	93	86	89	98	90
	17	96	94	94	88	92	96	96	100	84	87	85	89	92
	18	88	94	84	81	66	92	100	94	92	83	89	90	88
	19	91	87	83	81	73	73	79	83	83	86	90	77	82
	20	76	73	77	71	82	75	81	88	83	86	96	94	82
	21	98	87	100	98	81	96	98	98	98	—	—	—	95
	22	—	—	—	—	—	—	—	—	—	96	96	100	91
	23	100	100	98	88	94	94	88	85	82	82	93	86	91
	24	86	88	80	75	66	78	74	79	83	88	90	94	82
	25	94	94	80	77	80	83	82	86	98	89	91	89	87
	26	89	84	—	—	—	84	82	87	74	97	94	82	86
	27	84	92	81	86	94	78	87	83	85	84	81	85	85
	28	83	88	84	74	82	78	68	87	96	—	—	—	80
	29	—	—	—	—	—	—	—	—	—	80	70	72	80
	30	90	100	96	98	64	88	87	77	94	72	74	74	84
	Hourly Means		90	92	85	82	78	81	85	88	88	87	88	89
Tension of the Vapour. NOVEMBER.	2	.164	.214	.270	.298	.300	.294	.236	.216	.195	.182	.177	.173	.227
	3	.167	.206	.281	.288	.307	.281	.246	.238	.248	.255	.262	.241	.252
	4	.228	.255	.320	.327	.328	.316	.304	.290	.263	.262	.260	.248	.283
	5	.249	.254	.250	.269	.267	.283	.245	.243	.213	.209	.136	.177	.233
	6	.171	.211	.230	.245	.250	.240	.193	.183	.185	.150	.228	.237	.210
	7	.250	.233	.238	.270	.266	.226	.262	.276	.279	—	—	—	.267
	8	—	—	—	—	—	—	—	—	—	.305	.300	.295	.267
	9	.294	.292	.266	.239	.225	.219	.216	.228	.250	.212	.200	.188	.236
	10	.182	.147	.193	.193	.186	.172	.167	.185	.172	.159	.159	.152	.172
	11	.142	.163	.199	.197	.188	.195	.195	.207	.221	.229	.219	.215	.197
	12	.220	.242	.242	.282	.288	.267	.248	.252	.192	.198	.198	.188	.235
	13	.168	.223	.207	.181	.163	.165	.154	.150	.175	.138	.145	.143	.168
	14	.140	.164	.158	.155	.173	.183	.193	.211	.213	—	—	—	.167
	15	—	—	—	—	—	—	—	—	—	.139	.133	.139	.167
	16	.136	.129	.123	.179	.152	.152	.146	.137	.139	.131	.142	.152	.143
	17	.150	.149	.160	.152	.168	.163	.151	.155	.129	.128	.118	.122	.145
	18	.110	.146	.180	.159	.143	.174	.155	.146	.136	.120	.126	.140	.145
	19	.149	.145	.149	.157	.153	.151	.155	.145	.150	.152	.155	.130	.149
	20	.126	.122	.172	.142	.165	.150	.150	.157	.148	.152	.167	.159	.151
	21	.165	.145	.170	.165	.133	.150	.148	.215	.148	—	—	—	.163
	22	—	—	—	—	—	—	—	—	—	.170	.175	.168	.163
	23	.182	.179	.175	.175	.188	.184	.186	.150	.173	.161	.173	.164	.174
	24	.166	.168	.170	.168	.152	.168	.155	.159	.163	.161	.156	.159	.162
	25	.159	.182	.161	.174	.179	.171	.161	.160	.173	.150	.149	.144	.164
	26	.143	.138	—	—	—	.134	.117	.116	.091	.122	.118	.112	.121
	27	.108	.108	.132	.159	.174	.137	.145	.145	.150	.148	.150	.170	.144
	28	.163	.179	.186	.180	.204	.191	.115	.137	.195	—	—	—	.173
	29	—	—	—	—	—	—	—	—	—	.206	.168	.154	.173
	30	.170	.201	.225	.179	.103	.114	.103	.089	.094	.071	.070	.073	.124
	Hourly Means		.172	.194	.202	.206	.202	.195	.182	.184	.180	.172	.171	.170

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.																
Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	DECEMBER.	1	78	84	79	86	73	72	69	80	73	71	84	75	77	
		2	79	74	82	78	67	66	69	78	79	78	88	75	76	
		3	79	76	77	70	78	64	57	94	59	75	78	83	74	
		4	79	80	68	97	89	95	78	94	86	84	89	80	85	
		5	75	84	73	77	91	57	62	55	61	—	—	—	—	
		6	—	—	—	—	—	—	—	—	—	—	84	83	86	74
		7	87	79	92	87	92	96	90	79	89	89	94	90	89	
		8	88	88	92	90	90	94	94	96	98	96	94	98	98	
		9	98	96	98	96	96	100	100	100	100	100	100	100	100	
		10	80	81	70	63	64	66	71	96	82	88	73	73	75	
		11	75	89	82	78	70	92	86	92	92	83	81	75	83	
		12	77	94	98	98	98	100	100	100	100	—	—	—	—	
		13	—	—	—	—	—	—	—	—	—	—	88	94	88	
		14	90	88	90	90	84	86	99	98	96	98	85	100	92	
		15	100	96	94	98	100	98	96	84	78	83	73	84	90	
		16	84	73	71	73	71	71	65	87	87	78	81	91	78	
		17	95	83	71	79	77	82	94	81	84	84	88	100	85	
		18	95	100	92	94	61	64	78	72	71	70	78	80	80	
		19	97	82	81	80	79	76	78	84	76	—	—	—	—	
		20	—	—	—	—	—	—	—	—	—	—	84	89	84	
		21	81	87	91	71	75	85	98	98	87	88	96	96	88	
		22	92	90	90	84	83	84	91	62	88	74	59	88	82	
		23	97	88	75	75	71	72	71	81	100	61	71	71	79	
		24	73	79	76	83	74	67	83	95	95	—	—	—	—	
		25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	98	97	98	
		26	92	97	91	94	82	87	79	88	83	—	—	—	—	
		27	—	—	—	—	—	—	—	—	—	—	75	95	100	
		28	84	74	79	88	81	85	75	78	84	87	79	82	81	
		28	87	89	84	80	94	90	94	93	92	89	86	81	88	
		30	82	81	84	91	90	86	77	94	79	76	79	85	84	
		31	88	89	40	80	77	79	91	85	83	81	81	93	81	
Hourly Means		86	85	82	84	81	81	83	86	85	83	84	87	84		
Tension of the Vapour.	DECEMBER.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.		
		1	·073	·085	·097	·102	·086	·081	·063	·065	·069	·070	·080	·077	·079	
		2	·077	·091	·137	·146	·141	·142	·147	·150	·152	·143	·148	·114	·132	
		3	·113	·081	·089	·083	·095	·073	·051	·073	·045	·059	·059	·061	·073	
		4	·063	·067	·074	·125	·129	·126	·101	·120	·108	·106	·105	·089	·101	
		5	·075	·077	·073	·087	·099	·065	·063	·057	·058	—	—	—	—	
		6	—	—	—	—	—	—	—	—	—	—	·100	·096	·102	
		7	·104	·097	·123	·127	·131	·135	·135	·121	·140	·150	·167	·160	·132	
		8	·158	·168	·186	·194	·200	·206	·208	·211	·211	·211	·203	·213	·197	
		9	·211	·215	·229	·229	·225	·232	·228	·234	·238	·242	·240	·246	·230	
		10	·180	·164	·166	·160	·165	·155	·146	·179	·161	·148	·129	·121	·156	
		11	·108	·118	·136	·142	·137	·162	·130	·126	·131	·150	·155	·154	·137	
		12	·156	·174	·193	·202	·200	·206	·206	·207	·211	—	—	—	—	
		13	—	—	—	—	—	—	—	—	—	·169	·178	·172	·189	
		14	·181	·181	·181	·187	·182	·189	·205	·198	·182	·175	·168	·174	·184	
		15	·174	·179	·176	·185	·201	·200	·202	·180	·156	·156	·122	·138	·172	
		16	·140	·118	·129	·136	·127	·114	·097	·124	·116	·103	·094	·106	·117	
		17	·109	·094	·092	·111	·107	·093	·099	·081	·081	·080	·066	·065	·090	
		18	·053	·053	·061	·069	·059	·056	·060	·060	·059	·064	·076	·085	·063	
		19	·106	·093	·107	·120	·120	·110	·102	·103	·096	—	—	—	—	
		20	—	—	—	—	—	—	—	—	—	·104	·121	·109	·107	
		21	·097	·103	·113	·095	·103	·120	·148	·154	·145	·194	·151	·166	·132	
		22	·168	·166	·159	·146	·123	·102	·099	·075	·091	·073	·053	·063	·110	
		23	·076	·082	·094	·119	·125	·122	·127	·145	·165	·078	·077	·070	·107	
		24	·069	·067	·065	·085	·073	·064	·068	·060	·046	—	—	—	—	
		25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	·125	·130	·141	·083	
		26	·124	·117	·102	·100	·090	·081	·068	·065	·060	·060	—	—	—	
		27	—	—	—	—	—	—	—	—	—	·038	·052	·068	·080	
		28	·080	·085	·113	·147	·150	·151	·119	·127	·129	·136	·118	·117	·123	
		29	·133	·138	·148	·141	·160	·156	·156	·142	·213	·122	·109	·092	·142	
		30	·084	·079	·084	·088	·087	·077	·069	·073	·065	·065	·068	·074	·075	
31	·077	·078	·044	·087	·096	·096	·100	·093	·098	·092	·092	·068	·085			
Hourly Means		·115	·115	·122	·131	·131	·127	·123	·124	·124	·121	·118	·117	·122		

<sup>a</sup> Christmas Day.

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Mean Solar Time (Astronom'. Reck <sup>s</sup> ).		Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.	
Toronto.	Göttingen.		Direction.	Force.							
<b>MARCH.</b>											
<b>SUNDAY.</b>											
D.	H.	D.	H.							In.	
1	14	1	20	W. by S.	Nearly calm.	Clear; haze round horizon; fog rising	47.2	32.2	—	27.6	—
1	20	2	02	N. W.	Moderate.	Partially clouded; cirri and strati					
2	02	2	08	N. W.	Nearly calm.	Sun shining through haze					
2	08	2	14	W. S. W.	Nearly calm.	Clear	46.4	33.7	—	27.6	.050
2	14	2	20	W. by S.	Nearly calm.	Clouded					
2	20	3	02	W. S. W.	Nearly calm.	Clouded and raining					
3	02	3	08	S. E.	Nearly calm.	¼ of the sky to S. covered with haze					
3	08	3	14	S. E.	Light.	Clouded	52.1	35.5	—	—	—
3	14	3	20	E. S. E.	Nearly calm.	Haze and fog					
3	20	4	02	W.	Moderate.	Clear, except round horizon					
4	02	4	08	W.	Moderate.	Fresh gusts; ¾ clouded; light cirri and cirro-strati					
4	08	4	14	W. by N.	Fresh.	Partially clouded	58.6	24.9	—	19.4	—
4	14	4	20	N. W. by W.	High.	Partially clouded, a few stars appearing					
4	20	5	02	W. N. W.	Moderate.	Clear					
5	02	5	08	S. W. by W.	Moderate.	Clear; surface water of the lake 36°·0					
5	08	5	14	W. N. W.	Moderate.	Clear; Aurora from 9 <sup>h</sup> 45 <sup>m</sup> to 11 <sup>h</sup> 30 <sup>m</sup> ; reddish streamers, patches	43.7	29.8	—	19.8	—
5	14	5	20	N. W.	Moderate.	Clear - - - [and arches; no pulsations]					
5	20	6	02	W. by S.	Very light.	Clear; light strati in W.					
6	02	6	08	W. by N.	Light.	Partially clouded; occasional squalls					
6	08	6	14	W. by N.	Nearly calm.	Clear	53.2	25.2	—	21.1	—
6	14	6	20	W. N. W.	Moderate.	Overcast: auroral light and faint streamers at 12 <sup>h</sup>					
6	20	7	02	W. by N.	Fresh.	Clear, except strati along the horizon					
7	02	7	08	N. W.	Fresh.	Squalls; clear; light cirro-cumuli in S. E. horizon					
7	08	7	14	N. W. by N.	Nearly calm.	Clear	26.0	14.2	—	5.6	—
<b>SUNDAY.</b>											
8	14	8	20	W. S. W.	Nearly calm.	Clouded	42.0	24.9	—	20.6	—
8	20	9	02	W.	Light.	Clear, except a few cumuli and cirri					
9	02	9	08	W. by S.	Moderate.	¾ clouded					
9	08	9	14	W. by S. to E.N.E.	Fresh.	Clouded	41.7	14.4	—	—	—
9	14	9	20	N. by W.	Fresh.	Snowing heavily; ceased at 16 <sup>h</sup>					
9	20	10	02	N. by W.	Fresh.	Partially clouded					
10	02	10	08	N. W.	Moderate.	Clear; a few cirro-strati round horizon					
10	08	10	14	N. W. by N.	Moderate.	Clear; dense strati near S. horizon	23.2	9.2	—	2.4	—
10	14	10	20	N. W.	Nearly calm.	Clear; slight lunar halo					
10	20	11	02	W. by S.	Light.	Clouded; heavy cumuli and cumulo-strati					
11	02	11	08	W. & W. by S.	Moderate.	Clouded; cirro-strati, and cirro-cumuli					
11	08	11	14	W.	Nearly calm.	Light haze; lunar halo, diam. 8°	29.7	18.5	—	11.1	—
11	14	11	20	W.	Light.	Overcast; light haze; lunar halo, diam. 45°					
11	20	12	02	W.	Nearly calm.	¾ clouded; chiefly cirri and cirro-strati					
12	02	12	08	E.	Light.	¾ to N. clouded; light cirri in zenith; cirro-strati in W. and S.					
12	08	12	14	N. E.	Nearly calm.	Overcast, light haze and cirri; lunar halo, diam. 40°	36.3	18.3	—	17.6	—
12	14	12	20	N.	Moderate.	Overcast, light haze; surface of the lake 32°·0					
12	20	13	02	N. W.	Light.	Clear; a few light cirri					
13	02	13	08	W.	Nearly calm.	Clouded; dense cirro-strati					
13	08	13	14	W.	Nearly calm.	Overcast, dense haze	39.8	28.7	—	23.6	—
13	14	13	20	W.	Nearly calm.	Overcast					
13	20	14	02	W.	Moderate.	Clouded; light cirri					
14	02	14	08	S. E. by E.	Light.	Overcast; light haze					
14	08	14	14	E. by S.	Moderate.	Clouded round horizon; zenith clear	37.7	28.2	—	21.6	—
<b>SUNDAY.</b>											
15	14	15	20	W. S. W.	Nearly calm.	Clear	36.5	20.9	—	15.8	—
15	20	16	02	W. S. W.	Nearly calm.	Clear; a bank of strati in S. W.					
16	02	16	08	S. S. W.	Light.	Overcast; thick haze					
16	08	16	14	S. E.	Nearly calm.	Clouds breaking and passing rapidly from W. to E.	41.4	32.4	—	—	—
16	14	16	20	E. N. E.	Nearly calm.	Overcast; dense haze					
16	20	17	02	N. E. by N.	Nearly calm.	Overcast; cirro-strati and cirro-cumuli					
17	02	17	08	S. W. by W.	Moderate.	Overcast; cirro-strati and cirro-cumuli					
17	08	17	14	S. W. by W.	Moderate.	Clear; light haze near horizon					
17	14	17	20	W. S. W.	Nearly calm.	Partially clouded, cirro-cumuli and cirro-strati	40.3	28.1	—	21.6	—
17	20	18	02	W. by S.	Nearly calm.	Overcast; dense haze					

Mean Solar Time. (Astronom <sup>l</sup> . Reckons <sup>s</sup> .)		Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr <sup>l</sup> . Rad.	Rain.
Toronto.	Göttingen.		Direction.	Force.						
<b>MARCH.</b>										
D.	H.	D.	H.	°		°	°	°	°	In.
18	02	18	08	36·0	W.	Moderate.	Clouded partially; cumuli; wind freshening	-	-	-
18	08	18	14	28·5	N. W.	Moderate.	Overcast with cirri in ridges from W. to E.	-	-	50·8 34·0
18	14	18	20	30·0	N.	Moderate.	Clouded	-	-	-
18	20	19	02	37·0	E. by N.	Fresh.	Mixed rain and hail; thunder; heavy squalls	-	-	-
19	02	19	08	42·0	E. N. E.	Moderate.	Overcast, dense mist	-	-	-
19	08	19	14	38·0	E. by N.	Nearly calm.	Drizzling rain, and dense fog	-	-	40·5 36·1
19	14	19	20	38·0	W. N. W.	Moderate.	Densely clouded; heavy rain, commenced at 13 <sup>h</sup> 15 <sup>m</sup>	-	-	- 34·9
19	20	20	02	39·0	W. by S.	Nearly calm.	Clouded	-	-	-
20	02	20	08	26·5	W. by N.	Fresh.	Partially clouded; cumulo-strati, and cirro-cumuli	-	-	-
20	08	20	14	22·5	W. N. W.	Moderate.	½ clouded to N., remainder clear	-	-	49·5 31·7
20	14	20	20	20·0	N. W. by W.	Nearly calm.	Clear; surface water of the lake 36°·0	-	-	- 13·6
20	20	21	02	20·5	N. W.	Nearly calm.	Clear; temp. of soil, 3 ft. deep, 35°·0; 6 feet deep 38°·0	-	-	-
21	02	21	08	19·0	N. W. by W.	Moderate.	Overcast, cumuli; a few flakes of snow	-	-	-
21	08	21	14	13·0	N. W. by N.	Moderate.	A few strati along N. horizon, remainder clear	-	-	-
<b>SUNDAY.</b>										
22	14	22	20	23·5	N. E.	Moderate.	Overcast, dense haze; light snow commenced at 13 <sup>h</sup> .	-	-	33·1 27·7
22	20	23	02	24·5	E. by N.	Moderate.	Overcast	-	-	-
23	02	23	08	24·5	E. by S.	Brisk.	¾ clouded	-	-	-
23	08	23	14	24·5	E.	Fresh.	Clouded	-	-	37·3 30·2
23	14	23	20	25·5	E. by N.	Fresh.	Clouded	-	-	- 29·6
23	20	24	02	30·0	E. by N.	Stiff breeze.	Heavy snow commenced at 17 <sup>h</sup> .	-	-	-
24	02	24	08	30·0	E. by N.	Stiff breeze.	Snowing very fast	-	-	-
24	08	24	14	26·5	N. E. by E.	Fresh.	Snowing very fast	-	-	31·5 23·9
24	14	24	20	20·5	N.	Nearly calm.	Clear	-	-	-
24	20	25	02	14·0	N. by E.	Moderate.	Clear	-	-	-
25	02	25	08	20·0	N. W.	Moderate.	Clear	-	-	-
25	08	25	14	- <sup>a</sup>	N. N. W.	Moderate.	Clear at 10 <sup>h</sup> , faint light in N. horizon	-	-	39·5 12·5
25	14	25	20	-	N. W.	Moderate.	Clear	-	-	-
25	20	26	02	9·0	S. W.	Very light.	Clear, a few light clouds in N. E. horizon	-	-	-
26	02	26	08	22·5	S. S. W.	Moderate.	Overcast; haze and light cirri	-	-	-
26	08	26	14	24·5	S. W.	Moderate.	Clouded round horizon; zenith clear	-	-	40·2 31·7
26	14	26	20	32·0	S. W.	Moderate.	Clouded; surface water of the lake 36°·0	-	-	- 25·6
26	20	27	02	33·0	N. E.	Very light.	Clouded; clearing to N.	-	-	-
27	02	27	08	32·0	S. E. by S.	Moderate.	Clouded, cirri and cirro-cumuli	-	-	-
27	08	27	14	34·0	S. E.	Nearly calm.	Clouded, strati, cirro-cumuli and haze	-	-	43·1 35·3
27	14	27	20	34·0	S. E.	Nearly calm.	Clouded	-	-	- 31·4
27	20	28	02	34·0	S. E.	Nearly calm.	Overcast; thick haze	-	-	-
28	02	28	08	38·0	E. by S.	Moderate.	Overcast; thick haze, slight rain	-	-	-
28	08	28	14	38·0	E. N. E.	Brisk.	Raining heavily	-	-	41·8 37·2
<b>SUNDAY.</b>										
29	14	29	20	36·0	S. W. by W.	Nearly calm.	Clouded; raining	-	-	48·8 33·4
29	20	30	02	34·0	W. by S.	Nearly calm.	Snow commenced at 17 <sup>h</sup> 30 <sup>m</sup>	-	-	- 32·6
30	02	30	08	34·0	W. S. W.	Nearly calm.	Slight rain; clearing	-	-	-
30	08	30	14	27·5	W.	Freshening.	¾ clouded; dense cumuli in masses	-	-	48·3 29·2
30	14	30	20	20·5	W.	Brisk.	Snowing, squally	-	-	- 25·8
30	20	31	02	19·0	W. by S.	Fresh.	½ overcast	-	-	-
31	02	31	08	19·0	W.	Strong breeze.	Overcast; lighting up in N. and E. horizon; squally	-	-	-
31	08	31	14	24·5	W. by S.	Nearly calm.	Clear; heavy clouds near S. horizon	-	-	38·7 22·8
31	14	31	20	25·0	W. by S.	Nearly calm.	Overcast, with haze	-	-	- 17·6
31	20	1	02	26·0	W. by S.	Nearly calm.	Overcast, with haze	-	-	-
<b>APRIL.</b>										
1	02	1	08	28·0	S. by E.	Nearly calm.	¾ clouded, snow falling	-	-	-
1	08	1	14	26·0	W. N. W.	Nearly calm.	Clear; at 10 <sup>h</sup> Aurora visible	-	-	37·5 25·4
1	14	1	20	19·0	W. N. W.	Nearly calm.	Clear	-	-	- 15·5
1	20	2	02	21·0	W. N. W.	Moderate.	Clear	-	-	-
2	02	2	08	30·0	S. by E.	Brisk.	Light haze to S.	-	-	-
2	08	2	14	32·0	S. W.	Moderate.	Clouded	-	-	41·6 34·2
2	14	2	20	32·0	S. W.	Moderate.	Clear	-	-	- 25·6
2	20	3	02	34·0	W. by S.	Moderate.	Overcast; heavy haze in N.; rain commencing	-	-	-
3	02	3	08	41·0	S. W. by W.	Moderate.	Overcast; light cirri and haze	-	-	-
3	08	3	14	42·0	W. S. W.	Brisk.	Sheet lightning from a heavy bank in W.	-	-	52·0 38·3
3	14	3	20	-	W. by S.	Moderate.	¾ clouded; fresh and squally	-	-	- 33·6
3	20	4	02	37·0	W. by N.	Fresh.	½ overcast; clouds passing rapidly from N. W.	-	-	-

<sup>a</sup> No deposition of dew at 0°.

Mean Solar Time (Astronom'. Reckon'g.)		Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.	Göttingen.		Direction.	Force.						
APRIL.										
D.	H.	°								In.
4	02	33·0	S. W. by W.	Fresh.	½ densely clouded ; heavy squalls - - - - -	53·0	31·2	—	20·6	—
4	08	24·0	S. W. by W.	Moderate.	Clear ; faint light in N. near horizon - - - - -					
SUNDAY.										
5	14	26·0	—	Calm.	Clear - - - - -	48·3	29·0	—	18·6	·235
5	20	22·0	S. W.	Very light.	Clear ; a light haze in S. - - - - -					
6	02	24·0	S. W. & W.	Moderate.	Clear, except a few light cirri - - - - -					
6	08	17·0	W. by S.	Moderate.	Clear - - - - -	43·5	25·3	—	16·8	—
6	14	16·0	S. W.	Moderate.	Clear - - - - -					
6	20	10·0	W. N. W.	Light.	Clear ; wind in puffs - - - - -					
7	02	— <sup>a</sup>	{W. S. W. to S. S. E.}	Moderate.	Clear ; a few light cirri in zenith - - - - -					
7	08	12·0	W.	Moderate.	Clear - - - - -	42·3	25·0 <sup>b</sup>	—	13·1	—
7	14	13·0	W.	Light.	½ clouded - - - - -					
7	20	15·0	N. W. by W.	Moderate.	Clouded, light cirri - - - - -					
8	02	13·0	N. E. by N.	Moderate.	Clear - - - - -					
8	08	19·0	N. by W.	Moderate.	Clear - - - - -	39·8	25·9	—	17·6	—
8	14	19·0	N. by W.	Moderate.	Clear - - - - -					
8	20	30·0	N. N. E. & E.	Moderate.	Clear - - - - -					
9	02	33·0	N. E. by E.	Moderate.	Clear - - - - -					
9	08	28·0	{E. N. E. to N. N. W.}	Nearly calm.	Clear - - - - -	51·0	33·2	—	27·6	—
9	14	26·0	N. N. W.	Nearly calm.	Clear ; surface water of the lake 40° - - - - -					
9	20	42·0	W.	Light.	Clear ; cirro-strati in N. and W. horizon - - - - -					
10	02	48·5	S. S. W.	Moderate.	Clouded ; cirri and cirro-cumuli across zenith - - - - -					
10	08	53·0	N. W.	Moderate.	Overcast ; broken masses of clouds - - - - -	57·0	44·1	—	43·6	·150
10	14	48·0	N. E.	Fresh.	Raining slightly - - - - -					
10	20	45·0	E. N. E.	Brisk.	Slight rain and thick fog - - - - -					
11	02	48·0	E.	Moderate.	Light rain at intervals ; clouds breaking - - - - -					
11	08	44·0	S. S. W.	Nearly calm.	A few cirri in N. W. and zenith ; horizon hazy - - - - -	56·6	33·4	—	41·6	·050
SUNDAY.										
12	14	27·0	W. S. W.	Moderate.	Heavily clouded - - - - -	56·6	33·4	—	27·6	·175
12	20	30·0	W. & W. by S.	Nearly calm.	Clear - - - - -					
13	02	36·0	S. by E.	Nearly calm.	Clear ; strati in S. horizon - - - - -					
13	08	34·0	S.	Moderate.	Overcast ; light cirri, thick haze near N. and W. horizon - - - - -	46·5	33·9	—	26·6	—
13	14	31·0	S.	Nearly calm.	Clouded - - - - -					
13	20	36·5	S. by E.	Nearly calm.	Clouded ; cirro-strati and haze - - - - -					
14	02	—	S. by W.	Light.	Overcast ; light cirri - - - - -					
14	08	35·0	S. by W.	Nearly calm.	Overcast ; broken masses of cirro-cumuli - - - - -					
14	14	39·0	{S. S. W. to N. by E.}	Nearly calm.	Overcast - - - - -	44·3	36·4	—	30·8	—
14	20	36·0	N. by W.	Light.	Overcast ; cumuli and cumulo-strati - - - - -					
15	02	42·0	S. E.	Nearly calm.	½ clouded round horizon - [at the E. edge of the ring, alt. 70° - - - - -					
15	08	41·0	—	Calm.	Clouded ; lunar halo diam. 52°, a very distinct paraselene visible - - - - -	50·3	30·1	—	24·6	—
15	14	29·0	S.	Nearly calm.	Light cirri and haze in S. and zenith - - - - -					
15	20	39·0	S.	Nearly calm.	Very light cirri in zenith ; haze near horizon - - - - -					
16	02	42·0	S. E. by S.	Moderate.	½ to S. E. clouded ; light cirri and haze - - - - -					
16	08	43·0	E. by S.	Nearly calm.	Overcast ; light cirri and haze ; squalls ; surface water of the lake 42° - - - - -	53·0	44·9	—	42·6	—
Good Friday.										
17	14	45·0	N. W. by W.	Nearly calm.	Heavily clouded, slight rain - - - - -	64·0	48·6	—	—	·025
17	20	48·0	N. by W.	Moderate.	Heavily clouded, slight rain - - - - -					
18	02	40·0	N. W.	Moderate.	Overcast ; occasional sunshine - - - - -					
18	08	32·0	N. N. W.	Moderate.	Clear - - - - -	49·7	29·0	—	19·6	·140
SUNDAY.										
19	14	34·0	N. W.	Nearly calm.	Light haze ; lunar halo, diam. 40° - - - - -	45·7	30·7	—	20·6	—
19	20	24·0	{W. to W. by N.}	Nearly calm.	Clear - - - - -					
20	02	28·0	S. W.	Light.	½ clouded ; cirri and cirro-cumuli - - - - -					
20	08	26·0	S.	Nearly calm.	Clear - - - - -	50·0	29·7	—	22·1	—
20	14	23·0	S. by E.	Nearly calm.	Lunar halo - - - - -					
20	20	30·0	E. N. E.	Light.	Clear ; temp. of soil, 3 ft. deep, 42° ; 6 ft. deep, 40° - - - - -					
21	02	32·0	N. E. by E.	Brisk.	Clear - - - - -					
21	08	31·0	N.	Moderate.	Partially clouded, cirro-strati ; haze in horizon - - - - -	50·5	38·7	—	25·6	·600
21	14	36·0	N.	Nearly calm.	Overcast - - - - -					
21	20	46·0	E. by S.	Nearly calm.	Heavy rain from 17 <sup>h</sup> 45 <sup>m</sup> to 21 <sup>h</sup> 15 <sup>m</sup> - - - - -					

<sup>a</sup> No deposition of dew at 12°.

<sup>b</sup> Doubtful ; lowest reading of the standard 22° 8.—E. S.

Mean Solar Time (Astronom <sup>1</sup> Reck <sup>s</sup> ).				Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.		Göttingen.			Direction.	Force.						
<b>APRIL.</b>												
D.	H.	D.	H.					°	°	°	°	In.
22	02	22	08	50.0	S. by E.	Moderate.	Dense haze and drizzling rain					
22	08	22	14	54.0	{ S. W. & S. S. W. }	Moderate.	Densely clouded; heavy rain; lightning in N. E. and N. W. with distant thunder	61.8	47.0	—	41.6	.275
22	14	22	20	53.0	S. S. W.	Nearly calm.	½ clear in W., remainder clouded					
22	20	23	02	48.0	S. W. by W.	Light.	¾ overcast; light streaky cirri and haze					
23	02	23	08	48.0	S. W. by W.	Nearly calm.	Overcast; haze and light cirri					
23	08	23	14	41.0	S. W. by W.	Nearly calm.	Overcast; surface water of the lake 47°					
23	14	23	20	32.0	W. by S.	Nearly calm.	Clear	68.7	44.6	—	39.1	—
23	20	24	02	31.5	N. E. by E.	Nearly calm.	Overcast; light cirri					
24	02	24	08	36.0	N. E.	Moderate.	Clear					
24	08	24	14	28.0	N.	Moderate.	Partially clouded					
24	14	24	20	38.0	N.	Nearly calm.	Clear	58.8	46.4	—	39.1	—
24	20	25	02	50.0	E. N. E.	Light.	A few strati near N. horizon					
25	02	25	08	53.0	E. N. E.	Nearly calm.	Solar halo at 0 <sup>h</sup> , diam. 55°; heavy thunder squall from the W. at 4 <sup>h</sup> with hail and rain, some of the hail-stones fully an inch in diameter, the whole very large					
25	08	25	14	60.0	W.	Nearly calm.	Haze in zenith; heavy clouds from N. W. to S. W. near horizon; incessant sheet lightning in the W. and distant thunder; thunder storm passed over from W. to E. at 11 <sup>h</sup>	67.8	50.4	—	48.6	.910
<b>SUNDAY.</b>												
26	14	26	20	28.0	N.W. by W.	Moderate.	Slight snow	56.0	28.5	—	32.1	.100
26	20	27	02	24.0	N. W. by N.	Light.	Clear; snow ceased at 17 <sup>h</sup>					
27	02	27	08	34.0	S. W.	Light.	Clear					
27	08	27	14	28.0	S. W.	Light.	Zenith clear; cirro-strati and haze in N. and W.					
27	14	27	20	28.0	S. E.	Nearly calm.	Overcast	42.3	34.9	—	26.8	—
27	20	28	02	33.0	E. S. E.	Moderate.	Clouded, cirri and cirro-strati; fresh gusts					
28	02	28	08	38.0	S. E. by E.	Nearly calm.	Overcast; dense haze					
28	08	28	14	40.0	S. S. E.	Nearly calm.	Rain commenced at 7 <sup>h</sup> 30 <sup>m</sup>					
28	14	28	20	45.0	S. S. E.	Moderate.	Rain	53.0	40.4	—	40.6	.035
28	20	29	02	42.0	E.	Moderate.	Drizzling rain					
29	02	29	08	44.0	E. to E. by N.	Nearly calm.	Dense haze and drizzling rain					
29	08	29	14	47.0	E.	Nearly calm.	Dense haze; heavy rain, ceased at 10 <sup>h</sup> 46 <sup>m</sup>					
29	14	29	20	45.0	E.	Nearly calm.	Heavily clouded	51.5	43.2	—	38.6	.675
29	20	30	02	49.0	W.	Nearly calm.	Clear					
30	02	30	08	49.0	W. by S.	Fresh.	Fair; partially clouded; light cirri and cumuli					
30	08	30	14	44.0	N. W.	Nearly calm.	Clouded	64.6	43.6	—	40.1	.015
30	14	30	20	42.7	S. S. W.	Nearly calm.	Heavy rain					
30	20	1	02	44.7	S. W. by W.	Moderate.	Cirro-cumuli round horizon; zenith clear					
<b>MAY.</b>												
1	02	1	08	40.0	N. by W.	Fresh.	Clouded; thunder and lightning, with rain in squalls; cirro-					
1	08	1	14	24.3	N. W.	Nearly calm.	Clear [cumuli in horizon]	54.0 <sup>a</sup>	31.7	—	24.6	.250
1	14	1	20	16.0	N.W. by N.	Nearly calm.	Clear					
1	20	2	02	33.0	S. E.	Nearly calm.	Partially clouded					
2	02	2	08	45.0	W.	Moderate.	¾ clouded; light cirri					
2	08	2	14	41.0	W.	Moderate.	Clear	61.0 <sup>a</sup>	40.5	—	33.6	—
<b>SUNDAY.</b>												
3	14	3	20	51.7	N.	Nearly calm.	Raining	55.0	40.5	—	38.6	.390
3	20	4	02	53.7	N. W.	Light.	Raining; clouds passing rapidly from N.N.W.					
4	02	4	08	43.7	N.W. by W.	Fresh.	Clouded; squally					
4	08	4	14	36.0	N. W.	Fresh.	Densely clouded					
4	14	4	20	30.0	N. W.	Fresh.	¾ clouded, principally to N.	54.2	37.2	—	32.6	.500
4	20	5	02	34.0	W. N. W.	Moderate.	Partially clouded; cumuli					
5	02	5	08	32.0	N. W.	Moderate.	Cirro-cumuli and cumulo-strati in S. horizon, remainder clear					
5	08	5	14	25.3	N. W.	Moderate.	Clear					
5	14	5	20	25.3	—	Calm.	Clear	52.0	31.2	96 <sup>b</sup>	21.6	—
5	20	6	02	29.0	W. N. W.	Light.	Clear					
6	02	6	08	26.3	N. N. W.	Moderate.	Clear					
6	08	6	14	27.3	N. N. W.	Moderate.	Clear					
6	14	6	20	29.3	N. by W.	Moderate.	Clear; surface water of the lake 45°-8	51.3	38.0	103	31.1	—
6	20	7	02	22.3	N. N. W.	Light.	With fresh puffs; clear					
7	02	7	08	41.8	S. by E.	Light.	Clear; cirri in the N. E.					
7	08	7	14	36.0	W. N. W.	Nearly calm.	Wind variable; clear; a low bank of clouds from N. W. to S. E.					
7	14	7	20	37.0	E.	Fresh.	Densely clouded	56.0	43.3	100	40.6	—
7	20	8	02	36.0	N. E. by E.	Moderate.	Overcast with haze					

<sup>a</sup> Index of the register thermometer entangled; the maximum on the 1st and 2nd May, is taken from the highest observation with the standard thermometer.

<sup>b</sup> The register thermometer having been broken, the solar radiation is the highest of two hourly observations made with a thermometer with a blackened bulb, exposed to the direct rays of the sun.



Mean Solar Time (Astronom. Reck <sup>s</sup> .)				Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.		Göttingen.			Direction.	Force.						
MAY.												
D.	H.	D.	H.	°								In.
8	02	8	08	38.0	E. by N.	Moderate.	Overcast with haze; a few drops of rain at 2 <sup>h</sup>					
8	08	8	14	44.7	E. N. E.	Fresh.	Heavy rain commenced at 5 <sup>h</sup> 30 <sup>m</sup>					
8	14	8	20	42.7	E.	Stiff breeze.	Rain, with heavy squalls	48.6	40.7	52	—	.250
8	20	9	02	40.7	{E. by S. to E. N. E.}	Fresh.	Slight rain, with squalls					
9	02	9	08	40.7	E. by N.	Fresh.	Slight rain, with squalls	51.0	40.2	71	—	.625
9	08	9	14	40.7	N. E.	Fresh.	Slight rain, with squalls					
SUNDAY.												
10	14	10	20	29.0	S.	Nearly calm.	Clear	56.5	36.7	—	28.6	—
10	20	11	02	41.7	N. E.	Nearly calm.	Clear					
11	02	11	08	43.7	S. W.	Nearly calm.	Clear					
11	08	11	14	36.0	N. W.	Nearly calm.	Clear					
11	14	11	20	34.0	N. W. by N.	Light.	Clear	60.4 <sup>a</sup>	43.2	104	35.6	—
11	20	12	02	38.0	N. N. W.	Light.	Clear					
12	02	12	08	41.7	S. by W.	Light.	Clear					
12	08	12	14	24.6	N. W.	Nearly calm.	Clear	60.2 <sup>a</sup>	38.4	108	28.1	—
12	14	12	20	26.2	—	Calm.	Clear					
12	20	13	02	41.7	S.	Nearly calm.	Clear; surface water of the lake 54°·7					
13	02	13	08	42.7	S.	Nearly calm.	Light cirri to N. W. and E.					
13	08	13	14	41.7	S.	Nearly calm.	Zenith covered with ridges of light cirri	57.2 <sup>a</sup>	38.7	81	31.6	—
13	14	13	20	36.0	—	Calm.	Clear					
13	20	14	02	45.7	S. by E.	Nearly calm.	Clouded; light cirri					
14	02	14	08	53.8	S. by W.	Very light.	Clouded; cirro-cumuli; air close and oppressive					
14	08	14	14	55.8	—	Calm.	Clouded; cirro-cumuli; a few drops of rain falling					
14	14	12	20	51.8	S. by W.	Light.	Densely clouded; cirri and cirro-cumuli rising from W.	70.2 <sup>a</sup>	52.3	90	42.6	—
14	20	15	02	52.8	—	Calm.	{Clouded; the lower strata moving from N. E. to S. W., the upper from W. to E.; light showers, distant thunder from the S.					
15	02	15	08	58.8	Variable.	Nearly calm.	Light cirri in zenith; halo at 3 <sup>h</sup> , diam. 30°					
15	08	15	14	43.7	W. N. W.	Light.	Partially clouded; cirri	68.4 <sup>a</sup>	47.3	83	41.4	—
15	14	15	20	46.7	N.	Nearly calm.	Overcast; light haze; faint halo at 13 <sup>h</sup> 45 <sup>m</sup> , diam. 30°					
15	20	16	02	45.7	E. by N.	Light.	Partially clouded; light cirri and haze; wind freshening					
16	02	16	08	39.7	E. N. E.	Fresh.	Clear; halo, diam. 45°; surface water of the lake 47°	63.9	44.5	82	39.6	—
16	08	16	14	39.0	N. N. E.	Light.	Light cirri in zenith, remainder clear					
SUNDAY.												
17	14	17	20	51.8	—	Calm.	Light haze round horizon, remainder clear	75.5	44.7	—	49.6	—
17	20	18	02	61.0	—	Calm.	Clear					
18	02	18	08	64.0	S. by W.	Light.	Partially clouded; detached cumuli					
18	08	18	14	57.8	S.W. to S.E.	Nearly calm.	Haze round horizon, remainder clear	76.4	55.3	100	51.4	—
18	14	18	20	57.8	N. E. by E.	Light.	Clear					
18	20	19	02	58.8	E. N. E.	Light.	½ overcast; light cirri and cumulo-strati					
19	02	19	08	57.8	E. N. E.	Fresh.	Clear; squally					
19	08	19	14	51.8	N. E.	Fresh.	Clear	66.4	54.3	84	50.6	—
19	14	19	20	51.8	N. E.	Fresh.	Clear; haze round horizon					
19	20	20	02	55.8	N. E.	Moderate.	Clear; light squalls					
20	02	20	08	62.0	E. N. E.	Fresh.	Densely clouded; cumuli and cirri					
20	08	20	14	57.8	—	Calm.	Clouded; rain from 7 <sup>h</sup> 25 <sup>m</sup> ; surface water of the lake 60°	64.4 <sup>b</sup>	54.1	89	—	1.745
20	14	20	20	54.8	N. E.	Moderate.	Heavy rain					
20	20	21	02	54.3	E. N. E.	Light.	Rain moderating					
21	02	21	08	55.8	E. by N.	Nearly calm.	Cumuli and cirro-cumuli; clearing					
21	08	21	14	50.8	W.	Light.	Partially clouded	60.7	43.7	65	38.8	—
21	14	21	20	43.7	—	Calm.	Clear, except ½ to N. E.					
21	20	22	02	47.7	E. by S.	Light.	¾ clouded; cumuli and cumulo-strati; clear in S.					
22	02	22	08	52.8	E. by S.	Light.	¾ clouded; cirri and cumuli					
22	08	22	14	49.7	E.	Nearly calm.	½ clouded to N. and E.; remainder clear	65.7	44.5	78	38.6	—
22	14	22	20	47.7	E.	Nearly calm.	¾ of N. clouded; remainder clear					
22	20	23	02	53.8	E. by S.	Nearly calm.	Zenith clouded; cirri					
23	02	23	08	55.8	E. by S.	Light.	Partially clouded; cirri and cumuli	63.9	52.3	74	—	—
23	08	23	14	53.8	E. by S.	Nearly calm.	Clear					
SUNDAY.												
24	14	24	20	54.8	N. E.	Light.	Overcast	66.9	55.3	—	54.1	.190
24	20	25	02	57.8	N. E.	Moderate.	Clouded; partially clear to S.					
25	02	25	08	56.8	{N. E. to E. N. E.}	Brisk.	Overcast with haze					
25	08	25	14	57.8	N. E.	Light.	Clouded to S. E.; ¼ clear	67.9	49.2	82	43.6	—
25	14	25	20	50.8	—	Calm.	Clear					
25	20	26	02	56.8	—	Calm.	Overcast; haze and thick fog					

<sup>a</sup> Index entangled; maximum supplied from the highest observation with the standard thermometer.

<sup>b</sup> Doubtful; 68°·8 registered by the standard at 20<sup>h</sup> 2<sup>h</sup>.—E. S.

Mean Solar Time (Astronom. Reck <sup>o</sup> ).			Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.	Göttingen.	°		Direction.	Force.						
<b>MAY.</b>											
D.	H.	D. H.	°				°	°	°	°	In.
26	02	26 08	53·8	N. E.	Nearly calm.	Haze; cumuli and strati in N. horizon - - - -					
26	08	26 14	54·8	—	Calm.	Light haze round horizon; remainder clear - - - -	72·3	49·0	95	43·6	—
26	14	26 20	50·8	—	Calm.	Clear - - - - -					
26	20	27 02	60·5	—	Calm.	Clear - - - - -					
27	02	27 08	61·0	—	Calm.	Haze round horizon; remainder clear - - - -					
27	08	27 14	55·8	—	Calm.	Clear; faint auroral light - - - - -					
27	14	27 20	51·8	—	Calm.	Clear - - - - -	76·3	51·0	105	46·4	—
27	20	28 02	62·0	—	Calm.	Light haze and cirri round horizon - - - -					
28	02	28 08	60·0	S. by W.	Very light.	¾ clouded to S. W.; remainder clear - - - -					
28	08	28 14	64·0	—	Calm.	Thunder in N. W. at 6 <sup>h</sup> ; overcast - - - -					
28	14	28 20	66·0	—	Calm.	Clouded; lightning in S. E.; distant thunder - - - -	75·8	61·6	105	57·1	—
28	20	29 02	57·8	N.	Light.	¾ clouded; strati and cirro-strati - - - -					
29	02	29 08	51·8	E. by N.	Light.	Haze round horizon; light cirri in N. - - - -					
29	08	29 14	51·8	—	Calm.	A very brilliant Aurora <sup>a</sup> - - - - -					
29	14	29 20	47·7	—	Calm.	Clear - - - - -	66·6	47·5	90	41·6	—
29	20	30 02	53·8	—	Calm.	Clear; temp. of soil, 3 feet deep, 55°; 6 feet deep 48° - - - -					
30	02	30 08	56·8	—	Calm.	Overcast; cirri and haze - - - - -					
30	08	30 14	55·8	W.	Nearly calm.	¾ clouded; cirro-cumuli rising in N. W. - - - -	67·4	55·8	90	48·1	—
<b>SUNDAY.</b>											
31	14	31 20	50·7	N. by E.	Moderate.	Clouded; sheet lightning and distant thunder at 12 <sup>h</sup> - - - -	66·0	50·3	64	47·4	·200
31	20	1 02	43·7	N. E.	Brisk.	Fresh squalls; overcast - - - - -					
<b>JUNE.</b>											
1	02	1 08	46·7	N. N. E.	Moderate.	Heavily clouded; cirro-cumuli; thunder storm at 23 <sup>h</sup> 30 <sup>m</sup> - - - -					
1	08	1 14	48·7	N. by E.	Fresh.	Squalls; clouded; heavy cumuli and haze - - - -					
1	14	1 20	44·7	N. by E.	Fresh.	Overcast - - - - -	52·4	45·5	54	46·2	·840
1	20	2 02	47·2	N. N. E.	Fresh.	Squalls; overcast; heavy rain commenced at 19 <sup>h</sup> - - - -					
2	02	2 08	49·7	N. N. E.	Fresh.	Thunder and lightning in S. W. Heavy rain - - - -					
2	08	2 14	50·7	N. N. E.	Moderate.	Light rain till 7 <sup>h</sup> ; clouded, cirri - - - -					
2	14	2 20	49·7	N. E.	Light.	Overcast; lightning in S. and S. W. - - - -	56·0	44·3	70	41·4	·658
2	20	3 02	53·7	N. E.	Nearly calm.	Clearing in S.; rain from 15 <sup>h</sup> 30 <sup>m</sup> to 18 <sup>h</sup> - - - -					
3	02	3 08	59·8	N. E.	Light.	¾ clouded; cumuli; surface water of the lake 59°·2 [7 <sup>h</sup> 30 <sup>m</sup> ] - - - -					
3	08	3 14	59·8	—	Calm.	Overcast; lightning and distant thunder in S.; heavy shower at - - - -					
3	14	3 20	53·7	—	Calm.	Clouded; clearing in the W. - - - - -	64·0	54·1	72	50·3	·135
3	20	4 02	57·7	S. W.	Nearly calm.	Overcast; cumuli, haze, thick mist - - - -					
4	02	4 08	53·7	W. by S.	Light.	¾ clouded; cirro-cumuli - - - - -					
4	08	4 14	52·7	W.	Nearly calm.	Light strati in N. and N. W., remainder clear - - - -					
4	14	4 20	45·7	W.	Nearly calm.	Clear - - - - -	69·1	46·3	90	—	—
4	20	5 02	57·7	—	Calm.	¾ overcast; cumuli, haze and cumulo-strati - - - -					
5	02	5 08	57·7	—	Calm.	Cirri about the zenith - - - - -					
5	08	5 14	56·7	N. E.	Light.	¾ clouded; cirri rising from W. - - - -					
5	14	5 20	53·7	N. E.	Light.	Overcast; very heavy clouds in S. and S. W. - - - -	66·7	55·1	97	49·4	—
5	20	6 02	57·7	N. E.	Light.	¾ overcast; cirri, cirro-cumuli, and cumulo-strati - - - -					
6	02	6 08	61·8	S. W.	Light.	Overcast, heavy cumuli; change of wind and shower at 22 <sup>h</sup> 55 <sup>m</sup> - - - -					
6	08	6 14	49·7	W.	Fresh.	Rain commenced at 6 <sup>h</sup> 30 <sup>m</sup> , with a heavy squall passing to N. E. - - - -	67·3	42·2	78	44·4	·085
<b>SUNDAY.</b>											
7	14	7 20	38·0	—	Calm.	Clear; surface water of the lake 62°·4 - - - -	62·0	36·7	84	29·6	—
7	20	8 02	40·0	S. S. W.	Very light.	Fair; bank of strati in N. and S. E. horizon - - - -					
8	02	8 08	43·7	E.	Light.	Bank of strati in S. E. and cumuli in W. - - - -					
8	08	8 14	41·7	N. E.	Nearly calm.	Light cirri in zenith; faint halo at 10 <sup>h</sup> . - - - -					
8	14	8 20	39·7	—	Calm.	Clear - - - - -	62·9	41·8 <sup>b</sup>	100	38·0	—
8	20	9 02	46·0	S. W.	Nearly calm.	Light cirro-strati and haze in W. horizon; remainder clear - - - -					
9	02	9 08	49·7	N. N. E.	Very light.	Very light cirri in N. W. horizon; remainder clear - - - -					
9	08	9 14	48·7	—	Calm.	Clear - - - - -					
9	14	9 20	43·7	—	Calm.	Clear, heavy dew - - - - -	67·0	42·5	97	36·4	—
9	20	10 02	48·5	S. by W.	Nearly calm.	Clear - - - - -					
10	02	10 08	58·7	—	Calm.	Clear - - - - -					
10	08	10 14	56·7	—	Calm.	Clear; a few cirro-strati round N. horizon - - - -					
10	14	10 20	49·7	—	Calm.	Clear and unclouded - - - - -	70·0	49·2	101	44·4	—
10	20	11 02	58·5	S. W.	Very light.	¾ overcast; very light cirrous haze round horizon, a few strati in N. - - - -					
11	02	11 08	63·8	S. by W.	Light.	Partially clouded, cumuli; halo at 0 <sup>h</sup> . diameter 40° - - - -					
11	08	11 14	68·8	W.	Nearly calm.	Clouded, cirri and cirro-cumuli in zenith; heavy masses in S. - - - -					
11	14	11 20	63·8	W.	Nearly calm.	Clouded; heavy thunder shower at 13 <sup>h</sup> 40 <sup>m</sup> passing to Eastward - - - -	76·3	60·9	99	57·3	—
11	20	12 02	68·8	—	Calm.	Overcast; light cirri and haze; clearing in S. - - - -					

<sup>a</sup> A detailed description of this Aurora is given in the Volume of Disturbance Observations, Part I., pages 2 to 4. <sup>b</sup> Lowest observation with the standard. Minimum register omitted.

Mean Solar Time (Astronom. Reck <sup>g</sup> ).				Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.		Göttingen.			Direction.	Force.						
JUNE.												
D.	H.	D.	H.	°				°	°	°	°	In.
12	02	12	08	65.8	S. W.	Very light.	Overspread with cirri and cirro-strati; slight rain at 1 <sup>h</sup> - -					
12	08	12	14	61.8	S. by W.	Light.	Heavy thunder and lightning in W., squall at 6 <sup>h</sup> 20 <sup>m</sup> ; raining heavily	79.0	58.1	96	54.3	1.530
12	14	12	20	63.8	—	Calm.	Clouded, cumuli and haze - - - - -					
12	20	13	02	57.7	N. N. W.	Light.	Partially clouded; heavy masses of cumuli - - - - -					
13	02	13	08	57.7	S. W.	Moderate.	¾ clouded; cumuli and cirro-cumuli moving in opposite directions					
13	08	13	14	49.7	N. N. W.	Nearly calm.	Bank of strati in N. horizon; range of cumuli in S. E. - -	70.0	48.0	76	40.4	—
SUNDAY.												
14	14	14	20	34.0	W.	Light.	Clear - - - - -	65.9	43.0	96	38.0	—
14	20	15	02	42.5	W. by N.	Nearly calm.	Cirri and cirro-strati in S. horizon; remainder clear - -					
15	02	15	08	51.7	S. by W.	Light.	¾ clouded round horizon, from S. W. to N. E. - - - -					
15	08	15	14	50.7	W.	Nearly calm.	Clear; surface water of the lake 53°·5 - - - - -	62.3 <sup>a</sup>	42.0	104	33.4	—
15	14	15	20	37.0	—	Calm.	Clear - - - - -					
15	20	16	02	43.5	—	Calm.	Clear - - - - -					
16	02	16	08	56.7	W. by S.	Moderate.	¾ clouded: cirro-cumuli and cumulo-strati; shower at 1 <sup>h</sup> 30 <sup>m</sup> -					
16	08	16	14	55.7	—	Calm.	Light cirro-cumuli in N. E.; remainder clear - - - -	66.9	47.0	102	40.2	.050
16	14	16	20	46.7	—	Calm.	Overcast; light cirri and cirro-strati - - - - -					
16	20	17	02	52.7	N. N. E.	Moderate.	Overcast; light cirri and haze round horizon - - - -					
17	02	17	08	50.7	E. by N.	Brisk.	{Partially clouded; cirri and cirro-cumuli; halo from 22 <sup>h</sup> to 23 <sup>h</sup> , diameter about 30° - - - - -					
17	08	17	14	51.7	E. by N.	Brisk.	{Clouded, cirro-cumuli, and cumulo-strati; thunder and lightning, with rain 9 <sup>h</sup> 35 <sup>m</sup> to 10 <sup>h</sup> 30 <sup>m</sup> - - - - -	68.9	56.1	81	53.3	.295
17	14	17	20	55.7	—	Calm.	Thunder and lightning, with heavy rain from 13 <sup>h</sup> to 14 <sup>h</sup> - -					
17	20	18	02	58.5	W. by N.	Moderate.	¾ clouded, cumulo-strati, and cirro-cumuli - - - - -					
18	02	18	08	51.7	W. by N.	Light.	¾ clouded, cumuli and cirro-cumuli - - - - -					
18	08	18	14	46.7	W. by N.	Very light.	Low bank of cumuli, N. by W. to N. E., alt. 5°; remainder clear	69.5	47.5	92	40.4	—
18	14	18	20	45.2	W. by N.	Nearly calm.	Clear; light cirri round horizon - - - - -					
18	20	19	02	45.0	W. by N.	Brisk.	¾ clouded towards N. E. and N. - - - - -					
19	02	19	08	47.7	N. W.	Fresh.	Squally; ½ clouded, cirro-cumuli and cumulo-strati; clear in N. E.					
19	08	19	14	45.7	—	Calm.	Clear - - - - -	68.8 <sup>b</sup>	51.0 <sup>b</sup>	94	—	—
19	14	19	20	45.7	—	Calm.	Clear - - - - -					
19	20	20	02	52.0	W. N. W.	Light.	Clear - - - - -					
20	02	20	08	52.7	W. N. W.	Light.	Clear - - - - -					
20	08	20	14	57.7	—	Calm.	Clear - - - - -	78.3	57.8	110	57.8	—
SUNDAY.												
21	14	21	20	57.7	—	Calm.	Partially clouded; cumuli and strati - - - - -	74.5	57.3	97	53.3	.370
21	20	22	02	58.0	N. W.	Light.	Clear - - - - -					
22	02	22	08	57.7	N. by W.	Light.	¾ clouded; cirro-cumuli and cumulo-strati - - - - -					
22	08	22	14	57.7	W. by S.	Nearly calm.	Light cirri in S., remainder clear - - - - -	71.3	47.5	101	40.4	—
22	14	22	20	47.7	—	Calm.	Clear - - - - -					
22	20	23	02	51.5	—	Calm.	Clear - - - - -					
23	02	23	08	61.8	S. E.	Light.	Clear - - - - -					
23	08	23	14	58.7	W.	Light.	Clear - - - - -	73.7	52.7	106	47.8	—
23	14	23	20	54.7	—	Calm.	Clear - - - - -					
23	20	24	02	60.0	S. W.	Light.	Clear; a few light cirri in W. - - - - -					
24	02	24	08	67.8	—	Calm.	½ clouded; cumuli and cirri - - - - -					
24	08	24	14	67.8	—	Calm.	Clouded round horizon to the alt. of 20° - - - - -					
24	14	24	20	61.8	—	Calm.	½ clouded; cumuli and cirri - - - - -	79.0	63.8	106	47.9	—
24	20	25	02	58.3	N. N. E.	Moderate.	½ clouded; temp. of soil, 3 feet deep, 59°·2; 6 feet deep, 53°·2					
25	02	25	08	57.7	E. by N.	Moderate.	½ clouded; light cirri and cirro-strati - - - - -					
25	08	25	14	51.7	E. by N.	Light.	½ overcast; cumuli, cirro-cumuli, and haze - - - - -	72.7	61.0	80	55.3	—
25	14	25	20	47.7	N. N. E.	Moderate.	Overcast; cirri and cirro-strati. Surface water of the lake 61°·6					
25	20	26	02	52.7	N. E.	Moderate.	Overcast; cirro-cumuli, strati, and cirro-strati - - - -					
26	02	26	08	61.8	N. by E.	Moderate.	Overcast; cumuli and haze; slight showers - - - - -					
26	08	26	14	61.8	N. E.	Moderate.	Raining from 3 <sup>h</sup> to 8 <sup>h</sup> - - - - -	66.9	58.9	71	58.3	.555
26	14	26	20	57.7	N. E.	Moderate.	Overcast; very dark - - - - -					
26	20	27	02	60.8	N. N. E.	Light.	Overcast; cumuli and haze; heavy rain from 15 <sup>h</sup> 45 <sup>m</sup> - -					
27	02	27	08	60.8	N. N. E.	Light.	Overcast; dense haze; drizzling rain - - - - -					
27	08	27	14	61.8	N. E.	Light.	¾ clouded; cirri; clear to S. - - - - -	65.0	57.8	67	54.3	.285
SUNDAY.												
28	14	28	20	62.8	W. by S.	Light.	Wind backed at 13 <sup>h</sup> , during a light shower; lightning - -	74.8	61.7	72	48.7	.030
28	20	29	02	65.8	W. S. W.	Very light.	Clouded; cumuli, except a small clear space in S. - -					
29	02	29	08	75.8	S. W.	Nearly calm.	Nearly overcast; cirri and cumuli - - - - -					
29	08	29	14	66.8	S. E.	Nearly calm.	Partially clouded; thunder; vivid lightning - - - -					
29	14	29	20	61.8	—	Calm.	Clear - - - - -	79.9	60.7	108	56.8	—
29	20	30	02	60.0	N. W.	Light.	¾ clouded; detached cirri and cirro-cumuli - - - - -					

<sup>a</sup> Doubtful; standard at 14<sup>h</sup> 22<sup>m</sup> 64°·2.—E. S.

<sup>b</sup> Register omitted; supplied from standard.

Mean Solar Time (Astronom <sup>r</sup> . Reck <sup>r</sup> ).				Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr <sup>r</sup> . Rad.	Rain.
Toronto.		Göttingen.			Direction.	Force.						
<b>JUNE.</b>												
D.	H.	D.	H.	°				°	°	°	°	In.
30	02	30	08	55.7	W.	Light.	Overcast; cumuli and cumulo-strati - - - -	73.3	51.8	100	48.4	—
30	08	30	14	48.7	N. W.	Moderate.	Clouded; strati and cumuli; clear in N. - - - -					
30	14	30	20	51.0	N. N. W.	Moderate.	Overcast; heavy cumuli - - - -					
30	20	1	02	51.5	N. W.	Light.	Clouded; detached cumuli - - - -					
<b>JULY.</b>												
1	02	1	08	47.0	N. W.	Light.	¾ clouded; light cirri; clear in E. horizon - - - -	68.2	49.5	96	44.4	—
1	08	1	14	39.0	N. N. W.	Moderate.	Partially clouded; heavy cumuli - - - -					
1	14	1	20	45.0	N. by W.	Light.	Partially clouded; clouds rising in N. W. - - - -	67.3	49.3	96	43.0	—
1	20	2	02	46.0	N.	Light.	Detached masses of cirro-cumuli; clear in horizon - - - -					
2	02	2	08	50.0	S. W.	Light.	¾ clouded; heavy cumuli in masses - - - -	71.8	47.0	96	40.4	—
2	08	2	14	49.0	W. by N.	Nearly calm.	¾ clouded; cirro-cumuli - - - -					
2	14	2	20	44.0	—	Calm.	Clear - - - -	74.3	52.1	100	48.4	—
2	20	3	02	53.0	—	Calm.	Clear - - - -					
3	02	3	08	54.0	W. S. W.	Light.	Bank of cumuli in N. W. and N. horizon - - - -	74.9	59.8	102	55.1	—
3	08	3	14	50.0	—	Calm.	Clear; very red sun-set - - - -					
3	14	3	20	46.0	N. N. W.	Light.	Clear - - - -	73.7	58.3	103	49.9	—
3	20	4	02	52.5	S. W.	Light.	Clear - - - -					
4	02	4	08	59.0	S. by W.	Light.	Partially clouded round horizon; cirro-cumuli and cumuli - - - -	73.5	62.2	90	59.1	.235
4	08	4	14	56.0	W. by S.	Light.	Haze round horizon, otherwise clear - - - -					
<b>SUNDAY.</b>												
5	14	5	20	58.0	—	Calm.	Clouded; a smart shower of rain - - - -	75.3	57.8	98	53.3	—
5	20	6	02	55.5	E. by N.	Light.	Fair; yellowish haze in N. horizon; 1/10 overcast - - - -					
6	02	6	08	62.0	E. by N.	Moderate.	¾ of the horizon clouded; cumuli in N. - - - -	79.5	59.8	95	54.3	.035
6	08	6	14	64.0	—	Calm.	Overcast; cirro-cumuli and haze - - - -					
6	14	6	20	58.7	N. N. E.	Light.	Partially clouded; light cirri - - - -	79.8	57.5	106	54.1	—
6	20	7	02	64.0	—	Calm.	Fair; light haze - - - -					
7	02	7	08	66.0	E. by S.	Light.	Clouded; cirri in zenith; cumuli and cumulo-strati in N. horizon - - - -	82.3	60.7	110	57.8	—
7	08	7	14	60.0	E. N. E.	Light.	Overcast; cumulo-strati and haze; very red sun-set - - - -					
7	14	7	20	63.0	—	Calm.	Overcast; dense haze - - - -	82.0	69.2	106	64.5	1.890
7	20	8	02	65.0	E. by N.	Moderate.	Overcast; cirrous haze, and cirro-strati - - - -					
8	02	8	08	66.0	N. E.	Light.	Drizzling rain; clearing in E. - - - -	81.5	63.0	99	59.3	—
8	08	8	14	65.0	N. E.	Light.	Rain ceased at 6 <sup>h</sup> 30 <sup>m</sup> ; dense clouds, and low; sheet lightning at ¾ clouded to N. E.; remainder clear - - - - [10 <sup>h</sup>					
8	14	8	20	64.0	—	Calm.	¾ clouded to N. E.; remainder clear - - - -	80.1	61.4	100	57.8	—
8	20	9	02	68.0	W. by S.	Light.	Clouded; cirro-cumuli; clearing in S. and W. - - - -					
9	02	9	08	72.0	W. by S.	Light.	Heavy rain; thunder storm at 1 <sup>h</sup> - - - -	81.0	62.6	106	59.5	—
9	08	9	14	67.0	—	Calm.	Densely clouded; cirri and haze - - - -					
9	14	9	20	59.0	—	Calm.	Light haze round horizon; remainder clear - - - -	8.20	67.6	105	63.7	—
9	20	10	02	64.0	N. W. by W.	Nearly calm.	Light haze round horizon; remainder clear - - - -					
10	02	10	08	68.0	S.	Light.	Light haze round horizon; remainder clear - - - -	8.20	67.6	105	63.7	—
10	08	10	14	67.0	—	Calm.	Light haze round horizon; remainder clear - - - -					
10	14	10	20	59.0	—	Calm.	Haze near horizon. Surface water of the lake 69° 0 - - - -	8.20	67.6	105	63.7	—
10	20	11	02	67.0	S. W.	Light.	¾ clouded; light cumuli in W. - - - -					
11	02	11	08	68.0	N. by E.	Moderate.	Overcast; dense masses of cumuli; distant thunder in N. and N.E. - - - -	8.20	67.6	105	63.7	—
11	08	11	14	72.0	—	Calm.	¾ clouded; cumuli and cirro-cumuli - - - -					
<b>SUNDAY.</b>												
12	14	12	20	71.0	—	Calm.	Heavy rain; sheet lightning in N. W., distant thunder - - - -	81.5	63.0	99	59.3	—
12	20	13	02	70.0	S. by W.	Light.	Light cirri, with cumuli and cumulo-strati round horizon - - - -					
13	02	13	08	70.0	S. by W.	Moderate.	¾ overcast - - - -	80.1	61.4	100	57.8	—
13	08	13	14	69.0	W. by S.	Light.	¾ clouded; cumuli, cumulo-strati, and strati - - - -					
13	14	13	20	65.0	W. by S.	Light.	Clear - - - -	81.0	62.6	106	59.5	—
13	20	14	02	65.0	—	Calm.	Clear - - - -					
14	02	14	08	70.0	S. W.	Moderate.	¾ clouded; heavy mass of cumuli - - - -	8.20	67.6	105	63.7	—
14	08	14	14	69.0	—	Calm.	Overcast; cirri and haze; clouds very red at sun-set - - - -					
14	14	14	20	62.0	—	Calm.	Overcast; cirri - - - -	8.20	67.6	105	63.7	—
14	20	15	02	62.0	—	Calm.	Light cirri and cirro-cumuli near horizon - - - -					
15	02	15	08	68.0	—	Calm.	¾ clouded; detached cumuli in W. and N. - - - -	8.20	67.6	105	63.7	—
15	08	15	14	66.0	—	Nearly calm.	¾ clouded; light cirri and cirro-strati; heavy cumuli rising in - - - -					
15	14	15	20	64.0	—	Calm.	Overcast; very light haze - - - - [N. W.]	8.20	67.6	105	63.7	—
15	20	16	02	68.0	—	Calm.	Overcast; very light haze and cirri - - - -					
16	02	16	08	74.0	S. W.	Moderate.	Fresh puffs; ¾ clouded, cirro-cumuli and cirro-strati - - - -	8.20	67.6	105	63.7	—
16	08	16	14	71.0	W.	Light.	¾ overcast; cumuli and haze - - - -					
16	14	16	20	68.0	—	Calm.	Clouded, cirri and cirro-cumuli; distant thunder - - - -	8.20	67.6	105	63.7	—
16	20	17	02	68.0	W. by S.	Very light.	Overcast; cumuli, cirro-cumuli, and haze - - - -					

Mean Solar Time (Astronom. Reck <sup>s</sup> ).				Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Ter <sup>l</sup> . Rad.	Rain.
Toronto.		Göttingen.			Direction.	Force.						
<b>JULY.</b>												
D.	H.	D.	H.	°	—	Calm.	Densely clouded; heavy showers, with thunder and lightning	°	°	°	°	In.
17	02	17	08	71.5	—	Calm.	Clouded; clear in N.W.; clouds at sunset a deep yellowish tinge	75.4	54.7	88	49.4	1.212
17	08	17	14	68.0	—	Calm.	Clear - - - - -					
17	14	17	20	58.0	—	Calm.	Clear - - - - -					
17	20	18	02	58.0	—	Nearly calm.	Clear - - - - -					
18	02	18	08	65.0	—	Nearly calm.	Clear; a few cirro-cumuli round horizon					
18	08	18	14	64.0	—	Nearly calm.	Clear; sheet lightning in S. E. at 10 <sup>h</sup>	76.3	56.3	96	52.3	—
<b>SUNDAY.</b>												
19	14	19	20	51.0	N. N. W.	Nearly calm.	Clear; surface water of the lake 64°·2	75.9	51.3	92	47.4	—
19	20	20	02	51.0	N. N. W.	Nearly calm.	Clear - - - - -					
20	02	20	08	59.0	W. by S.	Moderate.	Clouded; dense cirro-cumuli, & cumulo-strati in N. & N.W. horizon					
20	08	20	14	57.0	W. N. W.	Nearly calm.	Haze round horizon; zenith clear	74.7	54.8	89	50.2	—
20	14	20	20	56.0	—	Calm.	Clear - - - - -					
20	20	21	02	58.0	W.	Nearly calm.	Fair; light haze round horizon					
21	02	21	08	64.0	W.	Nearly calm.	Partially clouded, heavy cumuli; distant thunder in N. W.					
21	08	21	14	61.0	—	Calm.	Clear - - - - -	81.0	53.8	101	50.3	—
21	14	21	20	52.0	—	Calm.	Clear; Aurora visible from 12 <sup>h</sup> to 15 <sup>h</sup>					
21	20	22	02	63.0	—	Calm.	Fair; overcast, light haze					
22	02	22	08	69.0	S. S. E.	Very light.	Clouded; cirri, cumuli, and cirro-cumuli rising in N. W. and N.					
22	08	22	14	63.0	—	Calm.	Overcast, with cumuli and haze	76.4	63.2	102	63.0	1.635
22	14	22	20	64.0	—	Calm.	Showers; distant thunder					
22	20	23	02	64.0	—	Calm.	Rain - - - - -					
23	02	23	08	64.0	—	Calm.	Rain; ceased at 4 <sup>h</sup> 45 <sup>m</sup>					
23	08	23	14	64.0	—	Calm.	Clear, except round horizon	67.7	60.0	74	56.8	—
23	14	23	20	62.0	N. W.	Very light.	Clear - - - - -					
23	20	24	02	56.0	N.	Moderate.	Fresh puffs, clear					
24	02	24	08	56.0	N.	Moderate.	Fresh puffs, clear; temperature of the soil, 3 feet deep 63°·5, six					
24	08	24	14	50.0	W. by N.	Light.	Clear, surface water of the lake 54°·6 [feet deep 57°·5	75.7	54.7	95	46.4	—
24	14	24	20	49.0	—	Calm.	Clear - - - - -					
24	20	25	02	56.0	—	Calm.	Clouded; cirro-cumuli					
25	02	25	08	61.0	S. E.	Light.	¾ clouded; cirri					
25	08	25	14	60.0	—	Calm.	¾ clouded; cirri and strati	74.2	56.5	106	53.3	—
<b>SUNDAY.</b>												
26	14	26	20	63.0	—	Calm.	Clouded - - - - -	74.3	63.5	105	60.5	—
26	20	27	02	67.0	—	Calm.	Clouded; cirro-cumuli, and cumulo-strati					
27	02	27	08	68.0	—	Calm.	Overcast, light haze and cirri					
27	08	27	14	66.0	—	Calm.	Overcast, cirri and cirro-cumuli	75.5	62.2	106	60.3	—
27	14	27	20	63.0	—	Calm.	¾ clouded - - - - -					
27	20	28	02	68.0	S. W.	Light.	Overcast, light haze and cirri					
28	02	28	08	70.0	S. W.	Moderate.	Fresh gusts, partially clouded; thunder storm at 23 <sup>h</sup> 30 <sup>m</sup>					
28	08	28	14	63.0	W.	Light.	Heavy cumuli in N. horizon; remainder clear	74.5	58.0	82	55.3	.265
28	14	28	20	61.0	—	Calm.	Partially clouded					
28	20	29	02	59.0	W.	Light.	Fair - - - - -					
29	02	29	08	60.0	W.	Light.	Clouded, haze and cumuli					
29	08	29	14	60.0	—	Calm.	Haze round horizon; remainder clear	77.7	57.1	92	51.1	—
29	14	29	20	57.0	—	Calm.	Haze round horizon; remainder clear					
29	20	30	02	63.0	—	Nearly calm.	Overcast, light haze					
30	02	30	08	63.0	—	Calm.	Overcast, haze, light cumuli					
30	08	30	14	64.0	—	Calm.	Overcast, heavy cumuli rising in W.	74.0	58.0	94	53.8	—
30	14	30	20	60.0	—	Calm.	Clouded, heavy cumuli; shower at 16 <sup>h</sup>					
30	20	31	02	64.0	W.	Nearly calm.	Overcast, cirri and cirro-cumuli; clearing at intervals					
31	02	31	08	60.5	S. W.	Light.	¼ overcast; cirro-cumuli and cumulo-strati					
31	08	31	14	64.0	—	Calm.	Partially clouded; sheet lightning to S. W. at 10 <sup>h</sup>					
31	14	31	20	64.0	—	Calm.	Distant thunder and lightning; surface water of the lake 59°·0	75.2	58.1	108	59.3	—
31	20	1	02	66.0	—	Calm.	Light haze and a few cirri					
<b>AUGUST.</b>												
1	02	1	08	67.5	—	Light.	Clouded, cumuli and cirro-cumuli; thunder in N. W.	76.3	61.7	98	58.8	—
1	08	1	14	66.0	—	Calm.	Partially clouded; lightning in S. and S. E. at 10 <sup>h</sup>					
<b>SUNDAY.</b>												
2	14	2	20	67.0	S. W.	Moderate.	Overcast, heavy cumuli; slight shower from 13 <sup>h</sup> 30 <sup>m</sup> to 13 <sup>h</sup> 45 <sup>m</sup>	75.0	66.4	105	64.5	—
2	20	3	02	67.0	S. by W.	Moderate.	¼ overcast, heaviest to Westward; zenith clear					
3	02	3	08	65.0	W. by S.	Fresh.	Partially clouded, heavy cumuli; cumulo-strati					
3	08	3	14	59.0	—	Calm.	Light haze round horizon; otherwise clear	82.0	56.8	104	52.8	—
3	14	3	20	56.0	—	Calm.	Light clouds, and haze rising in W.					
3	20	4	02	65.0	W. by S.	Light.	Overcast; slight shower					

Mean Solar Time (Astronom'. Reck <sup>s</sup> ).		Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Ter. Rad.	Rain.
Toronto.	Göttingen.		Direction.	Force.						
AUGUST.										
D. H.	D. H.	°								In.
4 02	4 08	67.0	S. W.	Fresh.	Partially clouded; cumuli; very heavy rain at 0 <sup>h</sup> with thunder and					
4 08	4 14	54.0	—	Calm.	Clear in zenith; light haze round horizon - - [lightning					
4 14	4 20	54.0	—	Calm.	Clouded - - - - -	72.5	50.1	86	45.6	.900
4 20	5 02	60.0	W. by S.	Light.	Wind freshening; clouded, cirro-cumuli and cumulo-strati					
5 02	5 08	53.5	W.	Moderate.	¾ clouded; cumuli; squally - - - - -					
5 08	5 14	62.0	—	Calm.	Densely clouded; heavy masses of cumuli					
5 14	5 20	58.0	W.	Light.	Overcast, heavy cumuli; a smart shower at 19 <sup>h</sup> - - - - -	75.3	54.5	94	49.4	—
5 20	6 02	55.0	W.	Light.	Partially clouded to S. W. - - - - -					
6 02	6 08	58.0	W.	Light.	¾ clouded, cirro-cumuli and cumulo-strati - - - - -					
6 08	6 14	55.0	—	Calm.	¾ overcast; sheet lightning and distant thunder in W.					
6 14	6 20	54.0	—	Calm.	Clearing to the S. and W.; zenith partially clear - - - - -	75.5	52.4	94	46.4	.060
6 20	7 02	53.0	N. N. W.	Light.	Detached cirri - - - - -					
7 02	7 08	59.0	S. W.	Light.	Partially clouded, heavy cumuli - - - - -					
7 08	7 14	56.0	W.	Nearly calm.	¾ clouded, densely round horizon - - - - -					
7 14	7 20	56.0	—	Calm.	Densely clouded; light shower - - - - -	73.1	56.7	96	54.3	—
7 20	8 02	59.0	W.	Very light.	Clouded, cumuli and cumulo-strati - - - - -					
8 02	8 08	62.0	W.	Light.	¾ overcast; heavy shower from 0 <sup>h</sup> to 1 <sup>h</sup> - - - - -					
8 08	8 14	50.0	—	Calm.	Clear; surface water of the lake 66° 0 - - - - -	69.8	49.7	100	42.4	.100
SUNDAY.										
9 14	9 20	50.0	—	Calm.	Clear - - - - -					
9 20	10 02	56.0	W.	Light.	Overcast; strati, cumuli and haze - - - - -	72.5	48.2	106	44.0	—
10 02	10 08	60.0	—	Calm.	Overcast; cirro-cumuli and cumulo-strati; light shower at noon					
10 08	10 14	60.0	W. S. W.	Light.	Rain from 4 <sup>h</sup> to 8 <sup>h</sup> 30 <sup>m</sup> ; clouds moving rapidly from S.W. to S. E.					
10 14	10 20	60.0	—	Calm.	Densely clouded; heavy showers, with thunder and lightning	67.3	58.1	99	59.5	.130
10 20	11 02	64.0	—	Calm.	Clouded; clearing up in W. and S. W. - - - - -					
11 02	11 08	68.0	—	Calm.	¾ clouded; well-defined cumuli; forked lightning in S. - - - - -					
11 08	11 14	62.0	W. by S.	Nearly calm.	Heavy cumuli in masses; lightning in E. and S. - - - - -					
11 14	11 20	60.0	—	Calm.	Overcast, heavy cumuli - - - - -	75.3	60.7	100	57.3	.460
11 20	12 02	62.0	—	Calm.	Overcast, dense cirro-cumuli and cirro-strati - - - - -					
12 02	12 08	60.0	S. by W.	Light.	Rain from 1 <sup>h</sup> 55 <sup>m</sup> to 3 <sup>h</sup> 5 <sup>m</sup> - - - - -					
12 08	12 14	56.0	—	Calm.	Clouded; cumuli and cirro-cumulo heavy in N. - - - - -					
12 14	12 20	54.0	—	Calm.	¾ clouded; cirro-cumuli, clear in N. - - - - -	67.5	52.3	81	48.5	.030
12 20	13 02	59.5	—	Calm.	Clouded; light haze and cirri - - - - -					
13 02	13 08	56.0	E.	Light.	¼ clear in W. horizon; halo at 22 <sup>h</sup> , diam. 30°. - - - - -					
13 08	13 14	55.0	—	Calm.	Clear; low bank of cirri and cirro-strati round horizon					
13 14	13 20	53.0	—	Calm.	Clouded; cumuli - - - - -	69.9	51.3	91	48.2	—
13 20	14 02	60.0	—	Calm.	Overcast; haze and light cirro-cumuli - - - - -					
14 02	14 08	62.0	S. W.	Moderate.	¾ overcast; heavy cumuli; distant thunder					
14 08	14 14	48.0	—	Calm.	Clear - - - - -					
14 14	14 20	46.0	—	Calm.	Clear - - - - -	71.3	47.7	99	41.4	—
14 20	15 02	52.0	—	Calm.	Clear - - - - -					
15 02	15 08	58.0	S.	Light.	Clear; bank of cirro-cumuli round S. and W. horizon					
15 08	15 14	54.0	—	Calm.	Clear - - - - -	70.3	49.9	94	45.4	—
SUNDAY.										
16 14	16 20	57.0	N. E.	Light.	¾ clouded; light cirri and cumuli in W. - - - - -	74.1	56.9	90	53.5	—
16 20	17 02	65.0	—	Calm.	Haze round horizon, remainder clear - - - - -					
17 02	17 08	68.0	E.	Light.	¾ overcast; cirro-cumuli, and cirro-strati; clear in E. - - - - -					
17 08	17 14	64.0	—	Calm.	Clouded; sheet lightning in N. W.; surface water of the lake 64° 8					
17 14	17 20	63.0	—	Calm.	Clouded; cumuli and haze - - - - -	75.8	61.7	103	58.8	—
17 20	18 02	68.0	—	Calm.	Overcast; cirro-cumuli; showers from 16 <sup>h</sup> to 18 <sup>h</sup> - - - - -					
18 02	18 08	71.0	E.	Light.	Partially clouded; distant thunder in N. - - - - -					
18 08	18 14	67.0	—	Calm.	Overcast; vivid sheet lightning in S. - - - - -					
18 14	18 20	62.0	—	Calm.	Overcast; lightning and distant thunder in W.; lunar halo from	77.3	61.2	103	58.4	—
18 20	19 02	69.0	N.	Light.	Clear - - - - - [14 <sup>h</sup> 30 <sup>m</sup> to 15 <sup>h</sup> 45 <sup>m</sup> , diam. 2°					
19 02	19 08	71.5	—	Calm.	Bank of cumuli round horizon, remainder clear - - - - -					
19 08	19 14	67.0	—	Calm.	Clear; Aurora visible from 8 <sup>h</sup> to 11 <sup>h</sup> 45 <sup>m</sup> . a - - - - -					
19 14	19 20	62.0	—	Calm.	Clear; faint auroral light in the N. at 12 <sup>h</sup> - - - - -	82.4	60.4	110	58.8	—
19 20	20 02	69.0	—	Calm.	Dense fog - - - - -					
20 02	20 08	73.0	—	Calm.	¾ clouded round horizon; cumuli and haze; remainder clear					
20 08	20 14	71.0	—	Calm.	Light haze round horizon; remainder clear - - - - -					
20 14	20 20	64.0	—	Calm.	Light haze round horizon; remainder clear - - - - -	80.7	63.7	109	60.3	—
20 20	21 02	70.0	—	Calm.	Clear - - - - -					
21 02	21 08	75.0	—	Calm.	Partially clouded; cirro-cumuli and cumulo-strati - - - - -					
21 08	21 14	72.0	—	Calm.	Clear; a few light strati in N. - - - - -					
21 14	21 20	65.0	—	Calm.	¾ clouded; auroral light in N.; lightning in N. W. at 12 <sup>h</sup> - - - - -	81.0	64.2	114	61.5	—
21 20	22 02	71.0	W. S. W.	Light.	¾ clouded round horizon; cumulo-cirri and haze - - - - -					

\* A detailed description of this Aurora is given in the Volume of Disturbance Observations, Part I., page 12.

Mean Solar Time (Astronom' Reck <sup>s</sup> )		Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.	
Toronto.	Göttingen.		Direction.	Force.							
AUGUST.											
D.	H.	D.	H.							In.	
22	02	22	08	S.	Light.	¾ clouded; dense cirro-cumuli and cumulo-strati - - - Vivid lightning in E., S., and W. horizon; air oppressive	81.8	65.2	106	62.0	—
22	08	22	14	—	Calm.						
SUNDAY.											
23	14	23	20	W. by N.	Light.	¾ clouded round horizon - - - - - Overcast; cirro-cumuli and cirri - - - - -	79.7	56.8	98	50.3	—
23	20	24	02	—	Calm.						
24	02	24	08	—	Calm.	Clouded; cirro-cumuli and cirro-strati; showers - - - - - ¼ clear in N., otherwise heavily clouded - - - - -	80.0	50.1	104	44.5	.210
24	08	24	14	N. N. W.	Light.						
24	14	24	20	—	Calm.	Faint auroral light in N.; bank of strati in N. horizon - - - - - Clear - - - - -	80.0	50.1	104	44.5	.210
24	20	25	02	N. W.	Light.						
25	02	25	08	N. W.	Light.	Clouded; light cirri and cumulo-strati - - - - - Overcast; cirri and cirro-cumuli - - - - -	71.3	49.5	108	45.5	.080
25	08	25	14	—	Calm.						
25	14	25	20	—	Calm.	Totally clouded - - - - - Overcast; light haze and cirro-cumuli - - - - -	71.3	49.5	108	45.5	.080
25	20	26	02	—	Calm.						
26	02	26	08	—	Calm.	Overcast; cirri and cirro-cumuli - - - - - Clouded; clearing in N. W.; surface of the lake 69°·5 - - - - -	74.3	60.4	101	57.3	—
26	08	26	14	E.	Light.						
26	14	26	20	—	Calm.	Overcast - - - - - Clouded; light cirri and cumuli - - - - -	74.3	60.4	101	57.3	—
26	20	27	02	E. by S.	Light.						
27	02	27	08	E.	Moderate.	Showers; halo from 22 <sup>h</sup> 50 <sup>m</sup> to 23 <sup>h</sup> 30 <sup>m</sup> , diam. 35° Slight rain; ceased at 9 <sup>h</sup> - - - - -	71.6	64.0	88	61.7	.200
27	08	27	14	E.	Light.						
27	14	27	20	E.	Moderate.	Densely clouded - - - - - Overcast; cumuli and cirro-cumuli; clearing to W. - - - - -	71.6	64.0	88	61.7	.200
27	20	28	02	—	Calm.						
28	02	28	08	—	Calm.	Overcast; cumuli and cirro-cumuli - - - - - A low bank of cirri and strati round horizon; zenith clear; at 8 <sup>h</sup>	75.7	65.6	92	61.7	—
28	08	28	14	—	Calm.						
28	14	28	20	—	Calm.	Overcast; cumuli - - - - - [30 <sup>m</sup> splendid Aurora <sup>a</sup> Overcast: dense haze; temperature of the soil, 3 ft. deep 65°·0; 6 ft.	75.7	65.6	92	61.7	—
28	20	29	02	—	Calm.						
29	02	29	08	—	Calm.	Overcast; dense haze; surface of the lake 69°·5 - - [deep 60° Densely clouded, with showers; sheet lightning in S. W. - - - - -	70.8	68.0	95	64.5	.075
29	08	29	14	—	Calm.						
SUNDAY.											
30	14	30	20	W.	Very light.	Clear - - - - - ½ clouded - - - - -	76.1	59.3	97	54.8	.410
30	20	31	02	W. S. W.	Moderate.						
31	02	31	08	S. W.	Brisk.	Partially clouded; cirro-cumuli - - - - - Partially clouded; heavy shower from 5 <sup>h</sup> 30 <sup>m</sup> to 5 <sup>h</sup> 50 <sup>m</sup> - - - - -	72.5	53.7	90	49.6	.250
31	08	31	14	—	Calm.						
31	14	31	20	W.	Light.	¾ clouded to the N.; showers - - - - - Low bank of strati from S. E. to W.; remainder clear - - - - -	72.5	53.7	90	49.6	.250
31	20	1	02	W. by N.	Moderate.						
SEPTEMBER.											
1	02	1	08	S. by W.	Moderate.	¾ clouded, detached cirro-cumuli and cirri - - - - - Densely clouded - - - - -	71.3	56.8	101	53.3	.030
1	08	1	14	W. S. W.	Light.						
1	14	1	20	W. S. W.	Moderate.	Squalls; heavily clouded; rain from 16 <sup>h</sup> to 18 <sup>h</sup> 30 <sup>m</sup> - - - - - Heavy cumuli and cirro-cumuli. Clear in N. W.; squalls	71.3	56.8	101	53.3	.030
1	20	2	02	W. by N.	Moderate.						
2	02	2	08	W.	Brisk.	¾ overcast; cirro-cumuli and cumulo-strati - - - - - Clear - - - - -	70.1	43.5	95	37.5	—
2	08	2	14	W. N. W.	Moderate.						
2	14	2	20	W.	Light.	Clear; faint auroral light - - - - - Clear; low ranges of cumulo-strati - - - - -	70.1	43.5	95	37.5	—
2	20	3	02	W.	Light.						
3	02	3	08	W. by N.	Nearly calm.	Partially clouded; cumuli - - - - - Strati in the S.; remainder clear - - - - -	—	—	—	—	—
3	08	3	14	N. W.	Light.						
SUNDAY.											
6	14	6	20	—	Calm.	Clear - - - - - Clear - - - - -	72.6	45.0	105	—	—
6	20	7	02	W.	Nearly calm.						
7	02	7	08	—	Calm.	½ clouded; cumuli and cirri - - - - - Overcast; cumuli, haze, and cirro-cumuli - - - - -	73.6	48.2	104	—	—
7	08	7	14	—	Calm.						
7	14	7	20	—	Calm.	Overcast; cumuli and haze - - - - - Overcast; cumuli and cirro-cumuli; showers	73.6	48.2	104	—	—
7	20	8	02	—	Calm.						
8	02	8	08	S. W.	Very light.	Frequent showers - - - - - ½ clouded; detached cirro-cumuli - - - - -	66.2	52.8	80	—	—
8	08	8	14	S. W.	Very light.						
8	14	8	20	—	Calm.	Unclear; fog rising - - - - - ¾ clouded in N.; remainder clear - - - - -	66.2	52.8	80	—	—
8	20	9	02	W.	Nearly calm.						
9	02	9	08	S. W.	Light.	¾ clouded - - - - - Partially clouded; cirro-cumuli; heavy thunder shower 5 <sup>h</sup> 45 <sup>m</sup> to	73.2	46.9	80	41.4	—
9	08	9	14	—	Calm.						
9	14	9	20	S. W.	Light.	¾ clouded, with cirro-cumuli - - - [6 <sup>h</sup> ; a double rainbow Clear; cirri and cumulo-strati in S. and W. horizon - - - - -	73.2	46.9	80	41.4	—
9	20	10	02	W. by S.	Light.						
10	02	10	08	W.	Light.	½ clouded round horizon; cumuli - - - - - Partially clouded; cumuli - - - - -	64.9	49.5	80	—	—
10	08	10	14	N. W.	Moderate.						
10	14	10	20	N. W.	Light.	Clouded; cirro-strati and cirri; showers about 12 <sup>h</sup> [N. N. W.] Nearly overcast; cumuli and cumulo-strati moving rapidly from	64.9	49.5	80	—	—
10	20	11	02	N. W.	Moderate.						

<sup>a</sup> A detailed description of this Aurora is given in the Volume of Observations on Days of unusual Disturbance, Part I., page 13.  
<sup>b</sup> On the 4th and 5th September the instruments were removing from the temporary to the permanent Observatory, and the Register was interrupted.

Mean Solar Time (Astronom. Reckg.)				Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.		Göttingen.			Direction.	Force.						
<b>SEPTEMBER.</b>												
D.	H.	D.	H.	°				°	°	°	°	In.
11	02	11	08	42·0	N. by W.	Brisk.	½ clouded; cumuli and cirro-cumuli					
11	08	11	14	41·0	—	Calm.	Clear			55·9	37·9	87
11	14	11	20	37·0	—	Calm.	Clear					31·0
11	20	12	02	42·0	—	Calm.	Clear					
12	02	12	08	46·0	—	Calm.	Densely clouded; cumuli and cumulo-strati; slight shower					
12	08	12	14	50·0	—	Calm.	Overcast, with cirro-cumuli; mottled sky			55·9	37·9	87
<b>SUNDAY.</b>												
13	14	13	20	49·0	N.	Light.	Clear			69·4	39·7	82
13	20	14	02	49·0	—	Calm.	Partially clouded; cumuli and cirro-cumuli					38·1
14	02	14	08	55·0	—	Calm.	Clear					
14	08	14	14	52·0	—	Calm.	Clear					
14	14	14	20	51·0	N. W.	Nearly calm.	Low clouds in S. horizon; remainder clear			71·0	51·9	—
14	20	15	02	49·0	—	Calm.	Clear					49·4
15	02	15	08	54·0	S. W.	Light.	Partially clouded; cumuli rising in N. W.					
15	08	15	14	56·0	N. by W.	Nearly calm.	A few cumuli and cirro-cumuli in N. and E. horizon					
15	14	15	20	46·0	—	Calm.	Clear			69·8	47·6	105
15	20	16	02	55·0	N. N. W.	Nearly calm.	¾ overcast, cirri and cirro-cumuli					
16	02	16	08	55·0	S.	Very light.	Cumuli and cumulo-strati round horizon; hazy					
16	08	16	14	54·0	—	Calm.	Clear; faint auroral light			71·1	54·8	103
16	14	16	20	56·0	—	Calm.	Well defined cirri; mottled sky; lunar halo 22 <sup>h</sup> to 24 <sup>h</sup> , diam. 20°					50·3
16	20	17	02	56·0	S. S. E.	Moderate.	Heavily clouded, with rain					
17	02	17	08	58·0	S.	Brisk.	Heavy rain; scud driving rapidly from S. W.					
17	08	17	14	48·0	W.	Moderate.	Clear; rain ceased at 3 <sup>h</sup>					
17	14	17	20	40·0	—	Calm.	Cirro-cumuli in zenith; cirro-strati in horizon			59·6	40·2	60
17	20	18	02	47·0	S.	Light.	Heavily clouded; cumuli and haze					
18	02	18	08	47·0	—	Calm.	Overcast; cumuli					
18	08	18	14	49·0	—	Calm.	Densely clouded; very dark; slight rain					
18	14	18	20	46·0	—	Calm.	Heavily clouded			53·4	44·7	—
18	20	19	02	47·0	S. by W.	Light.	¾ clouded; light cirri and cirro-strati					
19	02	19	08	50·5	S. W.	Light.	Overcast; cumuli					
19	08	19	14	53·0	—	Calm.	Clear, except round horizon			63·6	48·3	91
<b>SUNDAY.</b>												
20	14	20	20	37·0	—	Calm.	Clear; faint auroral light at 16 <sup>h</sup>			63·2	37·0	82
20	20	21	02	34·0	N. by W.	Light.	Heavily clouded; cumuli and haze					
21	02	21	08	34·0	—	Calm.	Clouded					
21	08	21	14	35·0	—	Calm.	Clear; bank of auroral light with streamers					
21	14	21	20	32·0	—	Calm.	Clear; brilliant Aurora <sup>a</sup>			45·9	30·2	78
21	20	22	02	35·0	—	Calm.	Light haze in N. and S. horizon; remainder clear					
22	02	22	08	48·0	S. by W.	Light.	Overcast, with very light fluxuous cirri; yellowish coloured haze					
22	08	22	14	47·0	—	Calm.	Haze round horizon; remainder clear [in N. and N. W. horizon					
22	14	22	20	42·0	—	Calm.	Clear			58·4	37·2	79
22	20	23	02	46·0	—	Calm.	Clear; light haze in S. horizon					
23	02	23	08	54·0	—	Calm.	Clear; light haze in S. horizon					
23	08	23	14	51·0	—	Calm.	Clear; light haze in S. horizon					
23	14	23	20	48·0	—	Calm.	Clear			67·2	44·5	86
23	20	24	02	50·0	—	Calm.	Overcast; thick haze					
24	02	24	08	56·0	—	Calm.	Fair; light haze; drizzling rain 22 <sup>h</sup> to 0 <sup>h</sup>					
24	08	24	14	50·0	—	Calm.	Clear; haze round horizon; surface water of the lake 52°·0					
24	14	24	20	44·0	E.	Light.	Clear; heavy dew			61·4	44·3	88
24	20	25	02	50·5	—	Calm.	Clear; temperature of soil, 3 ft. deep, 58°·6; 6 ft. deep, 58°·8					
25	02	25	08	58·5	—	Calm.	Clear; light haze round horizon					
25	08	25	14	50·0	—	Calm.	Clear; Aurora, with streamers					
25	14	25	20	46·5	E. by N.	Light.	Clear; no auroral light			67·2	45·1	91
25	20	26	02	56·0	E.	Nearly calm.	Partially clouded; cirro-cumuli					
26	02	26	08	59·0	E. by N.	Nearly calm.	¾ clouded; cirro-cumuli					
26	08	26	14	58·0	—	Calm.	Clouded; cumuli			68·8	49·8	99
<b>SUNDAY.</b>												
27	14	27	20	41·0	—	Calm.	Clear; faint auroral light			62·0	40·6	99
27	20	28	02	45·0	W. N. W.	Light.	Clear					
28	02	28	08	54·0	S.	Light.	Clear					
28	08	28	14	51·0	—	Calm.	Clear					
28	14	28	20	41·0	—	Calm.	Clear			60·7	41·5	93
28	20	29	02	48·0	—	Calm.	Dense haze					

<sup>a</sup> A detailed description of this Aurora is given in the Volume of Disturbance Observations, Part I., page 20.



Mean Solar Time (Astronom. Reck.)				Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.		Göttingen.			Direction.	Force.						
<b>SEPTEMBER.</b>												
D.	H.	D.	H.	°								In.
29	02	29	08	53·0	—	Calm.	Overcast; haze and cirro-strati; very perfect halo from 22 <sup>h</sup> to 23 <sup>h</sup> .					
29	08	29	14	53·0	—	Calm.	Overcast; heavy cumuli, haze; rain from 4 <sup>h</sup> to 6 <sup>h</sup> [diam. about 20 <sup>o</sup> ]	60·8	41·5	96	—	·100
29	14	29	20	52·0	N. N. E.	Light.	Rain - - - - -					
29	20	30	02	53·0	N. E.	Light.	Rain; clouds driving rapidly from E. N. E.					
30	02	30	08	54·0	N. E.	Light.	Rain; clouds driving rapidly from N. E.					
30	08	30	14	53·0	E. by N.	Moderate.	Heavy rain; squalls increasing after 4 <sup>h</sup>	57·2 <sup>a</sup>	52·3 <sup>a</sup>	56	52·1	1·250
30	14	30	20	53·0	E.	Light.	Drizzling rain - - - - -					
30	20	1	02	52·0	E. by S.	Moderate.	Overcast; haze - - - - -					
<b>OCTOBER.</b>												
1	02	1	08	52·5	E.	Light.	Overcast; dense haze - - - - -					
1	08	1	14	52·0	E.	Nearly calm.	Densely clouded - - - - -	59·7	51·8	61	51·3	·075
1	14	1	20	—	E.	Moderate.	Heavily clouded - - - - -					
1	20	2	02	57·0	E.	Moderate.	Heavily clouded - - - - -					
2	02	2	08	61·0	E.	Moderate.	Clouds moving rapidly from E.; sun visible through dense haze -					
2	08	2	14	60·0	S. E.	Light.	Heavily clouded; cumulo-strati; smart shower at 9 <sup>h</sup> 30 <sup>m</sup>	66·7	41·8	73	38·5	·075
2	14	2	20	59·0	S. E.	Moderate.	Slight rain; fresh gusts - - - - -					
2	20	3	02	33·0	W. by S.	Moderate.	Clouded; cumuli and cirro-cumuli rising rapidly from W.; showers					
3	02	3	08	38·0	S. S. W.	Brisk gale.	Clear; a few detached cumuli - - - - -	56·8	42·6	65	34·9	·115
3	08	3	14	33·0	S. W.	Brisk.	Clear - - - - -					
<b>SUNDAY.</b>												
4	14	4	20	49·5	—	Calm.	Clear; - - - - -	65·0	47·3	89	39·5	—
4	20	5	02	50·0	S. by W.	Light.	Light cirri in W. horizon; remainder clear - - - - -					
5	02	5	08	59·5	S.	Moderate.	$\frac{3}{4}$ clouded; light cirro-strati and range of cumulo-strati in N. horizon;					
5	08	5	14	52·0	W. by S.	Light.	Overcast; haze and light cirri. Lunar halo at 6 <sup>h</sup> [wind freshening]	67·4	41·7	84	35·5	—
5	14	5	20	45·0	—	Calm.	Clear. Surface water of the lake 59°·0					
5	20	6	02	52·0	—	Calm.	Thick fog from 18 <sup>h</sup> to 20 <sup>h</sup> - - - - -					
6	02	6	08	40·0	S. W.	Light.	Clear - - - - -					
6	08	6	14	34·0	W. by S.	Light.	Clear - - - - -	73·0	34·5	92	37·4	—
6	14	6	20	32·0	—	Calm.	Clear - - - - -					
6	20	7	02	40·5	—	Calm.	Clear - - - - -					
7	02	7	08	41·0	E. by S.	Light.	Clear - - - - -					
7	08	7	14	43·0	E. N. E.	Very light.	Clear - - - - -	72·9	35·0	—	36·0	—
7	14	7	20	44·0	N. N. E.	Light.	Clear - - - - -					
7	20	8	02	51·0	N. E.	Very light.	$\frac{1}{2}$ clouded; cirri - - - - -					
8	02	8	08	58·0	S.	Light.	$\frac{3}{4}$ clouded; light cirri and cirro-strati - - - - -					
8	08	8	14	53·5	N.	Light.	Overcast; very light cirri - - - - -	67·9	43·0	99	40·9	·135
8	14	8	20	50·0	N.	Light.	Thunder and lightning in W.; rain from 14 <sup>h</sup> 20 <sup>m</sup> to 18 <sup>h</sup> -					
8	20	9	02	40·0	N. E.	Light.	Clouded; cumuli and haze - - - - -					
9	02	9	08	38·0	E. N. E.	Light.	Overcast; cumuli and haze; a few flakes of snow, first in the season					
9	08	9	14	41·0	E. by N.	Nearly calm.	Overcast; light cirro-cumuli - - - - -	47·0	36·3	51	29·4	—
9	14	9	20	28·6	N. E.	Light.	Clear - - - - -					
9	20	10	02	35·0	N. E.	Light.	Overcast; cumulo-strati and cumulus; haze - - - - -					
10	02	10	08	46·0	E. by N.	Light.	Overcast; cumuli and cumulo-strati - - - - -	59·0	41·0	51	43·4	·075
10	08	10	14	48·0	—	Calm.	Overcast; dense haze - - - - -					
<b>SUNDAY.</b>												
11	14	11	20	43·0	W. by N.	Very light.	$\frac{3}{4}$ clouded; prismatic lunar halo, diam. 5° - - - - -	67·0	45·0	80	41·0	·085
11	20	12	02	36·0	N. W.	Light.	$\frac{1}{2}$ clouded; cirri, cirro-cumuli, and cirro-strati; small rain at 18 <sup>h</sup>					
12	02	12	08	40·0	N. W.	Moderate.	$\frac{1}{2}$ clouded; detached cirro-cumuli; fresh gusts - - - - -					
12	08	12	14	38·0	N.	Light.	$\frac{3}{4}$ clouded; light cirro-cumuli - - - - -	69·0	29·7	—	25·0	—
12	14	12	20	26·6	—	Calm.	Clear - - - - -					
12	20	13	02	39·0	—	Calm.	Clear - - - - -					
13	02	13	08	48·5	S. S. E.	Very light.	Clear - - - - -					
13	08	13	14	49·0	—	Calm.	Clear. Surface water of the lake 50°·0	52·2	42·7 <sup>b</sup>	—	34·4	—
13	14	13	20	42·0	—	Calm.	Clear - - - - -					
13	20	14	02	44·5	S. by W.	Light.	Cirro-cumuli rising in N. W., and spreading - - - - -					
14	02	14	08	47·0	S. by W.	Light.	Light cirro-cumuli in zenith - - - - -					
14	08	14	14	34·0	—	Calm.	Cirri and cirro-cumuli rising in N. and N. E. - - - - -	58·4	30·0	84	19·5	—
14	14	14	20	28·6	—	Calm.	Clear; at 15 <sup>h</sup> 40 <sup>m</sup> bright halo, diam. 25° - - - - -					
14	20	15	02	32·0	N.	Light.	Bank of cumulo-strati in W. horizon, alt. 3°; remainder clear -					
15	02	15	08	26·6	N.	Light.	Partially clouded; detached cumuli - - - - -					
15	08	15	14	28·6	N.	Light.	Clear - - - - -					
15	14	15	20	23·6	—	Calm.	Clouds rising in N. W.; remainder clear - - - - -	47·8 <sup>b</sup>	29·1	91	19·5	—
15	20	16	02	23·6	N. E.	Light.	Clear; low bank of cumulo-strati in S. - - - - -					

<sup>a</sup> Max. and min. of the standard thermometer.

<sup>b</sup> Index of the register thermometer entangled in the mercury; the maximum on the 15th is taken from the highest observation with the standard thermometer.

Mean Solar Time (Astronom. Reck <sup>s</sup> ).				Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.		Göttingen.			Direction.	Force.						
<b>OCTOBER.</b>												
D.	H.	D.	H.									In.
16	02	16	08	28·6	E.	Light.	Haze round W. and S. horizon; remainder clear	°	°	°	°	—
16	08	16	14	30·0	E.	Moderate.	Clouds rising in S. and S. W.; wind freshening	45·0	34·3	—	30·5	—
16	14	16	20	34·5	E.	Fresh.	Overcast, with sudden squalls; halo, diam. 36°	—	—	—	—	—
16	20	17	02	33·0	E.	Brisk.	Overcast; a few drops of rain; fresh gusts	—	—	—	—	—
17	02	17	08	43·0	E. by S.	Light.	Dense haze, and occasional drizzling rain	—	—	—	—	—
17	08	17	14	46·0	E.	Light.	Drizzling rain	48·5	41·5	47	38·5	·200
<b>SUNDAY.</b>												
18	14	18	20	54·0	N. N. E.	Nearly calm.	Clouds breaking up; clearing in S.	51·4	41·2	59	—	·100
18	20	19	02	56·0	E.	Nearly calm.	Partially clouded	—	—	—	—	—
19	02	19	08	57·0	S.	Light.	Densely clouded; rain from 0 <sup>h</sup> to 1 <sup>h</sup> 45 <sup>m</sup> ; moderate puffs	—	—	—	—	—
19	08	19	14	48·0	W. S. W.	Light.	Clear; auroral light in N. <sup>a</sup>	—	—	—	—	—
19	14	19	20	39·0	—	Calm.	Clear; faint auroral light in N.	61·0	34·2	75	27·6	·300
19	20	20	02	42·5	—	Calm.	Clear	—	—	—	—	—
20	02	20	08	48·0	S. W.	Light.	Clear; light cirri and strati in N. horizon	—	—	—	—	—
20	08	20	14	43·0	—	Calm.	Clear; haze round horizon	—	—	—	—	—
20	14	20	20	40·0	S. W.	Light.	Haze and cirri in N. and W. horizon	54·8	35·4	87	30·5	—
20	20	21	02	39·0	N. W.	Light.	Overcast; cumuli; wind freshening	—	—	—	—	—
21	02	21	08	38·0	N. N. E.	Moderate.	Heavy rain; cumuli at 1 <sup>h</sup>	—	—	—	—	—
21	08	21	14	39·0	N.	Moderate.	Dense haze, and drizzling rain	—	—	—	—	—
21	14	21	20	34·0	N.	Nearly calm.	Clear to W. and zenith; remainder clouded	49·8	33·4	70	25·2	·150
21	20	22	02	36·0	—	Calm.	Light cirri and cirro-strati in E. horizon; remainder clear	—	—	—	—	—
22	02	22	08	42·0	S. W.	Light.	¾ overcast; cumuli and cirro-cumuli. Surface water of the lake 50°·0	—	—	—	—	—
22	08	22	14	43·0	S.	Nearly calm.	Clouded round horizon; clear in zenith; very dark in E.; faint auroral	52·0	37·0	77	—	—
22	14	22	20	47·0	S.	Light.	Densely clouded, and very dark; moderate puffs [light from 9 <sup>h</sup> to 12 <sup>h</sup>	—	—	—	—	—
22	20	23	02	42·0	S. by W.	Moderate.	Clear at 18 <sup>h</sup> . Temp. of soil, 3 feet deep, 52°·8; 6 feet deep 53°·6	—	—	—	—	—
23	02	23	08	—	W.	Fresh.	¾ clouded; cirro-cumuli and cumulo-strati; squally	—	—	—	—	—
23	08	23	14	—	W.	Fresh.	Clear; bank of cumulo-strati in N. horizon; squally	58·5	28·8	75	19·8	—
23	14	23	20	—	W.	Light.	Densely clouded	—	—	—	—	—
23	20	24	02	—	—	Calm.	Clear	—	—	—	—	—
24	02	24	08	27·0	W.	Light.	Clouded; slight fall of snow at 0 <sup>h</sup> 30 <sup>m</sup>	—	—	—	—	—
24	08	24	14	29·5	W.	Nearly calm.	Heavily clouded; snow at intervals from 4 <sup>h</sup> to 6 <sup>h</sup>	41·3	29·8	77	20·4	·150
<b>SUNDAY.</b>												
25	14	25	20	23·5	—	Calm.	¼ clouded; detached cirro-strati	40·2	24·0	57	15·0	—
25	20	26	02	28·0	N. W.	Moderate.	Clouded; cumuli moving rapidly from W.	—	—	—	—	—
26	02	26	08	36·0	N. W.	Moderate.	¾ clouded; heavy cirro-cumuli and cumulo-strati	—	—	—	—	—
26	08	26	14	27·5	N. W.	Light.	Clear	—	—	—	—	—
26	14	26	20	24·0	N. W.	Very light.	Clouded; very dark	37·4	23·0	58	12·0	—
26	20	27	02	30·5	—	Calm.	Overcast; cumuli and haze	—	—	—	—	—
27	02	27	08	30·0	S. by W.	Nearly calm.	Overcast; cumuli and cumulo-strati	—	—	—	—	—
27	08	27	14	36·0	S. S. W.	Light.	Overcast; wind moderate at 0 <sup>h</sup> and between 5 <sup>h</sup> and 7 <sup>h</sup>	42·4	30·7	42	29·5	·050
27	14	27	20	40·5	S.	Fresh.	Very dark; drizzling rain	—	—	—	—	—
27	20	28	02	39·5	S. S. W.	Nearly calm.	Overcast; drizzling rain, continued until after 0 <sup>h</sup>	—	—	—	—	—
28	02	28	08	44·0	—	Calm.	Overcast; strati, cumuli, and haze	—	—	—	—	—
28	08	28	14	33·0	—	Calm.	Ground fog; haze round horizon; zenith clear	—	—	—	—	—
28	14	28	20	33·5	—	Calm.	Overcast; haze and cirri; a few stars visible	45·5	31·0	47	27·6	—
28	20	29	02	39·0	S. S. W.	Nearly calm.	Overcast; dense haze	—	—	—	—	—
29	02	29	08	44·5	N. E.	Light.	Drizzling rain from 22 <sup>h</sup> 30 <sup>m</sup>	—	—	—	—	—
29	08	29	14	40·0	N.	Moderate.	Rain ceased at 10 <sup>h</sup>	46·6	38·0	47	36·3	·350
29	14	29	20	37·0	N. by W.	Moderate.	Overcast; very dark	—	—	—	—	—
29	20	30	02	36·0	N. by W.	Light.	Clouded; cumuli	—	—	—	—	—
30	02	30	08	32·0	N. N. W.	Light.	Overcast	—	—	—	—	—
30	08	30	14	25·5	N. N. W.	Nearly calm.	Overcast	41·0	32·0	44	24·8	—
30	14	30	20	30·5	—	Calm.	Overcast; slight snow	—	—	—	—	—
30	20	31	02	30·5	—	Calm.	Overcast; cumuli; very slight snow at 19 <sup>h</sup> 15 <sup>m</sup>	—	—	—	—	—
31	02	31	08	34·0	N. N. W.	Very light.	Partially clouded; cumuli and cumulo-strati	—	—	—	—	—
31	08	31	14	34·0	—	Calm.	Strati in N. and S. horizon; remainder clear	46·2	26·6	72	20·6	—
<b>NOVEMBER.</b>												
<b>SUNDAY.</b>												
1	14	1	20	33·3	N. E.	Light.	Clear	47·3	29·7	76	25·6	—
1	20	2	02	37·5	—	Calm.	Clear; a very dense haze near horizon	—	—	—	—	—
2	02	2	08	45·2	S. by E.	Very light.	Light cirri and haze round horizon	—	—	—	—	—
2	08	2	14	36·4	—	Calm.	Clear	53·7	30·7	77	25·6	—
2	14	2	20	31·0	—	Calm.	Clear	—	—	—	—	—
2	20	3	02	35·0	N.	Very light.	Light strati and cumuli; haze round horizon	—	—	—	—	—

\* A detailed description of this Aurora is given in the Volume of Disturbance Observations, Part I., p. 23.

Mean Solar Time (Astronom. Reck <sup>s</sup> ).				Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.		Göttingen.			Direction.	Force.						
<b>NOVEMBER.</b>												
D.	H.	D.	H.	°								In.
3	02	3	08	45.9	—	Calm.	Partially clouded; detached cirri - - - -					
3	08	3	14	39.0	N.	Very light.	Clouded; haze round horizon - - - -	55.0	37.0	81	30.4	—
3	14	3	20	41.9	—	Calm.	¾ clouded; cirro-strati, principally to the S. and E. - - - -					
3	20	4	02	41.6	S. by E.	Nearly calm.	Clouded; cumuli and haze - - - -					
4	02	4	08	48.0	N. E.	Light.	Overcast; cirri and cirro-cumuli; haze round horizon - - - -					
4	08	4	14	44.7	—	Calm.	Densely clouded; cumuli and haze - - - -	56.8	41.3	75	37.7	.020
4	14	4	20	41.8	—	Calm.	Densely clouded; very dark - - - -					
4	20	5	02	41.3	N. by E.	Light.	Overcast; cumuli and haze; drizzling rain - - - -					
5	02	5	08	42.9	N. by E.	Light.	Clouded; cumuli, with a small clearing to the southward - - - -					
5	08	5	14	39.5	N. E.	Nearly calm.	Overcast; cumuli - - - -	51.6	30.0	59	23.6	—
5	14	5	20	35.1	—	Calm.	Clear - - - -					
5	20	6	02	36.0	—	Calm.	Detached cirri - - - -					
6	02	6	08	40.6	S.	Very light.	Heavy bank of cumuli round W. horizon; alt. about 25° - - - -					
6	08	6	14	32.0	E. N. E.	Nearly calm.	Unclouded; light haze - - - -	48.0	30.5	60	25.5	—
6	14	6	20	38.0	—	Calm.	Densely clouded; very damp - - - -					
6	20	7	02	38.4	E. by N.	Moderate.	Overcast; heavy cumuli; light scud passing rapidly from Eastward - - - -					
7	02	7	08	42.2	E.	Moderate.	Overcast; cirri; haze passing rapidly from Eastward - - - -					
7	08	7	14	43.2	E. N. E.	Moderate.	Overcast; cumuli passing from E. and S. E.; fresh puffs - - - -	48.9	40.7	56	39.5	—
<b>SUNDAY.</b>												
8	14	8	20	45.6	E.	Very light.	Mist clearing; light rain, moon occasionally visible - - - -	47.2	44.0	52	38.3	.380
8	20	9	02	44.5	—	Calm.	Clouded; cumuli and cirro-cumuli - - - -					
9	02	9	08	38.0	N. W.	Light.	Densely clouded; cumuli, cumulo-strati, and haze - - - -					
9	08	9	14	38.1	—	Calm.	Clouded; cumuli and cirro-cumuli; spitting rain - - - -	48.5	36.2	71	29.6	.070
9	14	9	20	34.7	N. W.	Brisk.	Overcast; cirro-cumuli moving rapidly from N. - - - -					
9	20	10	02	33.2	N. by W.	Light.	Overcast; cumuli and cumulo-strati moving rapidly from N. - - - -					
10	02	10	08	32.5	N.	Light.	Clear - - - -					
10	08	10	14	31.5	N.	Light.	Clear. Surface water of the lake 41° 0 - - - -	46.7	27.5	79	18.7	—
10	14	10	20	28.6	N.	Light.	Clear - - - -					
10	20	11	02	29.4	—	Calm.	Clear; at 14 <sup>h</sup> 30 <sup>m</sup> wind shifted to the N. E.; sky clouded rapidly - - - -					
11	02	11	08	33.2	E. by N.	Light.	Heavily clouded; cumuli and cumulo-strati - - - -					
11	08	11	14	36.2	E.	Moderate.	Brisk puffs; clouded in S. W. - - - -					
11	14	11	20	37.1	E. by N.	Moderate.	Clouds breaking; upper strata from N. W., lower from S. E. - - - -	41.9	32.5	61	27.8	—
11	20	12	02	39.3	E. by N.	Light.	{ Clouded; cumuli, cirro-cumuli, and cumulo-strati; cirri driving rapidly from S. W. - - - -					
12	02	12	08	44.4	S. S. W.	Light.	Low range of cumuli round the horizon; zenith clear - - - -					
12	08	12	14	41.2	S. by W.	Light.	Densely clouded; smart shower at 5 <sup>h</sup> 30 <sup>m</sup> - - - -	51.3	30.7	84	22.0	—
12	14	12	20	34.1	—	Calm.	Clear - - - -					
12	20	13	02	34.3	—	Calm.	¾ clouded; cirro-cumuli from S. W. - - - -					
13	02	13	08	29.2	W. S. W.	Moderate.	¾ clouded; at 3 <sup>h</sup> 5 <sup>m</sup> a sudden squall, with hail, lasting about 10 <sup>m</sup> - - - -					
13	08	13	14	27.1	N. W.	Light.	Clear; Aurora visible <sup>a</sup> - - - -	46.3	26.1	72	15.5	—
13	14	13	20	26.0	—	Calm.	Overcast; light cirri and cirro-cumuli; halo, diam. 5° - - - -					
13	20	14	02	29.1	—	Calm.	Overcast; low bank of strati in N. horizon; a faintly defined arch - - - -					
14	02	14	08	30.9	N. E.	Light.	Heavy snow, commenced at 20 <sup>h</sup> 30 <sup>m</sup> [of light above and below it] - - - -					
14	08	14	14	36.1	E. N. E.	Fresh.	Heavily overcast; cumuli and dense haze; rain and sleet - - - -	40.5	29.4	43	28.4	.500
<b>SUNDAY.</b>												
15	14	15	20	24.1	S. W.	Moderate.	Heavy bank of strati round W. and N. horizon - - - -	36.0	24.5	41	16.9	.250
15	20	16	02	25.6	W. by S.	Moderate.	Partially clouded; light cirro-strati - - - -					
16	02	16	08	27.3	S. W.	Moderate.	¾ overcast; cirro-cumuli, with a bank of cirro-strati - - - -					
16	08	16	14	25.3	S. W.	Light.	Clear - - - -	33.7	25.6	48	18.9	—
16	14	16	20	25.9	S. W.	Light.	Overcast - - - -					
16	20	17	02	28.0	S. W.	Moderate.	Overcast; cumuli and cumulo-strati; brisk gusts - - - -					
17	02	17	08	30.1	S. S. W.	Moderate.	Overcast, cumulo-strati and cumuli, a few flakes of snow - - - -					
17	08	17	14	28.0	—	Calm.	Overcast, cirri, cumulo-strati in N., very dark in S. S. W. - - - -					
17	14	17	20	21.6	S. S. W.	Nearly calm.	Clear - - - -	33.3	21.7	45.9	13.9	—
17	20	18	02	26.1	S. W.	Light.	Cirro-cumuli in zenith, and cumulo-strati from S. E. to W. - - - -					
18	02	18	08	26.5	S. W.	Light.	¾ clouded; cumuli and cirro-cumuli - - - -					
18	08	18	14	26.1	—	Calm.	Overcast; cirro-cumuli and haze. Surface water of the lake 36° 0 - - - -	31.7	24.8	59.8	17.9	—
18	14	18	20	23.2	N.	Light.	Heavy range of cumulo-strati in N. W.; remainder clear - - - -					
18	20	19	02	26.1	N. W.	Very light.	Overcast, cirro-cumuli; fair - - - -					
19	02	19	08	28.0	N. W.	Light.	Clouded, cirro-cumuli; partially clear in N. W. - - - -					
19	08	19	14	26.5	N. W.	Very light.	Clear and fine; cirri, cumulo-strati round horizon - - - -					
19	14	19	20	28.0	—	Calm.	Clouded, very dark - - - -	36.3	28.9	41.7	23.7	—
19	20	20	02	22.2	N.	Light.	Overcast; cumuli, cirro-cumuli and cumulo-strati - - - -					

<sup>a</sup> A detailed description of this Aurora is given in the Volume of Disturbance Observations, Part I., page 26.

Mean Solar Time (Astronom. Reck <sup>s</sup> .)				Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terri- Rad.	Rain.
Toronto.		Göttingen.			Direction.	Force						
<b>NOVEMBER.</b>												
D.	H.	D.	H.	°								In.
20	02	20	08	29.5	—	Calm.	Thickly overcast, cirri, cumuli, and haze - - -					
20	08	20	14	33.3	—	Calm.	Thickly overcast, cirri, cumuli, and haze - - -					
20	14	20	20	32.1	—	Calm.	Overcast - - - - -	34.6 <sup>a</sup>	25.8	70.0	25.8	—
20	20	21	02	31.4	N.	Very light.	Heavily clouded, a few flakes of snow falling - - -					
21	02	21	08	27.3	N. E.	Moderate.	Slight snow - - - - -					
21	08	21	14	26.5	N. E.	Light.	Moderate puffs; heavy snow <sup>a</sup> - - - - -	30.4 <sup>a</sup>	22.6	—	22.6	—
<b>SUNDAY.</b>												
22	14	22	20	21.3	E. by N.	Moderate.	Thickly overcast; snow ceased between 12 <sup>h</sup> and 13 <sup>h</sup> - - -	32.0	27.4	—	26.4	—
22	20	22	02	31.9	E. N. E.	Light.	Overcast, cirro-cumuli and dense haze; sleet at intervals - - -					
23	02	23	08	32.7	N. E.	Light.	Overcast, cirro-cumuli; a few flakes of snow falling - - -					
23	08	23	14	31.9	S. W.	Light.	Overcast, cirro-cumuli and haze; at 8 <sup>h</sup> 30 <sup>m</sup> cleared suddenly - - -					
23	14	23	20	34.5	—	Calm.	Clear; clouded round horizon - - - - -	37.1	29.0	—	21.3	—
23	20	24	02	30.0	S.	Nearly calm.	Overcast, cirro-cumuli, cumuli, and cumulo-strati - - -					
24	02	24	08	27.6	S. by W.	Very light.	Overcast, cirro-cumuli and cumulo-strati - - - - -					
24	08	24	14	28.9	—	Calm.	Heavily clouded - - - - -					
24	14	24	20	28.1	—	Calm.	Heavily clouded, cumuli, and cirro-cumuli - - - - -	38.6	29.6	—	24.4	—
24	20	25	02	29.7	—	Calm.	Overcast, cumuli, cirro-cumuli, and cumulo-strati - - -					
25	02	25	08	31.9	—	Calm.	Heavily clouded, cumuli and cumulo-strati; slight snow - - -					
25	08	25	14	28.9	—	Calm.	Heavily clouded, cumuli and haze; slight snow at 10 <sup>h</sup> - - -					
25	14	25	20	27.5	N.	Nearly calm.	Densely clouded; slight snow - - - - -	39.2	28.5	—	25.4	—
25	20	26	02	26.5	—	Calm.	Overcast, cirro cumuli and haze; snow ceased at 23 <sup>h</sup> 30 <sup>m</sup> - - -					
26	02	26	08	25.8	N. W.	Light.	Heavily clouded - - - - -					
26	08	26	14	21.0	N. by W.	Light.	Light cirri and haze round horizon; zenith clear - - -					
26	14	26	20	21.4	N. W.	Light.	Alternately clear and clouded - - - - -	32.1	19.0	—	11.0	—
26	20	27	02	18.8	—	Calm.	Overcast; cirri and cirro-strati passing from N. W. to S. E. - - -					
27	02	27	08	30.9	S. by W.	Light.	Heavily clouded, cumulo-strati and haze - - - - -					
27	08	27	14	26.1	S. W.	Light.	Heavily clouded - - - - -					
27	14	27	20	27.1	—	Calm.	Heavily clouded cirro-cumuli and haze, very dark - - -	35.9	20.7 <sup>b</sup>	—	14.9	—
27	20	28	02	31.5	S. W.	Light.	Overcast, cirri and cirro-strati - - - - -					
28	02	28	08	35.5	—	Calm.	Overcast, light cirri and haze - - - - -					
28	08	28	14	34.5	—	Calm.	Thick haze; heavy cumuli in S. W. - - - - -	40.3	31.8	—	27.8	—
<b>SUNDAY.</b>												
29	14	29	20	30.3	S. W.	Light.	Overcast, thick haze. Surface water of the lake 37° 0 - - -	47.6	32.5	—	21.9	—
29	20	30	02	34.9	W.	Light.	Bank of cirro-cumuli round horizon, light cirri - - - - -					
30	02	30	08	17.2	W. N. W.	Fresh.	Alternately clear and clouded, heavy showers of snow; squally - - -					
30	08	30	14	14.7	N. W.	Fresh.	Clear; cumuli passing rapidly from W.; squalls. Temperature of the soil, 3 feet deep, 42° 5; 6 feet deep, 47° 2	38.7	14.6	—	7.8	—
30	14	30	20	10.3	W. N. W.	Light.	Bank of strati in S. horizon; remainder clear - - - - -					
30	20	1	02	10.0	N. W.	Light.	Heavy banks of cumuli round horizon - - - - -					
<b>DECEMBER.</b>												
1	02	1	08	14.0	S. W.	Nearly calm.	Heavily clouded, cirro-cumuli and haze - - - - -					
1	08	1	14	6.7	—	Calm.	¾ clouded, cirro-cumuli - - - - -	22.9	10.8	—	2.8	— <sup>c</sup>
1	14	1	20	12.5	—	Calm.	Clear - - - - -					
1	20	2	02	14.7	W. by N.	Light.	Partially clouded, light cirro-cumuli - - - - -					
2	02	2	08	26.0	S. by W.	Brisk.	Clear - - - - -					
2	08	2	14	26.3	S. W.	Light.	¾ overcast, light cirri; prismatic halo, diameter 8° - - -	36.7	18.7	—	15.1	—
2	14	2	20	26.5	N. E.	Moderate.	Clouded; very dark - - - - -					
2	20	3	02	12.2	N. by E.	Brisk.	Squally; ranges of strati in S.; light cirro-cumuli across the zenith					
3	02	3	08	15.2	N.	Light.	Light cirro-strati in S.; remainder clear - - - - -					
3	08	3	14	9.7	—	Calm.	Clear - - - - -					
3	14	3	20	5.6	N. by E.	Light.	Haze in the N. and S. W. horizons; remainder clear - - -	22.1	10.0	—	3.7	—
3	20	4	02	7.0	N. by E.	Light.	Light clouds; dense vapour rising from the lake - - -					
4	02	4	08	22.8	S.	Light.	Heavy snow commenced at 1 <sup>h</sup> 30 <sup>m</sup> ; halo at 22 <sup>h</sup> , diameter 30° - - -					
4	08	4	14	21.2	—	Calm.	Overcast, thick haze - - - - -					
4	14	4	20	18.0	N. E.	Light.	Clouded round horizon, clearing in zenith - - - - -	37.2	12.9	—	10.8	—
4	20	5	02	11.3	N. E. by N.	Light.	Cumulo-strati in the S. horizon; overcast, light cirri - - -					
5	02	5	08	10.3	N. by E.	Light.	Heavy bank of cumuli in S. horizon - - - - -					
5	08	5	14	4.0	N. E.	Light.	Cumuli in S.; cirri and cirro-cumuli elsewhere - - - - -	22.1	14.7	—	7.6	—
<b>SUNDAY.</b>												
6	14	6	20	16.0	N.	Light.	Overcast; thick haze - - - - -	25.4	17.5	—	16.7	—
6	20	7	02	16.5	N.	Nearly calm.	Overcast; cirro-cumuli and cirro-cumulo-strati - - - - -					

<sup>a</sup> The returns received from the Observatory do not contain any record of the amount of rain (melted snow) that may have fallen on this day or on the following day.

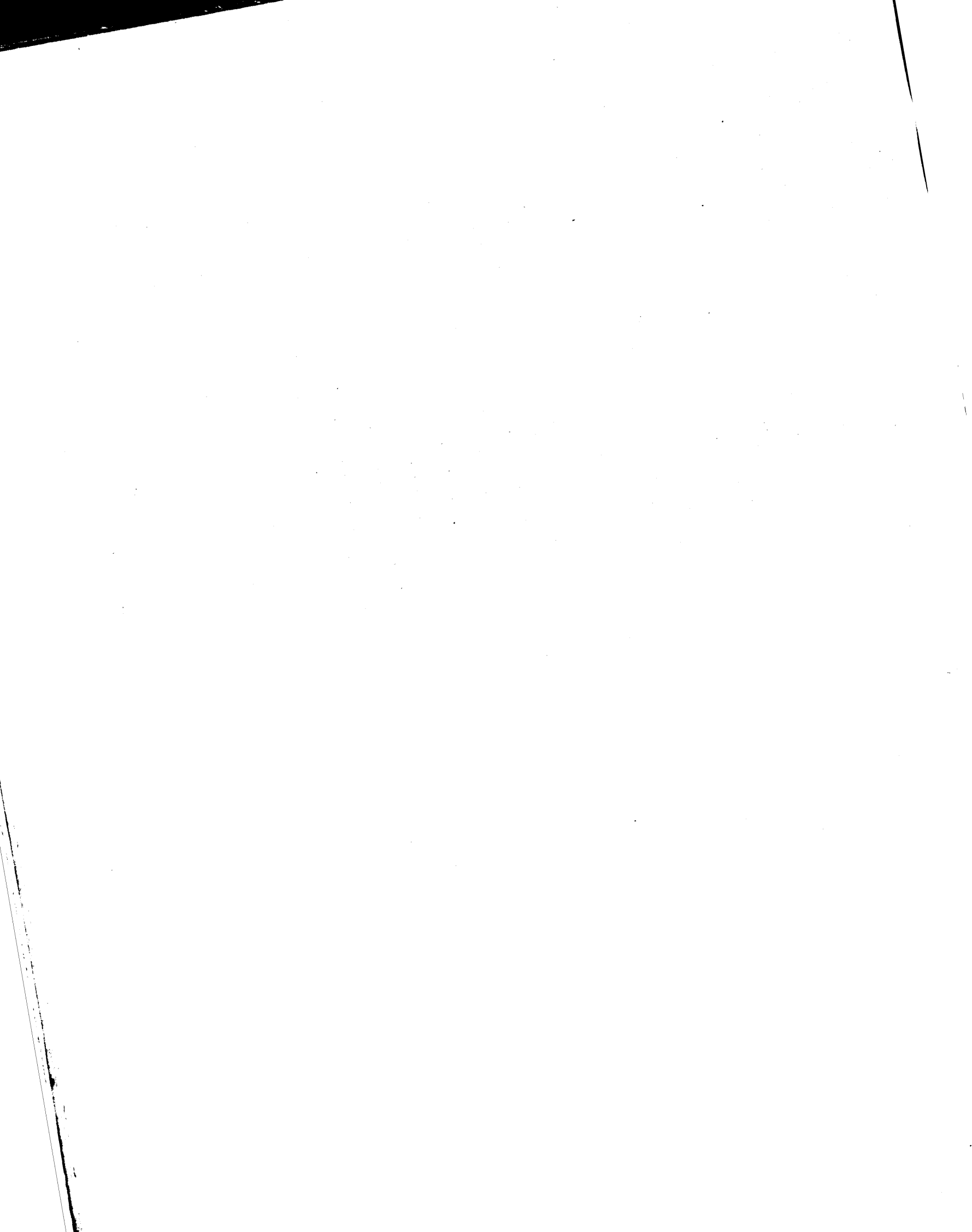
<sup>b</sup> Index of the register thermometer entangled; the maximum of the 21st and 22nd is taken from the highest observation of the standard thermometer.

<sup>c</sup> The record of rain is blank for all the month of December in the return received from the Observatory.

Mean Solar Time (Astronom. Reck.)				Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.		Gottingen.			Direction.	Force.						
DECEMBER.												
D.	H.	D.	H.	°				°	°	°	°	In.
7	02	7	08	23·6	—	Calm.	Overcast, cumulo-strati and haze; slight snow					
7	08	7	14	23·8	S. E.	Light.	Overcast; cirro-cumuli and haze	34·0	22·7	—	20·6	—
7	14	7	20	30·4	E. S. E.	Nearly calm.	Heavily clouded					
7	20	8	02	29·6	S. E.	Nearly calm.	Overcast; cirro-cumuli and cumulo-strati					
8	02	8	08	34·6	S. W.	Light.	Overcast; cirro-cumuli and haze					
8	08	8	14	35·7	—	Calm.	Overcast; cirro-cumuli; rain at intervals	37·4	33·9	—	31·4	—
8	14	8	20	35·1	—	Calm.	Overcast; thick haze					
8	20	9	02	36·5	—	Calm.	Overcast; thick haze and cirro-cumuli					
9	02	9	08	37·7	—	Calm.	Overcast; thick haze, rain at noon					
9	08	9	14	39·0	—	Calm.	Very thick mist	40·7	34·9	—	26·3	—
9	14	9	20	40·6	—	Calm.	Overcast; dense haze					
9	20	10	02	29·1	N. W.	Very light.	Range of cirri and cumulo-strati in the S. horizon; remainder clear					
10	02	10	08	29·6	W. by S.	Moderate.	A few cumuli rising in the W; strati and cumulo-strati in S.					
10	08	10	14	29·0	N.	Nearly calm.	½ overcast; light cirri and cirro-cumuli [horizon	42·1	23·2	—	14·4	—
10	14	10	20	23·4	S. W.	Light.	Partially clouded; cumuli rising in N. W.					
10	20	11	02	21·2	—	Calm.	Clear; a few very light cirro-cumuli in S. horizon					
11	02	11	08	24·8	—	Calm.	Clear; a few very light cirro-cumuli in S. horizon					
11	08	11	14	23·2	—	Calm.	Haze round horizon, otherwise clear. Surface of the lake 32°·5					
11	14	11	20	27·5	—	Calm.	Densely clouded; very perfect halo from 12 <sup>h</sup> to 13 <sup>h</sup> , diameter 40°	35·3	23·9	—	18·1	—
11	20	12	02	31·3	S. E.	Light.	Overcast; thick haze, heavy snow from 18 <sup>h</sup> to 45 <sup>m</sup>					
12	02	12	08	36·5	—	Calm.	Overcast; thick haze, drizzling rain					
12	08	12	14	36·1	—	Calm.	Overcast; thick haze	36·4	33·0	—	32·0	—
SUNDAY.												
13	14	13	20	31·0	W. by N.	Light.	Overcast; heavy cirro-cumuli from the W.	37·1	33·5	—	27·4	—
13	20	14	02	31·7	—	Calm.	Overcast; cumuli and cumulo-strati					
14	02	14	08	35·0	S. S. W.	Light.	Heavily clouded; cirro-cumuli and cumulo-strati					
14	08	14	14	32·3	S. W.	Light.	Slight rain from 4 <sup>h</sup> to 7 <sup>h</sup>	37·2	30·6	—	24·8	—
14	14	14	20	35·0	—	Calm.	Overcast; cirri and haze					
14	20	15	02	31·7	—	Calm.	Heavy snow; began at 19 <sup>h</sup>					
15	02	15	08	35·0	—	Calm.	Overcast; thick haze, drizzling rain					
15	08	15	14	32·3	N. W.	Brisk.	Sheet lightning in S. at 16 <sup>h</sup> ; cleared suddenly at 7 <sup>h</sup> 30 <sup>m</sup>	36·4	28·9	—	21·8	—
15	14	15	20	22·2	N. W.	Moderate.	½ clouded, strati in S.; cirro-cumuli passing across zenith					
15	20	16	02	21·4	—	Calm.	Partially clouded; light cirri in zenith					
16	02	16	08	23·6	W.	Light.	¾ clouded, cirri and cirro-cumuli; heavy cumulo-strati in S.					
16	08	16	14	22·6	N. W.	Light.	Heavily clouded, snowing [zenith	33·1	19·7	—	13·7	—
16	14	16	20	15·5	W.	Light.	Range of cumulo-strati in S. W. horizon; light cirri and haze in					
16	20	17	02	16·0	N. W.	Moderate.	Partially clouded; light cirro-cumuli and cirro-cumulo-strati					
17	02	17	08	19·7	W.	Light.	Heavily clouded in N. W., partially clear in S.; snow showers					
17	08	17	14	12·0	W. by S.	Light.	Haze round horizon, zenith clear; slight snow	26·9	0·4	—	—5·4	—
17	14	17	20	8·3	W.	Moderate.	Snowing slightly from 8 <sup>h</sup>					
17	20	18	02	1·7	N. W.	Nearly calm.	Clear; cirro-cumuli and cirro-cumulo-strati in S. horizon					
18	02	18	08	5·3	W.	Light.	Clouded; detached cumuli and cirro-cumuli					
18	08	18	14	5·0	—	Calm.	Partially clouded	21·2	1·7	—	0·6	—
18	14	18	20	11·0	N. W.	Light.	Overcast; thick haze					
18	20	19	02	15·7	W.	Light.	Partially clouded; light cirro-cumuli					
19	02	19	08	21·6	W. by S.	Light.	Overcast; cirro-cumuli and cirrous haze					
19	08	19	14	17·7	W.	Light.	¾ clouded; zenith clear	28·3	18·1	—	12·7	—
SUNDAY.												
20	14	20	20	21·6	—	Calm.	Clear; brilliant Aurora * [with yellow	26·5	17·0	—	13·1	—
20	20	21	02	17·7	S. W.	Moderate.	Brisk gusts, clouded, cirro-cumuli and cumuli; clouds tinged					
21	02	21	08	18·2	W. by S.	Light.	Overcast, thick haze; ranges of cumulo-strati in S. horizon					
21	08	21	14	28·3	S. E.	Moderate.	Heavy snow from 5 <sup>h</sup>	32·6	20·6	—	19·8	—
21	14	21	20	27·7	S. W.	Very light.	Densely clouded					
21	20	22	02	29·7	S. S. W.	Moderate.	Squally, clouded; cumuli and cirro-cumuli					
22	02	22	08	21·8	N. N. W.	Brisk.	Heavy squalls; snow showers (poudré)					
22	08	22	14	16·2	N. W.	Light.	Overcast, haze, slight snow; stars dim in zenith	37·6	6·9	—	—5·3	—
22	14	22	20	2·0	—	Calm.	Clear					
22	20	23	02	12·7	N. W.	Very light.	Nearly overcast; cumuli and cumulo-strati					
23	02	23	08	23·4	S. S. W.	Moderate.	{ Overcast; imperfect halo, diameter about 40°, parhelia in the E. and W. sides, occasionally very bright and of an orange colour	32·1	12·8	—	9·0	—
23	08	23	14	26·4	W.	Light.	Clear in zenith; cirro-cumuli round horizon					
23	14	23	20	11·0	N. W.	Moderate.	Clear; auroral light at 12 <sup>h</sup>					
23	20	24	02	8·3	N. W.	Light.	Nearly overcast; cumuli and cirro-cumuli					
24	02	24	08	9·7	N. W.	Light.	Overcast; cirro-cumuli and cumuli, lightest in the S.					
24	08	24	14	4·7	—	Calm.	Clear; temperature of the soil, 3 feet deep 38°·2; 6 feet deep 41°·4	17·5	—8·6	—	—17·3	—

\* A detailed description of this Aurora is given in the Volume of Disturbance Observations, Part I., page 30.

Mean Solar Time (Astronom. Recks.)		Dew Point.	Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.	Göttingen.		Direction.	Force.						
<b>DECEMBER.</b>										In.
D. H.	D. H.	°								
Christmas Day.										
25 14	25 20	23·8	S. E.	Light.	Snow - - - - -	27·4	-2·1	—	-5·4	—
25 20	26 02	21·0	E. N. E.	Moderate.	Overcast, thick haze; snow (poudré) squalls - - -					
26 02	26 08	14·3	E. N. E.	Light.	Overcast, thick haze; snow squalls - - -					
26 08	26 14	8·0	N.	Moderate.	Clear; haze in S. horizon - - -	21·5	9·0	—	5·8	—
<b>SUNDAY.</b>										
27 14	27 20	3·5	—	Calm.	Clear - - - - -	21·9	0·2	—	-5·9	—
27 20	28 02	10·7	S. W.	Light.	Partially clouded; light cirro-cumuli - - -					
28 02	28 08	26·5	S. by W.	Light.	Partially clouded; light cirro-cumuli - - -					
28 08	28 14	22·6	S. S. W.	Light.	Overcast; cirro-cumuli and cirro-strati - - -					
28 14	28 20	20·8	—	Calm.	Clouded round horizon; zenith clear; faint auroral light - - -	32·5	20·8	—	14·8	—
28 20	29 02	24·5	—	Calm.	Overcast; strati and cirrous haze - - -					
29 02	29 08	29·1	S. W.	Light.	Snowing slightly from 0 <sup>h</sup> 30 <sup>m</sup> - - -					
29 08	29 14	25·2	S. by W.	Light.	Thickly overcast - - -					
29 14	29 20	19·0	N.	Light.	Densely clouded - - -	32·1	15·8	—	15·5	—
29 20	30 02	11·7	N. W.	Light.	Densely clouded - - -					
30 02	30 08	14·0	N. W.	Moderate.	Overcast; snow from 22 <sup>h</sup> 30 <sup>m</sup> - - -					
30 08	30 14	5·0	N. N. W.	Light.	½ clouded; thin haze and cirro-cumuli - - -					
30 14	30 20	8·7	N. W.	Light.	Heavily clouded - - -	17·5	11·6	—	8·8	—
30 20	31 02	11·3	—	Calm.	Partially clouded; cirro-cumuli and haze - - -					
31 02	31 08	16·7	—	Calm.	Clouded; cirro-cumuli and cumulo-strati - - -					
31 08	31 14	15·2	—	Calm.	Overcast; thick haze - - -	22·6	4·7	—	-2·4	—
31 14	31 20	15·0	—	Calm.	Densely clouded - - -					
31 20	1 02	15·0	N. W.	Very light.	Overcast; very light cirro-cumuli and haze - - -					



TORONTO, 1841.

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MAGNETICAL OBSERVATIONS.



DECLINATION.														
Angular Value of One Scale Division of the Declinometer = 0'.721. Increasing numbers denote decreasing Westerly Declination.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
JANUARY.	1	154.9	152.2	160.9	152.0	149.8	149.0	151.2	153.1	156.2	156.9	155.2	154.7	153.84
	2	155.8	158.3	161.0	156.4	150.0	148.3	149.9	154.8	157.3	—	—	—	155.24
	3	—	—	—	—	—	—	—	—	—	156.0	158.2	156.9	—
	4	153.0	157.6	155.6	149.6	150.5	150.9	153.4	157.0	155.6	155.3	154.5	154.6	153.97
	5	155.3	156.6	159.3	155.8	151.7	152.1	153.6	155.8	156.0	155.2	154.4	155.1	155.07
	6	155.2	156.1	158.0	154.5	153.0	152.0	152.6	155.0	154.7	150.4	159.5	156.8	154.82
	7	157.3	150.0	150.8	146.8	150.7	151.5	154.1	154.8	159.0	157.0	154.3	158.0	153.69
	8	155.3	156.0	157.6	153.3	149.9	149.9	154.0	165.1	156.0	154.1	153.8	156.6	155.13
	9	154.9	155.0	155.4	151.4	147.5	149.9	153.6	155.0	156.3	—	—	—	153.12
	10	—	—	—	—	—	—	—	—	—	153.9	152.7	151.8	—
	11	152.5	155.9	160.5	153.4	148.3	149.9	153.0	157.5	155.0	153.4	149.0	154.7	153.59
	12	154.3	157.4	158.5	150.5	147.2	149.9	154.5	156.0	154.7	153.9	162.5	161.7	155.09
	13	153.1	138.1	155.6	152.9	148.8	150.5	153.5	159.0	156.0	156.5	154.8	152.2	152.58
	14	145.9	156.9	153.1	148.7	143.4	144.9	152.0	148.6	160.8	162.1	153.0	153.3	151.89
	15	149.0	161.0	151.7	149.3	145.8	144.7	150.2	156.8	164.0	157.9	161.3	157.7	154.12
	16	143.6	158.1	159.2	154.0	151.5	151.1	153.2	154.0	153.8	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	156.6	152.9	150.8	153.23
	18	152.5	154.8	156.4	151.8	151.0	152.5	153.7	153.5	152.9	153.2	158.1	156.6	153.92
	19	155.4	152.3	155.3	141.7	147.0	148.5	155.4	160.0	155.6	154.3	153.8	153.2	152.71
	20	151.3	156.0	151.8	149.5	144.8	144.9	150.9	154.1	157.9	152.0	153.5	153.4	151.67
	21	153.7	154.9	155.8	150.9	142.8	144.4	148.3	159.9	154.5	155.4	149.8	153.9	152.03
	22	152.3	156.5	157.0	151.9	146.9	151.9	152.8	157.4	154.0	153.5	153.2	153.8	153.43
	23	154.4	155.0	155.5	151.8	148.9	150.9	152.9	151.8	154.3	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	152.9	166.3	156.6	154.27
	25	150.7	155.0	153.1	149.1	148.5	150.1	153.0	154.2	180.3	167.5	152.6	153.2	155.61
	26	156.1	152.1	158.3	151.4	144.5	144.1	150.2	157.9	159.9	157.9	152.9	158.7	153.67
	27	148.2	158.6	157.6	151.3	147.3	147.2	146.7	160.5	156.3	153.2	155.7	155.2	153.15
	28	147.9	157.7	156.6	149.8	149.1	149.2	153.3	154.6	155.1	160.6	154.2	150.5	153.22
	29	154.6	156.8	157.4	150.3	145.0	146.4	150.8	154.2	154.0	155.4	151.8	153.7	152.53
	30	151.1	158.0	158.5	148.5	146.9	148.8	147.4	153.3	153.6	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	162.7	160.0	154.5	153.61
Hourly Means	152.63	155.27	156.56	151.02	148.11	148.98	152.08	155.92	157.07	156.07	155.31	154.93		
FEBRUARY.	1	154.2	156.7	157.5	151.5	147.1	146.6	151.0	151.1	152.3	152.4	152.0	151.8	152.03
	2	151.9	156.5	153.6	149.9	146.3	147.4	149.9	149.8	152.4	152.6	151.3	151.8	151.12
	3	152.3	154.9	155.7 <sup>a</sup>	151.2 <sup>b</sup>	150.7 <sup>b</sup>	149.1	150.7	151.1	151.6	154.0	153.0	153.1	152.28
	4	152.8	154.7	154.3	147.0	144.6	148.7	150.0	150.5	150.7	152.8	149.1	152.1	150.61
	5	151.3	154.2	154.0	148.5	145.9	147.4	149.6	150.5	150.1	150.1	149.7	150.7	150.17
	6	150.9	152.6	153.4	151.3	147.0	146.3	151.6	155.3	148.6	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	149.9	145.1	146.8	149.90
	8	150.5	153.5	153.9	142.8	145.5	148.3	152.2	150.5	150.3	148.3	147.7	152.4	149.66
	9	172.9	125.0	154.9	145.7	140.5	150.0	144.3	150.7	150.4	149.0	148.3	151.1	148.57
	10	150.7	154.5	155.4	150.3	142.5	147.5	149.4	149.7	151.5	150.7	151.6	151.1	150.41
	11	150.0	152.4	156.9	153.5	149.9	149.7	152.0	150.0	160.0	155.7	153.1	150.2	152.78
	12	158.0	158.1	157.9	151.2	148.5	146.8	153.1	156.3	178.0	156.3	156.2	156.2	156.38
	13	155.0	154.2	160.5	156.9	151.2	151.9	154.0	154.2	155.0	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	153.3	154.1	155.8	154.68
	15	156.0	141.7	148.6	153.9	144.9	140.2	148.7	159.1	157.1	160.6	159.2	149.5	151.63
	16	158.6	159.3	153.4	146.7	145.3	141.9	147.0	150.8	166.8	163.6	156.0	156.9	153.86
	17	156.6	161.0	157.6	150.6	148.0	150.5	154.0	155.3	157.1	153.7	151.9	158.8	154.59
	18	156.5	159.4	156.0	150.9	149.9	149.0	152.4	153.9	155.1	155.0	155.8	156.2	154.18
	19	157.1	158.9	157.0	150.5	148.8	149.7	149.6	151.2	153.8	154.5	154.6	156.7	153.53
	20	155.3	158.0	155.5	147.8	145.4	149.9	152.0	153.7	155.5	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	153.1	153.1	153.7	152.75
	22	159.2	161.5	155.2	148.2	147.0	145.1	140.2	157.2	151.6	152.0	152.8	148.8	151.57
	23	165.1	155.0	153.0	146.4	135.9	145.2	147.1	182.4	154.7	150.0	147.2	152.7	152.89
	24	156.3	158.7	152.2	146.4	145.8	149.6	153.2	153.3	159.2	155.4	144.7	158.8	152.80
	25	157.0	162.0	152.2	145.9	145.6	151.3	150.0	160.9	154.1	155.6	156.3	155.3	153.85
	26	163.0	155.6	162.5	149.9	143.6	150.1	149.4	155.1	179.8	154.1	153.8	153.6	155.87
	27	156.1	161.4	159.2	150.0	144.1	149.5	153.6	160.6	153.2	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	154.5	154.2	153.8	154.18
Hourly Means	156.14	154.99	155.43	149.46	146.00	147.98	150.21	154.72	156.21	153.63	152.12	153.24		

<sup>a</sup> Magnet removed after the observation at 4<sup>h</sup> and the brass bar suspended; replaced between 8<sup>h</sup> and 10<sup>h</sup>, the torsion circle not altered.  
<sup>b</sup> Approximate; limit of error 1 scale division.

DECLINATION.														
Angular Value of one Scale Division of the Declinometer = 0'·721. Increasing numbers denote decreasing Westerly Declination.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
MARCH.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
	1	155·8	151·5	153·8	149·9	146·1	146·5	149·8	153·2	154·0	155·5	152·8	153·0	151·82
	2	154·0	157·9	154·7	149·9	146·9	148·9	147·0	152·0	152·9	152·9	151·7	154·4	151·93
	3	155·3	158·4	155·1	148·0	143·1	147·2	144·5	150·3	152·6	152·5	154·2	158·4	151·63
	4	160·1	161·1	154·4	149·6	147·9	151·0	151·5	150·0	151·4	151·9	156·4	155·8	153·42
	5	158·4 <sup>a</sup>	157·6	152·8	148·3	147·0	150·3	151·0	154·1	152·1	151·5	153·9	155·9	152·74
	6	152·1	159·5	155·5	145·7	146·1	148·7	151·5	150·4	162·5	—	—	—	152·68
	7	—	—	—	—	—	—	—	—	—	152·7	152·4	155·0	—
	8	155·2	159·6	156·4	148·9	147·0	150·5	155·0	152·5	153·4	155·1	153·8	156·7	153·67
	9	156·1	160·9	160·9	152·3	148·1	148·5	150·4	152·0	154·0	152·9	153·0	154·6	153·64
	10	157·4	157·8	157·7	148·4	143·5	145·7	149·5	152·0	152·2	155·0	151·7	155·8	152·22
	11	149·0	158·0	158·1	146·8	144·0	149·0	150·6	159·9	151·7	153·2	148·2	154·1	151·88
	12	154·9	154·6	156·1	147·5	145·2	150·2	152·0	152·0	152·4	152·4	153·2	153·7	152·02
	13	154·3	149·4	153·0	144·9	145·1	151·0	151·6	151·9	152·8	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	157·2	157·7	159·4	153·19
	15	158·5	157·7	153·7	143·2	145·9	151·0	154·5	148·3	163·4	144·5	165·2	146·1	152·67
	16	159·8	164·5 <sup>b</sup>	—	—	—	—	—	154·2	152·4	157·5	155·2	153·6	—
	17	149·8	158·4	152·7	147·9	146·5	149·1	150·0	152·9	154·2	150·9	151·3	150·8	151·21
	18	155·8	156·0	149·6	146·5	144·0	147·9	151·3	154·1	151·6	152·4	153·4	158·5	151·76
	19	160·1	156·8	151·3	142·7	144·5	152·2	153·0	152·8	155·7	162·2	160·1	166·2	154·80
	20	158·7	154·8	153·7	146·8	146·1	147·3	162·6	153·0	157·3	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	158·6	169·3	158·9	155·59
	22	163·8	173·1	139·2	137·6	141·7	144·4	168·2	157·5	168·7	147·8	144·5	161·6	154·01
	23	158·6	152·6	156·8	145·4	144·9	142·8	153·1	156·3	152·0	156·6	156·9	158·0	152·83
	24	157·9	164·4	155·7	147·5	145·8	145·0	154·6	160·1	157·8	155·1	150·3	143·9	153·17
	25	156·3	159·2	157·7	147·3	141·9	147·0	151·6	157·5	158·0	157·5	153·0	153·1	153·34
	26	157·1	159·0	156·7	148·8	142·5	143·7	149·1	151·9	152·9	162·6	157·5	153·8	152·97
	27	154·4	159·7	156·8	147·1	141·8	145·6	150·2	150·2	150·9	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	151·5	152·2	153·2	151·13
	29	153·0	157·5	156·2	145·7	143·0	142·5	140·5	155·7	151·5	151·5	—	—	149·71
	30	152·5	155·1	149·3	145·0	144·8	146·2	150·0	150·0	151·3	150·7	152·7	151·5	149·92
31	153·8	156·4	151·0	145·5	144·5	146·3	148·1	149·0	150·0	153·2	153·7	155·0	150·54	
Hourly Means	156·03	158·57	154·19	146·82	144·92	147·63	151·58	153·10	154·43	153·90	154·40	155·04	150·65	
APRIL.	1	156·7	158·9	153·7	144·5	141·9	145·6	149·1	150·0	150·3	151·4	152·7	150·0	150·40
	2	156·0	160·7	156·0	145·4	140·5	144·1	148·9	149·5	150·6	151·0	155·5	159·5	151·47
	3	157·2	158·7	153·0	143·3	141·1	145·2	152·6	153·5	149·2	—	—	—	150·52
	4	—	—	—	—	—	—	—	—	—	149·9	150·8	151·8	—
	5	153·9	157·6	154·7	141·9	137·9	143·3	149·6	150·5	157·7	150·7	150·9	151·4	150·01
	6	153·8	160·1	156·9	142·1	140·6	145·6	149·5	149·6	150·8	150·5	153·4	152·5	150·45
	7	156·0	157·5	153·7	143·9	141·0	147·5	150·0	150·1	150·7	156·1	156·0	164·6	152·26
	8	147·7	149·8	152·0	139·5	139·0	145·5	151·2	151·0 <sup>c</sup>	152·2	—	—	—	—
	9 <sup>d</sup>	—	—	—	—	—	—	—	—	—	149·6	151·9	151·2	148·38
	10	152·6	157·5	155·9	146·7	141·4	143·2	146·1	147·0	149·2	—	—	—	—
	11	—	—	—	—	—	—	—	—	—	152·2	154·4	161·9	150·68
	12	151·7	156·8	148·5	141·9	137·6	143·0	155·0	148·6	154·3	149·2	149·5	149·6	148·81
	13	146·3	144·0	145·7	141·2	138·3	142·8	147·9	149·6	151·8	151·0	150·7	150·7	146·67
	14	154·1	157·0	155·8	140·1	141·4	144·0	147·7	152·0	163·9	156·3	154·0	151·7	151·50
	15	154·9	155·7	152·1	146·1	141·5	145·0	147·4	150·9	150·7	151·1	156·3	154·7	150·53
	16	156·1	152·8	150·2	147·2	142·0	141·6	141·0	146·2	165·3	150·3	153·3	154·3	150·02
	17	155·6	157·7	153·1	143·3	132·4	141·4	156·1	164·1	162·5	—	—	—	—
	18	—	—	—	—	—	—	—	—	—	148·2	155·4	152·7	151·87
	19	155·2	157·2	150·1	144·1	141·1	139·8	140·8	142·9	147·9	152·6	154·0	145·6	147·61
	20	157·4	156·5	152·6	144·0	140·8	145·9	144·1	157·8	161·2	166·2	153·9	142·2	151·88
	21	157·0	157·3	149·9	147·5	144·8	146·6	152·4	155·2	152·6	154·2	153·6	158·5	152·47
	22	158·6	155·9	153·5	140·1	143·1	143·0	144·5	146·2	150·0	153·5	154·0	151·6	149·50
	23	158·5	158·8	152·2	145·0	142·8	145·3	150·8	153·3	150·0	151·6	151·1 <sup>e</sup>	156·7 <sup>f</sup>	151·34
	24	151·4	154·2	148·4	141·3	137·9	141·8	147·6	153·2	152·7	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	150·3	152·9	152·2	148·66
	26	154·9	155·8	152·8	145·9	141·6	141·1	145·0	145·2	152·1	150·9	160·5	155·9	150·14
	27	157·9	156·5	148·7	143·7	142·2	146·0	146·3	152·4	148·7	150·0	152·1	152·3	149·73
	28	154·5	154·4	144·9	142·1 <sup>g</sup>	141·6	145·1	144·2	149·6	148·1	152·0	151·3	152·5	148·36
	29	156·7	155·1	150·9	143·3	142·3	144·2	146·6	146·5	147·3	150·7	144·0	159·7	148·94
	30	163·2	156·7	150·9	141·8	143·3	147·9	152·5	160·9	151·9	150·9	153·5	148·0	151·79
Hourly Means	155·12	156·13	151·85	143·44	140·72	144·18	148·28	151·03	152·87	152·02	153·03	153·27	150·54	

<sup>a</sup> Ten minutes late. <sup>b</sup> Instrument employed in observations of the absolute horizontal intensity. <sup>c</sup> Two minutes late. <sup>d</sup> Good Friday.  
<sup>e</sup> Four minutes late. <sup>f</sup> Fifteen minutes late. <sup>g</sup> Magnet removed between 6<sup>h</sup> and 8<sup>h</sup>, and the deflecting magnet suspended for experiments of vibration.

DECLINATION.															
Angular Value of one Scale Division of the Declinometer = 0'.721. Increasing numbers denote decreasing Westerly Declination.															
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.		
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.		
MAY.	1	162.2	164.0	153.7	145.4	141.9	148.0	152.1	151.4	150.5	—	—	—	152.38	
	2	—	—	—	—	—	—	—	—	—	153.1	152.1	154.2		
	3	158.8	162.3	153.3	144.6	143.7	149.2	151.1	150.3	150.7	152.1	153.9	156.3		
	4	158.8	153.8	149.6	138.9	143.6	148.4	153.2	153.2	153.8	152.5	153.7	154.7		151.18
	5	161.1	162.5	154.8	145.3	139.8	143.9	150.5	147.8	162.3	151.3	154.0	143.2		151.37
	6	164.5	162.8	153.2	144.6	135.7	136.7	150.5	146.1	155.6	151.0	151.4	152.8		150.41
	7	158.9	159.2	154.6	145.9	143.0	145.7	150.5	158.3	152.2	151.2	149.6	152.9		151.83
	8	157.4	157.6	151.2	141.3	139.6	146.0	148.4	154.5	152.5	—	—	—		151.44
	9	—	—	—	—	—	—	—	—	—	151.9	161.4	155.5		—
	10	171.5 <sup>a</sup>	134.9	150.6	150.4	144.7	143.5	148.0	142.7	145.3	146.0	150.0	151.2		148.23
	11	156.6	161.4	156.9	151.9	143.6	144.0	149.6	148.5	151.3	153.8	151.5	155.4		152.04
	12	154.1	161.8	153.0	146.0	142.9	141.6	149.4	150.6	157.2	155.5	152.1	151.0		151.27
	13	156.5	155.8	151.1	144.7	141.6	146.5	149.6	151.0	151.2	155.1	151.3	150.6		150.42
	14	155.9	155.1	151.2	146.7	149.4	148.5	151.0	164.9	154.7	150.6	151.1	152.4		152.62
	15	156.1	155.9	149.6	142.5	141.9	148.3	150.7	149.3	148.9	—	—	—		150.59
	16	—	—	—	—	—	—	—	—	—	156.4	155.3	152.2		—
	17	147.8	145.3	146.6	136.6	142.7	151.2	151.5	149.0	150.0	151.4	154.3	159.8		148.85
	18	152.3	156.1	151.4	144.7	139.6	141.8	146.4	145.9	149.1	150.3	151.3	153.8		148.56
	19	156.7	155.2	152.3	141.7	142.1	147.5	144.7	162.8	155.5	148.8	144.4	152.0		150.31
	20	154.7	158.9	154.5	143.1	146.8	141.9	147.8	147.5	148.0	150.0	139.9	153.0		148.84
	21	147.3	159.1	157.2	140.5	136.6	140.2	140.5	152.3	150.2	155.1	143.6	145.2		147.32
	22	153.3	149.2	149.5	147.6	140.6	141.4	146.6	149.1	147.1	—	—	—		146.82
	23	—	—	—	—	—	—	—	—	—	144.1	145.7	147.6		—
	24	151.5	154.2	146.6	138.6	134.6	139.2	146.0	144.0	145.5	146.5	148.5	149.3		145.37
	25	155.4	156.7	150.8	141.3	137.9	140.1	— <sup>b</sup>	—	—	—	—	—		—
	26	—	—	—	—	—	—	—	—	—	—	—	—		—
	27	—	—	—	—	136.3	136.2	136.3	144.4	138.8	130.7	139.5	136.3		—
	28	144.8	143.4	136.7	131.7	133.8	132.9	140.0	139.0	136.0	136.9	138.0	140.3		137.79
	29	142.9	137.0	131.6	131.8	132.5	135.9	137.1	136.8	136.9	—	—	—		137.02
	30	—	—	—	—	—	—	—	—	—	138.0	141.8	142.0		—
	31	146.9	145.5	134.8	— <sup>c</sup>	—	—	—	—	138.7 <sup>d</sup>	144.2	142.9	144.1		—
Hourly Means <sup>e</sup>	156.73	156.28	151.99	143.92	141.54	144.46	148.91	150.96	151.58	151.33	150.75	152.15			
JUNE.	1	145.7	146.7	138.1	132.8	132.3	137.9	136.1	137.7	139.3	140.1	142.2	142.1	139.25	
	2	146.3	143.8	138.9	132.0	125.9	131.4	137.0	134.1	138.2	135.3	136.8	141.1	136.73	
	3	146.3	143.0	132.8	127.2	126.1	133.4	134.4	138.2	144.1	139.4	141.1	138.3	137.02	
	4	140.9	153.0	139.3	132.0	127.1	132.4	141.2	136.5	140.3	137.0	138.1	141.3	138.26	
	5	147.1	146.7	140.9	141.3	130.3	132.2	136.9	136.0	135.0 <sup>e</sup>	—	—	—	138.82	
	6	—	—	—	—	—	—	—	—	—	136.8	139.6	143.0	—	
	7	141.9	146.8	143.0	130.8	126.9	129.4	133.2	140.1	135.0	135.2	138.4	138.0	136.56	
	8	141.6	142.3	136.5	131.2	131.0	132.0	136.0	135.4	135.0	136.4	137.6	138.9	136.16	
	9	144.6	143.3	139.6	129.8	129.1	131.7	139.7	133.2	135.3	151.0	134.2	134.2	137.14	
	10	138.5	142.1	133.0	125.8	128.6	131.5	136.3	133.1	133.0	137.3	139.0	131.0	134.10	
	11	144.2	142.2	137.1	130.8	131.9	132.6	133.1	133.0	146.8	132.8	133.7	137.6	136.32	
	12	143.3	141.3	133.9	126.6	130.4	131.3	132.9	134.1	133.4	—	—	—	134.21	
	13	—	—	—	—	—	—	—	—	—	133.7	133.8	135.8	—	
	14	141.6	139.9	132.2	124.6	125.5	131.8	134.7	132.6	134.0	132.5	134.1	141.7	133.77	
	15	151.7	145.0	125.5	119.6	123.4	127.8	144.4	131.2	131.9	129.0	131.6	137.5	134.05	
	16	144.2	142.5	135.5	126.9	129.1	133.2	133.8	133.5	138.3	136.4	134.7	132.4	135.04	
	17	139.5	143.1	131.5	119.6	119.3	124.7	129.9	136.2	138.7	140.0	129.0	136.1	132.30	
	18	138.5	140.0	120.7	125.3	132.0	135.9	149.0	135.3	132.0	132.0	134.4	136.3	134.28	
	19	139.0	139.8	137.1	129.8	129.3	131.3	132.8	132.1	132.2	—	—	—	133.74	
	20	—	—	—	—	—	—	—	—	—	131.8	133.3	136.4	—	
	21	142.2	146.0	136.5	131.0	125.8	126.9	231.9	133.0	135.6	140.8	136.0	137.6	135.27	
	22	144.0	145.3	136.9	123.7	129.1	127.0	131.2	139.6	134.4	138.7	135.0	135.0	134.99	
	23	142.0	146.6	138.4	128.5	121.6	127.8	137.3	133.3	138.6	143.5	120.7	134.2	134.37	
	24	133.3	142.4	138.4	129.9	126.2	128.1	133.9	135.4	137.0	144.5	136.0	125.3	134.20	
	25	148.3	149.2	133.7	128.3	121.7	127.7	129.9	131.2	141.2	133.2	133.5	136.2	134.51	
	26	141.1	141.3	133.3	129.0	126.1	131.2	133.9	132.0	130.8	—	—	—	132.40	
	27	—	—	—	—	—	—	—	—	—	129.5 <sup>f</sup>	130.1	130.5	—	
	28	132.7	127.0	125.9	125.8	124.9	128.0	133.2	138.4	130.6	131.1	134.6	138.7	130.91	
	29	146.0	143.9	138.9	131.5	126.1	125.1	137.9	132.1	130.3	137.4	135.4	141.4	135.50	
	30	142.0	142.6	135.0	126.2	127.5	126.9	129.1	133.1	132.1	134.3	133.8	130.4	132.75	
Hourly Means <sup>g</sup>	142.95	143.95	135.47	128.57	127.20	130.35	135.37	134.63	135.89	137.21	135.06	136.82	133.75		

<sup>a</sup> Four minutes late. <sup>b</sup> Magnet removed for observations of absolute intensity and the suspension thread broken. <sup>c</sup> Suspension thread again broken. <sup>d</sup> Four minutes late.  
<sup>e</sup> Eight minutes late. <sup>f</sup> The observations from June 27<sup>h</sup> 18<sup>h</sup> to 28<sup>h</sup> 6<sup>h</sup> are considered doubtful, the magnet having been discovered at 28<sup>h</sup> 7<sup>h</sup> to be resting on the copper ring.  
<sup>g</sup> The observations from May 25<sup>h</sup> 12<sup>h</sup> to the end of the month, and from June 27<sup>h</sup> 18<sup>h</sup> to 28<sup>h</sup> 6<sup>h</sup> are omitted in the hourly means.

DECLINATION.														
Angular Value of one Scale Division of the Declinometer = 0'.721. Increasing numbers denote decreasing Westerly Declination.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	4 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
JULY.	1	140.5	141.8	136.3	124.7	118.8	125.0	130.3	134.1	132.6	133.9	132.9	134.1	132.08
	2	141.0	145.2	137.3	124.1	122.0	125.8	126.9	133.0	130.1	131.4	135.6	136.4	132.40
	3	144.0	143.5	134.3	122.2	117.3	124.4	131.7	133.0	129.9	—	—	—	132.77
	4	—	—	—	—	—	—	—	—	—	145.5	135.0	132.5	—
	5	139.0	143.0	138.6	126.7	122.2	124.4	131.1	136.7	151.2	143.0	150.0	140.2	137.17
	6	134.9	143.1	138.1	126.3	122.3	125.7	129.8	128.4	129.3	157.4	148.0	134.4	134.81
	7	136.8	141.5	138.1	129.8	122.9	125.8	131.3	133.1	134.3	136.4	131.1	131.3	132.70
	8	137.7	141.0	136.0	128.0	123.9	127.4	132.1	132.7	138.5	132.0	131.3	133.3	132.82
	9	138.1	140.4	132.9	122.7	121.3	125.8	131.0	131.1	132.0	130.2	132.6	134.9 <sup>a</sup>	131.08
	10	138.8	145.8	137.9	125.3	122.0	126.7	130.4	131.0	131.1	—	—	—	—
	11	—	—	—	—	—	—	—	—	—	146.9	136.5	138.2	134.22
	12	136.3	143.1	138.3	128.5	128.2	128.9	131.8	132.9	132.2	132.2	127.4	133.2	132.75
	13	137.9	137.1	135.9	127.4	127.5	128.6	129.6	127.9	128.2	133.1	134.6	137.0	132.07
	14	142.8	141.5	136.0	126.9	128.5	130.5	135.0	133.2	137.5	138.0	140.0	125.5	134.62
	15	140.0	138.6	132.7	125.6	125.7	130.4	132.7	133.5	131.4	135.1	135.1	137.3	133.17
	16	142.8	143.3	134.8	126.3	129.0	132.7	134.1	131.8	131.5	131.7	133.1	133.4	133.71
	17	139.5	137.0	128.3	124.9	123.4	130.7	134.3	130.8	131.9	—	—	—	—
	18	—	—	—	—	—	—	—	—	—	131.9	133.9 <sup>b</sup>	135.3	131.82
	19	143.4	145.1	142.5	121.9	117.6	125.5	134.5	131.0	161.6	144.9	142.0	137.4	137.28
	20	130.3	141.4	139.7	129.1	128.2	124.0	132.2	134.8	134.1	134.7	126.4	132.2	132.26
	21	138.3	144.9	134.5	123.7	125.1	129.3	129.9	131.2	146.7	128.3	141.7	133.2	133.90
	22	140.0	139.0	134.7	126.2	126.3	127.5	131.8	138.5	132.0	129.6	123.2	139.1	132.32
	23	143.9	142.0	137.9	128.0	124.1	126.2	129.3	139.8	142.8	140.0	133.4	131.0	134.87
	24	132.0	— <sup>c</sup>	143.4 <sup>d</sup>	131.2	125.1 <sup>e</sup>	135.8	130.0	135.8	146.2	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	136.3	140.4	141.4	136.15
	26	148.8 <sup>f</sup>	145.0	137.5	124.9	127.5	130.1	134.8	134.0	140.3	141.4	130.0	142.1	136.37
	27	143.7	145.4	136.7	127.1	124.6	132.9	136.3	155.8	145.1	141.4	137.2	138.2	138.70
	28	143.1	146.0	139.1	135.0	133.6	133.1	138.8	139.7	140.9	150.0	143.1	143.5	140.49
	29	148.4	148.0	142.3	132.0	126.9	132.5	139.8	143.0	142.2	140.6	141.3	143.5	140.04
	30	148.0	149.4	140.6	137.3	133.0	133.7	141.0	140.1	139.8	141.0	142.1	144.2	140.85
	31	148.5	151.6	141.7	130.9	128.9	136.5	140.8	138.9	139.0	—	—	—	—
	32	—	—	—	—	—	—	—	—	—	155.0	140.0	141.5	141.11
Hourly Means	141.02	143.22	137.26	127.28	125.03	128.88	133.01	135.03	137.46	138.53	136.33	136.67		
AUGUST.	2	150.3	146.1	139.0	123.7	126.6	135.0	137.5	151.6	167.4	146.9	139.4	141.4	142.08
	3	149.6	147.8	144.8	132.6	129.9	133.0	137.1	138.4	137.5	134.9	141.9	140.0	138.96
	4	144.3	150.4	140.5	134.2	128.1	134.9	136.5	137.4	135.0	135.1	136.0	134.9	137.27
	5	138.5	147.9	142.2	131.9	126.1	129.6	128.0	136.8	145.3	146.5	148.6	148.7	139.18
	6	147.7	123.8	142.1	117.0	127.3	148.2	125.5	173.9	136.3	139.0	138.7	143.0	138.54
	7	141.9	149.0	141.2	127.9	128.3	132.7	133.8	134.2	134.5	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	135.1	133.7	134.0	135.52
	9	142.9	142.0	129.9	127.5	128.7	135.3	135.4	133.8	133.5	136.5	140.0	142.7	135.68
	10	146.8	146.4	140.1	132.3	132.0	135.2	135.2	135.5	134.0	137.0	137.8	139.9	137.68
	11	143.5	143.6	134.6	129.9	127.5	129.9	129.0	137.1	142.9	140.7	148.1	126.0	136.07
	12	150.3	149.7	135.9	132.8	133.1	133.9	134.4	135.1	134.2	135.9	137.0	138.7	137.58
	13	142.4	144.3	133.5	128.7	129.8	135.0	135.0	134.0	134.1	135.6	137.5	138.0	135.66
	14	142.9	149.9	138.6	127.9	128.0	132.0	138.8	139.3	152.5	—	—	—	—
	15	—	—	—	—	—	—	—	—	—	136.4	137.9	138.2	138.53
	16	142.7	147.2	137.2	128.0	123.8	130.4	136.1	139.3	161.5	137.7	139.3	141.9	138.76
	17	146.9	149.3	138.2	128.0	123.7	132.2	137.0	135.8	145.3	138.0	136.0	129.1	136.62
	18	141.6	150.0	138.1	128.3	127.0	133.0	137.3	134.0	138.3	137.5	135.2	136.6	136.41
	19	144.3	149.6	140.4	128.5	125.0	132.4	136.4	134.8	147.0	136.7	135.6	134.8	137.13
	20	141.6	145.7	136.4	125.6	123.6	128.5	135.4	139.0	136.3	135.7	135.4	135.2	134.87
	21	139.8	145.2	135.1	126.0	119.9	121.7	132.1	133.2	134.5	—	—	—	—
	22	—	—	—	—	—	—	—	—	—	136.8	137.1	145.1	133.88
	23	148.7	148.1	140.7	129.3	126.2	123.5	130.4	158.6	137.3	136.9	123.8	141.4	137.08
	24	138.5	145.3	132.2	126.0	126.1	131.1	132.4	132.9	134.0	135.8	136.4	138.0	134.06
	25	147.1	144.1	133.0	121.7	122.0	128.4	133.3	129.5	136.1	134.8	137.9	140.4	134.03
	26	133.9	144.9	136.2	120.9	124.5	125.0	117.7	146.8	162.0	145.0	154.8	115.0	135.56
	27	148.6	130.6	135.7	128.2	130.5	133.8	135.0	138.1	134.9	131.4	137.0	139.8	135.30
	28	136.0	150.1	140.4	129.0	128.2	131.8	141.7	143.4	161.4	—	—	—	—
	29	—	—	—	—	—	—	—	—	—	135.0	137.2	132.8	138.92
	30 <sup>g</sup>	142.6	154.0	—	—	125.9	132.2	135.3	132.2	—	—	—	—	—
	31	—	—	141.1	132.6	134.8	140.9	163.4	150.8	148.1	147.3	148.4	149.8	—
	Hourly Means	143.78	145.46	137.75	127.75	126.91	131.94	133.79	139.69	142.32	137.54	138.43	137.32	

<sup>a</sup> Six minutes late. <sup>b</sup> Four minutes late. <sup>c</sup> A fibre of the suspension thread found broken at 2<sup>h</sup>; the four observations preceding are reported as doubtful, and are omitted in the hourly means. <sup>d</sup> Five minutes late. <sup>e</sup> Six minutes late. <sup>f</sup> One minute late. <sup>g</sup> At 30<sup>d</sup> 6<sup>h</sup> the bar was perceived to rest on the copper ring, and the ring lowered; at 30<sup>d</sup> 16<sup>h</sup> a fibre of the suspension thread was found broken, and a new thread substituted of 19 fibres; the observations of the 30th and 31st are omitted in the hourly means.

DECLINATION.														
Angular Value of one Scale Division of the Declinometer = 0'.721. Increasing numbers denote decreasing Westerly Declination.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
SEPTEMBER.	1	157.4	157.8	139.1	133.0	133.0	142.4	143.4	142.4	145.1	142.9	144.0	144.1	143.72
	2 <sup>a</sup>	151.4	149.3	137.5	127.6	136.1	139.8	141.4	150.1	142.5	144.4	139.7	144.8	142.05
	3 <sup>a</sup>	147.8	146.3	139.2	133.5	128.7	134.6	141.5	139.8	144.0	141.2	140.0	135.7	139.36
	4 <sup>a</sup>	144.8	149.8	143.2	132.4	127.8	132.9	137.8	138.2	138.4	—	—	—	—
	5 <sup>a</sup>	—	—	—	—	—	—	—	—	—	141.0	139.0	140.4	138.81
	6	142.3	145.9	141.0	132.4	130.9	133.4	136.0	136.9	136.7	138.1	140.5	142.5	138.05
	7	144.3	146.0	142.0	130.2	127.9	132.4	136.1	134.9	141.9	139.1	137.7	138.9	137.62
	8	140.9	145.0	139.3	130.7	129.4 <sup>b</sup>	133.2	136.2	136.2	138.0	137.3	137.0	139.1	136.86
	9	140.5	144.5	140.9	131.5	128.9	133.0	135.4	136.9	137.0	138.2	139.0	139.6	137.12
	10	140.9	144.8	140.3	136.0	132.4	135.0	137.0	139.0	138.0	140.1	139.5	141.5	138.71
	11	142.1	142.3	137.7	130.0	130.9	135.9	136.0	136.8	136.2	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	151.9	145.3	147.8	139.41
	13	141.0	145.9	135.5	130.5	135.1	136.5	137.3	136.5	140.7	151.5	146.8	133.4	139.22
	14	143.2	142.8	138.6	127.1	130.9	136.4	138.0	137.8	140.2	137.9	136.8	138.5	137.35
	15	141.0	140.8	137.9	132.6	133.8	138.2	136.9	139.0	138.8	136.9	136.3	139.7	137.66
	16	141.1	143.7	138.1	131.0	132.1	135.2	137.1	143.0	157.9	139.7	137.4	140.6	139.74
	17	141.0	142.9	137.2	127.7	128.8	133.2	140.6	137.8	140.2	136.9	138.0	133.5	136.48
	18 <sup>a</sup>	145.7	147.7	137.9	127.8	126.7	131.6	135.0	152.2	139.5	—	—	—	—
	19 <sup>a</sup>	—	—	—	—	—	—	—	—	—	139.3	134.2	136.0	137.80
	20	139.5	145.4	136.1	128.9	126.6	129.4	134.6	139.5	136.7	136.9	134.2	136.7	135.37
	21	139.0	139.1	134.2	127.6	129.6	132.8	136.4	136.0	134.3	136.0	137.3	138.1	135.03
	22	138.8	138.0	129.8	130.0	131.3	139.9	133.5	135.1	136.6	140.3	138.6	136.6	135.71
	23	138.5	140.1	136.2	134.3	132.2	132.7	133.3	135.0	135.2	136.8	138.2	139.3	135.98
	24	142.0	141.3	140.9	137.7	126.2	121.6	120.4	125.0	146.3	142.8	156.9	169.4	139.21
	25	143.1	115.7	110.1	140.2	109.5	130.0	123.1	156.5	101.6	—	—	—	128.08
	26	—	—	—	—	—	—	—	—	—	140.8	135.2	131.2	—
	27	142.6	128.0	133.5	121.7	134.2	135.4	137.1	136.6	134.9	141.5	138.4	132.5	134.70
	28	124.8	142.9	135.4	127.5	125.6	133.5	133.6	140.4	134.9	142.9	149.9	142.6	136.17
	29	142.3	145.0	127.3	127.1	127.1	133.9	135.9	135.6	149.8	—	135.3	137.3	136.05
	30	140.0	144.5	140.2	129.9	126.9	132.1	142.3	152.2	133.3	135.2	135.0	137.6	137.43
Hourly Means	142.15	142.90	136.50	130.73	129.33	134.04	136.00	139.59	138.41	140.38	139.62	139.90	135.97	
OCTOBER.	1	137.9	139.9	135.0	129.5	130.5	132.8	135.1	135.6	135.0	131.4	138.4	138.4	134.96
	2	136.3	142.0 <sup>c</sup>	135.8	128.8	128.0	132.3	133.2	136.7	143.9	—	—	—	135.62
	3	—	—	—	—	—	—	—	—	—	125.8	146.2	138.5	—
	4	140.6	142.5	137.4	129.0	127.6	134.5	136.1	137.0	136.8	137.1	138.0	138.1	136.22
	5	140.7	141.8	140.3	132.5	129.4	131.6	136.2	143.2	138.0	136.9	139.0	156.1	138.81
	6	143.0	140.9	135.1	133.3	125.9	128.1	134.6	140.0	137.9	138.0	138.7	143.0	136.54
	7	136.9	141.9	138.1	135.2	135.4	134.0	148.2	135.5	136.0	136.4	137.0	139.2	137.82
	8	141.4	141.3	140.4	137.7	131.0	127.4	143.7	143.4	135.5	137.8	134.8	139.5	137.82
	9	140.0	141.5	138.8	131.5	132.8	143.0	135.7	138.6	139.9	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	141.0	137.7	137.0	138.12
	11	138.8	141.0	137.7	130.6	132.1	134.9	136.7	143.5	135.4	136.2	137.0	138.2	136.84
	12	139.1	143.6	139.8	129.3	131.0	135.2	136.5	136.5	137.0	134.0	137.9	138.8	136.56
	13	139.4	142.2	138.9	131.0	130.7	130.8	137.1	140.6	137.6	138.4	131.8	140.9	136.62
	14	142.8	143.3	137.7	129.7	130.1	133.0	134.5	138.8	151.5	142.2	145.5	139.3	139.03
	15	136.0	145.3	142.1	131.0	129.8	135.3	136.8	139.0	142.0	141.1	140.0	135.8	137.85
	16	140.2	144.5	143.3	129.1	130.2	136.1	148.2	138.9	141.7	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	138.7	134.7	138.2	138.65
	18	141.8	146.4	142.1	130.0	131.9	131.9	136.4	139.0	138.9	145.0	140.8	139.6	138.65
	19	141.5	145.0	141.4	130.6	132.4	132.0	137.3	145.4	139.2	142.0	137.8	138.0	138.55
	20	135.7	141.0	141.5	133.0	131.7 <sup>d</sup>	133.1	134.2	135.8	148.8	149.2	151.2	128.2	138.62
	21	138.6	125.8	130.4	131.7	132.4	135.0	136.7	138.7	138.0	136.7	137.3	138.4	134.97
	22	140.0	144.4	140.1	133.2	132.5	136.0	137.0	135.4	141.4	138.7	139.7	137.7	138.01
	23	139.5	142.7	139.6	131.9	131.7	136.2	137.1	137.7	137.5	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	150.7	167.0	156.5	142.34
	25	127.9	122.6	141.1	125.2	122.9	127.7	136.4	148.0	146.3	135.1	135.9	141.3	134.20
	26	125.7	131.6	133.9	129.6	134.1	141.7	139.0	146.1	138.8	135.8	133.3	134.6	135.35
	27	131.9	134.0	133.0	130.9 <sup>e</sup>	133.0	135.1	138.9	141.1	140.9	146.0	141.8	139.7	137.19
	28	138.1	137.3	139.2	130.0	130.9	136.3	138.2	140.4	138.4	137.8	137.8	138.5	136.91
	29	139.4	142.4	139.9	132.7	120.8	135.9	135.6	139.2	138.8	140.1	138.9	141.9	137.13
	30	139.9	144.8	140.2	134.3	134.8	135.9	137.9	138.0	138.2	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	139.9	136.9	139.5	138.36
Hourly Means	138.20	140.37	138.57	131.20	130.52	134.07	137.59	139.70	139.75	138.92	139.81	139.80	137.48	

<sup>a</sup> The magnet was removed and the brass bar suspended between 4<sup>h</sup> and 6<sup>h</sup> of the 2nd September, and the torsion circle moved from 346° to 329°, affecting the connexion of the readings, before and after, to the extent of about one scale division; the brass bar was suspended again on the 3rd, 4th, 5th, 18th, and 19th September, to verify the adjustment, but the torsion circle was not moved.

<sup>b</sup> Two minutes late.

<sup>c</sup> Seven and a-half minutes late.

<sup>d</sup> Ten minutes late.

<sup>e</sup> Five minutes late.

DECLINATION.

Angular Value of one Scale Division of the Declinometer = 0'·721. Increasing numbers denote decreasing Westerly Declination.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
NOVEMBER.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
	1	139·4	141·4	138·3	131·4	130·5	135·1	136·0	140·3	139·6	140·0	138·5	137·7	137·35
	2	139·0	142·9	138·6	129·9	127·6	133·8	136·1	147·4	138·5	138·0	139·0	139·9	137·56
	3	139·0	142·2	140·0	131·7	130·5	135·0	135·0	136·5	137·2	152·9	146·0	152·7	139·89
	4	138·3	138·9	128·9	131·3	132·3	136·6	139·3	139·7	140·8	137·0	138·3	125·0	135·53
	5	137·5	137·3	133·4	132·4	131·5	130·9	140·3	145·6	138·2	143·9	140·8	142·9	137·89
	6	119·3	131·0	142·3	134·1	131·0	134·2	140·6	146·0	148·5	—	—	—	136·36
	7	—	—	—	—	—	—	—	—	—	138·0	134·6	136·7	136·36
	8	127·7	142·0	138·0	130·8	130·9	135·1	136·9	139·2	139·0	139·2	138·5	139·4	136·39
	9	139·5	145·1	142·3	132·9	129·2	129·5	135·8	139·1	138·2	137·1	138·3	138·0	137·08
	10	135·9	143·0	137·3	131·8	133·1	134·4	134·9	140·2	138·8	137·2	139·8	141·5	137·32
	11	142·3	140·6	139·6	127·6	130·8	134·7	137·5	139·6	138·2	137·7	135·0	141·9	137·12
	12	136·7	141·3	137·6	134·8	133·1	133·4	140·3	139·8	138·8	139·5	138·1	140·2	137·80
	13	140·1 <sup>a</sup>	140·8	140·0	135·5	134·7	135·6	138·0	139·6	145·3	—	—	—	137·80
	14	—	—	—	—	—	—	—	—	—	139·6	137·3	138·8	138·77
	15	140·8	141·7	137·0	133·0	135·1	137·5	137·7	141·0	138·8	137·5	137·6	139·0	138·06
	16	138·7	142·0	138·5	133·3	135·9	137·8	138·5	139·0	139·6	137·9	137·9	139·1	138·18
	17	136·6	144·8	143·8	135·5	132·8	131·6	135·9	143·4	135·6	137·1	136·9	140·0	137·83
	18	140·9	145·0	140·6	133·9	125·8	130·2	140·0	124·2	131·3	150·3	158·4	144·6	138·77
	19	124·9	144·1	134·1	132·2	133·2	136·8	137·0	156·8	143·5	129·8	141·1	137·1	137·55
	20	126·4	129·7	127·3	129·7	134·6	139·0	157·0	138·0	141·3	—	—	—	136·39
	21	—	—	—	—	—	—	—	—	—	138·9	137·2	137·6	136·39
	22	140·0	139·9	128·4	126·9	128·6	133·0	138·9	138·8	138·0	142·2	140·6	139·8	136·26
	23	138·0	140·1	136·8	130·7	131·5	134·6	138·5	139·2	139·0	137·5	138·8	133·9	136·55
	24	139·5	129·8	134·0	130·4	133·1	135·6	138·3	148·7	138·4	136·8	138·0	141·4	137·00
	25	141·1	141·2	137·0	133·3	134·2	137·4	139·9	137·9	138·7	138·4	137·8	138·2	137·92
	26	140·7	141·6 <sup>b</sup>	137·3	135·3	132·2	136·1	137·2	139·1	137·9	138·0	137·8	138·6	137·65
	27	138·9	140·3	140·8	133·8	132·2	136·8	139·9	139·0	138·7	—	—	—	138·07
	28	—	—	—	—	—	—	—	—	—	138·4	138·5	139·5	137·89
	29	139·0	139·0	137·5	135·3	136·0	137·6	138·7	139·2	138·4	138·7	137·0	138·3	137·89
	30	139·9	140·1	138·1	134·4	135·9	136·9	137·8	138·2	138·9	138·0	137·5	138·8	137·87
Hourly Means	136·93	140·22	137·21	132·38	132·17	134·97	138·69	140·60	139·20	139·22	139·20	139·25		
DECEMBER.	1	139·0	140·4	140·2	135·2	130·2	133·9	138·2	139·0	138·5	140·5	141·7	140·0	138·07
	2	138·7	140·8	137·9	131·1	133·0	136·0	136·9	135·0	140·8	144·1	137·8	126·2	136·52
	3	142·0	128·5	122·9	127·5	130·2	136·4	146·9	141·2	130·0	140·2	133·9	138·0	134·81
	4	131·9	138·8	134·0	132·5	133·0	135·0	141·7	138·3	138·9	—	—	—	136·29
	5	—	—	—	—	—	—	—	—	—	136·2	139·2	136·0	136·29
	6	139·9	138·5	136·3	133·5	133·9	134·2	136·1	153·5	138·4	141·2	137·0	137·2	138·31
	7	136·5	139·7	138·9	131·9	133·1	136·8	137·7	141·3	138·0	138·8	141·7	145·6	138·33
	8	148·4	138·2	121·2	122·8	124·8	131·8	139·8	141·3	138·0	136·0	138·5	137·1	134·82
	9	138·3	139·2	134·9	130·8	131·8	135·0	136·0	138·0	136·4	137·1	133·2	134·7	135·45
	10	138·9	119·7	139·0	132·8	122·9	132·1	137·5	137·1	137·8	136·9	136·6	137·1	134·03
	11	137·0	138·6	138·4	134·1	133·7	135·7	137·1	139·0	137·0	—	—	—	136·97
	12	—	—	—	—	—	—	—	—	—	137·1	138·0	138·0	136·97
	13	139·8	137·9	136·0	132·5	130·0	134·2	135·7	138·0	138·4	137·2	139·6	138·7	136·50
	14	138·9	139·4	139·8	133·4	124·1	129·7	169·3	145·0	137·4	136·7	135·3	136·9	138·82
	15	136·8	139·9	140·6	134·4	133·2	135·1	137·0	137·8	135·6	137·2	136·9	140·9	137·12
	16	139·9	142·7	134·7	128·9	130·1	137·3	137·7	138·7	138·6	136·4	135·7	140·0	136·72
	17	138·7	133·2	140·0	131·1	129·8	132·3	142·7	143·3	146·8	140·9	137·6	135·2	137·63
	18	136·9	137·4	138·0	133·8	132·2	132·0	137·8	140·0	138·1	—	—	—	136·08
	19	—	—	—	—	—	—	—	—	—	137·0	134·2	135·6	136·08
	20	133·2	137·9	139·1	130·4	131·4	134·8	138·9	140·0	138·8	138·0	136·7	134·9	136·17
	21	136·5	138·9	140·5	134·4	133·5	135·3	137·7	138·1	137·7	136·9	135·3	137·0	136·82
	22	137·8	140·0	140·3	133·4	125·7	133·7	137·3	137·0	139·4	138·5	118·0	138·7	134·98
	23	139·6	138·0	138·8	133·8	132·3	134·1	134·2	147·0	138·7	137·8	136·9	137·3	137·37
	24	140·3	135·2	139·5	133·5	134·2	134·2	147·7	138·6	143·4	—	—	—	136·72
	25	—	—	—	—	—	—	—	—	—	—	—	—	138·23
	26	—	—	—	—	—	—	—	—	—	136·0	137·1	139·1	138·23
	27	139·1	139·1	138·3	134·8	133·1	136·1	138·0	137·9	138·0	137·9	137·0	137·6	137·24
	28	139·0	140·6	139·0	138·5	134·3	135·3	137·1	139·2	138·8	137·8	137·0	139·1	137·97
	29	140·1	140·2	138·2	134·1	134·4	136·7	138·8	139·7	139·1	138·0	138·9	137·0	137·93
	30	139·3	121·4 <sup>c</sup>	130·8	116·8	121·5	129·5	136·0	139·9	140·9	138·4	137·1	140·6	132·68
	31	134·1	134·7	141·8	135·0	134·4	138·7	139·6	141·3	140·2	141·0	140·0	130·2	137·58
Hourly Means	138·48	136·88	136·89	131·96	130·80	134·46	139·75	140·20	138·60	138·22	136·57	137·26		

<sup>a</sup> Five minutes late.

<sup>b</sup> Ten minutes late.

<sup>c</sup> Five minutes late.



HORIZONTAL FORCE.														
One Scale Division = { January 1 <sup>d</sup> 0 <sup>h</sup> to February 11 <sup>d</sup> 8 <sup>h</sup> ·0000757 } parts of the H. F. Change in the magnetic moment of the Bar for 1° Fah. = ·00026.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
JANUARY.	1	452·1	455·1	454·7	433·3	441·2	448·7	461·0	454·0	449·6	449·1	450·9	451·9	450·13
	2	461·0	457·6	464·4	442·5	434·3	448·1	453·1	454·5	451·8	—	—	—	456·64
	3	—	—	—	—	—	—	—	—	—	468·5	472·2	471·7	
	4	476·0	479·5	468·7 <sup>a</sup>	452·4	459·0	470·5	469·6	470·5	470·1	470·5	470·3	471·4	469·04
	5	475·5	479·2	473·7	462·8	454·0	466·2	466·1	469·2	468·0	463·2	464·7	464·3	467·24
	6	461·9	465·6	460·6	449·5	452·7	452·7	450·8	452·6	448·4	442·3	435·1	444·2	451·37
	7	454·1	445·3	437·4	428·0	432·0	435·0	433·0	431·7	411·7	433·2	435·3	442·0	434·89
	8	448·4	454·0	451·7	431·0	434·7	441·4	446·0	415·5	437·7	441·7	459·6	456·4	443·17
	9	454·5	461·9	447·6	431·6	440·7	450·5	446·9	446·6	433·1	—	—	—	447·44
	10	—	—	—	—	—	—	—	—	—	452·0	450·0	453·9	
	11	454·9	456·2	447·4	425·6	437·6	450·6	450·3	443·0	449·5	443·9	446·1	448·4	446·12
	12	451·7	451·2	432·7	420·5	431·0	452·2	454·5	451·0	441·1	452·4	455·4	437·0	444·23
	13	443·1	443·4	440·7	430·4	431·6	444·0	443·0	433·2	432·7	444·1	434·8	424·9	437·16
	14	435·7	455·1	430·3	423·3	425·1	439·0	431·7	427·1	425·7	434·5	434·0	442·4	433·66
	15	442·1	443·2	432·4	410·0	422·2	416·3	417·6	420·0	416·2	415·3	422·0	435·0	424·36
	16	434·3	443·2	429·0	423·9	426·3	434·7	437·0	435·3	434·0	—	—	—	438·47
	17	—	—	—	—	—	—	—	—	—	450·4	454·3	459·3	
	18	463·2	463·1	454·5	450·2	459·7	470·6	472·8	473·4	475·3	474·5	475·0	482·0	467·86
	19	485·4	497·4	481·7	448·5	460·8	465·6	469·2	443·1	447·7	444·2	448·1	448·1	461·65
	20	455·5	463·8	453·1	430·4	423·9	442·0	444·9	447·7	441·7	445·5	442·4	443·2	444·51
	21	444·9	446·8	439·9	423·2	441·6	436·2	439·0	426·3	429·5	436·0	428·2	436·0	435·63
	22	440·3	434·2	434·0	422·9	429·0	441·5	440·4	438·0	439·5	441·5	444·0	445·8	437·59
	23	445·5	443·5	438·7	430·0	432·1	434·4	441·5	438·9	436·0	—	—	—	438·92
	24	—	—	—	—	—	—	—	—	—	441·5	444·5	440·5	
	25	450·4	444·0	449·4	429·5	436·9	439·7	442·8	440·9	413·2	420·3	433·0	422·2	435·19
	26	451·7	448·9	445·7	418·4	420·8	441·5	440·0	431·9	449·7	431·7	432·3	420·4	436·08
	27	435·6	438·7	434·6	416·2	419·0	408·2	411·5	449·9	420·1	426·1	431·2	423·1	426·18
	28	434·0	442·5	429·8	415·5	418·1	431·2	430·6	432·9	425·0	430·7	437·6	434·5	430·20
	29	438·6	446·4	435·2	417·2	419·6	442·4	440·9	440·0	439·0	437·7	438·1	441·0	436·34
	30	442·1	445·8	430·5	422·0	424·4	442·6	434·6	441·2	442·1	—	—	—	432·14
	31	—	—	—	—	—	—	—	—	—	410·0	421·1	429·3	
Hourly Means	451·25	454·06	446·09	430·34	434·93	444·07	444·95	442·63	439·55	442·34	444·62	444·96		
FEBRUARY.	1	438·7	446·1	438·4	431·0	435·5	447·2	455·1	455·1	454·0	454·6	455·0	454·5	447·10
	2	457·7	458·8	445·9	442·2	441·4	454·0	454·2	448·0	454·0	450·5	450·0	453·9	450·88
	3	459·1	461·7	456·4	442·6	442·0	455·2	460·0	458·0	456·0	453·7	448·9	452·0	453·80
	4	468·0	469·8	454·2	429·5	440·8	449·5	450·2	448·1	451·0	451·0	453·0	450·8	451·32
	5	455·1	456·2	442·9	429·9	434·7	444·0	448·4	445·0	442·6	443·6	448·0	449·7	445·01
	6	451·1	452·3	446·7	435·2	430·1	442·5	442·0	436·5	435·8	—	—	—	435·69
	7	—	—	—	—	—	—	—	—	—	410·4	417·0	428·7	
	8	433·0	444·9	422·3	412·0	425·0	430·6	426·2	429·8	431·5	434·1	444·2	449·4	431·92
	9	462·7	423·2	422·1	400·5	395·2	405·5	417·4	433·0	433·0	435·7	438·0	441·8	425·67
	10	445·6	447·4	433·5	415·7	425·8	440·3	446·2	450·5	450·0	452·0	455·9	454·8	443·14
	11	462·6	466·0	463·5	439·2	435·6	— <sup>b</sup>	489·2 <sup>c</sup>	486·0	484·1	481·3	493·1	489·0	—
	12	512·3	514·2	487·2	485·2	473·6	476·3	488·6	485·7	508·5	490·3	491·6	492·3	492·15
	13	502·0	502·0	499·5	482·1	473·7	479·8	486·1	490·1	491·0	—	—	—	494·04
	14	—	—	—	—	—	—	—	—	—	503·4	503·2	515·6	
	15	511·0	495·5	492·9	489·4	460·7	468·2	474·5	465·4	472·6	476·4	471·0	477·1	479·56
	16	484·5	485·5	463·2	452·0	463·7	456·8	474·6	473·0	470·0	459·5	476·3	467·7	468·90
	17	469·0	462·4	457·6	456·6	458·6	463·5	466·1	465·9	467·0	468·8	470·7	475·0	465·10
	18	475·9	474·8	468·1	464·4	465·9	459·0	473·0	472·7	480·5	474·2	471·8	474·3	471·22
	19	477·6	477·5	464·5	465·0	465·1	465·5	462·1	462·0	469·2	468·0	475·0	472·8	468·69
	20	474·0	473·9	459·6	458·7	465·5	458·6	458·6	461·1	458·9	—	—	—	462·74
	21	—	—	—	—	—	—	—	—	—	459·0	462·0	463·0	
	22	470·7	467·7	455·7	449·0	460·5	479·2	467·0	443·2	436·0	437·2	440·8	433·6	453·38
	23	454·6	432·3	421·2	426·6	434·1	451·5	437·0	417·0	439·0	449·5	458·5	466·5	440·65
	24	466·4	462·5	453·7	449·1	456·6	458·0	452·2	461·2	478·2	458·1	451·0	459·0	458·83
	25	457·0	467·0	455·7	456·2	457·0	457·0	457·7	442·8	454·7	457·0	454·3	456·2	456·05
	26	428·8	464·6	446·3	425·8	445·7	457·7	446·1	422·5	411·8	431·3	435·6	439·0	437·93
	27	442·6	444·4	442·8	433·7	427·9	446·2	441·0	448·9	446·5	—	—	—	447·90
	28	—	—	—	—	—	—	—	—	—	464·7	466·3	469·8	
Hourly Means	465·10	464·55	453·50	444·89	446·92	454·18	455·84	452·85	456·16	455·78	458·18	460·76		

<sup>a</sup> Eight minutes late.

<sup>b</sup> Magnet removed to determine its magnetic moment; the connexion of the series broken thereby; the observations of the 11th are omitted in the hourly means. <sup>c</sup> Ten minutes late.

HORIZONTAL FORCE.														
Temperature of the Bifilar Magnet.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
JANUARY.	1	36.2	35.2	35.0	35.0	34.9	35.0	35.0	35.0	34.8	35.2	35.1	35.12	
	2	34.6	34.6	35.0	36.8	37.6	37.0	36.2	35.2	34.7	—	—	33.63	
	3	—	—	—	—	—	—	—	—	—	27.5	27.4	—	
	4	26.8	26.2	28.2 <sup>a</sup>	29.0	29.5	30.4	30.3	30.3	30.4	30.4	30.0	29.5	29.25
	5	28.6	28.1	28.4	29.4	30.8	31.4	31.2	31.7	32.0	33.0	34.2	34.4	31.10
	6	35.2	35.6	36.8	38.2	39.2	40.0	40.2	40.8	41.0	40.4	41.4	42.2	39.25
	7	42.2	42.4	43.7	43.3	43.7	44.5	44.4	44.4	44.4	43.8	42.8	41.7	43.44
	8	40.4	39.8	39.8	39.6	40.0	39.8	40.0	39.2	39.0	38.7	38.0	37.9	39.35
	9	37.1	36.4	36.9	37.4	38.0	39.2	39.4	39.2	39.2	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	36.7	37.0	37.1	37.80
	11	37.1	37.4	38.0	39.2	39.8	39.8	39.9	39.7	40.0	40.0	40.2	40.4	39.29
	12	40.4	40.4	40.8	42.4	43.4	43.0	42.8	43.0	42.8	42.3	42.0	42.0	42.11
	13	41.4	40.5	41.2	41.0	41.5	41.3	41.4	41.4	41.2	41.2	41.2	40.8	41.17
	14	40.6	40.3	40.4	40.8	41.0	41.0	41.3	41.0	41.0	41.4	41.6	42.0	41.03
	15	41.9	42.0	42.9	43.4	44.2	44.5	44.8	44.8	44.3	43.1	42.2	42.0	43.34
	16	41.8	41.5	42.6	44.5	45.4	45.4	45.4	45.9	45.7	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	35.8	34.4	33.6	41.83
	18	31.5	30.5	30.8	30.2	30.2	31.3	31.0	30.8	29.0	28.0	28.5	27.5	29.94
	19	26.8	26.6	28.2	29.0	30.2	32.0	32.2	32.7	32.8	32.6	32.0	31.7	30.57
	20	30.7	30.9	31.6	32.8	34.2	35.0	36.7	37.2	38.0	38.6	39.6	40.0	35.44
	21	41.6	41.2	41.1	41.6	42.2	42.2	42.2	42.8	42.3	42.0	41.7	41.8	41.89
	22	41.7	41.1	41.4	41.4	41.7	42.1	41.6	41.4	41.6	40.8	41.0	40.9	41.39
	23	40.8	40.8	41.0	41.9	42.4	42.0	42.2	42.4	42.0	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	40.0	40.0	40.0	41.29
	25	39.7	39.6	40.0	41.0	41.9	42.0	41.5	41.4	41.4	41.8	41.6	40.6	41.04
	26	39.7	38.5	40.0	40.4	41.0	41.2	41.3	41.3	41.4	42.0	42.4	43.2	41.03
	27	43.2	43.4	44.6	45.5	45.6	46.2	46.4	46.4	45.3	44.7	44.4	44.2	44.99
	28	43.7	43.2	44.4	46.2	47.0	46.5	46.4	45.4	44.7	43.6	42.4	41.5	44.58
	29	41.1	41.0	41.4	42.4	43.8	44.2	44.0	43.3	43.2	43.0	43.2	41.8	42.70
	30	41.7	41.1	42.0	42.4	42.9	43.4	43.2	42.4	41.5	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	40.7	40.0	39.8	41.76
Hourly Means	37.94	37.63	38.31	39.03	39.70	40.01	40.04	39.96	39.76	38.73	38.61	38.43		
FEBRUARY.	1	38.5	37.2	37.2	37.4	37.6	37.6	37.7	36.8	36.2	36.2	36.4	37.07	
	2	35.7	34.9	35.6	36.8	37.4	37.7	37.9	38.2	39.0	39.6	39.9	38.5	37.60
	3	37.0	36.3	36.6	37.0	37.8	37.6	37.0	37.4	37.8	36.8	36.4	34.7	36.87
	4	34.3	34.1	36.4	38.6	39.8	41.0	40.7	40.1	40.0	40.0	39.6	38.0	38.55
	5	38.1	38.1	39.2	40.1	40.8	41.4	41.6	42.0	42.0	42.1	42.3	42.0	40.81
	6	42.0	41.3	41.9	43.0	43.8	44.9	45.6	45.2	44.6	—	—	—	42.47
	7	—	—	—	—	—	—	—	—	—	39.8	39.2	38.4	—
	8	37.4	37.0	38.4	40.0	41.4	42.4	42.2	41.8	41.1	40.3	40.0	40.2	40.18
	9	40.0	39.8	41.4	41.8	42.3	42.5	41.8	41.4	41.4	41.2	40.1	40.0	41.14
	10	39.1	38.2	39.0	39.7	40.0	40.2	39.5	37.8	36.4	36.2	35.2	34.2	37.96
	11 <sup>b</sup>	33.1	32.2	33.7	35.0	36.0	—	39.2 <sup>c</sup>	36.4	34.9	33.5	32.4	32.2	—
	12	31.0	29.9	31.4	33.6	35.2	35.2	34.2	33.2	33.2	33.4	32.7	31.7	32.89
	13	30.6	30.3	31.2	33.3	35.4	36.6	36.6	34.9	34.2	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	30.1	29.6	29.4	32.68
	15	29.0	28.9	30.0	32.4	35.1	37.7	38.0	37.4	36.6	36.0	35.4	35.2	34.31
	16	34.6	34.2	35.2	37.7	38.6	39.2	39.0	39.8	40.2	40.8	41.4	41.4	38.51
	17	41.5	41.2	41.3	41.9	42.4	43.7	43.4	42.8	42.3	41.0	40.0	39.2	41.72
	18	38.7	38.0	38.4	39.2	39.8	40.0	40.2	40.0	40.2	40.8	40.5	40.5	39.69
	19	40.7	41.0	41.6	41.2	42.8	43.4	43.0	41.5	40.4	40.0	40.0	40.0	41.30
	20	39.4	39.0	40.3	41.6	43.0	45.0	46.2	44.9	44.8	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	43.7	43.1	42.5	42.79
	22	42.5	42.6	44.0	44.6	45.2	46.2	46.3	45.3	45.4	45.6	45.4	45.6	44.89
	23	44.9	43.0	42.1	41.2	40.4	41.1	41.6	40.2	40.0	38.8	38.0	37.2	40.71
	24	36.4	35.9	37.4	38.4	39.9	41.3	42.0	41.3	40.4	40.4	40.2	39.4	39.42
	25	39.2	38.3	39.4	41.0	42.6	44.6	44.7	44.1	44.3	43.7	43.4	42.8	42.34
	26	42.0	41.0	42.6	44.3	44.6	46.0	46.4	46.8	47.3	47.8	47.4	47.2	45.28
	27	46.7	46.0	46.2	47.7	47.4	49.4	48.4	47.5	46.7	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	40.2	39.8	40.0	45.50
Hourly Means	38.23	37.66	38.56	39.67	40.58	41.51	41.48	40.89	40.63	39.76	39.37	38.89		

<sup>a</sup> Eight minutes late.

<sup>b</sup> Observations of the 11th February omitted in the hourly means.

<sup>c</sup> Ten minutes late.



HORIZONTAL FORCE.

One Scale Division = .000074 parts of the H. F. Change in the magnetic moment of the Bar for 1° Fah. = .00026.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
MARCH.	1	468.5	443.7	453.1	454.3	455.3	454.4	453.0	458.0	456.7	459.1	465.7	468.7	457.54
	2	471.1	466.8	452.9	455.5	449.8	462.0	454.5	460.0	466.0	465.5	467.5	475.4	462.25
	3	474.1	470.4	460.7	454.4	460.5	469.8	459.0	460.1	464.0	466.9	467.1	469.2	464.68
	4	471.2	469.7	457.2	454.8	460.6	462.7	465.8	468.3	467.2	468.8	471.2	475.2	466.06
	5	477.9 <sup>a</sup>	481.7	470.0	478.2	483.1	478.5	472.6	472.0	475.5	478.0	477.1	477.8	476.87
	6	480.0	476.4	468.7	473.0	478.2	489.5	477.0	478.9	454.4	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	470.8	476.0	477.9	475.07
	8	477.5	466.6	451.2	453.0	462.8	461.7	446.9	466.0	464.2	469.4	466.0	468.6	462.82
	9	472.7	466.3	451.2	446.7	450.4	455.6	463.3	459.0	458.5	465.0	465.0	467.2	460.07
	10	472.4	470.0	457.0	446.3	449.0	450.0	457.5	462.7	457.6	456.3	464.5	473.0	459.70
	11	475.1	479.4	468.1	459.9	467.8	458.4	447.5	446.0	460.0	462.7	452.6	465.7	461.93
	12	477.3	472.8	458.4	448.1	458.5	463.8	465.1	466.3	467.0	469.0	470.3	471.0	465.63
	13	470.3	461.7	446.2	441.7	453.7	461.0	460.1	460.8	461.2	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	402.4	437.2	414.3	447.55
	15	467.7	457.5	427.0	423.5	467.0	460.0	443.8	458.0	450.0	450.2	436.6	460.8	450.17
	16	474.8	475.7	438.5	416.7	— <sup>b</sup>	—	—	442.3	460.5	461.9	472.5	470.7	—
	17	459.7	474.7	449.7	450.4	446.1	468.7	445.8	454.0	444.2	455.9	459.8	455.3	455.36
	18	478.5	463.9	451.6	438.1	457.9	450.4	455.1	453.9	460.0	459.5	460.7	458.6	457.35
	19	461.6	445.8	433.4	423.8	435.7	445.0	449.2	443.3	446.3	437.3	445.7	440.0	442.26
	20	445.0	445.3	431.6	420.2	436.4	435.4	432.6	430.8	434.0	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	455.2	454.4	474.0	441.24
	22	474.9	458.1	411.4	418.0	488.5	441.1	460.0	437.8	474.5	435.8	396.0	447.7	445.32
	23	449.0	435.0	437.6	423.4	443.3	450.2	440.5	443.7	419.4	450.6	452.8	447.0	441.04
	24	449.2	450.9	432.6	436.9	451.3	436.1	426.4	409.7	426.5	431.1	443.5	442.8	436.42
	25	440.6	435.8	432.1	425.2	441.7	438.3	443.0	430.0	432.4	438.4	448.0	447.5	437.75
	26	450.5	449.0	434.2	422.9	418.0	429.9	434.2	432.5	443.3	450.7	439.4	447.2	437.65
	27	448.1	445.4	429.6	417.9	427.4	446.6	452.3	449.5	450.7	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	453.5	457.0	458.0	444.67
	29	465.2	462.3	450.8	449.1	462.0	482.2	467.2	431.7	458.2	461.1	—	—	458.98
	30	462.4	462.6	433.2	452.0	456.6	452.1	451.0	455.0	463.0	465.2	467.1	472.4	457.72
	31	474.5	465.9	451.7	445.4	449.7	459.5	461.3	467.1	464.3	465.9	465.0	467.0	461.44
Hourly Means <sup>h</sup>	465.96	460.68	446.20	442.77	454.28	456.26	453.26	452.12	454.58	455.55	456.24	460.89		
APRIL.	1	466.9	463.3	444.1	433.6	444.9	452.6	456.5	460.0	462.0	463.9	464.9	467.1	456.65
	2	469.5	464.4	447.2	433.6	445.9	458.8	462.9	464.0	466.2	465.0	475.4	488.5	461.78
	3	461.5	464.1	435.5	422.0	452.2	454.1	449.4	439.0	444.7	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	468.5	469.5	473.6	452.84
	5	474.6	461.1	437.5	432.0	441.4	461.1	464.0	464.0	467.2	466.2	467.9	470.9	458.99
	6	471.5	458.9	433.3	428.5	453.6	464.2	464.6	460.1	462.4	465.5	464.2	466.5	457.77
	7	469.1	456.3	443.5	440.2	457.0	463.8	464.0	460.0	461.1	454.9	466.3	454.6	457.57
	8	457.0	426.2	430.0	393.6	447.6	457.3	458.6	450.2 <sup>c</sup>	451.2	—	—	—	—
	9 <sup>d</sup>	—	—	—	—	—	—	—	—	—	468.2	472.1	478.0	449.17
	10	480.8	469.9	447.7	452.0	464.0	472.2	472.1	472.1	474.7	—	—	—	—
	11	—	—	—	—	—	—	—	—	—	473.5	479.5	482.0	470.04
	12	484.0	473.8	459.1	442.0	449.0	467.9	460.0	464.0	449.2	465.6	468.5	470.4	462.79
	13	468.6	454.0	448.2	438.7	448.6	458.5	460.1	461.0	456.0	458.0	459.3	464.0	456.25
	14	467.6	457.4	436.0	427.4	460.5	463.1	464.8	452.1	460.7	456.1	463.9	469.0	456.55
	15	472.2	464.5	450.5	445.1	462.0	459.6	460.2	461.0	454.8	460.9	467.3	468.3	460.53
	16	469.0	454.9	447.9	447.2	455.0	456.0	457.9	451.0	461.6	470.5	470.8	466.2	459.00
	17	466.1	461.0	451.4	422.9	434.0	452.0	454.5	413.5	431.6	—	—	—	—
	18	—	—	—	—	—	—	—	—	—	449.1	442.1	468.4	445.55
	19	460.1	465.4	432.5	450.1	455.6	463.8	453.4	453.7	441.7	431.1	453.6	445.4	450.53
	20	465.4	450.7	438.5	422.2	467.5	461.4	453.1	457.0	445.0	428.1	464.5	443.0	449.70
	21	468.3	450.0	437.2	444.5	454.9	459.4	452.4	436.0	454.8	445.2	444.0	453.6	450.02
	22	455.6	443.4	422.6	426.7	443.6	437.8	436.1	439.5	439.4	441.2	447.0	453.7	440.55
	23	453.9	440.4	421.0	422.0	435.5	441.0	447.9	441.0	442.2	449.1	443.5 <sup>e</sup>	452.7 <sup>f</sup>	440.85
	24	450.0	448.2	410.1	419.9	424.5	427.0	437.2	418.5	430.5	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	420.2	424.0	429.0	428.26
	26	431.4	426.4	422.1	428.5	442.1	437.9	428.4	423.5	425.0	430.4	423.8	425.3	428.73
	27	440.1	429.9	434.4	455.0	463.1	455.9	448.0	437.0	442.3	446.4	449.5	453.7	446.27
	28	453.2	447.8	436.3	439.0	451.8	450.6	445.9	431.0	438.0	444.5	450.1	451.6	444.98
	29	446.1	444.5	433.1	444.4	459.0	467.0	464.1	456.1	454.0	466.4	466.1	466.5	455.61
	30	467.9	442.3	441.7	440.7 <sup>g</sup>	451.2	453.0	454.5	433.4	451.2	470.7 <sup>g</sup>	485.5	478.6	—
Hourly Means <sup>h</sup>	462.60	453.19	437.49	433.80	450.55	455.96	454.84	448.55	450.68	453.69	458.24	460.92		

<sup>a</sup> Ten minutes late. <sup>b</sup> Magnet removed for the determination of its magnetic moment, and of the absolute horizontal intensity, and the connexion of the series broken. <sup>c</sup> Two minutes late. <sup>d</sup> Good Friday. <sup>e</sup> Four minutes late. <sup>f</sup> Fifteen minutes late. <sup>g</sup> Magnet removed between 16<sup>h</sup> and 18<sup>h</sup> for the determination of its magnetic moment, and the connexion of the series broken. <sup>h</sup> The observations of the 16th March and 30th April are omitted in the daily and hourly means.

HORIZONTAL FORCE.														
Temperature of the Biflar Magnet.														
Mean Göttingen Time	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
MARCH.	1	39.7	40.0	40.4	42.2	43.2	42.9	42.8	42.6	41.3	40.2	39.4	38.8	41.12
	2	37.6	37.4	39.0	40.0	41.1	42.9	43.4	42.6	41.2	40.4	39.2	38.2	40.25
	3	37.2	36.9	37.4	39.7	41.2	43.4	43.9	43.0	42.0	41.7	41.0	40.2	40.63
	4	39.9	39.1	39.7	40.6	41.4	42.4	42.6	40.6	39.2	37.4	36.5	35.2	39.55
	5	34.0	33.7	35.2	37.0	38.1	38.7	37.9	37.2	36.4	36.0	36.0	36.0	36.35
	6	35.6	35.4	36.0	37.0	37.8	38.2	38.7	38.2	37.8	—	—	—	37.54
	7	—	—	—	—	—	—	—	—	—	38.2	38.6	39.0	
	8	38.8	38.7	39.8	40.8	42.1	42.5	42.2	41.4	40.8	40.8	40.2	39.8	40.66
	9	39.6	39.9	41.7	43.4	44.4	45.6	45.2	44.0	43.6	43.2	42.2	41.8	42.88
	10	40.9	40.5	43.0	44.3	45.6	46.4	46.0	45.0	43.4	41.9	40.4	39.9	43.11
	11	38.8	38.3	40.6	42.4	43.6	45.1	46.0	44.4	43.0	41.8	40.2	39.1	41.94
	12	39.0	38.9	41.5	43.4	44.4	43.6	42.5	42.0	41.5	41.6	41.8	42.0	41.85
	13	41.5	41.5	42.8	44.5	45.0	45.2	44.6	44.3	43.5	—	—	—	41.27
	14	—	—	—	—	—	—	—	—	—	35.0	34.2	33.2	
	15	31.7	32.5	35.4	38.7	40.2	41.0	40.0	39.6	38.4	37.7	36.8	36.8	37.40
	16 <sup>a</sup>	36.2	36.2	38.6 <sup>b</sup>	40.9	—	—	—	—	41.0	38.5	37.5	36.7	—
	17	35.3	35.7	38.8	41.4	43.5	45.2	45.9	44.2	42.6	40.2	39.7	37.8	40.86
	18	37.0	38.1	40.5	43.2	45.0	47.0	46.0	45.8	45.4	45.0	44.6	44.6	43.52
	19	44.2	45.4	48.0	49.3	50.7	52.2	51.8	51.4	51.0	49.9	49.4	49.4	49.39
	20	48.9	49.1	51.0	52.8	54.6	56.2	57.0	55.0	52.9	—	—	—	50.67
	21	—	—	—	—	—	—	—	—	—	43.6	43.4	43.6	
	22	43.0	42.4	42.3	43.9	44.4	45.0	44.7	44.8	44.6	44.5	44.4	45.0	44.08
	23	45.4	45.7	46.4	47.2	48.0	49.0	49.2	48.4	48.0	47.8	47.2	46.4	47.39
	24	45.9	47.9	50.0	51.0	51.8	53.4	53.4	53.7	53.0	52.5	52.6	52.0	51.43
	25	52.0	51.7	51.4	51.4	52.0	51.6	51.4	51.2	51.1	50.2	50.2	49.8	51.17
	26	49.4	49.3	50.4	52.6	54.7	57.2	59.0	57.4	56.0	55.2	54.2	53.2	54.05
	27	53.2	51.6	52.0	52.4	52.6	52.4	52.2	51.7	51.4	—	—	—	51.01
	28	—	—	—	—	—	—	—	—	—	48.4	47.4	46.8	
	29	45.8	44.9	44.6	43.8	44.1	45.4	45.2	45.0	44.8	44.2	—	—	44.78
	30	42.5	43.5	45.0	46.2	47.0	48.2	51.2	46.7	45.0	43.5	42.0	41.4	45.18
	31	40.6	41.3	44.3	46.0	47.2	47.4	46.4	45.8	45.6	45.3	45.4	45.4	45.06
Hourly Means	41.44	41.51	42.97	44.43	45.53	46.46	46.51	45.61	44.75	43.31	42.68	42.22		
APRIL.	1	45.1	45.6	48.4	49.6	50.5	51.7	52.4	51.0	50.0	49.4	48.8	48.0	49.21
	2	47.4	47.1	48.3	49.4	49.6	50.6	50.2	48.5	47.0	46.0	45.8	44.6	47.87
	3	44.2	44.8	47.3	48.3	49.4	50.4	51.4	51.0	50.3	—	—	—	47.58
	4	—	—	—	—	—	—	—	—	—	44.7	44.7	44.5	
	5	44.6	46.2	47.4	47.9	48.8	49.4	49.4	48.3	47.4	46.9	46.4	46.4	47.42
	6	45.9	46.6	48.3	49.0	49.4	50.4	51.2	50.4	49.3	48.8	48.0	47.4	48.72
	7	47.1	46.8	47.2	48.2	49.4	50.2	51.0	50.4	49.6	49.4	48.2	47.0	48.71
	8	47.2	48.4	50.2	51.2	51.8	52.0	52.1	51.5	50.8	—	—	—	48.77
	9	—	—	—	—	—	—	—	—	—	44.2	43.2	42.6	
	10	41.9	42.7	44.8	46.3	46.7	47.2	47.9	45.8	45.2	—	—	—	43.98
	11	—	—	—	—	—	—	—	—	—	39.8	39.7	39.8	
	12	39.5	40.0	40.8	43.2	44.7	46.0	46.4	45.9	45.6	45.4	44.6	44.7	43.90
	13	44.4	44.4	45.4	47.2	49.0	50.0	50.4	49.7	49.4	48.9	48.2	47.0	47.83
	14	47.0	48.0	48.0	47.9	47.7	48.4	48.8	47.8	46.5	45.8	45.2	44.4	47.12
	15	45.0	45.4	48.0	49.0	49.0	50.4	50.4	49.7	48.8	48.0	47.2	46.8	48.14
	16	46.1	46.4	47.4	49.4	51.0	52.4	52.9	52.0	51.2	51.2	51.0	51.2	50.18
	17	51.1	51.7	52.7	54.6	55.7	57.2	57.2	57.8	57.6	—	—	—	52.28
	18	—	—	—	—	—	—	—	—	—	44.4	44.0	43.4	
	19	44.5	44.2	44.7	46.5	49.0	50.2	50.5	49.8	48.6	48.0	47.4	46.6	47.50
	20	46.4	45.9	45.8	46.0	46.6	46.9	46.8	46.8	46.4	45.5	45.2	44.2	46.04
	21	45.4	46.1	48.0	49.4	51.0	52.4	54.0	53.2	51.8	50.7	49.8	48.6	50.03
	22	48.6	50.4	52.2	53.2	54.2	56.8	57.2	56.2	54.5	54.0	52.0	51.2	53.37
	23	52.4	52.5	54.0	55.2	56.7	57.2	57.0	56.7	56.2	55.5	55.7	54.0	55.26
	24	53.4	53.8	55.6	57.3	59.2	59.5	59.4	59.2	58.4	—	—	—	57.70
	25	—	—	—	—	—	—	—	—	—	59.4	59.0	58.2	
	26	57.7	58.5	58.3	58.5	59.0	60.0	61.1	59.4	58.1	57.5	55.4	54.2	58.14
	27	54.0	54.2	53.6	53.8	54.3	56.2	57.0	56.0	54.8	54.0	52.5	51.2	54.30
	28	53.0	52.4	54.2	55.3	56.4	57.8	58.4	58.0	56.8	55.2	54.0	53.0	55.37
	29	52.2	51.7	51.7	51.8	51.2	51.2	51.2	51.0	51.2	51.5	52.0	51.7	51.53
	30 <sup>c</sup>	52.0	51.8	53.0	54.0	55.0	55.8	56.2	55.0	54.0	54.2	53.5	52.8	—
	Hourly Means	47.67	48.07	49.26	50.34	51.26	52.27	52.68	51.92	51.06	49.34	48.67	47.95	

<sup>a</sup> Observations on the 16th March omitted in the hourly means.

<sup>b</sup> Approximate; taken from the temperature of the Vertical Force Magnet.

<sup>c</sup> Observations on the 30th April omitted in the hourly means.

HORIZONTAL FORCE.														
One Scale Division = .000074 parts of the H. F.      Change in the magnetic moment of the Bar for 1° Fah°. = .00026.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
MAY.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
	1	490.4	483.6	457.0	472.8	476.3	493.0	483.0	476.8	481.2	—	—	—	
	2	—	—	—	—	—	—	—	—	—	505.5	503.2	510.7	486.12
	3	514.6	505.7	491.6	492.5	504.4	512.7	512.2	509.2	511.3	512.0	514.5	506.9	507.30
	4	510.0	494.0	481.5	476.9	493.3	500.4	477.7	486.0	498.0	495.0	499.2	504.4	493.03
	5	507.7	496.8	478.0	472.4	487.2	495.2	499.1	481.4	459.2	484.0	487.5	469.5	484.83
	6	488.8	470.8	452.8	250.4	474.4	490.4	488.2	479.0	466.3	479.6	486.6	479.5	475.57
	7	489.8	483.4	475.7	455.7	468.0	475.9	482.5	494.0	478.7	484.0	486.5	496.5	480.89
	8	496.1	482.5	455.9	462.0	474.4	476.2	482.0	451.0	475.2	—	—	—	—
	9	—	—	—	—	—	—	—	—	—	442.8	432.3	437.5	463.99
	10	400.7 <sup>a</sup>	410.3	415.5	475.1	527.5	516.0	485.5	483.3	462.7	463.9	463.3	461.8	463.80
	11	477.5	473.8	453.9	457.6	462.2	472.6	462.7	469.5	472.0	464.3	463.2	475.7	467.08
	12	471.8	477.8	455.6	441.4	445.0	452.3	469.7	464.0	470.4	475.0	473.2	475.5	464.31
	13	476.8	461.3	455.1	472.6	469.9	483.7	479.2	473.4	472.6	472.7	481.2	481.7	473.35
	14	486.3	467.3	454.8	462.5	485.7	487.6	481.9	480.0	482.7	469.2	485.0	487.4	477.53
	15	492.2	471.9	465.9	465.0	482.7	487.0	475.4	482.0	486.0	—	—	—	—
	16	—	—	—	—	—	—	—	—	—	489.1	470.9	473.0	478.43
	17	464.4	424.7	431.1	444.6	473.7	478.5	469.4	470.1	466.5	467.2	465.7	469.9	460.48
	18	458.3	476.7	456.3	452.9	474.3	497.2	464.4	456.7	472.9	470.9	473.1	478.2	469.33
	19	480.9	470.0	456.5	468.7	459.7	484.0	457.0	455.2	451.0	469.0	468.5	475.8	466.36
	20	475.3	474.6	458.9	467.4	467.5	476.1	467.2	472.0	470.5	465.9	472.0	470.9	469.86
	21	454.8	479.3	461.3	467.5	465.7	468.3	468.0	461.8	450.5	461.2	458.0	463.8	463.35
	22	469.8	440.6	458.4	447.5	462.3	467.1	459.4	459.5	464.0	—	—	—	—
	23	—	—	—	—	—	—	—	—	—	452.2	454.0	461.0	457.98
	24	459.6	450.4	418.9	426.1	449.1	451.8	451.6	445.2	446.1	444.8	449.1	452.8	445.46
	25	459.4	456.9	432.7	430.1	443.3	458.0	454.8	449.2	446.6	455.6	461.1	463.6	450.94
	26	460.4	458.8	436.6	459.0	470.5	453.5	473.3	463.6	453.2	446.4	451.4	455.2	456.83
	27	455.3	443.3	427.7	441.3	448.3	462.2	459.7	457.4	449.1	447.3	454.4	457.1	450.25
	28	464.1	452.2	448.7	458.9	473.7	452.1	447.1	440.8	449.8	449.8	451.0	456.7	453.74
	29	457.2	444.6	441.7	456.8	468.5	471.2	468.7	449.6	457.4	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	465.2	463.4	475.6	459.99
31	483.6	468.0	451.4	470.7	474.9	479.8	481.2	465.0	467.4	425.0 <sup>b</sup>	436.9	444.2	—	
Hourly Means	474.49	466.05	452.88	459.11	472.30	478.52	472.79	468.43	467.76	469.30	470.73	473.63		
JUNE.	1	450.4	441.8	433.0	437.5	444.7	452.7	434.9	430.0	437.9	441.5	431.5	442.2	439.84
	2	446.0	440.9	421.3	421.1	428.7	464.6	428.0	430.5	423.1	425.2	438.7	448.7	434.73
	3	450.2	441.3	429.9	449.9	446.8	459.2	446.0	428.0	441.1	431.8	444.5	433.8	441.87
	4	474.9	434.9	412.5	430.9	438.9	428.5	423.6	419.3	427.2	429.4	431.2	429.5	429.48
	5	436.6	439.0	419.8	422.1	421.9	442.1	423.8	418.1	423.9 <sup>c</sup>	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	417.6	467.4	426.7	429.92
	7	427.4	438.8	421.3	423.8	422.5	426.0	410.0	411.9	416.7	421.9	424.9	433.0	423.18
	8	432.4	429.3	417.0	421.4	419.2	421.2	428.4	420.2	420.2	431.2	435.0	429.5	425.42
	9	438.7	445.6	423.4	417.6	422.6	413.0	419.5	423.2	421.1	421.7	427.1	427.5	425.08
	10	436.6	425.7	420.8	431.0	430.5	435.5	439.5	419.4	423.3	425.1	423.4	423.0	427.82
	11	440.0	434.8	431.1	433.8	442.5	431.4	423.0	428.0	416.1	427.1	429.7	441.5	431.58
	12	442.6	430.4	426.0	443.0	443.9	438.5	452.4	450.9	445.7	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	442.0	439.6	442.8	441.48
	14	442.9	431.3	430.8	446.7	455.2	457.8	449.2	447.7	447.0	451.4	444.9	447.6	446.04
	15	456.0	442.5	414.8	433.7	463.5	467.9	445.2	419.6	429.0	438.4	448.1	450.8	442.46
	16	447.6	447.3	436.5	433.0	452.9	456.4	448.7	445.7	447.0	446.6	453.0	442.2	446.41
	17	460.0	451.8	443.8	444.2	460.3	450.4	446.7	449.0	411.0	450.4	453.0	447.7	447.36
	18	451.8	427.5	404.7	438.0	460.2	467.7	460.9	441.7	439.0	442.0	445.6	445.0	443.67
	19	444.0	433.3	435.6	437.9	448.5	449.3	434.1	438.2	438.0	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	440.0	441.0	446.9	440.57
	21	449.3	446.9	428.4	453.4	450.5	450.4	444.0	444.2	443.0	430.3	441.9	439.3	443.47
	22	450.4	440.8	428.5	421.8	456.7	429.2	433.5	414.6	428.3	428.5	442.2	438.1	434.38
	23	449.9	439.3	424.2	426.0	431.5	427.2	420.7	416.2	422.2	412.3	422.6	434.7	427.23
	24	431.7	433.0	408.5	413.4	423.1	428.4	434.0	419.6	427.9	425.9	461.7	452.0	429.93
	25	463.6	427.7	444.8	426.9	405.5	465.6	449.8	444.8	434.2	441.1	441.7	430.5	439.68
	26	440.2	439.0	429.5	428.9	433.5	441.7	427.6	424.0	427.4	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	431.3	432.1	433.5	432.39
	28	435.3	430.4	413.1	436.5	446.5	435.5	437.8	415.9	415.3	423.1	423.4	417.2	427.50
	29	431.1	427.8	447.3	411.1	417.8	396.1	427.0	400.7	412.9	413.5	409.5	408.5	416.94
	30	414.6	412.3	405.0	397.8	420.0	416.9	419.6	411.8	415.3 <sup>d</sup>	434.4	374.2	382.3	—
Hourly Means	444.10	436.84	425.86	431.34	438.72	441.45	435.53	428.06	428.74	431.57	438.15	436.49		

<sup>a</sup> Four minutes late.  
<sup>b</sup> Magnet removed between May 31<sup>d</sup> 16<sup>h</sup> and May 31<sup>d</sup> 18<sup>h</sup>, and between June 30<sup>d</sup> 16<sup>h</sup> and June 30<sup>d</sup> 18<sup>h</sup>, to determine its magnetic moment, and the connexion of the series broken.  
The observations of the 31st May and 30th June are omitted in the daily and hourly means.  
<sup>c</sup> Eight minutes late.

HORIZONTAL FORCE.  
Temperature of the Bifilar Magnet.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.
MAY.	1	52.0	52.7	53.0	53.8	54.8	56.0	56.9	55.8	54.2	—	—	—
	2	—	—	—	—	—	—	—	—	—	44.4	44.0	43.5
	3	43.6	43.9	44.2	45.0	46.2	47.3	48.6	47.6	46.5	46.2	45.1	44.5
	4	47.6	47.3	48.2	49.0	50.8	52.4	54.0	52.5	50.8	49.6	48.8	48.0
	5	46.9	48.5	51.0	52.0	52.6	53.2	53.0	52.4	52.2	52.0	51.2	50.8
	6	50.0	49.8	50.8	51.8	52.8	53.7	55.0	52.4	52.0	51.6	51.2	50.6
	7	50.3	51.1	52.2	54.0	55.2	55.6	55.3	54.7	54.0	53.0	52.0	51.0
	8	50.2	53.0	54.5	55.5	56.4	57.5	58.2	58.0	57.0	—	—	—
	9	—	—	—	—	—	—	—	—	—	54.0	53.5	53.5
	10	53.0	53.0	53.6	54.2	54.4	54.4	54.8	54.8	54.4	54.4	54.4	54.6
	11	54.5	55.5	57.2	58.6	59.6	60.3	61.1	60.1	60.0	59.2	58.3	57.7
	12	57.2	58.4	60.1	60.3	60.5	60.3	59.3	58.6	57.6	56.8	55.9	55.0
	13	54.3	53.8	54.0	54.4	55.4	56.2	57.5	56.0	55.2	54.7	54.0	53.0
	14	55.0	54.5	55.8	56.2	56.6	57.2	57.6	56.4	55.7	55.7	52.9	51.2
	15	50.5	51.3	53.4	54.4	55.8	57.6	58.2	57.5	56.2	—	—	—
	16	—	—	—	—	—	—	—	—	—	55.4	55.0	55.0
	17	54.8	58.6	59.2	60.0	60.2	60.9	60.7	60.5	59.2	58.5	57.0	55.7
	18	55.0	56.0	58.4	58.8	59.3	60.7	61.5	60.5	59.3	58.7	57.2	56.6
	19	55.4	57.2	58.7	59.2	58.9	59.7	60.7	60.5	59.3	58.2	57.4	56.0
	20	55.0	56.3	58.7	59.2	59.5	61.3	62.3	62.1	61.6	60.1	59.3	59.0
	21	58.4	58.2	59.0	59.5	59.8	61.9	61.0	61.5	60.9	60.5	59.8	59.5
	22	58.9	58.8	60.5	61.8	62.7	62.7	63.5	63.3	62.7	—	—	—
	23	—	—	—	—	—	—	—	—	—	66.3	65.3	64.7
	24	64.3	65.0	67.3	67.5	69.1	70.1	70.3	69.7	68.9	67.9	66.5	65.5
	25	65.1	66.3	68.3	69.5	69.9	69.7	69.3	68.5	67.5	66.7	65.7	64.7
	26	64.1	64.7	66.1	66.9	67.3	66.5	67.5	67.1	66.5	66.0	64.5	64.0
	27	63.5	64.9	68.3	67.3	68.3	68.8	69.1	68.5	67.3	66.3	64.9	63.8
	28	63.1	64.2	66.7	67.3	69.1	69.9	70.4	69.7	68.9	67.9	66.7	66.0
	29	65.9	65.5	66.3	66.9	66.8	67.0	67.5	67.3	65.7	—	—	—
	30	—	—	—	—	—	—	—	—	—	61.8	61.0	59.3
	31 <sup>a</sup>	59.1	58.8	60.5	62.0	63.8	64.6	65.0	64.9	64.1	63.5	62.5	61.7
Hourly Means	55.54	56.34	57.82	58.52	59.28	60.04	60.53	59.84	58.94	57.76	56.86	56.13	
JUNE.	1	61.2	62.5	64.3	65.8	66.5	67.7	67.7	67.5	66.5	65.7	63.8	62.7
	2	62.4	63.5	65.7	67.1	68.5	70.3	70.5	69.3	67.7	65.3	64.7	63.5
	3	62.7	64.0	65.2	66.0	66.5	66.9	67.3	67.0	65.5	64.3	63.5	62.7
	4	62.4	63.2	64.8	66.0	67.3	68.6	69.9	69.5	68.5	67.7	66.8	66.5
	5	66.3	66.3	66.9	69.1	70.5	72.3	73.3	72.9	71.8	—	—	—
	6	—	—	—	—	—	—	—	—	—	69.7	68.7	69.2
	7	67.8	68.5	69.9	72.2	73.8	75.0	75.9	75.5	74.3	72.0	72.0	71.3
	8	70.5	71.5	73.0	74.3	75.5	76.5	76.5	76.3	75.7	74.8	73.8	72.9
	9	72.2	72.0	72.5	72.9	73.5	74.7	74.5	74.1	72.8	71.3	70.1	69.0
	10	68.3	67.9	68.5	69.3	71.0	72.0	73.7	74.2	73.5	72.5	71.8	71.0
	11	70.7	71.0	72.5	72.9	73.5	74.5	76.0	73.9	72.3	71.1	69.8	68.3
	12	68.1	66.9	67.3	67.7	67.7	67.9	67.5	66.7	66.0	—	—	—
	13	—	—	—	—	—	—	—	—	—	67.0	66.3	65.5
	14	65.1	65.5	66.3	66.7	67.3	67.9	67.8	67.5	66.7	65.8	64.9	64.1
	15	63.3	63.3	64.3	65.3	65.9	66.7	67.4	67.0	65.3	64.3	62.8	62.0
	16	61.3	62.3	63.8	65.3	65.7	66.7	67.7	67.3	66.1	65.0	63.5	62.5
	17	61.5	61.8	63.7	66.3	65.5	65.5	65.3	64.8	64.4	63.8	63.3	62.5
	18	62.1	62.3	63.5	64.5	65.7	66.3	66.5	66.1	65.3	64.5	64.2	63.5
	19	62.8	62.8	63.6	65.3	66.0	67.5	70.8	68.8	67.5	—	—	—
	20	—	—	—	—	—	—	—	—	—	65.9	65.0	64.2
	21	63.9	64.5	65.8	67.0	68.3	70.5	71.0	70.3	69.6	69.0	68.3	67.9
	22	67.5	68.0	69.7	71.5	72.3	72.7	73.3	73.2	72.5	71.9	71.3	70.5
	23	70.5	70.4	71.2	72.3	73.0	74.5	74.5	73.8	73.3	72.7	72.0	71.3
	24	71.0	70.7	71.1	71.9	73.2	73.5	73.8	72.8	71.8	71.0	70.0	70.0
	25	69.3	68.7	69.1	70.3	71.5	72.3	72.7	72.1	70.9	70.2	69.5	69.3
	26	69.5	69.0	70.0	70.9	71.7	72.5	73.5	73.3	72.9	—	—	—
	27	—	—	—	—	—	—	—	—	—	72.9	72.3	71.7
	28	71.0	72.1	73.5	73.8	75.0	76.3	77.0	77.7	75.5	74.3	73.5	72.5
	29	72.3	73.5	74.9	75.8	76.7	79.0	79.5	79.3	78.3	77.7	77.0	76.5
	30 <sup>b</sup>	75.5	75.0	75.4	76.0	77.2	79.0	78.3	77.1	76.5	76.0	75.7	74.9
Hourly Means	66.55	66.89	68.04	69.21	70.08	71.13	71.74	71.24	70.19	69.22	68.36	67.64	

<sup>a</sup> Observations of the 31st May omitted in the daily and hourly means.

<sup>b</sup> Observations of the 30th June omitted in the daily and hourly means.

HORIZONTAL FORCE.														
One Scale Division = .000074 parts of the H. F. Change in the magnetic moment of the Bar for 1° Fah. = .00026.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
JULY.	1	384.6	384.4	374.7	362.4	361.7	382.5	399.9	371.1	373.1	382.7	397.6	387.5	380.18
	2	396.7	396.2	389.1	375.6	401.2	417.9	404.6	399.4	398.0	403.4	413.4	408.3	400.31
	3	417.4	403.0	387.9	379.1	397.6	420.5	400.4	402.8	406.8	—	—	—	405.49
	4	—	—	—	—	—	—	—	—	—	415.7	412.7	422.0	—
	5	416.7	417.5	398.2	402.3	412.0	410.2	403.8	382.7	390.5	378.2	403.7	409.6	402.12
	6	393.8	428.3	410.3	406.2	417.4	425.6	446.7	404.1	400.5	399.9	405.2	410.0	412.33
	7	416.5	421.2	406.8	400.6	410.4	419.1	405.0	401.1	403.0	410.0	411.6	407.4	409.39
	8	413.9	411.0	395.7	388.9	398.0	412.8	411.0	403.9	398.8	405.0	409.7	411.5	405.02
	9	416.1	406.5	386.2	392.1	410.0	414.0	416.1	409.6	411.0	411.2	410.6	412.7 <sup>a</sup>	408.01
	10	420.5	417.7	401.9	408.0	412.6	425.4	404.8	410.6	413.2	—	—	—	—
	11	—	—	—	—	—	—	—	—	—	406.9	411.2	409.9	411.89
	12	412.9	405.2	388.8	398.0	415.0	416.8	404.0	401.0	394.8	401.1	399.2	409.6	403.87
	13	407.6	397.4	394.4	395.0	410.6	400.2	397.7	385.3	388.0	386.0	387.1	397.0	395.52
	14	399.8	397.6	386.7	392.5	410.8	396.9	389.6	363.1	358.0	365.0	379.6	360.7	383.36
	15	388.9	378.2	380.0	373.2	389.2	390.1	389.5	383.1	388.9	392.4	389.2	393.5	386.35
	16	399.5	400.4	399.3	405.1	414.1	411.2	404.0	399.0	403.2	401.6	403.6	406.7	403.98
	17	410.9	404.4	398.1	409.0	418.2	418.1	403.9	400.3	406.6	—	—	—	409.16
	18	—	—	—	—	—	—	—	—	—	412.3	414.1 <sup>b</sup>	414.0	—
	19	416.8	410.8	396.6	379.2	405.0	406.6	418.6	375.1	377.6	374.7	389.9	399.3	395.85
	20	392.0	394.1	393.4	361.1	386.4	357.8	392.4	387.0	396.4	394.3	397.1	397.5	387.46
	21	401.3	388.1	372.0	380.0	397.6	398.6	383.1	381.6	380.6	366.4	386.6	387.9	385.32
	22	391.1	377.5	369.9	371.6	389.2	386.3	380.7	367.5	380.3	379.9	380.3	394.3	380.72
	23	391.5 <sup>c</sup>	386.1	353.0	367.9	380.6	390.4	379.9	360.0	345.0	371.4	359.9	371.2	371.41
	24	356.1	328.4	361.7	363.5	381.3	430.1	377.0	367.9	364.3	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	387.9	388.4	391.4	374.83
	26	391.2	392.1	373.5	368.5	390.8	393.9	386.7	395.1	395.2	399.7	392.2	409.0	390.66
	27	403.2	394.7	390.8	396.7	398.0	411.4	408.8	409.8	412.4	397.0	399.9	405.3	402.33
	28	410.5	412.2	401.8	395.0	416.5	407.5	398.2	406.2	410.0	410.1	406.0	412.7	407.22
	29	421.2	424.6	405.6	411.1	422.4	403.7	415.2	406.5	408.8	409.1	410.9	409.2	412.36
	30	417.2	411.4	403.5	409.6	416.9	412.9	422.4	418.0	420.5	418.0	421.0	416.0	415.62
	31	422.4	416.0	400.1	406.5	424.0	430.0	427.9	421.2	422.4 <sup>d</sup>	—	—	—	—
	32	—	—	—	—	—	—	—	—	—	381.0	381.0	392.0	—
Hourly Means	403.38	399.58	389.23	388.16	402.42	406.17	401.69	391.99	393.29	395.38	399.26	402.08	—	
AUGUST.	2	392.7	387.5	381.3	384.3	390.0	398.4	390.3	352.6	364.9	360.1	385.0	390.7	381.48
	3	399.4	385.6	364.9	377.5	378.0	383.0	370.4	374.0	377.2	361.9	362.0	364.4	374.86
	4	379.8	374.7	370.3	360.1	375.2	388.1	383.3	380.2	388.7	386.9	386.3	380.8	379.53
	5	380.8	387.4	350.5	373.1	385.8	378.1	368.2	370.0	351.0	364.4	361.5	349.0	368.32
	6	382.7	349.1	382.9	365.7	399.2	415.5	454.6	337.5	356.6	371.3	382.8	394.5	382.70
	7	360.1	381.9	361.9	373.8	381.8	386.4	376.9	371.1	376.0	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	382.9	387.5	387.5	377.32
	9	392.9	382.2	372.4	376.7	389.1	399.9	383.4	379.0	376.1	371.3	377.4	380.1	381.71
	10	388.2	381.0	369.2	375.8	390.5	388.7	386.3	389.1	391.0	392.2	393.0	392.4	386.45
	11	392.6	380.3	368.5	393.4	412.6	393.6	404.2	369.1	362.0	384.6	374.5	365.7	383.42
	12	402.1	402.6	383.5	417.2	428.1	411.2	398.1	397.6	396.0	401.0	403.2	403.6	403.68
	13	400.1	395.7	378.1	386.6	395.9	397.0	383.6	394.2	392.7	399.2	404.8	401.5	394.12
	14	408.2	397.5	377.1	386.8	418.1	403.0	418.4	386.3	368.9	—	—	—	—
	15	—	—	—	—	—	—	—	—	—	369.8	383.4	385.0	391.87
	16	393.9	381.0	362.6	349.6	379.0	379.0	376.1	357.8	361.1	378.8	362.3	371.1	371.02
	17	389.4	381.2	345.0	367.5	376.8	388.9	377.4	374.9	363.0	375.5	378.5	375.2	374.44
	18	373.6	381.8	347.9	350.8	362.1	371.5	363.6	371.6	374.0	378.0	377.4	376.6	369.07
	19	385.1	377.4	356.9	358.9	374.3	398.1	376.7	375.5	377.8	380.8	382.0	392.1	377.97
	20	396.1	386.8	369.1	365.3	371.5	380.0	384.9	376.5	378.3	385.2	389.5	394.0	381.43
	21	396.4	393.6	370.0	371.0	385.6	392.3	368.1	389.9	386.6	—	—	—	—
	22	—	—	—	—	—	—	—	—	—	385.6	366.0	396.7	383.48
23	398.0	398.0	380.2	388.4	377.3	410.0	384.7	369.6	386.0	391.7	379.3	394.7	388.16	
24	393.7	386.9	373.5	388.9	399.1	414.4	394.8	392.1	398.0	401.7	398.3	415.0	396.37	
25	407.0	400.0	380.0	390.8	409.2	402.8	398.9	388.1	383.0	393.4	388.9	393.6	394.64	
26	393.2	404.1	376.7	364.8	397.7	398.5	380.5	351.0	340.0	338.3	367.9	390.2	375.24	
27	403.7	383.8	385.5	382.0	398.1	412.0	400.2	402.6	390.1	377.5	385.9	390.1	392.62	
28	388.5	385.4	365.1	357.6	391.5	390.2	377.4	366.3	345.2	—	—	—	—	
29	—	—	—	—	—	—	—	—	—	374.0	365.7	383.0	374.16	
30	386.5	371.1	351.4	363.6	381.0	390.3	390.5	386.0	385.7	386.5	384.4	391.9	380.74	
31	395.5	383.6	366.0	374.0	400.8	404.6	376.5	362.7	389.2	356.2	359.8	365.7	377.88	
Hourly Means	391.55	385.39	368.86	374.78	390.32	395.21	387.22	375.59	375.35	378.80	380.28	385.58	382.41	

<sup>a</sup> Six minutes late.

<sup>b</sup> Four minutes late.

<sup>c</sup> Two minutes late.

<sup>d</sup> Magnet removed for the determination of its magnetic moment, and the connexion of the series broken, the observations of the 31st of July and 1st of August are not included in the daily and hourly means.

HORIZONTAL FORCE.														
Temperature of the Bifilar Magnet.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
JULY.	1	73.7	73.6	73.7	74.3	75.1	76.2	76.7	75.8	74.5	73.2	72.0	70.8	74.13
	2	71.8	70.7	71.1	71.5	72.2	73.0	73.0	71.0	69.5	68.5	67.5	66.1	70.49
	3	66.0	67.9	69.0	69.1	68.8	68.7	69.6	69.6	68.5	—	—	—	68.37
	4	—	—	—	—	—	—	—	—	68.5	67.7	67.0	67.0	
	5	66.4	66.5	67.5	69.5	71.0	72.3	73.3	73.0	72.3	70.7	69.5	68.7	70.06
	6	67.7	67.8	67.8	68.2	68.5	69.0	70.0	69.6	68.3	67.5	66.7	65.6	68.06
	7	64.8	65.5	67.0	67.3	68.3	69.5	70.6	69.7	68.5	67.8	66.3	65.3	67.55
	8	65.3	66.5	67.5	68.3	68.7	69.5	71.0	70.5	69.5	68.5	68.0	67.3	68.38
	9	66.5	66.1	66.3	67.7	69.5	70.0	69.5	69.1	68.7	68.5	68.3	67.7	68.16
	10	67.0	67.7	68.6	68.5	68.5	70.0	70.5	69.9	68.5	—	—	—	68.34
	11	—	—	—	—	—	—	—	—	—	67.7	66.9	66.3	
	12	65.3	66.2	68.3	69.6	71.0	71.3	71.5	71.0	70.3	69.3	68.4	68.0	69.18
	13	67.5	68.6	70.5	72.0	73.3	73.9	74.3	74.0	73.3	72.5	71.7	71.1	71.89
	14	70.6	71.5	72.5	73.7	75.3	76.0	78.5	77.0	75.0	73.0	73.0	73.3	74.12
	15	72.8	73.8	74.9	75.7	75.7	75.3	74.5	73.5	72.9	71.5	70.5	69.7	73.40
	16	69.0	69.2	70.3	70.5	70.4	71.3	72.3	72.3	70.9	69.9	68.6	67.7	70.20
	17	66.5	66.9	68.4	69.5	70.7	72.0	72.5	71.8	70.8	—	—	—	70.08
	18	—	—	—	—	—	—	—	—	—	71.5	70.6	69.8	
	19	69.2	70.5	72.4	73.6	74.5	75.5	76.3	75.7	74.6	73.5	72.1	71.0	73.24
	20	70.5	71.5	73.2	74.5	75.7	75.8	76.3	75.8	74.3	72.8	71.3	70.3	73.50
	21	69.5	70.5	72.3	74.3	75.8	77.5	79.0	78.5	77.4	77.3	75.7	74.9	75.22
	22	74.7	76.3	77.4	78.5	79.1	80.3	80.5	80.0	79.1	78.3	77.3	76.5	78.17
	23	76.3	76.1	77.1	78.0	79.0	79.5	80.7	80.3	79.5	78.5	77.7	77.0	78.31
	24	76.3	76.7	78.5	79.5	80.8	81.3	80.5	79.8	79.0	—	—	—	77.77
	25	—	—	—	—	—	—	—	—	—	74.8	73.5	72.5	
	26	71.5	72.3	73.5	74.0	74.2	74.3	74.8	74.5	73.3	72.4	71.3	70.3	73.03
	27	69.4	69.8	70.7	71.3	71.3	72.0	72.0	71.5	71.0	70.5	70.8	69.3	70.80
	28	68.5	68.6	69.5	69.9	70.3	71.0	70.8	70.3	68.5	68.3	67.0	65.7	69.03
	29	64.8	65.8	67.3	68.0	69.2	69.7	70.3	70.0	69.5	69.0	68.1	67.5	68.27
	30	66.8	66.5	66.3	66.3	66.3	66.1	65.9	65.3	65.0	64.8	64.5	64.5	65.69
	31 <sup>a</sup>	64.0	64.0	64.3	64.7	65.3	65.5	65.4	65.3	64.9	—	—	—	—
	32	—	—	—	—	—	—	—	—	—	70.0	69.0	67.7	
Hourly Means	69.17	69.73	70.83	71.67	72.43	73.11	73.65	73.06	72.03	71.11	70.19	69.38		
AUGUST.	2	66.9	68.4	70.5	71.4	73.0	74.5	75.3	74.0	73.2	72.5	71.0	70.0	71.72
	3	69.0	70.7	72.0	72.8	73.5	74.3	74.2	73.7	73.3	72.6	72.0	71.5	72.47
	4	70.7	70.3	71.4	72.0	72.5	73.0	73.0	72.4	72.0	71.5	71.0	70.5	71.69
	5	69.6	70.0	72.5	73.5	74.0	74.6	74.8	73.2	71.5	70.2	69.0	68.3	71.77
	6	67.5	69.5	71.0	71.8	73.0	73.5	73.8	72.8	71.5	70.5	69.3	69.0	71.10
	7	66.5	68.1	70.0	71.5	72.4	73.3	73.5	72.8	70.4	—	—	—	70.33
	8	—	—	—	—	—	—	—	—	—	68.5	68.5	68.5	
	9	68.0	69.0	69.8	71.0	72.0	72.8	73.2	72.5	71.6	70.6	69.5	68.3	70.69
	10	67.1	67.5	70.0	71.8	72.8	72.5	71.6	70.8	70.0	69.5	68.6	68.0	70.02
	11	67.6	67.8	67.6	67.6	67.6	67.6	67.3	67.3	66.9	66.3	65.5	64.5	66.97
	12	63.9	65.8	67.4	67.8	68.8	70.0	70.8	69.9	69.0	68.0	67.0	66.2	67.88
	13	65.0	66.6	68.7	70.5	71.5	72.2	72.8	72.0	71.0	70.2	69.0	68.5	69.83
	14	67.8	67.5	68.0	69.4	70.5	71.2	71.5	70.7	70.0	—	—	—	69.52
	15	—	—	—	—	—	—	—	—	—	70.0	69.2	68.5	
	16	67.8	68.4	70.9	72.6	74.4	75.0	75.2	74.5	73.3	72.2	71.4	70.5	72.18
	17	69.8	71.0	73.6	74.0	74.8	76.4	76.8	76.4	75.0	73.9	73.0	72.0	73.89
	18	71.4	72.7	74.6	75.7	77.6	78.5	77.0	76.4	75.4	74.4	73.6	72.8	75.01
	19	72.2	73.3	74.5	75.8	76.5	78.0	77.5	75.5	74.4	72.8	71.9	70.4	74.40
	20	69.4	71.0	72.9	73.5	75.0	75.7	76.2	75.5	74.5	73.2	71.8	70.3	73.25
	21	69.3	71.6	73.2	74.5	75.8	75.6	75.6	74.3	73.8	—	—	—	72.57
	22	—	—	—	—	—	—	—	—	—	70.2	69.4	67.5	
	23	66.5	68.3	69.0	70.4	71.0	72.0	72.5	70.0	70.2	68.0	67.0	65.5	69.20
	24	64.5	66.4	68.2	69.8	71.0	72.0	72.5	70.9	69.3	67.5	66.4	65.4	68.66
	25	64.0	65.7	68.5	70.6	72.0	73.0	73.0	71.8	70.4	69.4	67.8	67.0	69.43
	26	66.3	67.8	69.0	69.5	69.8	69.8	68.9	68.0	67.3	67.0	66.5	66.5	68.03
	27	66.0	66.4	67.0	68.0	69.0	69.2	70.2	70.0	69.5	69.0	68.8	68.5	68.47
	28	68.8	68.2	69.0	70.8	71.5	70.5	71.3	70.9	70.4	—	—	—	70.48
	29	—	—	—	—	—	—	—	—	—	72.4	71.5	70.5	
	30	69.9	71.6	71.8	72.3	73.5	73.0	72.8	72.2	71.0	70.4	69.2	68.6	71.36
	31	68.0	68.7	69.0	70.0	71.4	72.8	73.3	73.0	71.2	70.5	69.6	69.0	70.54
	Hourly Means	67.83	68.93	70.39	71.48	72.50	73.12	73.25	72.37	71.39	70.43	69.52	68.71	70.83

<sup>a</sup> Observations of the 31st July and 1st August omitted in the daily and hourly means.



HORIZONTAL FORCE.														
One Scale Division = .000074 parts of the H F. Change in the magnetic moment of the Bar for 1° Fah°. = .00026.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
SEPTEMBER.	1	392.2	368.4	342.1	372.0	390.8	389.7	374.9	382.1	379.4	381.7	389.1	385.9	379.02
	2	393.0	374.3	367.5	374.9	393.0	366.3	376.0	381.8	381.8	391.5	392.4	385.7	381.52
	3	381.4	373.0	359.0	368.0	377.1	384.1	378.9	386.7	391.2	389.5	390.2	382.0	380.09
	4	396.2	385.0	357.8	354.7	374.7	390.4	389.0	390.0	387.5	—	—	—	382.30
	5	—	—	—	—	—	—	—	—	—	385.5	387.8	388.9	—
	6	391.7	387.4	371.1	368.4	380.8	383.3	387.0	389.4	387.8	391.9	390.2	393.5	385.21
	7	391.3	388.7	371.7	370.8	372.7	384.5	385.6	382.2	380.7	377.3	385.3	389.4	381.68
	8	390.3	386.4	375.5	374.0	383.3 <sup>a</sup>	386.6	386.3	387.0	385.2	387.8	389.4	392.3	385.34
	9	393.3	380.6	365.7	362.9	383.2	380.3	380.8	384.0	385.8	389.0	391.1	394.2	382.57
	10	393.1	382.8	372.7	365.8	379.0	383.9	372.1	382.2	378.0	377.6	382.3	388.1	379.80
	11	391.1	376.5	367.1	389.7	399.0	405.7	406.8	410.0	409.0	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	390.3	382.0	388.5	392.97
	13	407.4	390.4	351.6	375.0	397.0	399.4	390.7	393.9	394.5	360.2	345.8	318.2	377.01
	14	405.6	395.9	375.4	371.6	399.0	399.9	399.5	396.6	418.2	401.1	403.5	407.5	397.82
	15	413.9	402.4	390.7	396.7	400.2	397.7	392.7	393.6	403.7	396.8	397.1	406.0	399.30
	16	411.2	404.1	380.5	387.7	405.4	395.1	389.8	377.1	374.0	384.0	384.6	403.7	391.43
	17	404.3	391.6	375.5	376.1	394.5	394.2	389.8	397.8	399.9	404.9	407.7	405.4	395.14
	18	410.4	396.5	377.4	391.0	399.6	418.1	392.0	388.1	391.4	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	417.9	408.4	412.9	400.31
	20	414.7	401.4	381.4	379.9	398.5	400.5	406.4	392.3	398.2	408.4	411.0	413.0	400.47
	21	410.9	394.6	384.9	391.5	404.4	406.4	405.1	407.0	409.1	410.5	410.0	412.1	403.87
	22	409.0	398.3	396.2	407.1	397.5	397.1	407.4	407.8	405.4	402.0	404.5	405.4	403.14
	23	409.3	404.7	394.6	397.3	404.1	409.2	408.4	409.7	410.8	414.1	415.1	411.6	407.41
	24	418.0	416.1	413.2	412.7	388.2	395.2	408.2	384.9	326.3	360.6	334.6	306.2	380.35
	25	223.4	223.6	226.8	348.9	365.2	361.7	442.1	331.3	294.7	—	—	—	—
	26	—	—	—	—	—	—	—	—	—	383.2	368.5	364.5	327.82
	27	410.9	386.6	335.3	391.1	402.3	410.3	398.9	410.1	408.7	422.0	422.8	412.8	400.98
	28	366.5	421.0	382.1	391.3	396.7	419.6	416.6	409.1	420.8	383.6	398.1	403.0	400.70
	29	410.2	412.1	361.0	408.9	412.9	423.5	424.0	423.4	374.0	—	419.7	426.7	408.76
	30	417.5	405.1	390.1	394.6	412.4	415.9	409.9	428.9	411.7	420.1	419.0	428.0	412.77
Hourly Means	394.49	386.44	367.96	381.64	392.75	396.10	396.88	393.35	388.76	393.26	393.47	393.29	389.85	
OCTOBER.	1	427.0	422.0	413.8	415.8	424.0	423.7	424.8	425.3	425.4	431.2	429.6	436.0	424.88
	2	433.3	437.2	430.1	431.4	430.0	435.2	432.9	440.0	436.7	—	—	—	435.41
	3	—	—	—	—	—	—	—	—	—	433.7	437.2	447.2	—
	4	443.9	432.7	423.5	419.3	430.4	435.5	433.5	434.7	435.2	437.5	440.8	444.0	434.25
	5	446.8	441.0	430.6	425.9	427.5	439.2	437.4	409.9	432.4	427.5	437.3	439.1	432.88
	6	434.7	430.9	411.1	416.0	399.2	422.3	412.4	414.0	425.1	431.2	433.4	436.7	422.25
	7	431.4	437.2	427.1	430.9	440.6	439.0	423.1	418.9	416.5	430.0	432.5	434.5	430.14
	8	443.4	447.1	420.4	400.0	410.0	406.2	399.1	421.5	416.9	417.1	420.5	431.0	419.43
	9	438.7	432.0	417.5	409.1	433.5	398.5	402.2	397.1	410.0	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	409.9	412.3	418.0	414.90
	11	442.6	429.8	422.9	424.5	433.5	431.7	429.9	434.2	429.9	430.2	429.5	434.1	431.07
	12	430.6	424.5	405.5	403.0	419.1	432.0	435.4	435.0	436.4	444.5	441.0	441.0	429.00
	13	442.2	431.3	415.4	416.1	424.6	417.8	434.2	418.4	432.0	438.3	449.6	447.3	430.60
	14	443.8	437.3	425.1	430.1	433.0	442.2	432.9	435.2	416.8	424.3	429.4	436.6	432.22
	15	437.2	426.2	421.7	413.5	424.5	428.5	428.4	418.1	424.0	422.3	438.6	437.5	426.71
	16	437.1	433.7	423.2	405.5	426.2	433.4	438.9	435.4	440.1	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	456.6	462.8	456.5	437.45
	18	452.8	447.4	443.2	408.2	439.7	440.0	449.4	449.2	451.2	459.4	452.5	458.0	445.92
	19	461.7	456.0	440.9	422.4	447.1	452.7	454.0	441.7	447.5	448.2	447.8	452.6	447.72
	20	443.5	450.7	441.7	430.5	439.3 <sup>b</sup>	449.4	432.9	433.7	438.9	405.4	447.3	433.7	437.25
	21	445.4	398.8	418.8	434.2	429.7	435.7	435.8	434.3	439.4	445.1	445.1	450.0	434.36
	22	449.8	442.8	427.7	423.5	436.3	445.3	446.3	440.5	428.2	440.7	447.5	452.5	440.09
	23	453.2	440.4	431.0	436.1	441.8	451.4	445.4	450.7	453.1	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	409.7	427.1	451.0	440.91
	25	445.9	412.1	436.1	426.3	433.2	423.2	435.7	440.0	439.0	437.7	442.7	424.5	433.03
	26	417.6	450.2	446.5	430.9	438.4	445.4	440.9	443.0	442.2	445.3	444.4	439.5	440.36
	27	453.2	448.6	434.3	426.4 <sup>c</sup>	439.2	441.7	431.1	435.9	397.4	395.5	442.3	449.2	432.90
	28	448.5	452.8	449.5	442.5	447.0	451.4	459.2	461.0	452.5	454.7	454.7	455.2	452.42
	29	455.6	449.5	438.7	419.8	419.8	444.1	443.8	441.3	435.5	438.0	444.4	445.0	439.63
	30	443.3	430.2	414.5	413.1	423.7	432.7	434.7	433.3	433.4	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	432.0	434.5	437.3	430.23
Hourly Means	442.43	436.25	427.34	421.35	430.43	434.55	433.63	432.40	432.14	432.54	439.42	441.85	433.69	

<sup>a</sup> Two minutes late.

<sup>b</sup> Ten minutes late.

<sup>c</sup> Five minutes late.

HORIZONTAL FORCE.  
Temperature of the Biflar Magnet.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
SEPTEMBER.	1	67.5	68.8	70.5	71.5	72.4	73.5	73.6	72.0	72.5	72.2	71.3	71.0	71.40
	2	70.3	70.3	71.0	73.0	73.8	75.2	75.5	74.9	73.9	73.3	72.5	72.0	72.97
	3	71.5	71.4	71.6	72.4	73.3	73.7	73.2	72.8	72.3	72.0	71.8	71.5	72.30
	4	70.9	70.6	72.0	72.8	73.7	74.3	74.8	74.0	72.7	—	—	—	72.62
	5	—	—	—	—	—	—	—	—	—	72.5	71.8	71.4	72.62
	6	71.0	71.0	72.5	73.8	75.4	75.6	74.6	74.0	73.2	72.6	72.2	71.8	73.14
	7	71.1	72.2	73.8	74.8	75.5	75.7	75.6	75.0	74.3	73.7	73.1	72.5	73.94
	8	72.0	72.0	72.4	73.5	74.5	75.6	76.2	75.4	74.0	73.8	73.0	72.4	73.73
	9	72.0	74.0	74.4	75.3	76.2	77.2	77.5	76.5	75.3	74.5	74.0	73.4	75.02
	10	72.8	74.4	76.2	77.0	77.5	77.8	77.5	77.0	75.6	74.2	72.7	72.4	75.42
	11	71.0	70.5	71.0	70.8	71.5	71.8	71.8	70.8	69.6	—	—	—	69.85
	12	—	—	—	—	—	—	—	—	—	67.7	66.5	65.2	69.85
	13	64.4	66.2	68.0	69.0	69.5	70.2	70.0	69.0	67.5	65.5	64.6	63.8	67.31
	14	62.4	64.2	66.0	67.2	68.2	68.2	68.2	67.4	66.0	64.5	63.0	62.5	65.65
	15	62.3	62.5	64.8	66.8	67.5	69.0	69.0	68.3	67.5	67.2	66.8	64.4	65.51
	16	66.0	66.2	68.0	69.5	71.3	71.3	70.6	70.0	69.3	68.5	67.8	67.2	68.81
	17	66.6	66.5	67.5	69.0	70.0	70.8	70.2	69.8	68.5	67.2	66.0	65.0	68.09
	18	64.0	63.2	63.0	63.4	64.4	65.4	65.3	64.7	63.5	—	—	—	64.13
	19	—	—	—	—	—	—	—	—	—	64.2	64.3	64.2	64.13
	20	63.8	65.0	66.0	67.2	67.5	68.5	67.6	66.6	65.0	64.0	63.3	63.0	65.62
	21	63.0	63.0	63.2	64.6	66.5	67.3	66.8	66.5	66.0	66.0	65.8	65.7	65.37
	22	66.1	66.0	66.5	67.3	67.5	68.0	68.5	68.7	68.6	68.6	68.5	68.0	67.69
	23	67.6	67.5	67.7	68.0	68.5	68.8	68.2	68.0	67.5	67.1	66.3	65.7	67.57
	24	64.8	65.4	67.0	68.0	69.0	69.8	69.6	69.2	68.1	67.4	66.8	66.3	67.62
	25	66.2	65.8	65.6	66.0	66.3	67.4	67.3	66.8	66.5	—	—	—	64.70
	26	—	—	—	—	—	—	—	—	—	60.5	59.5	58.5	64.70
	27	58.0	58.3	59.3	59.5	59.8	60.0	59.6	58.7	58.5	58.2	58.3	58.0	58.85
	28	58.0	57.5	57.4	57.5	58.0	57.9	57.8	58.0	57.6	57.5	57.2	57.2	57.63
	29	56.7	56.5	57.5	58.1	58.0	58.0	58.0	58.0	57.6	—	56.5	56.1	57.36
	30	56.0	56.0	58.0	59.3	60.3	60.8	61.0	59.8	58.0	57.3	57.0	55.0	58.21
Hourly Means.	66.00	66.35	67.34	68.28	69.08	69.68	69.54	68.92	68.04	67.61	66.56	66.01	67.78	
OCTOBER.	1	54.2	55.0	56.8	56.7	57.5	59.4	59.3	58.0	56.5	55.0	54.0	53.3	56.31
	2	52.5	51.9	52.7	54.6	56.1	57.0	56.6	56.1	55.5	—	—	—	54.42
	3	—	—	—	—	—	—	—	—	—	53.4	53.8	52.8	54.42
	4	52.0	51.2	53.7	55.2	56.9	59.1	59.0	57.4	56.0	54.5	53.7	52.8	55.12
	5	52.0	53.6	56.0	57.9	59.0	59.1	60.4	59.2	58.0	57.0	56.4	56.0	57.05
	6	54.6	55.4	58.3	59.4	58.8	59.9	58.8	57.8	56.5	55.1	54.6	54.6	56.98
	7	55.0	54.7	55.0	55.4	56.0	58.8	58.6	58.3	57.5	57.0	55.6	54.5	56.37
	8	54.8	55.0	56.5	56.9	58.6	60.0	60.5	59.1	58.6	57.2	56.0	55.2	57.37
	9	54.7	54.5	56.8	57.9	58.8	59.5	59.2	58.8	58.0	—	—	—	57.23
	10	—	—	—	—	—	—	—	—	—	56.3	56.3	56.0	57.23
	11	55.3	55.0	55.2	56.3	57.0	58.2	58.2	58.5	58.8	58.7	58.2	57.6	57.25
	12	57.0	57.0	57.0	57.3	57.8	57.5	57.0	56.5	56.5	56.1	55.0	54.0	56.56
	13	53.5	54.5	56.4	57.0	57.8	57.5	57.5	56.8	56.0	55.0	54.2	53.2	55.78
	14	52.7	52.3	52.6	55.4	56.7	58.0	58.0	58.5	58.0	56.8	56.5	56.7	56.02
	15	56.7	56.8	58.0	59.0	60.0	60.0	59.2	58.6	57.5	56.7	56.0	55.6	57.84
	16	54.7	54.0	54.2	54.6	54.8	54.6	54.0	53.0	52.3	—	—	—	52.54
	17	—	—	—	—	—	—	—	—	—	48.8	48.0	47.5	52.54
	18	46.5	47.5	50.0	51.5	53.2	54.4	53.8	52.5	51.0	49.7	48.5	48.0	50.55
	19	47.0	46.8	48.0	47.8	49.5	51.0	51.0	51.3	51.5	51.3	51.2	50.8	49.77
	20	50.3	50.2	50.4	50.9	51.5	51.5	52.0	52.2	52.2	52.4	52.3	51.5	51.45
	21	51.8	52.0	52.3	53.5	54.5	54.6	53.8	53.2	53.0	52.2	51.5	51.5	52.82
	22	50.5	51.5	52.9	53.6	54.2	54.4	53.5	52.6	51.5	50.8	50.6	50.6	52.22
	23	50.4	49.8	50.4	51.2	51.2	51.5	51.0	50.6	50.5	—	—	—	49.11
	24	—	—	—	—	—	—	—	—	—	43.8	44.5	44.5	49.11
	25	44.1	44.3	47.2	48.0	47.8	48.0	47.4	46.6	46.5	46.5	46.6	46.6	46.63
	26	45.8	46.2	47.6	48.7	50.3	51.5	51.5	51.0	50.6	50.8	50.0	49.4	49.45
	27	47.3	47.8	49.5	51.3	53.0	54.5	53.6	52.4	50.4	49.2	48.0	47.5	50.37
	28	46.5	46.2	48.2	50.4	51.5	52.3	51.5	50.8	51.0	50.6	50.0	50.4	49.95
	29	50.0	49.9	51.4	53.3	56.0	57.1	57.5	57.3	57.0	55.3	54.8	54.8	54.53
	30	54.7	54.7	56.3	58.0	59.0	60.3	60.5	59.5	58.4	—	—	—	57.65
	31	—	—	—	—	—	—	—	—	—	56.2	56.8	57.4	57.65
Hourly Means.	51.71	51.84	53.21	54.30	55.29	56.14	55.90	55.25	54.59	53.32	52.81	52.41	53.90	



HORIZONTAL FORCE.														
One Scale Division = '000074 parts of the H. F. Change in the magnetic moment of the Bar for 1° Fah. = '00026.														
Mean Göttingen } Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
NOVEMBER.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
	1	435·8	430·3	419·5	419·7	428·3	435·2	427·5	422·0	429·0	428·0	434·2	433·9	428·62
	2	435·9	431·7	423·0	423·3	430·0	435·5	434·4	436·5	435·5	436·1	434·7	441·0	433·13
	3	444·9	439·8	424·1	424·0	435·4	449·7	451·0	459·0	459·6	450·2	441·0	444·2	443·57
	4	435·4	421·2	410·9	421·9	425·9	438·8	449·1	431·8	428·5	431·7	423·4	397·3	426·32
	5	458·2	440·7	408·4	429·2	414·4	413·6	433·5	439·1	422·1	424·2	421·9	442·8	429·01
	6	410·7	446·9	438·4	432·4	426·5	451·2	430·4	434·3	448·4	—	—	—	440·53
	7	—	—	—	—	—	—	—	—	—	453·0	452·6	461·6	448·2
	8	455·4	456·9	432·3	434·5	444·5	456·2	448·1	440·7	448·8	440·8	452·3	448·2	446·56
	9	463·7	458·4	445·0	437·2	441·0	457·2	458·4	458·6	454·1	460·4	460·5	462·7	454·77
	10	455·7	459·5	445·8	446·3	458·3	457·2	467·8	463·4	455·0	455·0	454·4	457·5	456·32
	11	403·9	454·3	453·1	414·6	449·4	445·2	459·2	456·3	455·9	446·6	445·5	447·7	444·31
	12	454·0	448·0	428·6	429·0	431·5	441·7	445·1	451·8	450·0	446·3	450·6	454·3	444·24
	13	459·0 <sup>a</sup>	448·9	445·0	438·5	450·8	450·8	453·6	455·0	460·5	—	—	—	453·64
	14	—	—	—	—	—	—	—	—	—	458·7	458·5	464·4	448·2
	15	468·3	461·7	460·5	460·9	470·9	470·0	467·7	456·0	470·0	465·3	468·0	473·0	466·02
	16	473·2	469·7	460·9	466·9	473·0	472·5	469·5	468·0	465·0	463·7	470·5	471·6	468·71
	17	471·3	469·2	464·2	460·5 <sup>b</sup>	470·1	470·1	473·7	475·2	477·3	465·4	466·8	467·4	469·27
	18	468·0	464·2	465·0	466·7	462·2	447·1	447·1	424·0	394·5	387·2	330·9	421·7	431·55
	19	441·5	451·1	439·2	443·2	443·3	453·4	435·0	421·8	436·4	422·0	434·0	431·0	437·66
	20	437·1	413·1	450·5	448·9	451·2	456·5	438·9	455·8	441·3	—	—	—	448·86
	21	—	—	—	—	—	—	—	—	—	464·1	463·4	465·5	449·66
	22	469·5	469·2	444·3	434·5	448·9	446·5	449·2	449·3	444·0	446·4	442·5	451·6	449·66
	23	458·0	456·9	447·4	435·6	455·6	458·0	463·8	461·0	459·2	458·0	462·2	446·4	455·17
	24	465·3	452·4	458·1	449·7	451·6	454·9	455·6	470·4	458·0	465·3	456·6	462·6	458·37
	25	463·8	467·7	460·1	455·7	464·5	471·5	469·6	472·2	470·5	470·0	471·2	477·0	467·82
	26	482·2	479·1 <sup>b</sup>	466·4	469·4	470·7	479·9	480·9	479·0	480·6	477·6	478·2	478·6	476·88
	27	480·4	478·1	471·6	465·1	474·3	473·4	480·3	475·9	474·0	—	—	—	477·20
	28	—	—	—	—	—	—	—	—	—	482·4	484·3	486·6	489·46
	29	490·2	490·5	488·0	486·7	487·5	490·0	491·0	490·7	490·3	488·1	489·0	491·5	489·46
	30	492·0	488·7	482·5	481·7	489·6	489·4	489·5	487·1	486·7	485·9	487·6	488·1	487·40
Hourly Means	456·67	455·70	447·42	445·23	451·90	456·37	456·53	455·19	453·66	452·78	451·34	456·47	453·27	
DECEMBER.	1	489·5	487·7	484·1	478·4	474·9	476·4	451·0	459·4	465·6	458·6	468·0	470·0	471·97
	2	473·0	474·4	458·4	463·5	469·7	473·1	473·5	449·7	453·2	451·1	445·6	415·9	458·42
	3	486·5	429·3	456·6	436·9	459·1	455·1	439·5	434·0	439·4	447·8	450·5	453·8	449·04
	4	454·7	468·8	440·4	443·2	448·9	459·4	449·2	462·4	466·5	—	—	—	459·07
	5	—	—	—	—	—	—	—	—	—	473·6	472·3	469·5	474·11
	6	479·9	471·0	462·9	463·6	472·0	468·2	475·9	474·7	469·8	489·4	479·1	482·8	474·37
	7	483·3	481·9	465·7	470·0	478·3	484·1	485·3	469·5	472·1	467·3	462·8	472·1	454·07
	8	469·4	472·0	413·7	425·2	448·1	462·2	463·0	457·0	458·0	460·0	459·9	460·4	453·20
	9	462·7	456·9	438·9	448·5	450·2	456·6	458·6	459·0	449·2	451·0	453·6	453·2	452·25
	10	461·1	431·0	453·9	442·0	446·1	453·2	453·0	456·7	457·3	456·0	458·3	458·4	463·50
	11	458·8	458·3	454·4	451·7	460·9	466·5	464·4	461·2	462·3	—	—	—	471·65
	12	—	—	—	—	—	—	—	—	—	473·3	470·8	479·4	446·17
	13	476·3	476·3	479·5	466·5	470·6	473·7	473·5	474·5	470·6	466·1	463·6	468·6	454·92
	14	470·1	462·3	470·2	456·5	437·9	439·1	399·2	432·2	436·1	450·7	448·0	451·7	459·92
	15	453·1	454·1	447·2	444·0	452·7	458·5	458·0	458·7	461·3	458·9	454·7	457·9	484·87
	16	461·5	470·8	450·0	457·4	455·0	438·7	448·4	461·0	465·4	473·0	471·1	466·7	496·45
	17	486·6	483·7	493·6	476·1	475·2	483·9	470·8	478·2	483·8	486·5	498·6	501·5	498·12
	18	509·2	505·9	498·9	488·0	492·4	480·1	499·2	500·9	499·1	—	—	—	502·79
	19	—	—	—	—	—	—	—	—	—	495·1	488·6	500·0	506·46
	20	498·8	500·2	505·4	490·0	495·9	499·0	497·8	493·5	498·6	499·0	497·5	501·7	486·42
	21	503·0	504·5	503·0	489·4	497·4	505·1	506·2	505·1	503·9	503·1	504·7	508·1	489·50
	22	514·0	516·5	512·1	506·2	505·7	515·2 <sup>c</sup>	513·4	505·7	501·6	497·1	495·0	495·0	496·52
	23	501·1	494·1	481·5	472·9	485·1	488·5	490·8	485·7	487·3	483·0	483·5	483·5	487·30
	24	493·0	492·5	484·7	466·3	477·6	486·9	492·5	486·4	487·4	—	—	—	461·87
	25 <sup>d</sup>	—	—	—	—	—	—	—	—	—	—	—	—	474·47
	26	—	—	—	—	—	—	—	—	—	501·4	501·7	503·6	496·52
	27	508·0	506·6	499·1	484·6	493·1	501·8	501·0	500·4	492·8	490·8	488·5	491·5	484·55
	28	494·4	494·1	482·6	468·3	482·0	486·0	486·4	484·6	483·8	482·0	483·6	486·8	487·30
	29	490·5	492·2	482·8	473·0	483·3	486·3	487·2	486·1	487·1	490·4	492·7	496·0	461·87
	30	502·8	473·3	499·4	432·5	445·7	456·9	437·2	453·9	461·5	456·0	460·3	463·0	474·47
	31	475·9	472·5	471·5	447·5	470·2	471·4	483·1	485·2	482·8	483·7	478·9	470·9	—
Hourly Means	482·97	478·11	472·71	463·16	470·31	474·07	471·47	472·14	472·94	474·80	474·30	475·46	473·54	

<sup>a</sup> Five minutes late.

<sup>b</sup> Ten minutes late.

<sup>c</sup> Ten minutes late.

<sup>d</sup> Christmas Day.

HORIZONTAL FORCE.  
Temperature of the Bifilar Magnet.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
NOVEMBER.	1	57.3	57.5	58.7	59.8	61.4	61.8	61.5	61.3	60.0	59.5	59.1	58.6	59.71
	2	57.5	58.2	59.3	58.8	58.4	58.0	57.0	57.0	56.5	55.8	55.5	55.4	57.28
	3	54.6	54.3	55.0	55.0	55.0	55.0	54.7	54.0	54.0	54.1	53.5	53.0	54.35
	4	52.5	52.1	52.4	52.8	53.5	53.8	53.1	53.0	52.5	52.3	51.6	51.3	52.57
	5	51.0	50.9	50.9	51.7	51.5	51.6	51.6	51.0	50.6	50.8	50.0	49.5	50.92
	6	49.1	49.6	49.0	49.1	49.1	49.0	48.8	48.5	48.0	—	—	—	48.14
	7	—	—	—	—	—	—	—	—	—	45.6	45.8	46.1	
	8	46.8	47.3	48.2	49.5	50.4	51.0	50.4	50.4	49.8	49.5	48.8	48.5	
	9	47.2	46.5	47.0	48.0	48.6	49.2	48.7	48.5	48.5	49.0	49.0	49.0	48.27
	10	48.7	48.2	48.4	49.0	49.0	49.3	48.5	49.0	49.1	49.3	49.4	49.8	48.97
	11	49.5	48.8	48.6	50.0	50.0	50.5	50.5	51.0	51.8	52.2	52.2	52.0	50.59
	12	53.1	53.1	54.0	54.1	54.3	54.3	53.2	52.6	51.8	50.8	50.8	50.0	52.67
	13	49.7	49.6	50.3	51.8	52.2	52.3	52.4	52.0	51.5	—	—	—	50.03
	14	—	—	—	—	—	—	—	—	—	46.3	46.5	45.8	
	15	45.1	44.7	45.0	45.4	45.6	46.2	45.7	45.4	45.0	45.0	44.6	44.3	
	16	43.5	43.3	45.2	46.3	47.2	48.2	48.3	48.0	47.2	47.3	46.8	46.8	46.51
	17	46.0	46.0	46.8	48.3	48.5	49.2	48.4	47.5	47.0	46.8	46.2	45.7	47.20
	18	44.7	44.5	45.7	47.4	48.0	49.5	49.0	47.2	45.1	44.1	44.1	45.0	46.19
	19	44.5	43.5	43.5	44.0	44.2	45.2	45.0	44.6	45.0	45.4	45.0	45.0	44.57
	20	44.5	44.4	44.8	45.8	47.5	48.0	48.1	48.5	47.6	—	—	—	46.13
	21	—	—	—	—	—	—	—	—	—	44.2	44.6	45.6	
	22	46.1	47.0	48.2	49.6	51.5	52.5	51.5	50.5	50.0	49.2	49.0	48.8	
	23	48.0	47.0	47.5	47.6	47.2	47.5	47.5	47.2	47.3	47.2	46.6	46.0	47.21
	24	45.5	45.4	47.6	49.4	49.5	50.0	49.3	49.1	48.6	47.8	47.2	46.5	47.99
	25	46.1	45.5	45.4	45.7	45.8	45.4	44.3	44.0	43.7	43.8	43.7	43.3	44.72
	26	42.0	41.5	41.8	42.8	42.6	42.4	42.5	43.0	42.5	42.0	42.0	42.0	42.26
	27	41.6	41.7	43.1	43.8	44.6	44.7	44.0	44.5	43.5	—	—	—	42.34
	28	—	—	—	—	—	—	—	—	—	38.4	38.8	39.4	
	29	38.2	37.8	38.9	39.0	40.2	40.8	40.0	39.0	38.2	38.4	38.6	38.5	
	30	38.1	37.8	39.8	40.7	41.7	41.5	41.4	40.8	40.7	41.2	41.5	41.8	40.58
Hourly Means	47.34	47.16	47.89	48.67	49.13	49.50	49.05	48.75	48.29	47.54	47.34	47.22	48.16	
DECEMBER.	1	41.7	41.5	42.0	44.4	45.8	46.4	46.3	45.7	45.3	45.5	45.5	45.0	44.59
	2	44.0	43.6	44.8	46.6	47.2	47.3	47.1	47.0	47.3	47.0	46.8	46.4	46.26
	3	46.0	46.0	45.8	46.5	47.0	47.5	47.5	48.0	48.5	49.0	48.7	48.7	47.43
	4	48.0	47.5	47.1	47.0	46.3	46.0	45.8	45.8	45.6	—	—	—	45.47
	5	—	—	—	—	—	—	—	—	—	42.0	42.1	42.4	
	6	42.5	42.5	42.7	43.1	43.3	43.5	43.0	42.8	42.0	41.4	41.1	41.3	
	7	41.5	41.2	41.4	42.8	43.4	44.4	44.0	43.6	43.4	43.2	43.2	43.0	42.92
	8	42.6	42.3	43.6	45.3	45.8	46.3	46.5	47.0	47.5	46.9	47.4	48.4	45.80
	9	48.5	48.3	48.8	49.6	49.7	50.5	51.0	51.2	51.3	50.8	49.9	49.5	49.92
	10	49.3	49.1	49.4	49.5	49.5	49.5	49.6	49.8	49.4	49.5	50.0	50.0	49.56
	11	49.5	48.5	48.0	48.5	48.6	49.2	48.7	48.4	48.0	—	—	—	47.48
	12	—	—	—	—	—	—	—	—	—	44.0	44.0	44.4	
	13	44.3	44.0	44.3	45.5	45.8	46.4	46.2	46.0	46.5	46.9	46.7	47.0	
	14	47.4	47.8	48.5	49.3	50.0	50.1	49.5	51.0	50.4	50.2	49.8	49.4	49.45
	15	48.3	47.5	47.9	48.9	49.2	49.3	48.5	48.0	47.2	46.8	46.4	46.1	47.84
	16	45.3	44.4	44.2	44.5	44.0	43.5	42.2	41.4	40.4	38.8	37.4	36.5	41.88
	17	35.5	34.5	34.0	34.5	35.2	36.0	34.6	33.0	32.0	30.5	30.0	29.8	33.30
	18	29.5	29.0	31.8	33.5	35.4	36.5	35.1	34.5	33.9	—	—	—	32.81
	19	—	—	—	—	—	—	—	—	—	31.5	31.5	31.5	
	20	31.4	30.5	30.4	31.8	33.3	33.4	33.5	32.5	32.5	32.6	32.6	32.6	
	21	31.3	29.5	30.0	30.5	32.5	34.0	33.5	33.0	32.6	32.2	31.3	29.9	31.69
	22	29.0	28.3	28.0	29.4	30.5	31.5	33.0	34.5	35.4	35.4	36.5	37.0	32.37
	23	38.3	39.0	39.9	40.8	41.7	42.5	42.8	43.7	44.0	44.2	43.5	42.5	41.91
	24	40.6	39.3	40.2	40.4	41.0	41.3	40.6	40.4	40.0	—	—	—	38.14
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	—	—	
	26	—	—	—	—	—	—	—	—	—	31.3	31.2	31.4	
	27	31.5	32.0	32.0	33.5	34.5	35.6	36.2	36.8	37.2	38.0	38.4	38.4	35.34
	28	38.1	38.4	39.5	40.4	41.8	43.8	43.2	42.8	42.5	42.4	41.3	40.8	41.25
	29	39.8	39.0	40.8	42.0	43.0	43.6	43.2	42.5	41.3	41.0	40.5	40.5	41.43
	30	40.5	40.0	40.6	42.6	44.0	44.2	43.9	43.6	43.5	43.5	43.8	43.2	42.78
	31	42.4	41.5	41.1	40.7	39.7	39.6	38.9	38.5	38.2	38.4	37.2	37.2	39.45
Hourly Means	41.03	40.58	41.03	41.98	42.62	43.15	42.86	42.75	42.53	41.65	41.41	41.26	41.91	

<sup>a</sup> Christmas Day.

VERTICAL FORCE.														
One Scale Division = '000090 parts of the V. F.      Change in the magnetic moment of the Bar for 1° Fahr. = '00011.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
JANUARY.	1	107·0	108·7	107·9	109·4	110·4	110·4	112·1	112·6	108·2	107·7	108·2	109·4	
	2	105·5	106·2	106·8	106·2	106·7	109·0	109·0	109·1	109·1	—	—	109·5	
	3	—	—	—	—	—	—	—	—	—	116·6	113·9	115·9	
	4	116·4	117·4	114·6 <sup>a</sup>	114·7	115·2	115·2	114·1	113·6	113·6	113·6	113·6	113·7	114·6
	5	113·8	114·7	109·6	109·2	114·6	111·7	111·1	110·7	109·4	108·0	108·3	106·9	110·7
	6	104·6	105·5	101·9	102·2	101·2	100·7	100·1	99·9	98·8	98·0	96·2	96·5	100·5
	7	94·0	94·8	92·5	95·4	95·7	95·0	95·0	95·4	96·4	94·5	94·3	91·4	94·5
	8	93·7	97·6	96·8	98·4	99·2	99·7	99·9	102·2	101·3	99·7	98·5	99·7	98·9
	9	100·1	102·3	100·2	102·0	101·7	100·6	100·2	100·4	99·7	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	103·1	101·8	101·2	101·1
	11	101·1	101·6	100·2	99·2	99·1	98·4	98·4	98·8	98·6	97·1	95·7	97·1	98·8
	12	96·6	98·2	95·9	95·6	94·0	94·4	94·6	94·9	95·2	94·8	86·2	86·0	93·9
	13	88·7	90·2	92·5	95·8	96·8	96·7	97·2	97·0	97·1	93·6	94·9	95·5	94·7
	14	92·4	95·9	95·5	97·5	98·5	99·6	99·9	97·9	102·2	99·0	98·0	88·3	97·1
	15	89·3	91·9	92·5	92·5	95·1	95·1	96·5	95·1	94·6	93·5	90·2	94·5	93·4
	16	92·9	96·2	93·5	92·0	92·2	92·0	90·9	90·3	90·2	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	101·4	100·3	100·0	94·3
	18	103·8	106·5	104·7	105·5	107·0	105·8	106·0	106·0	107·0	107·2	106·3	108·3	106·2
	19	108·7	108·6	106·1	107·0	108·1	107·8	114·8	114·7	113·5	107·8	107·6	105·1	109·1
	20	106·2	106·1	104·8	106·4	110·3	106·2	103·0	101·7	100·2	98·2	96·2	95·8	102·9
	21	94·7	94·4	94·1	93·6	96·0	99·4	95·5	97·7	95·8	95·2	94·2	90·2	95·1
	22	93·8	94·3	93·4	93·3	95·0	95·3	95·1	95·3	94·1	95·0	95·0	95·0	94·5
	23	94·7	94·7	93·8	93·1	92·6	94·7	93·7	94·1	93·6	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	96·2	94·5	94·5	94·2
	25	94·9	95·5	95·2	92·9	93·2	93·3	93·8	94·3	94·4	91·9	94·9	93·8	94·0
	26	93·0	97·5	95·4	95·0	99·5	98·6	97·5	97·0	91·4	93·2	92·6	85·8	94·7
	27	88·8	94·1	90·1	88·9	89·1	94·6	91·8	88·7	93·0	90·8	82·7	86·0	89·9
	28	82·7	90·9	89·4	87·9	86·6	87·5	88·1	88·1	88·4	85·6	85·7	89·6	87·5
	29	89·7	92·1	91·4	91·1	91·4	92·6	91·9	93·3	92·0	92·0	92·1	92·6	91·8
	30	91·8	93·1	90·6	91·3	93·3	93·1	92·7	92·5	92·5	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	95·7	95·6	94·4	93·0
Hourly Means	97·65	99·58	98·05	98·31	99·33	99·51	99·28	99·25	99·03	98·80	97·58	97·15		
FEBRUARY.	1	93·1	100·7	99·5	97·9	100·0	98·9	98·8	98·5	98·9	99·2	99·8	99·2	98·7
	2	98·9	100·3	98·4	99·2	99·1	98·9	99·0	99·9	97·9	96·0	95·9	96·5	98·3
	3	97·1	99·1	97·0	96·2	96·6	97·1	97·8	97·3	96·8	97·1	97·0	99·0	97·3
	4	99·4	99·6	95·9	95·1	95·3	92·3	93·5	94·1	95·3	95·0	93·3	96·8	95·5
	5	95·3	96·7	95·0	93·2	93·7	92·9	92·2	89·7	92·1	91·6	91·6	91·6	93·0
	6	90·9	92·1	90·7	— <sup>b</sup>	—	—	102·2	112·5	112·5	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	119·5	119·3	122·4	—
	8	124·5	130·2	124·4	124·7	122·9	122·1	123·4	123·2	122·5	122·9	123·6	109·5	122·8
	9	108·3	108·0	118·1	120·9	123·8	128·1	124·1	121·9	120·9	120·8	122·7	123·3	120·1
	10	122·9	125·1	121·1	123·9	124·2	124·6	124·9	126·5	125·9	127·4	127·3	128·9	125·2
	11	129·2	130·4	127·9	127·3	131·4	128·6	128·9	134·8	132·9	130·8	127·2	124·2	129·5
	12	128·5	132·0	130·1	130·8	130·7	131·9	131·8	131·4	131·3	128·1	127·1	129·7	130·3
	13	131·4	133·7	131·0	128·7	128·3	127·5	127·4	129·3	129·4	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	134·9	133·0	133·7	130·7
	15	132·5	127·5	127·4	128·4	131·3	135·9	132·2	125·5	131·5	125·6	126·0	121·1	128·7
	16	124·4	129·5	126·7	125·3	127·0	127·3	128·2	128·2	124·5	119·2	113·0	120·2	124·5
	17	120·1	120·3	120·9	119·9	120·2	119·9	119·7	121·6	121·9	121·3	121·3	122·7	120·8
	18	123·6	125·7	124·7	122·9	122·7	123·0	123·0	122·5	120·7	119·5	120·7	120·3	122·4
	19	120·3	120·1	122·5	— <sup>b</sup>	111·3	113·5	112·5	116·6	114·4	114·2	111·6	113·7	—
	20	116·0	114·9	113·2	110·6	111·7	108·8	108·4	108·9	110·0	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	109·8	111·5	111·5	111·3
	22	109·3	111·8	110·4	110·4	110·6	109·8	119·5	112·4	115·6	111·8	110·9	110·9	111·9
	23	107·4	109·6	109·0	118·8	122·4	125·7	119·8	128·6	118·4	111·6	115·9	119·8	117·3
	24	118·5	121·1	119·4	121·2	119·1	119·0	119·2	116·1	117·0	115·1	108·3	115·0	117·4
	25	115·1	116·5	113·8	114·4	114·8	113·5	113·4	111·8	111·8	111·8	107·1	111·9	113·0
	26	102·0	103·6	103·1	108·1	110·2	109·2	106·7	110·9	103·2	105·1	100·6	98·8	105·1
	27	127·9	145·3	149·8	151·0	151·2	150·1	152·5	152·5	154·7	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	161·5	160·5	160·7	—
Hourly Means <sup>c</sup>	114·17	116·01	114·62	115·14	116·00	115·95	115·80	115·86	115·17	114·03	113·04	113·55		

<sup>a</sup> Eight minutes late.

<sup>b</sup> Magnet re-adjusted; connexion broken.

<sup>c</sup> The observations of the 6th, 7th, and 19th February are omitted in the hourly means on account of the breaks in the connexion of the series; those of the 27th and 28th are also omitted on account of their great irregularity.

VERTICAL FORCE.  
Temperature of the Vertical Force Magnet.

Mean Göttingen Time.	0h.	2h.	4h.	6h.	8h.	10h.	12h.	14h.	16h.	18h.	20h.	22h.	Means.	
JANUARY.	1	37.3	36.0	35.8	35.6	35.6	35.8	35.9	35.9	35.4	35.5	36.0	35.8	35.9
	2	35.7	35.7	35.4	36.8	37.4	36.8	36.8	36.2	35.8	—	—	—	34.4
	3	—	—	—	—	—	—	—	—	—	29.0	28.5	28.5	30.1
	4	28.5	27.9	29.0	29.5	30.0	31.0	31.0	31.0	30.6	30.8	30.8	30.6	31.8
	5	30.3	29.7	29.4	29.8	30.6	31.6	32.0	32.8	32.8	33.7	34.6	34.6	39.3
	6	35.7	35.9	36.7	37.7	38.7	39.6	40.4	41.0	41.4	40.6	42.2	42.2	43.4
	7	42.2	42.8	43.0	42.2	43.4	44.4	44.5	44.5	44.2	43.8	43.2	42.5	39.8
	8	41.6	40.9	40.2	39.6	40.4	40.0	40.0	39.8	39.3	39.0	38.4	38.0	38.1
	9	38.0	37.4	37.4	37.6	38.0	39.5	39.6	39.2	39.3	—	—	—	39.7
	10	—	—	—	—	—	—	—	—	—	37.2	37.0	37.5	42.4
	11	37.8	38.2	38.4	39.0	39.6	40.2	40.4	40.2	40.4	40.7	40.6	40.6	41.7
	12	41.1	41.1	41.4	42.5	43.2	43.0	43.0	43.0	43.0	42.4	42.5	42.5	41.5
	13	42.0	41.5	41.8	41.6	42.1	41.6	41.8	41.8	41.6	41.6	41.5	41.3	43.6
	14	41.5	41.2	40.8	41.2	41.2	41.4	41.5	41.5	41.5	41.8	42.0	42.2	42.3
	15	42.2	42.4	43.0	43.5	44.0	44.5	44.8	45.2	44.3	43.5	43.0	43.0	41.9
	16	43.2	42.8	43.4	44.5	44.7	45.0	45.3	46.0	46.0	—	—	—	41.6
	17	—	—	—	—	—	—	—	—	—	36.6	35.2	34.4	31.9
	18	33.8	33.4	33.4	32.2	32.4	32.6	32.5	31.8	30.5	30.4	30.5	29.0	31.8
	19	29.6	29.0	30.2	30.4	31.0	32.3	33.4	33.5	33.2	33.0	33.0	32.7	36.2
	20	32.5	32.3	32.4	33.4	34.4	35.3	37.0	38.0	39.0	39.0	40.2	40.4	42.3
	21	41.8	41.6	41.5	41.8	42.4	42.6	42.6	43.2	42.9	42.4	42.2	42.2	41.6
	22	42.5	42.3	41.8	41.8	42.0	42.2	42.0	41.8	42.0	41.2	41.5	41.2	41.5
	23	41.5	41.5	41.5	42.0	42.6	42.5	42.5	42.4	42.5	—	—	—	41.6
	24	—	—	—	—	—	—	—	—	—	40.2	40.2	40.0	41.6
	25	40.6	40.2	40.4	41.2	42.0	42.0	42.2	42.0	41.8	42.6	42.5	41.8	41.5
	26	40.8	40.2	40.2	41.0	41.2	41.5	41.5	41.5	42.0	42.2	42.8	43.4	45.2
	27	43.8	43.8	44.6	45.4	45.5	46.0	46.2	46.6	45.5	45.0	45.0	44.7	44.9
	28	44.8	44.0	44.8	46.0	46.4	46.2	46.4	45.6	45.3	44.0	43.0	42.2	43.1
	29	42.5	42.4	42.0	42.5	43.6	43.8	44.2	43.6	43.7	43.5	43.5	42.5	42.3
	30	43.2	42.3	42.5	42.6	43.2	43.5	43.5	43.0	42.5	—	—	—	42.3
	31	—	—	—	—	—	—	—	—	—	41.4	40.5	40.0	—
Hourly Means	39.02	38.71	38.88	39.28	39.83	40.19	40.42	40.43	40.25	39.27	39.25	38.99	—	
FEBRUARY.	1	39.5	38.5	37.7	38.0	38.0	37.8	37.7	37.0	37.2	37.0	36.6	36.8	37.6
	2	37.0	35.8	36.2	37.0	37.2	37.5	38.0	38.5	39.0	39.6	39.5	38.8	37.8
	3	38.5	37.3	37.4	37.5	37.6	37.7	37.5	37.8	38.0	37.2	36.8	36.0	37.4
	4	36.0	35.5	37.0	38.2	39.2	40.5	40.5	40.5	40.0	40.0	39.6	38.5	38.8
	5	39.1	38.7	39.4	40.4	41.0	41.5	41.8	42.2	42.3	42.5	42.5	42.5	41.2
	6	43.0	42.3	42.5	—	—	—	47.2	45.9	45.3	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	40.5	40.0	39.8	—
	8	39.1	38.0	38.6	40.0	41.2	42.0	42.0	42.0	41.5	41.0	40.5	41.2	40.6
	9	41.6	40.8	41.5	42.0	42.4	42.5	42.8	42.2	42.0	42.0	41.0	40.5	41.8
	10	40.5	39.6	40.0	40.0	40.0	40.2	39.5	38.2	37.5	37.0	36.0	35.4	38.7
	11	34.8	33.8	34.9	35.5	35.7	36.7	37.2	36.4	35.2	34.6	34.2	33.7	35.2
	12	33.0	32.0	32.5	33.6	34.7	35.0	34.8	34.5	34.4	35.2	33.6	33.1	33.9
	13	32.5	32.0	32.5	33.5	35.2	36.2	36.2	35.9	35.5	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	31.5	31.0	30.8	33.6
	15	30.5	30.4	31.3	32.6	34.4	36.0	37.2	36.8	37.2	36.4	36.0	35.8	34.5
	16	36.0	35.3	35.7	37.4	38.0	38.5	38.8	39.3	40.2	41.0	41.5	41.5	38.6
	17	42.0	41.5	41.6	41.8	42.0	43.0	42.8	42.6	42.3	41.4	40.2	39.5	41.7
	18	39.2	38.6	38.6	39.0	39.2	39.6	40.2	40.5	40.6	41.2	41.0	41.2	39.9
	19	41.3	41.5	42.0	42.5	43.2	43.0	43.0	41.8	41.5	41.0	40.2	40.4	—
	20	39.5	39.5	41.0	41.6	42.6	44.2	45.4	44.6	44.8	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	44.5	43.5	43.3	42.9
	22	44.3	43.3	44.2	44.4	44.5	45.5	45.6	45.4	45.6	46.0	45.6	45.6	45.0
	23	45.5	43.7	42.7	41.8	40.7	41.0	41.6	40.6	41.8	39.0	39.0	38.0	41.3
	24	37.8	36.9	37.8	38.2	39.4	40.6	41.6	41.4	40.6	41.0	40.5	39.7	39.6
	25	40.0	39.0	40.0	41.2	42.0	43.6	44.0	43.6	44.2	43.8	44.0	43.2	42.4
	26	43.2	42.0	44.7	44.6	44.8	45.6	48.0	48.2	49.0	49.0	49.2	48.7	46.4
	27	48.5	47.2	46.4	48.0	48.5	49.5	48.8	48.2	47.6	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	40.6	40.2	40.6	—
Hourly Means <sup>a</sup>	38.6	37.7	38.3	39.0	39.5	40.2	40.6	40.4	40.4	40.0	39.6	39.2	—	

<sup>a</sup> The observations of the 6th, 7th, 19th, 27th, and 28th, are omitted in the hourly means.

VERTICAL FORCE.														
One Scale Division = '00009 parts of the V. F. Change of the magnetic moment of the Bar for 1° Fah. = '000108.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
MARCH.	1	159·7	159·7	159·7	159·0	158·8	107·4 <sup>a</sup>	106·3	107·2	108·3	108·0	108·2	110·7	
	2	110·5	110·5	107·3	106·2	105·9	105·7	106·5	107·2	108·2	108·4	110·6	111·8	
	3	111·1	112·2	109·7	107·0	106·5	105·3	106·8	109·5	109·4	107·2	107·2	104·6	108·1
	4	107·3	109·6	108·6	106·7	105·4	106·0	107·0	106·5	111·5	113·0	113·2	113·2	109·0
	5	114·1 <sup>b</sup>	114·7	112·1	111·3	111·3	111·0	112·0	112·3	112·9	112·9	112·7	112·7	112·5
	6	111·3	112·0	111·3	112·4	112·0	111·8	111·5	111·7	112·7	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	110·3	110·2	109·8	111·4
	8	110·0	110·0	107·4	107·0	106·2	105·9	105·7	106·5	107·3	106·1	106·3	106·3	106·2
	9	108·2	108·1	103·6	102·5	102·5	101·5	101·5	104·1	104·0	104·1	104·5	104·5	104·1
	10	105·2	107·0	102·8	100·8	100·7	101·2	101·2	102·5	104·8	105·6	105·2	106·3	103·6
	11	107·6	108·6	104·0	102·9	104·0	103·9	102·9	105·2	104·4	105·7	104·0	104·3	104·8
	12	108·4	108·3	102·7	101·9	102·1	105·0	105·6	105·6	105·3	105·3	105·3	104·9	105·0
	13	104·9	105·0	103·9	101·5	103·8	101·3	101·6	102·1	102·8	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	94·2	98·9	99·1	101·6
	15	112·4	116·9	111·7	115·3	111·8	112·0	115·3	114·3	109·2	101·1	100·9	107·6	110·7
	16	112·3	111·9	110·2	110·7	— <sup>c</sup>	—	—	—	104·1	101·3	103·3	102·3	—
	17	100·1	102·2	100·9	98·9	96·4	95·9	96·5	98·4	97·8	97·7	98·8	98·0	98·5
	18	100·7	100·4	96·6	93·9	95·2	94·4	92·4	92·3	92·3	92·3	92·3	92·5	94·6
	19	92·7	89·2	85·1	85·2	85·0	83·0	85·8	87·0	86·1	84·4	72·5	78·8	84·6
	20	80·3	84·3	81·4	79·9	79·4	81·7	82·0	83·5	85·4	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	92·0	86·4	94·6	84·2
	22	93·8	93·8	93·4	98·0	97·1	108·2	102·2	98·2	91·2	90·3	67·2	81·6	92·9
	23	87·3	86·7	88·9	89·0	90·3	90·2	92·4	90·7	88·8	89·9	84·9	90·5 <sup>d</sup>	89·1
	24	86·5	86·6	82·6	81·7	83·8	87·2	93·1	90·1	81·1	79·6	76·4	76·4	83·8
	25	79·3	82·4	82·7	81·9	82·3	83·6	84·0	83·1	88·1	83·2	79·2	82·1	82·7
	26	81·6	84·9	83·1	81·0	79·6	79·5	76·6	75·9	74·7	78·0	76·4	78·1	79·1
	27	80·1	81·8	80·8	80·4	81·2	81·7	81·1	81·5	81·4	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	85·6	86·7	86·7	82·4
	29	85·3	89·0	88·4	88·5	90·0	92·3	93·0	100·7	94·7	86·5	—	—	—
	30	88·0	90·6	87·8	88·8	88·9	88·2	88·1	88·1	90·5	90·4	94·3	93·8	89·8
	31	93·0	93·1	88·3	85·1	86·1	87·1	88·5	88·5	88·5	88·2	87·4	88·3	88·5
Hourly Means <sup>e</sup>	98·93	99·95	97·36	96·64	96·56	97·14	97·51	97·70	97·43	96·81	95·06	96·94	—	
APRIL.	1	86·9	87·3	82·2	80·7	80·8	81·2	80·9	81·2	82·3	82·6	83·0	83·0	82·7
	2	84·0	85·4	83·6	81·9	83·3	82·8	82·8	84·6	84·0	79·8	89·1	86·9	84·0
	3	78·8	80·5	81·2	82·1	85·3	83·2	85·1	83·0	82·8	—	—	—	83·6
	4	—	—	—	—	—	—	—	—	—	86·9	87·3	87·3	—
	5	86·6	85·8	83·1	83·4	82·7	83·5	83·4	83·4	83·9	85·0	85·2	85·3	84·3
	6	85·0	85·3	82·6	81·9	81·5	81·3	79·5	80·5	82·4	82·4	82·5	84·3	82·4
	7	84·1	85·3	82·1	81·0	81·0	81·0	80·6	80·7	82·0	78·9	83·0	71·1	80·9
	8	76·3	77·2	76·1	76·9	81·4	81·1	80·0	80·5	80·6	—	—	—	—
	9 <sup>f</sup>	—	—	—	—	—	—	—	—	—	87·7	86·0	89·5	81·1
	10	89·1	89·5	85·1	84·1	84·9	84·0	85·2	85·6	85·9	—	—	—	—
	11	—	—	—	—	—	—	—	—	—	92·0	91·6	88·7	87·1
	12	90·7	91·6	90·3	86·9	86·9	88·0	90·7	88·7	87·7	87·5	87·5	87·5	88·7
	13	84·0	85·0	82·3	82·3	81·1	81·0	81·3	81·1	81·9	81·5	82·8	84·7	82·4
	14	83·7	84·7	83·4	82·9	84·2	86·5	85·5	86·3	84·0	86·3	86·6	87·9	85·2
	15	88·9	86·4	82·6	80·4	83·2	81·8	81·2	81·9	83·4	84·0	84·1	85·4	83·6
	16	84·5	84·2	81·8	79·6	79·4	78·8	82·0	82·1	80·4	79·8	79·7	79·7	81·0
	17	79·0	78·5	75·8	73·9	74·8	74·1	102·4	73·6	68·9	—	—	—	—
	18	—	—	—	—	—	—	—	—	—	84·7	79·8	85·0	81·7
	19	86·6	87·0	85·1	85·1	83·1	86·1	91·5	86·2	86·4	81·3	79·5	67·1	83·7
	20	75·9	83·5	84·4	87·8	91·1	93·8	92·7	87·0	86·5	71·6	96·5	84·0	85·4
	21	84·0	84·7	81·9	81·3	81·2	80·9	81·3	79·8	71·8	76·5	77·8	77·6	79·9
	22	82·6	79·9	76·7	76·5	78·5	76·4	77·5	72·5	76·1	72·1	77·3	77·1	76·9
	23	79·0	78·3	75·5	72·2	72·2	74·0	73·7	74·0	74·0	73·3	73·3	74·1 <sup>g</sup>	74·5
	24	73·0	73·7	72·2	70·3	70·3	71·8	74·2	73·3	72·6	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	66·8	69·6	72·0	71·7
	26	72·9	70·9	71·0	70·9	72·4	72·2	72·3	74·6 <sup>h</sup>	74·6	74·4	69·2	69·2	72·1
	27	77·1	75·1	74·4	74·7	74·7	75·1	75·4	74·6	75·3	76·9	77·2	78·4	75·7
	28	79·9	77·2	75·4	75·5	75·5	75·3	74·2	74·7	75·5	72·8	75·8	76·7	75·7
	29	76·9	77·4	76·8	78·4	79·8	81·3	81·6	82·0	80·8	80·8	71·8	79·5	78·9
	30	77·7	76·4	74·6	74·6	76·0	75·6	75·6	76·1	75·7	72·2	76·2	71·6	75·2
Hourly Means	81·9	82·0	80·0	79·4	80·2	80·4	82·0	80·3	80·0	79·9	80·9	80·5	—	

<sup>a</sup> Magnet readjusted; connexion broken.

<sup>b</sup> Ten minutes late.

<sup>c</sup> Magnet readjusted; connexion broken.

<sup>d</sup> Two minutes late.

<sup>e</sup> The observations of the 1st and 16th are omitted in the hourly means, as well as those of the 29th, on account of their being incomplete.

<sup>f</sup> Good Friday.

<sup>g</sup> Fifteen minutes late.

<sup>h</sup> Seven minutes late.

VERTICAL FORCE.  
Temperature of the Vertical Force Magnet.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
MARCH.	1	41.5	40.5	41.0	42.0	43.2	44.0	43.4	43.2	42.2	40.7	40.1	39.5	—
	2	38.8	38.5	39.4	39.8	40.8	42.0	42.6	42.2	41.5	40.6	39.4	38.5	40.3
	3	38.0	37.5	37.8	39.4	41.8	42.4	43.0	42.5	42.0	41.8	41.2	40.5	40.7
	4	40.5	39.5	39.7	41.0	41.2	41.8	41.6	40.5	39.4	37.5	37.0	36.2	39.7
	5	35.0	34.8	35.5	36.6	37.3	37.7	37.8	37.5	36.8	36.6	36.5	36.4	36.5
	6	36.5	36.3	36.5	37.0	37.6	37.8	38.5	38.5	38.0	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	38.5	38.5	39.0	37.7
	8	39.1	38.9	39.6	40.5	41.6	42.2	42.5	41.8	41.2	41.2	40.7	40.5	40.8
	9	40.3	40.5	42.0	43.0	43.6	44.4	44.6	43.8	44.0	43.2	42.4	42.2	42.8
	10	42.0	41.0	43.0	43.8	44.6	45.5	45.5	44.6	43.6	42.5	41.5	40.5	43.2
	11	39.7	38.9	40.8	41.8	42.6	43.6	44.6	44.2	43.2	42.0	41.0	39.2	41.8
	12	39.6	39.4	41.8	43.0	43.4	43.0	42.6	42.1	42.2	42.2	42.0	42.2	41.9
	13	42.5	42.2	42.7	44.3	44.5	45.0	44.6	44.6	44.2	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	35.5	35.5	35.0	41.7
	15	33.2	34.0	36.2	38.5	40.0	40.6	40.0	39.5	39.0	38.2	37.4	38.2	37.9
	16	37.3	37.0	38.6	40.5	—	—	—	—	41.6	39.5	38.5	37.2	—
	17	36.5	36.5	38.6	40.6	42.6	43.7	44.8	43.8	42.5	40.4	39.0	38.0	40.6
	18	38.0	39.0	40.5	42.5	44.2	45.6	47.0	46.2	45.4	45.0	44.6	44.6	43.9
	19	45.0	45.5	47.5	48.7	50.0	51.4	51.5	51.6	51.0	50.0	50.2	50.2	49.4
	20	50.0	49.5	50.8	52.4	53.5	54.8	55.8	54.6	53.4	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	44.5	44.2	44.2	50.6
	22	44.3	43.2	43.0	44.1	44.5	44.8	45.0	44.8	44.7	44.6	45.0	44.5	44.4
	23	46.0	46.0	46.2	47.0	47.3	48.3	49.0	48.7	48.5	48.4	47.6	47.0	47.5
	24	46.9	48.6	50.0	50.5	50.8	52.4	53.5	54.2	55.0	54.0	54.0	53.5	51.9
	25	53.6	52.3	51.7	51.8	51.8	51.6	51.5	51.8	51.0	50.5	51.0	50.5	51.6
	26	51.1	49.7	50.2	52.0	53.5	55.5	56.8	56.8	55.8	55.2	54.0	53.0	53.6
	27	53.0	52.0	52.2	52.2	52.4	52.2	52.3	51.5	51.4	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	49.0	48.0	47.5	51.1
	29	46.5	45.6	45.4	44.6	44.5	44.8	45.5	45.5	45.0	44.4	—	—	—
	30	44.0	44.0	44.8	45.5	46.0	47.0	47.5	47.2	45.5	44.2	42.6	42.2	45.0
	31	42.0	42.0	44.1	45.2	46.0	46.8	46.3	46.0	46.0	45.5	46.0	46.0	45.2
Hourly Means <sup>a</sup>	42.4	42.1	43.1	44.2	45.0	45.8	46.1	45.7	45.2	43.4	43.3	42.9	—	
APRIL.	1	46.5	46.0	48.2	49.2	50.0	51.0	51.5	51.0	50.5	49.6	49.2	48.6	49.3
	2	48.8	47.9	48.5	49.5	49.6	50.2	50.0	48.8	47.8	46.5	46.2	45.2	48.2
	3	44.7	45.7	47.2	48.1	49.0	50.0	51.2	50.6	50.6	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	45.5	45.4	45.2	47.8
	5	45.6	46.3	47.5	47.5	48.2	48.5	48.7	48.3	47.8	47.2	46.6	46.5	47.4
	6	47.0	46.9	48.2	48.6	49.0	50.0	50.6	50.2	49.5	49.2	48.5	48.0	48.8
	7	47.6	47.2	47.5	48.2	49.4	50.0	50.5	50.5	49.6	49.5	48.5	47.5	48.8
	8	47.5	49.3	50.4	51.4	51.5	51.8	52.1	51.6	51.1	—	—	—	—
	9 <sup>b</sup>	—	—	—	—	—	—	—	—	—	44.6	43.8	43.2	49.0
	10	43.4	43.6	45.0	46.0	46.2	46.5	47.5	46.5	45.8	—	—	—	—
	11	—	—	—	—	—	—	—	—	—	40.8	40.5	40.2	44.3
	12	40.5	40.7	41.5	43.0	44.5	45.5	46.0	45.7	45.5	45.5	45.0	44.9	44.0
	13	45.9	45.0	45.5	47.0	48.2	49.6	50.3	49.6	49.5	49.2	48.5	47.6	48.0
	14	47.7	47.7	47.3	47.5	47.5	48.0	48.0	47.5	46.7	46.0	46.0	45.0	47.1
	15	44.4	45.8	48.2	48.5	48.5	49.5	50.0	49.5	49.0	48.4	47.6	47.2	48.1
	16	46.8	46.8	47.7	49.5	50.4	51.8	52.0	51.6	51.5	51.5	51.2	51.4	50.2
	17	51.6	52.0	52.5	53.7	55.0	56.5	57.0	58.6	58.2	—	—	—	—
	18	—	—	—	—	—	—	—	—	—	45.0	44.5	44.2	52.4
	19	44.8	44.7	45.0	46.5	48.0	49.5	50.0	49.8	49.2	47.8	48.2	47.0	47.5
	20	47.5	46.5	46.1	46.2	46.8	47.0	46.6	47.2	46.5	45.7	45.7	44.7	46.4
	21	45.3	46.0	47.6	49.0	50.0	51.7	53.0	54.1	52.8	52.0	50.7	49.5	50.1
	22	48.7	50.6	52.5	43.0	54.0	55.5	56.5	55.5	55.0	53.5	52.4	51.6	52.4
	23	51.7	52.5	53.8	55.0	56.2	56.5	56.8	56.5	56.5	56.0	55.4	54.5	55.1
	24	54.5	54.3	55.5	56.8	58.2	58.7	59.5	58.8	58.5	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	59.5	59.5	58.8	57.7
	26	58.0	58.5	58.3	58.7	58.8	59.2	59.8	59.5	58.2	57.8	55.9	55.5	58.2
	27	54.0	54.0	53.4	53.5	53.4	54.6	55.8	55.5	54.5	54.0	52.5	51.7	53.9
	28	51.5	52.4	54.0	55.0	56.0	57.2	57.6	57.3	56.6	55.0	54.0	53.2	55.0
	29	52.5	52.1	51.7	51.2	52.0	51.5	51.4	51.2	51.2	51.3	52.2	51.7	51.7
	30	51.8	51.6	52.4	53.2	54.2	55.0	54.8	54.5	53.8	54.0	53.4	52.7	53.4
Hourly Means	48.3	48.6	49.4	49.8	51.0	51.8	52.3	52.0	51.4	49.8	49.3	48.6	—	

<sup>a</sup> The observations of the 1st, 16th, and 29th, are omitted in the hourly means.

<sup>b</sup> Good Friday.

VERTICAL FORCE.														
One Scale Division = '000092 parts of the V. F.      Change of the magnetic moment of the Bar for 1° Fah. = '000108.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
MAY.	1	73·4	75·8	75·4	75·3	75·5	75·2	74·1	74·7	75·7	—	—	—	
	2	—	—	—	—	—	—	—	—	86·8	86·3	87·1	77·9	
	3	86·4	86·4	85·6	84·3	85·4	84·8	82·9	84·2	84·0	84·5	85·6	84·9	84·9
	4	84·5	79·2	78·7	80·3	80·5	79·5	78·9	80·0	80·7	79·8	82·0	81·8	80·5
	5	84·1	81·2	78·0	77·2	76·8	77·8	81·0	76·3	82·2	81·9	80·4	67·3	78·7
	6	76·0	79·2	78·3	78·3	80·2	88·5	85·5	80·9	80·0	80·4	81·2	80·4	80·7
	7	82·5	80·5	79·1	77·9	74·8	75·4	76·2	76·4	77·9	77·7	77·7	78·8	77·9
	8	81·4	78·8	74·2	72·7	71·9	71·9	74·1	79·2	75·5	—	—	—	—
	9	—	—	—	—	—	—	—	—	—	64·5	59·2	57·5	71·7
	10	49·0 <sup>a</sup>	65·3	76·5	92·6	92·4	90·2	91·6	86·0	80·9	79·5	79·0	78·8	80·2
	11	78·1	75·8	73·8	72·6	71·1	69·8	69·0	69·4	70·0	71·1	71·0	72·6	72·0
	12	69·6	66·4	66·1	65·8	68·5	71·2	71·1	71·1	71·0	67·4	67·3	75·0	69·2
	13	76·7	75·5	73·9	75·6	75·4	75·6	74·9	72·9	74·5	71·3	79·9	78·0	75·4
	14	77·9	75·0	71·7	72·9	76·5	77·6	75·8	74·5	74·1	75·6 <sup>b</sup>	77·4	82·3	75·9
	15	79·8	76·2	73·8	74·6	74·0	72·8	71·7	72·8	73·8	—	—	—	—
	16	—	—	—	—	—	—	—	—	—	68·1	69·0	60·8	72·3
	17	64·9	63·0	63·4	69·8	75·3	74·4	67·7	67·7	70·3	71·0	70·6	71·1	69·1
	18	69·3	68·8	66·9	68·7	72·4	72·4	72·3	70·2	66·3	69·3	71·3	71·5	69·9
	19	74·4	70·5	68·0	68·0	68·1	69·7	69·7	63·6	67·9	70·1	71·2	73·5	69·6
	20	71·4	70·1	66·2	67·2	67·9	65·9	65·5	65·4	65·4	65·6	62·8	63·3	66·4
	21	65·3	67·2	64·7	65·7	65·1	73·7	71·7	68·8	67·2	64·0	62·1	66·7	66·9
	22	68·5	66·2	63·4	61·8	64·1	63·7	63·8	63·9	64·8	—	—	—	—
	23	—	—	—	—	—	—	—	—	—	58·3	59·5	60·3	63·2
	24	61·4	59·1	54·6	52·4	53·9	54·5	54·6	54·7	54·6	53·4	56·1	59·1	55·7
	25	59·0	57·4	54·8	51·8	51·4	54·1	54·0	55·5	56·2	55·1	55·4	59·4	55·3
	26	60·2	56·1	55·5	53·7	— <sup>c</sup>	98·5	100·8	99·6	101·2	101·2	97·7	94·9	—
	27	100·2	96·2	96·5	99·3	102·5	104·1	101·6	97·0	95·6	94·2	101·9	102·2	99·3
	28	104·6	101·8	99·4	98·7	97·5	99·1	100·4	96·2	95·9	96·2	98·8	100·0	99·1
	29	101·0	99·0	97·1	95·7	99·1	101·4	101·1	100·1	101·3	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	106·7	106·7	110·7	101·7
	31	111·5	110·2	107·8	107·6	106·5	104·8	105·5	105·3	105·2	105·2	105·6	107·6	106·9
Hourly Means	79·2	77·5	75·5	75·6	76·4	77·4	76·8	75·9	76·2	76·4	77·4	79·0	—	
JUNE.	1	107·2	105·1	102·6	100·2	101·6	102·3	102·6	102·3	100·5	100·8	101·8	105·4	102·7
	2	106·7	104·3	100·6	100·2	97·8	101·5	101·4	99·2	99·2	102·8	102·6	103·1 <sup>d</sup>	101·6
	3	104·8	102·8	99·1	101·1	101·6	105·7	105·6	103·3	100·7	104·6	104·6	103·9	103·1
	4	104·4	103·1	102·3	101·1	101·1	100·9	103·9	100·0	99·0	99·5	99·5	103·7	101·1
	5	101·7	101·1	93·9	94·3	94·2	94·8	94·6	94·3	93·8	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	94·4	94·1	97·3	95·7
	7	95·1	94·9	92·9	91·0	91·0	90·8	90·6	89·9	91·4	90·5	91·1	93·4	91·9
	8	92·0	90·5	88·4	87·1	84·2	85·7	87·8	87·8	86·4	86·8	85·2	89·0	87·6
	9	90·3	87·5	85·0	86·6	87·2	90·2	90·8	88·1	89·0	82·8	91·9	93·9	88·6
	10	93·9	96·6	95·1	92·3	92·5	93·3	92·7	88·2	89·0	87·5	88·2	87·8	91·4
	11	92·2	91·2	87·4	85·9	86·7	86·7	86·7	87·0	88·6	91·2	90·9	92·2	88·9
	12	95·5	95·1	93·0	93·3	94·8	96·7	96·2	97·7	97·8	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	96·2	98·2	98·9	96·1
	14	99·1	96·8	95·4	94·0	95·2	95·2	95·9	95·8	94·8	96·7	98·7	99·4	96·4
	15	98·6	98·7	96·8	94·8	98·7	105·7	105·9	105·7	101·2	98·0	99·3	104·1	100·6
	16	101·5	102·4	98·6	96·3	98·9	98·7	96·6	96·4	97·2	97·2	99·3	98·6	98·5
	17	102·5	100·9	98·9	97·0	99·6	101·8	103·1	100·8	91·4	96·3	96·7	100·6	99·1
	18	103·0	101·3	102·5	103·0	101·9	101·5	102·9	99·0	99·1	100·0	100·0	100·0	101·2
	19	101·7	101·3	96·4	96·3	96·0	95·5	95·6	95·4	96·3	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	98·4	99·2	100·6	97·7
	21	97·8	99·5	96·0	91·2	89·6	91·4	91·8	91·7	92·5	86·8	92·0	93·8	93·7
	22	92·6	92·8	89·7	87·5	89·7	90·6	90·3	93·5	90·4	87·7	87·9	89·8	90·2
	23	88·5	89·6	87·1	85·9	85·7	87·3	87·9	87·9	86·0	79·6	75·8	85·5	85·6
	24	85·9	88·5	88·3	87·4	87·2	88·7	89·9	90·9	90·2	86·1	86·0	79·8	87·4
	25	89·7	91·4	90·6	89·0	86·5	94·4	90·5	90·9	88·5	91·5	91·6	92·1	90·6
	26	94·0	92·9	89·9	87·5	86·7	88·4	89·5	87·4	87·9	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	88·0	87·8	86·9	88·9
	28	85·5	85·6	83·7	82·3	81·8	81·9	83·5	81·7	83·6	84·1	84·5	84·9	83·6
	29	84·5	84·1	81·7	79·9	81·0	80·1	81·6	81·5	80·7	72·6	79·2	71·6	79·9
	30	81·2	82·8	81·2	79·9	80·0	80·0	81·2	81·3	80·9	79·3	77·9	81·9	80·6
Hourly Means	95·8	95·4	93·0	91·7	92·0	93·4	93·8	93·0	92·2	91·5	92·5	93·8	—	

<sup>a</sup> Four minutes late.

<sup>b</sup> Two minutes late.

<sup>c</sup> The observations of 26th May are omitted in the hourly means in consequence of the magnet being readjusted on that day; the observations of 10th May are also omitted in the hourly means in consequence of excessive disturbance.

<sup>d</sup> Two minutes late.



VERTICAL FORCE.														
Temperature of the Vertical Force Magnet.														
Mean Gottingen Time.	0h.	2h.	4h.	6h.	8h.	10h.	12h.	14h.	16h.	18h.	20h.	22h.	Means.	
MAY.	1	53.0	52.5	52.6	53.4	54.0	54.8	55.9	55.4	54.0	—	—	—	
	2	—	—	—	—	—	—	—	—	—	45.3	45.0	44.6	
	3	45.0	44.5	44.4	45.2	45.6	47.0	48.0	47.4	46.6	46.5	45.6	45.0	
	4	45.5	47.2	48.0	48.5	50.0	51.6	52.5	51.6	51.0	50.6	49.2	48.5	49.5
	5	47.9	49.4	50.5	51.3	52.2	53.0	52.8	52.5	52.2	52.0	51.6	51.5	51.4
	6	51.3	50.4	50.6	51.4	52.2	53.2	53.0	52.6	52.4	52.0	51.5	51.2	51.8
	7	51.0	51.6	52.7	53.8	54.3	55.0	54.8	54.5	54.5	53.6	52.4	51.5	53.3
	8	50.5	52.3	53.7	54.5	56.0	57.2	57.6	57.6	56.8	—	—	—	—
	9	—	—	—	—	—	—	—	—	—	54.0	53.6	53.5	54.8
	10	53.3	53.3	53.5	54.5	54.2	54.2	54.3	54.7	55.0	54.6	54.5	54.5	—
	11	54.8	55.3	56.4	57.3	58.5	59.8	60.2	60.0	59.5	58.8	58.5	58.0	58.1
	12	57.7	58.7	59.6	60.0	60.0	59.8	59.5	58.8	57.5	57.0	56.2	55.0	58.3
	13	54.6	54.0	54.0	54.5	55.0	55.6	55.5	55.5	55.3	55.0	54.2	53.2	54.7
	14	52.7	54.2	55.0	55.3	56.0	56.3	56.5	56.2	55.4	53.2	53.0	52.0	54.6
	15	51.2	52.8	53.4	53.8	54.6	56.3	57.2	57.0	56.0	—	—	—	—
	16	—	—	—	—	—	—	—	—	—	55.8	55.2	55.2	54.9
	17	55.3	57.2	58.0	58.0	59.2	60.0	60.4	60.6	59.4	58.5	57.2	56.2	58.3
	18	55.6	56.6	57.6	58.2	58.5	59.6	60.8	60.2	59.4	58.4	57.0	56.5	58.2
	19	55.8	57.5	58.5	58.8	59.0	59.6	60.4	61.0	59.5	58.5	57.6	56.4	58.6
	20	55.8	57.1	58.0	59.0	60.0	61.0	61.8	62.2	61.9	60.7	60.2	59.5	59.8
	21	58.6	58.5	58.8	59.8	60.0	60.3	61.5	61.5	61.2	60.8	60.6	60.0	60.1
	22	59.7	59.7	61.0	62.0	62.6	63.2	63.8	64.0	63.4	—	—	—	—
	23	—	—	—	—	—	—	—	—	—	67.0	66.0	65.5	63.1
	24	65.0	66.0	67.0	67.8	69.0	69.8	70.2	69.8	69.2	68.2	67.4	66.4	68.0
	25	66.7	67.3	68.5	69.5	69.6	69.8	69.5	69.5	68.5	67.5	66.8	65.5	68.2
	26	65.7	66.1	66.4	66.5	—	67.2	67.8	67.6	66.8	66.0	65.7	65.0	—
	27	65.0	66.5	67.2	67.6	68.0	68.5	69.0	69.0	67.6	66.6	65.8	64.9	67.1
	28	64.7	65.4	66.8	67.5	68.8	69.6	70.0	70.8	70.6	69.2	68.5	67.5	65.8
	29	66.0	66.5	67.0	67.2	67.2	67.2	67.7	67.7	66.5	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	62.6	61.9	60.4	65.7
	31	59.3	59.7	60.7	62.0	63.5	64.5	64.5	64.5	64.6	64.2	63.2	62.6	62.8
Hourly Means <sup>a</sup>	55.9	56.7	57.5	58.2	58.9	59.7	60.1	60.0	59.3	58.2	57.5	56.7		
JUNE.	1	62.8	63.9	64.5	65.6	66.5	67.3	67.6	67.5	67.8	67.0	65.0	64.2	65.8
	2	63.4	65.0	66.2	67.2	67.6	69.0	70.0	69.5	68.2	66.0	65.3	64.0	65.7
	3	64.9	65.4	65.8	66.4	66.6	66.8	67.2	67.2	66.2	65.0	64.2	63.5	65.8
	4	64.0	64.5	65.0	65.9	67.2	68.5	69.4	69.5	68.6	68.0	67.5	67.2	67.1
	5	66.9	66.8	67.4	69.0	70.0	71.3	72.5	71.5	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	69.8	69.8	69.0	69.6
	7	68.7	69.5	70.5	71.9	73.4	74.6	75.4	75.2	71.5	71.8	72.9	72.0	72.3
	8	71.9	72.4	73.4	73.4	76.0	76.5	76.5	76.7	75.6	75.5	74.5	72.6	74.6
	9	72.8	72.9	73.0	73.0	73.5	74.0	74.0	74.0	73.5	72.5	70.6	69.5	72.8
	10	68.9	68.7	68.5	69.8	71.0	72.0	73.0	73.6	73.0	71.0	72.5	72.5	71.2
	11	71.3	71.7	72.6	73.0	73.5	74.0	74.5	74.2	72.6	71.6	70.6	69.0	72.4
	12	68.0	68.0	68.5	68.5	68.5	68.4	68.0	67.5	66.8	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	67.8	67.0	66.5	67.8
	14	66.0	66.6	67.0	67.4	67.6	68.0	68.0	68.0	67.5	66.8	65.5	64.8	66.9
	15	64.4	64.3	65.2	65.7	65.8	66.5	66.8	67.0	66.0	65.0	63.5	62.8	65.2
	16	63.6	64.0	64.8	65.4	66.2	67.0	67.6	67.5	66.5	65.5	64.5	63.4	65.5
	17	62.5	63.1	64.5	66.6	65.7	65.8	65.6	65.5	65.0	64.6	64.0	63.4	64.7
	18	63.1	63.2	64.2	65.0	66.0	66.5	66.5	66.5	66.2	65.5	65.0	64.5	65.2
	19	63.9	63.9	64.4	65.3	65.5	67.4	68.6	68.6	68.0	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	66.3	65.6	65.0	66.0
	21	66.2	66.1	66.8	67.5	68.4	69.6	70.0	70.3	70.0	69.5	69.0	68.5	68.5
	22	69.0	69.3	70.2	71.8	72.2	72.8	73.0	73.2	72.6	71.5	72.0	71.8	71.6
	23	71.7	71.2	71.8	72.6	73.5	74.5	74.5	74.4	74.6	73.8	71.5	73.0	73.1
	24	71.8	71.4	71.6	72.3	72.8	73.7	73.6	73.0	72.2	72.0	70.6	70.5	72.1
	25	70.0	69.5	70.0	70.5	72.0	72.0	72.4	72.0	71.2	70.0	70.5	70.0	70.8
	26	69.5	69.4	70.4	70.0	71.8	72.5	73.5	73.5	72.8	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	73.6	72.2	72.2	71.8
	28	73.0	73.1	73.8	74.0	75.0	76.6	76.6	77.2	75.5	75.4	74.0	73.0	74.8
	29	73.6	74.4	75.5	76.0	77.0	79.0	79.5	79.5	78.6	78.4	77.5	77.0	77.2
	30	76.5	76.0	76.0	76.2	77.5	78.9	78.0	77.6	77.8	75.5	76.2	75.5	76.8
Hourly Means	68.0	68.2	68.9	69.6	70.4	71.3	71.6	71.5	70.8	70.0	69.3	68.7		

<sup>a</sup> The observations of the 10th and 26th May are omitted in the hourly means.



VERTICAL FORCE.														
One Scale Division = '000093 parts of the V. F. Change in the magnetic moment of the Bar for 1° Fah. = '000108.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
JULY.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
	1	84.9	84.9	84.1	84.0	82.1	81.2	84.7	87.5	86.8	86.1	85.8	87.0	84.9
	2	85.1	88.4	86.5	86.2	87.0	89.5	90.0	87.7	90.2	90.4	91.5	90.1	88.5
	3	91.5	93.3	89.7	90.1	91.4	93.3	91.6	90.3	91.5	—	—	—	90.9
	4	—	—	—	—	—	—	—	—	—	87.2	90.3	90.8	—
	5	93.9	93.2	90.8	88.5	88.6	87.9	86.4	87.5	75.8	87.2	72.4	83.1	86.3
	6	89.8	88.5	91.4	90.7	90.0	90.2	93.4	93.5	83.5	81.0	85.2	92.0	89.1
	7	92.0	92.5	90.6	93.3	92.2	90.3	90.6	90.8	90.8	90.0	92.3	93.8	91.6
	8	92.1	92.9	91.0	90.0	90.0	89.8	89.8	88.7	88.8	89.9	90.4	91.9	90.4
	9	93.0	94.0	92.9	90.1	88.3	90.1	90.1	89.0	89.5	89.3	90.1	91.4 <sup>a</sup>	90.7
	10	89.2	89.1	87.4	87.8	87.9	89.5	89.2	90.0	90.2	—	—	—	—
	11	—	—	—	—	—	—	—	—	—	87.7	87.4	92.7	89.0
	12	89.1	88.0	84.1	83.7	85.2	86.7	87.8	86.9	88.3	89.8	88.9	90.2	87.4
	13	89.5	86.1	81.8	83.0	84.8	86.2	85.8	87.6	83.9	83.8	85.2	86.7	85.4
	14	86.1	84.1	81.4	81.0	79.4	80.5	80.0	81.4	82.5	81.6	81.1	77.2	81.4
	15	79.8	78.4	77.7	77.4	81.6	82.3	82.3	82.9	84.7	83.4	85.1	87.9	82.0
	16	88.3	86.2	84.0	82.5	84.6	85.4	85.0	83.0	84.9	85.9	87.1	89.4	85.5
	17	90.4	88.4	87.0	86.3	84.6	84.8	83.8	83.5	84.2	—	—	—	—
	18	—	—	—	—	—	—	—	—	—	83.1	83.8 <sup>b</sup>	84.1	85.3
	19	86.5	82.6	80.6	79.6	78.8	78.7	80.5	87.8	77.1	71.8	72.6	83.5	80.0
	20	73.3	79.8	81.4	80.0	82.4	83.7	81.3	79.3	75.1	80.6	80.7	83.8	80.1
	21	84.4	83.9	81.1	80.2	79.2	76.5	75.4	72.8	63.5	62.2	65.5	63.7	74.0
	22	78.4	76.5	74.1	72.1	71.9	72.1	71.9	73.0	73.2	68.0	60.7	66.8	71.6
	23	72.6	76.2	72.1	71.4	73.6	74.3	77.4	74.2	67.6	62.4	62.5	54.8	69.9
	24	44.7	60.6	68.8	71.9	73.8	84.2	81.7	80.0	75.5	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	74.2	80.1	77.8	72.8
	26	80.1	77.7	76.4	76.9	76.3	78.5	79.6	80.2	79.2	58.9	74.5	81.5	76.7
	27	83.6	79.3	79.7	79.3	80.9	81.1	81.8	83.0	80.4	80.5	81.2	81.2	81.0
	28	85.6	84.9	83.0	82.2	82.2	82.7	84.3	82.2	84.4	80.1	83.1	88.3	83.6
	29	90.6	86.4	84.5	82.4	85.3	86.3	87.2	86.1	85.1	85.0	85.0	86.6	85.9
	30	87.7	88.9	88.0	87.3	89.5	90.3	89.9	88.8	88.7	90.0	89.4	90.7	89.1
	31	90.7	90.5	89.1	88.5	90.0	89.9	89.2	89.4	89.4	— <sup>c</sup>	—	—	—
32	—	—	—	—	—	—	—	—	—	94.1	103.4	105.4	—	
Hourly Means	84.7	84.8	83.5	83.0	83.5	84.5	84.7	84.5	82.5	81.2	82.0	84.1	—	
AUGUST.	2	104.7	104.6	102.2	101.5	101.1	101.7	106.3	111.8	82.7	95.9	103.9	103.7	101.7
	3	103.0	96.4	98.6	101.7	101.9	105.6	108.9	99.4	102.1	93.1	91.3	95.3	100.6
	4	102.2	104.1	103.4	102.5	101.8	103.6	102.8	101.5	101.2	102.1	102.4	100.8	102.4
	5	101.6	102.5	98.0	99.7	102.7	108.7	102.3	101.0	103.1	95.4	91.0	92.5	99.9
	6	104.0	87.9	99.4	103.6	116.0	116.9	130.7	90.7	107.6	105.2	95.7	93.0	104.2
	7	101.9	106.4	103.1	104.7	103.1	102.3	102.4	102.1	103.8	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	105.4	105.4	105.7	103.9
	9	106.8	105.4	104.0	103.8	101.9	103.3	103.3	103.0	103.8	104.1	105.3	106.4	104.2
	10	106.8	107.2	104.9	103.6	100.6	103.8	103.1	102.7	102.6	104.7	105.4	106.1	104.3
	11	106.2	105.5	105.2	105.6	106.4	107.7	110.2	116.3	105.3	110.6	104.8	104.7	107.4
	12	111.0	109.8	107.3	105.9	105.4	104.8	104.0	103.6	105.6	105.1	104.5	105.9	106.1
	13	111.3	105.0	104.9	103.9	103.7 <sup>d</sup>	97.1	100.9	101.2	101.2	102.1	102.5	103.8	103.1
	14	105.4	105.4	103.7	103.6	104.1	102.0	103.1	105.3	104.6	—	—	—	—
	15	—	—	—	—	—	—	—	—	—	95.4	100.4	103.2	103.0
	16	104.9	102.3	104.2	101.3	101.3	100.6	100.8	100.0	97.3	96.1	79.8	91.0	98.3
	17	101.1	103.1	100.6	98.2	100.0	97.3	95.9	95.9	92.3	91.6 <sup>e</sup>	96.2	93.8	97.2
	18	97.3	98.3	96.4	93.0	92.8	93.4	95.6	94.9	95.1	95.1	96.0	97.7	95.5
	19	99.6	98.0	96.7	95.8	95.5	94.6	93.7	94.5	94.3	97.1	97.2	99.4	96.4
	20	102.2	100.9	98.8	98.3	96.6	95.8	95.5	105.7	93.7	96.0	98.6	101.2	98.6
	21	102.1	99.4	97.9	95.8	96.3	99.0	99.9	96.6	97.0	—	—	—	—
	22	—	—	—	—	—	—	—	—	—	101.7	90.3	100.8	98.1
	23	103.4	102.1	101.3	102.2	104.2	106.4	102.7	104.4	103.8	105.0	78.3	102.7	101.4
	24	102.4	104.9	104.2	102.1	101.5	100.5	99.4	100.9	102.2	104.7	105.2	108.0	103.0
	25	110.3	104.9	102.8	100.5	98.4	98.3	98.3	99.4	101.3	97.2	103.1	103.1	101.5
	26	102.0	99.5	99.3	100.6	107.5	110.7	117.6	115.5	90.3	97.9	94.3	98.1	102.6
	27	111.5	94.5	106.4	105.3	104.7	101.4	107.4	102.6	102.5	84.7	93.6	99.3	101.1
	28	91.0	101.3	101.2	102.7	103.2	102.6	118.1	105.9	92.7	—	—	—	—
	29	—	—	—	—	—	—	—	—	—	93.4	93.3	93.7	99.9
	30	103.3 <sup>f</sup>	95.0	96.7	98.4	96.9	98.0	97.8	97.4	97.2	96.8	93.6	91.6	96.9
	31	100.1	99.2	100.5	100.3	100.5	98.4	96.3	99.1	90.5	85.9	86.0	85.1	95.1
	Hourly Means	103.7	101.7	101.6	101.3	101.8	102.1	103.7	102.0	99.0	98.5	96.8	99.5	—

<sup>a</sup> Six minutes late.

<sup>b</sup> Four minutes late.

<sup>c</sup> Magnet readjusted; the observations of the 31st July and 1st August are omitted in the hourly means.

<sup>d</sup> One minute late.

<sup>e</sup> One minute late.

<sup>f</sup> Seven minutes late.

VERTICAL FORCE.  
Temperature of the Vertical Force Magnet.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
JULY.	1	74.2	74.3	74.4	74.5	75.5	76.4	76.5	75.6	74.8	73.5	71.7	72.0	74.5
	2	72.4	71.4	71.6	71.8	71.5	72.6	72.5	71.0	71.0	70.0	68.0	67.0	70.9
	3	67.6	67.6	69.0	69.0	69.2	68.8	69.7	70.1	69.6	—	—	—	68.8
	4	—	—	—	—	—	—	—	—	—	68.7	68.2	68.2	68.8
	5	67.2	67.3	68.0	69.5	70.4	71.6	73.0	73.5	73.0	71.4	70.2	69.3	70.4
	6	68.6	68.5	68.3	68.4	68.8	69.5	70.0	70.0	68.6	68.5	67.6	66.2	68.6
	7	67.3	67.0	68.0	68.0	68.6	69.8	70.6	69.8	68.6	67.7	67.3	66.5	68.3
	8	67.7	67.2	68.0	68.5	69.0	69.5	70.2	70.2	70.0	70.0	69.0	68.2	69.0
	9	67.4	66.9	66.8	67.8	69.4	70.4	70.0	69.5	69.5	69.0	68.6	68.2	68.6
	10	69.0	68.6	69.2	69.0	69.0	70.5	70.5	70.0	69.5	—	—	—	69.1
	11	—	—	—	—	—	—	—	—	—	68.3	67.6	67.0	69.1
	12	66.0	67.5	68.7	69.8	70.5	71.0	71.5	71.5	70.6	69.6	69.0	68.5	69.5
	13	68.5	69.7	71.4	72.0	73.0	74.0	74.2	74.0	73.6	72.8	72.5	72.5	72.3
	14	71.5	71.5	72.8	74.0	75.2	75.6	76.6	76.8	76.5	76.0	75.0	74.0	74.6
	15	74.5	75.0	75.4	76.2	75.7	75.3	75.0	74.5	73.8	72.6	71.4	70.4	74.1
	16	70.6	70.5	70.4	70.8	70.6	71.4	72.0	72.5	71.2	70.5	69.4	68.1	70.7
	17	67.4	68.1	69.0	70.0	71.0	72.0	72.2	72.0	71.5	—	—	—	70.6
	18	—	—	—	—	—	—	—	—	—	72.0	71.5	70.3	70.6
	19	70.7	71.5	72.5	73.5	74.5	75.2	75.6	75.4	75.8	74.5	73.5	72.3	73.7
	20	71.5	72.5	73.8	74.7	75.3	75.5	75.9	75.5	75.3	73.9	73.2	71.5	74.1
	21	70.5	71.5	72.6	74.2	75.4	76.8	78.3	78.3	79.0	77.7	77.5	76.5	75.7
	22	75.4	76.5	78.0	78.5	79.2	79.6	80.5	80.2	79.5	79.0	78.0	77.4	78.5
	23	77.0	76.7	77.5	78.0	78.8	79.5	80.4	80.5	79.8	79.0	78.6	78.0	78.6
	24	77.0	77.5	79.0	80.0	80.8	81.2	81.0	80.2	79.3	—	—	—	78.4
	25	—	—	—	—	—	—	—	—	—	76.0	74.8	73.6	73.7
	26	72.6 <sup>a</sup>	73.5	74.0	74.5	74.5	74.4	74.7	74.5	74.0	73.2	72.5	71.5	73.7
	27	70.7	71.2	71.5	71.6	71.7	72.0	72.0	72.0	72.0	71.5	70.6	69.5	71.4
	28	69.7	70.1	70.2	70.5	71.5	71.0	71.0	71.5	70.0	69.0	67.6	66.5	69.9
	29	66.2	67.3	68.0	68.5	69.5	70.0	70.4	70.2	69.8	69.5	69.0	68.6	68.9
	30	67.9	67.5	67.0	67.0	66.8	66.6	66.2	66.0	66.0	65.8	65.6	65.5	66.5
	31	65.0	64.7	64.8	65.2	65.4	65.6	65.8	65.9	65.5	—	—	—	66.5
	32	—	—	—	—	—	—	—	—	—	70.3	69.3	68.5	—
Hourly Means <sup>b</sup>	70.3	70.6	71.3	71.9	72.5	73.1	73.5	73.3	72.8	71.9	71.1	70.3		
AUGUST.	2	67.5	68.4	69.3	71.0	71.3	72.5	73.3	73.5	73.0	73.1	71.3	70.1	71.2
	3	69.7	70.7	71.3	71.9	72.5	73.0	73.4	73.5	73.0	72.5	72.0	71.2	72.1
	4	71.2	70.5	70.8	71.2	71.7	72.0	72.3	72.3	71.6	71.0	71.0	70.5	71.3
	5	70.1	70.1	71.5	72.3	72.7	73.3	73.5	73.0	72.0	70.7	69.5	68.5	71.4
	6	68.0	69.1	69.7	70.7	71.3	71.5	72.3	72.5	71.8	70.7	69.3	69.2	70.5
	7	67.3	68.3	69.3	70.4	71.0	72.0	72.3	72.7	71.5	—	—	—	70.0
	8	—	—	—	—	—	—	—	—	—	68.3	68.3	68.3	70.0
	9	67.8	68.5	69.2	69.8	70.8	71.3	71.7	72.0	71.2	70.5	69.5	68.5	70.1
	10	67.7	67.5	69.1	70.4	71.3	71.5	70.9	70.9	70.2	69.4	69.0	68.5	69.7
	11	67.8	67.8	67.5	67.5	67.3	67.3	67.0	67.0	67.0	66.5	66.2	65.3	67.0
	12	64.5	65.6	66.7	67.3	67.6	68.7	69.3	69.7	69.3	68.3	67.3	66.5	67.6
	13	65.5	66.2	67.6	69.3	70.1	70.9	71.3	71.2	70.5	70.3	69.5	68.7	69.2
	14	68.1	67.5	67.5	68.5	69.3	70.0	70.1	70.1	69.8	—	—	—	69.0
	15	—	—	—	—	—	—	—	—	—	69.9	69.0	68.5	69.0
	16	68.1	68.4	69.2	71.0	72.5	73.0	73.7	73.5	72.9	71.9	71.5	71.0	71.4
	17	70.1	70.7	72.0	72.7	73.7	74.7	75.0	75.0	74.5	74.0	73.5	72.5	73.2
	18	71.8	72.5	73.6	74.5	75.5	76.7	76.1	75.5	75.5	74.7	73.6	73.0	74.4
	19	72.5	73.2	73.5	74.3	75.0	76.0	76.3	75.5	74.6	73.3	72.6	70.8	74.0
	20	70.2	71.0	72.0	72.7	73.5	74.3	74.8	74.7	73.8	72.7	71.7	70.6	72.7
21	70.2	71.0	72.0	73.3	74.1	74.3	74.8	74.3	73.9	—	—	—	72.1	
22	—	—	—	—	—	—	—	—	—	70.3	69.0	67.8	72.1	
23	67.0	68.1	68.5	69.3	69.8	70.3	70.5	70.0	69.7	68.0	67.3	66.0	68.7	
24	65.2	66.2	67.5	68.7	69.3	70.0	71.0	70.3	69.5	67.5	66.5	65.7	68.1	
25	64.5	65.5	67.2	68.6	69.0	70.0	71.0	71.0	70.3	69.5	67.9	66.8	68.6	
26	66.5	67.2	68.0	68.5	69.0	69.5	69.0	68.2	67.5	67.0	66.7	66.3	67.8	
27	66.0	66.0	66.3	67.0	67.8	68.7	68.9	71.0	70.4	70.1	69.8	69.7	68.5	
28	68.3	68.2	68.3	69.7	70.3	72.0	70.5	70.3	70.0	—	—	—	70.2	
29	—	—	—	—	—	—	—	—	—	72.5	71.5	70.5	70.2	
30	70.4	71.2	71.5	71.8	71.8	72.0	72.0	71.8	71.5	70.5	69.5	68.9	71.1	
31	68.5	68.6	68.5	69.0	70.2	71.0	71.8	72.5	71.5	70.7	70.0	69.0	70.1	
Hourly Means	68.3	68.8	69.5	70.4	71.1	71.8	72.0	72.0	71.4	70.5	69.7	68.9		

<sup>a</sup> Approximate.

<sup>b</sup> The observations of the 31st July and 1st August are omitted in the hourly means.

VERTICAL FORCE.														
One Scale Division = '00009 parts of the V. F. Change in the magnetic moment of the Bar for 1° Fah. = '000108.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
SEPTEMBER.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
	1	99·6	97·4	96·0	96·7	99·9	91·9	102·4	95·3	98·1	92·5	95·0	95·0	95·8
	2	97·2	98·6	98·4	97·1	96·9	97·4	96·0	94·6	92·3	92·2	93·4	96·2	95·9
	3	96·6	96·4	98·4	96·4	97·3	98·5	96·0	97·3	94·5	94·5	96·8	90·0	96·1
	4	93·0	—	96·0	95·5	94·9	95·4	94·1	94·7	95·4	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	102·2 <sup>a</sup>	101·7	101·7	—
	6	103·8	103·1	101·0	100·5	101·9	96·7	96·4	96·4	98·1	98·6	100·5	99·8	99·7
	7	99·9	98·1	98·3	98·0	96·2	95·1	93·2	90·4	94·4	93·7	94·4	95·1	95·6
	8	96·5	95·6	96·0	92·3 <sup>a</sup>	91·7	87·6	81·5	75·0	67·6	67·0	56·5	51·7	—
	9	49·1	100·2 <sup>a</sup>	102·5	97·7	95·1	91·7	89·2	87·9	87·3	87·3	88·0	88·4	—
	10	88·8	88·6	87·5	86·1	86·5	85·8	86·1	86·1	86·5	87·0	87·6	88·6	87·1
	11	89·2	89·2	89·2	89·1	90·0	90·1	90·1	90·5	90·9	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	90·2	91·3	91·2	90·1
	13	89·0	92·1	92·6	103·6 <sup>a</sup>	109·2	107·1	104·5	104·3	104·1	104·3	83·6	79·1	—
	14	95·3	103·1	106·6	108·3	107·4	108·1	106·5	106·7	102·5	106·6	109·0	110·1	105·9
	15	111·0	111·2	109·8	107·6	107·3	106·7	107·4	106·9	106·5	102·4	104·3	106·4	107·3
	16	105·0	106·3	105·8	85·1 <sup>a</sup>	85·8	85·5	85·4	82·8	81·2	85·3	77·4	85·9	—
	17	86·5	87·5	85·4	84·2	85·9	84·3	87·0	86·0	85·6	86·9	88·0	88·6	86·3
	18	89·9	91·8	90·8	90·0	93·2	91·5	94·9	97·9	92·5	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	91·1	91·3	91·2	92·2
	20	91·1	90·2	89·5	89·0	89·4	91·4	88·4	88·1	92·2	89·6	90·9	91·6	90·1
	21	65·2	92·6	91·4	90·4	89·5	88·2	86·7	86·6	86·7	86·7	86·8	86·8	87·6
	22	85·5	85·5	84·3	83·2	85·2	87·2	84·2	81·8	81·6	81·0	81·5	81·4	83·5
	23	81·8	81·8	80·7	79·7	79·8	80·2	80·9	81·1	81·4	82·4	83·2	82·8	81·3
	24	83·6	83·0	81·1	79·7	81·9	89·0	98·6	102·2	79·1	75·3	72·4	37·5	80·3
	25	31·5	48·0	83·3	100·3	110·8	101·1	140·1	102·5	28·1	—	—	—	—
	26	—	—	—	—	—	—	—	—	—	88·7	77·0	55·5	80·6
	27	83·2	91·7	94·5	97·0	101·2	100·0	99·9	97·1	97·3	83·9	88·6	95·5	94·2
	28	84·9	93·6	96·6	97·6	99·3	102·5	100·5	99·6	98·8	92·5	84·7	83·8	94·5
	29	94·0	96·5	95·2	97·0	100·3	100·1	99·0	98·6	89·7	—	96·1	98·6	96·8
30	96·8	99·3 <sup>a</sup>	96·0	96·2	94·0	93·7	92·9	91·7	94·7	94·1	93·7	92·4	94·6	
Hourly Means <sup>b</sup>	90·9	93·7	93·4	93·0	94·2	93·9	94·4	93·8	91·6	90·4	91·4	90·0		
OCTOBER.	1	92·8	95·1	93·7	95·3	93·6	92·9	91·6	93·4	94·2	92·4	94·6	98·5	94·0
	2	98·1	99·1 <sup>c</sup>	97·3	96·5	95·8	96·1	95·2	95·8	94·3	—	—	—	94·6
	3	—	—	—	—	—	—	—	—	—	90·0	88·7	88·6	—
	4	99·8	99·5	—	95·8	96·2	93·8	91·9	92·7	93·7	95·9	97·4	97·4	95·8
	5	96·4	96·8	93·7	92·9	92·7	91·5	89·5	91·2	95·3	93·9	93·3	87·4	92·9
	6	91·6	93·4	90·2	90·7	95·5	98·7	95·5	94·3	89·8	91·6	92·5	93·5	93·1
	7	94·1	96·5	94·5	95·6	95·5	94·4	96·3	95·2	94·7	94·4	94·3	93·7	94·9
	8	93·2	94·1	91·8	95·4	100·2	98·0	101·0	92·4	92·2	94·0	94·0	95·8	95·2
	9	95·8	98·1	94·9	93·6	96·2	97·1	101·0	95·5 <sup>d</sup>	92·5	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	91·2	84·9	86·7	93·9
	11	93·7	96·2	95·1	94·6	94·2	93·3	93·6	93·7	91·6	91·6	91·4	92·3	93·4
	12	90·4	93·0	92·8	92·8	92·1	93·8	93·2	93·7	94·1	92·3	94·1	96·7	93·3
	13	96·1	96·3	95·0	94·2	93·1	93·4	94·9	96·0	95·9	94·8	89·0	94·6	94·4
	14	96·7	98·4	96·4	94·8	92·6	94·4	94·0	94·2	98·4	94·2	88·8	91·0	94·5
	15	94·6	92·6	90·8	90·8	91·1	91·2	91·2	93·9	93·9	89·9	90·8	93·6	92·0
	16	94·9	96·8	95·6	95·9	97·9	98·8	98·0	98·3	97·6	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	102·3	99·2	102·8	98·2
	18	104·0	103·5	101·0	100·8	99·4	98·4	98·6	99·3	99·9	97·6	101·7	102·9	100·6
	19	104·0	106·3	102·9	102·2	103·0	103·3	102·1	101·6	102·5	99·2	99·2	101·8	102·3
	20	100·0	101·2	98·5	98·9	100·0 <sup>d</sup>	100·3	100·4	102·7	100·0	96·0	96·2	94·6	99·1
	21	94·5	96·1	97·6	98·6	101·2	98·2	98·3	99·5	98·5	98·9	99·9	99·9	98·4
	22	100·1	100·4	97·9	98·2	98·2	97·1	97·1	98·3	97·3	100·0	97·6	101·1	98·6
	23	100·4	101·8	100·5	99·7	101·5	100·9	101·6	101·7	101·2	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	104·9	72·9	82·7	97·5
	25	94·2	92·1	106·5	113·5	114·5	113·8	110·7	108·6	109·1	96·2	89·3	92·1	103·4
	26	92·0	101·2	107·4	108·8	107·7	106·6	104·0	100·6	102·5	99·5	97·1	100·4	102·3
	27	100·3	102·3	102·0	101·6 <sup>e</sup>	102·2	99·8	100·0	102·1	91·8	76·8	102·2	105·3	98·9
	28	105·3	106·1	103·0	102·6	102·4	101·8	102·3	101·7	102·4	101·5	102·2	102·2	102·8
	29	101·8	102·7	100·1	98·4	97·9	95·6	94·2	94·6	94·4	94·9	96·1	96·1	97·2
	30	95·7	96·8	94·5	92·6	91·5	90·3	88·0	88·8	90·3	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	93·7	92·5	92·5	92·3
Hourly Means	96·94	98·32	97·35	97·49	97·93	97·44	97·08	96·92	96·47	94·91	93·84	95·55		

<sup>a</sup> Magnet readjusted; connexion broken.  
<sup>b</sup> The observations of the 4th, 5th, 8th, 9th, 13th, 16th, 25th, and 26th (the two last on account of excessive disturbance) are omitted in the hourly means.  
<sup>c</sup> Seven and a half minutes late.  
<sup>d</sup> Ten minutes late.  
<sup>e</sup> Five minutes late.

VERTICAL FORCE.  
Temperature of the Vertical Force Magnet.

Mean Göttingen Time.	0h.	2h.	4h.	6h.	8h.	10h.	12h.	14h.	16h.	18h.	20h.	22h.	Means.	
SEPTEMBER.	1	67.6	68.5	69.5	70.1	71.2	72.0	72.9	72.3	72.0	71.6	71.5	71.4	70.9
	2	70.5	70.3	70.5	71.5	72.5	73.7	74.1	74.0	73.5	73.4	72.5	72.0	72.4
	3	71.1	71.1	71.1	71.3	72.0	72.5	72.4	72.5	72.0	71.7	71.5	71.3	71.7
	4	—	—	71.2	72.0	72.5	72.7	73.3	73.5	72.7	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	72.7	71.9	71.5	—
	6	71.2	71.0	71.5	72.8	74.0	74.5	74.0	73.5	73.1	72.5	71.9	71.5	72.6
	7	71.4	71.8	72.6	73.5	74.3	74.5	74.7	74.3	73.9	73.5	73.0	72.4	73.3
	8	72.3	71.8	71.8	72.5	73.3	73.9	74.5	74.2	74.0	73.5	73.0	72.3	—
	9	72.0	75.3	73.8	74.3	75.0	75.5	76.0	75.7	74.8	74.3	73.8	73.3	—
	10	72.6	73.5	74.7	75.5	76.0	76.5	76.5	76.5	75.7	74.6	73.2	72.5	74.8
	11	71.5	71.0	71.0	70.5	70.5	70.5	70.7	70.5	69.8	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	67.7	67.0	66.5	69.8
	13	64.8	65.8	66.8	70.0	68.7	68.9	69.4	68.5	67.5	66.7	65.0	65.3	—
	14	64.0	63.8	65.0	65.5	66.5	67.0	67.3	66.9	65.7	64.5	63.0	62.5	65.1
	15	62.2	62.5	63.9	65.3	66.0	67.0	67.5	67.3	66.9	66.7	66.5	66.0	65.7
	16	67.0	66.1	66.7	68.5	69.3	69.7	70.0	69.5	68.8	68.5	68.2	67.5	—
	17	67.5	66.6	67.0	67.8	68.8	69.5	69.7	69.1	67.7	66.9	66.0	65.2	67.7
	18	64.7	63.6	62.8	63.0	63.5	64.0	64.5	64.2	63.5	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	63.7	64.1	63.6	63.7
	20	64.5	64.5	65.2	65.7	66.5	67.0	66.8	66.1	64.9	63.8	63.3	62.8	65.1
	21	63.5	63.1	62.7	63.5	64.5	65.6	65.5	65.7	65.7	65.5	65.3	65.2	64.7
	22	66.0	65.6	65.6	66.2	66.5	67.0	67.8	68.3	68.3	68.3	68.5	68.0	67.2
	23	67.7	67.6	67.3	67.5	67.7	68.1	67.7	67.5	67.3	66.7	66.5	65.7	67.3
	24	65.5	65.5	66.3	67.0	67.7	68.4	68.5	68.0	67.7	67.3	66.7	66.3	67.1
	25	67.0	65.8	65.7	65.7	66.0	66.0	66.8	67.0	67.5	—	—	—	—
	26	—	—	—	—	—	—	—	—	—	61.0	60.3	59.5	64.9
	27	59.0	59.0	59.0	59.5	60.0	59.8	59.5	58.8	58.7	58.5	59.0	58.7	59.1
	28	58.9	58.6	57.1	57.5	58.4	58.3	57.7	58.0	58.4	58.4	58.3	58.3	58.2
	29	58.2	57.4	57.7	58.2	58.2	58.2	58.4	58.4	58.5	—	57.7	57.2	57.3
	30	58.0	56.7	57.7	58.8	58.5	59.2	59.8	59.2	59.0	58.5	58.5	57.0	58.4
Hourly Means <sup>b</sup>	66.2	66.0	66.3	66.9	67.6	68.1	68.2	68.0	67.5	67.5	66.6	66.2		
OCTOBER.	1	56.6	55.9	56.5	56.9	57.2	58.4	58.7	58.2	57.4	56.4	55.3	54.5	56.8
	2	55.6	53.5	53.8	54.7	55.4	56.2	56.8	56.4	56.2	—	—	—	55.0
	3	—	—	—	—	—	—	—	—	—	54.2	53.8	53.2	—
	4	53.0	52.2	—	54.4	55.7	57.2	57.2	57.4	56.8	55.5	54.7	54.0	54.8
	5	54.4	54.3	55.2	56.7	58.0	59.1	59.3	59.2	58.4	57.7	57.2	57.0	57.2
	6	57.0	56.2	57.7	59.0	58.0	58.9	59.0	58.2	57.2	56.3	56.0	55.4	57.4
	7	57.4	56.5	55.5	55.6	56.0	58.0	58.7	58.2	58.0	57.4	56.9	56.0	57.0
	8	56.0	55.7	56.5	56.9	58.0	59.2	59.3	59.1	58.7	58.0	58.0	56.4	57.7
	9	56.3	55.8	56.6	57.5	58.2	59.0	58.5	59.8	58.7	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	56.9	56.7	56.5	57.5
	11	57.0	56.2	55.9	56.4	57.0	58.0	58.2	58.4	58.7	58.9	58.6	58.2	57.6
	12	58.8	57.9	57.8	57.7	58.0	57.9	57.5	57.2	57.0	56.8	56.2	55.2	57.3
	13	55.2	55.4	55.9	56.4	57.2	57.2	57.7	57.2	56.8	56.0	55.2	54.4	56.2
	14	54.5	53.7	53.2	54.7	56.2	57.2	57.5	58.0	57.9	57.2	57.2	57.1	56.2
	15	57.4	57.2	57.8	58.3	59.0	59.1	58.5	58.8	58.1	57.4	57.0	56.5	57.9
	16	56.2	55.5	55.0	55.4	55.4	55.4	55.0	54.5	53.9	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	50.0	49.4	48.9	53.7
	18	48.8	48.7	49.7	50.8	52.1	53.0	53.2	52.7	51.9	50.7	50.0	49.3	50.9
	19	49.0	48.4	48.7	48.6	49.3	50.7	50.8	51.3	51.4	51.4	51.4	51.2	51.0
	20	51.4	51.2	51.0	51.2	51.4	51.8	52.4	52.8	53.0	53.0	52.9	52.6	52.1
	21	52.7	52.8	52.7	53.4	54.1	54.4	54.2	53.8	53.4	52.8	52.3	52.2	53.2
	22	52.2	52.2	53.0	53.2	53.8	54.0	53.6	53.0	52.4	51.9	51.5	51.4	52.7
	23	51.4	50.5	51.0	51.4	51.3	51.4	51.3	51.2	51.2	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	45.0	46.2	46.2	49.9
	25	46.0	45.6	47.2	47.8	47.7	48.0	48.0	47.7	47.6	47.4	47.4	47.4	47.1
	26	47.0	46.9	47.4	48.2	49.4	50.4	51.0	51.0	50.4	50.6	50.4	49.7	49.4
	27	48.9	47.8	49.2	50.4	51.7	53.0	53.2	52.4	51.2	49.9	49.4	48.8	50.5
	28	48.0	47.4	48.4	49.4	50.5	51.4	51.3	50.8	51.0	51.0	50.4	50.4	50.0
	29	51.2	50.7	51.0	52.4	54.0	55.5	56.8	56.9	56.0	55.4	55.0	55.0	54.2
	30	55.6	55.2	55.7	56.9	58.2	59.2	59.5	59.6	59.1	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	56.4	56.6	57.2	57.4
Hourly Means	53.4	52.8	53.3	54.0	54.7	55.5	55.7	55.5	55.1	54.0	53.7	53.3		

<sup>a</sup> Approximate.

<sup>b</sup> The observations of the 4th, 5th, 8th, 9th, 13th, 16th, 25th, and 26th are omitted in the hourly means.

VERTICAL FORCE.														
One Scale Division = '000092 parts of the V. F. Change of the magnetic moment of the Bar for 1° Fah. = '000108.														
Mean Göttingen Time.	0h.	2h.	4h.	6h.	8h.	10h.	12h.	14h.	16h.	18h.	20h.	22h.	Means.	
NOVEMBER.	1	92·0	92·4	89·0	87·4	87·1	86·4	87·7	88·2	87·5	89·3	89·6	88·6	
	2	89·6	90·5	88·4	89·1	90·5	90·8	91·1	93·5	92·8	93·3	93·3	91·4	
	3	93·5	95·0	92·6	94·0	94·0	93·8	94·0	95·2	94·6	82·0	87·6	92·5	
	4	71·3	93·4	96·9	97·4	99·1	98·5	98·0	97·8	96·7	96·7	88·5	85·9	93·4
	5	88·6	93·2	97·7	99·4	102·5	113·2	105·1	101·7	98·0	85·4	85·4	92·8	96·9
	6	90·3	97·9	102·3	103·5	105·5	107·0	107·6	105·2	107·2	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	105·9	102·9	105·3	103·4
	8	100·2	104·9	103·7	103·7	103·7	102·9	102·6	104·0	103·0	100·4	100·2	101·7	102·6
	9	102·9	104·9	104·9	103·2	105·4	105·1	105·3	104·7	105·3	104·8	103·5	103·4	104·5
	10	102·1	102·5	101·4	102·2	104·2	103·9	104·8	105·6	104·9	103·6	101·7	103·1	103·3
	11	102·0	102·4	101·6	101·4	102·7	102·5	102·3	101·6	100·5	99·7	94·7	96·0	100·6
	12	96·6	98·5	98·4	97·9	98·5	98·8	100·0	98·3	98·8	99·6	99·9	101·4	98·9
	13	100·1 <sup>a</sup>	101·8	100·8	100·3	99·8	99·8	99·9	99·3	99·3	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	105·4	102·7	105·5	101·2
	15	104·7	107·4	105·7	105·7	106·8	106·1	106·1	107·1	101·6	107·2	107·0	107·0	106·9
	16	107·3	111·4	106·0	105·8	105·6	104·4	104·1	103·9	104·6	104·9	104·8	104·0	105·6
	17	102·0	103·9	103·7	103·5	104·4	103·3	105·0	104·4	106·4	104·2	104·2	104·5	104·1
	18 <sup>b</sup>	105·2	106·2	104·2	104·2	105·8	107·7	136·5	119·5	51·6	108·9	71·1	103·4	102·0
	19	98·3	107·1	108·9	108·9	109·2	111·7	114·0	116·7	111·6	85·1	101·9	101·5	106·2
	20	83·8	99·2	106·0	108·8	107·9	107·3	106·9	104·7	106·2	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	108·3	108·0	106·3	104·5
	22	104·3	104·9	104·1	102·4	103·3	101·6	100·6	101·3	102·0	102·9	101·6	102·8	102·7
	23	102·7	105·3	105·3	105·0	106·6	105·6	105·6	105·2	105·3	105·1	105·5	105·0	105·2
	24	105·0	104·8	104·3	103·4	103·5	103·4	103·2	103·4	103·4	102·8	104·2	104·8	103·9
	25	103·3	105·8	105·5	105·3	106·4	106·3	108·3	108·4	108·5	108·1	108·3	108·3	106·9
	26	110·3	110·3 <sup>c</sup>	110·1	109·3	109·8	111·1	108·9	108·4	110·2	108·9	108·8	109·4	109·6
	27	109·4	110·5	109·4	108·7	108·6	108·3	108·3	108·0	108·8	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	114·4	114·7	114·3	110·3
	29	114·2	115·2	114·3	114·2	113·3	112·2	112·8	113·0	114·3	114·5	114·5	114·5	113·9
	30	113·8	114·6	113·2	111·6	111·2	110·6	110·8	111·7	111·7	111·2	111·1	110·4	111·8
Hourly Means	99·53	103·11	102·97	102·88	103·58	103·78	103·66	103·63	103·36	101·68	101·77	102·60		
DECEMBER.	1	109·5	109·7	108·4	107·3	106·5	105·7	107·8	107·6	107·1	106·3	100·9	105·3	106·8
	2	105·9	107·5	106·1	103·7	104·4	104·4	104·4	107·7	106·4	100·0	96·0	90·6	103·1
	3	98·2	101·5	100·0	106·1	107·3	105·6	107·7	107·1	99·9	103·2	92·3	101·0	102·5
	4	99·7	101·5	101·9	103·3	106·0	106·0	108·7	107·3	106·6	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	108·9	108·6	108·6	105·6
	6	108·7	109·1	107·9	107·2	108·6	109·1	109·1	109·9	109·9	108·9	110·2	110·5	109·1
	7	108·5	110·2	109·6	110·3	109·4	108·2	107·4	107·8	108·1	109·2	107·1	108·2	108·7
	8	104·6	107·2	106·5	110·7	112·2	111·0	108·4	105·2	104·5	105·5	104·4	103·3	107·0
	9	101·6	102·9	100·5	100·6	100·7	100·1	100·0	100·0	99·7	100·4	98·3	100·1	100·4
	10	100·0	98·4	98·4	99·8	102·9	102·4	102·2	101·8	101·6	101·5	101·4	101·2	101·0
	11	99·0	102·1	101·8	101·2	102·8	101·6	101·6	102·0	102·0	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	105·3	106·7	105·9	102·5
	13	105·4	106·2	105·3	104·2	104·2	104·6	105·1	105·1	104·2	104·1	102·0	102·8	104·4
	14	101·7	101·0	100·2	99·6	99·8	105·1	117·9	98·2	96·3	99·3	101·4	101·4	101·8
	15	101·0	103·8	103·3	102·6	102·9	102·1	102·5	103·3	104·3	104·8	105·2	105·2	103·4
	16	105·6	107·0	106·8	106·2	108·1	113·1	112·6	114·6	113·7	113·5	113·7	113·8	110·7
	17	115·4	115·6	115·7	118·3	119·9	119·9	122·2	122·2	121·3	122·6	116·4	121·9	119·3
	18	122·7	125·2	120·8	120·8	120·4	119·2	119·4	119·9	119·4	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	120·2	118·1	121·3	120·6
	20	120·6	121·7	122·3	121·4	121·4	120·8	121·6	122·2	121·7	120·8	120·7	120·7	121·3
	21	121·8	124·1	121·8	121·9	122·6	121·2	120·6	120·6	121·6	121·3	121·3	121·3	121·7
	22	122·3	125·4	125·3	123·8	125·6	124·4	121·1	119·0	117·2	116·8	111·3	112·5	120·4
	23	114·0	113·5	112·7	111·6	111·6	109·7	109·4	109·2	106·4	105·0	106·7	106·1	109·7
	24	109·0	108·2	108·5	110·4	111·0	110·1	118·7	111·7	111·8	—	—	—	—
	25 <sup>d</sup>	—	—	—	—	—	—	—	—	—	—	—	—	113·0
	26	—	—	—	—	—	—	—	—	—	120·7	121·7	121·5	—
	27	120·7	120·4	120·4	119·8	118·8	118·0	116·2	115·4	115·0	114·0	113·2	113·2	117·1
	28	113·0	112·8	110·6	110·6	110·4	107·3	108·1	107·8	107·9	107·9	107·6	107·7	109·3
	29	109·6	110·5	108·4	108·1	108·3	106·7	106·7	107·1	108·3	107·6	108·7	109·0	108·2
	30	108·2	107·9	104·6	108·5	111·9	112·6	115·2	112·4	106·8	106·0	102·0	104·1	108·4
	31	105·3	107·7	109·2	110·7	112·3	113·6	112·3	112·9	111·0	108·9	109·1	103·5	109·7
Hourly Means	108·92	110·04	109·12	109·57	110·38	110·10	111·03	109·92	108·95	109·34	107·88	108·49		

<sup>a</sup> Five minutes late. <sup>b</sup> The observations on the 18th November are omitted in the hourly means on account of excessive disturbance. <sup>c</sup> Ten minutes late. <sup>d</sup> Christmas Day.

VERTICAL FORCE.  
Temperature of the Vertical Force Magnet.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
NOVEMBER.	1	57.8	57.6	58.1	59.4	59.8	60.5	60.5	60.5	60.1	59.4	58.9	58.8	59.3
	2	58.9	58.4	59.2	59.0	58.7	58.7	57.8	57.6	57.2	56.5	56.2	56.2	57.9
	3	56.2	55.3	55.4	55.7	55.4	55.4	55.2	54.9	54.6	55.0	54.2	54.0	55.1
	4	54.0	53.2	53.0	53.2	54.0	54.0	54.0	53.7	53.2	53.0	52.4	52.2	53.3
	5	52.5	51.8	51.6	51.9	52.0	52.0	52.0	51.4	51.2	51.2	50.6	50.2	51.5
	6	50.2	50.6	49.7	49.7	49.7	49.5	49.2	49.4	49.1	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	46.2	46.3	46.6	48.8
	8	47.7	48.0	48.2	49.2	49.8	50.4	50.2	50.2	50.1	50.0	49.6	49.3	49.4
	9	49.0	48.0	47.8	48.2	48.8	49.2	48.9	48.6	49.0	49.2	49.2	49.2	48.8
	10	49.6	49.3	49.2	49.3	49.0	49.2	49.1	49.2	49.2	49.3	49.4	49.5	49.3
	11	50.0	49.3	49.1	49.9	50.2	50.4	50.3	50.6	51.3	51.8	51.8	52.2	50.6
	12	53.4	53.2	53.4	53.6	54.0	54.0	53.6	53.0	52.2	51.5	51.2	50.8	52.8
	13	51.0	50.1	50.3	51.2	51.4	51.8	52.0	51.9	51.8	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	47.7	47.4	47.2	50.3
	15	47.0	46.4	46.2	46.4	46.3	46.6	46.3	46.0	45.9	45.9	45.6	45.2	46.1
	16	45.1	44.6	45.4	46.0	46.6	47.4	48.0	48.0	47.6	47.6	47.2	47.4	46.7
	17	47.2	46.5	47.0	47.7	48.0	48.2	48.2	47.8	47.6	47.4	47.0	46.5	47.4
	18 <sup>a</sup>	46.4	45.8	46.0	47.2	47.7	48.4	48.6	48.6	47.4	46.4	45.8	46.4	47.1
	19	46.0 <sup>b</sup>	45.0	44.4	44.7	44.8	45.4	45.2	44.9	45.4	45.6	45.4	45.4	45.2
	20	45.6	45.0	45.2	46.2	47.0	47.6	48.0	48.4	48.0	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	45.0	45.2	45.7	46.4
	22	46.7	47.0	47.6	48.7	50.0	51.0	51.2	50.6	50.2	49.4	49.2	49.2	49.2
	23	49.2	48.4	48.0	48.1	48.0	48.0	47.7	47.4	47.6	47.6	47.1	46.6	47.8
	24	46.8	46.5	47.2	48.4	49.2	49.4	49.2	49.2	48.6	48.2	48.0	47.4	48.2
	25	47.5	46.8	46.3	46.4	46.2	46.2	45.2	44.7	44.6	44.4	44.4	44.0	45.6
	26	43.4	42.6	42.6	43.0	42.8	42.7	43.6	44.1	43.4	43.0	43.0	42.9	43.1
	27	42.7	42.6	43.2	43.6	44.2	44.8	44.4	44.7	44.0	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	40.0	40.2	39.8	42.9
	29	39.9	39.7	39.4	40.0	40.0	40.5	40.4	40.0	39.8	39.8	39.6	39.5	39.9
	30	39.8	39.6	40.0	40.3	41.5	41.4	41.6	41.2	41.1	41.4	41.8	42.0	41.0
Hourly Means	48.7	48.2	48.3	48.8	49.1	49.4	49.3	49.1	48.9	48.2	48.0	47.9	—	
DECEMBER.	1	42.4	42.1	42.2	43.4	44.6	45.6	46.0	45.7	45.5	45.4	45.6	45.4	44.5
	2	44.6	44.0	44.6	45.8	46.4	47.1	47.0	46.8	47.2	47.0	46.8	46.8	46.2
	3	47.0	46.7	46.4	47.0	47.0	47.4	47.3	47.8	48.2	48.6	48.4	48.4	47.5
	4	48.7	48.4	47.8	47.4	47.2	46.7	46.4	46.6	46.2	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	42.7	42.8	42.8	46.1
	6	43.4	43.1	43.1	43.4	43.6	44.0	43.4	43.4	42.7	42.1	42.0	42.0	43.0
	7	42.9	42.0	42.2	42.4	43.2	44.0	44.1	44.0	44.0	43.8	44.0	43.4	43.3
	8	43.6	43.0	43.6	44.7	45.3	45.8	46.5	46.8	47.2	46.7	47.2	47.9	45.7
	9	49.0	48.4	48.6	49.2	49.4	49.5	50.6	50.6	50.8	50.6	50.2	49.9	49.7
	10	49.9	49.6	49.4	49.8	49.4	49.3	49.4	49.5	49.3	49.4	49.5	49.8	49.5
	11	50.5	49.3	48.4	48.6	48.6	49.0	49.0	48.6	48.4	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	45.0	44.8	44.9	47.9
	13	45.3	45.1	45.0	45.4	46.0	46.2	46.5	46.4	46.4	47.0	47.1	47.2	46.1
	14	47.9	48.2	48.3	48.8	49.4	50.0	49.0	50.3	50.4	50.0	49.8	49.6	49.3
	15	49.4	48.6	48.3	48.9	49.2	49.4	49.0	48.2	47.6	47.2	46.9	46.4	48.3
	16	46.4	45.6	45.0	45.0	44.7	44.2	43.2	42.4	41.5	40.0	40.0	39.0	43.1
	17	37.7	36.7	36.0	36.2	36.4	36.8	35.9	34.3	34.2	32.7	32.2	31.7	35.1
	18	31.2	30.8	32.4	33.5	34.6	35.8	35.5	35.4	35.2	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	33.2	33.2	33.2	33.7
	20	33.2	32.4	32.0	32.5	33.3	33.7	34.0	34.0	33.7	33.7	33.8	33.8	33.3
	21	33.0	31.2	31.0	31.2	32.2	33.5	33.7	33.4	33.4	33.2	32.2	31.3	32.4
	22	30.7	30.2	30.3	30.2	31.2	31.9	33.4	34.8	35.8	36.2	37.2	37.5	33.3
	23	38.4	39.2	39.8	39.7	40.7	41.6	41.9	42.6	43.0	44.0	43.2	42.4	41.4
	24	41.8	40.4	40.7	40.7	40.8	41.0	39.8	41.5	41.0	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	—	—	—	—
	26	—	—	—	—	—	—	—	—	—	32.2	32.4	32.4	38.7
	27	32.2	33.0	32.8	33.9	34.7	35.6	36.2	37.0	37.4	38.0	38.4	38.6	35.7
	28	38.7	39.0	39.4	40.0	40.4	42.4	42.2	42.2	42.1	42.0	41.4	41.2	41.0
	29	40.8	40.5	40.4	41.2	42.4	43.4	42.8	42.2	41.9	41.5	41.0	40.7	41.6
	30	41.1	40.6	40.4	41.4	42.6	43.2	43.4	43.4	43.2	43.2	43.4	43.0	42.4
	31	42.7	42.1	41.5	41.5	40.9	40.0	39.7	39.7	39.6	39.5	38.8	38.7	40.6
Hourly Means	42.0	41.5	41.5	42.0	42.5	43.0	42.9	43.0	42.9	42.1	42.0	41.8	—	

<sup>a</sup> The observations on the 18th November are omitted in the hourly means.

<sup>b</sup> Approximate.

January 20th and 21st.			MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.					DECLINATION.					
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		144.9	152.0	150.9	152.2	154.1	154.4	157.9	152.1	152.0	152.1	153.5
5	0		144.3	151.3	151.2	152.2	153.6	156.3	157.0	151.5	152.0	153.0	153.3
10	0		145.0	151.4	151.8	153.3	153.8	158.8	156.0	152.1	151.9	153.0	153.5
15	0		147.7	151.4	152.2	154.2	153.9	161.5	153.9	152.7	151.9	153.0	153.6
20	0		151.4	151.4	152.7	155.0	154.1	165.1	152.8	152.7	152.0	153.4	154.0
25	0		153.7	150.8	153.2	155.6	153.8	167.3	151.8	152.7	152.0	153.5	153.8
30	0		153.3	150.5	153.6	156.0	153.7	165.9	151.3	152.1	151.9	153.4	154.0
35	0		153.0	149.9	153.4	156.1	153.2	163.9	151.2	152.0	151.9	153.4	154.1
40	0		153.0	150.0	153.2	156.0	153.4	159.7	151.8	152.0	152.0	153.6	153.9
45	0		152.3	150.2	153.1	156.6	153.3	158.0	152.7	152.0	151.6	154.0	153.1
50	0		151.5	150.8	152.8	156.4	153.9	158.3	153.0	152.0	151.0	153.8	152.7
55	0		151.6	150.8	152.8	156.1	154.4	158.3	152.9	152.0	152.0	153.7	152.2
			One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.					
M.	S.												
2	30		442.0	456.5	450.0	451.8	454.9	448.2	450.7	458.6	456.3	460.0	456.2
12	30		435.2	455.4	451.0	450.8	451.6	444.1	456.9	456.8	456.0	456.8	455.8
22	30		442.0	454.5	450.7	450.8	451.6	440.2	455.7	453.0	454.4	455.0	455.7
32	30		448.6	452.9	452.6	451.8	450.3	448.5	455.3	451.5	455.6	456.0	453.8
42	30		449.7	450.2	451.6	452.0	448.8	450.9	453.8	455.4	458.6	455.2	454.9
52	30		455.3	449.3	451.6	453.3	448.7	454.4	455.0	456.6	458.4	454.7	457.2
Thermometer			35.0	36.2	36.7	37.2	37.4	37.9	38.0	38.2	38.6	39.0	39.6
			One Scale Division = .00009 parts of the V. F.					VERTICAL FORCE.					
M.	S.												
7	30		106.6	106.9	106.4	106.5	106.9	107.7	107.3	106.3	105.6	105.8	—
17	30		106.8	106.5	106.0	106.5	107.1	108.1	107.3	105.6	105.6	105.8	106.0
27	30		107.2	106.7	106.1	106.3	107.1	107.6	107.0	105.4	105.7	105.8	105.5
37	30		107.1	106.6	106.1	106.6	107.3	107.6	107.0	105.8	105.8	105.7	105.6
47	30		106.9	106.2	106.3	106.7	107.5	107.8	106.2	105.8	105.2	105.3	106.1
57	30		106.8	106.2	106.6	107.1	107.6	107.5	106.2	105.6	105.7	105.8	106.1
Thermometer			35.3	36.5	37.0	37.8	38.0	38.5	39.0	39.0	39.0	39.4	40.2
Increasing numbers denote decreasing westerly Declination, The observations of the Horizontal Force are reduced to a uniform													
METEOROLOGICAL OBSERVATIONS.													
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.					
				Dry.	Wet.	Direction.	Force.						
D.	H.	M.	In.	°									
20	10	0	29.970	27.1	—	E.	Mod.	Dense haze; snowing moderately.					
	11	0	29.940	27.3	—	E.	Mod.	Overcast; dense haze; ceased snowing.					
	12	0	29.903	28.2	—	E.	Brisk.	Snowing.					
	13	0	29.893	28.4	—	E.	Brisk.	Densely clouded; snowing.					
	14	0	29.863	28.4	—	S. E.	Brisk.	Heavily overcast; snowing.					
	15	0	29.828	28.7	—	S. E.	Brisk.	Heavily overcast; snowing.					
	16	0	29.795	29.9	—	S. E.	Mod.	Heavily overcast; snowing.					
	17	0	29.760	29.2	—	S. E.	Brisk.	With fresh puffs; snowing.					
	18	0	29.740	29.6	—	S. E.	Brisk.	With fresh puffs; snowing.					
	19	0	29.718	29.8	—	S. E.	Mod.	Slight snow.					
	20	0	29.700	30.4	—	S. E.	Mod.	Snowing slightly.					
	21	0	29.682	30.5	—	S. E.	Mod.	Slight snow.					



MAGNETICAL OBSERVATIONS.

January 20th and 21st.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 152.1	Sc. Div. 153.4	Sc. Div. 153.4	Sc. Div. 153.7	Sc. Div. 155.0	Sc. Div. 154.9	Sc. Div. 157.9	Sc. Div. 155.8	Sc. Div. 155.8	Sc. Div. 150.9	Sc. Div. 144.9	Sc. Div. 142.8	Sc. Div. 138.5
152.4	153.4	153.5	—	154.6	156.4	157.5	156.6	155.6	149.8	142.5	142.3	138.6
152.4	153.0	153.3	153.9	154.4	156.5	157.1	158.3	154.8	149.7	144.7	142.7	138.8
152.4	153.3	153.0	153.9	154.8	155.8	158.3	155.8	155.6	148.4	145.0	142.6	140.4
152.0	153.3	153.1	153.8	155.4	155.7	157.7	156.3	156.6	147.5	147.2	143.8	142.3
152.1	153.0	153.3	153.9	155.3	157.0	156.2	156.9	155.3	147.0	143.2	143.5	143.2
152.5	153.1	153.1	153.9	155.0	158.1	157.5	156.6	154.8	146.1	143.2	143.1	142.4
152.6	153.2	153.6	154.2	155.4	157.9	157.2	155.4	154.5	146.3	145.4	141.7	145.3
152.7	153.0	153.1	153.9	155.7	157.7	157.3	155.2	153.7	146.0	145.5	142.1	144.4
153.0	153.2	153.3	153.9	155.8	157.7	157.5	155.9	153.1	146.1	144.2	139.2	144.1
153.4	153.2	153.8	154.5	156.1	158.1	157.2	156.3	152.1	146.3	145.5	137.9	144.2
153.1	153.5	153.6	155.0	156.0	157.7	156.5	155.3	151.8	146.9	144.0	138.0	145.9

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

456.6	458.2	461.8	464.7	467.8	465.4	461.0	458.2	449.3	443.0	444.7	463.2	441.3
457.0	458.7	462.4	465.5	468.4	465.8	459.9	454.0	448.0	441.6	442.2	464.8	440.3
456.7	460.0	463.4	466.3	469.5	461.8	459.0	455.2	447.8	438.8	456.5	462.7	443.9
458.7	459.8	463.9	466.7	469.0	461.0	460.7	452.6	446.9	437.6	454.4	460.0	443.9
457.7	459.9	464.2	467.5	468.2	460.0	458.7	452.8	445.4	442.2	457.3	449.0	458.8
457.9	460.8	464.4	467.6	466.8	461.0	457.0	450.4	443.7	445.6	464.5	433.0	458.2
39.8	40.0	41.0	41.6	41.8	41.2	41.3	41.1	41.4	41.6	42.0	42.2	42.4

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .000108.

106.1	106.1	108.2	107.7	—	107.0	106.7	105.9	105.6	106.6	107.7	110.2	109.2
106.5	106.4	108.1	107.7	107.5	107.2	106.6	105.9	106.2	106.8	109.4	109.4	109.2
106.5	107.0	108.0	107.7	107.4	106.8	107.0	105.4	106.0	106.6	108.6	109.4	109.7
106.2	107.4	108.0	107.7	107.3	106.7	107.0	105.4	106.1	107.1	109.3	109.6	110.5
106.2	107.6	107.6	107.4	107.3	106.6	106.6	105.6	106.2	107.4	109.2	109.5	111.0
106.0	107.9	107.7	107.5	107.1	106.6	106.5	105.6	106.5	108.2	110.1	109.2	114.0
40.4	40.4	41.6	41.8	42.0	41.6	41.5	41.5	41.5	41.8	42.0	42.4	42.5

and increasing Horizontal and Vertical Force.

temperature of 35°; those of the Vertical Force to 35°·3.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
20	22	0	In. 29.658	30.6	—	S. E.	Light.	Heavily clouded; snowing slightly; very dark.
	23	0	29.635	30.4	—	—	Calm.	Heavily overcast; snowing slightly; very dark.
21	0	0	29.625	30.2	—	—	Calm.	Heavily overcast; ceased snowing; spitting rain.
	1	0	29.624	30.4	—	—	Calm.	Heavily overcast.
	2	0	29.624	30.3	—	E.	Light.	Densely clouded.
	3	0	29.630	31.2	—	N. E.	Light.	Densely clouded; cumuli and haze.
	4	0	29.634	30.2	—	—	Calm.	Densely clouded; cumuli and haze.
	5	0	29.618	30.2	—	—	Calm.	Densely overcast with cirrous haze.
	6	0	29.586	30.8	—	N. b. W.	Light.	Densely overcast with haze.
	7	0	29.591	31.2	—	N. b. W.	Light.	Overcast with haze.
	8	0	29.575	31.7	—	N. W.	Light.	Densely overcast, cirrous haze; a few cumuli round horizon. [zenith.
	9	0	29.583	31.3	—	N. b. W.	Light.	Densely overcast with cirri and cirro-cumuli round horizon; haze in



February 26th and 27th.			MAGNETICAL OBSERVATIONS.											
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.					DECLINATION.						
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		150.1	150.2	149.4	177.2	155.1	159.9	179.8	156.8	154.1	153.0	153.8	153.8
5	0		150.2	148.4	149.0	175.3	155.4	163.5	180.1	156.0	152.6	154.6	153.9	153.9
10	0		149.4	148.1	147.8	177.1	156.1	167.1	173.0	157.0	151.4	153.9	154.2	154.2
15	0		148.4	148.0	147.0	178.2	155.8	167.8	165.2	157.6	153.2	148.9	154.3	154.3
20	0		148.1	148.0	147.1	175.3	156.9	162.8	162.9	157.0	154.8	145.1	154.9	154.9
25	0		148.9	145.9	148.5	173.7	156.9	151.3	164.1	157.2	154.0	145.6	154.1	154.1
30	0		148.1	145.0	148.5	170.4	155.4	150.4	160.7	158.1	153.0	147.8	152.7	152.7
35	0		148.9	144.7	148.7	164.1	155.5	146.0	159.8	157.7	152.7	150.0	154.0	154.0
40	0		149.2	144.9	146.5	156.4	154.6	156.9	156.2	157.2	155.4	151.0	153.4	153.4
45	0		150.6	146.6	147.1	154.7	155.4	164.1	155.2	157.6	157.9	149.6	154.1	154.1
50	0		150.9	148.5	153.9	152.6	155.9	166.6	156.1	156.7	157.3	150.4	154.3	154.3
55	0		151.0	149.0	163.8	154.2	157.5	176.4	156.7	155.2	153.1	150.9	155.1	155.1
			One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.						
M.	S.													
2	30		458.9	452.3	448.5	438.3	426.1	432.5	416.9	442.1	437.9	426.4	441.0	441.0
12	12		454.9	454.9	450.7	435.4	432.0	430.6	427.2	439.6	438.4	428.2	440.5	440.5
22	30		448.9	453.8	447.1	428.6	427.8	421.4	428.7	435.6	443.7	421.4	438.1	438.1
32	30		448.1	446.0	448.4	429.5	427.1	388.0	442.6	438.8	440.0	433.8	437.3	437.3
42	30		448.3	428.8	443.0	423.1	430.1	402.2	441.4	438.2	436.8	438.9	438.7	438.7
52	30		453.5	447.1	426.7	422.5	434.2	415.3	439.9	438.2	430.9	437.1	436.8	436.8
Thermometer			46.0	46.2	46.4	46.8	46.8	47.0	47.3	47.3	47.8	47.7	47.4	47.4
			One Scale Division = .00009 parts of the V. F.					VERTICAL FORCE.						
M.	S.													
7	30		109.0	111.3	111.5	111.7	115.4	113.8	107.7	111.7	111.4	108.9	107.8	107.8
17	30		108.9	111.9	111.6	108.6	115.3	110.5	111.1	110.0	111.4	108.6	108.3	108.3
27	30		109.9	110.9	112.1	109.2	115.0	109.2	115.2	110.2	110.3	108.2	107.8	107.8
37	30		110.5	110.1	112.2	111.5	116.7	102.8	114.4	110.3	108.3	109.0	108.0	108.0
47	30		111.8	110.3	118.6	114.2	116.6	104.1	113.2	110.7	108.0	106.5	106.5	106.5
57	30		112.2	111.3	118.7	116.1	115.9	109.8	112.5	111.7	110.2	107.9	105.1	105.1
Thermometer			45.6	47.5	48.0	48.2	48.2	48.2	49.0	48.5	49.0	49.6	49.2	49.2
Increasing numbers denote decreasing westerly Declination, The Observations of the Horizontal Force are reduced to a uniform														
METEOROLOGICAL OBSERVATIONS.														
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.						
				Dry.	Wet.	Direction.	Force.							
D.	H.	M.	In.	°	°									
21	10	0	29.506	37.8	35.3	—	Calm.	Overcast with light cirri and haze.						
	11	0	29.487	37.5	33.7	S. W.	Light.	Clouded with cirro-cumuli and strati round horizon ; fair.						
	12	0	29.480	36.3	33.1	S. W.	Light.	Overcast with light cirri and haze.						
	13	0	29.470	35.7	32.9	S. W.	Light.	Overcast with cirri and haze.						
	14	0	29.454	35.3	32.5	S. W.	Light.	Overcast with light haze at 14 <sup>h</sup> 30 <sup>m</sup> ; lunar halo, diam. about 35°.						
	15	0	29.426	34.7	31.6	—	Calm.	Overcast with very light haze ; lunar halo diam. 45° ; stars dimly visible.						
	16	0	29.406	34.0	31.0	—	Calm.	Overcast with haze ; stars dimly visible.						
	17	0	29.390	34.0	31.2	—	Calm.	Overcast with dense haze.						
	18	0	29.386	34.3	32.0	—	Calm.	Ditto.						
	19	0	29.370	34.8	32.3	—	Calm.	Ditto.						
	20	0	29.326	32.8	31.4	—	Calm.	Clearing in zenith, remainder covered with haze.						
	21	0	29.320	32.6	30.6	—	Calm.	Densely overcast with haze.						

MAGNETICAL OBSERVATIONS.

February 26th and 27th.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 154.4	Sc. Div. 153.6	Sc. Div. 157.4	Sc. Div. 156.1	Sc. Div. 157.6	Sc. Div. 161.4	Sc. Div. 160.7	Sc. Div. 159.2	Sc. Div. 152.3	Sc. Div. 150.0	Sc. Div. 147.3	Sc. Div. 144.1	Sc. Div. 148.7
149.8	155.1	157.9	156.0	157.2	160.8	161.4	159.6	153.1	148.3	147.4	144.9	148.3
150.2	154.2	157.9	155.9	158.4	160.4	161.5	158.8	152.8	148.2	147.3	146.1	148.7
149.5	154.8	157.7	155.7	159.1	160.4	161.0	158.0	151.2	149.7	146.3	147.0	149.1
148.9	155.4	157.1	154.9	159.0	159.8	160.7	157.1	150.3	148.6	146.6	146.5	149.3
147.2	156.2	157.0	155.2	159.5	159.5	160.7	156.6	151.6	148.5	146.8	146.7	149.4
147.0	157.0	158.0	155.3	159.7	161.0	159.7	155.1	152.3	148.3	145.7	146.9	149.2
148.4	156.7	157.4	155.9	160.9	161.4	160.1	154.8	151.4	148.6	145.0	147.5	149.3
149.8	156.4	157.8	155.7	161.5	160.9	158.6	154.4	152.1	147.6	145.3	147.2	149.3
151.0	156.1	157.1	156.0	162.0	160.8	158.9	154.7	151.2	147.0	144.4	147.1	149.6
152.1	156.5	157.1	156.8	160.7	160.7	158.7	154.1	149.9	146.6	144.2	147.4	149.7
152.2	157.6	156.6	156.9	161.2	161.0	160.1	152.9	150.2	147.1	144.2	148.4	149.5

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

430.4	443.8	445.7	445.9	450.4	445.6	442.4	444.6	432.1	440.0	438.9	433.3	447.7
435.4	444.2	445.2	447.9	448.8	445.5	447.2	442.3	427.7	439.2	445.9	435.0	449.8
445.6	444.0	444.9	446.5	449.6	444.3	446.7	440.0	432.0	442.9	440.2	444.0	451.1
444.6	445.4	445.0	445.1	449.3	445.5	448.6	437.5	432.2	442.3	435.0	446.3	455.3
444.6	444.3	443.7	446.0	449.0	444.7	448.2	437.4	434.8	439.9	438.1	449.0	448.7
447.4	443.7	445.1	446.8	447.2	444.6	444.1	432.5	435.7	437.6	437.0	449.7	458.1
47.4	47.2	46.9	46.7	46.4	46.0	45.6	46.2	46.7	47.7	48.4	47.4	49.2

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .000108.

105.5	106.8	113.2	137.5	145.7	148.5	150.7	151.5	153.1	155.7	156.8	156.7	156.1
107.0	106.7	116.5	140.0	147.1	149.4	149.7	151.7	153.4	155.9	157.1	156.8	156.5
105.7	107.9	120.0	141.4	148.1	149.1	151.1	151.8	153.3	155.8	157.3	157.6	157.0
105.6	108.6	124.5	142.6	148.0	149.2	151.6	152.0	154.3	156.2	156.5	157.0	156.9
105.6	109.9	129.7	143.6	148.7	—	151.5	152.1	154.4	156.4	157.0	156.5	157.3
105.0	111.4	133.7	145.1	148.5	150.3	151.4	152.2	155.4	156.4	157.0	156.2	158.1
48.8	48.7	48.6	48.5	47.5	47.2	46.5	46.4	46.8	48.0	48.5	48.5	48.8

and increasing Horizontal and Vertical Force.  
temperature of 45°.6; those of the Vertical Force to 45°.6.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
26	22	0	In. 29.308	34.0	32.1	E.	Light.	Overcast with dense haze.
	23	0	29.269	33.7	31.5	—	—	
27	0	0	29.272	32.7	30.4	—	Calm.	Clouded with detached cirro-cumuli, clear spaces at intervals.
	1	0	29.282	32.2	30.5	S. W.	Very Light.	Clouded with detached cirro-cumuli.
	2	0	29.278	33.7	31.4	S. W.	Light.	Overcast with light cirri and cirro-cumuli: clear space in E. horizon.
	3	0	29.277	35.0	32.3	S. W.	Light.	§ overcast with detached cirro-cumuli; clearing in W. horizon.
	4	0	29.267	37.7	34.6	S. W.	Light.	Overspread with cirro-cumuli (marled sky).
	5	0	29.255	37.5	35.5	S.	Light.	Clear, except light cirro-strati in S.E. horizon.
	6	0	29.256	41.4	35.2	S. W.	Mod.	§ overcast with cirro-cumuli and cumulo-strati generally over the sky.
	7	0	29.258	39.9	34.8	W. S. W.	Mod.	Clouded with cumuli and cirro-cumuli, breaks occasionally appearing.
	8	0	29.249	40.6	35.1	W. S. W.	Mod.	Partially clouded with detached cumuli passing rapidly to E.
	9	0	29.239	41.8	35.1	W. S. W.	Mod.	Overcast with detached masses of cumuli and cirro-cumuli.

March 24th and 25th.			MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.					DECLINATION.					
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		145.0	148.8	154.6	177.0	160.1	164.6	157.8	149.4	155.1	149.3	150.3
5	0		150.4	145.3	158.0	175.5	162.1	167.0	156.7	148.6	155.0	149.8	150.0
10	0		151.7	146.6	154.3	172.0	164.3	164.8	154.2	148.9	153.8	151.6	148.8
15	0		149.1	148.0	149.8	166.7	165.7	161.5	154.4	150.3	148.6	151.7	147.3
20	0		146.3	145.0	147.1	164.1	163.7	160.3	159.4	150.4	143.9	150.8	147.8
25	0		147.9	144.5	146.8	163.5	161.3	159.0	160.1	151.2	142.1	151.1	146.1
30	0		148.7	145.0	156.6	164.0	160.8	159.1	159.0	153.3	143.2	152.3	146.4
35	0		146.0	146.0	164.8	64.8	160.7	159.6	158.1	154.2	145.6	151.0	147.1
40	0		145.5	143.5	184.5	61.9	160.3	163.2	156.7	154.9	148.0	151.3	149.5
45	0		146.0	145.8	181.3	61.8	159.7	167.0	151.9	156.8	149.0	151.5	152.0
50	0		147.2	149.7	179.7	59.0	159.5	167.1	149.7	157.0	148.6	150.7	152.6
55	0		149.5	152.0	176.6	58.8	160.7	163.3	149.1	156.4	148.2	151.0	153.1

M. S.		One Scale Division = .000074 parts of the H. F.										HORIZONTAL FORCE.	
2	30	442.1	453.2	432.4	440.4	416.6	416.7	431.3	431.9	434.4	435.9	447.1	447.0
12	30	450.1	441.0	437.7	427.9	404.5	428.7	432.3	436.1	435.3	440.4	440.4	447.0
22	30	435.4	443.8	439.8	415.7	407.9	423.3	430.9	438.3	429.1	434.1	445.9	445.9
32	30	441.7	430.1	445.8	403.3	411.2	425.9	429.1	438.2	423.2	431.2	442.7	442.7
42	30	451.7	425.7	442.5	407.0	408.1	422.4	432.4	432.6	434.0	438.0	439.5	439.5
52	30	446.1	432.7	440.9	409.4	412.5	429.6	432.9	434.1	439.6	442.6	436.4	436.4

Thermometer	53.4	53.4	53.4	53.7	53.7	53.4	53.0	53.0	52.5	52.5	52.6
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M. S.		One Scale Division = .000092 parts of the V. F.										VERTICAL FORCE.	
7	30	89.5	92.6	95.2	87.8	94.1	91.9	89.7	88.6	85.4	79.9	82.3	82.3
17	30	88.2	94.0	92.9	89.4	93.4	91.5	91.0	85.2	84.1	79.9	82.2	82.2
27	30	88.0	94.9	96.8	92.1	95.1	91.4	89.6	85.0	81.2	77.3	81.2	81.2
37	30	88.9	96.2	99.7	94.1	93.3	91.5	90.1	84.0	80.4	79.3	79.1	79.1
47	30	90.8	96.8	88.8	94.2	93.4	91.1	88.5	82.8	81.3	79.3	78.3	78.3
57	30	91.5	97.0	88.5	95.5	92.6	88.0	89.9	84.7	79.3	81.4	78.2	78.2

Thermometer	52.4	53.0	53.5	54.0	54.2	54.7	55.0	54.5	54.0	54.0	54.0
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Increasing numbers denote decreasing westerly Declination,  
The observations of the Horizontal Force are reduced to a uniform

METEOROLOGICAL OBSERVATIONS.												
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.				
				Dry.	Wet.	Direction.	Force.					
D.	H.	M.	In.	°	°							
24	10	0	29.522	47.5	41.6	S. W.	Nearly calm	§ overcast, with light cirro-cumuli. Fair.				
	11	0	29.516	44.6	39.6	S. W.	Nearly calm	Clouded, with cirro-cumuli; a few clear patches.				
	12	0	29.519	43.4	37.8	S. S. W.	Light.	Overcast, with dense haze.				
	13	0	29.545	42.6	38.2	S. W.	Very light	Overcast, with dense haze.				
	14	0	29.571	43.0	38.6	—	Calm.	Densely clouded; slight rain commenced at 13 <sup>h</sup> 30 <sup>m</sup> .				
	15	0	29.587	41.7	38.4	—	Calm.	Densely clouded; spitting rain.				
	16	0	29.592	38.6	36.8	—	Calm.	Densely clouded; slight rain.				
	17	0	29.600	39.2	34.9	—	Calm.	Densely clouded; rain ceased; began again at 17 <sup>h</sup> 40 <sup>m</sup> .				
	18	0	29.609	38.4	34.7	—	Calm.	Heavy rain.				
	19	0	29.613	37.6	34.3	—	Calm.	Densely clouded. Rain ceased at 18 <sup>h</sup> 30 <sup>m</sup> .				
	20	0	29.635	37.3	34.7	W. S. W.	Light.	Slight rain; very dark.				
	21	0	29.647	36.8	33.7	W. S. W.	Very light	Slight rain.				

MAGNETICAL OBSERVATIONS.													March 24th and 25th.	
DECLINATION.						Angular Value of one Scale Division = 0'.721.								
21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .		
Sc. Div. 151.6	Sc. Div. 143.9	Sc. Div. 151.7	Sc. Div. 156.3	Sc. Div. 158.4	Sc. Div. 159.2	Sc. Div. 159.2	Sc. Div. 157.7	Sc. Div. 153.9	Sc. Div. 147.3	Sc. Div. 142.6	Sc. Div. 141.9	Sc. Div. 142.2		
149.4	144.0	152.2	155.8	159.9	159.5	158.2	158.0	152.8	146.8	142.5	142.3	142.5		
146.2	143.9	151.2	156.2	159.5	159.5	158.9	157.4	152.2	146.5	142.3	142.1	142.2		
143.2	145.6	151.6	156.2	158.5	158.5	159.0	157.3	151.4	146.1	142.0	142.5	142.4		
140.1	147.9	152.1	154.4	158.9	157.8	159.4	156.8	150.8	145.5	142.0	143.2	142.6		
139.5	149.1	153.4	154.1	158.4	159.5	159.3	156.2	150.5	144.7	141.8	143.3	143.4		
139.3	149.5	154.4	154.8	158.9	159.1	159.8	156.0	150.4	144.1	141.8	142.7	143.8		
—	149.4	155.1	155.1	160.0	160.4	159.0	155.7	149.6	143.7	141.8	141.8	144.4		
138.5	150.3	157.2	156.3	159.7	160.0	158.8	155.1	149.3	143.5	141.6	141.6	145.0		
138.9	150.3	157.2	156.4	160.9	160.5	158.4	154.8	148.6	143.3	141.8	141.9	145.2		
140.1	150.9	157.2	157.3	159.4	160.3	158.6	154.3	147.8	143.2	141.6	142.3	145.4		
141.1	151.6	156.4	157.9 <sup>a</sup>	158.4	159.1	158.2	154.1	147.3	142.9	141.7	142.1	146.8		

HORIZONTAL FORCE.													Change in the magnetic moment of the Bar for 1° Fah <sup>t</sup> . = .00026.	
435.8	444.6	448.5	442.4	442.0	436.7	440.1	432.1	425.5	425.2	431.2	443.5	439.9		
426.8	440.7	448.5	443.7	438.6	439.8	437.6	429.6	425.0	426.1	432.2	444.9	443.3		
428.9	433.2	446.2	440.3	438.3	436.1	437.3	428.3	423.7	426.0	434.0	448.7	440.2		
433.2	434.9	442.3	441.4	432.9	439.5	436.7	427.5	423.6	424.9	436.3	440.9	440.2		
436.4	442.3	441.5	439.0	431.1	441.2	435.7	426.1	423.9	425.6	436.5	438.6	442.3		
440.0	445.9	442.5	442.1	436.9	441.8	433.6	426.9	424.7	428.8	440.8	440.2	442.7		
52.2	52.0	51.7	52.0	51.9	51.7	51.6	51.4	51.4	51.4	51.7	52.0	51.8		

VERTICAL FORCE.													Change in the magnetic moment of the Bar for 1° Fah <sup>t</sup> . = .000108.	
80.3	80.5	82.3	84.4	84.3	84.8	83.7	83.1	81.9	82.1	82.6	82.7	83.9		
79.6	79.2	82.5	86.1	84.2	84.7	83.6	83.0	82.0	82.2	82.6	83.3	83.5		
79.2	78.5	82.6	83.5	84.4	84.6	83.4	83.0	82.1	82.2	82.9	83.1	83.5		
78.3	79.4	82.3	83.1	84.5	84.3	83.4	82.3	82.2	82.2	82.7	83.1	83.6		
79.5	80.2	82.7	83.4	84.8	83.8	83.3	82.7	82.3	82.2	82.6	83.1	83.6		
80.4	81.5	83.5	83.9	84.3	83.7	83.2	82.3	82.4	82.6	82.9	83.3	83.8		
53.6	53.5	53.5	53.6	53.4	52.3	52.0	51.7	51.5	51.8	52.0	51.8	51.8		

and increasing Horizontal and Vertical Force.  
temperature of 51°.4; those of the Vertical Force to 51°.5.

METEOROLOGICAL OBSERVATIONS.												
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.				
				Dry.	Wet.	Direction.	Force.					
D. 24	H. 22	M. 0	In. 29.665	° 37.3	° 34.0	S. W.	Nearly calm	Densely clouded. Very dark.				
			29.680	37.2	34.3	N. W.	Nearly calm	Densely clouded, with cumuli.				
25	0	0	29.709	37.3	34.6	N. W.	Nearly calm	Densely clouded.				
	1	0	29.715	37.6	34.7	N. W.	Nearly calm	Clouded; a few drops of rain falling.				
	2	0	29.699	39.1	35.4	S. E.	Light.	Densely clouded, with cumulo-strati and haze.				
	3	0	29.697	41.4	36.6	S. E.	Light.	Overcast; cumulo-strati, cirro-cumuli, and haze.				
	4	0	29.719	43.6	38.6	—	Calm.	Densely clouded; spitting rain.				
	5	0	29.721	39.3	36.8	—	Calm.	Densely clouded; rain.				
	6	0	29.721	38.3	36.6	—	Calm.	Rain continued since last observation. Clearing in W.				
	7	0	29.700	38.6	37.2	N. b. E.	Light.	Densely overcast, with cirro-cumuli and haze. Rain ceased at 6 <sup>h</sup> 20 <sup>m</sup> .				
	8	0	29.687	40.2	38.4	N. b. E.	Light.	Densely overcast; cirro-cumuli and cirrous haze. Spitting rain.				
	9	0	29.700	38.2	36.6	N. b. E.	Light.	Heavy rain till 9 <sup>h</sup> 30 <sup>m</sup> ; and then began to clear up.				

\* Twenty-six seconds late.

April 21st and 22nd.			MAGNETICAL OBSERVATIONS.											
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.						DECLINATION.					
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		146.6	154.0	152.4	152.2	155.2	153.9	152.6	154.3	154.2	154.8	153.6	
5	0		147.3	158.5	151.6	151.8	153.1	148.4	153.6	153.2	152.2	155.0	153.9	
10	0		146.2	160.5	151.0	151.9	153.9	146.5	155.1	151.2	150.1	154.9	151.5	
15	0		146.3	162.7	151.1	151.7	152.2	150.2	155.6	150.7	148.8	154.1	146.5	
20	0		146.4	161.7	151.0	152.0	151.8	155.2	154.8	149.9	148.0	154.8	143.9	
25	0		145.7	157.9	150.5	151.0	152.1	144.1	154.1	149.1	149.3	154.4	141.4	
30	0		146.6	154.6	150.4	149.6	152.8	136.4	153.7	148.8	150.7	154.4	140.3	
35	0		145.7	154.8	150.0	148.4	151.9	141.6	154.3	149.9	151.5	153.8	139.6	
40	0		146.0	154.0	150.1	148.2	152.1	158.4	154.5	150.3	152.9	153.0	140.0	
45	0		145.8	153.9	151.1	148.9	159.3	161.1	154.8	151.8	155.3	153.7	141.2	
50	0		146.4	153.6	151.4	151.3	169.9	155.6	155.3	153.1	156.0	155.1	142.4	
55	0		147.4	153.4	151.9	153.9	167.3	151.8	155.2	153.6	155.5	154.5	145.3	
M. S.			One Scale Division = .000074 parts of the H. F.						HORIZONTAL FORCE.					
			472.0	461.7	469.8	457.0	451.0	465.7	465.6	454.3	452.7	451.4	448.8	
2	30		472.0	461.7	469.8	457.0	451.0	465.7	465.6	454.3	452.7	451.4	448.8	
12	30		478.5	465.6	467.8	456.0	451.3	456.4	463.3	455.6	454.0	447.2	447.9	
22	30		486.1	478.4	462.1	452.5	450.2	479.6	460.3	457.5	460.4	444.0	444.7	
32	30		486.5	469.6	464.4	448.5	455.5	455.0	455.2	459.8	464.6	445.7	442.9	
42	30		478.6	464.8	462.4	446.1	447.3	465.8	453.3	458.1	460.1	446.0	446.0	
52	30		467.0	471.1	457.2	448.3	468.8	468.3	453.6	454.1	457.9	447.1	450.5	
Thermometer			52.4	53.4	54.0	53.9	53.2	52.4	51.8	51.2	50.7	50.4	49.8	
M. S.			One Scale Division = .000091 parts of the V. F.						VERTICAL FORCE.					
			73.3	75.5	75.6	75.6	76.5	68.9	68.2	72.4	69.5	68.2	68.2	
7	30		73.3	75.5	75.6	75.6	76.5	68.9	68.2	72.4	69.5	68.2	68.2	
17	30		73.6	76.4	75.4	76.1	76.1	71.3	69.7	72.0	70.5	68.0	67.4	
27	30		74.9	76.3	74.9	76.2	75.8	63.2	68.4	72.0	70.1	69.2	66.3	
37	30		73.8	76.4	74.9	77.0	75.4	66.1	71.8	70.8	69.1	69.5	63.9	
47	30		74.1	76.0	74.9	77.0	74.1	66.5	70.4	70.1	68.8	69.3	63.7	
57	30		73.6	76.2	74.9	77.0	70.9	76.4	70.8	69.5	68.4	68.4	63.4	
Thermometer			51.7	52.5	53.0	54.0	54.1	53.0	52.8	52.0	52.0	51.3	50.7	
Increasing numbers denote decreasing westerly Declination, The observations of the Horizontal Force are reduced to a uniform														
METEOROLOGICAL OBSERVATIONS.														
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.						
				Dry.	Wet.	Direction.	Force.							
D.	H.	M.	In.	°	°									
21	10	0	29.925	48.0	42.4	S.	Light.	Clear; light haze and cirri to W. and light strati in S. E. horizon.						
	11	0	29.934	50.2	43.2	S.	Light.	Perfectly clear except light haze to W.						
	12	0	29.936	50.0	42.8	S.	Very light	Clear.						
	13	0	29.951	44.0	34.8	N.	Light.	Clear; at 13 <sup>h</sup> 15 <sup>m</sup> , wind rising.						
	14	0	29.972	39.6	31.7	N.W.	Light.	Clear.						
	15	0	29.977	37.6	29.6	N.W.	Light.	Clear, auroral light in N. horizon, a few faint streamers rising from it.						
	16	0	29.977	35.2	28.7	N.W.	Light.	Clear.						
	17	0	30.001	33.9	28.0	N.W.	Light.	Clear.						
	18	0	29.997	33.4	27.7	N.W.	Light.	Clear.						
	19	0	29.992	32.5	27.3	N.W.	Light.	Clear.						
	20	0	29.973	31.7	27.1	N.W.	Light.	Clear, faint auroral light to N.						
	21	0	29.972	32.4	27.5	N.W.	Light.	Clear.						

MAGNETICAL OBSERVATIONS.

April 21st and 22nd.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 147.2	Sc. Div. 158.5	Sc. Div. 155.2	Sc. Div. 158.6	Sc. Div. 155.6	Sc. Div. 155.9	Sc. Div. 158.2	Sc. Div. 153.5	Sc. Div. 144.8	Sc. Div. 140.1	Sc. Div. 139.1	Sc. Div. 143.1	Sc. Div. 144.2
147.9	158.7	155.7	158.3	155.5	156.1	157.8	152.6	144.4	140.3	139.9	143.8	143.9
148.0	158.8	155.7	158.4 <sup>a</sup>	159.7	156.3	156.9	151.5	142.9	140.1	140.5	143.7	144.0
150.1	158.4	156.1	159.5	156.4	153.3	155.6	150.7	142.3	140.0	140.8	143.9	144.5
150.8	157.4	157.1	160.2	153.2	154.9	154.4	150.4	142.4	140.2	141.7	143.8	144.0
151.3	156.7	157.3	159.8	154.9	154.3	154.2	148.8	142.9	140.0	142.7	143.8	143.4
152.3	156.1	156.5	159.4	153.7	154.1	154.0	148.8	141.2	139.8	143.9	143.6	144.0
153.5	155.0	156.7	159.7	152.9	155.6	153.6	147.9	140.9	140.1	144.4	144.0	142.8
155.0	154.8	156.9	159.3	153.9	156.3	153.1	147.1	140.7	139.8	144.1	144.3	143.1
156.4	155.1	158.1	158.8	154.1	157.2	153.9	146.8	140.3	139.0	143.9	144.5	143.5
156.7	155.0	157.5	157.4	154.9 <sup>a</sup>	156.8	153.4	146.0	140.6	139.1	144.0	144.6	143.6
157.6	156.6	157.9	156.8	155.3	157.4	153.4	144.5	140.3	138.9	143.8	144.5	143.0

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

452.8	454.8	462.1	456.8	445.4	450.0	446.1	434.6	427.2	441.7	446.3	461.6	475.0
454.1	457.1	461.3	456.6	442.8	449.1	444.8	431.3	423.7	443.8	449.4	460.8	474.6
456.2	456.1	461.1	456.6	442.1	452.0	443.2	433.3	429.5	443.0	449.6	462.6	471.7
455.6	459.2	460.0	454.5	443.8	450.2	440.2	431.9	430.1	440.1	457.0	460.2	471.7
455.6	460.0	459.6	454.1	449.5	448.3	438.0	429.0	435.5	441.4	464.1	468.0	471.5
454.1	462.1	458.2	451.2	450.3	446.9	435.5	425.9	439.5	446.7	462.4	472.0	467.9
48.6	48.6	48.6	48.6	48.2	50.4	51.4	52.2	52.8	53.2	53.9	54.2	55.4

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .000108.

64.0	66.0	68.9	68.9	68.9	69.5	70.2	70.7	70.5	71.8	73.4	75.5	76.7
64.8	66.8	68.5	69.2	69.2	70.0	70.3	70.1	70.4	73.2	74.0	75.7	77.0
64.7	66.9	68.4	69.3	69.5	69.4	70.9	71.2	71.0	73.2	74.5	75.9	76.8
64.6	68.1	68.1	69.2	70.0	69.0	70.0	70.8	71.1	72.9	75.4	76.1	77.4
64.6	68.3	68.6	69.4	69.6	70.8	70.1	70.7	71.6	73.2	75.5	76.3	77.8
65.7	68.7	69.0	68.9	69.7	69.7	70.4	70.1	71.4	72.7	75.5	76.5	76.1
50.0	49.5	49.6	48.7	49.3	50.6	51.5	52.5	52.6	53.0	53.9	54.0	54.6

and increasing Horizontal and Vertical Force.

temperature of 48°·2; those of the Vertical Force to 55°·5.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
21	21	0	29.980	32.2	27.2	N. b. W.	Light.	Clear.
	23	0	30.007	32.5	27.4	N. b. W.	Light.	Clear.
22	0	0	30.025	34.2	28.8	N.	Light.	Clear.
	1	0	30.043	36.6	30.8	N. b. E.	Light.	Clear.
	2	0	30.038	40.1	33.8	N.	almost calm	Clear.
	3	0	30.048	42.9	35.5	S.W.	Very light	Clear.
	4	0	29.979	44.6	36.8	S.S.E.	Very light	Clear.
	5	0	30.026	45.6	38.4	S.S.E.	Light.	Clear.
	6	0	30.018	45.2	37.4	S.S.E.	Light.	Light cirri rising in W., otherwise perfectly clear.
	7	0	30.009	46.4	38.7	S.E.	Light.	Perfectly clear, except some light cirro-strati in N.W.
	8	0	29.994	46.8	40.0	S.	Very light	Clear, except some very light cirri in N.
	9	0	29.968	50.7	41.3	S.	Light.	Clear.

May 28th and 29th.			MAGNETICAL OBSERVATIONS.									
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.					DECLINATION.				
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		132.9	139.6	140.0	137.9	139.0	134.6	136.0	137.8	136.9	137.5
5	0		133.8	138.3	139.3	137.2	139.0	134.8	136.2	137.5	137.2	138.0
10	0		134.8	138.6	139.7	136.7	136.1	135.5	136.2	137.5	137.5	138.1
15	0		137.2	138.4	140.9	136.1	133.9	136.0	136.2	137.5	137.4	138.5
20	0		138.1	138.0	142.9	136.7	137.4	136.0	136.4	136.1	137.5	138.6
25	0		140.0	138.0	144.0	136.0	139.0	136.0	136.6	135.7	138.0	138.6
30	0		139.1	138.1	141.9	135.6	141.5	135.4	136.4	136.2	138.3	138.9
35	0		139.1	138.9	140.0	135.9	141.8	135.4	136.4	136.1	138.2	138.7
40	0		138.9	139.2	139.2	138.1	140.4	135.0	136.6	136.7	137.7	138.1
45	0		139.2	138.4	139.9	140.0	137.2	135.1	137.4	135.3	137.2	138.2
50	0		140.1	138.4	139.1	139.9	135.0	135.6	137.8	135.1	136.9	138.3
55	0		140.3	140.0	138.9	138.8	134.9	135.7	138.1	135.9	137.3	138.3
			One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.				
M.	S.											
2	30		465.6	465.7	462.1	458.8	453.7	458.5	460.3	455.7	457.3	456.6
12	30		466.4	462.8	454.0	455.2	455.7	457.7	458.7	455.5	458.3	456.1
22	30		466.5	465.9	462.1	460.0	451.8	455.9	457.7	456.8	461.4	454.5
32	30		468.7	465.6	466.1	450.4	457.1	455.4	456.3	459.0	460.5	453.7
42	30		467.9	472.0	454.7	449.3	465.5	454.6	455.3	459.8	459.1	453.6
52	30		466.8	472.0	455.6	453.0	460.5	457.8	455.6	459.2	457.9	454.9
Thermometer			69.9	70.4	70.4	70.2	69.7	69.4	68.9	68.3	67.9	67.3
			One Scale Division = .000091 parts of the V. F.					VERTICAL FORCE.				
M.	S.											
7	30		107.4	108.1	107.7	106.2	106.2	103.3	105.6	103.7	102.9	102.8
17	30		108.1	107.9	108.8	105.9	105.0	104.0	105.2	103.9	102.6	103.2
27	30		108.1	107.9	108.8	106.0	104.5	104.5	104.9	103.8	102.4	103.5
37	30		108.6	108.3	107.7	105.8	103.8	104.5	104.8	103.7	102.6	103.8
47	30		108.6	108.6	106.4	106.2	102.4	105.2	104.5	103.4	102.9	104.1
57	30		108.4	108.7	106.3	105.9	102.1	105.5	104.1	103.1	103.0	104.2
Thermometer			69.6	69.8	70.0	69.8	70.8	70.6	70.6	69.5	69.2	68.5
Increasing numbers denote decreasing westerly Declination, The observations of the Horizontal Force are reduced to a uniform												
METEOROLOGICAL OBSERVATIONS.												
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.				
				Dry.	Wet.	Direction.	Force.					
D.	H.	M.	In.	°	°							
28	10	0	29.581	75.8	65.1	N.	Light.	[in W. and N. W.				
	11	0	29.581	76.6	62.1	N.	Light.	§ clouded; dense cumuli and cumulo-strati generally over the sky.				
	12	0	29.595	75.0	58.4	N.	Light.	§ clouded, with dense masses of cumuli and cumulo-strati.				
	13	0	29.606	73.9	57.1	N.	Nearly calm.	§ clouded to eastward; remainder clear.				
	14	0	29.623	68.3	54.3	N.	Nearly calm.	Clear, except a few cirri in zenith, and light haze in S. horizon.				
	15	0	29.646	65.8	52.6	N.	Nearly calm.	Clear, except a few light cirri in W.				
	16	0	29.653	63.0	50.8	—	Calm.	Clear.				
	17	0	29.670	60.2	49.8	—	Calm.	Clear.				
	18	0	29.700	58.5	51.0	N. b. W.	Very light.	Clear. [zenith clear.				
	19	0	29.710	58.2	50.6	N. b. W.	Very light.	Bank of haze and strati in N. horizon; range of strati in S. horizon;				
	20	0	29.718	57.4	50.6	Northerly	Almost calm.	Sky partially covered with detached cirri and cirro-cumuli.				
	21	0	29.734	54.0	49.3	Northerly	Almost calm.	Sky partially covered with light cirri and cirro-cumuli.				

MAGNETICAL OBSERVATIONS.

May 28th and 29th.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 139.0	Sc. Div. 140.3	Sc. Div. 141.7	Sc. Div. 142.9	Sc. Div. 140.3	Sc. Div. 137.0	Sc. Div. 137.0	Sc. Div. 131.6	Sc. Div. 130.6	Sc. Div. 131.8	Sc. Div. 133.0	Sc. Div. 132.5	Sc. Div. 133.9
139.9	140.6	141.7	143.4	139.5	137.8	136.4	132.3	130.3	131.5	133.1	132.6	134.0
140.6	141.0	142.3	143.1	138.9	138.2	135.4	132.2	130.6	131.7	133.0	132.7	134.0
140.1	140.8	142.7	143.7	139.8	138.0	135.1	132.6	130.1	131.8	133.0	132.5	134.2
139.0	140.9	141.9	142.9	139.3	137.2	135.7	132.5	131.2	131.8	133.1	132.7	134.4
139.0	140.9	142.1	142.6	139.3	137.2	135.9	132.1	131.6	132.0	133.0	133.0	134.5
139.7	141.0	142.5	142.7	139.4	137.0	136.5	131.8	131.2	132.8	132.6	133.2	135.0
140.0	141.1	142.6	142.9	139.7	136.8	135.7	131.7	131.6	132.9	132.4	134.0	135.0
140.0	141.1	142.2	143.0	139.0	136.0	135.0	130.7	131.1	133.0	132.8	134.0	135.1
140.2	140.8	142.6	142.5	138.0	136.0	134.1	130.8	131.2	132.3	133.0	133.6	135.3
140.1	140.7	142.7	142.2	138.5	136.1	132.3	130.9	131.3	132.7	132.9	133.5	135.1
140.3	141.7	142.9	141.3	137.6	137.0	131.8	131.1	131.5	132.9	132.6	133.7	134.9

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

456.9	458.5	459.3	458.7	444.8	444.9	442.3	444.4	452.8	461.3	462.1	472.7	471.9
457.8	459.8	460.4	459.0	444.6	442.1	443.6	444.0	452.6	461.1	464.9	473.7	471.8
458.7	458.8	460.1	455.5	445.9	444.3	441.9	444.1	455.1	462.7	468.0	471.2	473.1
458.1	458.3	461.9	451.8	445.4	447.2	440.9	448.3	456.7	466.9	472.3	474.2	472.9
457.5	458.5	461.7	452.3	448.6	445.5	444.6	450.2	457.4	466.4	469.5	473.8	471.9
458.5	459.1	461.0	447.4	447.7	441.2	445.1	451.5	459.7	464.3	471.0	472.6	472.6
66.2	66.0	65.5	65.9	65.5	65.5	65.9	66.3	66.7	66.9	66.9	66.8	67.0

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .000108.

103.7	103.5	101.9	101.3	100.3	99.7	99.9	99.2	98.2	99.0	100.4	101.9	103.0
104.1	103.0	100.8	101.5	100.5	99.8	100.0	98.5	97.9	98.8	101.1	101.9	103.4
104.0	102.8	101.3	101.2	100.5	99.9	99.9	98.3	97.9	99.0	101.0	102.5	103.5
103.8	102.6	101.9	100.8	100.4	100.0	99.9	98.4	97.9	99.5	101.5	102.8	103.5
103.7	102.3	101.3	100.5	100.2	99.7	100.0	98.5	98.3	99.8	101.9	103.1	103.5
103.6	102.1	101.4	100.4	100.2	99.8	99.5	98.1	98.5	99.9	102.0	103.1	104.2
68.0	67.5	66.0	66.0	65.8	66.5	66.8	67.0	67.2	67.2	67.5	67.2	67.2

and increasing Horizontal and Vertical Force.  
temperature of 65°.5; those of the Vertical Force to 65°.8.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
28	22	0	29.753	50.7	46.7	N.	Light.	¾ overcast; strati and cirro-strati.
	23	0	29.767	50.4	46.5	N.	Light.	Clear, except a few cirri dispersed round horizon.
29	0	0	29.798	53.2	48.4	N.	Light.	Clear, except light haze round horizon.
	1	0	29.791	55.8	49.4	N.	Light.	¾ clouded, with cirro-cumuli in N.; remainder clear.
	2	0	29.793	57.8	50.6	N. b. W.	Very light.	A few cirri and light haze overspreading the sky.
	3	0	29.785	59.9	51.6	—	Calm.	Cirri round horizon; remainder hazy.
	4	0	29.807	61.2	53.1	S. E.	Light.	Haze in zenith, and cirri round horizon.
	5	0	29.811	61.7	53.6	S. E.	Light.	Very light cirri and haze overspreading the sky.
	6	0	29.813	60.2	53.0	S. E.	Light.	¾ overcast, with very light cirri and cirro-strati and haze.
	7	0	29.808	61.2	53.1	S. E.	Light.	Masses of light cirro-cumuli extending in an arch across zenith from E. to
	8	0	29.790	64.0	54.9	S. E.	Very light.	Clear, except a few streaks of cirri across zenith. [W., otherwise clear.
	9	0	29.780	66.3	56.6	S. E.	Very light.	Clear.



June 23rd and 24th.			MAGNETICAL OBSERVATIONS.									
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.					DECLINATION.				
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		127.8	128.0	137.3	137.0	133.3	137.6	138.6	141.1	143.5	132.3
5	0		128.2	128.2	140.1	136.6	133.1	138.6	140.4	141.0	144.0	131.4
10	0		128.0	128.7	142.0	136.1	133.1	139.7	139.9	138.6	143.1	130.7
15	0		129.4	129.8	141.8	136.0	132.9	140.8	141.5	137.4	142.3	131.7
20	0		129.0	131.3	140.5	136.9	133.0	141.0	148.2	138.0	141.0	132.1
25	0		128.9	133.0	141.0	136.7	133.3	141.0	148.7	137.2	140.6	133.5
30	0		129.4	133.0	140.1	136.6	133.2	139.7	148.8	137.0	141.9	132.9
35	0		130.2	133.1	139.8	136.0	134.0	138.8	148.8	137.3	140.9	133.9
40	0		131.2	133.9	140.0	134.7	134.2	137.6	149.0	138.6	138.1	131.5
45	0		130.4	134.6	138.4	133.9	135.0	137.4	147.6	139.8	135.5	127.4
50	0		129.0	134.9	137.7	133.6	135.1	137.3	144.2	141.7	133.6	123.1
55	0		128.5	136.1	137.3	132.9	136.0	137.8	143.0	142.2	132.4	121.7

M. S.		One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.					
2	30	438.6	440.8	432.1	431.1	425.5	423.0	430.0	428.2	418.3	430.1	426.5
12	30	440.6	436.2	445.4	426.5	425.6	420.8	427.4	428.2	420.5	431.9	430.8
22	30	444.8	454.9	447.7	432.9	424.1	424.3	435.4	428.4	421.7	433.9	435.3
32	30	447.9	448.9	452.4	436.7	428.9	427.0	438.9	425.0	434.3	434.9	435.9
42	30	455.9	449.6	441.4	430.3	428.3	428.3	435.4	423.6	429.3	432.9	436.7
52	30	448.3	443.1	435.0	427.4	427.1	427.9	434.1	420.0	431.4	428.2	435.8

Thermometer		74.5	74.5	74.5	74.1	73.8	73.5	73.3	73.0	72.7	72.0	72.0

M. S.		One Scale Division = .000092 parts of the V. F.					VERTICAL FORCE.					
7	30	94.6	92.7	95.3	94.9	94.6	94.6	92.3	87.4	86.1	82.9	75.5
17	30	94.7	94.3	95.2	95.1	94.6	94.1	90.9	87.6	86.4	82.6	76.1
27	30	94.0	94.3	96.0	96.7	94.5	93.2	88.0	87.5	86.1	82.9	76.8
37	30	95.4	95.2	96.2	95.5	94.7	93.1	87.0	87.4	82.9	81.7	78.2
47	30	94.3	95.5	95.8	94.7	94.7	93.0	86.9	86.1	82.7	80.1	79.7
57	30	92.9	94.5	95.7	94.3	94.2	92.9	86.7	84.9	82.4	76.8	80.7

Thermometer		74.5	74.5	74.5	74.2	74.4	75.0	74.6	74.2	73.8	72.7	71.5

Increasing numbers denote decreasing westerly Declination,  
The observations of the Horizontal Force are reduced to a uniform

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
23	10	0	29.465	78.8	70.5	S.	Light.	Overcast; cirro-cumuli and cirro-strati, with heavy cumuli in N.
	11	0	29.465	74.0	66.7	S.	Almost calm.	Overcast with cirro-cumuli and heavy cumuli in N., near horizon.
	12	0	29.474	72.0	65.1	—	Calm.	Overcast with cirro-cumuli and cumuli.
	13	0	29.490	70.5	65.8	—	Calm.	Clouded with cirro-strati and cirro-cumuli. [horizon.
	14	0	29.498	70.2	64.6	—	Calm.	Overcast with cirro-cumuli, cirri and dense haze, heavy clouds in
	15	0	29.506	67.8	64.0	—	Calm.	Densely clouded.
	16	0	29.523	66.0	62.2	—	Calm.	Densely clouded; a few drops of rain falling.
	17	0	29.540	64.7	62.9	—	Calm.	Densely clouded; cirro-cumuli, a few stars visible in zenith.
	18	0	29.537	63.0	60.8	—	Calm.	Clouded; very dark.
	19	0	29.529	63.4	61.4	—	Calm.	Clouded with strati, cirro-cumuli, and haze.
	20	0	29.525	64.2	61.9	—	Calm.	Densely clouded; cumulo-strati, cirro-cumuli, and haze.
	21	0	29.523	64.3	61.9	—	Calm.	Densely clouded; cumulo-strati, cirro-cumuli, and haze.

MAGNETICAL OBSERVATIONS.

June 23rd and 24th.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
128.8	134.2	129.0	133.3	143.0	142.4	142.0	138.4	130.2	129.9	127.9	126.2	128.0
128.1	135.0	127.2	134.5	143.4	142.3	140.7	136.0	131.6	129.1	126.7	126.2	127.8
128.0	135.1	125.9	134.8	143.5	142.5	142.5	134.2	130.8	128.7	127.6	126.1	127.7
127.3	134.6	124.0	135.4	143.6	142.6	142.0	133.1	130.0	128.9	128.3	126.1	127.7
126.3	134.4	124.9	136.1	143.2	143.6	140.2	132.7	129.6	129.4	127.8	126.4	128.0
127.2	133.4	128.4	136.6	143.3	143.8	140.0	134.3	131.8	128.8	127.6	126.9	127.9
128.1	132.5	131.2	136.3	143.9	142.7	138.7	133.6	130.6	129.8	126.6	127.2	128.0
129.2	130.1	131.9	137.5	143.3	141.9	138.0	132.6	130.6	129.4	127.3	127.2	128.1
129.0	133.3	131.2	139.1	144.8	141.7	137.6	132.3	129.8	128.9	126.9	128.0	128.0
130.5	131.2	130.2	141.6	142.8	141.0	135.8	130.4	130.1	128.6	126.1	128.0	128.0
132.0	131.2	131.0	142.6	142.5	141.4	137.9	130.6	129.8	128.2	126.3	126.7	128.0
133.5	129.9	132.6	143.0	142.2	143.6	137.7	132.0	130.1	128.8	126.1	128.0	128.0

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

435.2	436.5	409.7	432.6	443.8	433.0	421.7	409.7	413.3	417.0	424.6	430.6	435.5
436.3	438.7	406.5	435.7	442.5	426.7	420.7	405.8	415.5	415.1	421.6	431.5	434.4
435.0	437.0	413.6	437.0	436.9	427.8	417.1	399.0	413.4	418.6	427.5	435.9	434.0
435.3	431.0	429.5	437.2	438.0	430.2	419.4	408.4	411.3	418.3	429.0	433.4	435.3
437.0	424.2	430.8	439.4	442.0	425.4	422.4	406.8	413.2	429.6	428.9	430.2	438.3
436.2	414.9	428.7	439.6	433.4	421.4	418.3	404.3	416.3	426.8	431.1	433.4	439.5
71.9	71.3	71.3	71.0	70.9	70.7	70.7	71.1	71.3	71.9	72.5	73.2	73.5

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .000108.

81.9	89.6	89.0	87.5	89.6	88.8	88.0	89.1	89.1	89.8	89.0	90.4	93.1
84.2	89.9	88.5	87.7	89.3	88.3	88.2	88.4	89.1	89.7	89.6	91.4	93.4
85.3	89.4	89.3	88.0	89.3	88.3	88.7	88.5	89.2	89.4	89.7	91.3	93.4
85.5	88.4	89.3	88.1	89.2	88.7	88.3	88.9	88.8	89.4	89.9	92.1	93.5
87.2	—	88.0	88.4	89.1	88.6	89.4	87.9	89.0	89.5	90.2	92.7	93.6
88.6	88.1	87.3	89.3	89.0	88.5	89.0	88.0	89.4	89.4	90.4	92.9	93.7
71.5	73.0	72.5	71.8	71.7	71.4	72	71.6	71.8	72.3	72.6	72.8	73.5

and increasing Horizontal and Vertical Force.  
temperature of 70°.7; those of the Vertical Force to 71°.2.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.	Barometer at 32°.	Thermometers.		Wind.		Weather.
		Dry.	Wet.	Direction.	Force.	
D. H. M.	In.	°	°			
23 22 0	29.542	65.5	63.5	—	Calm.	Overcast with cirro-cumuli and haze.
23 0	29.548	65.6	63.9	—	Calm.	Overcast with cirro-cumuli and haze.
24 0 0	29.562	66.8	64.5	—	Calm.	Densely clouded, cirro-cumuli and cumulo-strati.
1 0	29.576	67.2	64.7	—	Calm.	Densely clouded, cirro-cumuli and haze passing rapidly from E.
2 0	29.580	67.2	64.8	—	Calm.	Overcast with cirro-cumuli and cirro-strati: sudden shower of rain at 2 <sup>h</sup> 10 <sup>m</sup> , lasting only a few minutes.
3 0	29.584	68.2	66.0	—	Calm.	Densely clouded with cirro-cumuli and cirro-strati.
4 0	29.590	71.8	67.7	E.	Very light	Densely clouded; cirro-cumuli and cumulo-strati.
5 0	29.599	71.0	68.2	E.	Light.	Densely clouded; strati, cumulo-strati and haze.
6 0	29.591	72.0	66.7	E.	Light.	Densely clouded; cumulo-strati, and cirro-cumuli and haze.
7 0	29.589	74.5	67.7	E.	Light.	Overcast; cirro-strati and cirro-cumuli, interspersed with clear patches, heavy clouds in N.
8 0	29.573	75.5	67.8	E.	Light.	Overcast with cirro-cumuli and cirro-strati generally over the sky.
9 0	29.573	76.0	67.4	E.	Mod.	Partially clouded with cirro-cumuli, light cirri passing rapidly from E.

July 21st and 22nd.		MAGNETICAL OBSERVATIONS.											
Mean Göttingen Time.		Angular Value of one Scale Division = 0'.721.										DECLINATION.	
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
M.	S.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
0	0	129.3	130.2	129.9	130.1	131.2	146.1	146.7	150.7	128.3	132.9	141.7	
5	0	129.2	130.0	129.8	130.1	131.0	145.6	143.9	154.1	133.6	122.4	140.9	
10	0	129.2	129.8	129.8	130.0	130.9	147.0	141.3	154.7	137.0	116.0	139.3	
15	0	129.4	130.0	129.9	129.8	130.9	151.2	139.7	154.3	140.0	117.5	139.0	
20	0	129.0	130.0	129.8	129.8	133.0	161.1	142.0	152.0	141.5	121.0	139.1	
25	0	129.7	130.4	129.8	129.7	137.2	164.8	144.3	149.1	144.5	123.2	139.7	
30	0	129.6	130.1	129.8	129.4	142.7	164.0	146.9	135.4	146.2	126.4	140.2	
35	0	129.9	130.1	129.6	129.7	143.3	156.3	146.9	124.9	147.9	127.1	141.8	
40	0	129.9	130.1	129.3	129.6	141.2	153.8	147.7	124.0	148.7	130.8	139.8	
45	0	130.7	130.0	129.6	130.4	138.9	153.1	148.1	120.7	147.8	135.3	136.5	
50	0	130.8	130.1	130.1	131.0	138.0	152.6	149.2	120.9	145.0	139.1	134.8	
55	0	130.5	130.0	130.1	131.0	135.9	150.6	148.8	122.8	141.7	141.1	133.3	

M. S.		One Scale Division = .000074 parts of the H. F.										HORIZONTAL FORCE.	
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
2	30	407.0	401.2	396.0	395.4	393.0	402.9	388.7	364.3	374.2	348.4	389.6	
12	30	401.7	399.7	395.8	391.1	396.0	391.2	379.2	365.2	381.3	350.8	388.8	
22	30	412.2	401.1	395.9	392.2	391.3	386.5	369.9	346.0	379.6	362.3	388.4	
32	30	411.2	399.2	392.9	394.1	387.0	398.4	372.3	327.7	376.8	368.2	383.7	
42	30	409.6	399.3	392.5	391.5	390.4	402.6	369.6	353.2	376.8	368.2	368.4	
52	30	403.4	396.8	395.2	390.1	395.8	399.5	370.6	366.1	364.6	380.9	362.9	

Thermometer		7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
		77.5	78.5	79.0	78.7	78.5	78.0	77.4	76.7	77.3	76.0	75.7			

M. S.		One Scale Division = .000093 parts of the V. F.										VERTICAL FORCE.	
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
7	30	70.6	72.3	72.8	72.6	70.7	67.1	63.2	62.0	61.3	55.3	62.7	
17	30	70.9	72.3	72.4	72.5	70.6	64.7	63.5	61.6	61.4	55.5	61.2	
27	30	71.6	72.6	72.3	71.8	69.9	63.7	63.2	57.2	61.3	54.8	60.8	
37	30	71.9	72.7	72.4	71.4	70.3	64.7	65.2	57.8	61.4	54.4	59.3	
47	30	72.2	72.7	72.5	70.9	69.7	63.7	64.2	56.2	59.5	57.7	58.0	
57	30	72.3	72.7	72.5	70.2	69.6	62.0	62.5	58.5	59.6	61.4	58.0	

Thermometer		7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
		76.8	78.0	78.3	78.5	78.3	78.0	79.0	78.0	77.7	78.0	77.5			

Increasing numbers denote decreasing westerly Declination,  
The observations of the Horizontal Force are reduced to a uniform

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
21	10	0	29.784	81.6	71.6	E. b. S.	Very light.	½ overcast with cirro-strati and haze round horizon; air close.
	11	0	29.752	83.2	71.9	Easterly.	Very light.	Zenith clear, except a few light cirro-strati; dense haze and heavy clouds round horizon.
	12	0	29.742	82.3	72.4	Easterly.	Nearly calm.	Zenith clear; light cirri, haze, and distant heavy clouds in horizon.
	13	0	29.731	78.8	70.8	—	Calm.	Zenith clear; light cirri round horizon.
	14	0	29.730	72.0	67.6	—	Calm.	Zenith clear; light cirri to westward, haze in S. horizon.
	15	0	29.729	67.5	65.3	—	Calm.	Clear.
	16	0	29.732	66.4	63.5	—	Calm.	Clear. [in N. horizon.
	17	0	29.738	65.2	63.1	—	Calm.	Clear; 17 <sup>h</sup> 30 <sup>m</sup> bright bank of auroral light in N., a few clouds rising
	18	0	29.745	64.5	63.0	—	Calm.	Clear; no auroral light.
	19	0	29.735	64.5	63.0	—	Calm.	Clear; faint auroral light in N.
	20	0	29.720	63.8	61.7	—	Calm.	Clear; faint auroral light in N.
	21	0	29.717	62.2	60.6	—	Calm.	Clear; faint auroral light in N.

MAGNETICAL OBSERVATIONS.

July 21st and 22nd.

DECLINATION.

Angular Value of one Scale Division = 0'·721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 127·2	Sc. Div. 133·2	Sc. Div. 136·9	Sc. Div. 140·0	Sc. Div. 142·0	Sc. Div. 139·0	Sc. Div. 138·0	Sc. Div. 134·7	Sc. Div. 130·0	Sc. Div. 126·2	Sc. Div. 124·0	Sc. Div. 126·3	Sc. Div. 126·8
122·3	131·6	137·0	139·7	141·7	139·7	135·7	133·9	129·9	127·2	124·9	126·1	126·9
118·3	130·9	136·5	140·0	141·0	139·6	135·1	133·1	129·4	126·5	124·7	126·3	127·3
116·6	131·1	136·2	140·1	140·6	139·9	134·8	132·1	129·3	126·1	125·3	126·3	127·5
122·6	132·3	137·7	139·8	140·7	140·1	135·5	132·0	129·0	126·0	125·4	126·5	128·1
126·0	133·3	137·9	140·2	140·9	140·2	135·7	132·0	129·0	125·5	125·5	126·5	128·0
128·9	134·6	138·0	140·7	141·0	140·1	135·9	131·9	129·3	124·9	125·4	126·8	127·6
131·6	135·2	137·9	140·7	140·9	139·5	134·1	132·1	128·2	125·0	125·1	126·5	128·0
134·3	135·5	138·1	140·9	141·0	138·2	132·2	131·8	127·6	124·7	125·5	126·7	127·7
132·8	136·2	138·8	141·5	139·9	138·4	134·5	131·7	127·0	124·4	125·6	126·7	127·5
132·8	136·0	137·5	141·3	139·8	138·5	135·9	131·0	127·1	124·5	125·8	126·7	127·0
131·8	136·6	139·5	141·2	139·8	138·6	134·9	130·5	127·0	124·4	125·9	127·0	128·0

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = ·00026.

360·0	388·5	395·0	391·1	382·1	382·3	378·0	378·0	381·2	383·0	393·9	402·4	403·1
358·3	386·1	397·0	390·4	383·6	383·5	376·4	377·4	381·4	390·3	400·3	402·4	404·6
364·8	390·1	395·9	388·8	383·4	383·8	376·1	377·4	385·3	391·0	399·1	405·5	407·7
377·6	392·8	394·5	387·7	382·5	379·7	373·9	378·6	383·9	393·3	398·7	405·3	403·3
392·2	392·8	392·2	384·0	381·3	378·9	372·2	379·2	380·9	392·7	401·9	404·5	400·0
387·5	393·8	390·8	382·3	381·3	377·4	377·8	381·1	381·4	395·1	401·9	401·8	400·4
75·3	74·9	74·7	74·7	76·4	76·3	76·5	77·4	78·0	78·5	78·8	79·1	79·7

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = ·000108.

55·3	59·3	69·1	70·0	69·6	70·2	70·4	71·1	71·4	69·9	71·8	70·9	70·3
54·0	58·9	69·5	70·1	69·5	70·6	70·3	71·1	71·1	69·9	71·5	70·9	70·1
50·7	61·9	69·8	69·9	69·6	70·8	70·2	70·9	70·7	70·6	71·1	70·8	71·6
53·7	64·7	70·1	69·7	69·8	70·6	70·6	71·1	70·3	70·8	70·9	70·5	71·5
56·8	66·7	70·7	69·7	69·6	70·5	70·3	71·3	69·9	71·1	71·0	70·5	71·5
57·5	67·8	70·0	69·6	70·1	70·7	70·6	71·3	69·9	71·3	71·0	70·3	72·0
76·6	76·5	75·6	75·4	76·0	76·5	77·0	78·0	78·5	78·5	79·0	79·2	79·2

and increasing Horizontal and Vertical Force.  
temperature of 74°·7; those of the Vertical Force to 79°·6.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
21	22	0	In. 29·715	° 62·0	° 60·6	—	Calm.	Clear, except a few light cirro-strati in N. horizon.
	23	0	29·713	61·2	60·0	—	Calm.	Clear, except light cirro-strati round N. and W. horizons.
22	0	0	29·727	65·5	64·5	—	Calm.	Clear, except a few light cirro-strati to N., and haze round horizon.
	1	0	29·726	70·2	66·6	Westerly.	Nearly calm	Clear, except a few light cirro-strati in N., and haze round horizon.
	2	0	29·722	72·9	69·0	Easterly.	Very light.	Unclassified; haze round horizon; fair.
	3	0	29·707	75·3	70·3	E. b. S.	Very light.	Unclassified; light haze in S. horizon; fair.
	4	0	29·704	78·0	71·6	S. E.	Very light.	Cirro-cumuli in N. and N. W.; hazy; fair.
	5	0	29·689	80·6	71·8	S. b. E.	Light.	Detached cirro-cumuli dispersed over the sky; hazy; fair. [over ¼ of sky.]
	6	0	29·660	84·0	72·8	S.	Light.	Detached cirro-cumuli and cumuli rising in W. and N. W., and scattered
	7	0	29·651	86·0	72·6	S. S. W.	Moderate.	Detached cumuli and cirro-cumuli rising in W., and partially covering the sky; heavy cumuli and haze round horizon; wind in gusts.
	8	0	29·641	86·6	73·6	S. S. W.	Light.	clouded with heavy cumuli and cumulo-strati in N. W. and N., and a few cirro-cumuli in zenith.
	9	0	29·618	85·8	73·0	S. S. W.	Light.	clouded with cumuli and cumulo-strati in E. and N. W.; fair.

August 27th and 28th.		MAGNETICAL OBSERVATIONS.											
Mean Göttingen Time.		Angular Value of one Scale Division = 0'.721.										DECLINATION.	
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
M.	s.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
0	0	133.8	129.8	135.0	145.0	138.1	134.2	134.9	132.8	131.4	140.9	137.0	
5	0	134.0	130.2	134.5	161.3	137.5	133.1	136.0	131.9	128.6	142.1	137.6	
10	0	134.3	130.9	135.0	160.8	136.2	131.8	136.3	131.7	123.1	141.8	137.4	
15	0	134.0	131.7	135.2	170.8	135.4	132.2	137.0	131.6	118.8	142.0	148.1	
20	0	133.8	132.6	135.0	166.0	134.3	132.0	136.2	136.4	114.8	143.9	139.6	
25	0	133.3	132.8	134.0	160.2	131.1	134.2	135.8	151.7	117.2	146.0	140.3	
30	0	132.9	133.3	134.2	154.0	130.4	134.3	135.7	153.3	118.6	146.9	140.2	
35	0	131.6	135.1	133.9	150.4	131.0	133.9	135.8	147.8	122.6	145.8	140.0	
40	0	130.9	135.3	133.7	148.6	132.4	134.0	135.3	142.0	127.0	143.4	140.9	
45	0	129.6	135.7	134.0	145.1	133.3	134.3	134.4	135.6	129.9	141.1	140.0	
50	0	127.5	135.9	130.8	140.8	134.0	133.8	135.4	134.2	133.1	138.2	140.4	
55	0	128.3	135.9	129.3	139.1	134.4	134.6	134.1	133.2	137.3	137.0	139.7	

M. s.		One Scale Division = .000074 parts of the H. F.										HORIZONTAL FORCE.	
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
2	30	415.0	385.8	406.2	353.5	408.0	398.3	394.0	391.1	379.9	382.4	387.7	
12	30	413.0	388.7	402.8	384.0	404.4	399.2	393.9	386.8	374.5	377.7	388.9	
22	30	410.1	390.1	408.8	413.5	401.0	396.7	390.2	396.1	377.4	372.2	392.7	
32	30	412.0	392.2	403.0	412.4	395.6	401.7	391.7	414.7	375.9	381.5	389.1	
42	30	410.4	393.3	393.3	412.9	393.8	402.6	392.3	410.8	371.6	387.4	393.9	
52	30	386.7	394.9	378.3	406.8	394.1	398.0	394.2	392.9	375.6	390.5	396.0	

Thermometer	69.2	70.2	70.2	70.3	70.0	69.9	69.5	69.3	69.0	69.0	68.8
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M. s.		One Scale Division = .000093 parts of the V. F.										VERTICAL FORCE.	
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
7	30	108.0	109.8	108.9	117.6	108.4	110.0	106.7	103.8	89.3	95.0	96.1	
17	30	107.9	109.7	108.9	112.9	108.6	110.1	106.7	99.9	86.6	91.9	96.4	
27	30	108.8	109.0	109.9	109.3	108.4	109.0	106.9	95.6	82.7	91.9	98.3	
37	30	109.1	109.3	111.2	108.4	108.8	107.8	105.5	91.0	86.7	94.9	97.6	
47	30	108.6	109.3	115.2	107.7	109.7	107.1	105.9	88.8	90.9	97.6	96.8	
57	30	109.5	109.0	118.4	108.4	110.4	107.4	104.9	88.5	95.0	97.0	99.0	

Thermometer	68.7	68.8	68.9	70.9	71.0	71.2	70.4	69.5	70.1	70.0	69.8
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Increasing numbers denote decreasing westerly Declination.  
The observations of the Horizontal Force are reduced to a uniform

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.					
27	10	0	29.631	68.5	63.4	S. by E.	Nearly calm	¾ clouded with cirro-cumuli and cirro-strati; clear spaces in S.E.
	11	0	29.629	67.3	63.3	—	Calm.	Small clear space in E. horizon; remainder overcast with cirro-cumuli.
	12	0	29.627	65.5	61.8	Easterly.	Nearly calm	¾ overcast with cirri and cirro-cumuli. Fair.
	13	0	29.648	62.7	60.1	East.	Very light	¾ overcast with cirri and cirro-cumuli, scattered in all directions.
	14	0	29.639	61.2	59.4	—	Calm.	¾ to S. covered with cirro-cumuli; remainder clear.
	15	0	29.658	61.1	59.7	—	Calm.	¾ clouded. Clouds passing rapidly from S.E.
	16	0	29.664	62.1	60.3	—	Calm.	Light cirro-cumuli dispersed about the sky. [clear patches.
	17	0	29.665	62.2	60.9	—	Calm.	Densely clouded; cirro-cumuli, cumuli and cumulo-strati; a few
	18	0	29.665	62.8	61.5	—	Calm.	Densely clouded with heavy masses of cirro-cumuli; at 18 <sup>h</sup> 45 <sup>m</sup> almost clear.
	19	0	29.655	62.2	60.9	—	Calm.	Clear in zenith; remainder clouded with cirro-cumuli. Clouded and
	20	0	29.657	60.8	59.5	—	Calm.	A few light cirri in zenith; otherwise clear. [clear alternately.
	21	0	29.651	59.9	58.9	—	Calm.	Clear.

MAGNETICAL OBSERVATIONS.

August 27th and 28th.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 139.5	Sc. Div. 139.8	Sc. Div. 116.7	Sc. Div. 136.0	Sc. Div. 151.8	Sc. Div. 150.1	Sc. Div. 145.0	Sc. Div. 140.4	Sc. Div. 133.0	Sc. Div. 129.0	Sc. Div. 121.1	Sc. Div. 128.2	Sc. Div. 126.6
138.5	138.5	115.4	137.6	151.8	150.3	145.0	139.1	132.6	128.2	120.8	129.0	128.7
137.3	137.4	114.9	141.4	151.3	150.1	144.2	138.0	132.0	128.3	122.0	128.7	130.1
137.5	137.3	114.8	146.9	151.9	150.6	144.1	136.8	131.4	130.1	123.0	128.1	131.8
138.5	136.4	113.6	149.7	151.1	151.0	143.9	135.1	131.0	130.4	124.0	127.3	132.0
139.2	135.8	114.0	148.0	150.8	150.2	144.5	134.1	130.4	129.0	124.5	126.2	132.1
140.2	133.7	115.2	144.9	152.5	150.8	143.4	134.1	130.0	128.1	125.3	125.0	131.8
140.6	133.3	117.4	148.5	154.0	149.6	141.1	134.3	130.5	128.0	123.2	125.9	131.8
142.6	131.7	119.4	151.4	153.0	147.5	139.5	135.0	130.8	126.0	122.4	127.5	130.0
142.6	128.3	126.3	151.6	150.7	145.6	139.0	135.2	130.0	125.0	124.0	128.6	129.9
141.0	124.3	129.8	149.4	149.2	145.8	139.6	134.9	130.2	123.8	124.8	127.5	130.6
141.0	120.3	131.7	149.9	150.0	145.8	140.2	133.6	129.7	123.0	126.2	126.8	131.3

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026

396.3	391.0	331.5	390.3	400.0	385.4	362.6	367.5	370.3	365.4	366.6	401.4	392.7
397.4	386.9	334.8	397.0	401.5	382.9	363.5	375.3	367.6	371.0	375.4	401.8	404.4
397.1	382.4	346.4	411.4	394.8	378.5	367.7	379.2	369.5	371.6	385.5	396.5	409.5
395.5	373.7	367.3	399.7	392.6	375.1	378.0	370.5	369.0	368.1	391.0	391.5	406.7
392.3	358.9	383.8	405.6	396.8	373.2	371.8	367.5	367.7	360.8	389.6	400.1	404.4
389.8	336.4	392.3	401.3	390.3	358.5	366.1	373.2	369.1	357.6	389.7	400.3	400.0
68.6	68.5	68.2	68.8	68.4	68.2	68.5	69.0	70.0	70.8	71.0	71.5	72.3

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .000108.

99.3	102.0	94.1	92.6	101.2	101.5	101.0	102.0	103.5	—	106.5	108.8	108.7
99.2	101.7	92.1	96.9	101.2	101.5	101.5	103.7	103.3	—	106.5	108.0	109.9
99.2	100.3	92.3	98.0	100.3	101.1	102.1	103.5	103.5	106.0	107.4	107.4	109.4
100.7	98.1	92.0	99.5	101.6	101.6	102.8	102.2	103.8	—	106.6	107.5	108.9
102.5	95.2	92.0	101.4	101.6	100.7	102.0	102.7	103.8	108.4	106.8	108.9	107.6
102.5	93.0	91.7	101.2	101.5	100.6	101.6	101.9	105.6	—	107.6	107.4	107.4
69.7	69.7	69.3	68.3	68.3	68.2	68.1	68.3	68.9	69.7	70.3	70.3	70.7

and increasing Horizontal and Vertical Force.  
temperature of 68° 2; those of the Vertical Force to 68° 1.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
27	22	0	In. 29.651	60.4	59.5	—	Calm.	Clear, except a few light cirro-strati in N.E.
	23	0	29.657	61.3	60.5	N.E.	Light.	Overcast; cirro-cumuli and cirrous haze moving rapidly from E.
28	0	0	29.673	62.8	62.1	E.	Very light	Clouded; cirri and dense cirro-cumuli passing very rapidly from E.
	1	0	29.680	64.8	63.4	E.	Light.	{ Clouded; cirri and dense cirro-cumuli passing very rapidly from E.; wind in gusts.
	2	0	29.697	65.4	63.8	E.	Light.	{ Clouded; cirri and dense cirro-cumuli passing very rapidly from E.; wind in gusts.
	3	0	29.694	67.0	65.1	E.	Light.	{ Clouded with cirro-cumuli and haze; clouds scudding rapidly from S.E.; wind in moderate gusts.
	4	0	29.677	68.3	65.5	E.	Light.	{ Overcast; cirri, cirro-cumuli, and haze passing rapidly from S. S. E.; wind in gusts.
	5	0	29.689	69.8	65.9	E.	Brisk.	Heavy masses of cirro-cumuli, passing rapidly across zenith.
	6	0	29.689	69.8	66.7	E.	Brisk.	Heavy masses of detached cirro-cumuli, and cumuli passing rapidly from
	7	0	29.694	70.4	66.7	E.	Brisk.	Heavy masses of cirro-cumuli, and cumuli passing rapidly from E. [E.
	8	0	29.680	69.7	65.7	E.	Brisk.	Heavy masses of cirro-cumuli and cumuli passing rapidly from E.
	9	0	29.667	71.2	67.1	E.	Brisk.	¾ clouded; cirro-strati, and cirrous haze; clear patches in zenith and N.

September 22nd and 23rd.		MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.		Angular Value of one Scale Division = 0' 721.					DECLINATION.					
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0	139·9	133·2	133·5	134·1	135·1	135·4	136·6	135·9	140·3	136·8	138·6
5	0	139·1	133·2	133·1	134·0	135·3	135·0	136·5	137·4	140·4	137·3	138·8
10	0	139·0	133·1	133·3	134·1	135·3	135·2	136·1	138·0	139·8	138·3	138·8
15	0	138·0	133·0	133·5	134·3	135·1	135·0	136·0	137·7	139·0	139·0	138·9
20	0	138·3	133·2	133·9	134·4	135·1	134·8	135·8	137·4	137·9	138·9	139·0
25	0	136·8	133·6	134·1	135·6	135·0	135·0	135·3	137·2	137·8	139·4	139·0
30	0	135·2	132·9	134·4	135·0	135·4	135·2	135·0	137·7	138·2	138·7	139·1
35	0	134·0	133·1	134·4	134·6	135·3	135·0	135·0	137·9	138·9	138·8	139·3
40	0	133·8	133·0	134·1	134·3	135·0	135·2	135·7	138·1	139·6	138·9	139·2
45	0	133·7	133·7	134·0	134·4	135·0	135·2	136·3	138·6	137·9	138·8	138·9
50	0	133·3	133·0	134·3	134·6	135·2	135·0	136·5	138·4	136·5	138·0	138·7
55	0	133·0	133·9	134·0	135·0	135·4	135·8	136·0	139·4	135·9	138·8	138·4

M. S.		One Scale Division = ·000074 parts of the H. F.					HORIZONTAL FORCE.					
2	30	397·1	401·7	407·4	405·3	407·8	408·1	405·4	401·1	402·0	398·5	404·5
12	30	399·8	404·9	407·5	404·6	406·8	406·4	401·4	402·3	405·7	398·5	404·6
22	30	395·2	405·2	407·9	107·1	407·0	403·1	401·8	404·8	405·2	398·2	404·7
32	30	397·2	404·4	410·0	408·0	406·7	405·6	401·3	406·7	400·2	398·1	403·2
42	30	396·3	407·6	408·2	406·3	406·2	405·1	402·3	402·5	402·1	400·1	406·1
52	30	399·7	409·5	407·0	406·9	407·8	405·1	403·0	398·6	399·8	403·9	405·5

Thermometer	68·0	68·5	68·5	68·5	68·7	68·7	68·6	68·7	68·6	68·7	68·5
	°	°	°	°	°	°	°	°	°	°	°

M. S.		One Scale Division = ·000089 parts of the V. F.					VERTICAL FORCE.					
7	30	88·1	85·5	83·5	82·4	81·8	81·6	81·3	81·6	81·3	81·3	81·7
17	30	87·2	85·0	82·0	82·3	81·8	81·6	81·7	81·6	81·2	81·2	81·5
27	30	87·1	84·9	82·1	82·3	81·8	81·4	81·8	81·6	81·1	81·0	81·5
37	30	86·0	84·7	82·7	82·2	81·6	81·6	81·8	81·0	81·2	81·0	81·5
47	30	85·8	84·7	82·7	81·8	81·6	81·6	81·8	81·0	81·0	81·0	81·4
57	30	85·5	84·2	82·7	81·8	81·6	81·6	81·6	81·0	81·0	81·5	81·7

Thermometer	67·0	67·7	67·8	68·0	68·3	68·3	68·3	68·3	68·3	68·3	68·5	68·5
	°	°	°	°	°	°	°	°	°	°	°	°

Increasing numbers denote decreasing westerly Declination,  
The observations of the Horizontal and Vertical Force of this and the

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°	—	Calm.	Overcast with cirri and cirro-strati; haze round horizon, fair.
22	10	0	29·323	69·3	65·2	—	Calm.	Overcast with cirro-cumuli and haze; fair.
	11	0	29·321	67·6	63·2	S. E.	Nearly calm	Overcast with cirri and haze.
	12	0	29·310	66·3	62·6	—	Calm.	Overcast with light cirri and haze.
	13	0	29·296	65·8	62·5	—	Calm.	Overcast with cirri and haze.
	14	0	29·283	65·6	62·9	—	Calm.	Overcast with cirro-strati and haze.
	15	0	29·301	66·2	63·7	Easterly.	Nearly calm	Overcast with cirro-strati and haze, a few stars visible in zenith.
	16	0	29·317	65·8	62·9	Easterly.	Nearly calm	Zenith clear: cirro-strati and haze round horizon.
	17	0	29·309	64·7	62·2	Easterly.	Nearly calm	Densely clouded, very dark.
	18	0	29·293	63·4	61·2	—	Calm.	Densely clouded, spitting rain, very dark.
	19	0	29·293	64·0	61·7	—	Calm.	Densely clouded, heavy rain, very dark; at 20 <sup>h</sup> 30 <sup>m</sup> high wind.
	20	0	29·301	63·6	61·7	—	Calm.	Densely clouded; rain since 20 <sup>h</sup> ; wind in gusts.
	21	0	29·315	63·4	60·3	S. E.	Moderate.	

MAGNETICAL OBSERVATIONS.

September 22nd and 23rd.

DECLINATION.

Angular Value of one Scale Division = 0'·721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
138·6	136·6	136·8	138·5	140·5	140·1	140·9	136·2	135·5	134·3	132·1	132·2	132·2
138·9	136·5	136·6	138·6	140·4	140·6	140·0	136·3	135·2	134·1	132·0	132·4	132·4
138·3	136·6	136·2	138·7	140·5	140·3	137·4	135·7	135·4	135·1	132·0	132·1	132·1
137·5	136·9	136·3	139·1	140·9	140·2	140·0	135·2	135·8	135·8	131·6	132·3	132·1
136·8	137·5	136·5	139·1	141·1	140·1	140·0	135·7	135·5	135·0	131·5	132·1	132·3
136·9	138·5	136·2	139·5	141·0	139·5	140·4	135·6	135·1	133·7	131·9	132·0	132·3
137·4	139·1	137·2	138·1	140·4	140·2	139·8	135·8	134·8	133·0	132·1	132·0	132·3
136·8	139·1	136·2	140·3	140·2	140·3	139·4	135·8	135·6	132·8	132·0	131·9	132·5
135·7	137·7	136·6	139·5	140·6	140·2	139·4	135·8	135·8	132·4	131·8	132·0	132·4
136·4	137·9	137·1	140·2	140·9	141·1	139·8	135·4	135·0	132·4	132·3	132·2	132·4
137·2	137·7	137·4	140·0	140·5	141·6	137·0	135·2	135·3	132·1	131·9	132·2	132·8
137·1	137·5	137·9	140·6	140·0	141·5	135·9	135·7	134·5	132·2	132·0	132·1	132·7

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = ·00026.

406·4	405·4	405·6	409·3	407·4	404·7	395·1	394·6	396·9	397·3	389·9	404·1	401·7
405·9	406·5	406·2	407·2	407·6	403·3	392·7	395·7	398·8	404·7	398·3	402·3	407·3
403·1	407·0	406·7	407·9	406·7	402·4	394·0	397·0	397·9	399·8	398·0	404·0	405·2
405·3	407·5	400·2	405·8	406·6	400·4	393·2	396·1	394·7	388·0	393·8	403·5	406·0
399·4	404·4	406·5	—	406·2	396·4	392·0	397·2	399·0	385·5	397·0	404·6	407·0
398·7	402·9	407·9	408·6	405·6	394·5	393·4	394·6	397·0	388·7	397·3	403·5	408·8
68·3	68·0	68·0	67·6	67·5	67·5	67·5	67·7	67·8	68·0	68·2	68·5	68·7

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = ·000108.

81·5	81·5	81·8	81·6	81·5	81·6	81·2	80·4	79·5	79·9	79·9	80·1	80·1
81·5	81·0	81·7	81·5	81·5	81·6	81·4	80·1	79·5	80·2	80·9	79·8	79·9
81·2	80·6	81·7	81·5	81·8	81·4	80·8	79·9	79·7	79·3	79·8	80·2	80·4
81·0	80·6	81·7	81·5	81·8	81·4	81·0	79·9	80·2	78·9	80·1	80·0	80·0
80·9	80·8	81·7	81·7	81·8	81·1	81·0	80·0	79·7	79·0	80·1	79·5	81·0
81·4	80·9	81·8	81·5	81·8	81·6	80·7	79·0	79·7	79·3	79·8	79·8	80·2
68·3	68·0	67·9	67·7	67·8	67·6	67·3	67·3	67·3	67·5	67·5	67·7	67·9

and increasing Horizontal and Vertical Force.  
succeeding term days are not reduced to a uniform temperature.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
22	22	0	29·306	62·4	60·1	S.	Light.	Densely clouded ; moderate rain at intervals since 21 <sup>h</sup> .
	23	0	29·320	62·5	60·1	S. S. E.	Moderate.	{ Overcast ; cirro-strati and cirrous haze passing rapidly from S. E. ; wind in gusts.
23	0	0	29·340	62·4	59·5	S. E.	Light.	{ Densely clouded ; cirro-strati, cirro-cumuli and haze ; a few drops of rain ; wind in gusts.
	1	0	29·352	63·1	60·1	S. E.	Light.	Overcast ; cirro-cumuli and haze ; wind in gusts.
	2	0	29·367	63·5	60·5	S. by E.	Light.	Overcast with cumulo-strati, strati, and haze ; clearing a little in S.
	3	0	29·372	63·8	61·0	S. S. E.	Light.	Overcast with cirro-cumuli and haze ; clearing a little in S. E.
	4	0	29·371	67·0	63·5	S. E.	Light.	Overcast with cirro-cumuli and cirro-strati, clearing partially in S. & S. E.
	5	0	29·375	65·7	62·3	S. E.	Light.	Overcast ; cirro-cumuli and cumulo-strati.
	6	0	29·372	66·7	62·9	S. E.	Light.	Densely clouded with cumulo-strati and cirro-cumuli.
	7	0	29·362	66·8	63·1	E.	Light.	Densely clouded ; cumulo-strati and cirro-cumuli.
	8	0	29·358	67·5	63·7	Easterly.	Very light	Densely clouded : cirro-cumuli and cumulo-strati.
	9	0	29·359	67·9	64·5	Easterly.	Light.	Densely clouded ; cumulo-strati, cumuli, and cirro-cumuli.



October 20th and 21st.		MAGNETICAL OBSERVATIONS.											
Mean Göttingen Time.		Angular Value of one Scale Division = 0'.721.										DECLINATION.	
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
M.	S.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
0	0	133.1	134.6	134.2	134.0	135.8	176.5	148.8	143.2	149.2	152.4	151.2	
5	0	134.0	134.1	137.0	134.0	137.2	166.4	147.2	143.4	147.5	153.4	149.2	
10	0	134.1	133.6	137.1	134.2	138.6	158.0	146.5	146.2	146.0	154.5	146.2	
15	0	134.3	133.3	137.0	134.2	138.7	151.3	147.3	146.9	143.6	152.2	143.7	
20	0	134.4	133.3	138.1	134.6	140.0	145.6	147.7	147.5	142.6	147.0	143.2	
25	0	134.7	133.2	139.7	135.0	141.8	144.2	144.8	149.2	148.0	141.4	142.5	
30	0	134.8	133.0	140.0	135.5	145.7	142.2	142.5	149.2	158.0	140.4	140.9	
35	0	134.7	132.5	139.2	136.2	155.2	141.0	141.4	150.0	162.7	142.2	141.2	
40	0	135.0	132.0	138.2	136.9	168.5	141.8	142.2	148.9	173.5	141.5	142.0	
45	0	135.0	132.2	137.0	137.2	186.1	144.5	142.0	148.8	181.3	146.5	143.5	
50	0	135.1	132.7	135.4	136.8	187.0	147.0	142.3	148.1	175.0	153.0	146.7	
55	0	135.0	132.5	134.9	136.8	184.9	149.0	144.6	148.1	162.6	153.1	147.1	

M. S.		One Scale Division = .000074 parts of the H. F.										HORIZONTAL FORCE.	
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
2	30	449.4	456.0	432.9	432.9	433.7	467.0	438.9	429.2	405.4	415.2	447.3	
12	30	450.0	453.2	430.5	435.5	440.6	465.5	420.3	427.3	392.9	425.6	446.0	
22	30	451.1	451.2	423.7	437.9	432.8	448.9	424.9	424.5	407.5	397.4	446.8	
32	30	450.8	451.9	425.2	435.8	416.6	444.4	431.2	420.7	426.3	402.8	441.9	
42	30	450.3	449.5	427.9	435.7	425.4	436.9	435.9	422.7	444.1	414.0	442.2	
52	30	455.9	443.8	429.6	432.6	446.1	433.3	440.6	421.1	459.4	435.6	436.1	

Thermometer		51 <sup>o</sup> .5	51 <sup>o</sup> .6	52 <sup>o</sup> .0	52 <sup>o</sup> .2	52 <sup>o</sup> .2	52 <sup>o</sup> .3	52 <sup>o</sup> .2	52 <sup>o</sup> .3	52 <sup>o</sup> .4	52 <sup>o</sup> .6	52 <sup>o</sup> .3

M. S.		One Scale Division = .000092 parts of the V. F.										VERTICAL FORCE.	
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
7	30	100.8	101.6	100.4	102.7	103.5	97.2	98.8	96.2	89.6	98.3	96.7	
17	30	100.7	101.4	100.3	102.7	102.8	95.9	98.5	95.8	89.7	84.7	97.8	
27	30	100.7	101.2	100.9	102.1	101.6	97.4	103.2	95.3	100.3	78.6	98.7	
37	30	100.3	100.9	101.7	102.5	107.5	98.5	104.1	97.5	—	87.6	99.6	
47	30	101.0	100.7	102.1	102.7	110.7	99.6	103.0	96.6	107.1	89.2	96.5	
57	30	101.7	100.4	102.9	102.7	102.9	100.0	99.2	96.0	99.7	96.2	95.4	

Thermometer		51 <sup>o</sup> .8	52 <sup>o</sup> .2	52 <sup>o</sup> .4	52 <sup>o</sup> .7	52 <sup>o</sup> .8	52 <sup>o</sup> .9	53 <sup>o</sup> .0	53 <sup>o</sup> .0	53 <sup>o</sup> .0	53 <sup>o</sup> .0	52 <sup>o</sup> .9

Increasing numbers denote decreasing westerly Declination,

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
20	10	0	29.180	42.6	39.6	N. E.	Very light	Clouded with cirro-cumuli and haze; clouds breaking in N.
	11	0	29.182	41.5	39.2	N. W.	Very light	Overcast with cirro-cumuli and cumulo-strati; clearing slightly.
	12	0	29.191	40.6	38.2	N. W.	Very light	Overcast with cirro-strati and haze, except a small space in N. W.
	13	0	29.181	40.4	37.8	N.	Very light	Overcast with cirro-strati and haze. [horizon.
	14	0	29.179	39.8	37.2	N.	Light.	Partially clouded; at 14 <sup>h</sup> 35 <sup>m</sup> auroral light in N.
	15	0	29.167	38.4	35.6	N.	Light.	{ Clouded in N.; at 15 <sup>h</sup> 20 <sup>m</sup> very faint auroral light along N. hor.; at 15 <sup>h</sup> 35 <sup>m</sup> clouds rising from N.W., and no auroral light.
	16	0	29.163	36.9	34.8	N. b. W.	Light.	Clouded with cirro-strati and haze round horizon; zenith clear.
	17	0	29.147	36.5	34.3	N. b. W.	Light.	Cirro-strati and haze round horizon; zenith clear.
	18	0	29.125	36.8	34.4	N. W.	Light.	Clouded with cirro-strati and haze; clear space in zenith.
	19	0	29.111	38.4	35.3	N. W.	Light.	Clouded with cirro-strati and haze; a few clear spaces.
	20	0	29.105	38.6	35.8	—	Calm.	Overcast with dense haze.
	21	0	29.104	38.8	36.2	N.	Nearly calm	Densely clouded with strati and haze.

MAGNETICAL OBSERVATIONS.

October 20th and 21st.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
147.3	128.2	133.2	138.6	142.4	125.8	132.5	130.4	136.1	131.7	132.3	132.4	133.4
147.4	126.3	135.8	134.6	140.6	124.9	132.7	129.3	135.0	131.6	131.4	132.4	133.1
146.4	126.5	137.0	136.6	137.8	124.7	135.1	129.5	135.4	131.3	133.0	132.9	133.2
146.0	128.5	138.1	138.1	134.6	124.1	134.3	130.3	134.4	131.8	133.7	133.1	134.1
146.1	130.7	137.3	137.5	131.6	123.3	133.7	131.7	134.2	131.1	132.8	133.4	134.0
147.3	129.6	136.8	138.1	129.8	121.8	133.2	136.4	133.2	132.3	133.9	133.9	134.0
148.7	129.8	138.4	138.9	129.3	124.5	132.7	138.0	131.9	133.4	133.6	133.9	134.7
147.3	131.4	140.3	139.5	127.2	127.3	130.7	135.6	132.1	133.1	133.7	133.5	134.8
147.5	132.1	140.6	142.1	126.0	127.8	131.4	137.5	131.8	132.5	133.8	133.3	135.0
137.2	132.4	140.6	142.4	126.5	129.9	129.0	138.5	131.6	131.1	133.2	134.1	135.3
134.3	132.8	139.5	143.1	126.7	131.0	129.0	138.0	132.3	130.9	132.7	134.0	135.1
132.0	133.0	138.4	142.5	125.7	132.0	128.8	135.7	132.4	132.3	132.6	133.9	135.0

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

436.5	433.7	442.3	445.4	431.3	398.8	419.2	418.8	444.1	434.2	419.6	429.7	442.3
435.7	432.2	443.5	435.6	416.9	400.0	421.0	419.5	437.6	435.3	419.9	434.2	436.4
427.3	435.1	444.8	438.3	403.2	405.9	415.6	418.4	435.1	426.5	430.3	432.6	436.0
426.9	438.6	437.0	432.2	401.1	407.8	410.7	434.7	426.8	420.5	431.7	436.3	435.4
428.9	439.9	449.7	431.1	390.4	413.4	409.9	436.8	429.8	418.2	423.6	436.3	434.3
428.0	442.9	444.6	430.5	395.7	417.1	415.9	441.8	430.8	412.6	427.2	442.1	438.3
52.1	51.5	51.7	51.8	52.0	52.0	51.8	52.3	52.8	53.5	53.9	54.5	54.6

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .000108.

95.4	94.7	96.3	95.3	96.2	95.9	97.3	97.8	97.7	98.6	101.8	101.5	98.6
94.9	91.4	95.7	96.3	95.9	96.4	98.0	97.2	98.1	99.0	102.6	101.2	97.7
90.4	94.5	95.8	96.3	95.7	96.2	98.0	96.8	98.1	98.7	103.2	100.2	97.5
92.3	95.9	95.6	95.7	95.7	97.9	97.9	98.0	98.7	99.5	102.4	99.5	97.1
91.6	95.8	95.3	96.0	95.2	96.7	—	97.4	98.6	100.3	101.8	99.5	97.4
94.6	96.9	94.5	96.0	96.1	97.2	97.6	96.8	98.6	101.8	101.2	99.4	98.2
52.9	52.6	52.7	52.7	53.0	52.8	52.7	52.7	53.0	53.4	54.0	54.1	54.3

and increasing Horizontal and Vertical Force.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
20	22	0	29.102	39.2	36.4	N.	Very light	Densely overcast.
	23	0	29.106	38.9	35.9	N.	Light.	Densely clouded; slight rain, ceased at 23 <sup>h</sup> 30 <sup>m</sup> .
21	0	0	29.108	37.4	35.8	N.	Very light	Densely clouded, with cirri and haze.
	1	0	29.112	37.3	35.8	N. W.	Very light	Densely overcast, with cirri, cumulo-strati, and haze.
	2	0	29.117	37.9	36.3	N. b. W.	Light.	Densely overcast, with cirro-strati and haze.
	3	0	29.116	38.5	37.2	N. W.	Light.	Densely clouded, with cirro-cumuli and haze. [passing rapidly from N.W.
	4	0	29.116	40.2	38.2	N. b. W.	Light.	Densely overcast; cirro-strati and haze; very slight drizzling rain; clouds
	5	0	29.123	41.1	38.2	N. b. W.	Light.	Densely overcast; cirro-cumuli, cirro-strati, and haze; very slight
	6	0	29.111	41.9	39.4	N. N. W.	Moderate.	Densely clouded, with cirro-cumuli and haze. [drizzling rain at 5 <sup>h</sup> 30 <sup>m</sup> .
	7	0	29.106	42.3	39.4	N. W.	Moderate.	Densely clouded with cirro-cumuli and haze.
	8	0	29.114	43.6	40.2	N. b. W.	Light.	Densely clouded, with cirri, cirro-cumuli, and haze.
	9	0	29.115	43.5	40.5	N. W.	Light.	Densely clouded, with cirro-cumuli and haze.

November 26th and 27th.		MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.		Angular Value of one Scale Division = 0'.721.						DECLINATION.				
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0	136.1	136.7	137.2	138.0	139.1	141.7	137.9	138.4	138.0	138.8	137.8
5	0	136.5	137.0	137.6	138.0	139.0	140.3	138.0	138.4	138.0	138.1	137.7
10	0	136.5	136.5	138.0	137.8	139.3	138.9	138.0	138.3	138.2	138.0	138.3
15	0	136.8	136.5	138.2	138.0	139.3	138.8	138.2	138.1	138.5	137.9	138.2
20	0	136.6	136.2	138.3	138.0	139.9	137.6	137.9	138.0	139.0	137.8	138.4
25	0	136.4	136.5	138.0	138.3	140.0	136.9	138.7	138.0	139.0	137.7	138.2
30	0	136.6	136.9	138.0	138.3	140.8	136.8	139.0	138.0	139.2	137.4	138.5
35	0	136.4	137.3	137.7	138.0	142.5	136.7	138.6	137.7	139.6	137.7	138.1
40	0	136.3	137.2	137.5	—	143.0	137.3	138.7	137.2	139.5	137.4	137.9
45	0	136.0	137.5	137.4	139.0	142.6	137.2	138.2	137.8	139.4	137.5	138.0
50	0	136.0	137.5	137.4	139.2	141.7	137.0	138.2	137.0	139.1	137.9	138.0
55	0	136.0	137.1	137.7	139.1	142.0	137.2	138.4	137.8	138.8	138.1	138.0

M. S.		One Scale Division = .000074 parts of the H. F.						HORIZONTAL FORCE.				
		479.9	482.6	480.9	480.8	479.0	484.1	480.6	476.9	477.6	476.6	478.2
2	30	481.3	482.4	481.1	478.0	477.0	481.9	479.0	477.4	478.0	476.7	477.9
12	30	481.9	481.9	483.0	479.9	476.4	480.0	476.4	478.0	478.0	476.8	476.8
22	30	481.6	481.2	482.6	479.7	477.7	477.7	477.0	477.2	477.0	477.3	477.2
32	30	483.2	481.8	481.4	478.8	479.8	478.0	477.6	477.0	476.9	477.0	477.6
42	30	481.7	480.9	480.2	478.5	480.8	478.4	476.0	478.0	476.8	477.1	478.0

Thermometer		42.4	42.2	42.5	43.0	43.0	42.7	42.5	42.5	42.0	42.2	42.0

M. S.		One Scale Division = .000093 parts of the V. F.						VERTICAL FORCE.				
		111.0	109.4	108.6	108.5	108.4	109.4	109.3	109.0	108.6	108.5	108.8
7	30	110.7	109.3	108.5	108.6	108.4	109.4	108.6	109.0	108.6	108.5	108.8
17	30	109.8	109.1	108.6	108.4	109.0	108.8	109.1	109.0	108.1	108.5	108.8
27	30	109.7	109.0	109.0	108.4	109.0	109.2	109.1	109.2	108.5	108.5	108.8
37	30	109.7	109.1	108.9	108.4	109.0	109.2	109.0	108.8	108.5	108.8	108.8
47	30	109.4	108.9	109.1	108.4	109.4	110.2	109.0	108.9	108.5	108.8	108.8

Thermometer		42.7	43.4	43.6	44.0	44.1	43.7	43.4	43.4	43.0	43.2	43.0

Increasing numbers denote decreasing westerly Declination,

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
26	10	0	29.517	24.0	23.2	N.N.E.	Light.	Densely clouded with cirro-cumuli and cumulo-strati.
	11	0	29.550	23.7	22.8	N.	Very light	Densely clouded.
	12	0	29.592	22.9	22.1	N.	Light.	Densely clouded.
	13	0	29.611	22.2	21.3	N.	Very light	¾ clouded with cirri and cirro-cumuli; fair.
	14	0	29.639	21.0	20.2	N.	Very light	¾ overcast, with detached cirri; fair.
	15	0	29.653	19.4	18.6	N.	Very light	¾ overcast, with detached cirri; fair.
	16	0	29.668	20.5	19.9	N.	Nearly calm	Overcast with cirri and haze.
	17	0	29.684	21.0	21.0	—	Calm.	Overcast with dense haze.
	18	0	29.696	20.8	20.4	—	Calm.	Overcast with dense haze.
	19	0	29.720	20.5	20.4	N. b. W.	Light.	Overcast with dense haze.
	20	0	29.743	20.6	20.4	N. b. W.	Light.	Overcast with cirro-cumuli and haze.
	21	0	29.763	20.5	20.1	N. b. W.	Light.	¾ clear in N.W. and in zenith, remainder clouded with cirro-cumuli.

MAGNETICAL OBSERVATIONS.

November 26th and 27th.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
138.3	138.6	138.8	138.9	138.5	140.3	142.0	140.8	137.0	133.8	132.9	132.2	134.0
138.3	138.3	138.9	138.9	138.0	140.4	142.1	140.1	136.1	133.6	133.0	132.8	134.1
138.3	138.6	138.3	138.9	138.6	140.2	142.0	140.0	135.8	133.4	132.6	133.0	134.0
138.1	138.2	138.5	139.2	139.1	140.8	142.3	139.7	135.9	133.0	132.9	133.0	134.8
138.0	139.1	137.2	139.4	139.5	140.9	141.9	139.9	135.6	133.5	132.7	133.1	134.7
138.0	138.8	139.2	139.2	139.5	141.2	141.7	139.2	135.3	133.2	132.9	133.3	134.6
138.1	139.1	139.3	139.5	139.5	141.2	141.5	138.9	135.0	133.0	132.9	133.8	134.8
138.2	139.2	138.9	140.0	140.0	141.0	141.3	138.3	134.5	132.9	133.2	133.8	135.5
138.5	138.9	138.8	139.6	140.1	141.0	141.4	138.0	134.3	132.7	133.9	133.8	135.8
138.3	139.0	138.6	138.7	140.6	141.3	141.3	137.7	134.1	132.5	133.2	133.9	135.8
138.5	139.2	138.6	139.3	140.9	141.1	141.1	137.3	134.4	132.8	133.1	133.9	135.7
138.5	138.8	139.0	138.5	141.0	141.5	141.9	137.0	134.0	133.0	132.9	133.9	136.4

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah°. = .00026.

477.9	478.6	480.5	489.4	476.5	478.1	472.1	471.6	462.1	465.1	468.4	474.3	474.3
478.1	480.9	481.7	480.2	477.4	476.4	472.1	469.9	461.8	465.9	468.7	474.6	474.1
478.7	481.1	478.5	480.6	479.5	476.4	473.8	467.4	463.9	466.6	469.4	472.9	471.2
478.9	480.3	480.5	480.3	479.8	475.0	473.8	466.0	463.6	466.5	469.1	473.6	468.7
479.6	480.8	480.3	478.2	479.9	473.6	472.9	464.1	463.6	466.5	473.8	472.1	469.6
479.0	479.5	480.4	476.8	479.5	472.4	471.8	463.4	465.4	466.0	474.5	473.4	470.9
42.0	42.0	41.8	41.6	41.8	41.7	42.3	43.1	43.6	43.8	44.2	44.6	44.9

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah°. = .000108.

108.8	109.6	109.1	109.7	109.1	110.4	110.0	109.2	108.7	108.5	109.0	109.0	108.6
108.9	109.6	109.1	109.3	109.5	110.2	110.0	108.9	108.7	—	108.9	108.8	108.2
109.4	109.6	109.1	109.1	109.8	110.2	110.0	108.7	108.7	108.4	108.6	108.6	108.2
109.4	109.3	109.1	109.1	110.2	110.3	110.0	108.7	108.7	108.4	108.6	108.6	108.2
109.4	109.1	109.4	109.0	110.2	110.2	109.6	108.7	108.7	108.4	108.6	108.6	108.2
109.4	109.1	109.4	109.1	110.5	110.1	109.4	108.7	108.7	108.6	108.6	108.6	108.3
43.0	42.9	42.9	42.7	43.2	42.6	42.9	43.2	43.4	43.6	44.1	44.2	44.6

and increasing Horizontal and Vertical Force.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
26	22	0	29.768	17.6	16.3	N. b. W.	Light.	Clear, except a low bank of strati round S. E. horizon. Densely clouded with strati and cirro-cumuli. Densely clouded. Range of cirro-strati and cumulo-strati in S.E. hor.; remainder clear. { Low range of cirro-cumuli and cumulo-strati round S. and S.E. hor.; light cirro-cumuli round N. hor., remainder clear. [and haze.] Range of cumulo-strati in S. hor., remainder overcast with cirro-cumuli Clouded with cirro-cumuli and haze interspersed with clear patches. Overcast with cirro-cumuli and haze. Densely overcast with cirro-cumuli, cumulo-strati, and haze. Overcast with cirri, cirro-cumuli and haze; a few clear patches; fair. Overcast with cirro-cumuli and cumulo-strati. Overcast with cumulo-strati and cirro-cumuli.
	23	0	29.782	14.7	14.3	—	Calm.	
	0	0	29.796	16.6	16.6	N.	Nearly calm	
	1	0	29.825	16.9	16.5	N.	Nearly calm	
	2	0	29.848	16.6	16.6	N.	Very light	
	3	0	29.855	20.0	19.7	N.	Very light	
	4	0	29.866	23.3	22.6	N.	Light.	
	5	0	29.877	25.0	23.9	N.	Light.	
	6	0	29.871	26.4	25.3	N.	Light.	
	7	0	29.872	29.2	27.1	N.W.	Nearly calm	
	8	0	29.872	30.0	27.2	N.W.	Light.	
	9	0	29.876	29.9	27.0	N.W.	Light.	

December 22nd and 23rd.		MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.		Angular Value of one Scale Division = 0'.721.										
		DECLINATION.										
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0	133.7	131.9	137.3	137.8	137.0	138.2	139.4	139.4	138.5	139.2	118.0
5	0	133.2	132.2	137.0	136.9	137.7	138.9	140.0	139.5	138.4	140.0	117.1
10	0	131.8	132.3	137.8	136.6	137.6	139.2	140.1	139.2	138.6	141.0	119.5
15	0	132.3	130.6	138.1	135.3	137.9	139.8	140.0	139.5	138.4	140.7	123.9
20	0	133.0	131.9	138.3	135.2	138.8	139.7	140.3	138.9	138.5	139.6	128.2
25	0	134.0	132.7	138.3	136.5	138.1	139.8	139.9	139.5	138.9	138.9	132.0
30	0	132.4	133.2	138.8	136.9	138.2	139.7	140.0	139.0	138.2	138.0	135.0
35	0	131.6	134.1	137.7	135.3	138.6	139.7	140.0	138.8	139.4	136.9	137.1
40	0	131.5	136.1	138.8	134.8	138.2	139.5	140.0	139.0	140.1	133.4	138.5
45	0	131.8	136.8	139.1	135.8	138.0	139.5	139.8	138.7	140.1	129.4	140.1
50	0	131.5	136.1	138.8	136.2	138.0	139.3	139.1	139.0	139.4	124.3	139.4
55	0	130.9	136.5	138.4	136.4	138.0	139.2	139.7	139.0	139.0	121.1	139.3

		One Scale Division = .000074 parts of the H. F.										
		HORIZONTAL FORCE.										
M.	S.											
2	30	—	521.8 <sup>a</sup>	513.4 <sup>a</sup>	516.2	505.7	500.0	501.6	498.2	497.1	487.3	495.0
12	30	515.2	519.6 <sup>a</sup>	517.4 <sup>a</sup>	512.2	504.9	501.3	499.0	499.1	499.0	482.9	503.2
22	30	517.6	517.3 <sup>a</sup>	516.2 <sup>a</sup>	506.2	503.5	499.5	500.2	498.9	495.6	480.4	506.5
32	30	517.5	517.8 <sup>a</sup>	513.8 <sup>a</sup>	510.0	502.0	499.0	496.7	498.4	496.0	476.6	503.4
42	30	519.6	516.9 <sup>a</sup>	518.4 <sup>a</sup>	506.6	501.3	498.5	498.0	498.7	493.0	483.4	500.7
52	30	522.7 <sup>a</sup>	513.9 <sup>a</sup>	518.7	504.7	500.2	499.1	498.8	495.7	490.6	489.0	500.1

		One Scale Division = .000092 parts of the V. F.										
		VERTICAL FORCE.										
M.	S.											
7	30	125.1	122.2	121.0	119.2	119.0	118.1	117.0	117.0	117.0	115.6	108.7
17	30	123.1	121.6	120.3	119.2	118.7	117.9	117.0	117.3	116.7	115.1	107.1
27	30	122.9	121.3	120.0	119.5	118.4	117.9	117.0	116.9	116.7	114.3	107.0
37	30	122.6	121.3	119.6	119.5	118.4	117.5	116.9	117.3	116.2	114.3	107.9
47	30	122.6	121.1	119.2	119.3	118.4	117.5	116.9	116.9	115.9	113.4	109.2
57	30	122.6	121.1	118.9	119.0	118.4	117.2	117.0	116.8	115.7	111.3	110.8

<sup>a</sup> One minute late.
Increasing numbers denote decreasing westerly Declination.

METEOROLOGICAL OBSERVATIONS.												
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.				
				Dry.	Wet.	Direction.	Force.					
D.	H.	M.	In.	°	°							
22	10	0	30.279	19.6	19.3	N.E.	Brisk.	Snowing constantly since 4 <sup>h</sup> ; at 10 <sup>h</sup> 30 <sup>m</sup> wind rising and snow abating.				
	11	0	30.277	20.8	20.4	E.	Fresh.	Snowing very slightly with squalls.				
	12	0	30.258	21.4	20.9	E.	Fresh.	Densely clouded, ceased snowing at 12 <sup>h</sup> 20 <sup>m</sup> .				
	13	0	30.245	22.2	21.5	S. b. E.	Fresh.	Densely clouded.				
	14	0	30.220	22.7	21.6	E.	Brisk.	Densely clouded.				
	15	0	30.185	23.0	21.9	E.	Brisk.	Densely clouded.				
	16	0	30.130	23.0	22.2	E.	Brisk.	Squally; densely clouded.				
	17	0	30.070	24.1	22.4	E.	High.	Densely clouded, clouds passing rapidly.				
	18	0	30.016	25.0	23.3	E.	Brisk.	Densely clouded; violent squalls.				
	19	0	29.984	25.5	23.3	E.	Brisk.	Densely clouded; squalls.				
	20	0	29.949	24.8	23.5	S.E.	High.	Densely overcast, slight snow; squalls.				
	21	0	29.906	24.8	23.5	S.E.	High.	Densely overcast; squalls.				

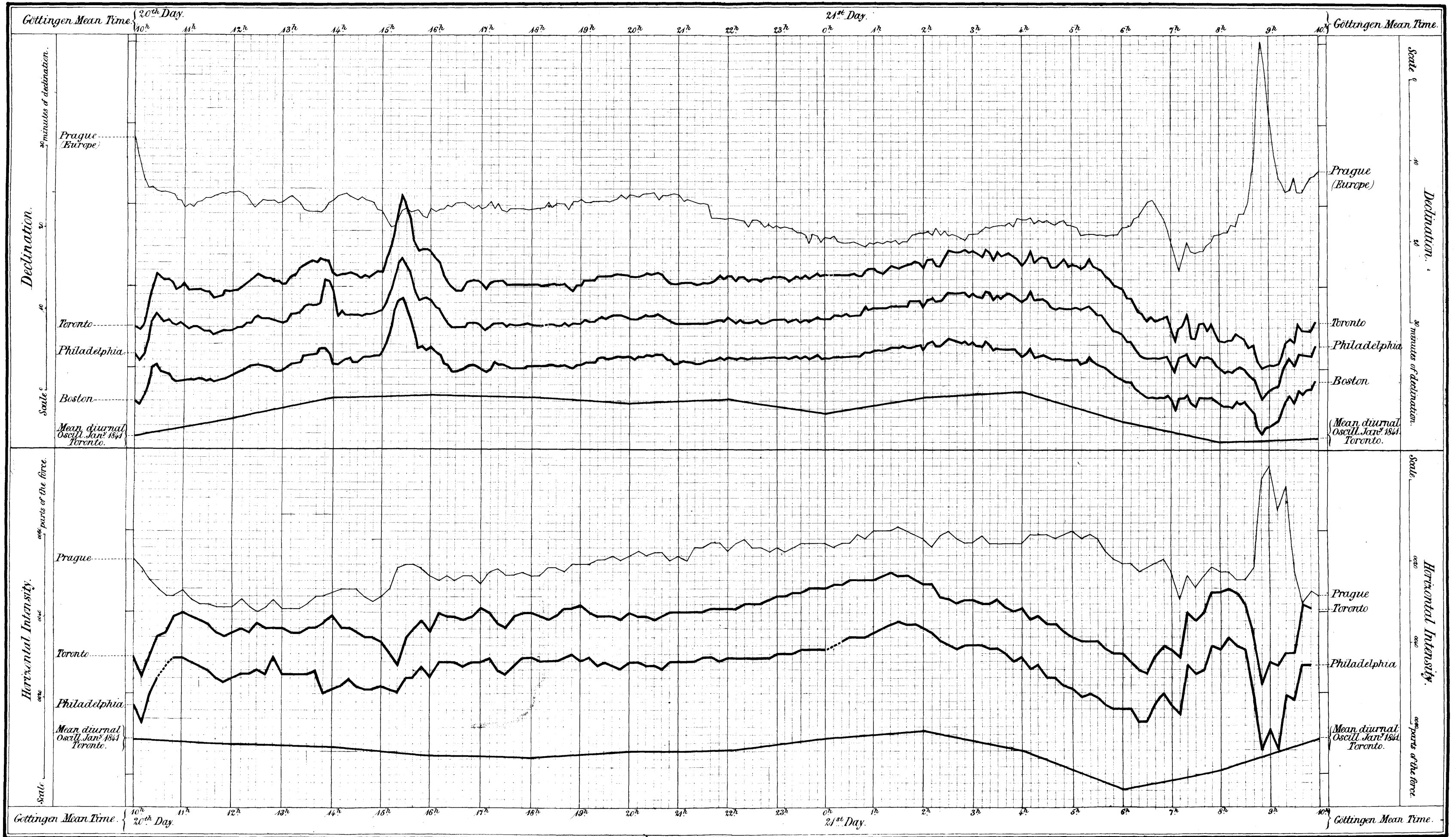
MAGNETICAL OBSERVATIONS.												December 22nd and 23rd.		
DECLINATION.						Angular Value of one Scale Division = 0'.721.								
21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .		
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
139.9	138.7	139.2	139.6	136.9	138.0	139.8	138.8	137.1	133.8	131.5	132.3	133.0	133.0	
141.1	137.3	139.9	137.5	136.9	139.0	140.1	138.1	137.0	133.8	131.3	132.5	133.0	133.0	
141.7	137.1	138.3	137.9	137.8	139.7	140.5	138.4	136.6	133.8	131.2	133.0	133.2	133.2	
142.9	135.3	139.6	138.5	138.2	140.0	140.4	138.0	135.6	133.4	131.0	133.0	133.0	133.0	
143.2	135.8	137.8	138.1	137.8	139.3	139.9	138.0	135.0	133.3	131.0	133.0	133.0	133.0	
144.0	137.4	138.2	137.6	138.1	139.0	140.0	137.5	134.7	133.0	131.0	133.2	133.5	133.5	
143.7	136.4	137.5	138.0	138.2	140.2	139.2	137.0	134.4	133.1	131.0	133.2	133.8	133.8	
142.4	138.2	138.7	137.4	138.0	139.8	139.1	137.5	134.7	133.0	131.0	133.6	134.0	134.0	
143.8	138.8	138.9	137.4	138.1	139.8	138.8	137.4	134.0	132.7	131.0	133.3	134.0	134.0	
143.3	138.9	138.7	137.3	137.8	140.0	139.5	137.9	134.0	132.3	131.5	133.5	134.0	134.0	
142.1	139.5	136.9	136.9	138.7	140.5	139.5	137.2	133.9	132.0	132.0	133.6	134.5	134.5	
139.5	139.7	136.7	136.8	138.8	139.9	138.9	137.3	133.5	131.7	132.0	133.1	134.2	134.2	
HORIZONTAL FORCE.						Change in the magnetic moment of the Bar for 1° Fah. = .00026.								
501.4	495.0	500.5	501.1	485.5	494.1	489.7	481.5	474.5	472.9	477.7	485.1	488.8	488.8	
501.1	497.5	500.4	495.9	488.3	494.5	488.9	479.2	475.7	474.6	479.0	485.9	488.2	488.2	
501.1	493.3	500.7	493.4	489.8	494.2	487.1	479.4	475.0	475.0	478.0	485.1	487.2	487.2	
501.9	489.3	496.3	492.0	492.8	493.3	485.6	477.4	472.1	478.1	480.0	487.3	487.8	487.8	
497.9	492.5	494.7	487.9	493.7	492.1	482.4	475.4	472.3	475.8	481.1	489.1	487.8	487.8	
497.2	494.1	495.1	485.0	492.5	491.5	482.0	474.3	472.8	476.7	483.0	489.8	487.7	487.7	
36.7	37.0	37.6	38.3	38.8	39.0	39.5	39.9	40.3	40.8	41.5	41.7	42.2	42.2	
VERTICAL FORCE.						Change in the magnetic moment of the Bar for 1° Fah. = .000108.								
110.8	113.2	113.6	113.6	113.3	113.5	112.5	112.3	112.0	111.5	111.3	111.5	110.4	110.4	
110.8	113.3	113.6	112.8	114.1	113.5	112.5	112.3	112.0	111.6	111.1	111.4	110.4	110.4	
110.8	113.1	113.1	112.9	114.1	113.5	112.4	112.3	111.8	111.6	111.3	111.2	109.8	109.8	
110.8	113.1	113.1	112.9	114.0	113.3	112.4	112.1	111.6	111.4	111.5	111.2	109.8	109.8	
110.8	113.1	114.0	113.0	113.5	113.1	112.4	112.2	111.7	111.3	111.5	110.9	109.7	109.7	
112.5	113.6	114.0	113.0	113.5	112.9	112.7	112.0	111.6	111.3	111.6	110.6	109.7	109.7	
37.4	37.5	38.0	38.4	39.0	39.2	39.6	39.8	40.1	39.7	40.4	40.7	41.2	41.2	
and increasing Horizontal and Vertical Force.														
METEOROLOGICAL OBSERVATIONS.														
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.						
				Dry.	Wet.	Direction.	Force.							
D.	H.	M.	In.	°	°									
22	22	0	29.858	26.0	23.5	S.E.	Brisk.	Densely clouded, with squalls. Slight rain at 21 <sup>h</sup> 30 <sup>m</sup> .						
	23	0	29.831	26.9	25.2	S.E.	Fresh.	Densely clouded. Raining slightly occasionally; heavy squalls.						
23	0	0	29.806	27.6	26.5	S.E.	Fresh.	Heavy showers of rain and sleet at intervals; heavy squalls.						
	1	0	29.776	29.1	28.2	S.E.	Brisk.	Heavy showers of rain and sleet at intervals with squalls.						
	2	0	29.736	30.2	29.8	E.	Brisk.	Densely clouded; rain and sleet; wind in gusts.						
	3	0	29.718	31.3	30.8	E.	Brisk.	Densely clouded; rain and sleet.						
	4	0	29.686	32.2	31.7	E.	Mod.	Densely clouded; rain and sleet; wind in gusts.						
	5	0	29.646	33.0	32.4	E. b. S.	Mod.	Light and moderate rain since 4 <sup>h</sup> ; densely clouded. Clouds passing						
	6	0	29.575	33.5	32.5	E.	Light.	Light rain; wind in gusts, densely overcast. [rapidly from S.E.]						
	7	0	29.512	34.3	32.9	S. E.	Light.	Light and moderate rain at intervals.						
	8	0	29.481	35.0	33.7	E.	Light.	Raining moderately and steadily; at 8 <sup>h</sup> 8 <sup>m</sup> raining heavily.						
	9	0	29.441	35.8	35.4	E.	Light.	Constant heavy rain since 8 <sup>h</sup> .						







Declination and Horizontal Intensity, January 20<sup>th</sup> & 21<sup>st</sup> 1841.

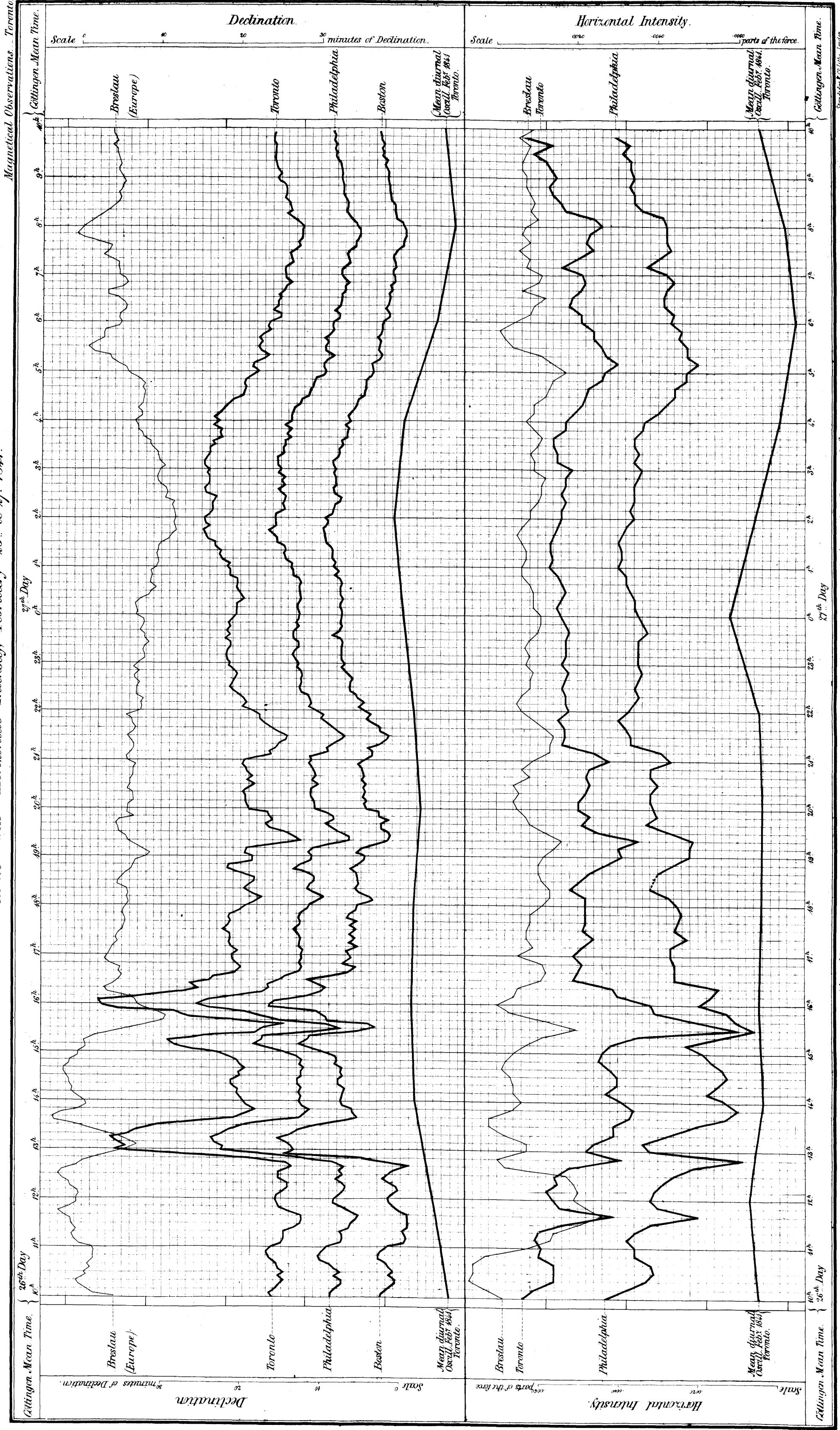


Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

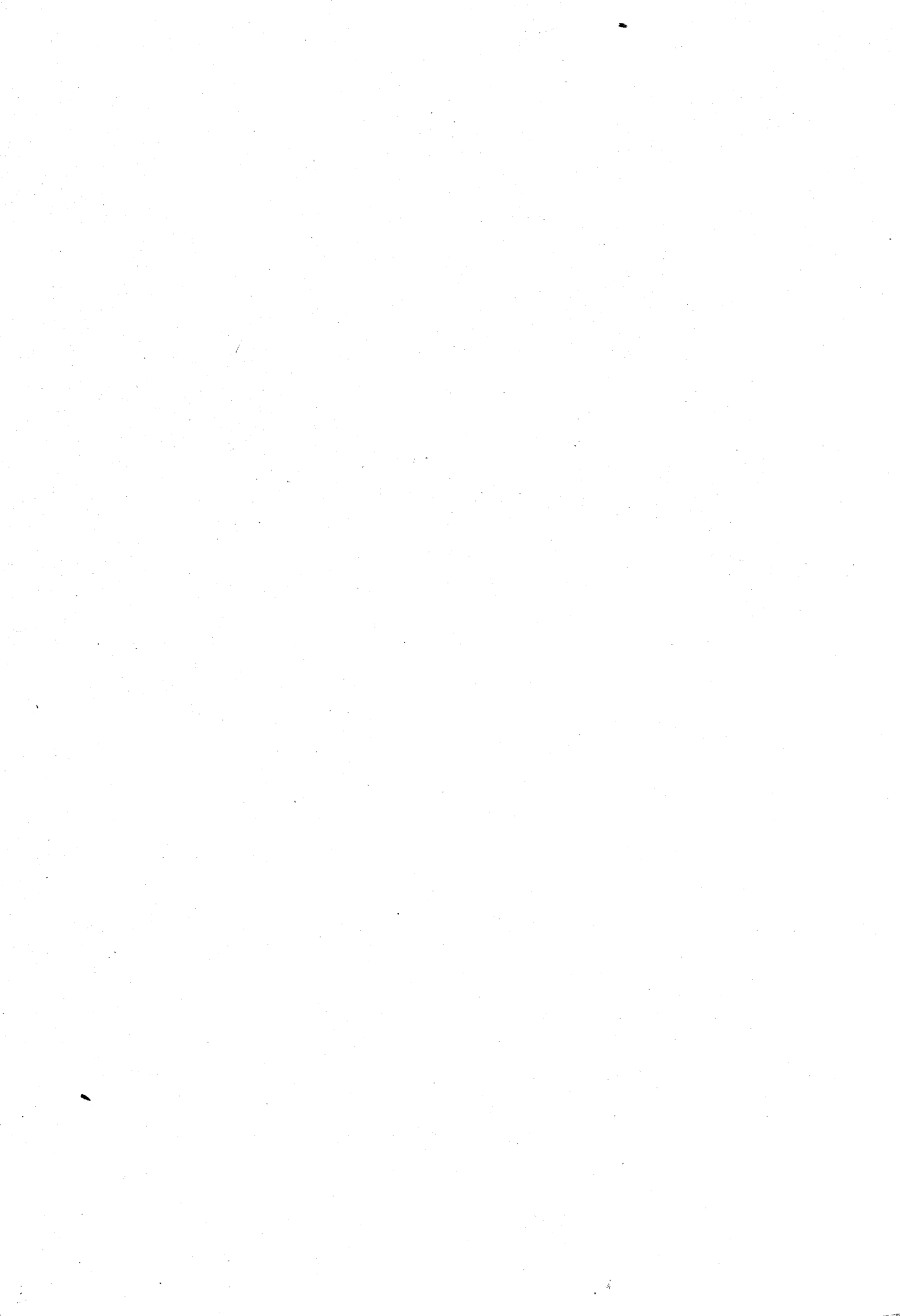




# Declination and Horizontal Intensity, February 26<sup>th</sup> & 27<sup>th</sup> 1841.

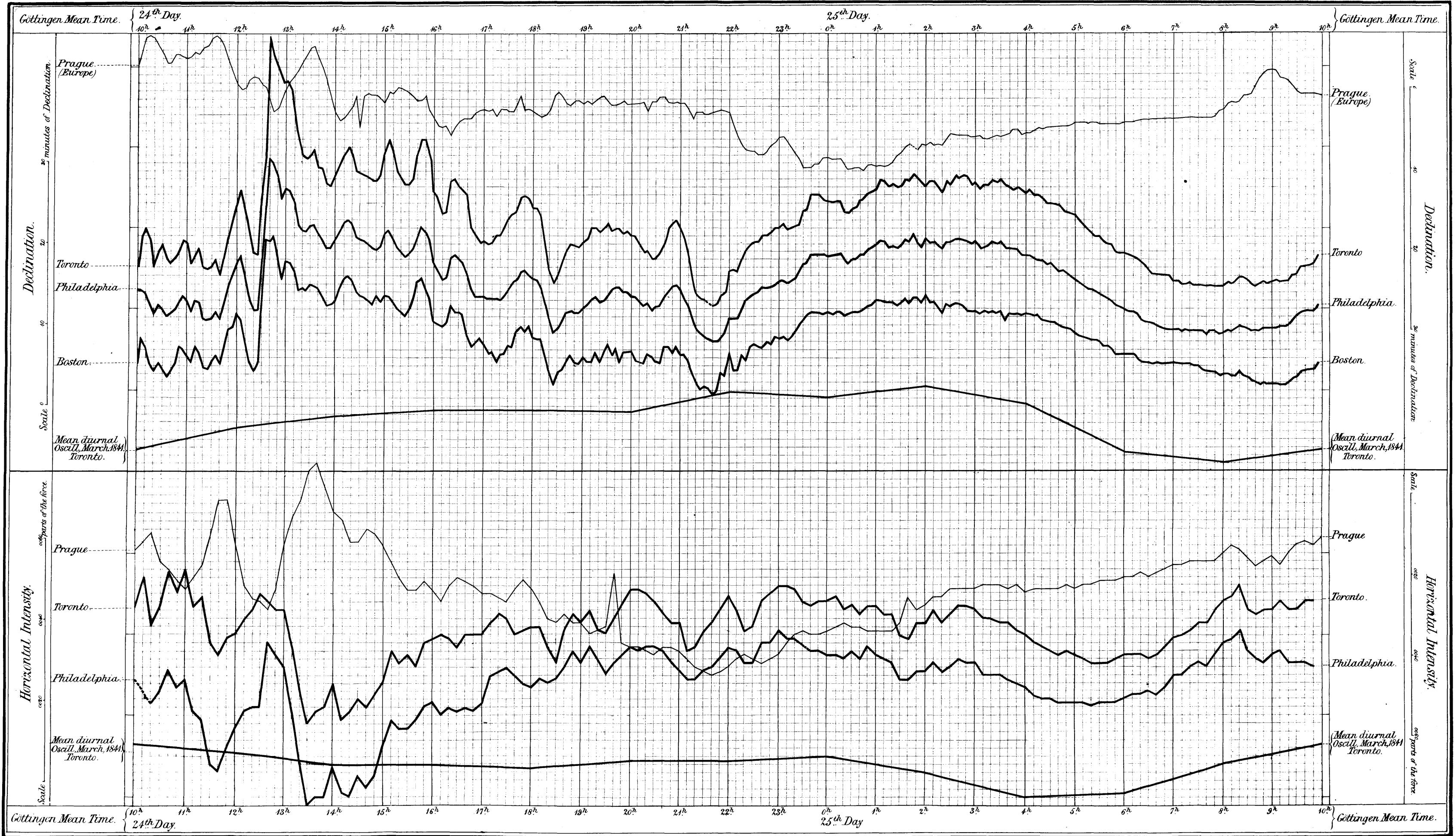






Declination and Horizontal Intensity, March 24<sup>th</sup> & 25<sup>th</sup> 1841.

Magnetical Observations. — Toronto.

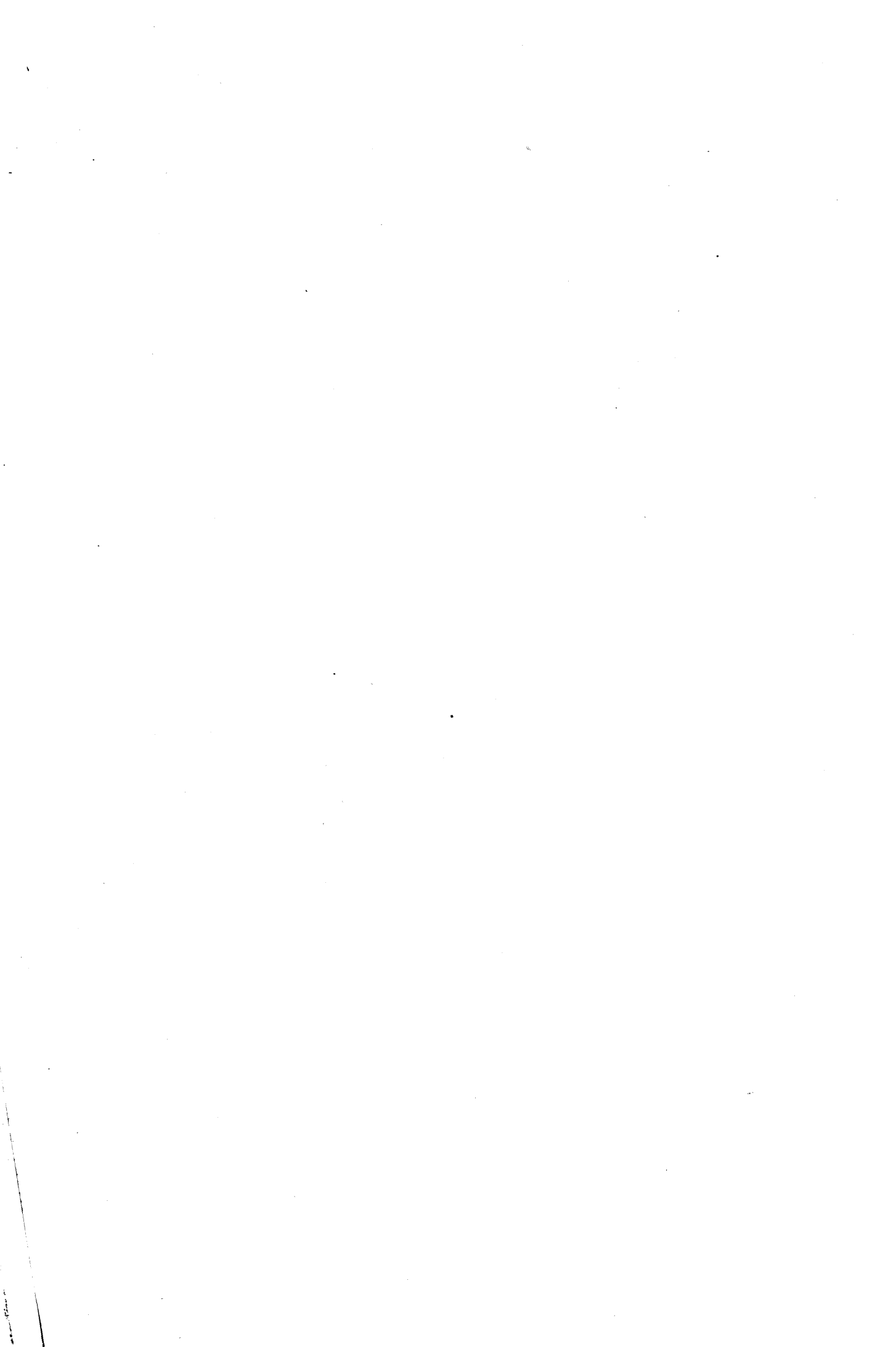


Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

Standidge & Co. Litho. London.

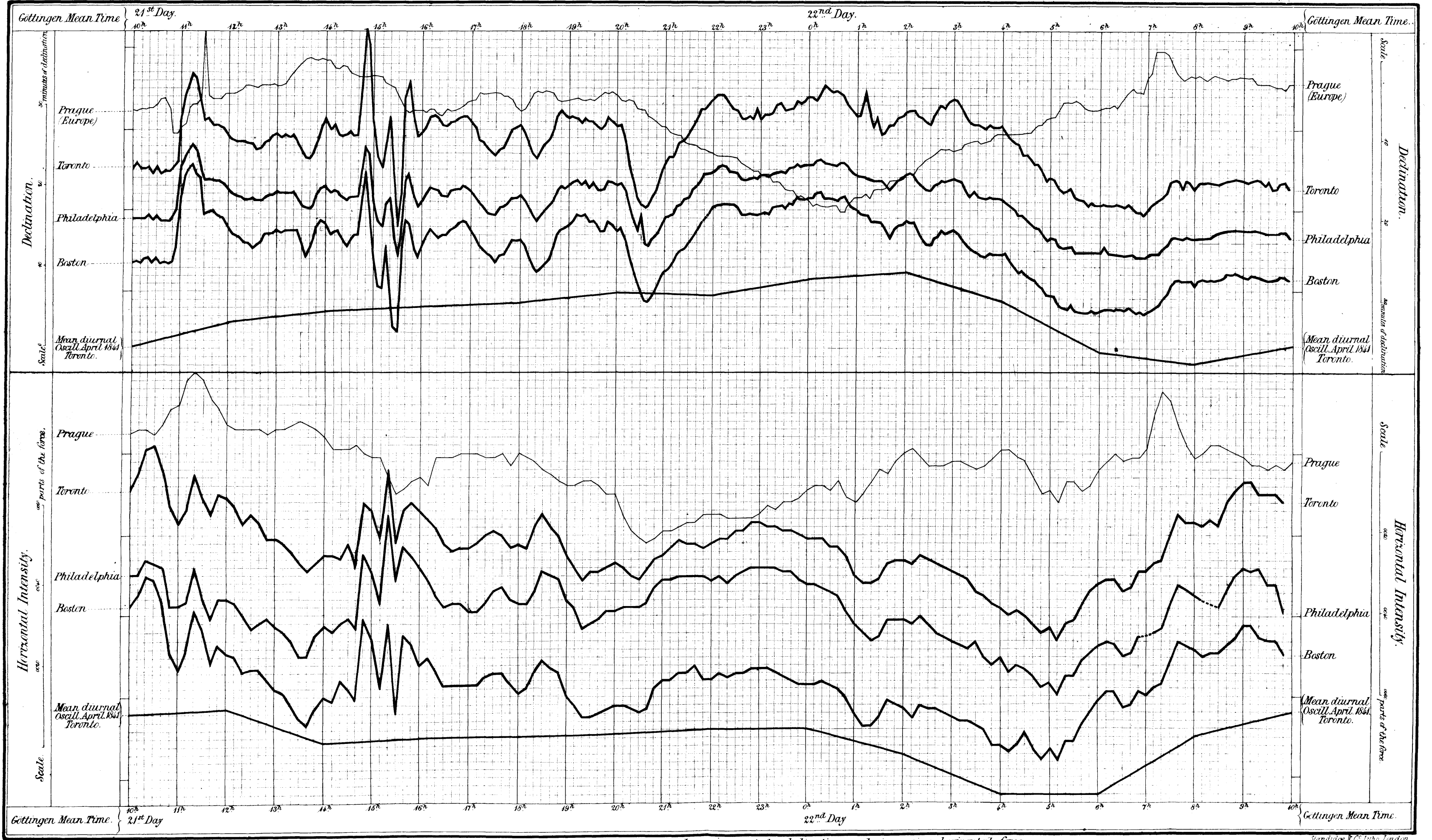






# Declination and Horizontal Intensity, April 21<sup>st</sup> & 22<sup>nd</sup>, 1841.

Magnetical Observations.— Toronto.



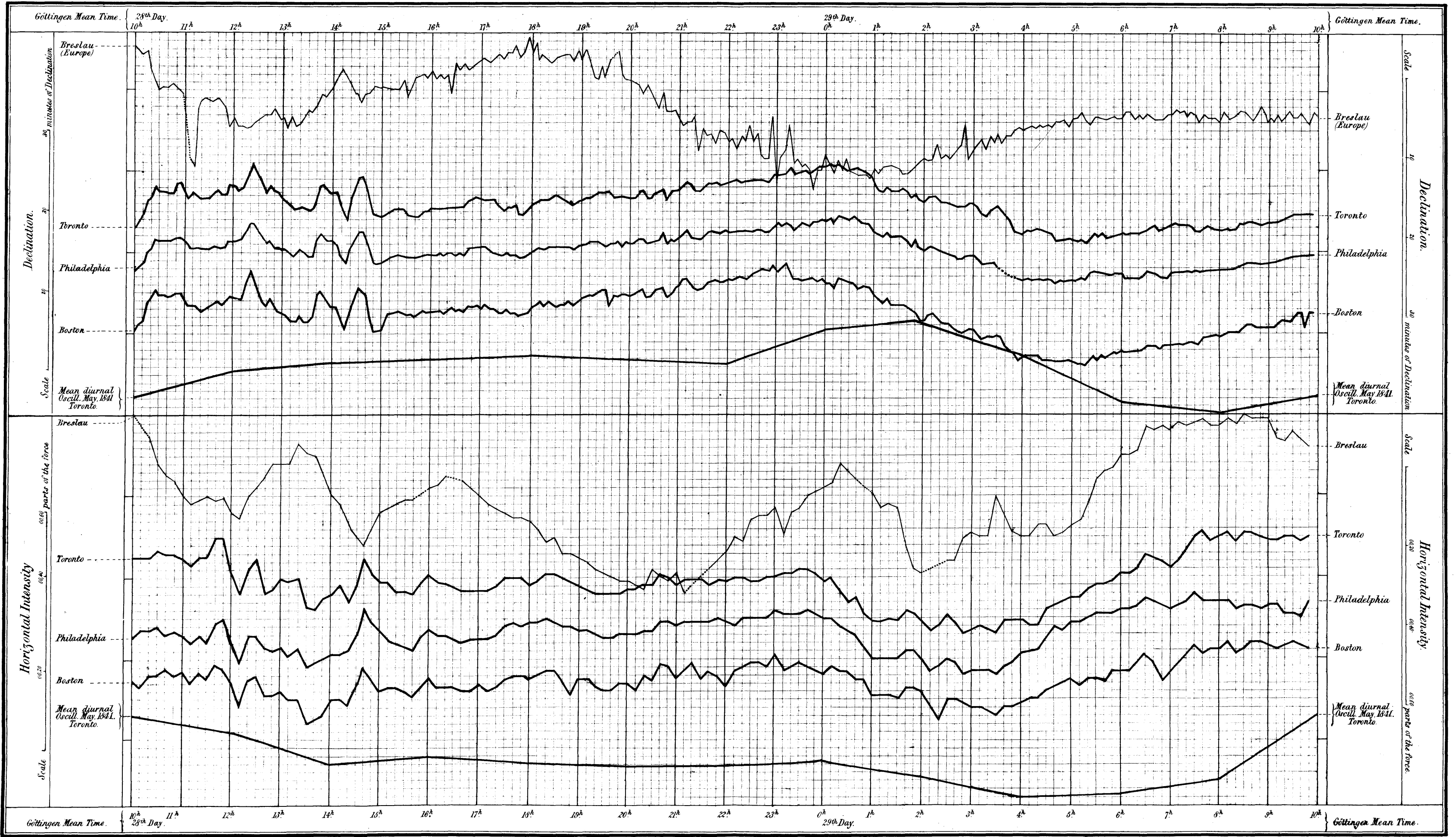
Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

Sandridge & Co. Litho. London





# Declination and Horizontal Intensity, May 28<sup>th</sup> & 29<sup>th</sup> 1841.



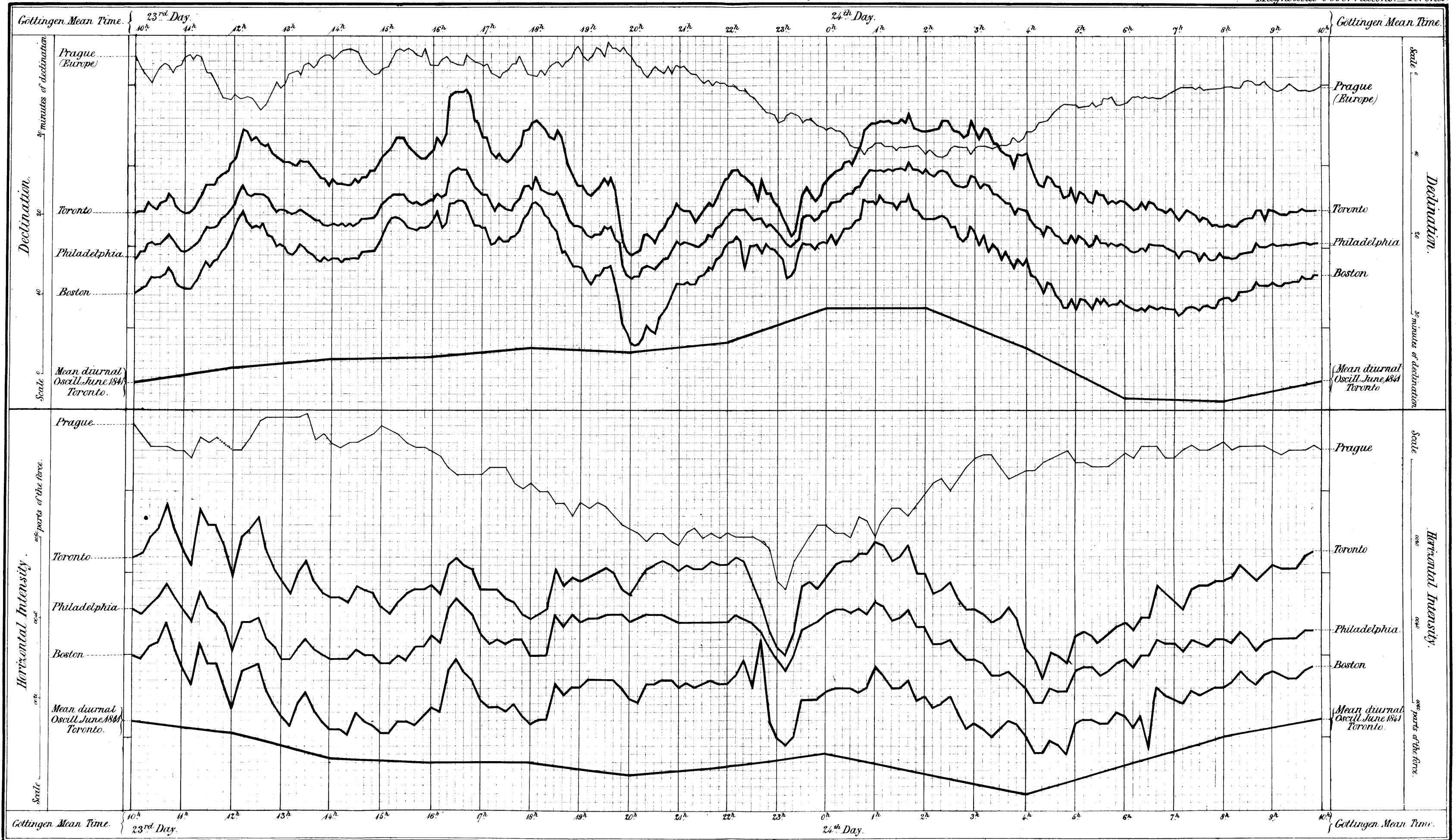
Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.





# Declination and Horizontal Intensity, June 23<sup>rd</sup> & 24<sup>th</sup> 1844.

Magnetical Observations. — Toronto.



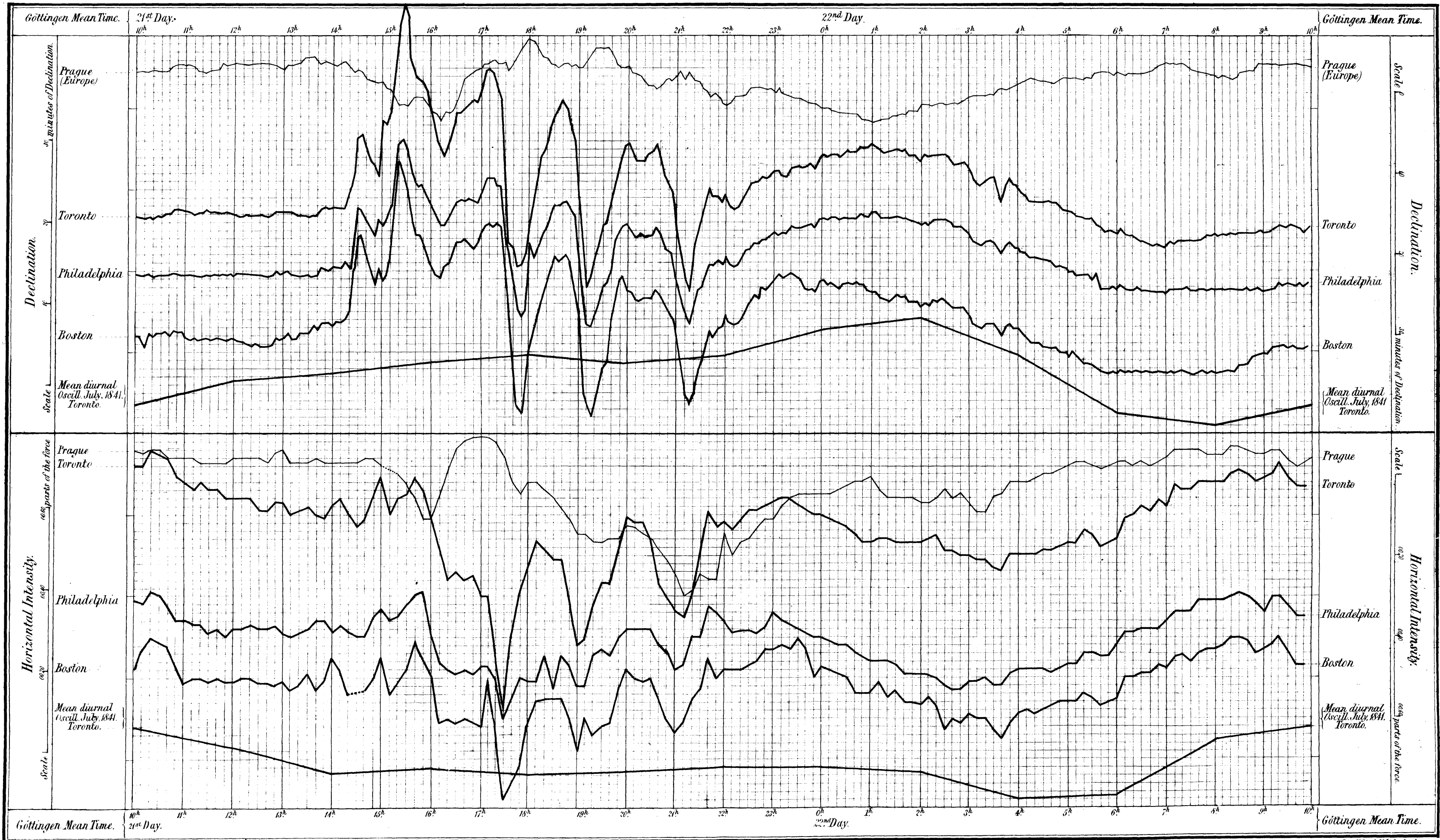
Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.







Declination and Horizontal Intensity, July 21<sup>st</sup> & 22<sup>nd</sup> 1841.



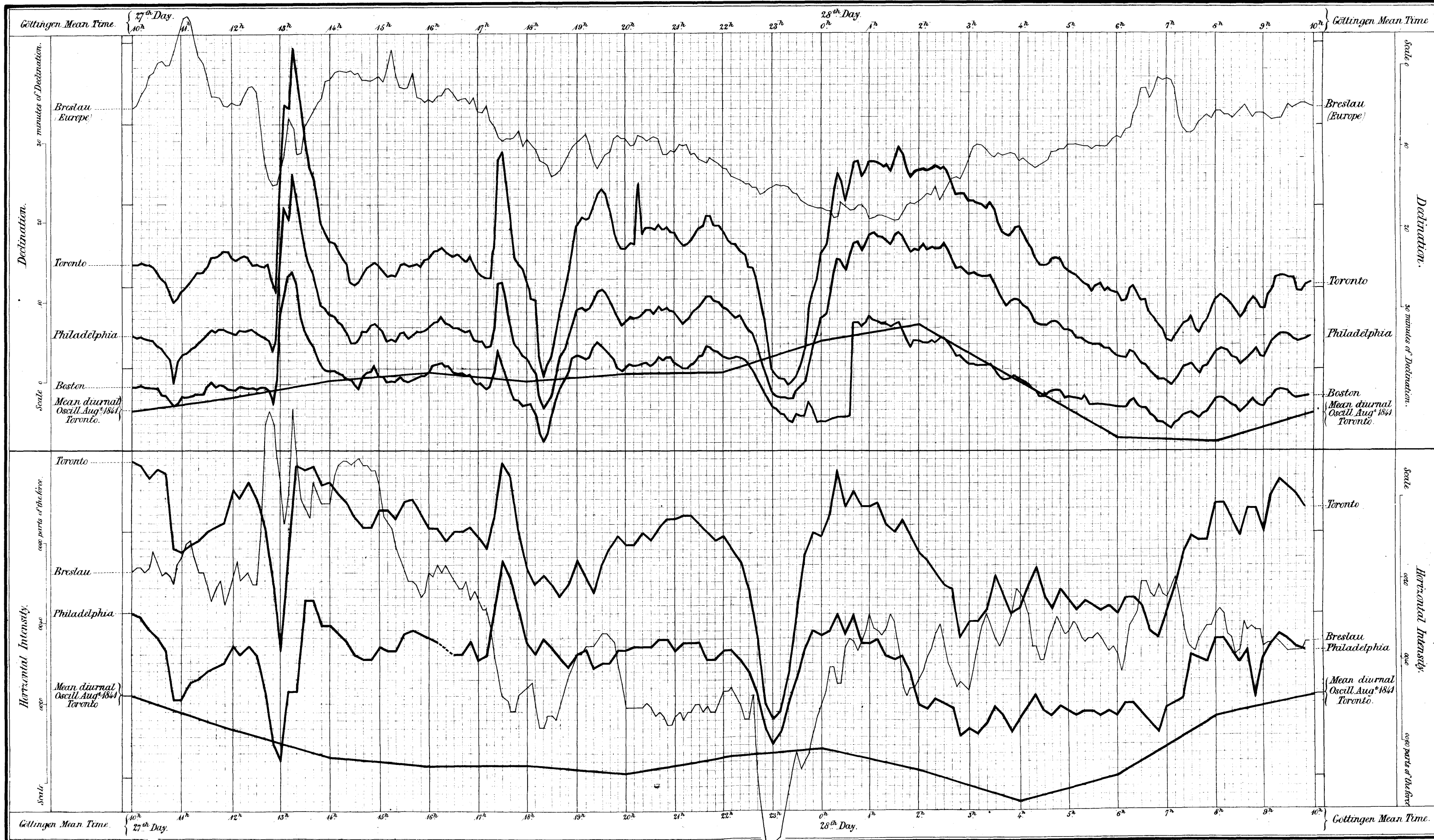
Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.





Declination and Horizontal Intensity, August 27<sup>th</sup> & 28<sup>th</sup> 1841.

Magnetical Observations. — Toronto.



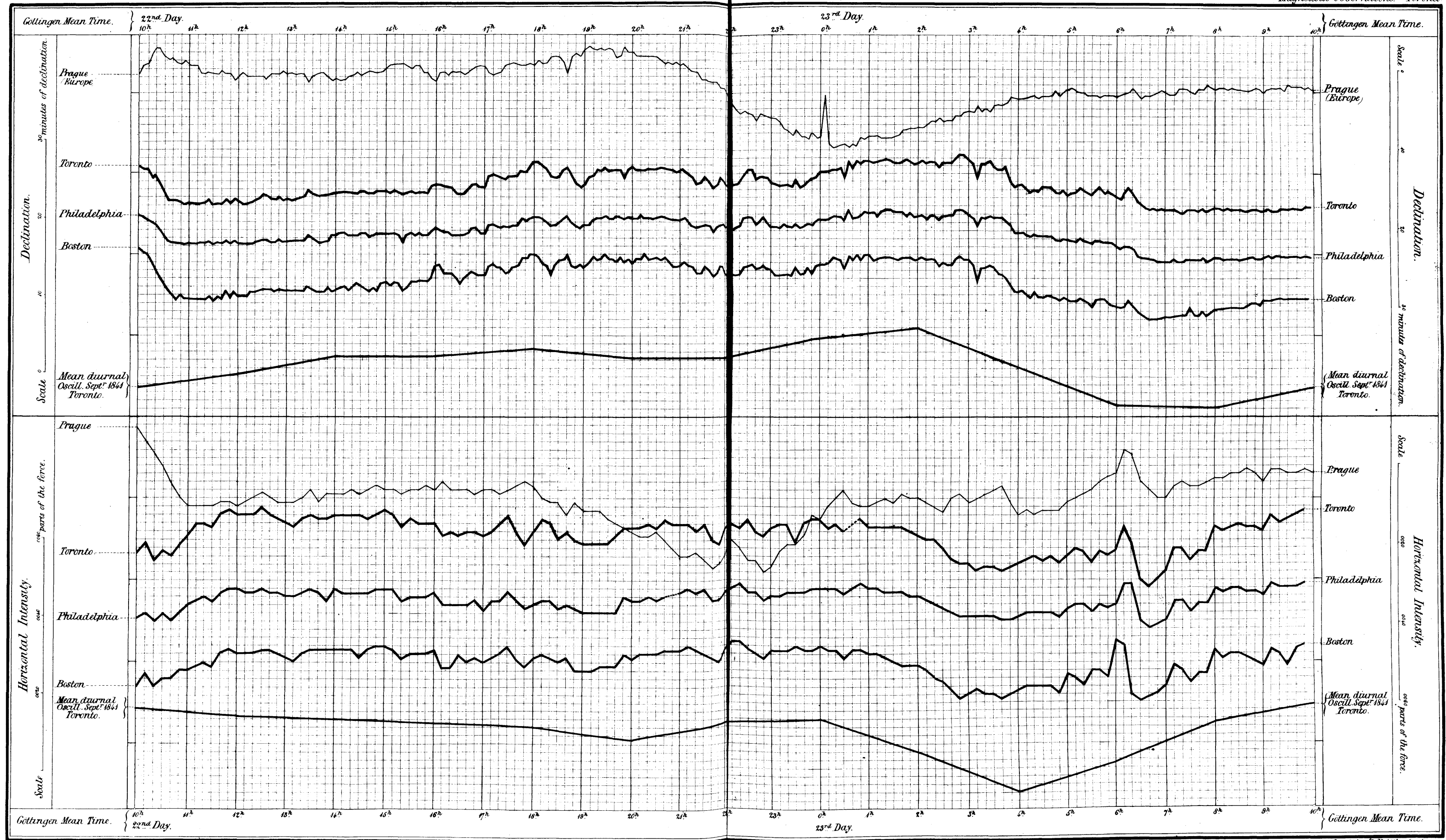






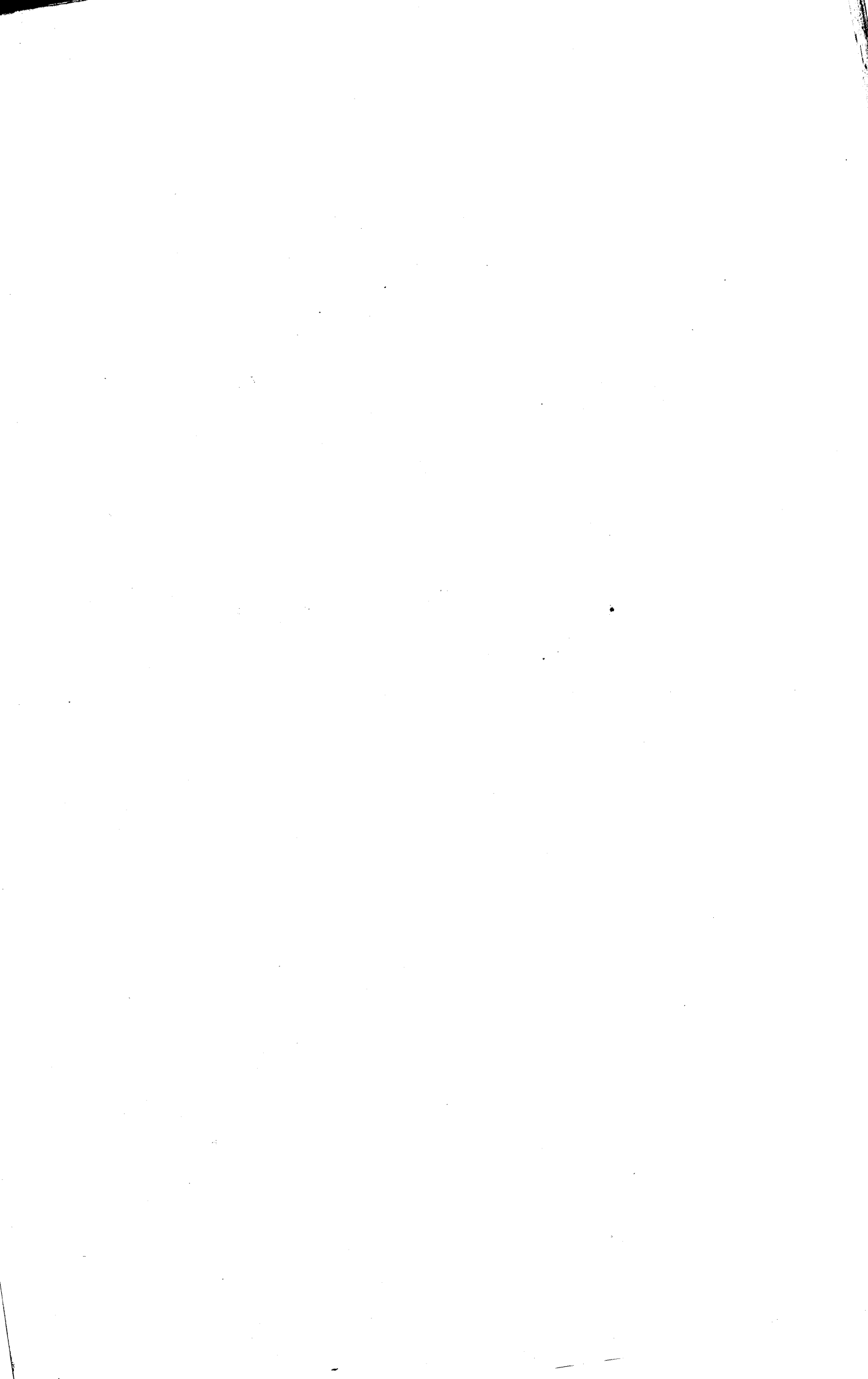
Declination and Horizontal Intensity, September 22<sup>nd</sup> & 23<sup>rd</sup> 1841.

Magnetical Observations. Toronto



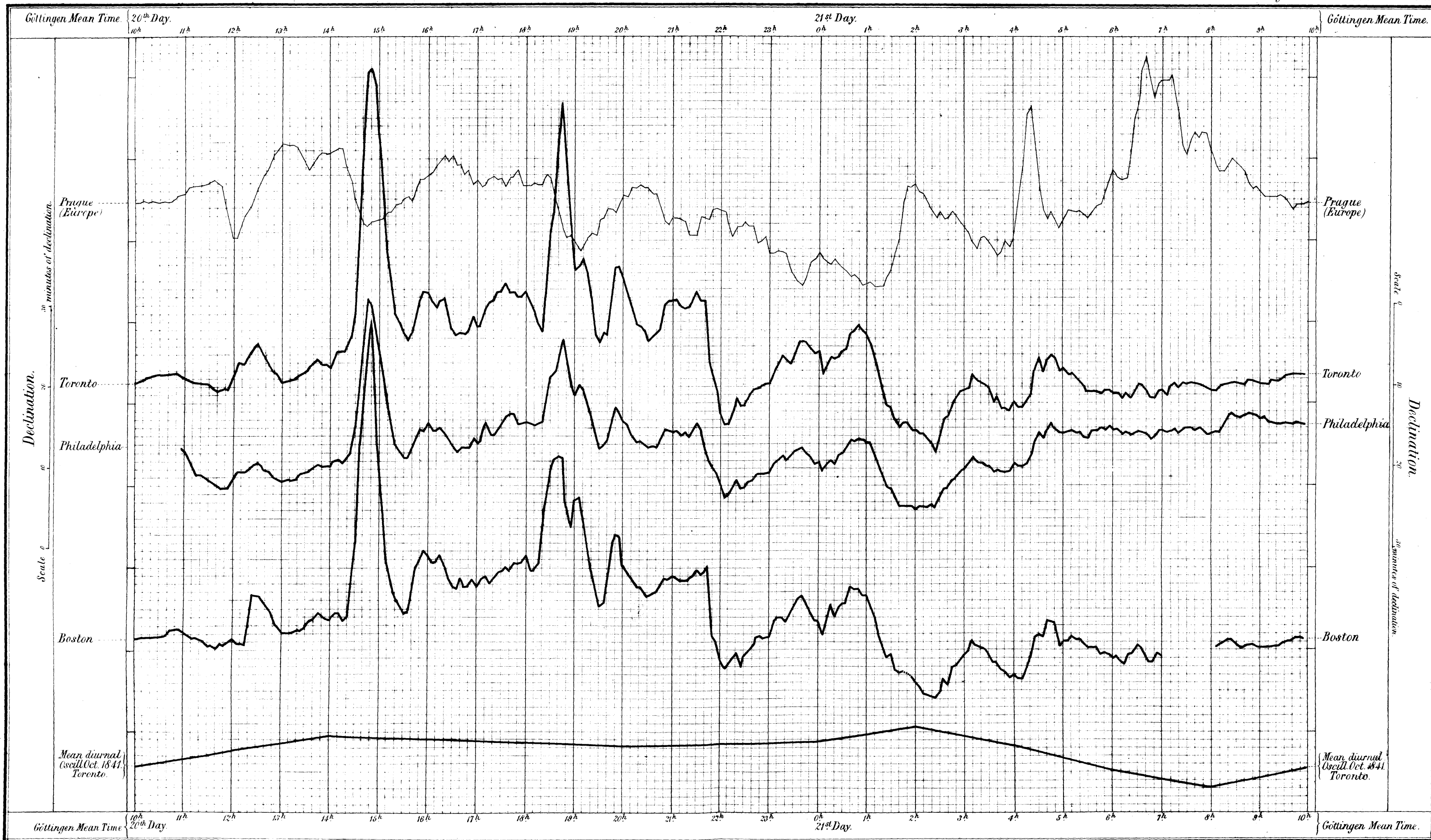
Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.





Declination, October 20<sup>th</sup> & 21<sup>st</sup> 1841.

Magnetical Observations Toronto.



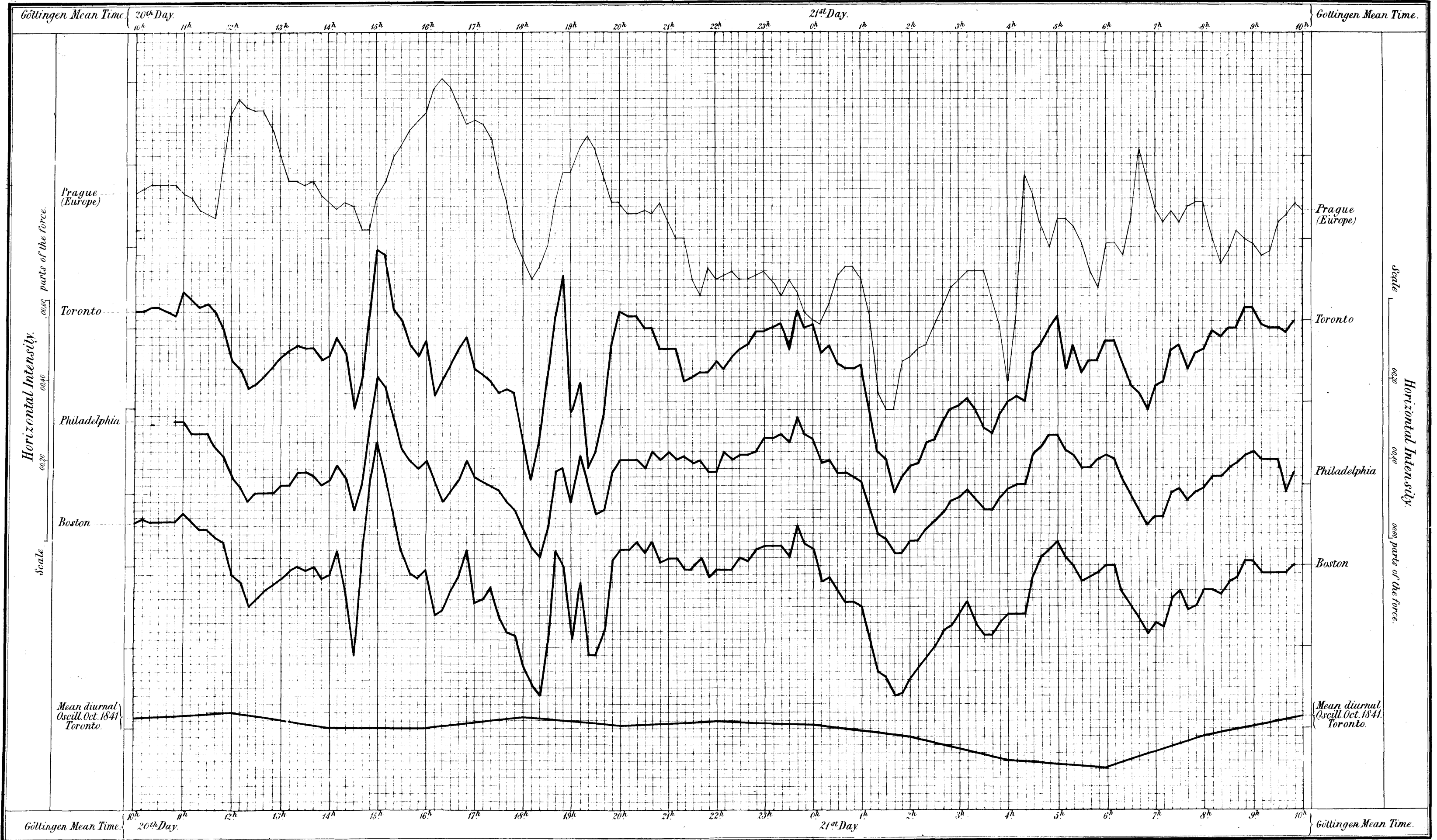
Ascending curves denote increasing easterly or decreasing westerly declination.





# Horizontal Intensity, October 20<sup>th</sup> & 21<sup>st</sup> 1841.

Magnetical Observations.— Toronto.



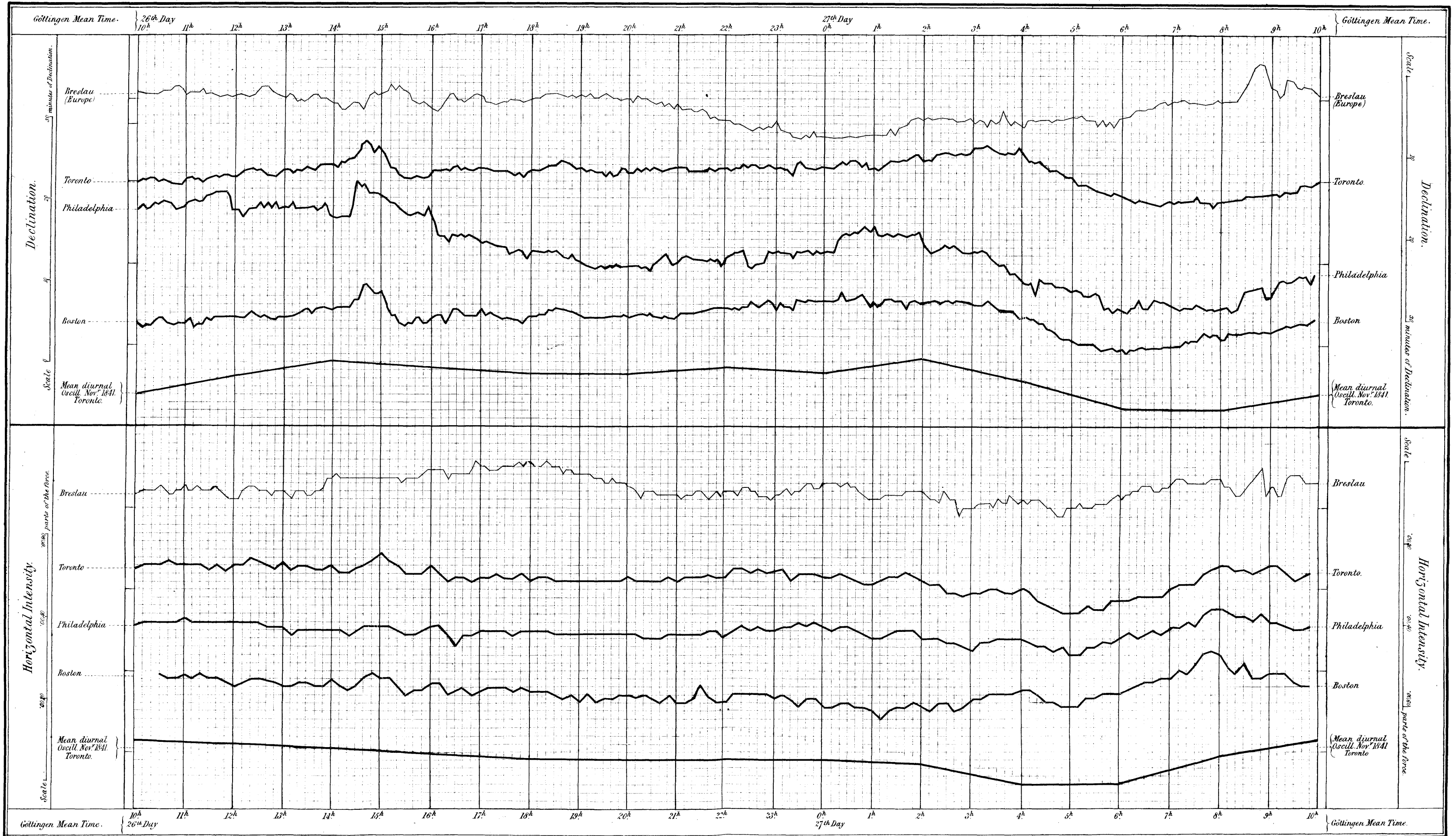
Ascending curves denote increasing horizontal force.







# Declination and Horizontal Intensity, November 26<sup>th</sup> & 27<sup>th</sup> 1841.



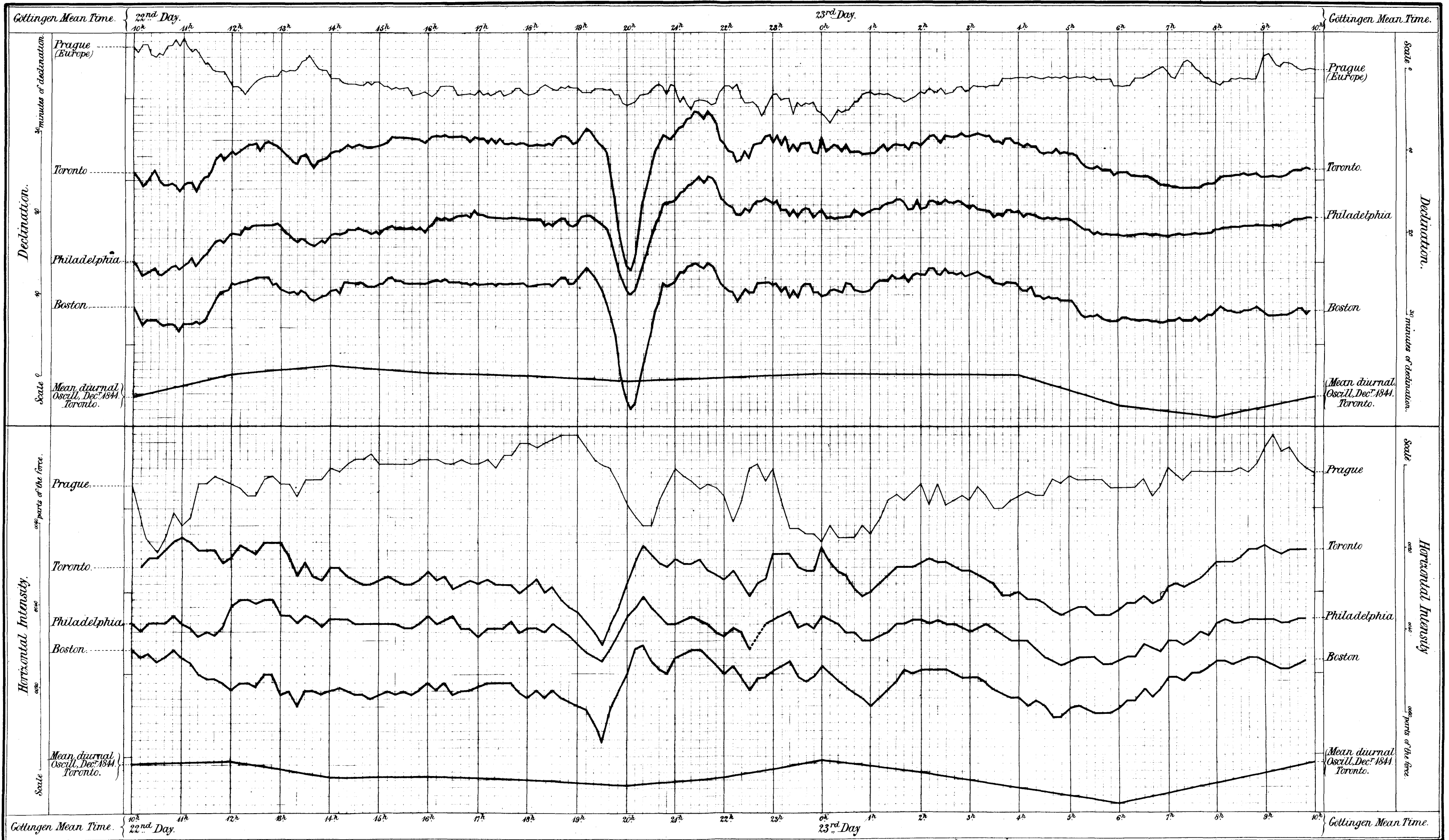
Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.





Declination and Horizontal Intensity, December 22<sup>nd</sup> & 23<sup>rd</sup> 1844.

Magnetical Observations. Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.



**TORONTO, 1841.**

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**METEOROLOGICAL OBSERVATIONS.**

BAROMETRIC PRESSURE.

Barometer at 32° = 27 English inches + the numbers in the Table.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16	
JANUARY.	1	2.707	2.687	2.623	2.518	2.444	2.365	2.283	2.223	2.167	2.121	2.087	2.043	2.356
	2	2.022	2.015	2.009	1.981	1.996	2.091	2.168	2.247	2.269	—	—	—	2.216
	3	—	—	—	—	—	—	—	—	—	2.586	2.606	2.606	2.784
	4	2.622	2.660	2.691	2.679	2.702	2.738	2.799	2.835	2.880	2.909	2.939	2.953	2.835
	5	2.964	2.990	3.002	2.939	2.906	2.865	2.812	2.791	2.751	2.698	2.665	2.639	2.592
	6	2.617	2.632	2.631	2.599	2.598	2.604	2.622	2.627	2.607	2.582	2.549	2.441	2.592
	7	2.386	2.308	2.226	2.156	2.122	2.142	2.180	2.299	2.443	2.548	2.663	2.730	2.350
	8	2.793	2.809	2.883	2.865	2.858	2.862	2.856	2.876	2.888	2.874	2.905	2.891	2.863
	9	2.911	2.922	2.920	2.867	2.847	2.834	2.830	2.811	2.781	—	—	—	2.790
	10	—	—	—	—	—	—	—	—	—	2.609	2.602	2.550	2.443
	11	2.492	2.450	2.427	2.352	2.293	2.299	2.312	2.380	2.450	2.548	2.608	2.702	2.789
	12	2.751	2.788	2.816	2.790	2.779	2.775	2.777	2.785	2.777	2.782	2.832	2.822	2.758
	13	2.823	2.827	2.807	2.757	2.736	2.724	2.707	2.728	2.736	2.732	2.750	2.764	2.761
	14	2.795	2.814	2.827	2.794	2.772	2.786	2.770	2.746	2.738	2.707	2.701	2.686	2.757
	15	2.680	2.684	2.695	2.662	2.663	2.746	2.819	2.849	2.862	2.837	2.833	2.752	2.633
	16	2.724	2.685	2.656	2.583	2.546	2.530	2.506	2.485	2.439	—	—	—	2.380
	17	—	—	—	—	—	—	—	—	—	2.758	2.839	2.842	3.092
	18	2.920	2.979	3.053	3.046	3.018	3.049	3.115	3.146	3.159	3.169	3.213	3.238	3.287
	19	3.290	3.321	3.355	3.328	3.323	3.318	3.290	3.269	3.253	3.246	3.244	3.212	2.936
	20	3.211	3.185	3.145	3.062	3.007	2.970	2.903	2.862	2.796	2.739	2.700	2.657	2.636
	21	2.624	2.624	2.635	2.587	2.574	2.606	2.640	2.668	2.672	2.666	2.671	2.667	2.514
	22	2.668	2.658	2.643	2.593	2.539	2.526	2.467	2.451	2.433	2.398	2.398	2.390	2.380
	23	2.398	2.420	2.419	2.423	2.408	2.420	2.421	2.416	2.392	—	—	—	2.574
	24	—	—	—	—	—	—	—	—	—	2.248	2.284	2.304	2.458
	25	2.339	2.383	2.434	2.453	2.498	2.576	2.625	2.673	2.709	2.731	2.734	2.730	2.508
	26	2.744	2.733	2.732	2.642	2.543	2.445	2.343	2.295	2.253	2.242	2.252	2.274	2.785
	27	2.316	2.366	2.392	2.417	2.420	2.473	2.540	2.578	2.612	2.643	2.661	2.683	2.582
	28	2.717	2.741	2.784	2.783	2.758	2.776	2.805	2.834	2.832	2.819	2.798	2.778	2.572
	29	2.744	2.724	2.649	2.588	2.567	2.567	2.569	2.564	2.529	2.479	2.493	2.508	—
	30	2.536	2.569	2.569	2.602	2.623	2.640	2.650	2.610	2.559	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	2.467	2.512	2.534	2.664
Hourly Means		2.684	2.691	2.694	2.656	2.636	2.643	2.646	2.656	2.653	2.663	2.674	2.669	2.664
FEBRUARY.	1	2.553	2.532	2.483	2.422	2.334	2.340	2.338	2.347	2.362	2.368	2.404	2.416	2.408
	2	2.416	2.445	2.419	2.351	2.252	2.156	2.050	2.045	1.990	1.953	2.063	2.169	2.192
	3	2.312	2.390	2.459	2.480	2.506	2.544	2.557	2.590	2.646	2.691	2.700	2.774	2.554
	4	2.804	2.853	2.869	2.831	2.779	2.772	2.778	2.797	2.790	2.742	2.731	2.693	2.787
	5	2.635	2.612	2.549	2.493	2.435	2.423	2.451	2.440	2.438	2.440	2.467	2.493	2.490
	6	2.517	2.565	2.599	2.612	2.608	2.659	2.690	2.710	2.720	—	—	—	2.717
	7	—	—	—	—	—	—	—	—	—	2.962	2.979	2.980	2.844
	8	2.992	3.009	3.016	2.961	2.926	2.914	2.898	2.835	2.752	2.674	2.621	2.532	2.424
	9	2.462	2.425	2.409	2.396	2.382	2.415	2.446	2.457	2.445	2.421	2.412	2.422	2.546
	10	2.436	2.489	2.490	2.496	2.511	2.557	2.602	2.608	2.604	2.601	2.578	2.583	2.608
	11	2.592	2.610	2.611	2.577	2.563	2.593	2.648	2.653	2.649	2.616	2.610	2.581	2.584
	12	2.576	2.583	2.577	2.562	2.541	2.575	2.617	2.620	2.620	2.606	2.575	2.561	2.524
	13	2.539	2.536	2.517	2.472	2.435	2.434	2.454	2.483	2.499	—	—	—	2.580
	14	—	—	—	—	—	—	—	—	—	2.664	2.637	2.620	2.287
	15	2.633	2.673	2.668	2.629	2.525	2.558	2.585	2.594	2.563	2.532	2.511	2.494	2.601
	16	2.479	2.493	2.464	2.402	2.295	2.231	2.197	2.211	2.177	2.146	2.157	2.187	2.474
	17	2.241	2.355	2.457	2.530	2.572	2.624	2.705	2.730	2.757	2.753	2.747	2.742	2.451
	18	2.735	2.723	2.685	2.611	2.534	2.471	2.452	2.400	2.358	2.304	2.227	2.191	2.215
	19	2.196	2.251	2.317	2.439	2.480	2.556	2.618	2.607	2.588	2.528	2.455	2.377	2.504
	20	2.334	2.324	2.304	2.360	2.169	2.121	2.120	2.115	2.084	—	—	—	2.663
	21	—	—	—	—	—	—	—	—	—	2.230	2.215	2.199	1.930
	22	2.179	2.176	2.150	2.068	1.979	1.928	1.844	1.773	1.753	1.727	1.729	1.851	2.504
	23	2.028	2.213	2.388	2.445	2.481	2.548	2.601	2.646	2.654	2.679	2.678	2.694	2.663
	24	2.696	2.720	2.739	2.713	2.672	2.643	2.645	2.655	2.660	2.632	2.612	2.564	2.546
	25	2.552	2.553	2.534	2.498	2.478	2.485	2.499	2.523	2.553	2.596	2.630	2.656	2.496
	26	2.646	2.657	2.647	2.599	2.535	2.506	2.480	2.454	2.405	2.385	2.325	2.307	—
	27	2.272	2.277	2.266	2.255	2.248	2.257	2.327	2.381	2.401	—	—	—	2.307
	28	—	—	—	—	—	—	—	—	—	2.333	2.340	2.332	—
Hourly Means		2.493	2.519	2.526	2.508	2.468	2.471	2.483	2.486	2.478	2.483	2.475	2.476	2.489



BAROMETRIC PRESSURE.

Barometer at 32° = 27 English inches + the numbers in the Table.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16	
MARCH.	1	2.340	2.364	2.354	2.360	2.367	2.382	2.431	2.504	2.573	2.602	2.640	2.681	2.467
	2	2.709	2.755	2.751	2.727	2.677	2.658	2.628	2.598	2.593	2.573	2.536	2.525	2.644
	3	2.528	2.549	2.553	2.540	2.525	2.534	2.545	2.588	2.620	2.641	2.663	2.682	2.581
	4	2.727	2.783	2.802	2.854	2.852	2.880	2.946	3.005	3.050	3.107	3.135	3.123	2.939
	5	3.148	3.178	3.163	3.152	3.088	3.056	3.007	2.961	2.900	2.854	2.800	2.742	3.004
	6	2.688	2.657	2.624	2.549	2.488	2.419	2.361	2.283	2.226	—	—	—	2.406
	7	—	—	—	—	—	—	—	—	—	2.175	2.185	2.213	—
	8	2.279	2.335	2.380	2.416	2.432	2.494	2.550	2.625	2.661	2.698	2.743	2.793	2.534
	9	2.839	2.865	2.880	2.837	2.820	2.784	2.788	2.822	2.817	2.822	2.849	2.836	2.829
	10	2.857	2.891	2.855	2.834	2.776	2.737	2.767	2.749	2.747	2.744	2.753	2.763	2.790
	11	2.817	2.865	2.873	2.883	2.869	2.866	2.890	2.924	2.925	2.904	2.892	2.866	2.881
	12	2.853	2.840	2.792	2.694	2.581	2.516	2.451	2.376	2.329	2.217	2.097	2.038	2.482
	13	1.986	1.985	2.005	2.026	2.060	2.119	2.194	2.247	2.300	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	2.873	2.892	2.900	2.299
	15	2.902	2.901	2.870	2.840	2.803	2.776	2.743	2.747	2.752	2.755	2.767	2.804	2.805
	16	2.865	2.926	2.993	3.032	3.042	3.067	3.111	3.163	3.178	3.174	3.165	3.187	3.075
	17	3.216	3.226	3.230	3.186	3.133	3.095	3.078	3.045	3.026	2.989	2.975	2.953	3.096
	18	2.966	2.979	2.949	2.920	2.841	2.814	2.784	2.771	2.742	2.742	2.752	2.750	2.834
	19	2.750	2.731	2.697	2.640	2.593	2.541	2.547	2.556	2.535	2.536	2.523	2.501	2.596
	20	2.527	2.571	2.597	2.582	2.562	2.566	2.599	2.649	2.691	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	2.924	2.899	2.879	2.671
	22	2.815	2.770	2.674	2.611	2.542	2.464	2.400	2.370	2.318	2.240	2.150	2.075	2.452
	23	2.026	2.005	2.087	2.122	2.164	2.208	2.265	2.298	2.324	2.339	2.353	2.388	2.215
	24	2.442	2.479	2.502	2.503	2.515	2.522	2.519	2.571	2.592	2.612	2.638	2.665	2.547
	25	2.708	2.698	2.718	2.720	2.687	2.674	2.683	2.667	2.627	2.583	2.576	2.552	2.658
	26	2.546	2.526	2.539	2.524	2.519	2.527	2.535	2.567	2.620	2.631	2.595	2.578	2.559
	27	2.590	2.596	2.583	2.577	2.552	2.524	2.517	2.517	2.527	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	2.628	2.615	2.591	2.568
	29	2.530	2.461	2.368	2.275	2.221	2.297	2.356	2.406	2.438	2.485	—	—	2.384
	30	2.635	2.719	2.782	2.807	2.822	2.838	2.859	2.884	2.873	2.871	2.849	2.826	2.814
	31	2.820	2.812	2.788	2.713	2.630	2.576	2.545	2.517	2.475	2.426	2.376	2.356	2.586
Hourly Means		2.671	2.684	2.682	2.664	2.635	2.627	2.633	2.645	2.646	2.672	2.669	2.664	2.656
APRIL.	1	2.376	2.398	2.430	2.434	2.427	2.471	2.493	2.539	2.554	2.552	2.525	2.498	2.475
	2	2.445	2.415	2.330	2.272	2.266	2.297	2.455	2.519	2.583	2.638	2.688	2.710	2.468
	3	2.730	2.728	2.726	2.701	2.672	2.679	2.696	2.723	2.726	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	2.266	2.324	2.352	2.610
	5	2.404	2.436	2.467	2.486	2.483	2.496	2.549	2.580	2.617	2.642	2.648	2.660	2.539
	6	2.737	2.792	2.810	2.807	2.801	2.784	2.792	2.806	2.785	2.768	2.759	2.730	2.781
	7	2.710	2.688	2.663	2.604	2.558	2.547	2.543	2.543	2.548	2.557	2.514	2.517	2.583
	8	2.559	2.578	2.581	2.575	2.533	2.544	2.549	2.547	2.544	—	—	—	—
	9 <sup>a</sup>	—	—	—	—	—	—	—	—	—	2.563	2.564	2.606	2.562
	10	2.648	2.690	2.710	2.704	2.699	2.693	2.724	2.770	2.805	—	—	—	—
	11	—	—	—	—	—	—	—	—	—	2.805	2.748	2.736	2.728
	12	2.741	2.741	2.734	2.702	2.712	2.694	2.690	2.670	2.667	2.644	2.620	2.614	2.687
	13	2.627	2.625	2.610	2.577	2.555	2.521	2.513	2.539	2.554	2.560	2.572	2.591	2.570
	14	2.659	2.726	2.778	2.811	2.850	2.874	2.930	2.987	3.014	3.045	3.064	3.100	2.903
	15	3.146	3.178	3.185	3.169	3.145	3.114	3.070	3.045	3.038	3.015	2.990	2.977	3.090
	16	2.981	2.978	2.964	2.909	2.849	2.793	2.752	2.729	2.693	2.658	2.606	2.604	2.800
	17	2.591	2.586	2.570	2.545	2.508	2.468	2.431	2.407	2.348	—	—	—	—
	18	—	—	—	—	—	—	—	—	—	2.712	2.693	2.674	2.544
	19	2.660	2.619	2.556	2.485	2.469	2.501	2.552	2.615	2.657	2.684	2.710	2.705	2.601
	20	2.726	2.777	2.785	2.769	2.789	2.804	2.813	2.863	2.871	2.859	2.856	2.870	2.815
	21	2.921	2.943	2.968	2.965	2.941	2.925	2.936	2.972	2.977	2.997	2.974	2.980	2.958
	22	3.025	3.038	3.029	3.018	2.994	2.942	2.913	2.884	2.871	2.877	2.836	2.820	2.937
	23	2.831	2.839	2.848	2.799	2.796	2.762	2.756	2.746	2.744	2.731	2.728	2.718	2.775
	24	2.736	2.726	2.751	2.735	2.721	2.696	2.680	2.684	2.700	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	2.492	2.438	2.411	2.650
	26	2.353	2.315	2.253	2.216	2.173	2.127	2.089	2.151	2.212	2.288	2.342	2.394	2.243
	27	2.429	2.470	2.503	2.513	2.519	2.537	2.583	2.656	2.646	2.652	2.660	2.679	2.571
	28	2.717	2.718	2.718	2.678	2.633	2.597	2.574	2.554	2.513	2.478	2.426	2.389	2.583
	29	2.325	2.245	2.152	2.084	2.032	2.002	1.974	1.970	1.934	1.902	1.892	1.876	2.032
	30	1.873	1.917	1.918	1.929	1.972	2.001	2.039	2.093	2.121	2.146	2.156	2.207	2.031
Hourly Means		2.638	2.647	2.642	2.619	2.604	2.595	2.604	2.624	2.629	2.621	2.613	2.607	2.621

<sup>a</sup> Good Friday.

BAROMETRIC PRESSURE.

Barometer at 32° = 27 English inches + the numbers in the Table.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.																													
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16																														
MAY.	1	2.263	2.281	2.287	2.279	2.279	2.295	2.327	2.353	2.364	—	—	—	2.387																													
	2	—	—	—	—	—	—	—	—	—	2.633	2.639	2.645		2.684																												
	3	2.666	2.677	2.681	2.670	2.672	2.666	2.697	2.712	2.722	2.696	2.674	2.672			2.580																											
	4	2.680	2.654	2.622	2.577	2.561	2.542	2.553	2.578	2.562	2.550	2.552	2.532				2.420																										
	5	2.519	2.517	2.492	2.442	2.398	2.345	2.355	2.384	2.392	2.399	2.386	2.411					2.584																									
	6	2.442	2.469	2.493	2.493	2.500	2.543	2.597	2.666	2.699	2.698	2.696	2.707						2.715																								
	7	2.751	2.791	2.749	2.730	2.721	2.699	2.685	2.688	2.685	2.694	2.689	2.699							2.678																							
	8	2.732	2.761	2.770	2.769	2.750	2.738	2.749	2.807	—	—	—	—								2.138																						
	9	—	—	—	—	—	—	—	—	—	2.471	2.417	2.367									2.145																					
	10	2.337	2.271	2.221	2.160	2.106	2.082	2.075	2.089	2.096	2.076	2.076	2.070										2.361																				
	11	2.085	2.107	2.110	2.099	2.095	2.114	2.149	2.191	2.196	2.193	2.193	2.207											2.510																			
	12	2.259	2.288	2.299	2.291	2.313	2.345	2.386	2.422	2.443	2.428	2.429	2.423												2.634																		
	13	2.432	2.467	2.478	2.477	2.478	2.487	2.515	2.543	2.540	2.548	2.565	2.589													2.611																	
	14	2.621	2.641	2.634	2.617	2.601	2.602	2.613	2.651	2.667	2.661	2.655	2.650														2.511																
	15	2.683	2.691	2.683	2.653	2.646	2.643	2.651	2.682	2.698	—	—	—															2.605															
	16	—	—	—	—	—	—	—	—	—	2.490	2.418	2.388																2.672														
	17	2.358	2.336	2.388	2.448	2.477	2.497	2.538	2.585	2.606	2.628	2.632	2.638																	2.644													
	18	2.662	2.666	2.640	2.604	2.558	2.561	2.566	2.579	2.590	2.588	2.599	2.645																		2.623												
	19	2.697	2.715	2.707	2.707	2.678	2.661	2.636	2.640	2.646	2.659	2.660	2.663																			2.582											
	20	2.668	2.697	2.701	2.676	2.638	2.614	2.616	2.626	2.628	2.623	2.616	2.627																				2.580										
	21	2.644	2.668	2.667	2.661	2.633	2.608	2.584	2.594	2.630	2.647	2.557	2.585																					2.476									
	22	2.610	2.602	2.603	2.601	2.600	2.559	2.538	2.536	2.539	—	—	—																						2.546								
	23	—	—	—	—	—	—	—	—	—	2.609	2.604	2.583																							2.623							
	24	2.628	2.625	2.620	2.612	2.567	2.534	2.526	2.554	2.575	2.578	2.570	2.562																								2.637						
	25	2.576	2.569	2.547	2.489	2.451	2.403	2.419	2.433	2.461	2.442	2.457	2.463																									2.747					
	26	2.486	2.519	2.531	2.526	2.524	2.529	2.528	2.566	2.582	2.580	2.579	2.606																										2.481				
	27	2.639	2.660	2.664	2.647	2.621	2.611	2.597	2.602	2.618	2.617	2.600	2.596																											2.545			
	28	2.627	2.635	2.617	2.593	2.563	2.581	2.595	2.623	2.651	2.699	2.717	2.751																												2.543		
	29	2.796	2.791	2.805	2.811	2.788	2.770	2.765	2.778	2.804	—	—	—																													2.543	
	30	—	—	—	—	—	—	—	—	—	2.648	2.613	2.599																														2.543
	31	2.627	2.597	2.569	2.498	2.453	2.423	2.428	2.426	2.448	2.432	2.436	2.438																														
Hourly Means		2.557	2.565	2.561	2.543	2.526	2.517	2.526	2.550	2.564	2.549	2.539	2.543	2.545																													
JUNE.	1	2.455	2.472	2.464	2.461	2.434	2.417	2.414	2.461	2.451	2.452	2.464	2.511	2.455																													
	2	2.486	2.482	2.496	2.480	2.482	2.481	2.503	2.555	2.600	2.615	2.641	2.685		2.542																												
	3	2.738	2.756	2.750	2.751	2.711	2.670	2.640	2.640	2.623	2.620	2.619	2.616			2.678																											
	4	2.612	2.607	2.597	2.557	2.502	2.463	2.443	2.444	2.445	2.448	2.448	2.416				2.498																										
	5	2.489	2.515	2.500	2.491	2.484	2.471	2.485	2.498	2.511	—	—	—					2.492																									
	6	—	—	—	—	—	—	—	—	—	2.478	2.483	2.503						2.483																								
	7	2.517	2.509	2.494	2.457	2.458	2.436	2.437	2.469	2.494	2.490	2.511	2.522							2.509																							
	8	2.561	2.577	2.573	2.546	2.491	2.456	2.432	2.439	2.481	2.500	2.508	2.549								2.660																						
	9	2.604	2.648	2.683	2.682	2.670	2.671	2.671	2.664	2.666	2.656	2.649	2.653									2.509																					
	10	2.663	2.672	2.635	2.591	2.532	2.481	2.462	2.458	2.456	2.403	2.371	2.388										2.407																				
	11	2.384	2.396	2.363	2.381	2.340	2.336	2.342	2.392	2.430	2.486	2.513	2.523											2.479																			
	12	2.553	2.566	2.562	2.559	2.527	2.501	2.473	2.467	2.441	—	—	—												2.428																		
	13	—	—	—	—	—	—	—	—	—	2.380	2.357	2.359													2.597																	
	14	2.368	2.385	2.397	2.384	2.382	2.404	2.418	2.452	2.488	2.481	2.476	2.500														2.695																
	15	2.538	2.563	2.576	2.574	2.581	2.576	2.596	2.626	2.649	2.580	2.647	2.666															2.697															
	16	2.695	2.728	2.719	2.704	2.687	2.685	2.672	2.679	2.693	2.688	2.687	2.702																2.640														
	17	2.731	2.728	2.716	2.706	2.703	2.691	2.702	2.686	2.704	2.677	2.657	2.661																	2.650													
	18	2.661	2.661	2.650	2.637	2.629	2.646	2.634	2.632	2.633	2.627	2.630	2.630																		2.570												
	19	2.652	2.667	2.654	2.636	2.623	2.610	2.594	2.605	2.605	—	—	—																			2.441											
	20	—	—	—	—	—	—	—	—	—	2.691	2.686	2.761																				2.490										
	21	2.658	2.646	2.643	2.620	2.593	2.552	2.538	2.502	2.534	2.537	2.517	2.506																					2.577									
	22	2.521	2.508	2.499	2.473	2.427	2.393	2.393	2.405	2.440	2.425	2.404	2.410																						2.533								
	23	2.457	2.471	2.494	2.491	2.461	2.465	2.474	2.498	2.523	2.537	2.525	2.542																							2.567							
	24	2.562	2.580	2.591	2.591	2.574	2.564	2.574	2.595	2.601	2.594	2.591	2.593																								2.533						
	25	2.595	2.611	2.600	2.586	2.551	2.539	2.521	2.519	2.502	2.488	2.475	2.462																									2.483					
	26	2.478	2.474	2.483	2.474	2.463	2.450	2.458	2.483	2.497	—	—	—																										2.543				
	27	—	—	—	—	—	—	—	—	—	2.533	2.533	2.549																											2.543			
	28	2.568	2.593	2.590	2.584	2.552	2.532	2.544	2.554	2.579	2.570	2.561	2.575																												2.543		
	29	2.603	2.609	2.580	2.539	2.500	2.492	2.480	2.497	2.543	2.534	2.525	2.500																													2.483	
	30	2.572	2.581	2.500	2.499	2.438	2.425	2.437	2.444	2.467	2.457	2.485	2.494																														2.543
Hourly Means		2.566	2.577	2.570	2.556	2.531	2.516	2.513	2.526	2.541	2.536	2.537	2.549	2.543																													

BAROMETRIC PRESSURE.

Barometer at 32° = 27 English inches + the numbers in the Table.

Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
JULY.	1	2.520	2.542	2.545	2.548	2.508	2.499	2.516	2.547	2.565	2.573	2.573	2.634	2.547
	2	2.690	2.711	2.722	2.716	2.697	2.689	2.666	2.706	2.727	2.748	2.767	2.769	2.717
	3	2.783	2.798	2.797	2.767	2.747	2.719	2.698	2.694	2.704	—	—	—	2.663
	4	—	—	—	—	—	—	—	—	—	2.433	2.407	2.406	2.363
	5	2.409	2.393	2.378	2.346	2.326	2.305	2.313	2.357	2.370	2.390	2.390	2.381	2.386
	6	2.368	2.348	2.373	2.335	2.273	2.263	2.329	2.401	2.453	2.472	2.502	2.517	2.570
	7	2.532	2.543	2.542	2.532	2.518	2.521	2.570	2.604	2.611	2.616	2.611	2.642	2.661
	8	2.694	2.713	2.709	2.600	2.695	2.656	2.640	2.664	2.659	2.651	2.628	2.624	2.498
	9	2.650	2.627	2.597	2.547	2.493	2.464	2.431	2.401	2.375	2.397	2.471	2.524	2.649
	10	2.586	2.640	2.667	2.681	2.675	2.735	2.739	2.719	2.733	—	—	—	2.509
	11	—	—	—	—	—	—	—	—	—	2.555	2.536	2.531	2.492
	12	2.558	2.545	2.536	2.542	2.506	2.476	2.481	2.482	2.505	2.496	2.493	2.492	2.492
	13	2.540	2.545	2.552	2.547	2.509	2.486	2.482	2.474	2.475	2.448	2.445	2.404	2.429
	14	2.397	2.401	2.384	2.376	2.358	2.337	2.402	2.446	2.525	2.489	2.508	2.523	2.589
	15	2.534	2.547	2.551	2.513	2.545	2.561	2.584	2.599	2.625	2.650	2.666	2.689	2.770
	16	2.751	2.800	2.779	2.810	2.776	2.754	2.751	2.755	2.772	2.783	2.765	2.750	2.723
	17	2.802	2.795	2.842	2.760	2.720	2.699	2.690	2.673	2.676	—	—	—	2.786
	18	—	—	—	—	—	—	—	—	—	2.657	2.664	2.695	2.880
	19	2.720	2.752	2.761	2.770	2.763	2.765	2.769	2.799	2.813	2.832	2.838	2.856	2.784
	20	2.895	2.920	2.933	2.929	2.900	2.881	2.858	2.857	2.847	2.840	2.846	2.853	2.654
	21	2.864	2.863	2.865	2.846	2.808	2.784	2.742	2.730	2.732	2.745	2.720	2.715	2.640
	22	2.727	2.722	2.704	2.660	2.641	2.617	2.625	2.630	2.655	2.640	2.612	2.614	2.597
	23	2.669	2.689	2.686	2.655	2.643	2.636	2.623	2.628	2.616	2.616	2.598	2.591	2.775
	24	2.632	2.634	2.601	2.554	2.532	2.546	2.491	2.476	2.473	—	—	—	2.607
	25	—	—	—	—	—	—	—	—	—	2.715	2.744	2.768	2.729
	26	2.820	2.844	2.851	2.830	2.799	2.777	2.757	2.738	2.740	2.704	2.717	2.726	2.624
	27	2.715	2.691	2.662	2.636	2.585	2.529	2.507	2.529	2.559	2.588	2.618	2.667	2.505
	28	2.723	2.755	2.760	2.741	2.718	2.702	2.708	2.731	2.744	2.731	2.717	2.717	2.586
	29	2.745	2.741	2.717	2.672	2.635	2.609	2.588	2.573	2.571	2.573	2.537	2.524	—
	30	2.534	2.536	2.533	2.525	2.536	2.523	2.495	2.493	2.484	2.474	2.464	2.461	—
	31	2.462	2.482	2.483	2.500	2.513	2.519	2.525	2.549	2.584	—	—	—	—
	32	—	—	—	—	—	—	—	—	—	2.803	2.805	2.812	—
Hourly Means	2.641	2.651	2.649	2.627	2.608	2.595	2.592	2.602	2.615	2.616	2.616	2.625	2.620	
AUGUST.	2	2.851	2.885	2.895	2.878	2.859	2.829	2.822	2.817	2.837	2.839	2.838	2.847	2.850
	3	2.851	2.858	2.850	2.835	2.798	2.767	2.757	2.751	2.755	2.748	2.733	2.735	2.786
	4	2.745	2.752	2.752	2.740	2.733	2.719	2.692	2.685	2.671	2.675	2.662	2.658	2.707
	5	2.673	2.665	2.660	2.651	2.624	2.616	2.616	2.648	2.651	2.648	2.632	2.647	2.644
	6	2.687	2.699	2.707	2.702	2.683	2.682	2.653	2.650	2.670	2.670	2.664	2.681	2.679
	7	2.704	2.706	2.709	2.694	2.660	2.632	2.631	2.634	2.639	—	—	—	2.595
	8	—	—	—	—	—	—	—	—	—	2.361	2.367	2.403	2.589
	9	2.454	2.480	2.516	2.504	2.526	2.551	2.599	2.643	2.675	2.716	2.699	2.708	2.682
	10	2.728	2.733	2.719	2.698	2.661	2.683	2.659	2.668	2.675	2.663	2.647	2.649	2.712
	11	2.674	2.690	2.702	2.706	2.708	2.718	2.698	2.714	2.725	2.738	2.737	2.738	2.653
	12	2.754	2.759	2.749	2.714	2.660	2.625	2.587	2.600	2.609	2.600	2.588	2.593	2.644
	13	2.606	2.619	2.629	2.631	2.605	2.600	2.619	2.635	2.668	2.699	2.706	2.715	2.793
	14	2.744	2.756	2.778	2.777	2.769	2.775	2.784	2.806	2.821	—	—	—	2.784
	15	—	—	—	—	—	—	—	—	—	2.838	2.826	2.847	2.643
	16	2.872	2.870	2.858	2.840	2.811	2.784	2.757	2.748	2.749	2.687	2.723	2.712	2.580
	17	2.723	2.723	2.713	2.681	2.654	2.626	2.609	2.597	2.592	2.606	2.595	2.593	2.670
	18	2.607	2.608	2.604	2.577	2.528	2.540	2.548	2.552	2.561	2.589	2.614	2.625	2.696
	19	2.651	2.665	2.670	2.673	2.650	2.640	2.642	2.665	2.691	2.693	2.699	2.706	2.701
	20	2.732	2.738	2.729	2.717	2.704	2.677	2.664	2.685	2.683	2.689	2.669	2.666	2.938
	21	2.696	2.682	2.685	2.663	2.635	2.619	2.602	2.606	2.601	—	—	—	2.956
	22	—	—	—	—	—	—	—	—	—	2.849	2.875	2.900	2.787
	23	2.952	2.968	2.968	2.949	2.927	2.914	2.901	2.915	2.927	2.937	2.947	2.955	2.564
	24	2.986	3.010	3.021	3.003	2.972	2.952	2.925	2.926	2.924	2.915	2.918	2.915	2.631
	25	2.921	2.913	2.907	2.869	2.830	2.783	2.747	2.727	2.720	2.704	2.673	2.655	2.668
	26	2.650	2.630	2.600	2.567	2.545	2.556	2.547	2.549	2.528	2.530	2.524	2.542	2.642
	27	2.582	2.595	2.610	2.620	2.630	2.631	2.627	2.639	2.664	2.665	2.657	2.651	2.554
	28	2.673	2.697	2.677	2.689	2.680	2.664	2.650	2.664	2.651	—	—	—	—
	29	—	—	—	—	—	—	—	—	—	2.656	2.662	2.658	—
	30	2.675	2.697	2.689	2.673	2.654	2.643	2.620	2.623	2.624	2.615	2.598	2.597	—
	31	2.587	2.601	2.593	2.566	2.532	2.519	2.522	2.548	2.554	2.544	2.540	2.544	—
	Hourly Means	2.722	2.731	2.730	2.716	2.694	2.682	2.672	2.681	2.687	2.687	2.684	2.690	2.698

BAROMETRIC PRESSURE.														
Barometer at 32° = 27 English inches + the numbers in the Table.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
SEPTEMBER.	1	2.570	2.560	2.554	2.538	2.505	2.476	2.449	2.463	2.464	2.447	2.423	2.420	2.489
	2	2.463	2.466	2.460	2.491	2.487	2.474	2.492	2.512	2.556	2.519	2.502	2.509	2.494
	3	2.515	2.502	2.495	2.449	2.391	2.326	2.325	2.318	2.263	2.259	2.265	2.289	2.366
	4	2.327	2.356	2.403	2.417	2.431	2.424	2.442	2.483	2.499	—	—	—	2.469
	5	—	—	—	—	—	—	—	—	—	2.610	2.615	2.625	—
	6	2.639	2.655	2.657	2.666	2.650	2.639	2.615	2.622	2.646	2.637	2.643	2.621	2.641
	7	2.625	2.648	2.641	2.636	2.629	2.604	2.602	2.596	2.593	2.580	2.585	2.578	2.609
	8	2.608	2.619	2.621	2.619	2.612	2.604	2.611	2.641	2.645	2.636	2.641	2.646	2.625
	9	2.676	2.688	2.694	2.687	2.667	2.655	2.640	2.632	2.628	2.627	2.618	2.618	2.653
	10	2.627	2.618	2.610	2.590	2.552	2.522	2.534	2.572	2.630	2.655	2.678	2.715	2.609
	11	2.759	2.770	2.778	2.774	2.748	2.752	2.757	2.778	2.781	—	—	—	2.759
	12	—	—	—	—	—	—	—	—	—	2.734	2.739	2.733	—
	13	2.770	2.782	2.781	2.758	2.745	2.748	2.755	2.782	2.811	2.827	2.844	2.867	2.790
	14	2.891	2.916	2.928	2.917	2.877	2.867	2.866	2.890	2.886	2.896	2.911	2.926	2.898
	15	2.950	2.958	2.964	2.933	2.899	2.884	2.850	2.828	2.836	2.813	2.805	2.800	2.877
	16	2.821	2.819	2.808	2.794	2.771	2.762	2.750	2.751	2.748	2.743	2.730	2.720	2.768
	17	2.716	2.730	2.735	2.723	2.687	2.667	2.705	2.739	2.753	2.764	2.717	2.788	2.727
	18	2.847	2.868	2.881	2.883	2.859	2.856	2.852	2.856	2.853	—	—	—	2.793
	19	—	—	—	—	—	—	—	—	—	2.588	2.586	2.598	—
	20	2.638	2.689	2.722	2.720	2.726	2.730	2.758	2.780	2.792	2.755	2.745	2.719	2.731
	21	2.693	2.691	2.657	2.618	2.564	2.504	2.460	2.447	2.425	2.401	2.399	2.397	2.521
	22	2.399	2.407	2.400	2.378	2.340	2.323	2.310	2.283	2.317	2.293	2.301	2.306	2.338
	23	2.340	2.367	2.371	2.372	2.358	2.369	2.394	2.406	2.422	2.427	2.446	2.452	2.394
	24	2.486	2.496	2.501	2.498	2.464	2.421	2.399	2.383	2.368	2.319	2.298	2.289	2.410
	25	2.301	2.331	2.319	2.309	2.323	2.308	2.328	2.342	2.327	—	—	—	2.409
	26	—	—	—	—	—	—	—	—	—	2.646	2.669	2.704	—
	27	2.712	2.715	2.726	2.727	2.663	2.625	2.579	2.562	2.540	2.483	2.449	2.448	2.602
	28	2.443	2.448	2.446	2.438	2.434	2.448	2.494	2.544	2.558	2.556	2.582	2.587	2.498
	29	2.617	2.628	2.639	2.630	2.612	2.628	2.630	2.634	2.626	—	2.587	2.582	—
	30	2.595	2.613	2.609	2.606	2.604	2.633	2.656	2.685	2.692	2.705	2.709	2.752	2.655
Hourly Means	2.616	2.628	2.631	2.622	2.600	2.586	2.587	2.597	2.602	2.597	2.596	2.603	2.511	
OCTOBER.	1	2.803	2.827	2.848	2.862	2.854	2.860	2.906	2.939	2.946	2.958	2.975	2.968	2.895
	2	3.001	3.029	3.036	3.040	3.009	2.992	2.979	2.976	2.968	—	—	—	2.971
	3	—	—	—	—	—	—	—	—	—	2.900	2.854	2.866	—
	4	2.880	2.894	2.900	2.894	2.854	2.856	2.853	2.875	2.878	2.867	2.850	2.856	2.871
	5	2.869	2.890	2.877	2.849	2.823	2.808	2.817	2.828	2.827	2.830	2.828	2.818	2.839
	6	2.845	2.852	2.846	2.811	2.783	2.770	2.752	2.741	2.709	2.671	2.648	2.624	2.754
	7	2.557	2.508	2.420	2.367	2.323	2.304	2.324	2.350	2.371	2.379	2.387	2.382	2.389
	8	2.387	2.378	2.389	2.358	2.314	2.323	2.364	2.392	2.412	2.417	2.427	2.452	2.384
	9	2.470	2.504	2.511	2.504	2.536	2.563	2.625	2.656	2.677	—	—	—	2.557
	10	—	—	—	—	—	—	—	—	—	2.578	2.542	2.513	—
	11	2.478	2.482	2.452	2.391	2.369	2.386	2.396	2.424	2.435	2.457	2.486	2.528	2.440
	12	2.556	2.581	2.601	2.595	2.598	2.617	2.641	2.668	2.667	2.667	2.674	2.684	2.629
	13	2.738	2.770	2.802	2.794	2.776	2.786	2.790	2.809	2.802	2.805	2.824	2.822	2.793
	14	2.826	2.852	2.831	2.784	2.707	2.674	2.665	2.653	2.633	2.586	2.488	2.428	2.677
	15	2.371	2.367	2.341	2.362	2.397	2.446	2.501	2.542	2.595	2.646	2.671	2.707	2.495
	16	2.754	2.801	2.820	2.820	2.834	2.848	2.862	2.870	2.893	—	—	—	2.863
	17	—	—	—	—	—	—	—	—	—	2.950	2.955	2.954	—
	18	2.976	2.989	2.985	2.959	2.921	2.906	2.892	2.878	2.855	2.828	2.807	2.770	2.897
	19	2.733	2.729	2.691	2.616	2.558	2.501	2.456	2.406	2.360	2.292	2.252	2.214	2.484
	20	2.172	2.186	2.196	2.173	2.172	2.180	2.191	2.179	2.163	2.125	2.105	2.102	2.162
	21	2.108	2.117	2.116	2.111	2.114	2.120	2.158	2.172	2.172	2.175	2.197	2.219	2.148
	22	2.260	2.310	2.330	2.329	2.341	2.356	2.377	2.397	2.391	2.364	2.339	2.301	2.341
	23	2.285	2.263	2.237	2.188	2.171	2.164	2.167	2.167	2.164	—	—	—	2.340
	24	—	—	—	—	—	—	—	—	—	2.726	2.767	2.787	—
	25	2.835	2.868	2.876	2.838	2.816	2.774	2.734	2.687	2.612	2.586	2.538	2.494	2.721
	26	2.475	2.456	2.437	2.388	2.377	2.417	2.484	2.551	2.623	2.675	2.718	2.779	2.532
	27	2.832	2.899	2.941	2.936	2.936	2.942	2.990	3.009	3.026	3.045	3.054	3.056	2.972
	28	3.064	3.091	3.084	3.057	3.012	2.998	2.970	2.951	2.899	2.880	2.853	2.835	2.974
	29	2.837	2.851	2.824	2.789	2.750	2.738	2.744	2.746	2.768	2.767	2.792	2.798	2.784
	30	2.808	2.849	2.857	2.837	2.836	2.834	2.838	2.860	2.882	—	—	—	2.809
	31	—	—	—	—	—	—	—	—	—	2.728	2.708	2.675	—
Hourly Means	2.651	2.667	2.663	2.640	2.622	2.622	2.634	2.643	2.643	2.650	2.644	2.640	2.643	

BAROMETRIC PRESSURE.														
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Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
NOVEMBER.	1	2·641	2·628	2·582	2·518	2·439	2·380	2·316	2·416	2·393	2·382	2·353	2·307	2·446
	2	2·291	2·325	2·325	2·310	2·306	2·314	2·385	2·374	2·331	2·309	2·268	2·257	2·316
	3	2·204	2·193	2·157	2·127	2·175	2·214	2·254	2·265	2·264	2·258	2·258	2·271	2·220
	4	2·292	2·318	2·346	2·348	2·337	2·356	2·383	2·389	2·393	2·402	2·413	2·443	2·368
	5	2·461	2·502	2·521	2·519	2·525	2·555	2·579	2·610	2·659	2·675	2·710	2·748	2·589
	6	2·793	2·843	2·873	2·872	2·883	2·907	2·941	2·944	2·932	—	—	—	2·805
	7	—	—	—	—	—	—	—	—	—	2·618	2·538	2·512	—
	8	2·491	2·540	2·594	2·654	2·710	2·792	2·860	2·918	2·960	2·973	2·985	3·014	2·791
	9	3·039	3·071	3·078	3·034	3·050	3·049	3·043	3·041	3·046	3·037	3·021	3·017	3·044
	10	3·037	3·060	3·064	3·035	3·015	3·011	3·012	2·974	2·982	2·955	2·951	2·919	3·001
	11	2·913	2·887	2·847	2·781	2·704	2·639	2·551	2·457	2·366	2·253	2·138	2·111	2·554
	12	2·191	2·218	2·243	2·218	2·215	2·242	2·263	2·248	2·223	2·220	2·239	2·257	2·231
	13	2·295	2·332	2·328	2·334	2·357	2·388	2·405	2·405	2·373	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	2·027	2·062	2·135	2·287
	15	2·228	2·290	2·332	2·338	2·377	2·427	2·451	2·475	2·482	2·488	2·490	2·509	2·407
	16	2·537	2·560	2·562	2·529	2·503	2·489	2·478	2·453	2·429	2·389	2·392	2·378	2·475
	17	2·356	2·398	2·424	2·419	2·410	2·416	2·448	2·475	2·505	2·506	2·513	2·515	2·449
	18	2·529	2·567	2·598	2·584	2·579	2·578	2·622	2·633	2·634	2·622	2·616	2·580	2·595
	19	2·583	2·591	2·582	2·544	2·529	2·567	2·580	2·574	2·584	2·592	2·608	2·616	2·579
	20	2·658	2·697	2·707	2·714	2·687	2·714	2·748	2·767	2·772	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	2·345	2·292	2·270	2·614
	22	2·223	2·176	2·136	2·106	2·093	2·072	2·126	2·172	2·215	2·246	2·301	2·322	2·182
	23	2·345	2·388	2·411	2·403	2·403	2·427	2·451	2·479	2·503	2·525	2·542	2·573	2·454
	24	2·613	2·643	2·672	2·666	2·658	2·705	2·733	2·765	2·772	2·763	2·782	2·774	2·712
	25	2·769	2·777	2·686	2·646	2·542	2·488	2·462	2·423	2·347	2·321	2·250	2·294	2·500
	26	2·332	2·406	2·450	2·440	2·465	2·517	2·592	2·639	2·668	2·696	2·743	2·768	2·560
	27	2·796	2·848	2·866	2·871	2·872	2·882	2·890	2·934	2·947	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	2·928	2·941	2·892	2·889
	29	2·883	2·899	2·888	2·857	2·835	2·842	2·847	2·858	2·878	2·892	2·888	2·890	2·871
	30	2·912	2·924	2·941	2·896	2·858	2·846	2·840	2·838	2·836	2·824	2·797	2·786	2·858
Hourly Means	2·554	2·580	2·585	2·568	2·559	2·570	2·587	2·597	2·596	2·548	2·542	2·544	2·568	
DECEMBER.	1	2·781	2·814	2·820	2·787	2·777	2·795	2·811	2·812	2·808	2·804	2·814	2·821	2·804
	2	2·840	2·855	2·846	2·816	2·779	2·756	2·730	2·721	2·690	2·674	2·662	2·582	2·746
	3	2·544	2·470	2·371	2·240	2·077	1·980	1·902	1·816	1·797	1·771	1·729	1·686	2·032
	4	1·691	1·686	1·677	1·672	1·681	1·710	1·742	1·765	1·773	—	—	—	1·842
	5	—	—	—	—	—	—	—	—	—	2·196	2·232	2·281	—
	6	2·317	2·373	2·433	2·436	2·440	2·486	2·542	2·590	2·599	2·616	2·635	2·649	2·510
	7	2·693	2·742	2·768	2·749	2·741	2·744	2·728	2·710	2·678	2·665	2·640	2·625	2·707
	8	2·584	2·568	2·543	2·481	2·440	2·430	2·407	2·388	2·365	2·354	2·365	2·355	2·440
	9	2·359	2·382	2·388	2·368	2·350	2·387	2·451	2·499	2·518	2·523	2·523	2·479	2·436
	10	2·429	2·393	2·320	2·187	2·074	2·012	1·971	1·929	1·901	1·911	1·945	1·984	2·005
	11	2·061	2·131	2·222	2·262	2·302	2·383	2·439	2·508	2·548	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	2·718	2·688	2·640	2·408
	13	2·610	2·531	2·515	2·428	2·375	2·334	2·292	2·254	2·232	2·202	2·207	2·192	2·348
	14	2·200	2·234	2·315	2·313	2·345	2·391	2·443	2·481	2·521	2·553	2·603	2·640	2·420
	15	2·663	2·681	2·707	2·680	2·663	2·661	2·666	2·656	2·645	2·623	2·621	2·614	2·657
	16	2·616	2·624	2·650	2·622	2·623	2·625	2·661	2·678	2·683	2·680	2·657	2·653	2·648
	17	2·664	2·684	2·703	2·614	2·571	2·562	2·572	2·567	2·546	2·554	2·554	2·538	2·594
	18	2·562	2·571	2·597	2·570	2·558	2·596	2·629	2·649	2·663	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	2·766	2·796	2·780	2·645
	20	2·796	2·821	2·827	2·795	2·756	2·764	2·761	2·779	2·769	2·780	2·848	2·864	2·797
	21	2·919	3·025	3·076	3·079	3·103	3·146	3·188	3·232	3·267	3·292	3·333	3·358	3·168
	22	3·368	3·402	3·417	3·370	3·328	3·279	3·258	3·220	3·130	3·016	2·949	2·858	3·216
	23	2·806	2·736	2·686	2·575	2·481	2·409	2·336	2·307	2·273	2·298	2·352	2·402	2·472
	24	2·478	2·535	2·587	2·609	2·650	2·683	2·709	2·750	2·777	—	—	—	—
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	—	—	2·699
	26	—	—	—	—	—	—	—	—	—	2·904	2·866	2·845	—
	27	2·822	2·812	2·793	2·734	2·705	2·721	2·714	2·708	2·729	2·705	2·721	2·709	2·739
	28	2·698	2·725	2·751	2·719	2·715	2·734	2·762	2·792	2·803	2·843	2·882	2·895	2·777
	29	2·928	2·976	3·001	2·978	2·969	2·989	2·979	2·970	2·953	2·931	2·887	2·847	2·951
	30	2·814	2·769	2·753	2·675	2·647	2·646	2·656	2·652	2·653	2·643	2·682	2·649	2·687
	31	2·622	2·605	2·601	2·586	2·651	2·709	2·756	2·782	2·774	2·764	2·737	2·714	2·692
Hourly Means	2·610	2·621	2·629	2·590	2·569	2·574	2·581	2·585	2·581	2·607	2·613	2·602	2·597	

<sup>a</sup> Christmas Day.

STANDARD THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
JANUARY.	1	5.7	8.0	14.8	19.2	21.4	20.4	20.0	20.0	19.4	18.6	18.0	15.0	16.7
	2	13.8	12.2	19.7	24.2	23.3	20.5	17.4	14.7	10.4	—	—	—	14.0
	3	—	—	—	—	—	—	—	—	—	5.4	3.8	2.0	—
	4	0.8	-0.4	8.6	12.0	12.8	11.9	9.8	10.8	10.4	9.0	6.5	5.0	8.1
	5	1.6	3.6	8.6	20.0	23.6	22.0	23.6	28.1	27.6	28.5	31.2	33.2	21.0
	6	34.4	34.8	36.5	38.0	37.2	37.5	36.4	36.8	36.5	36.6	37.8	38.4	36.7
	7	39.6	39.8	40.5	42.0	41.2	39.2	38.0	37.0	33.4	28.2	26.4	24.4	35.8
	8	20.8	19.2	21.6	24.2	26.5	26.2	24.8	24.0	22.6	20.5	18.8	18.0	22.3
	9	19.6	20.2	21.6	24.4	26.2	26.2	25.4	26.8	27.0	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	29.0	29.6	29.4	25.5
	11	29.7	30.2	31.6	32.8	32.8	32.8	31.0	30.6	30.2	29.8	28.8	25.6	30.5
	12	28.6	29.8	31.6	33.4	33.7	31.6	30.2	31.4	29.0	26.8	25.4	23.6	29.7
	13	19.2	18.8	22.5	26.6	28.7	28.1	27.0	26.8	27.8	27.5	27.4	27.0	25.6
	14	25.7	25.2	25.5	26.2	26.9	27.9	29.6	30.4	31.5	31.8	33.3	34.0	29.0
	15	33.4	33.6	34.4	35.8	36.6	37.0	34.4	28.4	23.4	23.2	29.2	31.4	31.7
	16	33.1	32.6	36.8	39.8	38.0	37.4	37.4	39.5	37.7	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	10.2	6.8	5.4	29.6
	18	4.2	1.0	1.0	2.8	5.2	6.2	4.8	4.8	4.7	4.6	4.4	3.2	3.9
	19	2.1	2.2	7.2	12.0	15.4	14.3	13.2	13.2	13.1	12.2	11.5	12.4	10.7
	20	13.8	11.6	19.8	25.8	26.8	27.1	28.2	28.4	29.9	29.6	30.4	30.6	25.2
	21	30.2	30.3	30.2	30.8	31.7	30.8	30.2	29.8	29.2	28.2	27.6	27.0	29.7
	22	25.4	25.3	25.4	25.5	25.8	26.2	24.4	25.6	27.6	27.2	27.0	26.8	26.0
	23	27.5	27.8	30.0	31.2	31.7	31.3	31.0	31.0	30.6	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	29.8	26.8	28.8	29.8
	25	30.8	30.8	32.0	32.8	32.5	32.2	31.0	30.8	30.7	30.1	24.9	17.0	29.6
	26	14.5	16.6	28.8	31.8	31.9	32.7	33.8	33.2	33.8	34.6	36.5	36.8	30.4
	27	36.2	37.9	40.2	39.4	38.2	36.0	34.3	33.2	32.2	30.8	39.8	30.4	34.9
	28	29.6	29.7	31.7	35.8	35.7	34.8	29.0	24.2	22.4	21.7	23.5	24.6	28.6
	29	27.7	32.0	33.7	33.2	33.2	33.7	32.8	33.0	33.2	33.4	34.2	32.2	32.7
	30	31.0	29.5	31.2	31.2	30.0	29.8	27.2	28.1	29.1	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	31.4	25.0	21.0	28.7
Hourly Means	22.3	22.4	25.6	28.1	28.7	28.2	27.1	26.9	26.3	24.6	24.0	23.2	25.6	
FEBRUARY.	1	17.7	16.0	17.4	16.6	16.4	16.3	15.0	14.6	13.0	10.5	13.0	12.8	14.9
	2	10.2	10.3	15.4	21.0	26.0	29.6	32.2	32.6	34.7	34.8	22.0	17.0	23.8
	3	14.4	14.0	15.7	17.2	18.8	19.0	18.6	18.8	19.8	20.2	21.0	19.6	18.1
	4	19.0	19.0	20.8	25.0	28.7	30.3	28.8	25.2	22.8	23.0	19.7	19.6	23.5
	5	19.5	24.2	31.7	32.8	32.8	32.2	29.2	28.6	29.4	29.2	25.0	24.6	28.3
	6	24.1	25.3	29.6	33.8	35.4	33.5	31.4	30.7	30.2	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	21.8	18.6	16.8	27.6
	8	17.4	17.6	24.2	30.0	30.5	28.8	27.2	27.2	29.8	31.0	29.4	28.8	26.8
	9	29.1	29.8	31.2	31.8	31.8	30.4	29.2	26.5	25.8	24.6	25.4	22.0	28.1
	10	20.0	16.7	17.8	19.5	19.2	17.9	14.3	13.0	10.6	8.7	6.8	4.4	14.1
	11	1.3	1.6	6.2	11.0	11.1	10.4	7.4	7.0	5.0	4.6	3.4	2.8	6.0
	12	3.7	4.8	8.5	13.3	14.2	11.4	8.4	7.2	5.6	5.2	6.0	5.8	7.8
	13	3.5	6.0	15.1	20.0	23.0	21.8	18.8	18.0	17.8	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	3.8	2.2	3.6	12.8
	15	6.6	11.3	16.4	20.5	23.9	25.0	21.5	19.6	18.0	19.5	21.5	21.8	18.8
	16	21.6	21.9	23.8	26.3	30.9	31.1	31.4	30.4	30.8	31.4	32.2	31.2	28.6
	17	31.4	29.4	26.8	28.1	28.4	29.0	23.0	24.0	23.6	17.4	16.4	17.8	24.6
	18	17.7	19.4	26.7	29.5	30.0	29.6	29.8	31.2	30.7	30.6	30.6	30.6	28.0
	19	30.3	31.3	30.3	27.4	26.3	24.7	20.0	19.6	17.8	11.0	19.8	20.5	23.2
	20	18.2	23.0	26.8	32.2	36.2	39.3	38.0	37.5	37.6	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	31.5	32.4	30.4	31.9
	22	30.2	30.9	32.2	35.0	38.6	41.3	39.6	40.5	43.5	42.0	40.8	37.8	37.7
	23	23.2	12.7	12.6	13.3	14.5	15.4	15.1	12.8	11.4	11.8	12.5	11.4	13.9
	24	9.5	11.1	20.0	22.4	27.3	29.8	27.5	25.6	23.6	22.6	21.8	17.6	21.6
	25	23.9	26.0	30.8	34.7	36.3	38.0	36.4	35.2	33.2	28.4	25.2	19.6	30.6
	26	17.4	19.8	31.6	35.8	37.3	37.8	36.3	35.3	34.0	34.3	32.8	34.0	32.2
	27	32.7	33.7	37.7	41.4	40.6	40.6	33.0	31.6	28.7	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	26.3	26.6	27.7	33.4
Hourly Means	18.4	19.0	22.9	25.8	27.4	27.6	25.5	24.7	24.1	22.6	21.0	19.9	23.2	



STANDARD THERMOMETER.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16	
MARCH.	1	28.7	30.4	35.2	38.0	36.2	34.8	30.4	27.7	23.8	20.8	19.8	16.2	28.5
	2	12.7	12.0	16.6	21.6	25.4	26.3	24.0	19.2	18.0	16.8	18.3	17.2	19.0
	3	16.6	15.9	23.6	28.5	30.7	30.7	28.0	23.6	24.6	23.6	22.0	21.2	24.1
	4	20.8	22.2	25.3	25.6	25.2	25.7	20.1	15.4	13.0	11.0	7.2	7.6	18.2
	5	6.7	10.9	18.6	22.7	24.4	22.8	21.6	22.4	23.4	24.8	25.2	23.6	20.6
	6	24.1	25.4	26.8	27.3	28.0	27.5	25.4	24.2	23.8	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	26.6	27.0	26.6	26.1
	8	26.4	28.8	29.9	31.9	32.8	30.2	29.2	26.8	25.7	24.3	23.0	19.2	27.3
	9	10.7	20.1	25.8	31.6	35.4	36.3	33.6	30.4	27.5	25.6	23.9	21.0	26.8
	10	18.4	19.0	24.1	28.4	30.2	31.0	24.5	16.0	18.5	15.2	7.4	6.3	19.9
	11	4.8	10.2	25.5	29.0	31.6	32.4	28.6	18.4	18.3	15.3	10.0	9.4	19.5
	12	10.2	20.1	29.3	32.0	32.6	30.7	31.6	29.2	29.0	28.2	27.5	27.9	27.4
	13	25.7	26.5	30.2	32.0	28.7	28.9	29.5	29.2	30.8	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	9.0	-1.0	-4.6	22.1
	15	-5.2	6.0	15.8	22.6	23.1	22.2	20.0	17.0	17.0	17.0	16.9	15.8	15.7
	16	16.1	16.8	19.8	24.0	25.4 <sup>a</sup>	26.3	23.8	18.1	13.0	10.4	9.6	8.0	17.6
	17	6.5	13.9	22.7	26.4	28.7	32.2	27.5	12.3	10.3	7.8	6.0	5.4	16.6
	18	2.5	13.2	26.8	30.5	36.9	38.8	32.8	32.6	34.2	31.4	27.5	31.6	28.2
	19	25.8	32.1	36.2	42.0	43.1	45.8	42.0	41.8	41.8	39.3	38.2	42.6	39.2
	20	43.2	44.6	47.9	50.2	53.6	54.0	50.8	40.4	36.2	—	—	—	42.6
	21	—	—	—	—	—	—	—	—	—	28.8	29.4	32.2	—
	22	32.7	33.8	35.1	35.6	36.0	36.2	37.2	37.4	39.0	37.8	38.0	39.2	36.5
	23	38.8	39.1	37.9	38.2	36.3	41.5	38.4	37.4	36.7	39.3	37.0	34.0	37.9
	24	33.0	39.0	43.8	42.7	45.6	47.5	43.4	43.0	38.6	38.4	37.3	37.3	40.8
	25	37.3	39.1	43.6	38.3	40.2	38.0	37.4	37.5	38.9	39.6	37.8	38.6	38.8
	26	37.5	38.0	42.5	44.3	46.0	51.8	51.2	45.0	40.8	39.3	37.9	38.0	42.7
	27	38.0	37.8	40.8	40.4	40.6	40.2	39.2	39.2	39.0	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	35.6	36.0	32.2	38.2
	29	30.8	31.2	31.7	32.0	32.0	32.8	31.8	30.6	30.0	29.8	—	—	—
	30	24.9	21.7	24.4	26.2	28.3	31.8	31.2	21.5	16.6	15.4	14.2	13.7	22.5
	31	16.9	27.0	32.1	37.4	37.5	35.6	34.0	33.5	34.0	33.7	33.2	35.2	32.5
Hourly Means		21.6	25.0	30.1	32.6	33.9	34.5	32.1	28.5	27.5	25.4	23.4	22.9	28.1
APRIL.	1	36.4	38.2	41.1	44.7	46.9	46.4	43.4	39.0	36.4	33.7	32.5	32.0	39.2
	2	32.2	36.4	39.6	41.8	39.9	42.5	36.1	34.0	31.7	30.6	29.4	27.0	35.1
	3	26.7	31.8	40.0	45.7	48.4	49.2	46.2	37.6	31.7	—	—	—	38.5
	4	—	—	—	—	—	—	—	—	—	35.6	35.0	34.7	—
	5	36.4	40.1	40.0	37.8	40.7	40.8	37.8	32.2	30.5	32.2	31.9	29.2	35.8
	6	29.1	32.3	35.4	39.0	42.6	45.7	40.5	36.8	34.2	32.8	32.6	32.6	36.1
	7	33.1	35.8	38.5	41.2	42.2	43.4	41.5	33.0	32.4	30.0	27.8	30.6	35.6
	8	31.2	37.1	40.6	41.0	43.2	41.1	42.7	38.5	36.3	—	—	—	36.5
	9 <sup>b</sup>	—	—	—	—	—	—	—	—	—	30.2	29.2	27.4	—
	10	24.8	25.7	28.2	29.8	31.7	34.3	33.6	25.6	22.7	—	—	—	28.9
	11	—	—	—	—	—	—	—	—	—	29.5	29.8	31.0	—
	12	31.4	34.7	36.2	38.8	40.0	41.7	35.8	34.4	32.2	32.4	31.7	32.7	35.2
	13	33.4	34.1	38.0	42.6	43.9	45.5	40.6	39.0	37.6	34.8	31.8	31.7	37.7
	14	32.2	34.4	35.5	37.1	37.0	38.4	36.2	31.5	29.7	26.8	25.8	24.2	32.4
	15	25.1	31.9	35.4	37.6	40.2	44.8	41.7	32.8	31.2	31.5	29.0	29.8	34.2
	16	31.2	37.0	41.2	45.6	50.8	48.2	45.6	42.6	42.0	40.8	39.4	39.6	42.0
	17	40.2	46.9	52.8	56.4	55.6	57.0	50.2	50.8	45.2	—	—	—	—
	18	—	—	—	—	—	—	—	—	—	27.4	26.3	26.7	44.6
	19	30.0	34.0	40.1	49.2	52.6	50.2	43.3	36.8	33.6	33.2	31.3	30.2	38.7
	20	31.0	32.2	33.2	34.3	32.0	32.0	32.0	31.8	31.6	31.2	29.4	28.4	31.6
	21	29.0	32.9	39.7	44.8	45.3	48.0	50.0	39.6	35.2	33.4	31.7	32.2	38.5
	22	34.2	40.1	44.6	45.2	46.8	53.1	53.3	38.0	33.3	33.8	35.0	37.2	41.2
	23	36.2	43.5	47.6	52.0	49.3	51.7	51.8	47.6	46.2	43.8	45.0	44.8	46.6
	24	46.6	53.4	54.4	57.3	58.2	59.9	58.6	47.6	47.4	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	49.2	46.5	46.2	52.1
	26	45.2	51.8	54.2	56.6	57.6	61.8	55.7	54.1	49.6	41.8	34.6	32.2	49.6
	27	37.6	40.5	41.8	46.0	50.6	52.2	52.5	46.2	36.0	30.8	29.8	28.7	41.1
	28	30.8	42.7	50.3	52.7	57.6	61.4	61.1	43.5	36.8	36.4	32.2	39.2	45.4
	29	42.6	45.6	47.2	44.2	42.2	41.6	42.2	42.4	43.5	44.8	43.8	43.0	43.6
	30	43.8	47.2	50.5	53.3	52.5	53.0	49.4	46.8	45.1	43.6	41.1	38.4	47.1
Hourly Means		34.0	38.4	41.8	44.6	45.9	47.4	44.9	39.3	36.5	34.8	33.3	33.2	39.5

<sup>a</sup> Thirty minutes late.

<sup>b</sup> Good Friday.

STANDARD THERMOMETER.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16		
MAY.	1	38.4	41.0	45.1	47.4	51.3	53.3	52.1	43.2	38.2	—	—	—	41.2	
	2	—	—	—	—	—	—	—	—	—	27.0	28.2	29.4		
	3	30.6	32.3	33.2	35.4	36.8	40.3	35.8	32.0	30.0	28.0	28.0	27.5		32.5
	4	31.1	36.9	41.7	46.0	49.9	49.7	46.7	38.8	35.0	31.0	28.6	30.5		38.8
	5	33.2	40.5	43.4	44.3	47.8	48.4	42.7	40.0	38.0	37.2	37.2	36.7		40.8
	6	36.9	40.6	44.3	47.1	49.4	47.8	47.6	43.2	42.1	37.7	36.7	37.6		42.6
	7	39.4	43.4	49.0	49.6	54.0	51.0	47.6	41.2	36.4	34.6	32.3	29.7		42.3
	8	34.0	44.1	48.9	52.6	56.4	58.8	59.0	44.2	38.7	—	—	—		47.7
	9	—	—	—	—	—	—	—	—	—	48.2	44.2	43.7		
	10	44.6	49.2	48.9	48.2	48.8	49.3	50.0	49.0	48.4	47.8	47.4	47.9		48.3
	11	48.0	52.4	58.7	62.4	63.0	65.6	59.1	54.2	52.0	50.0	48.0	47.0		55.0
	12	47.6	49.7	55.0	56.5	54.6	53.6	49.8	46.8	44.8	43.2	40.8	41.2		48.6
	13	41.7	44.4	48.0	49.7	49.0	51.3	50.3	45.5	44.4	44.4	42.6	40.0		45.9
	14	40.7	45.9	50.6	52.8	53.8	54.6	50.2	43.0	39.0	36.2	33.2	33.0		44.4
	15	34.4	43.3	47.1	55.7	60.6	60.0	58.4	46.7	42.0	—	—	—		50.3
	16	—	—	—	—	—	—	—	—	—	48.9	53.8	52.4		
	17	53.6	63.3	63.0	63.8	63.7	63.8	61.5	53.8	48.0	45.7	42.8	42.2		55.4
	18	45.0	50.8	56.1	59.3	63.4	64.6	64.0	54.6	50.6	48.5	45.3	42.6		53.7
	19	45.3	50.4	51.3	53.0	57.8	62.4	65.8	47.6	42.2	37.6	35.8	35.2		48.7
	20	40.1	48.4	53.2	60.3	67.8	71.2	66.1	54.5	49.9	49.5	48.0	47.2		54.7
	21	51.6	53.7	61.7	58.2	60.3	67.8	67.8	62.0	54.2	57.8	56.0	55.3		58.9
	22	55.1	59.8	63.8	61.0	62.8	67.0	61.8	59.0	55.6	—	—	—		60.2
	23	—	—	—	—	—	—	—	—	—	59.0	59.4	58.0		
	24	59.5	61.9	66.7	71.8	77.1	66.7	70.0	62.0	57.7	55.4	53.8	53.0		63.0
	25	56.2	62.2	67.0	67.0	70.1	70.1	61.8	61.4	55.2	55.0	54.7	53.1		61.1
	26	55.4	59.5	64.8	69.0	68.3	65.8	63.5	58.7	54.7	54.0	53.2	49.8		59.7
	27	53.1	59.6	62.6	64.8	68.4	71.6	71.2	60.4	55.2	50.7	48.0	46.5		59.3
	28	52.1	61.3	66.2	73.1	74.2	75.8	75.0	68.3	63.0	58.5	57.4	50.7		64.6
	29	53.2	57.8	61.2	60.2	64.0	69.0	70.8	51.6	45.4	—	—	—		55.1
	30	—	—	—	—	—	—	—	—	—	39.8	42.0	46.4		
	31	48.2	54.1	58.5	64.0	68.8	64.0	66.6	59.0	54.4	52.4	54.7	47.8		57.7
Hourly Means		45.0	50.2	54.2	56.7	59.3	60.1	58.3	50.8	46.7	45.3	44.3	43.2	51.2	
JUNE.	1	53.4	61.3	64.6	66.8	72.3	71.0	74.5	63.8	55.8	50.8	48.6	50.6	61.1	
	2	55.2	64.8	70.7	75.2	74.7	78.5	72.8	64.2	58.8	56.5	51.8	50.6	64.5	
	3	53.0	56.8	58.7	60.4	65.1	67.3	68.7	53.8	50.2	47.6	50.4	51.6	57.0	
	4	53.3	62.0	68.8	72.0	78.2	79.5	76.2	66.8	61.8	62.6	66.6	65.7	67.8	
	5	64.6	70.8	77.1	78.0	71.8	81.0	82.5	67.7	66.5	—	—	—	69.7	
	6	—	—	—	—	—	—	—	—	—	59.2	58.5	59.2		
	7	65.0	69.4	72.8	78.8	82.2	81.8	80.4	67.4	63.5	63.6	64.2	60.5	70.8	
	8	63.8	71.5	75.1	80.4	85.6	82.5	77.7	73.4	72.8	67.8	66.0	63.6	73.3	
	9	67.0	67.9	72.6	75.8	78.0	79.4	77.6	64.6	57.3	54.2	54.4	51.8	66.7	
	10	57.6	63.0	72.0	77.0	76.0	81.8	87.2	73.6	65.5	64.6	64.2	69.8	71.0	
	11	67.9	71.3	71.8	70.3	76.5	78.8	72.3	66.8	63.4	58.4	52.5	47.0	66.4	
	12	50.3	56.1	58.8	59.0	57.8	60.7	56.7	54.7	54.7	—	—	—	56.4	
	13	—	—	—	—	—	—	—	—	—	57.5	55.2	55.2		
	14	57.8	63.0	62.7	67.6	66.2	66.2	67.8	60.4	55.8	54.2	53.2	52.8	60.6	
	15	54.0	55.8	61.0	63.4	63.0	67.6	65.6	57.0	52.8	51.5	49.5	47.4	57.4	
	16	51.8	59.1	64.6	65.8	70.2	72.2	73.8	58.2	55.1	54.6	51.8	46.2	60.3	
	17	52.1	61.7	65.3	65.7	65.4	62.6	60.0	57.8	56.4	55.3	54.8	55.9	59.4	
	18	56.7	60.9	65.0	66.2	67.2	63.9	63.4	58.2	54.4	50.8	53.6	54.6	59.6	
	19	53.8	59.1	63.4	67.2	70.0	76.0	76.2	60.8	60.8	—	—	—	62.8	
	20	—	—	—	—	—	—	—	—	—	56.4	55.2	55.0		
	21	57.2	60.0	65.0	67.3	74.2	77.7	67.0	66.8	64.5	62.8	61.7	61.2	65.4	
	22	63.4	68.8	74.2	72.8	77.5	80.0	74.2	72.7	68.7	67.3	67.0	66.8	71.1	
	23	67.2	71.2	74.1	77.3	80.0	78.8	72.0	70.2	66.0	63.0	64.2	65.5	70.8	
	24	66.8	67.2	71.8	72.0	75.5	75.5	70.0	64.7	62.6	61.5	60.4	59.8	67.3	
	25	60.6	63.2	67.7	72.1	74.4	74.2	75.8	62.5	60.5	62.6	65.0	65.5	67.0	
	26	65.6	70.1	71.4	71.4	76.2	79.8	81.6	70.0	67.4	—	—	—	70.3	
	27	—	—	—	—	—	—	—	—	—	65.8	62.8	61.6		
	28	62.6	68.4	72.0	77.0	78.6	86.0	84.7	73.1	69.7	65.4	65.2	64.0	72.2	
	29	67.2	74.3	76.5	83.1	91.5	91.7	88.6	79.0	77.4	75.8	74.0	68.8	79.0	
	30	68.4	64.1	72.3	77.7	85.3	76.5	73.0	71.0	66.0	68.9	67.2	64.5	71.2	
Hourly Means		59.9	64.7	68.8	71.6	74.4	75.8	73.9	65.3	61.9	59.9	59.6	58.3	66.1	



STANDARD THERMOMETER.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time.		18	20	22	0	2	4	6	8	10	12	14	16		
JULY.	1	63.8	67.5	70.2	75.3	80.2	81.6	78.6	66.7	61.8	60.6	57.4	54.5	68.2	
	2	57.2	61.3	65.5	69.3	70.0	71.6	69.4	59.6	55.6	54.2	46.6	43.6	60.3	
	3	50.4	59.8	62.2	66.9	69.6	73.2	75.2	56.7	50.0	—	—	—	61.4	
	4	—	—	—	—	—	—	—	—	—	—	61.0	56.8	55.0	68.1
	5	59.0	64.0	69.3	76.1	77.7	80.2	81.6	71.4	63.2	56.4	59.4	58.7	61.1	
	6	58.7	65.0	60.7	68.3	65.2	68.3	73.6	60.5	56.7	55.1	52.6	49.0	61.5	
	7	51.6	58.8	63.2	69.0	72.8	74.6	68.2	62.1	57.8	53.8	53.4	52.8	64.9	
	8	55.6	62.0	65.5	68.7	71.1	74.9	79.6	67.4	63.2	58.8	57.4	54.4	65.0	
	9	58.2	60.2	68.4	74.1	74.2	68.8	66.0	63.4	64.8	64.8	59.7	57.8	61.2	
	10	57.6	61.3	65.4	67.2	68.8	70.7	69.6	60.4	55.2	—	—	—	65.8	
	11	—	—	—	—	—	—	—	—	—	54.2	52.8	51.8		70.0
	12	54.0	64.6	69.2	73.0	77.6	75.7	78.4	61.2	55.6	59.4	60.4	60.6	73.1	
	13	63.5	70.0	72.4	74.2	80.8	74.8	74.8	69.8	66.4	65.0	65.5	62.7	64.9	
	14	64.2	71.8	75.6	77.2	81.4	86.5	77.8	74.8	70.2	68.3	65.2	63.8	61.1	
	15	66.2	69.4	74.6	77.2	61.2	66.6	66.2	62.0	60.2	59.2	59.2	57.3	63.6	
	16	55.5	58.7	62.8	64.5	69.3	72.4	75.6	60.2	57.6	52.8	52.8	51.4		68.9
	17	50.6	63.4	66.8	70.9	74.9	73.6	67.6	62.3	58.0	—	—	—	67.8	
	18	—	—	—	—	—	—	—	—	—	59.7	58.0	57.9	71.6	
	19	61.0	68.7	73.9	75.4	79.5	81.3	82.3	65.4	62.4	59.9	59.0	57.8	76.0	
	20	60.9	68.4	73.4	76.7	78.9	78.3	82.6	66.8	58.4	55.8	57.3	56.4	74.4	
	21	59.0	68.8	75.1	80.3	83.3	81.6	82.3	72.0	66.4	64.5	63.8	62.0	69.3	
	22	65.5	72.9	78.0	84.0	86.6	84.5	82.0	74.6	71.5	68.4	74.0	70.6		63.6
	23	69.2	71.2	74.8	79.1	83.8	81.7	82.1	75.2	71.8	69.0	68.0	67.4	63.4	
	24	68.2	74.2	77.7	83.8	79.7	71.2	72.4	71.4	69.4	—	—	—	50.8	
	25	—	—	—	—	—	—	—	—	—	56.0	54.4	53.4	63.6	
	26	56.3	62.7	66.2	67.2	71.1	76.7	75.0	67.0	61.6	57.2	51.5	50.8	63.4	
	27	55.2	62.3	68.4	67.9	69.3	69.0	68.4	64.6	62.2	60.3	55.8	57.4	57.9	
	28	55.9	59.0	61.5	64.7	68.0	68.8	67.3	56.4	50.8	48.4	48.7	45.2	62.7	
	29	47.7	61.0	63.6	67.4	71.6	75.2	71.0	62.0	60.8	59.5	57.8	54.9	58.6	
	30	57.2	59.4	60.0	58.5	59.3	58.6	58.6	58.6	58.8	58.9	57.8	58.2	60.0	
	31	58.6	59.4	61.9	62.8	63.6	63.9	62.8	60.3	61.0	—	—	—		
	32	—	—	—	—	—	—	—	—	—	57.8	55.0	52.8		
Hourly Means		58.6	64.7	68.4	71.8	73.7	74.2	73.7	64.9	61.2	59.3	57.9	56.4	65.4	
AUGUST.	2	54.2	63.8	69.2	73.0	77.8	81.2	81.0	65.0	61.3	58.8	56.5	55.1	63.1	
	3	57.2	65.9	71.5	72.0	76.4	76.2	72.8	68.2	66.4	66.4	65.0	64.4	68.5	
	4	64.4	67.6	70.4	71.6	73.2	71.8	70.1	67.4	65.4	63.7	63.4	62.0	67.6	
	5	62.3	67.5	70.7	71.6	74.8	72.9	72.8	63.4	59.2	58.6	57.9	56.4	65.7	
	6	57.2	64.3	68.8	70.8	72.0	73.8	75.0	61.0	57.8	55.4	54.4	51.3	63.5	
	7	51.0	61.8	66.6	71.4	75.7	76.0	73.2	61.2	57.6	—	—	—	65.6	
	8	—	—	—	—	—	—	—	—	—	66.1	64.6	62.2		65.3
	9	61.4	66.7	69.5	72.5	72.5	75.8	77.0	66.6	58.1	55.7	54.3	53.2	63.3	
	10	55.5	63.3	69.4	72.5	72.8	61.3	61.2	61.5	61.0	61.2	60.2	60.3	58.9	
	11	61.4	63.4	62.2	62.2	62.9	61.9	62.0	60.2	58.0	55.2	49.2	47.8	61.0	
	12	47.7	57.2	63.1	68.1	71.5	73.4	72.6	64.5	56.4	54.5	51.2	51.6	65.1	
	13	52.3	62.6	67.3	70.8	74.3	73.8	70.2	64.4	64.4	62.4	60.3	58.4	62.4	
	14	58.2	60.3	63.0	67.4	70.0	70.4	67.9	60.1	57.6	—	—	—		
	15	—	—	—	—	—	—	—	—	—	59.8	57.8	57.0	68.5	
	16	57.6	66.8	71.6	77.6	78.8	80.0	73.2	67.5	64.8	63.0	60.6	60.4	70.5	
	17	61.2	69.4	73.6	78.2	80.8	80.8	80.8	70.7	65.6	62.8	61.5	60.8	70.7	
	18	62.0	71.4	75.2	81.6	83.8	75.2	69.0	70.0	66.4	66.2	64.3	63.7	64.9	
	19	63.2	66.4	70.2	73.0	76.4	75.7	72.2	63.7	58.5	55.1	53.2	51.0	65.3	
	20	52.3	62.3	69.4	72.9	75.5	77.0	79.2	62.4	60.2	58.4	58.0	56.0	65.3	
	21	55.4	65.7	71.5	74.8	76.8	73.5	70.3	66.2	67.6	—	—	—		
	22	—	—	—	—	—	—	—	—	—	56.4	53.4	51.9	59.2	
	23	51.2	57.3	62.4	65.5	68.6	71.1	72.9	55.0	55.0	53.8	47.2	50.8	59.9	
	24	50.9	58.9	65.4	69.1	71.9	74.0	68.4	56.4	52.2	50.0	50.9	50.3	62.7	
	25	51.6	60.9	67.3	71.2	73.9	73.8	70.4	60.2	56.9	55.2	55.3	56.4	62.4	
	26	57.2	65.6	67.6	67.8	67.6	64.5	62.0	60.4	59.5	59.0	59.0	59.0	64.0	
	27	59.3	62.0	65.2	68.3	72.1	68.5	65.5	61.2	62.1	62.8	60.8	60.4	66.1	
	28	62.8	65.4	68.3	69.8	69.7	69.7	68.5	68.5	69.0	—	—	—		
	29	—	—	—	—	—	—	—	—	—	60.0	60.4	61.4	63.6	
	30	60.9	64.9	68.9	70.0	70.3	70.2	67.2	61.8	57.0	57.0	56.8	58.0	63.7	
	31	57.6	62.4	65.6	70.8	72.0	76.6	74.2	62.8	57.0	56.4	55.0	54.6		
	Hourly Means		57.2	64.0	68.2	71.3	73.5	73.0	71.1	63.5	60.6	59.0	57.4	56.7	64.6

STANDARD THERMOMETER.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16	
SEPTEMBER.	1	55.4	63.4	68.2	72.0	75.3	75.7	69.7	69.1	70.0	66.6	63.8	62.8	67.7
	2	61.8	67.2	70.2	76.7	76.7	80.2	76.0	69.0	69.0	66.8	65.0	63.2	70.2
	3	64.4	69.4	68.4	72.7	73.7	71.5	67.4	67.2	68.0	68.4	67.6	65.6	68.7
	4	64.6	66.8	69.8	71.2	73.1	76.6	74.6	63.7	62.2	—	—	—	67.5
	5	—	—	—	—	—	—	—	—	—	61.8	62.0	63.4	68.9
	6	65.6	68.5	71.9	74.6	75.5	71.2	68.8	68.4	66.8	66.4	64.2	65.3	69.8
	7	64.2	70.1	72.0	74.8	75.8	73.0	71.4	70.5	69.8	67.8	64.8	63.9	69.7
	8	64.8	70.0	70.1	74.2	77.4	76.4	72.0	69.0	66.6	66.8	65.0	64.2	70.3
	9	64.2	69.8	73.1	75.3	76.3	76.9	73.5	70.4	69.5	67.0	65.2	62.7	68.8
	10	61.8	69.8	73.3	75.4	76.6	77.9	74.2	69.8	66.1	62.2	61.5	56.9	57.0
	11	53.4	58.8	59.4	59.0	64.6	64.0	60.6	54.1	51.6	—	—	—	56.2
	12	—	—	—	—	—	—	—	—	—	54.7	52.8	50.6	56.2
	13	48.8	54.8	62.0	66.4	68.9	69.3	62.8	58.4	50.8	45.0	43.7	43.7	56.2
	14	42.8	54.7	59.3	65.4	68.2	65.6	62.5	52.6	48.8	46.7	47.0	44.8	54.9
	15	45.4	55.8	63.2	67.1	68.8	69.7	63.5	63.8	63.5	59.7	57.4	60.4	61.5
	16	60.7	64.7	68.4	73.0	72.5	68.5	65.6	62.4	59.2	57.6	57.6	55.8	63.8
	17	54.2	61.6	66.5	70.6	72.5	72.4	64.2	58.3	56.2	55.2	53.4	51.4	61.4
	18	49.8	49.1	51.2	54.6	56.2	57.4	52.6	48.2	50.0	—	—	—	54.2
	19	—	—	—	—	—	—	—	—	—	61.4	61.1	58.2	60.5
	20	54.6	63.9	66.6	68.8	68.3	67.8	60.4	57.1	53.4	52.6	54.0	58.0	63.7
	21	56.6	58.7	61.8	67.1	69.5	65.9	64.0	64.2	62.6	64.2	65.1	64.7	66.3
	22	64.6	65.5	68.6	69.7	71.2	69.3	66.3	65.6	65.8	63.4	63.6	62.4	62.2
	23	62.4	63.5	67.0	66.7	67.5	67.0	64.1	63.5	58.5	56.9	56.7	53.2	60.6
	24	48.3	56.7	61.8	65.2	68.0	66.9	63.4	61.2	60.4	59.7	57.6	57.8	55.0
	25	57.0	57.4	59.6	61.5	62.0	65.0	60.0	57.8	56.6	—	—	—	50.1
	26	—	—	—	—	—	—	—	—	—	40.6	41.0	42.0	50.3
	27	37.6	48.0	52.2	53.4	53.7	52.2	50.6	51.2	51.3	50.4	50.3	50.2	46.1
	28	49.1	49.4	50.8	52.4	53.0	52.2	50.8	50.2	49.6	49.0	48.8	48.8	—
	29	48.0	48.9	50.9	51.2	50.8	49.2	47.7	47.0	45.8	—	44.4	44.4	—
	30	44.6	46.4	51.1	53.2	54.9	54.5	48.6	44.9	42.6	40.5	36.3	35.8	—
Hourly Means		55.6	60.5	63.7	66.6	68.1	67.5	63.7	60.7	59.0	58.1	56.5	55.8	61.3
OCTOBER.	1	35.4	41.6	43.9	47.2	49.2	50.5	44.2	40.4	38.0	37.4	35.8	37.0	41.7
	2	37.8	41.4	47.7	50.0	50.6	49.2	46.4	43.5	40.8	—	—	—	43.3
	3	—	—	—	—	—	—	—	—	—	38.8	37.4	35.8	44.9
	4	36.2	44.8	51.1	53.2	54.6	55.5	45.2	38.8	40.0	40.7	40.4	38.2	46.5
	5	37.8	45.8	51.5	54.0	56.0	56.0	44.3	41.6	44.6	43.6	42.7	40.6	46.6
	6	38.5	46.1	52.5	55.5	57.4	56.3	45.8	40.0	38.4	39.6	43.2	46.4	48.4
	7	47.9	49.7	51.7	50.5	53.7	57.5	52.6	48.2	45.2	45.0	41.7	37.0	45.8
	8	35.5	44.0	50.5	55.5	58.8	58.4	52.6	43.6	37.9	38.7	37.4	37.0	46.8
	9	40.7	45.6	51.9	54.8	50.6	53.1	47.9	41.5	40.6	—	—	—	51.8
	10	—	—	—	—	—	—	—	—	—	46.0	44.4	44.4	44.0
	11	44.3	47.2	49.8	52.7	54.6	56.7	57.0	57.5	56.2	51.2	46.6	47.2	41.8
	12	44.8	46.3	47.9	48.2	49.4	47.2	44.8	44.0	42.0	36.3	37.2	40.2	48.1
	13	38.8	42.5	47.4	49.7	50.4	49.3	40.4	39.4	36.0	35.0	36.0	36.1	47.6
	14	36.2	39.4	45.8	51.2	54.1	56.6	51.2	44.8	49.8	49.7	49.6	49.2	37.3
	15	49.2	51.9	56.8	55.2	52.8	50.5	46.8	45.2	42.2	41.2	40.0	39.4	35.7
	16	38.1	39.0	40.2	41.0	40.6	39.9	38.2	38.2	37.8	—	—	—	39.6
	17	—	—	—	—	—	—	—	—	—	32.4	31.6	30.7	35.7
	18	28.4	34.0	40.8	44.8	44.5	46.3	35.4	32.8	30.3	30.2	30.5	30.6	40.4
	19	30.6	34.5	40.8	44.5	45.0	43.4	43.0	42.9	40.8	39.4	39.9	39.5	39.6
	20	39.1	39.7	38.7	40.6	42.5	42.6	40.6	39.8	36.9	36.8	38.6	39.2	38.9
	21	37.4	37.9	40.2	41.9	43.6	42.0	39.8	38.8	37.3	36.9	35.5	35.0	35.5
	22	34.6	37.8	42.0	40.5	40.6	39.8	36.0	31.8	30.9	28.9	32.0	31.2	32.3
	23	30.8	33.5	37.2	39.1	37.8	35.0	34.2	34.1	34.6	—	—	—	31.3
	24	—	—	—	—	—	—	—	—	—	26.3	23.0	21.8	38.4
	25	21.0	25.2	30.0	33.7	34.0	34.6	31.7	31.7	33.0	33.3	33.4	34.2	32.0
	26	34.3	37.0	40.7	44.7	47.1	46.4	40.7	37.3	37.2	34.5	31.8	28.8	36.4
	27	25.7	32.1	36.5	39.6	42.7	41.3	30.8	28.2	28.3	26.0	26.1	26.6	44.7
	28	27.8	32.4	39.6	43.0	42.3	40.4	38.2	38.3	35.2	33.0	31.8	35.0	—
	29	36.6	38.8	46.6	50.3	54.5	51.8	46.0	44.7	40.5	39.0	43.1	44.4	—
	30	45.2	46.7	53.4	57.7	56.0	58.6	50.8	46.4	44.6	—	—	—	50.9
	31	—	—	—	—	—	—	—	—	—	50.9	51.2	48.7	—
Hourly Means		36.6	40.6	45.2	47.7	48.6	48.4	43.3	40.5	39.2	38.1	37.7	37.5	41.9

STANDARD THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
NOVEMBER.	1	48.2	53.9	58.0	63.6	61.2	59.0	59.6	53.4	49.3	49.2	48.6	45.6	54.1
	2	47.7	48.4	51.4	51.2	50.4	49.4	48.2	45.5	44.8	48.8	45.0	38.4	47.4
	3	42.4	45.5	48.7	47.5	46.5	43.7	41.3	41.1	40.4	39.7	38.8	37.5	42.8
	4	35.1	36.0	38.5	40.1	41.4	39.4	37.8	36.5	31.8	32.5	35.2	36.3	36.7
	5	37.2	37.6	40.0	41.7	41.1	39.7	37.6	36.6	35.7	34.3	34.0	32.9	37.4
	6	34.3	34.8	34.8	35.5	35.8	34.4	33.1	32.2	32.1	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	37.4	39.0	39.7	35.4
	8	39.0	38.7	43.0	44.6	45.5	41.5	39.3	37.5	36.7	33.0	29.4	28.8	38.1
	9	30.5	32.8	37.0	39.3	38.7	38.6	38.7	39.2	39.8	38.5	38.0	38.0	37.4
	10	37.6	37.3	37.5	38.5	38.9	39.0	40.2	40.4	39.8	40.2	39.9	38.7	39.0
	11	37.8	37.2	38.4	40.0	40.6	40.8	41.6	43.8	45.1	46.4	47.7	50.2	42.5
	12	47.1	46.1	45.6	47.0	43.8	42.0	39.2	37.7	37.4	37.2	36.3	38.9	41.5
	13	38.0	37.8	40.6	42.9	41.5	40.2	37.5	37.0	35.6	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	33.5	35.0	33.8	37.8
	15	31.7	30.8	31.3	32.0	32.7	31.3	29.7	27.8	28.4	28.8	29.2	30.0	30.3
	16	29.3	29.3	33.7	37.6	40.1	39.4	37.8	33.0	34.0	34.2	33.2	32.2	34.5
	17	31.6	33.0	35.2	35.6	35.0	33.2	28.4	29.0	28.8	29.2	30.0	28.8	31.5
	18	26.4	28.7	31.6	33.3	34.0	33.5	28.5	25.8	25.0	25.0	26.2	27.8	28.8
	19	28.9	29.7	30.8	31.2	30.7	30.5	30.5	31.0	30.8	30.6	30.2	30.2	30.4
	20	30.2	30.9	32.8	35.3	36.1	35.9	34.7	34.4	34.6	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	39.3	40.1	41.4	35.5
	22	42.2	44.0	46.7	50.0	48.0	44.8	45.4	42.2	38.8	39.0	38.1	37.5	43.1
	23	37.2	36.6	37.7	37.3	36.7	36.3	36.0	36.6	35.1	34.6	31.4	26.9	35.2
	24	30.6	31.5	36.6	39.8	41.5	38.5	34.8	32.5	32.0	30.6	30.6	29.4	34.0
	25	28.7	30.0	30.8	30.8	30.7	28.2	28.5	27.6	27.7	26.6	25.0	23.8	28.2
	26	24.5	23.9	24.2	25.5	25.7	24.0	22.9	21.0	20.5	20.8	20.6	17.6	22.6
	27	16.6	16.6	23.3	26.4	30.0	29.3	26.8	25.0	26.4	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	26.2	24.2	21.2	24.3
	29	20.0	18.4	19.8	22.7	24.5	24.0	14.0	9.0	15.4	18.8	20.3	20.1	18.9
	30	20.3	18.6	28.5	32.6	33.3	31.6	32.8	32.7	30.6	31.0	32.6	33.6	29.9
Hourly Means	33.6	34.2	36.8	38.5	38.6	37.2	35.6	34.2	33.7	34.1	33.8	33.1	35.3	
DECEMBER.	1	32.5	31.2	33.8	37.7	38.8	37.7	34.6	33.5	31.9	31.6	32.8	31.4	34.0
	2	23.8	27.2	36.6	38.7	39.4	38.5	36.8	36.1	36.8	35.7	36.2	37.7	35.3
	3	37.8	36.8	38.8	39.4	39.9	40.0	39.8	40.4	40.8	41.4	41.4	41.5	39.8
	4	39.7	38.4	37.4	37.0	36.0	35.0	33.8	33.2	33.0	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	34.8	34.8	34.7	35.7
	6	34.2	33.4	33.5	32.4	32.0	31.2	30.1	27.2	25.4	23.7	27.0	27.4	29.8
	7	27.4	27.5	28.8	31.0	32.2	32.1	31.0	32.7	31.8	32.2	33.4	32.7	31.1
	8	33.2	33.4	36.9	39.7	39.6	38.5	38.8	39.4	40.0	40.4	41.5	41.6	39.4
	9	41.2	41.3	43.0	43.4	43.4	43.8	42.0	43.0	38.3	38.9	35.4	37.6	40.9
	10	39.4	40.4	40.8	40.6	42.2	42.2	42.1	42.2	42.4	42.2	41.3	39.5	41.3
	11	37.3	36.6	37.0	37.8	38.6	39.2	38.7	38.8	37.6	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	32.8	34.0	35.8	37.0
	13	35.8	36.1	37.5	39.0	38.8	38.5	38.7	39.8	40.8	41.0	40.2	40.0	38.9
	14	40.6	40.8	41.8	43.3	46.0	45.0	43.6	42.1	39.0	36.4	34.3	31.7	40.4
	15	32.8	34.2	36.3	38.1	37.0	36.2	34.6	32.8	32.8	33.1	33.3	32.0	34.4
	16	29.1	27.6	26.4	26.3	26.0	24.0	22.5	19.2	18.3	18.0	17.6	17.2	22.7
	17	16.5	14.6	14.8	15.8	19.4	18.2	16.2	13.9	11.5	10.8	11.6	12.2	14.6
	18	12.4	13.7	16.7	19.7	21.7	20.6	18.2	15.8	15.6	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	18.0	16.8	15.0	17.0
	20	13.5	11.2	12.0	15.8	18.0	17.9	17.5	17.7	17.8	17.7	16.1	13.7	15.7
	21	8.7	3.9	5.6	10.4	13.9	13.6	11.0	10.0	8.9	8.7	9.5	7.5	9.3
	22	6.8	6.6	11.7	13.8	14.6	19.6	21.4	22.7	23.0	25.0	24.8	26.0	18.0
	23	27.6	30.2	32.2	33.5	35.0	36.4	37.0	37.8	37.2	36.5	33.0	28.0	33.7
	24	24.8	23.9	25.3	27.2	28.2	27.1	26.2	26.8	27.0	—	—	—	—
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—
	26	—	—	—	—	—	—	—	—	—	16.7	16.5	18.7	24.0
	27	20.5	22.1	25.3	27.9	28.6	28.6	28.4	29.4	29.5	28.5	27.8	28.0	27.1
	28	27.9	27.2	31.2	31.9	34.0	33.6	33.4	31.9	30.7	29.7	29.8	29.3	30.9
	29	26.9	24.8	30.8	32.8	33.6	32.3	30.6	28.9	28.0	25.6	26.4	27.0	29.0
	30	28.7	30.0	31.7	34.1	35.4	33.0	33.1	33.5	33.4	32.0	31.6	30.0	32.2
	31	28.9	29.0	30.0	26.5	24.8	24.1	21.7	20.6	18.2	21.5	21.6	22.4	24.1
Hourly Means	28.0	27.8	29.8	31.3	32.2	31.8	30.8	30.4	29.6	29.0	28.8	28.4	29.8	

<sup>a</sup> Christmas Day.

WET THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
JANUARY.	1	5.7	8.0	14.2	18.1	19.9	20.1	20.0	20.0	19.4	18.1	17.6	15.0	16.4
	2	13.8	12.2	19.6	22.9	21.9	18.4	15.3	13.6	9.9	—	—	—	13.1
	3	—	—	—	—	—	—	—	—	—	5.0	3.2	1.5	—
	4	0.6	-0.4	7.8 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	—	—	—	—
	9	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	—	—	—	—
	11	—	—	—	—	—	—	—	—	—	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	—	—	—	—
	15	—	—	—	—	—	—	—	—	—	—	—	—	—
	16	—	—	—	—	—	—	—	—	—	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	—	—	—	—
	18	—	—	—	—	—	—	—	—	—	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	—	—	—	—
	22	—	—	—	—	24.1	25.3	23.6	25.3	26.7	26.4	26.2	26.0	—
	23	26.6	27.0	28.5	30.0	30.8	30.1	29.9	29.8	29.8	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	29.1	26.2	28.1	28.8
	25	29.5	29.3	30.0	31.0	31.0	31.9	29.1	29.8	29.4	28.5	24.2	16.8	28.4
	26	14.2	16.6	28.7	30.4	30.1	31.1	32.3	32.5	33.6	34.3	36.0	34.9	29.6
	27	35.8	36.7	37.6	35.6	35.0	33.1	31.4	30.4	29.8	28.7	27.8	28.5	32.5
	28	29.1	28.2	30.8	32.3	32.9	32.5	28.3	23.7	22.1	21.7	23.4	24.1	27.4
	29	27.4	30.8	32.3	32.4	32.5	32.6	32.5	32.4	32.3	32.4	30.4	28.6	31.4
	30	27.7	26.4	27.9	28.3	27.9	26.7	23.7	24.6	26.5	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	31.3	23.4	20.4	26.2
Hourly Means <sup>b</sup>	23.3	23.9	27.7	29.0	29.1	28.5	26.9	26.3	25.9	25.5	23.6	22.0	—	
FEBRUARY.	1	16.7	15.3	16.9	15.8	14.9	15.6	13.7	12.8	11.4	9.2	11.5	11.4	13.8
	2	9.7	10.1	15.2	20.6	25.1	27.9	30.3	30.6	32.0	32.5	19.3	15.1	22.4
	3	12.7	12.5	14.2	15.2	16.6	16.7	16.5	16.7	17.3	17.7	19.0	18.1	16.1
	4	17.5	17.7	19.7	23.2	26.4	27.5	25.5	24.2	20.5	20.5	18.5	18.7	21.7
	5	18.5	22.9	28.3	29.3	29.5	28.7	28.7	28.5	28.9	28.1	25.0	24.2	26.7
	6	23.8	24.9	28.7	33.3	33.5	32.3	30.7	29.7	29.5	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	20.5	16.9	16.0	26.7
	8	16.4	16.7	22.0	26.9	28.1	26.7	25.3	26.2	27.1	28.2	29.3	28.8	25.1
	9	28.7	29.3	30.4	30.3	29.7	28.5	26.7	24.1	23.9	23.2	23.0	20.6	26.5
	10	18.1	15.0	15.9	17.5	17.2	15.6	12.3	11.0	9.0	7.4	6.2	3.6	12.4
	11	1.0	1.2	5.2	9.2	9.2	8.4	6.5	5.8	4.2	4.6	3.0	2.4	5.1
	12	3.3	4.1	7.3	11.2	11.2	10.4	7.0	6.7	4.6	4.5	5.4	5.0	6.7
	13	3.2	6.0	13.8	18.2	20.4	18.9	16.5	16.0	16.1	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	3.2	2.2	3.4	11.5
	15	6.6	10.7	14.6	18.0	20.0	20.7	18.4	17.1	15.8	17.0	19.1	19.7	16.5
	16	18.2	20.6	23.0	24.9	28.2	28.2	28.6	29.9	30.3	30.5	31.2	30.9	27.0
	17	31.0	28.7	25.5	26.2	26.6	26.4	21.3	22.0	21.5	16.5	15.4	16.6	23.1
	18	16.8	18.7	25.7	27.9	28.1	27.9	28.4	29.7	29.3	29.1	29.0	29.3	26.7
	19	29.3	29.8	29.5	25.9	24.1	22.4	17.7	17.5	16.4	10.2	17.3	18.0	21.5
	20	16.5	20.8	24.3	29.0	32.3	35.2	33.4	31.8	34.2	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	30.1	30.7	29.5	29.0
	22	30.0	29.7	30.9	33.3	36.2	36.2	35.4	36.4	37.5	37.2	36.7	32.6	34.3
	23	23.1	11.8	11.0	11.8	12.5	13.3	12.5	11.1	10.0	10.6	11.1	10.9	12.5
	24	9.5	10.1	18.1	18.0	23.7	26.0	23.9	23.8	21.3	20.4	20.5	16.5	19.3
	25	22.2	23.9	28.6	31.5	32.4	33.7	32.3	30.7	29.4	25.8	23.2	19.0	27.7
	26	17.3	19.5	29.5	31.3	34.3	35.2	33.1	32.5	31.0	32.0	31.4	32.1	29.9
	27	30.4	31.4	34.6	35.2	35.1	33.9	32.1	30.4	27.8	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	25.3	24.8	25.9	30.6
Hourly Means	17.5	18.0	21.4	23.5	24.8	24.9	23.2	22.7	22.0	20.2	19.6	18.7	21.4	

<sup>a</sup> The bulb of the wet thermometer was dried from the 4th to the 22nd for the purpose of comparing the thermometer with the standard, to obtain its index error; and another thermometer was substituted with its bulb wetted: comparisons subsequently made showed that the indications of the thermometer thus substituted were very unsatisfactory, and they are therefore omitted.

<sup>b</sup> The observations on the 4th and 22nd are omitted in the hourly means.

WET THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
MARCH.	1	26.3	28.1	31.0	32.7	32.1	30.8	27.8	25.1	22.2	19.1	17.4	14.2	25.6
	2	11.6	10.9	15.1	20.6	22.4	22.0	21.2	17.4	17.4	15.3	16.5	15.2	17.1
	3	14.9	14.1	21.4	23.7	27.5	27.2	24.1	21.6	21.8	20.5	19.8	19.1	21.3
	4	18.8	20.5	23.3	23.2	22.4	22.5	17.3	13.5	11.3	9.2	6.1	6.1	16.2
	5	5.0	8.9	16.9	20.7	21.6	20.5	19.3	19.5	21.0	22.4	23.0	23.5	18.5
	6	23.6	24.1	25.3	25.7	26.7	26.9	24.9	24.1	23.6	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	25.9	26.2	25.9	25.2
	8	25.6	27.3	28.4	29.9	29.9	28.6	26.9	24.7	24.1	22.5	21.8	17.9	25.6
	9	10.2	19.4	24.9	29.6	32.0	32.8	31.4	27.2	25.5	23.5	22.0	18.9	24.8
	10	16.7	17.5	22.0	25.8	27.7	28.7	22.3	15.6	16.5	13.2	6.2	5.8	18.2
	11	4.6	10.2	23.3	26.0	27.0	27.7	23.8	15.5	15.7	13.3	8.9	8.3	17.0
	12	9.4	18.8	26.6	29.4	30.5	28.6	29.2	29.1	29.0	28.1	27.4	27.9	26.2
	13	25.5	26.3	29.2	30.4	27.6	27.1	27.6	27.8	29.7	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	7.9	-2.4	-5.2	21.0
	15	-6.9	5.7	15.1	21.4	21.7	20.9	18.3	15.5	15.7	14.6	13.6	13.2	14.1
	16	14.0	15.3	17.7	21.3	23.2 <sup>a</sup>	24.7	20.7	16.0	11.6	9.2	8.6	7.2	15.8
	17	6.0	11.9	19.6	23.8	25.4	29.2	24.6	12.1	10.1	7.8	5.9	4.9	15.1
	18	2.3	13.0	24.8	29.1	32.0	34.8	32.3	31.1	31.7	30.2	26.9	29.3	26.5
	19	24.5	30.5	32.3	36.7	38.4	39.8	37.2	36.9	37.2	35.8	35.6	38.6	35.3
	20	39.7	42.0	46.2	45.2	46.0	41.3	39.4	36.5	31.7	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	28.6	28.5	30.0	37.9
	22	29.8	30.8	32.1	32.4	33.5	33.6	34.3	34.8	36.2	35.2	35.6	37.2	33.8
	23	38.2	38.4	37.2	37.0	34.6	37.2	35.0	34.7	34.0	34.7	33.4	31.0	35.5
	24	29.7	34.3	37.6	39.2	41.5	41.6	37.8	38.6	36.8	34.7	34.7	34.0	36.7
	25	34.6	35.4	38.6	36.6	38.4	37.0	36.2	36.0	36.2	37.6	37.2	38.6	36.9
	26	37.1	37.8	42.3	43.5	44.6	49.0	47.4	43.2	39.3	38.2	36.9	36.8	41.3
	27	36.8	37.3	40.4	39.7	39.6	39.3	38.6	38.8	38.9	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	33.3	30.4	30.4	37.0
	29	30.3	30.5	30.1	31.3	31.1	32.0	31.1	30.2	29.1	28.9	—	—	—
	30	22.7	19.9	21.4	23.4	25.4	27.8	26.4	20.3	16.1	15.3	14.0	13.5	20.5
	31	16.9	25.4	30.0	32.5	34.6	32.6	32.7	33.0	33.6	33.5	33.1	34.7	31.1
Hourly Means	20.3	23.5	27.1	30.0	31.0	31.3	29.2	26.6	25.8	23.7	21.8	21.4	26.1	
APRIL.	1	34.6	35.9	36.3	40.5	42.4	44.7	41.0	34.7	33.5	32.0	31.6	30.9	36.5
	2	31.3	35.0	37.4	38.4	38.3	37.6	31.4	30.2	28.4	27.2	23.9	25.0	32.0
	3	25.2	29.2	32.5	37.2	38.2	39.0	37.2	34.6	29.6	—	—	—	—
	4	—	—	—	—	—	—	—	—	—	34.4	34.0	33.5	33.7
	5	34.7	37.2	35.7	35.2	35.2	34.5	31.7	28.0	27.7	28.1	28.9	27.4	32.0
	6	27.7	29.5	31.4	36.0	34.9	35.8	36.4	30.4	30.2	30.5	30.8	31.3	32.1
	7	31.8	34.5	36.5	38.6	39.8	40.2	39.0	31.3	30.1	27.3	25.4	27.0	33.5
	8	27.5	32.0	36.2	35.9	39.2	37.0	36.1	33.4	32.9	—	—	—	—
	9 <sup>b</sup>	—	—	—	—	—	—	—	—	—	29.5	26.6	24.5	32.6
	10	21.9	22.9	24.9	26.0	28.6	30.7	28.3	23.7	21.4	—	—	—	—
	11	—	—	—	—	—	—	—	—	—	27.2	27.5	29.4	26.0
	12	30.0	31.9	32.7	35.7	36.4	37.6	34.4	33.1	31.3	31.3	30.8	31.7	33.1
	13	32.7	33.7	36.8	41.3	41.8	41.0	37.4	37.0	35.6	30.6	29.0	28.5	35.5
	14	30.3	31.4	31.9	32.3	32.7	31.9	31.3	26.3	25.8	23.9	23.1	22.1	28.5
	15	23.0	28.0	31.4	32.4	33.8	35.8	34.7	29.6	28.9	28.6	27.4	28.3	30.2
	16	29.9	32.2	37.2	40.1	43.7	41.6	36.6	35.4	36.6	38.0	37.0	37.4	37.1
	17	39.6	44.9	50.8	53.7	52.8	53.7	48.5	49.1	43.2	—	—	—	—
	18	—	—	—	—	—	—	—	—	—	27.0	24.7	25.3	42.8
	19	27.3	31.0	35.5	39.2	43.2	41.6	38.8	31.1	29.6	28.1	27.8	26.5	33.3
	20	27.7	29.0	30.7	32.0	31.9	31.9	30.9	30.4	29.8	28.8	27.8	26.2	29.8
	21	26.9	30.1	35.8	37.5	41.4	42.4	42.8	31.7	28.7	27.7	27.1	27.2	33.3
	22	28.8	33.8	36.8	37.4	40.0	44.5	43.7	33.5	30.8	30.0	30.4	31.6	35.1
	23	32.7	39.6	43.6	47.2	45.3	48.0	49.6	46.0	44.9	42.8	44.1	44.3	44.0
	24	46.0	50.6	51.1	53.9	53.7	54.8	54.9	46.2	46.6	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	48.6	46.0	46.0	49.9
	26	44.9	50.1	51.0	52.8	52.8	54.9	50.2	45.3	40.6	37.5	32.3	31.0	45.3
	27	33.1	35.1	34.9	38.4	40.2	40.0	41.3	35.0	32.1	28.4	27.7	27.0	34.4
	28	29.4	39.8	42.8	43.9	46.4	49.3	48.8	38.2	33.3	32.5	30.1	34.3	39.1
	29	37.6	39.6	40.1	39.2	40.6	40.7	41.6	41.6	43.0	43.4	42.8	42.2	41.0
	30	41.2	41.1	42.3	43.1	42.0	43.3	40.6	39.5	38.7	37.6	35.9	33.7	39.9
Hourly Means	31.8	35.1	37.5	39.5	40.6	41.3	39.5	35.0	33.3	32.0	30.9	30.9	35.6	

<sup>a</sup> Thirty minutes late.

<sup>b</sup> Good Friday.

WET THERMOMETER.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16		
MAY.	1	33.9	36.0	38.6	40.8	43.7	42.6	41.0	36.0	32.7	—	—	—	35.4	
	2	—	—	—	—	—	—	—	—	—	24.9	26.8	27.9		
	3	27.9	27.5	29.5	31.1	32.3	33.0	29.6	28.0	26.9	25.7	25.9	25.8		28.6
	4	28.8	32.1	35.4	38.0	43.0	41.3	38.0	32.8	30.7	28.3	26.6	27.5		33.5
	5	30.2	34.6	37.8	39.0	40.6	40.2	36.9	37.5	36.2	36.5	36.2	36.0		36.8
	6	35.8	38.1	41.1	40.6	41.9	40.2	40.0	37.8	37.4	34.1	33.9	34.4		37.9
	7	36.0	38.3	41.0	44.2	45.8	44.3	41.8	37.0	34.9	32.7	30.8	28.9		38.0
	8	33.0	40.0	42.9	45.1	47.6	48.1	49.4	40.0	36.5	—	—	—		42.3
	9	—	—	—	—	—	—	—	—	—	41.4	41.6	41.8		
	10	42.8	47.3	48.0	47.6	48.2	48.6	49.2	48.6	47.0	46.4	45.8	45.7		47.1
	11	45.6	48.0	49.8	51.2	52.0	53.6	50.4	48.8	47.6	47.4	47.0	45.0		48.9
	12	45.4	45.4	47.9	52.0	50.9	46.9	44.2	41.5	40.7	40.2	36.7	39.6		46.0
	13	40.5	43.4	45.5	46.6	47.2	46.2	45.4	43.2	41.4	40.0	37.8	35.9		42.8
	14	36.6	39.4	41.2	47.2	45.1	42.3	39.2	35.8	34.5	31.9	29.3	30.8		37.8
	15	31.6	38.8	41.1	46.8	50.2	45.2	43.8	36.7	34.6	—	—	—		41.9
	16	—	—	—	—	—	—	—	—	—	43.6	45.7	45.1		
	17	47.2	49.9	49.3	49.2	48.6	49.0	48.0	43.8	40.8	39.4	37.8	37.5		45.0
	18	40.3	43.8	44.3	46.6	49.2	48.8	48.1	43.2	41.2	40.5	39.2	37.8		43.6
	19	40.6	43.8	44.7	46.8	49.2	51.2	52.7	43.0	39.8	36.5	34.9	34.3		43.1
	20	39.1	45.4	48.2	51.0	54.7	53.1	54.9	48.2	43.7	46.4	45.3	45.1		48.9
	21	48.2	49.6	53.6	51.3	53.4	57.3	58.4	54.5	49.5	51.6	52.8	52.5		52.7
	22	53.1	56.3	57.8	55.6	57.2	59.8	56.3	55.3	53.0	—	—	—		56.5
	23	—	—	—	—	—	—	—	—	—	58.1	58.2	57.2		
	24	58.9	60.3	63.0	66.6	68.8	61.4	63.8	60.0	56.2	54.5	52.9	52.2		59.9
	25	56.2	59.6	61.5	62.0	61.5	62.1	60.4	60.1	53.7	53.7	52.6	51.8		57.9
	26	53.5	55.3	57.0	59.0	61.7	59.2	56.8	56.1	53.0	52.8	52.2	49.4		55.5
	27	52.6	56.0	57.2	59.2	61.0	60.5	61.1	56.0	52.6	49.4	47.1	45.5		54.9
	28	51.6	58.0	59.8	64.3	66.7	65.1	58.4	54.3	50.8	51.0	50.6	46.7		56.4
	29	48.4	50.6	53.1	53.0	54.9	58.4	58.8	45.8	43.1	—	—	—		48.1
	30	—	—	—	—	—	—	—	—	—	37.4	37.2	36.2		
	31	45.7	48.3	51.4	56.4	58.7	55.0	57.6	54.7	52.3	50.4	50.8	46.2		52.3
Hourly Means		42.4	45.6	47.7	49.7	51.3	50.5	49.4	45.3	42.7	42.1	41.4	41.0	45.7	
JUNE.	1	51.4	55.3	58.8	59.1	62.0	60.1	64.2	55.6	51.0	48.0	47.0	49.4	55.2	
	2	53.4	58.0	57.1	58.0	63.0	63.9	55.9	52.0	50.2	49.6	47.2	46.6		
	3	48.3	49.4	52.0	53.4	56.8	55.1	56.5	49.1	46.3	44.9	47.3	48.8		50.7
	4	49.7	56.4	60.3	61.3	64.5	63.6	59.5	57.6	56.9	57.6	61.0	59.2		59.0
	5	60.3	62.7	69.9	69.4	68.5	73.0	71.2	65.4	64.2	—	—	—		64.3
	6	—	—	—	—	—	—	—	—	—	57.0	56.6	53.4		
	7	63.8	66.8	68.9	71.2	73.6	70.7	72.4	65.1	61.3	62.0	52.6	58.5		65.6
	8	61.9	66.3	67.3	68.9	71.8	70.2	69.0	66.0	63.3	63.8	63.3	62.5		66.2
	9	62.5	59.4	60.1	58.8	60.5	60.4	60.6	55.8	53.5	51.3	51.1	50.2		57.0
	10	55.8	57.8	64.9	67.4	65.1	67.6	66.1	62.6	59.8	59.5	59.0	61.3		62.2
	11	63.4	66.2	67.4	68.6	68.8	67.8	64.5	58.2	57.8	51.0	47.5	44.3		60.5
	12	47.6	51.0	51.6	52.8	51.5	53.5	51.9	50.6	51.3	—	—	—		51.9
	13	—	—	—	—	—	—	—	—	—	54.1	53.2	53.5		
	14	56.1	59.1	58.8	60.9	59.3	59.0	57.2	54.0	51.4	50.8	50.7	50.8		55.7
	15	51.4	51.7	54.5	55.3	54.0	55.8	62.7	49.8	42.8	47.0	46.2	45.3		51.4
	16	49.2	54.1	58.2	58.6	59.7	60.5	61.5	52.8	49.5	48.3	46.3	43.9		53.6
	17	49.5	55.5	57.0	54.6	54.3	53.8	54.7	53.6	54.1	53.4	53.4	53.0		53.9
	18	54.5	56.8	59.5	60.3	60.6	58.3	58.8	55.6	53.0	49.8	52.8	53.7		56.1
	19	53.2	57.2	59.7	62.2	61.5	63.2	64.2	56.4	53.3	—	—	—		57.6
	20	—	—	—	—	—	—	—	—	—	53.7	53.4	53.6		
	21	55.0	56.7	60.0	60.7	65.7	68.3	61.2	62.9	61.9	60.8	59.7	59.5		61.0
	22	61.3	65.5	68.7	67.5	70.3	69.0	67.3	67.8	65.0	64.9	65.0	65.3		66.5
	23	65.6	68.1	68.5	71.2	71.2	70.5	65.1	64.6	62.2	60.8	61.9	63.5		66.1
	24	64.5	64.8	67.7	66.7	67.8	68.0	65.2	61.6	60.2	59.4	59.8	59.2		63.7
	25	59.3	60.2	62.7	64.1	65.5	65.3	65.7	59.1	58.6	61.2	63.5	64.1		61.6
	26	64.3	67.9	67.4	67.6	69.5	70.5	70.0	65.9	65.9	—	—	—		66.2
	27	—	—	—	—	—	—	—	—	—	64.2	61.7	59.4		
	28	60.6	63.6	67.1	70.6	69.8	68.6	68.5	64.9	64.7	62.6	63.1	62.3		65.5
	29	65.5	69.0	70.5	73.6	72.0	71.6	73.8	69.7	69.2	68.8	69.1	64.7		69.8
	30	66.2	63.4	67.5	72.1	76.0	68.1	67.8	69.2	64.9	67.4	64.3	58.7		67.1
Hourly Means		57.5	60.1	62.5	63.7	64.7	64.5	63.7	59.5	57.4	56.6	56.0	55.6	60.1	

WET THERMOMETER.

Hours of Mean Gottingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16		
JULY.	1	59.9	58.0	58.8	63.8	65.5	61.4	60.2	55.0	53.7	51.3	49.8	49.8	57.3	
	2	49.8	51.0	54.8	56.2	55.6	54.7	50.9	49.2	47.8	48.7	44.6	42.4	50.5	
	3	47.6	50.2	53.2	56.7	57.9	60.3	61.1	52.1	45.7	—	—	—	54.7	
	4	—	—	—	—	—	—	—	—	—	—	60.3	56.4	54.4	61.3
	5	59.0	63.1	65.6	68.9	68.8	70.8	62.3	59.7	55.8	53.2	53.6	54.2	47.8	57.5
	6	55.5	60.4	59.5	65.5	62.0	64.0	63.9	55.6	53.6	52.4	50.0	49.4	49.2	54.6
	7	50.9	54.7	58.0	61.3	64.7	57.4	56.8	52.9	51.0	49.4	49.4	54.2	53.0	56.4
	8	52.0	56.0	58.4	60.8	60.9	62.1	61.0	54.7	50.8	53.2	54.2	58.2	55.1	60.8
	9	56.0	57.6	62.6	66.1	64.0	61.5	60.3	60.8	63.5	63.7	—	—	—	54.5
	10	55.1	55.2	56.7	56.2	58.2	58.0	57.6	53.7	51.0	—	51.0	50.8	50.0	57.8
	11	—	—	—	—	—	—	—	—	—	—	—	—	—	63.5
	12	53.1	57.6	60.5	60.7	62.1	61.1	64.5	55.6	50.3	54.7	55.8	57.3	61.2	67.8
	13	59.4	61.6	63.5	64.2	66.7	65.1	66.9	64.1	63.1	63.0	63.6	61.2	61.3	61.7
	14	63.8	69.0	71.7	70.9	72.5	73.0	69.9	68.8	65.3	64.4	62.5	61.3	61.3	55.6
	15	63.1	64.2	68.2	70.6	60.8	63.2	64.1	60.0	57.6	57.3	56.8	54.7	48.6	58.3
	16	51.9	53.3	55.6	59.1	62.5	63.3	63.5	55.5	54.3	50.2	49.3	—	—	63.5
	17	48.8	57.8	58.8	62.1	65.4	64.7	59.7	57.2	54.9	—	—	—	—	66.8
	18	—	—	—	—	—	—	—	—	—	—	57.5	55.6	56.6	69.8
	19	59.9	64.1	64.7	67.8	70.1	71.1	69.7	62.2	60.2	58.3	57.6	56.8	54.1	71.2
	20	59.9	65.3	65.3	66.7	66.1	64.1	67.3	59.5	55.6	54.1	55.3	54.1	60.6	66.7
	21	56.9	64.5	68.1	71.0	72.0	71.6	72.4	67.6	63.5	63.0	61.7	60.6	67.6	66.7
	22	64.5	69.0	71.6	72.8	73.6	73.2	72.7	69.2	67.7	67.2	69.0	67.6	66.9	57.7
	23	68.4	70.5	70.9	73.8	76.8	77.4	73.8	71.6	69.8	67.6	66.9	66.7	66.7	60.2
	24	67.6	71.6	72.9	75.8	73.3	69.5	71.4	69.4	68.0	—	—	—	—	57.3
	25	—	—	—	—	—	—	—	—	—	—	55.3	53.6	51.8	57.7
	26	54.2	56.2	59.5	58.6	62.1	64.6	64.7	60.0	57.0	55.5	50.3	49.8	55.2	60.2
	27	54.6	59.3	62.7	62.2	63.1	63.3	64.1	64.0	61.5	58.3	54.5	55.2	44.0	52.4
	28	54.2	53.4	53.2	54.1	55.3	59.2	59.3	53.2	49.4	47.0	46.7	44.0	53.4	57.3
	29	46.9	54.4	57.6	59.8	61.1	63.3	62.9	59.0	57.4	56.6	55.7	53.4	57.0	57.1
	30	55.2	56.5	56.8	57.3	58.0	57.0	57.5	57.5	57.6	57.6	57.0	57.0	—	58.4
	31	57.4	58.4	60.3	61.2	62.0	62.0	61.0	58.6	58.4	—	—	—	—	—
	32	—	—	—	—	—	—	—	—	—	55.5	53.6	51.8	—	—
Hourly Means		56.5	59.7	61.8	63.9	64.5	64.3	63.7	59.5	57.2	56.6	55.3	54.3	59.8	
AUGUST.	2	53.7	59.8	61.7	65.3	68.0	70.1	69.9	62.1	60.1	58.0	55.4	54.3	61.5	
	3	57.1	63.8	67.1	68.0	71.0	71.2	67.9	65.7	64.9	65.0	63.4	63.1	65.7	
	4	63.0	65.0	66.5	66.3	67.4	64.1	65.4	64.4	63.1	62.0	61.5	60.3	64.1	
	5	60.3	62.3	63.9	63.5	66.0	65.3	60.5	55.6	53.0	53.9	54.5	53.6	59.4	
	6	54.6	58.0	58.4	64.1	63.2	64.2	65.0	57.8	55.5	52.9	51.2	50.0	57.9	
	7	50.0	58.1	59.9	63.3	63.7	66.3	65.0	58.0	55.0	—	—	—	60.6	
	8	—	—	—	—	—	—	—	—	—	64.9	62.8	60.7	60.8	
	9	60.3	62.7	65.3	67.9	64.0	69.9	64.5	59.5	55.9	53.9	53.4	52.2	61.0	
	10	54.8	60.4	65.0	66.9	65.5	60.0	60.5	60.1	60.3	60.0	59.1	59.0	57.6	
	11	60.2	61.6	60.7	61.3	61.5	61.0	61.0	59.0	57.1	53.9	47.3	47.0	61.2	
	12	47.7	56.0	61.2	63.1	64.1	66.0	62.9	58.0	53.7	52.3	50.0	50.6	59.3	
	13	51.9	59.2	62.9	64.7	66.6	67.3	63.9	61.3	62.8	59.9	57.4	56.0	65.2	
	14	56.0	57.6	59.5	63.4	64.7	63.2	62.9	57.8	56.3	—	—	—	60.7	
	15	—	—	—	—	—	—	—	—	—	57.6	57.0	56.0	65.2	
	16	56.8	65.2	67.1	70.7	71.6	73.2	68.2	65.3	63.5	62.0	59.7	59.6	66.5	
	17	60.8	66.6	69.5	73.8	73.0	72.8	70.1	65.9	63.3	61.3	60.5	59.9	67.6	
	18	61.4	67.9	70.7	75.0	76.1	69.3	68.4	69.2	63.7	62.9	63.3	62.9	60.2	
	19	61.8	64.1	63.5	63.3	64.3	68.6	67.3	59.1	55.1	53.0	52.1	50.3	61.1	
	20	51.8	58.9	65.0	66.0	67.3	68.0	70.1	60.5	58.2	56.8	56.1	54.2	60.7	
	21	54.0	61.6	67.3	67.7	68.5	66.7	65.3	64.0	64.1	—	—	—	53.6	
	22	—	—	—	—	—	—	—	—	—	51.4	49.6	48.2	54.9	
	23	48.6	53.1	53.6	55.2	60.2	61.9	61.7	52.7	51.2	50.0	45.8	48.8	59.3	
	24	48.9	54.4	60.5	62.1	60.9	62.0	60.6	53.4	50.0	48.8	49.2	48.5	60.2	
	25	50.4	58.0	63.0	65.2	66.7	66.5	64.3	58.0	55.6	54.1	54.5	55.3	59.4	
	26	56.6	62.2	61.8	61.5	62.5	60.1	59.1	57.6	57.4	57.9	58.1	58.2	61.3	
	27	58.3	60.3	62.3	63.7	65.9	63.4	61.8	59.4	60.3	61.5	59.5	59.5	63.2	
	28	62.1	63.8	65.5	66.7	65.7	64.7	63.3	64.4	65.1	—	—	—	59.5	
	29	—	—	—	—	—	—	—	—	—	58.2	59.2	59.2	60.2	
	30	58.5	60.7	59.6	62.1	63.5	65.7	61.4	59.0	55.8	56.0	55.2	56.4	59.5	
	31	56.3	59.4	62.1	65.5	65.9	69.3	66.9	60.9	53.6	54.9	53.8	54.0	60.2	
	Hourly Means		56.0	60.8	63.2	65.2	66.1	66.2	64.5	60.3	58.3	57.0	55.8	55.3	60.7



WET THERMOMETER.

		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.
Hours of Mean Göttingen Time	Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16	
SEPTEMBER.	1	54.8	62.1	64.6	67.1	68.4	67.5	66.4	65.8	68.7	65.1	62.7	61.7	64.6
	2	61.1	66.8	68.7	73.0	71.4	71.2	71.1	67.1	67.3	64.3	64.1	62.0	67.3
	3	63.7	68.3	66.7	70.6	69.1	67.3	66.5	66.3	67.1	67.7	65.2	64.1	66.9
	4	63.6	64.7	65.5	66.2	65.7	67.6	66.8	60.9	59.8	—	—	—	63.8
	5	—	—	—	—	—	—	—	—	—	60.7	61.1	62.7	—
	6	65.2	66.8	68.8	69.9	70.1	66.7	64.5	65.0	66.1	62.7	61.3	63.1	66.9
	7	63.3	67.4	67.6	69.5	68.7	65.5	66.7	66.9	66.3	65.5	63.9	62.9	66.2
	8	64.2	68.2	68.2	69.9	72.9	71.2	68.0	66.4	64.9	66.3	63.3	62.9	67.2
	9	62.4	67.8	69.8	71.2	71.8	70.1	67.6	66.0	66.1	64.5	63.8	61.0	66.8
	10	60.9	66.4	68.3	69.6	70.3	69.4	68.6	68.6	63.0	57.2	56.7	54.6	64.5
	11	52.4	54.0	53.0	51.8	54.7	55.6	54.4	49.5	48.6	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	51.0	50.2	48.2	52.0
	13	47.0	53.0	56.6	60.0	61.1	60.4	56.8	53.3	48.4	43.6	42.5	42.2	52.1
	14	41.8	50.3	54.5	60.0	57.4	59.0	54.8	49.8	46.8	45.6	45.7	43.9	50.8
	15	44.7	54.4	57.8	59.3	59.3	60.7	58.6	59.7	59.2	56.4	55.8	57.1	56.9
	16	57.7	61.0	64.3	66.5	65.8	63.4	60.1	59.5	57.6	56.4	56.8	54.9	60.3
	17	53.7	60.6	62.8	65.4	66.7	65.5	62.8	56.2	53.7	52.3	50.2	48.4	58.2
	18	46.7	46.3	48.0	49.6	50.3	50.8	48.8	46.2	47.0	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	60.7	60.0	57.1	51.0
	20	54.0	61.7	61.9	62.8	62.1	62.0	55.8	53.0	51.0	50.8	52.8	56.0	57.0
	21	55.3	57.5	60.4	64.0	65.6	63.4	62.1	62.2	61.3	62.0	62.1	62.2	61.5
	22	62.5	63.4	64.9	65.1	65.3	65.2	62.6	62.9	62.9	61.2	61.7	60.1	63.2
	23	59.5	60.5	63.5	62.9	63.7	64.0	62.1	61.7	56.8	54.9	54.8	52.1	59.7
	24	47.5	54.7	56.6	57.8	62.0	60.9	59.3	58.9	58.6	57.8	57.0	56.2	57.3
	25	55.6	55.6	56.4	57.1	56.5	56.8	54.1	53.7	53.2	—	—	—	—
	26	—	—	—	—	—	—	—	—	—	39.2	40.0	41.2	51.6
	27	36.8	46.8	49.4	49.6	51.2	48.7	48.6	48.6	48.2	49.5	49.1	50.0	48.0
	28	48.9	48.9	50.2	51.8	51.4	50.8	49.3	49.2	47.6	47.1	47.1	47.1	49.1
	29	46.1	47.0	47.5	47.0	47.0	45.8	45.6	44.1	43.6	—	42.6	42.9	—
	30	42.9	44.1	46.6	46.7	47.1	46.7	43.6	41.4	39.9	38.2	34.3	35.0	42.2
Hourly Means		54.3	58.4	60.1	61.7	62.1	61.4	59.4	57.8	56.7	56.0	54.4	54.2	58.1
OCTOBER.	1	34.5	37.9	38.9	42.6	41.9	43.1	40.3	37.8	36.0	35.4	34.5	35.0	38.2
	2	35.4	38.6	41.7	44.1	43.8	43.7	42.0	41.5	37.8	—	—	—	39.4
	3	—	—	—	—	—	—	—	—	—	36.2	35.4	32.7	—
	4	33.5	40.6	43.2	43.0	45.7	45.1	41.0	37.0	37.2	38.1	38.1	36.1	39.9
	5	36.2	42.8	43.6	47.6	48.8	48.8	41.9	40.0	41.7	41.5	41.2	39.2	42.8
	6	37.6	44.1	47.1	49.3	50.7	49.7	43.4	39.2	37.6	38.8	42.4	45.4	44.6
	7	46.4	47.5	48.7	49.9	53.7	56.6	52.4	47.6	45.1	44.5	40.6	36.2	47.4
	8	34.8	43.7	48.8	52.0	53.3	49.0	45.8	39.8	36.6	37.0	36.0	35.6	42.7
	9	39.3	42.9	46.2	46.6	46.0	46.4	43.0	38.8	38.4	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	45.3	43.9	44.0	43.4
	11	44.0	46.8	49.2	52.2	53.2	55.6	56.4	56.8	53.8	48.2	43.8	44.3	50.4
	12	42.8	43.9	44.0	44.3	47.5	43.2	41.4	40.9	39.6	35.0	36.0	38.4	41.4
	13	37.0	40.0	43.7	42.9	42.4	42.6	37.6	35.4	33.7	33.6	34.7	35.1	38.2
	14	35.2	37.6	42.8	47.3	48.0	47.2	44.7	42.6	43.0	42.6	43.8	44.5	43.3
	15	44.3	46.1	49.4	44.7	44.9	44.9	42.5	42.0	40.0	38.6	37.8	37.6	42.7
	16	34.8	34.8	37.3	36.6	35.1	35.0	33.8	33.6	33.7	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	31.3	30.8	29.7	33.9
	18	28.0 <sup>a</sup>	32.3	37.1	39.5	37.9	40.2	32.9	29.8	28.3	28.5	28.8	29.1	32.7
	19	29.4	32.3	38.6	40.1	38.6	37.7	39.5	39.6	39.7	38.6	38.9	38.6	37.6
	20	38.1	38.8	37.8	37.8	38.4	39.6	38.2	37.2	34.8	34.4	35.8	36.4	37.3
	21	35.8	36.3	38.2	39.4	40.2	39.0	38.7	37.4	36.3	35.4	34.1	33.8	37.1
	22	33.1	35.4	38.0	37.8	37.2	35.8	33.5	30.5	29.4	28.6	31.7	30.6	33.5
	23	30.4	32.4	36.2	37.3	37.0	34.4	33.9	33.8	34.1	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	24.3	22.8	20.8	31.5
	25	20.5	24.2	27.9	29.4	29.6	29.6	28.5	29.1	30.9	30.4	31.4	29.5	28.4
	26	29.6	33.0	34.3	37.2	38.5	38.4	35.2	33.3	34.1	30.4	28.9	26.8	33.3
	27	25.2	29.6	31.4	32.6	35.6	35.8	30.6	26.6	25.4	23.5	24.3	24.5	28.8
	28	25.8	30.2	36.0	37.6	37.1	37.5	36.0	36.6	33.9	31.7	31.7	32.5	33.9
	29	35.7	38.0	44.8	47.5	49.8	47.7	43.8	43.1	39.5	38.2	42.1	43.3	42.8
	30	44.1	45.8	50.2	52.4	52.8	56.2	50.0	45.8	44.4	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	49.3	49.6	47.8	49.0
Hourly Means		35.1	38.3	41.4	42.8	43.4	43.2	40.3	38.3	37.1	36.1	36.1	35.7	39.0

<sup>a</sup> Approximate.



WET THERMOMETER.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16	
NOVEMBER.	1	47.6	52.6	54.7	58.4	57.0	56.2	55.6	52.0	48.6	48.6	47.7	44.3	51.9
	2	46.8	45.5	46.6	46.4	45.8	43.3	39.2	40.5	40.4	41.3	40.3	36.0	42.7
	3	40.4	42.1	43.8	42.8	39.9	37.8	36.4	36.7	36.8	35.4	34.8	34.3	38.4
	4	34.7	34.8	37.4	38.3	38.5	37.1	36.7	35.4	31.3	31.7	34.3	35.3	35.5
	5	35.7	36.1	37.3	37.8	36.8	35.5	33.8	33.5	33.4	33.4	32.4	32.5	34.8
	6	31.9	31.6	32.1	32.0	32.4	31.9	29.7	29.2	29.1	—	—	—	—
	7	—	—	—	—	—	—	—	—	—	37.3	38.6	39.4	32.9
	8	38.9	38.6	41.6	42.3	42.0	39.0	36.9	35.2	34.0	30.8	28.1	27.3	36.2
	9	29.0	31.1	33.9	36.2	37.2	37.7	36.5	36.8	37.2	37.1	37.0	36.8	35.5
	10	36.8	36.5	36.4	37.2	37.3	37.4	38.8	38.8	38.3	38.8	38.8	38.8	37.8
	11	37.0	36.6	38.0	39.3	40.0	40.3	41.4	43.6	45.0	46.1	47.6	49.7	42.1
	12	43.9	43.8	41.1	41.5	39.8	38.2	35.2	34.5	34.4	34.7	34.2	34.5	38.0
	13	36.2	35.2	36.7	36.8	36.4	36.3	34.8	34.5	34.1	—	—	—	—
	14	—	—	—	—	—	—	—	—	—	32.2	33.5	32.4	34.9
	15	29.7	29.0	28.9	29.1	30.5	29.2	27.0	26.6	27.3	27.2	27.3	28.1	28.3
	16	27.8	26.9	32.2	32.6	34.7	34.4	33.5	31.4	32.1	33.7	33.0	30.7	31.9
	17	30.2	31.6	32.5	32.9	33.5	31.8	27.3	28.3	28.4	27.0	27.4	26.8	29.8
	18	25.3	26.8	27.9	30.1	29.8	29.8	26.7	24.7	24.1	24.2	25.4	26.4	26.8
	19	27.3	27.9	29.2	29.4	29.0	28.6	28.9	29.2	29.2	29.2	29.4	29.4	28.9
	20	29.4	29.6	31.3	32.8	33.5	33.4	32.6	32.7	32.7	—	—	—	—
	21	—	—	—	—	—	—	—	—	—	39.0	39.8	41.0	34.0
	22	42.1	43.8	46.7	49.8	46.3	42.4	38.9	36.2	33.5	33.7	33.0	32.4	39.9
	23	32.0	32.0	32.3	32.2	32.4	31.9	32.3	32.9	32.9	31.0	29.0	25.9	31.4
	24	30.2	29.1	32.4	34.5	35.2	34.7	31.9	32.2	30.7	29.2	29.4	28.0	31.5
	25	27.3	27.9	28.4	28.8	29.2	27.8	27.9	27.1	26.6	26.2	24.9	23.8	27.2
	26	23.3	23.1	23.5	24.4	24.7	23.2	22.1	20.2	19.9	20.4	20.4	16.3	21.8
	27	16.6	16.6	22.6	25.3	27.2	26.8	24.9	23.5	24.3	—	—	—	—
	28	—	—	—	—	—	—	—	—	—	25.9	23.9	20.8	23.2
	29	19.6	16.8	18.3	20.6	22.3	21.4	13.2	8.4	15.1	18.4	19.7	19.3	17.8
	30	19.7	17.7	26.6	29.2	29.7	29.2	31.6	30.9	28.3	29.0	30.8	31.7	27.9
Hourly Means		32.3	32.4	34.3	35.4	35.4	34.4	32.8	32.1	31.8	32.3	32.3	31.6	33.1
DECEMBER.	1	30.6	29.5	31.5	34.0	35.6	34.0	31.7	32.5	30.3	29.7	30.7	29.2	31.6
	2	23.6	27.1	33.3	36.6	37.1	36.4	36.6	35.0	35.0	33.9	33.4	34.8	33.6
	3	35.9	36.3	38.3	39.4	39.9	40.0	39.8	40.4	40.8	41.4	41.4	40.3	39.5
	4	37.3	36.1	34.8	33.6	33.1	32.4	32.4	31.9	31.3	—	—	—	33.4
	5	—	—	—	—	—	—	—	—	—	33.1	32.3	32.6	—
	6	31.8	30.8	30.2	28.9	29.1	28.3	27.4	25.2	23.7	22.2	25.0	25.4	27.3
	7	26.7	25.2	26.2	27.7	28.4	30.8	28.9	29.8	29.0	29.4	30.4	30.2	26.9
	8	31.2	31.5	32.6	36.6	37.0	36.8	37.5	38.0	38.5	39.2	41.4	41.3	36.8
	9	41.2	41.3	42.6	43.2	43.4	43.7	42.0	43.0	38.1	38.8	35.1	37.4	40.8
	10	39.3	40.4	40.6	40.5	42.0	42.2	41.8	42.1	42.0	41.8	41.2	39.0	41.1
	11	36.9	35.6	35.8	36.3	37.2	37.5	37.2	36.7	35.4	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	31.9	33.0	35.0	35.7
	13	34.8	34.6	36.2	37.5	37.4	37.4	37.8	38.4	39.4	39.3	40.0	40.0	37.7
	14	40.4	40.8	41.7	42.9	43.9	42.6	41.8	40.6	37.5	34.7	33.2	31.1	39.3
	15	32.3	33.5	34.5	35.2	34.7	33.9	32.9	31.3	32.4	31.9	32.5	30.6	33.0
	16	28.7	26.9	25.6	25.1	25.1	23.5	21.8	17.9	17.6	17.4	16.8	16.2	21.9
	17	15.2	13.2	14.2	14.9	17.4	16.3	14.7	12.7	10.8	9.8	10.8	11.4	13.5
	18	11.8	13.2	15.6	17.9	19.0	18.1	16.6	14.7	14.8	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	17.0	16.3	14.6	15.8
	20	13.0	11.2	12.0	14.7	16.1	16.1	15.6	15.9	15.7	15.6	14.6	12.9	14.5
	21	8.4	3.9	5.6	9.7	12.6	12.4	10.3	9.6	8.7	8.4	9.0	7.2	8.8
	22	6.4	6.5	11.5	13.7	14.5	19.3	20.9	21.6	22.2	23.3	23.5	23.5	17.2
	23	26.5	29.8	31.7	32.5	33.7	36.0	36.9	37.7	36.5	35.2	31.7	25.4	32.8
	24	23.1	21.9	23.3	24.9	25.7	25.3	24.6	25.1	25.4	—	—	—	—
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—
	26	—	—	—	—	—	—	—	—	—	16.1	15.8	18.1	22.4
	27	20.1	21.4	24.7	26.5	27.3	26.4	26.6	27.2	27.3	27.1	27.0	27.3	25.7
	28	27.0	26.8	28.9	29.2	31.1	30.2	30.8	30.4	29.0	28.7	27.8	27.5	29.0
	29	25.4	23.8	28.5	29.8	30.9	30.8	28.9	27.1	26.8	24.2	25.6	26.4	27.4
	30	28.3	29.6	31.6	32.2	33.7	32.4	32.3	32.3	31.0	29.8	28.9	27.9	30.8
	31	26.8	27.0	27.7	25.1	22.8	21.5	19.5	18.7	18.1	19.6	20.0	20.9	22.3
Hourly Means		27.0	26.8	28.4	29.6	30.3	30.2	29.4	29.1	28.4	27.7	27.5	27.1	28.5

<sup>a</sup> Christmas Day.

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.															
Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16		
Humidity of the Air.	JANUARY.	1	100	100	97	85	84	95	100	100	100	94	94	100	96 87 84
		2	100	100	99	86	84	74	69	83	94	—	—	—	
		3	—	—	—	—	—	—	—	—	—	—	—	—	
		4	95	100	83 <sup>a</sup>	—	—	—	—	—	—	—	90	85	—
		5	—	—	—	—	—	—	—	—	—	—	—	—	—
		6	—	—	—	—	—	—	—	—	—	—	—	—	—
		7	—	—	—	—	—	—	—	—	—	—	—	—	—
		8	—	—	—	—	—	—	—	—	—	—	—	—	—
		9	—	—	—	—	—	—	—	—	—	—	—	—	—
		10	—	—	—	—	—	—	—	—	—	—	—	—	—
		11	—	—	—	—	—	—	—	—	—	—	—	—	—
		12	—	—	—	—	—	—	—	—	—	—	—	—	—
		13	—	—	—	—	—	—	—	—	—	—	—	—	—
		14	—	—	—	—	—	—	—	—	—	—	—	—	—
		15	—	—	—	—	—	—	—	—	—	—	—	—	—
		16	—	—	—	—	—	—	—	—	—	—	—	—	—
		17	—	—	—	—	—	—	—	—	—	—	—	—	—
		18	—	—	—	—	—	—	—	—	—	—	—	—	—
		19	—	—	—	—	—	—	—	—	—	—	—	—	—
		20	—	—	—	—	—	—	—	—	—	—	—	—	—
		21	—	—	—	—	—	—	—	—	—	—	—	—	—
		22	—	—	—	—	—	79	89	89	96	90	90	90	90
		23	90	93	84	88	92	88	90	88	92	—	—	—	—
		24	—	—	—	—	—	—	—	—	—	—	94	93	91
		25	88	84	81	86	88	98	81	90	88	84	89	97	97
		26	97	100	100	86	81	86	85	94	98	96	96	84	84
		27	96	88	78	68	71	72	75	75	78	77	80	80	80
		28	94	84	92	67	75	78	91	95	94	100	100	92	92
		29	100	90	88	94	94	92	98	96	92	92	67	68	68
		30	69	70	69	71	80	70	62	66	73	—	—	—	—
		31	—	—	—	—	—	—	—	—	—	98	82	96	96
Hourly Means <sup>b</sup>		92	90	88	81	83	84	83	88	90	92	87	88	—	
Tension of the Vapour.	JANUARY.	1	In. .063	In. .067	In. .086	In. .092	In. .100	In. .109	In. .113	In. .113	In. .109	In. .099	In. .097	In. .091	.095 .079 .044
		2	.087	.081	.110	.115	.109	.085	.069	.074	.069	—	—	—	
		3	—	—	—	—	—	—	—	—	—	—	—	—	
		4	.047	.047	.058 <sup>a</sup>	—	—	—	—	—	—	—	.056	.048	—
		5	—	—	—	—	—	—	—	—	—	—	—	—	—
		6	—	—	—	—	—	—	—	—	—	—	—	—	—
		7	—	—	—	—	—	—	—	—	—	—	—	—	—
		8	—	—	—	—	—	—	—	—	—	—	—	—	—
		9	—	—	—	—	—	—	—	—	—	—	—	—	—
		10	—	—	—	—	—	—	—	—	—	—	—	—	—
		11	—	—	—	—	—	—	—	—	—	—	—	—	—
		12	—	—	—	—	—	—	—	—	—	—	—	—	—
		13	—	—	—	—	—	—	—	—	—	—	—	—	—
		14	—	—	—	—	—	—	—	—	—	—	—	—	—
		15	—	—	—	—	—	—	—	—	—	—	—	—	—
		16	—	—	—	—	—	—	—	—	—	—	—	—	—
		17	—	—	—	—	—	—	—	—	—	—	—	—	—
		18	—	—	—	—	—	—	—	—	—	—	—	—	—
		19	—	—	—	—	—	—	—	—	—	—	—	—	—
		20	—	—	—	—	—	—	—	—	—	—	—	—	—
		21	—	—	—	—	—	—	—	—	—	—	—	—	—
		22	—	—	—	—	—	.113	.130	.120	.135	.137	.136	.135	.134
		23	.137	.142	.141	.154	.163	.154	.156	.153	.157	—	—	—	—
		24	—	—	—	—	—	—	—	—	—	—	.154	.137	.145
		25	.152	.148	.147	.159	.161	.179	.141	.155	.152	.141	.123	.096	.096
		26	.086	.098	.160	.155	.147	.159	.164	.176	.189	.193	.206	.182	.182
		27	.204	.201	.194	.164	.165	.152	.151	.143	.142	.134	.133	.136	.136
		28	.154	.140	.163	.141	.156	.158	.146	.126	.118	.120	.129	.124	.124
		29	.151	.161	.167	.176	.176	.176	.181	.179	.172	.174	.132	.123	.123
		30	.120	.114	.121	.124	.134	.115	.095	.102	.118	—	—	—	—
		31	—	—	—	—	—	—	—	—	—	.173	.114	.111	.111
Hourly Means <sup>b</sup>		.128	.128	.143	.142	.144	.142	.133	.136	.136	.138	.125	.119	—	

<sup>a</sup> Vide note page 138.

<sup>b</sup> The observations on the 4th and 22nd are omitted in the hourly means.

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	16	18	
Humidity of the Air. FEBRUARY.	1	88	87	94	87	78	87	83	73	76	80	76	80	82
	2	93	96	97	97	89	82	81	81	75	78	65	72	83
	3	80	76	81	79	73	71	73	73	65	65	75	80	74
	4	80	82	86	79	77	74	67	87	75	72	85	88	79
	5	88	86	69	69	70	68	94	98	96	87	100	95	85
	6	97	98	89	94	81	90	92	92	94	—	—	—	90
	7	—	—	—	—	—	—	—	—	—	84	76	91	
	8	88	88	76	72	80	55	79	88	73	72	98	100	81
	9	96	96	92	86	81	80	73	74	79	84	73	84	83
	10	74	81	75	74	74	72	69	68	74	80	87	81	76
	11	95	90	83	69	69	64	87	75	85	100	90	95	83
	12	90	85	79	69	56	80	76	87	81	85	92	85	80
	13	95	100	83	77	72	65	71	73	75	—	—	—	83
	14	—	—	—	—	—	—	—	—	—	85	100	95	
	15	100	89	71	74	60	54	64	65	70	68	70	74	72
	16	59	84	92	87	72	72	73	96	96	90	92	98	84
	17	96	91	86	81	81	73	78	78	74	88	84	85	83
	18	88	91	88	84	80	82	87	85	88	84	84	98	87
	19	92	85	94	84	75	77	69	71	82	83	65	70	79
	20	76	75	71	72	64	66	60	56	71	—	—	—	73
	21	—	—	—	—	—	—	—	—	—	86	83	91	
	22	98	88	90	83	79	61	65	67	55	63	67	55	73
	23	97	83	75	76	69	70	69	71	75	80	79	94	73
	24	100	80	74	48	62	63	63	78	71	75	82	85	73
	25	82	78	79	73	65	62	62	62	69	73	77	91	73
	26	97	95	81	64	75	77	70	74	74	79	88	81	80
	27	79	81	75	51	54	47	92	90	91	—	—	—	76
	28	—	—	—	—	—	—	—	—	—	89	80	84	
Hourly Means		89	87	82	76	72	71	75	78	78	80	82	85	80
Tension of the Vapour. FEBRUARY.	1	.089	.082	.095	.085	.076	.084	.075	.066	.064	.060	.064	.066	.075
	2	.068	.071	.089	.114	.129	.136	.148	.151	.155	.159	.080	.072	.114
	3	.070	.067	.075	.076	.078	.076	.077	.078	.072	.074	.087	.088	.076
	4	.085	.088	.100	.109	.123	.124	.107	.121	.093	.091	.094	.097	.103
	5	.096	.115	.122	.129	.133	.124	.152	.154	.157	.141	.138	.128	.132
	6	.128	.136	.147	.180	.167	.179	.162	.157	.158	—	—	—	.140
	7	—	—	—	—	—	—	—	—	—	.102	.081	.088	
	8	.088	.089	.102	.120	.134	.113	.119	.133	.122	.126	.161	.160	.122
	9	.154	.159	.161	.153	.146	.136	.119	.107	.113	.114	.102	.103	.131
	10	.083	.078	.077	.080	.077	.073	.061	.057	.055	.055	.056	.047	.067
	11	.048	.046	.052	.053	.053	.049	.057	.049	.051	.058	.051	.052	.052
	12	.051	.050	.055	.058	.049	.064	.052	.057	.050	.051	.058	.053	.054
	13	.053	.062	.075	.086	.091	.078	.075	.075	.077	—	—	—	.069
	14	—	—	—	—	—	—	—	—	—	.048	.053	.054	
	15	.064	.069	.069	.083	.076	.075	.076	.072	.072	.075	.083	.089	.075
	16	.072	.103	.119	.127	.126	.126	.129	.163	.164	.159	.166	.172	.135
	17	.170	.149	.127	.126	.128	.118	.099	.104	.097	.088	.081	.087	.114
	18	.089	.099	.130	.139	.134	.136	.143	.151	.150	.146	.146	.168	.136
	19	.157	.151	.158	.128	.109	.104	.077	.078	.084	.065	.072	.079	.105
	20	.079	.094	.105	.131	.137	.160	.137	.126	.134	—	—	—	.131
	21	—	—	—	—	—	—	—	—	—	.152	.153	.156	
	22	.165	.153	.163	.167	.185	.158	.158	.170	.155	.168	.172	.129	.162
	23	.124	.071	.062	.065	.062	.065	.062	.059	.058	.065	.064	.073	.069
	24	.072	.062	.083	.059	.095	.105	.096	.110	.093	.093	.099	.086	.088
	25	.108	.111	.136	.147	.141	.142	.134	.128	.130	.114	.107	.100	.124
	26	.097	.105	.145	.134	.165	.174	.148	.153	.145	.159	.164	.161	.146
	27	.148	.157	.168	.135	.138	.121	.172	.159	.144	—	—	—	.144
	28	—	—	—	—	—	—	—	—	—	.130	.118	.128	
Hourly Means		.098	.099	.109	.111	.114	.113	.110	.111	.108	.105	.102	.101	.107

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	MARCH.	1	75	77	66	54	65	68	74	72	84	77	69	71	71	
		2	83	83	74	89	67	56	68	76	91	79	76	72	76	
		3	74	71	74	61	70	68	58	76	69	65	74	73	69	
		4	81	79	77	73	70	65	63	73	72	69	75	66	72	
		5	70	65	76	77	69	75	70	63	62	75	75	97	73	
		6	97	82	83	84	87	96	95	97	100	—	—	—	—	91
		7	—	—	—	—	—	—	—	—	—	92	90	92	—	
		8	92	84	84	81	74	84	78	76	79	82	86	85	85	82
		9	94	91	92	83	72	70	81	70	81	75	78	75	80	80
		10	76	80	78	73	77	77	76	93	71	73	75	92	78	78
		11	95	100	75	69	59	58	50	57	61	73	83	76	71	71
		12	88	82	73	78	79	80	80	98	98	100	99	100	88	88
		13	98	92	91	86	91	72	82	84	90	—	—	—	—	85
		14	—	—	—	—	—	—	—	—	—	80	67	82	—	
		15	43	95	87	84	84	84	77	79	81	68	55	64	75	75
		16	71	79	71	71	75	83	67	73	80	80	80	87	76	76
		17	92	69	68	71	69	73	70	96	96	100	100	90	83	83
		18	95	96	83	88	61	66	94	86	78	88	96	80	84	84
		19	85	86	64	60	59	58	63	63	64	75	77	71	69	69
		20	72	84	74	67	55	36	30	67	64	—	—	—	—	68
		21	—	—	—	—	—	—	—	—	—	98	89	79	—	
		22	73	74	74	71	75	76	75	77	77	77	79	83	76	76
		23	96	96	93	88	86	66	70	77	76	63	68	74	79	79
		24	72	61	55	74	69	60	58	68	82	68	79	72	68	68
		25	79	70	63	86	85	90	90	88	77	83	94	100	84	84
		26	96	98	98	94	93	82	77	86	87	93	90	88	90	90
		27	88	94	98	93	91	91	96	96	98	—	—	—	—	88
		28	—	—	—	—	—	—	—	—	—	78	54	83	—	
		29	94	92	86	94	92	92	94	96	91	94	—	—	—	—
		30	75	81	66	71	73	63	55	87	91	97	68	96	77	77
		31	100	84	81	57	77	73	88	96	96	98	98	96	87	87
Hourly Means		83	83	78	77	75	73	73	80	81	81	80	82	79		
Tension of the Vapour.	MARCH.	1	In. .120	In. .131	In. .135	In. .125	In. .140	In. .135	In. .126	In. .111	In. .110	In. .089	In. .076	In. .068	In. .113	
		2	.071	.068	.073	.107	.095	.083	.090	.082	.093	.076	.079	.071	.082	
		3	.073	.067	.097	.093	.120	.118	.092	.100	.094	.084	.090	.085	.092	
		4	.093	.097	.107	.103	.097	.093	.070	.067	.060	.053	.049	.044	.079	
		5	.045	.050	.081	.096	.093	.093	.084	.078	.083	.102	.104	.127	.085	
		6	.128	.116	.124	.126	.133	.145	.134	.129	.129	—	—	—	—	.131
		7	—	—	—	—	—	—	—	—	—	.136	.135	.136	—	
		8	.134	.135	.141	.147	.138	.143	.127	.113	.113	.109	.110	.092	.125	
		9	.070	.102	.131	.148	.148	.148	.157	.119	.123	.107	.104	.087	.120	
		10	.080	.085	.104	.114	.129	.134	.103	.089	.075	.067	.050	.058	.091	
		11	.057	.074	.105	.112	.105	.107	.081	.061	.064	.067	.061	.055	.079	
		12	.065	.093	.119	.141	.148	.138	.142	.159	.161	.152	.151	.154	.135	
		13	.138	.134	.154	.155	.144	.120	.135	.138	.155	—	—	—	—	.116
		14	—	—	—	—	—	—	—	—	—	.056	.031	.031	—	
		15	.017	.060	.082	.106	.107	.103	.086	.077	.080	.068	.055	.061	.075	
		16	.067	.076	.079	.095	.105	.120	.087	.075	.067	.060	.058	.059	.079	
		17	.058	.060	.086	.103	.109	.134	.106	.078	.071	.067	.062	.056	.082	
		18	.051	.082	.124	.148	.132	.155	.174	.159	.155	.155	.145	.141	.135	
		19	.120	.155	.136	.158	.163	.178	.167	.165	.170	.180	.176	.190	.164	
		20	.202	.240	.264	.240	.219	.137	.112	.168	.136	—	—	—	—	.181
		21	—	—	—	—	—	—	—	—	—	.156	.145	.145	—	
		22	.137	.143	.152	.148	.159	.161	.165	.170	.182	.175	.180	.198	.164	
		23	.225	.227	.210	.203	.183	.172	.163	.170	.165	.150	.150	.145	.180	
		24	.136	.144	.156	.199	.210	.194	.163	.185	.193	.157	.173	.160	.172	
		25	.173	.165	.177	.198	.211	.205	.200	.196	.182	.201	.212	.234	.196	
		26	.213	.223	.262	.270	.281	.312	.284	.255	.220	.220	.205	.201	.245	
		27	.201	.212	.247	.232	.229	.225	.229	.229	.231	—	—	—	—	.205
		28	—	—	—	—	—	—	—	—	—	.160	.116	.152	—	
		29	.161	.161	.152	.168	.165	.172	.167	.164	.152	.154	—	—	—	
		30	.103	.098	.090	.102	.113	.113	.096	.103	.088	.089	.065	.083	.095	
		31	.099	.125	.147	.127	.170	.154	.171	.182	.187	.187	.184	.196	.161	
Hourly Means		.113	.123	.138	.147	.149	.148	.137	.134	.131	.121	.114	.117	.131		

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	APRIL.	1	84	80	63	70	67	87	81	65	72	86	92	92	78	
		2	92	86	81	75	85	64	63	67	71	68	46	79	73	
		3	86	78	39	40	35	34	38	75	83	—	—	—	65	
		4	—	—	—	—	—	—	—	—	—	90	92	88		
		5	84	76	63	77	56	51	53	61	74	61	73	81	81	67
		6	87	76	68	75	43	31	67	49	65	78	83	88	88	67
		7	90	85	82	80	82	76	81	86	78	70	77	77	66	79
		8	64	61	64	61	69	67	51	56	70	—	—	—	—	66
		9 <sup>a</sup>	—	—	—	—	—	—	—	—	—	94	73	67	—	
		10	69	70	68	63	71	69	55	78	84	—	—	—	—	72
		11	—	—	—	—	—	—	—	—	—	78	78	85	—	
		12	86	75	67	73	70	68	88	85	92	90	92	92	92	81
		13	94	96	88	90	83	68	73	83	82	66	75	69	69	81
		14	81	74	72	59	62	50	60	52	61	69	70	76	76	65
		15	77	63	68	55	48	36	47	72	77	73	84	84	84	65
		16	88	59	67	59	55	56	37	46	60	78	79	81	81	64
		17	94	85	87	83	82	82	88	88	85	—	—	—	—	86
		18	—	—	—	—	—	—	—	—	—	96	83	80	—	
		19	74	74	62	35	43	45	66	55	66	55	67	63	63	59
		20	69	72	78	79	99	99	92	88	83	77	82	77	77	83
		21	80	74	69	47	72	62	53	43	46	52	57	56	56	59
		22	55	50	43	44	54	48	44	60	79	66	61	36	36	53
		23	76	71	72	71	73	77	86	88	91	93	91	94	94	82
		24	94	83	78	82	73	72	78	89	94	—	—	—	—	86
		25	—	—	—	—	—	—	—	—	—	95	96	98	—	
		26	98	88	79	76	72	64	68	48	44	66	77	90	90	72
		27	59	55	48	48	36	27	33	24	67	77	89	84	84	54
		28	88	79	52	47	39	39	39	61	68	64	79	59	59	59
		29	62	57	51	63	89	93	80	94	97	90	93	93	93	80
		30	81	57	47	40	36	42	43	49	55	55	61	58	58	52
Hourly Means		80	73	66	64	64	60	63	66	74	75	78	77	70		
Tension of the Vapour.	APRIL.	1	In. .180	In. .186	In. .160	In. .205	In. .214	In. .270	In. .226	In. .153	In. .154	In. .166	In. .168	In. .165	In. .187	
		2	.166	.185	.197	.197	.209	.171	.134	.131	.126	.117	.077	.118	.153	
		3	.126	.139	.098	.123	.117	.119	.117	.168	.148	—	—	—	—	.138
		4	—	—	—	—	—	—	—	—	—	.187	.158	.158	—	
		5	.180	.187	.157	.175	.142	.129	.120	.113	.126	.112	.132	.133	.133	.143
		6	.140	.138	.139	.178	.117	.097	.168	.108	.128	.146	.154	.162	.162	.139
		7	.168	.185	.191	.206	.218	.213	.208	.160	.143	.119	.118	.115	.115	.170
		8	.113	.133	.163	.155	.193	.173	.137	.132	.149	—	—	—	—	.144
		9 <sup>a</sup>	—	—	—	—	—	—	—	—	—	.158	.119	.102	—	
		10	.095	.099	.107	.105	.127	.136	.104	.110	.106	—	—	—	—	.116
		11	—	—	—	—	—	—	—	—	—	.128	.129	.150	—	
		12	.152	.154	.145	.171	.173	.178	.185	.169	.166	.164	.163	.170	.170	.166
		13	.178	.187	.201	.241	.234	.204	.184	.195	.184	.132	.134	.124	.124	.183
		14	.148	.148	.148	.128	.137	.117	.126	.091	.101	.102	.099	.102	.102	.121
		15	.106	.114	.139	.125	.119	.106	.121	.135	.136	.129	.136	.140	.140	.125
		16	.154	.128	.174	.172	.201	.185	.113	.125	.158	.197	.190	.196	.196	.166
		17	.234	.272	.341	.371	.357	.372	.314	.322	.254	—	—	—	—	.268
		18	—	—	—	—	—	—	—	—	—	.145	.120	.118	—	
		19	.123	.145	.153	.124	.170	.163	.182	.120	.129	.103	.118	.107	.107	.137
		20	.120	.130	.147	.159	.181	.181	.165	.157	.148	.136	.135	.122	.122	.148
		21	.129	.138	.165	.137	.214	.203	.190	.102	.094	.098	.103	.101	.101	.139
		22	.107	.122	.126	.132	.169	.190	.173	.136	.150	.129	.126	.122	.122	.140
		23	.161	.198	.235	.267	.251	.289	.329	.284	.282	.262	.270	.277	.277	.259
		24	.297	.333	.325	.374	.350	.361	.379	.290	.304	—	—	—	—	.329
		25	—	—	—	—	—	—	—	—	—	.330	.300	.302	—	
		26	.292	.334	.328	.345	.334	.348	.298	.200	.156	.174	.154	.163	.163	.260
		27	.134	.140	.127	.148	.132	.109	.128	.075	.140	.132	.142	.134	.134	.128
		28	.152	.213	.188	.184	.183	.208	.202	.172	.147	.138	.145	.142	.142	.173
		29	.168	.173	.166	.183	.238	.242	.229	.252	.269	.263	.262	.255	.255	.225
		30	.229	.184	.173	.162	.146	.169	.155	.157	.164	.157	.156	.136	.136	.166
Hourly Means		.162	.174	.180	.191	.197	.198	.187	.163	.162	.157	.152	.152	.173		

\* Good Friday.

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.																															
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16																																
Humidity of the Air.	MAY.	1	62	61	55	54	53	37	34	46	52	—	—	—	} 59																														
		2	—	—	—	—	—	—	—	—	—	79	87	84		} 65																													
		3	74	57	69	64	60	40	51	63	72	77	79	81			} 60																												
		4	79	61	51	45	55	45	41	51	64	72	80	72				} 71																											
		5	74	54	58	62	53	46	57	78	84	94	92	94					} 66																										
		6	90	78	76	57	50	50	48	60	65	69	76	73						} 69																									
		7	72	61	47	63	50	57	59	66	86	81	88	94							} 70																								
		8	90	71	60	54	51	94	49	70	80	—	—	—								} 91																							
		9	—	—	—	—	—	—	—	—	—	55	81	84									} 65																						
		10	86	86	92	96	95	95	95	97	90	90	87	84										} 71																					
		11	84	72	51	44	45	43	54	68	73	84	94	85											} 77																				
		12	84	71	59	74	77	61	63	62	70	78	67	87												} 55																			
		13	91	93	82	79	88	68	69	83	78	68	64	67													} 49																		
		14	67	54	39	67	48	29	31	46	63	65	66	83														} 44																	
		15	75	66	58	50	46	25	23	33	45	—	—	—															} 43																
		16	—	—	—	—	—	—	—	—	—	63	51	54																} 67															
		17	62	36	34	31	29	30	33	41	51	55	62	64																	} 64														
		18	66	55	34	34	32	27	26	35	41	47	57	64																		} 64													
		19	68	57	59	63	53	44	39	67	82	90	92	92																			} 66												
		20	91	80	69	52	41	25	48	62	59	79	80	84																				} 80											
		21	78	76	58	60	63	38	57	61	72	65	80	84																					} 85										
		22	88	81	70	70	71	64	71	78	84	—	—	—																						} 84									
		23	—	—	—	—	—	—	—	—	—	94	93	94																							} 84								
		24	97	90	82	76	65	74	71	89	92	94	94	96																								} 78							
		25	100	87	73	74	61	63	92	91	90	92	88	93																									} 75						
		26	88	76	61	55	69	68	65	84	89	91	94	98																										} 61					
		27	98	80	53	62	65	51	55	77	85	92	94	93																											} 60				
		28	97	83	68	61	67	55	35	37	39	58	62	74																												} 73			
		29	72	60	56	61	55	53	48	63	82	—	—	—																													} 67		
		30	—	—	—	—	—	—	—	—	—	79	63	31																														} 80	
		31	83	65	61	63	54	75	57	76	86	87	76	89																															} 85
Hourly Means		81	70	61	60	58	52	53	65	72	77	79	80	67																															
Tension of the Vapour.	MAY.	1	In. .146	In. .155	In. .164	In. .177	In. .198	In. .151	In. .131	In. .131	In. .123	In. —	In. —	In. —	} .147																														
		2	—	—	—	—	—	—	—	—	—	.118	.135	.139		} .120																													
		3	.127	.106	.130	.133	.132	.101	.107	.115	.120	.119	.123	.123			} .138																												
		4	.138	.133	.135	.139	.195	.159	.131	.121	.131	.126	.126	.122				.122	} .175																										
		5	.139	.135	.163	.178	.173	.157	.155	.192	.192	.206	.203	.203				.203		} .177																									
		6	.196	.197	.219	.181	.177	.164	.160	.165	.172	.155	.165	.164				.164			} .180																								
		7	.172	.171	.162	.222	.208	.209	.191	.169	.185	.163	.159	.154				.154				} .218																							
		8	.174	.202	.205	.208	.228	.318	.242	.200	.188	—	—	—				—					} .306																						
		9	—	—	—	—	—	—	—	—	—	.182	.232	.237				.237						} .274																					
		10	.251	.299	.317	.322	.324	.330	.339	.333	.304	.296	.281	.277				.277							} .243																				
		11	.277	.280	.252	.243	.258	.269	.266	.281	.279	.297	.309	.273				.273								} .239																			
		12	.275	.252	.252	.331	.323	.246	.222	.197	.207	.216	.171	.224				.224									} .156																		
		13	.237	.268	.272	.279	.300	.252	.247	.250	.226	.198	.173	.166				.166										} .174																	
		14	.170	.166	.144	.260	.196	.122	.113	.128	.150	.140	.125	.156				.156											} .184																
		15	.152	.183	.186	.217	.241	.131	.113	.104	.120	—	—	—				—												} .168															
		16	—	—	—	—	—	—	—	—	—	.220	.211	.210				.210													} .219														
		17	.250	.206	.122	.185	.168	.177	.178	.166	.171	.169	.170	.169				.169														} .256													
		18	.195	.202	.150	.172	.186	.162	.150	.146	.149	.161	.170	.173				.173															} .219												
		19	.201	.205	.217	.248	.249	.241	.242	.221	.218	.201	.193	.188				.188																} .406											
		20	.223	.267	.275	.262	.273	.186	.298	.261	.210	.275	.266	.269				.269																	} .475										
		21	.293	.308	.312	.288	.324	.287	.377	.332	.296	.304	.352	.356				.356																		} .436									
		22	.370	.404	.404	.372	.395	.416	.382	.383	.362	—	—	—				—																			} .386								
		23	—	—	—	—	—	—	—	—	—	.463	.464	.448				.448																				} .371							
		24	.483	.487	.520	.576	.586	.473	.503	.481	.428	.406	.383	.376				.376																					} .363						
		25	.443	.472	.468	.482	.433	.449	.497	.486	.386	.389	.367	.365				.365																						} .262					
		26	.377	.378	.365	.377	.462	.418	.374	.408	.372	.375	.374	.346				.346																							} .332				
		27	.387	.398	.345	.403	.440	.384	.409	.391	.362	.336	.309	.290				.290																								} .259			
		28	.370	.437	.426	.484	.548	.479	.295	.256	.224	.280	.288	.268				.268																									} .259		
		29	.287	.282	.298	.311	.320	.363	.349	.235	.246	—	—	—				—																										} .259	
		30	—	—	—	—	—	—	—	—	—	.194	.167	.098				.098																											} .259
		31	.274	.266	.291	.362	.374	.374	.365	.372	.358	.338	.319	.290				.290																											
Hourly Means		.254	.264	.264	.285	.296	.270	.263	.251	.238	.243	.239	.234	.259																															

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16		
Humidity of the Air.	JUNE.	1	87	67	70	62	55	51	56	59	71	82	89	92	70
		2	89	67	41	33	51	44	33	42	54	62	72	74	55
		3	71	60	63	62	59	43	45	72	73	80	80	82	66
		4	79	71	60	53	47	41	34	56	75	74	72	68	61
		5	77	63	70	64	84	68	57	89	89	—	—	—	75
		6	—	—	—	—	—	—	—	—	—	87	89	67	75
		7	93	88	82	68	66	58	62	87	88	90	44	89	76
		8	90	76	67	55	50	54	64	67	58	80	86	92	70
		9	76	60	46	34	34	30	35	56	78	81	78	90	58
		10	89	73	69	60	55	48	31	53	71	74	74	61	63
		11	78	77	80	92	67	55	65	59	71	58	69	79	71
		12	84	70	61	65	64	61	73	76	78	—	—	—	74
		13	—	—	—	—	—	—	—	—	—	80	88	89	74
		14	89	79	79	68	66	65	51	66	73	78	85	81	73
		15	83	75	65	58	54	45	84	60	41	72	77	84	66
		16	84	72	69	66	53	49	48	68	68	61	64	83	65
		17	84	66	59	48	46	55	72	76	85	89	92	81	71
		18	87	77	72	71	68	72	76	84	90	94	94	93	81
		19	96	89	80	74	61	48	51	76	60	—	—	—	75
		20	—	—	—	—	—	—	—	—	—	83	89	92	75
		21	87	82	74	68	63	61	71	81	85	89	89	90	78
		22	88	86	75	76	70	57	69	77	83	89	90	92	79
		23	92	85	75	74	65	66	69	74	80	88	88	89	79
		24	87	87	81	75	67	68	78	85	87	89	96	97	83
		25	92	84	75	64	62	62	58	82	91	93	92	92	79
		26	94	90	82	83	74	63	55	81	92	—	—	—	82
		27	—	—	—	—	—	—	—	—	—	92	94	88	82
		28	89	77	77	73	64	40	43	66	77	85	88	89	72
		29	91	76	74	63	37	36	49	61	65	69	77	83	65
		30	89	98	78	76	65	64	76	91	96	93	84	72	82
Hourly Means		86	78	70	65	59	54	58	71	76	81	82	84	72	
Tension of the Vapour.	JUNE.	1	In. .349	In. .358	In. .419	In. .399	In. .424	In. .380	In. .467	In. .341	In. .310	In. .299	In. .301	In. .336	In. .365
		2	.379	.397	.299	.280	.429	.416	.251	.243	.261	.276	.271	.268	.314
		3	.278	.267	.305	.321	.356	.283	.308	.290	.263	.264	.285	.310	.294
		4	.313	.384	.411	.406	.433	.396	.306	.362	.401	.410	.461	.418	.391
		5	.458	.461	.632	.598	.637	.692	.612	.586	.557	—	—	—	.536
		6	—	—	—	—	—	—	—	—	—	.428	.429	.334	.536
		7	.559	.611	.642	.653	.705	.604	.683	.574	.501	.519	.529	.460	.565
		8	.519	.568	.563	.555	.598	.579	.586	.538	.458	.529	.535	.493	.543
		9	.495	.399	.359	.291	.313	.295	.322	.337	.356	.333	.325	.340	.347
		10	.415	.411	.522	.544	.477	.502	.382	.429	.434	.438	.430	.430	.451
		11	.520	.570	.606	.662	.592	.535	.494	.381	.407	.280	.268	.252	.464
		12	.299	.307	.294	.319	.298	.319	.329	.319	.329	—	—	—	.328
		13	—	—	—	—	—	—	—	—	—	.372	.373	.379	.328
		14	.418	.443	.442	.448	.413	.408	.335	.339	.322	.324	.336	.319	.379
		15	.341	.327	.342	.332	.308	.301	.517	.271	.160	.271	.269	.271	.310
		16	.318	.353	.406	.406	.380	.377	.391	.326	.287	.258	.244	.257	.334
		17	.321	.359	.360	.295	.285	.308	.361	.355	.382	.379	.385	.357	.345
		18	.390	.401	.433	.440	.440	.414	.432	.402	.375	.342	.380	.391	.403
		19	.388	.437	.456	.486	.434	.421	.445	.385	.310	—	—	—	.409
		20	—	—	—	—	—	—	—	—	—	.371	.379	.389	.409
		21	.397	.412	.446	.440	.519	.563	.461	.518	.507	.496	.477	.475	.476
		22	.501	.584	.617	.596	.635	.561	.570	.603	.561	.575	.578	.588	.581
		23	.598	.630	.612	.671	.640	.628	.522	.529	.501	.493	.514	.547	.574
		24	.560	.569	.614	.573	.573	.581	.553	.503	.480	.473	.492	.487	.538
		25	.477	.472	.495	.486	.509	.504	.502	.450	.467	.512	.552	.560	.499
		26	.579	.642	.611	.619	.629	.618	.579	.576	.603	—	—	—	.585
		27	—	—	—	—	—	—	—	—	—	.565	.523	.470	.585
		28	.493	.521	.588	.657	.607	.484	.491	.512	.536	.520	.535	.517	.539
		29	.590	.624	.654	.695	.542	.524	.640	.593	.596	.599	.627	.552	.603
		30	.600	.565	.601	.695	.766	.568	.601	.669	.591	.639	.547	.422	.606
Hourly Means		.444	.465	.490	.495	.505	.472	.467	.440	.422	.414	.414	.408	.453	

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.															
Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16		
Humidity of the Air.	JULY.	1	80	65	49	52	45	29	31	45	58	51	58	72	53
		2	58	46	49	43	38	30	22	45	55	66	85	90	52
		3	82	50	53	52	49	45	43	73	71	—	—	—	67
		4	—	—	—	—	—	—	—	—	—	95	99	97	
		5	100	95	84	69	63	62	31	49	62	80	68	75	70
		6	81	76	94	87	82	79	58	74	94	85	83	91	80
		7	96	77	73	64	64	32	48	53	61	74	76	79	66
		8	78	69	66	63	56	47	31	42	39	68	82	90	61
		9	87	86	72	65	56	66	71	86	93	94	92	83	79
		10	84	67	57	49	53	45	47	64	74	—	—	—	66
		11	—	—	—	—	—	—	—	—	—	79	87	88	
		12	93	65	59	47	39	41	46	69	68	74	76	81	63
		13	79	62	59	57	47	58	67	72	82	89	91	93	71
		14	98	86	82	73	65	52	68	73	77	81	85	87	77
		15	84	73	72	72	97	83	89	89	86	88	86	86	84
		16	80	68	63	73	68	60	50	74	80	85	79	82	72
		17	88	71	61	59	60	61	61	74	82	—	—	—	73
		18	—	—	—	—	—	—	—	—	—	87	86	92	
		19	94	77	59	67	61	60	52	82	88	91	92	94	76
		20	94	85	65	58	49	45	44	64	83	89	88	85	72
		21	88	79	70	63	57	60	62	80	84	93	89	92	76
		22	94	81	73	58	53	58	64	75	83	94	77	86	75
		23	97	97	83	78	72	82	68	84	90	94	96	96	86
		24	98	87	80	69	73	91	95	90	94	—	—	—	88
		25	—	—	—	—	—	—	—	—	—	95	94	90	
		26	88	67	67	59	59	51	56	65	75	89	93	94	72
		27	97	84	72	72	72	73	78	96	96	89	92	87	84
		28	89	68	57	49	42	56	61	80	92	90	86	90	72
		29	95	65	69	62	54	51	64	84	93	84	87	90	75
		30	88	83	82	92	93	89	92	92	93	92	94	92	90
		31	92	94	90	91	90	89	90	92	86	—	—	—	91
		32	—	—	—	—	—	—	—	—	—	86	92	94	
Hourly Means		88	75	69	65	61	59	58	73	79	84	86	88	74	
Tension of the Vapour.	JULY.	1	In. .461	In. .366	In. .355	In. .444	In. .446	In. .303	In. .299	In. .290	In. .312	In. .262	In. .266	In. .299	In. .350
		2	.268	.249	.298	.298	.270	.228	.156	.229	.238	.274	.268	.252	.253
		3	.298	.250	.293	.332	.342	.360	.363	.327	.253	—	—	—	.347
		4	—	—	—	—	—	—	—	—	—	.498	.443	.411	
		5	.488	.551	.578	.604	.579	.622	.324	.368	.353	.358	.337	.363	.460
		6	.392	.458	.483	.581	.502	.530	.469	.380	.395	.359	.324	.312	.432
		7	.358	.375	.415	.441	.500	.266	.320	.291	.287	.301	.306	.307	.347
		8	.340	.372	.402	.430	.412	.392	.313	.275	.221	.332	.377	.375	.354
		9	.413	.438	.487	.529	.462	.450	.442	.489	.556	.561	.462	.390	.474
		10	.392	.358	.351	.318	.360	.330	.331	.328	.317	—	—	—	.341
		11	—	—	—	—	—	—	—	—	—	.327	.341	.334	
		12	.380	.387	.413	.377	.362	.359	.431	.370	.297	.367	.386	.420	.379
		13	.451	.442	.463	.468	.474	.492	.558	.512	.521	.539	.553	.512	.499
		14	.569	.653	.705	.663	.681	.633	.626	.612	.550	.545	.515	.499	.604
		15	.526	.525	.596	.654	.514	.526	.552	.481	.438	.435	.422	.392	.513
		16	.342	.332	.351	.426	.471	.461	.531	.376	.374	.330	.307	.307	.375
		17	.320	.406	.392	.437	.504	.490	.408	.402	.387	—	—	—	.418
		18	—	—	—	—	—	—	—	—	—	.436	.403	.435	
		19	.491	.524	.484	.572	.603	.616	.556	.505	.482	.459	.451	.444	.515
		20	.491	.570	.513	.518	.472	.416	.474	.411	.400	.389	.403	.382	.453
		21	.431	.539	.585	.629	.631	.634	.661	.610	.534	.546	.513	.501	.551
		22	.575	.639	.679	.650	.654	.662	.674	.626	.618	.636	.627	.626	.639
		23	.667	.714	.690	.749	.810	.860	.716	.709	.683	.646	.634	.624	.708
		24	.654	.719	.731	.774	.716	.674	.732	.672	.650	—	—	—	.607
		25	—	—	—	—	—	—	—	—	—	.416	.394	.360	
		26	.390	.371	.419	.387	.437	.453	.474	.422	.400	.409	.345	.342	.404
		27	.415	.459	.486	.478	.493	.502	.528	.570	.523	.456	.401	.400	.476
		28	.392	.336	.301	.289	.281	.385	.400	.357	.336	.304	.291	.268	.328
		29	.311	.342	.397	.410	.404	.430	.472	.455	.449	.419	.407	.382	.406
		30	.403	.413	.415	.443	.460	.433	.447	.447	.453	.451	.444	.439	.454
		31	.447	.471	.487	.509	.519	.517	.503	.472	.453	—	—	—	.461
		32	—	—	—	—	—	—	—	—	—	.402	.389	.368	
Hourly Means		.432	.454	.473	.497	.495	.482	.469	.445	.425	.424	.408	.398	.450	



HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	AUGUST.	2	96	79	65	66	60	56	57	84	92	96	93	97	78	
		3	98	88	80	81	76	77	79	88	93	93	92	93	86	
		4	93	87	81	75	74	65	79	85	87	90	89	90	83	
		5	89	74	69	64	63	66	47	60	65	74	79	83	69	
		6	86	70	53	69	61	58	58	83	86	85	80	93	73	
		7	94	81	67	64	51	59	65	83	83	—	—	—	—	
		8	—	—	—	—	—	—	—	—	—	—	96	90	91	77
		9	92	80	81	80	63	74	50	65	88	90	94	94	94	79
		10	96	85	80	75	68	92	95	91	95	92	94	94	94	88
		11	92	90	91	95	91	95	95	94	93	93	86	95	95	92
		12	100	93	90	76	66	67	57	69	83	86	93	94	94	81
		13	98	94	79	72	67	71	71	84	91	87	85	86	86	82
		14	87	86	81	80	85	67	86	88	92	—	—	—	—	86
		15	—	—	—	—	—	—	—	—	—	—	88	94	95	86
		16	95	92	79	71	70	72	78	89	72	94	95	96	96	83
		17	97	87	80	81	68	68	57	78	87	91	94	95	95	82
		18	97	84	80	73	70	73	98	68	86	84	95	96	96	84
		19	91	87	69	57	50	70	77	76	79	88	93	96	96	78
		20	97	83	80	69	65	63	62	89	89	89	88	89	89	80
		21	92	79	81	69	65	70	77	89	81	—	—	—	—	80
		22	—	—	—	—	—	—	—	—	—	—	70	78	89	78
		23	84	75	55	50	60	59	52	86	77	76	88	88	88	71
		24	88	75	74	67	52	49	63	81	86	92	89	88	88	75
		25	93	84	79	73	67	68	71	88	92	93	96	92	92	83
		26	97	82	71	70	74	77	84	85	88	94	94	96	96	84
		27	94	90	82	78	73	78	80	90	90	93	92	95	95	86
		28	95	91	87	85	82	77	75	80	81	—	—	—	—	85
		29	—	—	—	—	—	—	—	—	—	—	91	94	88	85
		30	86	77	58	63	69	79	71	85	93	95	91	91	91	80
		31	92	84	80	76	86	68	68	90	80	91	93	96	96	84
		Hourly Means		94	84	75	72	68	70	71	82	86	89	90	92	81
Tension of the Vapour.	AUGUST.	2	In. .396	In. .454	In. .451	In. .519	In. .554	In. .583	In. .586	In. .504	In. .489	In. .465	In. .417	In. .408	In. .469	
		3	.451	.548	.595	.619	.670	.681	.611	.588	.586	.586	.552	.546	.586	
		4	.546	.570	.584	.565	.591	.489	.561	.552	.533	.519	.508	.487	.542	
		5	.485	.482	.502	.478	.522	.520	.373	.344	.322	.357	.375	.371	.428	
		6	.392	.405	.366	.502	.466	.473	.489	.435	.402	.365	.330	.342	.414	
		7	.345	.432	.428	.473	.440	.515	.509	.438	.390	—	—	—	—	
		8	—	—	—	—	—	—	—	—	—	.591	.536	.498	.466	
		9	.493	.508	.561	.615	.482	.645	.444	.415	.416	.392	.390	.374	.478	
		10	.412	.479	.553	.583	.530	.489	.502	.486	.498	.489	.475	.475	.497	
		11	.493	.515	.498	.518	.513	.513	.513	.475	.441	.397	.298	.311	.457	
		12	.327	.426	.506	.505	.494	.537	.452	.402	.371	.358	.342	.354	.422	
		13	.378	.480	.513	.524	.548	.575	.507	.491	.539	.476	.431	.411	.490	
		14	.413	.438	.455	.524	.556	.484	.530	.447	.428	—	—	—	—	
		15	—	—	—	—	—	—	—	—	—	.443	.444	.429	.466	
		16	.440	.588	.593	.649	.669	.714	.613	.580	.503	.527	.490	.492	.571	
		17	.514	.603	.646	.760	.695	.686	.590	.568	.537	.509	.499	.494	.599	
		18	.526	.627	.678	.762	.785	.622	.672	.603	.543	.526	.555	.553	.621	
		19	.518	.550	.494	.455	.444	.601	.593	.435	.382	.370	.368	.350	.464	
		20	.373	.452	.553	.542	.557	.563	.607	.489	.456	.429	.416	.392	.494	
		21	.395	.490	.604	.580	.581	.558	.550	.552	.534	—	—	—	—	
		22	—	—	—	—	—	—	—	—	—	.313	.311	.314	.481	
		23	.310	.344	.304	.308	.410	.437	.407	.364	.325	.311	.287	.320	.344	
		24	.322	.365	.453	.460	.398	.401	.426	.364	.329	.328	.328	.314	.374	
		25	.348	.440	.512	.539	.550	.553	.512	.451	.418	.397	.408	.411	.461	
		26	.445	.504	.468	.460	.487	.454	.455	.436	.439	.463	.463	.469	.462	
		27	.467	.487	.495	.524	.553	.528	.493	.475	.487	.516	.481	.486	.499	
		28	.530	.553	.580	.598	.573	.536	.507	.543	.557	—	—	—	—	
		29	—	—	—	—	—	—	—	—	—	.459	.479	.466	.531	
		30	.453	.467	.396	.448	.494	.566	.465	.458	.423	.429	.408	.428	.453	
		31	.428	.463	.497	.553	.658	.604	.564	.503	.366	.405	.394	.402	.487	
		Hourly Means		.431	.487	.511	.541	.547	.551	.520	.476	.443	.439	.422	.419	.483

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.																
Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	SEPTEMBER.	1	96	93	83	77	71	65	85	85	94	92	94	94	86	
		2	96	98	92	83	76	64	77	91	92	86	94	93	87	
		3	96	95	91	91	79	81	94	94	96	97	88	91	91	
		4	95	89	80	77	68	62	66	86	87	—	—	—	—	83
		5	—	—	—	—	—	—	—	—	—	94	95	95	—	
		6	98	92	84	79	76	79	79	84	96	81	85	88	88	85
		7	95	88	80	76	69	67	78	84	83	89	95	95	95	83
		8	96	91	91	80	81	76	81	88	92	97	91	94	94	88
		9	90	90	85	82	80	70	74	79	84	87	92	94	94	84
		10	96	84	78	74	73	64	75	95	85	74	75	87	87	80
		11	94	74	64	61	52	58	67	73	81	—	—	—	—	72
		12	—	—	—	—	—	—	—	—	—	77	85	84	—	
		13	88	89	72	68	63	59	68	69	85	90	90	88	88	77
		14	91	74	74	72	51	67	61	81	86	93	90	93	93	78
		15	93	92	72	62	56	58	76	79	78	82	91	81	81	77
		16	84	81	79	71	70	76	71	84	91	93	95	95	95	82
		17	96	94	82	76	73	69	93	88	84	82	81	81	81	83
		18	79	80	80	72	65	62	76	86	81	—	—	—	—	80
		19	—	—	—	—	—	—	—	—	—	95	94	92	—	
		20	96	88	76	72	70	71	76	77	85	87	91	88	88	81
		21	91	92	92	84	83	87	89	89	93	88	84	87	87	88
		22	88	89	83	79	73	84	82	86	86	88	89	87	87	84
		23	84	84	82	82	81	84	89	90	89	88	88	93	93	86
		24	95	88	73	63	71	71	78	88	91	89	96	91	91	83
		25	92	89	82	76	71	59	70	76	79	—	—	—	—	81
		26	—	—	—	—	—	—	—	—	—	87	93	94	—	
		27	92	92	82	78	85	77	86	84	81	94	92	98	98	87
		28	98	97	97	96	90	90	91	94	86	86	88	88	88	92
		29	86	86	78	74	77	76	85	77	85	—	86	90	90	—
		30	88	82	72	60	54	54	66	73	81	82	82	92	92	74
		Hourly Means		92	88	81	76	71	70	78	84	87	88	89	90	83
Tension of the Vapour.	SEPTEMBER.	1	.412	.525	.552	.588	.599	.563	.595	.581	.665	.583	.540	.523	.561	
		2	.515	.634	.662	.743	.684	.638	.676	.623	.631	.552	.565	.525	.620	
		3	.566	.657	.613	.705	.632	.604	.617	.613	.634	.651	.579	.557	.619	
		4	.564	.566	.563	.571	.536	.558	.551	.493	.472	—	—	—	—	.536
		5	—	—	—	—	—	—	—	—	—	.503	.513	.543	—	
		6	.601	.621	.641	.658	.650	.584	.540	.563	.611	.510	.494	.535	.584	
		7	.555	.626	.611	.634	.599	.527	.581	.606	.586	.585	.568	.551	.586	
		8	.575	.649	.649	.663	.734	.671	.620	.603	.583	.618	.544	.548	.621	
		9	.527	.636	.670	.694	.705	.632	.596	.570	.583	.557	.556	.510	.602	
		10	.515	.592	.614	.634	.651	.599	.617	.667	.529	.402	.397	.394	.551	
		11	.377	.359	.318	.297	.308	.339	.348	.298	.305	—	—	—	—	.325
		12	—	—	—	—	—	—	—	—	—	.322	.330	.304	—	
		13	.298	.372	.391	.430	.435	.413	.382	.334	.309	.266	.252	.247	.344	
		14	.247	.309	.362	.440	.339	.411	.333	.319	.293	.292	.287	.273	.325	
		15	.281	.401	.408	.402	.384	.413	.431	.454	.443	.410	.418	.415	.405	
		16	.433	.483	.534	.556	.540	.514	.437	.463	.448	.433	.440	.413	.474	
		17	.396	.503	.516	.553	.568	.532	.542	.420	.373	.351	.322	.302	.448	
		18	.278	.275	.294	.298	.289	.287	.297	.285	.286	—	—	—	—	.335
		19	—	—	—	—	—	—	—	—	—	.506	.491	.439	—	
		20	.402	.510	.487	.491	.469	.474	.386	.347	.338	.341	.375	.416	.419	
		21	.408	.447	.497	.542	.576	.542	.517	.477	.512	.515	.505	.517	.504	
		22	.522	.548	.561	.551	.541	.578	.513	.531	.531	.502	.514	.477	.531	
		23	.464	.477	.530	.521	.531	.543	.518	.516	.429	.400	.397	.368	.475	
		24	.316	.397	.394	.386	.472	.456	.444	.463	.467	.449	.446	.425	.427	
		25	.418	.412	.411	.404	.386	.357	.350	.355	.356	—	—	—	—	.346
		26	—	—	—	—	—	—	—	—	—	.220	.236	.248	—	
		27	.206	.303	.318	.311	.342	.298	.315	.310	.300	.339	.330	.352	.310	
		28	.338	.338	.353	.370	.354	.346	.331	.336	.304	.296	.298	.298	.330	
		29	.282	.296	.286	.274	.279	.262	.279	.248	.258	—	.248	.259	—	
		30	.256	.255	.266	.240	.230	.225	.225	.217	.218	.204	.176	.193	.225	
		Hourly Means		.413	.469	.480	.498	.494	.476	.463	.449	.441	.432	.416	.409	.453

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

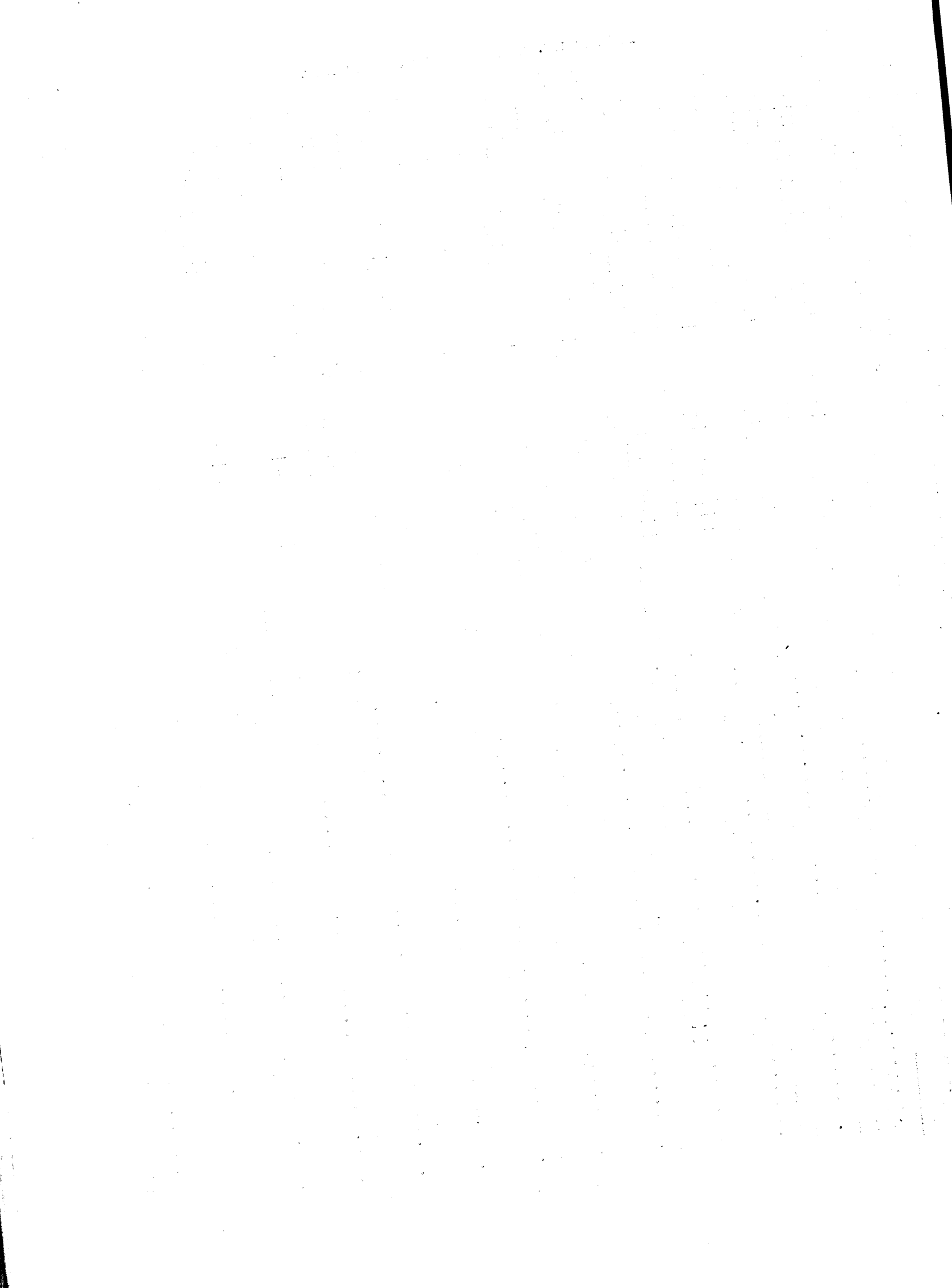
Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	OCTOBER.	1	92	72	63	67	51	52	72	78	82	88	82	82	73	
		2	79	79	59	61	55	63	68	84	76	—	—	—	} 71	
		3	—	—	—	—	—	—	—	—	79	82	73	—		
		4	74	70	52	40	47	41	69	84	76	78	80	80		66
		5	86	79	52	62	59	59	83	87	78	83	90	87	75	
		6	93	85	67	64	62	63	83	93	93	93	93	93	82	
		7	89	85	81	97	100	96	98	96	98	94	93	94	93	
		8	94	98	89	80	68	49	57	71	88	84	88	88	79	
		9	87	80	63	52	69	60	66	79	82	—	—	—	} 77	
		10	—	—	—	—	—	—	—	—	—	94	96	96		—
		11	98	96	97	97	90	93	97	96	85	81	79	77		91
		12	85	83	72	72	86	72	75	78	82	88	88	90	85	81
		13	84	89	72	56	48	56	76	67	78	88	88	88	90	74
		14	90	85	79	75	64	47	59	83	56	53	61	67	68	68
		15	65	62	58	40	54	65	69	75	84	80	82	85	68	68
		16	71	65	74	66	54	58	62	60	63	—	—	—	} 71	
		17	—	—	—	—	—	—	—	—	—	90	94	92		—
		18	96	82	69	60	54	59	78	73	80	82	84	84		75
		19	90	78	84	68	55	56	72	74	91	94	91	94	79	
		20	93	93	74	76	71	77	80	78	80	80	75	77	79	
		21	86	84	83	81	74	77	91	89	92	86	88	90	85	
		22	83	79	71	78	71	67	72	88	83	96	98	91	81	
		23	96	92	92	85	92	96	98	98	94	—	—	—	} 92	
		24	—	—	—	—	—	—	—	—	—	78	97	87		—
		25	96	87	80	65	63	58	69	75	83	75	83	60		74
		26	62	65	49	43	42	46	56	65	72	65	75	84	60	
		27	96	80	60	43	48	58	98	84	73	73	85	76	73	
		28	79	79	70	59	60	74	80	90	90	90	100	77	79	
		29	90	94	87	81	72	74	83	88	91	94	91	91	86	
		30	90	93	81	70	80	86	95	94	98	—	—	—	} 88	
		31	—	—	—	—	—	—	—	—	—	89	91	94		—
Hourly Means		86	82	72	67	65	65	77	82	83	83	87	84	78		
Tension of the Vapour.	OCTOBER.	1	In. .190	In. .187	In. .179	In. .215	In. .178	In. .189	In. .204	In. .195	In. .188	In. .183	In. .185	In. .180	In. .189	
		2	.178	.202	.191	.214	.201	.217	.212	.235	.193	—	—	—	} .196	
		3	—	—	—	—	—	—	—	—	—	.185	.183	.144		—
		4	.157	.206	.189	.158	.199	.177	.205	.197	.187	.197	.200	.185		.188
		5	.195	.239	.194	.255	.260	.260	.237	.228	.227	.232	.241	.220	.232	
		6	.214	.260	.257	.277	.288	.278	.252	.228	.214	.224	.257	.290	.253	
		7	.293	.298	.306	.350	.404	.442	.384	.322	.292	.280	.242	.205	.318	
		8	.193	.278	.323	.343	.334	.237	.224	.201	.201	.197	.196	.192	.244	
		9	.220	.243	.242	.222	.252	.237	.218	.202	.206	—	—	—	} .240	
		10	—	—	—	—	—	—	—	—	—	.289	.278	.278		—
		11	.280	.311	.341	.379	.378	.420	.441	.442	.380	.300	.249	.250		.347
		12	.249	.257	.238	.240	.301	.231	.220	.221	.216	.188	.198	.211	.230	
		13	.197	.231	.232	.198	.175	.193	.191	.160	.164	.177	.186	.190	.191	
		14	.192	.203	.239	.277	.262	.214	.217	.243	.198	.188	.213	.232	.224	
		15	.227	.237	.266	.170	.208	.234	.217	.225	.223	.206	.200	.203	.218	
		16	.163	.152	.184	.167	.136	.144	.143	.138	.143	—	—	—	} .155	
		17	—	—	—	—	—	—	—	—	—	.164	.165	.157		—
		18	.150	.161	.174	.178	.156	.181	.159	.137	.135	.138	.145	.146		.155
		19	.154	.156	.211	.198	.163	.158	.200	.204	.229	.226	.223	.226	.195	
		20	.218	.224	.190	.194	.189	.210	.203	.190	.176	.175	.177	.184	.194	
		21	.191	.192	.208	.213	.211	.206	.220	.207	.203	.188	.181	.181	.200	
		22	.166	.179	.185	.196	.180	.164	.160	.157	.145	.154	.177	.164	.169	
		23	.166	.174	.203	.199	.208	.195	.193	.191	.188	—	—	—	} .171	
		24	—	—	—	—	—	—	—	—	—	.112	.123	.105		—
		25	.111	.121	.134	.125	.124	.117	.123	.134	.156	.144	.160	.120		.130
		26	.123	.142	.125	.128	.136	.144	.142	.143	.161	.131	.134	.135	.137	
		27	.135	.144	.128	.106	.127	.147	.169	.131	.113	.105	.223	.111	.137	
		28	.121	.146	.170	.162	.159	.186	.185	.203	.183	.168	.179	.156	.168	
		29	.194	.220	.272	.293	.298	.282	.255	.256	.227	.222	.250	.263	.253	
		30	.268	.292	.322	.328	.351	.415	.347	.294	.285	—	—	—	} .324	
		31	—	—	—	—	—	—	—	—	—	.328	.337	.317		—
Hourly Means		.190	.210	.219	.222	.227	.226	.220	.211	.201	.196	.204	.194	.210		

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
Humidity of the Air. NOVEMBER.	1	96	91	81	73	77	84	77	91	95	95	94	88	87
	2	94	80	70	70	69	58	40	64	69	47	66	79	67
	3	85	74	66	67	56	56	63	66	69	65	66	73	67
	4	98	88	91	85	76	79	90	90	96	94	92	90	89
	5	86	86	76	70	66	65	67	72	79	82	85	96	77
	6	79	73	75	72	69	78	72	73	73	—	—	—	80
	7	—	—	—	—	—	—	—	—	—	98	98	98	
	8	99	99	90	81	74	81	81	80	76	81	84	84	84
	9	88	86	74	75	86	91	80	79	78	86	90	88	83
	10	92	94	92	88	85	87	87	85	87	87	89	93	89
	11	92	96	96	93	94	97	98	98	99	96	99	97	96
	12	77	83	66	61	71	72	66	73	75	79	82	63	73
	13	84	77	67	53	61	67	77	79	86	—	—	—	76
	14	—	—	—	—	—	—	—	—	—	90	85	88	
	15	81	82	79	73	79	81	73	88	89	84	80	80	81
	16	84	78	88	50	57	60	61	88	81	85	94	86	76
	17	88	88	74	75	85	88	89	91	96	78	77	80	84
	18	87	84	67	72	63	69	81	87	87	89	92	86	80
	19	81	82	88	83	94	82	88	83	84	88	94	94	87
	20	94	88	88	68	75	75	81	82	81	—	—	—	85
	21	—	—	—	—	—	—	—	—	—	98	98	97	
	22	98	98	100	98	89	82	54	55	55	55	55	57	75
	23	59	62	54	57	62	65	65	66	67	70	78	88	66
	24	96	78	62	57	51	68	75	98	88	88	90	84	78
	25	87	80	77	81	88	96	96	93	88	96	99	100	90
	26	87	88	92	87	87	92	88	91	95	97	97	81	90
	27	100	100	94	87	74	76	80	82	76	—	—	—	88
	28	—	—	—	—	—	—	—	—	—	98	97	96	
	29	95	76	80	77	76	76	89	87	93	97	91	89	84
	30	91	85	81	70	71	80	92	86	77	81	83	83	82
	Hourly Means	88	85	79	74	74	77	77	82	82	85	87	86	81
Tension of the Vapour. NOVEMBER.	1	In. .322	In. .375	In. .382	In. .423	In. .406	In. .413	In. .387	In. .366	In. .330	In. .330	In. .317	In. .267	In. .359
	2	.306	.268	.261	.258	.249	.206	.135	.194	.202	.161	.195	.184	.218
	3	.230	.223	.225	.220	.176	.161	.160	.168	.173	.158	.156	.163	.184
	4	.198	.186	.209	.209	.200	.191	.203	.193	.171	.172	.188	.192	.192
	5	.189	.193	.187	.183	.168	.158	.150	.154	.164	.163	.166	.179	.171
	6	.159	.146	.154	.148	.145	.157	.135	.134	.132	—	—	—	.166
	7	—	—	—	—	—	—	—	—	—	.217	.231	.237	
	8	.236	.234	.245	.237	.222	.208	.192	.179	.165	.152	.139	.135	.195
	9	.148	.159	.163	.180	.202	.211	.188	.188	.189	.200	.205	.201	.184
	10	.206	.206	.204	.205	.199	.204	.216	.213	.212	.216	.219	.216	.209
	11	.208	.211	.223	.228	.238	.243	.255	.275	.295	.300	.327	.347	.262
	12	.248	.256	.201	.196	.201	.190	.160	.165	.168	.174	.176	.150	.190
	13	.193	.175	.171	.146	.158	.168	.171	.173	.178	—	—	—	.171
	14	—	—	—	—	—	—	—	—	—	.179	.172	.169	
	15	.146	.143	.140	.133	.149	.144	.123	.135	.139	.135	.130	.134	.137
	16	.138	.127	.167	.114	.140	.144	.140	.164	.161	.168	.179	.156	.149
	17	.155	.164	.154	.157	.172	.166	.131	.146	.152	.127	.127	.128	.148
	18	.128	.133	.120	.137	.125	.132	.128	.124	.120	.123	.133	.132	.128
	19	.132	.136	.152	.147	.160	.140	.148	.145	.148	.150	.158	.158	.148
	20	.158	.153	.162	.137	.159	.159	.163	.165	.163	—	—	—	.178
	21	—	—	—	—	—	—	—	—	—	.233	.241	.249	
	22	.260	.278	.314	.349	.293	.241	.163	.148	.130	.131	.129	.129	.214
	23	.131	.136	.121	.126	.136	.140	.139	.144	.153	.140	.137	.132	.136
	24	.164	.137	.136	.139	.134	.157	.154	.179	.158	.150	.154	.139	.150
	25	.137	.134	.132	.140	.150	.149	.150	.142	.135	.140	.138	.130	.140
	26	.116	.117	.122	.122	.124	.120	.113	.107	.109	.113	.113	.083	.113
	27	.098	.098	.121	.128	.123	.124	.120	.114	.110	—	—	—	.118
	28	—	—	—	—	—	—	—	—	—	.141	.129	.112	
	29	.107	.080	.089	.096	.103	.099	.078	.062	.087	.103	.104	.099	.092
	30	.104	.090	.128	.130	.133	.141	.170	.159	.131	.141	.154	.161	.137
	Hourly Means	.177	.175	.180	.181	.180	.176	.164	.167	.164	.170	.173	.168	.173

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16		
Humidity of the Air. DECEMBER.	1	83	83	79	69	73	69	74	92	83	83	79	80	79	
	2	98	98	68	82	81	82	100	90	84	86	72	75	85	
	3	84	96	93	98	100	100	100	100	100	100	100	100	91	97
	4	79	79	77	70	72	77	98	90	86	—	—	—	—	81
	5	—	—	—	—	—	—	—	—	—	—	83	77	81	81
	6	78	78	72	70	73	71	77	79	75	84	79	79	79	76
	7	90	77	73	69	69	90	81	73	75	76	74	78	78	77
	8	83	83	62	76	78	84	89	89	89	87	89	99	97	85
	9	100	100	97	98	100	99	100	100	100	98	98	96	98	99
	10	98	100	98	98	98	100	98	99	99	97	97	99	98	98
	11	98	90	90	86	86	85	86	82	80	—	—	—	—	98
	12	—	—	—	—	—	—	—	—	—	—	94	90	92	88
	13	90	88	90	87	89	91	93	89	89	89	85	98	100	91
	14	98	100	99	98	85	82	84	91	87	84	90	90	94	91
	15	96	92	84	75	77	82	83	88	98	92	94	88	88	87
	16	96	93	92	87	89	95	91	85	91	91	88	88	87	90
	17	81	80	93	87	74	73	78	80	89	80	83	89	89	82
	18	89	93	84	80	65	66	80	84	87	—	—	—	—	82
	19	—	—	—	—	—	—	—	—	—	85	93	97	97	83
	20	93	100	100	84	73	73	75	79	69	81	81	88	88	83
	21	96	100	100	88	80	79	83	96	93	96	93	93	96	92
	22	92	95	98	93	97	94	94	86	91	79	85	73	73	90
	23	86	92	96	92	88	96	99	98	94	88	90	75	75	91
	24	79	78	77	76	75	80	83	80	84	—	—	—	—	91
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	82
	26	—	—	—	—	—	—	—	—	—	91	90	91	91	82
	27	95	91	92	84	87	77	81	78	78	87	93	93	93	86
	28	90	96	79	75	74	70	78	86	84	89	80	81	81	82
	29	84	87	77	73	78	88	84	80	88	82	88	93	93	83
	30	96	98	98	82	83	96	94	90	79	80	78	80	80	88
	31	78	80	78	86	77	71	73	74	97	78	81	81	81	79
Hourly Means		90	90	87	83	82	83	87	87	87	87	87	88	86	
Tension of the Vapour. DECEMBER.	1	In. .153	In. .147	In. .155	In. .155	In. .171	In. .155	In. .150	In. .174	In. .150	In. .148	In. .149	In. .141	In. .154	
	2	.127	.147	.147	.193	.192	.191	.216	.190	.182	.178	.154	.168	.174	
	3	.190	.208	.220	.235	.246	.246	.244	.250	.252	.258	.258	.236	.237	
	4	.193	.184	.171	.155	.153	.158	.182	.171	.161	—	—	—	—	
	5	—	—	—	—	—	—	—	—	—	.166	.155	.163	.168	
	6	.155	.148	.138	.129	.132	.125	.127	.119	.105	.110	.118	.120	.127	
	7	.137	.117	.117	.120	.123	.161	.141	.137	.134	.138	.141	.144	.136	
	8	.157	.159	.138	.184	.188	.195	.207	.213	.214	.223	.258	.251	.199	
	9	.256	.256	.264	.273	.278	.281	.263	.274	.225	.231	.198	.219	.251	
	10	.235	.250	.248	.247	.260	.265	.257	.261	.258	.255	.256	.233	.252	
	11	.215	.194	.196	.195	.202	.201	.202	.193	.180	—	—	—	—	
	12	—	—	—	—	—	—	—	—	—	.174	.174	.193	.193	
	13	.188	.186	.200	.204	.207	.209	.216	.217	.225	.217	.243	.246	.213	
	14	.247	.252	.260	.271	.261	.242	.237	.239	.204	.180	.175	.167	.228	
	15	.177	.180	.179	.172	.167	.173	.166	.162	.181	.172	.176	.158	.172	
	16	.154	.142	.134	.127	.129	.125	.114	.092	.094	.093	.089	.087	.115	
	17	.078	.072	.084	.082	.080	.076	.075	.070	.069	.061	.067	.072	.074	
	18	.073	.081	.082	.088	.078	.076	.083	.079	.081	—	—	—	—	
	19	—	—	—	—	—	—	—	—	—	.088	.092	.088	.082	
	20	.080	.078	.080	.079	.075	.075	.075	.080	.071	.083	.077	.077	.077	
	21	.067	.057	.062	.065	.070	.069	.065	.070	.065	.067	.066	.064	.065	
	22	.059	.061	.077	.082	.087	.104	.112	.109	.116	.109	.116	.105	.095	
	23	.132	.157	.175	.174	.177	.206	.218	.221	.206	.190	.168	.116	.178	
	24	.108	.104	.107	.116	.117	.121	.120	.120	.125	—	—	—	—	
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	—	—	—	—	
	26	—	—	—	—	—	—	—	—	—	.088	.087	.096	.109	
	27	.109	.112	.128	.130	.137	.123	.128	.128	.128	.136	.142	.143	.129	
	28	.140	.144	.139	.136	.145	.135	.148	.155	.146	.147	.133	.133	.142	
	29	.125	.119	.132	.137	.150	.159	.146	.129	.137	.117	.130	.138	.135	
	30	.151	.164	.175	.161	.171	.179	.174	.179	.152	.144	.137	.134	.160	
	31	.126	.129	.131	.125	.105	.095	.087	.086	.101	.093	.098	.101	.106	
Hourly Means		.147	.148	.152	.155	.158	.159	.160	.158	.152	.149	.148	.146	.153	

<sup>a</sup> Christmas Day.



**METEOROLOGICAL JOURNAL.**

Mean Solar Time (Astronom. Reck <sup>s</sup> .)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.		Göttingen.		Direction.	Force.						
JANUARY.											
D.	H.	D.	H.				°	°	°	°	In.
1	02	1	08	—	Calm.	Densely clouded with cumuli, cumulo-strati, and haze - - -					
1	08	1	14	N.	Nearly calm.	Overcast with dense haze; snowing from 3 <sup>h</sup> to 8 <sup>h</sup> - - -	21.9	8.0	—	2.5	—
1	14	1	20	—	Calm.	Densely clouded with cumulo-strati and haze - - -					
1	20	2	02	—	Calm.	Overcast with dense haze - - - - - [30 <sup>m</sup> .					
2	02	2	08	S. W.	Light.	Overcast with dense haze; snowing slightly at intervals from 20 <sup>h</sup>	26.2	3.5	—	0.6	—
2	08	2	14	W. by N.	Moderate.	Overcast with dense haze; occasional heavy squalls of snow - -					
SUNDAY.											
3	14	3	20	W.	Very light.	Cleared suddenly at 13 <sup>h</sup> - - - - - [E. to W.	10.0	-6.4	—	-15.5	—
3	20	4	02	—	Calm.	Clear; a range of cumuli and cumulo-strati in S. horizon from					
4	02	4	08	N. W.	Light.	Clouded; cumuli, cirro-cumuli and haze, from N. W. - - -					
4	08	4	14	W. by S.	Light.	Densely clouded; cirro-cumuli and cirro-strati - - -	12.8 <sup>a</sup>	0.1	—	-7.1	—
4	14	4	20	—	Calm.	Overcast; cirri and haze; lunar halo, diam. about 40°, very					
4	20	5	02	N. W.	Very light.	Entirely overcast; cumuli and cirro-cumuli - [perfect.					
5	02	5	08	E. by N.	Light.	§ overcast; light cirrous haze; bank of cumulo-strati in S. horizon					
5	08	5	14	S. W.	Light.	Densely clouded; cirri and haze; a few particles of snow falling	35.6	4.5	—	6.0	0.25
5	14	5	20	E. S. E.	Light.	Densely overcast; slight snow from 8 <sup>h</sup> 45 <sup>m</sup> - - - - -					
5	20	6	02	—	Calm.	Heavily overcast; snow ceased at 14 <sup>h</sup> 45 <sup>m</sup> - - - - -					
6	02	6	08	—	Calm.	Densely overcast; occasional drizzling rain - - - - -					
6	08	6	14	—	Calm.	Densely overcast; occasional drizzling rain - - - - -	40.9	34.8	—	34.6	1.90
6	14	6	20	—	Calm.	Overcast; dense haze; smart drizzling rain from 13 <sup>h</sup> - - -					
6	20	7	02	E. by N.	Light.	Heavy rain from 14 <sup>h</sup> 30 <sup>m</sup> - - - - -					
7	02	7	08	—	Calm.	Rain abated between 0 <sup>h</sup> and 2 <sup>h</sup> ; at 2 <sup>h</sup> again heavy; dense mist					
7	08	7	14	E. N. E.	Light.	Rain nearly ceased; clouds breaking and clearing in S. and S.W.	42.3	19.1	—	15.9	—
7	14	7	20	N. W.	Light.	Densely clouded; cirro-strati and haze - - - - -					
7	20	8	02	N. W.	Light.	Fair; overcast with cirro-cumuli; imperfect lunar halo at 18 <sup>h</sup> , diam.					
8	02	8	08	N. W.	Light.	Overcast; cirro-cumuli and cirrous haze - - - [about 40°					
8	08	8	14	N. W.	Light.	Densely clouded; cirro-cumuli and haze - - - - -	26.5	12.6	—	12.6	—
8	14	8	20	N. W.	Light.	Light cirri and cirro-cumuli occasionally covering the sky; fair -					
8	20	9	02	N. W.	Light.	Overcast; cirri and haze - - - - -					
9	02	9	08	N. W.	Light.	Overcast: dense cirri and haze - - - - -	27.5	21.2	—	12.7	—
9	08	9	14	N. E.	Light.	Densely overcast, very dark - - - - -					
SUNDAY.											
10	14	10	20	—	Calm.	Overcast; dense haze; very light drizzling rain - - - - -	30.1	23.2	—	22.4	—
10	20	11	02	N. E.	Light.	Heavy fall of snow, began at 18 <sup>h</sup> - - - - -					
11	02	11	08	N. E.	Light.	Sleet since 22 <sup>h</sup> 30 <sup>m</sup> - - - - -					
11	08	11	14	N.	Light.	Densely clouded; light snow - - - - -	33.2	24.1	—	— <sup>b</sup>	— <sup>c</sup>
11	14	11	20	—	Calm.	Clear in zenith; bank of clouds round N. & E. hor.: snow ceased					
11	20	12	02	—	Calm.	Nearly overcast; cumuli; snow from 15 <sup>h</sup> 30 <sup>m</sup> to 19 <sup>h</sup> [about 13 <sup>h</sup> .					
12	02	12	08	N. W.	Light.	Overcast; cirri and haze - - - - -					
12	08	12	14	N. W.	Light.	Partially clouded round horizon - - - - -	33.6	12.5	—	12.5	—
12	14	12	20	—	Calm.	Overcast with haze; lunar halo, diam. about 43° - - - - -					
12	20	13	02	—	Calm.	Overcast with light cirrous haze - - - - -					
13	02	13	08	N. E.	Light.	Overcast with very dense haze - - - - -					
13	08	13	14	N. W.	Light.	Slight snow, began at 14 <sup>h</sup> 30 <sup>m</sup> - - - - -	28.5	19.0	—	17.7	—
13	14	13	20	N. E.	Light.	Densely clouded; heavy bank of strati round S. and E. horizons					
13	20	14	02	E. N. E.	Light.	Overcast with haze; cumuli in S.W. horizon; very slight snow					
14	02	14	08	N. E.	Moderate.	Overcast with dense haze; snowing slightly at intervals since 20 <sup>h</sup>					
14	08	14	14	E. N. E.	Moderate.	Densely clouded; moderate snow since 2 <sup>h</sup> - - - - -	34.2	24.6	—	22.9	— <sup>c</sup>
14	14	14	20	E.	Very light.	Moderate snow from 8 <sup>h</sup> to 13 <sup>h</sup> ; dense haze; heavy clouds in S.					
14	20	15	02	—	Calm.	Densely clouded; drizzling rain since 14 <sup>h</sup> [hor.; drizzling rain					
15	02	15	08	S.	Light.	Densely overcast; cirro-cumuli and strati passing rapidly from S.W.					
15	08	15	14	—	Calm.	Bank of strati in S. and N. hor.; zenith perfectly clear [across zen.	37.4	21.4	—	14.1	—
15	14	15	20	—	Calm.	Densely overcast; very thick mist - - - - -					
15	20	16	02	S. E.	Light.	Partially overcast with light streaky cirri; fair - - - - -					
16	02	16	08	—	Calm.	Overcast with dense haze - - - - -	39.8	32.7	—	26.6	—
16	08	16	14	S. E.	Light.	Overcast with dense haze - - - - -					
SUNDAY.											
17	14	17	20	N. W.	Moderate.	Clear - - - - - [horizon	37.5	0.7	—	-1.2	—
17	20	18	02	W. by S.	Moderate.	Clear, except at intervals; light cumuli and cirro-cumuli in S.					
18	02	18	08	W. N. W.	Moderate.	Fresh gusts; detached masses of cumuli. Fair - - - - -					
18	08	18	14	W. S. W.	Moderate.	Range of cumuli and cumulo-strati in S. horizon; wind in gusts	6.2	0.8	—	-4.6	—
18	14	18	20	N. W.	Brisk.	Fresh gusts; clear; faint auroral light in North - - - - -					
18	20	19	02	—	Calm.	Clear, except a low bank of cumuli in S. and S.E. horizons -					

<sup>a</sup> Highest observation of the standard.

<sup>b</sup> Index entangled.

<sup>c</sup> No rain recorded.



Mean Solar Time <sup>1</sup> (Astronom <sup>1</sup> . Reck <sup>2</sup> ).		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.	
Toronto.	Göttingen.	Direction.	Force.							
<b>JANUARY.</b>										
D.	H.	D.	H.							
19	02	19	08	—	Calm.	Overcast; haze and cirro-cumuli; range of cumulo-strati in S. E.	°	°	°	In.
19	08	19	14	—	Calm.	Haze round horizon; zenith clearing - - - [horizon	16·2	2·6	—	-1·4
19	14	19	20	N. N. W.	Light.	Overcast; dense haze - - - [S. horizon from E.				
19	20	20	02	W.	Light.	Overcast; dense haze and cirro-cumuli. Scud passing rapidly in				
20	02	20	08	N. E.	Brisk.	Wind shifted suddenly at 20 <sup>h</sup> 45 <sup>m</sup> and freshened; snow, com-				
20	08	20	14	S. E.	Brisk.	Heavily overcast; snowing; wind in gusts - [menced at 1 <sup>h</sup> 15 <sup>m</sup>	30·9	16·6	—	16·6
20	14	20	20	S. E.	Moderate.	Snowing slightly. Temp. of soil 3 ft. deep, 34°·2; 6 ft. deep, 38°·2				
20	20	21	02	E.	Light.	Densely clouded; snow ceased at 18 <sup>h</sup> . Surface water of the lake 32°				
21	02	21	08	N. W.	Light.	Densely overcast; cirri and haze; cumuli round horizon				
21	08	21	14	—	Calm.	Densely overcast - - - - -	32·1	24·9	—	22·5
21	14	21	20	—	Calm.	Densely overcast; very dark - - - - -				
21	20	22	02	—	Calm.	Overcast; cumuli and cumulo-strati - - - - -				
22	02	22	08	—	Calm.	Densely clouded; cumuli and haze; very dark in S. - - - - -				
22	08	22	14	—	Calm.	Very densely clouded and dark; spitting rain - - - - -	28·0	23·9	—	22·1
22	14	22	20	—	Calm.	Densely clouded; very dark in S. - - - - -				
22	20	23	02	—	Calm.	Densely clouded, with cirrous haze - - - - -				
23	02	23	08	N. W.	Very light.	Densely clouded, with cirrous haze - - - - -	32·3	27·0	—	26·4
23	08	23	14	—	Calm.	Densely clouded - - - - -				
<b>SUNDAY.</b>										
24	14	24	20	—	Calm.	Partially clouded; $\frac{1}{2}$ clear in zenith; faint auroral light in N.	36·5	25·0	—	15·7
24	20	25	02	—	Calm.	Densely clouded; light snow - [horizon since 11 <sup>h</sup> 30 <sup>m</sup>				
25	02	25	08	—	Calm.	Densely clouded; cumuli and cumulo-strati - - - - -				
25	08	25	14	W. S. W.	Light.	Densely clouded and very dark - - - - -	33·5	13·1	—	6·8
25	14	25	20	—	Calm.	Clear; faint auroral light in N. - - - - -				
25	20	26	02	N. W.	Very light.	Light cirri and haze overspreading the sky - - - - -				
26	02	26	08	S. by E.	Light.	Overcast with dense cirri, strati, and haze; slight snow from 0 <sup>h</sup> 30 <sup>m</sup>				
26	08	26	14	—	Calm.	Clouded; rain at 7 <sup>h</sup> 15 <sup>m</sup> - - - - -	38·7	17·3	—	12·9
26	14	26	20	S.	Very light.	Densely clouded - - - - -				
26	20	27	02	—	Calm.	Clouds breaking up; fair - - - - -				
27	02	27	08	N. W.	Nearly calm.	Densely clouded; cirro-strati and cumulo-strati - - - - -				
27	08	27	14	N. W.	Very light.	Heavily clouded - - - - -	40·2	28·1	—	22·9
27	14	27	20	—	Calm.	Partially clouded; stars dimly visible in zenith - - - - -				
27	20	28	02	—	Calm.	Partially clouded with cirro-cumuli; clearing rapidly				
28	02	28	08	S. W.	Light.	Partially clouded; strati, cirro-cumuli and cirri; clear patches in				
28	08	28	14	—	Calm.	Clear; surface water of the lake 32°·0. - - - [zenith	37·3	20·9	—	13·4
28	14	28	20	N. W.	Very light.	Overcast; dense haze - - - - -				
28	20	29	02	—	Calm.	Overcast; dense haze - - - - -				
29	02	29	08	N. E.	Light.	Snow commenced at 22 <sup>h</sup> 30 <sup>m</sup> - - - - -				
29	08	29	14	S. S. E.	Light.	Overcast; dense haze - - - - -	34·4	29·5	—	25·1
29	14	29	20	S. W.	Brisk.	Cumuli scattered round horizon; zenith clear from 12 <sup>h</sup> - - -				
29	20	30	02	W.	Brisk.	Partially clouded; fair; wind in gusts - - - - -				
30	02	30	08	W.	Brisk.	Clouded; cumuli and cumulo-strati interspersed with clear patches				
30	08	30	14	N. W.	Light.	Partially overcast; light cirro-cumuli passing from N. W. -	31·7	25·0	—	15·0
<b>SUNDAY.</b>										
31	14	31	20	N. W.	Moderate.	Overcast; cirro-cumuli and strati - - - - -	40·7	15·3	—	15·3
31	20	1	02	N.	Light.	Overcast; cumuli, cumulo-strati, and haze - - - - -				
<b>FEBRUARY.</b>										
1	02	1	08	N. E.	Moderate.	Overcast; dense cirrous haze; slight snow from 1 <sup>h</sup> 40 <sup>m</sup> - - -				
1	08	1	14	N.	Very light.	Densely clouded; cirro-cumuli; snow ceased at 7 <sup>h</sup> [11 <sup>h</sup> 15 <sup>m</sup>	17·2	9·4	—	5·6
1	14	1	20	—	Calm.	Clouded; light cirri and cirro-cumuli; lunar halo from 8 <sup>h</sup> 30 <sup>m</sup> to				
1	20	2	02	—	Calm.	Partially clouded; cirro-cumuli and cumulo-strati $\frac{1}{2}$ - - -				
2	02	2	08	S. E.	Light.	Densely clouded; cumulo-strati and haze - - - - -				
2	08	2	14	S. W.	Fresh.	Densely clouded; cirro-cumuli and cumulo-strati; wind shifted				
						at 2 <sup>h</sup> 30 <sup>m</sup> and freshened; a smart shower of snow at 6 <sup>h</sup> 30 <sup>m</sup> -	35·7	12·7	—	8·7
2	14	2	20	N. W.	Very light.	$\frac{3}{4}$ clouded with cirro-cumuli; clearing rapidly from N. W.; wind				
						shifted at 12 <sup>h</sup> 30 <sup>m</sup> - - - - -				
2	20	3	02	N. W.	Moderate.	Squally; overcast with cirro-cumuli; light snow; clear at 16 <sup>h</sup> ,				
						and partly so at 18 <sup>h</sup> - - - - -				
3	02	3	08	W.	Moderate.	Partially clouded; cirro-cumuli - - - - -				
3	08	3	14	W.	Nearly calm.	Clouded; cirro-cumuli and haze - - - - -				
3	14	3	20	N. W.	Light.	Densely clouded, with haze - - - - -	20·7	13·9	—	13·0
3	20	4	02	W. by S.	Moderate.	At 19 <sup>h</sup> 45 <sup>m</sup> entirely clouded with cirro-cumuli; the clouds rose as				
						a curtain, and at 20 <sup>h</sup> 15 <sup>m</sup> the whole of the S. W. hemisphere was				
						perfectly clear; wind in gusts - - - - -				

\* No rain recorded.

Mean Solar Time (Astronom. Reck.)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.	Göttingen.	Direction.	Force.						
<b>FEBRUARY.</b>									
D.	H.	D.	H.						In.
4	02	4	08	W. by S.	Light.				
4	08	4	14	—	Calm.				
4	14	4	20	—	Calm.				
4	20	5	02	S. E.	Light.				
5	02	5	08	S. E.	Light.				
5	08	5	14	—	Calm.				
5	14	5	20	—	Calm.				
5	20	6	02	—	Calm.				
6	02	6	08	—	Calm.				
6	08	6	14	—	Calm.				
<b>SUNDAY.</b>									
7	14	7	20	—	Calm.				
7	20	8	02	N. E.	Very light.				
8	02	8	08	—	Calm.				
8	08	8	14	—	Calm.				
8	14	8	20	E.	Brisk Gale.				
8	20	9	02	S. E.	Light.				
9	02	9	08	S. S. W.	Light.				
9	08	9	14	S. W.	Light.				
9	14	9	20	N. W.	Very light.				
9	20	10	02	S. W.	Moderate.				
10	02	10	08	W.	Brisk.				
10	08	10	14	N. W.	Light.				
10	14	10	20	N. W.	Moderate.				
10	20	11	02	W.	Light.				
11	02	11	08	W.	Light.				
11	08	11	14	W.	Light.				
11	14	11	20	—	Calm.				
11	20	12	02	W.	Moderate.				
12	02	12	08	W.	Moderate.				
12	08	12	14	W.	Light.				
12	14	12	20	—	Calm.				
12	20	13	02	—	Calm.				
13	02	13	08	W. by N.	Light.				
13	08	13	14	N. W.	Light.				
<b>SUNDAY.</b>									
14	14	14	20	—	Calm.				
14	20	15	02	—	Calm.				
15	02	15	08	—	Calm.				
15	08	15	14	N. W.	Light.				
15	14	15	20	—	Calm.				
15	20	16	02	N. W.	Very light.				
16	02	16	08	W. by S.	Light.				
16	08	16	14	S.	Light.				
16	14	16	20	S. E.	Light.				
16	20	17	02	N. E.	Moderate.				
17	02	17	08	N. E.	Light.				
17	08	17	14	N. E.	Light.				
17	14	17	20	N. E.	Very light.				
17	20	18	02	—	Calm.				
18	02	18	08	S.	Light.				
18	08	18	14	S. W.	Light.				
18	14	18	20	—	Calm.				
19	20	19	02	W. by S.	Light.				
19	02	19	08	N.	Fresh.				
19	08	19	14	N. by W.	Light.				
19	14	19	20	—	Calm.				
19	20	20	02	—	Calm.				
20	02	20	08	S. W.	Moderate.				
20	08	20	14	S. W.	Light.				

\* No rain recorded.

Mean Solar Time (Astronom'. Recks').				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.		Göttingen.		Direction.	Force.						
<b>FEBRUARY.</b>											
<b>SUNDAY.</b>											
D.	H.	D.	H.								In.
21	14	21	20	—	Calm.	Overcast with cirro-cumuli, interspersed with clear patches	42·9	29·7	—	23·0	—
21	20	22	02	S.	Nearly calm.	Partially clouded, cirro-cumuli; clouds passing rapidly from S. W.					
22	02	22	08	S. by W.	Moderate.	{ Clouded with light cirri and haze, clear spaces in S. hor.; at 3 <sup>h</sup> 45 <sup>m</sup> solar halo, diameter 25°, at 4 <sup>h</sup> diam. increased to 35°					
22	08	22	14	S. W.	Moderate.	Densely clouded and very dark; a few very heavy drops of rain	44·1	12·1	—	9·8	—
22	14	22	20	S. W.	Moderate.	{ Clear in zenith and south, otherwise densely clouded with cirro-cumuli					
22	20	23	02	N. by W.	Fresh.	Heavy squalls; cumuli passing across zenith, otherwise clear					
23	02	23	08	N.	Light.	{ $\frac{1}{2}$ clear to N., light cirri dispersed about; solar halo from 0 <sup>h</sup> to 1 <sup>h</sup> , diameter about 30°	16·2	9·3	—	2·0	—
23	08	23	14	N.	Light.	A few cumulo-strati in N. hor.; bank of strati in S. hor.; zenith					
23	14	23	20	N.	Light.	Densely clouded [clear; auroral light in N.					
23	20	24	02	N.	Nearly calm.	Clear, except light cirri in zenith, and cumulo-strati in horizon					
24	02	24	08	—	Calm.	Clear					
24	08	24	14	S.	Moderate.	Clear	29·8	12·0	—	7·0	—
24	14	24	20	—	Calm.	Clear; bank of auroral light in N. hor. from 10 <sup>h</sup>					
24	20	25	02	S. W.	Light.	Clouded, cirro-cumuli; bright spaces appearing occasionally					
25	02	25	08	S. by W.	Moderate.	Bank of cumulo-strati in S. horizon; zenith clear; fair					
25	08	25	14	—	Calm.	Overcast with masses of cumuli and cirro-cumuli	38·0	16·7	—	10·6	—
25	14	25	20	—	Calm.	Dense bank of strati in S. horizon; remainder clear					
25	20	26	02	—	Calm.	$\frac{1}{2}$ overcast with cirro-cumuli and cirro-strati generally over the sky					
26	02	26	08	—	Calm.	Overcast; light cirri and haze					
26	08	26	14	S. W.	Very light.	Overcast with light haze; lunar halo at 8 <sup>h</sup> 30 <sup>m</sup> , diameter about 30°	38·2	17·9	—	13·0	—
26	14	26	20	—	Calm.	Clearing in zenith, remainder covered with haze					
26	20	27	02	S. W.	Light.	Overcast with light cirri and cirro-cumuli; a few breaks					
27	02	27	08	W. S. W.	Moderate.	Partially clouded, with detached cumuli passing rapidly to E.					
27	08	27	14	—	Calm.	Clouded; cirro-cumuli; stars visible in zenith, very dark round the [horizon.	41·4	20·2	—	12·8	—
<b>SUNDAY.</b>											
28	14	28	20	—	Calm.	[Surface water of the lake 34°·0.	36·9	23·2	—	17·6	—
28	20	1	02	S. W.	Light.	Clear. Temperature of soil three feet deep 33°·8; six feet deep 37°·2.					
<b>MARCH.</b>											
1	02	1	08	W. by S.	Light.	Clouded; cumuli and cirro-cumuli					
1	08	1	14	N. W.	Light.	Clouded; cirro-cumuli and haze	38·0	10·2	—	5·8	—
1	14	1	20	N.	Light.	Overcast; cirro-cumuli					
1	20	2	02	N. N. E.	Very light.	Clear, except strati in S. horizon					
2	02	2	08	S. W.	Light.	Clear, except light cirri round N. W. and S. horizons					
2	08	2	14	—	Calm.	Clear [patches.	26·3	12·5	—	7·8	—
2	14	2	20	N. by E.	Light.	Clouded; cumuli-strati and cirro-cumuli, interspersed with clear					
2	20	3	02	N. E.	Light.	Partially clouded; detached cirro-cumuli; fair					
3	02	3	08	N.	Light.	Light cirro-cumuli dispersed; fair					
3	08	3	14	—	Calm.	Overcast; cirro-cumuli, interspersed with clear patches; marled	30·7	16·5	—	13·2	—
3	14	3	20	N.	Light.	Densely overcast; cirri and cirro-cumuli [sky					
3	20	4	02	N. N. E.	Light.	Clouded; detached cirro-cumuli passing from W.					
4	02	4	08	N. by W.	Light.	Densely clouded; cirro-cumuli, interspersed with clear patches					
4	08	4	14	N. by W.	Moderate.	Clear	27·3	6·5	—	-3·8	—
4	14	4	20	—	Calm.	Clear					
4	20	5	02	N. F.	Light.	Clear; light cirri in zenith, and cirro-cumuli in S. horizon					
5	02	5	08	E.	Light.	Overcast; cirri and haze; solar halo from 22 <sup>h</sup> to 2 <sup>h</sup> 30 <sup>m</sup> , diameter					
5	08	5	14	E.	Moderate.	Overcast with dense haze; wind freshening [about 30°	27·2	10·9 <sup>a</sup>	—	9·0	—
5	14	5	20	E. by S.	Brisk.	Densely clouded; moderate snow; wind in squalls					
5	20	6	02	S. E.	Brisk.	Slight snow since 14 <sup>h</sup> ; scud passing rapidly from S. E.; heavy squalls					
6	02	6	08	E.	Brisk.	Densely clouded; cirro-cumuli, cirro-strati, and haze; fresh squalls					
6	08	6	14	N. E.	Moderate.	{ Densely clouded; squally; snow from 3 <sup>h</sup> 20 <sup>m</sup> to about 12 <sup>h</sup> ; about 12 inches deep at 20 <sup>h</sup>	28·9	23·3	—	22·0	— <sup>b</sup>
<b>SUNDAY.</b>											
7	14	7	20	—	Calm.	Overcast with dense haze; slight snow falling	32·1	25·0	—	22·0	—
7	20	8	02	N.	Light.	Overcast; cirro-cumuli; clearing from N.; fair; wind in puffs					
8	02	8	08	N. W.	Very light.	Densely clouded; cumulo-strati and haze					
8	08	8	14	W.	Moderate.	Overcast with dense haze; slight snow	33·2	7·8	—	7·8	—
8	14	8	20	N. W.	Light.	$\frac{1}{2}$ overcast; cirro-cumuli [parhelia from 1 <sup>h</sup> to 1 <sup>h</sup> 45 <sup>m</sup>					
8	20	9	02	—	Calm.	Clear, except occasional light scattered cirri; remarkable halo and					

<sup>a</sup> Lowest observation of the standard thermometer.

<sup>b</sup> No fall recorded.

Mean Solar Time (Astronom'. Reck <sup>s</sup> ).		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.
Toronto.	Göttingen.	Direction.	Force.						
<b>MARCH.</b>									
D.	H.	D.	H.						In.
9	02	9	08	S. W.	Light.				
9	08	9	14	—	Calm.	37·1	17·9	—	8·3
9	14	9	20	N. by W.	Light.				
9	20	10	02	N.	Light.				
10	02	10	08	S. S. E.	Light.				
10	08	10	14	S.	Very light.	29·6	4·3	—	4·3
10	14	10	20	—	Calm.				
10	20	11	02	—	Calm.				
11	02	11	08	N. by E.	Light.				
11	08	11	14	—	Calm.				
11	14	11	20	N.	Very light.	32·4	8·6	—	0·6
11	20	12	02	N. E.	Light.				
12	02	12	08	N. E.	Brisk.				
12	08	12	14	E.	Brisk.				
12	14	12	20	E.	Brisk.	32·6	20·1	—	19·4
12	20	13	02	N. E.	Light.				
13	02	13	08	N. by E.	Light.				
13	08	13	14	—	Calm.	32·1	26·9	—	19·5
<b>SUNDAY.</b>									
14	14	14	20	N. by W.	Light.	28·7	6·7	—	—
14	20	15	02	N. by W.	Light.				
15	02	15	08	—	Calm.				
15	08	15	14	N. E.	Very light.	25·9	6·0°	—	7·8
15	14	15	20	N. E.	Light.				
15	20	16	02	N. E.	Moderate.				
16	02	16	08	N. E.	Light.				
16	08	16	14	N. by E.	Light.	26·5	4·6	—	6·4
16	14	16	20	N. N. E.	Light.				
16	20	17	02	N. by E.	Light.				
17	02	17	08	S.	Nearly calm.				
17	08	17	14	—	Calm.	32·2	2·3	—	6·4
17	14	17	20	N. E.	Light.				
17	20	18	02	N. E.	Very light.				
18	02	18	08	S.	Very light.				
18	08	18	14	—	Calm.	38·8	13·2°	—	10·8
18	14	18	20	S.	Very light.				
18	20	19	02	S.	Nearly calm.				
19	02	19	08	S.	Nearly calm.				
19	08	19	14	S.	Nearly calm.	47·0	32·1°	—	30·9
19	14	19	20	S. by W.	Nearly calm.				
19	20	20	02	—	Calm.				
20	02	20	08	W. S. W.	Light.				
20	08	20	14	N. E.	Light.	54·0	26·9	—	16·9
<b>SUNDAY.</b>									
21	14	21	20	—	Calm.	37·1	27·2	—	20·2
21	20	22	02	E.	Brisk.				
22	02	22	08	E.	Moderate.				
22	08	22	14	E.	Moderate.	40·5	33·8	—	30·0
22	14	22	20	E. S. E.	Light.				0·25
22	20	23	02	—	Calm.				
23	02	23	08	W.	Moderate.				
23	08	23	14	W. S. W.	Light.	41·5	32·7	—	21·5
23	14	23	20	S. W.	Light.				0·05
23	20	24	02	W. S. W.	Light.				
24	02	24	08	S. W.	Light.				
24	08	24	14	—	Calm.	47·5	36·7	—	32·0
24	14	24	20	W. S. W.	Light.				0·08
24	20	25	02	S. E.	Light.				
25	02	25	08	N. by E.	Light.				
25	08	25	14	N. E.	Light.	43·6	36·7	—	32·0
25	14	25	20	N. E.	Light.				0·16
25	20	26	02	—	Calm.				

\* No fall recorded.

<sup>b</sup> Details of this Aurora are given in the Volume of Disturbance Observations, Part I., p. 47.

<sup>c</sup> Lowest observation of the standard.

Mean Solar Time (Astronom. Reck.)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.		
Toronto.	Göttingen.	Direction.	Force.								
<b>MARCH.</b>											
D.	H.	D.	H.						In.		
26	02	26	08	E. by S.	Light.	Overcast with light cirro-cumuli and cirri; fair	°	°	°	°	In.
26	08	26	14	N. E.	Light.	Clear	54·6	36·2	—	31·0	} 0·50
26	14	26	20	—	Calm.	Overcast with haze; stars dimly visible in zenith	40·8 <sup>a</sup>	36·2	—	32·4	
26	20	27	02	—	Calm.	Densely clouded; moderate rain since 18 <sup>h</sup> 10 <sup>m</sup>					
27	02	27	08	E.	Light.	Densely overcast, cirri and haze; rain occasionally since 20 <sup>h</sup>					
27	08	27	14	E.	Light.	Densely clouded; slight rain since 7 <sup>h</sup>					
<b>SUNDAY.</b>											
28	14	28	20	E.	Brisk.	Hail or snow from 13 <sup>h</sup> 30 <sup>m</sup>	43·4	30·1	—	27·0	—
28	20	29	02	E.	Brisk.	Drift or snow without intermission from 13 <sup>h</sup> 30 <sup>m</sup> ; heavy squalls	32·8	22·2	—	21·0	—
29	02	29	08	E.	Moderate.	Densely overcast; slight snow continuing					
29	08	29	14	N.	Moderate.	Heavy snow since 2 <sup>h</sup> , but abating	31·8 <sup>a</sup>	13·4	—	4·3	—
29	20	30	02	N. N. E.	Moderate.	Light cirro-strati in zenith, banks of strati round horizon					
30	02	30	08	S. E.	Nearly calm.	Bank of cumulo-strati in S. horizon; imperfect solar halo at 22 <sup>h</sup>	39·7	27·0	—	26·0	0·12
30	08	30	14	S. S. E.	Nearly calm.	Clear					
30	14	30	20	—	Calm.	Clear	43·2	34·0	—	26·0	0·47
30	20	31	02	—	Calm.	Sky overspread with light cirro-strati; fair					
31	02	31	08	S.	Light.	{ Overcast, light cirri and haze; bright and perfect solar halo from 22 <sup>h</sup> 30 <sup>m</sup> , diameter about 35°; fair	43·2 <sup>a</sup>	27·8	—	16·0	—
31	08	31	14	S. W.	Nearly calm.	Moderate snow since 5 <sup>h</sup> 15 <sup>m</sup> , began to abate at 8 <sup>h</sup> 10 <sup>m</sup>					
31	14	31	20	—	Calm.	Densely clouded, fog [rapidly from W.]	43·2 <sup>a</sup>	32·9	—	30·1	—
31	20	1	02	S. S. W.	Light.	Partially clouded, large detached masses of cirro-cumuli passing					
<b>APRIL.</b>											
1	02	1	08	W.	Light.	Clouded; very heavy masses of cumuli and cirro-cumuli with clear	47·1	38·2	—	24·0	—
1	08	1	14	N. W.	Light.	Densely clouded with cirro-cumuli - [patches; fair.					
1	14	1	20	—	Calm.	Overcast; detached masses of cirro-cumuli and haze	43·9	26·4	—	16·0	0·05
1	20	2	02	—	Calm.	Overcast with haze; fair [commenced at 1 <sup>h</sup> 15 <sup>m</sup>					
2	02	2	08	N. W.	Light.	¾ overcast; cirri and haze; clear in W. and N. W.; slight rain	49·3	27·3	—	18·5	—
2	08	2	14	N. W.	Moderate.	¼ clouded; cirro-cumuli in horizon, and detached masses passing					
2	14	2	20	N. W.	Light.	Clear - [across the zenith; wind in gusts	43·2	34·0	—	26·0	0·47
2	20	3	02	S. W.	Very light.	Clear -					
3	02	3	08	W.	Light.	Detached cirro-cumuli dispersed over the sky	43·2 <sup>a</sup>	27·8	—	16·0	—
3	08	3	14	—	Calm.	Partially overcast; very light cirri in parallel ridges from E. to W.					
<b>SUNDAY.</b>											
4	14	4	20	N. N. W.	Light.	Clear	41·7	27·7	—	16·5	—
4	20	5	02	N. W.	Moderate.	Partially clouded; cirro-cumuli passing rapidly from N. W.					
5	02	5	08	N. by W.	Light.	Densely overcast with cumulo-strati and cumuli; clear in N. and N. W. horizon	45·7 <sup>a</sup>	32·3	—	25·9	—
5	08	5	14	—	Calm.	Light cirro-strati dispersed round horizon, otherwise perfectly clear					
5	14	5	20	—	Calm.	Overcast with dense cirro-cumuli and haze	43·4 <sup>a</sup>	27·8	—	16·0	—
5	20	6	02	N.	Very light.	Clear					
6	02	6	08	W. S. W.	Light.	Partially clouded; light cirri and cirro-cumuli	43·2 <sup>a</sup>	32·9	—	30·1	—
6	08	6	14	W. by S.	Light.	Overcast; light haze					
6	14	6	20	—	Calm.	Overcast; very dense haze; moon invisible (nearly full)	40·2	24·7	—	18·0	—
6	20	7	02	W. by S.	Light.	Overcast with cirro-strati and cirrous haze					
7	02	7	08	S. W.	Nearly calm.	Overcast; haze and cirro-strati	34·3 <sup>a</sup>	19·9	—	12·3	—
7	08	7	14	—	Calm.	Clear					
7	14	7	20	—	Calm.	Clear	35·6	26·1	—	19·0	—
7	20	8	02	W.	Very light.	Clear					
8	02	8	08	S. E.	Light.	¾ overcast with detached cirro-cumuli; fair	40·2	24·7	—	18·0	—
8	08	8	14	N.	Light.	Overcast with dense haze; very dark					
<b>GOOD FRIDAY.</b>											
9	14	9	20	N.	Light.	Overcast with light cirri and haze; lunar halo, diameter about 25°	34·3 <sup>a</sup>	19·9	—	12·3	—
9	20	10	02	N. E.	Very light.	Overcast with light cirro-strati; fair					
10	02	10	08	N. E.	Light.	Light cirri and detached cumuli dispersed over the sky	35·6	26·1	—	19·0	—
10	08	10	14	—	Calm.	Clear, except occasional very light cirri					
10	14	10	20	E.	Moderate.	Partially clouded with light cirro-cumuli	40·2	24·7	—	18·0	—
10	20	11	02	E.	Light.	Clouded; cirro-cumuli; fair					
11	02	11	08	S. E.	Light.	Densely clouded; cumulo-strati and haze	34·3 <sup>a</sup>	19·9	—	12·3	—
11	08	11	14	E. by N.	Light.	Partially clouded, chiefly to E. and S.					

Mean Solar Time (Astronom' Recks).		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr. Rad.	Rain.		
Toronto.	Göttingen.	Direction.	Force.								
<b>APRIL.</b>											
<b>SUNDAY.</b>											
D.	H.	D.	H.						In.		
12	14	12	20	—	Calm.	Densely clouded; strati and haze - - - [to 20 <sup>h</sup> 15 <sup>m</sup>	41·7 <sup>a</sup>	31·5	—	25·0	—
12	20	13	02	—	Calm.	Densely clouded; cumuli and haze; moderate snow from 19 <sup>h</sup> 15 <sup>m</sup>					
13	02	13	08	S.	Light.	¾ clouded with dense haze; cirro-cumuli rising in N. W.; heavy range of cumulo-strati in S. horizon - - -					
13	08	13	14	N. N. W.	Nearly calm.	Densely clouded; very slight drizzling rain - - -	45·5 <sup>a</sup>	31·3	—	12·1	—
13	14	13	20	N. by W.	Light.	Clear - - - - -					
13	20	14	02	N. N. W.	Brisk.	Clouded; masses of cirro-cumuli, with clear patches; heavy squalls					
14	02	14	08	N. N. W.	Brisk.	¾ overcast; detached cumuli and cumulo-strati - - -					
14	08	14	14	N. by W.	Brisk.	Clear - - - - -	38·4	23·9	—	12·1	—
14	14	14	20	—	Calm.	Clear - - - - -					
14	20	15	02	N. by W.	Very light.	Clear - - - - -					
15	02	15	08	S.	Light.	Clear - - - - -					
15	08	15	14	—	Calm.	Clear - - - - -	44·8 <sup>a</sup>	28·3	—	17·0	—
15	14	15	20	S. S. E.	Light.	¾ clouded; strati round horizon; remainder clear [breaking through					
15	20	16	02	S. E.	Very light.	Clouded; cirro-cumuli and light haze; occasional bright spaces					
16	02	16	08	S. S. E.	Nearly calm.	A few light cirri in S. W. and W. horizons; remainder clear -					
16	08	16	14	E.	Light.	Densely overcast; cumulo-strati and haze - - -	50·8 <sup>a</sup>	37·0	—	34·0	—
16	14	16	20	—	Calm.	Densely overcast; very dark - - - - -					
16	20	17	02	—	Calm.	Clouded; cirro-cumuli; fair - - - - -					
17	02	17	08	—	Calm.	Overcast; cirro-cumuli and haze; dense vapour rising from the lake	58·2	35·3	—	27·8	—
17	08	17	20	—	Calm.	Heavy rain from 7 <sup>h</sup> 50 <sup>m</sup> to 8 <sup>h</sup> 45 <sup>m</sup> ; at 8 <sup>h</sup> 45 <sup>m</sup> gusts from N. W.					
<b>SUNDAY.</b>											
18	14	18	20	—	Calm.	Clear; faint auroral light in N. - - - - -	37·1	26·2	—	13·9	—
18	20	19	02	S. W.	Light.	Clouded; light cirri and haze; complete solar halo, diam. about 20°					
19	02	19	08	W.	Brisk.	Clouded; dense cirro-cumuli and cirrous haze - - -					
19	08	19	14	N. N. W.	Light.	Low bank of strati in S. horizon, otherwise perfectly clear	52·7	30·1	—	22·0	—
19	14	19	20	—	Calm.	Light cirri and haze; faint bank of light in N. horizon - - -					
19	20	20	02	E.	Light.	Overcast; dense haze - - - - -					
20	02	20	08	E.	Moderate.	Slight snow from 22 <sup>h</sup> to 5 <sup>h</sup> 20 <sup>m</sup> - - - - -					
20	08	20	14	E. by N.	Light.	Densely overcast; cirri and haze - - - - -	35·5	28·0	—	22·0	—
20	14	20	20	N. E.	Light.	Clear - - - - -					
20	20	21	02	N. N. E.	Light.	Clear, except a range of strati extending along the S. horizon -					
21	02	21	08	S.	Light.	Clear, except a low bank of strati in S. E. horizon - - -					
21	08	21	14	N. W.	Light.	Clear - - - - -	50·0 <sup>a</sup>	31·3	—	24·0	—
21	14	21	20	N. W.	Light.	Clear; faint auroral light to N. - - - - -					
21	20	22	02	N.	Nearly calm.	Clear - - - - -					
22	02	22	08	S.	Very light.	Clear, except very light cirri in N. - - - - -					
22	08	22	14	—	Calm.	Clear. Temperature of soil 3 feet deep 96°·2; 6 feet deep 37°·5	53·3 <sup>a</sup>	31·1	—	19·0	—
22	14	22	20	—	Calm.	Clear. Surface water of the lake 41°·5 - - - - -					
22	20	23	02	Northerly.	Nearly calm.	Overcast with cirro-cumuli, but fair - - - - -					
23	02	23	08	S. E.	Nearly calm.	Densely clouded with cumulo-strati and haze - - -					
23	08	23	14	—	Calm.	Heavy bank of clouds in N. W.; light haze elsewhere - - -	54·0	43·3	—	37·0	—
23	14	23	20	—	Calm.	Clear, except light haze in zenith and cirro-strati round horizon -					
23	20	24	02	—	Calm.	Overcast; light cirro-strati and haze - - - - -					
24	02	24	08	S. E.	Nearly calm.	Light cirri dispersed over the sky - - - - -	62·0	41·2	—	38·0	—
24	08	24	14	—	Calm.	Overcast with light haze; scattered cirro-strati - - -					
<b>SUNDAY.</b>											
25	14	25	20	—	Calm.	Overcast; dense haze - - - - -	64·8.	44·2	—	38·0	—
25	20	26	02	—	Calm.	Overcast with cirro-cumuli, cumulo-strati, and haze; fair - - -					
26	02	26	08	S. by W.	Light.	Overcast; cirro-cumuli and haze; fair [horizon; wind in gusts					
26	08	26	14	N.	Moderate.	Heavy cumuli in S. E. passed from N. W.; cirro-cumuli round	61·8 <sup>a</sup>	31·1	—	21·0	—
26	14	26	20	—	Calm.	Clear, except a few strati in S. E.; auroral light in N. - - -					
26	20	27	02	N. W.	Brisk.	Partially clouded; masses of cumuli passing from N. W. - - -					
27	02	27	08	N. N. W.	Moderate.	Clear, except a few detached cirro-cumuli; wind in brisk gusts -					
27	08	27	14	—	Calm.	Clear - - - - -					
27	14	27	20	N.	Light.	Clear - - - - -	52·5 <sup>a</sup>	27·9	—	19·0	—
27	20	28	02	—	Calm.	Partially clouded; light cirro-strati; range of cirro-strati in N. E.					
28	02	28	08	S. W.	Light.	Partially covered with very light cirri and haze; fair - [horizon					
28	08	28	14	—	Calm.	Clear - - - - -	61·4 <sup>a</sup>	32·1	—	21·0	—
28	14	28	20	S. by E.	Very light.	Clear - - - - -					
28	20	29	02	E.	Moderate.	Clouded; cirro-cumuli; fair - - - - -					

\* Highest observation of the standard.

Mean Solar Time (Astronom'. Reck <sup>s</sup> ).		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Terr'. Rad.	Rain.
Toronto.	Göttingen.	Direction.	Force.						
<b>APRIL.</b>									
D.	H.	D.	H.						In.
29	02	29	08	S. by E.	Brisk.				
29	08	29	14	S. by E.	Brisk.				
29	14	29	20	E. N. E.	Light.	48.8	40.9	37.4	0.84
29	20	30	02	N.	Moderate.				
30	02	30	08	N. N. W.	Brisk.				
30	08	30	14	N. W.	Moderate.	54.7	37.9	31.0	
30	14	30	20	N. N. W.	Moderate.				
30	20	1	02	N. W.	Moderate.				
<b>MAY.</b>									
1	02	1	08	W. by N.	Moderate.				
1	08	1	14	N. W.	Light.	53.3 <sup>a</sup>	31.7	22.0	
<b>SUNDAY.</b>									
2	14	2	20	—	Calm.	37.7	26.5	15.0	
2	20	3	02	N. by W.	Light.				
3	02	3	08	N. by E.	Moderate.				
3	08	3	14	—	Calm.				
3	14	3	20	N. N. W.	Very light.	40.3 <sup>a</sup>	27.1	12.0	
3	20	4	02	N.	Moderate.				
4	02	4	08	S.	Light.				
4	08	4	14	N.	Light.				
4	14	4	20	—	Calm.	49.9	28.0	17.0	
4	20	5	02	E. N. E.	Nearly calm.				
5	02	5	08	S. E.	Light.				
5	08	5	14	S. E.	Nearly calm.				
5	14	5	20	—	Calm.	48.8	36.7	33.0	0.12
5	20	6	02	N. W.	Light.				
6	02	6	08	W.	Light.				
6	08	6	14	W.	Light.				
6	14	6	20	—	Calm.	51.2	35.1	—	0.04
6	20	7	02	N. W.	Light.				
7	02	7	08	S.	Light.				
7	08	7	14	—	Calm.	54.0 <sup>a</sup>	29.2	18.9	
7	14	7	20	—	Calm.				
7	20	8	02	—	Calm.				
8	02	8	08	S. by E.	Light.				
8	08	8	14	—	Calm.	59.0 <sup>a</sup>	31.3	21.4	0.06
<b>SUNDAY.</b>									
9	14	9	20	E.	Light.				
9	20	10	02	E.	Light.	58.3	43.2	—	
10	02	10	08	N. E.	Moderate.				
10	08	10	14	N.	Moderate.	54.0	47.4	41.0	1.24
10	14	10	20	N. W.	Light.				
10	20	11	02	N. N. W.	Light.				
11	02	11	08	N. N. W.	Light.				
11	08	11	14	N. by W.	Light.	65.6	47.0	42.0	0.01
11	14	11	20	N. by W.	Light.				
11	20	12	02	N.	Light.				
12	02	12	08	W.	Light.				
12	08	12	14	N. N. W.	Light.	57.5	40.8	34.0	0.10
12	14	12	20	N.	Light.				
12	20	13	02	N.	Very light.				

<sup>a</sup> Highest observation of the standard.

Mean Solar Time (Astronom'. Reck'g.)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar. Rad.	Terr. Rad.	Rain.	
Toronto.	Göttingen.	Direction.	Force.							
MAY.										
D.	H.	D.	H.						In.	
13	02	13	08	N. by W.	Light.					
13	08	13	14	N. N. E.	Very light.	52.2	38.7	—	31.8	0.13
13	14	13	20	N. by W.	Light.					
13	20	14	02	N. by W.	Light.					
14	02	14	08	N. by W.	Moderate.	54.6	31.2	—	23.6	—
14	08	14	14	N. by W.	Light.					
14	14	14	20	—	Calm.					
14	20	15	02	S. W.	Nearly calm.					
15	02	15	08	S. E.	Very light.					
15	08	15	14	N. by E.	Nearly calm.	60.6	37.9	—	23.3	—
SUNDAY.										
16	14	16	20	S. by W.	Light.	64.3	47.3	—	—	—
16	20	17	02	N. by W.	Moderate.					
17	02	17	08	N.	Brisk.					
17	08	17	14	N. by W.	Light.	65.5	42.2	—	31.5	—
17	14	17	20	—	Calm.					
17	20	18	02	N. N. E.	Light.					
18	02	18	08	N.	Light.					
18	08	18	14	—	Calm.	64.6 <sup>a</sup>	41.5	—	32.0	—
18	14	18	20	N.	Light.					
18	20	19	02	N. E.	Very light.					
19	02	19	08	S. by E.	Very light.					
19	08	19	14	—	Calm.	65.8 <sup>a</sup>	35.5	—	28.1	—
19	14	19	20	—	Calm.					
19	20	20	02	S. E.	Nearly calm.					
20	02	20	08	—	Calm.					
20	08	20	14	—	Calm.	71.2 <sup>a</sup>	46.9	—	40.3	—
20	14	20	20	—	Calm.					
20	20	21	02	S. E.	Nearly calm.					
21	02	21	08	—	Calm.					
21	08	21	14	—	Calm.					
21	14	21	20	—	Calm.	69.0	52.3	—	47.4	—
21	20	22	02	—	Calm.					
22	02	22	08	E. S. E.	Light.	68.0	53.3	—	50.1	0.02
22	08	22	14	—	Calm.					
SUNDAY.										
23	14	23	20	—	Calm.	74.4	56.9	—	55.0	0.15
23	20	24	02	—	Calm.					
24	02	24	08	—	Calm.					
24	08	24	14	—	Calm.	78.0	51.8	—	47.0	—
24	14	24	20	—	Calm.					
24	20	25	02	—	Calm.					
25	02	25	08	S. E.	Light.					
25	08	25	14	—	Calm.	72.1	52.3	—	46.9	0.45
25	14	25	20	—	Calm.					
25	20	26	02	S. W.	Moderate.					

<sup>a</sup> Highest observation of the standard.



Mean Solar Time (Astronom. Recks).		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Ter. Rad.	Rain.
Toronto.	Göttingen.	Direction.	Force.						
<b>MAY.</b>									
D. H.	D. H.								In.
26 02	26 08	S. W.	Light.	Overcast with heavy masses of cumuli, interspersed with clear spaces.	°	°	°	°	—
26 08	26 14	—	Calm.	{ § clouded round horizon, with cirro-cumuli and strati; zenith	70·4	48·6	—	41·9	—
26 14	26 20	—	Calm.	{ partially clouded with light cirri - - - - -					
26 20	27 02	—	Calm.	{ Clear in zenith, clouded round horizon - - - - -					
27 02	27 08	S. E.	Light.	{ Clear; haze round horizon - - - - -					
27 08	27 14	—	Calm.	{ A few cumuli scattered round horizon, otherwise clear - - -					
27 14	27 20	—	Calm.	{ Haze round horizon, a few cirri in zenith - - - - -	71·6 <sup>a</sup>	45·4	—	33·8	—
27 20	28 02	S. E.	Nearly calm.	{ Clear - - - - -					
28 02	28 08	—	Calm.	{ Sky partially covered with light cirri - - - - -					
28 08	28 14	N.	Nearly calm.	{ Densely clouded with cirro-cumuli and cumulo-strati; slight					
28 14	28 20	Northerly.	Nearly calm.	{ showers of rain at 2 <sup>h</sup> 30 <sup>m</sup> - - - - -	78·0	49·2	—	35·2	0·02
28 20	29 02	N. by W.	Very light.	{ Clear, except a few cirri in zenith, and a light haze in S. horizon -					
29 02	29 08	S. E.	Very light.	{ Sky partially covered with detached cirri and cirro-cumuli -					
29 08	29 14	—	Calm.	{ A few cirri and light haze. Temperature of soil 3 feet deep 52° 8';					
				{ 6 feet deep 46° 2'. Surface water of the lake 66° 8' - - -					
				{ Clear, except a few streaks of cirri across zenith - - - - -					
				{ A few light cirro-strati in E., haze round hor.; otherwise perfectly	70·8 <sup>a</sup>	43·1	—	27·4	—
				{ [clear. - - - - -					
<b>SUNDAY.</b>									
30 14	30 20	—	Calm.	{ § clouded with strati in N. W.; otherwise clear - - - - -	66·7	39·2	—	27·1	—
30 20	31 02	S. E.	Light.	{ Clouded, but fair; cirro-cumuli in zenith, cumulo-strati round					
31 02	31 08	E. by N.	Light.	{ Clear - - - - - [horizon, very slight shower about 19 <sup>h</sup> 15 <sup>m</sup>					
31 08	31 14	—	Calm.	{ Low bank of strati round S. and W. hor.; otherwise perfectly clear.	69·3	47·8	—	37·4	—
31 14	31 20	—	Calm.	{ Clear - - - - -					
31 20	1 02	N. E.	Very light.	{ Very light cirri scattered in all directions; haze in horizon -					
<b>JUNE.</b>									
1 02	1 08	S. by E.	Light.	{ Overcast with light cirri and haze - - - - -					
1 08	1 14	N.	Light.	{ Clear; light haze round horizon - - - - -	75·5	48·0	—	39·3	—
1 14	1 20	N.	Nearly calm.	{ Clear - - - - -					
1 20	2 02	—	Calm.	{ Clear; haze in S. horizon - - - - -					
2 02	2 08	N. W.	Nearly calm.	{ Clear - - - - -					
2 08	2 14	N.	Light.	{ Clear - - - - -	78·5 <sup>a</sup>	50·6	—	38·5	—
2 14	2 20	N.	Light.	{ Clear - - - - -					
2 20	3 02	N.	Light.	{ Clear - - - - -					
3 02	3 08	S. S. E.	Very light.	{ Light cirri and haze in W. horizon; remainder perfectly clear -					
3 08	3 14	—	Calm.	{ Overcast with thin haze; cirro-strati and strati round N. and W.					
3 14	3 20	—	Calm.	{ horizons, and a few cirri in zenith - - - - -	68·7 <sup>a</sup>	47·6	—	38·7	—
3 20	4 02	—	Calm.	{ Overcast with cirro-cumuli - - - - -					
4 02	4 08	S. S. W.	Light.	{ Overcast with cirro-cumuli - - - - -					
4 08	4 14	S. by W.	Light.	{ Light flexuous cirri and haze overspreading the sky - - - - -					
4 14	4 20	—	Calm.	{ § overcast with very light cirri and cirro-strati - - - - -	79·5 <sup>a</sup>	59·6	—	49·4	—
4 20	5 02	S. Westerly.	Nearly calm.	{ A few cirro-cumuli rising in N.; remainder covered with light haze					
5 02	5 08	—	Calm.	{ Densely clouded cumuli and cirro-cumuli - - - - -					
5 08	5 14	—	Calm.	{ Overcast with dense cirro-cumulo-strati, cumulo-strati, and					
				{ cumuli; thunder at 1 <sup>h</sup> ; heavy shower at 1 <sup>h</sup> 15 <sup>m</sup> ; heavy thunder					
				{ from 2 <sup>h</sup> to 2 <sup>h</sup> 15 <sup>m</sup> ; clearing in N.W. - - - - -	82·5 <sup>a</sup>	56·7	—	49·1	0·17
				{ Clear in zenith; heavy masses of cumuli and haze in horizon;					
				{ distant thunder and lightning in S.W.; no rain since 2 <sup>h</sup> 15 <sup>m</sup> -					
<b>SUNDAY.</b>									
6 14	6 20	—	Calm.	{ Clear - - - - -	75·7	57·1	—	50·9	0·02
6 20	7 02	S. W.	Nearly calm.	{ Sky partially covered with flexuous cirri; air close - - - - -					
7 02	7 08	—	Calm.	{ Heavy masses of detached cumuli, interspersed with clear patches					
7 08	7 14	—	Calm.	{ Range of strati and cumulo-strati skirting horizon; zenith clear -	84·9	59·5	—	48·6	—
7 14	7 20	—	Calm.	{ Clear - - - - -					
7 20	8 02	S. Westerly.	Nearly calm.	{ Clear; light cirri scattered over the sky; fair - - - - -					
8 02	8 08	S. E.	Very light.	{ Heavy cumuli in N. horizon; light cirri passing across the zenith					
8 08	8 14	—	Calm.	{ Very heavy clouds rising in the W., light cirri and haze else-					
				{ where; distant thunder in N.W. at 7 <sup>h</sup> ; occasional thunder,					
				{ lightning, and rain from 8 <sup>h</sup> 50 <sup>m</sup> to 9 <sup>h</sup> 10 <sup>m</sup> ; wind W., light,	85·6	59·5	—	— <sup>b</sup>	0·05
				{ with heavy gusts - - - - -					
8 14	8 20	—	Calm.	{ Clear - - - - -					
8 20	9 02	N. W.	Brisk.	{ Clear, except low ranges of cumuli and cirro-strati skirting S. and					
				{ N. W. horizons; wind in squalls - - - - -					

<sup>a</sup> Highest observation of the standard.

<sup>b</sup> Terrestrial radiation thermometer broken.

Mean Solar Time (Astronom. Reck.)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
JUNE.							
D.	H.	D.	H.				In.
9	02	9	08	N. N. W.	Brisk.		
9	08	9	14	N.	Nearly calm.	79.7	51.5
9	14	9	20	—	Calm.		
9	20	10	02	—	Calm.		
10	02	10	08	S. S. W.	Nearly calm.		
10	08	10	14	—	Calm.		
10	14	10	20	—	Calm.	87.2 <sup>a</sup>	63.2
10	20	11	02	—	Calm.		
11	02	11	08	N. W.	Nearly calm.		
11	08	11	14	N. N. W.	Moderate.	78.8	46.3
11	14	11	20	N. E.	Light.		
11	20	12	02	N. E.	Light.		
12	02	12	08	E. by S.	Light.		
12	08	12	14	E.	Nearly calm.	64.8	54.0
SUNDAY.							
13	14	13	20	—	Calm.	69.8	55.2
13	20	14	02	E.	Light.		0.02
14	02	14	08	N. N. E.	Moderate.		
14	08	14	14	N.	Light.	69.1	52.5
14	14	14	20	N.	Very light.		
14	20	15	02	N. by W.	Brisk.		
15	02	15	08	N.	Brisk.		
15	08	15	14	N.	Moderate.	67.6 <sup>a</sup>	47.1
15	14	15	20	N. by W.	Light.		
15	20	16	02	N. by E.	Light.		
16	02	16	08	S. by W.	Light.		
16	08	16	14	—	Calm.	73.8 <sup>a</sup>	45.3
16	14	16	20	E. by N.	Light.		
16	20	17	02	N. E.	Nearly calm.		
17	02	17	08	E.	Nearly calm.		
17	08	17	14	E. by N.	Light.		
17	14	17	20	E. N. E.	Very light.	67.5	54.5
17	20	18	02	E. by N.	Moderate.		
18	02	18	08	E. by S.	Moderate.		
18	08	18	14	E.	Light.	67.2 <sup>a</sup>	50.1
18	14	18	20	—	Calm.		
18	20	19	02	—	Calm.		
19	02	19	08	S.	Light.		
19	08	19	14	—	Calm.	76.2 <sup>a</sup>	49.5
SUNDAY.							
20	14	20	20	E. by N.	Nearly calm.	70.9	55.0
20	20	21	02	E.	Moderate.		
21	02	21	08	E. by N.	Moderate.		
21	08	21	14	—	Calm.		
21	14	21	20	S. by E.	Nearly calm.	77.8	60.2
21	20	22	02	S. E.	Very light.		
22	02	22	08	E. S. E.	Light.		
22	08	22	14	S.	Very light.	80.0 <sup>a</sup>	64.1
22	14	22	20	—	Calm.		
22	20	23	02	—	Calm.		
23	02	23	08	S. S. W.	Light.		
23	08	23	14	—	Calm.	82.8	62.1
23	14	23	20	—	Calm.		
23	20	24	02	—	Calm.		
24	02	24	08	E.	Light.		
24	08	24	14	E.	Light.	75.5	59.8
24	14	24	20	E. by S.	Light.		
24	20	25	02	E.	Light.		
25	02	25	08	S. E.	Light.		
25	08	25	14	—	Calm.		
25	14	25	20	—	Calm.	75.8	59.8
25	20	26	02	E.	Nearly calm.		0.13

<sup>a</sup> Highest observation of the standard.

Mean Solar Time (Astronom. Recks.)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Göttingen.		Direction.	Force.				
<b>JUNE.</b>									
D.	H.	D.	H.						
26	02	26	08	—	Calm.	Overcast; cirro-cumuli and cirrous haze, air close and oppressive. [in N. W.]			In.
26	08	26	14	—	Calm.	Densely clouded; cirro-cumuli and cirro-strati, lightning and distant thunder	81·8	62·0	0·50
<b>SUNDAY.</b>									
27	14	27	20	—	Calm.	§ overcast with cirro-cumuli and strati, principally round horizon; zenith clear	81·3	60·1	0·03
27	20	28	02	—	Calm.	Clear			
28	02	28	08	S. S. W.	Very light.	Heavy masses of detached cumuli dispersed over the sky; air very close			
28	08	28	14	—	Calm.	Haze round horizon; zenith clear, brilliant sunset	86·0	63·3	—
28	14	28	20	—	Calm.	Unclouded; light haze, sheet lightning in N. W. horizon			
28	20	29	02	S. W.	Light.	Clouded; detached cirro-cumuli interspersed with clear patches; fair			
29	02	29	08	S. W. by W.	Moderate.	Fresh gusts; cirro-cumuli dispersed over the sky; dense cumulo-strati in N.			
29	08	29	14	S. W. by W.	Light.	Clear, except a few cirro-cumuli in N. hor. At 3 <sup>h</sup> 15 <sup>m</sup> , therm. 93°·1 [ & N. W.]	93·1	64·0	—
29	14	29	20	—	Calm.	§ clouded round horizon; cirri and cirro-strati; sheet lightning in N. W.			
29	20	30	02	—	Calm.	Thunder-storm, with very heavy rain and squalls from W. from 19 <sup>h</sup> 40 <sup>m</sup> to 20 <sup>h</sup> 5 <sup>m</sup>			
30	02	30	08	—	Calm.	{ Dense cumuli, cumulo-strati and cirro-cumuli, a few clear patches; distant thunder since 0 <sup>h</sup>			
30	08	30	14	S. by W.	Light.	{ Dense cumulo-strati, cirro-cumuli and cumuli; extremely vivid sheet and forked lightning at 7 <sup>h</sup> 40 <sup>m</sup> with loud thunder; heavy shower at 7 <sup>h</sup> 45 <sup>m</sup>	85·3 <sup>a</sup>	61·3	0·37
30	14	30	20	—	Calm.	Dense cirro-cumuli and cumulo-strati; distant thunder and lightning in S.			
30	20	1	02	—	Calm.	§ overspread with light cirro-strati and cirrous haze; fair. [and S.E. from 8 <sup>h</sup> to 15 <sup>h</sup>			
<b>JULY.</b>									
1	02	1	08	—	Calm.	Light strati and cirro-cumuli in S. and W. horizons			
1	08	1	14	N.	Nearly calm.	§ overcast with light cirro-strati and haze	81·2	54·1	—
1	14	1	20	N. by E.	Fresh.	Clear, except cirro-cumuli and cirro-strati in S. W. horizon; wind in gusts			
1	20	2	02	N. by E.	Nearly calm.	Light cirri and cirro-strati in N. E. and N. W. hor.; haze in S. hor.; zen. clear			
2	02	2	08	N. W.	Light.	Overspread with cirri and cirro-strati; solar halo at 22 <sup>h</sup>			
2	08	2	14	N.	Moderate.	Clear, except light strati round horizon	72·0	43·4	—
2	14	2	20	N.	Nearly calm.	Clear, except a small range of cirro-strati in south - [in S. horizon.			
2	20	3	02	N. by E.	Light.	Two parallel ranges of light cirro-cumuli from E. to W. across zenith; haze			
3	02	3	08	S. W.	Moderate.	§ clouded, with detached heavy masses of cumulo-strati and cirro-cumuli			
3	08	3	14	—	Calm.	Unclouded; light haze in horizon; showers, with thunder and lightning, at [9 <sup>h</sup> 30 <sup>m</sup> and 11 <sup>h</sup> ; lunar rainbow at 9 <sup>h</sup> 30 <sup>m</sup>	75·3	39·9	0·25
<b>SUNDAY.</b>									
4	14	4	20	—	Calm.	Clear; dense mist rising - [slight shower at 19 <sup>h</sup> 30 <sup>m</sup>	76·9	54·9	—
4	20	5	02	S. Westerly.	Nearly calm.	Overcast; cirri, cirro-cumuli, and cumulo-strati, with clear patches; very			
5	02	5	08	S.	Light.	Heavy masses of cumuli and cumulo-strati round horizon; distant thunder in			
5	08	5	14	W. by S.	Nearly calm.	Cirro-strati and cirro-cumuli in small portion of S. horizon - [S. at 1 <sup>h</sup>	83·5	56·4	—
5	14	5	20	W. by S.	Light.	§ overcast with light cirro-strati and haze			
5	20	6	02	—	Calm.	Overcast; cirro-cumuli, cirro-strati, and dense haze			
6	02	6	08	N. E.	Light.	{ Cirro-cumuli and dense cumulo-strati dispersed generally; distant thunder in N. W.; showers from 2 <sup>h</sup> 50 <sup>m</sup> to 3 <sup>h</sup> 30 <sup>m</sup> -			
6	08	6	14	N.	Moderate.	{ Clear, except a very low bank of cumuli in S. horizon; faint auroral light in N. from 10 <sup>h</sup> 30 <sup>m</sup> to 11 <sup>h</sup> 15 <sup>m</sup> ; wind in gusts -	75·7	47·9	0·42
6	14	6	20	—	Calm.	Clear			
6	20	7	02	N. W.	Nearly calm.	Clear, except in S. E.; cirri, detached cirro-strati, and cirro-cumuli			
7	02	7	08	W. N. W.	Light.	Clear, except a few detached cumuli			
7	08	7	14	N. W.	Nearly calm.	Clear	75·1	51·0	—
7	14	7	20	N. W.	Light.	Clear			
7	20	8	02	N. W.	Light.	Clear, except a few detached cumuli rising in N. W.			
8	02	8	08	S.	Moderate.	§ overcast, with heavy well-defined cirro-cumuli and cumulo-strati scattered			
8	08	8	14	W.	Nearly calm.	{ clouded with strati and cirro-cumuli; clear spaces in S. W. [generally.	79·6 <sup>a</sup>	54·0	—
8	14	8	20	—	Calm.	Clear, except a few light cirro-cumuli in zenith			
8	20	9	02	Westerly.	Nearly calm.	Cirro-cumuli and cumulo-strati; light showers between 17 <sup>h</sup> 30 <sup>m</sup> and 18 <sup>h</sup> 30 <sup>m</sup>			
9	02	9	08	S. S. W.	Light.	Overcast with cirro-cumuli and cumulo-strati, a few clear patches			
9	08	9	14	—	Calm.	Dense cirro-strati, strati, cumuli, and haze; rain from 6 <sup>h</sup> 20 <sup>m</sup> to 7 <sup>h</sup> 55 <sup>m</sup>	79·6	57·2	0·50
9	14	9	20	N. W.	Nearly calm.	Heavy showers from 8 <sup>h</sup> to 13 <sup>h</sup> 30 <sup>m</sup> ; at 14 <sup>h</sup> 10 <sup>m</sup> unclouded			
9	20	10	02	N. N. W.	Moderate.	§ clouded, with heavy masses of cirro-cumuli generally over the sky			
10	02	10	08	N. by W.	Light.	Moderate gusts; dense masses of cirro-cumuli and cumuli round horizon			
10	08	10	14	N.	Very light.	About § covered with light cirri	70·8	48·2	—
<b>SUNDAY.</b>									
11	14	11	20	N.	Nearly calm.	§ overcast, with light cirro-cumuli and cirro-strati	73·7	50·1	—
11	20	12	02	—	Calm.	Ranges of light cirro-strati in W. horizon and in S.; remainder clear			
12	02	12	08	S. E.	Nearly calm.	Strati and cirro-strati generally over the sky			
12	08	12	14	—	Calm.	Clear	78·3	56·4	—
12	14	12	20	N. E.	Nearly calm.	Densely clouded; cumulo-strati, cirri, and haze			
12	20	13	02	—	Calm.	Light cirri, cirro-strati, and haze partially covering the sky			

<sup>a</sup> Highest observation of the standard thermometer.

Mean Solar Time (Astronom'. Reck <sup>s</sup> ).		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
JULY.							
D. H.	D. H.						In.
13 02	13 08	E. S. E.	Nearly calm.	Partially overcast with light cirri and haze; a few cumuli in N. horizon	83·8	60·9	0·87
13 08	13 14	—	Calm.	¾ overcast with cirro-cumuli and haze; zenith partially clear			
13 14	13 20	—	Calm.	Violent thunder-storm from 14 <sup>h</sup> to 15 <sup>h</sup> 30 <sup>m</sup> passing across zenith from N. W.			
13 20	14 02	—	Calm.	Overcast; cirro-cumuli, a few clear patches; fair			
14 02	14 08	S.	Light.	¾ overcast with detached masses of cirro-cumuli; remainder clear			
14 08	14 14	W. N. W.	Light.	Range of cumulo-strati in S. E. horizon	89·0	62·5	—
14 14	14 20	—	Calm.	Clear			
14 20	15 02	S. W.	Nearly calm.	Strati in S. and N.W., otherwise clear; lunar halo from 2 <sup>h</sup> 30 <sup>m</sup> to 3 <sup>h</sup>			
15 02	15 08	N. by E.	Nearly calm.	Densely clouded; cirro-cumulo-strati and cirro-cumuli; heavy thunder since 0 <sup>h</sup> ; at 0 <sup>h</sup> 15 <sup>m</sup> wind shifted from S. S. E. to N. W. by E.; heavy squall with heavy rain from 0 <sup>h</sup> 45 <sup>m</sup> to 1 <sup>h</sup> 30 <sup>m</sup>	81·5	55·0	0·95
15 08	15 14	—	Calm.	¾ overcast; strati, cirro strati and cirro-cumuli; heavy cumuli in W. horizon.			
15 14	15 20	N. by W.	Moderate.	¾ clouded with cirro-cumuli; faint auroral light in N. at 12 <sup>h</sup> ; wind in gusts			
15 20	16 02	N. N. E.	Moderate.	Clear, except a low range of strati in S. horizon; wind in gusts			
16 02	16 08	S. by E.	Very light.	Clear	75·6 <sup>a</sup>	49·2	—
16 08	16 14	—	Calm.	Clear			
16 14	16 20	N.	Nearly calm.	Clear, except a few cirro-strati dispersed round horizon			
16 20	17 02	—	Calm.	Cirro-strati in detached masses; haze in S. horizon			
17 02	17 08	E. by N.	Very light.	Light flexuous cirri dispersed over the sky	77·2	52·1	—
17 08	17 14	—	Calm.	Overcast; cirro-cumuli and haze; a few clear spaces			
SUNDAY.							
18 14	18 20	—	Calm.	Clear	78·6	56·5	—
18 20	19 02	N. N. E.	Moderate.	Clear; wind in gusts			
19 02	19 08	S. by E.	Nearly calm.	Clear, except a few detached cirri round horizon	82·3 <sup>a</sup>	57·4	—
19 08	19 14	—	Calm.	Clear; haze round horizon; Aurora from 9 <sup>h</sup> to 13 <sup>h</sup> <sup>b</sup>			
19 14	19 20	—	Calm.	A few cirro-strati in N. horizon; remainder perfectly clear			
19 20	20 02	—	Calm.	Light cirro-strati scattered in all directions; haze in horizon			
20 02	20 08	S. by E.	Light.	A few very light streaky cirri scattered about; wind variable	82·6 <sup>a</sup>	55·5	—
20 08	20 14	—	Calm.	Clear; light haze round horizon			
20 14	20 20	N. N. E.	Nearly calm.	Clear			
20 20	21 02	N. E.	Nearly calm.	Partially overcast; cirro-strati and dense haze in horizon			
21 02	21 08	S. by E.	Nearly calm.	¾ overcast; light cirro-strati in S. and E.; heavy cumuli in W. and N. W.	86·6	60·0	—
21 08	21 14	—	Calm.	Zenith clear; light cirri to W.; haze in S. horizon			
21 14	21 20	—	Calm.	Clear; faint auroral light in N. Surface water of the lake 72°·0; temperature of			
21 20	22 02	Easterly.	Very light.	Unclouded; haze in horizon. [soil, 3 feet deep, 64°·0; 6 feet deep 57°·5			
22 02	22 08	S. S. W.	Light.	¾ clouded; heavy cumuli and cumulo-strati in N. W. and N., dispersed cirro-cumuli in zenith [air close	88·9	67·2	0·75
22 08	22 14	—	Calm.	Partially clouded in W. and N. W.; dense cirri and cirro-cumuli elsewhere;			
22 14	22 20	N. W.	Light.	Dense cumulo-strati and strati; partially clear in E.; sheet lightning in N. W.; air very close; wind in puffs [and rain from 17 <sup>h</sup> 45 <sup>m</sup> to 18 <sup>h</sup>			
22 20	23 02	—	Calm.	Light cirro-cumuli in zenith; heavy cumuli in S. E.; violent storm of wind			
23 02	23 08	S.	Very light.	Thunder-storm, with heavy rain from 3 <sup>h</sup> 45 <sup>m</sup> to 4 <sup>h</sup> 5 <sup>m</sup> , passing from N. W.; thunder remarkably loud	85·8	66·5	—
23 08	23 14	—	Calm.	¾ overcast with very light cirrous haze; a few clear patches in zenith			
23 14	23 20	—	Calm.	Light cirro-strati dispersed about; air very close; dense mist at 15 <sup>h</sup>			
23 20	24 02	—	Calm.	Clear in zenith; haze round horizon; very dense haze on the lake			
24 02	24 08	E. by S.	Very light.	Dense cumulo-strati and cumuli rising in N. W., cirri and cirro-strati elsewhere; distant thunder in W. since 0 <sup>h</sup> ; air close and oppressive	87·2	68·0	2·00
24 08	24 14	—	Calm.	¾ overcast round horizon; strati and cirro-strati, remainder clear. Violent thunder-storm and heavy rain from 3 <sup>h</sup> 30 <sup>m</sup> to 5 <sup>h</sup>			
SUNDAY.							
25 14	25 20	—	Calm.	Clear, except a haze round horizon	76·7	51·9	—
25 20	26 02	N. Easterly.	Very light.	Clear			
26 02	26 08	S. S. E.	Light.	Range of cumulo-strati and cirro-cumuli in N. W. and N. horizons, ¾ clear			
26 08	26 14	S.	Very light.	Light cirri and cirro-strati overspreading the sky	76·7	50·3	—
26 14	26 20	S.	Light.	Clear			
26 20	27 02	Southerly.	Very light.	Partially overcast; cirro-cumuli and cirro-strati			
27 02	27 08	S. S. W.	Light.	Overspread with strati and cirro-strati; a few clear patches			
27 08	27 14	—	Calm.	Cirro-strati and cirrous haze; dense in S. E. Thunder and lightning from W. with very heavy gusts and violent rain about 7 <sup>h</sup>	73·8	55·0	0·50
27 14	27 20	—	Calm.	Partially overcast with cirro-cumuli and cirri; clear in zenith			
27 20	28 02	N.	Light.	Partially overcast, with detached cirro-cumuli; wind in gusts			
28 02	28 08	N.	Light.	Cirro-cumuli in zenith, and towards the South			
28 08	28 14	—	Calm.	Clear	70·4	44·6	—
28 14	28 20	N.	Very light.	Clear; faint auroral light in N.			
28 20	29 02	Westerly.	Nearly calm.	A few detached cirri rising in N., otherwise perfectly clear			

<sup>a</sup> Highest observation of the standard.

<sup>b</sup> For particulars of the Aurora, see Part I. p. 58, of Disturbance Observations.

Mean Solar Time (Astronom. Reckon.)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Göttingen.		Direction.	Force.				
<b>JULY.</b>									
D.	H.	D.	H.						
29	02	29	08	S. W.	Light.	Cirro-cumuli and cirri dispersed generally over the sky	o	o	In.
29	08	29	14	—	Calm.	§ overcast with cirro-cumuli and cirri, small clear spaces in S.E. and in zenith	74·9	54·5	—
29	14	29	20	—	Calm.	Densely overcast with strati and cirro-cumuli; very dark			
29	20	30	02	Easterly.	Nearly calm.	Clouded; cirro-cumuli, cumuli and cumulo-strati			
30	02	30	08	—	Calm.	Densely clouded; cirro-cumuli and haze, heavy rain from 22 <sup>h</sup> 30 <sup>m</sup>			
30	08	30	14	—	Calm.	Densely clouded; cumulo-strati and haze, drizzling rain	61·5	57·2	1·25
30	14	30	20	E. N. E.	Light.	Densely clouded and very dark; slight rain occasionally			
30	20	31	02	N. N. E.	Light.	Densely clouded; cirro-cumuli and haze, occasional slight or moderate rain			
31	02	31	08	N. N. E.	Light.	Densely clouded; cirro-cumuli and cirrous haze, slight steady rain continuing			
31	08	31	14	N. E.	Very light.	Overcast with dense cirro-strati and cirri, slight rain at intervals	74·2	58·1	0·65
<b>AUGUST.</b>									
<b>SUNDAY.</b>									
1	14	1	20	—	Calm.	Clear	74·9	52·8 <sup>a</sup>	—
1	20	2	02	—	Calm.	Clear; light haze			
2	02	2	08	—	Calm.	Masses of cumuli and cirro-cumuli round the horizon, remainder clear			
2	08	2	14	—	Calm.	Clear, except a light haze round horizon, and light cirri dispersed	81·2 <sup>b</sup>	54·0	—
2	14	2	20	—	Calm.	Slight fog; partially clouded with cirri and cirro-strati			
2	20	3	02	Southerly.	Nearly calm.	Detached cirri; bank of cirro-strati in N. W. horizon; haze in S.			
3	02	3	08	—	Calm.	Densely overcast with strati, cirro-strati, and cirro-cumuli; very sultry			
3	08	3	14	—	Calm.	Overcast with cirri and cirro-cumuli	78·0	63·9	—
3	14	3	20	—	Calm.	Densely clouded with cirro-cumuli and haze; air very close			
3	20	4	02	Westerly.	Nearly calm.	Overcast with detached cirro-cumuli and dense haze			
4	02	4	08	—	Calm.	Overcast with cirro-cumuli and haze			
4	08	4	14	—	Calm.	Clouded with cirro-cumuli and cirro-strati; occasionally spitting rain	74·3	60·9	—
4	14	4	20	—	Calm.	Densely overcast with cirro-cumuli, cumulo-strati and strati; dense haze to S.			
4	20	5	02	Northerly.	Variable.	Detached cirri and cirro-cumuli partially over the sky			
5	02	5	08	S. by W.	Very light.	§ overcast with heavy detached cirro-cumuli, principally in N.			
5	08	5	14	N. by W.	Light.	Low range of cumulo-strati in S. horizon; slight shower of rain and hail at	77·0	55·3	—
5	14	5	20	N. by W.	Light.	Clear, except a ridge of cumuli in S. and S. E. [3 <sup>h</sup> 50 <sup>m</sup>			
5	20	6	02	N.	Light.	Clear, except a few detached cirri scattered about, and haze in horizon			
6	02	6	08	S. S. W.	Light.	Unclouded, light haze round horizon			
6	08	6	14	S. Westerly.	Very light.	Light cirri dispersed, low bank of cirro-strati in N., dense haze in S. horizon	75·0 <sup>b</sup>	48·5	—
6	14	6	20	—	Calm.	§ overcast with light cirro-cumuli and cirro-strati; lunar halo from 12 <sup>h</sup> 30 <sup>m</sup>			
6	20	7	02	—	Calm.	to 13 <sup>h</sup> 45 <sup>m</sup> , diam. 30°; Aurora from 8 <sup>h</sup> 30 <sup>m</sup> to 10 <sup>h</sup> °			
7	02	7	08	S. Easterly.	Light.	Unclouded; light cirri and haze round horizon	76·6	50·5	—
7	08	7	14	—	Calm.	Light cirri dispersed, a low range of cumuli in the horizon; solar halo at 3 <sup>h</sup> 15 <sup>m</sup> , A few detached cirri scattered over the sky [diam. about 35°			
<b>SUNDAY.</b>									
8	14	8	20	S. W.	Light.	Clouded with cirro-cumuli and cirro-strati	73·7	60·6	1·00
8	20	9	02	N. Westerly.	Nearly calm.	§ overcast; cirri and light cirro-cumuli			
9	02	9	08	W. by N.	Moderate.	Fresh gusts; cirro-strati and strati generally, heavy masses of cumuli round			
9	08	9	14	—	Calm.	Light cirri in S. E. and S., otherwise clear [horizon	77·1	52·7	—
9	14	9	20	N.	Nearly calm.	§ overcast with light cirro-strati round horizon			
9	20	10	02	Easterly.	Very light.	Nearly overcast with cirri and cirro-strati, heavy clouds in horizon			
10	02	10	08	E.	Light.	Overcast with cirro-cumuli and haze; heavy masses of cumuli, and distant thunder in N. W.			
10	08	10	14	N. by E.	Light.	Dense cirro-cumuli and cirro-cumulo-strati; spitting rain occasionally; thun- der-storm and heavy rain from 3 <sup>h</sup> 30 <sup>m</sup> to 4 <sup>h</sup> 30 <sup>m</sup> , thunder remarkably loud	73·8	59·6	1·25
10	14	10	20	—	Calm.	Densely clouded; cirro-cumulo-stratus and cirro-stratus; showery			
10	20	11	02	N. E.	Light.	Densely clouded; cirro-cumuli with cumulo-strati in horizon			
11	02	11	08	N. E.	Nearly calm.	Constant heavy rain from 21 <sup>h</sup> 45 <sup>m</sup>			
11	08	11	14	—	Calm.	Clear, except a few strati round W. and S. horizons; rain ceased at 5 <sup>h</sup>	63·7	46·0	2·34
11	14	11	20	—	Calm.	Clear; auroral light in N. from 12 <sup>h</sup> to 14 <sup>h</sup> 45 <sup>m</sup>			
11	20	12	02	Westerly.	Nearly calm.	Clear			
12	02	12	08	S. S. W.	Light.	Clear, except a few light cirro-strati in N. W. horizon			
12	08	12	14	—	Calm.	Range of light cirri and haze in W., N. W., and N., otherwise clear	73·4	50·1	—
12	14	12	20	—	Calm.	Clear			
12	20	13	02	—	Calm.	Unclouded; light haze round horizon			
13	02	13	08	S. E.	Very light.	Dense masses of cumuli round horizon, and light streaky cirri to N.			
13	08	13	14	E.	Light.	Clear, except a few heavy clouds in N. W. and N. horizons	74·8	57·9	—
13	14	13	20	—	Calm.	Densely clouded; very dark night			
13	20	14	02	E.	Very light.	Densely clouded; cumuli and cumulo-strati			

<sup>a</sup> Lowest observation of the standard thermometer.

<sup>b</sup> Highest observation of the standard.

<sup>c</sup> For the particulars of the Aurora, see Disturbance Observations, Part I., page 67.

Mean Solar Time (Astronom'. Reck.)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
AUGUST.							
D.	H.	D.	H.				In.
14	02	14	08	E. S. E.	Light.	Partially overcast with cirri and haze	—
14	08	14	14	—	Calm.	Clear; haze round horizon; bank of auroral light in N. from 9 <sup>h</sup> to 10 <sup>h</sup>	70.2
SUNDAY.							
15	14	15	20	—	Calm.	Clear	74.6
15	20	16	02	N. Easterly.	Nearly calm.	Detached cirro-cumuli covering the sky	—
16	02	16	08	—	Calm.	Partially overcast with cirro-cumuli and haze; fair	—
16	08	16	14	—	Calm.	A few very light cirro-strati scattered about	80.9
16	14	16	20	—	Calm.	Clear	—
16	20	17	02	Westerly.	Nearly calm.	Cirri scattered over the sky; haze in horizon	—
17	02	17	08	S. by W.	Light.	Haze and cirro-strati round horizon; zenith clear	—
17	08	17	14	—	Calm.	A few light cirro-strati in N. W., otherwise clear	81.1
17	14	17	20	—	Calm.	Clear	—
17	20	18	02	Westerly.	Nearly calm.	Cirri scattered about; haze in horizon	—
18	02	18	08	S.	Very light.	Heavy cirro-cumulo-stratus and cumulo-strati in N; air close and oppressive;	—
18	08	18	14	—	Calm.	thunder-storm, with heavy rain, from 4 <sup>h</sup> 35 <sup>m</sup> to 5 <sup>h</sup> , coming from N. W. -	84.8
18	14	18	20	—	Calm.	Densely clouded; splendid sheet and forked lightning, with distant thunder,	62.9
18	20	19	02	Westerly.	Very light.	in N. and N. W.; heavy rain from 11 <sup>h</sup> 50 <sup>m</sup> to 12 <sup>h</sup> 50 <sup>m</sup> . [14 <sup>h</sup> 30 <sup>m</sup> to 15 <sup>h</sup> 15 <sup>m</sup>	—
19	02	19	08	Northerly.	Nearly calm.	Densely clouded; sheet lightning in S. and W.; heavy squall, with rain, from	—
19	08	19	14	—	Calm.	A few detached cirri and cirro-strati scattered over the sky	—
19	14	19	20	—	Calm.	§ to S. covered with cirrous haze; light cirri scattered	77.1
19	20	20	02	—	Calm.	Clear, except a few cirri in N.; cleared suddenly at 7 <sup>h</sup> 30 <sup>m</sup> , beginning in	—
20	02	20	08	S.	Nearly calm.	Clear, except a low bank of strati in S. - [N. W. and N. horizon	—
20	08	20	14	N. by W.	Nearly calm.	Clear, except a low bank of strati in S. -	79.2 <sup>a</sup>
20	14	20	20	—	Calm.	Clear, except a few cirro-cumuli in N. horizon, and light haze in S. horizon	—
20	20	21	02	—	Calm.	Light haze and strati round horizon; zenith clear	53.8
21	02	21	08	—	Calm.	Bank of cirro-strati to S., remainder clear	—
21	08	21	14	Northerly.	Nearly calm.	Clear, except a few streaks of light cirri in S. W.	—
SUNDAY.							
22	14	22	20	—	Calm.	Overcast with light cirro-strati and dense haze; solar halo from 21 <sup>h</sup> 30 <sup>m</sup> to	77.3
22	20	23	02	N. E.	Nearly calm.	Overcast with light haze; cirro-cumuli and cirro-strati in N. - [22 <sup>h</sup> 30 <sup>m</sup>	—
23	02	23	08	S. by W.	Very light.	Clear; faint auroral light in N. -	73.8
23	08	23	14	—	Calm.	Clear	50.2
23	14	23	20	—	Calm.	A few cirro-cumuli passing across zenith; wind shifted at 0 <sup>h</sup> 30 <sup>m</sup>	—
23	20	24	02	Northerly.	Nearly calm.	Clear; very faint auroral light at 10 <sup>h</sup>	72.9 <sup>a</sup>
24	02	24	08	S. by E.	Very light.	Clear; auroral arch in N. from 12 <sup>h</sup> 45 <sup>m</sup> to 13 <sup>h</sup> 30 <sup>m</sup>	45.7
24	08	24	14	S. E.	Light.	Clear	—
24	14	24	20	N. E.	Light.	Clear	—
24	20	25	02	N. E.	Very light.	Clear	—
25	02	25	08	—	Calm.	Clear, except cirri and haze round horizon	—
25	08	25	14	—	Calm.	Haze round horizon; a few cumuli in N. horizon; remainder clear	—
25	14	25	20	N. E.	Light.	Sky clear; mist rising	75.0
25	20	26	02	S. S. E.	Very light.	Clear; heavy dew	54.5
26	02	26	08	S. E.	Light.	Partially overcast with light cirri and haze	—
26	08	26	14	S. by E.	Moderate.	Overcast with cirri and haze; slight rain at intervals from 3 <sup>h</sup> 30 <sup>m</sup>	—
26	14	26	20	—	Calm.	Densely clouded; slight rain at intervals	69.0
26	20	27	02	—	Calm.	Densely clouded; drizzling rain at intervals	59.0
27	02	27	08	S. by W.	Nearly calm.	Densely clouded; cirro-cumuli and haze	—
27	08	27	14	—	Calm.	§ clear in zenith and S.; dense cirro-cumulo-strati and cumulo-strati in N.	72.2
27	14	27	20	—	Calm.	§ to S. covered with cirro-cumuli; remainder clear	59.8
27	20	28	02	E.	Light.	A few light cirri in zenith; otherwise clear	—
28	02	28	08	E.	Brisk.	Cirri and dense cirro-cumuli passing rapidly from E.; wind in gusts	—
28	08	28	14	E.	Nearly calm.	Heavy masses of cirro-cumuli and cumuli passing rapidly from E. -	77.3
SUNDAY.							
29	14	29	20	—	Calm.	§ clouded; cirro-strati, strati, and cirro-cumulo-strati; faint lunar halo;	62.8
29	20	30	02	W.	Light.	sheet lightning in W. -	—
30	02	30	08	S. W.	Light.	Overcast with light cirri and haze. Temperature of soil, 3 feet deep, 63°·0,	77.8
30	08	30	14	—	Calm.	6 feet deep 59°·5. Surface water of the lake 70°·0	57.5
30	14	30	20	—	Calm.	§ overcast with detached cirro-cumuli; fair.	—
30	20	31	02	S. W.	Nearly calm.	§ clouded with cumulo-strati and cirro-cumuli; clear spaces in S.	73.1
				—	Calm.	Bank of strati in S., otherwise clear; slight shower at 3 <sup>h</sup> 30 <sup>m</sup>	55.0
				—	Calm.	Clouded with cirro-cumuli and cirro-strati; a few clear spaces in S. horizon	0.08
				—	Calm.	Clouded; cirro-cumuli; fair	—

<sup>a</sup> Highest observation of the standard.





Mean Solar Time (Astronom'. Reck'g.)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
<b>SEPTEMBER.</b>							
D.	H.	D.	H.				
16	02	16	08	E.	Nearly calm.		In.
16	08	16	14	—	Calm.	73·6	53·0
16	14	16	20	—	Calm.		
16	20	17	02	—	Calm.		
17	02	17	08	S. E.	Light.		
17	08	17	14	N.	Light.	73·3	49·0
17	14	17	20	N.	Moderate.		0·22
17	20	18	02	N.	Moderate.		
18	02	18	08	N.	Light.		
18	08	18	14	—	Calm.	57·3	45·7
<b>SUNDAY.</b>							
19	14	19	20	—	Calm.	66·0	54·4
19	20	20	02	N. W.	Nearly calm.		
20	02	20	08	N. by E.	Nearly calm.		
20	08	20	14	N. by E.	Light.		
20	14	20	20	N. E.	Light.	70·0	51·1
20	20	21	02	E.	Moderate.		
21	02	21	08	E.	Light.		
21	08	21	14	—	Calm.	69·5	59·2
21	14	21	20	S. E.	Light.		
21	20	22	02	S. Easterly.	Nearly calm.		
22	02	22	08	Southerly.	Very light.		
22	08	22	14	—	Calm.	72·8	61·5
22	14	22	20	—	Calm.		0·03
22	20	23	02	S. by E.	Light.		
23	02	23	08	Easterly.	Very light.		
23	08	23	14	—	Calm.	68·0	48·1
23	14	23	20	—	Calm.		
23	20	24	02	—	Calm.		
24	02	24	08	—	Calm.		
24	08	24	14	—	Calm.	68·1	55·7
24	14	24	20	—	Calm.		0·20
24	20	25	02	N.	Nearly calm.		
25	02	25	08	N. W.	Nearly calm.		
25	08	25	14	N. W.	Moderate.	64·8	53·6
<b>SUNDAY.</b>							
26	14	26	20	—	Calm.	60·7	37·7
26	20	27	02	N. W.	Very light.		
27	02	27	08	—	Calm.		
27	08	27	14	N. Easterly	Very light.	54·0	49·1
27	14	27	20	N. by E.	Light.		1·05
27	20	28	02	N.	Light.		
28	02	28	08	Northerly.	Light.		
28	08	28	14	N. by E.	Light.	54·1	48·2
28	14	28	20	N.	Light.		
28	20	29	02	N. N. E.	Very light.		
29	02	29	08	N. by E.	Light.		
29	08	29	14	N. by E.	Light.	52·1	43·7
29	14	29	20	N.	Light.		
29	20	30	02	N. by E.	Very light.		
30	02	30	08	N.	Nearly calm.		
30	08	30	14	N.	Light.	55·6	34·2
30	14	30	20	—	Calm.		
30	20	1	02	N.	Moderate.		
<b>OCTOBER.</b>							
1	02	1	08	N. by E.	Light.		
1	08	1	14	—	Calm.		
1	14	1	20	N. E.	Light.	50·5	35·2
1	20	2	02	N. E.	Light.		



Mean Solar Time (Astronom' Reck <sup>s</sup> ).				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Göttingen.		Direction.	Force.				
<b>OCTOBER.</b>									
D.	H.	D.	H.				°	°	In.
2	02	2	08	E.	Moderate.	Overcast; cumulo-strati round hor., cirro-cumuli in zenith, clouds breaking [in N. E.]	43·5	36·7	—
2	08	2	14	E.	Light.	Partially clouded with cirro-cumuli and cirri; a few clear spaces in zenith -			
<b>SUNDAY.</b>									
3	14	3	20	—	Calm.	Overcast with cirro-cumuli and cirro-strati - - - - -	54·0	33·2	—
3	20	4	02	N.	Light.	¾ clouded; detached cirri and cirro-strati; wind in moderate gusts - - -			
4	02	4	08	Northerly.	Very light.	Light scattered cirri - - - - -			
4	08	4	14	—	Calm.	Clear, except a few cirro-strati in N. E. - - - - -	55·7	36·3	—
4	14	4	20	N.	Nearly calm.	¾ clouded in E.; perfectly clear, and totally clouded at intervals - - -			
4	20	5	02	N.	Very light.	¾ clear; cirri and cirro-strati in W. and E. horizons - - - - -			
5	02	5	08	S. S. E.	Nearly calm.	A few cumuli and light haze round S. horizon; remainder quite clear - - -			
5	08	5	14	N.	Nearly calm.	¾ overcast, with cirro-strati generally over the sky - - - - -	56·0	37·9	—
5	14	5	20	—	Calm.	Densely clouded; cirro-strati and haze - - - - -			
5	20	6	02	N. E.	Nearly calm.	Range of cirro-strati in N. E.; remainder clear - - - - -			
6	02	6	08	Southerly	Very light.	Clear, except a few light cirri in W. and cumulo-strati in S. horizon - - -			
6	08	6	14	—	Calm.	Clear, except a few very light cirri dispersed about - - - - -	57·1	37·1	—
6	14	6	20	Northerly.	Light.	Densely clouded with cirro-cumuli and haze - - - - -			
6	20	7	02	E.	Light.	Overcast; cirri, cirro-strati and dense haze; light showers since 18 <sup>h</sup> [1 <sup>h</sup> 15 <sup>m</sup> .]			
7	02	7	08	—	Calm.	Overcast with cirro-cumuli and cirri; slight and moderate rain from 22 <sup>h</sup> 15 <sup>m</sup> to			
7	08	7	14	—	Calm.	¾ overcast; heavy detached clouds; heavy showers with thunder and lightning	57·4	34·3	0·50
7	14	7	20	—	Calm.	from 5 <sup>h</sup> 30 <sup>m</sup> to 5 <sup>h</sup> 45 <sup>m</sup> - - - - -			
7	20	8	02	—	Calm.	Perfectly unclouded; dense fog rising from the ground, about 12 feet in height			
8	02	8	08	S. E.	Very light.	¾ overcast in W. with cirro-cumuli and cirro-strati, remainder clear - - -			
8	08	8	14	—	Calm.	Overcast with cirro-strati and cirri, except a clear space in N. W. [from 7 <sup>h</sup> .]	59·7	35·7	—
8	14	8	20	—	Calm.	Clear; faint auroral light in N., a few faint streamers visible occasionally			
8	20	9	02	S. W.	Nearly calm.	Clear, except a few cirro-strati dispersed round horizon - - - - -			
9	02	9	08	N. W.	Brisk.	¾ overcast; cirri and cirro-cumuli; fair - - - - -			
9	08	9	14	—	Calm.	Masses of cumuli, with clear patches; light showers, and sharp squalls	56·6	33·3	—
						{ Clear, except a bank of strati in W.; faint auroral light in N.; brilliant Au- rora from 7 <sup>h</sup> 20 <sup>m</sup> to 8 <sup>h</sup> 45 <sup>m</sup> - - - - -			
<b>SUNDAY.</b>									
10	14	10	20	—	Calm.	A sheet of strati in N., remainder clear - - - - - [mencing	55·1	43·1	—
10	20	11	02	N. Easterly.	Nearly calm.	Densely overcast; cirri, cirro-cumuli, cirro-strati and haze, light rain com-			
11	02	11	08	—	Calm.	Densely overcast with cirri and haze; rain ceased at 22 <sup>h</sup> 50 <sup>m</sup> - - - - -			
11	08	11	14	—	Calm.	Densely clouded; very dark - - - - -	58·6	44·2	0·07
11	14	11	20	N. E.	Light.	¾ overcast to northward, remainder unclouded - - - - -			
11	20	12	02	N. Easterly.	Nearly calm.	Overcast; cirri, cirro-cumuli and cirro-strati; fair - - - - -			
12	02	12	08	N. W.	Light.	Clouded with cirro-strati and cumulo-strati - - - - -			
12	08	12	14	—	Calm.	Densely clouded; very dark - - - - -	50·0	34·7	—
12	14	12	20	N. by W.	Light.	¾ clouded in N. W.; remainder clear - - - - -			
12	20	13	02	N. by E.	Light.	Clear, except a low range of cumulo-strati in S. horizon - [patches.			
13	02	13	08	N.	Light.	Densely clouded; cumulo-strati and cirro-cumuli, interspersed with clear			
13	08	13	14	—	Calm.	A few scattered clouds in horizon, remainder clear - - - - -	51·5	30·8	—
13	14	13	20	N.	Light.	Strati round horizon, remainder clear; faint auroral light in N. - - -			
13	20	14	02	N. Westerly.	Nearly calm.	¾ overcast; cirro-cumuli and cumulo-strati; fair - - - [of rain.			
14	02	14	08	—	Calm.	Densely clouded; cumuli, cirro-cumuli and cumulo-strati; a few heavy drops			
14	08	14	14	—	Calm.	Partially overcast; clear in zenith - - - - -	56·9	40·3	—
14	14	14	20	—	Calm.	Densely clouded; very dark night - - - - -			
14	20	15	02	S. W.	Very light.	Clouded; cirro-cumuli; fair - - - - - [and 2 <sup>h</sup> 30 <sup>m</sup> .]			
15	02	15	08	N. W.	Brisk.	Partially clouded with cumuli and cirro-cumuli; slight showers at 2 <sup>h</sup> 15 <sup>m</sup>			
15	08	15	14	N. W.	Brisk.	Clouded with cirro-cumuli and cirro-strati, a few clear patches in N. and zen.	59·6	38·7	—
15	14	15	20	—	Calm.	Clear space in S. horizon; remainder densely overcast, very dark [and 21 <sup>h</sup> .]			
15	20	16	02	N. Easterly.	Nearly calm.	Densely overcast; cirro-cumuli and cumulo-strati; slight snow between 20 <sup>h</sup>			
16	02	16	08	N. by W.	Light.	Densely clouded; with cirro-cumuli and cumulo-strati - - - - -	41·5	35·5	—
16	08	16	14	Northerly.	Very light.	Densely clouded with cirro-cumuli, cumulo-strati, and haze - - - - -			
<b>SUNDAY.</b>									
17	14	17	20	Northerly.	Nearly calm.	Clear - - - - -	46·8	27·0	—
17	20	18	02	N.	Very light.	Clear, except a low range of cumulo-strati in S. horizon - - - - -			
18	02	18	08	—	Calm.	Heavy detached masses of cumuli and cumulo-strati scattered over ¾ of the sky			
18	08	18	14	Northerly	Nearly calm.	Perfectly unclouded - - - - -	46·7	28·5	—
18	14	18	20	N. by W.	Very light.	Clear, except a few streaks of light cirri in N. W. - - - - -			
18	20	19	02	Northerly.	Nearly calm.	Densely clouded; cirro-cumuli and haze - - - - -			
19	02	19	08	E. by N.	Nearly calm.	Overcast with dense haze - - - - -			
19	08	19	14	E.	Light.	Densely clouded; moderate rain from 7 <sup>h</sup> 50 <sup>m</sup> to 10 <sup>h</sup> 30 <sup>m</sup> - - - - -	46·2	35·7	0·50
19	14	19	20	N. E.	Light.	Very dark; rain from 13 <sup>h</sup> 30 <sup>m</sup> - - - - -			
19	20	20	02	N. E.	Light.	Densely clouded; continued slight and moderate rain; wind in gusts - - -			

\* For a detailed description of this Aurora, see Observations of Unusual Disturbance, Part I., page 86.

Mean Solar Time (Astronom. Reckons.)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Göttingen.		Direction.	Force.				
OCTOBER.									
D.	H.	D.	H.						
20	02	20	08	N. E.	Very light.	Densely clouded; cirro-cumuli and haze; rain ceased at 22 <sup>h</sup> 30 <sup>m</sup> -	43·1	36·0	In.
20	08	20	14	Northerly.	Light.	Clear in N. and zenith; remainder cirro-strati and haze; auroral light in N.			
20	14	20	20	—	Calm.	Overcast; dense haze. Temp. of soil 3 ft. deep, 51°·5; 6 ft. deep, 55°·0 -			
20	20	21	02	N. by W.	Light.	Densely overcast; cirro-strati and haze. Surface water of the lake 45°·5 -			
21	02	21	08	N. by W.	Light.	Densely clouded; cirri, cirro-cumuli, and haze - - -			
21	08	21	14	N. W.	Light.	Densely overcast with cirri and haze; drizzling rain from 5 <sup>h</sup> to 10 <sup>h</sup> - -	43·8	34·4	—
21	14	21	20	N. W.	Nearly calm.	¾ clouded; cirri and haze, principally round horizon - - -			
21	20	22	02	Northerly.	Nearly calm.	Cirro-strati scattered over the sky; heavy cumulo-strati in S. horizon -			
22	02	22	08	N. W.	Moderate.	Heavy cirro-cumuli and cumulo-strati round horizon; hail showers at 1 <sup>h</sup> 45 <sup>m</sup> -			
22	08	22	14	N. W.	Nearly calm.	Clear, except a very low range of cumulo-strati in S. horizon - - -	44·1	27·9	—
22	14	22	20	—	Calm.	Clouded; cirro-cumuli and haze; slight snow from 12 <sup>h</sup> 30 <sup>m</sup> to 13 <sup>h</sup> 30 <sup>m</sup> -			
22	20	23	02	N. W.	Nearly calm.	Densely overcast with cirro-cumuli, cumulo-strati and haze; commenced			
23	02	23	08	—	Calm.	Densely clouded; rain continuing - - [slight rain at 19 <sup>h</sup> 50 <sup>m</sup> -	40·4	33·1	0·25
23	08	23	14	—	Calm.	Densely clouded; cirro-cumuli and haze; rain ceased at 6 <sup>h</sup> 30 <sup>m</sup> - -			
SUNDAY.									
24	14	24	20	—	Calm.	Clear; brilliant Aurora * - - - - -	36·1	20·6	—
24	20	25	02	N. Westerly.	Nearly calm.	¾ overcast; cirri and cirro-cumuli; fair - - - - -			
25	02	25	08	W.	Light.	Densely clouded; cumulo-strati and cirro-cumuli; slight snow occasionally			
25	08	25	14	W.	Light.	Overcast; cirro-cumuli and cirrous haze; a clear space in N. W. - -	37·2	26·2	—
25	14	25	20	W. S. W.	Moderate.	Cirri and haze round horizon; zenith clear - - - - -			
25	20	26	02	W. S. W.	Moderate.	Cirri and haze round horizon; zenith clear - - - - -			
26	02	26	08	S. W.	Moderate.	Unclassified, with haze; dense haze in horizon - - - - -			
26	08	26	14	Northerly.	Nearly calm.	Moderate haze, dense in horizon - - - - -	47·4	24·7	—
26	14	26	20	—	Calm.	Clear - - - - -			
26	20	27	02	—	Calm.	Clear, except a few cirri and cirro-strati scattered about - - - -			
27	02	27	08	S. W.	Light.	A few light flexuous cirri dispersed - - - - -			
27	08	27	14	Westerly.	Nearly calm.	Bank of cirri and cirro-cumuli from W. to E. across zenith, about 10° in	42·1	24·9	—
27	14	27	20	—	Calm.	Clear - - - - - [breadth; remainder clear - - - - -			
27	20	28	02	E.	Nearly calm.	¾ overcast with light cirro-cumuli; clear in S. - - - - -			
28	02	28	08	E.	Brisk.	Clear, except light cirro-cumuli in zenith, and strati and haze round horizon			
28	08	28	14	E.	Nearly calm.	Unclassified; light haze round horizon - - - - -	44·1	31·3	—
28	14	28	20	—	Calm.	Overcast with light cirro-cumuli in close arrangement - - - - -			
28	20	29	02	Easterly.	Nearly calm.	Densely overcast; cirro-cumuli, cirro-strati, and haze - - - - -			
29	02	29	08	E.	Light.	¾ overcast; cirro-strati and cirro-cumuli, heaviest in N. W. - - - -			
29	08	29	14	—	Calm.	Overcast round horizon, with closely arranged cirro-cumuli, cirro-strati, and	54·1	38·8	—
29	14	29	20	—	Calm.	Clouded with cirro-cumuli and cirro-strati - [haze; clear spaces in zenith			
29	20	30	02	—	Calm.	Partially clouded; cirro-strati, cirro-cumuli, and cumulo-strati; fair -			
30	02	30	08	—	Calm.	Clouded; cirro-cumuli, cirro-strati and haze; a few drops of rain falling -	59·3	41·2	0·03
30	08	30	14	Northerly.	Nearly calm.	Partially overcast; cirri and cirro-strati; fair - - - - -			
SUNDAY.									
31	14	31	20	—	Calm.	Overcast with light fleecy cirro-cumuli and cirro-strati - - - - -	59·1	47·9	—
31	20	1	02	S. Easterly.	Nearly calm.	¾ overcast; cirri and cirro-cumuli; fair - - - - -			
NOVEMBER.									
1	02	1	08	Easterly.	Very light.	Clouded; cirro-strati, cumulo-strati, and cirro-cumuli; a few clear spaces -	63·8	44·5	0·20
1	08	1	14	S. by W.	Light.	Moderate rain from 7 <sup>h</sup> 40 <sup>m</sup> - - - - - [rising - - - - -			
1	14	1	20	—	Calm.	¾ overcast with cirro-cumuli and cirro-strati; clearing rapidly; dense vapour			
1	20	2	02	S. S. W.	Moderate.	Bank of cumuli in S., and cirro-cumuli in N. horizon; otherwise clear [rizon			
2	02	2	08	S. W.	Moderate.	Detached cirro-cumuli passing across zenith; cumuli and dense haze round ho-			
2	08	2	14	S. W.	Moderate.	Dense cirro-cumuli and cumulo-strati: very heavy squalls from 4 <sup>h</sup> to 6 <sup>h</sup> -	53·2	34·9	—
2	14	2	20	—	Calm.	¾ clouded; cirro-cumuli; a slight shower at 12 <sup>h</sup> 35 <sup>m</sup> - - - - -			
2	20	3	02	S. W.	Light.	Scattered cirri and cirro-strati; haze in horizon - - - - -			
3	02	3	08	S. by W.	Moderate.	Dense cirro-cumuli and haze - - - - -			
3	08	3	14	S. W.	Nearly calm.	Densely clouded; very dark - - - - -	50·9	34·8	—
3	14	3	20	—	Calm.	Overcast with cirro-cumuli and haze - - - - -			
3	20	4	02	—	Calm.	Overcast with dense haze; very slight sleet occasionally - - - - -			
4	02	4	08	S. W.	Light.	Overcast; dense cumulo-strati and cirro-cumuli; a few clear spaces -			
4	08	4	14	—	Calm.	[Low range of heavy cumulo-strati in N.; haze round the horizon; drizzling	42·4	31·8	—
4	14	4	20	—	Calm.	rain from 5 <sup>h</sup> 40 <sup>m</sup> to 7 <sup>h</sup> - - - - -			
4	20	5	02	N. W.	Very light.	Overcast with cirro-cumuli and cirro-strati; faint auroral light, and a few			
5	02	5	08	W. S. W.	Light.	Clouded; cirro-cumuli - - [streamers in N. from 8 <sup>h</sup> 30 <sup>m</sup> to 9 <sup>h</sup> 30 <sup>m</sup> -			
5	08	5	14	W. by N.	Moderate.	Cirro-cumuli, cumulo-strati, and haze; very dense cumuli and cumulo-strati	42·1	32·6	—
5	14	5	20	N. N. W.	Moderate.	Clearing in N. and N. W., remainder densely clouded - [round horizon			
5	20	6	02	N. W.	Light.	Densely clouded; cirro-cumuli and haze; slight snow - - [gusts			
						Densely clouded; cirri, cirro-cumuli, and cumulo-strati; wind in moderate			

\* For a detailed description of the Aurora, vide Observations of Unusual Disturbance, Part I., p. 91.

Mean Solar Time (Astronom. Reck.)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Göttingen.		Direction.	Force.				
NOVEMBER.									
D.	H.	D.	H.				°	°	In.
6	02	6	08	N. W.	Light.	Overcast with very dense cumulo-strati			
6	08	6	14	N. W.	Very light.	Densely clouded; very dark night	36.2	30.3	—
SUNDAY.									
7	14	7	20	—	Calm.	Densely clouded; very dark; heavy and moderate rain from 7 <sup>h</sup> to 13 <sup>h</sup> 30 <sup>m</sup>	39.9	31.9	0.75
7	20	8	02	—	Calm.	Densely clouded; drizzling rain at intervals			
8	02	8	08	N.	Light.	Partially overcast with heavy masses of cumuli and cumulo-strati; fair			
8	08	8	14	Northerly.	Light.	Densely clouded; very dark	46.0	27.6	—
8	14	8	20	N. Easterly.	Nearly calm.	Clear, except a low range of strati round S. horizon; faint auroral light in N.			
8	20	9	02	N. E.	Light.	Clouded; cirro-cumuli			
9	02	9	08	S. E.	Light.	Densely clouded with cirro-cumuli and cirro-strati; clouds passing rapidly			
9	08	9	14	E.	Moderate.	Densely clouded; very dark; wind in gusts [from S. E.]	40.8	32.8	—
9	14	9	20	E. S. E.	Brisk.	Densely clouded and very dark			
9	20	10	02	E.	Brisk.	Densely clouded; scud passing rapidly from E.; wind in gusts			
10	02	10	08	E. by N.	Moderate.	Brisk gusts; densely clouded; cirro-cumuli and haze			
10	08	10	14	E. by S.	Brisk.	Densely clouded; squally	41.2	36.7	—
10	14	10	20	E.	Brisk.	Densely clouded; wind in gusts			
10	20	11	02	E.	Moderate.	Densely clouded; slight drizzling rain; wind in gusts			
11	02	11	08	E. by S.	Light.	Densely clouded; cirri and haze passing rapidly from eastward			
11	08	11	14	E. by S.	Light.	Densely clouded; constant moderate rain since 5 <sup>h</sup>	51.1	36.7	1.04
11	14	11	20	Easterly.	Light.	Densely clouded; moderate rain from 8 <sup>h</sup> to 18 <sup>h</sup>			
11	20	12	02	N. W.	Very light.	Partially clouded; cirri, cirro-cumuli, and cumuli passing rapidly from W.			
12	02	12	08	W. by N.	Moderate.	Partially clouded; cirro-cumuli and cumuli passing rapidly from N. W.			
12	08	12	14	N. W.	Moderate.	Brisk gusts; $\frac{2}{3}$ clouded with cirro-cumuli passing rapidly across from N. W.	47.4	35.2	—
12	14	12	20	N. W.	Light.	$\frac{3}{4}$ clouded, principally around horizon; fair			
12	20	13	02	W.	Light.	Densely clouded; cirri and cirro-cumuli			
13	02	13	08	W. by N.	Moderate.	$\frac{2}{3}$ overcast with cirro-cumuli and cumulo-strati; wind in gusts			
13	08	13	14	N. W.	Nearly calm.	Densely clouded; cirro-cumuli and haze	44.7	29.7	—
SUNDAY.									
14	14	14	20	N. W.	Brisk.	Dense cirro-cumuli and cirri; very slight rain; squally, sprung up at 13 <sup>h</sup>	43.5	30.3	0.05
14	20	15	02	N. W. by N.	Light.	Overcast; cirri, cirro-cumuli, and cumulo-strati; slight snow; wind in gusts			
15	02	15	08	N. by W.	Moderate.	Clouded with cirro-cumuli and haze; slight snow; wind in gusts			
15	08	15	14	N. W.	Light.	$\frac{2}{3}$ overcast with cirro-strati and cirro-cumuli; slight snow	33.7	27.3	—
15	14	15	20	N. W.	Light.	Partially clouded; cirri and cirro-cumuli; wind in gusts			
15	20	16	02	N. W.	Light.	$\frac{1}{2}$ clouded; cirri, cirro-cumuli, and cumulo-strati; fair			
16	02	16	08	N. W.	Light.	Densely clouded; cumulo-strati and cirro-cumuli			
16	08	16	14	N. Westerly.	Nearly calm.	A few light strati dispersed round horizon, otherwise clear	40.5	30.1	—
16	14	16	20	N. W.	Light.	$\frac{3}{4}$ clouded; cirro-cumuli and cirro-strati; clearest in N. and zenith			
16	20	17	02	N. by W.	Light.	$\frac{2}{3}$ clouded; cumulo-strati and cirro-cumuli, very dense round horizon; slight snow from 19 <sup>h</sup> 10 <sup>m</sup> to 19 <sup>h</sup> 55 <sup>m</sup>			
17	02	17	08	N. W.	Light.	$\frac{3}{4}$ clouded in S. and S. W.; cirro-cumuli and cumulo-strati			
17	08	17	14	—	Calm.	Overcast; clouded at 7 <sup>h</sup> with cirri and haze rising in N. W.; clear at 6 <sup>h</sup>	36.7	25.8	—
17	14	17	20	—	Calm.	Partially overcast; cirro-cumuli and cirro-strati			
17	20	18	02	N. Easterly.	Nearly calm.	Clouded; cirro-cumuli; fair			
18	02	18	08	—	Calm.	Clear, except a few detached cirro-cumuli and strati near the S. horizon			
18	08	18	14	N. N. W.	Light.	Clear; brilliant Aurora <sup>a</sup>	35.6	24.1	—
18	14	18	20	N. by W.	Light.	Densely clouded			
18	20	19	02	N. E.	Moderate.	Dense cirro-cumuli and haze; wind in gusts			
19	02	19	08	N. E.	Moderate.	Dense cirro-strati and cumulo-strati			
19	08	19	14	N. E.	Moderate.	Densely clouded	31.4	9.1	—
19	14	19	20	N. E.	Moderate.	Densely clouded; slight snow at intervals during the night			
19	20	20	02	N. E.	Moderate.	Densely overcast with cirro-strati and haze			
20	02	20	08	N. E.	Light.	Densely clouded; cirro-cumuli and haze			
20	08	20	14	—	Calm.	Clouded with dense haze	36.3	31.3	—
SUNDAY.									
21	14	21	20	E. by S.	Moderate.	Densely clouded	44.7	36.1	0.41
21	20	22	02	Easterly.	Light.	Densely overcast with cirri, strati, and haze			
22	02	22	08	S. W.	Light.	Clear, except a low range of cumulo-strati round S. E. horizon			
22	08	22	14	S. S. W.	Light.	Perfectly clear and unclouded	50.6	36.4	—
22	14	22	20	Southerly.	Moderate.	Densely clouded, very dark			
22	20	23	02	S. W.	Light.	Densely overcast; cirro-cumuli and cumulo-strati; wind in gusts			
23	02	23	08	W. by S.	Light.	Densely clouded; cirro-cumuli and cumulo-strati			
23	08	23	14	S. W.	Moderate.	Densely clouded; cirro-cumuli and haze; slight hail	37.9	26.2	—
23	14	23	20	—	Calm.	Clear, except a low bank of strati round N. and W. horizons			
23	20	24	02	S. Westerly.	Nearly calm.	Cirro-strati round the E., S., and W. horizons; remainder clear			

<sup>a</sup> For the detailed description of this Aurora, vide Unusual Magnetic Disturbances, Part I., page 97.

Mean Solar Time (Astronom. Reck.)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
NOVEMBER.							
D. H.	D. H.						In.
24 02	24 08	W. S. W.	Nearly calm.	Partially clouded; cirro-cumuli and cirri; fair - - - [zenith]			
24 08	24 14	—	Calm.	¾ overcast with cirro-cumuli and cumulo-strati; clear spaces occasionally in	42·4	27·9	—
24 14	24 20	—	Calm.	¾ clouded to northward; cirro-cumuli, cirro-strati; remainder clear - -			
24 20	25 02	E. by N.	Light.	Overcast; cirri and cirro-strati; fair - - - - -			
25 02	25 08	N. E.	Moderate.	Overcast with dense haze; moderate snow since 1 <sup>h</sup> 55 <sup>m</sup> ; wind in gusts			
25 08	25 14	N. E.	Moderate.	Densely clouded; snow continuing; ceased at 8 <sup>h</sup> 15 <sup>m</sup> ; wind in gusts	30·8 <sup>a</sup>	23·3	— <sup>b</sup>
25 14	25 20	E. N. E.	Brisk.	Moderate snow from 11 <sup>h</sup> to 12 <sup>h</sup> ; heavy fall since 12 <sup>h</sup> ; squally - - -			
25 20	26 02	N. E.	Light.	Densely overcast; light snow until 18 <sup>h</sup> ; wind in gusts - - -			
26 02	26 08	N. N. E.	Light.	Clouded; cumulo-strati and cirro-cumuli; a few clear patches - - -			
26 08	26 14	N.	Very light.	¾ overcast; detached cirri; fair - - - - -	26·9	13·4	—
26 14	26 20	N. by W.	Light.	Overcast; cirro-cumuli and haze - [and cirro-cumuli in N. horizons			
26 20	27 02	Northerly.	Very light.	Clear, except a low range of cirro-cumuli and cumulo-strati in S. and E.			
27 02	27 08	N. W.	Light.	Overcast; cirro-cumuli and cumulo-strati. Temperature of soil, 3 feet deep,			
27 08	27 14	—	Calm.	43°·5; 6 feet deep, 49°·0. Surface water of the lake 35°·5 - - -	30·8 <sup>a</sup>	15·7	—
				Partially clouded with detached cirro-cumuli and cumuli - - -			
SUNDAY.							
28 14	28 20	N. E.	Light.	Densely overcast with cirro-strati and haze. - - - - -	30·3	17·8	—
28 20	29 02	N.	Very light.	Overcast; cirri, cirro-cumuli, and cumulo-strati - - - - -			
29 02	29 08	Northerly.	Nearly calm.	Cirri, cirro-strati, and cumulo-strati; clear spaces in N. E. and zenith			
29 08	29 14	—	Calm.	Partially clouded, with detached cirro-cumuli rising in N. W. - - -	25·2	8·5	—
29 14	29 20	N. Easterly.	Nearly calm.	Densely clouded; cirro-cumuli and haze - - - - -			
29 20	30 02	Easterly.	Very light.	Dense cumulo-strati round horizon; cirri and cirrous haze generally - -			
30 02	30 08	S. W.	Very light.	Overcast; cirro-strati and haze; fair - - - - -			
30 08	30 14	S. by W.	Moderate.	Densely clouded with cirro-cumuli; clear spaces in zenith - - -	33·9	18·6	—
30 14	30 20	S. W.	Light.	¾ clouded with cirro-cumuli and cumuli passing rapidly from S. W. - -			
30 20	1 02	S. W.	Very light.	Partially overcast; cirri, cirro-cumuli, and cumulo-strati - - -			
DECEMBER.							
1 02	1 08	S. by W.	Light.	Partially clouded with light cirri and cirro-strati; fair - - - - -			
1 08	1 14	—	Calm.	Densely clouded; strati and haze - - - - -	39·2	21·3	—
1 14	1 20	—	Calm.	Clear - - - - -			
1 20	2 02	—	Calm.	¾ overcast with very light cirri and strati; dense strati in S. horizon - -			
2 02	2 08	—	Calm.	Densely clouded; strati, cirro-strati, and haze - - - - -			
2 08	2 14	—	Calm.	Clouded with dense haze - - - - - 13 <sup>h</sup> 30 <sup>m</sup> , diameter 60°	40·6	26·7	—
2 14	2 20	—	Calm.	Clouded with light cirro-cumuli and haze; lunar halo from 12 <sup>h</sup> 30 <sup>m</sup> to			
2 20	3 02	S. Easterly.	Nearly calm.	Densely clouded; light rain since 17 <sup>h</sup> - - - - -			
3 02	3 08	Easterly.	Very light.	Clouded with dense haze; drizzling rain since 20 <sup>h</sup> - - - - -			
3 08	3 14	East.	Light.	Densely clouded; constant rain from 2 <sup>h</sup> to 7 <sup>h</sup> 45 <sup>m</sup> - - - - -	42·8	36·8	1·81
3 14	3 20	S. S. E.	Light.	Densely clouded; cirro-cumuli and haze - - - - -			
3 20	4 02	S. W. by W.	Brisk.	Heavy squalls; densely overcast; cirro-cumuli and haze; snow ceased			
4 02	4 08	S. W.	Brisk.	Squally; densely clouded, cirro-cumuli and haze; slight snow - - -			
4 08	4 14	S. W.	Brisk.	Fresh squalls; densely clouded; slight snow since 4 <sup>h</sup> - - - - -	37·8	31·6	0·03
SUNDAY.							
5 14	5 20	N. W.	Light.	¾ clouded; strati and cirro-cumuli - - - - -	39·1	33·2	—
5 20	6 02	N. W. by W.	Light.	Moderate gusts; clouded, cirri and cirro-cumuli - - - - -			
6 02	6 08	N. W.	Light.	Densely clouded; cirro-cumuli and cumulo-strati - - - - -			
6 08	6 14	Northerly.	Very light.	Clear, except a range of strati round W. and S. horizons - - - - -	33·6	22·9	—
6 14	6 20	—	Calm.	Overcast; cirro-cumuli and cirro-strati - - - - -			
6 20	7 02	N. W.	Very light.	Densely clouded; cirro-cumuli and cumulo-strati - - - - -			
7 02	7 08	N. W.	Very light.	Densely clouded; cirro-cumuli and cumulo-strati - - - - -			
7 08	7 14	Westerly.	Light.	Densely clouded; very dark - - - - -	33·9	27·1	—
7 14	7 20	S. W.	Moderate.	Clouded with cirro-cumuli and haze - - - - -			
7 20	8 02	S. by W.	Light.	Light cirri and cirro-strati round horizon, light cirri and haze in zenith			
8 02	8 08	S. S. W.	Light.	Densely clouded; strati, cirro-cumuli, and haze - - - - -			
8 08	8 14	S. Westerly.	Nearly calm.	Densely overcast, very dark; occasional drops of rain since 6 <sup>h</sup> - - -	41·6 <sup>a</sup>	33·4	0·25
8 14	8 20	S. W.	Very light.	Densely clouded - - - - -			
8 20	9 02	—	Calm.	Densely clouded; moderate rain from 23 <sup>h</sup> 50 <sup>m</sup> to 0 <sup>h</sup> - - - - -			
9 02	9 08	—	Calm.	Densely clouded; moderate and steady rain from 0 <sup>h</sup> 40 <sup>m</sup> till 2 <sup>h</sup> 30 <sup>m</sup>			
9 08	9 14	—	Calm.	¾ clouded; zenith clear - - - - -	44·7	35·3	1·75
9 14	9 20	—	Calm.	Densely clouded, cirro-cumuli and haze - - - - -			
9 20	10 02	E.	Very light.	Densely clouded; moderately dense fog - - - - -			
10 02	10 08	E. N. E.	Brisk.	Heavy squalls; constant moderate rain since 21 30 <sup>m</sup> - - - - -			
10 08	10 14	N. E.	High.	Constant moderate rain continuing; heavy squalls - - - - -	42·8	36·3	0·50
10 14	10 20	N.	Light.	Constant moderate rain continuing; very dark, wind in gusts - - -			
10 20	11 02	N.	Light.	Densely overcast; rain nearly ceased; wind in gusts - - - - -			

<sup>a</sup> Highest observation of the standard.

<sup>b</sup> No fall recorded.

Mean Solar Time (Astronom. Recks.)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
<b>DECEMBER.</b>							
D. H.	D. H.						
11 02	11 08	N. N. W.	Moderate.	Dense cirro-cumuli, cirro-strati, and haze passing rapidly from N.W.; clearing			In.
11 08	11 14	N. W.	Light.	Densely clouded, very dark night - - - [slightly in zenith.]	39.4	35.1	—
<b>SUNDAY.</b>							
12 14	12 20	Northerly.	Nearly calm.	Densely overcast - - - - -	38.6	31.0	—
12 20	13 02	E.	Brisk.	Clouded; cirri, cirro-cumuli and cumuli; wind in heavy gusts			
13 02	13 08	E.	Light.	Clouded with cirro-strati and cirro-cumuli - - - - -			
13 08	13 14	E.	Light.	Densely clouded round horizon; partially clear in zenith - - - - -	41.9	36.1	0.50
13 14	13 20	Easterly.	Nearly calm.	Constant light rain since 12 <sup>h</sup> - - - - -			
13 20	14 02	—	Calm.	Overcast with dense haze, moderate rain until 18 <sup>h</sup> - - - - -			
14 02	14 08	N. W.	Light.	Densely clouded; cumulo-strati and cirro-cumuli - - - - -			
14 08	14 14	—	Calm.	A few clear spaces in N., remainder densely clouded - - - - -	46.1	30.2	—
14 14	14 20	—	Calm.	A few light scattered cirri, otherwise clear - - - - -			
14 20	15 02	—	Calm.	Clouded; cirri and cirro-cumuli; fair - - - - -			
15 02	15 08	N. W. by W.	Light.	Densely clouded; cirro-cumuli and cumulo-strati - - - - -			
15 08	15 14	N. by W.	Light.	Densely clouded; cirro-cumuli and haze - - - - -	38.1	26.6	—
15 14	15 20	Northerly.	Light.	Densely clouded; a few particles of snow falling - - - - -			
15 20	16 02	N. N. E.	Light.	Densely clouded; light snow falling; wind in gusts - - - - -			
16 02	16 08	N. by E.	Light.	Densely clouded; slight snow continuing - - - - -			
16 08	16 14	N. by E.	Moderate.	Densely overcast; slight snow continuing, wind in gusts - - - - -	27.7	13.9	— <sup>a</sup>
16 14	16 20	N. by E.	Moderate.	Densely clouded; a few particles of snow falling; wind in gusts - - - - -			
16 20	17 02	N. by E.	Moderate.	Partially clouded; cirro-strati and cirri; fair; snow ceased at 18 <sup>h</sup> ; wind in - - - - -			
17 02	17 08	N.	Brisk.	Squally; $\frac{3}{4}$ clear; light cirri and cirro-strati in E. and S.; fair - [gusts.]	20.0	10.3	—
17 08	17 14	N. b. W.	Brisk.	Squally; clear - - - - -			
17 14	11 20	N.	Brisk.	Squally; clear, faint auroral light in N. - - - - -			
17 20	18 02	N. N. W.	Moderate.	Squally; clear, except a few light clouds round horizon - - - - -			
18 02	18 08	N. W.	Moderate.	Squally; clear - - - - -			
18 08	18 14	N. W.	Very light.	Clear - - - - -	23.5	13.7	—
<b>SUNDAY.</b>							
19 14	19 20	Northerly.	Nearly calm.	Overcast with haze - - - - -	28.0	10.6	—
19 20	20 02	N.	Light.	Overcast; cirri, cirro-cumuli and cirro-strati, fair; imperfect solar halo at 22 <sup>h</sup> - - - - -			
20 02	20 08	—	Calm.	Densely clouded, strati and cirro-strati, a few clear spaces to N. - - - - -			
20 08	20 14	N. W.	Very light	Densely overcast with cirro-cumuli and haze - - - - -	18.2	3.1	—
20 14	20 20	Northerly.	Light.	Densely overcast with cirro-strati and haze - - - - -			
20 20	21 02	N.	Light.	Clear, except a low bank of cumulo-strati in S. horizon - - - - -			
21 02	21 08	Northerly.	Very light.	Clear, except a low range of cumulo-strati in S. horizon - - - - -			
21 08	21 14	—	Calm.	Clear - - - - -	14.3	3.3	—
21 14	21 20	Northerly.	Light.	Clouded; strati and cirro-cumuli - - - - -			
21 20	22 02	N. E.	Very light.	$\frac{1}{4}$ clear N. of zenith, elsewhere cirro-cumuli, cumulo-strati and haze; dense haze rising from the lake - - - - -			
22 02	22 08	N. E.	Brisk.	Moderate snow from 22 <sup>h</sup> to 0 <sup>h</sup> ; heavy snow from 0 <sup>h</sup> to 6 <sup>h</sup> 20 <sup>m</sup> - - - - -			
22 08	22 14	E.	Brisk.	Densely clouded; wind in gusts - - - - -	30.7	6.6	
22 14	22 20	S. E.	High.	Densely overcast; slight snow; squalls - - - - -			
22 20	23 02	E.	Brisk.	Densely clouded; rain and sleet at intervals since 16 <sup>h</sup> ; wind in gusts - - - - -			
23 02	23 08	E.	Light.	Steady rain; rain and sleet without intermission since 20 <sup>h</sup> - - - - -			1.75
23 08	23 14	—	Calm.	Densely clouded; very slight rain; heavy and moderate rain between 2 <sup>h</sup> and 8 <sup>h</sup> - - - - -	38.5	22.6	
23 14	23 20	S. W.	Brisk.	Clouded; cirri and cirro-strati; heavy squalls - - - - -			
23 20	24 02	W. by S.	Brisk.	$\frac{1}{2}$ clear; range of cirro-cumuli and cumulo-strati in S. horizon; squalls - - - - -			
24 02	24 08	W.	Moderate.	$\frac{3}{8}$ clouded, cirro-cumuli and cirri. Temperature of the soil 3 feet deep 39°·5, 6 feet deep 44°·0. Surface water of the lake 33°·0 - - - - -	29.2	14.9	—
24 08	24 14	W.	Very light.	Overcast; cirro-cumuli and cirrous haze - - - - -			
<b>CHRISTMAS DAY.</b>							
<b>SUNDAY.</b>							
26 14	26 20	W.	Very light.	Partially clouded with light cirro-cumuli - - - - -	22.9	14.9	—
26 20	27 02	—	Calm.	Densely clouded with cirro-cumuli and cumulo-strati - - - - -			
27 02	27 08	S. E.	Light.	Densely clouded - - - - -			
27 08	27 14	—	Calm.	Densely clouded, cumuli and cirro-strati - - - - -	30.2	22.1	—
27 14	27 20	—	Calm.	Clouded; cumulo-strati, cirro-cumuli and haze - - - - -			
27 20	28 02	Southerly.	Very light.	$\frac{3}{4}$ clear in zenith; otherwise cirro-cumuli, cirro-strati and haze - - - - -			
28 02	28 08	S. by E.	Very light.	A few detached cirri and cirro-cumuli; fair - - - - -			
28 08	28 14	S.	Light.	Overcast with cirro-strati and haze - - - - -	34.6	24.2	—
28 14	28 20	S. W.	Very light.	Densely overcast - - - - -			
28 20	29 02	—	Calm.	Clear, except a range of cirro-strati in S. horizon - - - - -			

<sup>a</sup> No fall recorded.

Mean Solar Time (Astronom. Reck <sup>t</sup> .)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Göttingen.		Direction.	Force.				
DECEMBER.									
D.	H.	D.	H.						
29	02	29	08	S. by W.	Very light.	Clear, except light cirri and strati in S. horizon - - - -	°	°	Int
29	08	29	14	—	Calm.	A few light cirro-strati in E. horizon, otherwise clear - - - -	33·6	24·2	—
29	14	29	20	—	Calm.	Overcast with dense haze - - - - -			
29	20	30	02	Northerly.	Nearly calm.	Densely overcast; light snow - - - - -			
30	02	30	08	S. W.	Very light.	Dense cumulo-strati and haze; moderate snow from 20 <sup>h</sup> to noon - - - -			
30	08	30	14	S. W.	Nearly calm.	Overcast with dense haze; very slight snow - - - - -	35·9	28·1	— <sup>a</sup>
30	14	30	20	S. W.	Light.	Clouded with cirro-cumuli, clear spaces in zenith - - - - -			
30	20	31	02	S. W.	Moderate.	Clouded; strati and cirro-cumuli - - - - -			
31	02	31	08	N. by W.	Moderate.	Clouded; cumuli and cirro-cumuli; occasional gusts with light snow - - - -			
31	08	31	14	—	Calm.	Overcast; dense haze - - - - -	30·6	19·7	—
31	14	31	20	W.	Nearly calm.	Clouded; cirro-cumuli and haze - - [from S. W.; wind in gusts.]			
31	20	1	02	S. by W.	Moderate.	Densely clouded; cirro-strati and cirro-cumuli, upper strata from N. W., lower			

<sup>a</sup> No fall recorded.

TORONTO, 1842.

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MAGNETICAL OBSERVATIONS.





DECLINATION.

Angular Value of one Scale Division of the Declinometer = 0'.721. Increasing numbers denote decreasing Westerly Declination.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.		
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.		
JANUARY.	1	119.4	134.0	129.0	124.9	130.0	127.7	144.8	138.9	140.0	—	—	133.00		
	2	—	—	—	—	—	—	—	—	—	136.4	135.6		135.3	
	3	135.0	140.5	139.4	132.3	133.1	136.0	138.0	137.2	139.2	135.9	137.4		138.3	136.86
	4	137.6	138.9	138.7	134.1	133.0	135.0	138.7	139.1	145.1	137.3	141.0		137.4	137.16
	5	138.0	144.0	139.6	133.8	134.5	135.7	146.6	139.3	138.0	139.6	137.9		139.8	138.90
	6	139.9	141.9	141.2	134.8	132.1	134.2	135.0	139.5	143.0	143.9	138.3		135.7	138.29
	7	141.1	140.1	135.0	134.4	131.6	136.6	137.7	139.6	138.7	138.0	139.2		139.1	137.59
	8	139.7 <sup>a</sup>	143.3	140.1	133.9	135.1	137.4	138.8	138.9	137.9	—	—		—	138.17
	9	—	—	—	—	—	—	—	—	—	137.0	137.7		138.3	
	10	138.6	141.6	139.1	131.7	132.7	136.1	136.0	138.3	140.0	143.7	142.8		142.0	138.55
	11	140.0	146.2	139.0	134.2	131.7	132.8	131.5	142.6	138.0	136.8	136.7		136.7	137.18
	12	137.0	141.6	140.0	135.0	134.9	137.3	137.5	139.3	140.4	138.1	136.8		137.0	137.91
	13	139.6	141.8	138.8	130.0	128.0	133.6	139.0	140.3	139.9	137.0	138.1		138.0	137.84
	14	139.3	141.5	138.0	131.6	133.7	136.0	138.0	140.8	139.0	138.1	137.2		138.3	137.62
	15	140.0	143.9	140.8	132.3	133.0	138.0	130.6	139.7	150.8	—	—		—	138.47
	16	—	—	—	—	—	—	—	—	—	136.0	136.0		140.6	
	17	137.9	144.2	140.5	132.7	131.0	134.5	137.8	138.9	142.0	137.0	137.0		138.9	137.70
	18	140.0	144.2	138.1	126.1	126.2	134.3	160.6	153.8	147.0	138.3	135.6		137.2	140.12
	19	138.3	145.0	141.9	131.9	130.2	135.1	135.8	137.4	141.3	136.2	137.8		137.3	137.35
	20	139.0	141.3	141.7	133.4	131.2	135.1	137.0	137.8	137.0	136.6	138.0		140.0	137.34
	21	140.7	142.4	139.5	132.1	130.7	135.0	134.1	139.7	143.0	137.8	137.9		133.6	137.21
	22	140.0	141.5	140.3	134.4	133.7	136.9	137.0	139.5	138.5	—	—		—	137.85
	23	—	—	—	—	—	—	—	—	—	138.0	141.7		137.2	
	24	138.3	141.1	136.5	132.8	133.2	129.6	132.7	137.2	137.2	146.2	138.1		140.3	136.93
	25	141.8	140.1	140.2	134.3	133.1	135.6	136.5	137.8	137.5	137.8	137.1		137.3	137.42
	26	139.2 <sup>b</sup>	139.9	139.0	135.0	134.1	135.4	137.0	137.8	137.5	137.7	137.2		137.8	137.30
	27	139.9	142.8	141.5	137.1	133.3	128.0	132.4	137.8	138.6	138.0	138.0		138.2	137.13
	28	140.4	142.0	142.3	138.2	133.1	135.2	134.7	147.0	139.1	137.8	140.1		138.2	139.01
	29	135.1	140.5	141.9	133.5	133.1	135.2	137.4	138.3	145.9	—	—		—	137.72
	30	—	—	—	—	—	—	—	—	—	136.0	138.0		137.7	
	31	134.1	144.1	139.8	133.9	132.1	136.2	138.7	138.4	140.1	146.1	135.8		131.8	137.59
Hourly Means <sup>c</sup>	138.03	141.86	139.30	133.02	132.25	134.71	137.84	139.80	140.57	138.51	137.96	137.77			
FEBRUARY.	1	143.4	142.7 <sup>d</sup>	134.0	130.0	131.2	136.7	136.1	147.5	142.9	136.0	137.0	137.0	137.87	
	2	128.5	144.6	139.5	132.5	131.5	135.8	137.0	137.9	140.0	137.7	137.0	140.8	136.90	
	3	140.2	138.0	136.4	132.5	130.6	135.0	134.3	140.5	142.7	136.2	136.8	136.1	136.61	
	4	138.4	141.9	138.9	131.8	132.0	133.9	134.9	137.8	138.5	139.7	136.8	139.1	136.97	
	5	138.0	139.4	139.5	135.3	132.8	134.1	136.2	136.9	138.3	—	—	—	137.97	
	6	—	—	—	—	—	—	—	—	—	141.3	142.3	141.5		
	7	144.3	131.2	124.1	130.8	132.6	141.1	134.7	137.4	137.4	137.0	138.4	138.6	135.63	
	8	135.8	139.9	140.7	135.2	133.7	134.3	138.3	138.1	137.2	137.0	136.1	133.6	136.66	
	9	137.3	140.1	139.0	132.6	132.4	135.7	136.9	138.0	137.4	137.0	137.2	138.0	136.80	
	10	137.8	140.1	142.5	135.7	131.3	133.8	136.5	138.6	136.8	137.5	136.5	135.9	136.92	
	11	139.5	138.4	141.3	132.0	126.8	122.1	133.4	138.2	141.9	144.6	137.1	130.3	135.47	
	12	142.1	146.2	142.3	137.6	134.9	132.3	136.0	137.5	139.2	—	—	—	138.08	
	13	—	—	—	—	—	—	—	—	—	135.4	136.2	137.3		
	14	137.2	139.1	142.4	138.1	129.6	130.6	134.3	137.4	137.5	137.0	139.4	136.7	137.97	
	15	137.0	141.8	140.8	134.0	132.7	133.1	134.0	137.5	138.2	139.5	137.8	138.1	137.04	
	16	138.2	141.2	141.2	136.4	122.9	124.2	130.7	130.7	130.5	134.0	132.6	134.8	133.12	
	17	130.4	129.7	135.3	122.7	130.0	129.2	128.1	128.0	131.8	134.4	134.9	136.1	130.88	
	18	138.8	129.1	129.7	125.4	126.1	120.2	135.7	130.3	133.4	137.0	132.8	120.2	129.89	
	19	131.4	117.7	124.5	129.3	132.4	128.5	134.1	135.1	134.5	—	—	—	130.16	
	20	—	—	—	—	—	—	—	—	—	133.1	125.4	135.9		
	21	129.6	135.3	135.0	131.3	126.3	128.4	130.2	133.0	137.2	132.2	134.2	132.3	132.08	
	22	133.9	134.4	135.1	129.9	129.0	130.0	130.1	136.8	131.7	133.0	132.6	133.4	132.49	
	23	133.4	135.7	135.8	130.5	128.8	129.9	130.9	131.3	138.2	134.0	138.0	141.6	134.01	
	24	145.5	141.3	140.4	121.6	126.3	118.0 <sup>e</sup>	119.5	115.8	142.8	133.7	133.3	134.1	131.02	
	25	135.2	136.5	135.4	131.8	127.8	132.7	131.7	132.0	131.2	133.3	131.4	133.0	132.67	
	26	132.8	136.9	135.1	128.8	126.7	129.5	131.5	139.8	132.0	—	—	—	132.50	
	27	—	—	—	—	—	—	—	—	—	133.3	132.3	131.3		
	28	134.0	136.1	134.5	128.8	126.1	129.2	131.9	136.0	134.4	139.0	132.4	135.1	133.12	
Hourly Means	136.78	137.39	136.81	131.44	129.77	130.76	133.21	135.50	136.90	136.37	135.36	135.45			

<sup>a</sup> Ten minutes late.

<sup>b</sup> One hour late; omitted in the hourly mean.

<sup>c</sup> Eleven minutes late.

<sup>d</sup> Seven minutes late.

DECLINATION.														
Angular Value of one Scale Division of the Declinometer = 0'.721. Increasing numbers denote decreasing Westerly Declination.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
MARCH.	1	136.3	134.9	134.0	128.0	125.9	123.2	128.8	132.5	132.4	132.0	132.6	135.1	131.31
	2	134.0	129.2	129.5	130.7	129.0	127.3	129.7	132.6	133.4	136.0	132.5	136.2	131.67
	3	133.4	138.0	136.1	130.1	127.8	129.4	129.7	132.3	134.4	132.6	138.6	134.1	131.37
	4	133.0	135.5	134.1	129.7	129.0	127.2	128.0	132.8	133.1	136.0	131.6	139.8	132.48
	5	133.5	139.2	135.4	124.6	128.5	124.0	129.6	134.7	132.0	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	131.9	134.8	133.8	131.92
	7	131.7	136.2	132.9	126.8	126.9	130.0	131.2	141.1	135.4	131.0	133.9	131.9	132.42
	8	134.3	136.0	133.7	125.4	127.8	130.1	129.8	130.6	133.0	133.1	134.2	134.4	131.87
	9	136.3	137.1	134.5	125.6	125.0	129.9	131.3	132.2	134.0	134.0	133.3	133.0	132.18
	10	133.0	138.0	136.8	130.0	127.7	130.3	132.1	133.0	133.3	132.9	132.8	133.2	132.76
	11	133.9	137.5	137.8	126.8	124.7	138.6	131.2	130.4	132.4	—	134.1	135.5	132.99
	12	135.1	138.0	136.0	128.5	127.3	130.2	132.0	132.3	131.2	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	136.8	134.0	136.7	133.17
	14	137.2	138.8	138.8	130.3	125.8	128.5	132.3	132.6	136.4	134.2	133.8	134.3	133.58
	15	136.0	140.6	138.7	129.5	124.3	120.8	118.4	133.2	133.6	132.6	133.4	134.7	131.32
	16	136.5	143.9	144.8	132.4	120.2	119.5	126.7	143.2	139.2	146.1	133.7	128.7	134.58
	17	134.8	138.2	139.0	131.5	125.9	127.4	129.0	129.5	137.1	134.1	134.0	135.2	132.98
	18	135.2	139.6	138.4	130.1	127.2	129.7	132.6	132.9	133.3	134.4	135.8	141.6	134.23
	19	137.3	132.1	134.9	126.0	122.4	125.9	131.7	132.9	133.0	—	—	—	131.94
	20	—	—	—	—	—	—	—	—	—	135.5	134.5	137.1	—
	21	136.8	138.4	137.6	130.5	127.5	129.1	131.4	135.0	135.5	134.2	135.0	134.2	133.77
	22	135.9	137.9	134.2	123.8	124.6	128.3	130.0	129.6	132.3	136.8	134.6	135.0	131.92
	23	128.9	143.7	133.3	124.7	124.1	122.2	130.1	136.3	133.8	136.5	128.1	129.2	130.91
	24	132.0	140.9	135.2	125.1	125.6	130.0	140.3	138.5	138.4	—	—	—	133.45
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	131.9	131.0	132.5	—
	26	135.0	140.1	136.2	127.5	124.6	128.9	131.2	131.0	132.7	—	—	—	133.48
	27	—	—	—	—	—	—	—	—	—	140.0	139.2	135.3	—
	28	128.3	137.1	132.3	125.8	122.8	123.1	131.0	132.0	135.0	133.2	133.0	134.0	130.63
	29	129.2	140.9	139.3	127.7	121.2	125.9	128.6	136.7	142.3	140.8	137.0	133.9	133.63
	30	136.1	132.2	137.3	122.8	120.0	126.4	131.0	129.7	140.6	131.5	131.7	131.6	130.91
	31	134.9	140.5	139.9	129.5	124.6	125.0	129.1	130.3	133.1	131.9	133.3	132.6	132.06
Hourly Means	134.18	137.87	136.18	127.82	125.40	127.34	130.26	133.38	134.65	134.80	133.87	134.37	131.54	
APRIL.	1	140.1	144.0	130.1	127.6	124.1	122.6	130.1	134.8	133.4	135.1	128.0	132.2	131.84
	2	132.0	135.2	133.8	128.3	125.2	124.4	124.0	130.0	133.0	—	—	—	130.74
	3	—	—	—	—	—	—	—	—	—	136.4	133.7	132.6	—
	4	134.3 <sup>b</sup>	135.8	135.9	122.2	125.0	124.9	126.3	128.0	129.2	132.0	136.1	131.8	130.12
	5	133.8	138.4	134.6	124.3	122.9	124.1	129.6	131.0	136.2	137.4	134.3	134.0	131.72
	6	134.3	134.6	133.0	125.2	124.6	128.0	134.2	130.1	130.7	131.2	132.7	133.1	130.97
	7	133.0	136.8	133.3	123.0	121.9	126.9	131.0	129.7	130.2	135.2	135.0	136.2	131.02
	8	138.2	139.9	135.7	128.6	124.0	124.8	126.3	127.5	130.1	133.3	133.6	134.4	131.37
	9	134.1	137.9	135.0	125.5	121.2	125.0	130.0	132.0	132.8	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	138.5	138.9	156.3	133.92
	11	137.2	138.3	134.9	127.0	126.9	128.9	130.8	128.0	141.2	144.3	139.9	135.0	134.37
	12	133.0	126.0	139.0	129.1 <sup>c</sup>	123.8	123.2	131.9	132.4	133.4	129.3	123.0	150.8	131.24
	13	137.1	119.6	137.6	134.0	127.6	123.2	126.7	128.0	131.2	131.4	133.4	133.8	130.30
	14	134.0	140.0	136.1	128.0	123.4	123.0	132.3	127.5	145.8	88.7	166.3	167.3	136.00
	15	141.2	146.3	124.9	128.2	131.0	131.6	129.0	137.5	113.1	137.1	155.5	149.9	135.44
	16	142.8	142.6	137.2	128.0	125.0	124.0	127.0	127.5	128.8	—	—	—	132.49
	17	—	—	—	—	—	—	—	—	—	133.8	137.2	136.0	—
	18	132.9	136.3	134.1	127.6	127.2	127.0	127.1	129.0	130.0	135.2	138.0	134.5	131.57
	19	136.3	131.6	130.1	123.5	125.5	127.1	130.8	134.7	131.0	131.0	131.9	135.3	130.73
	20	133.9	131.9	130.0	121.9	126.8	129.2	131.0	133.1	127.4	135.0	111.3	139.9	129.29
	21	127.3	136.5	124.5	126.0	125.0	128.9	130.0	130.3	133.0	131.4	130.1	133.7	129.64
	22	135.4	136.9	130.4	124.6	127.0	129.0	130.0	130.3	131.9	134.2	133.4	133.6	131.39
	23	135.3	137.0	131.9	125.7	125.2	128.0	131.7	131.0	134.2	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	134.5	133.0	135.0	131.87
	25	137.5	139.6	133.3	124.9 <sup>d</sup>	123.7	129.2	131.2	129.5	131.1	131.1	133.8	137.1	131.83
	26	140.3	137.6	130.9	126.4	125.1	127.0	131.2	132.1	132.2	133.7	135.5	137.1	132.42
	27	137.8	136.9	134.3	126.6	121.2	126.2	128.1	131.0	132.0	131.7	132.1	134.2	131.01
	28	133.9	139.4	127.8	123.7	123.0	126.2	130.3	130.7	131.2	134.5	134.4	134.3	130.71
	29	139.6	138.9	135.0	127.0	123.4	120.2	127.8	130.3	131.4	134.4	134.1	134.9	131.42
	30	138.2	138.8	132.9	126.2	125.3	127.8	130.6	130.6	130.1	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	133.0	134.0	134.1	131.80
Hourly Means <sup>e</sup>	135.97	136.80	132.93	126.27	124.81	126.17	129.58	130.64	131.72	134.19	133.72	136.79	131.48	

<sup>a</sup> Good Friday.

<sup>b</sup> Thirty-five minutes late; omitted in the hourly mean.

<sup>c</sup> Four minutes late.

<sup>d</sup> Two minutes late.

<sup>e</sup> The observations of April 14<sup>h</sup> 18<sup>h</sup>, 14<sup>h</sup> 20<sup>h</sup>, and 14<sup>h</sup> 22<sup>h</sup>, are omitted in the hourly means on account of excessive disturbance.

DECLINATION.

Angular Value of one Scale Division of the Declinometer = 0'.721. Increasing numbers denote decreasing Westerly Declination.

Mean Göttingen Time	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
MAY.	2	134.1	139.4	132.6	123.8	123.1	129.7	131.4	130.0	130.7	132.1	134.0	135.9	131.40
	3	137.1 <sup>a</sup>	135.0	123.9 <sup>a</sup>	123.9	126.6	128.9	131.5	130.0	131.1	132.8	134.7	135.5	130.92
	4	139.0	135.4	128.8	122.5	124.3	131.0	131.8	129.7	130.5	131.8	133.5	132.5	130.90
	5	142.2	139.3	128.3	123.0	127.8	131.2	131.4	130.8	131.2	132.0	134.0	136.5	132.31
	6	140.8	139.3	132.2	115.4	120.9	124.2	127.7	130.7	132.0	134.2	135.9	140.6	131.16
	7	129.9	132.1	128.5	122.8	122.9	123.4	130.6	134.0	130.1	—	—	—	129.56
	8	—	—	—	—	—	—	—	—	—	133.0	134.2	133.2	—
	9	135.8	139.1	131.2	123.0	123.2	128.7	136.0	130.5	132.3	132.0	132.2	135.8	131.65
	10	139.9	139.7	132.8	126.9	124.0	125.6	131.1	131.5	140.6	125.0	133.2	133.6	132.00
	11	135.9	138.5	129.5	122.8	121.5	126.2	132.2	131.3	134.8	133.4	132.4	133.5	130.17
	12	137.6	140.3	131.6	123.4	123.8	126.9	130.8	131.5	131.9	132.0	134.0	134.5	130.70
	13	138.2	139.8	131.8	121.9	123.0	126.8	133.0	131.3	132.1	131.3	131.9	133.3	131.20
	14	136.1	135.7	128.8	128.0	124.8	128.6	130.5	128.9	131.2	—	—	—	131.34
	15	—	—	—	—	—	—	—	—	—	134.9	133.3	135.3	131.13
	16	138.4	129.9	131.0	124.0	125.8	128.9	130.1	131.2	141.8	136.8	132.8	123.8	131.21
	17	130.0	136.9	131.8	125.9	129.8	132.2	131.9	137.2	135.8	133.1	135.4	129.5	132.46
	18	135.0	134.8	131.4	127.9	126.0	127.8	130.3	130.8	133.0	131.0	132.7	134.2	131.24
	19	131.5	135.2	131.9	127.9	128.1	130.0	131.0	130.3	131.2	131.6	131.8	136.0	131.37
	20	136.7	133.2	127.7	124.7	126.9	129.1	129.8	130.2	130.0	132.0	132.8	134.2	130.61
	21	137.7	137.7	129.2	125.5	126.4	129.6	130.3	130.1	130.4	—	—	—	131.32
	22	—	—	—	—	—	—	—	—	—	131.5	132.3	135.1	—
	23	138.3	138.0	132.8	125.1	120.3	127.2	131.1	131.8	130.3	131.0	135.0	132.7	131.13
	24	142.7	144.0	136.0	123.9	121.4	126.4	129.8	130.0	131.2	138.0	133.3	134.4	132.60
	25	139.4	137.6	133.3	126.0	121.7	127.0	130.4	136.7	132.7	132.0	131.7	131.2	131.64
	26	138.7	137.1	131.9	125.2	121.2	124.8	133.2	134.3	129.6	134.2	131.0	133.1	131.20
	27	138.1 <sup>a</sup>	138.4	132.5	123.2	122.1	129.2	131.0	132.0	132.0	130.0	126.7	128.1	130.27
	28	138.1	142.0	131.5	125.0	122.5	126.1	131.9	131.2	141.6	—	—	—	131.28
	29	—	—	—	—	—	—	—	—	—	133.0 <sup>a</sup>	132.0	130.3	132.10
	30	137.1	138.0	132.2	126.4	124.8	126.3	130.4	130.8	130.8	131.5	131.2	132.0	130.96
	31	137.0	139.0	131.6	125.9	121.9	127.4	131.5	131.0	129.9	130.3	131.2 <sup>b</sup>	132.2	130.74
	Hourly Means	137.09	137.52	131.24	124.38	124.03	127.82	131.18	131.45	132.65	132.30	132.82	133.35	
JUNE.	1	138.3	138.0	131.2	124.8	121.8	123.6	129.2	127.0	130.2	133.3	136.4	135.4	130.77
	2	140.4	143.2	128.2	120.8	118.7	124.9	131.8	137.5	132.0	127.6	132.7	135.0	131.07
	3	139.9	141.2	130.0	124.2	123.7	127.1	133.9	131.5	130.1	131.0	132.2	134.7	131.62
	4	139.9	139.9	136.0	136.1	105.9	122.1	123.8	131.1	130.3	—	—	—	129.31
	5	—	—	—	—	—	—	—	—	—	129.0	126.1	131.5	—
	6	138.9	137.8	129.5	122.8	121.6	127.2	129.1	137.7	132.1	128.8	124.9	136.1	130.55
	7	141.8	139.7	129.2	119.3	123.0	126.0	129.0	130.0	132.2	138.0	132.1	125.0	130.44
	8	137.1	139.2	127.9	119.0	120.6	121.0	132.7	129.1	136.4	132.7	131.0	132.1	129.90
	9	138.7	136.1	138.6	130.1	122.9	120.4	128.0	135.5	129.0	130.3	131.3	133.9	131.23
	10	144.0	147.5	142.9	125.9	118.0	121.9	128.4	130.0	130.4	132.1	129.5	132.6	131.93
	11	138.0	140.5	133.9	124.3	123.0	125.2	131.2	129.2	130.1	—	—	—	130.24
	12	—	—	—	—	—	—	—	—	—	137.7	137.0	136.8	132.24
	13	139.6	133.3	129.9	118.8	123.9	125.0	132.6	125.5	134.7	135.2	130.6	131.2	130.25
	14	123.6	137.6	135.1	122.3	122.2	134.9	128.9	129.7	129.8	127.1	138.0	127.0	129.68
	15	136.4	137.4	133.9	127.1	124.7	127.6	128.7	133.5	128.0	131.6	121.2	131.5	130.13
	16	135.1	135.4	130.0	121.8	124.3	126.3	127.8	126.1	126.3	127.9	128.7	131.0	128.39
	17	133.8	133.9	129.6	123.5	123.5	125.4	126.9	127.2	127.4	129.5	130.8	128.0	128.29
	18	136.0	136.0	130.6	121.5	123.2	125.4	126.1	127.0	131.7	—	—	—	128.58
	19	—	—	—	—	—	—	—	—	—	128.5	130.0	126.9	128.58
	20	130.6	132.9	128.0	120.4	119.3	123.3	128.2	128.5	128.8	127.5	128.0	130.0	127.12
	21	133.3	135.1	131.3	121.7	119.7	123.3	128.0	127.7	127.6	128.3	129.6	131.4	128.08
	22	135.1	137.0	130.9	124.0	117.7	120.3	123.6	128.2	135.7	155.3	131.0	122.0	130.07
	23	138.9	133.8	131.9	128.3	120.6	123.5	126.4	126.2	128.5	121.0	119.4	128.3	127.23
	24	131.5	130.3	125.9	124.5	121.1	123.7	126.7	127.0	130.0	130.8	129.5	130.7	127.64
	25	132.3	137.5	134.9	122.7	123.0	123.2	126.0	137.8	141.0	—	—	—	128.80
	26	—	—	—	—	—	—	—	—	—	133.0	129.5	130.1	130.92
	27	135.7 <sup>c</sup>	135.6	131.3	122.6	121.0	122.5	127.3	127.8	128.1	130.8	127.5	129.0	128.27
	28	134.1	137.4	133.3	121.8	120.3	124.1	127.9	127.4	127.1	129.1	127.3	130.2	128.33
	29	135.0 <sup>d</sup>	138.0	133.6	125.3	120.0	123.4	126.7	128.2	129.8	135.2	131.4	130.5	129.76
	30	136.5	135.4	135.0	120.9	117.0	122.7	125.3	127.1	136.4	121.0	131.0	130.0	128.19
Hourly Means	136.33	137.30	132.02	123.63	120.80	124.38	128.24	130.13	130.91	131.25	129.87	130.80		

<sup>a</sup> Thirty minutes late; omitted in the hourly means.

<sup>b</sup> Five minutes late.

<sup>c</sup> Eleven minutes late.

<sup>d</sup> Fifteen minutes late.

DECLINATION.													
Angular Value of one Scale Division of the Declinometer = 0'.721. Increasing numbers denote decreasing Westerly Declination.													
Mean Göttingen Time.	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .	
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
JULY.	1	133.5	137.0	138.2	135.9	132.1	123.3	117.8	116.9	117.0	121.6	122.3	123.8
	2	131.7	145.9	150.9	144.5	132.1	134.0	120.7	134.2	140.0	135.7	124.4	134.9
	3	—	—	—	—	—	—	—	—	—	—	—	—
	4	130.6	126.3	129.0	119.2	121.6	121.0	120.0	124.2	123.6	126.0	128.0	124.4
	5	132.7	136.9	137.7	136.9	133.5	129.4	125.1	122.9	122.5	123.6	124.4	125.5
	6	136.9	133.9	136.7	135.0	129.9	126.0	120.9	119.3	116.7	122.6	126.0	125.0
	7	140.3	139.6	137.5	141.4	136.8	132.9	129.4	124.8	123.0	124.1	125.9	128.6
	8	138.0	140.5	141.3	138.0	135.9	133.0	129.1	123.8	121.9	122.3	126.2	128.3
	9	140.2	123.2	130.8	133.4	137.2	131.5	129.4	128.4	120.2	126.0	124.0	139.6
	10	—	—	—	—	—	—	—	—	—	—	—	—
	11	127.0	126.4	140.8	141.0	134.1	132.2	124.6	124.3	125.3	124.7	126.1	129.3
	12	137.0	138.9	140.3	137.0	135.7	135.0	131.3	125.0	120.3	122.0	127.8	129.9
	13	136.0	138.9	139.9	141.1	134.1	132.2	128.8	125.0	124.0	124.1	126.0	128.5
	14	138.0	136.7	138.8	137.9	135.6	129.2	124.8	122.4	122.6	123.7	126.6	128.6
	15	136.8	138.7	140.1	137.0	132.8	129.4	126.4	123.5	122.1	124.0	127.0	129.2
	16	133.4	138.2	139.9	136.9	132.0	129.3	127.0	126.2	125.5	127.4	127.3	128.8
	17	—	—	—	—	—	—	—	—	—	—	—	—
	18	139.6	141.4	140.1	137.7	133.8	128.0	125.0	124.4	125.9	127.5	129.6	131.2
	19	140.9	143.4	137.6	135.5	133.9	130.5	126.2	124.5	126.7	126.8	127.2	129.1
	20	136.0	136.5	140.4	137.6	135.7	127.2	127.0	125.1	126.0	129.0	126.7	132.9
	21	137.0	141.4	141.1	138.9	133.9	131.5	128.4	126.7	125.6	128.0	131.0	133.4
	22	141.9	142.1	141.2	135.5	131.0	126.5	120.8	121.5	123.2	126.1	128.2	129.0
	23	144.4	137.9	141.5	138.2	134.4	133.9	124.2	126.0	124.9	129.1	134.8	128.0
	24	—	—	—	—	—	—	—	—	—	—	—	—
	25	135.2	140.5	143.4	142.7	139.4	132.7	126.5	122.4	123.2	126.3	129.8	131.1
	26	142.9	146.5	147.4	143.3	135.0	129.7	124.7	121.0	118.4	120.2	124.5	127.6
	27	132.5	145.9	145.5	143.5	132.9	131.8	124.0	121.6	120.7	121.3	125.3	128.6
	28	139.5	142.2	141.2	140.9	138.7	133.0	128.0	124.7	122.6	122.5	124.2	127.5
	29	139.9	149.0	148.3	144.7	147.1	134.6	130.1	125.8	124.2	120.7	121.1	123.3
	30	132.7	142.5	143.7	144.0	136.0	134.8	131.3	128.4	124.5	124.9	126.1	128.3
	31	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means	136.71	138.86	140.51	138.34	134.43	130.48	125.83	124.35	123.48	125.01	126.56	129.02	
AUGUST.	1	136.5	145.0	141.5	143.0	134.7	132.4	127.2	123.6	122.7	123.3	127.9	130.0
	2	139.1	140.5	140.1	136.0	131.2	128.2	126.0	125.5	127.4	128.8	130.0	131.1
	3	137.4	139.6	141.1	137.6	131.0	126.0	123.6	123.1	125.8	127.4	130.0	131.8
	4	139.0	138.3	138.8	138.3	132.8	130.5	124.4	121.0	122.1	123.8	125.6	129.0
	5	139.5	146.5	142.9	136.6	133.0 <sup>e</sup>	128.2	125.5	125.5	126.2	128.6	130.1	131.2
	6	140.0	147.0	142.2	138.2	135.7	119.9	122.8	125.1	126.0	125.2	128.9	130.2
	7	—	—	—	—	—	—	—	—	—	—	—	—
	8	135.0	137.9	137.8	136.0	130.4	124.7	121.0	120.0	120.2	125.0	129.1	131.1
	9	140.0	143.5	143.0	137.5	130.4	125.0	124.6	124.1	126.1	129.3	131.0	130.9
	10	139.1	139.0	139.6	134.4	128.7	128.2	128.2	125.9	125.4	126.8	128.2	130.7
	11	138.5	139.1	139.8	134.7	134.0	132.8	130.2	126.3	126.8	128.0	129.0	130.4
	12	146.4	142.6	139.4	134.6	127.6	126.5	125.2	123.1	127.1	127.5	129.6	132.0
	13	138.0	138.9	137.9	135.4	130.8	128.0	126.0	125.8	126.9	127.2	128.8	131.4
	14	—	—	—	—	—	—	—	—	—	—	—	—
	15	136.6	138.0	136.8	132.4	127.0	122.2	121.8	120.4	123.3	126.2	131.4	133.0
	16	137.2	138.1	138.0	136.0	128.6	126.5 <sup>s</sup>	126.0	126.3	127.0	129.1	130.4	132.0
	17	145.3	139.7	143.9	140.0	132.3	126.9	121.0	118.8	123.0	125.8	127.9	131.0
	18	137.5	141.2	139.2	129.8	126.2	118.2	117.9	117.8	123.8	129.1	132.0	132.2
	19	139.5	152.8	132.6	133.0	121.0	100.9	110.6	118.4	120.6	125.1	143.4	131.4
	20	135.3	136.9	137.0	135.2	128.7	125.3	123.8	126.7	127.8	129.6	129.7	134.0
	21	—	—	—	—	—	—	—	—	—	—	—	—
	22	139.4	143.2	141.0	137.7	132.8	128.5	123.7	124.1	125.1	126.5	128.3	129.3
	23	142.6	144.1	143.0	139.1	133.6	126.8	120.1	118.0	119.1	125.0	129.4	131.7
	24	140.6	135.7	138.1	134.5	125.7	121.8	117.9	118.9	123.5	127.6	130.3	129.5
	25	133.3	140.3	142.0	138.6	132.0	125.2	125.3	123.3	126.1	129.9	129.6	136.7
	26	140.3	141.1	142.2	137.4	130.6	125.0	123.1	121.2	122.0	124.2	126.0	129.9
	27	135.7	140.1	142.6	139.1	131.1	127.0	121.0	118.9	120.0	123.9	127.8	129.3
	28	—	—	—	—	—	—	—	—	—	—	—	—
	29	137.9	139.1	139.0	137.0	131.0	125.8	123.5	123.5	125.5	127.0	129.9	131.0
	30	137.3	139.0	139.0	136.1	129.2	124.8	124.6	124.0	126.5	129.9	132.0	132.7
	31	138.8	140.7	140.1	136.7	132.0	126.5	124.4	125.0	125.9	129.4	132.5	132.1
Hourly Means	138.73	141.03	139.95	136.48	130.45	125.25	123.31	122.75	124.51	127.01	129.95	131.32	

<sup>e</sup> Five minutes late.

<sup>s</sup> Seven minutes late.

DECLINATION.  
Angular Value of one Scale Division of the Declinometer = 0'.721. Increasing numbers denote decreasing Westerly Declination.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Means.
Sc. Div. 126.8	Sc. Div. 126.0	Sc. Div. 134.0	Sc. Div. 129.7	Sc. Div. 129.1	Sc. Div. 125.9	Sc. Div. 159.7	Sc. Div. 137.2	Sc. Div. 120.7	Sc. Div. 148.6	Sc. Div. 121.8	Sc. Div. 171.2	Sc. Div. 131.25
144.4	132.4	136.2	131.1	138.2	131.9	—	—	—	—	—	—	—
—	—	—	—	—	—	134.0	108.5	129.8	136.6	131.5	131.5	133.96
128.1	127.2	134.2	135.0	123.1	125.4	129.3	125.3	116.1	128.0	121.9	121.3	125.37
125.5	126.9	128.7	130.4	133.2	130.1	132.0	128.3	115.5	121.9	131.4	135.1	128.72
125.3	138.3	127.7	129.0	130.0	130.3	131.1	125.1	139.5	134.2	133.6	136.6	129.57
130.8	131.0	131.4	130.6	130.9	131.0	131.2	132.0	132.2	132.6	133.3	135.2	131.94
129.8	124.0	147.6	136.4	155.7	158.9	145.0	148.2	142.0	132.9	136.4	135.5	136.28
132.3	139.1	156.9	141.4	137.0	131.3	—	—	—	—	—	—	—
—	—	—	—	—	—	131.4	131.2	126.2	131.0	133.0	120.2	132.29
130.9	132.4	140.9	142.0	141.7	130.2	133.7	136.0	127.0	127.2	128.9	131.6	131.60
132.5	132.1	134.0	135.0	134.3	135.2	133.3	131.0	131.2	131.2	132.6	134.1	132.36
128.0	130.2	129.9	128.2	131.1	131.9	132.0	133.4	132.2	131.8	130.2	137.1	131.44
130.0	130.9	132.0	131.6	134.0	136.3	127.6	139.6	133.3	136.6	137.0	138.5 <sup>a</sup>	132.18
129.8	130.1	130.7	130.8	132.2	147.4	138.6	134.0	133.7	134.3	136.4	137.5	132.60
129.7	130.7	131.2	134.1	132.5	131.7	—	—	—	—	—	—	—
—	—	—	—	—	—	133.0	132.5	132.2	132.8	132.9	134.0	131.63
131.1	130.9	132.0	133.9	141.6	134.0	130.3	137.0	131.7	134.6	123.8	138.1	132.63
130.2	130.5	130.0	138.2	140.9	135.3	145.9	137.7	134.8	133.0	135.3	138.1	133.84
131.4	136.2	133.8	132.0	131.0	135.2	129.8	129.8	131.2	133.4	134.2	136.2	132.26
134.0	134.1	132.4	133.1	132.7	132.5	132.2	132.2	134.9	130.3	134.3	139.9	132.90
131.6	132.0	130.2	130.0	132.0	139.4	134.5	130.0	143.0	129.3	128.4	140.0	131.97
132.0	136.0	143.0	131.5	135.0	131.6	—	—	—	—	—	—	—
—	—	—	—	—	—	130.9	133.0	131.0	131.6	132.9	132.8	133.27
132.8	133.0	131.6	134.0	133.9	132.7	134.0	133.8	132.2	133.4	137.3	140.8	133.45
129.9	129.9	131.2	137.2	133.4	133.0	133.0	132.0	129.1	130.4	137.0	143.2	132.52
131.8	131.4	130.7	129.1	130.4	132.2	132.9	133.5	133.5	134.1	134.1	136.6	131.83
132.3	131.0	130.8	131.0	133.0	133.0	135.2	135.0	136.0	134.5	132.4	135.4	132.69
126.0	136.3	147.9	132.0	131.4	138.0	137.4	134.5	133.5	132.6	134.8	134.9	134.50
130.6	134.0	143.4	131.5	134.0	131.4	—	—	—	—	—	—	—
—	—	—	—	—	—	154.3	125.5	137.6	122.9	126.4	<sup>b</sup> 133.9	133.45
130.68	131.79	135.09	133.03	134.32	134.07	135.47	132.17	131.54	132.30	131.99	136.43	—
129.2	126.0	125.0	124.6	129.2	133.8	131.7	132.8	133.0	133.6	134.7	137.0	131.60
131.2	129.7	131.5	131.3	131.8	131.6	131.7	132.4	132.6	132.5	134.5	136.6 <sup>c</sup>	132.14
132.3	130.7	131.0	138.3	133.1	132.2	133.0	132.2	132.2	133.7	135.0	137.6 <sup>d</sup>	132.32
128.6	132.5	143.2	138.1	133.5	167.9	137.4	134.2	136.8	137.0	138.2	127.7	134.11
133.0	131.9	132.9	132.2	144.8	133.0	146.0	117.9	140.6	128.7	136.0	137.2	133.67
133.2	140.9	129.5	130.0	133.5	134.2	—	—	—	—	—	—	—
—	—	—	—	—	—	132.5	131.3	130.8	127.2	131.3	<sup>e</sup> 135.0	132.11
137.9	133.1	132.6	130.0	131.0	130.1	127.6	130.1	127.4	123.6	135.2	137.8	130.19
131.7	130.9	130.6	130.5	130.7	131.0	135.3	134.1	132.8	133.0	133.6	134.4	132.35
134.7	131.5	131.0	130.1	131.4	135.0	138.8	134.4	135.1	136.5	136.7	135.4	132.70
130.7	130.4	131.8	136.0	130.2	134.7	132.4	134.0	133.1	134.1	122.8	141.2	132.54
131.6	132.1	129.8	133.0	129.1	130.0	131.8	132.1	128.1	130.7	133.0	135.7	131.61
129.5	129.5	148.3	137.0	133.3	134.0	—	—	—	—	—	—	—
—	—	—	—	—	—	133.5	128.6	131.9	132.3	133.5	134.3	132.53
133.3	132.0	132.4	134.0	133.0	133.0	134.2	131.0	126.4	133.0	133.5	135.3	130.84
132.2	132.5	143.2	133.9	135.0	138.8	137.1	132.4	131.3	129.4	136.8	140.9	133.28
131.9	131.1	131.2	132.9	135.1	141.4	139.4	136.3	131.0	134.0	136.9	140.2	133.21
137.1	132.5	131.8	131.4	136.2	137.0	136.8	134.2	130.3	138.8	138.9	135.5	131.89
131.2	132.5	131.1	130.1	133.0	131.7	132.7	130.0	130.8	129.0	131.5	129.6	129.27
131.8	133.1	144.0	138.5	133.7	137.0	—	—	—	—	—	—	—
—	—	—	—	—	—	132.0	132.0	133.1	132.5	133.6	136.0	132.80
130.2	132.9	137.2	137.0	135.2	130.3	127.6	130.9	132.6	132.9	131.2	—	132.07
133.0	131.9	131.0	131.7	131.4	131.9	132.0	132.0	132.8	133.5	134.3	136.8	131.87
131.1	130.2	139.8	132.3	132.1	133.4	130.1	132.7	129.1	132.7	134.8	135.9	130.76
133.9	139.0	134.0	135.0	131.8	132.0	133.5	133.0	130.0	132.3	134.0	135.0	132.74
143.0	130.0	135.0	139.4	135.8	130.9	130.9	132.9	132.5	134.1	133.1	135.1	131.90
130.1	131.0	130.5	131.2	131.0	135.0	—	—	—	—	—	—	—
—	—	—	—	—	—	131.2	132.0	132.0	132.0	134.0	135.9	130.93
131.0	131.7	130.8	131.2	131.5	133.1	130.0	134.0	136.4	135.5	135.3	135.6	131.93
132.0	131.3	131.2	132.3	134.2	132.0	133.0	133.6	135.1	135.4	136.3	136.0	132.40
132.0	131.7	131.9	132.0	132.0	131.9	133.5	133.2	135.0	136.6	137.3	137.2	132.85
132.50	131.95	133.79	133.11	133.06	134.70	133.54	132.01	132.33	132.76	134.30	135.96	—

<sup>a</sup> Forty minutes late; omitted in the hourly mean.    <sup>b</sup> Twenty minutes late.    <sup>c</sup> Ten minutes late.    <sup>d</sup> Twenty-two minutes late.    <sup>e</sup> Twenty minutes late.

DECLINATION.													
Angular Value of one Scale Division of the Declinometer = 0'.721. Increasing numbers denote decreasing Westerly Declination.													
Mean Göttingen Time.	0h.	1h.	2h.	3h.	4h.	5h.	6h.	7h.	8h.	9h.	10h.	11h.	
SEPTEMBER.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
	1	139.1	139.9	139.0	135.7	130.3	124.0	123.0	123.2	124.1	132.1	130.2	131.2
	2	143.6	143.0	142.4	136.5	129.3	121.4	122.9	123.7	123.1	124.5	128.0	129.0
	3	134.3	141.6	140.8	133.8	133.5	127.3	125.9	126.4	127.1	130.5	132.6	134.2
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	143.3	145.0	144.9	139.0	131.1	123.2	117.3	118.0	121.9	124.2	131.7	131.6
	6	136.7	141.2	139.6	134.1 <sup>a</sup>	128.9	125.0	122.8	121.0	124.2	128.7	133.2	135.0
	7	141.1	144.0	143.3	139.0	132.7	126.7	122.2	122.0	123.9	128.0	131.0	134.5
	8	139.0	138.5	136.4	136.2	128.5	126.6	122.7	121.9	122.4	127.9	131.1	134.7
	9	139.7	144.5	144.3	140.5	134.2	129.2	123.6	120.8	122.5	127.0	131.9	133.6
	10	141.8	143.9	143.7	138.8	133.3	129.0	126.5	124.8	125.8	129.9	130.8	137.1
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	138.3	139.3	137.0	134.3	132.0	126.1	124.3	123.1	125.7	128.2	125.6	130.7
	13	137.0	143.1	134.9	133.5	129.2	126.1	125.0	124.9	125.3	130.0	132.0	139.8
	14	136.0	142.6	138.6	136.0	132.7	129.3	127.5	127.8	128.1	130.2	131.6	132.1
	15	135.0	140.4	138.8	135.4	131.9	128.4	125.4	124.0	125.3	127.0	130.2	132.0
	16	139.8	135.3	125.0	130.6	127.9	125.3	125.8	124.1	125.5	129.2	131.3	132.2
	17	138.3	139.6	138.0	134.1	131.0	127.2	124.9	124.8	127.2	130.9	132.4	132.4
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	138.6	141.2	139.3	134.5	132.9	128.1 <sup>b</sup>	124.8	125.2	126.0	122.1	124.7	127.0
	20	142.4	141.9	141.6	143.1	132.9	126.8	125.3	124.6	125.3 <sup>c</sup>	127.7	126.2	127.8
	21	129.1	139.0	138.1	137.0	133.9	128.4	124.6	121.7	122.9	127.0	126.6	126.0
	22	139.4	139.0	140.2	140.0	136.2	130.2	126.1	122.7	119.2	122.8	125.2	130.3
	23	140.4	136.6	141.0	136.7	132.6	127.5	124.9	123.1	123.9	130.3	130.6	130.8
	24	139.6	141.1	140.7	138.8	133.0	127.2	122.5	123.2	123.9	125.0	125.5	128.6
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	136.0	137.3	136.2	134.8	133.9	132.1	130.2	127.7	126.6	127.7	128.1	129.0
	27	135.8	137.0	136.0	135.4	133.4	130.0	127.1	126.0	127.1	128.7	129.2	129.0
	28	133.0	134.4	134.5	134.5	134.7	130.1	127.7	127.1	125.5	127.1	128.1	132.0
	29	137.9	134.3	131.4	129.5	129.1	124.5	128.2	130.0	129.7	131.0	132.0	131.8
30	134.0	132.4	133.5	132.0	132.2	129.3	129.2	129.7	129.9	130.9	130.0	129.0	
Hourly Means	138.05	139.85	138.43	135.91	131.97	127.27	125.02	124.29	125.08	128.02	129.61	131.59	
OCTOBER.	1	133.9	135.2	136.8	136.0	134.0	131.6	130.0	129.5	129.9	130.0	127.9	129.4
	2	—	—	—	—	—	—	—	—	—	—	—	—
	3	123.2	127.7	128.4	127.3	124.5	121.1	117.0	117.2	118.5	120.0	122.0	122.4
	4	125.1	131.0	130.2	128.6	122.2	118.7	115.0	113.0	115.0	117.7	122.0	123.0
	5	129.3	131.8	132.4	132.0	127.6	124.6	120.0	120.8	123.6	125.8	127.5	128.9
	6	135.4	138.1	137.2	131.5	127.5	122.2	120.2	120.5	123.0	124.5	127.2	128.3
	7	132.1	135.2	135.0	133.2	130.1	126.1	123.4	121.9	121.1	123.7	125.4	126.8
	8	132.2	135.4	138.0	133.5	129.5	125.0	120.9	117.0	119.9	120.5	125.8	122.0
	9	—	—	—	—	—	—	—	—	—	—	—	—
	10	130.4	132.3	133.0	133.2	131.2	127.0	124.2	123.3	123.2	123.4	126.0	127.9
	11	130.3	131.8	132.3	132.9	131.7	128.0	124.0	123.0	124.1	125.4	127.0	127.5
	12	128.4	128.0	130.0	134.8	134.6	131.2	127.6	125.2	124.8	125.4	126.5	127.0
	13	132.7	128.7	128.3	134.4	131.2	126.6	121.7	118.1	119.2 <sup>d</sup>	115.0	119.2	122.1
	14	131.0	134.5	135.7	137.5	129.9	120.4	121.4	126.2	124.7	123.3	125.5	127.7
	15	129.0	131.2	136.2	133.4	132.2	126.8	122.1	120.1	121.0	122.4	124.1	122.7
	16	—	—	—	—	—	—	—	—	—	—	—	—
	17	121.6	131.0	134.9	137.6	127.2	124.7	122.0	118.2	116.3	122.6	122.2	126.7
	18	130.9	133.0	133.1	131.1	127.8	124.1	122.4	121.1	120.6	123.1	123.6	124.5
	19	131.8	131.2	134.3	133.2	132.7	125.0	120.8	120.2	122.1	123.0	121.6	126.0
	20	130.0	131.1	137.3	135.1	129.9	125.8	121.0	120.0	122.6	123.6	126.4	127.5
	21	130.2	135.2	136.4	133.1	127.9	123.7	120.1	121.0	122.0	123.4	126.5	125.3
	22	129.1	133.0	136.4	133.6	129.1	123.9	121.0	120.2	123.1	125.2	126.7	126.2
	23	—	—	—	—	—	—	—	—	—	—	—	—
	24	122.5	127.9	130.5	130.0	127.3	125.3	124.6	123.2	124.7	126.7	126.9	127.2
	25	130.6	132.3	134.3	128.3	128.1	125.0	124.8	122.1	123.3	121.3	124.7	126.8
	26	128.9	133.3	133.2	135.1	133.2	128.1	124.2	132.5	120.9	120.1	123.6	121.8
	27	128.9	124.8	132.2	126.7	121.3	126.6	126.0	123.7	121.2	119.0	123.9	126.1
	28	127.1	130.6	132.6	129.5	129.9	124.0	123.1	123.0	123.4	123.3	125.2	126.0
	29	130.1	127.4	127.1	129.3	129.2	125.4	122.8	124.2	123.0	123.0	122.1	124.6
	30	—	—	—	—	—	—	—	—	—	—	—	—
	31	129.8	130.1	133.5	132.3	128.3 <sup>e</sup>	125.3	123.2	122.6	122.6	124.0	—	127.3
Hourly Means	129.40	131.61	133.43	132.43	129.16	125.24	122.44	121.84	122.07	122.90	124.78	125.83	

<sup>a</sup> Seven minutes late.

<sup>b</sup> Three minutes late.

<sup>c</sup> Six minutes late.

<sup>d</sup> Six minutes late.

<sup>e</sup> Five minutes late.



DECLINATION.

Angular Value of one Scale Division of the Declinometer = 0'.721. Increasing numbers denote decreasing Westerly Declination.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Means.
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
131.0	131.4	131.4	130.0	134.0	132.7	134.7	132.6	128.0	154.1	153.2	138.8	133.49
131.3	155.0	131.0	139.0	127.9	131.0	121.3	127.5	133.5	134.0	136.3	131.2	131.93
132.3	138.9	137.2	134.5	134.3	133.6	—	—	—	—	—	—	134.69
—	—	—	—	—	—	141.9	138.5	138.0	135.2	138.9	141.2	132.55
132.5	132.3	132.4	133.1	131.9	131.0	137.0	133.7	135.1	122.0	128.2	136.1	131.52
134.0	133.0	133.0	134.0	136.0	133.2	130.0	131.0	132.9	134.0	135.0	136.0	132.19
133.5	132.0	132.1	131.9	132.2	132.1	131.3	134.2	134.1	135.4	135.1	138.1	132.93
134.8	134.2	135.4	136.9	132.3	130.7	132.1	132.2	132.8	133.9	134.9	135.6	132.15
133.4	133.2	132.7	132.3	133.4	135.1	132.6	133.5	134.0	138.9	142.4	134.3	133.65
132.3	132.0	132.0	135.0	139.2	139.0	—	—	—	—	—	—	—
—	—	—	—	—	—	141.5	138.0	137.0	136.9	132.8	133.8	134.79
130.0	130.7	130.0	133.5	139.8	133.3	128.1	133.0	131.0	134.5	134.7	126.1	131.22
137.0	132.4	138.3	140.0	135.9	135.0	130.6	130.2	134.0	136.3	131.5	134.7	133.20
132.2	132.0	131.5	131.0	135.6	131.2	134.0	134.8	124.8	136.9	139.2	136.2	133.00
131.3	132.9	133.8	132.2	131.7	132.7	136.7	133.5	132.9	134.1	138.0	142.1	132.74
131.0	129.0	129.4	135.0	131.5	139.0	136.1	144.6	144.3	143.9	135.1	144.5	133.14
131.0	131.7	131.1	131.1	131.0	132.0	—	—	—	—	—	—	—
—	—	—	—	—	—	127.0	130.9	131.0	134.8	140.7	<sup>d</sup> 138.2	132.14
130.6	131.0	133.7	139.1	133.2	131.9	134.6	133.0	136.1	139.4	133.1	140.4	132.52
128.6	142.1	136.9	131.2	133.5	131.7	133.2	141.1	133.2	136.1	139.8	130.8	133.49
130.8	128.4	149.5	123.9	130.4	132.1	137.2	128.0	131.0	137.3	140.6	130.9	131.64
131.0	137.5	144.9	132.9	130.7	134.3	129.3	140.6	129.5	131.8	125.1	125.9	131.87
134.5	130.1	133.8	134.2	134.8	136.1	135.3	132.4	138.0	136.1	135.3	135.6	133.11
129.8	131.0	133.0	132.8	133.0	132.5	—	—	—	—	—	—	—
—	—	—	—	—	—	133.0	133.4	133.4	133.8	134.7	<sup>e</sup> 135.4	131.87
130.1	131.1	131.6	131.2	132.0	132.2	132.5	132.8	133.8	134.2	135.0	<sup>f</sup> 135.2	132.14
130.4	132.1	131.7	131.8	131.8	132.2	134.0	132.5	133.0	134.0	134.0	134.8	131.96
131.2	131.9	143.1	132.5	133.2	143.6	150.5	140.7	135.2	138.9	128.2	132.4	133.75
131.7	131.9	136.5	140.0	133.1	132.6	133.3	133.7	123.1	136.1	136.7	133.8	132.16
131.8	132.2	137.5	135.8	133.8	135.8	137.5	134.3	134.2	133.0	128.1	128.1	132.26
131.85	133.46	134.75	133.84	133.32	133.72	134.05	134.26	133.23	135.98	135.64	135.01	129.59
130.9	131.3	131.8	131.1	132.1	139.9	—	—	—	—	—	—	129.92
—	—	—	—	—	—	123.0	122.9	122.9	124.3	124.1	119.5	122.98
123.5	122.6	123.0	122.9	126.0	127.0	123.5	123.1	122.9	124.3	125.6	117.9	122.67
122.3	122.3	122.8	123.0	122.2	122.3	121.7	119.6	125.7	126.4	126.7	127.7	122.60
128.7	129.2	128.9	128.2	127.6	128.0	129.9	131.1	128.8	132.5	134.5	134.8	128.35
128.7	128.6	128.1	128.5	129.1	130.2	124.3	131.0	131.7	125.5	127.4	131.6	128.44
127.1	127.5	127.6	129.2	127.0	132.0	130.4	126.2	128.3	132.0	131.0	130.3	127.55
127.0	127.9	128.0	128.0	127.3	131.4	—	—	—	—	—	—	127.96
—	—	—	—	—	—	127.5	126.0	128.1	129.8	130.6	129.8	128.05
126.8	127.0	127.1	126.4	127.5	127.5	127.0	128.0	127.5	128.1	132.1	131.0 <sup>i</sup>	128.81
127.5	127.0	127.2	127.3	127.4	128.0	129.1	128.5	129.9	128.9	126.4	128.1	127.60
127.5	128.0	128.0	128.7	129.0	133.4	124.8	131.1	128.0	130.2	130.1	129.2	128.51
127.8	128.9	129.9	129.8	129.5	139.8	134.4	128.2	127.2	130.1	128.2	131.5	128.95
127.4	127.9	128.2	128.2	130.2	131.4	131.7	129.0	124.4	125.4	130.4	132.2	126.28
130.1	128.7	136.7	139.2	143.5	136.5	—	—	—	—	—	—	128.79
—	—	—	—	—	—	128.1	125.1	124.0	126.9	131.2	123.6	127.91
127.5	132.1	128.2	140.6	128.0	127.7	128.0	123.3	120.2	128.3	120.0	121.8	128.15
123.3	131.0	133.5	140.1	141.2	137.2	129.6	127.9	127.0	126.5	128.8	129.6	127.46
128.0	129.4	132.3	129.0	128.8	129.3	126.9	129.2	128.0	127.5	130.0	129.5	127.55
128.8	131.4	127.4	128.0	132.6	132.0	125.2	128.7	126.8	126.8	128.4	129.3	127.44
127.9	129.0	128.8	128.0	127.4	127.1	127.2	127.4	127.4	127.9	127.7	128.5	127.77
126.0	128.0	127.2	128.2	128.0	126.0	—	—	—	—	—	—	128.39
—	—	—	—	—	—	129.0	129.2	126.1	126.6	131.9	127.6	127.24
127.2	127.9	127.8	128.0	136.0	125.8	127.4	128.0	127.0	129.9	127.2	129.5	127.67
127.5	128.8	128.5	130.1	135.5	129.0	127.0	127.4	128.2	127.3	125.1	130.5	127.80
122.0	130.0	131.0	130.1	129.3	130.4	129.2	130.6	130.7	128.2	129.2	125.8	127.70
127.8	136.3	129.4	130.0	132.0	128.6	128.0	130.3	120.3	128.7	131.0	131.0	128.39
127.9	129.0	129.6	129.1	132.5	128.0	127.5	128.0	128.0	127.9	129.7	129.1	127.24
128.6	130.9	137.2	131.8	137.0	131.4	—	—	—	—	—	—	127.79
—	—	—	—	—	—	132.2	127.0	126.0	119.4	128.4	129.2	127.91
127.6	128.2	127.8	129.0	131.0	128.0	127.3	126.4	128.2	127.8	128.8	128.0	127.80
127.13	128.80	129.08	129.71	130.68	130.30	127.69	127.43	126.67	127.59	128.63	128.33	127.66

<sup>d</sup> Eight minutes late.

<sup>e</sup> Sixteen minutes late.

<sup>f</sup> Twenty-three minutes late.

<sup>i</sup> Sixteen minutes late.

DECLINATION.													
Angular Value of one Scale Division of the Declinometer = 0'.721. Increasing numbers denote decreasing Westerly Declination.													
Mean Göttingen Time.	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .	
NOVEMBER.	1	127.0	130.2	133.0	133.0	129.8	125.8	124.4	121.9	123.0	125.7	127.1	127.5
	2	134.1	132.7	132.9	131.1	124.7	122.9	120.2	119.8	121.5	123.8	120.5	119.8
	3	126.3	125.9	132.0	132.5	123.9	121.9	119.5	119.7	115.0	122.8	126.5	128.0
	4	131.9	133.0	132.6	131.4	128.7	125.0	123.5	122.5	123.6	125.9	126.9	127.2
	5	128.8	132.1	133.3	133.8	132.7	128.8	127.2	123.6	123.9	125.2	126.5	127.2
	6	—	—	—	—	—	—	—	—	—	—	—	—
	7	129.1 <sup>a</sup>	130.3	134.0	133.1	129.3	125.0	120.8	120.0	120.6	122.7	125.0	126.9
	8	128.7	130.2	133.0	133.3	130.3	125.8	123.2	122.9	123.7	124.9	125.5	126.2
	9	129.4	131.2	131.8	131.8	130.0	126.2	123.8	123.4	124.2	125.4	123.1	124.3
	10	115.2	108.3	129.7	128.2	121.1	124.0	116.6	119.1	121.2	123.0	126.0	121.4
	11	133.0	129.1	129.4	129.5	127.0	123.2	121.9	122.0	121.2	124.2	124.2 <sup>b</sup>	125.1
	12	129.3	132.1	130.0	128.1	127.4	124.6	122.7	122.1	123.6	125.0	125.3	127.4
	13	—	—	—	—	—	—	—	—	—	—	—	—
	14	128.1	130.9	131.6	130.2	127.6	125.2	123.0	122.9	124.0	125.7	126.7	126.6
	15	128.8	129.7	130.1	129.2	126.3	124.3	122.3	121.9	123.3	125.2	126.6	127.0
	16	135.0	132.2	132.0	129.2	127.6	121.8	119.5	118.1	116.0	120.2	124.0	126.8
	17	128.2	129.7	130.0	129.1	126.0	123.7	121.5	122.2	121.9	124.8	124.6	126.4
	18	128.5	129.2	130.8	130.0	131.9	122.8	121.0	120.0	122.1	126.3	127.4	127.3
	19	130.6	132.0	131.9	131.0	128.4	123.2	120.2	119.7	123.9	125.2	127.2	128.0
	20	—	—	—	—	—	—	—	—	—	—	—	—
	21	125.1	131.7	129.7	129.4	125.4	123.6	122.0	122.6	122.2	122.9	121.9	122.4
	22	122.1	124.9	110.9	113.1	116.2	123.0	123.8	121.2	124.0	126.0	126.9	128.3
	23	133.9	134.8	133.2	131.5	130.0	126.9	125.6	124.2	125.8	125.4	125.6	127.1
	24	129.4	129.8	130.1	132.2	127.8	123.8	120.1	123.5	121.8	124.0	126.0	126.2
	25	127.8	128.3	130.3	129.7	130.0	128.0	125.2	123.0	123.0	124.0	127.4	128.0
	26	128.5	129.0	128.8	130.3	128.7	126.8	125.1	124.5	125.0	125.0	125.2	127.4
	27	—	—	—	—	—	—	—	—	—	—	—	—
	28	128.8	128.0	128.3	129.9	129.7	127.4	126.2	126.0	126.0	131.7	132.5	133.2
	29	136.2	130.6	135.2	137.5	130.0	127.3	125.2	124.4	125.7	127.8	128.6	128.9
	30	131.0	129.9	125.9	126.2	124.4	122.8	120.7	122.0	125.2	125.0	127.0	126.2
	Hourly Means	129.03	129.45	130.40	130.17	127.50	124.76	122.51	122.05	122.75	124.91	125.93	126.57
DECEMBER.	1	129.7	128.9	132.7	132.5	131.1	128.0	126.8	126.8	127.0	127.2	128.3	129.3
	2	130.8	131.3	130.4	131.6	130.0	128.4	127.0	126.2	127.1	128.5	128.4	129.2
	3	129.9	130.6	130.7	130.9	129.0	127.2	124.8	123.7	124.5	125.9	127.1	130.1
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	129.8	129.7	130.8	130.9	127.8	124.3	122.0	121.9	123.7	125.8	127.4	128.0
	6	128.2	124.9	128.2	129.5	128.4	125.4	124.7	124.0	125.2	126.4	126.0	128.2
	7	130.7	131.5	131.8	127.4	125.0	122.7	121.8	120.0	121.9	123.8	126.2	124.2
	8	128.4	129.6	127.3	127.5	129.6	127.0	126.5	123.0	121.5	123.0	126.2	127.2
	9	129.2	127.4	129.4	130.5	128.0	127.0	122.5	120.7	121.1	117.3	126.8	116.0
	10	127.6	129.8	130.8	131.0	129.9	128.3	125.3	123.8	124.2	124.7	126.6	126.8
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	128.5	129.5	129.2	131.9	132.6	129.7	126.3	124.5	125.0	126.0	127.0	128.0
	13	128.5	128.9	130.3	131.5	131.2	129.0	127.0	124.8	125.3	123.2	124.0	125.0
	14	129.0	129.2	129.7	129.4	129.0	126.9	124.0	124.9	125.8	125.4	126.2	127.8
	15	—	129.2	—	131.0	129.1	127.2	124.4	124.7	124.0	124.8	126.9	127.9
	16	129.1	129.1	130.0	130.3	129.8	127.7	126.0	125.1	124.6	124.6	125.8	127.6
	17	128.8	129.1	130.0	130.1	129.0	127.2	125.3	126.1	126.8	126.0	126.4	128.2
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	125.7	125.5	132.5	132.0	130.4	127.0	124.0	124.9	124.3	124.9	127.0	127.8
	20	128.5	131.4	130.0	132.3	131.2	128.2	125.8	125.0	125.4	126.4	127.0	128.4
	21	129.7	130.3	130.8	131.2	130.0	126.0	122.0	121.5	123.0	124.9	126.0	127.5
	22	129.6	130.3	131.4	132.3	130.5	126.3	124.0	124.4	124.6	125.1	126.8	127.2
	23	128.6	129.4	131.4	131.9	131.4	129.7	126.6	125.2	124.0	126.3	124.0	128.2
	24	129.0	129.2	131.8	127.8	130.0	128.0	125.6	123.7	123.0	124.0	126.0	126.4
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	129.0	129.0 <sup>c</sup>	130.6	131.5	132.0	129.8	126.6	124.1	125.0	125.8	127.0	128.0
	27	129.8	129.1	132.5	133.7	133.0	129.3	124.3	121.9	124.0	123.6	124.1	127.0
	28	129.1 <sup>d</sup>	129.8	131.7	132.1	130.2	124.8	122.6	122.9	120.0	123.0	126.5	127.5
	29	129.0	129.0	130.4	132.2	131.1	127.4	121.0	119.2	120.2	121.0	123.9	126.2
	30	129.0	128.3	123.9	135.0	132.5	124.6	125.4	122.5	124.0	125.0	127.5	127.9
	31	—	129.8	132.1	133.0	133.0	130.5	126.3	124.3	125.0	126.4	127.5	129.0
	32	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means	129.00	129.25	130.40	131.15	130.18	127.32	124.76	123.70	124.08	124.78	126.39	127.21	

<sup>a</sup> Six minutes late.

<sup>b</sup> Four minutes late.

<sup>c</sup> Nine minutes late.

<sup>d</sup> Three minutes late.



DECLINATION.

Angular Value of one Scale Division of the Declinometer = 0'.721.

Increasing numbers denote decreasing Westerly Declination.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Means.
Sc. Div. 128.4	Sc. Div. 128.2	Sc. Div. 128.0	Sc. Div. 129.7	Sc. Div. 127.2	Sc. Div. 128.6	Sc. Div. 131.1	Sc. Div. 130.0	Sc. Div. 127.1	Sc. Div. 126.1	Sc. Div. 127.5	Sc. Div. 128.6	Sc. Div. 127.87
124.0	128.0	128.0	127.6	127.1	128.1	126.9	123.0	128.3	133.7	133.7	130.3	127.20
128.7	128.8	139.1	129.7	129.0	127.4	126.7	128.2	130.2	130.2	130.5	132.2	127.28
127.8	128.5	128.8	128.4	128.0	133.1	131.4	128.5	120.3	128.3	129.3	129.1	128.07
128.0	128.7	129.0	128.8	130.0	128.2	—	—	—	—	—	—	128.51
—	—	—	—	—	—	128.0	127.8	127.7	128.0	128.0	128.9	127.09
128.0	128.6	128.6	128.4	129.2	128.5	126.0	126.0	126.0	127.7	128.0	128.3	127.09
128.0	128.3	129.2	129.1	129.2	129.0	129.0	128.7	128.0	130.5	130.8	130.0	128.23
133.9	131.0	138.5	132.1	144.2	134.6	127.6	124.2	129.8	129.6	127.0	144.7	130.07
134.1	130.1	132.5	138.0	129.2	128.4	138.0	134.8	135.2	125.8	121.0	130.0	126.29
126.6	129.0	128.0	129.6	129.4	126.5	126.0	125.2	120.2	128.1	129.8	130.5	126.61
126.9	127.0	130.7	127.9	127.0	126.6	—	—	—	—	—	—	126.82
—	—	—	—	—	—	127.2	127.2	128.0	123.4	127.1	127.2	127.45
127.1	127.4	127.4	127.6	127.9	128.1	128.5	128.3	128.0	127.8	129.1	129.0	127.44
128.0	128.5	128.8	128.5	127.8	127.8	127.8	128.4	130.0	130.5	132.2	134.4	127.81
129.0	128.8	128.7	129.0	129.0	128.9	128.0	128.0	128.2	130.0	129.2	129.2	127.02
126.7	126.8	126.2	127.5	127.8	127.6	127.6	128.0	128.1	128.0	128.4	128.5	126.64
127.6	127.3	127.9	128.2	129.5	128.7	126.5	128.7	126.6	126.8	129.2	130.5	126.87
127.0	127.0	127.0	129.0	125.0	131.7	—	—	—	—	—	—	127.20
—	—	—	—	—	—	127.5	118.5	130.3	128.6	131.7	128.1	127.20
127.5	136.7	129.8	140.9	149.3	144.7	143.5	134.0	109.7	127.1	113.8	123.3	128.30
129.2	129.4	129.4	129.0	129.4	139.1	128.8	124.0	126.5	126.0	132.4	136.0	125.82
127.2	128.8	134.0	129.8	128.2	127.8	127.0	127.0	127.0	127.5	128.5	127.6	128.52
128.0	132.5	129.2	130.0	128.7	129.0	130.2	127.2	128.0	128.0	128.0	128.0	127.56
128.2	128.9	128.9	129.1	128.8	127.9	127.8	128.0	128.4	127.4	126.4	128.2	127.61
128.3	128.7	129.0	128.2	128.2	128.2	—	—	—	—	—	—	127.73
—	—	—	—	—	—	128.6	128.0	129.1	127.6	130.1	127.2	128.42
133.9	134.1	134.5	133.0	134.1	131.2	136.8	133.8	133.0	134.4	141.7	136.3	131.85
128.9	129.5	130.1	129.4	129.2	130.3	129.2	129.3	129.1	129.6	130.2	130.3	129.69
140.0	129.8	129.2	131.8	130.9	130.0	129.0	128.8	129.7	127.0	130.6	130.0	128.05
128.88	129.25	130.02	130.01	130.13	130.00	129.41	127.83	127.40	128.37	129.01	130.25	
130.0	130.4	131.0	130.6	130.0	129.8	129.3	129.0	129.2	129.0	130.1	130.9	129.48
129.8	130.4	130.5	130.1	130.0	130.0	128.8	128.2	128.3	128.2	129.0	130.1	129.26
129.0	129.2	129.2	129.0	—	128.6	—	—	—	—	—	—	128.05
—	—	—	—	—	—	127.0	127.8	127.2	127.1	128.0	128.7	128.63
128.9	128.5	129.0	129.7	129.3	129.4	130.6	129.5	137.3	134.0	129.2	129.7	127.65
127.0	128.1	129.2	127.7	128.0	128.5	130.6	128.0	128.7	130.6	128.2	130.0	127.35
133.0	127.8	132.0	132.6	135.3	129.0	128.0	126.3	122.9	125.7	128.0	129.0	127.26
128.1	128.8	129.9	131.9	130.0	128.6	125.2	127.0	128.3	126.7	126.0	127.0	126.76
123.2	126.9	124.9	132.0	132.2	129.7	130.2	128.8	130.4	130.0	129.0	129.0	128.33
128.0	129.1	129.8	130.0	139.8	128.7	—	—	—	—	—	—	128.24
—	—	—	—	—	—	128.0	128.0	127.2	127.3	127.2	128.0	127.89
128.5	129.1	129.5	129.0	128.9	128.4	128.0	127.6	127.2	127.6	127.8	128.0	127.55
127.9	128.2	129.5	129.7	133.2	128.4	128.8	131.0	125.5	129.2	128.1	121.2	127.88
127.9	128.4	128.0	128.0	128.6	127.4	129.0	127.1	127.5	127.2	127.3	—	128.11
128.0	129.0	129.6	129.2	129.5	129.2	128.3	128.0	127.8	128.3	128.2	129.0	128.03
129.2	129.0	129.0	128.9	129.0	128.4	128.4	128.2	128.6	128.8	129.2	128.2	127.60
128.8	128.9	129.2	130.0	129.2	128.7	—	—	—	—	—	—	128.19
—	—	—	—	—	—	127.1	127.0	127.5	128.0	127.7	127.6	128.38
132.0	133.0	130.0	130.2	129.4 <sup>e</sup>	126.1	126.3	126.0	127.4	128.1	122.5	125.4	128.42
129.6	129.8	130.1	129.4	129.9	129.0	129.0	126.9	127.2	128.2	128.4	128.8	127.88
129.1	130.0	129.5	131.0	128.7	128.5	128.5	129.0	127.5	126.9	134.0	131.1	128.55
129.3	129.7	131.1	128.9	126.1	132.5	129.2	127.4	128.7	128.3	128.7	128.7	128.29
129.0	129.5	129.4	129.2	129.0	128.4	128.3	128.0	128.0	128.1	129.2	129.2	127.63
127.3	128.2	129.7	130.2	129.3	129.4	—	—	—	—	—	—	127.07
—	—	—	—	—	—	128.0	127.4	128.8	129.0	128.0	129.4	128.06
129.0	129.0	129.2	129.6 <sup>f</sup>	129.5	128.9	128.2	128.1	127.2	127.9	130.9	129.3	128.80
128.0	127.1	130.0	132.0	128.4	129.0	129.4	128.0	128.0	130.0	128.2	128.5	128.06
127.9	129.4	132.1	129.0	129.0	127.2	128.1	127.5	128.0	128.0	128.1	128.7	128.06
125.3	128.0	129.1 <sup>g</sup>	129.5	129.6	129.5	128.9	124.8	130.7	120.5	133.9	129.2	128.06
128.3	129.1	130.0	131.0	135.5	129.3	126.9	127.7	128.1	125.3	128.6	—	128.06
129.0	129.4	130.0	129.5	129.0	131.2	—	—	—	—	—	—	128.06
—	—	—	—	—	—	127.5	127.7	126.9	120.0	129.2	135.7	128.06
128.56	129.04	129.65	129.92	130.25	128.96	128.39	127.78	128.20	128.00	128.60	128.53	

<sup>e</sup> Six minutes late.

<sup>f</sup> Six minutes late.

<sup>g</sup> Four minutes late.

HORIZONTAL FORCE.

One Scale Division =  $\cdot 000074$  parts of the H. F. Change of the magnetic moment of the Bar for  $1^\circ$  Fah. =  $\cdot 00026$ .

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Daily and Monthly Means.	
JANUARY.	Sc. Div. 474.7	Sc. Div. 488.8	Sc. Div. 465.5	Sc. Div. 473.7	Sc. Div. 460.1	Sc. Div. 461.0	Sc. Div. 467.7	Sc. Div. 479.0	Sc. Div. 469.8	—	496.1	495.9	503.8	478.01
	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	2	502.0	513.7	506.1	497.6	504.9	501.9	498.9	500.2	497.3	506.0	504.5	501.5	502.88
	3	494.7	498.9	491.6	482.5	486.2	499.4	496.1	495.0	490.2	492.5	491.0	498.5	493.05
	4	488.2	501.6	484.1	482.0	488.5	485.7	470.8	493.3	494.1	493.5	490.7	495.5	489.00
	5	496.9	494.1	485.4	475.2	486.1	500.8	489.5	490.4	495.0	481.6	472.5	474.6	486.84
	6	478.6	477.0	481.0	466.4	478.1	476.2	481.1	480.2	479.6	482.7	483.1	488.5	479.37
	7	488.5 <sup>a</sup>	492.7	475.0	473.2	482.4	488.6	486.9	483.9	483.8	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	489.2	491.8	492.4	485.70
	9	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	494.7	494.6	485.2	480.5	497.9	498.1	486.5	487.6	468.5	472.1	473.6	483.2	485.21
	11	490.0	503.3	482.3	476.1	484.7	477.6	475.7	466.4	476.2	480.7	477.7	481.3	481.00
	12	476.1	477.6	468.8	466.1	478.0	479.4	476.2	480.5	482.8	484.8	488.7	487.9	478.91
	13	491.8	493.3	485.3	477.6	489.0	497.5	494.8	490.4	495.3	495.1	476.2	488.8	489.59
	14	496.0	493.4	473.1	467.7	482.2	488.3	487.3	483.3	485.8	484.0	485.0	487.7	484.48
	15	490.4	491.7	476.3	474.4	491.3	495.6	461.5	479.8	495.7	—	—	—	—
	16	—	—	—	—	—	—	—	—	—	487.2	488.6	486.5	484.92
	17	489.8	490.0	472.9	455.9	468.0	479.0	478.2	475.1	476.0	476.1	485.0	482.6	477.38
	18	484.4	493.9	454.4	445.2	450.3	466.2	455.2	462.4	452.6	456.9	467.8	472.0	463.44
	19	470.0	470.2	454.6	454.3	454.1	466.9	453.7	463.4	455.2	458.1	457.1	462.0	459.97
	20	463.4	463.2	448.8	445.2	462.3	470.0	470.5	471.0	466.5	467.1	467.5	465.9	463.45
	21	468.5	473.8	462.0	460.1	469.9	487.6	461.7	470.0	470.0	481.5	478.3	484.0	472.28
	22	492.7	490.5	478.5	475.6	482.5	496.5	489.7	499.3	498.4	—	—	—	—
	23	—	—	—	—	—	—	—	—	—	514.7	504.0	510.1	494.38
	24	516.3	520.1	502.7	501.4	503.6	489.1	500.2	501.4	492.7	502.5	493.1	494.2	501.44
	25	494.5	495.7	484.4	481.2	461.7	480.5	477.4	482.9	475.6	479.0	479.3	480.0	481.02
	26	499.7 <sup>b</sup>	484.7	476.7	466.9	467.5	480.8	480.4	480.2	479.5	482.2	484.3	486.7	480.80
	27	490.9	491.7	483.0	478.6	477.4	475.1	485.9	480.7	489.5	487.0	488.0	488.7	484.71
	28	495.2	498.6	487.2	476.7	471.5	485.6	471.0	472.0	469.4	474.0	474.0	477.6	479.40
	29	484.9	491.0	477.6	451.9	458.5	468.2	465.4	464.2	472.1	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	471.7	474.0	477.7	471.43
31	475.0	480.8	460.9	456.4	475.3	478.7	481.3	479.1	473.0	470.3	483.5	478.7	474.42	
Hourly Means	487.53	490.96	477.05	470.86	477.38	483.63	478.60	481.22	480.18	483.33	482.89	485.78	481.66	
FEBRUARY.	1	484.0	474.4 <sup>c</sup>	474.9	466.7	470.7	487.3	458.9	454.2	474.0	474.6	479.0	480.2	473.24
	2	492.5	481.2	460.0	452.9	463.5	474.8	478.0	470.7	467.0	465.2	464.8	467.2	469.82
	3	467.9	465.9	457.7	451.5	449.1	463.0	453.0	457.7	451.0	457.6	457.6	458.4	457.53
	4	462.6	457.4	458.3	445.4	454.4	463.5	463.3	460.0	463.6	461.1	461.0	465.1	459.64
	5	468.9	468.9	467.9	461.8	464.5	472.5	470.6	471.5	469.2	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	455.7	453.0	466.4	465.91
	7	471.3	446.2	462.0	463.5	464.7	460.5	465.4	470.6	469.7	471.0	470.5	479.5	466.24
	8	477.8	485.1	469.5	463.5	469.4	483.9	458.5	481.1	490.2	493.0	498.2	496.8	480.58
	9	503.2	505.4	496.6	485.3	493.8	496.8	497.5	496.2	494.1	492.1	488.7	488.3	494.83
	10	489.9	497.9	485.4	464.8	460.7	478.9	479.8	469.4	466.1	470.4	475.2	477.7	476.35
	11	487.4	490.0	477.1	460.5	470.4	458.4	446.5	434.0	418.6	410.4	415.5	440.4	450.77
	12	463.5	476.4	471.7	472.0	466.2	467.5	471.2	471.2	456.6	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	476.0	480.5	481.5	471.19
	14	478.7	487.1	488.8	472.0	472.5	469.1	483.2	485.6	484.4	487.5	490.5	493.3	482.72
	15	498.7	499.3	497.6	485.3	497.2	494.9	485.0	494.2	493.0	488.8	488.3	491.6	492.82
	16	494.6	497.1	487.7	473.1	493.7	491.9	494.3	441.0	464.0	466.0	487.8	492.1	481.94
	17	483.5	516.0	509.1	494.0	514.5	506.3	502.4	497.2	495.0	494.9	505.0	499.0	501.41
	18	504.5	486.5	496.4	469.1	471.2	481.1	477.4	476.5	480.9	470.9	474.4	467.2	479.67
	19	477.1	463.5	480.4	457.8	475.2	480.7	482.0	481.4	488.5	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	496.7	499.1	499.3	481.77
	21	500.7	502.8	494.7	490.4	493.6	482.8	484.0	493.0	486.1	486.8	484.9	489.8	490.80
	22	490.2	491.8	483.4	477.2	476.9	478.5	479.0	483.2	482.3	484.1	486.9	490.8	483.69
	23	493.3	493.8	484.3	486.0	488.2	487.4	488.0	481.3	476.9	481.0	477.0	485.7	485.24
	24	480.7	496.6	463.5	417.6	434.4	459.3 <sup>d</sup>	467.6	499.0	447.5	453.4	450.8	459.7	460.84
	25	472.6	469.9	466.4	489.6	487.8	467.2	485.4	471.2	473.3	471.9	482.1	465.7	475.26
	26	476.6	474.0	464.6	455.7	463.7	470.6	471.8	463.9	471.0	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	468.8	472.0	474.2	468.91
	28	480.9	481.3	470.7	461.5	469.5	478.0	486.3	460.1	465.5	470.2	471.8	475.4	472.60
Hourly Means	483.38	483.69	477.86	467.38	473.57	477.29	476.21	473.51	472.02	472.84	475.61	478.55	475.99	

<sup>a</sup> Ten minutes late.

<sup>b</sup> One hour late; omitted in the hourly mean.

<sup>c</sup> Eleven minutes late.

<sup>d</sup> Seven minutes late.

HORIZONTAL FORCE.														
Temperature of the Bifilar Magnet.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Daily and Monthly Means.	
JANUARY.	1	36.0	35.8	36.3	38.0	40.0	41.2	41.2	41.5	41.3	—	—	—	
	2	—	—	—	—	—	—	—	—	—	31.1	30.5	29.5	
	3	28.0	27.0	27.7	30.7	33.2	34.4	33.6	33.4	33.0	32.3	33.3	34.4	31.75
	4	34.5	35.0	36.0	38.5	39.2	38.4	38.4	38.6	37.1	37.0	36.5	36.3	37.12
	5	36.0	35.0	36.0	38.2	40.0	40.8	39.0	37.5	35.8	35.5	35.0	34.8	36.97
	6	34.5	34.4	35.3	37.0	38.2	38.5	39.2	40.2	41.2	42.3	43.2	43.6	38.97
	7	42.6	42.5	42.7	43.2	44.0	44.0	43.5	42.8	41.0	39.8	38.9	38.8	41.98
	8	37.5	36.5	38.5	40.6	41.8	42.4	41.1	42.0	42.4	—	—	—	—
	9	—	—	—	—	—	—	—	—	—	39.0	38.6	38.0	39.87
	10	37.4	36.6	37.0	39.5	41.6	43.6	43.2	42.1	40.6	39.9	39.3	39.0	39.98
	11	38.8	38.0	39.3	41.2	43.2	44.5	43.8	43.0	43.0	43.0	43.2	43.2	42.02
	12	42.8	41.8	42.5	43.4	43.9	43.7	43.0	42.0	40.8	39.6	38.3	37.0	41.57
	13	34.2	33.6	34.6	36.6	37.5	37.8	37.4	37.0	36.4	36.8	37.3	37.7	36.41
	14	38.0	38.1	39.5	42.4	43.6	44.8	43.8	43.5	42.8	42.3	42.0	41.0	41.82
	15	40.1	39.3	39.6	40.5	41.5	42.9	41.7	41.5	40.8	—	—	—	—
	16	—	—	—	—	—	—	—	—	—	38.5	39.5	40.0	40.49
	17	39.6	39.6	40.6	42.2	44.8	46.3	46.2	45.7	44.5	44.0	43.6	43.2	43.36
	18	42.5	41.5	43.0	44.6	46.0	47.1	46.5	46.0	45.0	44.8	44.5	44.2	44.64
	19	43.7	43.4	44.2	47.0	48.5	49.4	50.4	50.6	51.0	51.0	50.0	49.5	48.22
	20	49.0	48.6	48.4	49.0	48.5	48.4	48.0	47.6	48.0	48.3	48.2	47.5	48.29
	21	46.7	45.6	44.8	45.2	44.9	44.4	43.0	42.0	41.0	39.0	37.6	37.5	42.64
	22	36.5	35.5	35.2	36.7	37.6	38.5	36.5	35.8	35.0	—	—	—	—
	23	—	—	—	—	—	—	—	—	—	30.0	30.2	29.8	34.77
	24	28.8	28.2	29.4	31.5	34.8	36.4	36.4	36.0	36.0	36.3	37.2	37.0	34.00
	25	37.0	36.7	37.9	40.5	42.5	45.0	44.6	44.6	43.8	44.5	43.4	43.0	41.96
	26	42.4 <sup>a</sup>	42.0	42.5	44.2	44.5	45.3	44.8	45.0	43.6	41.8	41.2	41.3	43.22
	27	40.6	39.6	40.5	41.2	42.4	42.8	41.4	41.4	40.8	40.5	40.4	40.3	40.98
	28	38.8	37.5	40.5	42.4	44.2	45.4	45.5	45.5	45.8	46.0	46.0	46.0	43.63
	29	46.1	46.4	48.6	49.8	51.0	51.3	51.2	50.8	49.8	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	44.2	44.5	44.4	48.17
	31	45.5	45.0	45.0	46.0	46.6	46.5	45.3	44.8	44.0	43.3	42.0	41.4	44.62
Hourly Means	39.01	38.58	39.45	41.16	42.46	43.22	42.64	42.34	41.71	40.41	40.17	39.94	40.93	
FEBRUARY.	1	41.2	40.2	42.3	42.8	43.3	45.5	45.4	44.5	43.2	43.0	42.3	42.2	42.99
	2	42.4	42.0	42.8	43.8	45.8	46.5	46.5	46.8	47.1	47.3	47.4	47.4	45.48
	3	48.4	47.9	48.3	50.3	51.4	52.5	52.3	52.3	52.2	52.0	51.4	50.8	50.82
	4	50.0	48.7	48.5	49.0	49.7	49.6	48.8	48.6	48.5	48.6	48.0	47.2	48.77
	5	46.5	44.8	46.0	46.5	47.2	47.6	47.7	47.4	46.8	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	43.6	43.9	43.8	45.98
	7	43.5	42.8	43.4	45.4	46.0	46.5	45.8	44.8	43.7	43.4	43.2	43.0	44.29
	8	42.4	40.5	39.8	38.8	38.6	38.5	35.8	34.2	33.5	32.6	32.0	32.0	36.56
	9	31.6	30.6	31.4	33.2	35.4	37.5	37.0	37.5	38.5	39.6	39.4	39.5	35.93
	10	38.5	38.2	41.5	43.5	45.0	46.9	47.6	47.5	46.4	45.0	43.9	42.8	43.90
	11	42.0	41.7	42.5	43.0	44.4	45.4	46.2	46.2	46.6	46.5	46.8	47.0	44.86
	12	46.2	44.8	45.4	45.6	46.2	47.9	47.8	47.1	46.5	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	44.4	44.2	44.2	45.86
	14	43.4	42.0	41.5	40.6	40.6	40.8	38.3	36.6	35.4	34.5	34.6	35.2	38.62
	15	35.0	34.4	34.6	36.4	38.4	40.0	39.5	38.8	39.2	39.2	39.5	39.3	37.86
	16	38.5	38.5	39.5	42.0	42.7	42.8	40.5	37.6	36.2	33.5	31.5	30.4	37.81
	17	28.7	28.0	29.0	30.6	32.0	34.6	35.4	34.0	33.6	33.2	32.5	32.3	31.99
	18	32.3	32.5	34.8	38.0	39.6	40.3	41.0	41.7	41.8	42.0	42.0	42.8	39.07
	19	41.3	40.3	40.0	40.4	40.5	41.2	40.4	39.0	38.5	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	32.0	32.0	32.0	38.13
	21	32.0	31.8	34.8	37.4	39.5	40.4	39.0	39.0	39.4	39.8	39.4	38.8	37.61
	22	38.2	38.5	42.0	44.0	44.0	44.7	43.2	42.3	41.0	39.7	38.7	37.5	41.15
	23	36.5	36.0	37.0	39.0	40.6	42.0	42.0	42.4	42.0	41.5	40.5	41.0	40.04
	24	40.5	40.6	43.5	45.5	47.2	47.1	46.3	45.4	45.0	43.6	42.8	41.4	44.07
	25	39.5	38.8	39.4	38.8	39.2	39.6	39.6	40.3	40.5	40.2	40.2	40.8	39.74
	26	42.0	42.3	42.5	43.6	44.4	45.2	44.8	44.5	44.5	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	44.2	44.5	44.0	43.87
	28	42.5	42.2	42.7	44.4	45.7	46.0	45.8	45.3	44.6	44.5	44.4	44.6	44.39
Hourly Means	40.13	39.50	40.55	41.77	42.81	43.71	43.20	42.66	42.28	41.41	41.05	40.83	41.66	

<sup>a</sup> One hour late; omitted in the hourly mean.

HORIZONTAL FORCE.														
One Scale Division = .000074 parts of the H. F.      Change in the magnetic moment of the Bar for 1° Fahr. = .00026.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Daily and Monthly Means.	
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
MARCH.	1	478.6	479.9	471.0	468.8	466.7	463.5	462.2	471.0	468.3	476.7	469.2	470.5	470.53
	2	467.7	468.4	464.0	456.7	453.7	459.1	458.6	462.1	460.0	454.0	465.3	467.6	461.41
	3	466.3	465.1	462.7	456.7	457.6	450.7	452.0	452.0	451.7	448.5	454.3	446.0	455.30
	4	460.8	458.0	453.9	448.5	454.9	461.0	449.6	459.9	458.7	450.2	448.1	467.0	455.88
	5	459.9	461.2	459.2	464.5	471.0	455.7	457.9	448.6	429.7	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	479.0	477.7	481.2	462.13
	7	477.7	483.0	472.1	467.6	470.9	472.2	470.0	478.4	464.0	468.4	475.0	471.6	472.57
	8	481.4	478.2	467.7	470.6	474.7	468.4	465.7	465.5	471.0	471.0	473.2	472.8	471.68
	9	477.2	470.7	462.4	455.4	462.8	473.7	462.7	465.2	462.7	462.5	462.3	462.9	465.04
	10	465.9	462.9	456.6	456.8	466.2	469.7	464.0	464.9	466.0	469.0	471.6	474.2	465.90
	11	478.0	476.6	465.4	465.9	470.0	476.5	483.7	478.1	481.0	—	484.1	489.9	477.20
	12	490.6	484.5	472.1	467.4	472.8	482.6	481.9	481.0	476.3	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	471.1	483.5	482.7	478.87
	14	488.4	487.7	473.8	462.6	464.2	477.4	479.0	476.0	467.5	479.0	481.8	485.7	476.92
	15	488.2	485.0	467.5	460.9	480.9	461.9	459.4	464.2	468.1	473.1	472.8	482.2	472.02
	16	488.7	488.5	470.2	458.4	443.4	456.9	442.7	423.1	410.8	443.3	447.3	456.7	452.50
	17	456.9	454.5	443.7	441.0	447.0	452.7	445.9	449.0	488.8	447.0	456.9	459.5	453.57
	18	462.3	460.1	444.0	440.0	453.7	459.9	458.2	457.4	459.0	459.0	454.3	461.4	455.85
	19	469.0	458.5	445.6	441.0	441.6	449.8	428.7	421.5	434.0	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	445.3	461.0	462.1	446.51
	21	469.6	464.5	453.0	459.9	468.1	464.2	473.5	474.2	474.4	470.7	472.0	475.4	468.29
	22	478.8	475.5	457.2	454.5	475.4	472.0	467.3	468.4	468.0	467.1	480.8	482.2	470.60
	23	480.9	473.3	460.5	451.2	467.8	453.7	451.3	441.9	447.7	460.0	455.1	434.4	456.48
	24	465.4	457.3	446.6	434.2	451.5	454.1	452.7	457.2	462.2	—	—	—	—
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	475.4	476.2	478.0	459.23
	26	481.4	474.2	459.4	457.7	472.9	473.5	459.7	459.3	462.7	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	435.9	455.9	467.5	463.34
	28	465.5	464.3	445.0	447.0	467.8	477.4	469.3	468.9	459.1	470.0	475.0	475.0	465.36
	29	470.5	473.7	440.9	447.1	448.1	469.6	467.9	467.2	468.4	445.5	461.1	467.9	460.66
	30	460.8	451.8	445.5	427.1	434.6	449.9	451.7	445.9	433.9	443.2	451.9	460.0	446.36
	31	462.2	458.4	444.0	444.3	463.1	469.8	468.1	467.9	468.6	481.3	477.0	483.0	465.64
Hourly Means	472.80	469.84	458.00	454.07	461.58	464.46	460.91	460.34	460.10	461.85	467.05	469.90	463.40	
APRIL.	1	485.2	459.1	472.8	451.7	454.7	462.6	464.7	453.6	456.5	463.0	473.1	472.5	464.12
	2	473.9	467.3	450.3	441.7	445.4	444.7	444.0	452.2	448.0	—	—	—	—
	3	—	—	—	—	—	—	—	—	—	469.5	458.7	458.5	454.52
	4	458.1 <sup>b</sup>	452.9	443.3	430.7	456.2	461.8	464.8	462.3	464.2	469.5	472.3	465.5	458.47
	5	466.9	466.4	446.5	441.7	454.1	449.2	462.2	449.1	444.2	434.7	448.5	454.4	451.49
	6	455.7	451.8	440.2	433.6	447.9	448.9	446.2	444.0	449.0	453.2	455.9	459.8	448.85
	7	462.3	458.9	435.3	434.0	448.3	459.5	454.7	456.4	457.2	465.5	462.0	461.5	454.62
	8	461.5	461.7	448.2	449.3	455.0	453.0	456.7	446.7	458.2	462.0	466.2	466.5	457.08
	9	469.4	466.4	439.8	434.6	446.9	457.8	451.0	452.5	450.9	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	426.8	435.7	442.3	447.84
	11	448.2	440.1	435.7	431.3	445.6	454.1	420.1	436.0	426.8	406.9	433.9	438.2	434.74
	12	432.3	445.9	419.3	428.2 <sup>c</sup>	457.7	453.5	439.4	398.8	434.2	457.1	369.0	344.2	423.30
	13	436.0	402.9	452.0	453.0	464.1	471.4	457.7	448.8	450.0	452.5	455.5	455.0	449.91
	14	443.5	454.8	440.5	432.2	439.5	450.0	439.8	454.2	406.2	232.9	412.8	360.3	413.89
	15	441.1	438.1	391.8	425.0	459.3	454.2	453.7	414.9	397.7	332.2	304.5	442.0	412.87
	16	445.2	437.8	425.2	424.7	446.7	459.5	449.5	440.0	443.8	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	453.9	449.0	464.7	445.00
	18	456.7	456.3	438.4	448.3	449.0	467.1	469.5	466.4	461.1	482.4	453.9	433.6	456.89
	19	453.3	442.9	431.5	439.2	435.4	432.4	449.4	446.1	442.0	449.9	453.1	451.4	443.88
	20	453.2	451.1	437.2	437.3	446.6	442.8	425.4	428.7	401.5	426.0	422.4	443.1	434.61
	21	414.9	442.0	395.4	424.4	422.4	431.5	426.7	422.6	423.9	428.8	436.5	430.9	425.00
	22	433.1	430.3	418.5	420.8	414.7	410.0	409.0	412.0	413.9	425.6	421.8	425.7	419.62
	23	430.0	427.5	417.2	419.5	432.6	427.2	432.9	434.0	429.2	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	446.1	450.6	454.5	433.44
	25	456.5	445.5	428.5	436.7 <sup>d</sup>	447.1	450.3	448.0	449.1	447.0	447.7	446.6	455.7	446.56
	26	461.3	450.6	442.5	441.5	451.7	451.0	443.0	445.1	446.0	451.0	452.8	454.1	449.22
	27	455.0	445.2	443.3	441.5	442.1	461.1	450.5	450.4	454.7	456.1	457.9	462.3	451.67
	28	464.3	458.7	447.1	450.8	467.5	471.0	458.7	454.2	454.2	451.7	460.8	464.2	458.60
	29	464.0	455.7	443.5	440.1	451.1	444.9	442.4	445.0	445.7	451.4	454.3	458.5	449.72
	30	454.7	456.7	438.9	439.1	444.0	447.4	451.0	442.2	438.9	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	454.0	457.2	458.1	448.52
Hourly Means <sup>e</sup>	452.73	448.72	435.49	436.57	447.14	450.65	446.58	442.51	440.19	449.39	446.42	449.33	443.63	

<sup>a</sup> Good Friday.      <sup>b</sup> Thirty-five minutes late; omitted in the hourly mean.      <sup>c</sup> Four minutes late.      <sup>d</sup> Two minutes late.  
<sup>e</sup> The observations of April, 12<sup>d</sup> 22<sup>h</sup>, 14<sup>d</sup> 18<sup>h</sup>, 15<sup>d</sup> 18<sup>h</sup>, and 15<sup>d</sup> 20<sup>h</sup>, are omitted in the hourly means on account of excessive disturbance.

HORIZONTAL FORCE. Temperature of the Biflar Magnet.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Daily and Monthly Means.	
MARCH.	1	44.1	44.1	45.0	45.6	47.2	47.4	47.0	47.4	47.3	47.5	47.5	47.5	46.47
	2	47.4	47.0	47.6	49.0	50.3	51.1	51.2	51.0	50.2	49.9	49.6	49.2	49.46
	3	48.5	48.0	48.8	50.6	52.6	54.0	55.4	54.5	53.6	52.8	52.7	52.0	51.96
	4	51.0	51.2	52.0	53.5	53.5	52.3	51.2	51.0	49.8	48.2	47.2	47.0	50.66
	5	46.1	45.2	45.2	47.5	47.2	48.2	48.3	48.0	47.5	—	—	—	45.68
	6	—	—	—	—	—	—	—	—	—	41.8	41.5	41.7	—
	7	41.0	40.7	41.2	42.5	45.2	46.8	47.2	46.2	44.8	44.1	43.0	42.7	43.78
	8	41.7	42.5	45.0	46.3	47.2	48.3	48.0	47.0	46.1	46.0	45.8	46.2	45.84
	9	46.0	45.7	47.2	48.5	48.6	49.3	49.5	50.0	50.2	50.8	50.5	50.2	48.87
	10	48.6	47.4	47.0	49.0	50.0	51.7	51.6	50.0	48.7	47.2	46.5	45.8	48.62
	11	45.2	44.5	44.7	45.5	45.4	45.0	43.7	42.6	41.5	—	40.4	39.5	43.45
	12	38.7	39.8	42.0	43.4	44.8	45.5	45.1	43.8	42.9	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	41.6	41.5	41.2	42.52
	14	41.0	40.8	42.4	44.8	47.0	48.5	48.0	47.2	45.7	45.0	44.6	44.4	44.95
	15	43.6	44.3	45.8	47.5	48.7	50.4	50.5	48.7	48.4	46.8	45.5	44.4	47.05
	16	43.5	43.4	44.5	46.5	48.0	50.3	51.0	51.2	50.7	49.8	49.9	49.5	48.19
	17	49.0	49.0	50.0	52.0	53.8	54.0	56.2	53.8	52.2	51.2	49.7	48.8	51.64
	18	47.8	47.4	49.2	51.2	52.4	54.0	53.4	52.5	51.5	50.6	50.4	50.0	50.87
	19	49.2	49.2	50.0	52.5	55.0	57.5	57.4	56.9	56.0	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	47.8	46.8	46.4	52.06
	21	45.3	44.5	45.0	45.8	46.3	46.3	46.0	45.7	45.6	45.6	45.6	45.4	45.59
	22	44.2	43.7	44.6	46.0	47.7	48.5	47.8	47.6	47.5	47.6	47.1	46.8	46.59
	23	46.3	46.1	48.0	49.8	50.5	52.2	51.9	52.0	51.2	51.5	51.0	50.5	50.08
	24	50.3	51.7	51.6	52.5	52.6	51.8	51.0	50.1	49.2	—	—	—	—
	25	—	—	—	—	—	—	—	—	—	45.0	45.3	45.5	49.72
	26	44.3	43.8	45.5	47.0	49.2	51.8	53.4	52.4	51.2	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	46.6	45.7	44.6	47.96
	28	43.2	44.0	45.5	46.5	48.2	50.3	53.0	50.0	48.6	47.6	46.4	46.3	47.47
	29	45.8	46.0	46.4	47.3	47.5	49.0	49.6	49.8	50.0	50.4	50.8	51.6	48.68
	30	51.7	51.2	52.0	53.2	55.0	57.1	57.6	56.8	55.5	54.0	52.3	51.0	53.95
	31	49.3	48.0	47.6	47.8	48.0	49.0	49.6	47.8	47.0	46.2	44.8	44.0	47.42
Hourly Means	45.88	45.74	46.68	48.15	49.30	50.40	50.56	49.77	48.96	47.82	47.00	46.62	48.06	
APRIL.	1	42.7	45.0	46.6	48.2	49.5	51.2	49.8	49.0	48.1	48.0	48.4	48.8	47.94
	2	49.0	49.8	52.2	54.2	56.4	58.0	58.0	57.0	57.5	—	—	—	—
	3	—	—	—	—	—	—	—	—	—	50.6	50.4	50.4	53.62
	4	49.2 <sup>a</sup>	48.5	48.4	49.8	50.0	49.8	49.0	48.5	48.2	48.5	49.0	49.8	49.06
	5	49.8	49.6	50.5	52.8	54.2	55.5	56.6	56.0	54.6	53.6	52.2	50.8	53.02
	6	49.7	51.3	54.4	55.6	56.4	56.5	56.2	55.6	54.6	54.2	53.2	53.0	54.22
	7	52.5	52.3	52.4	53.5	53.5	53.6	54.2	53.8	53.0	53.0	53.0	52.5	53.11
	8	52.0	51.5	51.8	52.6	53.2	52.8	52.0	51.8	51.7	51.2	50.6	50.2	51.78
	9	50.0	51.2	54.3	54.8	55.6	57.5	58.0	56.5	54.5	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	52.2	52.2	52.2	54.08
	11	52.4	53.4	55.5	56.8	58.0	60.4	61.5	59.6	58.6	57.8	57.0	55.4	57.20
	12	54.3	53.7	54.4	55.5	55.5	55.8	55.2	54.5	53.8	52.5	51.0	51.0	53.93
	13	50.5	50.0	50.2	50.5	50.4	50.4	50.5	51.5	52.2	51.9	51.5	51.2	50.90
	14	51.0	51.3	53.6	54.8	55.8	56.5	56.5	55.1	54.2	54.0	53.5	52.5	54.07
	15	51.0	50.6	52.2	53.5	54.7	54.3	56.5	54.0	53.4	53.0	51.8	51.4	53.03
	16	49.7	52.2	53.5	54.0	55.0	57.0	56.8	55.4	53.6	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	50.4	50.3	50.3	53.18
	18	49.5	49.2	49.0	49.5	49.5	50.5	50.4	50.4	50.3	50.4	50.5	50.6	49.98
	19	50.4	50.3	51.5	53.5	53.8	54.0	54.2	53.2	53.5	53.2	53.0	52.5	52.76
	20	50.9	50.9	54.5	56.8	57.8	57.8	60.2	59.7	58.6	57.8	57.4	56.0	56.53
	21	55.5	58.2	59.8	61.5	63.5	65.3	64.6	63.5	63.2	62.5	61.8	60.6	61.67
	22	59.2	62.0	66.0	68.5	70.0	71.8	71.2	69.5	67.4	65.0	62.5	60.0	66.09
	23	58.0	58.5	60.4	60.2	60.4	62.8	62.7	61.3	59.2	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	54.5	54.1	54.0	58.84
	25	53.5	55.0	57.4	58.7	59.2	60.4	59.5	58.5	57.6	56.3	55.5	55.0	57.22
	26	54.5	54.2	54.5	56.0	57.4	58.6	59.0	58.6	57.8	57.0	56.8	56.6	56.75
	27	54.9	55.5	55.7	56.0	55.8	55.8	54.5	54.0	53.4	53.0	52.5	51.4	54.37
	28	50.3	50.3	51.0	51.7	52.4	54.2	55.8	54.8	53.7	52.7	51.0	50.1	52.33
	29	49.4	52.0	55.0	56.0	56.4	57.8	59.0	58.2	56.7	55.1	53.6	52.6	55.15
	30	51.5	53.8	56.3	58.2	59.4	59.8	61.0	59.6	58.5	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	55.7	54.5	53.3	56.80
Hourly Means <sup>b</sup>	51.69	52.32	53.89	55.12	55.92	56.85	57.03	56.14	55.30	54.05	53.42	52.85	54.52	

<sup>a</sup> Thirty-five minutes late; omitted in the hourly mean.

<sup>b</sup> The observations of April 12<sup>d</sup> 22<sup>h</sup>, 14<sup>d</sup> 18<sup>h</sup>, 15<sup>d</sup> 18<sup>h</sup>, and 15<sup>d</sup> 20<sup>h</sup>, are omitted in the hourly means.

HORIZONTAL FORCE.

One Scale Division = .000074 parts of the H. F. Change of the magnetic moment of the Bar for 1° Fah. = .00026.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Daily and Monthly Means.	
MAY.	2	456.0	462.5	440.5	440.4	447.9	452.5	451.1	442.3	446.7	449.0	451.7	456.0	449.72
	3	456.4 <sup>a</sup>	443.6	435.1 <sup>a</sup>	451.7	450.0	445.7	440.7	441.5	445.4	447.5	451.2	456.3	447.09
	4	458.0	443.8	442.0	458.7	459.1	469.0	443.8	446.8	451.7	454.4	456.4	455.1	453.23
	5	461.2	453.2	438.5	443.2	447.7	449.2	442.5	445.1	451.8	454.3	462.5	454.7	450.32
	6	454.3	450.3	417.7	427.4	450.2	420.1	434.7	437.5	439.1	444.0	441.0	440.0	438.02
	7	438.3	442.6	433.9	430.8	454.2	461.0	435.5	439.1	445.2	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	457.4	453.2	460.0	445.93
	9	452.9	463.3	450.0	461.7	466.2	455.4	443.5	451.0	451.2	448.6	457.2	456.2	454.77
	10	457.0	459.3	448.2	440.3	459.7	454.1	442.3	443.3	439.5	437.1	434.0	432.9	445.64
	11	432.5	427.0	423.0	431.5	446.4	452.7	452.1	447.7	446.5	444.5	451.4	454.1	442.45
	12	458.3	446.4	434.2	432.9	449.3	448.0	447.2	443.7	445.0	446.0	442.6	451.5	445.42
	13	451.9	443.0	432.5	440.1	450.0	452.9	450.7	445.0	448.4	449.6	453.1	456.0	447.77
	14	458.4	453.4	437.4	455.0	458.5	465.5	456.9	455.9	455.0	—	—	—	—
	15	—	—	—	—	—	—	—	—	—	457.9	462.4	459.0	456.27
	16	430.4	392.7	400.4	431.5	443.9	440.0	433.7	438.4	418.7	438.5	441.6	423.9	427.81
	17	427.5	437.7	431.0	441.7	458.9	443.5	442.5	423.8	436.5	443.4	435.2	437.6	438.27
	18	441.2	426.7	416.7	428.3	438.3	429.9	426.1	424.7	423.9	427.0	433.3	433.3	429.12
	19	426.0	414.8	425.8	419.7	440.5	444.0	439.8	439.7	435.2	437.2	439.1	445.7	433.96
	20	455.2	445.9	437.2	454.5	466.5	460.0	459.2	452.2	445.9	448.2	456.1	457.3	453.18
	21	459.7	454.2	444.0	455.2	463.7	462.3	455.1	454.2	453.1	—	—	—	—
	22	—	—	—	—	—	—	—	—	—	457.5	459.1	458.8	456.41
	23	457.7	447.4	440.0	450.0	456.9	457.0	449.7	451.4	446.1	447.9	451.6	462.5	451.52
	24	456.0	452.9	431.2	439.9	451.5	460.1	452.2	451.3	456.0	451.2	457.8	455.8	451.32
	25	462.7	450.0	443.3	443.9	444.5	459.1	469.4	434.9	441.3	445.0	450.9	450.0	449.58
	26	459.1	452.1	425.2	443.5	460.5	457.1	450.0	446.3	444.9	446.8	447.9	448.4	448.48
	27	456.5 <sup>a</sup>	449.2	438.6	442.4	454.2	453.8	456.6	446.8	451.7	449.9	451.5	452.0	450.27
	28	461.8	454.3	438.1	439.8	440.2	448.8	441.1	447.3	436.6	—	—	—	—
	29	—	—	—	—	—	—	—	—	—	444.0 <sup>a</sup>	448.2	451.5	445.97
	30	457.5	451.4	449.0	444.0	448.3	454.4	452.4	445.0	445.9	449.2	450.7	458.3	450.51
	31	462.5	456.7	442.2	438.3	443.5	455.9	444.6	440.2	437.9	440.9	446.1 <sup>b</sup>	447.0	446.32
	Hourly Means	451.50	445.17	434.42	441.78	451.95	452.00	446.67	443.66	443.82	446.92	449.45	450.53	446.51
JUNE.	1	457.8	449.0	434.0	430.0	439.0	437.7	442.0	442.7	439.0	426.9	426.0	439.8	438.66
	2	449.8	425.7	436.4	432.7	433.0	435.1	438.9	433.4	432.8	427.6	435.0	439.1	434.96
	3	439.3	423.4	402.8	411.4	415.4	427.2	438.1	436.1	433.2	436.1	433.0	437.6	427.80
	4	438.7	437.3	430.1	442.3	389.9	481.0	464.0	419.6	382.8	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	420.7	419.4	423.1	429.07
	6	431.6	426.7	405.5	414.5	428.1	449.0	426.2	430.5	420.5	424.1	433.2	432.2	426.84
	7	444.3	441.0	424.4	426.8	438.5	449.2	430.3	436.1	437.0	441.1	431.8	442.7	436.93
	8	442.1	431.5	425.5	426.5	452.4	454.7	455.2	440.8	445.8	442.0	433.2	429.9	439.97
	9	451.3	448.0	433.7	426.2	435.1	434.6	438.0	427.0	435.5	439.0	437.6	439.6	437.13
	10	452.3	454.4	439.5	428.9	435.0	444.8	448.0	444.5	450.5	449.1	447.8	452.1	445.57
	11	454.4	452.4	433.5	432.0	446.9	453.7	455.3	449.9	446.7	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	431.5	443.2	456.1	446.30
	13	453.3	428.1	434.5	439.5	447.5	445.5	442.0	420.9	422.3	422.1	450.1	432.3	436.81
	14	411.7	446.6	421.2	415.7	420.1	451.5	436.5	438.3	430.0	423.8	430.0	438.4	430.32
	15	432.6	441.3	438.2	436.0	435.8	436.3	430.1	435.1	437.2	426.7	420.5	432.7	433.54
	16	429.3	432.2	416.2	428.0	441.4 <sup>c</sup>	436.4	424.4	422.2	423.7	428.3	431.0	428.8	428.49
	17	432.5	424.9	424.1	427.3	435.0	442.7	434.5	433.4	429.4	427.0	431.4	438.6	431.73
	18	443.2	433.8	432.6	425.7	443.9	451.4	429.9	425.5	427.3	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	409.6	418.2	420.2	430.11
	20	426.9	426.7	417.6	421.0	426.8	428.5	423.4	421.7	422.2	422.7	426.0	430.0	424.46
	21	437.9	432.7	415.2	426.3	435.3	435.9	432.9	428.6	429.6	429.7	433.8	434.5	431.03
	22	434.2	429.0	411.9	418.4	436.6	448.6	440.6	452.8	427.5	430.8	425.4	424.3	431.67
	23	430.1	424.3	420.1	417.1	412.4	445.1	420.1	429.8	428.9	440.7	398.2	424.6	424.28
	24	425.1	419.7	412.1	419.0	429.4	435.2	434.6	426.2	424.1	414.1	430.7	423.5	424.47
	25	435.3	441.6	428.0	422.0	431.3	432.8	435.1	438.7	458.4	—	—	—	—
	26	—	—	—	—	—	—	—	—	—	429.9	426.0	431.2	434.19
	27	431.0 <sup>d</sup>	427.2	416.1	419.8	436.4	430.4	430.4	426.9	425.0	423.5	428.6	430.4	427.14
	28	431.8	433.6	416.1	412.8	431.1	428.0	425.9	425.1	422.9	420.5	423.7	428.1	424.97
	29	438.6 <sup>e</sup>	439.7	420.7	418.1	432.0	425.0	430.5	430.9	425.7	432.0	420.5	430.0	428.64
	30	435.1	423.4	400.0	405.7	425.3	423.8	431.1	424.1	402.4	402.2	420.0	415.5	417.38
Hourly Means	438.08	434.39	422.69	423.99	432.06	440.93	436.08	432.34	429.25	427.76	429.01	432.90	431.62	

<sup>a</sup> Thirty minutes late; omitted in the hourly means.

<sup>b</sup> Five minutes late.

<sup>c</sup> Two minutes late.

<sup>d</sup> Eleven minutes late.

<sup>e</sup> Fifteen minutes late.



HORIZONTAL FORCE.														
Temperature of the Bifilar Magnet.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Daily and Monthly Means.	
MAY.	2	52.8	55.0	55.4	56.6	57.4	58.6	59.5	58.8	58.0	56.7	55.6	54.5	56.57
	3	53.8 <sup>a</sup>	55.5	59.2 <sup>a</sup>	59.9	60.4	61.0	61.2	59.3	57.4	55.8	54.9	53.3	57.64
	4	52.2	53.8	55.8	56.5	57.5	58.8	59.4	57.8	56.2	54.5	53.5	52.4	55.70
	5	51.7	53.8	55.8	57.4	58.6	60.4	59.8	59.0	58.2	56.8	55.9	55.2	56.88
	6	54.8	56.0	56.8	59.0	61.4	63.3	62.8	60.6	58.5	57.0	56.8	54.6	58.47
	7	53.7	53.8	55.2	55.3	56.1	57.0	57.2	56.7	56.5	—	—	—	—
	8	—	—	—	—	—	—	—	—	—	51.2	50.4	49.6	54.39
	9	49.4	48.8	49.5	51.5	53.5	55.5	55.0	54.5	54.0	53.5	53.4	52.8	52.62
	10	51.4	51.4	52.8	55.0	57.6	59.8	61.0	60.8	61.0	60.5	59.8	59.3	57.53
	11	58.5	58.2	58.3	56.0	56.8	57.2	56.8	55.7	54.8	54.0	53.5	53.5	56.11
	12	53.0	54.2	55.2	56.3	57.7	60.3	61.0	59.8	58.5	57.5	56.6	56.2	57.19
	13	55.2	55.2	55.6	56.2	56.8	58.2	58.6	56.8	55.5	54.8	53.5	52.5	55.74
	14	51.2	52.5	51.8	52.8	53.4	53.8	56.5	56.0	55.6	—	—	—	—
	15	—	—	—	—	—	—	—	—	—	55.0	55.2	55.0	54.07
	16	54.3	55.6	57.7	59.3	61.0	61.6	61.6	60.5	59.5	58.5	56.8	55.0	58.45
	17	54.0	54.4	55.5	56.8	58.0	58.8	59.5	60.0	59.6	58.8	58.0	57.7	57.59
	18	57.7	58.2	59.2	60.2	62.2	65.8	66.0	65.0	64.5	64.0	63.2	62.2	62.35
	19	60.4	59.3	58.5	57.9	58.3	59.3	59.5	59.2	58.5	57.8	56.5	55.5	58.39
	20	54.5	55.5	55.0	54.4	54.5	55.0	55.6	57.2	56.5	55.2	53.6	52.0	54.92
	21	50.7	51.5	53.0	54.4	56.4	57.2	57.4	57.7	57.5	—	—	—	—
	22	—	—	—	—	—	—	—	—	—	55.0	55.2	55.3	55.11
	23	55.0	55.1	55.4	56.6	57.4	57.8	58.0	58.4	58.4	57.6	56.6	56.0	56.86
	24	55.6	55.4	55.8	56.8	57.4	57.8	58.5	58.5	58.1	57.0	56.0	55.2	56.84
	25	54.0	55.2	56.2	56.8	58.0	59.0	59.7	60.0	59.5	58.4	57.0	56.0	57.48
	26	54.3	54.6	55.3	56.1	56.8	58.0	59.0	59.6	59.6	59.1	58.3	57.8	57.37
	27	56.6 <sup>a</sup>	56.3	56.0	56.0	56.6	58.5	58.8	59.0	59.2	58.6	58.0	57.4	57.58
	28	56.8	58.0	59.5	60.0	60.6	62.0	63.0	62.0	60.8	—	—	—	—
	29	—	—	—	—	—	—	—	—	—	56.6 <sup>a</sup>	55.5	55.0	59.15
	30	54.6	55.0	55.5	56.2	57.7	59.0	59.5	59.0	58.4	57.0	56.2	55.4	56.96
	31	55.5	56.3	57.6	58.8	59.8	61.2	62.5	62.2	61.2	59.4	58.3	57.0	59.15
	Hourly Means	54.22	54.95	55.70	56.65	57.77	59.03	59.52	59.00	58.29	56.95	56.09	55.25	56.97
JUNE.	1	56.0	58.7	59.5	60.5	61.8	62.6	62.8	62.5	62.3	60.8	58.8	57.5	60.32
	2	56.5	58.0	59.7	61.7	62.6	63.2	63.6	63.8	63.5	63.0	62.6	62.7	61.74
	3	62.0	62.6	63.6	63.5	63.3	63.3	62.7	62.3	61.6	61.8	62.2	62.0	62.57
	4	61.5	61.3	61.2	61.8	63.0	64.6	65.5	66.0	65.6	—	—	—	—
	5	—	—	—	—	—	—	—	—	—	62.8	61.8	60.8	62.99
	6	59.5	60.5	61.0	61.0	61.2	61.3	60.6	60.0	58.8	57.4	56.0	55.0	59.36
	7	54.5	56.4	57.5	58.7	59.4	60.0	59.8	59.4	59.2	58.2	57.6	57.3	58.17
	8	56.8	57.2	58.0	56.7	54.2	55.6	55.2	55.2	56.0	56.4	56.5	57.0	56.23
	9	57.3	57.4	57.6	58.2	59.2	59.8	59.8	59.6	60.5	60.5	60.6	60.4	59.24
	10	59.9	59.2	59.2	58.5	57.8	57.5	56.6	56.0	56.0	55.7	54.6	53.0	57.00
	11	52.4	53.0	53.5	53.8	55.0	56.2	57.0	57.4	58.5	—	—	—	—
	12	—	—	—	—	—	—	—	—	—	57.4	57.4	57.4	55.75
	13	56.7	57.3	58.3	59.5	60.6	61.4	61.5	61.2	61.4	60.4	59.1	58.5	59.66
	14	57.5	58.7	60.0	61.0	62.2	61.2	60.4	61.0	62.0	61.4	60.5	59.8	60.47
	15	59.0	58.5	58.8	60.8	62.4	64.0	64.4	64.2	63.5	63.5	62.6	61.8	61.96
	16	61.0	62.2	63.5	65.0	66.0	66.2	66.4	66.2	65.5	65.0	64.2	63.5	64.56
	17	62.2	62.0	63.0	63.5	64.2	65.0	65.2	65.2	65.2	64.2	63.2	62.3	63.77
	18	61.3	61.5	62.3	63.0	64.4	66.2	66.2	67.3	67.2	—	—	—	—
	19	—	—	—	—	—	—	—	—	—	65.2	64.1	63.0	64.31
	20	62.0	61.9	62.3	61.5	63.0	64.2	64.5	64.2	63.8	63.1	62.0	61.5	62.83
	21	60.8	61.2	62.0	63.3	64.4	65.8	65.8	65.6	65.0	64.5	63.8	63.6	63.82
	22	63.0	62.7	63.0	63.4	64.4	65.4	66.5	66.6	66.8	66.7	66.0	65.5	65.00
	23	64.8	64.0	64.5	65.0	65.7	66.7	66.4	66.0	65.8	64.6	63.4	62.5	64.95
	24	61.2	61.7	62.5	64.0	65.0	65.7	66.6	66.6	65.4	64.3	63.5	62.7	64.10
	25	61.7	61.5	61.8	62.2	62.0	62.0	62.5	62.6	62.6	—	—	—	—
	26	—	—	—	—	—	—	—	—	—	64.7	64.2	64.0	62.65
	27	64.2	64.0	63.8	64.2	64.8	65.8	66.2	66.6	66.0	65.5	65.6	64.5	65.10
	28	64.0	64.8	65.1	65.3	65.5	66.0	66.8	67.3	67.0	66.4	65.5	64.3	65.67
	29	63.2	63.4	64.1	64.8	65.8	66.7	67.2	67.0	67.0	66.5	65.6	64.8	65.51
	30	64.3	65.7	66.7	67.7	69.0	69.8	69.9	70.0	70.0	68.5	68.0	67.5	68.09
Hourly Means <sup>b</sup>	60.13	60.59	61.25	61.87	62.57	63.32	63.47	63.45	63.31	62.63	61.90	61.27	62.15	

<sup>a</sup> Thirty minutes late; omitted in the hourly means.

HORIZONTAL FORCE.													
One Scale Division = .000074 parts of the H. F.      Change in the magnetic moment of the Bar for 1° Fahr. = .00026.													
Mean Göttingen Time.	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .	
JULY.	1	414.0	424.2	420.8	420.5	402.6	405.0	408.5	397.2	421.1	433.9	447.0	418.3
	2	312.4	423.8	415.0	417.8	419.4	400.7	399.4	443.5 <sup>a</sup>	525.7	576.1	552.2	506.4
	3	—	—	—	—	—	—	—	—	—	—	—	—
	4	337.5	309.4	288.8	322.3	325.2	363.8	359.5	389.8	381.8	383.7	417.2	394.7
	5	414.9	413.6	404.6	397.0	395.1	395.0	400.0	404.7	406.5	414.2	417.9	419.0
	6	431.4	424.4	418.2	408.0	397.7	409.0	415.5	426.8	423.8	433.7	437.3	446.0
	7	432.8	432.6	427.8	414.0	406.6	402.7	400.4	403.9	407.6	412.8	415.7	419.0
	8	428.0	428.3	424.8	416.3	405.0	404.7	408.5	415.0	413.1	426.7	435.4	442.9
	9	423.2	396.1	419.8	418.2	414.0	390.8	406.8	412.5	404.0	426.5	419.0	448.0
	10	—	—	—	—	—	—	—	—	—	—	—	—
	11	409.9	414.9	407.5	392.4	392.4	405.9	389.2	402.6	414.2	414.5	423.1	429.3
	12	411.8	415.9	405.6	403.5	401.1	393.7	391.0	395.8	398.0	408.0	424.7	422.0
	13	413.3	412.5	403.3	387.5	381.7	390.7	397.0	399.6	410.5	412.0	406.0	409.7
	14	406.2	408.4	405.9	398.4	385.9	383.0	384.3	394.3	400.2	408.4	410.4	403.0
	15	405.4	403.3	404.0	400.4	388.9	387.0	392.9	402.7	413.7	412.4	418.7	404.9
	16	414.1	412.9	406.3	396.2	395.0	397.1	398.5	415.4	417.0	418.2	412.4	405.1
	17	—	—	—	—	—	—	—	—	—	—	—	—
	18	404.2	406.3	404.4	405.1	398.7	393.2	392.5	393.7	405.7	412.6	410.3	404.5
	19	403.3	405.2	396.4	393.5	388.2	389.1	390.6	393.6	401.0	394.7	391.8	387.9
	20	395.3	404.2	391.9	392.4	387.8	397.7	408.8	417.5	418.7	422.1	401.4	421.3
	21	417.0	417.3	405.0	399.9	398.4	395.5	393.4	404.7	412.8	416.6	413.9	411.3
	22	425.7	414.0	395.4	400.2	400.5	397.1	401.2	407.6	411.5	418.5	415.9	412.4
	23	411.6	390.5	386.8	390.1	389.9	375.8	384.8	386.7	398.5	408.0	414.5	380.8
	24	—	—	—	—	—	—	—	—	—	—	—	—
	25	410.1	403.6	401.2	393.0	388.3	385.4	383.8	393.1	404.4	412.9	418.3	420.5
	26	417.1	425.3	416.0	406.2	396.7	392.9	394.3	399.7	406.7	418.6	415.8	415.5
	27	399.5	409.8	404.2	400.1	396.3	399.8	395.5	396.7	400.4	405.6	413.7	410.6
	28	411.6	411.3	399.0	397.5	400.5	406.0	402.6	406.7	410.4	411.8	409.9	406.3
	29	420.0	434.4	426.7	422.3	407.6	406.3	402.2	395.8	394.0	410.6	403.6	402.4
	30	402.8	406.8	401.5	380.7	381.0	394.1	396.4	396.1	387.6	399.8	400.7	406.5
	31	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means <sup>d</sup>	413.47	413.16	407.38	401.39	395.83	395.73	397.45	402.60	407.56	414.71	415.78	413.68	

TEMPERATURE OF THE BIFILAR MAGNET.													
JULY.	1	66.9	66.7	66.6	66.4	66.3	66.2	66.2	66.3	65.5	64.2	65.2	65.5
	2	65.5	65.2	65.0	65.2	64.5	63.6	63.5	63.5	64.6	65.4	65.6	66.0
	3	—	—	—	—	—	—	—	—	—	—	—	—
	4	66.8	67.3	67.5	68.0	68.4	67.6	68.4	69.0	69.0	69.0	68.6	68.8
	5	65.3	65.5	65.4	65.6	65.9	65.9	66.4	67.0	67.5	67.4	67.4	67.3
	6	62.0	62.0	62.0	62.3	63.2	63.5	64.0	64.4	64.4	64.6	64.4	65.0
	7	60.7	61.0	61.9	62.6	63.0	63.7	64.4	65.0	65.5	66.2	67.0	67.3
	8	63.8	63.7	63.5	63.6	63.6	63.7	64.0	64.2	64.6	65.0	65.4	65.6
	9	63.4	63.1	63.0	63.3	63.9	64.4	65.1	65.5	66.4	66.7	67.0	67.3
	10	—	—	—	—	—	—	—	—	—	—	—	—
	11	64.0	64.6	64.8	65.3	65.8	66.4	67.2	67.8	68.5	69.0	69.8	70.4
	12	65.5	65.5	65.8	66.0	66.7	67.5	68.4	69.0	70.2	71.0	72.0	72.8
	13	69.2	69.3	69.6	69.8	70.3	71.0	71.8	72.7	73.8	73.8	75.0	75.3
	14	71.2	71.0	71.2	71.5	72.0	72.5	73.0	73.5	74.0	74.4	74.8	74.8
	15	69.2	69.0	69.0	69.6	69.8	70.3	71.1	71.5	72.0	72.3	72.5	72.6
	16	67.2	67.2	67.5	68.0	68.6	69.2	70.0	70.4	71.2	71.8	72.4	73.0
	17	—	—	—	—	—	—	—	—	—	—	—	—
	18	70.6	71.0	71.3	71.7	72.0	72.8	73.2	74.0	74.8	75.4	75.8	76.0
	19	72.7	72.8	73.2	73.4	73.8	74.3	75.0	75.7	76.9	77.5	78.0	78.0
	20	70.5	70.0	69.5	69.5	69.6	70.0	70.0	70.5	70.9	71.4	71.6	71.5
	21	66.6	66.8	67.4	68.0	68.3	69.0	69.6	70.0	70.5	71.5	72.1	71.7
	22	65.5	66.0	66.7	67.5	68.2	69.0	69.6	70.5	71.3	72.0	72.6	73.0
	23	69.6	70.5	71.4	71.8	72.3	72.6	73.3	73.8	74.4	75.0	75.5	76.3
	24	—	—	—	—	—	—	—	—	—	—	—	—
	25	69.0	68.0	68.6	68.8	68.8	69.0	69.2	69.5	69.5	69.2	69.0	69.8
	26	66.7	66.5	66.7	67.0	67.5	68.4	69.2	70.0	70.8	71.7	72.2	72.5
	27	71.0	71.0	71.0	71.3	71.5	71.8	72.5	73.0	74.0	74.6	74.8	75.3
	28	69.6	69.5	69.6	69.9	70.3	70.8	71.3	71.8	72.2	72.5	72.8	73.2
	29	67.5	67.0	67.4	68.0	68.6	69.6	70.4	71.2	72.0	72.6	73.2	73.5
	30	72.8	72.7	72.7	73.2	73.5	73.8	73.7	73.1	71.2	70.3	69.6	69.0
	31	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means <sup>d</sup>	67.52	67.52	67.74	68.09	68.48	68.97	69.52	70.02	70.50	70.84	71.15	71.42	

<sup>a</sup> Two minutes late.

<sup>d</sup> The observations from July 1<sup>d</sup> 18<sup>h</sup> to July 4<sup>d</sup> 9<sup>h</sup>, are omitted in the hourly means on account of excessive disturbance.



HORIZONTAL FORCE.

One Scale Division = .000074 parts of the H. F. Change in the magnetic moment of the Bar for 1° Fah. = .00026.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Daily and Monthly Means.
Sc. Div. 429.7	Sc. Div. 439.8	Sc. Div. 419.6	Sc. Div. 417.2	Sc. Div. 425.0	Sc. Div. 428.4	Sc. Div. 453.5	Sc. Div. 368.4	Sc. Div. 354.4	Sc. Div. 200.0	Sc. Div. 341.2	Sc. Div. 337.0	Sc. Div. 401.14
442.2	387.3	361.6	381.0	333.2	371.6	—	—	—	—	—	—	352.90
—	—	—	—	—	—	—194.3	—90.9	334.3	52.4	379.3	319.5	—
411.4	404.4	402.7	393.6	400.0	403.1	391.3	400.5	388.4	397.1	395.5	401.4	377.63
413.5	408.6	408.3	398.2	398.3	406.8	404.5	417.8	398.4	416.4	431.7	434.3	409.14
429.1	444.6	412.3	414.6	411.7	412.0	419.2	429.5	419.0	420.7	427.0	432.8	422.68
418.7	417.7	413.7	415.1	417.0	417.1	416.2	419.1	420.7	421.0	423.2	426.3	416.74
431.0	430.3	418.7	418.1	421.1	413.2	396.5	425.1	438.1	434.2	441.2	436.9	423.05
427.7	408.9	414.3	403.1	396.9	401.4	—	—	—	—	—	—	—
—	—	—	—	—	—	419.2	422.5	425.6	422.6	427.7	393.2	414.25
418.8	415.5	401.2	398.5	401.1	406.8	411.9	411.9	414.1	417.1	415.5	413.0	409.22
415.5	396.7	399.9	404.0	392.7	400.7	403.0	403.0	405.5	406.7	409.2	410.8	404.95
391.0	403.8	397.9	395.0	393.5	394.9	396.1	396.9	395.3	395.7	403.0	406.8	399.74
399.0	397.0	401.1	396.8	393.0	388.9	387.0	389.2	391.4	401.2	411.6	412.4 <sup>b</sup>	398.21
403.6	400.6	402.3	402.8	408.0	392.1	395.0	404.4	408.3	406.7	408.6	408.5	403.13
405.0	399.9	401.0	397.8	401.6	401.1	—	—	—	—	—	—	—
—	—	—	—	—	—	399.1	402.0	405.9	406.1	407.4	401.1	404.84
402.1	403.0	402.4	386.9	373.3	393.9	389.0	394.5	389.1	379.0	386.5	401.1	397.17
390.6	396.0	395.0	388.7	395.7	390.0	386.7	395.2	392.9	392.6	401.3	404.4	394.35
402.0	394.8	401.6	395.4	399.0	402.7	403.4	407.3	404.9	406.5	410.9	411.2	404.12
407.5	405.4	405.1	407.0	406.1	410.0	414.0	413.8	414.5	415.1	417.4	420.7	409.27
405.5	406.6	410.3	407.4	408.1	412.9	407.0	406.0	383.5	397.7	411.2	414.3	407.10
394.9	378.8	384.9	383.7	384.0	384.3	—	—	—	—	—	—	—
—	—	—	—	—	—	383.3	401.0	400.0	400.5	406.3	395.4	392.30
417.5	407.6	409.8	409.6	404.5	408.7	408.2	419.2	408.8	408.6	415.5	417.8	406.27
410.0	406.0	405.0	404.9	404.9	404.2	404.9	406.6	405.1	406.0	411.0	394.1	406.98
401.5	399.2	399.2	400.2	406.6	401.9	404.9	406.1	411.7	410.1	414.3	414.2	404.25
414.6	411.0	398.9	395.8	407.4	400.0	408.8	410.5	409.0	411.5	407.2	411.8	406.67
409.7	409.5	391.1	393.0	400.2	422.1	402.5	402.0	404.9	405.5	408.7	399.5	407.27
406.0	417.7	418.2	414.2	408.6	409.5	—	—	—	—	—	—	—
—	—	—	—	—	—	391.6	386.6	424.9	417.6	408.3	410.4	402.82
410.24	408.14	404.58	401.66	402.33	404.27	401.80	407.11	406.67	408.17	412.51	411.30	402.93

TEMPERATURE OF THE BIFILAR MAGNET.

65.8	65.6	65.5	65.5	65.3	65.1	65.0	65.5	65.6	66.0	66.2	66.2	65.80
66.5	66.8	67.0	67.2	67.4	67.0	—	—	—	—	—	—	66.17
—	—	—	—	—	—	68.5	68.6	68.4	68.2	67.8	67.0	67.61
68.6	68.4	68.0	67.8	67.5	67.2	66.8	66.6	66.2	65.9	65.8	65.5	65.42
66.8	66.5	66.2	65.8	65.2	64.8	64.1	63.5	63.0	62.8	62.6	62.2	63.46
65.4	65.3	65.4	65.1	64.5	63.8	63.2	62.6	62.5	61.8	61.2	60.5	64.94
67.4	67.3	67.0	66.5	66.3	66.0	65.5	65.4	65.2	64.8	64.6	64.2	64.61
65.4	65.5	65.6	65.6	65.4	65.5	65.3	65.0	64.5	64.4	64.0	63.7	65.68
67.4	68.0	68.3	68.2	67.4	66.8	—	—	—	—	—	—	67.86
70.6	70.6	70.7	70.5	70.2	69.6	68.7	68.0	67.4	66.8	66.2	65.7	70.20
73.5	73.5	73.7	73.4	73.0	72.5	72.0	71.5	71.0	71.0	70.0	69.4	72.72
75.3	75.3	75.2	74.9	74.5	74.0	73.5	73.0	72.6	72.2	71.8	71.5	72.50
74.6	74.4	74.0	73.5	73.0	72.4	72.0	71.5	71.0	70.7	70.0	69.0 <sup>b</sup>	70.67
72.8	73.0	73.0	72.5	72.0	71.0	70.5	69.3	68.8	68.6	68.1	67.6	71.17
73.2	73.5	73.6	73.5	73.0	72.5	—	—	—	—	—	—	74.17
—	—	—	—	—	—	73.5	73.1	72.4	71.8	71.3	70.2	74.62
76.5	76.4	76.4	76.1	75.8	75.5	75.1	74.7	74.5	74.0	73.5	73.0	70.70
77.7	77.3	75.5	75.5	75.0	74.5	73.8	73.2	72.6	72.0	71.5	71.0	69.33
72.4	72.5	72.5	72.2	72.2	72.0	71.4	71.0	70.0	69.2	68.5	67.8	70.47
72.2	72.0	71.6	71.0	70.5	69.8	69.0	68.1	67.6	67.3	66.9	66.4	73.09
73.0	73.4	73.0	72.6	72.3	72.0	71.5	71.0	70.8	70.4	70.0	69.5	68.90
76.5	76.3	76.0	75.6	75.2	74.8	—	—	—	—	—	—	70.77
—	—	—	—	—	—	72.0	71.5	71.0	70.5	69.8	68.5	73.02
70.0	70.1	70.0	69.8	69.5	69.0	68.5	68.2	68.0	67.6	67.4	67.0	71.11
73.0	73.0	73.0	73.2	73.2	72.8	72.4	72.2	72.0	71.7	71.5	71.2	71.73
75.6	75.8	75.6	75.5	74.8	74.0	73.2	72.5	71.8	71.3	70.7	70.0	68.79
73.3	73.2	73.2	72.6	72.3	71.7	71.3	70.5	69.5	69.0	68.5	68.0	—
73.8	73.8	73.8	73.5	73.5	73.5	73.0	73.2	73.2	73.2	73.0	73.0	—
69.0	68.5	68.7	68.5	68.0	67.5	—	—	—	—	—	—	—
—	—	—	—	—	—	63.5	63.2	63.0	62.5	62.0	61.0 <sup>c</sup>	—
71.59	71.57	71.42	71.16	70.78	70.33	69.83	69.37	68.92	68.53	68.06	67.42	69.44

<sup>b</sup> Forty minutes late; omitted in the hourly mean.

<sup>c</sup> Twenty minutes late.

HORIZONTAL FORCE.													
One Scale Division = $\cdot 000074$ parts of the H. F. Change in the magnetic moment of the Bar for $1^\circ$ Fah. = $\cdot 00026$ .													
Mean Gottingen Time.	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .	
AUGUST.	1	406.8	416.7	417.1	411.6	414.0	422.4	425.9	426.1	437.0	432.7	438.7	438.6
	2	440.3	438.4	427.8	410.7	406.6	405.2	411.9	423.7	425.4	422.3	427.3	426.0
	3	429.1	426.4	416.3	405.4	401.9	405.0	410.0	415.9	423.2	430.9	428.4	423.8
	4	431.9	426.7	414.8	402.8	401.5	414.7	417.9	424.4	432.0	444.7	437.4	430.9
	5	420.0	423.3	405.8	406.2	400.9 <sup>e</sup>	397.7	398.4	408.4	411.0	414.2	412.6	416.0
	6	413.3	414.5	410.8	406.6	394.6	390.6	416.5	424.5	424.5	421.0	418.0	406.5
	7	—	—	—	—	—	—	—	—	—	—	—	—
	8	404.9	401.4	394.2	390.2	393.3	396.7	402.9	409.2	415.0	427.0	432.0	409.6
	9	409.5	412.7	403.7	388.7	390.2	396.0	404.0	410.3	415.1	411.8	416.2	413.9
	10	407.5	416.6	411.3	402.7	402.9	402.9	409.9	416.5	418.9	423.7	418.0	400.8
	11	414.3	407.9	410.0	405.2	404.9	398.1	399.0	407.8	414.8	414.4	415.5	418.0
	12	431.9	423.2	414.7	404.9	395.0	395.7	398.8	393.1	403.7	405.5	404.5	409.8
	13	412.4	408.3	403.0	393.1	392.2	392.7	400.7	400.3	403.0	408.6	411.8	424.4
	14	—	—	—	—	—	—	—	—	—	—	—	—
	15	403.5	400.0	393.9	387.5	384.5	388.7	392.0	401.3	409.4	408.1	409.1	399.5
	16	406.9	403.9	396.8	391.0	391.1	397.0 <sup>e</sup>	402.0	404.6	412.3	413.6	406.3	403.7
	17	396.5	397.0	390.6	387.1	377.2	375.1	382.5	384.1	398.6	402.9	408.2	407.5
	18	395.2	396.7	394.4	383.7	378.5	376.6	394.2	389.1	406.9	414.9	420.2	397.4
	19	424.7	420.7	379.4	389.4	352.1	363.5	387.0	423.5	415.2	449.1	435.7	395.9
	20	407.6	404.8	394.8	384.7	387.4	390.9	394.4	401.3	410.3	426.2	405.6	401.4
	21	—	—	—	—	—	—	—	—	—	—	—	—
	22	420.7	420.1	412.4	404.2	403.7	406.3	407.3	412.8	419.9	427.1	420.2	406.3
	23	414.9	413.1	412.1	411.3	396.9	393.9	391.6	401.9	413.2	423.3	427.0	423.9
	24	414.5	408.9	403.0	405.4	408.7	383.5	408.1	413.9	421.0	427.2	411.8	406.3
	25	404.5	410.4	408.8	392.0	380.5	395.4	400.4	402.0	400.7	409.2	412.4	415.0
	26	411.6	408.5	398.6	386.4	381.6	386.8	402.8	409.9	407.7	409.1	420.1	410.3
	27	392.8	396.8 <sup>f</sup>	386.7	378.5	376.7	382.2	389.7	404.0	408.2	409.4	418.1	401.7
	28	—	—	—	—	—	—	—	—	—	—	—	—
	29	405.6	403.2	393.1	381.1	373.7	380.4	390.0	403.9	413.5	417.6	406.1	403.9
	30	412.9	409.5	401.8	393.0	392.5	396.3	403.0	408.0	408.2	419.9	416.0	403.8
	31	419.9	416.1	408.6	399.5	398.2	405.6	409.8	416.3	418.2	421.7	417.2	416.7
Hourly Means	413.10	412.07	403.87	396.40	391.90	394.07	401.88	408.77	414.33	419.86	418.31	411.54	

TEMPERATURE OF THE BIFILAR MAGNET.													
AUGUST.	1	60.5	60.7	60.7	61.0	61.0	61.5	62.0	62.6	63.1	63.8	64.4	65.1
	2	60.5	60.5	60.7	61.4	62.1	62.7	63.5	64.5	65.1	65.7	66.4	66.8
	3	62.6	62.3	62.2	62.2	62.5	62.5	63.2	64.0	64.8	65.4	66.0	66.5
	4	62.6	62.5	62.6	63.0	63.8	64.6	65.4	66.2	66.9	67.5	67.7	68.3
	5	64.6	64.6	65.0	65.2	66.0 <sup>e</sup>	66.6	67.5	68.2	68.7	69.0	69.3	69.5
	6	67.8	67.6	67.5	67.5	67.5	67.8	68.1	68.5	68.7	69.0	69.0	69.2
	7	—	—	—	—	—	—	—	—	—	—	—	—
	8	68.0	67.7	67.8	67.8	68.0	68.4	68.8	69.1	69.5	70.0	70.3	70.4
	9	68.0	68.0	67.7	67.6	67.5	67.5	67.5	67.6	67.7	67.8	68.0	68.3
	10	66.8	66.8	66.8	67.2	67.3	67.4	67.6	68.0	68.5	69.0	69.2	69.5
	11	66.7	66.6	66.5	66.8	67.2	68.2	68.5	69.1	69.5	70.1	70.6	71.0
	12	67.2	67.5	68.0	68.5	69.1	70.0	70.7	71.2	71.8	72.5	73.0	73.6
	13	70.0	70.3	70.8	71.5	72.0	72.4	72.6	73.3	73.6	73.8	74.2	74.3
	14	—	—	—	—	—	—	—	—	—	—	—	—
	15	69.5	69.4	69.3	69.5	70.0	71.0	71.6	72.3	73.4	74.2	74.8	75.4
	16	70.2	70.2	70.2	70.6	71.2	71.8 <sup>e</sup>	72.4	73.0	73.5	73.6	74.0	74.4
	17	72.3	72.2	72.1	72.5	72.5	72.5	73.0	73.9	74.0	74.1	74.2	74.3
	18	71.7	71.6	71.7	71.7	71.8	72.0	72.3	72.5	72.8	73.2	73.5	73.8
	19	70.0	69.8	69.7	70.2	70.5	70.5	70.7	71.5	71.2	71.5	71.6	71.8
	20	68.8	68.5	68.3	68.3	68.5	68.8	69.5	70.0	70.3	70.6	70.7	71.3
	21	—	—	—	—	—	—	—	—	—	—	—	—
	22	63.7	64.1	64.7	65.3	66.0	66.8	67.4	68.0	68.7	69.0	69.5	69.8
	23	65.5	65.3	65.5	66.0	66.5	67.5	68.2	69.0	69.7	70.5	71.0	71.4
	24	67.6	67.5	67.6	68.0	68.6	69.1	70.0	70.5	71.3	71.8	72.2	72.6
	25	68.5	68.2	68.2	68.4	68.8	69.5	70.0	70.5	71.2	71.7	72.0	72.4
	26	71.6	71.5	71.5	71.6	71.8	71.8	72.0	72.2	72.5	72.8	73.5	74.0
	27	74.0	73.6 <sup>f</sup>	73.5	73.3	73.5	73.5	74.0	74.6	75.2	75.5	75.6	75.6
	28	—	—	—	—	—	—	—	—	—	—	—	—
	29	73.0	73.0	73.4	73.7	73.9	74.0	73.5	73.0	73.3	73.8	74.2	74.5
	30	69.0	69.0	69.3	69.7	70.4	71.0	71.6	72.0	72.4	72.9	73.0	73.0
	31	67.7	67.7	67.6	67.8	68.0	68.5	69.4	70.1	70.8	71.4	71.7	72.2
Hourly Means	67.72	67.65	67.74	68.01	68.37	68.81	69.30	69.83	70.30	70.75	71.10	71.44	

<sup>e</sup> Five minutes late.

<sup>e</sup> Seven minutes late.

<sup>f</sup> Six minutes late.

HORIZONTAL FORCE.

One Scale Division = .000074 parts of the H. F. Change in the magnetic moment of the Bar for 1° Fah. = .00026.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Daily and Monthly Means.
Sc. Div. 431.5	Sc. Div. 432.3	Sc. Div. 429.0	Sc. Div. 430.0	Sc. Div. 419.9	Sc. Div. 432.8	Sc. Div. 428.5	Sc. Div. 427.1	Sc. Div. 427.9	Sc. Div. 432.5	Sc. Div. 433.8	Sc. Div. 436.9	Sc. Div. 427.08
424.6	428.3	419.3	418.8	420.0	420.6	419.2	420.0	421.7	421.4	422.4	426.7 <sup>a</sup>	422.02
423.0	421.1	420.8	429.1	417.0	420.0	424.4	422.4	423.5	423.5	425.5	429.5 <sup>b</sup>	420.67
443.0	437.9	413.9	387.2	411.0	425.0	409.5	410.9	419.4	422.2	405.3	400.5	419.40
433.6	394.5	404.2	408.0	414.5	410.3	377.8	338.4	419.6	399.9	405.2	371.6	403.84
403.5	403.8	412.7	409.1	409.8	416.4	—	—	—	—	—	—	—
—	—	—	—	—	—	405.8	406.9	412.0	403.4	405.8	409.1 <sup>d</sup>	409.99
410.0	406.7	391.1	401.9	398.8	400.1	400.8	407.0	405.7	409.7	409.0	407.0	405.17
410.4	413.4	417.0	417.7	418.2	417.8	416.3	412.0	417.1	415.7	416.0	412.3	410.67
410.0	407.1	407.2	414.9	409.1	410.5	401.5	404.3	413.2	414.0	415.1	415.5	410.59
414.4	410.2	407.2	407.2	409.1	416.6	407.5	408.1	412.7	416.1	391.0	423.1	409.71
405.6	403.3	403.9	405.7	403.4	407.4	406.3	404.2	403.9	409.1	409.2	410.9	406.40
412.1	403.0	390.5	394.2	397.4	401.2	—	—	—	—	—	—	—
—	—	—	—	—	—	399.1	404.2	406.8	403.2	405.9	404.1	403.01
401.4	396.8	394.4	392.4	394.7	395.3	398.2	399.0	398.5	406.5	404.1	405.6	398.52
405.0	405.9	400.9	400.0	394.0	388.5	389.0	396.7	397.9	392.6	401.6	400.8	400.09
404.1	405.7	407.5	403.9	408.1	393.8	377.9	392.3	388.8	405.5	403.9	396.6	395.64
398.8	400.3	405.9	404.3	407.7	403.7	397.7	394.8	382.2	400.9	402.2	406.0	398.01
389.6	399.4	410.5	410.2	403.3	403.7	402.3	406.0	399.2	399.4	402.7	400.7	402.63
406.3	404.5	402.5	404.3	398.8	420.7	—	—	—	—	—	—	—
—	—	—	—	—	—	411.7	414.0	415.0	416.7	416.5	420.1	405.85
415.4	408.8	399.6	393.2	405.3	416.8	427.1	419.0	413.4	415.0	406.6	—	412.23
417.7	410.9	409.0	409.9	409.1	410.2	412.1	413.0	413.5	415.0	417.0	419.4	411.66
413.0	396.5	402.0	397.4	401.1	402.9	408.4	404.2	406.1	406.2	408.0	406.7	406.87
405.3	403.1	397.6	407.1	410.7	414.0	404.0	406.5	404.0	407.0	410.2	409.0	404.57
410.8	400.1	390.8	409.5	398.1	400.3	400.1	405.5	400.3	394.8	400.3	399.7	401.82
394.7	399.4	395.0	397.0	397.2	397.1	—	—	—	—	—	—	—
—	—	—	—	—	—	397.0	399.9	400.2	402.1	403.7	403.7	397.16
403.5	402.7	404.0	403.8	403.8	404.9	404.2	404.9	408.8	406.5	407.2	411.5	401.58
406.2	407.6	409.0	409.5	411.3	410.3	412.7	413.0	416.8	418.0	416.9	419.8	409.00
415.0	414.6	415.2	414.1	412.8	411.3	410.0	411.0	409.9	415.0	414.9	413.6	412.72
411.43	408.07	405.95	406.68	406.82	409.34	405.52	405.38	408.82	410.07	409.63	410.02	407.65

TEMPERATURE OF THE BIFILAR MAGNET.

65.5	65.5	65.4	65.0	64.5	64.6	63.6	63.2	62.5	62.0	61.5	61.0	62.95
67.2	67.4	67.5	67.3	67.0	66.3	65.6	65.0	64.5	63.8	63.4	62.7 <sup>a</sup>	64.48
67.0	67.4	67.4	67.0	66.6	66.1	65.4	64.8	64.4	64.0	63.5	62.8 <sup>b</sup>	64.61
68.5	68.6	68.5	68.0	67.5	67.3	67.0	67.0	66.4	66.2	65.5	65.0	66.11
69.5	69.5	69.3	69.2	69.0	69.0	69.2	69.2	69.2	68.5	68.3	68.1	68.01
69.4	69.4	69.4	69.4	69.0	68.8	—	—	—	—	—	—	—
—	—	—	—	—	—	70.2	69.7	69.4	68.7	68.4	68.0 <sup>d</sup>	68.67
70.8	71.0	71.0	71.0	70.6	70.5	70.0	69.6	69.3	69.0	68.7	68.5	69.41
68.3	68.3	68.3	68.1	68.1	68.0	67.6	67.5	67.4	67.3	67.0	67.0	67.75
69.6	69.5	69.5	69.0	68.8	68.5	68.2	68.2	67.8	67.4	67.2	67.0	68.12
71.5	71.5	71.5	71.2	70.8	70.4	69.8	69.4	68.5	67.6	67.4	67.4	69.07
74.2	74.4	74.2	73.8	73.2	73.0	72.4	71.9	71.5	71.0	70.6	70.3	71.40
74.4	74.5	74.4	73.6	73.0	72.5	—	—	—	—	—	—	—
—	—	—	—	—	—	72.8	72.1	71.5	71.3	70.6	70.2	72.49
75.8	75.5	75.0	74.5	74.0	73.2	72.7	72.0	71.5	71.3	71.0	70.5	72.39
74.3	74.3	74.1	73.5	73.5	73.2	73.0	73.0	72.8	72.8	72.6	72.5	72.70
74.3	74.0	74.0	73.6	73.6	73.4	73.2	72.8	72.5	72.2	72.0	71.8	73.12
73.8	73.8	73.6	73.5	73.0	72.5	72.5	72.1	71.8	71.4	71.0	70.5	72.42
72.0	71.8	71.2	71.2	71.0	70.7	70.5	70.0	70.0	69.5	69.5	69.0	70.64
71.5	71.3	70.9	70.5	70.0	69.2	—	—	—	—	—	—	—
—	—	—	—	—	—	67.5	66.7	66.1	65.6	65.0	64.2	68.84
70.2	70.3	70.2	69.8	69.5	68.8	68.3	67.6	67.2	66.6	66.4	—	67.73
71.5	71.5	71.5	71.3	71.0	70.6	70.2	69.7	69.4	69.0	68.5	68.0	69.09
72.6	72.6	72.6	72.4	72.0	71.5	71.0	70.5	70.1	69.6	69.3	69.0	70.42
72.8	72.5	72.5	72.3	72.2	72.1	72.0	71.8	71.8	71.8	71.6	71.8	71.02
74.4	74.5	75.0	75.0	75.0	75.2	75.0	75.0	74.5	74.5	74.5	74.0	73.47
75.8	75.8	75.8	75.5	75.2	74.8	—	—	—	—	—	—	—
—	—	—	—	—	—	74.8	74.5	74.2	74.2	73.8	73.3	74.57
74.5	74.5	74.4	74.3	73.6	73.2	73.0	72.4	71.5	71.0	70.5	69.6	73.16
73.0	72.8	72.4	71.9	71.2	70.5	69.8	69.3	68.9	68.5	68.2	68.0	70.74
72.5	72.4	72.2	72.0	71.8	71.3	71.2	71.0	71.0	70.7	70.5	70.4	70.41
71.66	71.65	71.55	71.26	70.91	70.56	70.24	69.85	69.47	69.09	68.76	68.49	69.77

<sup>a</sup> Ten minutes late.

<sup>b</sup> Twenty-two minutes late.

<sup>d</sup> Twenty minutes late.

HORIZONTAL FORCE.													
One Scale Division = $\cdot 000074$ parts of the H. F.    Change in the magnetic moment of the Bar for $1^\circ$ Fahr. = $\cdot 00026$ .													
Mean Göttingen Time.	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .	
SEPTEMBER.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
	1	413·1	408·6	394·8	381·2	382·5	391·5	403·2	409·5	411·5	410·2	407·4	399·0
	2	396·0	402·2	394·2	365·9	374·8	381·0	388·1	394·6	407·2	393·3	414·1	402·2
	3	402·1	399·2	389·0	373·3	381·4	393·0	402·0	411·7	414·2	420·5	422·0	413·0
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	417·2	409·6	398·6	384·5	376·1	375·2	389·2	398·0	420·2	402·1	421·2	420·1
	6	417·6	414·3	408·6	390·2 <sup>a</sup>	398·1	403·7	406·1	413·7	421·0	420·6	425·7	421·2
	7	422·8	415·0	404·8	395·7	390·2	388·8	391·9	403·1	415·4	420·9	422·2	420·4
	8	423·0	411·5	414·5	405·9	396·1	396·2	402·5	412·7	420·5	428·5	430·7	439·1
	9	433·8	432·7	424·1	416·1	405·8	401·7	402·0	407·4	414·6	422·2	436·2	430·7
	10	438·9	438·1	426·6	415·2	416·3	419·7	417·8	421·1	425·3	427·1	427·7	418·1
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	423·1	410·3	404·1	399·2	398·0	399·6	401·1	401·1	411·2	418·6	406·8	410·1
	13	421·6	419·6	396·5	400·9	395·6	404·5	400·2	406·6	406·7	417·0	420·4	395·0
	14	420·3	418·9	414·0	404·1	404·2	407·9	408·8	408·9	413·9	422·5	426·0	428·1
	15	432·0	431·5	418·5	411·8	400·1	402·6	408·7	409·2	421·5	421·0	421·0	416·1
	16	428·1	416·9	407·0	416·5	410·9	418·4	417·1	424·4	424·6	431·1	423·0	425·0
	17	430·4	429·5	426·3	418·6	423·5	425·5	427·7	432·8	425·2	428·8	431·7	427·3
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	437·0	436·1	427·8	420·1	412·8	415·4 <sup>b</sup>	421·6	432·1	448·0	438·9	447·9	430·0
	20	449·9	444·0	440·5	429·6	418·4	422·2	422·0	431·2	410·1 <sup>c</sup>	419·9	430·0	442·4
	21	431·0	439·0	434·0	412·8	399·0	400·3	410·0	417·6	433·0	436·0	447·9	428·6
	22	453·6	445·6	432·9	429·8	428·1	422·3	426·7	424·9	426·3	442·5	459·2	439·2
	23	454·8	448·4	439·5	431·1	427·5	432·3	435·9	443·2	448·3	463·4	455·7	445·7
	24	448·7	446·0	442·6	432·4	423·5	421·6	425·1	432·9	439·9	444·6	422·3	445·6
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	454·1	451·9	454·0	449·0	446·2	441·6	439·7	443·5	444·3	446·3	448·8	445·0
	27	446·0	445·8	445·5	441·6	439·6	432·1	430·6	435·4	435·4	435·6	432·7	428·3
	28	437·7	439·5	433·5	429·0	424·7	425·5	429·5	433·4	427·5	426·5	431·8	411·2
	29	431·6	421·8	419·6	414·8	399·3	411·6	420·6	423·6	426·0	426·1	422·0	420·9
30	426·2	428·5	428·6	425·2	420·5	414·4	413·3	423·5	417·7	424·6	425·8	403·4	
Hourly Means	430·41	427·09	420·00	411·33	407·43	409·56	413·13	419·08	423·44	426·49	429·24	423·30	

TEMPERATURE OF THE BIFILAR MAGNET.													
SEPTEMBER.	1	70·4	70·4	70·5	71·2	71·8	72·8	73·6	74·4	75·6	76·0	76·2	76·5
	2	73·3	73·2	72·0	72·0	72·0	72·6	72·8	72·7	72·6	72·8	72·5	72·5
	3	67·8	67·5	67·5	67·3	67·4	67·1	66·5	66·4	66·3	66·5	67·0	67·6
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	67·6	67·6	68·0	68·2	68·4	68·5	68·7	69·0	69·2	69·5	69·7	70·0
	6	63·3	63·0	63·2	63·5 <sup>a</sup>	64·0	64·5	65·0	65·6	66·2	66·7	67·2	67·4
	7	65·2	65·1	65·0	65·2	65·5	66·0	66·6	67·4	67·6	67·9	68·4	68·9
	8	64·8	64·5	64·3	65·0	64·7	64·0	64·0	64·0	64·0	64·4	64·2	64·0
	9	61·0	61·0	60·8	60·8	60·7	60·7	60·8	60·8	60·8	61·0	61·0	61·0
	10	59·5	59·7	60·3	60·8	61·5	62·2	62·6	63·2	63·8	64·1	64·5	64·8
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	67·5	67·2	67·0	66·8	66·0	66·4	66·6	66·8	67·0	67·0	67·0	67·0
	13	63·7	63·8	63·8	64·0	64·3	64·6	65·1	65·5	66·0	66·5	66·7	66·8
	14	63·4	63·4	63·5	64·0	64·0	64·5	64·8	65·0	65·4	65·7	65·8	66·0
	15	63·0	62·9	63·0	63·0	63·0	63·1	63·5	64·0	64·5	65·0	65·6	66·0
	16	63·9	63·6	63·7	63·8	63·5	63·7	64·0	64·4	64·8	65·2	65·3	65·6
	17	61·2	60·8	60·8	61·0	61·2	61·6	61·8	62·4	62·7	63·2	63·5	64·3
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	58·4	58·4	58·8	59·3	59·4	59·6 <sup>b</sup>	59·8	59·8	60·1	59·8	59·5	60·1
	20	55·5	55·2	55·4	56·0	56·7	57·8	58·8	59·5	59·7 <sup>c</sup>	60·0	60·3	60·5
	21	59·0	59·0	59·3	59·0	58·7	58·6	58·5	58·5	57·5	57·0	56·7	57·2
	22	55·6	56·0	56·5	56·2	56·0	56·2	55·5	55·1	54·9	55·0	55·7	56·0
	23	51·0	50·7	51·2	51·2	51·4	52·0	52·8	53·2	53·6	54·4	54·8	55·6
	24	55·4	55·0	55·8	56·2	57·4	58·0	57·8	58·3	58·5	58·7	59·2	59·7
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	54·2	54·0	54·3	55·1	55·7	56·6	58·0	58·4	58·8	59·4	59·7	60·2
	27	56·7	56·7	57·2	57·6	58·1	58·6	59·3	60·3	61·4	62·2	63·0	63·4
	28	63·0	63·0	63·5	63·7	64·4	64·5	64·7	65·2	65·6	66·0	66·5	66·6
	29	62·6	62·5	62·5	62·7	63·0	64·0	64·6	64·8	65·2	65·5	65·8	65·7
	30	62·6	62·5	62·7	63·0	62·6	62·8	63·2	63·5	63·8	64·3	65·0	65·4
Hourly Means	61·91	61·80	61·95	62·17	62·36	62·73	63·05	63·39	63·68	63·99	64·26	64·57	

<sup>a</sup> Seven minutes late.

<sup>b</sup> Three minutes late.

<sup>c</sup> Six minutes late.

HORIZONTAL FORCE.

One Scale Division = .000074 parts of the H. F. Change in the magnetic moment of the Bar for 1° Fah. = .00026.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Daily and Monthly Means.
397.7	399.0	401.9	403.0	400.1	402.0	402.0	384.0	357.3	386.9	362.8	393.8	395.96
385.0	367.7	385.5	388.7	405.9	397.3	401.1	392.9	403.6	400.1	397.7	385.8	392.70
408.4	388.2	402.0	417.2	407.2	413.9	—	—	—	—	—	—	—
—	—	—	—	—	—	412.0	412.2	409.0	412.4	420.5	416.7	405.88
405.3	408.1	411.9	410.0	410.6	412.0	414.6	407.1	410.4	397.1	417.2	403.8	405.00
410.6	418.2	418.4	416.2	404.5	417.8	416.7	419.5	419.0	419.6	421.0	421.3	414.32
416.8	417.2	416.5	419.2	418.2	421.5	424.1	419.7	419.9	420.9	421.0	423.3	413.73
425.0	417.7	416.6	426.4	432.0	430.8	430.7	430.9	430.8	429.3	430.9	430.8	421.38
433.0	433.4	431.1	434.0	431.8	435.1	432.1	432.9	430.5	430.5	429.8	432.2	425.57
429.9	431.4	430.0	418.6	409.6	406.1	—	—	—	—	—	—	—
—	—	—	—	—	—	423.8	407.7	415.6	411.5	409.0	417.9	420.96
400.2	413.3	409.2	410.8	410.6	384.1	409.6	412.0	419.0	414.9	417.2	416.5	408.36
400.0	408.0	405.9	427.6	384.3	396.5	392.1	420.2	418.1	419.2	415.3	417.2	407.87
425.1	426.7	422.4	421.5	421.2	418.2	428.4	423.5	413.5	425.6	428.2	431.5	419.31
416.1	417.1	412.3	418.0	413.0	412.1	410.9	415.5	397.1	414.8	421.0	426.8	415.36
421.2	411.1	408.3	411.6	409.0	401.2	386.5	386.6	398.6	406.1	422.7	429.5	413.97
415.4	423.7	426.4	427.8	425.6	428.1	—	—	—	—	—	—	—
—	—	—	—	—	—	428.2	421.7	423.6	428.7	432.4	438.6	426.98
438.0	436.8	400.9	425.2	420.7	434.4	433.5	439.9	444.4	438.3	437.1	446.0	431.79
424.1	408.4	431.0	432.9	437.7	435.3	434.1	444.4	420.6	419.9	426.0	422.0	428.99
434.7	432.4	443.7	435.5	443.6	446.1	451.2	448.3	446.3	436.2	430.5	451.9	432.90
444.0	448.5	452.1	445.5	449.5	434.7	438.6	438.2	444.5	436.7	421.4	459.7	439.35
451.8	450.2	452.8	452.2	453.9	450.4	452.0	454.7	453.1	449.9	451.3	450.1	447.84
445.7	440.5	442.2	443.4	445.7	442.5	—	—	—	—	—	—	—
—	—	—	—	—	—	447.8	448.8	448.3	449.3	452.4	456.2	441.17
445.7	443.9	442.0	441.1	440.0	441.2	442.5	443.9	443.8	446.4	446.0	446.4	445.30
433.8	433.6	435.3	434.5	432.5	429.0	427.7	429.6	432.8	434.8	437.1	438.1	435.31
422.7	419.4	427.0	418.4	429.1	438.4	448.5	422.2	428.0	423.5	412.5	417.8	427.39
420.3	421.4	415.8	420.2	421.0	420.9	420.0	426.8	411.4	423.8	429.4	429.4	420.76
421.2	427.1	413.8	418.4	419.4	419.5	425.3	425.5	426.0	425.0	422.0	432.0	421.95
421.99	420.88	421.35	423.77	422.18	421.89	424.38	423.41	421.74	423.13	423.55	428.28	421.54

TEMPERATURE OF THE BIFILAR MAGNET.

76.4	76.2	75.9	75.5	75.2	75.0	74.7	74.8	74.6	74.5	74.2	73.5	74.16
72.5	72.0	72.0	71.8	71.6	71.2	70.5	69.6	69.2	68.8	68.5	68.2	71.54
67.8	68.0	68.0	67.8	67.4	67.0	—	—	—	—	—	—	—
—	—	—	—	—	—	68.4	68.2	68.2	68.2	68.2	67.8	67.50
70.8	70.0	69.5	69.0	68.5	68.0	67.4	66.4	65.7	65.0	64.5	63.7	68.04
67.5	67.4	67.3	67.0	66.5	66.4	66.3	66.0	65.8	65.5	65.5	65.5	65.68
69.2	69.0	69.0	68.5	68.0	67.6	67.3	67.2	66.6	66.2	65.6	65.2	67.01
63.8	63.4	63.1	63.0	62.7	62.4	62.2	62.0	61.4	61.1	61.0	60.7	63.28
61.2	61.5	61.6	61.5	61.4	61.3	61.0	60.6	60.5	60.2	60.0	59.7	60.87
64.7	64.5	64.5	64.4	64.0	63.6	—	—	—	—	—	—	—
—	—	—	—	—	—	68.1	68.0	67.9	67.9	67.8	67.8	64.17
67.0	66.5	66.5	66.1	66.0	65.8	65.3	64.7	64.5	64.2	64.0	63.8	66.11
66.7	66.4	66.4	66.0	65.8	65.5	65.2	65.0	64.8	64.4	64.2	64.1	65.22
66.0	66.0	65.8	65.6	65.2	65.0	64.6	64.2	63.9	63.8	63.5	63.1	64.67
66.4	66.6	66.8	67.0	66.7	66.5	66.3	65.7	65.3	64.9	64.5	64.2	64.90
65.6	65.5	65.3	64.9	64.6	64.0	63.6	63.4	62.9	62.5	62.0	61.5	64.05
64.3	64.2	64.0	63.6	63.0	62.7	—	—	—	—	—	—	—
—	—	—	—	—	—	61.3	61.0	60.0	59.5	59.0	58.7	61.91
60.2	59.8	59.5	59.0	58.8	58.8	58.0	57.8	57.4	56.8	56.5	56.0	58.82
61.0	60.5	60.5	60.2	60.2	60.3	60.4	60.5	60.4	60.4	60.0	59.3	59.13
57.1	57.4	57.4	57.2	57.0	56.8	56.7	56.5	56.3	56.1	55.5	55.6	57.44
55.8	55.5	55.5	54.7	54.0	53.8	53.5	52.5	52.5	52.4	52.0	51.2	54.67
56.0	55.8	55.7	56.0	56.1	56.1	56.2	56.2	56.2	56.0	56.0	55.5	54.32
61.0	60.8	60.5	60.0	59.5	59.0	—	—	—	—	—	—	—
—	—	—	—	—	—	57.2	56.6	56.2	56.0	55.8	54.7	57.80
60.5	61.5	61.5	61.0	60.4	60.2	59.8	59.2	59.0	58.5	58.0	57.1	58.38
63.6	64.3	64.5	64.5	64.8	64.5	64.5	64.0	64.1	64.0	63.8	63.5	61.86
66.8	67.0	66.5	66.3	65.8	65.1	64.7	64.3	63.5	63.3	63.2	62.7	64.83
65.4	65.4	65.3	65.0	65.0	65.0	64.8	64.5	64.3	64.0	63.6	63.1	64.35
65.3	65.1	64.8	64.5	64.5	64.0	64.0	63.5	63.5	63.0	62.5	62.1	63.67
64.72	64.63	64.52	64.23	63.95	63.68	63.54	63.17	62.87	62.58	62.28	61.86	63.25

<sup>d</sup> Eight minutes late.

<sup>e</sup> Sixteen minutes late.

<sup>f</sup> Twenty-three minutes late.

HORIZONTAL FORCE.													
One Scale Division = .000074 parts of the H. F.      Change in the magnetic moment of the Bar for 1° Fah. = .00026.													
Mean Göttingen Time.	0h.	1h.	2h.	3h.	4h.	5h.	6h.	7h.	8h.	9h.	10h.	11h.	
OCTOBER.	1	Sc. Div. 434.9	Sc. Div. 435.7	Sc. Div. 432.4	Sc. Div. 426.2	Sc. Div. 422.3	Sc. Div. 421.2	Sc. Div. 423.0	Sc. Div. 420.7	Sc. Div. 419.4	Sc. Div. 428.2	Sc. Div. 413.5	Sc. Div. 425.7
	2	—	—	—	—	—	—	—	—	—	—	—	—
	3	440.0	437.8	432.7	425.4	424.0	423.0	424.5	429.4	432.9	433.5	431.6	434.8
	4	449.6	448.4	438.6	421.8	422.5	423.5	429.2	434.8	438.7	441.6	437.6	438.9
	5	451.6	446.4	440.0	428.1	422.8	422.5	435.2	441.1	447.0	446.5	444.4	440.0
	6	450.5	447.7	435.8	427.9	422.5	423.2	430.0	435.0	429.0	445.2	448.8	446.3
	7	452.3	451.1	443.4	432.1	426.1	426.9	430.1	440.0	429.5	438.5	437.5	440.3
	8	435.2	435.8	428.0	418.5	410.5	411.7	410.4	394.0	417.2	422.0	405.5	427.3
	9	—	—	—	—	—	—	—	—	—	—	—	—
	10	455.6	454.3	452.0	445.7	437.7	432.4	432.7	434.8	440.6	450.7	444.6	438.1
	11	454.0	453.0	450.2	443.7	436.7	430.8	431.4	433.8	437.1	442.3	444.2	443.2
	12	443.6	441.6	439.7	437.8	429.3	423.5	423.4	423.2	430.4	436.2	437.0	438.6
	13	451.5	433.8	451.3	434.6	419.7	441.7	417.2	421.2	419.6 <sup>a</sup>	424.0	429.1	435.5
	14	446.4	446.0	438.6	427.9	409.0	417.0	418.4	426.7	432.3	434.1	437.2	441.9
	15	446.4	444.3	443.1	431.8	434.0	427.5	427.5	425.0	435.0	433.5	434.9	423.7
	16	—	—	—	—	—	—	—	—	—	—	—	—
	17	447.0	454.1	444.5	436.5	431.3	416.2	405.0	419.8	434.6	445.6	447.3	439.2
	18	454.6	452.6	441.3	430.2	430.3	431.8	438.5	441.0	462.2	448.4	446.1	450.5
	19	454.9	442.6	445.8	445.6	437.2	441.0	431.7	442.5	453.0	460.6	463.4	451.7
	20	454.2	440.0	445.7	434.8	425.5	425.4	424.9	437.6	447.9	444.3	453.2	449.0
	21	462.6	459.7	449.5	445.8	440.6	441.5	439.9	448.5	451.1	445.6	447.4	447.8
	22	450.1	451.7	440.8	428.9	428.6	430.5	433.1	438.6	443.6	442.9	456.3	453.2
	23	—	—	—	—	—	—	—	—	—	—	—	—
	24	444.8	444.1	440.1	426.6	426.2	421.6	426.2	429.8	437.5	440.4	441.0	448.1
	25	438.7	440.7	434.6	430.0	421.0	417.5	421.8	427.1	418.0	432.0	435.5	434.6
	26	456.4	450.3	453.5	445.1	436.0	432.1	429.5	435.8	441.3	432.9	432.8	437.6
	27	454.9	461.5	452.0	434.0	449.0	443.1	441.1	435.3	434.3	436.9	535.1	446.3
	28	453.4	455.3	449.8	449.0	448.9	445.1	441.1	449.6	444.0	448.8	453.4	453.7
	29	451.8	445.9	446.0	440.1	437.3	430.7	434.6	440.2	448.0	448.0	436.9	441.4
	30	—	—	—	—	—	—	—	—	—	—	—	—
	31	454.3	453.3	449.3	439.7	428.2 <sup>b</sup>	424.3	425.6	430.5	435.4	445.0	—	450.0
Hourly Means	449.59	447.22	443.03	434.15	429.12	427.91	427.92	432.15	436.91	440.30	439.77	441.44	

TEMPERATURE OF THE BIFILAR MAGNET.													
OCTOBER.	1	61.7	62.0	62.3	62.5	62.7	63.2	63.5	64.1	64.4	64.4	64.2	64.2
	2	—	—	—	—	—	—	—	—	—	—	—	—
	3	58.2	58.0	58.6	59.0	59.7	59.7	59.9	60.2	60.3	60.4	60.5	61.0
	4	56.8	57.2	57.6	58.4	58.7	59.0	59.0	59.1	59.4	59.5	59.9	60.0
	5	54.1	53.9	54.8	56.0	56.9	57.3	58.0	58.5	59.0	59.3	60.2	60.3
	6	54.1	54.2	55.2	56.3	57.5	57.5	58.4	58.8	59.5	59.5	59.6	59.5
	7	54.2	54.1	55.0	56.2	57.3	58.2	59.4	60.4	61.5	62.5	63.0	63.0
	8	61.3	61.0	61.1	60.8	61.0	61.6	61.8	62.0	62.7	63.0	63.0	63.3
	9	—	—	—	—	—	—	—	—	—	—	—	—
	10	53.2	53.0	53.5	54.0	54.5	55.5	56.0	56.5	57.4	58.2	57.8	58.0
	11	55.3	55.1	56.1	56.2	57.0	57.2	57.7	58.3	58.9	60.3	61.0	62.8
	12	58.2	57.9	58.2	58.2	58.4	58.8	59.2	59.2	59.5	60.8	61.5	61.5
	13	55.5	55.0	54.9	55.0	56.1	57.0	58.0	58.5	59.0 <sup>a</sup>	59.5	60.0	59.8
	14	55.5	55.2	55.1	55.1	55.1	55.5	55.7	56.2	56.4	56.6	57.0	57.4
	15	55.7	55.4	55.8	55.6	56.3	56.3	56.3	57.2	57.6	58.0	58.4	58.4
	16	—	—	—	—	—	—	—	—	—	—	—	—
	17	53.6	53.0	53.4	53.6	54.0	54.2	55.0	54.9	55.7	56.4	57.4	57.7
	18	52.7	52.1	51.8	51.1	51.0	50.3	50.9	49.8	49.2	49.2	49.2	49.0
	19	50.7	50.6	51.0	51.0	51.0	51.2	51.3	51.5	51.5	51.4	51.3	53.3
	20	52.8	52.2	52.2	53.1	53.6	54.0	54.4	54.6	55.0	56.3	56.8	57.0
	21	49.5	49.2	49.2	49.5	49.8	50.8	51.4	52.0	53.6	53.6	53.5	53.5
	22	54.2	54.0	54.2	53.6	54.3	53.9	53.9	53.8	54.5	55.5	56.0	56.4
	23	—	—	—	—	—	—	—	—	—	—	—	—
	24	55.1	55.2	55.2	55.0	55.5	55.5	55.5	55.6	57.0	57.6	58.0	58.2
	25	58.2	57.9	57.5	56.8	56.8	57.2	57.5	57.7	57.8	58.5	59.0	58.6
	26	51.7	51.7	52.2	52.5	53.4	54.0	55.0	55.2	55.8	56.6	57.0	56.8
	27	52.5	52.2	52.6	52.4	53.3	53.4	53.6	54.3	55.5	56.6	57.3	56.2
	28	51.7	51.3	51.3	51.5	52.1	53.0	53.6	54.5	54.5	54.4	54.5	54.3
	29	55.0	54.5	54.6	53.5	54.5	54.5	54.2	54.4	55.0	55.3	55.2	55.8
	30	—	—	—	—	—	—	—	—	—	—	—	—
	31	53.5	53.6	53.5	53.0	53.5 <sup>b</sup>	53.8	54.4	54.4	55.0	55.6	—	55.4
Hourly Means	54.81	54.60	54.88	55.00	55.54	55.87	56.29	56.60	57.14	57.65	58.05	58.13	

<sup>a</sup> Six minutes late.

<sup>b</sup> Five minutes late.



HORIZONTAL FORCE.

One Scale Division = '000074 parts of the H. F. Change in the magnetic moment of the Bar for 1° Fah. = '00026.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Daily and Monthly Means.
425.4	424.4	420.9	424.8	421.7	417.7	—	—	—	—	—	—	426.60
—	—	—	—	—	—	431.4	429.4	433.3	432.0	436.7	437.4	435.61
437.0	436.0	439.0	437.8	431.0	436.0	437.6	444.5	445.1	450.8	447.0	443.3	439.18
438.9	438.8	439.2	440.0	440.7	441.9	444.1	443.9	444.6	445.6	448.0	449.4	440.56
439.2	437.7	441.1	442.2	442.1	440.9	438.7	443.8	445.8	444.3	445.9	446.1	441.55
444.3	446.9	444.9	445.9	444.8	439.6	446.3	444.9	445.1	442.6	456.2	453.9	441.25
438.0	437.1	431.2	428.0	432.6	433.0	431.0	427.9	431.4	425.5	422.3	436.1	429.51
428.9	431.8	438.0	432.6	435.2	433.2	—	—	—	—	—	—	445.51
—	—	—	—	—	—	448.7	443.9	447.7	449.3	449.5	453.4	445.76
446.2	447.1	447.2	441.5	445.0	446.2	444.0	451.1	450.5	451.5	451.1	451.7	436.09
439.0	439.7	438.1	436.2	436.0	435.0	436.7	439.1	435.5	438.5	439.1	441.0	434.04
440.0	438.0	438.0	435.7	435.4	431.1	438.3	433.9	439.5	437.0	444.4	450.5	437.14
438.4	444.3	438.3	433.3	433.1	408.2	425.9	440.0	445.2	440.5	444.0	446.5	434.03
440.8	443.2	442.5	440.7	440.2	440.6	445.0	440.5	441.7	443.9	447.9	448.9	436.89
430.6	431.7	431.5	414.5	403.2	425.6	—	—	—	—	—	—	446.68
—	—	—	—	—	—	443.8	448.0	449.4	445.2	451.7	434.8	449.95
441.4	433.8	429.3	431.0	443.9	443.0	441.2	437.1	441.3	446.9	428.5	446.9	445.64
446.9	459.6	437.0	448.3	443.9	443.1	444.2	451.0	452.9	454.4	457.1	454.4	451.35
459.0	443.0	446.9	452.4	453.0	448.2	460.9	450.4	456.0	452.2	454.3	452.4	446.11
443.3	442.6	444.0	448.1	456.5	451.5	450.5	452.1	455.5	449.0	457.7	452.1	438.07
451.6	457.2	457.9	455.7	455.0	454.0	454.0	453.8	453.6	454.0	454.2	451.4	437.18
446.6	451.0	452.0	478.0	448.0	455.0	—	—	—	—	—	—	440.70
—	—	—	—	—	—	441.6	444.3	449.0	447.0	451.8	444.1	443.62
444.0	444.5	443.0	444.3	437.4	436.1	440.1	438.8	439.7	437.7	439.4	442.2	448.30
437.0	436.8	435.6	435.1	461.2	444.1	444.8	446.3	450.5	448.8	446.7	453.9	441.67
427.0	433.0	431.8	442.8	441.0	439.1	445.5	449.4	445.4	447.1	451.4	440.0	445.33
443.9	419.2	442.0	433.0	440.0	446.4	445.0	447.9	450.9	450.4	452.0	452.7	440.19
454.4	452.4	434.1	434.2	456.2	447.4	448.8	446.1	446.5	446.0	449.2	451.7	—
434.3	438.9	418.5	440.4	436.7	426.5	—	—	—	—	—	—	—
—	—	—	—	—	—	445.0	448.0	448.5	449.6	456.0	456.9	—
451.4	450.8	449.4	446.0	445.7	448.1	447.5	450.3	452.5	452.9	457.2	455.1	—
441.06	440.75	438.90	440.10	440.75	438.90	443.10	444.09	446.04	445.49	447.67	448.34	440.19

TEMPERATURE OF THE BIFILAR MAGNET.

64.3	64.4	64.2	64.0	63.8	63.8	—	—	—	—	—	—	62.40
—	—	—	—	—	—	59.6	59.4	59.0	58.7	58.6	58.5	59.06
60.7	60.5	59.7	59.4	58.8	58.3	58.0	57.5	57.5	57.4	57.2	57.0	57.98
59.8	59.3	58.8	58.5	58.0	57.5	57.0	56.6	56.2	55.6	55.2	54.5	57.61
60.9	60.5	60.0	59.5	58.8	58.2	57.6	56.8	56.2	55.8	55.5	54.5	57.49
59.8	60.0	59.6	59.1	57.6	57.0	57.0	56.6	56.5	56.0	55.6	54.8	60.27
62.4	62.2	61.8	61.5	61.5	61.5	61.5	61.8	62.0	62.0	62.0	61.5	—
63.1	62.9	62.4	61.6	61.1	60.9	—	—	—	—	—	—	60.11
—	—	—	—	—	—	55.5	55.5	55.0	54.5	54.0	53.5	56.16
57.7	57.7	57.4	57.1	56.8	56.8	56.5	56.5	56.1	56.0	56.0	55.7	59.47
62.5	62.5	62.3	61.8	61.5	61.0	61.0	60.6	60.2	59.8	59.5	58.8	59.21
61.0	61.0	60.5	60.5	60.5	60.2	59.6	58.7	57.9	57.1	56.5	56.2	57.54
59.4	59.2	58.8	58.5	58.3	57.8	57.4	57.2	57.0	56.8	56.5	55.9	56.42
57.3	57.5	57.5	57.5	57.3	57.0	56.7	56.5	56.5	56.5	56.5	56.4	—
58.0	57.5	56.8	56.5	56.0	56.4	—	—	—	—	—	—	56.02
—	—	—	—	—	—	54.0	53.8	53.8	53.6	53.6	53.6	55.36
57.5	57.0	56.7	56.3	56.0	56.0	56.0	55.6	55.5	55.2	54.4	53.5	50.98
49.5	51.0	51.3	51.8	52.2	52.2	52.2	51.6	51.5	51.5	51.4	51.0	52.61
53.8	54.5	54.5	54.4	54.0	53.8	53.6	53.8	53.8	53.8	53.5	53.3	53.42
56.3	55.5	55.0	54.1	53.4	52.8	51.8	51.0	50.6	50.0	50.0	49.5	52.52
53.3	53.0	53.5	53.6	53.5	53.6	53.8	54.0	54.0	54.2	54.3	54.2	—
56.5	56.6	56.5	56.5	56.5	56.5	—	—	—	—	—	—	54.92
—	—	—	—	—	—	54.0	53.8	53.8	53.8	54.2	55.0	57.45
58.0	58.4	58.6	58.8	59.0	59.3	59.3	59.1	59.0	58.8	58.6	58.5	56.60
57.8	57.4	57.0	56.8	56.5	56.2	55.6	55.0	54.0	53.5	53.0	52.1	54.51
56.5	56.2	56.0	55.6	55.3	55.0	54.5	54.0	53.5	53.3	53.3	53.1	54.33
56.3	56.0	55.5	55.1	54.6	54.5	54.0	54.0	53.8	53.6	53.2	53.5	54.36
55.0	55.5	55.5	55.6	55.6	55.8	55.8	56.0	56.0	55.9	55.8	55.4	—
56.0	56.0	56.2	56.4	56.3	56.4	—	—	—	—	—	—	54.68
—	—	—	—	—	—	52.6	52.7	53.0	53.2	53.5	53.5	—
55.2	55.5	55.8	55.6	55.1	54.6	54.0	53.0	52.5	52.5	52.2	52.0	54.07
58.02	58.00	57.77	57.54	57.23	57.04	56.10	55.81	55.57	55.35	55.16	54.83	56.37

\* Sixteen minutes late.

HORIZONTAL FORCE.													
One Scale Division = .000074 parts of the H. F.      Change in the magnetic moment of the Bar for 1° Fah°. = .00026.													
Mean Göttingen Time.	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .	
NOVEMBER.	1	Sc. Div. 457.3	Sc. Div. 460.7	Sc. Div. 457.6	Sc. Div. 450.3	Sc. Div. 443.5	Sc. Div. 439.6	Sc. Div. 438.5	Sc. Div. 440.6	Sc. Div. 448.1	Sc. Div. 450.9	Sc. Div. 454.3	Sc. Div. 456.2
	2	462.5	460.2	456.5	444.9	441.4	441.3	444.4	450.5	457.3	454.8	437.8	442.5
	3	457.7	459.8	471.9	466.2	449.8	449.7	445.4	446.1	444.6	442.6	446.5	440.5
	4	467.4	467.7	462.8	455.6	449.0	445.1	443.8	446.5	450.0	454.5	458.0	458.2
	5	467.2	465.9	461.4	457.0	449.1	445.5	448.0	450.5	459.2	460.4	462.6	462.2
	6	—	—	—	—	—	—	—	—	—	—	—	—
	7	465.2 <sup>a</sup>	464.0	458.0	446.2	439.2	435.0	438.1	447.8	451.8	452.9	456.9	459.1
	8	463.7	459.6	452.9	446.4	442.9	442.3	447.7	453.9	458.4	460.0	464.4	466.1
	9	468.2	466.7	459.5	452.8	447.4	446.9	450.8	455.5	461.0	460.0	456.9	455.5
	10	450.4	431.3	456.6	441.8	406.1	436.3	425.6	442.0	450.2	445.5	456.5	447.6
	11	461.5	448.2	446.1	437.5	431.0	427.0	437.7	445.8	452.0	449.6	451.1 <sup>b</sup>	440.0
	12	455.2	453.4	447.7	444.9	435.4	435.6	439.4	438.9	442.9	446.3	448.9	455.4
	13	—	—	—	—	—	—	—	—	—	—	—	—
	14	466.2	466.7	463.0	451.7	448.5	448.8	449.9	454.3	459.7	461.1	461.9	462.0
	15	464.1	462.7	459.0	456.0	453.7	453.9	453.2	457.0	462.3	467.1	467.4	471.0
	16	466.2	472.9	458.6	458.2	456.0	450.4	444.5	451.0	448.5	458.4	465.0	467.0
	17	463.0	461.1	456.0	449.0	444.0	445.0	448.2	455.2	457.2	459.8	463.4	466.2
	18	464.2	463.5	456.5	452.2	454.4	454.6	461.8	469.4	476.1	484.4	487.5	486.1
	19	493.8	492.7	486.9	481.3	479.2	478.9	482.7	490.0	493.0	496.4	498.5	494.5
	20	—	—	—	—	—	—	—	—	—	—	—	—
	21	495.5	500.6	486.7	493.7	490.6	485.0	486.2	484.7	482.9	474.4	468.0	451.7
	22	478.4	481.2	556.1	454.0	458.9	466.4	470.5	468.4	475.5	481.2	478.3	478.9
	23	474.3	473.8	468.8	466.7	454.7	451.5	448.7	447.9	458.8	464.2	468.1	465.7
	24	474.6	471.6	461.1	462.9	453.0	434.5	450.9	461.8	462.3	464.4	462.6	461.9
	25	474.3	473.2	473.8	467.6	461.6	460.1	462.8	463.3	473.5	479.0	479.4	481.6
	26	484.3	485.2	483.3	481.5	482.1	479.6	478.3	477.0	479.2	481.4	483.0	483.5
	27	—	—	—	—	—	—	—	—	—	—	—	—
	28	500.6	501.0	504.1	502.0	501.8	498.7	501.0	500.2	499.1	499.0	500.0	500.3
	29	491.5	481.0	503.3	497.0	495.6	491.2	488.4	487.8	493.3	495.3	498.9	497.7
	30	497.6	491.8	489.3	489.8	486.2	482.4	484.9	488.4	489.7	487.4	484.0	481.1
Hourly Means <sup>c</sup>	471.73	469.86	466.83	461.82	455.97	454.82	456.59	460.56	464.87	466.58	467.69	466.63	
TEMPERATURE OF THE BIFILAR MAGNET.													
NOVEMBER.	1	51.5	51.0	51.0	51.5	51.8	52.4	53.0	53.3	53.8	54.4	55.0	56.0
	2	53.5	53.2	53.0	52.8	52.6	52.6	52.6	52.9	52.7	52.7	52.8	52.8
	3	50.4	51.0	51.0	49.8	49.9	50.3	50.9	51.5	52.0	52.5	53.1	52.5
	4	47.2	46.7	47.0	48.0	49.0	50.0	51.3	52.0	52.7	53.4	53.5	53.6
	5	47.6	47.0	46.5	47.5	48.7	49.8	50.7	51.8	52.6	53.2	52.6	52.3
	6	—	—	—	—	—	—	—	—	—	—	—	—
	7	51.0 <sup>a</sup>	51.7	51.8	52.0	52.0	52.0	52.1	52.3	52.6	52.6	52.6	52.9
	8	51.7	51.8	51.5	51.3	51.0	51.3	51.7	51.0	50.4	50.8	51.4	51.5
	9	52.0	51.6	51.4	51.3	51.5	50.8	51.3	50.8	51.5	51.4	51.3	51.0
	10	49.2	49.0	49.0	49.0	49.0	49.0	48.8	49.2	49.0	49.3	49.4	49.7
	11	50.6	50.5	50.5	51.3	51.6	52.3	52.5	52.4	52.8	53.4	53.6 <sup>b</sup>	53.5
	12	53.0	52.4	52.2	51.8	51.6	51.4	51.6	52.0	52.5	52.8	52.9	52.5
	13	—	—	—	—	—	—	—	—	—	—	—	—
	14	49.2	49.0	48.8	48.8	49.2	49.4	50.0	50.0	50.5	51.0	51.4	51.3
	15	48.7	48.1	48.0	48.0	48.0	48.0	48.0	48.2	48.3	48.3	48.0	48.0
	16	48.0	47.5	47.0	47.0	47.0	47.3	47.7	48.0	48.0	48.3	48.7	48.8
	17	49.2	48.9	49.0	48.9	48.8	48.7	49.0	49.2	49.4	49.8	50.0	49.8
	18	47.0	45.0	45.0	43.6	42.5	42.2	42.0	41.5	41.6	41.3	40.9	40.2
	19	38.5	38.4	38.6	39.3	39.9	40.5	41.4	41.0	42.0	41.5	41.0	41.9
	20	—	—	—	—	—	—	—	—	—	—	—	—
	21	36.0	37.0	37.4	37.0	38.1	39.5	40.4	41.3	41.3	41.6	41.7	41.6
	22	41.4	41.0	40.6	40.5	40.6	40.8	41.4	41.8	42.5	43.5	44.2	44.4
	23	45.2	45.0	45.2	45.3	45.6	46.4	47.4	47.6	48.2	48.6	48.8	48.6
	24	47.0	47.5	47.5	46.8	47.0	47.3	47.8	48.3	48.9	49.4	49.8	49.5
	25	45.4	45.0	43.5	43.0	42.5	42.3	41.9	42.0	41.6	42.1	42.2	43.5
	26	42.5	42.0	41.3	41.4	41.5	41.8	42.2	43.0	43.4	43.5	43.6	43.8
	27	—	—	—	—	—	—	—	—	—	—	—	—
	28	36.0	35.5	35.6	35.6	36.3	36.7	37.5	37.4	38.8	39.4	39.6	39.2
	29	39.4	39.0	39.0	37.6	39.0	39.8	40.4	40.6	41.0	41.5	42.3	42.4
	30	39.4	39.4	39.0	37.8	37.6	38.2	38.5	39.0	40.0	40.3	40.5	40.3
Hourly Means <sup>c</sup>	46.56	46.32	46.17	46.03	46.24	46.57	47.00	47.23	47.62	47.95	48.11	48.14	

<sup>a</sup> Eight minutes late.

<sup>b</sup> Four minutes late.

<sup>c</sup> The observation at 21<sup>d</sup> 20<sup>h</sup> is omitted in the hourly mean on account of excessive disturbance.



HORIZONTAL FORCE.

One Scale Division = .000074 parts of the H. F. Change in the magnetic moment of the Bar for 1° Fah°. = .00026.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Daily and Monthly Means.
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
454.3	453.7	447.9	448.8	451.1	447.0	444.9	442.2	443.5	441.5	450.0	446.0	448.69
441.0	445.0	447.1	445.0	446.7	448.7	443.7	448.6	459.5	454.4	452.9	457.1	449.32
446.3	452.0	455.0	456.3	455.7	456.8	459.5	459.2	458.6	461.2	464.7	463.8	454.58
458.7	458.6	457.9	456.5	458.4	458.4	460.0	454.0	455.0	461.7	463.9	463.2	456.87
462.4	460.9	460.8	459.0	460.0	458.9	—	—	—	—	—	—	460.35
—	—	—	—	—	—	464.4	465.5	466.2	467.0	467.2	467.2	467.2
460.0	460.2	458.4	457.0	454.9	454.4	459.3	457.5	459.2	461.0	462.4	463.8	455.10
466.2	465.7	473.0	468.5	467.0	464.5	463.7	463.8	466.4	469.1	466.2	465.7	460.75
453.0	442.7	441.0	446.8	416.3	443.3	457.0	465.1	455.0	463.2	453.4	472.0	453.75
440.9	441.1	438.0	446.4	445.3	454.0	448.1	433.5	434.4	436.0	445.0	457.0	442.07
448.4	449.0	450.4	450.0	447.8	444.5	445.8	446.4	448.5	448.5	452.2	453.3	446.35
453.9	442.5	450.6	454.0	445.0	453.8	—	—	—	—	—	—	—
—	—	—	—	—	—	455.2	459.2	452.5	460.6	467.2	465.7	450.17
462.0	463.0	462.0	463.1	464.0	463.5	463.7	462.8	462.0	462.3	464.9	464.4	460.48
471.9	472.0	470.0	469.3	468.0	468.8	470.0	466.0	466.8	462.0	462.9	464.8	464.16
467.8	465.4	466.8	465.0	463.5	460.8	462.9	462.1	458.2	458.0	462.1	462.0	460.47
467.0	467.4	465.7	465.0	463.3	462.2	462.0	461.7	462.0	462.0	463.1	463.0	459.69
488.1	487.2	488.2	489.1	492.7	494.0	489.5	490.5	490.8	494.2	495.0	495.2	479.38
487.2	477.0	478.0	471.5	475.2	464.5	—	—	—	—	—	—	—
—	—	—	—	—	—	476.5	493.0	493.2	487.8	488.5	493.9	485.59
450.7	457.2	449.5	437.9	417.8	411.4	402.9	402.8	358.4	469.6	457.7	474.4	457.93
476.7	475.3	477.0	474.9	463.3	483.7	463.6	470.6	464.0	472.8	468.1	456.5	470.60
461.7	456.7	458.4	461.0	463.9	465.1	466.0	464.5	465.0	466.0	466.5	466.3	462.68
460.3	461.1	460.0	461.5	476.5	469.0	462.7	466.1	469.0	470.8	471.7	473.8	463.50
480.1	477.7	476.0	469.0	474.4	468.0	469.5	471.0	470.6	473.4	472.0	480.0	472.16
483.3	480.0	475.3	475.2	473.1	476.3	—	—	—	—	—	—	—
—	—	—	—	—	—	497.1	498.7	499.3	499.4	501.4	500.1	484.90
498.8	496.1	495.1	492.9	486.2	479.5	487.5	485.7	490.9	492.6	494.0	495.2	495.93
496.0	493.4	492.8	495.1	492.0	497.9	495.1	496.9	499.0	500.7	500.0	500.0	495.00
489.0	489.5	481.4	480.0	486.0	484.7	483.0	485.3	483.1	483.9	490.5	487.0	486.50
466.37	465.02	464.47	463.80	461.85	462.83	463.60	464.33	466.91	468.45	469.37	471.20	464.50

TEMPERATURE OF THE BIFILAR MAGNET.

55.5	55.6	55.2	55.4	55.1	55.2	54.9	54.7	54.5	54.3	54.0	53.5	53.86
52.8	52.6	52.5	52.0	51.6	51.5	51.5	51.4	51.2	51.3	51.0	50.6	52.26
52.5	52.5	52.5	51.5	50.4	50.2	49.6	49.1	48.6	48.3	48.0	47.8	50.66
53.6	53.2	52.5	51.4	50.3	50.2	50.3	49.8	49.5	48.6	48.3	48.0	50.42
52.9	52.3	52.5	51.8	51.8	51.6	—	—	—	—	—	—	—
—	—	—	—	—	—	50.4	50.5	50.6	51.0	51.2	51.4	50.76
53.0	53.0	52.7	52.5	52.4	52.4	52.1	51.9	51.9	51.7	51.7	51.8	52.20
51.6	51.9	51.8	51.6	51.5	51.5	51.6	51.6	51.8	51.8	52.0	52.0	51.50
51.0	51.0	51.0	50.8	50.6	50.6	50.6	50.2	50.0	49.6	49.5	49.5	50.85
49.6	49.6	49.8	50.0	50.5	50.3	50.1	50.0	50.2	50.5	50.8	50.6	49.65
53.5	53.5	53.4	53.0	53.2	53.2	54.4	53.8	53.5	53.5	53.5	53.2	52.78
52.5	52.9	53.0	52.9	52.8	52.8	—	—	—	—	—	—	—
—	—	—	—	—	—	49.0	49.0	48.8	48.8	48.8	49.0	51.54
51.0	50.8	50.5	49.9	49.9	49.9	50.0	50.0	49.4	49.2	49.2	49.0	49.89
49.0	49.0	49.0	49.1	48.8	48.4	48.0	47.7	48.0	48.1	48.0	48.2	48.29
49.0	49.2	49.2	49.1	49.5	49.6	49.6	49.4	49.2	49.0	48.8	48.9	48.49
50.4	50.7	51.0	51.0	50.8	50.6	50.5	50.0	50.0	49.4	48.6	47.3	49.62
39.8	39.5	38.5	38.0	38.0	38.0	38.0	38.0	38.0	38.0	38.2	38.6	40.56
42.5	42.5	42.6	43.0	43.0	42.8	—	—	—	—	—	—	—
—	—	—	—	—	—	36.2	36.4	36.4	37.0	37.2	36.6	40.01
41.5	41.5	41.5	41.6	41.8	41.6	41.6	41.2	41.3	41.6	41.8	42.0	40.50
44.3	44.4	44.4	44.6	44.7	44.7	45.0	44.8	45.0	45.2	45.0	45.0	43.32
48.6	48.4	48.4	48.1	47.6	47.5	47.0	46.9	46.5	46.4	46.4	47.0	47.11
49.0	48.2	46.5	46.2	46.0	46.0	46.2	46.5	45.8	45.8	45.6	45.5	47.25
44.5	44.9	45.0	44.6	44.8	45.2	46.2	46.1	45.4	44.8	44.0	43.1	43.90
44.2	44.8	45.2	45.2	45.2	45.4	—	—	—	—	—	—	—
—	—	—	—	—	—	35.7	35.8	36.1	36.3	36.4	36.4	41.53
39.6	40.2	40.2	40.2	40.8	40.6	40.5	40.5	40.2	40.0	39.2	39.2	38.70
42.4	42.0	41.5	40.6	39.7	39.0	38.4	38.3	38.6	38.8	39.0	39.0	39.97
40.4	40.4	40.5	40.7	42.1	43.0	43.2	43.2	42.8	42.4	42.4	42.6	40.57
48.26	48.25	48.11	47.88	47.80	47.76	46.94	46.80	46.88	46.59	46.48	46.38	47.16

HORIZONTAL FORCE.													
One Scale Division = '000074 parts of the H. F. Change in the magnetic moment of the Bar for 1° Fah. = '00026.													
Mean Göttingen Time.	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .	
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
DECEMBER.	1	494·9	488·7	490·8	487·7	476·8	473·4	476·4	479·6	482·5	486·2	487·0	487·2
	2	490·3	488·0	485·4	481·5	476·2	475·5	475·9	479·5	484·4	489·0	486·0	488·7
	3	484·2	482·6	477·8	473·1	467·4	465·8	466·0	468·6	470·3	476·2	476·1	477·5
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	487·9	486·0	484·0	483·7	477·0	475·0	476·2	477·3	479·7	488·6	486·8	486·1
	6	488·5	487·8	491·0	493·6	492·4	488·0	481·8	480·4	479·4	479·8	483·4	490·0
	7	496·2	495·6	491·9	486·4	484·7	474·6	479·8	477·6	474·5	471·7	464·9	471·5
	8	481·5	483·3	478·4	474·4	473·0	462·3	465·0	468·5	462·3	473·4	482·0	481·9
	9	486·0	479·6	482·8	479·7	460·0	449·9	436·5	431·3	436·4	439·6	450·6	438·7
	10	474·6	478·3	479·4	472·9	473·9	466·6	465·4	469·4	472·0	477·9	484·3	486·2
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	494·7	495·4	492·4	488·5	483·8	477·1	473·5	476·3	480·5	483·6	486·7	485·5
	13	486·0	488·3	488·7	489·8	484·0	479·8	487·7	484·3	482·6	480·9	478·7	479·0
	14	488·9	489·0	488·4	487·0	482·9	476·8	477·0	476·7	481·7	483·0	485·0	484·2
	15	—	483·2	485·4	482·0	472·0	468·5	468·9	468·6	478·0	475·0	481·7	481·3
	16	486·9	487·5	488·0	487·0	482·3	476·7	478·0	473·7	473·9	476·3	482·6	485·0
	17	493·7	495·8	496·5	496·0	491·0	486·0	486·8	488·5	490·5	491·0	494·2	497·5
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	496·0	499·6	499·5	498·2	485·6	476·5	476·2	477·1	484·9	486·5	488·3	483·0
	20	492·5	494·3	492·0	491·0	483·2	477·9	475·7	476·4	481·5	485·0	488·0	489·1
	21	493·6	494·8	493·0	488·2	480·0	473·9	473·0	477·3	479·8	484·7	482·5	482·0
	22	477·1	480·6	482·1	481·0	475·2	469·2	474·4	481·6	490·5	494·0	501·1	506·5
	23	500·9	501·5	501·4	496·5	493·1	490·4	488·2	493·8	495·9	494·9	508·0	505·2
	24	502·0	503·6	500·3	490·0	479·6	476·7	480·4	491·6	497·4	503·9	507·7	508·0
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	495·9	496·2 <sup>b</sup>	496·5	490·5	479·9	477·1	474·1	475·0	482·7	493·0	495·3	495·4
	27	494·2	492·5	492·5	488·1	481·5	472·6	466·9	464·3	480·5	488·8	492·1	487·1
	28	490·3	490·2	492·9	490·7	481·3	478·2	480·4	481·3	476·0	493·1	493·4	494·9
	29	489·8	488·5	489·1	485·2	476·4	463·5	460·7	465·0	473·3	478·5	481·2	482·0
	30	476·9	472·5	477·6	481·8	476·3	452·1	463·8	469·5	474·0	483·6	490·0	485·6
	31	—	497·8	500·0	498·9	492·0	481·0	479·9	484·7	491·4	494·3	494·1	491·3
	32	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means	489·74	489·67	489·55	486·79	480·06	473·52	473·65	475·48	479·13	483·43	486·36	486·31	
TEMPERATURE OF THE BIFILAR MAGNET.													
DECEMBER.	1	43·0	43·0	42·4	42·6	43·0	43·4	43·2	43·3	44·2	43·6	43·5	43·4
	2	43·5	43·2	43·6	43·5	44·0	44·0	44·6	44·8	45·0	45·0	44·9	44·8
	3	45·0	45·7	45·7	46·1	46·6	47·5	47·8	48·2	48·5	49·2	49·6	49·2
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	43·5	43·6	43·9	43·6	44·0	44·6	45·2	45·2	45·6	46·3	46·5	45·8
	6	39·0	38·9	38·0	37·8	39·0	39·6	40·5	41·3	41·6	42·1	42·4	42·5
	7	40·5	39·9	39·5	39·0	39·3	40·4	41·6	42·6	43·0	43·2	43·6	44·0
	8	43·0	43·0	42·6	42·2	43·0	43·2	43·4	43·4	43·6	43·8	43·8	44·0
	9	46·0	45·6	46·4	46·0	46·1	46·7	47·4	47·3	47·2	47·6	47·4	46·9
	10	42·6	42·2	41·6	41·3	41·2	41·4	41·8	42·0	42·3	42·8	42·5	42·2
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	39·9	39·6	40·3	39·4	39·8	40·8	42·2	43·3	44·2	44·9	45·0	44·6
	13	43·0	42·5	41·6	41·5	41·4	41·8	42·1	42·0	42·0	42·2	42·4	42·5
	14	40·7	40·5	40·6	40·4	40·6	41·0	42·0	42·2	43·0	44·6	45·2	45·4
	15	—	42·7	42·6	42·1	43·2	43·6	43·6	44·2	44·5	44·6	44·8	44·0
	16	41·6	40·6	39·5	39·8	39·8	40·8	41·6	42·0	42·3	43·0	43·3	42·6
	17	39·6	39·1	38·9	37·5	37·1	37·7	38·8	39·8	40·0	40·6	41·0	41·3
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	37·6	37·6	38·0	38·3	38·8	40·0	41·0	41·8	42·8	43·0	43·2	43·5
	20	40·6	40·2	40·0	40·2	40·9	41·9	43·3	43·8	44·3	44·5	44·6	44·2
	21	41·0	40·0	41·0	40·7	41·8	42·6	44·4	45·4	45·6	46·0	46·0	46·6
	22	47·2	46·2	44·6	43·5	42·6	41·4	40·6	40·3	40·4	39·6	39·2	38·6
	23	34·1	33·9	33·5	33·1	32·8	33·4	33·9	34·0	34·9	35·0	35·1	35·4
	24	35·6	35·1	34·9	34·3	34·6	35·0	34·9	35·0	35·6	35·5	35·7	35·6
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	40·0	40·0 <sup>b</sup>	40·0	39·8	39·5	40·8	40·8	41·3	40·7	41·2	41·5	41·5
	27	41·5	41·5	41·5	41·5	41·7	42·4	43·2	43·6	43·6	43·6	43·8	43·7
	28	40·1	40·0	40·0	39·2	39·0	39·4	40·0	40·0	40·3	40·5	40·2	40·4
	29	41·2	41·2	41·3	41·4	41·6	41·8	43·0	43·0	43·6	44·4	44·8	44·9
	30	46·0	45·9	45·7	45·1	44·8	45·1	45·3	44·4	43·5	43·5	43·3	43·0
	31	—	38·1	38·0	38·5	38·5	38·3	38·8	39·5	40·5	41·4	41·2	40·5
	32	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means	41·43	41·10	40·95	40·68	40·91	41·43	42·04	42·36	42·69	43·03	43·13	43·00	

<sup>b</sup> Eight minutes late.

HORIZONTAL FORCE.

One Scale Division = .000074 parts of the H. F. Change in the magnetic moment of the Bar for 1° Fah. = .00026.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Daily and Monthly Means.
488.0	492.1	490.0	488.4	486.3	483.5	484.3	484.2	488.3	488.1	492.0	492.2	486.19
487.9	486.3	485.9	484.2	483.1	481.0	480.4	481.0	482.3	482.6	484.3	484.2	483.48
477.1	476.4	475.0	474.5	—	475.0	—	—	—	—	—	—	476.76
—	—	—	—	—	—	481.1	479.0	484.8	483.0	486.0	488.0	—
483.7	481.4	485.8	484.6	482.4	479.6	482.6	474.5	469.7	485.5	489.5	492.8	482.52
487.5	487.8	485.0	481.5	481.0	487.0	481.0	481.7	492.2	489.8	490.2	491.2	486.33
466.0	468.0	475.6	478.3	475.4	480.8	480.6	481.1	483.7	474.6	483.8	484.3	479.23
481.1	479.0	477.5	485.3	478.7	476.1	476.0	478.8	477.6	477.5	480.1	483.8	479.56
457.6	457.6	461.4	461.2	463.8	467.3	468.4	463.0	467.7	469.5	471.0	473.0	460.52
488.0	486.7	481.0	480.6	488.8	485.0	—	—	—	—	—	—	—
—	—	—	—	—	—	491.5	492.0	492.4	492.7	494.0	494.5	482.00
484.6	483.3	482.0	483.0	484.0	483.0	482.0	483.1	482.0	482.7	482.9	485.0	483.98
476.0	477.0	471.0	459.5	476.1	483.4	477.8	481.8	490.6	485.6	487.0	486.0	481.73
480.8	481.5	480.1	478.4	475.9	475.1	478.6	475.9	479.0	479.4	480.3	—	481.11
479.5	482.7	477.4	476.1	479.4	481.0	483.0	485.0	486.0	486.7	487.5	486.2	479.79
484.0	485.0	486.0	486.0	487.0	487.0	487.0	486.7	489.1	490.8	490.8	492.3	484.57
497.5	498.2	499.0	497.6	496.5	489.0	—	—	—	—	—	—	—
—	—	—	—	—	—	493.4	494.9	494.4	496.2	495.0	495.0	493.92
483.0	481.4	480.0	479.3	481.4 <sup>a</sup>	485.2	485.7	484.1	485.0	485.1	479.0	491.8	485.52
486.9	486.5	485.1	481.0	485.1	485.9	485.0	485.0	487.0	489.4	489.0	492.2	486.03
480.8	479.2	478.0	476.5	473.5	471.3	470.7	468.4	467.9	472.2	474.6	474.5	478.77
503.9	496.2	489.2	493.2	467.5	486.2	489.7	491.8	492.1	495.0	496.1	500.1	488.10
504.0	503.5	501.7	500.3	500.1	500.5	500.0	500.7	501.0	502.0	502.0	502.0	499.48
506.4	506.8	505.1	506.1	503.0	502.6	—	—	—	—	—	—	—
—	—	—	—	—	—	495.8	495.6	500.9	498.1	498.5	497.5	498.23
494.4	492.0	491.1	492.0 <sup>b</sup>	492.6	492.4	491.4	491.3	490.2	489.5	488.3	493.0	489.57
489.0	485.0	479.1	474.3	480.6	483.2	479.0	483.0	485.7	485.0	489.0	490.0	483.50
493.2	492.8	490.1	490.0	490.3	488.0	490.9	489.0	489.1	489.7	491.1	490.0	488.62
474.4	480.0	479.0 <sup>c</sup>	480.5	478.7	476.0	480.8	480.4	472.4	472.4	476.5	479.2	477.65
487.6	483.3	485.5	484.6	486.6	486.3	495.8	489.1	488.6	490.7	491.7	—	481.46
494.7	495.3	493.0	492.0	491.4	488.0	—	—	—	—	—	—	—
—	—	—	—	—	—	500.7	506.1	513.7	493.1	511.6	518.0	495.78
485.84	485.37	484.06	483.30	483.43	483.68	484.93	484.71	486.42	486.18	488.21	490.27	484.14

TEMPERATURE OF THE BIFILAR MAGNET.

43.2	43.0	43.0	43.4	43.5	43.5	43.5	43.3	43.5	43.6	43.7	44.1	43.33
44.4	44.4	44.0	44.0	44.5	44.7	45.3	45.5	45.5	45.6	45.6	45.7	44.59
48.7	48.5	48.1	47.9	—	46.5	—	—	—	—	—	—	—
—	—	—	—	—	—	43.0	43.0	43.2	43.0	43.4	43.3	46.42
45.0	44.5	44.0	43.3	42.7	43.3	42.0	41.4	41.0	40.5	40.4	39.9	43.57
42.0	41.5	41.2	40.5	40.5	40.5	40.5	40.5	40.4	40.4	40.6	40.0	40.47
44.0	44.0	44.0	44.0	43.7	43.5	43.4	43.4	43.5	43.5	43.2	43.1	42.50
44.0	44.5	44.8	44.6	44.8	45.1	45.0	45.0	45.1	45.1	45.2	46.0	44.09
46.8	46.5	46.0	45.0	44.5	44.3	43.8	43.0	42.8	42.8	42.8	43.0	45.50
42.3	42.4	42.0	41.6	41.5	41.3	—	—	—	—	—	—	—
—	—	—	—	—	—	38.0	38.1	38.5	39.0	39.5	39.6	41.15
44.5	44.5	44.2	44.0	44.1	44.5	44.5	44.8	44.2	43.8	43.5	43.7	43.10
42.5	42.5	42.2	42.0	41.8	41.6	41.2	40.6	40.5	40.6	40.8	41.0	41.76
45.2	44.8	44.4	44.8	44.8	44.7	44.6	44.5	44.0	44.0	44.0	—	43.30
43.5	43.4	43.2	43.0	42.3	41.9	41.4	41.2	41.0	41.2	41.5	41.6	42.83
42.2	42.0	41.6	41.0	40.6	40.6	41.6	41.0	40.6	40.5	40.4	40.0	41.21
42.0	42.2	42.6	43.0	43.2	43.5	—	—	—	—	—	—	—
—	—	—	—	—	—	36.2	36.2	36.6	37.4	38.2	37.5	39.58
43.5	43.6	43.6	43.2	42.5 <sup>a</sup>	42.2	42.5	41.7	41.3	41.0	41.3	41.2	41.38
43.8	43.6	43.5	43.5	43.0	43.0	42.6	42.5	42.3	41.7	41.4	41.0	42.52
47.5	47.9	48.0	48.0	48.2	48.2	48.2	48.4	48.5	48.5	48.3	47.6	45.77
38.5	38.3	37.2	36.5	36.5	36.5	37.0	37.0	36.8	36.4	35.6	34.8	39.39
35.5	35.5	35.6	35.6	35.4	35.8	36.2	36.0	36.0	36.1	36.0	36.0	34.95
35.8	36.2	35.6	35.8	36.0	35.8	—	—	—	—	—	—	—
—	—	—	—	—	—	37.5	37.7	38.1	38.5	39.0	39.8	36.15
41.3	41.0	41.0	40.2 <sup>b</sup>	40.2	40.2	40.4	40.6	40.7	41.3	41.5	41.5	40.71
43.6	43.8	43.5	43.3	42.8	42.6	42.6	42.4	42.1	42.0	41.6	41.0	42.62
40.6	40.4	40.0	40.0	40.2	40.2	40.4	40.5	40.8	40.6	40.6	41.0	40.18
44.9	44.9	44.8 <sup>c</sup>	44.6	44.9	45.0	45.1	45.3	45.3	45.8	46.0	46.0	43.95
43.0	42.6	42.5	41.6	41.1	40.5	40.1	39.4	38.8	39.0	39.0	—	42.75
40.6	40.8	40.7	40.5	40.4	40.0	—	—	—	—	—	—	—
—	—	—	—	—	—	30.7	30.5	30.5	30.8	31.1	31.7	37.46
42.92	42.86	42.64	42.40	42.07	42.20	41.38	41.24	41.17	41.21	41.27	41.20	41.89

<sup>a</sup> Six minutes late.

<sup>c</sup> Four minutes late.

VERTICAL FORCE.

One Scale Division = .000093 parts of the V. F. Change of the magnetic moment of the Bar for 1° Fah. = .00011.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
JANUARY.	1	99·2	107·5	110·9	113·7	115·8	114·2	111·0	109·8	109·1	—	—	111·7	
	2	—	—	—	—	—	—	—	—	—	116·6	116·3	116·4	
	3	119·4	122·5	120·1	120·6	118·9	116·9	117·8	118·6	118·6	116·8	117·7	115·7	118·6
	4	114·8	114·4	117·0	116·6	111·1	110·8	110·8	110·5	113·8	112·1	111·2	111·2	112·9
	5	111·3	114·0	111·6	111·6	110·3	109·5	113·4	112·2	114·0	113·8	112·9	112·9	112·3
	6	114·2	114·6	114·1	113·0	111·9	112·0	111·3	111·2	106·6	105·6	104·6	102·3	110·1
	7	104·8	104·7	104·6	105·2	104·4	104·4	106·1	105·4	106·7	107·0	107·8	109·2	105·9
	8	110·3	111·6	108·9	108·9	107·4	106·6	107·0	106·0	104·9	—	—	—	—
	9	—	—	—	—	—	—	—	—	—	106·1	107·8	109·1	107·9
	10	108·3	110·8	109·6 <sup>a</sup>	108·6	108·0	104·6	104·5	105·9	104·7	106·5	106·6	108·1	107·2
	11	108·1	109·6	107·8	106·8	104·7	103·9	106·0	109·3	106·4	101·5	105·6	103·8	106·1
	12	103·8	105·3	103·6	103·3	103·6	104·0	104·3	105·7	106·5	108·7	108·7	108·7	105·5
	13	111·2	114·3	112·2	112·7	112·7	111·6	112·0	112·2	112·2	111·7	111·3	112·6	112·2
	14	110·1	109·6	107·7	106·2	104·7	103·1	103·3	104·1	105·0	104·3	104·8	105·3	105·7
	15	105·3	107·4	107·2	106·8	106·4	104·5	108·5	110·1	114·5	—	—	—	—
	16	—	—	—	—	—	—	—	—	—	108·9	108·0	106·8	107·9
	17	107·9	108·0	106·7	105·5	103·6	101·9	100·8	101·3	101·3	102·0	102·3	102·4	103·6
	18	101·8	104·4	101·0	102·6	102·5	102·0	104·5	104·1	102·9	102·9	103·3	102·6	102·9
	19	102·9	103·4	101·9 <sup>a</sup>	99·3	99·4	99·4	96·1	94·2	93·7	93·6	94·9	95·6	97·9
	20	95·5	95·8	95·6	96·1	97·8	97·4	98·0	98·0	97·8	97·4	97·5	96·7	97·0
	21	97·3	97·5	98·9	100·8	101·2	102·7	105·0	105·8	106·2	107·2	110·4	108·0	103·4
	22	109·5	112·0	111·6	114·1	112·7	111·6	113·4	115·0	114·6	—	—	—	—
	23	—	—	—	—	—	—	—	—	—	120·3	119·9	121·0	114·6
	24	121·0	123·3	121·1	120·0	117·3	117·3	119·9	116·7	114·7	104·8	114·7	114·5	117·1
	25	112·9	113·9	112·4	110·8	108·5	106·4	105·1	104·7	104·7	105·2	105·6	105·7	108·0
	26	106·7	105·8	104·8	104·3 <sup>a</sup>	104·1	103·3	103·3	103·3	104·5	106·6	107·1	105·3	104·9
	27	106·4	108·0	106·2	106·5	106·3	106·7	109·2	109·5	107·4	108·2	108·4	108·3	107·6
	28	108·4	109·9	107·5	105·7	103·7	102·5	102·6	102·0	101·8	101·3	98·4	100·6	103·7
	29	100·1	99·8	96·4	95·3	95·4	94·8	94·8	95·2	97·2	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	102·8	102·0	101·6	97·9
	31	100·6	101·0	100·2	101·6	101·6	101·2	100·9	102·0	102·6	102·6	104·3	103·6	101·8
Hourly Means	107·38	108·81	107·68	107·56	106·69	105·90	106·52	106·65	106·63	106·71	107·39	107·23		
FEBRUARY.	1	103·0	104·5 <sup>b</sup>	101·7	104·4	105·0	102·2	101·4	105·1	104·6	103·2	103·1	103·3	103·5
	2	104·4	102·7	101·8	104·0 <sup>a</sup>	102·9	100·9	100·4	99·9	99·6	99·5	98·8	97·7	101·1
	3	97·9	97·9	97·2	95·0	95·4	94·6	93·6	93·2	92·7	92·8	93·6	93·8	94·8
	4	94·5	96·4	95·8	95·8	96·9	96·8	98·2	97·9	98·7	97·3	98·3	98·2	97·1
	5	98·7	100·2	99·3	98·9	99·7	99·1	99·1	99·0	100·3	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	104·1	94·9	100·6	99·5
	7	100·0	101·2	98·8 <sup>a</sup>	99·6	101·5	103·4	104·2	104·7	102·9	102·7	102·1	102·1	101·9
	8	103·9	106·9	106·2	108·9	112·0	112·1	115·0	115·4	112·9	114·2	118·0	116·0	111·8
	9	116·9	119·5	117·9	117·9	116·6	113·2	112·7	112·4	111·5	110·5	109·8	109·7	114·0
	10	109·6	111·1	106·4	104·3	102·0	100·8	100·1	100·0	101·9	102·3	103·1	102·4	103·7
	11	104·1	105·7	102·7	103·2	103·0	103·5	110·0	110·2	102·4	97·5	96·4	91·1	102·5
	12	98·1	103·0	100·9	100·7	99·5 <sup>a</sup>	99·5	99·5	100·6	102·1	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	100·5	101·3	101·5	100·6
	14	102·9	104·3	103·4	104·9	106·5	109·8	109·3	111·1	112·4	113·0	114·9	114·3	108·9
	15	114·3	114·0	112·0	111·3	110·1	109·2	109·6	109·9	109·7	109·7	109·7	108·9	110·7
	16	109·8	109·6	107·9	105·7	104·3	104·2	106·7	119·9	121·2	121·2	120·9	119·0	112·5
	17	117·1	111·3	113·5	118·5	117·1	115·5	115·8	117·1	119·0	118·7	117·7	117·7	116·6
	18	111·5	113·7	111·4 <sup>a</sup>	112·5 <sup>a</sup>	113·6	116·5	114·9	110·4	109·6	105·8	105·5	101·0	110·5
	19	106·1	105·3	105·3	108·5	112·7	109·2	109·8	110·8	110·8	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	116·9	114·8	116·2	110·5
	21	116·5	117·8	114·0	112·9	111·6	109·8	110·7	110·8	110·4	109·9	109·9	109·9	112·0
	22	109·7	110·4	105·9	104·1	103·7	103·7	104·7	106·0	106·1	108·1	108·7	109·4	106·7
	23	110·2	111·9	111·0	108·9	108·4	106·4	105·9	105·9	103·8	106·2	106·2	105·4	107·5
	24	97·4	103·6	101·0	101·8	113·8	124·3 <sup>c</sup>	125·2	150·2	116·0	112·9	108·3	109·5	113·7
	25	108·5	110·3	109·1 <sup>a</sup>	109·1	108·9	109·2	109·3	107·5	108·3	107·7	106·5	106·7	108·4
	26	106·9	106·0	105·9	104·9	104·5	104·1	103·4	103·9	103·8	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	102·3	102·3	101·6	104·1
	28	102·7	105·2	103·6 <sup>a</sup>	101·9	100·4	100·8	101·2	103·9	103·1	100·5	102·4	101·7	102·3
Hourly Means <sup>d</sup>	106·40	107·34	105·73	105·91	105·93	105·41	105·89	106·76	106·43	106·29	106·04	105·57		

<sup>a</sup> The time of vibration of the magnet was observed between these and the following observations; initial arcs of vibration 5° 50'; the magnet not touched.  
<sup>b</sup> Eleven minutes late. <sup>c</sup> Seven minutes late. <sup>d</sup> The observations of the 24th February are omitted in the hourly means on account of unusual disturbance.

VERTICAL FORCE.														
Temperature of the Vertical Force Magnet.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
JANUARY.	1	38.2	36.9	37.4	38.4	39.7	40.0	40.4	40.9	41.0	—	—	37.5	
	2	—	—	—	—	—	—	—	—	—	33.2	32.2	31.4	
	3	30.5	29.6	29.7	30.4	32.6	34.0	34.2	34.0	33.7	33.4	34.0	34.8	
	4	35.5	35.8	36.2	37.5	38.6	38.8	38.7	38.7	38.2	38.0	37.7	37.2	37.6
	5	37.3	36.5	36.8	37.9	39.1	39.8	39.4	38.7	37.2	36.7	36.5	36.2	37.7
	6	36.2	35.8	36.0	37.0	38.0	38.5	39.0	39.5	40.0	41.2	42.0	43.6	38.9
	7	42.4	42.3	42.4	42.6	42.9	43.4	43.0	42.7	42.2	41.4	39.7	39.4	42.0
	8	39.2	38.2	39.1	39.8	40.6	41.2	40.6	41.4	41.9	—	—	—	—
	9	—	—	—	—	—	—	—	—	—	40.0	40.0	39.7	40.1
	10	39.5	38.7	38.4	39.0	40.0	41.7	42.1	41.4	40.8	40.2	39.5	39.5	40.1
	11	40.0	39.5	39.8	40.2	41.6	43.1	43.4	43.0	42.9	42.6	42.7	42.7	41.8
	12	43.0	42.2	42.4	42.8	43.2	43.4	42.6	42.0	41.2	40.0	39.7	38.8	41.8
	13	36.9	36.1	37.0	37.0	37.8	38.2	38.2	37.8	37.4	37.3	37.5	38.0	37.4
	14	39.0	38.9	39.1	40.8	41.8	43.4	43.2	42.6	42.6	42.6	42.0	41.4	41.4
	15	41.3	40.8	39.8	40.2	40.9	42.0	41.4	41.4	40.9	—	—	—	—
	16	—	—	—	—	—	—	—	—	—	39.6	40.0	40.0	40.7
	17	40.4	40.3	40.2	41.2	43.4	44.7	45.2	45.2	44.4	44.2	43.6	43.2	43.0
	18	43.4	42.4	42.9	43.8	45.3	46.0	46.2	45.6	45.2	45.0	44.7	44.4	44.6
	19	44.2	43.8	44.0	46.1	47.2	48.2	49.8	50.5	50.6	50.4	50.0	49.3	47.8
	20	49.3	49.3	48.4	48.7	48.5	48.4	48.1	48.0	48.0	48.2	47.9	47.6	48.4
	21	47.9	46.6	45.6	45.6	45.2	44.9	44.0	43.0	42.4	41.0	39.6	39.4	43.8
	22	39.1	38.0	37.2	37.7	38.4	38.8	37.7	37.1	36.3	—	—	—	—
	23	—	—	—	—	—	—	—	—	—	31.5	31.2	31.0	36.2
	24	30.8	30.3	30.2	31.4	33.4	35.2	35.7	35.7	36.1	36.2	36.9	37.0	34.1
	25	37.8	37.5	37.9	39.2	40.6	42.6	43.4	43.6	43.3	43.2	43.0	42.9	41.2
	26	42.6	42.4	42.4	43.4	43.9	44.7	44.4	44.4	43.6	42.8	41.4	41.3	43.1
	27	41.4	40.5	40.6	40.7	41.5	42.0	41.4	41.2	40.7	40.4	40.4	40.2	40.9
	28	39.7	39.4	39.6	41.4	43.0	44.0	44.0	44.8	45.2	45.4	45.4	45.5	43.1
	29	45.5	46.0	47.4	48.4	50.0	50.2	50.2	50.2	49.8	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	44.4	44.3	44.7	47.6
	31	45.4	45.4	45.0	45.6	46.0	46.2	45.6	44.9	44.4	43.6	42.8	42.0	44.7
Hourly Means	40.25	39.74	39.83	40.65	41.66	42.44	42.38	42.24	41.92	40.87	40.57	40.43		
FEBRUARY.	1	42.1	41.4	41.8	42.2	42.6	44.4	44.0	43.4	42.6	42.8	42.4	42.8	
	2	42.6	42.5	42.6	43.2	44.7	45.6	45.8	46.4	46.6	47.0	47.6	45.1	
	3	47.6	47.6	47.8	49.2	50.0	51.2	51.4	51.5	51.6	51.4	51.2	50.7	50.1
	4	50.3	49.5	49.0	49.0	49.3	49.7	49.0	48.6	48.4	48.4	48.0	47.4	48.9
	5	47.2	46.0	46.2	46.3	46.6	47.2	47.2	47.2	46.6	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	44.0	44.1	44.1	46.1
	7	44.2	43.5	43.4	44.8	45.4	46.0	45.8	44.6	44.2	43.8	43.4	43.4	44.4
	8	43.0	41.2	40.4	38.8	39.4	39.2	37.7	36.4	35.3	34.4	33.8	33.5	37.8
	9	33.5	32.7	32.4	33.3	34.8	36.5	37.0	37.2	38.2	39.0	39.3	39.5	36.1
	10	39.2	38.9	39.9	41.4	43.4	45.2	46.2	46.3	45.7	44.8	44.2	43.5	43.2
	11	43.1	42.4	42.4	43.0	44.0	44.8	45.4	45.5	46.0	46.2	46.4	46.4	44.6
	12	46.8	45.0	45.2	45.4	45.5	46.7	47.2	46.4	46.1	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	44.4	44.4	44.3	45.6
	14	44.0	42.7	42.0	41.2	41.0	40.8	40.0	38.0	36.8	36.0	36.4	36.2	39.6
	15	36.2	35.7	35.8	36.8	37.0	38.4	39.2	39.0	39.4	39.4	39.6	39.6	38.0
	16	39.5	39.5	40.0	40.8	41.7	42.2	40.6	39.4	38.7	36.2	34.4	33.0	38.8
	17	31.8	30.7	30.2	31.4	32.2	33.9	34.7	34.2	34.2	34.0	33.4	33.4	32.8
	18	33.8	33.9	34.6	37.4	38.4	39.2	39.4	40.4	40.6	41.4	41.4	42.0	38.5
	19	41.8	40.8	40.2	40.2	40.3	40.4	40.4	39.8	39.3	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	33.6	33.4	33.0	38.6
	21	33.7	33.2	34.7	36.3	38.2	39.3	39.1	39.1	39.4	39.7	39.7	39.5	37.7
	22	39.3	39.3	40.4	42.2	42.5	43.2	42.6	42.2	41.4	40.1	39.6	39.2	41.0
	23	38.6	38.0	37.7	39.2	40.0	40.8	41.4	41.3	41.8	41.4	40.4	40.6	40.1
	24	40.4	40.3	42.4	44.0	45.1	45.4	45.8	45.0	45.6	44.0	43.2	42.0	43.6
	25	41.5	40.7	40.0	40.2	39.5	39.8	39.9	41.1	40.8	40.4	40.4	40.7	40.4
	26	41.5	42.5	42.2	42.8	43.7	44.4	44.4	44.2	44.2	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	44.4	44.4	44.2	43.6
	28	44.0	43.1	43.0	43.9	45.0	45.6	45.5	45.2	44.5	44.6	44.6	44.8	44.5
Hourly Means <sup>a</sup>	41.10	40.47	40.52	41.26	41.97	42.80	42.80	42.52	42.30	41.60	41.40	41.26		

<sup>a</sup> The observations of the 24th February are omitted in the hourly means.

VERTICAL FORCE.

One Scale Division = .000093 parts of the V. F. Change of the magnetic moment of the Bar for 1° Fab. = .00011.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
MARCH.	1	101.4	101.3	100.2	99.3	97.5	99.8	101.8	99.7	99.4	94.5	97.4	97.6	99.2
	2	97.3	97.2	96.0	95.6	96.6	95.1	95.0	94.1	95.0	95.2	95.0	95.1	95.6
	3	95.4	96.5	95.8	93.6	93.0	91.2	89.9	89.9	91.2	91.6	87.7	89.7	92.1
	4	92.3	92.4	90.5	88.5	89.8	92.7	93.9	94.8	96.3	97.0	91.6	95.4	92.9
	5	97.1	98.7	98.7	98.5	99.2	102.3	99.5	101.9	92.4	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	102.6	103.6	105.0	100.0
	7	105.1	107.0	105.4	106.5	105.8	101.9	101.1	101.1	103.4	103.0	103.5	103.0	103.9
	8	103.4	103.8	101.5	98.4	99.4 <sup>a</sup>	98.7	99.7	101.3	100.1	100.1	100.3	98.2	100.4
	9	99.0	100.0	97.6	97.6	97.6	97.2	96.6	95.8	94.0	93.5	94.2	94.3	96.4
	10	95.9	97.2	96.8	95.4	94.3	93.7	93.7	95.4	96.3	98.0	98.2	98.0	96.1
	11	98.5	100.9	99.9	98.7	99.6	101.4	102.7	104.3	105.5	—	101.9	107.1	101.9
	12	107.6	107.2	104.3	103.0	102.1	100.9	101.0	103.0	104.3	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	102.0	104.7	104.4	103.7
	14	105.5	105.8	102.7	101.0	99.7	98.0	97.6	98.1	99.6	100.9	101.2	101.4	101.0
	15	100.8	101.1	99.1 <sup>a</sup>	97.1	96.4	98.8	100.2	97.6	97.4	99.1	100.0	102.1	99.1
	16	101.3	101.7	97.9	96.3	97.8	105.2	104.5	102.5	94.3	91.9	94.7	94.3	98.5
	17	95.8	98.0	96.1	92.8	91.1	91.4	89.9	89.9	93.0	93.6	93.6	93.6	93.2
	18	95.7	96.8	94.7	91.8	91.3	89.9	90.5	91.6	92.5	93.4	94.7	93.4	93.0
	19	90.9	89.2	88.6	89.4	91.3	91.4	92.5	92.9	89.6	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	97.8	99.0	100.0	92.7
	21	99.4	102.0	100.1	99.5	99.8	101.1	101.1	101.1	101.7	101.2	100.7	100.6	100.7
	22	101.2	102.2	99.3	100.3	98.7	98.0	99.6	99.4	99.3	99.4	99.4	98.7	99.6
	23	93.6	97.5	95.3	93.9	93.5	94.7	97.0	99.4	94.5	93.7	91.3	84.6	94.1
	24	89.5	92.7	91.8	92.4	93.3	94.7	97.0	94.6	94.3	—	—	—	—
	25 <sup>b</sup>	—	—	—	—	—	—	—	—	—	100.5	100.2	100.2	95.1
	26	100.9	102.0	100.4	98.0	96.3	94.1	91.9	92.4	93.5	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	86.6	94.7	97.6	95.7
	28	97.6	99.8	98.8 <sup>a</sup>	98.8 <sup>a</sup>	98.6	97.6	94.4	95.1	96.3	97.2	97.7	98.0	97.5
	29	97.4	98.1	96.1	97.1	100.1	97.9	96.8	96.5	92.3	89.4	92.0	91.4	95.4
	30	90.1	90.5	89.6	89.7	88.7	88.0	87.4	87.2	86.3	87.7	87.6	89.7	88.5
	31	91.5	94.7	94.6	96.1	97.4	97.1	97.4	97.6	97.9	99.0	99.3	98.0	96.7
Hourly Means	97.85	99.01	97.38	96.51	96.50	96.65	96.64	96.82	96.17	96.36	97.08	97.36		
APRIL.	1	98.7	98.7	95.8	95.0	95.2	95.1	96.3	97.0	93.7	94.6	93.1	95.1	95.7
	2	95.3	94.7	91.7	89.2	87.3	87.2	87.5	86.4	85.2	—	—	—	89.6
	3	—	—	—	—	—	—	—	—	—	88.2	91.2	91.7	—
	4	94.2 <sup>c</sup>	95.5	93.7	93.5	94.4	95.2	98.0	98.1	97.2	96.2	93.1	94.5	95.3
	5	94.5	94.5	92.4	89.4	89.0	90.5	88.9	87.7	88.5	81.3	88.4	90.6	89.6
	6	92.3	92.5	88.6 <sup>a</sup>	85.5	86.1	86.6	87.3	86.7	87.1	87.7	88.2	88.2	88.1
	7	89.8	90.4	88.9	87.5	90.5	90.1	89.5	89.3	89.6	89.2	87.5	88.6	89.2
	8	89.8	90.9	88.9	86.9	89.5	90.4	92.2	93.4	91.1	90.1	91.0	92.6	90.6
	9	94.8	92.1	88.2	86.7	86.5	86.0	85.6	85.9	87.0	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	93.1	84.9	70.8	86.8
	11	82.2	88.9	88.6 <sup>a</sup>	86.2	86.2	83.3	88.3	85.4	86.0	79.6	84.3	84.3	85.3
	12	84.1	79.1	84.7	85.1 <sup>d</sup>	93.7	95.1	101.9	100.6	93.5	88.4	68.0	42.0	84.7
	13	66.9	78.6	91.5	94.1	103.9	101.9	103.5	93.8	92.1	92.1	92.4	92.8	92.0
	14	91.3	91.1	87.8	86.0	87.6	87.3	87.5	88.2	91.2	38.3	56.3	66.9	80.0
	15	73.8	92.8	90.6	90.6	100.4	99.8	97.8	80.7	52.2	39.5	57.6	92.7	80.7
	16	95.5	93.9	91.1	89.6	90.5	90.8	88.9	88.9	90.2	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	92.7	93.1	93.6	91.6
	18	92.9	93.8	94.2	96.1	95.9	95.7	95.5	95.3	95.9	90.3	89.3	91.2	93.8
	19	88.3	90.0	92.6	91.3 <sup>a</sup>	90.7	90.6	91.6	91.1	89.9	89.2	91.5	91.5	90.7
	20	92.1	90.5	87.8	86.9	86.9	85.4	83.5	83.0	66.1	81.8	72.0	82.2	83.2
	21	80.3	80.6	78.9	81.6	79.7	78.1	76.3	77.0	76.8	78.0	78.1	79.6	78.7
	22	80.8	77.8	73.5	69.7	68.5	66.8	65.8	66.6	69.1	66.6	73.5	77.4	71.3
	23	81.6	81.1	78.7	78.7	80.1	78.9	77.7	78.4	80.2	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	86.4	87.1	88.8	81.5
	25	87.9	85.8	82.8	82.8 <sup>e</sup>	82.8	80.8	80.8	81.3	82.6	84.0	85.0	86.0	83.5
	26	86.2	86.2	86.1 <sup>a</sup>	85.8	83.9	81.5	81.4	81.5	81.9	81.4	82.6	82.6	83.4
	27	84.5	83.3	82.1	82.1	84.7	86.4	87.2	87.8	87.8	87.8	89.4	90.1	86.1
	28	91.3	90.4	89.9	89.3	90.5	88.6	87.1	86.9	87.7	88.7	90.6	92.1	89.4
	29	92.6	89.7	86.4	84.6	85.9	86.9	84.2	83.3	84.1	85.3	86.7	88.5	86.5
	30	89.3	86.7	83.9 <sup>a</sup>	81.4	80.7	80.8	78.8	80.4	81.9	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	83.7	85.2	85.3	83.2
Hourly Means	88.12	88.83	87.67	86.75	88.12	87.68	87.81	86.72	84.95	82.85	83.85	85.37		

<sup>a</sup> The time of vibration of the magnet was observed between these and the following observations; initial arcs from 5° 50' to 6° 00'; magnet not touched.  
<sup>b</sup> Good Friday. <sup>c</sup> Thirty-five minutes late. <sup>d</sup> Four minutes late. <sup>e</sup> Two minutes late.



VERTICAL FORCE.  
Temperature of the Vertical Force Magnet.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
MARCH.	1	45.1	44.5	44.7	45.2	46.2	46.7	46.9	46.9	47.0	47.2	47.4	47.4	46.0
	2	47.6	47.2	47.4	48.2	49.4	50.0	50.4	50.4	49.7	49.5	49.4	49.2	49.0
	3	49.5	48.6	48.6	49.6	51.3	52.6	53.8	53.8	53.4	52.8	52.7	52.2	51.6
	4	51.8	51.3	51.6	52.6	53.0	52.0	51.2	51.0	50.2	48.6	47.8	47.6	50.7
	5	47.4	46.2	45.5	46.4	46.9	47.4	47.8	47.3	47.4	—	—	—	45.7
	6	—	—	—	—	—	—	—	—	—	42.0	42.0	42.1	—
	7	42.0	41.5	41.2	41.9	43.2	45.2	46.2	45.4	45.0	44.6	43.4	43.0	43.5
	8	42.8	43.0	43.8	45.2	46.0	47.0	47.2	47.0	46.2	46.0	45.8	46.2	45.5
	9	46.6	46.2	46.7	47.7	48.2	48.8	49.0	49.4	49.4	50.0	50.2	49.9	48.5
	10	49.6	48.4	47.4	48.4	49.3	50.4	50.8	49.8	49.0	48.0	47.2	46.4	48.7
	11	46.6	45.4	45.2	45.6	45.4	45.0	44.0	43.0	42.2	—	40.8	40.0	43.9
	12	40.2	40.3	41.4	42.2	43.3	44.4	44.6	43.7	43.0	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	42.6	42.0	41.2	42.4
	14	41.6	41.4	42.0	43.8	45.4	47.0	47.0	46.6	45.8	45.2	44.8	44.4	44.6
	15	44.7	44.6	45.3	46.6	47.4	48.6	48.9	48.0	48.0	47.2	46.0	45.0	46.7
	16	44.6	44.0	44.5	46.0	47.0	48.9	50.0	50.2	50.0	49.8	49.8	49.6	47.9
	17	49.2	49.2	49.3	50.7	52.4	52.8	54.8	53.6	52.4	51.8	50.2	49.2	51.3
	18	48.6	48.2	48.8	50.4	51.2	52.7	52.6	52.0	51.6	50.7	50.2	50.0	50.6
	19	50.0	49.4	50.2	51.6	53.2	55.6	56.1	56.1	55.4	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	48.4	47.6	47.0	51.7
	21	46.8	45.7	45.8	46.0	46.1	46.2	45.7	45.5	45.6	45.6	45.4	45.3	45.8
	22	45.2	44.4	44.5	45.4	46.5	47.4	47.2	47.2	47.4	47.4	47.4	47.0	46.4
	23	46.6	46.5	47.4	48.9	49.8	50.5	51.1	52.0	51.3	51.3	51.2	51.0	49.8
	24	51.0	51.2	51.2	51.9	52.2	52.0	51.2	50.4	49.8	—	—	—	—
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	45.0	45.4	45.4	49.7
	26	44.9	44.6	45.0	46.0	47.6	49.5	51.2	51.4	50.8	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	47.2	46.5	45.6	47.5
	28	44.9	44.9	45.2	46.0	47.0	48.4	49.6	49.2	48.6	47.8	47.0	46.6	47.1
	29	46.6	46.4	46.5	47.0	47.2	47.9	48.6	49.0	49.2	49.5	50.2	51.0	48.3
	30	51.9	51.1	51.2	52.2	53.4	55.0	55.9	55.7	55.2	54.5	53.0	51.4	53.4
	31	51.0	49.3	48.3	48.0	47.6	48.2	48.6	47.6	47.2	46.6	45.5	44.8	47.7
Hourly Means	46.80	46.29	46.49	47.44	48.32	49.24	49.63	49.32	48.88	47.97	47.27	46.87	—	
APRIL.	1	43.9	44.4	46.0	47.2	48.2	49.8	49.2	48.6	48.2	48.0	48.2	48.4	47.5
	2	49.0	49.1	50.4	52.6	54.4	56.2	57.0	56.2	56.8	—	—	—	—
	3	—	—	—	—	—	—	—	—	—	51.2	50.7	50.4	52.8
	4	50.1 <sup>b</sup>	49.3	48.8	49.6	49.8	49.8	49.1	48.8	48.4	48.4	48.8	49.2	49.2
	5	49.5	49.4	50.0	51.2	52.8	54.0	55.0	55.0	54.6	54.0	53.0	51.4	52.5
	6	51.0	51.4	53.0	54.8	55.4	56.0	56.0	55.8	55.1	54.5	53.8	53.2	54.2
	7	53.2	52.5	52.4	53.0	53.4	53.6	54.0	53.6	53.0	53.0	52.4	52.2	53.0
	8	52.5	52.0	51.6	52.4	52.5	53.0	52.4	52.1	51.7	51.2	51.0	50.4	51.9
	9	49.8	51.2	53.0	53.9	54.4	56.0	56.6	56.2	55.1	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	52.6	53.2	53.0	53.7
	11	52.2	53.1	54.4	55.8	57.0	58.2	59.5	59.1	58.8	58.2	57.2	56.4	56.7
	12	55.4	54.6	54.7	55.2	55.4	55.6	55.4	54.6	54.0	52.9	52.0	52.0	54.3
	13	52.2	50.6	50.2	50.4	50.6	50.6	50.9	52.0	52.0	51.8	51.4	51.2	51.2
	14	51.0	51.5	53.0	54.0	55.0	55.5	56.0	55.2	54.7	57.0	55.4	54.2	54.4
	15	52.5	51.5	52.0	53.5	54.3	54.0	54.0	53.7	54.4	54.4	53.7	53.0	53.4
	16	50.8	51.6	52.8	53.2	54.0	55.4	56.2	55.4	54.2	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	51.0	50.8	50.3	53.0
	18	50.0	49.8	49.2	49.4	49.2	50.2	50.2	50.2	50.0	50.1	50.3	50.2	49.9
	19	50.5	50.3	51.0	52.2	53.0	53.4	53.7	53.2	53.4	53.0	52.7	52.2	52.4
	20	51.6	51.2	53.0	55.4	56.2	57.2	58.7	59.3	59.0	58.2	58.0	57.2	56.2
	21	56.1	58.0	58.7	59.7	61.5	64.0	63.2	62.3	62.8	61.7	61.0	60.5	60.8
	22	59.5	61.0	63.7	66.3	67.5	68.8	69.3	68.5	67.0	65.3	64.2	61.0	65.2
	23	59.1	58.8	59.7	60.0	59.7	60.7	61.3	60.5	60.0	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	55.2	54.7	54.2	58.7
	25	54.2	55.2	56.4	57.7	58.2	59.4	59.1	58.2	58.0	57.0	55.7	55.4	57.0
	26	55.3	54.8	54.6	55.5	56.9	58.0	58.3	58.0	58.0	57.2	57.0	56.8	56.7
	27	55.9	56.2	56.0	56.2	56.1	56.0	55.0	54.2	54.0	53.4	52.5	52.0	54.8
	28	51.5	51.2	51.2	51.7	52.2	53.4	54.6	54.6	53.8	53.0	52.0	51.0	52.5
	29	50.5	51.2	53.6	54.9	55.4	56.6	57.5	57.4	56.8	55.8	54.2	53.2	54.8
	30	52.8	54.0	55.6	57.5	58.5	59.0	60.0	59.3	59.0	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	56.2	55.2	54.0	56.8
Hourly Means	52.31	52.46	53.27	54.36	55.06	55.94	56.24	55.85	55.49	54.40	53.81	53.19	—	

<sup>a</sup> Good Friday.

<sup>b</sup> Thirty-five minutes late.

VERTICAL FORCE.														
One Scale Division = '000094 parts of the V. F.      Change of the magnetic moment of the Bar for 1° Fah. = '00011.														
Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
MAY.	2	85·7	82·8	83·0	82·2	83·2	83·6	80·8	80·9	81·8	83·0	84·8	85·9	83·1
	3	86·4 <sup>a</sup>	84·5	82·7 <sup>a</sup>	78·7	79·8	79·8	78·7	79·3	82·0	83·6	84·2	84·2	82·0
	4	89·4	86·4	84·7	83·8	84·7	84·2	82·6	83·4	83·9	85·4	86·2	84·6	84·9
	5	88·2	86·7	84·2	83·4	82·8	80·9	79·1	80·2	80·5	81·8	82·9	82·9	82·8
	6	84·4	82·7	80·5	79·9	81·9	79·8	79·3	79·3	80·5	80·9	80·4	81·2	80·9
	7	79·5	80·7	81·1	83·6	85·2	88·9	87·0	84·6	82·6	—	—	—	84·9
	8	—	—	—	—	—	—	—	—	—	88·7	86·4	91·1	84·9
	9	91·3	91·1	91·1	89·4	88·5	85·9	91·0	89·4	88·4	87·1	82·5	87·2	88·6
	10	89·6	89·2	87·7	85·7	83·5	83·5	82·2	79·4	75·3	75·2	76·5	78·6	82·2
	11	80·1	79·4	78·9	79·8	81·1 <sup>b</sup>	82·7	83·6	84·6	85·2	85·1	86·0	87·4	82·8
	12	86·8	85·4	84·6	83·3	80·3	79·5	79·1	79·5	80·3	81·0	82·1	83·4	82·1
	13	84·5	84·7	83·6	83·1	83·4	82·8	82·7	83·2	84·7	84·8	86·0	86·3	84·1
	14	89·0	87·5	86·9	83·5	84·7	86·4	84·5	86·3	85·9	—	—	—	84·1
	15	—	—	—	—	—	—	—	—	—	86·2	86·2	85·1	86·0
	16	62·7	62·2	77·8	81·1	82·9	80·7	79·4	81·1	88·1	72·7	76·8	71·6	76·4
	17	74·9	81·3	83·5	85·7	83·0	83·0	84·7	83·2	79·1	77·2	78·9	79·2	81·1
	18	77·6	78·5	79·0	78·3	78·9	74·6	75·3	73·7	72·1	73·5	74·3	73·4	75·8
	19	75·2	75·3	75·3	78·3	81·0	80·7	80·7	80·1	79·8	81·8	82·3	84·0	79·5
	20	85·1	83·0	81·9 <sup>b</sup>	84·2	85·6	85·2	85·2	82·2	83·8	84·8	86·7	88·3	84·7
	21	88·7	87·0	86·2	86·2	84·1	83·2	83·2	82·3	82·3	—	—	—	84·7
	22	—	—	—	—	—	—	—	—	—	84·6	84·4	84·5	84·7
	23	85·1	83·9	82·3	81·1	81·0	80·7	80·2	80·1	79·9	80·6	80·6	82·7	81·5
	24	82·1	82·6	80·2	79·6	81·3	81·2	79·4	79·8	80·4	79·4	82·3	83·8	81·0
	25	84·7	82·9	80·9	80·4	80·4	79·1	78·8	79·4	78·9	78·9	79·8	80·6	80·4
	26	83·6	83·2	81·8	81·3	81·9	81·0	82·1	79·9	78·5	77·9	79·4	79·9	80·9
	27	81·3 <sup>a</sup>	81·8	80·8	79·4	80·7	79·8	80·6	79·2	77·4	78·0	75·4	79·0	79·4
	28	79·9	78·6	75·1	74·9	74·4	75·0	74·9	74·4	74·5	—	—	—	77·4
	29	—	—	—	—	—	—	—	—	—	82·0 <sup>a</sup>	82·6	82·6	77·4
	30	83·7	83·4	81·9	80·7	81·5	80·9	80·1	79·2	79·5	80·2	82·0	83·1	81·3
	31	83·1	81·2	80·4	78·2	78·4	77·5	76·2	75·4	75·3	76·7	78·1 <sup>c</sup>	79·7	78·3
	Hourly Means	83·18	82·54	82·16	81·76	82·08	81·56	81·21	80·77	80·80	81·20	81·84	82·70	
JUNE.	1	81·6	78·2	75·8	76·3	77·2	77·8	76·1	75·5	74·7	74·3	73·9	79·9	76·8
	2	81·7	77·2	74·4 <sup>b</sup>	73·2	73·1	74·0	73·8	73·1	72·9	71·3	73·6	74·0	74·4
	3	74·3	72·2	69·3	70·3	73·3	74·3	75·1	73·9	73·9	73·7	73·6	73·6	73·1
	4	75·9	75·3	71·3	70·8	80·5	76·1	92·9	93·9	50·3	—	—	—	75·5
	5	—	—	—	—	—	—	—	—	—	73·4	70·6	75·5	75·5
	6	76·8	77·6	76·4	76·4	77·7	80·0	78·6	77·6	76·7	75·1	79·7	80·5	77·8
	7	84·3	82·6	80·2	78·3	78·9	80·2	80·7	80·1	79·4	75·5	76·6	78·6	79·6
	8	82·0	81·2	80·4	76·9	83·8	86·4	88·9	85·9	83·2	83·2	81·3	81·1	82·9
	9	81·9	82·5	78·6	77·9	79·3	81·6	83·0	81·7	79·9	78·2	76·9	77·9	79·9
	10	78·8	77·3 <sup>b</sup>	76·1 <sup>b</sup>	77·8	78·6	81·4	83·2	83·5	83·5	79·4	84·1	86·6	80·9
	11	86·4	85·4	84·5	83·5	82·6	84·2	84·1	82·7	81·2	—	—	—	82·8
	12	—	—	—	—	—	—	—	—	—	77·6	79·9	81·7	82·8
	13	82·7	80·0	76·8 <sup>b</sup>	74·6 <sup>b</sup>	74·8	76·9	82·1	83·4	79·3	70·9	69·5	72·2	76·9
	14	69·7	73·6	75·5	76·2	77·4	83·8	79·7	76·6	74·3	69·8	72·7	72·2	75·1
	15	75·3	77·2	76·3	75·2	71·8	72·3	71·6	71·6	66·4	71·4	68·9	70·9	72·4
	16	73·5	72·5	71·4	68·7	66·9	68·9	67·7	67·7	67·2	68·9	68·9	70·4	69·4
	17	71·6	69·6	69·5	68·7	69·3	69·3	68·6	68·6	67·7	68·0	68·2	69·3	69·0
	18	70·7	70·5	70·5	68·8	67·0	68·4	65·8	65·5	65·9	—	—	—	68·4
	19	—	—	—	—	—	—	—	—	—	67·6	68·9	70·8	68·4
	20	73·6	73·4	71·9 <sup>b</sup>	69·4	68·7	69·0	69·0	69·3	69·0	69·9	71·9	72·1	70·6
	21	74·3	72·0	70·0	69·6	69·9	68·4	68·1	67·2	67·7	68·3	68·7	70·2	69·5
	22	69·7	69·3	68·9	67·7	66·8	65·9	64·6	66·4	56·8	55·4	55·8	55·1	63·5
	23	66·3	68·7	64·7	64·3	66·8	70·9	72·2	67·4	66·6	59·8	55·1	64·7	65·6
	24	58·3	66·6	69·6	65·7	67·9	69·3	69·1	69·1	69·1	61·7	68·5	69·5	67·0
	25	69·9	71·1	70·6	69·7 <sup>b</sup>	69·7	72·9	72·1	70·3	65·4	—	—	—	69·3
	26	—	—	—	—	—	—	—	—	—	65·6	65·6	69·0	69·3
	27	69·1 <sup>d</sup>	67·8	67·1	65·4	65·9	66·2	66·3	65·5	65·9	65·2	65·8	67·3	66·5
	28	67·2	67·0	66·1	65·2	66·1	66·5	66·0	64·6	64·0	64·0	64·3	67·0	65·7
	29	68·2 <sup>e</sup>	67·1	66·3	62·1	64·5	63·8	64·6	64·4	64·2	63·3	63·8	65·3	64·8
	30	64·4	64·5	63·2	60·1	59·2	59·2	59·1	59·8	58·7	55·2	60·5	61·0	60·4
Hourly Means	74·16	73·86	72·52	71·26	72·22	73·37	73·96	73·28	70·15	69·49	70·28	72·17		

<sup>a</sup> Thirty minutes late.

<sup>b</sup> The time of vibration of the magnet was observed between these and the following observations; initial arcs 3° 00'; magnet not touched.

<sup>c</sup> Five minutes late.

<sup>d</sup> Eleven minutes late.

<sup>e</sup> Fifteen minutes late.



VERTICAL FORCE.  
Temperature of the Vertical Force Magnet.

Mean Göttingen Time.	0 <sup>h</sup> .	2 <sup>h</sup> .	4 <sup>h</sup> .	6 <sup>h</sup> .	8 <sup>h</sup> .	10 <sup>h</sup> .	12 <sup>h</sup> .	14 <sup>h</sup> .	16 <sup>h</sup> .	18 <sup>h</sup> .	20 <sup>h</sup> .	22 <sup>h</sup> .	Means.	
MAY.	2	53.4	55.0	55.4	56.0	56.6	57.3	58.5	58.3	58.0	57.0	56.0	55.2	56.6
	3	54.5	55.5	58.0	58.7	59.3	60.0	60.4	59.1	58.0	56.8	54.9	54.0	57.4
	4	53.5	54.2	55.0	55.6	56.0	57.2	58.0	57.2	56.2	55.0	54.2	53.2	55.4
	5	52.9	54.2	55.6	56.8	57.6	59.0	59.6	58.7	58.2	57.4	56.4	55.7	56.8
	6	55.4	56.2	56.4	58.2	60.0	60.5	61.2	60.2	59.1	57.7	56.4	55.6	58.1
	7	54.9	54.8	55.2	55.4	56.0	57.0	57.0	56.6	56.5	—	—	—	54.8
	8	—	—	—	—	—	—	—	—	—	52.2	51.4	50.2	54.8
	9	49.4	49.3	49.4	50.8	52.2	54.0	54.2	54.2	54.2	53.7	53.2	53.0	52.3
	10	52.2	52.0	52.6	54.2	56.2	58.0	59.2	59.8	59.5	59.8	59.8	59.4	56.9
	11	59.2	58.7	58.6	57.2	57.4	57.6	57.2	56.2	55.3	54.8	54.0	53.8	56.7
	12	53.7	55.2	55.5	56.0	57.1	59.0	59.6	59.2	58.7	57.7	57.2	56.8	57.1
	13	56.3	55.9	55.9	56.1	56.1	57.1	58.0	57.2	56.2	55.5	54.3	53.2	56.0
	14	52.5	53.7	52.6	53.2	54.0	54.2	55.8	55.7	55.8	—	—	—	54.4
	15	—	—	—	—	—	—	—	—	—	55.3	55.2	55.1	54.4
	16	55.0	55.5	57.0	58.3	59.7	60.0	60.4	59.8	59.4	59.0	57.8	56.2	58.2
	17	55.4	55.0	55.6	56.4	57.6	58.2	58.8	59.0	59.2	59.0	58.5	58.0	57.6
	18	58.1	58.2	58.8	59.4	60.5	63.4	64.0	63.8	63.5	63.1	63.0	62.1	61.5
	19	61.0	60.3	59.4	58.6	58.5	59.0	59.2	59.1	59.0	58.2	57.0	55.9	58.8
	20	55.5	56.2	55.6	55.2	55.0	55.2	55.8	57.0	56.6	55.5	54.2	53.0	55.4
	21	52.2	52.2	52.7	53.7	55.3	56.4	56.9	57.2	57.2	—	—	—	55.0
	22	—	—	—	—	—	—	—	—	—	55.3	55.3	55.6	55.0
	23	55.0	55.2	55.3	56.0	57.0	57.4	58.0	58.2	58.4	58.0	57.2	56.7	56.9
	24	56.2	56.0	56.2	56.8	57.2	57.8	58.3	58.5	58.2	57.4	56.6	55.8	57.1
	25	55.0	55.2	56.4	57.0	57.6	58.5	59.1	59.4	59.0	58.8	57.9	56.5	57.5
	26	55.9	55.6	55.7	56.2	56.7	58.0	59.0	59.2	59.0	59.0	58.6	58.2	57.6
	27	57.2	57.0	56.3	56.3	56.6	58.0	58.7	59.3	59.4	59.0	59.2	58.4	57.9
	28	57.8	58.9	59.5	60.0	61.5	60.9	61.5	61.2	60.5	—	—	—	59.1
	29	—	—	—	—	—	—	—	—	—	56.2	55.7	55.2	59.1
	30	55.5	55.5	55.4	56.4	57.2	57.9	58.8	58.6	58.2	57.4	56.6	55.8	56.9
	31	55.5	56.7	57.5	58.4	59.2	60.0	61.0	60.3	60.7	59.5	59.0	57.9	58.8
	Hourly Means	55.12	55.47	55.83	56.42	57.23	58.14	58.78	58.58	58.23	57.24	56.52	55.79	
JUNE.	1	57.1	58.3	59.2	60.0	60.9	61.3	61.8	61.8	61.5	60.5	59.7	58.6	60.1
	2	57.9	58.4	59.0	60.5	61.3	62.1	62.5	62.7	62.6	62.5	62.2	62.2	61.2
	3	61.7	62.1	62.7	63.3	62.9	62.9	62.4	61.8	61.5	61.5	61.7	61.5	62.2
	4	61.3	61.0	61.0	61.3	62.0	63.5	64.5	64.9	66.0	—	—	—	62.7
	5	—	—	—	—	—	—	—	—	—	62.9	62.1	61.5	62.7
	6	60.8	61.1	61.9	61.0	61.0	61.1	60.5	60.0	58.7	58.2	56.8	56.0	59.8
	7	55.5	56.5	57.6	58.4	59.1	59.5	59.6	59.5	59.2	58.7	58.2	57.7	58.3
	8	57.6	57.5	58.0	57.6	55.4	56.2	56.0	55.5	56.1	56.2	56.5	56.7	56.6
	9	57.2	57.4	57.8	58.2	59.1	59.5	59.5	59.8	59.7	59.5	60.0	59.8	59.0
	10	60.0	59.5	59.5	59.0	58.6	58.1	57.2	56.4	56.4	56.2	55.1	54.1	57.5
	11	53.6	54.0	54.1	54.2	55.0	56.1	56.8	57.4	58.0	—	—	—	56.0
	12	—	—	—	—	—	—	—	—	—	57.6	57.7	57.6	56.0
	13	57.2	57.4	58.1	59.0	60.0	60.5	60.5	60.7	60.7	60.3	59.9	59.1	59.4
	14	58.6	59.0	59.7	61.3	61.5	61.3	61.7	61.9	61.8	61.4	60.5	60.0	60.7
	15	59.7	59.2	59.4	60.1	61.3	62.3	63.0	63.1	63.0	63.0	62.5	61.8	61.5
	16	61.5	61.8	62.5	63.7	64.8	65.0	65.0	65.2	65.0	64.8	64.0	63.5	63.9
	17	62.6	62.3	62.5	63.2	63.7	64.0	64.3	64.5	64.5	63.9	63.3	62.5	63.4
	18	61.5	61.5	61.7	62.5	63.3	64.8	65.3	66.0	66.1	—	—	—	63.8
	19	—	—	—	—	—	—	—	—	—	65.1	64.2	63.2	63.8
	20	62.5	62.4	62.0	62.4	62.9	63.5	63.6	63.5	63.5	63.0	62.0	61.5	62.7
	21	60.9	61.1	61.7	62.5	63.5	64.4	64.6	64.5	64.5	63.8	63.7	63.3	63.3
	22	63.2	62.8	62.6	63.0	63.6	64.3	65.3	66.3	66.7	66.5	66.2	65.7	64.7
	23	64.8	64.3	64.3	64.7	65.1	65.6	65.5	65.7	65.3	64.5	63.6	63.0	64.7
	24	62.0	62.0	62.3	63.0	64.1	64.7	65.3	65.7	65.0	64.1	63.3	63.0	63.7
	25	62.3	61.6	61.7	61.7	62.0	61.7	62.0	62.0	62.1	—	—	—	62.4
	26	—	—	—	—	—	—	—	—	—	64.5	64.0	63.5	62.4
	27	63.7	63.7	63.5	63.7	64.4	65.0	65.4	65.8	65.5	65.0	64.7	64.1	64.5
	28	64.0	64.5	64.5	64.9	65.0	65.3	65.7	66.5	66.3	65.8	65.1	64.2	65.1
	29	63.4	63.5	63.8	64.2	65.0	65.5	66.3	66.5	66.3	65.9	65.5	64.8	65.1
	30	64.8	65.3	65.8	67.0	67.7	68.7	69.0	69.5	69.6	68.5	68.3	68.0	67.6
Hourly Means	60.59	60.70	61.03	61.55	62.05	62.57	62.82	62.97	62.91	62.46	61.95	61.42		



VERTICAL FORCE.

One Scale Division = .000094 parts of the V. F. Change in the magnetic moment of the Bar for 1° Fah. = .00011.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Means.
71.3	71.3	66.6	69.6	68.3	59.6	34.6	19.0	15.3	7.8	11.3	19.6	53.3
86.9	78.6	68.9	62.6	46.1	56.4	—	—	—	—	—	—	59.5
—	—	—	—	—	—	-27.3	-7.7	10.3	9.0	35.1	41.3	59.5
66.2	63.0	66.1	63.9	59.9	64.3	63.0	63.6	61.1	57.8	55.4	52.7	59.5
66.6	67.5	67.9	66.0	66.0	66.3	63.6	60.3	55.4	61.9	67.7	70.8	65.7
69.7	69.4	67.0	68.3	68.0	68.5	68.6	66.7	62.1	70.1	72.2	72.1	68.8
65.3	64.9	64.9	65.0	65.0	65.4	65.7	65.7	66.4	66.4	66.6	67.6	66.5
68.3	70.3	72.4	70.9	58.4	63.0	57.3	47.5	58.6	60.1	56.4	66.7	64.9
68.5	69.8	64.6	63.9	65.3	64.7	—	—	—	—	—	—	65.2
—	—	—	—	—	—	64.9	65.0	57.9	60.8	64.5	61.7	65.2
59.9	59.8	60.2	59.1	62.4	59.2	57.7	58.3	61.3	61.5	62.5	64.0	61.5
57.3	56.3	56.6	54.0	55.2	55.1	55.1	56.2	56.9	57.3	58.2	59.4	59.7
52.7	52.8	52.8	53.3	53.3	53.3	53.6	53.6	54.6	55.1	54.5	55.9	55.2
53.1	53.5	54.0	54.0	54.5	54.5	49.3	54.1	53.9	55.1	55.8	59.1	54.7
57.4	57.0	57.3	54.3	55.1	54.7	57.5	58.3	59.1	59.2	59.4	59.4	58.0
55.5	54.9	54.3	53.2	54.0	55.0	—	—	—	—	—	—	56.3
—	—	—	—	—	—	48.8	52.6	53.7	54.3	54.8	55.0	56.3
50.1	50.1	—	49.7 <sup>c</sup>	52.5	51.0	48.8	45.8	46.3	42.8	42.8	52.1	50.5
47.7	48.6	49.2	48.8	48.8	48.8	47.4	42.8	40.8	41.4	51.0	51.0	48.3
56.8	56.4	55.1	55.1	54.7	53.9	52.8	52.5	54.1	55.5	57.9	59.1	55.6
56.1	55.7	56.3	56.5	57.2	56.3	57.2	60.0	58.4	58.2	60.4	60.4	57.6
56.6	55.2	54.5	54.8	54.7	53.5	53.5	46.0	41.4	48.1	54.5	58.6	55.4
57.8	54.4	52.7	50.8	52.8	50.3	—	—	—	—	—	—	55.1
—	—	—	—	—	—	50.3	54.8	56.2	56.2	57.5	57.4	55.1
58.8	58.7	58.7	58.7	59.1	59.1	57.5	58.8	58.1	58.9	60.3	61.2	59.1
54.8	53.8	53.6	53.3	53.1	53.9	54.3	54.2	53.1	53.1	50.4	49.3	55.5
50.5	49.3	48.8	48.8	48.6	51.2	51.9	52.9	53.0	54.2	55.1	55.8	51.9
55.0	54.3	54.3	55.3	55.0	55.0	52.8	52.2	54.8	56.6	57.1	57.1	54.8
54.3	55.0	55.6	55.8	54.1	52.1	50.1	53.9	53.1	53.1	53.1	52.5	54.5
60.3	60.3	59.5	58.5	59.1	59.4	—	—	—	—	—	—	54.5
—	—	—	—	—	—	59.1	52.5	66.0	60.1	56.9	58.3 <sup>d</sup>	56.1
57.96	57.74	57.74	56.87	56.82	56.70	55.56	54.99	55.44	56.52	57.81	59.33	

TEMPERATURE OF THE VERTICAL FORCE MAGNET.

65.5	65.5	65.4	65.3	65.0	65.0	65.0	67.0	67.3	67.1	66.7	66.1	65.9
65.9	66.1	66.5	67.5	67.5	67.5	67.5	—	—	—	—	—	66.2
—	—	—	—	—	—	68.9	69.1	68.7	68.3	68.1	67.5	66.2
68.3	68.0	68.0	67.7	67.5	67.3	67.1	66.5	66.3	66.1	65.8	65.8	67.6
66.5	66.1	65.8	65.5	65.3	64.7	64.1	63.6	63.1	63.0	62.7	62.5	65.2
64.5	64.5	64.5	64.5	64.2	63.8	63.3	62.5	62.5	62.0	61.5	61.2	63.1
66.2	66.5	66.2	66.0	65.8	65.5	65.5	65.2	64.9	64.7	64.7	64.5	64.5
65.0	65.0	65.0	65.3	64.8	64.7	64.7	64.5	64.3	63.7	63.7	63.8	64.3
66.3	66.8	67.1	67.1	66.7	66.3	—	—	—	—	—	—	64.3
—	—	—	—	—	—	66.0	65.7	65.5	65.0	64.5	64.3	65.1
69.3	69.3	69.3	69.3	69.1	68.9	68.3	68.0	67.5	67.1	66.6	66.2	67.2
71.7	72.0	72.3	72.3	72.0	71.8	71.5	71.0	70.5	70.5	70.0	69.5	69.5
74.0	74.1	74.2	74.0	73.5	73.5	73.0	72.8	72.5	72.1	71.7	71.7	72.1
73.4	73.4	73.2	72.8	72.5	72.1	71.7	71.1	70.8	70.5	70.0	69.0	71.8
71.7	71.8	71.9	71.7	71.4	70.7	70.2	69.5	69.1	68.7	68.2	68.3	70.1
71.7	72.0	72.3	72.3	72.0	71.7	—	—	—	—	—	—	70.5
—	—	—	—	—	—	73.2	73.0	72.3	71.8	71.4	70.8	70.5
74.9	75.0	—	75.3 <sup>c</sup>	75.2	75.0	74.8	74.5	74.3	74.0	73.5	73.2	73.5
76.5	76.4	75.3	74.8	74.5	74.3	73.7	73.3	72.7	72.3	71.7	70.7	74.1
71.0	71.5	71.8	71.5	71.5	71.3	71.1	70.3	69.7	69.3	69.0	68.3	70.2
70.9	71.0	71.0	70.5	70.0	69.6	68.9	68.3	68.1	67.6	67.2	67.0	69.0
71.5	71.9	71.6	71.6	71.5	71.3	71.1	70.6	70.5	70.3	69.7	69.5	69.6
75.0	75.1	75.0	74.8	74.5	74.2	—	—	—	—	—	—	72.2
—	—	—	—	—	—	72.0	71.5	71.0	70.5	70.0	69.0	72.2
69.2	69.4	69.3	69.3	69.3	69.0	68.5	68.3	68.0	67.7	67.3	67.0	68.7
71.5	71.7	71.7	72.1	72.0	71.9	71.7	71.5	71.3	71.0	71.0	71.1	69.9
74.3	74.5	74.5	74.4	73.8	73.3	72.7	72.1	71.7	71.2	70.8	70.5	72.3
72.3	72.4	72.3	72.1	71.9	71.5	71.1	70.5	70.0	69.3	68.7	68.3	70.7
72.4	72.5	72.6	72.5	72.5	72.5	72.3	72.5	72.4	72.4	72.4	72.5	70.9
68.8	68.5	68.5	68.5	68.0	67.5	—	—	—	—	—	—	68.6
—	—	—	—	—	—	63.5	63.1	62.8	62.4	62.3	61.5 <sup>d</sup>	68.6
70.81	70.93	70.70	70.79	70.52	70.22	69.69	69.28	68.91	68.57	68.20	67.84	

<sup>c</sup> Eleven minutes late.

<sup>d</sup> Twenty minutes late.

VERTICAL FORCE.												
One Scale Division = $\cdot 000095$ parts of the V. F. Change in the magnetic moment of the Bar for $1^\circ$ Fah $^\circ$ = $\cdot 00011$ .												
Mean Göttingen Time. } AUGUST.	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
1	64.3	67.7	68.3	70.0	68.3	67.7	67.2	67.6	68.3	67.6	67.3	66.6
2	68.3	68.4	67.3	66.9	66.8	66.1	64.3	63.7	64.8	64.2	63.8	62.9
3	65.2	65.4	65.3	65.3	64.3	64.2	64.0	63.7	63.9	64.3	63.0	62.4
4	64.7	64.7	64.6	64.2	63.1	62.3	60.8 <sup>d</sup>	60.8	60.7	60.1	59.4	58.4
5	56.6	59.5	61.3	60.3	59.7 <sup>e</sup>	58.3	56.8	56.6	56.3	56.8	58.4	58.6
6	56.1	57.1	56.7	57.2	57.5	59.4	59.3	58.8	60.6	62.4	62.4	63.1
7	—	—	—	—	—	—	—	—	—	—	—	—
8	57.1	57.1	57.6	56.2	55.7	56.6	58.0	57.9	57.6	58.7	59.4	58.9
9	56.6	58.0	57.7	57.7	56.6	57.4	57.3	57.6	58.8	58.8	59.1	59.1
10	58.2	58.9	57.4	58.0	57.2	56.5	56.5	56.6	57.1	58.2	58.4	58.0
11	56.6	56.2	57.6	56.7	56.7	56.2 <sup>d</sup>	56.2	56.2	56.7	56.7	56.7	56.3
12	50.5	54.3	54.0	54.5	53.7	52.7	53.9	53.9	55.1	53.7	53.1	53.2
13	51.9	52.6	49.4	53.0	52.1	52.1	50.2	49.8	50.5	51.4	50.4	51.5
14	—	—	—	—	—	—	—	—	—	—	—	—
15	53.1	53.3	54.0	54.9	54.9	54.2	52.4	51.4	51.7	51.1 <sup>h</sup>	51.1	51.1
16	53.2	53.3	53.5	54.0	50.7	54.7 <sup>i</sup>	49.4	50.1	50.0	49.2	48.3	48.6
17	50.3	50.1	48.9	49.2	49.2	48.3	49.7	49.0	49.3	49.6	49.9	48.4
18	50.8	50.7	51.6	50.9	48.6	51.2	51.5	49.5	52.4	51.2	52.0	52.4
19	52.5	52.1	49.0	45.2	46.3	47.1	49.6	53.7	51.6	56.2	62.2	57.5
20	54.2	55.2	55.3	54.1	53.4	53.7	54.5	54.5	54.5	56.4	56.4	56.0
21	—	—	—	—	—	—	—	—	—	—	—	—
22	61.4	61.8	60.6	60.3	59.6	59.2	58.8	58.8	58.2	57.6	57.4	56.9
23	56.1	57.3	58.4	58.2	58.2	57.5	56.5	55.9	55.1	54.2	54.1	54.1
24	54.1	55.4	55.2	53.9	53.9	52.5	53.1	52.5	53.9	53.3	52.1	51.5
25	55.3	55.8	55.7	55.0	55.0 <sup>d</sup>	52.7	52.7	52.3	52.2	52.4	53.3	52.7
26	50.8	50.6	50.1	49.9	48.4	47.0	47.6	49.0	48.5	49.5	49.8	47.8
27	45.9	46.0	45.9	45.8	45.5	44.7	45.2	44.4	43.9	44.0	45.1	44.1
28	—	—	—	—	—	—	—	—	—	—	—	—
29	44.7	46.7	46.4	45.8	45.2	45.0 <sup>d</sup>	46.2	47.7	47.2	49.2	46.7	45.7
30	51.2	50.8	50.4	49.4	49.3	50.0	51.1	51.4	51.4	51.4	50.2	48.5
31	53.1	52.9	53.1	53.1	53.2	52.8 <sup>d</sup>	52.1	51.8	51.7	51.3	50.6	49.2
Hourly Means <sup>k</sup>	55.22	55.95	55.68	55.52	54.90	54.75	54.50	54.51	54.78	55.03	55.05	54.41

TEMPERATURE OF THE VERTICAL FORCE MAGNET.												
AUGUST.	1	2	3	4	5	6	7	8	9	10	11	12
1	61.4	61.3	61.2	61.0	60.8	61.3	61.5	61.6	62.1	62.5	63.0	63.4
2	61.0	61.1	61.1	61.1	61.2	62.0	62.5	63.3	63.8	64.2	64.7	65.3
3	62.9	62.6	62.5	62.2	62.2	62.3	62.5	63.3	63.8	64.5	64.7	65.3
4	63.1	62.8	62.8	62.9	63.3	63.9	64.5	65.3	65.5	66.0	66.5	67.0
5	64.9	64.7	64.6	64.9	65.3 <sup>e</sup>	65.6	66.3	68.6	67.5	67.0	68.1	68.3
6	67.6	67.3	67.3	67.1	67.1	67.3	67.5	68.0	68.3	68.4	68.5	68.5
7	—	—	—	—	—	—	—	—	—	—	—	—
8	67.8	67.5	67.5	67.5	67.5	67.6	68.1	68.4	68.5	69.0	69.3	69.5
9	68.2	68.0	67.5	67.5	67.4	67.3	67.4	67.4	67.4	67.4	67.5	67.7
10	66.5	66.7	66.6	66.6	66.8	66.9	67.3	67.5	67.9	67.8	68.0	68.3
11	66.8	66.6	66.5	66.7	66.7	67.2	67.9	68.1	68.5	69.0	69.4	69.7
12	67.1	67.2	67.5	67.9	68.3	69.0	69.5	70.1	70.7	71.3	71.5	72.3
13	70.3	70.6	71.3	71.3	71.5	71.5	72.0	72.2	72.5	72.8	72.9	73.3
14	—	—	—	—	—	—	—	—	—	—	—	—
15	69.9	69.5	69.4	69.4	69.5	70.0	70.7	71.3	72.0	72.7 <sup>h</sup>	73.3	73.8
16	70.5	70.3	70.3	70.3	70.5	71.1 <sup>i</sup>	71.3	71.7	72.3	72.5	73.0	74.0
17	72.1	72.0	72.0	71.7	71.7	71.9	72.1	73.0	73.0	73.2	73.2	73.5
18	71.5	71.6	71.7	71.5	71.6	71.6	71.8	72.0	72.3	72.5	72.7	72.8
19	70.2	70.0	70.0	70.3	70.3	70.5	70.5	70.5	71.8	71.0	71.3	71.1
20	69.1	68.9	68.6	68.5	68.5	68.5	68.9	69.4	69.5	69.6	69.9	70.2
21	—	—	—	—	—	—	—	—	—	—	—	—
22	64.3	64.4	65.0	65.0	65.3	65.8	66.3	66.9	67.5	67.9	68.4	68.5
23	65.8	65.7	65.6	65.5	65.9	66.5	67.0	67.8	68.3	68.9	69.4	70.0
24	67.8	67.8	67.7	67.6	68.0	68.5	68.8	69.5	70.0	70.6	71.0	71.3
25	68.7	68.4	68.4	68.3	68.5	69.2	69.4	69.5	70.0	70.4	70.7	71.0
26	71.1	71.0	71.0	71.0	71.1	71.2	71.3	71.5	71.5	71.9	72.5	73.1
27	73.8	73.5	73.3	73.3	73.3	73.3	73.9	74.1	74.5	74.7	74.7	75.0
28	—	—	—	—	—	—	—	—	—	—	—	—
29	73.2	73.3	73.3	73.1	73.3	73.3	73.4	73.1	73.0	73.2	73.5	73.8
30	69.7	69.7	69.5	69.5	69.8	70.2	70.6	71.2	71.4	71.6	71.9	72.0
31	68.0	67.6	67.6	67.9	67.9	68.0	68.5	69.2	69.5	70.1	70.5	70.6
Hourly Means <sup>k</sup>	67.90	67.79	67.78	67.77	67.92	68.23	68.59	69.08	69.41	69.68	70.03	70.38

<sup>a</sup> The times of vibration of the magnet were observed between these and the following observations; initial arcs from  $3^\circ$  to  $4^\circ$ ; magnet not touched.  
<sup>e</sup> Five minutes late. <sup>h</sup> Five minutes late. <sup>i</sup> Seven minutes late.

<sup>k</sup> The observations on the 8th are omitted in the hourly means on account of the uncertainty of the observation at 18<sup>h</sup>.

VERTICAL FORCE.

One Scale Division = '000095 parts of the V. F. Change in the magnetic moment of the Bar for 1° Fahr. = '00011.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Means.
66.2	66.0	64.9	64.9	65.2	62.8	63.7	65.4	65.4	66.3	66.8	67.2	66.5
61.7	61.4	60.9	60.0	60.4	61.2	61.8	62.2	61.9	62.0 <sup>a</sup>	63.7	65.1 <sup>b</sup>	63.7
61.7	60.9	60.4	58.8	60.0	61.5	61.5	61.4	62.9	63.9	64.4	64.4 <sup>c</sup>	63.0
57.8	57.9	63.5	62.1	62.1	49.4	45.5	57.6	52.4	57.0	57.0	54.0	59.2
60.2	60.2	60.5	60.4	54.7	50.9	45.2	29.2	34.8	52.9	54.0	52.5	54.8
61.9	60.9	58.9	58.1	57.6	53.6	—	—	—	—	—	—	—
—	—	—	—	—	—	55.7	55.7	55.3	56.3	56.3	57.2 <sup>f</sup>	58.2
60.2	58.3	57.8	57.6	55.8	55.6	37.4 <sup>g</sup>	53.2	52.1	50.7	53.7	56.6	55.8
58.1	58.1	58.1	57.5	57.5	57.6	57.6	58.3	58.2	58.1	58.8	58.5	58.0
59.8	58.0	57.3	56.9	57.6	55.6	52.8	52.7	52.7	57.8	57.8	58.5	57.0
54.9	53.8	53.8	53.2	52.9	53.3	53.8	54.1	55.4	55.4	48.7	42.9	54.6
52.3	51.5	49.6	49.2	49.6	49.9	51.2	51.3	51.7	51.6	53.8	55.0	52.5
51.9	50.5	49.1	49.7	50.9	47.6	—	—	—	—	—	—	—
—	—	—	—	—	—	48.3	50.1	50.1	51.0	52.1	52.8	50.8
48.1	47.3	47.5	47.8	47.8	47.3	48.0	49.4	50.1	51.0	51.8	52.6	50.9
49.3	49.7	49.0	48.8	47.7	45.8	47.0	48.9	48.8	48.5	49.7	49.7	49.9
48.4	49.4	47.4	48.8	44.7	41.4	40.3	46.1	41.8	47.4	50.7	50.9	47.9
49.8	47.5	47.3	48.2	48.6	48.6	44.9	45.5	41.2	44.3	48.5	52.0	49.1
53.0	53.0	53.7	52.3	52.4	53.4	53.3	53.3	53.3	53.1	53.6	53.4	52.5
54.8	54.2	54.2	52.9	54.2	48.3	—	—	—	—	—	—	—
—	—	—	—	—	—	62.3	62.4	61.2	62.5	59.3	61.4	56.1
56.9	56.2	55.7	56.0	57.3	56.2	53.0	56.4	57.1	56.9	53.5	—	57.6
53.2	53.2	52.1	52.1	52.1	56.9	53.3	53.4	53.8	54.4	54.4	55.2	55.0
52.8	52.8	50.8	53.0	52.2	51.7	50.1	51.4	52.0	52.0	53.5	54.3	52.8
52.1	51.5	50.4	47.7	50.0	50.0	48.4	49.5	49.5	50.8	50.8	50.8	51.9
48.7	47.6	47.3	41.3	43.2	44.4	43.3	42.5	41.8	42.9	45.0	46.0	46.8
44.4	43.6	43.6	43.6	44.6	44.6	—	—	—	—	—	—	—
—	—	—	—	—	—	43.6	44.6	43.8	43.1	45.2	45.9	44.6
45.9	45.9	45.3	44.6	47.4	46.9	46.9	47.2	47.8	48.7	48.6	50.3	46.7
47.8	47.4	48.0	48.3	48.3	49.3	50.5	51.1	51.3	51.9	52.5	52.8	50.2
48.7	48.3	48.3	48.2	48.3	48.3	48.3	49.5	50.4	48.2	49.7	49.9	50.5
53.86	53.34	52.98	52.48	52.59	51.40	51.17	51.89	51.72	53.38	53.85	54.13	—

TEMPERATURE OF THE VERTICAL FORCE MAGNET.

63.8	64.1	64.2	63.9	63.7	63.7	63.3	63.0	62.5	62.1	61.6	61.5	62.4
65.7	65.9	66.3	66.4	66.0	65.6	65.5	65.0	64.5	64.1 <sup>a</sup>	63.8	63.2 <sup>b</sup>	63.9
65.7	66.3	66.3	66.2	66.0	65.6	65.2	64.7	64.4	64.4	63.5	63.2 <sup>c</sup>	64.2
67.3	67.5	67.7	67.5	67.0	67.0	67.0	67.0	66.3	66.0	65.5	65.0	65.6
68.5	68.5	68.5	68.5	68.4	68.7	69.5	68.9	68.9	68.3	68.1	67.8	67.4
68.5	68.5	68.7	68.7	68.6	68.5	—	—	—	—	—	—	—
—	—	—	—	—	—	69.9	69.5	69.2	68.6	68.5	68.1 <sup>f</sup>	68.3
69.7	69.8	70.0	69.8	69.9	69.7	69.5 <sup>g</sup>	69.2	69.0	68.9	68.5	68.5	68.8
67.7	67.5	67.5	67.8	67.5	67.5	67.3	67.3	67.3	67.0	66.8	66.7	67.4
68.5	68.6	68.7	68.7	68.5	68.3	68.0	67.7	67.5	67.3	66.8	67.1	67.6
70.0	70.5	70.5	70.7	70.6	70.2	69.8	69.3	68.5	68.1	67.7	67.2	68.6
72.7	72.9	73.3	73.0	72.5	72.2	71.7	71.6	71.3	71.0	70.7	70.3	70.6
73.3	73.5	73.5	73.0	72.5	72.1	—	—	—	—	—	—	—
—	—	—	—	—	—	72.5	72.1	71.6	71.2	70.7	70.6	72.0
74.3	74.5	74.0	73.7	73.3	73.0	72.5	72.0	71.5	71.3	70.8	70.7	71.8
73.5	73.3	73.1	73.0	73.0	72.8	72.5	72.4	72.5	72.5	72.3	72.2	72.1
73.4	73.4	73.4	73.3	73.1	72.8	72.7	72.5	72.1	72.0	71.6	71.8	72.6
73.1	73.1	72.9	73.0	72.5	72.0	72.0	72.0	71.8	71.5	71.1	70.5	72.0
71.0	71.4	71.0	71.0	70.8	70.5	70.3	70.0	69.7	69.5	69.5	69.3	70.5
70.5	70.6	70.1	70.0	69.7	69.1	—	—	—	—	—	—	—
—	—	—	—	—	—	67.5	67.0	66.3	65.8	65.3	65.0	68.6
69.0	69.1	69.5	69.2	68.6	68.4	67.8	67.5	67.1	66.7	66.3	—	67.2
70.2	70.3	70.3	70.5	70.3	69.8	69.7	69.5	68.7	68.7	68.5	68.2	68.4
71.5	71.7	71.7	71.5	71.3	70.9	70.6	70.4	70.1	69.5	69.2	69.2	69.8
71.3	71.5	71.5	71.3	71.3	71.1	71.2	71.3	71.3	71.3	71.0	71.3	70.3
73.3	73.7	74.3	74.5	74.5	74.7	74.5	74.5	74.3	74.0	73.8	74.1	72.8
75.0	75.0	75.0	75.0	74.8	74.5	—	—	—	—	—	—	—
—	—	—	—	—	—	74.5	74.3	74.0	73.7	73.5	73.5	74.2
73.8	73.8	73.5	73.5	72.8	72.7	72.6	71.8	71.5	71.0	70.5	70.2	72.8
72.0	72.0	71.7	71.3	70.9	70.4	69.8	69.3	69.0	68.6	68.3	68.3	70.4
71.0	71.3	71.3	71.2	71.1	71.0	70.9	70.5	70.5	70.5	70.0	70.0	69.8
70.56	70.70	70.70	70.63	70.36	70.12	69.95	69.66	69.32	69.03	68.67	68.60	—

<sup>a</sup> Twelve minutes late.

<sup>b</sup> Ten minutes late.

<sup>c</sup> Twenty-two minutes late.

<sup>f</sup> Twenty minutes late.

<sup>g</sup> This observation may have been incorrect, as no corresponding disturbance appears to have occurred in the observations of the declination and horizontal force.

VERTICAL FORCE.												
One Scale Division = '000095 parts of the V. F.      Change in the magnetic moment of the Bar for 1° Fahr. = '00011.												
Mean Göttingen Time. } SEPTEMBER.	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
1	50.1	50.0	49.7	49.6	48.7	46.5	46.1	46.1	44.2	45.3	44.7	43.9
2	47.4	46.3	47.5	45.8	48.6	48.5	47.3	49.3	52.8	55.3	54.2	55.6
3	49.9	51.0	51.7	53.7	54.9	55.5	56.6	58.6	58.6	57.5	57.7	56.8
4	—	—	—	—	—	—	—	—	—	—	—	—
5	54.0	53.1	52.8	52.3	52.5	53.5	53.9	53.9	56.4	54.3	54.6	56.9
6	55.3	58.1	56.6	56.6 <sup>a</sup>	56.6	56.6	56.4	56.3	56.3	56.7	56.4	56.0
7	51.6	59.8	55.8 <sup>b</sup>	55.3	55.3	54.8	54.1 <sup>c</sup>	54.2	54.9	53.6	52.9	52.6
8	55.1	55.6	55.8	56.0	55.4	54.4	55.4	56.7	57.6	58.8	58.2	59.0
9	60.3	60.8	60.8	61.0	61.5	62.9	63.8	64.0	65.4	66.7	66.3	64.1
10	62.1	62.4	61.0	60.9	60.5	60.6	60.2	60.0	60.5	64.1	60.3	60.2
11	—	—	—	—	—	—	—	—	—	—	—	—
12	52.7	52.5	53.1	54.1	54.7	53.5	53.3	54.0	55.1	56.0	57.0	57.9
13	55.9	55.3	55.3	54.4	54.8	55.7 <sup>c</sup>	55.9	55.9	55.9	56.5	57.4	57.7
14	57.9	57.3	56.5	56.4	55.8	55.2	55.5	55.7	56.3	56.1	56.2	55.6
15	57.9	59.2	54.3	56.9	60.0	57.1	56.0	55.0	61.3	58.3	56.9	56.8
16	52.0	54.3	51.7	53.1	55.7	55.7	56.8	57.3	57.4	58.2	65.7	57.8
17	55.1	58.2	58.7	58.4	59.1	59.1	59.6	60.4	60.0	59.6	59.7	59.6
18	—	—	—	—	—	—	—	—	—	—	—	—
19	62.7	63.1	61.8	61.2	60.8	61.0 <sup>e</sup>	60.9	61.5	64.5	65.1	69.3	70.8
20	65.1	68.1	68.5	66.5	65.8	65.8	63.4	62.9	65.2 <sup>f</sup>	67.0	65.1	65.1
21	62.3	61.0	62.6	62.4	63.0	65.2	64.1	65.9	66.6 <sup>c</sup>	66.9	68.5	68.4
22	63.2	67.4	66.5	67.5	67.6	68.2	68.0	69.6	72.4	70.9	71.9	70.1
23	68.5	71.9	71.9	72.4	71.7	71.7	71.7	71.7	71.4	71.9	70.6	69.7
24	68.3	68.2	67.2	67.0	66.4	62.8	66.9	67.8	68.5	67.2	66.0	64.1
25	—	—	—	—	—	—	—	—	—	—	—	—
26	68.0	68.4	67.7	66.4	66.4	66.4	65.6	64.0	63.0	62.5	62.4	61.8
27	64.9	65.5	64.7	63.6	63.3	62.5	61.3 <sup>c</sup>	61.2	59.5	59.4	59.0	58.5
28	59.6	56.9	57.1	56.9	55.4	54.4	53.5	53.2	54.3	54.3	54.9	55.9
29	60.6	50.0	54.7	55.4	55.6	56.5	55.8	56.1	55.2	54.8	54.2	54.7
30	56.1	55.9	55.4	54.8	55.3	55.7	56.6	56.9	55.8	55.0	56.5	54.9
Hourly Means	58.33	58.86	58.44	58.41	58.67	58.45	58.42	58.78	59.58	59.68	59.87	59.40

TEMPERATURE OF THE VERTICAL FORCE MAGNET.												
SEPTEMBER.	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .
1	69.9	69.8	70.0	70.4	70.7	71.3	72.5	73.0	73.8	74.3	74.5	74.9
2	73.5	72.6	71.6	71.5	71.9	72.2	72.4	72.4	72.3	72.3	72.3	72.3
3	68.2	67.6	67.5	67.3	67.1	67.0	66.6	66.3	66.5	66.7	66.5	66.7
4	—	—	—	—	—	—	—	—	—	—	—	—
5	67.3	67.4	67.5	67.5	67.6	67.7	68.0	68.3	68.3	68.5	68.5	68.9
6	63.8	63.6	63.4	63.5 <sup>a</sup>	63.5	64.0	64.3	65.0	65.3	65.6	66.3	66.3
7	65.5	65.2	65.6 <sup>b</sup>	65.3	65.3	65.5	65.7	66.3	66.5	67.3	67.3	67.6
8	65.1	64.6	64.5	64.4	64.3	64.3	64.0	64.0	64.0	64.1	64.0	64.0
9	61.2	61.3	61.0	60.8	60.5	60.6	60.5	60.7	60.7	60.7	60.7	60.7
10	59.9	60.3	60.5	60.7	61.1	61.5	61.7	62.3	62.9	63.3	63.5	63.5
11	—	—	—	—	—	—	—	—	—	—	—	—
12	67.5	67.2	67.0	66.5	66.0	66.3 <sup>d</sup>	66.3	66.5	66.5	66.6	66.7	66.5
13	64.0	64.2	64.2	64.2	64.3	64.3	65.0	64.9	65.2 <sup>e</sup>	65.5	66.0	66.0
14	63.5	63.6	63.8	63.5	63.7	64.0	64.3	64.5	64.8	65.0	65.1	65.3
15	63.0	63.0	63.0	63.0	63.0	63.1	63.3	63.5	64.0	64.5	64.7	65.1
16	64.2	64.1	64.3	64.3	64.0	64.0	64.0	64.1	64.3	64.6	64.7	64.9
17	62.0	61.7	61.5	61.5	61.5	61.7	61.7	62.0	62.3	62.5	62.7	63.4
18	—	—	—	—	—	—	—	—	—	—	—	—
19	59.1	58.8	59.3	59.5	59.5	59.5	59.5	59.5	59.5	59.4	59.3	59.4
20	56.0	55.5	55.8	56.0	56.5	57.2	57.7	58.5	58.8	59.1	59.3	59.5
21	59.5	59.2	59.5	59.2	59.0	58.6	58.5	58.2	57.8	57.6	57.2	57.9
22	57.0	57.0	57.2	57.0	56.7	56.2	56.2	55.9	55.7	55.7	56.0	55.3
23	51.8	51.5	52.2	52.4	52.4	52.8	53.2	52.7	53.0	53.5	54.0	54.3
24	55.5	55.2	55.9	55.7	56.3	56.9	57.5	57.5	57.6	58.0	58.2	58.3
25	—	—	—	—	—	—	—	—	—	—	—	—
26	55.2	54.7	54.8	55.0	55.5	56.0	56.7	57.3	57.9	58.4	58.8	59.0
27	57.5	57.3	57.3	57.5	57.8	58.4	58.8	59.5	60.3	61.2	61.7	61.9
28	63.0	63.2	63.2	63.4	63.7	63.9	64.0	64.3	64.7	64.7	65.3	65.5
29	62.8	63.0	62.7	62.5	63.0	63.7	64.0	64.3	64.5	64.7	64.8	64.8
30	63.0	62.6	62.6	63.0	62.8	62.8	63.0	63.2	63.3	63.5	63.8	64.1
Hourly Means	62.27	62.08	62.15	62.14	62.22	62.44	62.67	62.87	63.10	63.36	63.53	63.70

<sup>a</sup> Seven minutes late.      <sup>b</sup> Twenty minutes late.  
<sup>c</sup> The times of vibration of the magnet were observed between these and the following observations; initial arcs 3° 20'; magnet not touched.  
<sup>d</sup> Three minutes late.      <sup>e</sup> Six minutes late.

VERTICAL FORCE.

One Scale Division = .000095 parts of the V. F. Change in the magnetic moment of the Bar for 1° Fah. = .00011.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Means.
Sc. Div. 43.2	Sc. Div. 43.0	Sc. Div. 42.8	Sc. Div. 43.4	Sc. Div. 43.4	Sc. Div. 44.8	Sc. Div. 46.0	Sc. Div. 43.5	Sc. Div. 31.0	Sc. Div. 30.3	Sc. Div. 32.4	Sc. Div. 35.4	Sc. Div. 43.5
54.5	53.0	51.2	50.1	46.3	42.9	35.2	40.6	42.3	42.3	45.7	48.0	47.9
56.7	56.3	55.8	55.7	55.7	54.2	—	—	—	—	—	—	—
—	—	—	—	—	—	48.5	48.5	48.1	49.1	53.9	54.1	54.1
58.5	53.3	53.4	51.2	51.9	51.9	51.8	51.4	50.1	52.7	53.3	53.3	53.4
54.8	54.3	54.3	54.3	54.0	52.9	53.9	54.8	54.8	58.2	57.8	57.9	55.8
51.8	51.6	51.6	52.0	52.3	52.6	49.9	48.3	56.0	53.9	53.9	53.2	53.4
58.9	58.8	60.2	59.7	59.8	60.5	60.3	60.2	60.3	60.7	61.6	60.8	58.3
62.7	62.3	62.1	61.8	61.6	61.3	62.0	61.6	60.9	61.4	61.7	62.1	62.5
58.6	58.6	55.8	57.6	57.6	56.6	—	—	—	—	—	—	—
—	—	—	—	—	—	47.5	50.5	51.0	53.1	52.8	52.6	57.7
60.6	59.3	58.4	58.6	58.5	57.8	55.8	55.1	58.3	58.1	57.4	57.1	56.2
58.2	56.8	56.4	53.8	43.5	47.3	47.5	51.9	56.9	57.3	58.0	57.3	54.8
55.6	55.6	55.6	55.6	55.6	56.0	53.5	55.5	60.6	56.7	60.4	58.2	56.4
56.5	56.3	55.9	55.0	55.3	54.8	53.4	52.0	48.0	45.3	46.9	50.2	55.0
57.3	58.0	59.1	57.3	57.4	53.7	51.1	53.6	56.3	54.6	47.3	52.8	55.6
58.8	58.2	58.1	58.4	58.3	58.7	—	—	—	—	—	—	—
—	—	—	—	—	—	56.4	57.9	56.8	56.4	60.3	61.2 <sup>a</sup>	58.6
65.5	65.4	70.8	69.3	70.1	70.1	70.1	63.9	66.5	65.1	65.9	60.7	65.2
69.0	65.2	63.2	64.3	63.5	63.0	62.3	55.5	52.5	53.0	59.8	60.5	63.3
71.2	69.1	68.3	67.6	66.5	66.2	62.7	63.2	64.1	61.6	63.4	66.3	65.3
69.9	68.8	68.1	68.1	69.2	68.5	64.5	60.5	67.6	68.0	58.8	63.4	67.4
69.7	69.5	69.2	68.5	68.0	64.8	66.7	67.2	66.7	67.8	67.7	67.9	69.5
62.7	62.2	63.1	63.1	63.5	63.6	—	—	—	—	—	—	—
—	—	—	—	—	—	65.2	66.5	66.5	67.6	67.4	66.4 <sup>g</sup>	65.8
61.7	60.6	60.2	61.8	62.1	62.1	62.5	62.6	62.6	63.1	63.7	63.8 <sup>h</sup>	63.7
58.2	57.8	57.2	56.5	56.4	56.4	58.8	57.1	59.1	56.6	56.1	59.6	59.7
55.9	54.5	54.0	53.1	55.0	48.9	46.7	54.0	55.6	53.4	53.0	39.2	53.7
54.9	55.4	55.4	53.0	55.0	52.8	52.6	52.3	48.5	51.9	56.3	55.9	54.5
56.7	56.4	56.3	57.0	56.5	55.9	54.3	55.4	56.6	56.4	54.8	41.7	55.3
59.31	58.47	58.33	57.95	57.58	56.86	55.35	55.52	56.07	55.95	56.55	56.14	

TEMPERATURE OF THE VERTICAL FORCE MAGNET.

75.0	75.0	74.8	75.0	74.7	74.5	74.5	74.7	74.3	75.1	74.9	74.1	73.4
72.3	71.5	71.9	71.8	71.7	71.5	70.8	69.9	69.1	68.7	68.5	68.5	71.4
67.1	67.5	67.5	67.3	67.0	66.7	—	—	—	—	—	—	67.1
—	—	—	—	—	—	67.6	67.4	67.3	67.4	67.4	67.4	67.7
69.6	69.5	69.7	68.6	68.2	67.9	67.4	66.7	66.1	65.5	65.0	64.5	67.7
66.6	66.5	66.5	66.4	66.2	66.0	65.9	65.9	65.7	65.5	65.4	65.7	65.3
68.1	68.0	68.1	67.8	67.5	67.5	67.3	66.8	66.6	66.3	65.7	65.5	66.6
63.6	63.3	63.0	62.8	62.6	62.3	62.0	61.7	61.3	61.1	61.0	61.2	63.2
60.7	61.0	61.1	61.0	61.0	60.8	60.6	60.6	60.5	60.3	60.2	60.4	60.7
63.5	63.7	63.6	63.5	63.5	63.3	—	—	—	—	—	—	63.6
—	—	—	—	—	—	67.3	67.4	67.3	67.3	67.3	67.0 <sup>d</sup>	63.6
66.5	66.3	66.1	65.8	65.8	65.6	65.3	64.6	64.5	64.2	64.0	64.2	65.9
66.0	65.5	65.6	65.7	65.5	65.5	65.0	64.8	64.7	64.2	64.0	63.5	64.9
65.3	65.4	65.3	65.0	64.9	64.7	64.5	64.0	63.7	63.5	63.4	63.1	64.3
65.3	65.5	65.9	66.0	66.0	65.7	65.5	65.6	65.2	65.0	64.6	64.6	64.5
64.8	65.0	64.7	64.6	64.4	64.1	63.7	63.5	63.2	63.0	62.5	62.6	64.1
63.5	63.5	63.5	63.2	62.8	62.6	—	—	—	—	—	—	—
—	—	—	—	—	—	61.3	61.0	60.6	60.0	59.5	59.3	61.9
59.5	59.4	59.2	59.0	59.0	58.8	58.8	58.8	58.4	58.0	57.6	56.5	59.0
59.8	59.8	59.8	59.7	59.7	59.7	59.7	59.7	59.6	59.4	59.5	60.0	58.6
57.9	58.0	58.8	58.6	58.2	58.0	57.8	57.6	57.5	57.3	57.0	57.2	58.2
55.4	55.3	55.3	55.0	54.4	54.1	53.8	54.0	53.7	53.4	53.2	52.5	55.2
54.9	54.9	55.0	55.6	56.0	56.0	56.2	56.2	56.2	56.2	56.0	55.7	54.3
59.1	59.7	59.7	59.4	59.0	58.7	—	—	—	—	—	—	—
—	—	—	—	—	—	57.8	57.4	57.2	56.8	56.6	55.8 <sup>g</sup>	57.5
59.6	60.0	60.0	60.0	59.8	59.5	59.3	59.0	58.6	58.4	58.0	58.0 <sup>h</sup>	57.9
62.3	62.9	63.1	63.5	63.5	63.6	63.5	63.5	63.5	63.5	63.5	63.7	61.2
65.6	65.7	65.5	66.2	65.7	65.0	64.7	64.5	64.0	63.5	63.3	63.6	64.4
64.8	64.6	64.6	64.6	64.7	64.5	64.5	64.5	64.3	63.9	63.7	63.5	64.0
64.2	64.2	64.3	64.1	63.8	64.0	63.7	63.4	63.4	63.5	63.0	62.8	63.4
63.88	63.91	63.95	63.85	63.68	63.48	63.40	63.20	62.94	62.73	62.49	62.34	

<sup>d</sup> Eight minutes late.

<sup>g</sup> Sixteen minutes late.

<sup>h</sup> Twenty-three minutes late.



VERTICAL FORCE.

One Scale Division = '000093 parts of the V. F. Change in the magnetic moment of the Bar for 1° Fah° = '00011.

Mean Göttingen Time.	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .		
OCTOBER.	1	66·6	67·7	67·1	67·3	56·6	56·6	56·6	56·5	56·1	56·7	56·3	57·3	
	2	—	—	—	—	—	—	—	—	—	—	—	—	
	3	63·0	63·7	62·2	61·5	60·3	60·0	59·9	59·3	59·7	59·7	60·3	60·2	
	4	63·6	63·3	63·0	61·8	50·2	61·7	60·7	60·9	59·9	62·1	61·8	61·4	61·4
	5	56·3	56·3	53·9	52·6	61·8	61·3	63·1 <sup>c</sup>	63·1	63·3	63·5	63·1	61·7	61·7
	6	65·3	67·8	65·4	65·1	65·1	63·7	63·4	63·2	62·9	62·7	62·7	62·4	62·4
	7	66·6	67·7	66·6	66·0	64·3	63·6	62·7	62·2	59·8	59·8	59·7	60·0	60·0
	8	58·1	59·7	58·9	57·7	57·6	57·5	57·5	57·5	60·2	59·3	61·4	58·8	58·8
	9	—	—	—	—	—	—	—	—	—	—	—	—	—
	10	67·5	69·0	67·6	67·3	65·9	65·4 <sup>c</sup>	64·6	64·6	64·6	65·0	63·8	63·3	63·3
	11	65·6	66·2	65·2	64·6	63·3	62·4	62·3	62·3	62·3	61·6	60·8	59·2	59·2
	12	62·2	62·6	62·4	62·2	62·2	62·1	61·7	61·8	61·6	49·8	48·8	47·8	47·8
	13	66·9	65·2	64·4	63·2	63·7	63·2	63·4	64·6	64·8 <sup>b</sup>	64·8	64·3	63·9	63·9
	14	66·2	67·1	66·4	65·5	66·2	65·0	64·8	66·1	65·9	67·0	65·5	66·8	66·8
	15	65·3	66·6	65·5	64·2	64·0	63·3	64·3	64·3	65·0	65·0	65·0	65·8	65·8
	16	—	—	—	—	—	—	—	—	—	—	—	—	—
	17	66·1	67·6	67·3	66·7	65·3	65·2	68·1	68·2	71·3	73·6	69·6	81·7	81·7
	18	65·6	72·4	69·6	68·7	69·4	69·1	71·6	71·6	71·5	73·3 <sup>c</sup>	76·7	74·5	74·5
	19	70·7	70·4	71·8	70·5	67·7	67·8	68·9	71·1	71·5	72·7	73·3	71·4	71·4
	20	68·8	70·6	71·0	68·3	66·6	66·2	66·4	67·4	69·0	67·0	67·3	66·4	66·4
	21	73·8	74·5	74·1	72·5	70·9	71·0	70·8	70·7	70·9	70·8	70·9	70·9	70·9
	22	68·1	69·1	68·4	67·2	66·4	66·4	67·5	54·6	57·4	68·2	63·1	66·1	66·1
	23	—	—	—	—	—	—	—	—	—	—	—	—	—
	24	66·6	65·6	66·7	66·2	66·2	66·1	66·5	66·5	66·5	65·5	65·1	64·9	64·9
	25	63·6	64·0	64·0	70·7	63·9	64·4	64·8	65·3	65·3	65·5	64·1	64·6	64·6
	26	69·3	68·9	69·2	69·4	68·0	68·0	67·6	67·9	69·5	68·8	71·2	70·3	70·3
	27	66·4	67·7	66·7	66·6	66·5	66·7	67·8	68·4	68·7	68·8	67·4	67·4	67·4
	28	68·5	69·8	69·6	70·7	68·8	68·6	67·9	68·4	68·4	69·4	69·5	69·2	69·2
	29	66·9	67·2	67·3	68·9	65·9	65·9	67·0	67·1	67·8	68·2	68·7	68·9	68·9
	30	—	—	—	—	—	—	—	—	—	—	—	—	—
	31	68·7	68·6	69·3	68·5	67·1	67·6	68·0	67·4	67·5	67·5	—	67·4	67·4
Hourly Means	66·01	66·90	66·29	65·92	64·38	64·57	64·92	64·65	65·05	65·24	64·82	65·09	65·09	

TEMPERATURE OF THE VERTICAL FORCE MAGNET.

OCTOBER.	1	62·3	62·2	62·3	62·2	62·4	63·0	63·1	63·4	63·5	63·7	63·5	63·7
	2	—	—	—	—	—	—	—	—	—	—	—	—
	3	58·8	58·2	58·4	58·6	59·5	60·0	60·0	60·0	60·1	60·3	60·3	60·3
	4	58·0	58·2	58·4	59·0	59·0	59·2	59·2	59·2	59·6	59·4	59·8	59·8
	5	55·8	55·4	55·8	56·2	57·0	57·5	58·0	58·8	59·0	59·0	59·5	59·2
	6	55·8	55·5	56·1	56·4	57·4	58·0	58·2	58·6	59·2	59·2	59·2	59·2
	7	55·7	55·5	55·9	56·4	57·4	58·0	59·0	59·0	59·8	60·7	61·2	61·5
	8	61·5	61·1	61·1	61·0	60·7	61·3	61·5	61·5	61·9	62·5	62·5	62·5
	9	—	—	—	—	—	—	—	—	—	—	—	—
	10	54·9	54·4	54·6	55·0	55·2	55·6	56·6	56·5	57·0	57·5	57·8	57·8
	11	56·5	56·5	56·6	57·0	57·2	57·5	58·0	58·1	58·7	59·4	60·0	61·0
	12	59·3	59·0	59·0	59·0	59·0	59·1	59·2	59·2	59·5	60·5	60·0	60·3
	13	57·0	56·4	56·2	56·2	56·8	57·4	58·0	58·3	58·4 <sup>b</sup>	59·2	59·3	59·0
	14	56·9	56·5	56·2	56·0	56·0	56·2	56·2	56·4	56·7	57·0	57·2	57·3
	15	56·9	56·6	56·5	56·4	56·8	57·0	57·0	57·1	57·4	57·9	58·0	58·2
	16	—	—	—	—	—	—	—	—	—	—	—	—
	17	54·2	54·0	54·0	54·2	54·6	54·6	55·2	55·1	55·7	56·0	56·5	57·0
	18	54·4	53·9	53·3	52·4	52·0	51·7	51·7	51·2	50·7	50·2	50·5	50·0
	19	51·8	51·5	51·7	52·0	52·1	52·2	52·2	52·0	52·0	52·0	51·8	52·9
	20	54·0	53·4	53·4	53·9	54·2	53·9	54·0	54·8	55·0	55·8	56·2	56·4
	21	51·0	50·5	50·5	50·4	50·6	51·4	51·7	52·2	53·0	53·3	53·3	53·5
	22	54·9	54·9	54·7	54·3	54·7	54·3	54·3	54·4	54·8	55·4	55·9	56·0
	23	—	—	—	—	—	—	—	—	—	—	—	—
	24	55·6	55·6	55·5	55·4	55·8	55·8	55·8	56·0	56·6	57·2	57·5	57·7
	25	58·8	58·6	58·3	58·0	58·0	57·8	58·0	58·2	58·2	58·3	58·6	58·5
	26	53·9	53·3	53·4	53·6	54·0	54·2	54·8	55·0	55·4	56·0	56·6	56·6
	27	54·0	53·5	53·8	53·4	53·8	53·8	54·0	54·2	54·7	55·4	56·1	56·0
	28	53·2	52·5	52·6	52·2	52·6	53·0	53·4	54·2	54·6	54·7	55·0	54·2
	29	55·2	55·1	55·1	54·2	55·0	55·2	55·0	54·7	55·2	55·2	55·0	55·4
	30	—	—	—	—	—	—	—	—	—	—	—	—
	31	54·3	54·2	54·0	53·6	53·9	54·8	55·3	54·5	55·0	55·0	—	55·4
Hourly Means	55·95	55·63	55·67	55·65	55·99	56·25	56·52	56·64	56·99	57·34	57·65	57·67	

<sup>b</sup> Six minutes late. <sup>c</sup> The times of vibration of the magnet were observed between these and the following observations; initial arcs from 3° 20' to 4° 00'; magnet not touched



VERTICAL FORCE.

One Scale Division = .000095 parts of the V. F. Change in the magnetic moment of the Bar for 1° Fah. = .00011.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Means.
Sc. Div. 57.3	Sc. Div. 56.8	Sc. Div. 56.8	Sc. Div. 56.3	Sc. Div. 56.9	Sc. Div. 56.9	—	—	—	—	—	—	—
—	—	—	—	—	—	60.4	59.0	59.4	61.6	62.3	61.4	59.4
60.4	60.2	60.5	60.6	62.3	62.2	62.9	62.8	63.7	63.7	63.5	62.1	61.4
61.4	61.7	62.5	62.7	63.0	64.0	63.9	65.0	65.0	65.9	67.2	67.1	62.5
61.4	61.7	61.7	62.7	64.9	63.1	62.8	59.5	63.3	63.8	64.0	64.2	61.4
62.1	62.2	62.0	62.6	62.6	62.9	62.0	62.9	65.0	68.0	65.8	66.4	63.9
59.3	59.5	59.8	57.9	60.1	58.7	58.8	58.4	55.6	55.4	56.6	56.2	60.6
57.8	57.8	57.9	59.4	58.9	58.6	—	—	—	—	—	—	—
—	—	—	—	—	—	65.8	65.2	65.2	66.1	66.1	66.2	60.4
63.8	63.8	63.8	63.8	63.7	64.5	64.4	62.1	57.5	56.0	63.4	64.8 <sup>a</sup>	64.2
58.6	58.3	58.1	58.6	58.8	59.7	59.8	59.8	60.5	60.5	61.2	61.2	61.3
48.3	47.8	58.1	62.4	61.5	61.1	59.4	59.4	62.6	65.8	66.3	66.9	59.4
64.4	63.7	63.1	64.5	64.5	63.6	64.0	65.2	64.3	63.8	63.6	64.4	64.2
65.0	64.8	64.7	64.9	64.1	64.1	63.7	65.1	64.6	64.3	63.4	63.2	65.2
65.7	66.0	66.8	65.3	66.1	63.9	—	—	—	—	—	—	—
—	—	—	—	—	—	68.3	66.1	66.1	66.9	68.9	66.2	65.6
82.1	82.2	80.2	82.8	83.4	82.1	82.8	78.1	67.5	60.0	60.0	62.5	72.3
77.0	76.5	75.3	73.9	72.6	70.2	70.6	72.1	71.9	71.9	71.9	70.2	72.0
71.0	70.0	69.5	68.9	68.6	67.5	66.9	65.5	66.4	94.1	67.8	68.0	70.5
66.4	67.5	67.5	67.5	66.1	65.6	66.9	67.3	71.3	73.0	73.6	72.5	68.3
71.9	71.1	71.1	70.4	70.4	69.8	69.9	69.9	69.9	69.6	69.6	68.1	71.0
66.1	65.9	65.9	65.9	66.2	66.2	—	—	—	—	—	—	—
—	—	—	—	—	—	66.0	68.0	68.6	68.7	67.3	66.6	66.0
64.9	64.9	64.3	64.2	63.0	63.4	62.5	62.7	63.1	63.1	63.1	63.1	64.8
65.6	65.9	66.9	66.9	62.2	65.2	66.8	66.8	70.6	67.6	67.6	66.4	65.8
71.4	70.7	70.5	68.9	67.9	67.9	67.9	68.0	66.6	66.9	67.6	67.0	68.7
67.7	68.2	63.9	69.5	68.2	68.9	68.8	67.6	68.0	66.8	69.4	68.0	67.7
68.5	67.9	68.3	69.1	67.5	67.5	67.8	66.9	66.7	67.1	67.0	67.0	68.3
68.7	68.0	68.6	65.2	67.2	65.7	—	—	—	—	—	—	—
—	—	—	—	—	—	68.2	67.8	68.5	65.7	68.9	68.8	67.5
67.9	67.5	67.3	67.2	67.2	66.8	67.3	66.6	68.8	69.6	70.0	68.9	67.9
65.19	65.02	65.20	65.47	65.30	65.00	65.72	65.30	65.41	66.38	65.98	65.67	—

TEMPERATURE OF THE VERTICAL FORCE MAGNET.

63.7	63.7	63.8	63.5	63.4	63.4	—	—	—	—	—	—	—	62.2
—	—	—	—	—	—	59.8	59.5	59.4	59.0	59.0	59.1	—	59.2
60.3	60.0	59.8	59.5	59.0	58.6	58.3	58.2	58.2	58.2	58.2	58.5	—	59.2
59.7	59.7	59.4	59.0	58.8	58.4	58.0	57.8	57.4	57.0	56.4	56.2	—	58.6
59.5	59.5	59.0	59.0	58.8	58.8	58.6	57.8	57.2	56.9	56.7	56.4	—	57.9
59.2	59.4	59.2	59.0	58.2	58.0	57.7	57.4	57.3	57.0	56.3	56.4	—	57.8
61.2	61.2	61.0	61.0	60.7	61.0	61.0	61.2	61.3	61.5	61.5	62.0	—	59.8
62.5	62.3	62.0	61.5	61.2	61.0	—	—	—	—	—	—	—	—
—	—	—	—	—	—	56.7	56.7	56.2	56.2	55.7	55.3	—	60.3
57.7	57.6	57.7	57.7	57.4	57.2	57.2	57.2	57.0	56.7	56.4	56.8	—	56.6
61.5	61.3	61.3	61.0	60.7	60.5	60.5	60.2	60.0	59.8	59.8	60.0 <sup>a</sup>	—	59.3
60.0	59.8	59.9	59.8	59.8	59.7	59.6	59.2	58.8	58.0	57.6	57.7	—	59.3
58.8	58.8	58.8	58.8	58.6	58.6	58.0	58.0	58.0	57.5	57.4	57.2	—	57.9
57.3	57.4	57.6	57.7	57.7	57.5	57.5	57.2	57.2	57.0	57.0	57.4	—	57.0
58.2	57.7	57.7	57.4	57.0	56.4	—	—	—	—	—	—	—	—
—	—	—	—	—	—	54.2	54.4	54.2	54.2	54.2	54.2	—	56.5
57.2	57.2	57.0	56.8	56.5	56.2	56.2	56.8	56.0	55.7	55.3	55.0	—	55.7
50.2	51.0	51.2	51.6	52.0	52.2	52.2	52.0	51.8	51.8	51.8	52.2	—	51.7
52.9	54.6	55.0	54.8	54.5	54.6	54.6	54.8	55.0	55.2	55.0	55.0	—	53.3
56.2	55.8	55.3	55.0	54.3	54.0	53.6	52.4	51.8	51.6	51.2	51.2	—	54.1
53.5	53.4	53.3	53.2	53.2	53.4	53.8	54.0	54.0	54.2	54.2	54.6	—	52.8
56.2	56.2	56.2	56.2	56.2	56.2	—	—	—	—	—	—	—	—
—	—	—	—	—	—	54.8	54.6	54.5	54.4	54.4	55.6	—	55.2
57.6	58.0	58.2	58.4	58.6	58.3	58.8	58.8	58.8	58.7	58.6	59.0	—	57.3
58.0	57.8	57.6	57.3	57.2	57.0	56.3	56.2	55.5	55.6	55.0	54.3	—	57.4
56.5	56.2	56.1	56.0	56.0	55.7	55.4	55.0	54.2	55.0	54.0	54.5	—	55.0
56.0	56.4	55.5	55.7	55.2	55.0	54.7	54.7	54.4	54.0	53.8	53.6	—	54.6
55.0	55.2	55.2	55.4	55.6	55.7	55.7	55.7	55.8	55.8	55.8	55.4	—	54.5
55.8	56.0	56.0	56.2	56.2	56.0	—	—	—	—	—	—	—	—
—	—	—	—	—	—	53.0	53.1	53.3	53.3	53.6	54.5	—	54.9
55.2	55.4	55.6	55.6	55.3	55.2	54.7	54.5	54.0	53.9	53.7	53.7	—	54.6
57.69	57.75	57.67	57.58	57.39	57.25	56.57	56.44	56.20	56.05	55.87	56.00	—	—

<sup>a</sup> Sixteen minutes late.

VERTICAL FORCE.												
One Scale Division = .000095 parts of the V. F.      Change in the magnetic moment of the Bar for 1° Fahr. = .00011.												
Mean Göttingen Time. } NOVEMBER.	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
1	68.9	71.3	72.2	70.1	69.1	68.0	68.0	68.0	69.4	68.8	68.2	67.2
2	67.3	69.1	67.4	67.3	67.8	67.1	67.2	67.2	68.4	69.0	71.1	71.9
3	71.8	71.9	72.9	71.7	71.7	69.7	70.7	72.2	73.0	74.6	73.0	74.9
4	77.2	77.4	77.8	76.0	74.9	74.6	74.2	74.1	74.3	70.7	71.3	70.7
5	73.5	76.2	76.2	74.9	73.8	73.2	73.9	72.8	71.8	71.1	71.1	70.9
6	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	71.4	70.0	70.1	70.1	70.7	70.7	71.7	71.4	70.7	70.7
8	70.7	71.5	70.6	71.1	70.4	70.2	70.2 <sup>a</sup>	70.9	72.1	71.9	71.4	71.4
9	70.4	70.4	71.0	70.0	69.1	69.1	69.1	70.3	71.3	71.4	71.4	71.9
10	66.9	63.5	65.2	68.5	70.8	72.9	74.0	75.3	75.9	77.1	75.7	77.8
11	85.3	72.4	73.2	72.8	71.6	71.6	71.6	70.8	72.2	71.6	71.6 <sup>c</sup>	71.4
12	70.0	71.2	70.5	70.2	71.1	71.1	71.5	71.5	71.5	71.4	70.9	70.9
13	—	—	—	—	—	—	—	—	—	—	—	—
14	74.1	75.0	74.4	73.6	73.2	73.1	72.8	73.1	73.8	73.1	72.5	72.5
15	74.4	75.3	75.5	75.8	75.9	76.0	75.6	76.4	76.4	76.4	76.0	75.6
16	76.0	74.5	76.0	75.2	75.2	75.4	75.4	77.0	77.7	77.4	76.8	76.1
17	74.4	73.9	74.1	74.9	74.6	74.9	75.2	75.6	76.3	75.6	74.9	74.7
18	75.5	75.7	77.3	80.6	79.3	79.9	81.5	80.8	82.8	83.5	83.5	84.9
19	84.3	85.3	84.9	84.6	83.7	84.2	84.5 <sup>a</sup>	85.0	82.4	82.5	82.5	82.4
20	—	—	—	—	—	—	—	—	—	—	—	—
21	83.7	84.9	—	85.3	85.0	84.4	84.8	84.8	85.1	85.1	88.1	94.1
22	77.7	80.5	80.0	82.8	82.7	82.0	83.3	85.0	84.2	83.1	82.5	81.6
23	76.9	77.5	77.5	78.3	77.2	77.5	77.5	77.7	78.4	78.1	77.9	76.9
24	76.0	76.5	76.8	77.4	76.4	76.7	77.0	76.8	76.8	76.5	76.3	75.5
25	77.2	78.2	79.0	81.0	81.3	81.2	82.0	83.1	83.1	83.1	83.1	81.3
26	78.5	79.2	81.0 <sup>d</sup>	78.5	81.0	80.9	80.4	80.3	81.0	80.5	80.5	81.3
27	—	—	—	—	—	—	—	—	—	—	—	—
28	87.1	88.1	88.3	87.9	87.5	87.5	87.2	87.8	87.2	86.5	86.2	85.9
29	83.5	82.9	82.5	84.4	84.0	83.3	82.5	83.9	83.9	83.7	83.3	82.5
30	84.9	83.8	83.4	84.8	85.2	85.3	85.4	84.9	84.9	84.7	85.4	85.9
Hourly Means <sup>e</sup>	75.94	75.89	76.15	76.35	76.15	76.06	76.28	76.69	77.03	76.76	76.55	76.50

TEMPERATURE OF THE VERTICAL FORCE MAGNET.												
NOVEMBER.	0 <sup>o</sup> .	1 <sup>o</sup> .	2 <sup>o</sup> .	3 <sup>o</sup> .	4 <sup>o</sup> .	5 <sup>o</sup> .	6 <sup>o</sup> .	7 <sup>o</sup> .	8 <sup>o</sup> .	9 <sup>o</sup> .	10 <sup>o</sup> .	11 <sup>o</sup> .
1	53.0	52.2	52.2	52.6	52.6	53.0	53.2	53.5	53.8	54.2	54.6	55.2
2	54.0	54.0	53.9	53.4	53.4	53.4	53.4	53.4	53.3	53.3	53.3	53.4
3	50.4	51.0	50.9	50.7	50.5	50.8	51.1	52.6	52.8	52.4	52.6	52.4
4	48.4	48.0	48.0	48.5	49.4	50.0	50.6	51.2	51.8	52.2	52.4	53.0
5	49.0	48.3	48.1	48.3	48.9	49.4	50.2	51.0	51.7	52.4	52.4	52.2
6	—	—	—	—	—	—	—	—	—	—	—	—
7	—	—	52.2	52.0	52.0	52.0	52.2	52.4	52.6	52.8	52.8	52.8
8	52.2	52.2	52.6	52.0	51.8	51.8	52.0	52.0	51.3	51.2	51.4	51.8
9	52.0	52.0	51.7	51.7	51.8	51.6	51.7	51.6	51.7	51.8	51.8	51.4
10	50.2	50.2	50.0	50.0	49.7	49.9	50.0	49.7	49.5	49.7	49.7	50.0
11	51.0	51.0	51.0	51.6	51.8	52.0	52.2	52.4	52.4	53.0	53.2 <sup>c</sup>	53.4
12	53.4	53.0	53.0	52.6	52.4	52.2	52.4	52.3	52.4	52.8	52.8	53.0
13	—	—	—	—	—	—	—	—	—	—	—	—
14	49.4	49.4	49.4	49.4	49.4	49.6	50.0	50.1	50.2	50.7	51.0	51.4
15	49.2	49.1	49.0	49.0	48.9	49.0	49.0	48.9	50.0	48.8	48.9	48.8
16	48.6	48.4	48.2	48.0	48.0	47.6	48.2	48.4	48.4	48.4	48.6	49.0
17	49.2	49.2	49.2	49.4	49.3	49.2	49.2	49.4	49.4	49.6	49.8	50.0
18	47.9	47.2	46.4	45.8	44.8	44.6	44.2	43.6	43.4	43.1	42.4	42.4
19	39.4	39.2	39.2	40.1	40.4	40.9	41.3	41.5	41.9	42.0	41.7	41.8
20	—	—	—	—	—	—	—	—	—	—	—	—
21	37.5	37.6	—	39.2	39.2	40.0	40.0	40.6	40.9	41.1	41.2	41.4
22	41.9	41.6	41.2	41.0	41.2	41.6	41.8	42.0	42.3	43.0	43.4	44.2
23	45.2	45.0	45.2	45.4	45.5	46.1	46.7	47.2	47.6	47.9	48.2	48.1
24	47.5	47.2	47.2	47.2	47.4	47.5	47.6	48.1	48.3	48.5	48.9	48.8
25	45.4	45.2	44.6	44.3	44.0	43.5	43.2	43.2	43.4	43.6	43.2	44.2
26	44.6	44.1	44.1 <sup>d</sup>	43.4	43.1	43.1	43.2	43.6	43.8	44.2	44.4	44.2
27	—	—	—	—	—	—	—	—	—	—	—	—
28	37.7	37.2	37.0	37.2	37.6	37.6	38.2	38.6	39.2	39.7	40.0	40.0
29	39.7	39.4	39.2	39.7	39.9	39.9	40.2	40.4	40.4	41.0	41.4	41.5
30	39.4	39.2	39.2	39.6	39.4	39.6	39.8	39.6	39.7	39.6	40.3	40.4
Hourly Means <sup>e</sup>	47.45	47.22	47.10	47.12	47.13	47.25	47.47	47.68	47.86	48.05	48.18	48.36

<sup>a</sup> The times of vibration of the magnet were observed between these and the following observations; initial arcs 3° 50'; magnet not touched.  
<sup>c</sup> Four minutes late.      <sup>d</sup> Four minutes early.      \* The observations on the 7th and 21st, not being complete, are omitted in the hourly means.

VERTICAL FORCE.

One Scale Division = '000095 parts of the V. F. Change in the magnetic moment of the Bar for 1° Fah. = '00011.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Means.
Sc. Div. 67·1	Sc. Div. 67·1	Sc. Div. 67·1	Sc. Div. 67·4	Sc. Div. 67·4	Sc. Div. 67·0	Sc. Div. 67·0	Sc. Div. 67·0	Sc. Div. 72·2	Sc. Div. 67·7	Sc. Div. 67·7	Sc. Div. 67·7	Sc. Div. 68·4
73·4	72·1	71·2	72·2	72·2	72·2	71·5	66·0	67·9	70·1	71·1	77·9	69·9
74·3	74·3	77·8	78·7	79·6	79·2	80·1	79·3	76·4	76·7	76·5	77·2	74·9
70·1	70·2	71·0	71·0	72·2	71·1	70·5	71·2	69·1	72·1	73·3	73·0	72·8
70·5	70·5	70·7	70·7	70·9	70·9	—	—	—	—	—	—	—
—	—	—	—	—	—	65·9	71·6	71·6	71·2	71·2	88·7	72·7
69·7	69·7	69·7	68·5	70·9	70·8	70·7	68·8	70·7	70·4	71·2	70·7	70·4
70·8	71·0	71·0	70·7	70·2	70·5	70·5	70·6	71·1	70·4	70·4	70·4	70·8
73·0	69·1	77·0	74·9	77·5	77·4	73·7	73·7	72·7	73·7	70·2	58·6	71·5
77·7	78·1	79·7	76·6	76·8	74·4	69·3	70·4	58·0	68·6 <sup>b</sup>	68·6	83·0	72·7
71·2	71·1	71·1	70·5	70·8	69·7	69·3	69·0	66·4	69·0	69·0	70·5	71·4
71·5	71·5	71·5	71·0	69·9	69·9	—	—	—	—	—	—	—
—	—	—	—	—	—	73·8	73·8	73·8	74·1	74·1	74·1	71·7
72·5	72·2	72·5	72·3	72·9	72·5	72·5	72·7	74·1	73·7	73·7	74·4	73·2
75·3	75·0	74·7	74·6	74·7	75·5	75·5	75·4	74·3	75·0	75·5	75·5	75·4
75·8	76·0	75·7	75·3	74·8	74·2	74·2	74·2	74·2	74·5	74·8	74·2	75·4
74·1	73·5	73·0	73·0	72·6	72·6	72·6	73·0	73·0	73·6	74·3	74·7	74·1
83·4	83·3	83·6	85·8	85·8	85·1	86·5	86·7	86·3	86·7	86·8	84·4	82·9
81·9	81·5	81·5	81·4	72·9	80·7	—	—	—	—	—	—	—
—	—	—	—	—	—	86·4	82·6	84·6	86·7	85·2	84·3	83·2
102·1	101·1	92·5	91·9	86·4	75·7	67·4	69·2	50·2	62·3	70·2	74·2	82·1
81·6	81·6	81·4	81·0	80·7	76·0	77·0	79·4	78·6	72·9	71·4	68·4	79·8
76·9	77·0	77·2	77·2	77·5	77·5	77·5	77·3	77·6	77·6	77·0	75·5	77·4
75·3	75·3	76·4	77·4	75·5	77·4	77·7	78·2	78·2	77·8	78·4	77·4	76·8
79·7	78·6	77·5	79·5	78·3	78·3	78·0	77·7	78·2	77·8	77·8	77·5	79·6
81·0	80·5	79·4	79·4	79·4	78·6	—	—	—	—	—	—	—
—	—	—	—	—	—	88·7	89·2	88·7	88·2	87·9	87·9	82·2
86·1	85·6	84·8	84·8	84·8	84·5	82·7	83·6	82·2	84·5	84·0	83·9	85·8
82·3	82·3	82·6	82·8	84·1	85·0	85·7	85·6	85·6	84·2	84·9	84·9	83·8
90·9	85·8	85·1	85·1	84·6	82·9	82·3	82·3	82·1	82·4	82·2	80·5	84·4
76·52	75·97	76·40	76·30	76·11	75·96	76·20	76·27	75·70	76·22	76·08	76·86	

TEMPERATURE OF THE VERTICAL FORCE MAGNET.

55·2	55·3	55·1	55·4	55·4	55·4	55·3	55·0	54·8	54·5	54·5	54·0	54·2
53·6	53·4	53·4	53·0	52·4	52·2	52·0	52·0	52·0	52·0	51·8	51·0	53·0
52·2	52·2	52·2	51·8	51·0	50·6	50·4	49·9	49·6	49·2	49·0	48·5	51·0
53·0	53·0	52·8	52·0	51·1	50·6	50·8	50·7	50·5	50·0	48·0	49·5	50·6
52·3	52·3	52·3	52·1	52·0	52·0	—	—	—	—	—	—	—
—	—	—	—	—	—	51·4	51·5	51·4	51·6	51·7	52·0	51·0
53·0	53·0	52·9	53·0	53·0	53·1	52·8	52·4	52·0	52·0	52·0	52·2	—
52·0	52·1	52·2	52·0	51·8	51·6	51·6	51·8	51·8	52·0	52·0	52·0	51·9
51·2	51·2	51·2	51·2	51·0	51·0	51·0	50·8	50·6	50·3	50·0	50·2	51·3
50·0	50·0	50·2	50·3	50·2	50·3	50·4	50·5	50·6	50·8 <sup>a</sup>	51·4	51·1	50·2
53·3	53·3	53·2	53·4	53·4	53·4	53·5	53·7	53·6	53·6	53·6	53·7	52·8
53·1	53·2	53·4	53·3	53·4	53·5	—	—	—	—	—	—	—
—	—	—	—	—	—	50·0	49·7	49·5	49·3	49·3	49·4	52·1
51·2	51·2	51·2	50·6	50·2	50·2	50·2	50·4	50·0	49·6	49·6	49·4	50·2
49·1	49·1	49·1	49·2	49·2	49·0	48·6	48·4	48·4	48·4	48·4	48·6	48·9
49·2	49·2	49·2	49·2	49·2	49·3	49·3	49·6	49·6	49·5	49·6	49·8	48·8
50·1	50·2	50·4	50·7	50·8	50·8	50·6	50·2	50·2	50·0	49·5	48·6	49·8
42·2	41·4	40·6	40·2	40·2	39·9	39·7	39·6	39·4	39·4	39·6	39·2	42·4
42·2	42·4	42·5	42·9	43·1	42·9	—	—	—	—	—	—	—
—	—	—	—	—	—	38·0	38·0	38·2	38·4	38·6	37·6	40·6
41·4	41·4	41·4	41·6	42·0	41·8	41·8	41·5	41·6	42·1	42·3	42·0	—
44·2	44·0	44·2	44·4	44·4	44·6	44·8	44·8	45·1	45·4	45·2	45·4	43·4
48·2	48·0	48·0	48·2	47·8	47·8	47·6	47·4	47·2	47·0	47·0	47·2	47·1
48·9	48·7	47·4	47·0	46·6	46·5	46·5	47·0	46·8	46·5	46·4	46·0	47·4
44·7	45·5	46·2	46·0	46·0	46·2	46·4	46·5	46·4	46·3	45·8	45·7	45·0
44·4	44·8	45·0	45·2	45·2	45·4	—	—	—	—	—	—	—
—	—	—	—	—	—	37·9	37·9	37·9	38·0	38·0	37·7	42·6
40·0	40·2	40·4	39·9	40·2	40·4	40·4	40·4	40·2	40·1	39·5	40·4	39·2
41·6	41·6	41·4	40·8	40·2	39·6	39·2	39·6	39·8	39·9	39·9	39·4	40·2
40·4	40·6	40·5	40·9	41·4	42·4	42·6	42·8	42·6	42·4	42·2	42·4	40·7
48·43	48·45	48·42	48·32	48·17	48·15	47·42	47·42	47·34	47·26	47·11	47·03	

<sup>b</sup> Twenty minutes late.

VERTICAL FORCE.													
One Scale Division = .000094 parts of the V. F.      Change in the magnetic moment of the Bar for 1° Fahr. = .00011.													
Mean Göttingen } Time. }	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	10 <sup>h</sup> .	11 <sup>h</sup> .	
	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	
DECEMBER.	1	80.5	80.4	80.7	81.0	80.3	79.4	79.9	80.3	80.3	80.5	81.1	81.2
	2	80.0	80.0	78.8	80.5	79.7	79.0	79.0	79.8	80.1	79.5	78.4	79.4
	3	77.2	77.2	77.2	77.3	77.0	75.9	75.9	75.8	75.7	75.1	74.5	73.3
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	77.0	77.0	77.2	77.3	76.8	76.8	76.8	77.5	78.0	77.2	76.7	76.5
	6	82.2	83.0	80.9	80.6	83.2	82.9	82.8	83.4	82.6	82.8	82.9	82.9
	7	83.1	82.5	81.0	83.7	82.4	82.2	81.8	81.8	81.9	82.5	83.0	83.0
	8	78.8	80.0	80.2	79.9	80.2	80.2	80.9	81.9	81.9	82.0	81.3	81.5
	9	76.4	76.9	76.9	76.6	75.5	76.2	76.9	77.9	80.0	81.8	83.0	84.5
	10	81.4	82.5	83.5	83.3	82.8	83.2	82.2 <sup>a</sup>	83.0	83.0	83.1	82.7	82.5
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	84.8	84.8	85.1	84.3	83.6	83.1	82.2	81.8	81.0	80.3	80.0	80.0
	13	76.7	76.4	76.6	77.0	76.4	76.0	76.1	76.7	76.4	77.6	77.7	78.3
	14	78.8	79.2	79.2	79.0	78.6	78.6	78.9	79.3	78.6	77.4	76.1	72.9
	15	—	84.5	85.5	86.0	85.6	86.2	86.6	86.2	77.2	76.2	76.0	76.2
	16	78.5	79.5	79.5	80.7	79.5	78.4	78.3	78.3	78.5	78.1	78.1	84.9
	17	89.1	89.8	90.1	90.5	92.1	91.9	91.6 <sup>a</sup>	91.6	90.6	89.5	89.5	89.6
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	91.4	92.6	92.6	91.8	90.9	90.9	89.4	89.3	88.3	87.2	86.9	87.3
	20	87.8	87.9	86.1	86.9	86.9	86.9	86.3	86.3	85.3	86.0	85.3	85.2
	21	78.3	84.8	82.8	83.8	82.1	82.1	82.0	81.1	80.1	79.2	79.7	— <sup>c</sup>
	22	72.7	72.4	73.6	75.2	75.5	77.5	78.7	80.7	81.0	81.9	80.9	82.6
	23	87.3	88.1	88.4 <sup>d</sup>	90.6	90.7	90.9	90.8	90.8	90.2	90.2	90.2	90.2
	24	87.8	88.3	88.9	89.1	88.4	88.4	89.5	90.3	89.9	89.9	89.9	89.1
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	83.2	83.5 <sup>e</sup>	83.9	83.8	82.9	82.9	82.9	83.7	83.2	83.3	83.4	83.0
	27	82.3	81.8	81.8	81.6	80.3	79.8	79.4 <sup>a</sup>	79.1	80.6	80.3	79.9	78.8
	28	81.3	82.0	82.5	82.5	82.8	83.5	83.1	83.2	83.9	83.7	83.4	83.3
	29	82.0	82.0	81.7	81.6	80.4	79.9	79.9	80.8	80.5	80.5	79.4	78.7
	30	75.1	74.6	74.8	74.7	74.0	74.0	75.7	77.6	79.4	79.4	78.7	78.2
	31	—	83.0	79.7	82.5	81.8	81.8	82.7 <sup>a</sup>	83.4	83.1	82.6	82.5	82.4
	32	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means <sup>h</sup>	81.47	81.92	81.78	82.23	81.86	81.79	81.86	82.33	81.97	81.87	81.60	81.75	

TEMPERATURE OF THE VERTICAL FORCE MAGNET.													
DECEMBER.	1	42.6	42.6	42.5	42.9	42.9	43.4	43.2	43.2	43.4	43.4	43.2	43.4
	2	43.6	43.6	43.9	43.4	44.0	44.2	44.4	44.7	44.8	44.8	44.8	45.0
	3	46.2	45.5	45.7	46.2	46.4	47.2	47.3	47.6	48.0	48.4	48.8	48.6
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	43.9	44.0	44.2	44.0	44.2	44.4	45.0	45.2	45.4	45.8	46.0	45.9
	6	40.4	40.2	39.6	39.6	40.0	40.2	40.6	41.2	41.4	41.5	41.6	41.7
	7	40.4	40.4	40.4	40.1	40.0	40.4	41.4	41.6	42.4	42.4	42.6	43.2
	8	43.3	43.2	43.2	42.6	42.7	43.0	43.2	43.4	43.6	43.6	43.6	43.8
	9	46.2	45.6	46.2	46.1	46.1	46.5	47.2	47.2	47.0	47.2	47.4	46.9
	10	43.4	43.2	42.4	42.2	41.8	42.0	42.2	42.2	42.6	42.5	42.8	42.4
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	40.2	40.2	40.3	39.6	40.2	40.4	41.4	42.3	43.2	43.5	43.9	43.8
	13	43.4	43.3	43.0	42.4	42.3	42.2	42.4	42.6	42.4	42.5	42.6	42.4
	14	41.3	41.2	41.0	41.0	41.0	41.2	41.8	42.0	42.4	43.3	44.2	44.6
	15	—	44.0	43.4	43.0	43.5	43.7	43.8	44.2	44.4	44.4	44.6	44.2
	16	41.8	41.4	41.0	40.7	40.5	41.0	41.6	42.0	42.2	42.4	42.6	42.7
	17	40.2	40.0	39.4	39.7	39.1	39.2	39.7	39.9	39.8	40.3	40.5	40.9
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	38.6	38.4	38.9	39.1	39.2	40.0	40.0	40.7	41.2	41.7	42.4	42.4
	20	41.2	40.9	41.0	41.1	41.1	41.8	42.5	43.2	43.5	43.6	43.9	43.8
	21	42.2	41.6	42.0	41.2	42.0	42.4	43.4	44.4	45.0	45.4	45.4	— <sup>c</sup>
	22	48.2	47.9	46.4	45.4	44.5	43.6	42.7	42.2	41.9	41.2	40.6	40.2
	23	36.2	35.9	35.2 <sup>d</sup>	35.1	34.9	35.0	35.2	35.2	35.6	36.2	36.4	36.0
	24	36.4	36.2	36.2	36.0	36.0	36.2	36.1	36.2	36.2	36.2	36.4	36.6
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	40.0	40.0 <sup>d</sup>	40.0	39.2	39.9	40.2	40.4	40.8	40.7	40.8	41.4	41.7
	27	41.4	41.4	41.4	41.4	41.6	42.2	42.6	43.2	43.2	43.2	43.4	43.2
	28	41.2	41.0	40.4	40.2	40.0	40.0	40.2	40.1	40.2	40.2	40.2	40.6
	29	41.1	41.4	41.3	41.4	41.4	41.9	42.4	42.6	43.2	43.5	44.2	44.2
	30	46.2	45.8	45.6	45.2	45.1	45.2	45.2	44.8	44.2	44.0	43.6	43.6
	31	—	39.5	39.5	40.0	40.0	40.0	40.0	40.0	40.1	40.6	40.6	40.4
	32	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means <sup>h</sup>	41.97	41.80	41.62	41.45	41.48	41.73	42.02	42.26	42.42	42.60	42.77	42.78	

<sup>a</sup> The times of vibration of the magnet were observed between these and the following observations; initial arcs of vibration 3° 40' to 3° 50'; magnet not touched.  
<sup>b</sup> Magnet removed and re-adjusted; connexion of the observations broken.      <sup>c</sup> Six minutes late.      <sup>d</sup> Nine minutes late.  
<sup>e</sup> The observations of the 21st December are omitted in the hourly means.

VERTICAL FORCE.

One Scale Division = '000094 parts of the V. F. Change in the magnetic moment of the Bar for 1° Fahr. = '00011.

12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	Means.
Sc. Div. 81·0	Sc. Div. 81·0	Sc. Div. 81·0	Sc. Div. 81·0	Sc. Div. 80·7	Sc. Div. 80·4	Sc. Div. 80·3	Sc. Div. 80·4	Sc. Div. 80·4	Sc. Div. 80·2	Sc. Div. 80·2	Sc. Div. 80·0	Sc. Div. 80·5
79·2	79·2	79·2	79·2	79·0	78·8	78·3	77·9	77·9	77·8	77·3	77·2	79·0
73·3	73·4	73·9	74·2	—	74·2	—	77·8	78·7	78·9	78·9	78·6	76·1
—	—	—	—	—	—	—	77·8	78·7	78·9	78·9	78·6	76·1
76·9	77·8	78·1	78·7	79·3	78·7	79·8	80·3	76·0	80·4	82·3	82·2	78·1
82·6	82·8	82·8	84·2	85·3	84·1	83·5	83·0	80·2	82·9	82·8	82·8	82·8
83·5	83·2	82·4	81·5	80·6	81·2	81·2	81·2	80·5	79·0	77·7	78·1	81·6
80·8	80·8	81·0	79·8	79·7	79·3	77·7	77·3	77·7	78·1	77·1	75·9	79·7
82·0	81·4	81·3	82·6	83·4	82·0	81·4	82·1	82·1	82·5	82·1	81·3	80·3
82·6	82·6	82·6	82·9	82·8	82·5	—	—	—	—	—	—	—
—	—	—	—	—	—	86·2	86·2	85·8	85·8	85·8	84·8	83·5
79·4	79·6	79·6	79·7	79·7	85·5	82·0	74·3	76·2	76·2	76·2	76·2	80·6
78·6	78·6	78·6	78·6	79·4	79·2	78·7	78·4	77·5	77·9	78·0	77·6	77·6
75·2	76·6	85·0	80·6	75·9	75·2	75·2	75·0	76·0	80·2	84·5	—	78·1
76·7	76·7	77·0	77·7	77·9	78·0	78·9	78·7	78·7	78·7	78·7	78·5	80·1
78·0	87·2	87·6	87·6	87·6	88·1	88·1	88·1	88·0	88·7	88·7	88·7	83·3
88·3	88·3	87·4	86·9	86·3	86·3	—	—	—	—	—	—	—
—	—	—	—	—	—	94·7	94·8	94·2	93·2	92·4	92·1	90·4
87·3	86·7	86·4	86·4	87·4 <sup>b</sup>	86·9	86·4	79·2	79·8	82·0	82·0	86·3	87·3
85·0	85·3	85·3	85·3	77·3	77·2	77·2	77·5	77·5	78·1	78·1	78·6	83·3
—	—	—	—	72·9	72·7	72·5	72·0	71·5	68·0	70·4	71·6	—
82·7	81·9	82·6	84·9	85·1	86·2	86·4	86·8	86·3	87·0	87·0	86·7	81·5
89·1	89·1	89·0	89·0	89·0	88·7	88·5	88·4	88·3	87·9	87·8	87·8	89·2
88·9	89·2	89·1	88·9	88·4	88·6	—	—	—	—	—	—	—
—	—	—	—	—	—	85·8	85·8	85·4	85·2	84·8	84·0	88·1
82·0	81·4	82·1	82·1 <sup>f</sup>	82·1	82·1	82·1	82·4	82·0	81·1	81·6	82·3	82·6
78·8	78·8	79·3	79·3	79·8	80·1	79·4	79·0	79·3	79·3	79·3	80·6	79·9
83·1	83·1	83·3	83·9	83·8	83·4	83·1	83·1	82·5	82·3	82·3	82·3	83·0
78·3	78·3	77·5 <sup>g</sup>	78·0	78·8	77·0	77·4	77·1	75·8	72·9	72·1	73·6	78·5
78·5	78·9	78·9	78·8	79·5	79·8	80·7	81·0	81·4	81·3	82·5	—	78·2
82·4	82·3	82·3	81·9	81·7	81·7	—	—	—	—	—	—	—
—	—	—	—	—	—	90·9	90·8	89·4	88·5	88·5	88·5	84·1
81·31	81·70	82·05	82·07	82·02	81·74	82·37	81·83	81·45	81·77	81·86	81·78	—

TEMPERATURE OF THE VERTICAL FORCE MAGNET.

43·4	43·2	43·2	43·4	43·4	43·6	43·6	43·4	43·5	43·5	43·5	44·0	43·3
44·7	44·7	44·6	44·4	44·5	44·5	45·2	45·3	45·4	45·6	45·6	45·7	44·6
48·4	48·4	48·2	47·9	—	47·4	—	—	—	—	—	—	—
—	—	—	—	—	—	43·8	44·8	43·8	43·5	43·8	44·2	46·5
45·4	45·0	44·5	44·0	43·6	44·0	42·8	42·4	42·0	41·4	41·2	40·7	44·0
41·6	41·4	41·2	40·9	40·6	40·6	40·6	40·6	40·6	40·6	40·6	40·4	40·7
43·4	43·4	43·4	43·6	43·6	43·4	43·4	43·4	43·4	43·5	43·4	43·3	42·3
44·0	44·2	44·4	44·4	44·4	44·9	44·8	44·8	45·0	45·1	45·2	46·2	44·0
46·9	46·7	46·4	46·0	45·5	45·1	44·6	44·2	43·6	43·4	43·4	43·4	45·8
42·6	42·6	42·4	42·2	42·0	41·8	—	—	—	—	—	—	—
—	—	—	—	—	—	39·7	39·4	39·7	39·7	40·0	40·0	41·7
43·9	43·9	44·1	43·7	43·8	44·2	44·3	44·4	44·4	44·1	43·8	43·4	42·8
42·4	42·4	42·4	42·2	42·2	42·0	41·7	41·4	41·2	41·1	41·2	41·4	42·2
44·6	44·4	44·4	44·4	44·5	44·4	44·4	44·4	44·4	44·4	44·4	—	43·2
43·9	43·5	43·4	43·5	43·0	42·6	42·2	42·0	41·6	41·6	41·4	42·0	43·2
42·6	42·3	42·2	41·6	41·3	41·2	41·1	41·4	41·2	41·0	40·8	40·5	41·5
41·2	41·6	42·2	42·2	42·4	42·7	—	—	—	—	—	—	—
—	—	—	—	—	—	37·6	37·6	37·8	38·4	38·6	38·5	40·0
42·4	42·6	42·6	42·8	42·4 <sup>a</sup>	42·2	42·2	41·9	41·5	41·4	41·4	41·6	41·1
43·6	43·4	43·4	43·4	43·2	43·1	43·0	42·9	42·6	42·2	41·9	42·4	42·6
—	—	—	—	48·1	48·2	48·2	48·7	48·7	48·7	48·7	48·3	—
40·4	39·6	38·8	38·7	38·2	38·2	38·0	38·0	38·0	37·8	37·2	36·0	41·0
36·4	36·4	36·2	36·4	36·4	36·4	36·6	36·7	36·9	36·9	36·9	37·0	36·1
36·7	36·8	37·0	37·0	37·2	37·0	—	—	—	—	—	—	—
—	—	—	—	—	—	38·7	38·8	39·0	39·2	39·3	40·0	37·1
41·9	41·4	40·9	40·9 <sup>o</sup>	40·6	40·6	40·8	41·2	41·4	41·6	41·6	41·4	40·8
43·2	43·3	43·2	43·4	43·2	43·0	43·0	42·7	42·4	42·4	42·2	41·6	42·6
40·8	40·6	40·4	40·4	40·4	40·3	40·4	40·3	40·3	40·3	40·3	40·6	40·4
44·4	44·3	44·3 <sup>f</sup>	44·6	44·8	45·0	45·1	45·2	45·4	45·5	45·6	45·9	43·7
43·6	43·3	43·2	42·2	41·8	41·2	41·0	40·8	40·3	40·0	39·9	—	43·3
40·4	40·4	40·5	40·4	40·4	40·2	—	—	—	—	—	—	—
—	—	—	—	—	—	32·6	32·4	32·4	32·4	32·6	32·2	38·2
42·80	42·68	42·60	42·48	42·14	42·29	41·58	41·55	41·45	41·41	41·37	41·39	—

<sup>b</sup> Six minutes late.

<sup>f</sup> Ten minutes late.

<sup>o</sup> Four minutes late.

January 19th and 20th.			MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.					DECLINATION.					
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		135.1	134.1	135.8	140.8	137.4	138.7	141.3	141.2	136.2	—	—
6	0		134.7	135.0	138.4	140.8	137.6	138.7	143.0	136.9	136.3	—	—
12	0		134.1	134.9	141.3	140.0	138.3	138.3	142.9	134.0	136.3	—	—
18	0		133.3	134.6	146.6	138.8	138.9	138.8	143.3	134.8	136.0	—	—
24	0		134.0	135.0	148.8	138.2	138.4	138.8	146.9	135.5	136.2	—	—
30	0		134.0	135.4	147.5	138.0	138.2	138.9	149.0	137.0	— <sup>a</sup>	—	—
36	0		133.2	135.2	145.9	138.2	138.4	138.9	152.6	138.8	—	—	—
42	0		132.9	135.2	143.6	137.8	138.8	138.9	153.0	139.0	—	—	—
48	0		132.6	134.5	142.2	137.4	138.9	139.3	149.6	136.4	—	—	—
54	0		133.0	135.8	140.6	137.1	138.9	140.4	145.7	135.7	—	—	—

M. S.		One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.					
2	0	466.9	463.6	453.7	462.0	463.4	462.9	455.2	464.0	458.1	—	—
8	0	466.7	463.9	452.7	463.9	464.3	463.0	453.1	462.8	458.6	—	—
14	0	462.6	463.2	450.9	463.4	464.5	462.4	451.4	460.9	458.8	—	—
20	0	462.9	461.4	455.0	463.8	464.0	463.9	456.2	461.0	459.5	—	—
26	0	466.0	461.3	461.2	463.7	463.0	461.9	462.7	459.9	— <sup>a</sup>	—	—
32	0	465.6	462.1	461.8	463.9	462.6	460.6	461.7	459.8	—	—	—
38	0	464.7	463.7	462.5	463.9	462.2	462.2	461.3	459.5	—	—	—
44	0	463.3	461.4	461.8	464.6	462.4	457.0	461.9	462.1	—	—	—
50	0	461.8	456.0	462.6	465.0	462.2	457.1	459.0	461.7	—	—	—
56	0	461.4	456.7	461.7	464.0	462.0	456.1	459.1	457.9	—	—	—

Thermometer		49.4	49.8	50.4	50.6	50.6	50.6	51.0	51.2	51.0	—	—

M. S.		One Scale Division = .000093 parts of the V. F.					VERTICAL FORCE.					
4	0	99.1	96.9	95.5	94.5	94.2	94.1	93.7	92.8	93.7	—	—
10	0	99.2	97.2	95.5	94.6	94.2	94.0	93.7	92.5	93.9	—	—
16	0	98.7	97.0	95.5	94.6	94.2	94.0	93.9	92.8	93.9	—	—
22	0	98.5	96.7	95.5	95.0	94.2	93.8	94.2	93.1	93.9	—	—
28	0	98.6	96.7	95.6	94.4	94.2	93.8	93.6	93.1	— <sup>a</sup>	—	—
34	0	98.7	96.7	95.2	94.4	94.1	94.0	93.2	93.1	—	—	—
40	0	98.6	96.7	95.3	94.4	94.1	94.0	93.0	93.1	—	—	—
46	0	98.2	96.5	95.3	94.4	93.9	94.0	92.5	93.7	—	—	—
52	0	97.7	96.3	95.0	94.4	93.9	94.0	92.5	93.6	—	—	—
58	0	96.9	96.1	94.7	94.2	93.9	93.7	92.8	93.6	—	—	—

Thermometer		48.2	49.1	49.8	50.4	50.5	50.4	50.6	50.5	50.4	—	—

\* The observations from 18<sup>h</sup> 20<sup>m</sup> to 20<sup>h</sup> 58<sup>m</sup> are omitted in consequence of having been taken at wrong intervals.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
19	10	0	29.386	42.1	39.0	—	Calm.	Overcast; cirri and haze.
	11	0	29.374	39.8	36.9	Northerly	Nearly calm	Overcast; cirri, cirro-cumuli and haze.
	12	0	29.383	38.0	35.8	—	Calm.	Partially overcast with light cirro-cumuli and haze. [ment.
	13	0	29.382	37.0	35.1	—	Calm.	Partially overcast, with light detached cirro-cumuli in close arrange-
	14	0	29.380	36.3	34.7	—	Calm.	Clouded with detached cirro-cumuli; a few clear spaces in zenith.
	15	0	29.376	36.5	34.7	—	Calm.	Clouded with cirro-cumuli and haze, a few clear spaces.
	16	0	29.358	36.2	34.4	—	Calm.	Clouded with cirro-cumuli and cirro-strati; clear spaces in zenith.
	17	0	29.350	34.8	33.3	—	Calm.	‡ clouded with scattered cirro-cumuli.
	18	0	29.346	35.5	34.0	—	Calm.	Densely clouded; cirro-cumuli and cirro-strati.
	19	0	29.347	39.2	36.5	—	Calm.	Densely clouded.
	20	0	29.358	38.7	35.8	—	Calm.	Densely clouded; short shower of rain.
	21	0	29.329	36.6	34.9	N. N. W.	Light.	Densely overcast; slight rain.

MAGNETICAL OBSERVATIONS.

January 19th and 20th.

DECLINATION.

Angular Value of one Scale Division = 0.721

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
138.0	137.3	138.3	139.0	140.0	141.3	143.1	141.7	138.2	133.4	131.6	131.2	132.0
137.2	138.0	138.1	139.0	140.0	141.7	143.2	141.2	137.7	133.1	131.5	131.1	132.1
136.3	138.0	138.1	139.0	141.0	142.0	143.2	140.7	137.1	132.9	131.6	131.0	132.1
136.0	137.3	138.1	138.6	140.6	142.1	143.2	140.8	137.0	132.6	131.3	131.2	132.9
137.0	137.7	139.0	138.0	140.4	143.0	142.9	140.0	136.3	132.1	131.0	131.6	132.9
136.9	137.8	138.8	138.7	140.2	143.0	142.3	139.4	135.8	131.6	130.8	131.5	133.2
136.5	137.9	138.4	138.9	140.4	143.0	142.3	139.4	135.2	131.4	130.6	131.7	133.6
137.1	138.0	138.0	139.1	140.5	143.0	142.3	139.2	134.8	—	130.5	132.0	134.0
137.2	138.0	138.9	139.5	140.4	143.1	142.4	139.0	134.3	131.9	130.9	132.0	134.0
137.2	138.6	138.9	139.0	140.7	143.1	141.9	138.5	134.0	131.7	131.0	132.0	134.4

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

459.9	462.0	463.1	463.4	465.4	463.2	460.4	448.8	443.9	445.2	452.8	462.3	468.2
458.9	462.0	462.5	462.4	463.9	463.1	459.1	448.6	443.5	444.9	453.9	462.9	469.4
458.0	460.9	463.0	463.0	465.1	463.6	458.8	447.3	443.4	444.8	455.5	463.8	469.2
458.2	461.0	462.5	463.5	464.0	462.2	456.7	447.4	443.5	446.4	457.8	464.6	469.8
459.7	461.8	462.1	463.3	464.8	462.9	456.1	446.7	443.6	446.4	457.7	465.4	471.7
460.0	461.8	462.5	463.4	463.3	463.3	456.3	445.9	443.0	447.8	459.2	464.4	470.4
460.8	461.5	462.8	462.5	463.0	463.1	453.9	444.7	442.7	448.2	460.3	463.5	471.0
461.7	462.0	562.3	462.5	463.0	463.0	451.6	445.1	443.2	448.9	460.1	464.5	472.7
461.3	462.3	463.1	464.1	463.5	462.0	450.8	444.2	444.7	449.7	461.4	465.5	473.5
462.0	462.6	462.8	462.3	462.7	460.7	450.3	444.1	445.1	451.0	461.8	465.9	471.7
49.8	49.5	49.0	49.0	48.5	48.6	47.8	48.4	48.8	49.0	48.8	48.5	48.5 <sup>b</sup>

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00011.

94.4	95.6	96.1	95.5	95.5	95.8	95.8	95.9	96.1	96.1	97.2	97.8	97.7
94.7	95.6	96.1	95.5	95.5	95.7	95.7	96.0	96.1	96.1	97.0	97.6	97.7
95.0	95.6	96.0	95.5	95.5	95.9	95.7	96.0	96.1	96.2	97.5	97.7	97.8
95.1	96.1	95.8	95.5	95.7	95.9	95.6	96.0	96.1	96.4	97.5	97.7	97.8
95.1	95.6	95.8	95.5	95.5	96.0	95.6	96.1	96.1	96.8	97.7	97.7	97.8
95.4	96.1	95.8	95.5	95.5	96.1	95.6	96.1	96.1	96.5	97.6	97.6	97.6
95.5	96.1	95.8	95.5	95.6	96.0	95.5	96.1	96.1	96.6	97.3	97.5	97.6
95.5	96.1	95.7	95.5	95.8	95.7	95.6	96.1	96.1	97.1	97.6	97.5	97.8
95.6	96.1	95.7	95.5	95.8	95.6	95.6	96.1	96.3	97.3	97.8	97.5	97.8
95.6	96.1	95.5	95.5	95.8	95.6	95.6	96.1	96.1	97.3	97.8	97.5	97.4
50.0	49.3	49.1	49.3	49.2	49.3	48.8	48.4	48.4	48.7	48.9	48.5	48.6 <sup>b</sup>

and increasing Horizontal and Vertical Force. and their exact times being unknown.

<sup>b</sup> At 20<sup>d</sup> 10<sup>h</sup> thermometer of the H. F. 48°·4; of V. F. 48°·4.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
19	22	0	In. 29.320	° 34.8	° 33.8	N. W.	Light.	Heavy rain.
	23	0	29.332	34.8	34.1	—	Calm.	Moderate rain.
20	0	0	29.336	34.4	34.1	—	Calm.	Heavy rain.
	1	0	29.327	34.2	34.1	E.	Light.	Densely clouded; cirro-cumuli and haze, rain ceasing.
	2	0	29.328	34.7	34.5	N. E.	Very light	Densely overcast; cirri, cirro-strati and haze; moderate rain.
	3	0	29.327	35.1	35.0	N. E.	Light.	Densely overcast; cirro-strati and haze; moderate rain.
	4	0	29.321	36.6	36.6	—	Calm.	Densely clouded; moderate rain.
	5	0	29.283	36.8	36.4	—	Calm.	Densely clouded; slight rain.
	6	0	29.240	36.1	35.6	E.	Light.	Densely clouded; moderate rain.
	7	0	29.193	35.6	35.2	E.	Light.	Densely clouded; moderate rain.
	8	0	29.173	35.9	35.5	E.	Light.	Densely clouded; moderate rain.
	9	0	29.137	35.6	35.4	E.	Light.	Densely clouded; moderate rain.
	10	0	29.109	35.6	35.4	E.	Light.	Densely clouded; light rain.



February 25th and 26th.		MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.		Angular Value of one Scale Division = 0'.721.					DECLINATION.					
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0	132.7	131.0	131.7	130.7	132.0	136.1	131.2	131.6	133.3	132.3	131.4
6	0	133.2	131.0	132.0	131.9	132.9	134.8	131.8	131.3	134.0	132.7	132.7
12	0	133.4	131.5	131.0	132.0	132.8	134.2	131.8	131.2	135.4	133.0	133.0
18	0	132.9	131.8	130.3	132.0	132.4	134.0	131.8	131.7	—	132.9	133.2
24	0	131.3	130.9	129.7	131.9	132.8	133.5	131.8	132.0	132.8	132.2	134.1
30	0	132.0	129.7	129.7	132.0	132.9	132.3	131.8	132.1	134.0	132.2	133.9
36	0	132.0	129.0	130.2	132.5	133.0	132.0	131.5	132.3	135.0	128.9	133.4
42	0	131.1	129.5	130.2	133.1	133.9	131.8	131.8	137.2	134.3	125.0	133.3
48	0	131.0	130.5	129.6	132.6	134.9	131.8	131.8	137.0	134.0	126.1	133.0
54	0	131.0	130.5	130.6	131.5	135.4	131.6	131.8	135.2	133.1	128.4	134.5

M. S.		One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.					
2	0	467.2	484.3	485.4	478.0	471.2	466.4	473.3	474.4	471.9	475.0	482.1
8	0	473.1	484.0	483.5	478.5	469.3	467.1	473.7	474.6	471.7	474.3	483.0
14	0	478.2	482.2	481.0	478.5	470.2	467.3	473.6	473.5	479.1	474.2	480.0
20	0	482.1	484.4	482.0	478.7	468.7	469.1	474.4	472.8	479.4	473.2	479.2
26	0	486.4	480.2	479.2	478.6	471.7	469.2	474.4	471.6	475.9	474.0	478.8
32	0	483.8	479.6	479.4	476.1	469.7	470.6	474.2	471.5	476.3	473.5	479.6
38	0	485.0	482.1	480.7	476.9	471.2	471.7	474.0	474.1	477.2	478.7	478.8
44	0	483.2	483.0	479.1	476.4	469.4	471.3	473.5	477.4	475.5	476.5	477.8
50	0	482.5	482.9	478.5	475.3	468.5	473.8	472.9	476.5	474.3	479.0	477.6
56	0	483.6	484.2	478.1	476.4	469.2	472.8	474.0	475.6	475.0	480.4	475.6

Thermometer	39.6	39.5	39.6	40.0	40.3	40.6	40.5	40.3	40.2	40.1	40.2
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M. S.		One Scale Division = .000092 parts of the V. F.					VERTICAL FORCE.					
4	0	109.3	109.0	109.2	108.1	108.2	108.6	108.3	108.7	107.7	108.4	106.5
10	0	109.8	108.7	109.2	108.1	107.8	108.6	108.3	108.6	108.3	108.4	106.5
16	0	109.8	108.7	109.2	108.1	108.3	108.4	108.3	108.8	108.3	108.4	106.1
22	0	109.8	109.2	109.2	108.1	108.4	108.4	108.3	108.4	107.7	108.4	106.1
28	0	109.8	109.2	108.7	108.1	108.4	108.4	108.3	108.4	107.6	108.4	106.5
34	0	109.8	108.7	108.9	107.8	108.4	108.4	108.3	108.4	107.6	108.4	107.0
40	0	109.6	108.4	108.9	108.0	108.4	108.4	108.3	108.4	107.6	108.4	107.0
46	0	109.1	108.7	108.7	108.0	108.4	108.6	108.3	108.0	107.6	107.5	107.0
52	0	109.0	108.7	108.7	108.0	108.6	108.5	108.3	108.0	107.8	107.3	107.0
58	0	109.0	109.3	108.1	107.5	108.5	108.3	108.5	107.7	108.3	106.5	106.6

Thermometer	39.8	39.9	39.9	40.4	41.1	40.8	40.8	40.4	40.4	40.5	40.4
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Increasing numbers denote decreasing westerly Declination.  
 \* At 26<sup>d</sup> 10<sup>h</sup>, thermometer of

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
25	10	0	29.874	28.3	26.8	E.	Fresh. <sup>b</sup>	Densely clouded; cumulo-strati, cirro-cumuli, and haze; low clouds moving rapidly. Densely clouded; cirro-cumuli and haze. Densely overcast; cirro-cumuli and haze. Overcast; cirro-cumuli and light haze; clouds from E. Overcast with light haze. Overcast with light haze. [from S. W.] Overcast with light haze; light cirro-cumuli rising in S. W.; clouds Clouded; light cirro-cumuli and haze; clouds from W. Clouded with light cirro-cumuli and haze; clouds from W. Clouded; cirro-cumuli and haze; clouds from S. W. Clouded; cirro-cumuli, cumulo-strati, and haze; clouds from S. W. Densely clouded; strati and haze.
	11	0	29.852	28.3	26.6	E.	Brisk.	
	12	0	29.826	28.6	26.6	E.	Brisk.	
	13	0	29.816	28.4	26.4	E.	Brisk.	
	14	0	29.806	28.0	26.0	E.	Brisk.	
	15	0	29.795	27.8	26.2	E.	Brisk.	
	16	0	29.777	28.1	26.4	E.	Brisk.	
	17	0	29.749	27.9	26.8	E.	Brisk.	
	18	0	29.749	28.2	27.0	E.	Brisk.	
	19	0	29.725	28.6	27.6	E.	Moderate.	
	20	0	29.705	28.9	28.0	E.	Moderate.	
	21	0	29.685	29.6	28.7	E.	Moderate.	

<sup>b</sup> The wind blew in gusts from 25<sup>d</sup> 10<sup>h</sup> to 26<sup>d</sup> 3<sup>h</sup>, and at 25<sup>d</sup> 22<sup>h</sup> with violent squalls.



MAGNETICAL OBSERVATIONS.

February 25th and 26th.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 134.6	Sc. Div. 133.0	Sc. Div. 132.2	Sc. Div. 132.8	Sc. Div. 135.5	Sc. Div. 136.9	Sc. Div. 136.4	Sc. Div. 135.1	Sc. Div. 132.0	Sc. Div. 128.8	Sc. Div. 127.6	Sc. Div. 126.7	Sc. Div. 128.0
133.7	132.8	133.1	134.3	135.0	137.2	136.4	134.5	131.1	128.3	127.6	126.9	128.0
134.8	131.5	133.0	135.2	135.1	137.2	136.0	135.0	130.9	127.9	127.0	127.2	128.0
136.3	130.1	133.4	134.4	134.9	138.0	137.1	134.8	130.4	127.8	127.2	127.0	128.3
135.9	129.2	133.4	135.0	136.0	137.6	137.0	134.1	130.8	128.0	127.7	127.2	128.0
135.7	129.5	133.8	134.9	135.7	137.0	137.0	133.3	130.1	128.0	126.6	127.6	128.9
136.0	129.8	134.3	134.5	136.1	137.0	137.0	133.6	129.8	128.0	126.2	127.6	128.1
135.4	130.3	134.7	134.0	136.1	137.5	136.1	133.2	129.2	127.7	126.7	127.7	128.8
134.9	131.0	135.0	135.3	136.6	137.0	135.3	132.8	129.2	127.6	127.6	127.7	129.1
134.5	132.0	134.2	134.9	136.6	137.0	135.0	132.3	129.0	127.5	127.0	128.0	129.5

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

475.3	465.7	475.8	476.6	477.3	474.0	471.2	464.6	459.3	455.7	455.0	463.7	469.2
472.8	466.0	477.1	476.9	475.7	473.6	471.0	463.4	458.7	456.7	458.0	468.2	469.0
469.5	465.5	476.8	479.4	475.3	473.7	469.4	464.6	458.4	457.1	458.0	470.0	468.2
472.4	467.0	477.1	477.1	473.5	473.6	468.3	463.7	453.5	456.6	459.8	466.7	469.2
471.3	468.7	478.6	478.2	474.3	474.5	466.2	462.6	457.1	456.5	460.0	469.7	472.7
473.0	470.3	478.9	479.8	473.3	473.9	465.5	461.1	456.1	458.2	465.2	468.4	470.3
470.1	472.6	481.8	478.4	474.7	473.5	465.0	461.7	455.8	458.6	462.1	468.8	469.2
468.7	473.6	479.8	477.8	474.6	473.0	465.7	461.6	455.6	458.5	461.8	468.8	466.6
466.9	474.3	480.6	480.2	474.7	473.2	464.9	461.7	456.9	455.3	464.7	469.4	467.7
467.7	475.5	480.7	476.5	474.6	471.9	464.1	459.3	456.1	456.2	462.1	467.0	470.6
40.5	40.8	41.3	42.0	42.5	42.3	42.5	42.5	42.8	43.6	44.0	44.4	44.8

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00011.

106.6	106.4	107.1	106.9	105.5	106.2	105.9	106.7	105.6	104.7	104.3	104.5	104.1
106.3	106.9	107.0	106.8	105.7	106.2	105.9	105.9	105.5	104.8	104.3	104.7	104.1
106.2	106.9	106.9	106.8	105.7	106.2	105.6	105.9	105.4	104.6	104.6	104.7	103.9
106.1	107.0	106.9	106.9	105.5	106.2	105.7	105.9	105.2	104.6	104.2	104.6	103.9
106.2	107.0	106.9	107.0	105.7	106.2	105.6	105.9	105.2	104.6	104.8	104.4	104.1
106.2	107.4	106.9	106.5	105.9	106.2	105.7	105.8	105.2	104.6	105.0	104.4	103.7
106.1	107.2	106.9	106.6	106.1	106.2	105.7	105.8	105.1	104.7	104.7	104.2	103.8
106.4	107.2	107.0	106.2	106.0	106.2	105.9	106.0	105.0	104.5	104.6	104.3	103.6
106.3	107.2	106.9	105.9	106.0	106.2	105.9	106.0	104.9	104.5	104.8	104.1	103.6
106.7	107.1	106.9	105.8	106.0	105.9	105.9	105.7	104.9	104.4	104.5	104.0	104.1
40.5	40.7	41.0	41.5	42.4	42.5	42.2	42.2	42.6	42.8	43.7	43.7	44.2

and increasing Horizontal and Vertical Force.  
H. F. 45°.0; of V. F. 44°.4.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.	Barometer at 32°.	Thermometers.		Wind.		Weather.
		Dry.	Wet.	Direction.	Force.	
D. 25	H. 22	M. 0	In. 29.644	° 30.8	° 30.0	Easterly. Moderate. Densely clouded; violent squalls.
			29.576	31.8	31.1	E. Moderate. Densely clouded.
26	0	0	29.573	32.7	32.0	E. Moderate. Densely clouded; slight sleet; clouds from E.
	1	0	29.622	33.2	32.4	E. Moderate. Moderate sleet since noon; clouds from E.
	2	0	29.609	33.5	32.5	E. Moderate. Heavy snow and rain since 1 <sup>h</sup> 30 <sup>m</sup> .
	3	0	29.593	34.6	33.9	E. Moderate. Raining heavily; snow until 2 <sup>h</sup> 30 <sup>m</sup> .
	4	0	29.592	34.8	34.7	E. Moderate. Raining moderately.
	5	0	29.572	35.1	35.0	E. Light. Densely overcast with haze; moderate rain since 4 <sup>h</sup> ; clearing up.
	6	0	29.566	35.3	35.1	E. Light. Densely clouded; rain ceased; clouds from E.
	7	0	29.540	35.5	35.4	E. Light. Densely clouded; clouds from E.
	8	0	29.517	35.8	35.6	E. Very light. Densely clouded; clouds from E.
	9	0	29.517	35.8	35.5	E. Very light. Densely clouded and haze; clouds from E.
	10	0	29.461	35.6	35.2	Easterly. Light. Clouded; very dense haze; clouds from E.

March 23rd and 24th.			MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.			Angular Value of one Scale Division = 0'·721.					DECLINATION.					
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		122·2	126·1	130·1	177·4	136·3	130·0	133·8	139·8	136·5	136·0	128·1
6	0		121·0	126·4	130·2	173·5	133·0	130·4	135·9	142·9	136·1	135·0	127·5
12	0		120·7	127·1	130·0	160·2	130·7	130·2	136·0	144·8	136·1	135·0	128·2
18	0		121·1	128·8	130·9	150·0	132·0	129·8	135·2	144·2	136·6	133·7	129·3
24	0		122·7	129·1	132·1	147·6	132·1	130·0	136·0	140·4	136·4	131·7	130·2
30	0		124·7	129·0	135·9	144·2	131·9	130·6	134·4	139·7	135·8	131·1	131·7
36	0		125·9	128·9	137·8	146·3	130·8	131·1	134·4	138·0	136·0	132·3	132·1
42	0		126·4	128·0	143·2	140·2	131·0	131·8	136·0	136·0	137·0	131·8	130·0
48	0		126·7	128·2	150·1	136·1	131·0	131·4	136·3	135·7	136·4	130·1	131·0
54	0		126·5	129·7	162·6	135·9	130·1	132·5	138·0	136·7	136·0	129·5	131·9
			One Scale Division = ·000074 parts of the H. F.					HORIZONTAL FORCE.					
M.	S.												
2	0		453·7	456·3	451·3	450·6	441·9	449·4	447·7	444·5	460·0	446·6	455·1
8	0		459·8	452·8	447·6	464·6	445·3	451·9	449·6	440·9	458·8	444·8	448·0
14	0		458·5	453·4	453·6	457·0	440·6	451·6	446·9	439·9	458·0	447·0	453·2
20	0		449·6	465·8	451·8	444·8	443·7	450·5	445·6	442·4	456·2	449·2	454·3
26	0		450·0	474·1	452·5	434·0	449·7	448·6	445·9	442·7	456·0	451·9	452·9
32	0		452·7	465·3	447·7	429·3	451·1	447·3	444·0	445·8	453·6	451·2	452·8
38	0		463·3	460·9	449·7	432·8	450·1	445·5	444·2	450·6	452·0	456·2	455·5
44	0		467·8	452·8	446·5	434·4	451·0	448·3	446·2	453·0	452·6	450·9	455·8
50	0		463·3	448·5	432·5	431·9	450·3	448·3	448·8	455·9	449·3	450·6	456·8
56	0		457·6	453·5	425·8	432·5	448·5	445·9	448·0	458·1	448·0	453·3	455·2
Thermometer			52·2	52·4	51·9	52·2	52·0	51·5	51·2	51·3	51·5	51·5	51·0
			One Scale Division = ·000092 parts of the V. F.					VERTICAL FORCE.					
M.	S.												
4	0		94·8	94·6	97·8	103·3	98·0	95·4	93·8	93·9	93·6	92·1	91·3
10	0		96·0	94·4	98·3	99·3	97·8	95·3	92·8	93·8	93·1	92·1	90·1
16	0		94·7	94·5	99·4	96·9	97·9	95·3	92·7	93·6	92·9	92·1	90·6
22	0		94·2	96·2	99·1	96·7	98·1	95·3	92·7	94·4	92·9	92·1	90·2
28	0		93·8	97·5	100·4	97·2	97·1	94·9	93·0	94·3	92·8	92·4	91·0
34	0		95·3	96·9	102·4	98·8	96·4	94·7	93·7	94·3	92·8	92·2	91·0
40	0		95·3	96·9	107·3	97·6	96·1	94·5	94·0	94·5	92·8	91·3	91·0
46	0		96·0	96·7	106·3	97·5	95·9	94·7	94·0	94·6	92·1	91·3	91·7
52	0		95·0	97·0	105·8	98·6	95·6	94·8	94·0	94·6	92·3	91·3	91·7
58	0		95·0	97·0	109·1	99·4	95·4	94·5	93·9	93·7	92·3	91·3	91·7
Thermometer			50·5	51·0	51·1	51·5	52·0	51·8	51·3	51·2	51·3	51·4	51·2
Increasing numbers denote decreasing westerly Declination, * At 24 <sup>d</sup> 10 <sup>h</sup> thermometer of													
METEOROLOGICAL OBSERVATIONS.													
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.					
				Dry.	Wet.	Direction.	Force.						
D.	H.	M.	In.	°	°								
23	10	0	29·844	38·2	34·7	S. E.	Light.	¾ clouded; cirro-cumuli and cumulo-strati; clear in W.; clouds from [S.E.]					
	11	0	29·841	34·4	32·3	E.	Light.	Densely clouded; cirro-cumuli and cumulo-strati; clouds from S.					
	12	0	29·841	33·3	31·5	E.	Light.	Densely clouded; strati and haze. [from S.E.]					
	13	0	29·841	33·0	31·5	E.	Very light	Densely clouded; cumulo-strati, cirro-cumuli and haze; clouds					
	14	0	29·829	32·9	31·6	—	Calm.	Clouded with cirro-cumuli; fair; clouds from S.					
	15	0	29·813	32·6	31·3	—	Calm.	Clouded with cirro-cumuli; fair; clouds from S.					
	16	0	29·804	32·5	31·3	—	Calm.	Clouded; light cirro-cumuli; fair; clouds from S.E.					
	17	0	29·802	31·7	30·6	—	Calm.	Partially clouded with well-defined cirro-cumuli; clouds from S.					
	18	0	29·784	30·5	29·4	—	Calm.	Clear, except a few light clouds round horizon.					
	19	0	29·776	29·8	29·1	—	Calm.	A few cirro-strati and cirri in S. and S.W.; clouds rising in S.W.					
	20	0	29·764	30·2	29·2	—	Calm.	Overcast; light cirri and cirro-cumuli overspreading the sky.					
	21	0	29·765	30·8	29·2	—	Calm.	Overcast with cirro-cumuli in close arrangement.					

MAGNETICAL OBSERVATIONS.

March 23rd and 24th.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 132.8	Sc. Div. 129.2	Sc. Div. 127.4	Sc. Div. 132.0	Sc. Div. 140.8	Sc. Div. 140.9	Sc. Div. 138.2	Sc. Div. 135.2	Sc. Div. 128.6	Sc. Div. 125.1	Sc. Div. 122.5	Sc. Div. 125.6	Sc. Div. 132.7
133.7	128.1	127.2	135.1	140.5	140.3	137.7	132.8	127.9	126.0	123.0	125.7	133.5
134.4	125.2	127.2	135.1	140.7	140.4	137.5	133.5	126.1	125.5	123.0	125.9	133.9
134.5	122.9	126.2	136.0	140.3	140.7	137.1	132.6	125.7	124.5	122.9	124.3	134.1
132.7	123.7	125.2	138.2	140.2	140.2	136.3	131.7	124.6	122.7	122.8	123.0	133.1
128.5	127.4	125.5	139.7	140.6	139.9	136.1	130.8	125.0	122.7	123.6	124.0	131.4
126.8	130.4	126.0	140.7	140.0	139.3	136.0	131.0	125.0	123.1	123.9	123.1	130.5
124.2	130.6	128.0	141.0	139.3	139.1	135.0	131.2	125.2	122.5	124.0	124.9	130.3
125.9	130.0	128.6	140.0	141.4	138.8	133.9	129.8	125.0	122.1	124.2	128.6	130.2
127.2	128.2	130.0	140.8	141.0	138.7	133.9	127.8	124.8	122.1	125.0	131.6	129.9

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

455.7	434.4	438.9	465.4	466.7	457.3	450.4	446.6	435.5	434.2	439.6	451.5	448.0
456.3	430.5	453.9	469.4	465.8	456.6	450.3	443.7	436.2	435.6	441.4	449.3	451.3
452.4	427.0	458.6	468.5	466.3	454.2	450.5	440.7	433.4	437.5	441.0	451.4	460.3
452.3	422.4	463.0	468.4	465.2	454.4	448.4	440.9	434.7	440.0	442.2	448.1	472.6
452.8	432.8	467.0	469.0	464.3	453.3	448.2	440.2	437.2	440.1	444.6	444.9	470.8
453.3	438.8	468.5	469.6	464.3	453.5	446.5	441.7	439.2	438.9	447.9	439.5	463.6
450.4	446.9	468.0	468.2	463.1	453.0	447.4	438.4	435.5	441.1	449.4	441.2	458.1
441.7	445.7	468.0	468.9	459.1	451.5	448.9	436.5	437.3	439.5	451.5	432.2	457.0
440.3	443.7	468.0	466.6	460.2	452.6	446.9	440.9	436.3	437.9	451.4	439.5	457.0
435.0	440.8	467.3	466.8	460.2	451.5	443.4	437.9	436.0	437.3	450.7	443.1	455.6
50.5	50.5	50.4	50.3	50.7	51.7	51.5	51.6	52.2	52.5	52.7	52.6	52.5 <sup>a</sup>

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00011.

92.3	83.7	83.6	90.6	93.6	92.4	91.7	92.1	91.9	92.7	92.0	93.9	95.6
91.6	83.8	86.5	91.0	93.4	92.2	91.7	91.6	92.5	92.7	92.7	93.7	95.6
89.8	83.2	86.5	91.3	93.1	92.2	91.7	91.7	92.3	92.9	92.3	95.1	95.5
91.6	82.2	87.8	92.1	93.0	92.2	91.7	91.6	92.7	92.9	92.2	94.5	96.7
92.4	82.1	87.8	92.4	92.8	92.0	91.7	91.8	92.9	92.9	92.2	93.9	96.3
92.3	84.0	89.0	92.8	92.8	92.0	91.5	91.9	92.9	92.9	92.8	94.0	95.8
90.6	85.5	88.9	92.9	92.6	91.7	91.7	91.8	92.7	92.6	92.8	94.3	95.5
88.9	84.8	89.1	93.0	92.4	91.8	92.0	91.8	92.7	92.4	92.8	94.5	95.3
86.9	84.7	89.5	93.2	92.5	91.8	91.8	92.0	92.8	92.0	93.3	94.5	95.0
84.6	84.1	89.5	93.4	92.7	91.8	91.8	91.9	92.4	92.0	93.3	94.5	94.7
50.5	51.0	51.0	51.0	50.7	51.2	51.2	51.2	51.5	51.9	52.4	52.2	52.2 <sup>a</sup>

and increasing Horizontal and Vertical Force.

H. F. 51°.8; of V. F. 52°.0.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D. 23	H. 22	M. 0	In. 29.743	° 30.5	° 29.9	—	Calm.	Partially overcast with light haze.
	23	0	29.771	31.2	30.6	N.E.	Very light	Partially overcast; light cirro-cumuli and cirrous haze; clouds from E.
24	0	0	29.779	31.5	31.0	E.	Nearly calm	Overcast; cirri and light haze; fair; clouds from S.E.
	1	0	29.784	33.7	32.4	E.	Light.	Overcast; cirri and light haze; fair; clouds from E.
	2	0	29.776	35.5	33.5	E.	Light.	Overcast; dense cirro-cumuli and cumulo-strati, with cirrous haze.
	3	0	29.762	37.4	36.0	E.	Light.	Densely clouded; cirro-cumuli, cumulo-strati and haze.
	4	0	29.751	38.2	35.9	E.	Light.	Overcast; cirro-cumuli, cumulo-strati and haze.
	5	0	29.735	39.3	36.8	E.	Light.	Overcast; cumulo-strati; cirro-cumuli and haze.
	6	0	29.742	39.4	37.3	E.	Light.	Overcast; cirro-cumuli and haze; clouds from W. and E.
	7	0	29.713	39.5	36.9	E.	Mod.	Overcast; cirro-cumuli and haze; clouds from E.
	8	0	29.702	38.4	35.4	E.	Mod.	Densely overcast; cirro-strati and haze.
	9	0	29.690	37.9	35.5	E. by N.	Brisk.	Densely overcast; cirri, cirro-strati and haze.
	10	0	29.667	37.2	34.9	E by N.	Mod.	Densely overcast; cirri, cirro-strati and haze; brisk gusts of wind.

April 20th and 21st.			MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.			Angular Value of one Scale Division = 0'·721.					DECLINATION.					
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		129·2	129·7	131·0	134·1	133·1	132·7	127·4	142·8	135·0	132·1	111·3
6	0		129·1	130·1	131·8	133·2	134·0	137·8	131·1	141·1	136·3	131·6	115·2
12	0		129·1	130·0	132·3	134·6	134·8	140·9	141·1	141·3	136·1	130·5	119·7
18	0		129·4	129·4	132·2	138·6	132·2	139·7	162·3	140·9	136·2	126·9	121·7
24	0		129·2	130·0	131·9	141·4	131·9	141·7	171·4	139·5	136·1	126·9	124·1
30	0		129·5	130·0	131·4	142·3	131·0	143·0	171·3	136·6	133·9	129·3	126·9
36	0		129·0	130·5	133·4	140·8	131·9	132·8	161·2	134·4	134·2	126·8	130·0
42	0		129·2	130·7	133·7	138·8	133·3	126·9	154·1	133·5	133·3	114·0	129·9
48	0		129·5	131·0	134·7	136·7	132·5	117·6	151·1	133·0	133·2	108·1	131·2
54	0		129·8	131·0	134·2	133·9	132·2	121·5	146·9	133·4	132·2	108·9	132·1

		One Scale Division = ·000074 parts of the H. F.					HORIZONTAL FORCE.						
M.	S.												
2	0		442·8	441·0	425·4	429·5	428·7	415·7	401·5	424·6	426·0	437·9	422·4
8	0		443·4	444·9	424·7	429·1	436·5	413·9	397·7	423·4	428·9	434·4	415·0
14	0		442·9	442·6	425·8	433·2	433·1	412·7	389·1	425·6	429·9	417·2	417·6
20	0		439·0	440·1	425·6	453·3	419·4	414·3	396·6	424·7	431·1	411·3	411·3
26	0		447·5	441·0	424·4	443·0	422·3	425·9	410·6	429·1	435·0	406·5	422·3
32	0		442·6	440·1	421·2	443·1	420·5	426·6	422·2	429·7	436·1	416·9	437·0
38	0		442·2	436·1	420·5	439·9	427·0	419·9	414·5	431·0	435·9	416·5	445·5
44	0		439·5	435·5	423·0	436·9	429·3	411·9	417·9	428·5	433·3	419·9	449·0
50	0		439·7	434·5	428·1	433·3	423·9	394·2	430·7	429·0	436·9	418·9	451·5
56	0		442·5	429·8	431·4	424·6	419·1	386·2	425·8	427·5	439·1	416·2	443·3

Thermometer		57·8	59·8	60·2	60·0	59·7	59·2	58·6	58·2	57·8	57·6	57·4
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		One Scale Division = ·000092 parts of the V. F.					VERTICAL FORCE.						
M.	S.												
4	0		85·3	84·4	83·6	84·0	83·2	83·7	69·9	76·8	81·8	84·2	73·8
10	0		84·9	84·7	83·6	83·7	83·6	82·4	73·2	79·0	82·9	82·9	71·4
16	0		84·6	84·1	84·2	84·7	83·0	82·6	76·2	79·8	83·1	79·2	70·9
22	0		84·6	83·9	84·4	83·2	83·9	83·2	75·1	80·4	84·2	78·3	70·7
28	0		85·0	84·2	84·4	82·6	84·0	80·3	74·0	81·5	84·6	76·1	73·6
34	0		84·7	83·9	83·9	83·0	84·0	74·6	71·1	81·0	84·4	78·2	73·6
40	0		84·3	84·1	84·0	83·1	84·0	70·8	69·1	81·5	84·4	76·9	74·7
46	0		84·3	84·3	84·5	83·2	83·3	68·9	73·6	81·5	84·4	75·4	74·7
52	0		84·3	83·9	84·5	82·7	82·8	64·9	74·6	81·8	84·6	72·8	74·0
58	0		84·3	83·5	84·3	83·0	83·7	66·1	74·6	81·8	84·4	72·0	74·0

Thermometer		57·2	58·0	58·7	59·0	59·3	59·2	59·0	58·5	58·2	58·2	58·0
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Increasing numbers denote decreasing westerly Declination, <sup>a</sup> At 21<sup>d</sup> 10<sup>h</sup> thermometer of

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
20	10	0	29·563	57·0	47·1	S. W.	Light.	§ overcast ; cirro-strati and cirro-cumuli ; clouds passing from N.
	11	0	29·566	62·7	51·3	S. Westerly.	Nearly calm	§ overcast with cirro-strati and strati.
	12	0	29·572	62·0	50·3	S. Westerly.	Very light	Strati and cirro-strati round horizon ; remainder clear.
	13	0	29·581	53·2	46·1	S. Westerly.	Nearly calm	Clear, except a few cirri and cirro-strati round horizon and in N.
	14	0	29·610	49·6	44·5	S. Westerly.	Nearly calm	§ overcast ; cirro and cirro-cumuli.
	15	0	29·602	47·0	43·6	—	Calm.	Partially clouded ; cirro-cumuli and haze.
	16	0	29·602	44·2	42·0	—	Calm.	Clear, except a few light cirri in E.
	17	0	29·624	42·8	41·0	—	Calm.	Unclouded ; slight haze.
	18	0	29·639	41·2	39·6	—	Calm.	Slight haze and light cirri in E.
	19	0	29·649	40·8	39·3	—	Calm.	Slight haze round horizon ; zenith perfectly clear.
	20	0	29·648	41·1	38·7	—	Calm.	Slight haze round horizon ; zenith perfectly clear.
	21	0	29·665	40·3	38·8	—	Calm.	Clear.

MAGNETICAL OBSERVATIONS.												
DECLINATION.												Angular Value of one Scale Division = 0'·721.
21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
133·6	139·9	145·5	127·3	135·1	136·5	129·6	124·5	123·5	126·0	119·4	125·0	128·4
135·1	141·8	142·8	128·3	135·7	136·4	127·9	126·0	122·4	124·8	119·5	125·1	129·1
136·6	140·3	142·1	131·2	136·4	136·8	126·9	126·9	123·0	124·3	120·3	126·0	129·6
137·7	139·7	140·0	130·6	136·6	136·1	127·9	125·3	123·4	124·2	120·0	126·7	129·5
139·4	141·1	136·1	130·0	135·4	136·0	128·9	124·7	123·1	124·4	120·5	126·0	129·0
141·2	142·8	133·4	130·4	135·0	136·0	129·1	125·0	122·9	123·8	121·5	125·5	130·2
140·5	144·1	128·5	131·7	135·0	135·8	129·2	124·9	124·0	123·2	123·0	125·7	129·9
140·6	145·6	126·5	131·4	136·0	134·8	127·2	126·7	124·7	122·0	124·1	125·8	129·6
141·8	145·7	124·9	133·9	137·0	133·8	124·6	125·3	124·9	121·0	124·2	126·9	129·3
140·2	146·2	125·0	133·5	136·2	131·7	125·3	123·7	125·5	120·1	125·0	127·7	129·1

HORIZONTAL FORCE.												
Change in the magnetic moment of the Bar for 1° Fah. = ·00026.												
443·1	443·1	427·2	414·9	438·7	442·0	417·8	395·4	415·2	424·4	421·2	422·4	428·1
441·6	447·1	429·1	412·8	435·8	438·5	418·8	399·7	414·1	420·2	421·9	422·9	433·0
438·7	445·4	429·3	417·9	439·2	438·2	415·8	403·5	410·7	419·3	427·0	425·5	434·4
438·2	442·4	430·6	422·7	442·3	434·5	412·1	406·1	415·5	420·7	425·1	427·7	438·7
442·0	438·3	431·1	425·9	441·6	430·5	409·9	408·4	418·1	424·2	420·6	423·2	436·9
445·4	439·1	425·2	425·2	442·9	427·3	409·0	412·6	417·7	422·0	422·0	419·7	437·7
444·4	436·8	416·9	431·5	439·6	426·8	403·6	416·1	421·1	422·4	423·5	419·2	444·6
443·6	436·8	410·3	430·4	441·4	422·3	401·1	420·6	421·4	422·8	426·0	421·7	445·7
444·2	435·1	404·0	438·0	443·6	421·7	396·7	422·1	425·2	422·9	424·5	427·1	444·9
444·0	433·7	406·3	432·0	443·4	417·1	393·1	419·0	426·5	423·0	425·7	430·2	438·5
56·6	56·0	55·5	55·5	56·5	58·2	59·4	59·8	60·5	61·5	62·6	63·5	64·5 <sup>a</sup>

VERTICAL FORCE.												
Change in the magnetic moment of the Bar for 1° Fah. = ·00011.												
74·0	83·0	80·5	80·3	81·3	80·3	79·7	79·4	80·1	81·6	80·5	79·0	78·5
76·6	83·5	81·1	78·8	81·6	80·3	79·7	80·0	79·6	81·4	80·5	79·0	78·5
77·0	83·3	82·3	79·1	81·2	80·3	79·4	80·0	79·9	81·1	81·0	79·3	78·5
77·7	82·7	83·5	79·3	81·1	79·9	79·2	80·3	80·1	81·4	80·2	79·3	78·5
79·7	81·8	83·5	79·9	81·3	79·6	79·2	80·8	80·2	81·4	79·5	78·5	77·8
80·9	81·8	83·5	80·8	80·3	79·4	79·2	81·6	80·6	81·4	79·5	78·5	78·4
81·2	81·3	82·0	81·9	80·2	79·5	79·6	81·6	81·0	81·4	79·5	77·9	79·2
81·7	81·1	81·1	81·5	80·6	79·5	79·5	82·2	81·0	81·4	79·5	77·9	79·1
82·2	81·1	80·3	81·2	80·6	79·5	78·8	81·8	81·3	81·4	79·7	78·5	78·9
82·2	80·8	80·3	80·8	80·6	79·5	78·9	80·5	81·6	80·9	79·7	78·5	78·1
57·7	57·2	56·7	56·1	57·1	58·0	58·8	58·7	59·3	59·7	60·7	61·5	62·3 <sup>a</sup>

and increasing Horizontal and Vertical Force.  
H. F. 65°·3; of V. F. 64°·0.

METEOROLOGICAL OBSERVATIONS.												
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.				
				Dry.	Wet.	Direction.	Force.					
D.	H.	M.	In.	°	°							
20	22	0	29·651	38·3	37·3	—	Calm.	Clear.				
	23	0	29·667	37·7	36·6	—	Calm.	Clear.				
21	0	0	29·687	39·6	38·6	—	Calm.	Very light cirrous haze round horizon, otherwise clear.				
	1	0	29·707	44·6	43·0	Southerly	Nearly calm	Overcast with very light haze.				
	2	0	29·705	47·5	44·7	S.Westerly.	Very light	Very light cirrous haze overspreading the sky.				
	3	0	29·703	49·6	45·7	S.Westerly.	Nearly calm	Haze round horizon, remainder clear.				
	4	0	29·698	52·0	47·2	S. W.	Very light	Clear.				
	5	0	29·684	56·6	51·2	S. W.	Light.	Unclouded; somewhat hazy.				
	6	0	29·656	62·0	54·3	S. W.	Nearly calm	Haze round horizon, and a few cumulo-strati in N. W.				
	7	0	29·641	63·1	55·4	Southerly.	Nearly calm	Haze round horizon, and a few cirro-cumuli in N.				
	8	0	29·624	63·8	54·7	S. by W.	Light.	A few light cirro-strati dispersed over the sky.				
	9	0	29·603	65·2	54·9	S. by W.	Moderate.	A few light cirri dispersed over the sky.				

May 27th and 28th.			MAGNETICAL OBSERVATIONS.											
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.					DECLINATION.						
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		129.2	130.6	131.0	134.1	132.0	133.8	132.0	130.0	130.0	130.0	124.1	126.7
6	0		129.6	130.7	131.4	134.7	131.6	131.4	131.0	130.2	130.0	130.0	125.1	127.9
12	0		129.8	130.6	131.6	133.9	131.2	131.6	130.2	130.5	130.0	130.0	126.9	129.0
18	0		129.4	130.7	131.4	133.2	131.2	133.6	130.5	130.4	129.9	129.9	128.7	130.1
24	0		129.1	130.9	131.2	132.4	131.4	134.2	130.5	130.4	129.5	130.0	130.0	131.1
30	0		130.2	131.0	131.1	133.0	131.8	134.0	130.4	130.1	126.8	129.9	132.1	
36	0		129.4	130.8	132.2	132.8	131.2	133.0	130.9	130.0	125.8	128.5	132.0	
42	0		129.2	130.9	133.4	132.6	130.7	132.2	130.0	129.8	125.1	126.7	131.1	
48	0		129.1	130.7	134.3	132.6	131.6	131.8	130.0	130.0	124.9	126.0	130.9	
54	0		130.7	130.9	134.5	132.3	133.9	131.2	130.1	130.0	124.2	126.1	131.2	
			One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.						
M.	S.													
2	0		453.8	464.7	456.6	440.8	446.8	453.0	451.7	447.3	449.9	444.1	451.5	
8	0		456.8	462.7	456.2	442.2	446.3	456.2	449.5	447.2	450.2	444.7	451.7	
14	0		453.6	462.4	454.2	441.7	447.9	451.1	447.7	446.4	449.0	445.2	451.6	
20	0		462.7	462.8	449.8	442.6	448.2	450.7	448.6	447.4	448.6	444.9	451.2	
26	0		460.4	459.9	443.9	441.8	447.4	449.1	448.1	452.0	449.0	447.0	450.4	
32	0		453.2	457.4	443.4	443.5	447.6	449.7	447.1	453.4	450.1	446.8	450.5	
38	0		454.4	457.9	441.6	444.3	444.8	448.1	449.0	452.8	449.6	446.8	451.2	
44	0		455.9	456.6	438.8	444.9	444.8	448.1	449.0	449.2	447.1	447.0	450.5	
50	0		464.2	456.0	441.2	446.4	447.1	448.2	448.8	446.9	447.0	448.0	451.6	
56	0		465.0	457.4	441.1	448.3	450.7	451.6	448.8	448.0	446.0	450.0	451.4	
Thermometer.			58.5	58.6	58.8	58.6	59.0	59.3	59.2	58.8	58.6	58.2	58.0	
			One Scale Division = .000095 parts of the V. F.					VERTICAL FORCE.						
M.	S.													
4	0		79.9	80.9	80.6	80.2	79.0	77.6	77.1	77.3	78.0	74.6	75.4	
10	0		80.4	80.9	80.6	80.0	78.7	77.5	77.1	77.3	78.0	74.0	75.4	
16	0		80.2	80.5	80.5	79.9	78.7	77.3	77.1	77.3	78.0	74.3	75.6	
22	0		80.8	80.5	80.4	79.7	78.5	76.7	77.5	77.6	78.0	74.3	75.4	
28	0		80.8	80.5	80.4	79.4	78.5	76.7	77.6	78.4	78.0	74.8	75.9	
34	0		80.1	80.5	80.4	79.7	78.3	76.7	77.6	78.0	77.0	75.0	76.2	
40	0		80.5	80.7	80.4	79.4	78.3	76.6	77.5	77.8	76.6	75.0	76.6	
46	0		80.5	80.6	80.2	79.2	78.2	77.0	77.5	77.6	75.7	75.4	76.6	
52	0		81.2	80.6	80.2	79.3	78.0	77.4	77.4	77.5	75.0	75.4	76.9	
58	0		81.3	80.6	80.2	79.2	77.6	77.4	77.4	78.0	74.6	75.4	76.9	
Thermometer.			58.0	58.5	58.7	58.7	59.3	59.4	59.4	59.4	59.0	59.1	59.2	
Increasing numbers denote decreasing westerly Declination, * At 28 <sup>d</sup> 10 <sup>h</sup> thermometer of														
METEOROLOGICAL OBSERVATIONS.														
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.						
				Dry.	Wet.	Direction.	Force.							
D.	H.	M.	In.	°	°									
27	10	0	29.496	58.8	53.2	S.	Light.	Clouded round horizon; cumulo-strati and haze.						
	11	0	29.500	52.8	49.4	—	Calm.	Overcast; dense cirri and haze.						
	12	0	29.499	52.6	49.9	—	Calm.	Densely clouded; cumulo-strati and cirro-cumuli.						
	13	0	29.512	51.0	48.8	S. Westerly	Nearly calm	Densely clouded; cumulo-strati and cirro-cumuli.						
	14	0	29.517	50.2	48.1	—	Calm.	Clouded; detached cirro-cumuli. Fair.						
	15	0	29.523	46.8	45.3	—	Calm.	Clear.						
	16	0	29.526	45.2	44.2	—	Calm.	Clear.						
	17	0	29.537	43.8	43.2	—	Calm.	Clouded with cirro-cumuli, except in zenith.						
	18	0	29.551	44.0	43.5	—	Calm.	Clouded with cirro-cumuli.						
	19	0	29.552	46.7	46.2	—	Calm.	Clouded with cirro-cumuli in close arrangement.						
	20	0	29.540	45.8	45.1	—	Calm.	Clear, except a bank of strati in S. horizon.						
	21	0	29.552	45.6	44.3	—	Calm.	Clear, except a bank of strati in S. horizon.						

MAGNETICAL OBSERVATIONS.

May 27th and 28th.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
131.7	128.1	132.2	138.1	141.0	142.0	137.0	131.5	127.3	125.0	122.8	122.5	123.6
131.8	128.8	132.2	137.6	141.5	141.9	136.8	130.7	127.9	125.1	122.5	122.3	122.8
131.8	129.7	133.2	137.3	140.1	141.2	136.8	129.6	128.0	124.2	122.0	122.8	123.8
131.8	129.4	133.1	138.3	140.3	141.0	136.3	128.2	127.5	124.4	122.0	122.8	123.1
131.4	131.5	134.4	139.6	139.4	139.7	135.8	128.7	127.1	123.9	121.6	122.7	123.1
131.1	131.3	135.4	139.7	139.1	140.1	135.2	128.3	126.6	124.1	121.2	123.8	123.8
129.2	132.0	135.6	140.1	140.8	139.6	134.2	127.7	126.1	124.0	121.4	122.5	124.0
128.7	131.9	136.4	140.2	139.9	139.9	133.4	126.9	125.0	123.2	121.6	122.9	124.9
128.1	131.2	137.1	141.1	140.0	138.3	133.6	126.7	124.9	123.0	122.0	123.2	125.2
127.5	132.0	137.5	140.4	141.1	137.5	132.5	126.8	125.0	122.8	122.0	123.0	125.3

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

451.1	452.0	456.6	461.8	462.7	454.3	447.7	438.1	443.1	439.8	432.8	440.2	446.0
450.1	452.5	458.1	465.8	462.2	454.0	447.7	438.4	441.2	435.8	435.2	438.4	450.5
450.0	453.5	458.5	465.5	461.1	453.3	446.7	439.4	440.0	434.7	437.0	441.2	448.0
450.4	453.9	458.6	464.7	460.5	451.3	445.5	438.9	439.6	434.5	437.7	441.9	444.3
450.3	454.6	459.3	465.6	459.6	450.6	444.1	442.6	439.4	434.3	434.4	441.0	440.5
451.3	456.0	460.4	465.6	458.0	451.5	444.6	439.0	440.8	433.7	436.7	441.3	444.7
450.9	457.4	460.4	465.6	459.2	448.6	442.2	442.3	439.0	434.4	436.0	441.7	448.2
450.2	458.0	460.8	465.0	457.9	443.8	442.6	441.4	438.5	433.4	437.7	446.2	451.0
450.4	456.3	462.2	464.5	455.8	444.9	439.2	443.0	439.0	435.5	435.5	447.2	452.7
450.9	456.8	461.3	463.0	454.7	447.4	444.4	444.4	438.2	434.7	438.3	445.9	455.5
57.6	57.4	56.8	56.8	57.3	58.0	58.8	59.5	59.8	60.0	60.2	60.6	61.6*

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00011.

77.3	78.6	79.1	80.0	79.6	78.6	76.8	74.8	74.4	74.9	74.9	74.5	75.0
77.2	78.6	79.1	80.0	79.6	78.6	76.8	74.6	74.4	75.1	74.9	74.5	75.3
77.5	78.6	79.0	80.1	79.5	78.5	76.5	74.6	74.4	75.1	75.0	74.5	74.7
77.7	78.6	79.0	80.1	79.4	78.0	75.9	74.3	74.6	75.1	74.7	74.7	74.4
77.7	78.6	79.2	80.1	79.4	78.0	75.9	74.1	74.6	75.1	74.4	74.7	74.1
78.4	79.4	79.8	80.1	79.0	78.0	75.9	74.1	74.8	74.9	74.7	74.7	74.3
78.4	79.4	79.8	80.1	79.3	77.4	75.9	74.0	74.9	75.2	74.5	74.7	74.6
78.5	79.6	79.7	80.0	78.9	77.4	75.7	74.0	74.9	75.1	74.8	75.2	74.9
79.2	79.1	79.7	80.0	78.6	77.2	75.4	74.1	74.9	74.9	74.4	74.9	74.9
79.0	79.1	79.9	79.7	78.6	77.2	75.1	74.4	74.9	74.9	74.4	74.9	75.0
58.9	58.4	58.0	57.8	58.2	58.9	59.2	59.5	59.8	60.0	60.2	60.5	61.0*

and increasing Horizontal and Vertical Force.  
H. F. 62° 0'; of V. F. 61° 4'.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
27	22	0	29.582	43.7	42.5	—	Calm.	Clear, except a very low bank of strati in S. horizon.
	23	0	29.601	40.7	39.9	—	Calm.	½ clouded; very light cirro-cumuli in zen., and bank of strati in S. hor.
28	0	0	29.609	45.3	44.1	N. W.	Very Light.	Clear, except a few light cirri in N., and bank of strati in S.
	1	0	29.605	48.0	44.8	N. W.	Nearly calm	Clear, except a few detached cirro-cumuli.
	2	0	29.629	50.6	46.1	W. by N.	Light.	Clear, except a few cirro-cumuli and cirro-strati.
	3	0	29.621	53.9	47.5	W. N. W.	Light.	Clear, except a few detached cirro-cumuli floating about.
	4	0	29.631	54.6	50.1	W. by S.	Light.	Clear, except a few light cirri; wind in gusts.
	5	0	29.620	54.6	49.6	S.	Mod.	Cirro-cumuli in N. horizon, remainder clear.
	6	0	29.623	57.2	51.6	S.	Light.	Clear, except a few light cirri dispersed over the sky.
	7	0	29.611	60.5	53.5	S.	Light.	A few light cirri dispersed over the sky.
	8	0	29.599	64.2	55.6	Southerly.	Light.	½ overcast; light cirri in zenith; range of strati in S. horizon.
	9	0	29.589	63.3	53.7	S.	Light.	Overcast; light cirro-cumuli, cirro-strati and haze; solar halo, diam. 30°.
	10	0	29.594	62.4	53.7	S. E.	Light.	Overcast; light cirro-strati and haze; halo continuing.

June 22nd and 23rd.		MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.		Angular Value of one Scale Division = 0'.721.					DECLINATION.					
		10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0	120.3	122.0	123.6	135.0	128.2	163.1	135.7	139.0	155.3	127.1	131.0
6	0	120.7	122.0	124.7	133.9	129.5	164.7	135.5	136.8	150.3	125.5	131.0
12	0	120.6	122.5	124.8	129.4	128.2	162.4	138.3	135.9	144.1	124.0	130.3
18	0	120.7	122.4	126.0	127.9	126.0	157.2	138.3	148.5	140.5	126.2	132.9
24	0	120.5	122.8	126.0	—	126.8	153.6	136.8	145.5	140.3	130.1	133.9
30	0	120.9	123.0	127.0	125.6	127.7	147.8	138.3	140.3	137.1	133.6	135.2
36	0	121.1	123.1	127.8	125.3	127.6	146.0	141.8	139.8	133.9	135.8	135.4
42	0	121.2	123.3	128.6	126.1	135.3	143.3	144.0	142.4	130.0	136.6	126.1
48	0	121.9	123.1	131.9	128.5	150.7	141.9	143.4	146.5	127.6	136.9	114.7
54	0	121.2	123.0	133.8	128.6	158.1	137.3	141.4	155.3	127.3	133.1	115.0

M. S.		One Scale Division = .000074 parts of the H. F.										
		HORIZONTAL FORCE.										
2	0	448.6	444.8	440.6	471.2	452.8	426.9	427.5	411.5	430.8	415.9	425.4
8	0	450.0	442.4	445.7	458.9	445.9	428.4	421.3	413.8	430.3	413.3	427.7
14	0	456.1	445.0	443.3	450.8	438.2	419.7	422.8	427.2	431.5	400.9	425.2
20	0	456.6	446.2	447.7	443.1	432.5	412.1	419.1	430.4	431.6	395.3	426.9
26	0	458.0	445.9	447.7	443.4	438.3	420.5	413.4	429.4	432.0	400.1	423.0
32	0	460.3	448.6	446.7	445.9	442.5	421.8	403.2	427.5	429.4	401.3	416.3
38	0	459.2	449.6	446.5	442.5	432.8	426.0	401.8	423.5	426.0	409.3	404.1
44	0	462.4	466.8	450.6	449.8	431.8	429.6	407.6	421.2	424.5	416.8	383.2
50	0	453.4	455.0	455.9	454.0	427.8	439.3	407.1	419.6	419.1	425.2	384.5
56	0	449.9	449.9	462.6	456.7	421.6	437.7	411.6	425.9	415.4	428.7	403.0

M. S.		One Scale Division = .000094 parts of the V. F.										
		VERTICAL FORCE.										
4	0	66.2	64.7	65.3	68.4	66.5	62.2	56.4	61.2	51.5	48.8	54.9
10	0	66.2	65.2	64.9	66.5	65.4	59.6	56.0	61.8	47.6	48.7	54.4
16	0	66.7	65.2	64.9	66.1	65.3	57.8	57.9	58.5	46.9	49.9	53.1
22	0	66.7	65.6	65.9	—	66.3	59.9	62.1	52.9	48.3	50.6	52.1
28	0	66.2	65.6	65.2	64.2	66.3	60.2	61.5	51.9	48.9	53.7	50.3
34	0	66.2	65.6	65.6	65.7	67.0	61.8	61.6	53.8	48.9	55.5	49.2
40	0	66.2	67.0	65.6	65.1	66.0	60.5	63.7	56.1	48.0	56.4	46.1
46	0	65.9	66.5	66.2	66.7	66.4	59.6	61.3	58.7	48.0	57.3	43.6
52	0	65.1	65.6	66.9	66.1	65.5	57.8	61.3	58.7	48.0	57.0	44.5
58	0	65.9	64.6	68.0	66.4	63.3	56.8	60.6	55.4	48.6	55.8	44.4

Increasing numbers denote decreasing westerly Declination,  
 \* At 23<sup>d</sup> 10<sup>h</sup> thermometer of

METEOROLOGICAL OBSERVATIONS.											
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.			
				Dry.	Wet.	Direction.	Force.				
D.	H.	M.	In.	°	°			{ Clouded; cirro-cumulo-strati, cirro-cumuli and haze; dense vapour rising from the lake; a few drops of rain. Densely clouded; cumuli, cumulo-strati, and haze. Densely clouded; cumuli, cumulo-strati, and haze. Densely clouded; cirro-cumuli, cirro-strati, and haze. Densely clouded; cirro-cumuli, cumulo-strati, and haze. Densely clouded; cirri, strati, and haze; slight rain since 14 <sup>h</sup> 45 <sup>m</sup> . Densely clouded; moderate rain since 15 <sup>h</sup> . Densely clouded; rain ceased. Densely clouded; cirro-cumuli and haze. Densely clouded; slight rain. Densely clouded; sprinkling rain. Densely clouded; very slight drizzling rain.			
22	10	0	29.493	67.3	64.6	—	Calm.				
	11	0	29.490	65.4	62.9	S. W.	Light.				
	12	0	29.500	63.8	61.1	N.	Light.				
	13	0	29.503	62.8	59.2	N.	Light.				
	14	0	29.525	61.2	58.4	Northerly	Light.				
	15	0	29.531	60.5	58.2	Northerly	Light.				
	16	0	29.539	59.2	58.1	Northerly	Light.				
	17	0	29.538	59.2	57.5	—	Calm.				
	18	0	29.528	58.6	57.0	—	Calm.				
	19	0	29.524	58.6	56.4	—	Calm.				
	20	0	29.525	58.2	55.8	Northerly	Very light				
	21	0	29.529	58.0	54.3	N. E.	Nearly calm				



MAGNETICAL OBSERVATIONS.

June 22nd and 23rd.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
114 6	122 0	132 9	138 9	131 8	133 8	134 1	131 9	128 4	128 3	127 2	120 6	121 3
114 9	123 9	134 7	135 9	133 9	133 5	133 3	131 9	129 5	126 1	125 8	121 7	121 0
114 2	124 8	136 4	132 6	131 2	134 6	132 3	131 2	128 7	125 8	124 8	122 4	120 9
115 0	126 0	136 4	134 5	131 5	134 4	134 0	129 8	129 4	125 7	124 0	122 4	120 6
115 4	126 5	137 0	133 2	133 3	133 2	134 5	129 9	128 1	125 9	123 8	123 6	121 0
115 0	124 6	135 6	135 9	131 1	134 7	133 9	129 6	127 9	127 0	123 5	125 2	121 8
115 5	126 1	134 5	136 5	132 7	135 1	134 1	129 1	127 7	127 8	122 8	125 6	122 0
116 1	126 7	133 9	136 2	132 2	134 5	132 0	129 3	127 8	128 2	122 6	125 2	123 1
120 4	131 2	134 9	131 3	132 2	134 1	132 4	129 1	128 5	127 5	121 3	124 1	123 4
121 0	132 5	138 2	132 2	133 2	134 0	132 5	128 8	129 9	127 1	119 9	123 1	123 3

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

414 6	424 3	433 3	430 1	421 3	424 3	430 6	420 1	415 9	417 1	426 2	412 4	418 9
415 8	427 5	433 0	425 7	428 0	425 8	430 3	419 5	417 0	415 1	419 6	424 1	416 5
419 0	428 4	433 2	420 6	422 2	428 1	425 1	418 1	409 3	413 5	420 7	425 5	419 3
416 4	432 2	430 9	424 8	424 8	432 4	424 1	416 6	415 6	419 7	420 9	426 6	420 8
416 1	429 6	430 9	422 7	423 8	429 0	425 2	417 0	416 7	423 8	418 4	427 2	422 9
415 3	434 5	430 6	426 4	423 0	433 8	425 2	416 5	416 8	427 7	420 0	431 9	429 1
417 3	435 9	429 1	427 5	424 1	433 8	424 3	414 3	415 1	430 1	420 2	426 5	432 0
415 0	437 7	427 6	432 0	424 9	433 5	423 1	414 1	414 9	426 4	418 7	421 4	443 3
418 6	434 7	423 2	421 8	424 3	431 9	420 5	415 1	417 8	425 1	411 9	417 4	440 8
422 5	435 3	428 0	424 3	424 3	431 9	421 3	415 9	420 8	424 6	406 1	422 7	442 8
65 7	65 5	65 2	64 8	64 3	64 0	64 0	64 5	64 9	65 0	65 5	65 7	66 2 <sup>a</sup>

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00011.

44 4	56 2	64 1	66 3	67 1	62 0	66 7	64 7	63 1	63 8	65 6	67 7	68 5
44 2	58 0	64 6	66 3	67 7	74 1	66 8	64 7	63 3	63 8	65 0	69 3	68 4
45 9	58 7	65 1	66 3	60 6	67 6	65 4	64 7	63 3	63 8	65 5	69 1	68 4
46 9	59 5	65 5	65 7	69 4	67 6	65 4	64 4	63 3	64 2	65 5	69 4	69 6
49 2	59 9	65 9	65 8	61 5	66 9	65 4	64 2	63 7	64 4	65 5	69 7	68 6
51 1	60 8	65 9	66 2	64 9	71 1	65 1	64 0	63 7	64 4	66 3	70 2	69 2
51 1	61 3	65 9	67 0	61 4	68 8	65 7	64 0	63 7	64 9	66 7	69 2	69 8
51 5	62 1	65 6	67 5	67 6	66 3	65 0	63 6	63 7	64 9	66 6	69 4	70 0
53 5	62 9	65 6	66 8	68 4	66 8	65 0	63 6	63 9	64 9	66 2	69 6	70 3
55 1	63 6	66 3	67 2	68 7	67 0	64 7	63 6	64 3	64 9	66 8	68 8	70 9
65 9	65 7	65 4	64 8	64 5	64 3	64 3	64 3	64 5	64 7	64 7	65 1	65 4 <sup>a</sup>

and increasing Horizontal and Vertical Force.  
H. F. 66° 7; of V. F. 65° 6.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.	Barometer at 32°.	Thermometers.		Wind.		Weather.
		Dry.	Wet.	Direction.	Force.	
D. H. M.	In.	°	°			
22 22 0	29 539	57 2	52 2	N.	Light.	Densely clouded; cirro-cumuli and strati.
23 0 0	29 564	56 2	50 8	N. E.	Light.	Clouded with cirro-cumuli and strati.
1 0 0	29 576	55 8	50 2	N. E.	Nearly calm	Clouded with cirro-cumuli, strati, and haze.
2 0 0	29 580	55 6	50 3	N. by E.	Nearly calm	Overcast; cirro-cumuli, cirro-strati, strati, and haze.
3 0 0	29 588	56 9	51 0	N. N. E.	Light.	Overcast; light cirro-cumuli, cirro-strati, and haze.
4 0 0	29 588	58 9	51 4	N. E.	Mod.	Overcast; light cirrous haze in zenith, and cirro-strati round horizon.
5 0 0	29 590	59 6	51 2	E.	Mod.	Overspread with very light cirri and haze. [diam. 35°.
6 0 0	29 585	61 0	53 0	E.	Light.	Overspread with very light cirri and cirrous haze; imperfect solar halo
7 0 0	29 579	62 8	54 9	E.	Light.	Overspread with very light cirri and haze.
8 0 0	29 578	64 0	56 8	S. E.	Light.	Overspread with light cirro-strati and haze.
9 0 0	29 564	65 0	57 6	Southerly.	Very light	Unclouded; light haze.
10 0 0	29 557	66 0	58 2	Southerly.	Light.	Overspread with cirri and haze, small detached cumuli round horizon.
	29 553	67 0	58 1	Southerly.	Light.	Thin haze in zenith, cirro-strati and haze round horizon.

July 20th and 21st.			MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.					DECLINATION.					
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		126.7	132.9	131.4	136.2	133.8	132.0	131.0	135.2	129.8	129.8	131.2
6	0		126.7	132.9	131.7	137.8	132.4	131.0	131.3	135.1	128.6	130.8	130.2
12	0		127.1	132.7	131.9	139.3	132.9	131.0	131.6	134.2	127.9	131.9	130.5
18	0		128.6	132.4	131.9	140.0	133.0	131.4	132.0	134.3	128.2	132.8	130.8
24	0		129.4	131.9	132.3	138.1	133.1	131.2	131.8	134.2	128.5	133.3	130.4
30	0		130.4	131.9	132.9	137.7	133.1	131.2	131.5	134.1	130.1	133.5	130.0
36	0		130.5	131.4	133.0	136.0	132.9	130.9	131.8	133.5	129.9	133.4	130.4
42	0		131.1	131.1	133.0	134.4	133.0	131.1	133.1	133.0	130.2	133.7	130.3
48	0		131.6	131.1	133.9	134.6	132.2	130.4	133.9	133.0	130.3	133.3	131.5
54	0		132.3	131.1	135.9	134.6	132.0	130.4	135.3	131.0	130.0	132.1	132.7

M. S.		One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.					
2	0	401.4	421.3	402.0	394.8	401.6	395.4	399.0	402.7	403.4	407.3	404.9
8	0	401.7	420.6	403.2	395.4	398.2	393.0	400.5	401.0	402.7	406.2	404.5
14	0	400.2	417.0	403.4	397.3	397.7	390.6	399.6	399.8	402.0	407.0	406.4
20	0	404.7	409.5	403.4	401.2	395.2	391.5	401.2	399.0	402.7	408.0	406.8
26	0	408.0	403.0	404.0	402.5	395.4	394.3	401.8	400.8	405.2	408.5	407.4
32	0	409.1	400.6	404.1	404.4	394.9	394.9	400.6	402.8	407.5	409.8	409.3
38	0	409.0	398.0	400.4	405.0	393.0	395.2	400.6	403.8	408.0	409.5	412.6
44	0	410.1	394.2	399.0	404.6	394.9	397.1	403.4	403.7	409.4	408.3	410.6
50	0	414.1	398.1	395.0	404.3	395.6	397.6	402.6	405.3	410.0	406.5	408.2
56	0	418.2	399.8	394.4	403.1	395.7	397.0	403.3	403.6	409.0	405.8	406.6

Thermometer		71.6	71.5	72.4	72.5	72.5	72.2	72.2	72.0	71.4	71.0	70.0
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M. S.		One Scale Division = .000094 parts of the V. F.					VERTICAL FORCE.					
4	0	56.5	58.2	56.8	56.3	55.0	54.9	54.9	53.7	52.8	52.5	54.6
10	0	56.5	58.4	56.8	56.3	54.7	54.9	54.7	53.3	52.8	52.5	54.7
16	0	56.5	58.4	56.8	56.3	54.9	54.7	54.6	53.3	52.8	52.8	54.9
22	0	57.1	57.3	56.5	56.3	54.9	55.3	54.5	53.3	52.8	53.0	55.0
28	0	57.0	57.1	56.7	56.2	54.9	54.8	54.5	53.3	52.8	53.0	55.0
34	0	57.0	57.1	56.7	56.0	54.9	54.7	54.4	52.8	53.2	53.5	55.5
40	0	57.0	57.1	56.4	55.7	54.9	54.9	54.5	52.6	52.9	53.5	55.5
46	0	57.0	56.5	56.4	55.6	55.1	55.0	54.5	52.6	52.7	53.5	55.3
52	0	57.6	56.8	56.4	55.1	55.1	54.7	53.9	52.6	52.5	53.7	55.3
58	0	58.2	56.8	56.4	55.1	55.1	54.7	53.9	52.8	52.5	54.1	55.5

Thermometer		70.6	71.0	71.0	71.5	71.8	71.5	71.5	71.3	71.1	70.3	69.7
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Increasing numbers denote decreasing westerly Declination,  
 \* At 21<sup>a</sup> 10<sup>h</sup> thermometer of

METEOROLOGICAL OBSERVATIONS.												
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.				
				Dry.	Wet.	Direction.	Force.					
D.	H.	M.	In.	°	°							
20	10	0	29.797	73.4	61.4	S. W.	Light.	Unclouded, but hazy.				
	11	0	29.800	74.2	62.5	S. W.	Nearly calm	No clouds; light haze over the sky.				
	12	0	29.822	73.6	59.4	N.	Light.	Unclouded, but hazy; dense reddish haze round the horizon.				
	13	0	29.849	68.6	56.6	N. by W.	Very light	Haze in zenith; cirro-strati and haze round horizon.				
	14	0	29.866	63.3	53.5	N. by W.	Light.	Cirro-strati and haze round horizon, otherwise clear.				
	15	0	29.889	59.7	51.8	N. by W.	Light.	Cirro-strati and haze round horizon, otherwise clear.				
	16	0	29.891	55.6	49.3	N. by W.	Nearly calm	Clear.				
	17	0	29.901	55.1	49.7	N. by W.	Nearly calm	Clear.				
	18	0	29.902	54.1	49.5	N. by W.	Nearly calm	Clear.				
	19	0	29.898	51.0	47.8	—	Calm.	Clear.				
	20	0	29.903	46.7	45.2	—	Calm.	Clear.				
	21	0	29.911	45.8	44.5	—	Calm.	Clear.				

MAGNETICAL OBSERVATIONS.

July 20th and 21st.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
133.4	134.2	136.2	137.0	141.4	141.1	138.9	133.9	131.5	128.4	126.7	125.6	128.0
133.4	134.3	136.4	138.2	141.2	140.8	139.2	133.3	131.3	128.3	126.5	125.8	128.2
133.3	135.0	136.6	141.7	139.7	141.4	139.8	132.7	130.6	127.9	126.0	125.7	128.5
133.0	135.1	136.5	137.9	139.2	141.2	139.2	132.5	130.4	128.1	126.0	126.1	128.8
132.9	135.5	137.0	138.0	139.4	141.3	138.8	132.1	130.7	127.5	125.6	126.5	129.2
132.8	135.3	137.9	137.8	139.5	141.1	137.8	133.1	130.8	127.6	125.3	126.9	129.4
133.0	135.7	137.7	138.4	139.7	140.8	139.0	132.9	130.3	126.8	124.8	127.2	129.6
133.4	135.7	137.8	138.2	140.5	140.9	136.8	131.3	130.2	126.6	124.5	127.7	129.8
133.6	136.2	137.4	139.3	141.3	140.4	135.2	131.4	130.3	126.6	124.5	127.8	130.3
133.9	136.4	136.3	139.6	140.4	139.6	134.3	131.0	129.2	126.8	124.8	127.8	130.5

HORIZONTAL FORCE.

Change of the magnetic moment of the Bar for 1° Fah. = .00026.

406.5	410.9	411.2	417.0	417.3	405.0	399.9	398.4	395.5	393.4	404.7	412.8	416.6
407.6	409.8	413.4	415.6	416.7	404.8	400.7	397.2	395.0	394.6	405.9	414.0	414.4
407.1	410.5	416.4	417.5	413.2	405.0	400.6	396.6	393.8	396.4	404.7	415.4	412.3
408.2	411.6	413.7	416.7	411.0	405.6	400.4	396.2	392.8	400.7	405.4	416.4	415.2
408.5	411.6	414.6	415.8	412.3	406.5	400.5	396.5	392.2	397.8	406.1	417.2	416.3
409.0	411.4	415.9	414.6	411.5	403.1	401.2	395.5	393.8	396.5	405.1	417.6	416.3
408.6	411.1	414.8	415.5	409.5	401.7	396.1	397.0	394.7	395.6	404.5	418.5	415.3
410.0	412.3	415.7	414.7	406.6	402.6	398.0	396.4	396.9	397.8	404.9	417.1	415.7
410.7	411.7	417.5	415.4	406.1	401.1	397.6	394.8	397.4	400.6	404.7	416.0	418.3
410.2	410.8	417.1	416.7	404.9	401.1	397.1	394.0	394.8	402.2	407.4	414.3	416.2
69.2	68.5	67.8	66.6	66.8	67.4	68.0	68.3	69.0	69.6	70.0	70.5	71.5 <sup>a</sup>

VERTICAL FORCE.

Change of the magnetic moment of the Bar for 1° Fah. = .00011.

55.5	58.1	59.1	60.2	60.0	58.6	58.3	57.3	56.3	55.5	56.1	56.8	56.6
56.5	58.1	59.2	60.3	59.8	58.5	58.3	57.2	56.0	55.5	56.1	56.8	56.6
56.9	58.4	59.3	60.3	59.7	58.5	58.0	57.2	55.8	55.5	56.1	56.8	56.4
57.0	58.4	59.5	60.3	59.7	58.5	58.0	57.2	55.8	55.9	56.1	56.8	56.7
57.2	58.5	59.5	60.3	59.2	58.5	58.0	57.1	55.6	55.3	56.1	56.8	56.6
57.3	58.6	59.5	60.3	59.0	58.3	58.0	56.9	55.6	55.6	56.1	57.0	56.4
57.5	58.6	59.5	60.3	59.0	58.3	57.7	56.9	55.6	55.4	56.1	56.9	56.5
57.7	58.9	60.3	60.3	58.8	58.3	57.9	56.7	55.6	55.5	56.1	56.9	56.4
57.9	59.0	60.6	60.3	58.8	58.3	57.6	56.5	55.5	55.5	56.1	56.9	56.4
57.9	59.1	60.6	60.3	58.7	58.3	57.6	56.3	55.5	55.5	56.5	56.8	56.2
69.3	69.0	68.3	67.4	67.3	67.5	68.0	68.0	68.3	68.8	69.5	69.8	70.4 <sup>a</sup>

and increasing Horizontal and Vertical Force.

H. V. 72° 1; of V. F. 71° 0.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	Force.	
20	22	0	29.927	45.0	44.0	—	Calm.	Unclouded; light haze in horizon.
	23	0	29.948	44.0	43.2	—	Calm.	Light flexuous cirri in zenith, dense haze round horizon.
21	0	0	29.953	48.5	47.8	Northerly	Very nearly calm	Clear, except a few light cirro-strati scattered about.
	1	0	29.963	54.6	52.2	—	Calm.	Light cirro-strati and haze in horizon, remainder clear.
	2	0	29.973	58.7	55.0	—	Calm.	A few cirro-cumuli in N. W., remainder light haze.
	3	0	29.969	62.4	57.6	—	Calm.	Light cirri and cirro-cumuli in N., remainder light haze. [horizons.
	4	0	29.968	64.8	59.5	—	Calm.	Overcast; very light cirri and haze, with cumulo-strati in N. and N. W.
	5	0	29.962	67.5	61.6	Southerly	Very light	Very light cirri and haze in zenith; range of cumulo-strati and dense haze [round horizon.
	6	0	29.933	69.3	61.9	S. E.	Light.	Very light cirri dispersed over the sky.
	7	0	29.920	71.3	62.5	Southerly	Light.	Overspread with light cirro-cumuli and cirri; fair.
	8	0	29.917	73.4	62.2	S. E.	Nearly calm	Overspread with light cirri and cirro-cumuli; fair.
	9	0	29.898	74.6	63.3	—	Calm.	Overspread with cirri and cirrous haze.
	10	0	29.868	73.0	63.7	S. Easterly	Light.	Overspread with cirri and cirrous haze.

August 26th and 27th.			MAGNETICAL OBSERVATIONS.									
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.					DECLINATION.				
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		126.0	129.9	143.0	130.0	135.0	139.4	135.8	130.9	130.9	132.9
6	0		126.6	129.2	140.0	131.2	136.9	137.0	134.0	131.2	131.6	132.4
12	0		127.4	130.7	137.1	134.1	140.4	134.0	132.9	131.8	131.2	132.1
18	0		126.9	131.2	136.0	133.6	145.9	135.3	131.9	131.2	130.1	132.7
24	0		127.1	131.3	134.1	136.4	141.1	136.9	131.6	131.3	128.9	132.7
30	0		128.2	131.7	131.7	135.0	136.4	139.7	131.1	131.8	129.2	133.8
36	0		129.0	132.7	129.5	134.6	138.0	140.6	131.1	131.8	129.0	133.6
42	0		129.8	138.2	128.9	135.0	142.1	139.9	131.0	130.9	129.7	134.0
48	0		130.2	145.1	129.2	135.9	139.0	138.2	130.6	130.4	130.2	133.9
54	0		130.0	146.0	130.2	136.1	140.0	137.0	130.4	130.5	132.1	132.7

M. S.		One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.					
2	0	420.1	410.3	410.8	400.1	390.8	409.5	398.1	400.3	400.1	405.5	400.3
8	0	416.2	422.2	411.7	400.4	387.0	412.6	399.5	400.8	400.2	409.2	402.2
14	0	409.9	417.6	411.9	399.5	387.1	402.1	398.1	400.4	399.6	410.5	402.4
20	0	406.1	412.5	407.8	398.0	398.5	400.6	398.6	401.9	400.1	407.9	402.0
26	0	399.6	406.4	405.7	395.5	402.9	396.1	399.4	402.3	397.5	406.7	401.0
32	0	399.8	396.7	404.9	390.1	396.5	397.0	400.1	402.4	397.0	406.2	400.3
38	0	404.0	390.5	400.2	386.0	399.7	397.2	399.8	402.6	395.9	403.6	398.5
44	0	406.2	388.5	398.6	390.9	410.2	398.0	399.7	402.4	396.8	402.1	398.0
50	0	404.9	396.5	398.5	393.5	405.4	398.2	400.1	402.7	399.8	400.3	396.3
56	0	406.0	408.2	398.9	392.6	401.7	397.9	399.9	401.4	402.7	399.1	395.1

M. S.		One Scale Division = .000096 parts of the V. F.					VERTICAL FORCE.					
4	0	50.3	48.2	49.1	47.3	47.3	41.8	43.6	44.5	43.3	41.0	41.6
10	0	49.7	48.2	49.3	47.2	46.4	41.8	44.1	44.2	43.3	40.7	41.6
16	0	49.1	48.5	49.1	47.2	46.4	41.9	43.7	44.2	43.3	39.9	41.6
22	0	48.8	48.0	48.7	46.4	45.4	42.4	43.9	44.0	43.1	39.5	41.6
28	0	47.9	48.0	48.6	46.4	43.9	42.8	43.7	44.0	42.8	39.5	41.6
34	0	48.1	47.3	48.6	46.4	43.9	43.2	43.7	44.0	42.6	39.5	41.6
40	0	48.5	47.6	48.1	46.4	43.4	43.2	43.4	44.3	42.4	39.8	41.9
46	0	48.3	48.4	47.7	47.5	41.7	43.2	43.9	44.1	42.3	40.2	42.1
52	0	47.7	49.7	47.8	47.3	40.8	43.2	44.5	43.4	42.5	40.6	42.5
58	0	47.8	48.7	47.6	47.3	41.3	43.2	44.4	43.3	42.5	41.8	42.9

Thermometer											
		73.5	74.0	74.4	74.5	75.0	75.0	75.0	75.2	75.0	75.0

Thermometer											
		72.5	73.1	73.3	73.7	74.3	74.5	74.5	74.7	74.5	74.5

Increasing numbers denote decreasing westerly Declination,  
\* Thermometer of

METEOROLOGICAL OBSERVATIONS.											
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.			
				Dry.	Wet.	Direction.	Force.				
D.	H.	M.	In.								
26	10	0	29.527	79.3	72.1	S. E.	Nearly calm	Clouded; cumuli and cirro-strati; partially clear in zenith.			
	11	0	29.536	76.9	70.5	—	Calm.	Clouded; dense cumuli, cirro-cumuli, and cumulo-strati.			
	12	0	29.534	74.4	69.9	—	Calm.	Densely clouded; cumuli, cumulo-strati, and cirro-cumuli; distant thunder in N.W., air close.			
	13	0	29.532	72.6	69.3	—	Calm.	Densely clouded; short and moderate shower at 12 <sup>h</sup> 36 <sup>m</sup> .			
	14	0	29.534	72.0	69.2	—	Calm.	Densely clouded.			
	15	0	29.539	70.0	67.3	—	Calm.	Densely clouded.			
	16	0	29.539	70.6	68.6	—	Calm.	Densely clouded; occasional drops of rain.			
	17	0	29.552	70.3	67.6	—	Calm.	Densely clouded; occasional drops of rain, sheet lightning in E.			
	18	0	29.546	69.4	67.2	—	Calm.	Densely clouded; cirro-cumuli and cirro-strati, clear space in zenith.			
	19	0	29.538	69.3	67.4	—	Calm.	Densely clouded; slight rain.			
	20	0	29.530	69.4	67.3	—	Calm.	Densely clouded; slight rain.			
	21	0	29.529	69.0	67.1	—	Calm.	Densely clouded; slight rain.			

MAGNETICAL OBSERVATIONS.

August 26th and 27th.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 134.1	Sc. Div. 133.1	Sc. Div. 135.1	Sc. Div. 135.7	Sc. Div. 140.1	Sc. Div. 142.6	Sc. Div. 139.1	Sc. Div. 131.1	Sc. Div. 127.0	Sc. Div. 121.0	Sc. Div. 118.9	Sc. Div. 120.0	Sc. Div. 123.9
134.0	132.1	135.0	135.8	141.0	142.5	137.8	132.4	126.0	120.6	118.9	120.3	124.3
133.0	132.0	134.7	135.8	141.6	142.4	137.3	131.7	125.2	120.5	118.9	120.7	124.7
133.6	132.4	134.2	135.6	141.6	141.3	136.8	131.8	124.1	119.4	119.0	121.1	125.2
133.9	132.3	133.6	135.5	141.3	141.3	136.3	131.0	123.6	119.5	118.8	121.5	125.9
133.3	132.6	133.9	136.0	141.7	140.8	136.0	130.9	122.6	119.8	119.0	121.9	125.8
132.9	132.8	134.3	136.1	142.0	140.3	135.0	130.0	122.2	119.2	119.2	122.2	126.8
133.2	133.4	135.0	137.3	142.3	139.7	134.1	129.1	121.9	119.0	119.3	122.8	127.0
132.9	134.3	135.3	138.5	142.5	140.4	132.8	128.1	121.9	119.0	119.6	123.0	127.0
133.1	134.9	135.2	138.9	142.2	141.0	132.4	128.0	121.0	119.0	119.7	123.2	127.5

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

394.8	400.3	399.7	392.8	—	386.7	378.5	376.7	382.2	389.7	404.0	408.2	409.4
394.4	398.0	398.6	393.4	396.8	384.7	379.4	379.9	383.0	390.4	406.4	407.8	410.7
393.2	396.3	397.8	393.9	396.6	384.5	378.7	379.2	381.9	390.4	409.3	408.0	408.1
395.8	399.0	397.7	394.8	396.8	384.4	378.4	379.2	380.4	393.5	408.5	405.6	410.2
397.0	397.7	395.2	395.1	395.7	385.2	378.4	380.8	382.9	395.6	406.6	409.2	408.3
397.5	398.3	395.7	395.6	392.2	383.6	378.8	380.6	383.7	398.1	409.9	410.0	412.2
397.8	397.6	394.3	394.8	391.8	383.4	379.5	381.0	384.7	398.2	410.2	410.0	412.7
398.9	398.6	393.8	393.3	389.3	381.8	380.8	382.0	386.7	398.3	410.3	410.5	416.4
398.3	398.7	393.6	397.0	388.3	378.6	380.8	382.4	388.5	402.1	411.8	412.2	420.4
399.9	399.5	393.3	395.9	387.4	377.1	380.6	382.8	387.2	404.1	408.5	414.4	418.
74.5	74.5	74.0	74.0	73.6	73.5	73.3	73.5	73.5	74.0	74.6	75.2	75.5 <sup>a</sup>

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00011.

43.4	45.2	45.9	45.9	46.1	45.9	45.8	45.5	44.7	45.3	44.4	43.4	43.6
43.7	45.0	45.9	45.9	46.1	45.9	45.5	45.3	44.7	45.2	44.7	43.4	43.6
44.0	45.2	45.9	46.5	46.1	46.0	45.4	45.4	44.7	44.9	44.7	43.4	43.6
44.6	45.5	45.7	46.7	46.0	46.1	45.3	44.7	44.7	45.1	44.4	43.4	43.6
44.8	45.2	45.6	46.7	45.9	46.0	45.0	44.7	45.4	44.7	44.4	43.8	43.6
44.8	45.5	45.7	46.5	45.9	46.0	45.0	44.7	45.2	44.7	44.3	43.8	44.1
44.8	45.3	45.7	46.3	45.9	46.2	45.2	44.7	45.2	44.6	44.1	43.8	44.1
44.8	45.5	45.7	46.2	45.9	46.0	45.2	44.7	45.2	44.6	44.1	43.8	44.7
44.8	45.6	45.9	46.2	45.9	46.0	45.2	44.7	45.2	44.4	44.1	43.8	45.1
45.0	46.0	45.9	46.0	45.9	45.8	45.5	44.7	45.2	44.4	43.9	44.0	45.1
74.0	73.8	74.1	73.8	73.5	73.3	73.3	73.3	73.3	73.9	74.1	74.5	74.7 <sup>a</sup>

and increasing Horizontal and Vertical Force.

H. F. at 10<sup>h</sup>, 75°·6; of V. F. 74°·7.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.	°	°			
26	22	0	29.537	69.0	66.2	—	Calm.	Densely clouded.
	23	0	29.532	68.4	66.8	—	Calm.	Clouded; cirri, cirro-cumuli, cirro-strati, and cumulo-strati; fair.
27	0	0	29.554	68.3	66.7	N. Easterly.	Nearly calm	Clouded; cirri, cirro-cumuli, cirro-strati, and cumulo-strati.
	1	0	29.547	68.5	67.0	—	Calm.	Densely clouded; raining since 0 <sup>h</sup> 10 <sup>m</sup> .
	2	0	29.550	68.5	67.5	—	Calm.	Densely clouded; moderate and heavy rain since 1 <sup>h</sup> . [ceased at 2 <sup>h</sup> 40 <sup>m</sup> .
	3	0	29.546	70.4	69.0	—	Calm.	Clouded; cirro-cumuli, cirro-strati and haze; rain slackened at 2 <sup>h</sup> 20 <sup>m</sup> .
	4	0	29.546	72.4	70.9	E. by N.	Light.	Densely clouded; cirro-cumuli and haze; clearing.
	5	0	29.550	73.2	70.3	E.	Light.	Clouded with cirro-cumuli and cumuli; clear patches.
	6	0	29.526	77.4	72.0	E.	Light.	§ clouded; cirro-cumuli and cumulo-strati; partially clear in S. & S.W.
	7	0	29.513	79.9	73.7	S. E.	Moderate.	§ densely clouded; cirro-cumuli and cumulo-strati, principally in N.; clear in S. hor. and in zen.; thunder in N.E.; shower of rain at 7 <sup>h</sup> 15 <sup>m</sup> .
	8	0	29.510	75.6	71.3	E.	Light.	§ densely clouded; cumulo-strati and cirro-strati; distant thunder in W.
	9	0	29.496	76.2	71.4	—	Calm.	§ clouded; cirro-cumuli and cirro-strati; fair.
	10	0	29.481	76.0	72.0	—	Calm.	§ clouded; cumulo-strati, cirro-cumuli and cirro-strati.

September 21st and 22nd.			MAGNETICAL OBSERVATIONS.										
Mean Göttingen			Angular Value of one Scale Division = 0'.721.					DECLINATION.					
Time.			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		126.6	126.0	130.8	128.4	149.5	128.9	130.4	132.1	137.2	128.0	131.0
6	0		125.5	127.0	131.3	132.3	138.0	130.0	130.9	132.5	136.0	129.8	131.5
12	0		124.7	126.6	129.8	140.5	134.7	130.3	131.5	132.6	134.5	131.0	132.2
18	0		124.2	126.9	129.9	150.1	136.2	130.6	131.2	133.8	135.0	128.2	134.1
24	0		125.2	127.9	130.2	166.5	136.0	129.8	131.0	136.4	132.9	126.0	136.7
30	0		125.5	128.5	129.0	172.1	133.0	129.7	131.6	133.8	127.4	127.4	137.0
36	0		125.2	128.7	129.5	171.2	130.5	130.5	131.2	134.9	126.0	130.1	137.0
42	0		125.0	127.9	129.2	167.7	131.0	131.0	131.1	136.1	126.5	131.1	136.1
48	0		125.1	126.1	130.4	165.7	130.2	130.6	131.5	137.4	126.5	130.9	136.3
54	0		124.6	127.6	129.1	158.9	129.0	130.1	131.5	139.0	126.5	130.3	137.0
			One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.					
M.	S.												
2	0		447.9	428.6	434.7	432.4	443.7	435.5	443.6	446.1	451.2	448.3	446.3
8	0		447.8	433.3	441.5	417.2	433.7	438.7	442.8	445.1	449.3	450.0	446.2
14	0		448.4	435.2	443.0	413.7	432.5	439.6	442.5	440.4	447.3	451.1	443.1
20	0		439.3	437.2	444.4	408.2	434.4	441.0	440.4	439.1	445.6	444.2	441.7
26	0		433.6	437.0	445.5	411.5	435.8	440.9	441.4	444.6	442.5	440.6	445.0
32	0		433.1	435.1	444.7	427.7	438.6	441.8	442.7	443.5	437.8	440.3	440.5
38	0		432.4	433.8	444.7	442.1	436.4	442.7	441.6	445.6	438.5	444.6	437.0
44	0		431.6	437.8	443.4	443.1	435.9	443.9	441.5	446.8	442.5	446.5	436.1
50	0		430.5	439.1	440.7	445.2	436.6	445.6	443.3	453.5	447.5	447.1	437.9
56	0		426.0	434.5	439.2	446.0	435.6	444.9	443.2	452.5	449.2	446.9	437.0
Thermometer			56°7	57°2	57°1	57°4	57°4	57°2	57°0	56°8	56°7	56°5	56°3
			One Scale Division = .000093 parts of the V. F.					VERTICAL FORCE.					
M.	S.												
4	0		69.5	69.0	70.8	69.1	—	67.6	66.3	66.2	62.6	63.1	64.2
10	0		69.5	69.1	69.2	68.4	—	67.6	66.3	65.6	62.7	63.1	63.8
16	0		69.5	69.3	68.6	68.9	—	67.3	66.3	65.6	62.7	63.1	63.1
22	0		67.8	70.1	68.6	68.4	—	67.3	66.0	65.1	62.7	63.1	62.9
28	0		68.1	70.3	68.5	68.0	—	66.9	66.3	65.1	62.8	63.4	62.8
34	0		68.5	70.3	68.5	67.9	67.5	66.9	66.3	64.8	63.6	63.4	62.7
40	0		68.3	70.3	68.5	68.7	67.7	66.9	66.3	64.8	64.0	63.8	62.5
46	0		68.4	71.4	68.5	—	67.6	66.5	66.3	63.8	63.8	63.9	62.3
52	0		68.4	71.3	68.5	68.4	67.6	66.5	66.2	63.2	63.6	63.9	61.8
58	0		68.4	71.2	69.1	68.3	67.6	66.5	66.2	62.7	63.2	64.1	61.6
Thermometer			57°2	57°9	57°9	58°0	58°8	58°6	58°2	58°0	57°8	57°6	57°5
Increasing numbers denote decreasing westerly Declination, * At 22 <sup>d</sup> 10 <sup>h</sup> thermometer of													
METEOROLOGICAL OBSERVATIONS.													
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.					
D.	H.	M.		Dry.	Wet.	Direction.	Force.						
21	10	0	In. 29.606	° 46.1	° 41.9	N.	Brisk.	[slight showers. Densely clouded; cumuli and cumulo-strati; squally; occasional					
	11	0	29.637	46.5	42.8	N. N. W.	Moderate.	{Partially clouded; cirro-cumuli; cumuli and cumulo-strati; wind in gusts. [strati round whole horizon.					
	12	0	29.659	43.4	40.5	N. N. W.	Moderate.	Partially clouded; cirro-cumuli in zenith; dense range of cumulo-					
	13	0	29.673	42.8	40.1	N. N. W.	Moderate.	Partially clouded; cirro-cumuli and cumulo-strati; wind in gusts.					
	14	0	29.699	41.7	39.8	N. W.	Moderate.	Zenith clear; range of cumulo-strati round horizon; wind in gusts.					
	15	0	29.711	39.6	37.6	N. W.	Light.	½ clouded in N.					
	16	0	29.711	38.8	37.3	N. W.	Light.	Clear.					
	17	0	29.724	38.3	36.8	N. W.	Light.	Clear, except a few cirro-cumuli dispersed about.					
	18	0	29.732	37.4	36.3	N. W.	Very light	Clear, except a few cirro-cumuli scattered about.					
	19	0	29.741	36.7	35.2	—	Calm.	Clear, except a few light cirro-cumuli round horizon.					
	20	0	29.743	37.0	34.9	N. W.	Light.	½ clouded round horizon; cirro-cumuli.					
	21	0	29.747	37.4	35.6	N. W.	Light.	Heavily clouded in N. W., near horizon; remainder clear.					

MAGNETICAL OBSERVATIONS.

September 21st and 22nd.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 137.3	Sc. Div. 140.6	Sc. Div. 130.9	Sc. Div. 139.4	Sc. Div. 139.0	Sc. Div. 140.2	Sc. Div. 140.0	Sc. Div. 136.2	Sc. Div. 130.2	Sc. Div. 126.1	Sc. Div. 122.7	Sc. Div. 119.2	Sc. Div. 122.8
138.9	139.0	132.2	138.9	138.3	140.2	139.1	134.1	129.9	125.2	120.7	120.3	123.7
138.7	136.5	133.3	139.5	138.3	139.2	138.2	133.0	129.8	126.0	121.7	121.7	124.3
137.6	132.1	130.9	141.0	138.8	138.4	137.3	134.3	129.4	125.0	120.3	121.5	124.0
136.7	130.5	133.6	138.8	139.2	139.8	134.8	132.9	129.0	123.8	120.4	120.6	123.8
136.8	138.7	134.1	140.6	138.1	138.8	135.2	132.6	128.2	123.8	120.7	120.2	123.8
138.0	138.9	135.1	141.5	137.7	137.3	135.5	132.3	127.9	124.7	119.1	120.4	124.2
138.9	138.1	136.9	141.5	138.3	137.6	137.0	132.2	127.8	124.4	119.5	120.4	124.2
139.3	138.3	138.0	140.7	138.9	138.1	135.4	132.0	126.7	124.4	118.8	120.8	124.6
139.8	138.7	139.0	139.8	138.3	137.2	134.9	130.7	126.3	124.3	119.9	121.7	125.3

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

436.2	430.5	451.9	453.6	445.6	432.9	429.8	428.1	422.3	426.7	424.9	426.3	442.5
441.4	435.7	452.4	451.0	446.2	428.4	430.8	423.4	422.7	428.8	424.0	427.9	445.4
434.2	436.1	453.1	463.1	445.7	428.2	427.3	424.0	423.9	429.3	426.5	431.6	450.6
439.1	435.0	449.6	450.9	442.6	427.1	426.0	425.9	424.3	424.1	430.0	433.9	451.2
443.0	439.6	448.5	445.5	443.4	430.5	428.7	423.5	423.3	423.0	429.7	435.1	451.0
442.2	436.0	451.5	448.8	439.7	427.8	429.8	423.8	422.5	431.0	431.5	439.1	448.6
439.7	439.1	450.6	450.3	438.4	434.6	430.0	422.6	423.2	433.4	423.6	440.0	448.4
433.9	443.6	451.7	449.5	438.0	430.8	428.0	420.0	422.1	428.9	422.3	438.1	451.2
430.5	442.2	453.7	448.7	434.8	431.9	426.3	419.8	422.3	431.9	428.9	439.4	452.9
429.2	442.5	454.7	446.8	432.1	428.9	425.6	420.6	425.4	429.7	428.9	439.2	456.4
56.1	55.5	55.6	55.6	56.0	56.5	56.2	56.0	56.2	55.5	55.1	54.9	55.0 <sup>a</sup>

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00011.

60.8	65.4	66.3	64.1	67.6	66.5	67.5	67.6	68.3	68.3	69.2	71.6	71.3
60.8	66.9	67.9	64.1	67.5	66.7	67.5	67.7	68.3	68.9	69.9	72.0	71.5
62.0	67.4	67.0	64.6	67.2	66.7	67.5	67.7	68.3	68.7	70.4	72.0	71.5
62.4	67.4	67.9	64.6	67.2	66.7	67.5	68.2	68.3	68.5	70.8	71.5	71.5
62.4	67.4	67.9	65.3	67.2	66.6	67.0	68.2	68.3	68.5	70.9	71.1	71.5
65.4	67.4	68.2	65.9	67.5	67.2	67.7	68.2	68.0	68.9	71.4	71.1	71.0
65.0	67.6	68.2	66.6	67.1	67.2	67.8	68.2	68.0	68.9	71.0	71.0	71.0
64.4	67.6	67.5	67.0	66.8	67.4	67.6	68.2	68.0	68.7	72.5	70.9	71.4
64.4	66.3	63.2	67.4	67.0	67.5	67.6	68.2	68.0	69.0	72.4	70.9	71.5
63.4	66.3	63.2	67.4	66.5	67.5	67.6	68.2	68.0	69.6	72.4	70.9	71.9
57.3	57.0	57.2	57.0	57.0	57.2	57.0	56.7	56.2	56.2	55.9	55.7	55.7 <sup>a</sup>

and increasing Horizontal and Vertical Force.

H. F. 55.7; of V. F. 56.0.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
				Dry.	Wet.	Direction.	Force.	
D.	H.	M.	In.					
21	22	0	29.756	37.8	35.6	N. W.	Light.	Clouded with cirro-cumuli.
	23	0	29.770	37.6	35.2	N. W.	Light.	Densely clouded; cirro-cumuli and haze.
22	0	0	29.808	36.6	34.7	N. W.	Nearly calm.	Clear, except a few clouds in N. W. horizon.
	1	0	29.811	37.9	35.0	N.	Moderate.	Partially clouded; cirri, cirro-cumuli, and cumulo-strati; wind in gusts.
	2	0	29.835	39.5	36.0	N. N. W.	Moderate.	§ clouded; cirro-cumuli and cumulo-strati; wind in gusts.
	3	0	29.836	40.9	37.1	N. N. W.	Fresh.	§ clouded; cirro-cumuli and cumulo-strati; wind in gusts.
	4	0	29.834	41.2	36.8	N.	Fresh.	Partially clouded round horizon; cumulo-strati and cirro-cumuli.
	5	0	29.840	42.4	37.4	N. N. W.	Fresh.	§ clouded; cumulo-strati and cirro-cumuli; wind in gusts.
	6	0	29.850	42.2	37.3	N. N. W.	Fresh.	§ clouded; cirro-cumuli and cumulo-strati; wind in gusts.
	7	0	29.844	43.6	38.4	N. N. W.	Fresh.	§ clouded; cirro-cumuli and cumulo-strati; wind in gusts.
	8	0	29.839	45.4	39.7	N.	Moderate.	§ clouded; cirro-cumuli and cumulo-strati; wind in gusts.
	9	0	29.845	44.9	38.8	N. b. W.	Brisk.	Partially clouded; detached cumuli and cirro-cumuli; fair; squally.
	10	0	29.849	44.8	38.8	N.	Moderate.	Partially clouded; cumuli and cirro-cumuli; wind in gusts.

October 19th and 20th.			MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.					DECLINATION.					
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.			Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		121.6	126.0	128.0	129.4	132.3	129.0	128.8	129.3	126.9	129.2	128.0
6	0		121.9	125.1	127.6	130.4	132.0	128.5	128.9	128.0	126.2	129.0	128.2
12	0		122.4	125.0	127.8	131.1	132.0	128.5	129.1	128.3	127.4	124.9	128.3
18	0		126.0	126.9	127.2	134.0	131.9	129.0	129.8	127.6	128.3	123.5	128.0
24	0		127.4	127.1	126.4	135.7	130.7	129.0	130.6	128.0	126.2	123.8	127.6
30	0		127.2	127.2	126.2	138.3	130.1	128.8	129.9	128.4	125.8	123.8	127.8
36	0		127.3	127.5	126.3	136.4	129.6	129.0	129.3	128.3	126.4	124.3	127.3
42	0		126.9	128.0	126.4	133.6	130.6	128.6	129.5	128.2	127.2	125.1	127.2
48	0		127.0	127.5	126.4	132.0	130.3	128.8	129.2	128.0	127.8	126.1	127.2
54	0		126.4	127.5	126.4	132.0	129.8	128.8	129.9	127.7	129.1	127.1	127.2
			One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.					
M.	S.												
2	0		463.4	451.7	459.0	443.0	446.9	452.4	453.0	448.2	460.9	450.4	456.0
8	0		453.7	450.2	460.4	444.3	448.5	451.4	452.4	450.3	456.6	449.7	455.1
14	0		440.2	444.4	458.4	446.2	449.8	450.8	451.9	449.5	454.2	447.3	454.1
20	0		441.0	447.4	457.5	438.3	451.7	452.6	453.6	450.0	454.4	447.4	455.1
26	0		447.6	449.2	454.1	437.5	452.2	451.3	454.2	450.0	452.6	451.2	453.8
32	0		449.1	452.2	455.0	438.8	451.7	451.6	450.2	451.0	449.4	453.0	452.6
38	0		451.3	452.3	453.9	445.0	450.1	451.9	448.4	451.2	449.0	455.0	452.2
44	0		447.9	454.1	451.5	443.9	451.8	451.9	449.0	451.7	449.6	455.1	453.2
50	0		447.0	455.2	446.2	444.8	453.0	451.8	449.1	453.5	451.1	455.0	454.1
56	0		449.0	457.6	447.3	445.4	452.9	452.3	447.0	458.5	451.5	455.7	452.9
Thermometer			51.3	53.3	53.8	54.5	54.5	54.4	54.0	53.8	53.6	53.8	53.8
			One Scale Division = .000093 parts of the V. F.					VERTICAL FORCE.					
M.	S.												
4	0		73.5	72.1	71.0	70.0	69.5	68.0	68.6	67.7	65.9	65.5	66.4
10	0		72.7	71.7	71.0	69.6	69.5	68.5	68.2	67.7	65.5	65.5	66.4
16	0		72.3	71.2	71.2	69.6	69.2	68.5	68.0	67.7	65.5	66.5	66.5
22	0		72.5	71.3	71.2	69.2	69.2	68.4	68.0	67.7	65.4	66.7	66.5
28	0		72.6	71.3	71.2	69.2	68.9	68.6	67.5	67.7	65.3	66.7	67.2
34	0		72.3	71.2	71.2	69.7	68.8	68.6	67.5	67.7	65.3	66.7	71.5
40	0		71.8	71.3	70.9	69.5	68.6	68.7	67.5	67.7	64.6	66.7	71.5
46	0		71.4	71.3	70.9	69.5	68.6	68.6	67.5	67.7	64.6	66.4	91.8
52	0		71.4	71.0	70.5	69.5	68.6	68.6	67.5	67.7	65.5	66.4	94.2
58	0		71.4	71.0	70.0	69.5	68.9	68.6	67.5	66.9	65.5	66.4	94.1
Thermometer			51.8	52.9	53.9	54.6	55.0	54.8	54.5	54.6	54.6	54.8	55.0
Increasing numbers denote decreasing westerly Declination, * At 20 <sup>d</sup> 10 <sup>h</sup> thermometer of													
METEOROLOGICAL OBSERVATIONS.													
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.					
				Dry.	Wet.	Direction.	Force.						
D.	H.	M.	In.	°	°								
19	10	0	29.689	41.6	40.1	W.N.W.	Very light	[cirro-cumulo-strati in S.E. overcast; light cirro-cumuli and cumulo-strati; with very dense overcast; cirri, cirro-cumuli, and cumulo-strati; wind in gusts. Partially clouded; detached cirro-cumuli and cirro-strati. Wind in gusts. Partially clouded; light detached cirro-cumuli and cumulo-strati. Clouded; light detached cirro-cumuli and cirro-strati. overcast; light cirro-cumuli and cumulo-strati; fair. Clouded with cirro-cumuli; clear to the N. of zenith. Clouded; cirro-cumuli and cumulo-strati. Partially clouded with cirro-cumuli. Clouded with dense cirro-cumuli. Clouded with cirro-cumuli; a few clear spaces. Clouded with cirro-cumuli; a few clear spaces.					
	11	0	29.714	40.9	38.2	W.N.W.	Moderate.						
	12	0	29.726	38.4	36.0	N.W.	Moderate.						
	13	0	29.743	38.0	35.5	N.W.	Light.						
	14	0	29.744	37.6	34.9	N.W.	Light.						
	15	0	29.754	37.4	34.7	—	Calm.						
	16	0	29.754	36.6	33.9	N.W.	Light.						
	17	0	29.755	37.8	34.4	W.N.W.	Light.						
	18	0	29.769	37.5	34.9	N.Westerly	Light.						
	19	0	29.767	36.4	34.5	—	Calm.						
	20	0	29.778	33.6	33.1	—	Calm.						
	21	0	29.776	32.4	31.7	—	Calm.						



MAGNETICAL OBSERVATIONS.

October 19th and 20th.

DECLINATION.

Angular Value of one Scale Division = 0'·721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 127·5	Sc. Div. 130·0	Sc. Div. 129·5	Sc. Div. 130·0	Sc. Div. 131·1	Sc. Div. 137·3	Sc. Div. 135·1	Sc. Div. 129·9	Sc. Div. 125·8	Sc. Div. 121·0	Sc. Div. 120·0	Sc. Div. 122·6	Sc. Div. 123·6
127·6	129·6	129·9	131·3	131·8	137·3	135·6	129·4	125·4	120·6	120·0	122·8	124·0
128·0	128·0	130·0	131·2	132·2	137·1	135·4	129·4	125·2	120·3	120·0	123·0	124·0
128·5	128·9	129·6	131·9	133·0	136·1	134·8	129·2	123·7	121·0	120·6	122·7	124·1
129·8	131·0	130·0	131·6	133·9	136·0	134·4	129·2	123·1	121·0	120·4	123·3	124·5
128·3	130·2	130·0	132·6	134·1	134·7	134·0	128·2	124·2	120·3	121·0	123·0	125·1
128·2	129·1	129·3	131·0	134·8	134·4	133·1	128·0	123·8	120·6	121·4	123·6	125·1
128·9	128·3	129·6	130·9	135·9	134·5	132·0	127·2	122·6	120·0	122·1	122·3	125·4
128·9	128·9	130·8	131·1	137·5	134·2	131·7	127·2	121·5	120·0	122·3	122·4	126·0
129·3	129·2	131·8	131·2	137·2	134·9	130·9	126·1	120·9	120·0	122·3	123·1	126·1

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = ·00026.

452·2	454·3	452·4	454·2	440·0	445·7	434·8	425·5	425·4	424·9	437·6	447·9	444·3
452·2	450·4	453·8	455·6	438·5	445·2	433·8	424·7	424·5	425·2	433·5	447·3	448·0
452·0	452·4	452·3	455·5	441·2	445·3	432·8	424·1	423·4	426·2	433·2	448·0	444·6
451·6	450·6	452·0	453·2	441·8	443·6	431·5	424·0	423·0	430·6	433·8	447·3	445·7
451·1	453·1	453·4	450·0	441·4	445·3	431·4	424·9	425·3	429·9	435·0	445·0	447·6
452·3	452·9	454·2	450·0	441·0	444·2	430·5	425·8	428·1	432·0	438·7	451·4	447·9
452·2	451·9	454·0	443·9	441·6	442·8	429·2	425·6	426·0	435·0	439·4	455·4	447·4
453·3	448·2	454·9	438·2	444·5	440·9	427·5	425·1	425·1	432·2	441·4	454·1	447·0
451·9	448·0	456·0	437·7	446·2	438·3	427·8	426·2	424·2	433·6	443·7	448·2	450·5
451·7	449·4	457·6	438·6	446·2	436·4	427·5	426·8	423·1	434·7	446·4	443·7	455·9

53·8	53·5	53·3	52·8	52·2	52·2	53·1	53·6	54·0	54·4	54·6	55·0	56·3 <sup>a</sup>
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VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = ·00011.

89·0	67·7	67·8	68·8	70·6	71·0	67·8	66·6	66·2	65·0	67·4	68·1	67·0
89·5	77·2	67·8	68·8	70·6	70·9	67·6	66·5	66·4	66·9	67·0	68·1	67·3
96·5	77·2	67·8	67·8	71·4	70·7	67·7	66·5	66·4	66·8	67·0	68·1	—
86·5	74·3	67·8	67·4	71·2	70·1	67·4	66·4	66·4	67·1	67·0	68·3	66·8
57·1	69·3	68·5	68·5	70·7	69·5	67·3	66·4	66·4	67·1	67·2	67·9	65·7
68·2	62·3	68·5	68·5	70·6	69·1	67·0	66·2	66·4	67·1	67·6	68·5	66·0
68·0	47·2	68·8	69·7	71·4	69·1	66·9	66·2	66·4	67·3	67·7	69·3	66·2
68·0	62·9	68·8	69·7	71·1	68·8	66·9	66·2	66·4	67·3	67·6	68·6	66·2
67·8	68·4	68·8	70·6	71·0	68·3	66·9	66·2	66·4	67·4	67·6	67·8	67·0
67·8	68·0	68·8	70·6	71·0	68·3	66·6	66·2	66·4	67·4	69·0	67·0	67·3

55·2	55·0	55·0	54·0	53·4	53·4	53·9	54·2	53·9	54·0	54·8	55·0	55·8 <sup>a</sup>
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and increasing Horizontal and Vertical Force.

H. F. 56°·8; of V. F. 56°·2.

METEOROLOGICAL OBSERVATIONS.

Mean Göttingen Time.	Barometer at 32°.	Thermometers.		Wind.		Weather.
		Dry.	Wet.	Direction.	Force.	
D. H. M.	In.	°	°			
19 22 0	29·778	32·2	31·7	—	Calm.	Clouded with cirro-cumuli; a few clear spaces.
23 0	29·798	31·2	30·4	—	Calm.	Clear, except a few clouds in S. horizon.
20 0 0	29·814	33·0	32·2	—	Calm.	Clear, except a few clouds round horizon.
1 0	29·841	34·4	33·7	N.W.	Light.	¾ overcast; cirro-cumuli and cumulo-strati; clear and overcast alternately.
2 0	29·847	37·1	35·7	N.W.	Nearly calm	Bank of cumulo-strati in N.E. and S.E. horizons, remainder clear.
3 0	29·866	40·8	37·6	N.W.	Light.	Zenith clear; cumulo-strati in S. horizon, and cirro-cumuli in N.
4 0	29·864	42·8	37·9	N.W.	Light.	¾ clouded; cirro-cumuli and cumulo-strati; fair.
5 0	29·870	43·4	37·7	N.W.	Light.	¾ clouded with cirro-cumuli and cumulo-strati; fair.
6 0	29·861	44·2	38·8	N.W.	Light.	Partially clouded; detached cumuli and cirro-cumuli.
7 0	29·849	45·4	39·0	N.W.	Light.	Partially clouded; detached cumuli and cumulo-strati.
8 0	29·848	47·8	41·0	N.W.	Light.	¾ clouded; detached masses of cirro-cumuli and cumulo-strati. [hor.
9 0	29·847	47·6	40·6	N.W.	Light.	¾ clouded; light cirro-cumuli in zenith; range of cumulo-strati round
10 0	29·852	46·8	40·1	N.W.	Light.	¾ overcast; light cirro-cumuli in zenith; well-defined cumulo-strati at hor.

November 25th and 26th.			MAGNETICAL OBSERVATIONS.											
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.					DECLINATION.						
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .	
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		127.4	128.0	128.2	128.9	128.9	129.1	128.8	127.9	127.8	128.0	128.4	
6	0		127.5	128.0	128.3	128.7	128.8	130.6	128.9	128.2	127.8	127.6	128.0	
12	0		127.7	128.1	128.4	128.8	128.8	132.0	128.4	128.0	127.1	127.4	128.0	
18	0		127.5	128.0	128.7	129.0	128.7	132.8	128.9	127.8	127.8	127.5	128.0	
24	0		127.4	128.1	128.9	128.8	128.8	131.6	129.0	127.8	128.0	128.0	128.0	
30	0		127.2	128.2	128.7	128.8	128.8	130.1	129.8	127.7	128.3	128.4	128.0	
36	0		127.2	128.2	128.7	128.6	128.5	129.0	130.0	127.8	128.2	128.1	127.4	
42	0		127.6	128.5	128.5	128.8	128.5	128.2	129.0	128.0	128.0	128.0	127.1	
48	0		127.7	128.4	128.6	128.9	128.8	127.8	128.4	127.9	128.1	127.5	127.4	
54	0		127.8	128.2	128.5	128.9	128.5	128.0	128.0	127.8	128.2	128.0	127.4	
			One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.						
M.	S.													
2	0		479.4	481.6	480.1	477.7	476.0	469.0	474.4	468.0	469.5	471.0	470.6	
8	0		479.4	482.5	480.0	477.6	475.1	468.1	473.8	468.8	470.8	470.1	470.9	
14	0		479.9	482.2	479.7	477.5	474.5	468.8	472.4	468.8	469.8	469.4	471.0	
20	0		480.6	482.0	480.0	477.8	474.9	469.9	472.0	469.1	—	469.1	472.5	
26	0		480.6	481.5	480.0	477.1	475.0	470.1	471.4	469.1	470.1	469.0	472.4	
32	0		480.8	481.7	480.0	476.7	474.0	469.8	471.7	469.4	469.6	469.1	472.2	
38	0		480.7	481.5	479.1	476.3	474.0	470.1	470.1	470.0	470.9	469.0	473.0	
44	0		481.4	481.1	479.0	477.1	473.5	470.5	469.0	469.7	471.0	470.0	472.7	
50	0		481.1	481.0	478.2	476.7	473.0	471.2	468.3	469.8	470.3	470.8	473.0	
56	0		481.7	480.1	478.2	476.0	472.4	472.4	467.8	469.1	470.4	470.4	473.1	
Thermometer			42.2	43.5	44.5	44.9	45.0	44.6	44.8	45.2	46.2	46.1	45.4	
			One Scale Division = .000095 parts of the V. F.					VERTICAL FORCE.						
M.	S.													
4	0		81.9	80.8	79.7	78.5	77.5	78.4	78.2	78.6	78.0	77.7	78.2	
10	0		81.9	80.8	79.7	77.9	77.5	78.4	78.1	78.6	78.0	77.8	78.2	
16	0		81.7	80.7	79.5	77.8	77.5	78.7	77.9	78.6	78.1	77.7	77.9	
22	0		81.7	80.7	79.5	77.6	77.5	78.7	77.9	78.6	78.1	77.7	77.9	
28	0		81.7	80.7	79.4	76.6	77.5	79.0	77.9	78.6	77.8	77.7	77.9	
34	0		81.7	80.7	79.3	77.5	77.5	78.9	77.9	78.6	77.7	77.9	77.9	
40	0		81.3	80.0	78.6	77.5	77.5	78.9	77.9	78.3	77.7	78.0	77.9	
46	0		81.3	80.0	78.7	77.5	77.5	78.9	78.5	78.3	77.7	78.2	77.6	
52	0		81.3	80.0	78.5	77.5	77.5	78.6	78.3	78.1	77.7	78.2	77.8	
58	0		81.3	79.7	78.6	77.5	77.5	78.3	78.3	78.0	77.7	78.2	77.8	
Thermometer			43.2	44.2	44.7	45.5	46.2	46.0	46.0	46.2	46.4	46.5	46.4	
Increasing numbers denote decreasing westerly Declination, * At 26 <sup>d</sup> 10 <sup>h</sup> thermometer of														
METEOROLOGICAL OBSERVATIONS.														
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.						
				Dry.	Wet.	Direction.	Force.							
D.	H.	M.	In.	°	°									
25	10	0	29.564	32.2	31.1	S. W.	Brisk.	Densely clouded; cirro-cumuli and cumuli.						
	11	0	29.575	32.4	30.4	S. W.	Brisk.	Densely clouded; cirro-cumuli and haze.						
	12	0	29.588	31.6	29.4	S. W.	Brisk.	Densely clouded; very dark; squally.						
	13	0	29.617	30.4	27.2	S. W.	Moderate.	Densely clouded; cirro-cumuli and haze.						
	14	0	29.642	28.8	25.8	S. W.	Light.	Nearly overcast; cumulo-strati.						
	15	0	29.650	28.4	26.0	S. W.	Moderate.	Densely overcast; cumulo-strati.						
	16	0	29.684	27.6	25.7	S. W.	Moderate.	Densely overcast; cumulo-strati.						
	17	0	29.678	26.3	24.3	S. W.	Moderate.	Overcast; cirro-cumuli and cumulo-strati.						
	18	0	29.707	25.9	23.8	S. W.	Moderate.	‡ clouded; cirro-cumuli and cumulo-strati; wind in gusts.						
	19	0	29.709	23.7	22.0	S.W.b.W.	Moderate.	Overcast; cirro-cumuli and haze; a few stars visible; wind in gusts.						
	20	0	29.728	22.5	20.8	S.W.b.W.	Brisk.	Overcast; cirro-strati and light haze, a few stars visible; wind in						
	21	0	29.715	21.9	20.4	S. W.	Fresh.	Overcast; light cirro-strati and haze. [gusts.						

MAGNETICAL OBSERVATIONS.												November 25th and 26th.	
DECLINATION.												Angular Value of one Scale Division = 0'·721.	
21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .	
Sc. Div. 127·4	Sc. Div. 126·4	Sc. Div. 128·2	Sc. Div. 128·5	Sc. Div. 129·0	Sc. Div. 128·8	Sc. Div. 130·3	Sc. Div. 128·7	Sc. Div. 126·8	Sc. Div. 125·1	Sc. Div. 124·5	Sc. Div. 125·0	Sc. Div. 125·0	
127·3	125·0	128·1	128·6	129·2	129·3	129·8	128·5	126·5	125·0	125·0	125·0	125·0	
127·1	125·0	129·0	129·0	129·0	129·5	129·2	128·6	126·6	124·7	124·8	125·0	125·0	
127·0	125·4	129·2	129·2	129·0	129·1	129·6	128·4	126·0	124·6	124·8	125·0	124·8	
126·5	125·4	127·5	129·0	129·7	130·0	129·8	128·4	125·6	124·5	124·3	125·0	125·0	
126·3	125·6	128·0	—	129·3	129·6	130·1	128·0	125·3	124·2	124·8	125·1	125·0	
126·0	125·8	128·0	129·0	129·2	129·7	129·6	128·0	125·3	124·0	124·5	125·1	125·2	
125·0	126·2	128·0	128·9	129·0	129·5	129·5	127·7	125·0	124·1	124·8	125·0	125·0	
125·0	127·4	128·2	129·0	129·8	129·4	129·8	127·3	125·1	124·6	125·0	125·0	125·4	
124·4	128·1	128·0	129·2	129·6	130·5	130·4	127·1	125·1	124·8	125·0	125·0	125·5	

HORIZONTAL FORCE.												Change in the magnetic moment of the Bar for 1° Fah. = ·00026.	
473·4	472·0	480·0	484·3	485·2	483·3	481·5	482·1	479·6	478·3	477·0	479·2	481·4	
473·2	471·8	480·0	485·1	484·4	481·7	482·6	481·9	477·1	478·3	478·1	479·1	482·0	
472·6	472·0	480·4	485·2	484·4	480·9	483·4	482·0	475·9	478·6	479·0	480·0	481·8	
473·7	473·7	482·1	486·5	484·8	478·8	484·6	482·3	475·6	477·6	478·8	480·0	482·0	
473·0	474·9	482·2	485·8	485·8	479·1	484·7	481·8	474·9	477·1	478·6	481·0	482·9	
472·7	475·0	483·2	486·2	486·1	480·0	485·4	481·5	476·2	477·3	478·8	480·0	483·0	
472·8	475·0	483·0	485·1	486·0	478·7	485·7	480·9	477·3	476·9	477·5	480·5	484·0	
471·1	475·5	484·0	485·1	484·7	480·3	485·0	480·3	477·4	476·4	477·2	482·0	483·0	
471·0	477·0	483·2	484·5	483·3	478·5	483·6	480·6	477·9	477·6	476·9	481·0	483·0	
470·1	478·8	485·0	485·1	484·5	480·5	484·1	480·9	477·9	478·0	478·0	481·0	482·8	
° 44·8	° 44·0	° 43·1	° 42·5	° 42·0	° 41·3	° 41·4	° 41·5	° 41·8	° 42·2	° 43·0	° 43·4	° 43·5	

VERTICAL FORCE.												Change in the magnetic moment of the Bar for 1° Fah. = ·00011.	
77·8	77·8	77·5	78·5	79·2	70·6	80·1	80·8	80·9	80·3	80·3	80·5	80·5	
77·7	77·8	77·5	78·5	79·2	74·4	80·8	81·0	80·9	80·3	80·3	80·5	80·5	
77·7	77·8	77·5	78·5	79·2	75·9	80·9	80·7	80·8	80·3	80·3	80·5	80·5	
77·8	77·8	78·1	78·5	79·2	76·9	81·0	80·7	80·4	80·1	80·5	80·5	80·5	
77·8	77·5	78·1	78·5	79·2	76·9	81·4	80·7	80·4	80·1	80·4	80·5	80·7	
77·8	77·5	78·1	78·5	80·2	77·3	81·4	80·2	80·2	80·3	80·6	80·5	80·7	
77·8	77·5	78·1	78·5	81·3	77·4	81·7	80·6	80·8	80·3	80·6	80·5	80·7	
77·8	77·5	78·2	79·3	82·1	78·1	81·0	80·6	80·4	80·3	80·6	80·5	80·7	
77·8	77·5	78·2	79·2	81·0	78·0	81·0	80·6	80·4	80·3	81·0	80·5	80·7	
77·8	77·5	78·5	79·2	—	78·5	81·0	80·9	80·4	80·3	81·0	80·5	80·5	
° 46·3	° 45·8	° 45·7	° 44·6	° 44·1	° 44·1	° 43·4	° 43·1	° 43·1	° 43·2	° 43·6	° 43·8	° 44·2	

and increasing Horizontal and Vertical Force.  
H. F. 43°·6; of V. F. 44°·4.

METEOROLOGICAL OBSERVATIONS.											
Mean Göttingen Time.			Barometer at 32°.		Thermometers.		Wind.		Weather.		
					Dry.	Wet.	Direction.	Force.			
D.	H.	M.	In.	°	°						
25	22	0	29·716	20·2	18·3	S. W.	Fresh.		Overcast; light cirro-strati and haze.		
	23	0	29·733	18·6	17·1	S. W.	Moderate		Clouded; cirro-cumuli, strati and haze; wind in gusts.		
26	0	0	29·737	18·2	16·8	S. W.	Fresh.		Clear, except a few cirro-cumuli, strati, and haze round horizon.		
	1	0	29·747	17·9	16·8	W. S. W.	Light.		Bank of strati in N. and W. horizons, and cirri in N.; generally clear.		
	2	0	29·753	19·4	18·0	S. W.	Light.		Partially clouded with light cirro-cumuli.		
	3	0	29·758	21·3	19·9	S. W.	Light.		Partially clouded; cirro-cumuli and cirro-strati. [in S. W.]		
	4	0	29·754	22·8	22·0	S. W.	Light.		Clear, except a few light cirri and cirro-cumuli round horizon, and		
	5	0	29·726	26·2	24·0	S. W.	Light.		Partially clouded; light cirro-cumuli; fair.		
	6	0	29·713	27·8	25·7	W. by S.	Light.		Overcast; cirri and haze, dense along S. horizon; fair.		
	7	0	29·674	28·3	27·2	S. by W.	Light.		Overcast with haze, very dense round horizon; slight snow.		
	8	0	29·643	28·5	27·3	S. by W.	Light.		Overcast; cirri and haze, very dense round horizon; slight snow.		
	9	0	29·602	28·8	27·7	S. by W.	Light.		Densely overcast; slight snow.		
	10	0	29·582	28·0	27·4	S. by W.	Near calm		Densely overcast; slight snow.		

December 21st and 22nd.			MAGNETICAL OBSERVATIONS.										
Mean Göttingen Time.			Angular Value of one Scale Division = 0'.721.					DECLINATION.					
			10 <sup>h</sup> .	11 <sup>h</sup> .	12 <sup>h</sup> .	13 <sup>h</sup> .	14 <sup>h</sup> .	15 <sup>h</sup> .	16 <sup>h</sup> .	17 <sup>h</sup> .	18 <sup>h</sup> .	19 <sup>h</sup> .	20 <sup>h</sup> .
M.	S.		Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.	Sc. Div.
0	0		126.0	127.5	129.1	130.0	129.5	131.0	128.7	128.5	128.5	129.0	127.5
6	0		126.0	127.4	129.8	130.3	129.7	130.8	129.5	128.5	128.4	129.0	125.9
12	0		126.2	127.5	129.7	130.4	129.4	130.5	129.8	128.0	128.5	129.0	124.6
18	0		126.6	127.6	130.0	130.4	129.2	130.6	129.0	127.3	128.5	128.2	122.7
24	0		126.8	127.3	130.0	130.1	129.3	131.2	129.0	127.0	128.6	127.3	121.0
30	0		126.9	128.0	129.8	130.2	129.9	130.0	128.1	127.2	129.0	128.0	120.0
36	0		127.0	128.4	129.9	130.0	130.1	129.0	127.8	127.2	129.0	128.0	120.0
42	0		127.0	128.7	130.0	129.8	132.4	129.0	128.5	128.6	129.0	128.2	121.1
48	0		127.0	129.6	129.9	129.8	133.0	129.0	128.8	129.8	129.0	128.6	123.0
54	0		127.3	129.1	129.9	129.4	132.2	128.2	128.0	130.2	129.0	128.1	124.3
			One Scale Division = .000074 parts of the H. F.					HORIZONTAL FORCE.					
M.	S.												
2	0		482.5	482.0	480.8	479.2	478.0	476.5	473.5	471.3	470.7	468.4	467.9
8	0		481.9	482.0	480.9	479.6	477.8	476.4	473.0	472.5	470.3	468.0	467.7
14	0		481.6	482.2	479.1	479.2	477.1	476.3	473.1	473.6	470.4	467.7	468.9
20	0		481.7	480.6	479.6	479.2	477.0	475.9	472.5	475.1	470.3	467.0	468.4
26	0		481.8	479.5	479.7	478.9	476.5	477.4	473.0	475.7	470.0	467.0	469.4
32	0		482.0	479.6	479.2	477.9	474.9	477.2	472.2	475.1	470.9	467.0	469.7
38	0		482.1	479.8	479.5	477.6	474.1	476.2	471.0	474.0	470.0	467.4	471.6
44	0		483.0	480.2	479.9	478.0	474.0	476.0	472.0	473.1	470.8	468.0	472.1
50	0		482.9	480.2	479.5	478.0	475.0	475.0	472.2	471.4	469.8	468.7	473.7
56	0		483.3	479.9	480.0	476.8	476.2	473.0	472.4	471.1	469.0	467.9	473.2
Thermometer			°	°	°	°	°	°	°	°	°	°	°
			46.0	46.6	47.5	47.9	48.0	48.0	48.2	48.2	48.2	48.4	48.5
			One Scale Division = .000094 parts of the V. F.					VERTICAL FORCE.					
M.	S.												
4	0		— <sup>a</sup>	—	—	—	—	—	72.9	72.7	72.5	72.0	71.5
10	0		—	—	—	—	—	—	73.2	72.7	72.5	72.0	71.1
16	0		—	—	—	—	—	—	73.0	72.7	73.3	72.0	70.7
22	0		—	—	—	—	—	—	73.0	72.7	72.6	72.0	70.6
28	0		—	—	—	—	—	—	73.0	72.7	72.5	72.0	69.5
34	0		—	—	—	—	—	73.0	72.7	72.6	72.5	72.0	68.4
40	0		—	—	—	—	—	73.0	72.7	72.6	72.4	72.0	68.2
46	0		—	—	—	—	—	72.9	72.7	72.5	72.4	72.0	68.2
52	0		—	—	—	—	—	72.9	72.7	72.4	72.0	71.5	68.0
58	0		—	—	—	—	—	72.9	72.7	72.5	71.3	71.5	68.0
Thermometer			°	°	°	°	°	°	°	°	°	°	°
			—	—	—	—	—	47.6	48.1	48.2	48.2	48.7	48.7
Increasing numbers denote decreasing westerly Declination,													
<sup>a</sup> Magnetometer being re-adjusted.													
METEOROLOGICAL OBSERVATIONS.													
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.					
				Dry.	Wet.	Direction.	Force.						
D.	H.	M.	In.	°	°								
21	10	0	29.222	35.3	34.4	S. E.	Very light	Clouded; cirro-cumuli and cumulo-strati.					
	11	0	29.194	34.8	34.1	—	Calm.	Densely overcast. [E. and N. W.]					
	12	0	29.169	34.4	33.9	—	Calm.	Overcast; cirro-cumuli, cirro-strati, and haze; a few stars visible in					
	13	0	29.150	34.3	34.0	—	Calm.	Overcast; cirro-strati and haze; a few stars visible.					
	14	0	29.132	33.2	33.0	—	Calm.	Overcast.					
	15	0	29.077	33.0	32.8	—	Calm.	Overcast.					
	16	0	29.054	33.6	33.6	—	Calm.	Overcast.					
	17	0	29.032	34.0	33.7	—	Calm.	Densely overcast.					
	18	0	29.008	33.6	33.6	—	Calm.	Densely overcast.					
	19	0	28.964	34.2	33.6	S. W.	Light.	Clouded; cirro-cumuli and haze.					
	20	0	28.964	33.8	33.0	S. W.	Light.	Clouded; cirro-cumuli and haze.					
	21	0	28.972	33.6	32.6	N. W.	Brisk.	Densely clouded; cirro-cumuli and haze; slight snow. Squally.					

MAGNETICAL OBSERVATIONS.

December 21st and 22nd.

DECLINATION.

Angular Value of one Scale Division = 0'.721.

21 <sup>h</sup> .	22 <sup>h</sup> .	23 <sup>h</sup> .	0 <sup>h</sup> .	1 <sup>h</sup> .	2 <sup>h</sup> .	3 <sup>h</sup> .	4 <sup>h</sup> .	5 <sup>h</sup> .	6 <sup>h</sup> .	7 <sup>h</sup> .	8 <sup>h</sup> .	9 <sup>h</sup> .
Sc. Div. 126.9	Sc. Div. 134.0	Sc. Div. 131.1	Sc. Div. 129.6	Sc. Div. 130.3	Sc. Div. 131.4	Sc. Div. 132.3	Sc. Div. 130.5	Sc. Div. 126.3	Sc. Div. 124.0	Sc. Div. 124.4	Sc. Div. 124.6	Sc. Div. 125.1
129.0	133.0	131.4	129.8	130.7	131.4	132.5	130.1	125.7	122.9	123.6	124.3	125.4
131.0	132.7	132.0	129.9	130.7	131.5	133.8	129.9	125.6	122.6	123.5	124.3	125.4
132.0	132.2	131.8	130.0	131.0	131.6	131.5	129.2	125.6	123.6	123.6	124.2	125.6
133.0	132.0	130.9	130.3	130.9	131.5	132.0	129.0	125.3	124.0	123.8	124.6	125.2
133.6	132.0	131.7	130.4	130.8	132.0	131.9	128.5	125.6	123.4	124.6	124.7	125.2
134.0	132.0	131.9	131.0	131.0	131.9	132.1	129.5	125.4	124.0	124.2	125.1	125.7
134.0	131.0	131.7	131.0	131.3	132.1	132.3	128.5	125.6	123.9	124.5	125.6	126.1
134.5	130.8	130.8	130.7	131.0	132.2	132.0	127.0	124.5	124.1	124.1	125.6	125.8
134.7	131.0	130.1	130.3	131.8	132.5	131.0	127.7	124.3	124.6	123.9	125.9	126.4

HORIZONTAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00026.

472.2	474.6	474.5	477.1	480.6	482.1	481.0	475.2	469.2	474.4	481.6	490.5	494.0
471.1	474.9	475.0	477.1	480.8	481.5	480.1	473.5	469.1	474.6	483.0	489.2	496.5
472.0	476.0	475.8	477.6	481.0	482.6	479.6	472.3	469.1	473.8	480.7	487.1	498.5
473.2	475.1	476.8	478.9	481.2	483.0	479.8	471.2	472.0	477.4	482.1	488.9	499.8
474.2	474.6	477.2	480.0	480.9	482.0	479.3	472.5	471.8	474.9	482.1	491.0	499.3
474.5	473.3	476.9	480.3	480.9	482.0	478.1	473.2	472.8	473.1	482.2	491.8	499.6
475.1	473.7	477.1	482.2	480.8	482.3	476.8	471.1	475.6	475.2	484.0	491.3	500.2
475.0	473.9	476.1	482.3	482.1	482.3	477.4	472.9	475.0	477.0	485.5	492.1	500.8
474.9	473.8	477.1	481.4	481.6	482.6	476.2	472.2	474.7	477.2	486.6	491.7	500.7
474.1	474.1	477.0	481.0	482.0	481.7	475.4	471.3	477.3	480.5	487.6	493.1	500.1
48.5	48.3	47.6	47.2	46.2	44.6	43.5	42.6	41.4	40.6	40.3	40.4	39.6 <sup>b</sup>

VERTICAL FORCE.

Change in the magnetic moment of the Bar for 1° Fah. = .00011.

68.0	70.4	71.6	72.7	72.4	73.6	75.2	75.5	77.5	78.7	80.7	81.0	81.9
67.8	70.6	71.6	71.5	72.4	73.9	75.2	75.6	77.0	78.9	80.7	81.0	81.6
67.8	71.0	71.8	72.4	72.4	74.7	75.3	76.1	77.6	79.3	80.7	81.3	81.2
68.6	71.0	71.8	72.4	72.0	74.9	75.4	76.2	78.1	80.9	81.7	81.3	80.9
68.6	71.0	72.1	72.4	72.0	75.2	75.4	76.2	77.8	80.8	81.0	81.4	80.9
68.8	71.0	72.1	72.4	72.4	75.3	75.4	78.7	77.8	80.7	81.0	81.4	80.9
69.4	71.5	72.1	72.4	72.7	75.3	75.4	76.2	78.9	80.7	81.0	81.4	80.9
69.3	71.5	72.2	72.4	72.7	75.3	75.4	76.9	78.9	80.7	81.1	81.2	80.9
69.9	71.5	72.2	72.4	72.9	75.3	75.5	76.9	78.2	80.7	81.0	81.2	81.6
69.9	71.5	72.4	72.4	73.3	75.3	75.7	76.9	79.8	80.7	81.0	82.2	80.9
48.7	48.7	48.3	48.2	47.9	46.4	45.4	44.5	43.6	42.7	42.2	41.9	41.2 <sup>b</sup>

and increasing Horizontal and Vertical Force.

<sup>b</sup> At 22<sup>d</sup> 10<sup>h</sup> thermometer of H. F. 39°·2; of V. F. 40°·6.

METEOROLOGICAL OBSERVATIONS.

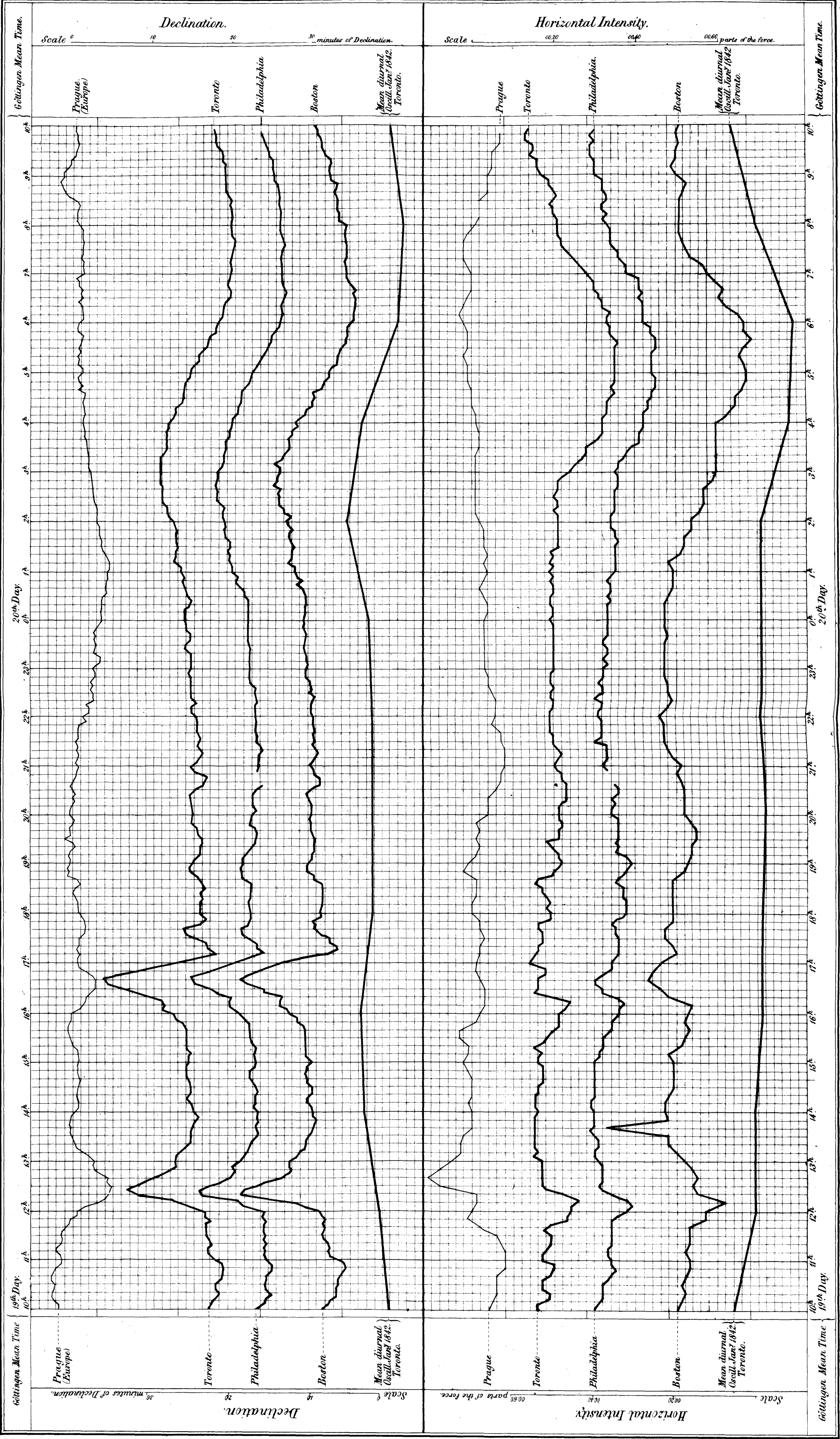
Mean Göttingen Time.			Barometer at 32°.	Thermometers.		Wind.		Weather.
D.	H.	M.		Dry.	Wet.	Direction.	[Force.	
21	22	0	28.996	29.0	25.1	N. W.	Brisk.	{ Clouded; cirro-cumuli and cumulo-strati; clear spaces in N. W. and zenith; wind in gusts. Clouded; detached cirro-cumuli and cumulo-strati; clear spaces in Clouded with cirro-cumuli. [zenith; wind in gusts. Partially clouded; cirri and cirro-cumuli; fair. § clouded round horizon; cirro-cumuli and cirro-strati. ¶ clouded; dense cumulo-strati in S. and S. E., and a few cirro-cumuli passing rapidly across zenith. § clouded round horizon; cirro-cumuli and cumulo-strati, very dense in § clouded; cirri, cirro-cumuli and haze. [S. and S. E. § clouded; cirro-cumuli and haze. Partially clouded with cirri and cirro-cumuli; fair. [squally. § clouded; heavy detached masses of cirro-cumuli and cumulo-strati; Dense bank of cumulo-strati in S.; detached cirro-cumuli in N. W. and N. horizons; squally. Zenith clear; very dense and well-defined range of cumulo-strati from S.E. to S.W., alt. 15°; detached cirro-cumuli round remainder.
	23	0	29.008	24.7	20.6	N. W.	Brisk.	
22	0	0	29.065	22.7	19.0	N. W.	Brisk.	
	1	0	29.101	18.6	14.9	W. N. W.	Brisk.	
	2	0	29.145	15.8	12.1	W. N. W.	Brisk.	
	3	0	29.188	15.1	11.3	W. N. W.	Brisk.	
	4	0	29.200	14.7	10.9	W. N. W.	Brisk.	
	5	0	29.208	15.7	12.7	W. N. W.	Brisk.	
	6	0	29.197	15.6	11.5	W. N. W.	Brisk.	
	7	0	29.200	15.7	11.7	W. N. W.	Brisk.	
	8	0	29.233	14.9	10.6	W.	Brisk.	
	9	0	29.253	12.8	8.8	W.	Brisk.	
	10	0	29.272	11.9	7.8	W.	Brisk.	





# Declination and Horizontal Intensity, January 19<sup>th</sup> & 20<sup>th</sup> 1842.

Magnetical Observations - Toronto



Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

Standard & Co. Litho. London.

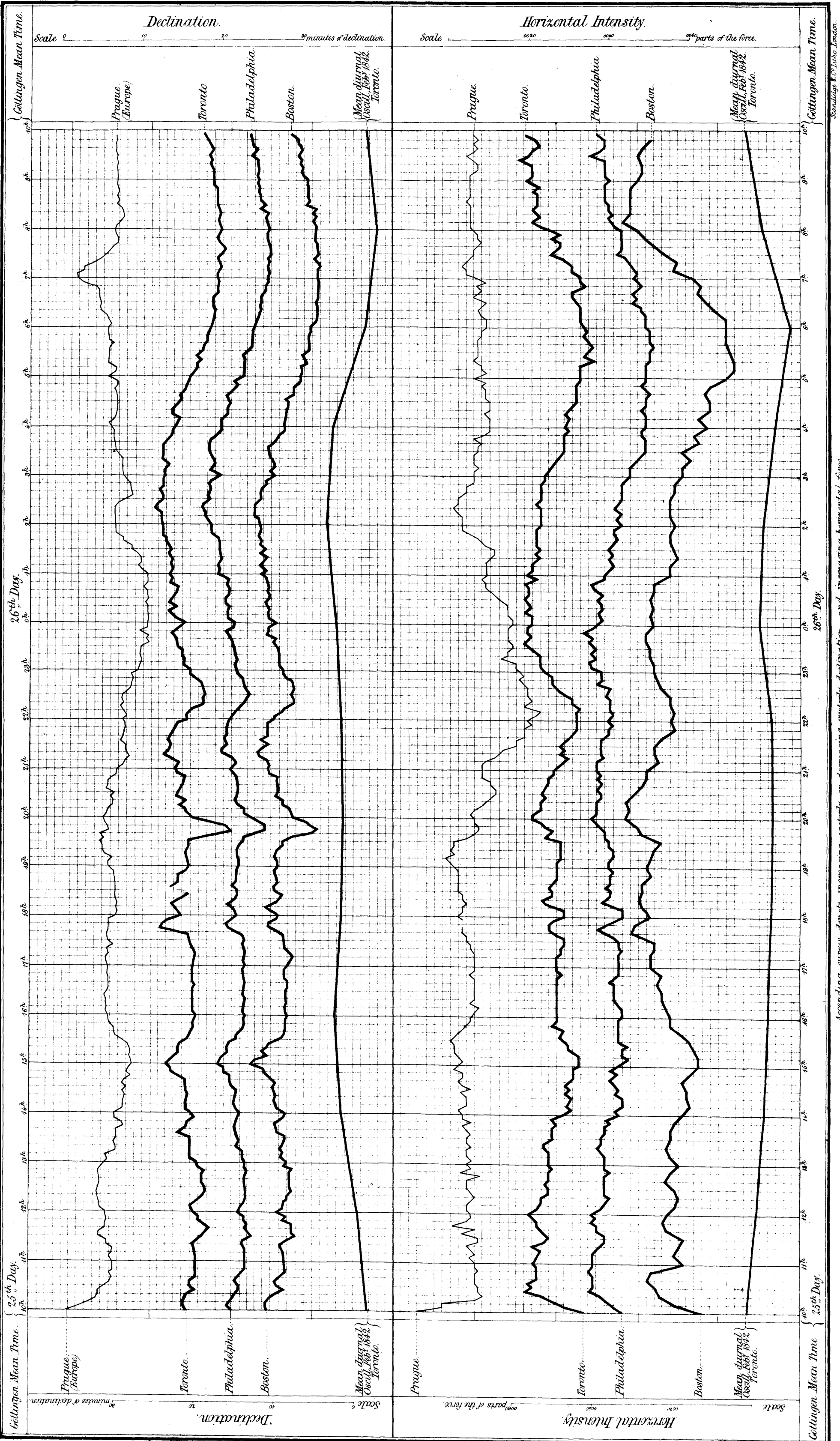






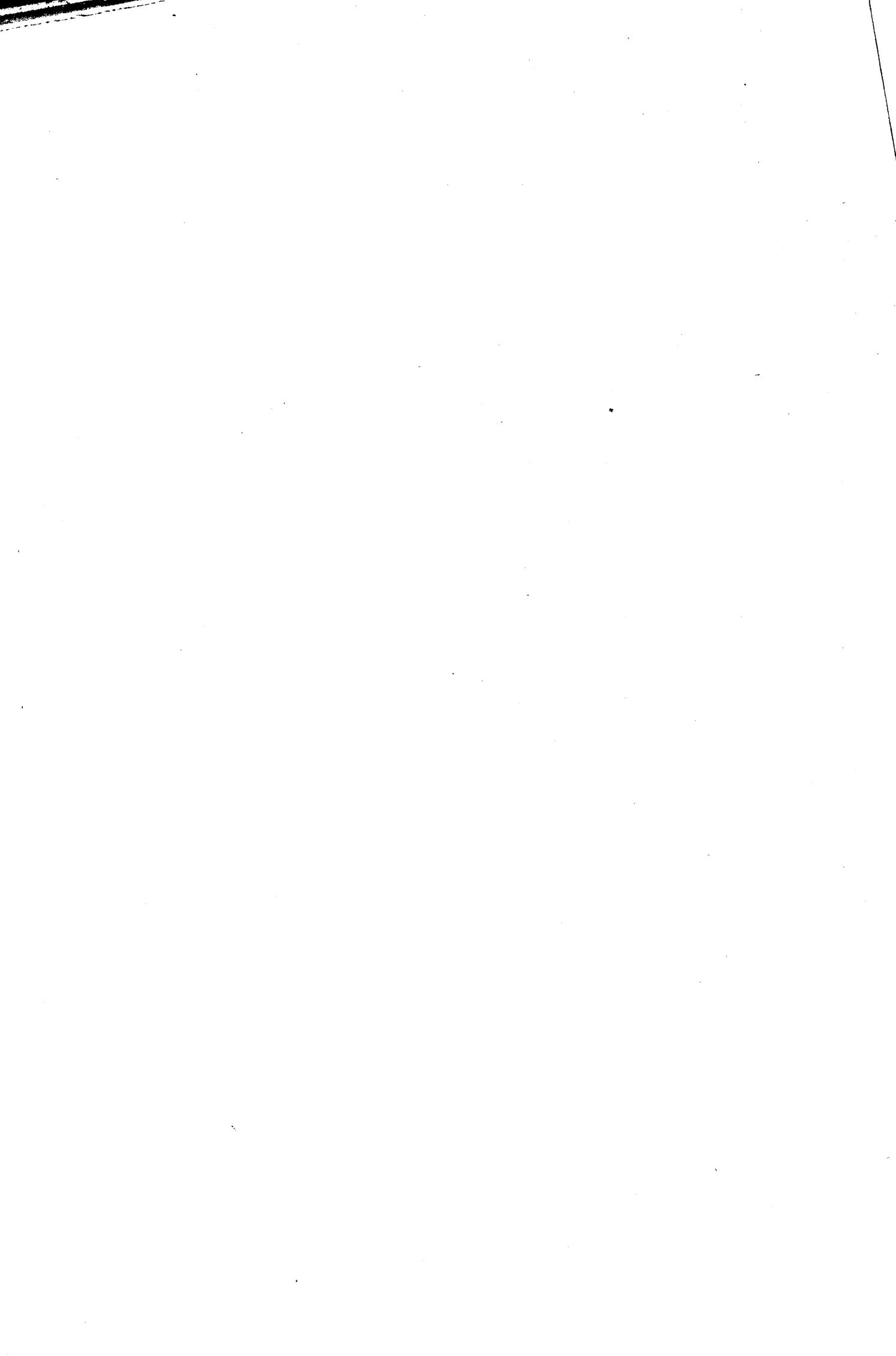
Declination and Horizontal Intensity, February 25<sup>th</sup> & 26<sup>th</sup> 1842.

Magnetical Observations. Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

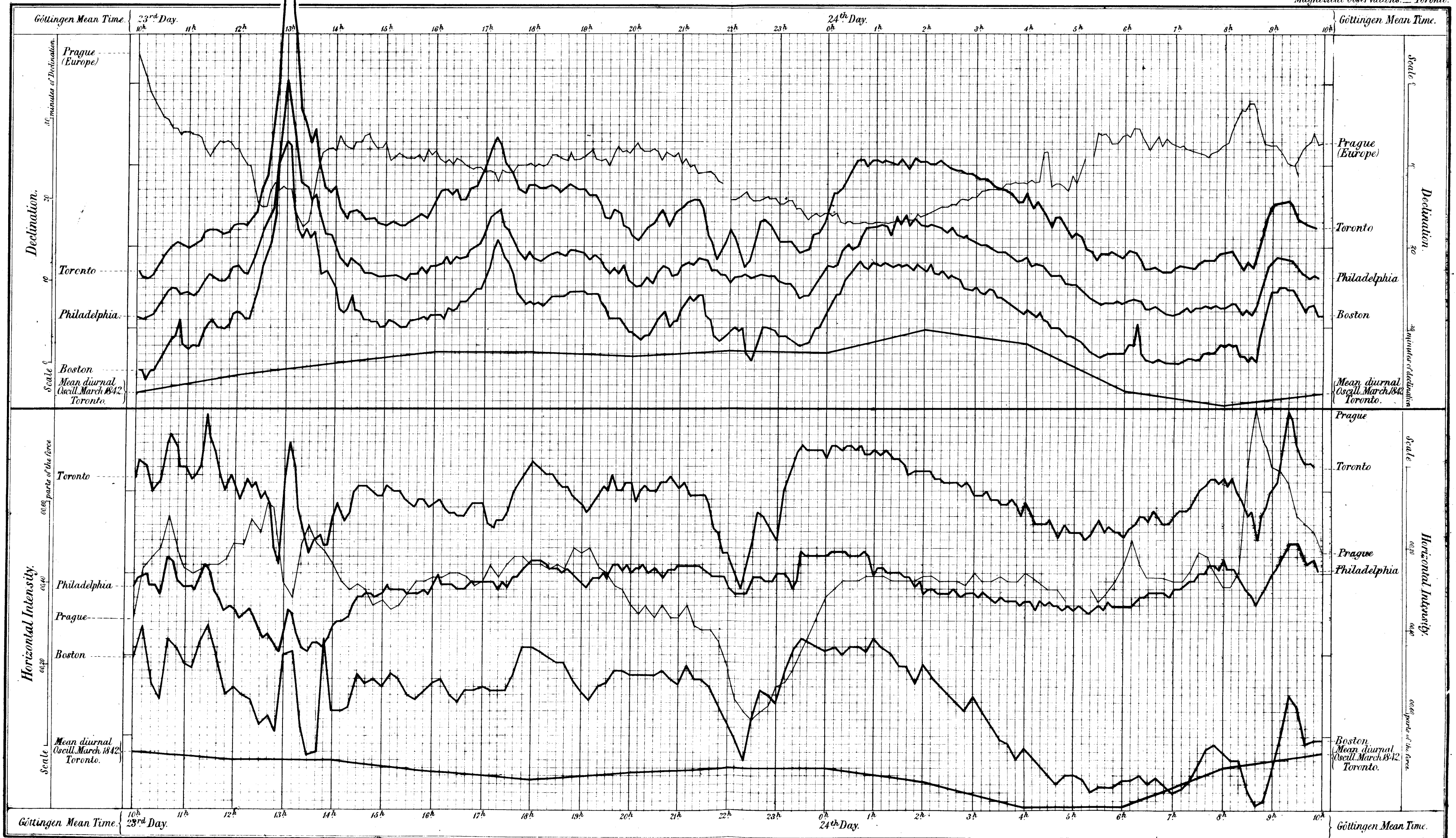
Standard & Co. Litho. London.





# Declination and Horizontal Intensity, March 23<sup>rd</sup> & 24<sup>th</sup> 1842.

Magnetical Observations. — Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination and increasing horizontal force.

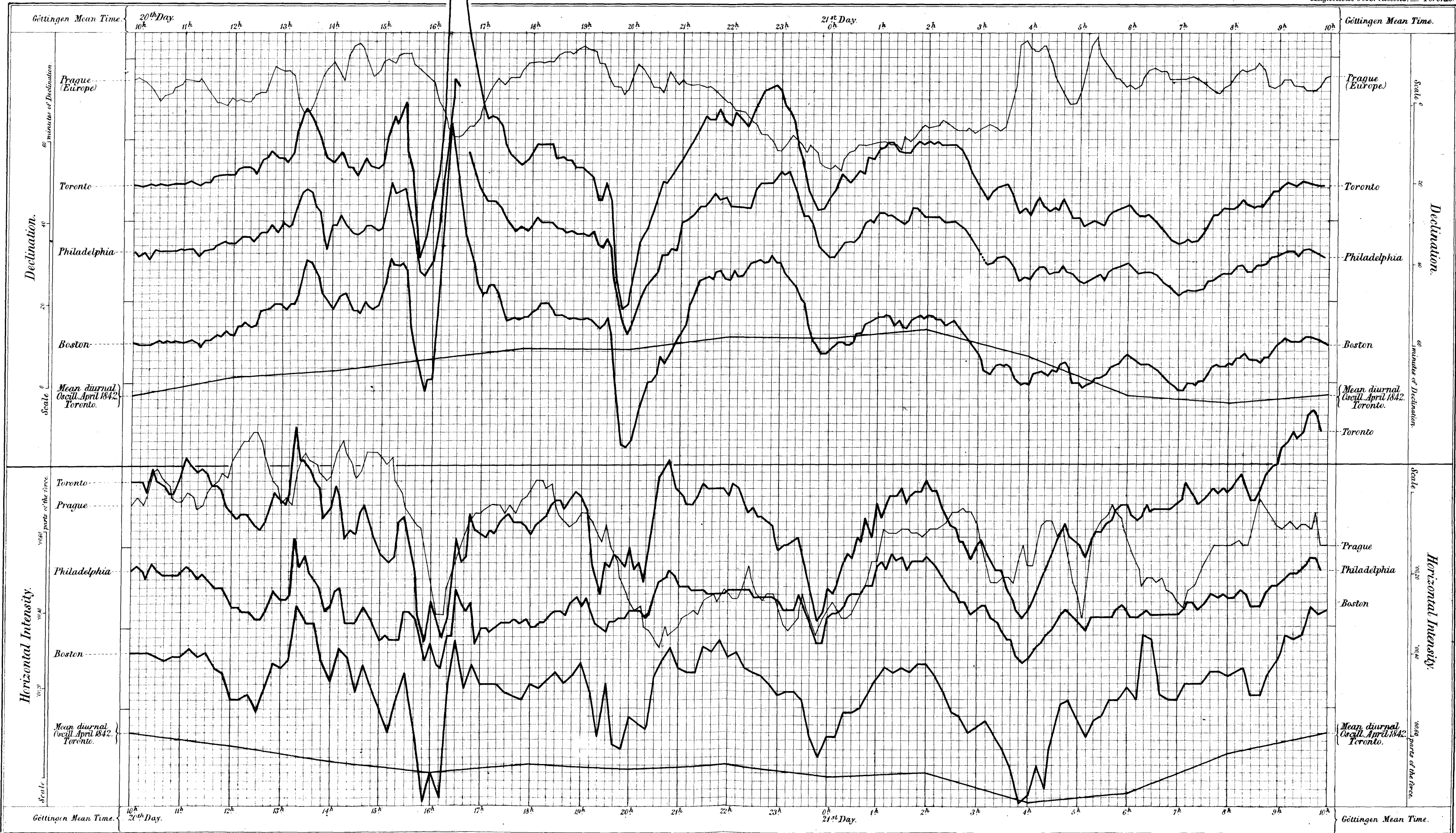






# Declination and Horizontal Intensity, April 20<sup>th</sup> & 21<sup>st</sup> 1842.

Magnetical Observations. — Toronto.



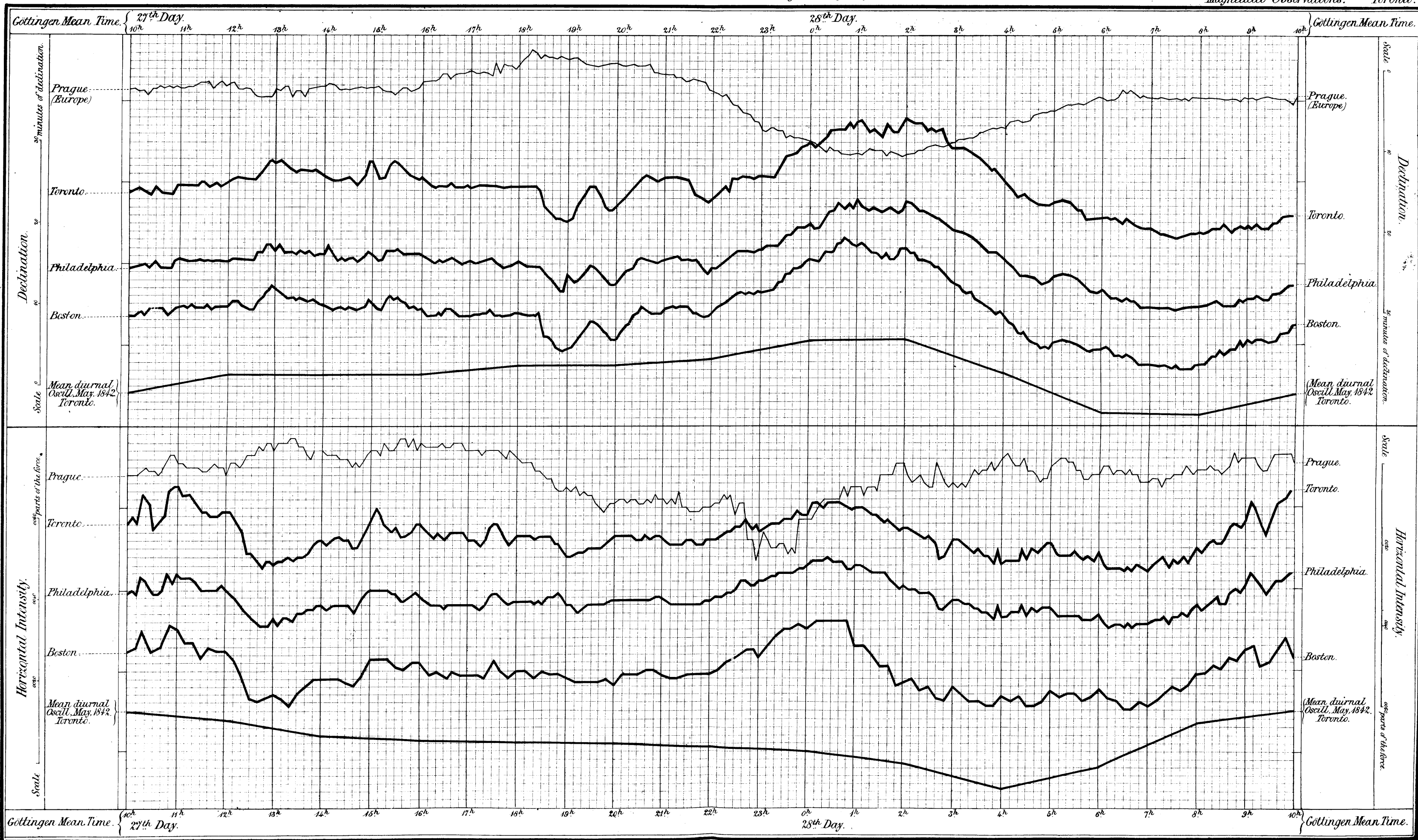
*Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.*





Declination and Horizontal Intensity, May 27<sup>th</sup> & 28<sup>th</sup> 1842.

Magnetical Observations. Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

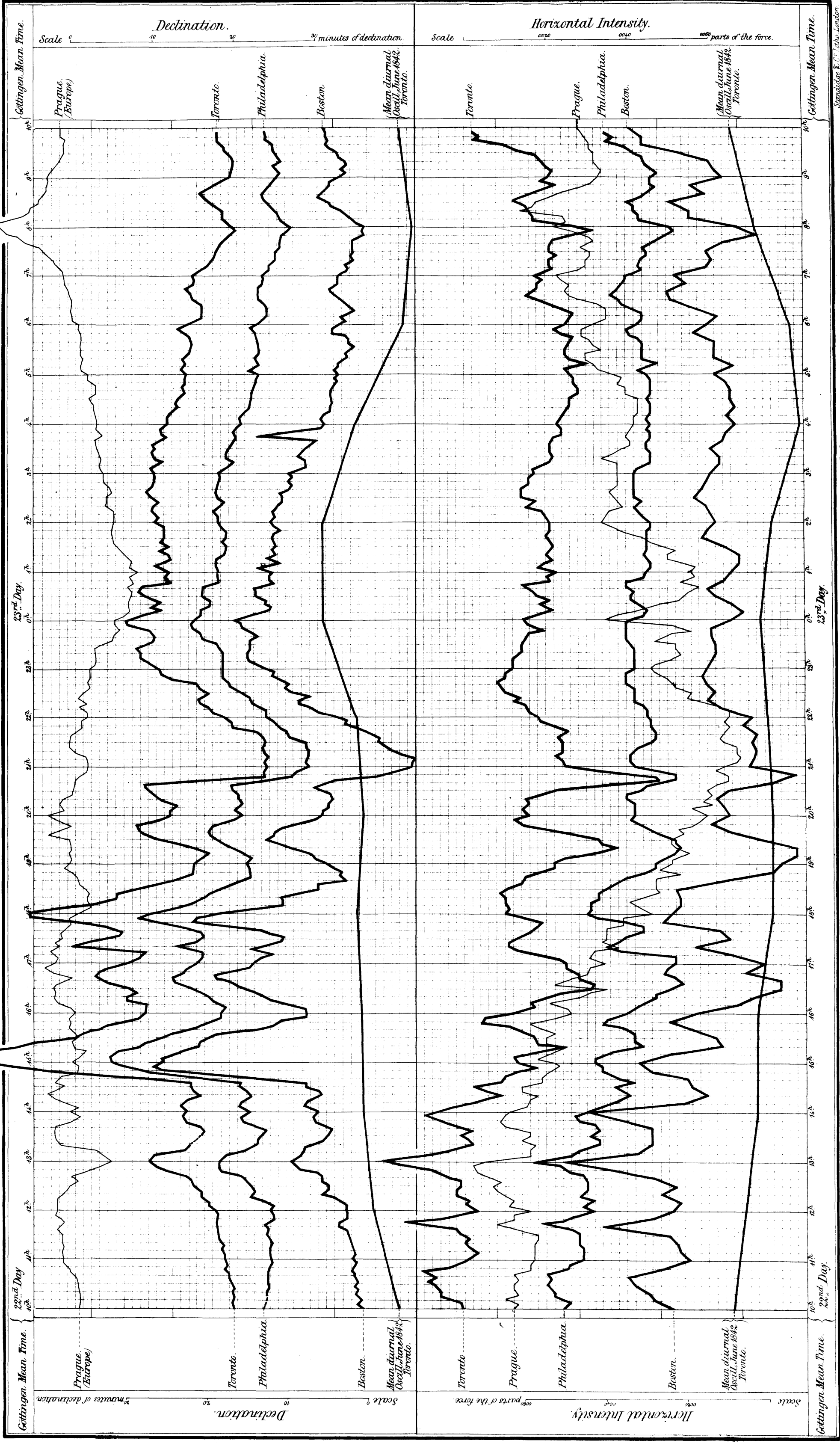
Standage & Co. Litho. London.





*Declination and Horizontal Intensity, June 22<sup>nd</sup> & 23<sup>rd</sup> 1842.*

Magnetical Observations. Toronto.



*Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.*

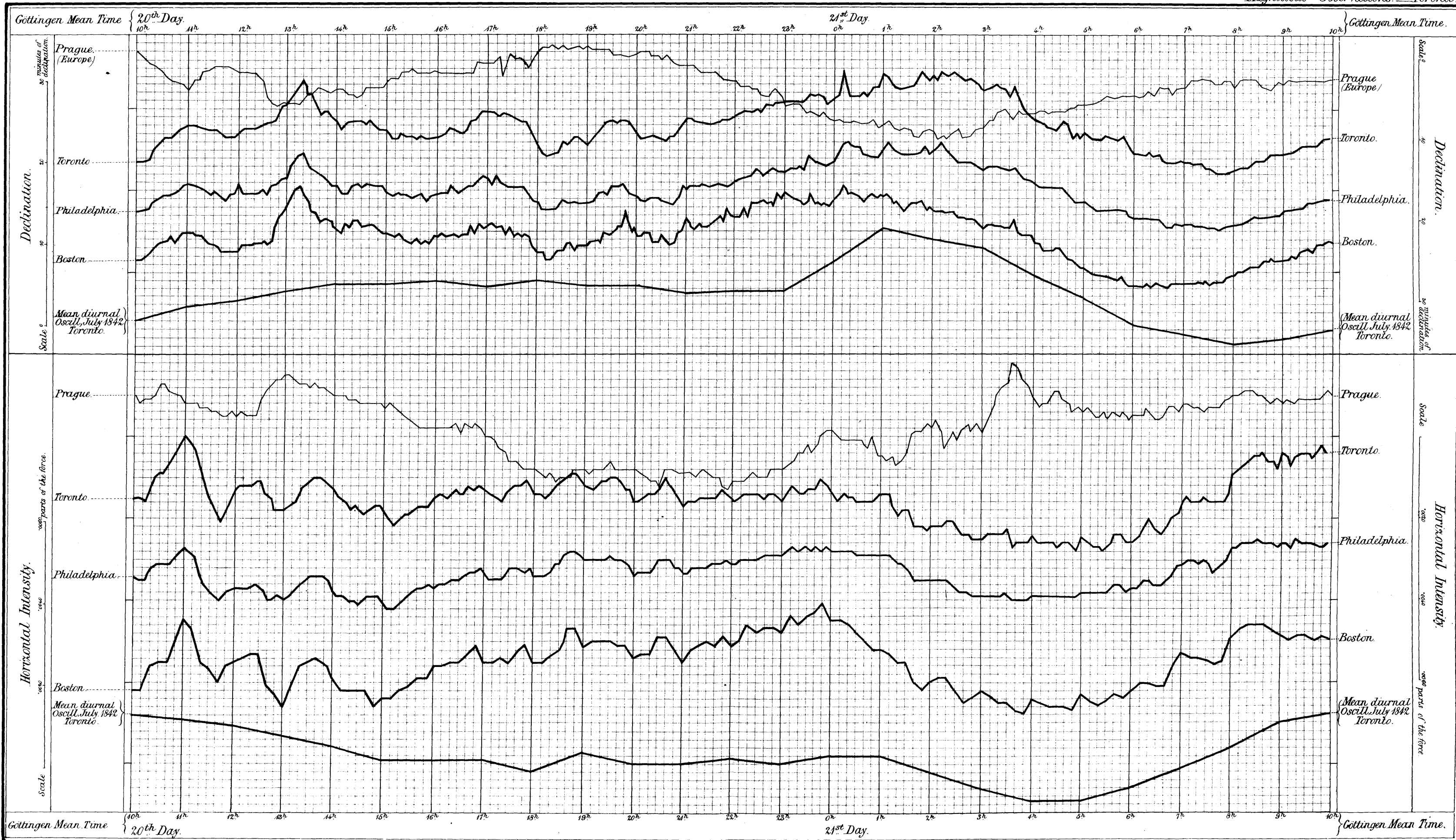






Declination and Horizontal Intensity, July 20<sup>th</sup> & 21<sup>st</sup> 1842.

Magnetical Observations.—Toronto.



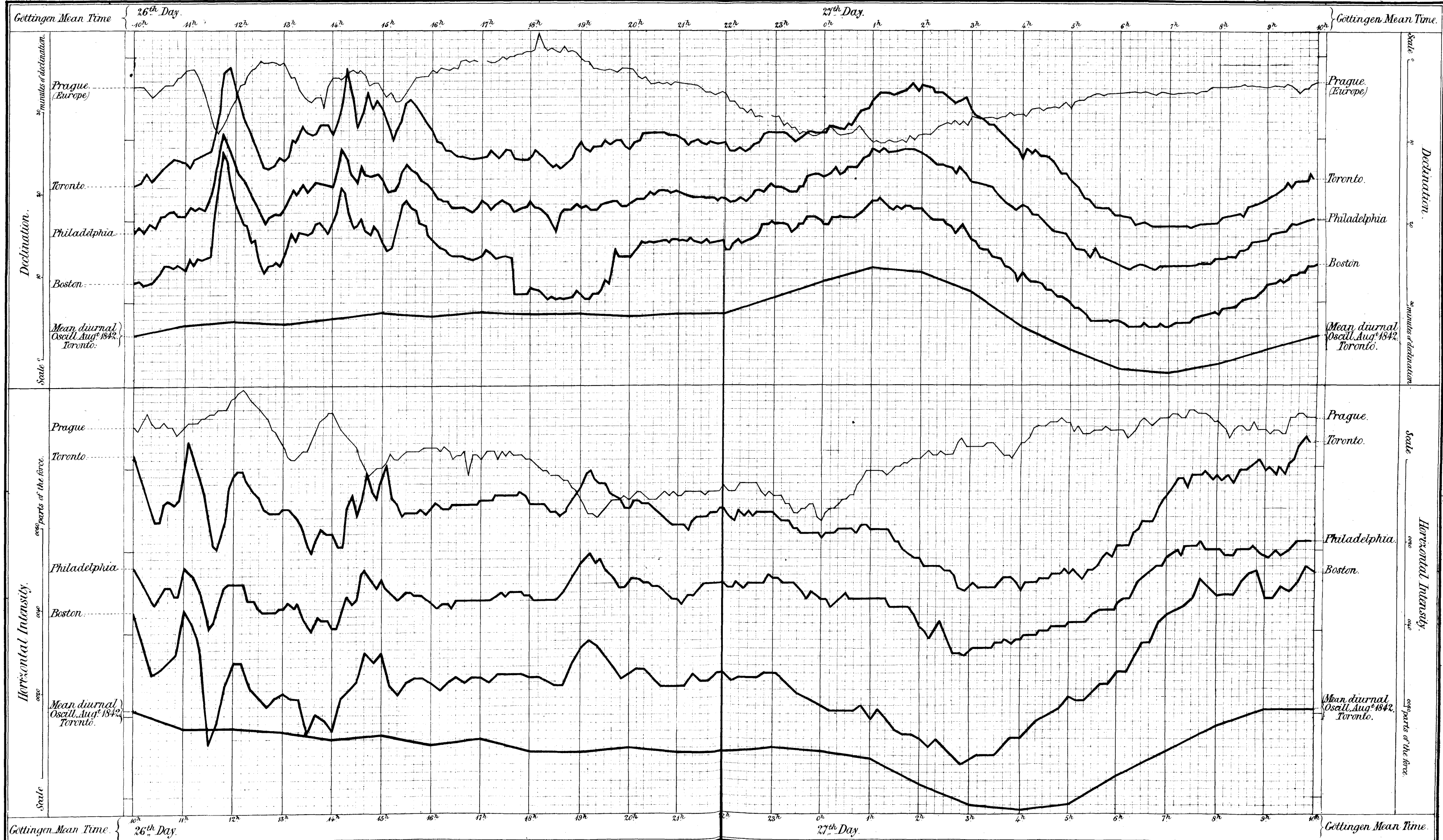
Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.





Declination and Horizontal Intensity, August 26<sup>th</sup> & 27<sup>th</sup> 1842.

Magnetical Observations Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

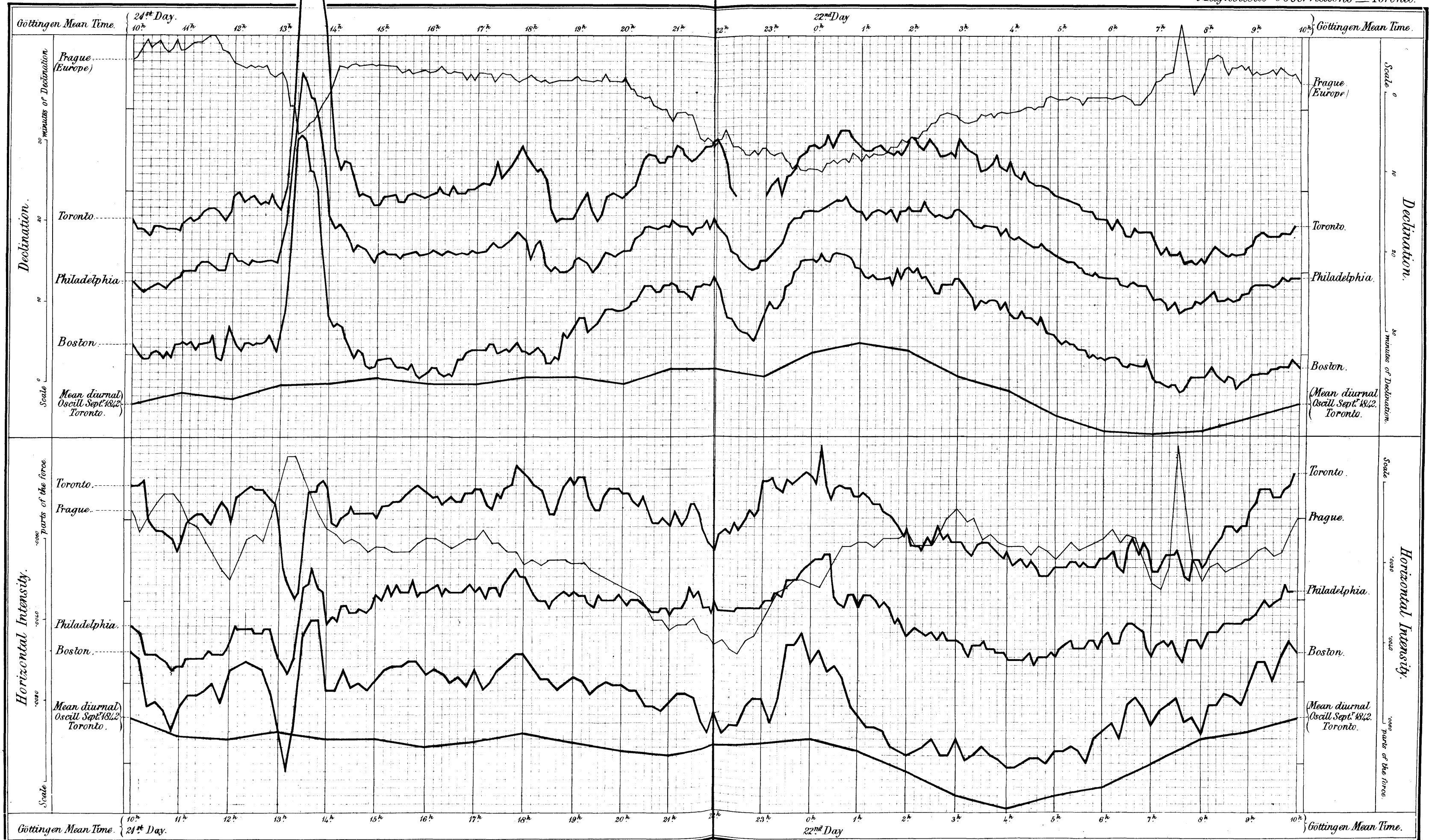
Standidge & Co. Litho. London.





Declination and Horizontal Intensity, September 21<sup>st</sup> & 22<sup>nd</sup> 1842.

Magnetical Observations — Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

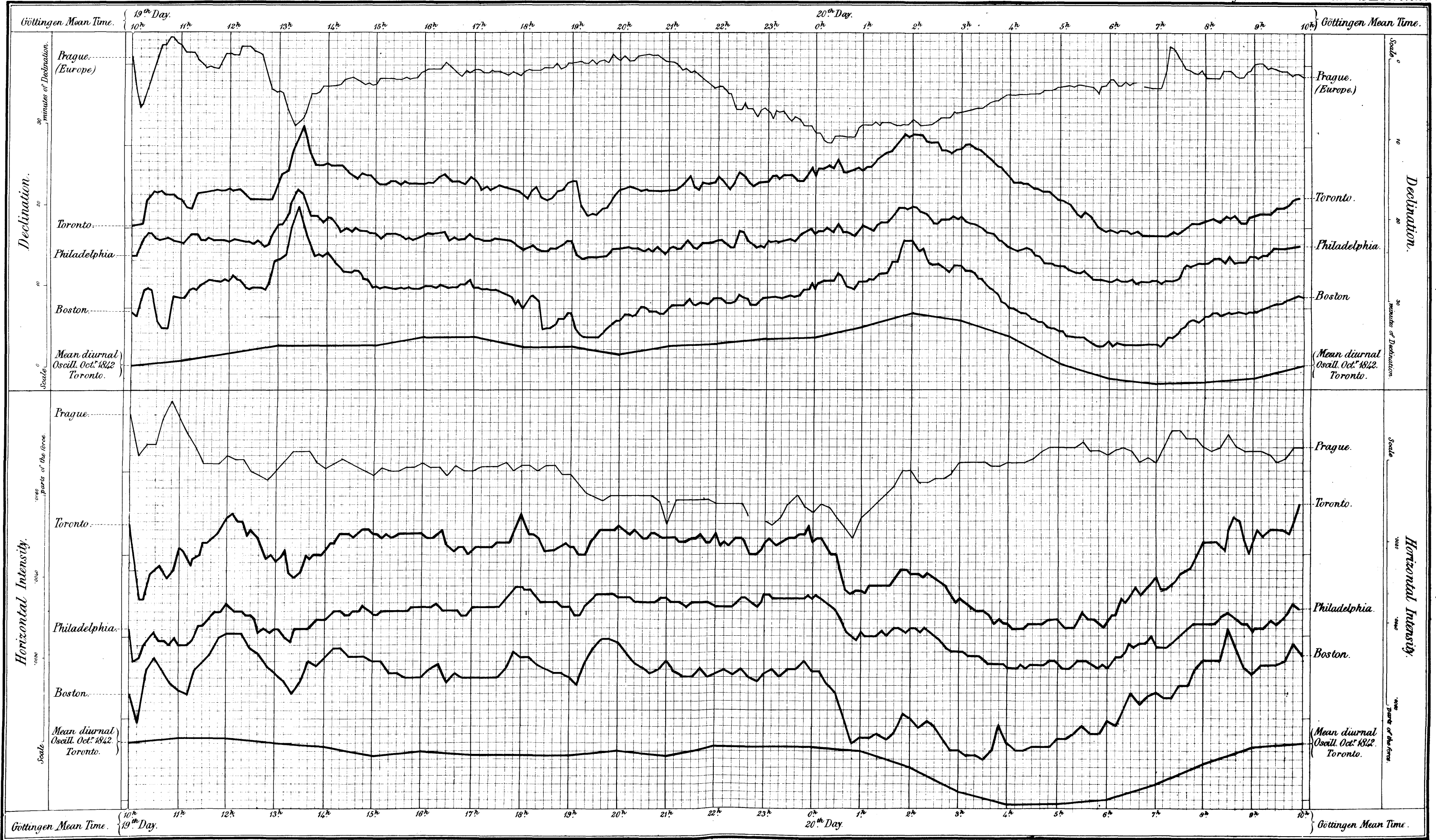






Declination and Horizontal Intensity, October 19<sup>th</sup> & 20<sup>th</sup> 1842.

Magnetical Observations - Toronto.



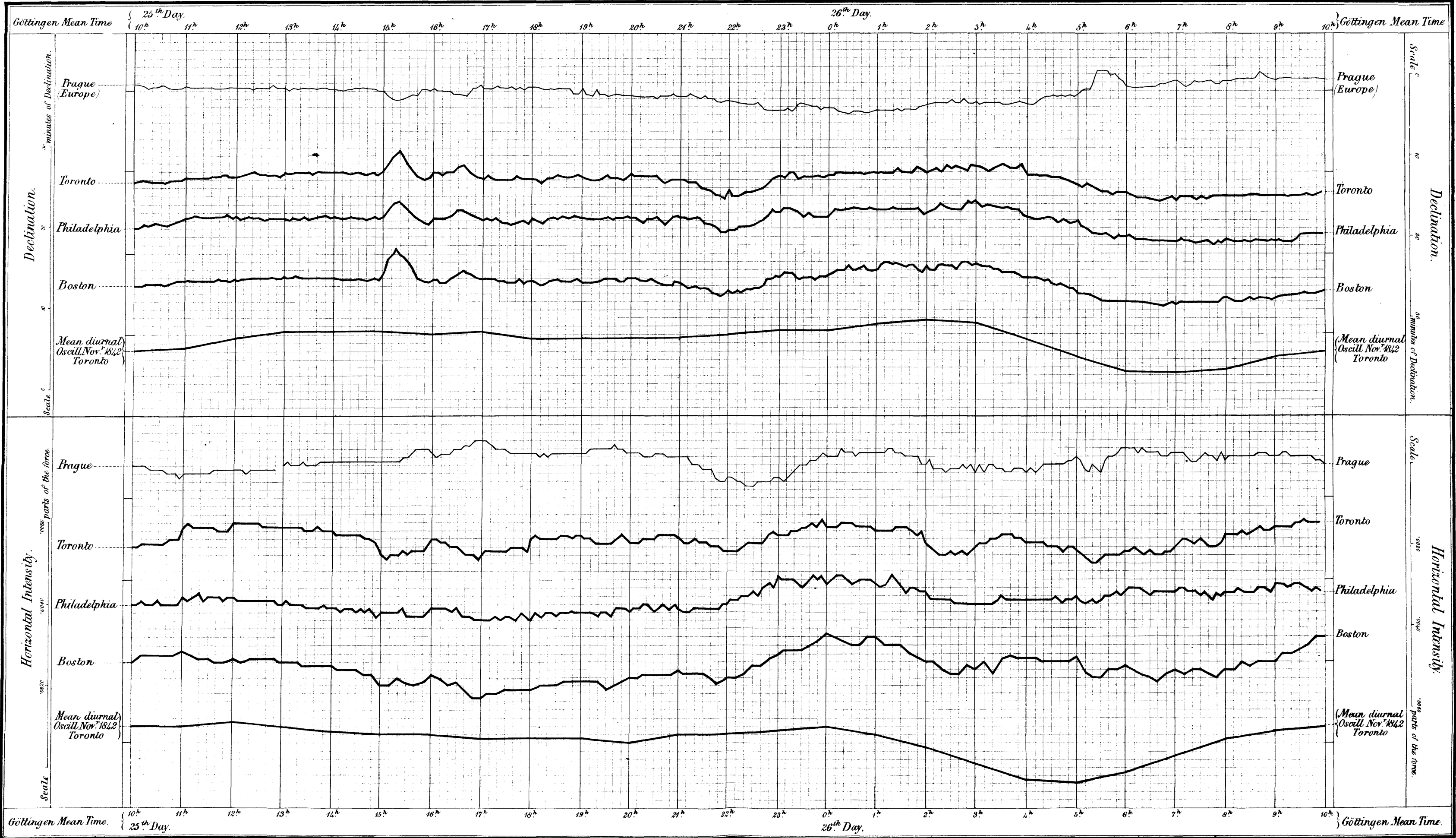
Ascending curves denote increasing easterly or decreasing westerly declination and increasing horizontal force.





Declination and Horizontal Intensity, November 25<sup>th</sup> & 26<sup>th</sup> 1842.

Magnetical Observations. Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

Standley & Co. Litho. London.

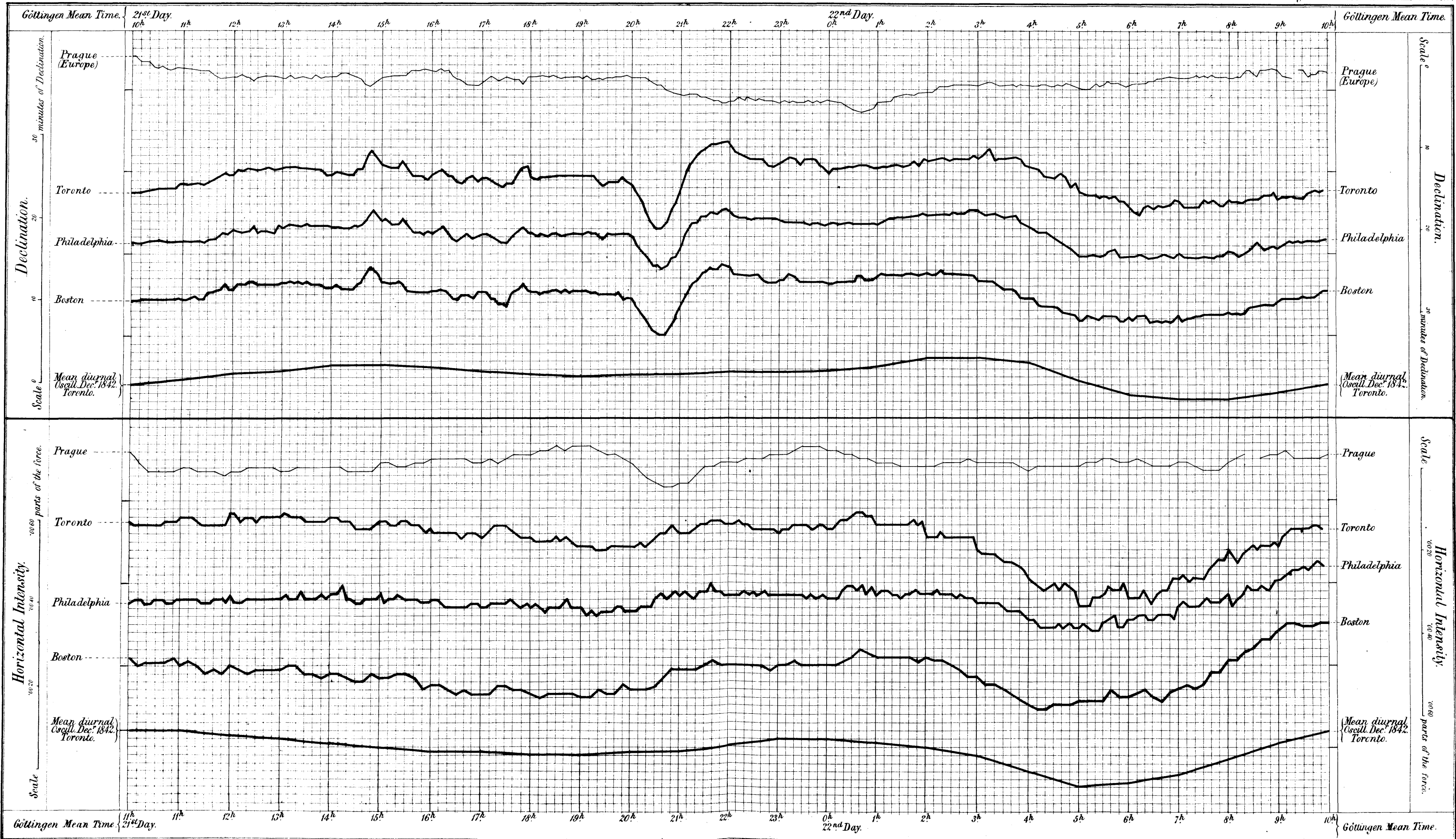






Declination and Horizontal Intensity, December 21<sup>st</sup> & 22<sup>nd</sup> 1842.

Magnetical Observations. — Toronto.



Ascending curves denote increasing easterly or decreasing westerly declination, and increasing horizontal force.

Standidge & Co. Litho. London



**TORONTO, 1842.**

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**METEOROLOGICAL OBSERVATIONS.**



BAROMETRIC PRESSURE.

Barometer at 32° = 27 English inches + the numbers in the Table.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.																													
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16																														
JANUARY.	1	2·659	2·560	2·462	2·370	2·342	2·304	2·237	2·159	2·131	—	—	—	2·419																													
	2	—	—	—	—	—	—	—	—	—	2·573	2·607	2·618																														
	3	2·637	2·676	2·714	2·667	2·644	2·586	2·529	2·456	2·426	2·257	2·192	2·153		2·495																												
	4	2·145	2·156	2·171	2·163	2·245	2·399	2·541	2·653	2·714	2·749	2·802	2·852			2·466																											
	5	2·923	3·016	3·088	3·087	3·106	3·131	3·139	3·109	3·100	3·044	2·966	2·911				3·052																										
	6	2·825	2·748	2·633	2·508	2·424	2·331	2·263	2·197	2·272	2·101	2·175	2·211					2·391																									
	7	2·236	2·351	2·452	2·489	2·539	2·600	2·675	2·720	2·689	2·697	2·745	2·734						2·577																								
	8	2·727	2·709	2·672	2·610	2·561	2·521	2·477	2·443	2·424	—	—	—							2·654																							
	9	—	—	—	—	—	—	—	—	—	2·892	2·911	2·896								2·856																						
	10	2·887	2·907	2·907	2·866	2·871	2·876	2·879	2·875	2·845	2·822	2·795	2·739									2·501																					
	11	2·686	2·654	2·605	2·501	2·407	2·402	2·438	2·475	2·468	2·448	2·474	2·460										2·519																				
	12	2·448	2·460	2·456	2·406	2·389	2·411	2·456	2·547	2·612	2·677	2·552	2·815											2·710																			
	13	2·890	2·917	2·945	2·916	2·880	2·820	2·773	2·699	2·585	2·471	2·359	2·264												2·229																		
	14	2·139	2·065	2·003	1·989	2·105	2·209	2·271	2·320	2·345	2·390	2·443	2·467													2·555																	
	15	2·499	2·560	2·616	2·613	2·603	2·618	2·605	2·546	2·472	—	—	—														2·445																
	16	—	—	—	—	—	—	—	—	—	2·527	2·512	2·486															2·491															
	17	2·470	2·439	2·411	2·337	2·342	2·384	2·430	2·458	2·492	2·493	2·536	2·543																2·389														
	18	2·539	2·575	2·567	2·522	2·483	2·450	2·443	2·436	2·446	2·472	2·486	2·473																	2·150													
	19	2·447	2·450	2·451	2·411	2·373	2·386	2·383	2·380	2·358	2·346	2·358	2·320																		2·136												
	20	2·336	2·328	2·321	2·240	2·173	2·109	2·076	2·064	2·064	2·030	2·034	2·022																			2·820											
	21	2·017	2·022	2·031	2·003	1·987	2·042	2·116	2·166	2·219	2·294	2·343	2·389																				2·872										
	22	2·432	2·499	2·569	2·602	2·652	2·744	2·819	2·881	2·918	—	—	—																					2·399									
	23	—	—	—	—	—	—	—	—	—	3·258	3·248	3·216																						2·304								
	24	3·170	3·149	3·124	3·052	2·954	2·890	2·840	2·776	2·699	2·640	2·602	2·563																							2·765							
	25	2·540	2·516	2·461	2·394	2·331	2·350	2·373	2·373	2·362	2·361	2·366	2·367																								2·436						
	26	2·376	2·367	2·351	2·294	2·244	2·239	2·225	2·215	2·228	2·278	2·385	2·451																									2·209					
	27	2·529	2·638	2·721	2·727	2·740	2·787	2·834	2·862	2·849	2·843	2·841	2·804																										2·372				
	28	2·759	2·702	2·616	2·505	2·405	2·367	2·341	2·324	2·330	2·312	2·298	2·274																											2·508			
	29	2·286	2·321	2·349	2·315	2·262	2·197	2·126	1·962	1·973	—	—	—																												2·534		
	30	—	—	—	—	—	—	—	—	—	2·313	2·249	2·159																													2·482	
	31	2·119	2·094	2·103	2·157	2·255	2·365	2·474	2·510	2·543	2·574	2·622	2·647																														2·491
Hourly Means		2·528	2·534	2·531	2·490	2·474	2·482	2·491	2·485	2·483	2·533	2·535	2·532	2·508																													
FEBRUARY.	1	2·675	2·729	2·794	2·823	2·814	2·848	2·873	2·880	2·865	2·781	2·749	2·692	2·794																													
	2	2·632	2·589	2·570	2·505	2·464	2·472	2·481	2·457	2·386	2·310	2·207	2·096		2·431																												
	3	2·058	2·070	2·088	2·077	2·088	2·136	2·160	2·203	2·221	2·272	2·254	2·299			2·161																											
	4	2·309	2·343	2·332	2·258	2·158	2·080	2·017	1·907	1·879	1·879	1·903	2·044				2·092																										
	5	2·230	2·400	2·498	2·575	2·594	2·635	2·647	2·649	2·662	—	—	—					2·507																									
	6	—	—	—	—	—	—	—	—	—	2·425	2·389	2·386						2·302																								
	7	2·387	2·403	2·398	2·362	2·328	2·307	2·305	2·282	2·266	2·245	2·180	2·160							2·575																							
	8	2·195	2·253	2·321	2·386	2·466	2·582	2·691	2·764	2·798	2·807	2·828	2·807								2·543																						
	9	2·754	2·727	2·655	2·560	2·489	2·466	2·460	2·469	2·469	2·483	2·490	2·494									2·635																					
	10	2·519	2·561	2·593	2·596	2·587	2·606	2·646	2·678	2·691	2·705	2·718	2·716										2·572																				
	11	2·681	2·668	2·653	2·596	2·556	2·547	2·562	2·534	2·483	2·488	2·524	2·570											2·601																			
	12	2·641	2·692	2·763	2·779	2·760	2·759	2·742	2·721	2·698	—	—	—												2·628																		
	13	—	—	—	—	—	—	—	—	—	2·235	2·209	2·209													2·604																	
	14	2·308	2·370	2·394	2·457	2·538	2·664	2·742	2·787	2·809	2·822	2·823	2·822														2·078																
	15	2·816	2·835	2·820	2·791	2·727	2·699	2·643	2·589	2·480	2·406	2·262	2·185															2·543															
	16	2·121	2·117	2·098	2·053	2·015	2·035	2·078	2·074	2·046	2·055	2·088	2·155																2·280														
	17	2·251	2·367	2·429	2·470	2·517	2·572	2·641	2·673	2·676	2·676	2·643	2·604																	2·701													
	18	2·575	2·531	2·497	2·417	2·355	2·290	2·211	2·145	2·101	2·011	2·064	2·173																		2·681												
	19	2·325	2·479	2·538	2·575	2·654	2·747	2·826	2·904	2·956	—	—	—																			2·701											
	20	—	—	—	—	—	—	—	—	—	2·819	2·800	2·798																				2·701										
	21	2·792	2·791	2·779	2·756	2·701	2·658	2·645	2·653	2·649	2·610	2·582	2·560																					2·646									
	22	2·567	2·604	2·633	2·647	2·656	2·692	2·745	2·783	2·786	2·778	2·771	2·752																						2·900								
	23	2·727	2·709	2·664	2·630	2·582	2·559	2·571	2·603	2·623	2·651	2·700	2·731																							2·858							
	24	2·777	2·829	2·866	2·883	2·858	2·879	2·908	2·926	2·934	2·951	2·990	3·000																								2·595						
	25	3·012	3·032	3·006	2·957	2·911	2·874	2·826	2·806	2·777	2·749	2·705	2·644																									2·713					
	26	2·573	2·609	2·592	2·566	2·517	2·461	2·521	2·511	2·485	—	—	—																										2·548				
	27	—	—	—	—	—	—	—	—	—	2·768	2·762	2·770																											2·511			
	28	2·775	2·786	2·791	2·768	2·741	2·730	2·712	2·704	2·668	2·643	2·629	2·612																												2·512		
Hourly Means		2·529	2·562	2·574	2·562	2·545	2·554	2·569	2·571	2·559	2·524	2·511	2·512	2·548																													

BAROMETRIC PRESSURE.														
Barometer at 32° = 27 English inches + the numbers in the Table.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
MARCH.	1	2.640	2.653	2.631	2.598	2.541	2.510	2.454	2.387	2.341	2.313	2.264	2.225	2.463
	2	2.196	2.146	2.050	1.985	1.913	1.872	1.932	2.040	2.105	2.143	2.162	2.172	2.060
	3	2.188	2.238	2.264	2.278	2.274	2.272	2.253	2.225	2.189	2.179	2.179	2.179	2.227
	4	2.212	2.259	2.280	2.286	2.284	2.284	2.356	2.383	2.387	2.425	2.436	2.491	2.340
	5	2.535	2.610	2.672	2.686	2.669	2.699	2.695	2.726	2.750	—	—	—	2.680
	6	—	—	—	—	—	—	—	—	—	2.698	2.704	2.712	—
	7	2.756	2.795	2.820	2.818	2.798	2.810	2.826	2.859	2.884	2.890	2.899	2.918	2.839
	8	2.953	2.971	2.986	2.968	2.881	2.852	2.818	2.728	2.668	2.592	2.508	2.431	2.780
	9	2.390	2.355	2.308	2.241	2.141	2.071	2.036	2.067	2.083	2.072	2.058	2.150	2.164
	10	2.247	2.338	2.415	2.474	2.498	2.511	2.527	2.527	2.519	2.521	2.515	2.508	2.467
	11	2.491	2.547	2.585	2.625	2.692	2.774	2.888	2.969	3.032	—	3.103	3.130	2.803
	12	3.142	3.171	3.177	3.137	3.069	2.989	2.913	2.846	2.792	—	—	—	2.970
	13	—	—	—	—	—	—	—	—	—	2.803	2.806	2.798	—
	14	2.847	2.850	2.847	2.828	2.775	2.768	2.754	2.760	2.755	2.741	2.722	2.693	2.778
	15	2.697	2.717	2.734	2.742	2.766	2.811	2.873	2.918	2.947	2.953	2.931	2.929	2.835
	16	2.918	2.885	2.828	2.738	2.647	2.584	2.541	2.521	2.483	2.433	2.370	2.350	2.608
	17	2.348	2.348	2.341	2.359	2.378	2.473	2.558	2.652	2.717	2.758	2.809	2.819	2.542
	18	2.871	2.882	2.900	2.872	2.800	2.752	2.724	2.695	2.654	2.597	2.575	2.534	2.738
	19	2.507	2.527	2.546	2.563	2.545	2.586	2.605	2.629	2.630	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	2.827	2.826	2.818	2.634
	21	2.845	2.863	2.838	2.784	2.757	2.671	2.645	2.658	2.647	2.622	2.614	2.596	2.712
	22	2.625	2.678	2.687	2.718	2.753	2.778	2.816	2.848	2.850	2.832	2.824	2.848	2.771
	23	2.871	2.905	2.905	2.892	2.853	2.844	2.841	2.829	2.804	2.784	2.764	2.743	2.836
	24	2.779	2.776	2.751	2.742	2.702	2.667	2.605	2.573	2.524	—	—	—	2.627
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	2.406	2.466	2.539	—
	26	2.518	2.724	2.781	2.811	2.802	2.818	2.841	2.857	2.859	—	—	—	2.769
	27	—	—	—	—	—	—	—	—	—	2.702	2.734	2.783	—
	28	2.854	2.897	2.959	2.963	2.954	2.949	2.963	2.984	2.993	2.971	2.953	2.933	2.948
	29	2.928	2.895	2.843	2.744	2.685	2.605	2.507	2.459	2.388	2.324	2.311	2.298	2.582
	30	2.326	2.400	2.428	2.458	2.448	2.468	2.491	2.527	2.550	2.575	2.592	2.663	2.494
	31	2.745	2.816	2.879	2.890	2.896	2.906	2.933	2.965	2.990	3.007	2.998	3.026	2.921
Hourly Means	2.632	2.663	2.671	2.661	2.635	2.628	2.631	2.640	2.636	2.607	2.620	2.627	2.638	
APRIL.	1	3.047	3.074	3.068	3.013	2.930	2.887	2.813	2.734	2.680	2.665	2.573	2.558	2.837
	2	2.565	2.525	2.477	2.438	2.393	2.387	2.414	2.483	2.526	—	—	—	2.527
	3	—	—	—	—	—	—	—	—	—	2.711	2.692	2.708	—
	4	2.715	2.719	2.716	2.692	2.656	2.601	2.560	2.533	2.452	2.430	2.488	2.488	2.587
	5	2.531	2.572	2.590	2.601	2.647	2.698	2.751	2.801	2.842	2.872	2.863	2.877	2.720
	6	2.881	2.884	2.861	2.818	2.751	2.713	2.703	2.670	2.641	2.644	2.591	2.552	2.726
	7	2.538	2.528	2.497	2.422	2.365	2.347	2.341	2.357	2.373	2.365	2.348	2.366	2.404
	8	2.414	2.448	2.466	2.479	2.496	2.518	2.548	2.597	2.615	2.632	2.661	2.683	2.546
	9	2.709	2.735	2.754	2.768	2.725	2.729	2.722	2.719	2.708	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	2.594	2.594	2.644	2.700
	11	2.678	2.721	2.724	2.703	2.686	2.662	2.668	2.686	2.709	2.696	2.710	2.733	2.698
	12	2.739	2.733	2.725	2.684	2.653	2.633	2.610	2.623	2.617	2.621	2.599	2.570	2.651
	13	2.565	2.523	2.486	2.405	2.351	2.315	2.315	2.372	2.447	2.477	2.488	2.505	2.437
	14	2.506	2.487	2.462	2.448	2.488	2.466	2.506	2.552	2.549	2.546	2.517	2.524	2.504
	15	2.536	2.563	2.592	2.593	2.625	2.669	2.722	2.770	2.808	2.829	2.852	2.862	2.702
	16	2.908	2.961	2.965	2.969	2.948	2.931	2.921	2.938	2.950	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	2.774	2.770	2.744	2.898
	18	2.728	2.741	2.727	2.697	2.680	2.643	2.623	2.605	2.573	2.533	2.519	2.483	2.629
	19	2.495	2.471	2.480	2.450	2.419	2.397	2.394	2.416	2.417	2.433	2.438	2.460	2.439
	20	2.527	2.572	2.593	2.590	2.567	2.563	2.572	2.610	2.602	2.639	2.648	2.651	2.594
	21	2.687	2.705	2.698	2.656	2.624	2.579	2.568	2.576	2.569	2.550	2.504	2.487	2.600
	22	2.480	2.449	2.417	2.368	2.321	2.348	2.371	2.467	2.556	2.632	2.679	2.717	2.484
	23	2.785	2.825	2.836	2.838	2.812	2.794	2.783	2.774	2.770	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	2.520	2.490	2.473	2.725
	25	2.482	2.474	2.453	2.425	2.404	2.346	2.338	2.352	2.298	2.278	2.192	2.117	2.347
	26	2.066	2.005	2.010	2.023	2.020	2.023	2.013	2.055	2.030	2.018	2.039	2.039	2.028
	27	2.045	2.033	2.025	2.040	2.062	2.105	2.144	2.162	2.182	2.207	2.202	2.243	2.121
	28	2.288	2.335	2.382	2.407	2.433	2.443	2.473	2.509	2.520	2.525	2.519	2.550	2.449
	29	2.599	2.608	2.601	2.575	2.552	2.515	2.514	2.531	2.516	2.516	2.500	2.500	2.544
	30	2.521	2.507	2.478	2.433	2.372	2.327	2.299	2.288	2.262	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	2.261	2.262	2.265	2.356
Hourly Means	2.578	2.584	2.580	2.559	2.538	2.525	2.526	2.545	2.547	2.537	2.528	2.531	2.548	

<sup>a</sup> Good Friday.

BAROMETRIC PRESSURE.

Barometer at 32° = 27 English inches + the numbers in the Table.

Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
MAY.	2	2.321	2.320	2.316	2.321	2.351	2.391	2.432	2.446	2.480	2.462	2.505	2.520	2.405
	3	2.564	2.573	2.585	2.574	2.550	2.559	2.557	2.598	2.614	2.628	2.641	2.653	2.591
	4	2.692	2.728	2.751	2.756	2.754	2.762	2.787	2.831	2.842	2.855	2.853	2.860	2.789
	5	2.898	2.907	2.894	2.848	2.788	2.735	2.706	2.696	2.677	2.656	2.613	2.560	2.748
	6	2.562	2.580	2.605	2.599	2.599	2.638	2.695	2.748	2.784	2.804	2.846	2.899	2.697
	7	2.930	2.941	2.933	2.899	2.839	2.782	2.718	2.690	2.659	—	—	—	2.773
	8	—	—	—	—	—	—	—	—	—	2.632	2.628	2.627	—
	9	2.660	2.683	2.664	2.637	2.594	2.558	2.543	2.543	2.550	2.526	2.449	2.379	2.565
	10	2.344	2.311	2.276	2.234	2.179	2.135	2.130	2.136	2.109	2.086	2.098	2.108	2.179
	11	2.214	2.259	2.320	2.345	2.380	2.412	2.450	2.497	2.510	2.520	2.520	2.557	2.415
	12	2.615	2.631	2.618	2.610	2.582	2.607	2.539	2.514	2.490	2.439	2.359	2.297	2.525
	13	2.215	2.190	2.194	2.321	2.411	2.503	2.578	2.662	2.693	2.711	2.743	2.762	2.499
	14	2.805	2.815	2.808	2.773	2.718	2.690	2.652	2.646	2.636	—	—	—	2.637
	15	—	—	—	—	—	—	—	—	—	2.386	2.356	2.362	—
	16	2.392	2.396	2.407	2.464	2.490	2.531	2.576	2.627	2.678	2.686	2.686	2.696	2.552
	17	2.704	2.692	2.662	2.625	2.593	2.566	2.550	2.554	2.580	2.575	2.578	2.599	2.606
	18	2.641	2.654	2.652	2.632	2.588	2.552	2.566	2.579	2.576	2.564	2.581	2.622	2.601
	19	2.699	2.762	2.826	2.872	2.840	2.854	2.868	2.882	2.918	2.933	2.927	2.954	2.861
	20	3.005	3.014	3.035	3.009	2.988	2.951	2.937	2.929	2.913	2.915	2.900	2.898	2.958
	21	2.894	2.898	2.871	2.816	2.763	2.720	2.678	2.632	2.614	—	—	—	2.690
	22	—	—	—	—	—	—	—	—	—	2.448	2.456	2.496	—
	23	2.532	2.562	2.630	2.617	2.611	2.612	2.606	2.619	2.601	2.590	2.575	2.539	2.591
	24	2.523	2.495	2.445	2.386	2.383	2.400	2.475	2.521	2.586	2.609	2.602	2.593	2.501
	25	2.592	2.584	2.543	2.514	2.515	2.506	2.520	2.540	2.582	2.581	2.587	2.609	2.556
	26	2.650	2.672	2.658	2.651	2.605	2.575	2.568	2.552	2.540	2.544	2.499	2.468	2.582
	27	2.471	2.466	2.439	2.449	2.469	2.496	2.499	2.517	2.526	2.551	2.540	2.582	2.500
	28	2.609	2.629	2.631	2.623	2.599	2.594	2.589	2.574	2.566	—	—	—	2.524
	29	—	—	—	—	—	—	—	—	—	2.285	2.289	2.296	—
	30	2.309	2.348	2.374	2.369	2.357	2.360	2.378	2.397	2.414	2.413	2.420	2.455	2.383
	31	2.493	2.517	2.537	2.524	2.508	2.497	2.532	2.582	2.632	2.645	2.704	2.692	2.572
	Hourly Means	2.590	2.601	2.603	2.595	2.579	2.576	2.582	2.597	2.606	2.579	2.575	2.580	2.589
JUNE.	1	2.740	2.776	2.790	2.777	2.748	2.735	2.728	2.737	2.746	2.750	2.748	2.755	2.752
	2	2.769	2.766	2.760	2.730	2.672	2.636	2.597	2.577	2.563	2.561	2.526	2.523	2.640
	3	2.523	2.515	2.491	2.459	2.433	2.419	2.415	2.416	2.375	2.364	2.349	2.352	2.426
	4	2.341	2.402	2.424	2.412	2.422	2.436	2.433	2.438	2.456	—	—	—	2.462
	5	—	—	—	—	—	—	—	—	—	2.543	2.596	2.638	—
	6	2.690	2.731	2.741	2.740	2.756	2.780	2.820	2.845	2.874	2.887	2.897	2.931	2.808
	7	2.987	3.016	3.005	2.961	2.946	2.918	2.893	2.894	2.876	2.860	2.853	2.847	2.921
	8	2.853	2.850	2.858	2.840	2.824	2.801	2.761	2.729	2.702	2.677	2.639	2.627	2.763
	9	2.614	2.609	2.582	2.556	2.543	2.500	2.469	2.444	2.429	2.409	2.403	2.401	2.497
	10	2.423	2.440	2.476	2.506	2.564	2.624	2.678	2.720	2.788	2.824	2.833	2.854	2.644
	11	2.871	2.894	2.894	2.857	2.831	2.819	2.808	2.806	2.789	—	—	—	2.759
	12	—	—	—	—	—	—	—	—	—	2.517	2.514	2.505	—
	13	2.538	2.549	2.556	2.543	2.541	2.603	2.626	2.660	2.681	2.683	2.711	2.731	2.618
	14	2.746	2.761	2.744	2.711	2.683	2.650	2.622	2.626	2.620	2.606	2.593	2.587	2.662
	15	2.616	2.638	2.632	2.611	2.588	2.571	2.551	2.547	2.541	2.519	2.519	2.521	2.571
	16	2.518	2.519	2.500	2.448	2.487	2.452	2.458	2.492	2.528	2.545	2.572	2.615	2.511
	17	2.648	2.657	2.652	2.643	2.603	2.580	2.566	2.565	2.531	2.496	2.441	2.418	2.567
	18	2.379	2.384	2.374	2.371	2.349	2.328	2.331	2.323	2.322	—	—	—	2.406
	19	—	—	—	—	—	—	—	—	—	2.534	2.567	2.613	—
	20	2.644	2.667	2.675	2.673	2.646	2.627	2.616	2.636	2.676	2.695	2.688	2.685	2.661
	21	2.717	2.723	2.697	2.660	2.628	2.588	2.566	2.562	2.564	2.544	2.554	2.533	2.611
	22	2.519	2.522	2.513	2.501	2.490	2.493	2.500	2.525	2.539	2.528	2.525	2.539	2.516
	23	2.576	2.588	2.590	2.579	2.564	2.553	2.539	2.557	2.573	2.583	2.588	2.618	2.576
	24	2.640	2.646	2.656	2.651	2.632	2.621	2.616	2.595	2.589	2.589	2.546	2.559	2.612
	25	2.584	2.531	2.450	2.395	2.302	2.252	2.214	2.191	2.205	—	—	—	2.334
	26	—	—	—	—	—	—	—	—	—	2.287	2.296	2.298	—
	27	2.332	2.336	2.350	2.368	2.381	2.404	2.415	2.409	2.411	2.391	2.400	2.403	2.383
	28	2.418	2.423	2.430	2.424	2.378	2.349	2.341	2.396	2.458	2.485	2.527	2.575	2.434
	29	2.636	2.661	2.676	2.667	2.631	2.629	2.604	2.582	2.580	2.540	2.513	2.490	2.601
	30	2.469	2.449	2.425	2.406	2.400	2.392	2.394	2.417	2.473	—	—	—	2.454
	31	—	—	—	—	—	—	—	—	—	2.525	2.539	2.560	—
Hourly Means	2.607	2.617	2.613	2.596	2.578	2.568	2.560	2.565	2.573	2.575	2.574	2.584	2.584	

BAROMETRIC PRESSURE.													
Barometer at 32° = 27 English inches + the numbers in the Table.													
Hours of Mean Göttingen Time	0	1	2	3	4	5	6	7	8	9	10	11	
Hours of Mean Toronto Time	18	19	20	21	22	23	0	1	2	3	4	5	
JULY.	1	2.607	2.611	2.634	2.645	2.648	2.663	2.673	2.674	2.667	2.672	2.668	2.672
	2	2.567	2.560	2.530	2.546	2.521	2.523	2.554	2.540	2.548	2.560	2.572	2.585
	3	—	—	—	—	—	—	—	—	—	—	—	—
	4	2.655	2.663	2.667	2.662	2.660	2.648	2.647	2.635	2.617	2.601	2.579	2.557
	5	2.322	2.334	2.374	2.409	2.435	2.460	2.479	2.491	2.500	2.514	2.532	2.542
	6	2.625	2.647	2.663	2.676	2.694	2.697	2.699	2.704	2.704	2.703	2.697	2.690
	7	2.813	2.806	2.809	2.810	2.812	2.799	2.788	2.773	2.762	2.744	2.735	2.717
	8	2.592	2.591	2.568	2.526	2.508	2.508	2.490	2.460	2.436	2.425	2.429	2.418
	9	2.650	2.665	2.685	2.695	2.709	2.723	2.719	2.720	2.718	2.717	2.725	2.732
	10	—	—	—	—	—	—	—	—	—	—	—	—
	11	2.864	2.885	2.884	2.882	2.886	2.887	2.877	2.864	2.855	2.850	2.829	2.800
	12	2.775	2.776	2.782	2.777	2.765	2.765	2.749	2.728	2.719	2.698	2.676	2.655
	13	2.603	2.601	2.595	2.584	2.588	2.567	2.554	2.543	2.524	2.513	2.486	2.469
	14	2.522	2.524	2.538	2.541	2.553	2.561	2.568	2.570	2.569	2.578	2.594	2.610
	15	2.812	2.820	2.819	2.818	2.816	2.815	2.814	2.798	2.788	2.766	2.749	2.743
	16	2.747	2.749	2.753	2.749	2.744	2.728	2.711	2.698	2.681	2.656	2.645	2.632
	17	—	—	—	—	—	—	—	—	—	—	—	—
	18	2.502	2.494	2.498	2.498	2.498	2.485	2.474	2.463	2.456	2.442	2.432	2.421
	19	2.463	2.461	2.468	2.459	2.451	2.438	2.406	2.398	2.395	2.398	2.406	2.429
	20	2.672	2.718	2.749	2.757	2.773	2.789	2.793	2.796	2.798	2.793	2.797	2.800
	21	2.953	2.963	2.973	2.969	2.968	2.962	2.933	2.920	2.917	2.898	2.868	2.848
	22	2.751	2.757	2.771	2.754	2.759	2.752	2.743	2.718	2.702	2.684	2.657	2.649
	23	2.700	2.706	2.716	2.706	2.711	2.697	2.693	2.681	2.658	2.646	2.645	2.635
	24	—	—	—	—	—	—	—	—	—	—	—	—
	25	2.981	3.000	2.980	3.001	2.989	2.979	2.963	2.958	2.926	2.902	2.874	2.844
	26	2.729	2.733	2.733	2.725	2.717	2.694	2.673	2.658	2.641	2.622	2.609	2.603
	27	2.629	2.645	2.652	2.661	2.667	2.670	2.673	2.669	2.667	2.659	2.652	2.653
	28	2.762	2.775	2.802	2.800	2.799	2.799	2.792	2.790	2.775	2.763	2.759	2.753
	29	2.746	2.746	2.728	2.724	2.710	2.697	2.666	2.638	2.600	2.561	2.524	2.507
	30	2.297	2.275	2.267	2.273	2.270	2.270	2.302	2.312	2.305	2.328	2.333	2.349
	31	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means	2.667	2.673	2.678	2.679	2.679	2.676	2.670	2.661	2.651	2.642	2.633	2.627	
AUGUST.	1	2.789	2.792	2.803	2.803	2.805	2.797	2.798	2.801	2.801	2.803	2.806	2.815
	2	2.975	2.985	2.993	2.993	2.984	2.972	2.955	2.947	2.937	2.928	2.922	2.923
	3	2.965	2.970	2.977	2.984	2.984	2.974	2.969	2.965	2.960	2.944	2.936	2.935
	4	2.946	2.965	2.963	2.951	2.941	2.932	2.919	2.902	2.887	2.871	2.859	2.848
	5	2.812	2.814	2.814	2.804	2.787	2.771	2.758	2.745	2.738	2.724	2.699	2.681
	6	2.678	2.688	2.701	2.706	2.704	2.713	2.710	2.720	2.710	2.707	2.691	2.691
	7	—	—	—	—	—	—	—	—	—	—	—	—
	8	2.697	2.706	2.710	2.711	2.706	2.702	2.705	2.701	2.691	2.669	2.668	2.671
	9	2.709	2.724	2.724	2.724	2.736	2.744	2.742	2.732	2.720	2.710	2.712	2.713
	10	2.765	2.775	2.779	2.783	2.787	2.786	2.786	2.774	2.769	2.761	2.765	2.760
	11	2.791	2.803	2.805	2.791	2.805	2.808	2.803	2.787	2.779	2.753	2.747	2.738
	12	2.782	2.790	2.794	2.797	2.804	2.797	2.795	2.775	2.758	2.750	2.743	2.743
	13	2.808	2.818	2.825	2.838	2.842	2.841	2.833	2.832	2.823	2.809	2.798	2.788
	14	—	—	—	—	—	—	—	—	—	—	—	—
	15	2.739	2.740	2.740	2.732	2.730	2.717	2.700	2.693	2.675	2.657	2.642	2.628
	16	2.581	2.580	2.583	2.580	2.572	2.568	2.557	2.551	2.535	2.515	2.506	2.494
	17	2.459	2.470	2.466	2.459	2.464	2.460	2.457	2.428	2.436	2.412	2.408	2.398
	18	2.380	2.392	2.402	2.417	2.420	2.421	2.420	2.416	2.412	2.399	2.399	2.398
	19	2.500	2.495	2.495	2.513	2.516	2.518	2.518	2.514	2.506	2.516	2.536	2.527
	20	2.669	2.694	2.712	2.729	2.733	2.731	2.727	2.729	2.730	2.736	2.738	2.742
	21	—	—	—	—	—	—	—	—	—	—	—	—
	22	2.963	2.965	2.965	2.964	2.976	2.957	2.942	2.955	2.944	2.927	2.925	2.913
	23	2.945	2.960	2.957	2.955	2.959	2.957	2.946	2.934	2.919	2.897	2.893	2.893
	24	2.873	2.871	2.856	2.864	2.853	2.860	2.852	2.842	2.819	2.814	2.806	2.791
	25	2.716	2.719	2.701	2.697	2.685	2.677	2.661	2.650	2.627	2.612	2.606	2.611
	26	2.549	2.551	2.559	2.563	2.565	2.567	2.569	2.565	2.548	2.536	2.527	2.536
	27	2.554	2.547	2.550	2.546	2.546	2.550	2.526	2.513	2.510	2.496	2.481	2.483
	28	—	—	—	—	—	—	—	—	—	—	—	—
	29	2.530	2.551	2.560	2.568	2.588	2.596	2.602	2.604	2.596	2.592	2.594	2.600
	30	2.736	2.742	2.750	2.753	2.745	2.748	2.750	2.736	2.723	2.722	2.711	2.704
	31	2.754	2.755	2.766	2.764	2.770	2.769	2.755	2.737	2.721	2.705	2.698	2.699
Hourly Means	2.728	2.736	2.739	2.740	2.741	2.738	2.732	2.724	2.714	2.702	2.697	2.693	



BAROMETRIC PRESSURE.

Barometer at 32° = 27 English inches + the numbers in the Table.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
2.691	2.689	2.701	2.708	2.702	2.686	2.686	2.660	2.651	2.631	2.613	2.585	2.660
2.571	2.617	2.622	2.638	2.657	2.659	—	—	—	—	—	—	2.587
—	—	—	—	—	—	2.615	2.611	2.609	2.616	2.620	2.639	2.532
2.555	2.540	2.526	2.530	2.505	2.480	2.430	2.390	2.330	2.305	2.293	2.303	2.518
2.556	2.554	2.573	2.585	2.588	2.588	2.591	2.592	2.588	2.601	2.609	2.624	2.718
2.706	2.712	2.720	2.737	2.756	2.761	2.773	2.765	2.767	2.768	2.776	2.798	2.725
2.714	2.706	2.702	2.699	2.693	2.677	2.673	2.680	2.658	2.625	2.621	2.595	2.503
2.436	2.442	2.442	2.494	2.474	2.496	2.528	2.522	2.537	2.549	2.589	2.621	—
2.750	2.767	2.778	2.792	2.806	2.815	—	—	—	—	—	—	2.758
—	—	—	—	—	—	2.840	2.838	2.829	2.832	2.836	2.858	2.817
2.791	2.781	2.781	2.777	2.769	2.770	2.763	2.763	2.764	2.761	2.758	2.764	2.680
2.647	2.638	2.621	2.631	2.632	2.618	2.617	2.619	2.614	2.610	2.599	2.607	2.507
2.467	2.459	2.457	2.461	2.462	2.458	2.446	2.451	2.453	2.464	2.473	2.499	2.637
2.634	2.652	2.658	2.696	2.705	2.714	2.725	2.731	2.732	2.744	2.766	2.808	2.767
2.741	2.742	2.740	2.748	2.743	2.743	2.738	2.735	2.726	2.729	2.727	2.746	—
2.628	2.631	2.635	2.635	2.637	2.628	—	—	—	—	—	—	2.635
—	—	—	—	—	—	2.504	2.502	2.490	2.490	2.479	2.497	2.461
2.425	2.435	2.445	2.465	2.463	2.469	2.467	2.452	2.445	2.446	2.442	2.452	2.489
2.457	2.487	2.505	2.523	2.538	2.543	2.544	2.564	2.575	2.586	2.603	2.640	2.831
2.822	2.849	2.866	2.889	2.891	2.901	2.902	2.898	2.903	2.911	2.927	2.948	2.860
2.839	2.817	2.814	2.808	2.798	2.797	2.779	2.773	2.767	2.768	2.759	2.756	2.698
2.650	2.657	2.658	2.669	2.670	2.681	2.689	2.686	2.670	2.668	2.669	2.690	—
2.668	2.657	2.655	2.666	2.675	2.685	—	—	—	—	—	—	2.747
—	—	—	—	—	—	2.924	2.941	2.947	2.956	2.962	2.988	2.848
2.805	2.777	2.763	2.749	2.739	2.737	2.729	2.735	2.734	2.732	2.732	2.727	2.639
2.595	2.589	2.594	2.616	2.614	2.616	2.610	2.585	2.577	2.597	2.603	2.616	2.680
2.661	2.679	2.689	2.691	2.705	2.706	2.702	2.699	2.700	2.713	2.724	2.748	2.763
2.751	2.757	2.755	2.756	2.756	2.753	2.747	2.744	2.739	2.724	2.725	2.749	2.528
2.496	2.474	2.450	2.457	2.433	2.405	2.397	2.387	2.367	2.347	2.319	2.303	—
2.369	2.387	2.417	2.419	2.431	2.436	—	—	—	—	—	—	2.440
—	—	—	—	—	—	2.733	2.735	2.739	2.749	2.772	2.785	—
2.632	2.634	2.637	2.648	2.648	2.647	2.660	2.656	2.650	2.651	2.654	2.667	2.655
2.836	2.858	2.862	2.860	2.882	2.892	2.899	2.896	2.907	2.925	2.932	2.952	2.846
2.923	2.934	2.955	2.951	2.953	2.952	2.949	2.947	2.950	2.950	2.945	2.944	2.953
2.937	2.939	2.942	2.942	2.942	2.937	2.937	2.932	2.928	2.921	2.926	2.943	2.949
2.836	2.836	2.840	2.836	2.822	2.822	2.817	2.817	2.808	2.803	2.811	2.813	2.868
2.673	2.675	2.667	2.677	2.671	2.669	2.661	2.667	2.661	2.663	2.663	2.678	2.715
2.693	2.697	2.703	2.705	2.707	2.707	—	—	—	—	—	—	—
—	—	—	—	—	—	2.648	2.643	2.639	2.642	2.633	2.672	2.688
2.673	2.674	2.692	2.692	2.692	2.688	2.678	2.675	2.676	2.678	2.683	2.691	2.689
2.733	2.727	2.739	2.741	2.739	2.739	2.736	2.728	2.732	2.732	2.733	2.759	2.730
2.762	2.758	2.750	2.751	2.751	2.761	2.769	2.775	2.774	2.770	2.774	2.781	2.769
2.736	2.736	2.752	2.754	2.758	2.758	2.757	2.761	2.755	2.753	2.754	2.766	2.769
2.741	2.749	2.762	2.760	2.755	2.752	2.756	2.757	2.759	2.773	2.778	2.797	—
2.790	2.798	2.808	2.810	2.809	2.814	—	—	—	—	—	—	2.797
—	—	—	—	—	—	2.754	2.749	2.743	2.739	2.732	2.736	—
2.612	2.614	2.618	2.619	2.613	2.614	2.617	2.600	2.591	2.587	2.578	2.583	2.652
2.484	2.480	2.480	2.476	2.476	2.471	2.465	2.457	2.449	2.437	2.438	2.444	2.507
2.402	2.384	2.394	2.404	2.396	2.402	2.370	2.335	2.343	2.338	2.342	2.355	2.408
2.392	2.400	2.420	2.442	2.425	2.424	2.442	2.458	2.470	2.471	2.475	2.498	2.425
2.541	2.559	2.584	2.594	2.608	2.618	2.618	2.612	2.619	2.619	2.622	2.643	2.558
2.750	2.748	2.770	2.780	2.791	2.793	—	—	—	—	—	—	—
—	—	—	—	—	—	2.918	2.901	2.914	2.919	2.921	2.948	2.784
2.902	2.898	2.901	2.918	2.918	2.921	2.925	2.926	2.924	2.925	2.928	—	2.934
2.888	2.874	2.874	2.888	2.868	2.856	2.841	2.842	2.849	2.856	2.859	2.862	2.899
2.777	2.773	2.763	2.762	2.763	2.769	2.758	2.726	2.719	2.705	2.706	2.702	2.793
2.592	2.589	2.585	2.581	2.575	2.565	2.557	2.547	2.529	2.523	2.523	2.543	2.611
2.534	2.532	2.534	2.539	2.539	2.552	2.546	2.538	2.530	2.529	2.537	2.532	2.545
2.477	2.457	2.477	2.477	2.458	2.456	—	—	—	—	—	—	—
—	—	—	—	—	—	2.443	2.448	2.457	2.467	2.478	2.504	2.496
2.604	2.613	2.633	2.620	2.666	2.690	2.687	2.668	2.673	2.677	2.688	2.704	2.621
2.696	2.702	2.705	2.713	2.721	2.728	2.726	2.723	2.714	2.708	2.723	2.741	2.726
2.707	2.711	2.705	2.694	2.689	2.683	2.673	2.662	2.662	2.650	2.652	2.670	2.710
2.692	2.693	2.701	2.703	2.703	2.705	2.702	2.696	2.695	2.695	2.698	2.702	2.711

BAROMETRIC PRESSURE.													
Barometer at 32° = 27 English inches + the numbers in the Table.													
Hours of Mean Göttingen Time	0	1	2	3	4	5	6	7	8	9	10	11	
Hours of Mean Toronto Time	18	19	20	21	22	23	0	1	2	3	4	5	
SEPTEMBER.	1	2.666	2.666	2.662	2.666	2.663	2.649	2.621	2.598	2.584	2.561	2.563	2.578
	2	2.716	2.721	2.718	2.735	2.737	2.724	2.716	2.704	2.696	2.688	2.678	2.674
	3	2.625	2.628	2.615	2.632	2.666	2.619	2.604	2.642	2.638	2.648	2.656	2.663
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	2.483	2.514	2.534	2.557	2.563	2.575	2.595	2.620	2.621	2.631	2.631	2.650
	6	2.830	2.835	2.839	2.847	2.839	2.838	2.825	2.804	2.779	2.755	2.722	2.717
	7	2.550	2.556	2.548	2.554	2.562	2.563	2.573	2.576	2.580	2.581	2.598	2.610
	8	2.771	2.778	2.785	2.780	2.772	2.779	2.747	2.735	2.713	2.709	2.669	2.661
	9	2.517	2.520	2.540	2.564	2.575	2.575	2.592	2.584	2.596	2.600	2.620	2.642
	10	2.824	2.835	2.835	2.850	2.837	2.812	2.806	2.821	2.781	2.768	2.746	2.725
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	2.394	2.402	2.402	2.408	2.400	2.376	2.360	2.336	2.310	2.260	2.206	2.140
	13	2.384	2.417	2.439	2.450	2.460	2.465	2.454	2.460	2.454	2.467	2.474	2.482
	14	2.596	2.606	2.622	2.630	2.630	2.639	2.635	2.630	2.630	2.620	2.619	2.629
	15	2.531	2.519	2.511	2.489	2.487	2.487	2.483	2.474	2.478	2.476	2.478	2.485
	16	2.574	2.578	2.575	2.596	2.584	2.572	2.572	2.570	2.574	2.583	2.582	2.592
	17	2.742	2.751	2.760	2.769	2.765	2.752	2.744	2.724	2.711	2.687	2.675	2.684
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	2.724	2.738	2.757	2.783	2.785	2.801	2.807	2.807	2.803	2.817	2.823	2.831
	20	2.878	2.882	2.886	2.884	2.861	2.852	2.831	2.784	2.754	2.711	2.677	2.663
	21	2.436	2.446	2.455	2.472	2.486	2.500	2.523	2.543	2.552	2.584	2.606	2.637
	22	2.808	2.811	2.835	2.836	2.834	2.840	2.850	2.844	2.839	2.845	2.849	2.854
	23	2.915	2.919	2.924	2.926	2.908	2.903	2.889	2.860	2.848	2.834	2.823	2.819
	24	2.887	2.894	2.899	2.906	2.909	2.910	2.899	2.889	2.879	2.857	2.856	2.868
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	2.951	2.960	2.969	2.991	2.986	2.984	2.964	2.957	2.941	2.932	2.926	2.928
	27	2.832	2.831	2.834	2.823	2.809	2.797	2.776	2.742	2.715	2.688	2.662	2.658
	28	2.677	2.687	2.696	2.685	2.685	2.684	2.676	2.665	2.658	2.646	2.653	2.651
	29	2.709	2.706	2.698	2.702	2.687	2.660	2.642	2.617	2.600	2.570	2.546	2.517
	30	2.575	2.597	2.611	2.618	2.604	2.569	2.563	2.541	2.507	2.502	2.500	2.499
Hourly Means	2.677	2.684	2.690	2.698	2.696	2.689	2.683	2.674	2.663	2.655	2.648	2.648	
OCTOBER.	1	2.452	2.451	2.439	2.430	2.401	2.369	2.325	2.314	2.308	2.290	2.284	2.274
	2	—	—	—	—	—	—	—	—	—	—	—	—
	3	2.547	2.559	2.586	2.596	2.610	2.611	2.617	2.613	2.615	2.619	2.638	2.656
	4	2.802	2.816	2.839	2.841	2.844	2.844	2.834	2.820	2.822	2.818	2.819	2.826
	5	2.923	2.939	2.942	2.955	2.952	2.949	2.938	2.925	2.915	2.900	2.902	2.902
	6	2.938	2.948	2.957	2.959	2.948	2.928	2.923	2.895	2.878	2.864	2.845	2.841
	7	2.763	2.762	2.759	2.755	2.760	2.730	2.711	2.696	2.679	2.670	2.656	2.653
	8	2.566	2.573	2.580	2.568	2.552	2.540	2.524	2.520	2.507	2.488	2.477	2.471
	9	—	—	—	—	—	—	—	—	—	—	—	—
	10	2.606	2.618	2.621	2.633	2.616	2.620	2.594	2.569	2.528	2.505	2.500	2.490
	11	2.334	2.337	2.337	2.315	2.306	2.277	2.242	2.216	2.209	2.204	2.191	2.236
	12	2.557	2.590	2.620	2.638	2.654	2.678	2.680	2.688	2.696	2.718	2.735	2.755
	13	2.832	2.837	2.831	2.821	2.802	2.788	2.766	2.733	2.682	2.661	2.652	2.628
	14	2.336	2.341	2.336	2.330	2.310	2.310	2.300	2.287	2.291	2.279	2.278	2.291
	15	2.158	2.160	2.158	2.150	2.139	2.131	2.121	2.114	2.113	2.142	2.165	2.194
	16	—	—	—	—	—	—	—	—	—	—	—	—
	17	2.703	2.735	2.759	2.789	2.792	2.798	2.791	2.773	2.771	2.764	2.757	2.750
	18	2.468	2.459	2.444	2.424	2.448	2.443	2.429	2.443	2.437	2.457	2.505	2.518
	19	2.645	2.660	2.674	2.680	2.691	2.683	2.677	2.671	2.663	2.681	2.689	2.714
	20	2.814	2.841	2.847	2.866	2.864	2.870	2.861	2.849	2.848	2.847	2.852	2.852
	21	2.873	2.884	2.887	2.880	2.870	2.848	2.809	2.778	2.737	2.716	2.701	2.669
	22	2.432	2.421	2.414	2.413	2.399	2.389	2.361	2.354	2.393	2.352	2.374	2.380
	23	—	—	—	—	—	—	—	—	—	—	—	—
	24	2.441	2.444	2.435	2.426	2.412	2.376	2.332	2.308	2.271	2.242	2.209	2.160
	25	2.257	2.274	2.294	2.303	2.317	2.333	2.335	2.345	2.381	2.401	2.440	2.492
	26	2.629	2.651	2.654	2.650	2.637	2.631	2.561	2.600	2.598	2.601	2.609	2.630
	27	2.803	2.840	2.873	2.897	2.916	2.944	2.938	2.939	2.932	2.937	2.932	2.932
	28	2.974	2.976	2.994	2.978	2.971	2.964	2.944	2.922	2.898	2.882	2.870	2.856
	29	2.911	2.929	2.940	2.946	2.969	2.968	2.961	2.962	2.961	2.961	2.961	2.967
	30	—	—	—	—	—	—	—	—	—	—	—	—
	31	2.878	2.896	2.905	2.906	2.903	2.893	2.870	2.850	2.827	2.819	—	2.817
Hourly Means	2.640	2.652	2.659	2.660	2.657	2.651	2.632	2.622	2.614	2.608	2.602	2.614	

BAROMETRIC PRESSURE.

Barometer at 32° = 27 English inches + the numbers in the Table.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
2.578	2.586	2.595	2.601	2.601	2.612	2.624	2.651	2.639	2.645	2.665	2.680	2.623
2.676	2.667	2.669	2.671	2.673	2.656	2.652	2.626	2.611	2.604	2.593	2.623	2.676
2.670	2.678	2.704	2.712	2.722	2.734	—	—	—	—	—	—	2.605
—	—	—	—	—	—	2.453	2.451	2.443	2.435	2.431	2.457	—
2.683	2.711	2.745	2.763	2.771	2.777	2.800	2.804	2.815	2.812	2.805	2.818	2.678
2.705	2.681	2.665	2.638	2.618	2.603	2.596	2.611	2.595	2.583	2.569	2.545	2.709
2.621	2.639	2.655	2.669	2.671	2.700	2.708	2.718	2.741	2.754	2.757	2.754	2.635
2.644	2.620	2.620	2.615	2.591	2.573	2.550	2.522	2.500	2.497	2.509	2.524	2.653
2.648	2.674	2.692	2.700	2.712	2.722	2.735	2.735	2.737	2.762	2.778	2.806	2.651
2.722	2.708	2.684	2.666	2.642	2.632	—	—	—	—	—	—	—
—	—	—	—	—	—	2.404	2.396	2.378	2.370	2.372	2.377	2.666
2.184	2.180	2.216	2.206	2.220	2.203	2.231	2.250	2.264	2.271	2.316	2.345	2.287
2.504	2.504	2.520	2.523	2.523	2.533	2.540	2.556	2.560	2.567	2.578	2.588	2.496
2.627	2.633	2.639	2.639	2.637	2.630	2.617	2.597	2.580	2.558	2.538	2.526	2.613
2.495	2.507	2.516	2.510	2.508	2.518	2.518	2.531	2.538	2.536	2.534	2.553	2.507
2.608	2.628	2.638	2.654	2.659	2.668	2.669	2.674	2.675	2.683	2.695	2.723	2.622
2.681	2.681	2.689	2.680	2.671	2.669	—	—	—	—	—	—	—
—	—	—	—	—	—	2.596	2.602	2.608	2.622	2.680	2.690	2.693
2.839	2.871	2.879	2.895	2.896	2.896	2.898	2.895	2.887	2.878	2.874	2.877	2.836
2.633	2.607	2.589	2.571	2.539	2.491	2.459	2.424	2.390	2.364	2.387	2.408	2.647
2.659	2.673	2.699	2.711	2.711	2.724	2.732	2.741	2.743	2.747	2.756	2.770	2.621
2.866	2.880	2.884	2.881	2.883	2.884	2.884	2.886	2.886	2.888	2.889	2.898	2.861
2.828	2.831	2.846	2.842	2.850	2.842	2.840	2.854	2.848	2.850	2.864	2.862	2.863
2.857	2.851	2.851	2.853	2.854	2.850	—	—	—	—	—	—	—
—	—	—	—	—	—	2.930	2.934	2.927	2.920	2.916	2.935	2.889
2.897	2.891	2.882	2.882	2.879	2.869	2.851	2.842	2.838	2.838	2.833	2.837	2.909
2.639	2.627	2.630	2.630	2.622	2.616	2.620	2.628	2.628	2.632	2.646	2.654	2.697
2.661	2.673	2.675	2.683	2.689	2.685	2.686	2.688	2.689	2.691	2.691	2.697	2.678
2.506	2.486	2.462	2.455	2.443	2.469	2.475	2.511	2.522	2.538	2.552	2.560	2.568
2.491	2.491	2.493	2.490	2.508	2.500	2.506	2.479	2.467	2.449	2.451	2.453	2.519
2.651	2.653	2.659	2.659	2.657	2.656	2.637	2.639	2.635	2.634	2.641	2.652	2.662
2.252	2.234	2.264	2.254	2.262	2.290	—	—	—	—	—	—	2.374
—	—	—	—	—	—	2.517	2.507	2.501	2.502	2.527	2.538	—
2.685	2.693	2.705	2.709	2.725	2.738	2.744	2.745	2.745	2.747	2.759	2.781	2.668
2.835	2.835	2.856	2.858	2.858	2.859	2.860	2.878	2.875	2.878	2.894	2.907	2.847
2.903	2.909	2.917	2.911	2.898	2.900	2.899	2.898	2.897	2.902	2.915	2.934	2.918
2.833	2.823	2.820	2.792	2.771	2.764	2.774	2.777	2.769	2.766	2.766	2.764	2.848
2.645	2.639	2.626	2.628	2.628	2.596	2.590	2.586	2.574	2.574	2.568	2.560	2.659
2.483	2.489	2.479	2.478	2.480	2.480	—	—	—	—	—	—	—
—	—	—	—	—	—	2.532	2.538	2.557	2.560	2.586	2.592	2.526
2.482	2.476	2.474	2.478	2.458	2.447	2.416	2.403	2.375	2.358	2.340	2.347	2.498
2.284	2.323	2.352	2.370	2.380	2.380	2.394	2.431	2.453	2.485	2.515	2.541	2.338
2.782	2.790	2.804	2.827	2.825	2.827	2.827	2.830	2.824	2.815	2.820	2.829	2.742
2.598	2.586	2.573	2.543	2.533	2.488	2.464	2.442	2.433	2.396	2.386	2.352	2.618
2.285	2.265	2.261	2.257	2.253	2.256	2.238	2.212	2.192	2.177	2.159	2.162	2.267
2.228	2.260	2.269	2.288	2.305	2.317	—	—	—	—	—	—	—
—	—	—	—	—	—	2.511	2.589	2.569	2.599	2.643	2.678	2.292
2.737	2.755	2.759	2.751	2.752	2.718	2.694	2.682	2.621	2.576	2.562	2.513	2.721
2.535	2.548	2.555	2.576	2.576	2.584	2.582	2.582	2.592	2.600	2.621	2.631	2.519
2.726	2.743	2.744	2.754	2.754	2.755	2.769	2.767	2.778	2.776	2.778	2.798	2.720
2.850	2.852	2.867	2.870	2.873	2.876	2.881	2.882	2.874	2.872	2.870	2.870	2.860
2.661	2.647	2.619	2.603	2.585	2.571	2.545	2.538	2.516	2.486	2.468	2.452	2.681
2.395	2.415	2.439	2.453	2.465	2.473	—	—	—	—	—	—	—
—	—	—	—	—	—	2.551	2.511	2.500	2.484	2.480	2.460	2.429
2.144	2.139	2.123	2.119	2.118	2.173	2.185	2.183	2.185	2.187	2.199	2.220	2.251
2.528	2.555	2.577	2.592	2.604	2.609	2.615	2.618	2.613	2.618	2.628	2.628	2.473
2.639	2.673	2.664	2.680	2.705	2.699	2.713	2.708	2.717	2.722	2.738	2.774	2.662
2.946	2.946	2.949	2.963	2.965	2.954	2.955	2.963	2.963	2.966	2.966	2.968	2.933
2.867	2.861	2.869	2.881	2.883	2.883	2.883	2.883	2.881	2.871	2.891	2.908	2.908
2.965	2.970	2.984	2.982	2.972	2.970	—	—	—	—	—	—	—
—	—	—	—	—	—	2.890	2.892	2.888	2.868	2.884	2.872	2.940
2.821	2.831	2.825	2.821	2.809	2.819	2.819	2.813	2.806	2.816	2.822	2.818	2.843
2.620	2.625	2.630	2.632	2.632	2.632	2.648	2.648	2.642	2.638	2.646	2.650	2.636

BAROMETRIC PRESSURE.													
Barometer at 32° = 27 English inches + the numbers in the Table.													
Hours of Mean Göttingen Time	0	1	2	3	4	5	6	7	8	9	10	11	
Hours of Mean Toronto Time	18	19	20	21	22	23	0	1	2	3	4	5	
NOVEMBER.	1	2·827	2·840	2·852	2·858	2·855	2·853	2·841	2·824	2·821	2·821	2·834	2·855
	2	2·977	3·013	3·026	3·024	3·022	3·020	3·012	3·008	2·996	3·004	3·012	3·014
	3	3·135	3·152	3·166	3·172	3·172	3·166	3·139	3·127	3·127	3·120	3·108	3·106
	4	3·074	3·082	3·083	3·076	3·080	3·067	3·054	3·040	3·020	3·007	2·995	2·994
	5	2·900	2·907	2·913	2·894	2·883	2·867	2·854	2·825	2·812	2·805	2·787	2·773
	6	—	—	—	—	—	—	—	—	—	—	—	—
	7	2·566	2·570	2·565	2·555	2·548	2·512	2·484	2·466	2·447	2·421	2·417	2·395
	8	2·043	2·043	2·037	2·034	2·034	2·034	2·026	2·025	2·036	2·066	2·084	2·094
	9	2·228	2·247	2·269	2·261	2·285	2·295	2·267	2·257	2·297	2·321	2·315	2·331
	10	2·368	2·379	2·401	2·401	2·411	2·425	2·401	2·389	2·395	2·417	2·428	2·452
	11	2·693	2·734	2·760	2·772	2·785	2·780	2·780	2·791	2·785	2·795	2·794	2·794
	12	2·607	2·569	2·552	2·532	2·510	2·489	2·459	2·444	2·442	2·454	2·474	2·498
	13	—	—	—	—	—	—	—	—	—	—	—	—
	14	2·432	2·398	2·381	2·351	2·327	2·278	2·238	2·209	2·190	2·200	2·220	2·257
	15	2·624	2·647	2·671	2·676	2·688	2·674	2·654	2·660	2·675	2·698	2·676	2·682
	16	2·564	2·566	2·563	2·555	2·555	2·543	2·521	2·507	2·507	2·522	2·532	2·526
	17	2·495	2·440	2·434	2·382	2·364	2·330	2·278	2·251	2·208	2·167	2·114	2·072
	18	1·961	1·960	1·957	1·955	1·960	1·952	1·951	1·947	1·964	1·983	2·005	2·023
	19	2·183	2·204	2·241	2·260	2·291	2·306	2·326	2·343	2·373	2·404	2·435	2·467
	20	—	—	—	—	—	—	—	—	—	—	—	—
	21	2·779	2·796	2·814	2·816	2·814	2·807	2·796	2·773	2·772	2·782	2·794	2·788
	22	2·832	2·826	2·836	2·828	2·832	2·818	2·792	2·766	2·750	2·739	2·739	2·727
	23	2·678	2·672	2·674	2·664	2·650	2·640	2·609	2·592	2·581	2·567	2·562	2·550
	24	2·380	2·397	2·427	2·489	2·531	2·583	2·615	2·629	2·664	2·682	2·715	2·731
	25	2·736	2·725	2·710	2·684	2·659	2·630	2·602	2·576	2·592	2·582	2·564	2·575
	26	2·737	2·747	2·753	2·758	2·754	2·726	2·713	2·674	2·643	2·602	2·582	2·538
	27	—	—	—	—	—	—	—	—	—	—	—	—
	28	2·804	2·803	2·818	2·825	2·842	2·834	2·823	2·811	2·824	2·838	2·863	2·887
	29	3·124	3·133	3·142	3·164	3·182	3·167	3·166	3·143	3·143	3·148	3·146	3·132
	30	2·768	2·703	2·626	2·603	2·595	2·555	2·513	2·459	2·423	2·405	2·382	2·361
	Hourly Means	2·635	2·637	2·642	2·638	2·640	2·629	2·612	2·598	2·596	2·598	2·599	2·601
DECEMBER.	1	2·373	2·397	2·433	2·452	2·494	2·515	2·530	2·535	2·516	2·612	2·646	2·682
	2	2·923	2·915	2·904	2·891	2·871	2·847	2·786	2·750	2·693	2·673	2·657	2·591
	3	2·476	2·501	2·521	2·514	2·521	2·512	2·481	2·479	2·483	2·482	2·494	2·487
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	2·442	2·449	2·470	2·470	2·500	2·475	2·433	2·476	2·484	2·553	2·603	2·653
	6	3·073	3·058	3·084	3·102	3·126	3·085	3·062	3·023	2·998	2·994	2·976	2·966
	7	2·830	2·845	2·879	2·862	2·883	2·846	2·843	2·828	2·819	2·814	2·801	2·755
	8	2·609	2·593	2·562	2·534	2·536	2·501	2·450	2·354	2·316	2·270	2·230	2·182
	9	2·160	2·184	2·223	2·248	2·292	2·305	2·304	2·334	2·356	2·385	2·431	2·485
	10	2·915	2·931	2·953	2·972	2·986	2·975	2·962	2·954	2·945	2·953	2·961	2·943
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	2·863	2·882	2·896	2·898	2·824	2·919	2·909	2·894	2·907	2·900	2·914	2·916
	13	2·865	2·859	2·835	2·821	2·787	2·773	2·698	2·688	2·670	2·640	2·626	2·584
	14	2·492	2·479	2·549	2·570	2·594	2·599	2·598	2·610	2·632	2·673	2·690	2·720
	15	—	2·895	2·915	2·915	2·929	2·918	2·875	2·857	2·853	2·850	2·844	2·840
	16	2·736	2·722	2·721	2·715	2·713	2·686	2·660	2·649	2·641	2·633	2·646	2·654
	17	2·752	2·714	2·665	2·585	2·494	2·428	2·377	2·293	2·264	2·249	2·228	2·200
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	2·278	2·287	2·294	2·297	2·317	2·336	2·329	2·339	2·356	2·390	2·431	2·473
	20	2·651	2·658	2·663	2·667	2·670	2·655	2·629	2·614	2·592	2·576	2·576	2·569
	21	2·414	2·407	2·418	2·396	2·379	2·343	2·294	2·264	2·245	2·228	2·222	2·194
	22	2·065	2·101	2·145	2·188	2·200	2·208	2·197	2·200	2·233	2·253	2·272	2·277
	23	2·506	2·539	2·581	2·604	2·627	2·640	2·644	2·656	2·683	2·715	2·747	2·772
	24	3·039	3·042	3·071	3·077	3·085	3·063	3·034	3·021	3·003	3·003	3·006	3·013
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	3·096	3·102	3·117	3·139	3·133	3·113	3·100	3·085	3·078	3·090	3·078	3·074
	27	3·052	3·052	3·074	3·080	3·080	3·051	3·016	3·008	3·019	3·039	3·043	3·047
	28	3·172	3·191	3·207	3·214	3·223	3·199	3·150	3·118	3·092	3·058	3·027	2·997
	29	2·462	2·388	2·412	2·393	2·371	2·334	2·282	2·242	2·221	2·210	2·207	2·196
	30	2·070	2·051	2·073	2·073	2·087	2·087	2·091	2·116	2·139	2·170	2·223	2·261
	31	—	2·518	2·591	2·607	2·617	2·611	2·589	2·573	2·574	2·583	2·585	2·595
	32	—	—	—	—	—	—	—	—	—	—	—	—
Thermometer	2·653	2·658	2·676	2·677	2·679	2·668	2·642	2·628	2·623	2·629	2·636	2·634	

BAROMETRIC PRESSURE.

Barometer at 32° = 27 English inches + the numbers in the Table.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
2·871	2·895	2·908	2·919	2·937	2·947	2·953	2·955	2·961	2·968	2·972	2·972	2·889
3·022	3·038	3·048	3·050	3·063	3·063	3·063	3·071	3·086	3·088	3·092	3·114	3·039
3·100	3·107	3·103	3·117	3·112	3·089	3·076	3·061	3·067	3·073	3·075	3·081	3·115
2·994	2·980	2·975	2·957	2·945	2·931	2·920	2·910	2·910	2·901	2·901	2·899	2·991
2·774	2·775	2·767	2·767	2·747	2·737	—	—	—	—	—	—	2·757
—	—	—	—	—	—	2·546	2·586	2·565	2·565	2·569	2·562	—
2·383	2·359	2·329	2·311	2·291	2·251	2·217	2·165	2·119	2·091	2·069	2·061	2·358
2·131	2·153	2·173	2·179	2·187	2·197	2·203	2·215	2·225	2·223	2·230	2·228	2·121
2·355	2·348	2·336	2·338	2·334	2·338	2·338	2·330	2·351	2·353	2·352	2·368	2·313
2·472	2·488	2·511	2·517	2·533	2·548	2·571	2·591	2·563	2·579	2·647	2·675	2·482
2·796	2·788	2·788	2·792	2·774	2·760	2·742	2·720	2·704	2·688	2·655	2·619	2·754
2·502	2·518	2·538	2·575	2·594	2·607	—	—	—	—	—	—	—
—	—	—	—	—	—	2·602	2·570	2·552	2·523	2·497	2·464	2·524
2·286	2·292	2·374	2·403	2·445	2·465	2·483	2·519	2·545	2·563	2·576	2·585	2·376
2·682	2·648	2·647	2·655	2·653	2·650	2·630	2·610	2·602	2·584	2·572	2·566	2·647
2·554	2·575	2·563	2·571	2·575	2·560	2·549	2·525	2·499	2·501	2·499	2·509	2·539
2·004	1·928	1·870	1·804	1·781	1·831	1·866	1·876	1·894	1·917	1·948	1·968	2·093
2·020	2·028	2·023	2·038	2·048	2·059	2·085	2·093	2·112	2·127	2·141	2·163	2·023
2·504	2·534	2·546	2·572	2·592	2·614	—	—	—	—	—	—	—
—	—	—	—	—	—	2·721	2·729	2·745	2·755	2·757	2·765	2·486
2·800	2·818	2·816	2·823	2·824	2·827	2·830	2·822	2·832	2·830	2·830	2·842	2·809
2·724	2·719	2·712	2·697	2·710	2·714	2·714	2·695	2·693	2·682	2·672	2·671	2·745
2·542	2·528	2·512	2·515	2·473	2·451	2·433	2·393	2·384	2·370	2·354	2·365	2·532
2·747	2·748	2·752	2·753	2·769	2·769	2·769	2·769	2·769	2·756	2·739	2·746	2·664
2·588	2·617	2·642	2·650	2·684	2·678	2·707	2·709	2·728	2·715	2·716	2·733	2·658
2·504	2·475	2·437	2·395	2·366	2·322	—	—	—	—	—	—	—
—	—	—	—	—	—	2·780	2·790	2·790	2·796	2·793	2·808	2·645
2·894	2·924	2·939	2·955	2·971	2·993	2·995	3·009	3·021	3·027	3·032	—	2·901
3·134	3·126	3·118	3·096	3·063	3·034	2·993	2·956	2·936	2·890	2·838	2·829	3·075
2·340	2·332	2·321	2·302	2·291	2·283	2·288	2·297	2·306	2·307	2·322	2·346	2·422
2·605	2·605	2·606	2·606	2·606	2·604	2·618	2·614	2·614	2·610	2·609	2·598	2·613
2·715	2·739	2·753	2·775	2·787	2·803	2·823	2·837	2·867	2·885	2·893	2·916	2·666
2·538	2·493	2·455	2·411	2·379	2·335	2·332	2·342	2·372	2·392	2·433	2·471	2·602
2·504	2·506	2·508	2·510	—	2·499	—	—	—	—	—	—	—
—	—	—	—	—	—	2·428	2·412	2·422	2·422	2·419	2·415	2·478
2·674	2·760	2·809	2·844	2·881	2·915	2·937	2·951	2·972	2·986	2·997	3·045	2·699
2·953	2·896	2·846	2·841	2·869	2·821	2·795	2·805	2·811	2·783	2·796	2·824	2·941
2·747	2·779	2·771	2·777	2·739	2·727	2·715	2·687	2·685	2·639	2·635	2·623	2·772
2·144	2·164	2·122	2·095	2·106	2·097	2·071	2·093	2·113	2·133	2·127	2·137	2·272
2·531	2·574	2·611	2·642	2·676	2·713	2·726	2·773	2·819	2·839	2·858	2·892	2·515
2·937	2·935	2·925	2·916	2·898	2·882	—	—	—	—	—	—	—
—	—	—	—	—	—	2·796	2·816	2·816	2·816	2·835	2·852	2·911
2·922	2·924	2·938	2·928	2·938	2·920	2·910	2·908	2·886	2·881	2·871	2·862	2·900
2·566	2·546	2·535	2·527	2·509	2·495	2·473	2·447	2·451	2·451	2·453	2·480	2·616
2·734	2·746	2·765	2·778	2·790	2·808	2·818	2·824	2·844	2·850	2·860	—	2·697
2·837	2·839	2·830	2·839	2·827	2·824	2·815	2·798	2·792	2·778	2·756	2·751	2·842
2·672	2·694	2·729	2·756	2·780	2·799	2·807	2·825	2·839	2·843	2·829	2·803	2·731
2·189	2·181	2·153	2·167	2·148	2·143	—	—	—	—	—	—	—
—	—	—	—	—	—	2·457	2·412	2·378	2·349	2·308	2·291	2·351
2·533	2·570	2·588	2·601	2·624	2·626	2·636	2·641	2·663	2·669	2·657	2·649	2·483
2·561	2·554	2·546	2·527	2·523	2·511	2·488	2·482	2·474	2·458	2·438	2·426	2·563
2·169	2·150	2·132	2·077	2·054	2·032	2·008	1·964	1·964	1·972	1·996	2·008	2·180
2·317	2·331	2·330	2·335	2·336	2·338	2·357	2·389	2·416	2·438	2·450	2·474	2·285
2·810	2·834	2·881	2·899	2·912	2·916	2·924	2·942	2·960	2·972	2·974	3·010	2·781
3·000	2·993	2·981	2·959	2·935	2·907	—	—	—	—	—	—	—
—	—	—	—	—	—	3·023	3·036	3·058	3·078	3·079	3·088	3·025
3·086	3·087	3·091	3·084	3·088	3·086	3·062	3·043	3·048	3·054	3·054	3·046	3·085
3·061	3·077	3·091	3·125	3·117	3·103	3·099	3·122	3·141	3·166	3·156	3·164	3·083
2·983	2·951	2·881	2·851	2·813	2·777	2·719	2·682	2·652	2·608	2·564	2·509	2·943
2·190	2·176	2·149	2·138	2·134	2·122	2·102	2·097	2·093	2·081	2·060	2·053	2·213
2·293	2·324	2·342	2·351	2·373	2·396	2·406	2·433	2·454	2·474	2·498	—	2·251
2·601	2·601	2·603	2·603	2·600	2·601	—	—	—	—	—	—	—
—	—	—	—	—	—	2·759	2·717	2·681	2·613	2·567	2·526	2·605
2·639	2·645	2·643	2·643	2·647	2·637	2·648	2·647	2·654	2·653	2·650	2·653	2·648



STANDARD THERMOMETER.

Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16	

JANUARY.	1	23.2	27.6	32.4	35.2	38.8	36.9	36.8	37.5	37.9	—	—	—	26.52	
	2	—	—	—	—	—	—	—	—	—	5.3	2.8	3.9		
	3	3.3	3.8	12.0	15.8	17.9	18.9	18.8	19.5	19.8	21.1	22.6	24.2		
	4	21.9	21.8	26.0	29.8	29.8	26.5	23.0	21.3	17.7	16.8	13.5	16.6		22.06
	5	14.7	11.7	14.3	17.1	18.4	16.5	6.3	7.2	7.4	19.0	21.4	22.3		14.69
	6	22.9	25.3	27.4	29.6	31.7	34.1	35.2	36.0	36.8	38.2	39.6	37.0		32.82
	7	34.1	34.2	33.0	30.7	30.8	29.8	24.0	18.4	13.9	17.3	21.8	22.1		25.84
	8	20.8	21.0	29.6	30.6	31.8	31.4	31.2	30.6	30.4	—	—	—		27.19
	9	—	—	—	—	—	—	—	—	—	24.0	22.7	22.2		
	10	22.8	23.8	27.6	30.4	33.9	31.5	24.5	21.3	20.0	18.0	18.0	26.0		24.82
	11	20.6	21.8	29.9	34.5	38.3	38.4	34.2	31.8	30.0	31.0	31.5	29.2		30.93
	12	28.2	27.8	30.8	31.3	30.3	29.3	27.2	24.0	20.0	15.1	12.3	10.3		23.88
	13	8.7	7.4	10.5	15.1	16.2	19.0	20.8	23.1	25.9	28.1	28.0	27.7		19.21
	14	32.5	35.9	41.0	43.1	39.7	38.0	35.1	33.7	31.7	30.5	29.0	27.5		34.81
	15	27.3	25.1	26.6	26.7	26.6	26.1	25.2	25.5	26.5	—	—	—		27.27
	16	—	—	—	—	—	—	—	—	—	29.7	30.8	31.0		
	17	32.0	33.3	35.6	38.6	42.4	43.8	39.3	34.8	29.2	27.4	26.1	26.5		34.08
	18	25.2	27.4	33.3	38.2	41.0	39.3	35.0	31.5	40.7	35.9	36.8	37.2		35.12
	19	33.8	31.3	39.2	44.4	42.2	42.1	38.0	36.3	36.2	35.5	38.7	34.8		37.71
	20	34.4	34.7	36.6	36.1	35.9	35.6	35.9	36.2	35.7	35.7	33.6	32.8		35.27
	21	32.7	31.6	30.7	30.6	31.0	29.9	27.5	26.7	22.8	19.0	18.2	17.4		26.51
	22	16.8	16.5	14.0	16.3	16.9	15.0	12.4	10.5	10.5	—	—	—		11.85
	23	—	—	—	—	—	—	—	—	—	5.0	4.1	4.2		
	24	5.6	8.2	17.4	22.5	26.0	26.9	25.4	24.6	25.5	28.2	27.6	26.3		22.02
	25	27.0	29.6	33.4	37.5	40.0	38.7	35.3	34.3	34.0	35.4	32.9	26.6		33.72
	26	28.0	32.3	34.6	36.2	34.1	32.8	32.5	30.6	27.8	25.5	24.8	24.0		30.27
	27	21.8	21.2	21.3	25.2	27.2	27.0	25.5	25.6	24.0	14.6	13.5	16.7		21.97
	28	27.8	27.9	30.0	35.4	38.0	38.6	37.8	38.8	40.8	38.8	42.2	41.1		36.43
	29	39.5	38.1	42.8	45.5	46.3	41.7	38.8	39.6	40.4	—	—	—		40.17
	30	—	—	—	—	—	—	—	—	—	36.0	36.7	36.7		
	31	35.4	35.2	36.3	39.7	35.5	33.3	31.5	29.8	29.0	28.2	28.0	25.7		32.30

Hourly Means	24.65	25.17	28.70	31.39	32.33	31.58	29.12	28.05	27.48	25.36	25.28	25.00	27.84
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FEBRUARY.	1	25.1	27.1	30.6	32.5	34.7	35.4	31.3	29.3	31.0	31.4	32.6	33.4	31.20
	2	33.5	33.6	36.8	39.2	42.3	41.0	39.7	38.6	37.2	38.4	40.1	41.2	38.47
	3	39.9	39.4	42.8	48.2	49.2	47.0	43.5	42.2	44.4	40.3	37.6	35.8	42.52
	4	34.4	35.3	38.2	40.5	39.6	38.0	38.6	38.8	39.2	37.0	35.8	34.2	34.47
	5	31.4	29.9	31.6	32.8	34.3	33.2	32.6	30.9	33.0	—	—	—	32.37
	6	—	—	—	—	—	—	—	—	—	33.8	33.0	31.9	
	7	31.6	31.4	33.8	35.8	35.1	33.6	31.7	29.0	25.7	25.4	24.4	22.6	30.01
	8	17.6	13.9	13.3	13.1	14.3	12.4	7.7	5.7	4.8	4.0	4.8	7.9	9.96
	9	11.9	12.4	17.4	21.2	25.6	27.0	27.0	28.5	28.1	29.9	27.0	25.6	23.47
	10	23.8	24.4	31.0	34.5	39.4	39.8	35.8	35.1	29.0	27.3	26.2	25.8	31.01
	11	26.6	31.7	34.8	36.8	37.3	38.7	38.6	38.0	37.3	39.6	36.4	34.4	35.85
	12	31.1	27.9	28.7	29.7	32.3	33.2	29.2	29.2	30.6	—	—	—	31.61
	13	—	—	—	—	—	—	—	—	—	36.2	35.8	35.4	
	14	27.8	23.3	22.9	19.0	17.2	13.2	12.0	10.6	11.2	13.0	13.3	13.2	16.39
	15	12.3	13.6	21.8	23.3	26.2	26.8	25.6	27.4	28.1	27.3	27.2	29.9	24.12
	16	30.0	29.4	30.3	30.7	30.2	25.2	17.7	12.9	12.0	9.9	8.3	7.1	20.31
	17	4.8	4.3	8.4	12.8	16.7	19.2	16.7	13.8	10.4	13.6	20.6	20.6	13.44
	18	20.9	22.1	26.9	30.5	34.0	33.1	32.9	33.2	34.7	35.4	34.5	32.2	30.87
	19	24.2	21.6	20.7	23.1	21.0	20.0	17.2	15.2	14.8	—	—	—	18.61
	20	—	—	—	—	—	—	—	—	—	12.8	16.8	15.9	
	21	17.2	17.5	21.8	26.8	28.2	28.3	25.8	25.0	25.7	26.2	26.8	25.8	24.59
	22	24.6	23.2	28.5	32.2	29.6	31.2	26.5	21.3	17.7	16.4	17.8	15.8	23.73
	23	18.8	21.2	27.3	31.0	33.0	34.2	33.6	34.3	31.2	28.2	28.0	27.0	28.98
	24	25.6	24.8	32.5	34.8	37.0	34.8	30.9	28.9	29.8	31.4	28.2	24.7	30.28
	25	22.7	21.9	23.3	25.6	26.5	28.3	28.6	28.0	28.1	28.2	28.9	30.8	26.74
	26	32.7	33.5	34.8	35.3	35.8	35.6	35.1	34.8	35.3	—	—	—	34.25
	27	—	—	—	—	—	—	—	—	—	35.7	32.6	29.8	
	28	29.3	32.6	38.0	39.9	38.9	36.3	34.7	34.5	34.7	34.7	34.2	34.4	35.18

Hourly Means	24.91	24.83	28.17	30.38	31.60	31.06	28.87	27.72	27.25	27.34	27.12	26.45	27.98
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STANDARD THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
MARCH.	1	34.0	35.2	37.0	37.6	38.6	37.2	36.2	37.8	38.4	37.5	36.4	36.2	36.84
	2	36.1	36.9	39.9	41.9	43.3	46.0	48.0	44.9	40.4	38.0	37.5	37.4	40.86
	3	37.2	39.8	44.2	49.5	52.0	53.7	44.6	43.6	42.9	40.1	38.8	38.4	43.82
	4	35.2	43.4	50.0	49.2	45.0	38.7	37.4	36.4	35.0	33.4	32.8	31.5	39.00
	5	30.4	29.6	30.5	33.2	32.9	32.2	31.8	31.7	31.2	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	31.2	31.4	31.0	31.42
	7	30.3	30.7	30.8	33.7	35.0	38.9	32.7	29.0	29.5	26.8	24.8	24.2	30.53
	8	22.9	28.9	34.0	36.4	41.0	40.2	37.8	35.7	35.6	34.8	36.3	34.6	34.85
	9	34.1	36.5	44.5	42.2	42.4	42.5	41.5	42.7	41.7	38.4	41.0	45.0	41.04
	10	40.1	36.9	38.4	41.3	42.8	42.2	38.5	34.3	32.3	31.0	29.9	29.3	36.42
	11	28.7	27.7	29.2	29.2	29.2	27.3	24.0	22.4	22.6	—	20.5	18.0	25.35
	12	15.9	20.1	24.6	27.8	31.0	31.7	26.8	26.5	28.8	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	30.6	30.3	29.2	26.94
	14	28.6	31.0	35.0	39.3	39.8	38.6	32.4	29.6	27.4	28.0	27.7	26.3	31.97
	15	28.8	33.1	40.2	45.0	44.0	42.7	37.6	33.0	30.1	25.3	22.8	26.4	34.08
	16	27.8	32.8	38.5	43.1	48.0	47.0	43.7	39.4	37.0	39.0	36.8	42.8	39.66
	17	40.0	43.5	50.3	59.5	61.8	57.8	50.2	43.2	39.7	35.4	34.0	33.6	45.75
	18	31.5	36.8	40.5	42.7	45.2	44.4	38.0	35.4	33.8	30.8	31.5	31.2	36.82
	19	31.7	36.3	46.0	48.4	66.2	62.2	55.6	52.4	50.2	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	34.2	30.6	30.0	45.32
	21	28.3	29.6	32.3	30.0	31.4	33.4	34.4	30.5	30.7	30.2	29.9	29.0	30.81
	22	29.1	29.9	33.8	35.4	35.6	34.8	34.1	32.8	32.3	32.1	31.7	32.1	32.81
	23	32.2	33.4	34.6	35.6	35.2	38.2	33.3	32.9	32.5	30.5	30.2	30.5	33.26
	24	31.5	35.5	38.2	39.4	38.4	37.2	36.8	36.2	36.3	—	—	—	—
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	35.4	34.3	34.0	36.10
	26	34.3	35.6	38.5	41.9	47.0	49.2	47.7	41.8	37.9	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	37.8	35.8	32.7	40.02
	28	30.6	32.1	34.8	38.2	41.2	43.9	40.4	33.0	28.8	27.2	29.2	29.7	34.09
	29	30.3	34.8	38.2	36.8	36.0	40.5	40.1	38.2	38.0	38.0	40.3	46.3	38.12
	30	49.2	46.7	47.8	50.4	53.5	54.4	51.2	47.7	44.2	39.4	37.0	34.2	46.31
	31	30.6	28.0	27.9	30.6	33.2	33.5	30.9	26.8	25.1	21.6	21.2	22.2	27.63
Hourly Means	31.90	34.03	37.68	39.93	41.91	41.86	38.68	36.07	34.71	33.11	32.03	32.15	36.18	
APRIL.	1	22.4	29.0	32.9	37.2	41.1	38.6	38.1	37.3	36.8	35.8	37.8	43.0	35.83
	2	39.8	44.7	54.3	60.1	62.0	62.2	57.3	63.8	60.0	—	—	—	51.52
	3	—	—	—	—	—	—	—	—	—	40.0	38.4	35.6	—
	4	37.1	37.3	38.1	38.2	37.8	36.3	36.4	37.2	37.4	38.2	38.2	38.4	37.55
	5	38.0	39.8	42.8	50.4	50.7	49.5	50.8	39.4	34.2	31.8	30.8	28.8	40.58
	6	29.0	38.3	43.7	47.0	48.2	47.6	44.1	40.1	45.5	39.6	40.0	40.4	41.96
	7	41.7	44.9	44.2	43.2	43.1	43.0	43.0	41.3	40.0	38.6	37.0	36.4	41.37
	8	34.6	35.4	38.7	37.4	38.6	37.6	36.5	36.4	36.2	34.2	31.5	31.6	35.72
	9	31.9	36.3	40.0	43.2	46.5	49.6	42.4	36.8	37.0	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	41.2	39.2	40.5	40.38
	11	41.0	46.4	52.2	57.4	57.4	63.1	59.2	48.2	45.5	43.6	41.2	41.4	49.72
	12	39.3	40.8	42.5	41.9	43.2	44.2	42.0	41.1	38.8	37.8	36.8	36.8	40.45
	13	36.2	36.5	35.4	36.5	38.6	39.8	39.6	39.8	39.9	38.2	35.4	33.2	37.42
	14	34.8	39.1	46.0	50.5	45.0	46.8	46.8	40.5	33.8	31.2	30.4	30.0	39.57
	15	29.7	37.7	41.4	47.0	44.0	42.5	42.6	36.8	34.8	34.2	33.3	32.5	38.04
	16	32.2	37.5	41.5	41.6	47.6	49.4	44.2	34.9	33.5	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	41.3	41.0	40.3	40.42
	18	39.3	39.8	38.7	38.8	39.2	40.3	40.2	40.5	40.2	40.4	41.0	40.9	39.94
	19	41.2	44.5	44.4	47.2	46.6	46.7	48.0	46.4	45.6	43.4	40.2	39.0	44.43
	20	41.0	45.5	53.7	52.3	56.8	57.0	62.0	49.6	44.2	41.2	41.0	38.3	48.55
	21	39.6	47.5	52.0	62.0	63.8	65.0	61.4	57.2	60.3	53.8	52.9	50.3	55.48
	22	49.5	57.0	65.6	69.2	86.8	83.0	73.6	65.2	54.5	47.0	42.8	40.0	61.18
	23	38.0	42.0	43.8	46.2	48.2	50.3	49.0	39.7	36.6	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	45.8	46.2	45.6	44.28
	25	44.0	47.2	50.3	52.2	55.5	55.5	51.2	49.6	45.2	42.8	41.5	40.8	47.98
	26	40.6	43.0	47.8	47.2	49.0	54.7	53.3	47.2	45.8	44.2	42.8	40.3	46.32
	27	39.4	42.1	45.8	45.1	44.7	43.1	41.4	41.0	39.4	38.5	36.5	36.0	41.08
	28	36.8	37.4	40.0	42.8	45.0	49.0	50.8	44.5	40.4	37.7	36.5	37.6	41.54
	29	37.4	44.2	46.6	51.4	54.9	59.4	58.1	43.5	38.0	36.2	32.6	30.2	44.37
	30	32.6	45.1	47.9	54.2	59.5	60.3	58.8	48.4	47.2	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	39.6	36.6	36.6	47.23
Hourly Means	37.19	41.50	45.01	47.70	49.76	50.56	48.88	44.09	41.95	39.86	38.52	37.87	43.63	

<sup>a</sup> Good Friday.



STANDARD THERMOMETER.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16	
MAY.	2	37.3	42.1	45.5	48.5	50.2	52.8	55.8	48.3	44.4	46.0	41.8	40.0	46.06
	3	42.2	47.8	53.2	54.0	57.3	51.8	54.8	47.0	43.6	43.2	41.4	40.6	48.07
	4	40.0	44.3	48.6	52.2	54.0	55.3	53.0	43.7	41.4	38.8	38.4	34.6	45.36
	5	36.4	44.9	51.9	56.9	59.1	58.6	55.9	48.2	46.5	46.3	46.2	46.0	49.74
	6	55.0	57.1	58.8	65.1	66.7	63.0	56.8	48.2	44.4	41.8	40.2	34.2	52.61
	7	35.1	41.7	44.5	46.6	51.7	54.8	48.6	47.6	45.4	—	—	—	42.68
	8	—	—	—	—	—	—	—	—	—	33.5	31.5	31.2	
	9	31.4	38.0	43.0	46.0	51.5	53.1	46.8	45.2	42.2	40.6	38.8	36.0	42.72
	10	36.7	45.4	51.9	60.1	62.0	65.0	64.7	60.1	57.7	55.4	54.8	58.4	56.02
	11	51.2	52.4	53.3	52.2	50.5	47.9	46.0	44.2	42.0	40.6	39.0	39.8	46.59
	12	39.1	42.7	47.2	51.1	56.8	61.0	58.5	48.8	43.8	42.6	39.2	43.9	47.89
	13	45.9	48.9	49.8	48.7	50.1	52.0	50.2	43.6	39.7	35.7	31.5	32.4	44.04
	14	35.3	43.9	46.9	49.5	52.6	57.0	57.9	41.8	35.7	—	—	—	46.94
	15	—	—	—	—	—	—	—	—	—	48.2	47.0	47.5	
	16	53.4	60.0	67.6	66.6	67.2	65.2	60.7	51.1	42.9	38.7	34.6	36.5	53.71
	17	42.0	50.8	55.8	60.3	60.5	61.7	59.2	51.6	47.0	45.0	46.8	50.8	52.62
	18	52.4	59.7	62.7	66.0	71.4	74.8	64.0	60.5	58.0	55.6	55.8	50.3	60.93
	19	46.8	46.9	45.8	50.0	55.2	55.0	50.5	44.2	44.3	39.5	38.6	39.8	46.38
	20	41.7	45.4	47.8	50.8	55.0	59.4	58.5	40.1	34.9	32.4	30.2	31.3	43.96
	21	37.0	48.0	56.0	59.8	61.7	58.4	57.6	53.0	50.8	—	—	—	52.67
	22	—	—	—	—	—	—	—	—	—	49.8	50.0	49.9	
	23	50.1	53.7	53.3	58.8	58.4	62.3	61.6	51.0	46.5	44.5	45.0	46.6	52.65
	24	48.2	50.4	56.4	59.2	55.2	62.6	60.0	53.3	49.8	43.6	40.0	38.5	51.43
	25	42.0	48.6	56.5	64.4	64.5	65.0	63.4	55.0	47.8	40.7	40.2	40.6	52.39
	26	42.3	49.4	54.8	53.8	61.6	63.6	60.9	53.8	53.0	50.6	50.0	50.1	53.66
	27	48.8	48.4	50.8	52.5	58.3	58.8	52.6	50.2	45.2	44.0	45.8	43.7	49.92
	28	45.3	50.6	54.6	57.2	64.2	62.4	56.5	50.6	48.2	—	—	—	52.93
	29	—	—	—	—	—	—	—	—	—	49.2	48.4	48.0	
	30	47.3	48.8	49.5	52.9	58.0	61.0	60.8	50.7	43.2	44.4	44.3	43.8	50.39
	31	46.9	54.8	60.8	61.5	63.5	70.6	67.5	54.8	44.1	41.5	46.4	43.8	54.68
	Hourly Means		43.45	48.64	52.58	55.56	58.35	59.73	57.03	49.48	45.48	43.55	42.53	42.24
JUNE.	1	48.5	53.2	57.4	61.8	67.5	71.8	68.3	51.6	44.3	42.5	41.2	39.0	53.92
	2	45.5	54.3	60.8	64.7	66.6	69.1	66.6	60.5	57.4	51.8	54.0	55.4	58.89
	3	56.9	59.2	62.5	62.9	57.3	54.9	56.1	55.2	54.8	55.0	53.3	52.5	56.72
	4	53.0	56.1	59.3	62.2	66.0	71.2	72.0	58.0	54.5	—	—	—	58.29
	5	—	—	—	—	—	—	—	—	—	51.7	48.7	46.8	
	6	45.1	48.1	50.6	52.6	54.0	55.0	54.0	44.4	40.0	39.3	38.0	35.0	46.34
	7	39.9	47.1	51.5	55.2	57.2	61.6	54.9	48.3	46.4	49.3	46.8	46.0	50.35
	8	49.0	52.4	54.4	52.4	48.9	46.5	45.9	46.4	47.0	46.8	47.8	48.2	48.81
	9	50.1	53.7	57.1	59.2	61.4	59.6	59.0	55.8	54.2	54.2	53.3	51.8	55.78
	10	50.8	50.8	51.8	49.9	46.1	43.8	42.2	40.8	37.6	33.8	30.3	28.3	42.18
	11	34.7	40.0	45.8	52.0	57.8	62.6	67.0	50.4	41.2	—	—	—	49.22
	12	—	—	—	—	—	—	—	—	—	49.8	46.0	43.3	
	13	48.6	54.8	57.1	61.0	66.8	56.8	65.1	52.7	47.6	45.2	43.0	42.8	53.46
	14	47.9	52.1	57.5	65.0	64.3	61.8	59.5	55.4	53.6	49.6	46.4	44.8	54.82
	15	48.5	54.8	60.9	65.6	67.7	69.8	69.0	59.0	55.0	51.8	51.2	50.5	58.65
	16	54.3	59.9	66.9	69.6	63.5	69.3	64.4	59.4	57.6	55.5	53.8	49.2	61.12
	17	50.5	55.8	59.0	63.0	64.4	69.6	63.5	53.7	50.8	49.8	50.5	52.5	56.92
	18	55.6	60.4	63.4	66.8	72.9	69.3	68.3	63.8	63.7	—	—	—	60.71
	19	—	—	—	—	—	—	—	—	—	52.5	48.8	43.0	
	20	47.5	52.9	58.8	61.5	65.8	67.8	66.0	58.4	49.5	45.8	49.6	49.5	56.09
	21	51.2	57.0	62.1	66.1	71.4	68.6	70.0	63.2	60.0	53.8	55.7	53.6	61.06
	22	57.0	60.6	64.2	69.2	68.8	67.3	63.8	61.2	59.2	58.6	58.2	57.2	62.11
	23	55.8	56.9	59.6	62.8	65.0	67.0	66.2	54.3	49.8	49.4	48.5	49.8	57.09
	24	52.2	59.7	62.4	65.0	69.8	71.8	70.6	57.2	50.8	49.4	48.5	48.4	58.82
	25	52.9	57.7	59.5	61.0	59.6	58.8	64.5	60.8	58.8	—	—	—	59.12
	26	—	—	—	—	—	—	—	—	—	57.8	58.4	59.6	
	27	61.1	61.5	62.1	65.7	71.3	71.0	65.2	61.8	56.1	53.0	57.2	57.4	61.95
	28	57.2	62.2	61.4	64.3	66.2	75.2	76.2	64.6	60.2	55.8	52.5	49.2	61.25
	29	51.8	55.2	60.4	66.2	72.0	74.4	68.3	59.7	59.2	59.8	57.0	55.0	61.58
	30	58.9	66.0	70.0	68.0	72.2	74.4	70.3	68.9	68.4	59.8	59.4	58.8	66.26
Hourly Means		50.94	55.48	59.10	62.07	64.02	64.96	63.73	56.37	52.99	50.83	49.93	48.75	56.60

STANDARD THERMOMETER.													
Hours of Mean Göttingen Time	0	1	2	3	4	5	6	7	8	9	10	11	
Hours of Mean Toronto Time	18	19	20	21	22	23	0	1	2	3	4	5	
JULY.	1	58.3	59.0	59.7	60.1	60.9	62.3	61.4	61.4	63.1	61.8	61.0	
	2	58.3	57.8	57.9	57.7	59.0	60.9	63.4	64.0	68.6	66.6	65.0	
	3	—	—	—	—	—	—	—	—	—	—	—	
	4	55.8	60.0	63.6	65.0	65.8	67.6	68.2	68.8	69.2	68.2	67.4	66.2
	5	61.9	63.4	64.5	62.7	63.4	63.8	66.7	67.4	65.2	61.4	60.8	60.5
	6	50.2	53.2	55.7	57.8	58.8	60.8	61.5	65.4	67.7	64.4	67.1	70.3
	7	46.2	51.1	55.2	58.2	60.3	64.3	67.5	70.4	72.3	73.3	75.8	72.3
	8	56.2	58.8	60.1	61.3	58.8	60.4	62.7	68.6	69.0	66.6	65.3	65.0
	9	55.0	55.2	57.2	58.7	61.3	64.6	66.0	67.2	68.6	69.2	73.2	72.4
	10	—	—	—	—	—	—	—	—	—	—	—	—
	11	53.0	58.0	61.3	64.5	66.6	68.8	70.6	73.2	75.2	75.6	75.8	77.4
	12	55.4	61.4	64.2	67.2	68.8	70.7	74.8	78.2	81.1	82.7	85.2	86.4
	13	60.5	65.8	68.0	69.9	72.1	75.3	78.4	80.6	82.6	82.8	83.6	82.4
	14	66.0	66.2	68.2	71.4	74.6	76.0	76.4	76.6	76.2	77.3	76.2	77.0
	15	60.2	62.2	64.5	66.0	68.0	69.9	71.8	73.0	73.2	74.6	75.4	78.2
	16	51.8	57.6	63.4	66.6	69.0	71.0	72.4	74.3	75.4	77.8	80.5	82.6
	17	—	—	—	—	—	—	—	—	—	—	—	—
	18	60.0	67.2	71.2	73.4	73.4	76.6	80.2	82.3	81.7	81.2	80.1	81.4
	19	63.5	63.2	71.9	74.2	76.1	78.3	81.7	82.8	90.0	90.8	85.2	82.0
	20	59.3	59.5	60.7	63.0	65.2	67.0	68.2	69.8	72.0	73.6	73.4	74.2
	21	48.5	54.6	58.7	62.4	64.8	67.5	69.3	71.3	73.4	74.6	73.0	70.6
	22	53.4	59.2	63.6	65.4	68.8	71.4	74.5	78.6	79.4	79.2	77.0	76.8
	23	60.3	66.0	69.1	71.0	74.3	78.5	77.5	78.6	84.2	86.4	83.2	80.2
	24	—	—	—	—	—	—	—	—	—	—	—	—
	25	50.8	55.8	60.3	61.9	63.3	65.8	67.2	67.1	69.7	67.8	69.4	68.8
	26	59.5	66.2	64.3	67.5	70.2	73.5	77.4	79.2	82.3	83.2	84.2	82.2
	27	68.6	71.0	72.9	73.4	75.0	78.0	80.2	82.0	80.6	82.4	83.8	84.6
	28	59.9	63.0	66.4	69.8	71.0	73.0	75.2	75.4	76.6	75.5	77.8	77.2
	29	55.9	60.2	65.1	68.3	71.1	73.1	75.7	77.3	79.8	78.8	79.4	76.7
	30	70.1	71.7	77.1	78.0	78.2	70.8	66.1	64.7	62.8	61.8	61.8	60.4
	31	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means	57.64	61.09	64.03	65.98	67.65	69.61	71.35	73.01	74.61	74.52	74.66	74.40	
AUGUST.	1	46.7	49.1	51.7	55.0	58.2	60.0	61.0	62.3	64.1	65.2	66.8	69.3
	2	50.2	54.5	58.8	62.5	65.3	67.0	68.5	69.8	69.9	70.8	72.9	75.4
	3	51.9	55.5	56.5	58.2	62.8	65.8	68.8	68.2	69.5	72.1	72.1	74.4
	4	48.9	54.7	59.8	64.6	67.4	69.2	71.6	70.9	71.8	73.0	73.8	74.6
	5	58.1	61.7	65.3	69.0	72.2	73.9	74.1	74.5	72.0	71.0	70.8	70.8
	6	61.9	62.9	63.7	65.2	68.0	69.1	68.3	67.2	69.8	68.6	68.5	67.5
	7	—	—	—	—	—	—	—	—	—	—	—	—
	8	61.7	62.4	63.6	66.5	67.9	71.6	68.0	69.6	69.8	72.2	74.4	69.2
	9	60.8	60.6	61.4	62.2	62.0	62.2	63.8	65.0	68.2	70.7	66.0	66.4
	10	62.8	64.1	65.9	65.4	66.4	68.6	71.1	69.9	70.3	70.8	73.6	69.5
	11	59.7	61.6	64.0	67.0	69.5	70.0	69.3	72.0	72.3	74.4	75.6	78.8
	12	59.2	63.2	65.8	68.5	71.5	73.2	74.2	76.2	77.0	79.0	80.0	79.6
	13	61.3	64.7	67.1	69.2	70.0	71.2	72.6	73.8	75.4	75.5	76.3	78.8
	14	—	—	—	—	—	—	—	—	—	—	—	—
	15	57.0	62.0	67.2	70.0	72.8	75.4	77.2	79.2	79.7	81.0	80.1	80.4
	16	63.0	66.4	69.3	71.4	72.4	74.2	73.0	74.4	74.9	75.3	75.6	73.2
	17	68.2	69.7	70.7	73.4	74.9	77.0	75.4	75.7	72.7	74.3	74.3	75.2
	18	66.2	66.7	67.6	69.7	71.2	72.1	72.5	74.2	75.8	76.4	76.8	75.2
	19	60.4	62.2	64.6	66.8	67.8	69.0	68.6	69.9	71.6	73.3	69.2	69.0
	20	56.8	58.0	58.7	60.5	62.5	64.8	66.9	69.0	69.5	70.1	71.2	72.3
	21	—	—	—	—	—	—	—	—	—	—	—	—
	22	49.1	54.7	60.4	65.3	68.3	69.9	71.7	72.5	73.4	74.5	75.4	73.2
	23	54.2	58.3	62.7	67.3	69.7	72.1	74.4	73.8	75.0	75.0	75.1	75.8
	24	57.5	61.6	66.5	69.0	70.8	73.0	75.5	76.4	77.0	77.0	76.7	74.1
	25	59.5	62.5	66.2	69.9	73.8	73.2	73.2	76.8	79.2	77.7	75.4	74.0
	26	69.3	69.9	70.1	70.6	71.9	71.1	71.3	72.1	77.4	80.6	79.3	76.9
	27	68.3	68.5	68.5	70.4	72.4	73.2	77.4	79.9	75.6	76.2	76.0	79.0
	28	—	—	—	—	—	—	—	—	—	—	—	—
	29	65.5	67.2	68.7	70.0	71.2	70.0	70.5	71.9	75.4	76.2	77.4	77.8
	30	53.1	57.7	62.5	66.0	68.8	69.8	71.5	73.2	73.6	74.7	75.4	73.5
	31	59.1	61.9	64.5	67.0	69.3	72.8	75.0	76.2	73.8	74.2	72.9	72.2
Hourly Means	58.90	61.57	64.14	66.69	68.85	70.35	71.31	72.39	73.14	74.07	74.13	73.93	

STANDARD THERMOMETER.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
59.5	59.0	58.4	58.0	58.2	58.2	58.2	58.2	58.4	58.2	58.1	58.2	59.63
72.2	66.2	63.2	60.8	57.4	56.5	—	—	—	—	—	—	60.54
64.8	62.0	60.2	59.4	57.4	57.8	58.6	56.8	55.4	53.6	52.5	53.0	62.41
58.1	56.6	53.8	52.6	52.0	50.8	57.2	56.0	57.6	58.4	60.4	61.9	57.88
72.3	66.0	55.0	52.0	49.8	48.7	46.5	46.0	44.0	43.2	42.8	42.4	55.90
64.4	60.8	59.4	56.0	56.0	54.5	55.5	55.8	55.7	55.2	55.2	55.5	60.45
63.6	61.8	60.4	59.4	57.8	57.9	58.2	57.6	57.3	56.8	56.4	55.6	60.65
74.2	66.9	59.2	54.6	55.3	53.7	—	—	—	—	—	—	59.79
73.6	68.8	62.5	59.3	58.2	55.6	51.6	51.1	50.6	49.8	49.5	49.8	63.10
85.3	79.2	70.8	66.8	64.4	62.5	54.6	54.2	52.6	52.5	51.2	51.2	69.10
81.8	77.5	72.4	68.0	63.6	62.6	61.3	59.8	59.2	58.6	57.5	57.0	71.50
75.6	71.2	67.2	65.7	63.6	62.0	62.0	61.7	65.5	65.6	67.1	66.2	68.79
76.3	74.4	66.8	65.9	64.5	63.1	62.7	61.2	60.3	59.7	58.6	59.0	65.52
82.3	78.4	69.5	64.0	63.0	61.6	60.0	59.0	58.5	53.5	48.6	47.8	67.05
83.4	77.7	73.0	73.5	61.5	59.9	—	—	—	—	—	—	72.55
79.5	75.0	71.0	68.6	61.2	59.2	61.2	59.2	59.5	58.2	56.8	56.4	72.02
73.6	68.6	63.3	59.7	68.8	66.4	68.8	66.4	64.2	62.4	61.4	60.4	61.18
70.1	64.6	60.1	56.6	67.0	64.2	63.0	60.1	58.6	58.3	59.3	59.3	60.33
78.3	73.4	70.4	68.4	55.6	55.1	54.1	51.0	46.7	45.8	45.0	44.0	67.57
75.7	72.4	72.7	71.7	53.7	54.1	51.7	50.8	50.7	49.9	48.9	48.0	68.35
69.3	65.4	59.0	55.8	63.7	63.7	61.0	59.4	58.8	58.4	58.4	58.2	60.48
86.8	81.8	71.8	67.5	69.2	66.8	—	—	—	—	—	—	72.20
79.7	75.2	67.2	65.8	54.8	54.2	54.2	54.1	53.7	52.4	51.8	59.0	71.37
74.8	68.0	60.4	57.0	67.3	67.3	65.5	66.8	70.0	68.9	65.8	65.6	64.70
75.0	73.0	70.4	68.2	63.8	63.2	62.2	61.5	61.4	61.2	60.1	59.2	71.25
59.6	58.0	56.6	55.0	55.0	54.2	54.0	53.6	54.4	54.2	52.4	54.0	59.62
—	—	—	—	53.2	52.6	—	—	—	—	—	—	—
—	—	—	—	—	—	45.8	46.6	45.4	45.0	44.6	44.9	—
73.45	69.30	64.41	61.93	60.35	59.20	58.02	56.99	56.48	55.66	54.98	55.10	64.77
68.0	63.0	58.0	56.8	54.4	52.7	50.8	48.6	46.6	48.6	47.8	47.9	56.36
74.1	62.3	58.1	56.1	53.6	50.2	48.6	47.5	47.2	46.3	48.8	51.2	59.57
70.3	64.8	59.0	55.6	54.2	53.3	51.6	50.6	49.6	48.8	47.4	48.5	59.56
72.8	65.0	60.0	56.4	56.0	55.0	56.8	57.7	56.5	56.2	57.4	57.8	62.83
67.8	66.6	67.8	67.8	68.3	67.2	67.2	64.0	62.8	62.6	62.6	62.1	67.51
66.6	65.8	64.8	64.5	63.2	61.7	—	—	—	—	—	—	64.94
—	—	—	—	—	—	62.8	62.8	61.7	61.4	61.2	61.3	—
73.1	67.7	64.9	64.7	64.2	64.0	63.0	62.6	62.0	61.8	61.5	61.4	66.16
65.2	64.6	63.8	63.5	63.0	62.8	62.5	61.6	60.6	61.4	61.6	62.2	63.42
67.2	65.5	61.8	60.2	60.4	61.0	60.6	60.2	58.2	57.2	58.2	58.4	64.47
77.4	69.0	64.4	61.5	59.9	58.8	58.3	57.6	57.2	57.6	57.5	57.6	65.46
77.4	70.0	65.8	64.8	64.6	64.2	63.6	63.2	62.5	62.0	61.2	60.8	68.65
76.6	72.4	65.2	62.0	59.9	59.2	—	—	—	—	—	—	66.55
—	—	—	—	—	—	60.7	58.8	58.0	56.8	56.5	55.2	68.29
76.6	69.6	64.8	62.2	60.9	60.0	60.2	59.8	60.2	60.4	60.8	61.4	70.15
70.2	69.2	68.6	68.2	68.6	68.0	67.8	67.4	66.9	68.2	68.8	68.6	70.37
75.4	71.2	66.6	64.9	64.8	64.4	64.6	66.6	67.6	67.4	67.4	66.5	68.71
71.6	69.3	69.1	68.6	67.4	66.8	66.0	64.5	62.3	60.5	59.9	58.6	64.72
68.2	66.2	64.0	62.8	61.6	61.2	60.6	60.0	59.6	59.6	59.0	58.1	59.25
69.5	60.9	56.2	55.8	56.2	54.5	—	—	—	—	—	—	63.16
—	—	—	—	—	—	50.2	50.2	48.0	46.0	45.8	48.3	65.48
70.1	64.6	60.6	58.7	58.7	56.8	56.2	56.1	55.1	54.3	53.1	—	67.25
71.4	67.6	65.5	63.4	62.2	60.5	58.4	58.0	58.8	58.0	57.0	57.4	71.94
70.9	66.8	64.7	63.9	62.6	62.8	62.4	62.5	62.2	61.1	59.6	59.3	71.87
73.0	72.7	73.0	72.7	72.2	72.1	72.0	71.8	72.0	71.6	70.8	71.3	—
74.4	72.6	72.0	70.0	70.6	70.3	69.4	69.3	69.4	69.0	69.0	68.4	—
81.2	73.2	70.0	69.2	67.2	66.4	—	—	—	—	—	—	71.23
—	—	—	—	—	—	69.1	69.0	67.2	64.7	62.7	64.3	66.08
73.2	66.2	61.4	59.8	60.7	60.2	60.2	59.0	57.8	56.9	55.4	53.4	63.10
69.9	61.2	56.8	57.0	55.6	55.6	55.8	56.0	56.8	55.7	56.5	57.8	68.18
70.8	70.1	69.0	67.8	67.5	68.8	65.2	63.6	64.0	63.4	63.2	64.0	—
71.96	67.34	64.10	62.92	62.20	61.43	60.91	60.33	59.66	59.17	58.91	59.30	65.75

STANDARD THERMOMETER.													
Hours of Mean Göttingen Time	0	1	2	3	4	5	6	7	8	9	10	11	
Hours of Mean Toronto Time	18	19	20	21	22	23	0	1	2	3	4	5	
SEPTEMBER.	1	64.7	68.9	71.9	74.8	76.5	78.2	79.9	81.6	81.3	82.3	82.9	83.8
	2	65.1	64.6	64.7	65.7	68.9	70.5	73.4	69.8	69.0	69.8	68.6	67.8
	3	57.7	56.2	56.1	57.5	56.4	57.5	57.2	58.0	59.6	65.2	67.8	66.1
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	62.0	64.7	66.6	67.8	69.3	70.1	70.7	69.0	70.0	71.4	71.0	71.5
	6	45.7	50.5	55.6	59.2	61.7	62.8	65.0	66.7	67.8	70.1	67.4	67.4
	7	59.2	60.2	61.3	65.7	68.5	70.5	70.9	71.3	72.3	73.7	72.0	73.1
	8	54.1	54.2	57.4	58.5	59.3	59.6	61.0	60.0	59.7	58.7	56.4	54.5
	9	51.6	52.0	52.6	52.8	53.1	53.8	54.2	54.5	55.1	55.1	54.8	53.9
	10	47.2	49.4	52.8	56.3	57.8	60.0	62.0	64.6	64.7	64.5	63.3	64.3
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	60.0	59.1	60.2	60.8	62.0	65.2	64.5	65.1	64.6	63.2	61.8	60.6
	13	50.7	52.7	54.2	56.4	58.6	61.0	62.2	65.2	64.8	65.1	63.6	63.1
	14	53.3	54.9	57.2	59.2	64.2	63.2	62.4	64.0	63.7	64.6	65.3	64.6
	15	57.0	57.1	56.5	59.9	61.2	62.9	65.5	68.4	69.8	68.8	69.0	67.3
	16	50.7	52.1	54.8	56.6	59.6	61.2	62.8	63.7	63.2	62.9	62.7	61.7
	17	43.8	48.3	51.8	54.9	57.4	57.2	59.2	62.0	62.0	63.4	64.7	64.0
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	45.9	47.4	50.5	52.1	54.4	55.6	57.2	55.5	56.2	55.2	54.9	54.3
	20	36.7	40.4	47.0	52.0	54.9	57.7	59.2	60.1	61.3	62.3	63.0	62.0
	21	47.6	48.1	50.3	51.3	51.4	51.5	51.5	49.9	49.4	49.0	46.1	46.5
	22	36.6	37.9	39.5	40.9	41.2	42.4	42.2	43.6	45.4	44.9	44.8	41.5
	23	30.7	32.8	36.1	38.8	41.9	44.7	47.9	50.5	51.2	52.4	53.8	55.8
	24	43.1	43.2	45.5	48.5	50.3	51.7	53.9	54.8	55.9	57.1	58.4	57.0
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	38.1	41.7	48.6	53.4	54.8	58.2	60.0	60.3	61.8	63.2	62.8	62.8
	27	39.4	42.6	49.2	53.5	56.2	59.4	63.2	66.2	69.0	69.4	68.5	66.2
	28	49.4	53.9	58.4	60.8	63.2	65.8	67.4	66.2	68.0	68.9	69.4	68.0
	29	50.1	52.7	55.9	60.1	61.4	63.4	62.9	62.5	62.6	62.5	61.1	59.7
	30	47.8	48.4	51.2	55.0	57.2	58.6	60.5	63.2	64.7	65.7	66.6	66.4
Hourly Means	49.55	51.31	54.07	56.63	58.52	60.10	61.42	62.18	62.81	63.43	63.10	62.46	
OCTOBER.	1	52.2	54.9	55.4	59.0	61.3	63.6	64.1	63.4	61.8	60.3	59.4	57.2
	2	—	—	—	—	—	—	—	—	—	—	—	—
	3	44.1	46.4	49.4	50.6	53.2	54.0	54.6	56.2	55.8	54.1	52.4	52.5
	4	40.9	43.6	45.1	47.6	50.1	51.8	53.5	54.2	53.6	53.4	52.9	52.9
	5	37.5	39.4	45.2	48.7	51.1	52.0	52.7	54.0	54.9	55.0	54.9	53.0
	6	38.1	39.6	44.6	48.2	51.4	52.5	53.4	53.8	53.4	53.1	52.7	51.1
	7	36.2	38.8	45.3	51.2	54.1	56.9	60.2	63.0	65.0	63.4	61.2	59.4
	8	52.7	51.5	54.1	54.8	56.2	57.7	60.3	59.4	60.4	61.6	59.8	58.5
	9	—	—	—	—	—	—	—	—	—	—	—	—
	10	34.5	37.1	40.1	44.0	47.2	49.4	52.5	53.7	55.1	55.7	56.1	54.1
	11	42.7	46.2	50.1	52.6	56.1	58.3	60.6	62.0	64.5	68.1	69.0	67.0
	12	46.8	47.2	49.7	52.5	54.5	55.8	56.8	57.9	58.1	57.9	56.5	54.0
	13	32.7	33.8	39.9	45.5	48.6	51.8	53.2	54.7	54.9	54.7	52.2	49.1
	14	42.3	44.8	46.6	48.3	49.0	49.2	48.8	49.5	50.4	49.5	50.1	49.9
	15	39.0	40.3	42.7	46.1	48.8	51.1	50.4	50.0	50.2	49.0	48.2	47.8
	16	—	—	—	—	—	—	—	—	—	—	—	—
	17	37.4	37.7	40.8	44.2	47.8	49.3	50.9	52.6	51.5	53.2	53.1	49.8
	18	37.7	36.5	35.8	36.8	37.0	38.0	39.5	40.7	41.7	42.2	41.8	41.0
	19	37.9	37.0	38.5	41.5	43.1	45.1	46.1	45.8	45.0	41.2	41.6	40.9
	20	33.0	34.4	37.1	40.8	42.8	43.4	44.2	45.4	47.8	47.6	46.8	44.0
	21	32.7	33.0	35.9	39.4	42.1	44.2	46.1	48.9	50.8	50.8	48.3	46.4
	22	45.0	45.3	46.0	47.3	48.5	49.9	51.5	51.6	54.4	53.8	51.6	49.6
	23	—	—	—	—	—	—	—	—	—	—	—	—
	24	47.3	47.5	48.0	50.5	52.1	52.5	52.3	53.8	54.2	53.6	53.2	54.2
	25	46.0	45.0	45.0	45.6	47.0	48.0	49.6	48.8	49.2	49.0	45.4	42.4
	26	31.2	31.6	34.8	40.0	43.4	47.8	49.6	49.1	49.3	49.1	48.2	46.5
	27	33.6	33.6	37.2	39.9	40.5	41.7	44.0	46.0	46.6	46.9	44.5	41.4
	28	31.2	31.0	35.2	40.0	43.3	45.6	49.4	50.4	51.0	50.9	48.5	47.5
	29	38.4	39.2	41.5	45.2	46.9	48.2	48.6	48.2	47.6	47.0	46.8	46.2
	30	—	—	—	—	—	—	—	—	—	—	—	—
	31	43.4	43.8	44.8	45.2	45.8	46.8	47.4	47.8	49.3	51.0	—	43.7
Hourly Means	39.79	40.74	43.42	46.37	48.53	50.18	51.55	52.34	52.94	52.77	51.81	50.00	

STANDARD THERMOMETER.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
78.3	76.6	75.4	73.2	71.6	74.4	71.2	69.7	67.2	66.7	66.6	66.3	74.33
65.4	62.4	61.8	58.4	54.2	55.4	57.7	59.2	61.0	61.2	59.4	59.5	63.90
68.4	59.7	56.2	54.2	53.2	52.4	—	—	—	—	—	—	60.07
—	—	—	—	—	—	64.7	63.2	63.0	64.2	63.8	63.3	—
67.4	59.1	57.8	55.4	50.4	50.0	47.0	44.5	43.6	44.4	44.8	45.0	59.73
63.9	62.3	62.0	62.0	61.2	59.5	60.6	59.2	59.0	58.4	57.8	58.3	61.00
68.2	64.1	62.3	61.0	59.4	59.2	56.6	56.4	54.9	55.4	55.5	54.5	63.59
52.4	52.0	52.4	52.6	51.9	51.7	51.8	51.8	52.2	52.5	52.1	51.8	54.94
53.3	53.1	52.2	52.4	52.7	52.8	52.8	52.7	52.2	51.0	49.7	47.8	52.76
59.9	57.5	56.6	57.9	58.1	59.4	—	—	—	—	—	—	—
—	—	—	—	—	—	66.9	67.2	67.0	67.3	67.3	60.4	60.52
60.0	58.4	58.5	58.2	57.0	56.0	53.8	54.2	53.6	53.4	52.4	50.5	58.88
61.0	59.3	57.9	57.6	57.4	56.0	55.2	55.1	54.1	53.5	53.2	53.0	57.95
61.0	56.8	56.2	55.0	53.9	53.9	53.4	54.0	55.2	55.6	55.6	56.5	58.49
64.2	63.2	62.1	59.2	57.0	56.2	57.9	57.7	56.5	53.7	53.4	51.7	60.67
59.8	57.8	56.8	54.7	53.0	51.0	50.8	49.0	49.0	48.4	47.4	44.2	55.58
59.1	53.4	51.2	51.6	50.5	49.7	—	—	—	—	—	—	—
—	—	—	—	—	—	51.6	51.0	50.0	49.2	47.6	46.4	54.17
50.5	46.8	45.5	41.0	38.6	37.0	37.0	35.7	36.2	38.5	37.2	36.8	46.67
57.6	55.8	55.0	54.9	52.6	52.5	52.1	51.9	52.7	52.2	51.3	49.4	53.94
43.4	42.8	41.7	39.6	38.8	38.3	37.4	36.7	37.0	37.4	37.8	37.6	44.21
40.7	39.0	37.2	32.7	31.5	31.0	31.4	30.4	28.6	29.3	30.4	30.2	37.22
50.5	44.6	41.5	39.8	43.4	44.0	43.8	43.7	43.7	43.6	43.3	43.3	44.24
49.6	45.0	43.0	41.8	41.6	41.2	—	—	—	—	—	—	—
—	—	—	—	—	—	41.7	41.2	40.2	39.7	38.2	39.3	46.75
54.4	46.8	45.2	44.5	43.7	43.2	42.2	42.2	42.5	41.4	40.3	39.4	49.65
63.8	62.8	61.8	60.6	59.9	58.4	62.0	62.4	59.1	57.5	54.6	52.2	59.08
59.4	56.4	57.0	54.2	51.7	51.0	50.2	49.0	47.6	48.0	48.4	49.4	57.57
59.2	59.4	59.8	59.6	60.0	59.6	56.5	54.3	52.7	52.7	52.3	50.8	57.99
59.7	57.3	56.2	55.9	54.5	54.2	53.3	52.8	52.0	53.2	53.2	52.3	56.66
58.89	55.86	54.74	53.38	52.22	51.85	52.29	51.74	51.18	51.09	50.52	49.61	55.79
54.9	55.7	55.2	55.7	55.8	52.4	—	—	—	—	—	—	55.20
—	—	—	—	—	—	47.5	47.3	47.4	47.4	46.7	46.2	—
49.8	47.8	45.6	42.2	42.9	43.3	43.6	45.0	44.2	44.0	43.6	43.5	48.28
47.4	46.2	45.8	43.2	38.2	36.0	34.2	33.7	34.4	35.4	35.3	36.8	44.42
46.0	41.4	39.8	38.4	39.2	38.2	38.8	37.9	36.1	35.3	36.7	37.1	44.30
46.5	44.7	44.5	43.5	42.1	42.0	41.0	39.1	38.0	36.6	36.4	36.4	45.11
57.7	57.6	54.7	54.8	56.4	55.6	56.0	55.5	55.1	55.1	54.6	54.0	55.07
56.2	55.2	52.7	51.4	50.9	50.0	—	—	—	—	—	—	—
—	—	—	—	—	—	40.2	39.7	36.8	35.7	36.2	34.8	51.12
51.4	50.4	49.8	48.2	47.6	46.6	47.8	47.0	47.5	47.8	47.4	46.7	48.24
64.0	60.5	58.4	56.8	54.0	54.2	53.0	52.7	50.9	48.9	46.9	46.8	56.01
51.0	49.6	47.8	46.1	41.8	38.1	36.5	35.3	35.2	37.5	34.7	32.8	47.25
47.1	47.4	48.0	45.8	45.2	45.2	45.2	43.7	42.5	41.4	41.0	41.3	46.04
48.7	49.2	48.4	47.2	45.0	45.4	44.4	45.0	44.6	43.7	42.4	39.4	46.74
43.8	42.4	41.3	40.3	39.4	39.1	—	—	—	—	—	—	—
—	—	—	—	—	—	44.2	43.4	42.0	41.4	40.2	38.4	44.15
43.2	42.1	43.3	44.2	47.0	44.2	42.8	41.9	40.7	38.7	37.2	37.1	44.61
40.4	39.6	38.2	38.0	37.4	36.8	36.0	36.5	37.1	37.3	37.0	38.3	38.39
38.4	38.0	37.6	37.4	36.6	37.8	37.5	36.4	33.6	32.4	32.2	31.2	38.87
38.6	34.6	34.2	32.5	30.7	30.5	30.6	30.2	32.0	32.0	32.4	33.2	37.45
45.3	44.2	42.7	40.4	39.6	40.4	41.4	41.8	42.5	43.0	43.6	45.0	42.85
48.0	47.6	46.4	45.2	43.6	42.6	—	—	—	—	—	—	—
—	—	—	—	—	—	41.9	42.9	45.7	46.7	47.0	46.8	47.45
54.4	53.4	52.6	52.9	53.1	53.4	52.5	49.5	48.5	47.8	47.7	47.9	51.37
41.8	40.8	40.1	38.4	36.2	34.6	33.5	31.8	32.7	32.6	32.2	31.4	41.13
43.8	42.6	42.6	40.8	40.4	39.2	36.7	36.4	35.2	34.2	33.0	33.2	40.78
40.3	36.4	34.0	32.6	31.8	31.6	31.8	32.9	31.8	31.5	32.5	32.0	37.30
47.5	46.4	46.4	45.5	44.9	44.5	44.2	44.0	43.5	43.3	43.4	41.0	44.11
45.5	45.2	45.1	44.2	44.7	44.9	—	—	—	—	—	—	—
—	—	—	—	—	—	44.5	43.9	43.6	43.2	43.5	43.4	44.81
41.7	43.5	42.7	40.4	37.1	35.2	34.7	33.6	32.6	32.8	32.6	32.4	39.51
47.44	46.25	45.30	44.08	43.14	42.38	41.56	41.04	40.55	40.22	39.86	39.50	45.46

STANDARD THERMOMETER.													
Hours of Mean Göttingen Time	0	1	2	3	4	5	6	7	8	9	10	11	
Hours of Mean Toronto Time	18	19	20	21	22	23	0	1	2	3	4	5	
NOVEMBER.	1	32.4	32.4	34.7	40.2	45.3	49.1	52.4	53.0	54.3	53.2	50.2	47.4
	2	40.6	41.7	41.9	42.8	43.7	45.1	45.6	45.1	44.9	45.1	44.9	41.4
	3	34.1	33.5	35.7	37.9	41.0	42.4	43.8	45.0	44.6	43.8	42.0	38.6
	4	29.0	29.2	33.0	37.8	41.6	43.2	45.0	46.8	46.4	45.0	41.8	37.2
	5	29.4	28.9	34.1	39.7	42.6	45.8	47.0	49.3	48.4	47.8	45.8	43.8
	6	—	—	—	—	—	—	—	—	—	—	—	—
	7	47.7	47.6	47.8	47.8	48.0	48.2	48.2	47.3	46.4	46.3	46.0	45.5
	8	40.7	40.9	41.2	41.6	41.5	41.7	41.5	41.2	40.7	40.5	39.5	38.5
	9	38.5	41.6	42.0	41.5	42.7	42.5	43.4	43.0	39.8	38.7	37.6	36.4
	10	28.6	29.2	32.0	33.3	34.0	38.8	33.8	35.0	35.7	37.0	37.4	37.1
	11	37.0	36.4	38.0	40.0	42.2	43.6	44.8	45.5	47.3	45.3	42.9	40.9
	12	39.8	40.2	40.5	39.6	39.2	39.2	40.3	41.1	41.7	42.2	41.5	39.1
	13	—	—	—	—	—	—	—	—	—	—	—	—
	14	38.4	38.8	39.8	41.1	41.9	41.9	42.3	41.7	42.1	41.7	41.3	38.8
	15	31.7	31.1	32.7	33.7	35.1	36.2	37.6	37.4	37.1	37.2	36.4	34.6
	16	33.3	33.4	34.4	35.0	35.6	35.4	36.0	36.0	36.3	35.8	34.4	34.7
	17	37.9	37.3	38.2	39.2	38.8	38.8	38.6	38.8	39.5	39.9	40.5	41.0
	18	26.0	25.5	25.1	24.1	23.5	23.1	22.1	21.8	20.5	19.9	19.4	18.3
	19	25.3	25.2	25.7	27.2	29.9	32.1	31.7	32.4	33.4	33.9	31.7	31.0
	20	—	—	—	—	—	—	—	—	—	—	—	—
	21	21.8	21.9	23.5	25.4	28.0	31.8	31.4	32.0	31.0	30.6	29.4	28.2
	22	22.0	22.2	23.6	24.6	27.4	28.3	29.4	30.0	31.6	32.4	32.1	31.9
	23	30.4	30.4	30.8	31.4	32.8	34.1	35.8	36.6	36.0	35.5	34.3	34.9
	24	34.3	33.6	33.3	32.8	33.2	32.9	33.9	34.6	35.0	34.6	33.0	30.2
	25	29.3	29.6	29.8	29.4	30.2	30.8	31.6	32.6	32.4	31.8	32.2	32.4
	26	18.2	17.9	19.4	21.3	22.8	26.2	27.8	28.3	28.5	28.8	28.0	29.6
	27	—	—	—	—	—	—	—	—	—	—	—	—
	28	13.0	14.8	15.5	18.3	21.6	23.8	25.6	26.5	26.0	26.0	23.5	21.3
	29	17.7	15.0	15.5	19.0	21.2	21.8	22.3	23.8	23.5	25.2	23.5	19.2
	30	26.4	25.4	27.4	27.7	26.3	25.5	26.3	25.9	25.8	26.3	26.4	26.8
Hourly Means	30.90	30.91	32.14	33.55	35.00	36.24	36.83	37.34	37.26	37.10	35.99	34.57	
DECEMBER.	1	21.9	21.0	21.4	22.5	23.9	24.9	26.3	27.6	28.5	28.0	27.6	27.2
	2	25.1	25.0	25.4	26.6	28.4	29.8	30.8	31.3	32.2	32.0	31.8	31.3
	3	36.4	36.2	36.2	36.6	38.0	39.0	39.4	40.1	40.6	40.1	39.5	36.8
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	35.4	35.2	35.3	35.0	35.2	35.2	35.5	35.4	34.3	33.8	32.7	31.4
	6	10.1	11.4	9.6	14.6	18.1	20.6	21.8	22.6	22.9	22.7	21.9	21.0
	7	16.2	14.2	15.7	21.1	25.3	27.7	29.4	30.3	30.4	31.0	29.9	29.0
	8	28.2	29.2	32.2	33.3	33.9	33.8	33.4	33.0	33.3	34.4	33.6	33.4
	9	34.0	33.6	33.2	32.8	33.0	33.4	33.5	33.1	32.7	33.2	32.4	30.5
	10	19.6	19.5	19.6	19.9	20.2	20.5	21.1	21.7	22.1	21.9	21.5	21.4
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	24.8	25.2	26.2	27.4	30.6	32.9	34.3	34.7	34.2	34.4	32.5	31.5
	13	30.5	28.2	29.2	27.7	26.4	26.3	25.8	26.0	25.4	25.2	23.7	23.0
	14	20.3	20.3	20.3	22.0	23.8	25.7	27.5	29.7	31.2	32.1	31.4	30.2
	15	—	22.0	22.0	23.6	28.0	27.6	29.0	29.5	29.3	29.3	28.7	27.2
	16	23.1	23.0	24.2	25.2	25.3	27.1	27.9	28.4	28.7	28.0	24.9	24.5
	17	15.5	19.0	19.5	20.0	24.1	25.8	27.0	28.8	29.1	28.6	28.8	29.7
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	25.8	26.6	27.8	29.5	31.8	34.2	35.7	37.4	38.8	38.6	36.5	34.6
	20	16.5	13.4	15.0	20.4	25.7	28.6	30.4	32.2	34.0	34.8	33.4	27.2
	21	25.8	26.8	28.0	30.0	33.4	35.0	36.0	36.4	36.1	36.0	35.3	34.8
	22	22.7	18.6	15.8	15.1	14.7	15.7	15.6	15.7	14.9	12.8	11.9	10.8
	23	5.3	5.5	6.9	8.1	11.1	13.3	14.3	15.6	18.0	18.4	18.5	18.2
	24	11.8	11.7	14.0	15.4	18.0	19.0	21.0	21.8	23.2	22.8	22.0	21.2
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	30.6	30.6	31.0	31.2	31.4	31.9	31.8	32.2	32.1	32.0	31.7	31.4
	27	29.6	29.4	29.8	30.6	31.3	32.6	33.6	34.1	33.9	32.9	32.4	31.8
	28	19.3	22.9	23.4	24.6	24.7	25.2	25.2	25.7	25.6	25.1	25.0	25.4
	29	30.8	30.6	30.6	30.9	31.3	31.6	32.2	32.6	32.7	32.9	32.9	32.7
	30	32.6	32.2	32.1	29.8	28.3	28.0	26.4	23.8	24.0	23.8	22.8	21.4
	31	—	12.3	11.7	12.8	15.0	17.4	19.8	22.0	22.3	21.8	21.2	19.5
	32	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means	23.68	23.10	23.56	24.69	26.33	27.51	28.32	28.95	29.28	29.13	28.31	27.30	

STANDARD THERMOMETER.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
46.7	46.8	46.1	45.8	45.7	45.1	44.0	43.7	43.0	42.4	41.4	40.8	44.84
37.8	36.7	36.8	37.0	36.4	35.5	35.0	37.1	36.7	36.8	36.1	35.3	40.00
33.2	31.8	31.2	30.5	30.4	29.3	30.0	29.4	28.8	28.7	29.7	29.6	35.21
34.1	32.3	30.7	30.8	31.3	32.1	29.9	29.8	30.1	29.7	29.8	29.8	35.27
40.0	38.9	38.4	39.2	39.9	39.2	—	—	—	—	—	—	—
—	—	—	—	—	—	42.9	45.1	47.2	48.0	48.0	48.4	42.41
45.4	44.9	43.9	43.1	42.8	43.0	42.1	41.8	41.2	40.2	40.2	40.3	44.82
38.6	38.2	37.8	37.8	37.8	37.6	37.6	37.2	37.3	37.3	37.7	38.0	39.27
35.4	34.0	33.0	33.1	33.2	31.7	32.2	31.6	31.0	30.3	29.6	29.8	36.36
38.9	39.5	39.4	39.0	39.9	38.7	38.5	38.3	38.1	37.8	37.2	37.4	36.44
41.3	41.5	41.0	40.9	40.4	40.1	39.7	39.2	39.2	39.6	41.4	40.7	41.20
39.0	38.4	38.5	38.6	38.2	38.2	—	—	—	—	—	—	—
—	—	—	—	—	—	35.0	38.8	38.6	38.6	38.4	38.4	39.30
37.8	36.7	35.7	35.0	35.2	35.4	34.8	33.6	33.2	32.3	31.5	32.5	37.65
32.2	30.4	30.4	30.7	30.5	31.1	31.7	32.8	33.5	33.3	33.7	33.3	33.52
34.1	34.5	34.7	34.7	34.5	35.1	35.1	35.6	35.0	35.4	37.2	37.5	35.13
41.2	42.0	41.6	41.7	43.6	39.2	37.1	35.8	34.4	32.2	29.2	27.1	38.07
18.4	19.1	20.2	20.8	21.0	21.4	22.4	23.2	23.6	23.4	24.7	24.6	22.17
30.3	29.0	28.2	27.7	27.2	27.0	—	—	—	—	—	—	—
—	—	—	—	—	—	24.1	24.5	24.7	23.8	23.5	22.7	28.01
27.4	26.6	26.0	25.7	25.8	25.5	25.3	24.8	24.5	22.6	22.5	22.7	26.43
32.6	32.8	33.8	33.4	32.7	33.5	33.8	33.6	32.4	31.6	30.2	30.7	30.27
34.8	34.0	33.1	33.0	34.0	34.8	34.9	35.0	33.6	33.4	34.2	34.4	33.84
28.6	27.2	24.6	22.2	21.6	21.6	22.8	23.0	25.9	27.5	28.4	28.9	29.32
31.6	30.4	28.8	28.4	27.6	26.3	25.9	23.7	22.5	21.9	20.2	18.6	28.25
30.2	29.1	28.3	27.8	27.4	26.5	—	—	—	—	—	—	—
—	—	—	—	—	—	19.2	14.8	13.2	9.0	13.4	13.4	22.88
20.5	19.3	19.5	19.0	18.5	19.2	19.0	18.8	17.0	14.8	13.6	—	19.79
17.1	15.9	15.7	15.8	18.6	20.0	21.4	21.4	25.6	27.0	26.6	26.4	20.80
27.8	28.5	28.6	28.4	29.4	29.0	27.0	25.0	23.4	23.4	22.8	22.5	26.33
33.65	33.01	32.54	32.31	32.45	32.16	31.59	31.45	31.30	30.81	30.81	31.35	33.39
27.2	27.2	26.8	26.4	25.8	25.9	26.0	26.0	26.0	25.6	25.2	25.3	25.59
31.9	32.2	32.5	34.1	34.3	36.5	36.0	36.4	37.0	37.4	37.0	36.6	32.15
35.4	35.0	33.7	32.8	—	30.2	—	—	—	—	—	—	—
—	—	—	—	—	—	32.6	31.8	32.2	32.4	32.0	31.6	35.59
29.9	28.4	26.4	24.0	22.6	18.6	13.4	11.4	8.2	7.8	6.8	6.7	25.77
20.6	21.2	21.4	21.2	21.0	20.0	19.6	22.2	22.7	21.9	22.5	21.1	19.70
26.8	28.0	28.2	28.0	27.4	27.0	26.8	26.7	26.8	26.7	27.2	27.1	26.12
32.6	32.3	32.3	32.8	32.4	31.6	31.9	32.8	31.6	32.0	34.6	34.2	32.62
29.0	27.9	27.0	26.1	25.3	25.1	23.4	22.0	21.2	20.4	20.2	19.7	28.45
21.3	21.3	21.4	22.0	22.2	22.6	—	—	—	—	—	—	—
—	—	—	—	—	—	24.6	24.0	23.2	23.2	23.8	24.2	21.78
31.1	29.2	29.2	31.4	31.8	30.5	30.4	31.0	31.5	31.3	29.2	30.6	30.66
23.0	22.6	22.0	21.6	21.5	21.2	21.1	20.9	20.9	21.2	20.6	20.1	23.92
29.3	29.5	28.0	27.9	26.4	26.6	24.4	24.4	21.6	21.5	21.0	—	25.87
27.0	26.7	26.0	25.5	24.1	23.8	23.4	23.2	23.2	23.2	23.2	22.8	25.58
24.8	23.1	21.5	20.4	19.8	19.0	18.2	16.8	14.9	13.1	12.5	12.6	21.96
30.6	29.8	29.6	27.6	29.8	35.4	—	—	—	—	—	—	—
—	—	—	—	—	—	22.9	24.5	25.0	24.6	24.9	25.4	26.08
32.2	26.8	26.0	26.0	20.6	20.3	20.4	20.1	15.7	18.7	18.6	19.9	27.61
26.3	25.3	24.7	25.1	23.6	23.5	23.8	20.4	20.9	21.0	22.1	24.7	24.71
34.4	34.3	33.2	33.0	33.6	34.0	33.6	34.2	33.8	33.6	29.0	24.7	32.71
9.9	9.3	9.3	8.8	8.2	10.0	9.6	7.2	6.5	6.0	7.2	5.8	11.75
17.8	17.2	17.0	15.7	15.7	16.5	16.4	16.5	16.0	15.5	14.2	12.7	14.35
20.2	20.1	20.8	19.4	22.7	22.9	—	—	—	—	—	—	—
—	—	—	—	—	—	30.0	30.4	30.9	31.2	31.1	30.8	22.18
31.2	30.9	30.2	30.1	30.2	30.1	29.9	30.0	30.0	29.9	29.9	30.0	30.85
31.6	31.6	32.0	32.8	31.0	27.0	22.4	19.8	17.0	16.4	15.6	17.0	28.17
25.6	26.4	27.4	28.8	29.2	29.3	30.1	31.0	31.2	31.3	31.0	30.2	26.82
33.3	33.0	34.0	34.3	34.5	34.4	33.9	33.5	33.5	33.5	33.0	32.6	32.72
20.8	19.7	18.8	18.3	17.5	15.8	15.7	15.0	14.9	15.5	15.5	—	22.29
19.3	18.7	18.2	17.7	15.8	15.0	—	—	—	—	—	—	—
—	—	—	—	—	—	17.4	19.4	21.6	22.2	22.9	22.8	18.56
26.78	26.21	25.84	25.62	24.88	24.92	24.37	24.13	23.60	23.36	23.36	23.57	25.73





WET THERMOMETER.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16	
JANUARY.	1	22.1	26.5	30.2	32.1	34.0	33.3	32.7	33.4	33.3	—	—	—	24.07
	2	—	—	—	—	—	—	—	—	—	4.7	2.6	3.9	15.54
	3	3.3	3.8	10.7	13.6	16.3	17.5	17.0	18.2	19.0	21.0	22.3	23.8	21.09
	4	21.4	21.7	25.3	29.8	28.0	25.4	21.6	19.5	16.2	15.6	13.2	15.4	13.47
	5	14.2	11.2	13.5	14.9	15.9	14.4	5.4	6.5	6.6	17.2	20.5	21.3	31.57
	6	21.9	23.7	25.5	27.3	30.5	32.5	33.9	35.5	36.7	38.2	38.5	34.7	23.84
	7	32.6	31.0	29.5	28.0	27.8	25.8	21.5	18.2	13.6	16.8	20.4	20.9	25.99
	8	19.7	20.5	27.8	28.9	29.4	29.6	29.5	29.7	29.9	—	—	—	23.72
	9	—	—	—	—	—	—	—	—	—	23.5	21.8	21.5	28.51
	10	22.1	22.8	26.4	28.7	31.3	29.2	23.8	21.2	19.4	16.8	17.0	26.0	21.63
	11	20.3	21.7	29.3	32.3	33.4	32.3	31.0	29.2	28.5	29.2	27.8	27.1	18.37
	12	26.4	26.7	27.6	27.0	27.1	26.8	24.5	21.6	17.9	13.7	11.0	9.3	31.87
	13	7.9	6.9	10.0	13.9	15.9	18.1	19.9	22.0	25.1	27.0	27.0	26.8	25.12
	14	30.8	32.2	37.0	36.4	38.6	37.2	30.8	30.2	29.2	27.8	26.8	25.4	31.65
	15	25.3	23.4	23.8	23.9	23.5	23.4	22.6	23.2	24.1	—	—	—	33.19
	16	—	—	—	—	—	—	—	—	—	29.1	29.5	29.6	35.30
	17	30.9	31.9	32.7	35.5	37.8	38.1	35.1	31.8	27.7	27.4	24.9	26.0	34.76
	18	25.0	27.4	32.1	36.7	38.2	36.3	33.3	30.7	38.7	32.6	33.6	33.7	24.57
	19	30.7	29.6	36.3	40.0	39.5	39.0	35.8	34.7	34.4	34.0	35.8	33.8	10.68
	20	34.1	34.5	36.6	35.6	35.5	35.4	35.7	36.0	35.6	35.2	31.9	31.0	19.85
	21	31.1	29.8	28.5	28.1	28.5	28.3	26.0	24.9	20.6	17.2	16.5	15.3	30.22
	22	14.9	15.1	12.7	14.5	15.5	13.1	10.7	9.0	9.4	—	—	—	28.83
	23	—	—	—	—	—	—	—	—	—	5.0	4.1	4.2	20.42
	24	4.9	8.2	16.4	20.1	23.2	23.6	23.0	22.0	23.2	24.9	24.5	24.2	33.26
	25	24.6	27.1	30.0	32.4	33.1	35.3	31.9	31.0	30.8	31.6	29.5	25.4	37.72
	26	27.0	31.4	31.9	32.2	32.3	32.3	32.4	32.4	30.6	26.5	24.0	23.1	29.99
	27	20.5	20.0	19.5	22.6	24.7	24.5	24.5	23.4	22.0	14.0	13.1	16.2	—
	28	27.1	26.7	28.2	32.3	35.0	35.8	35.0	35.0	35.1	35.4	36.8	36.7	—
	29	36.0	35.9	40.4	41.7	42.5	38.9	37.6	39.4	39.3	—	—	—	—
	30	—	—	—	—	—	—	—	—	—	33.9	33.3	33.7	—
	31	34.5	34.8	36.3	37.3	32.2	29.3	27.8	27.1	26.4	26.0	25.2	23.0	—
Hourly Means		23.43	24.02	26.85	28.69	29.60	29.05	27.04	26.31	25.74	23.91	23.49	23.50	25.97
FEBRUARY.	1	22.8	24.7	27.1	28.3	29.9	30.6	27.5	25.8	29.2	30.2	30.6	31.1	28.15
	2	30.9	31.1	32.5	36.0	38.2	37.5	37.4	37.0	37.0	38.4	40.1	41.2	36.44
	3	39.8	39.4	42.8	48.2	49.1	46.4	43.2	42.2	42.3	37.7	35.6	34.1	41.73
	4	33.3	34.3	36.5	38.3	38.2	37.6	38.2	38.6	38.7	36.2	34.2	32.6	36.39
	5	29.8	28.3	29.6	30.4	31.5	31.8	30.6	29.3	31.2	—	—	—	30.61
	6	—	—	—	—	—	—	—	—	—	33.6	30.8	30.4	28.17
	7	30.2	29.9	32.1	32.1	32.1	29.8	28.9	27.0	25.0	24.9	24.0	22.1	9.13
	8	16.8	13.4	11.9	12.1	12.7	11.0	6.6	4.8	4.7	3.5	4.5	7.6	21.17
	9	10.5	11.3	16.8	19.7	22.4	23.4	23.7	25.3	25.5	27.1	24.5	23.8	28.76
	10	22.3	23.3	28.1	31.6	33.1	35.8	33.5	31.6	28.8	26.4	25.4	25.2	35.37
	11	26.6	31.4	32.5	36.2	36.9	38.7	38.5	38.0	37.3	39.6	35.7	33.1	29.57
	12	29.5	27.1	27.9	28.7	30.0	31.1	27.9	28.3	29.8	—	—	—	14.82
	13	—	—	—	—	—	—	—	—	—	32.7	31.7	30.2	22.28
	14	25.2	21.0	20.4	17.1	15.5	11.6	10.3	10.1	9.9	11.7	12.5	12.5	18.89
	15	11.8	13.3	19.9	20.6	23.1	23.5	23.2	25.2	26.6	26.2	26.4	27.6	12.16
	16	29.2	28.3	28.2	28.4	28.3	23.4	16.2	11.7	10.7	8.8	7.5	6.0	29.94
	17	4.2	3.8	7.4	11.1	14.5	16.7	14.8	12.6	9.8	12.4	18.9	19.7	16.87
	18	20.3	21.2	25.2	28.4	31.5	32.2	32.3	32.5	34.3	35.4	34.3	31.7	22.69
	19	22.2	19.6	18.9	21.2	18.7	17.9	15.5	13.8	13.4	—	—	—	22.39
	20	—	—	—	—	—	—	—	—	—	10.2	15.4	15.6	27.11
	21	16.0	16.0	19.7	23.5	25.6	25.5	23.7	22.6	23.5	25.2	25.7	25.3	28.10
	22	24.2	23.2	26.6	29.2	28.5	28.5	24.4	19.7	16.8	15.7	16.8	15.1	25.38
	23	17.8	20.4	25.6	29.1	30.5	32.4	31.2	30.6	29.2	26.2	26.4	25.9	33.76
	24	25.0	24.4	29.5	31.5	32.5	31.4	29.1	27.2	27.3	29.2	26.9	23.2	34.45
	25	21.3	20.7	22.2	24.2	25.4	26.8	26.6	26.0	26.4	27.0	28.0	30.0	—
	26	32.0	32.5	34.7	35.1	35.6	35.2	34.7	34.5	34.8	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	35.4	31.4	29.2	—
	28	29.1	32.5	37.2	38.5	37.6	35.2	33.8	33.9	33.8	34.0	33.5	34.3	—
Hourly Means		23.78	23.79	26.39	28.31	29.22	28.92	27.16	26.18	26.08	26.15	25.87	25.31	26.43

WET THERMOMETER.														
Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
MARCH.	1	33.6	34.8	36.4	37.1	38.2	36.6	36.2	37.8	38.3	37.4	36.2	36.2	36.57
	2	35.9	36.9	40.0	42.1	43.7	46.0	47.0	41.3	38.2	36.0	35.4	35.3	39.82
	3	35.4	37.3	41.3	46.2	47.0	48.9	41.3	41.6	40.1	38.6	37.2	36.9	40.98
	4	34.5	43.1	49.7	46.3	42.9	37.7	36.6	36.0	33.8	32.5	32.5	30.2	37.98
	5	29.0	28.3	29.2	32.0	31.1	30.8	30.2	30.2	30.8	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	30.2	30.2	30.0	30.17
	7	28.6	29.2	29.0	30.0	31.3	32.4	32.4	27.9	28.3	25.8	24.0	23.5	28.20
	8	22.8	28.1	32.1	34.7	37.4	37.7	34.6	33.4	33.7	32.7	33.7	33.1	32.83
	9	32.5	34.9	42.1	40.5	40.9	42.4	41.4	42.6	41.7	38.4	41.0	37.2	39.63
	10	33.4	32.1	33.9	35.4	36.0	36.9	33.3	29.6	32.0	28.6	27.5	27.0	32.14
	11	26.5	27.3	27.6	26.7	26.4	24.5	21.2	20.8	20.6	—	18.1	15.9	23.24
	12	15.0	17.7	21.8	25.2	27.7	28.6	24.9	25.0	26.9	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	28.5	28.1	27.5	24.74
	14	26.8	29.9	32.1	36.7	36.2	35.2	31.7	28.2	27.0	27.5	26.6	26.0	30.99
	15	28.8	31.3	35.8	40.9	34.7	32.8	29.2	27.0	25.4	23.1	21.2	24.8	29.58
	16	25.8	31.5	34.3	38.6	41.2	41.3	39.4	36.2	34.6	36.0	34.8	38.0	35.97
	17	36.6	38.9	44.3	47.8	47.6	42.9	37.8	42.4	38.9	29.2	29.1	28.3	38.65
	18	28.1	32.4	35.5	37.1	36.8	36.2	31.7	30.1	30.0	28.5	31.4	29.5	32.27
	19	30.1	32.3	41.4	44.3	51.9	48.0	44.9	42.4	41.4	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	28.5	25.8	26.4	38.12
	21	25.5	26.6	29.1	27.9	28.1	30.0	29.8	29.4	30.3	29.5	28.7	28.3	28.60
	22	28.4	29.0	32.1	32.3	32.5	31.9	32.3	31.3	30.8	30.8	30.6	30.7	31.56
	23	30.7	31.3	31.9	32.9	33.2	34.7	31.5	31.6	31.3	29.4	29.2	29.9	31.47
	24	31.0	33.5	35.9	37.3	35.4	34.9	34.7	35.4	35.7	—	—	—	—
	25 <sup>a</sup>	—	—	—	—	—	—	—	—	—	34.5	33.6	32.9	34.57
	26	32.5	33.2	35.5	38.2	40.0	40.8	39.7	35.2	32.3	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	32.9	30.4	28.3	34.92
	28	27.6	28.5	29.1	32.3	33.7	36.9	33.3	28.9	26.6	25.8	27.7	28.3	29.89
	29	29.1	32.3	36.4	35.4	34.7	38.5	38.4	37.0	37.0	36.8	40.1	44.9	35.88
	30	47.3	44.5	44.3	45.1	45.6	43.2	41.2	37.8	35.2	31.3	30.8	29.7	39.67
	31	27.3	25.4	23.8	26.7	28.8	30.6	29.4	23.7	21.8	20.1	19.7	20.3	24.80
Hourly Means	30.11	31.93	34.79	36.53	37.04	36.94	34.77	33.18	32.41	30.90	30.14	29.97	33.23	
APRIL.	1	20.6	26.1	32.2	32.4	35.2	34.4	34.0	33.3	33.9	33.2	35.6	39.8	32.56
	2	37.9	41.3	48.1	49.9	49.8	50.4	47.1	53.7	53.5	—	—	—	45.12
	3	—	—	—	—	—	—	—	—	—	34.7	33.1	31.9	—
	4	31.4	32.3	32.6	33.3	35.0	34.8	35.8	36.5	36.4	37.8	37.8	38.2	34.32
	5	37.6	39.6	41.8	45.6	45.0	43.5	43.6	36.7	32.9	30.9	29.8	28.0 <sup>b</sup>	37.92
	6	29.0	36.0	40.0	43.0	43.0	42.6	41.4	37.8	42.0	37.9	38.0	38.3	39.08
	7	38.3	38.9	38.8	40.3	40.9	41.3	41.0	39.7	39.1	38.0	36.4	35.0	38.97
	8	34.0	35.0	37.2	36.5	37.9	36.4	35.6	36.0	35.5	33.3	30.9	30.8	34.92
	9	31.9	34.7	37.8	41.4	42.7	44.8	38.8	35.0	36.0	—	—	—	—
	10	—	—	—	—	—	—	—	—	—	35.1	33.4	33.9	37.12
	11	34.3	38.2	41.4	43.9	46.8	50.5	45.2	38.2	37.7	36.9	37.0	36.7	40.57
	12	35.7	36.4	36.7	35.4	37.0	36.8	34.8	34.8	33.4	33.7	31.4	31.1	34.77
	13	31.4	33.5	34.0	36.0	38.4	39.3	39.2	39.2	39.4	35.0	33.7	32.3	35.95
	14	33.9	37.7	39.4	41.4	38.3	40.1	37.3	35.4	31.9	30.0	29.4	29.1 <sup>b</sup>	35.32
	15	28.7	32.3	35.5	40.4	38.7	37.6	36.6	33.3	31.4	32.4	31.3	30.8	34.08
	16	30.9	34.6	36.2	38.0	42.0	42.4	38.6	33.1	31.3	—	—	—	—
	17	—	—	—	—	—	—	—	—	—	37.6	39.0	39.0	36.89
	18	38.7	39.2	38.3	38.4	38.8	39.2	38.4	38.8	39.0	39.2	39.6	39.8	38.95
	19	40.4	43.0	43.2	45.3	44.6	45.2	44.5	43.4	43.0	40.8	38.4	37.6	42.45
	20	39.4	42.9	49.2	49.2	49.9	47.1	50.3	44.5	42.0	39.6	38.7	37.3	44.17
	21	38.6	44.7	47.2	54.3	54.7	54.3	51.8	50.8	51.3	48.6	49.2	47.0	49.37
	22	46.8	52.4	57.2	59.8	63.7	63.5	59.7	53.3	47.0	42.3	39.1	36.5	51.77
	23	34.7	36.8	38.8	41.2	42.7	44.2	42.2	36.8	34.4	—	—	—	—
	24	—	—	—	—	—	—	—	—	—	38.8	39.0	38.3	38.99
	25	38.7	41.0	43.8	45.4	49.5	49.2	46.4	45.5	42.5	40.3	40.2	40.3	43.57
	26	40.6	43.1	47.8	47.3	48.8	49.2	46.4	44.5	43.8	43.4	40.2	38.8	44.49
	27	37.2	38.8	39.6	38.5	38.9	37.7	37.4	37.4	35.6	35.2	34.1	33.8	37.02
	28	34.5	33.9	34.9	37.0	38.6	40.2	40.8	37.6	34.7	32.6	30.9	31.9	35.63
	29	32.7	38.2	42.4	45.0	46.1	49.3	48.7	39.8	36.1	32.4	30.4	29.1	39.18
	30	31.1	39.6	43.1	46.6	50.0	49.8	50.1	44.1	44.7	—	—	—	—
	31	—	—	—	—	—	—	—	—	—	34.5	34.0	34.3	41.82
Hourly Means	34.96	38.08	40.66	42.52	43.73	43.99	42.53	39.97	38.79	36.70	35.79	35.37	39.42	

<sup>a</sup> Good Friday.

<sup>b</sup> Approximate; the cause, or probable limits of error are not mentioned.

WET THERMOMETER.

Hours of Mean Göttingen Time	0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time	18	20	22	0	2	4	6	8	10	12	14	16		
MAY.	2	35.0	37.8	40.9	42.6	43.8	46.1	48.6	43.8	42.0	41.0	38.8	37.8	42.35
	3	40.6	43.9	47.0	49.0	50.9	46.9	48.2	40.0	37.7	38.4	37.5	36.8	43.07
	4	35.9	38.5	39.5	41.5	42.2	42.2	40.7	35.8	34.5	33.1	32.9	30.8	37.30
	5	32.7	40.9	45.3	47.9	49.7	49.3	47.2	43.6	41.8	41.4	41.4	41.6	43.57
	6	45.0	46.6	47.6	50.5	49.0	49.1	45.5	39.4	37.0	35.6	33.4	30.4	42.42
	7	31.9	35.0	38.5	40.4	44.3	45.7	39.6	40.4	40.0	—	—	—	36.72
	8	—	—	—	—	—	—	—	—	—	29.2	27.8	27.9	
	9	29.2	32.3	36.6	40.4	42.6	44.2	41.6	40.4	37.5	38.2	36.7	35.0	37.89
	10	35.8	42.9	47.6	53.6	54.5	57.2	56.0	54.6	53.6	52.2	51.6	51.5	50.92
	11	46.5	47.1	46.6	45.8	43.9	41.5	39.3	38.2	37.0	36.5	35.4	34.9	41.06
	12	35.4	38.2	43.2	45.7	49.2	51.8	50.5	44.1	41.8	41.0	38.4	42.4	43.47
	13	43.9	46.3	48.0	44.4	43.6	43.2	40.6	36.0	33.4	31.3	28.9	29.7	39.11
	14	32.2	37.5	42.4	42.0	42.0	47.4	46.6	37.8	33.7	—	—	—	41.13
	15	—	—	—	—	—	—	—	—	—	43.6	44.1	44.3	
	16	46.8	50.3	52.6	51.3	50.4	49.8	47.8	40.4	36.6	34.1	31.5	33.4	43.75
	17	37.2	41.8	47.6	51.2	51.3	52.1	51.5	47.4	45.1	43.7	45.3	48.2	46.87
	18	49.8	55.6	57.8	60.3	63.5	63.1	57.1	56.6	55.5	53.6	53.6	47.0	56.12
	19	45.3	44.8	43.4	43.9	44.0	47.6	44.7	40.5	39.4	36.7	36.4	35.1	41.82
	20	35.9	38.0	40.1	42.5	45.0	48.0	47.9	35.6	32.1	29.9	28.6	29.0	37.72
	21	34.6	43.4	47.6	50.8	50.8	48.1	47.1	45.6	45.7	—	—	—	46.70
	22	—	—	—	—	—	—	—	—	—	49.0	49.1	48.6	
	23	48.6	51.3	51.1	55.0	54.8	56.4	56.5	48.4	45.4	43.8	44.5	46.0	50.15
	24	47.3	48.9	48.6	54.5	53.3	54.9	50.6	47.6	44.6	40.4	38.2	37.3	46.35
	25	40.5	45.3	50.2	49.8	47.8	55.3	47.0	43.9	40.6	36.6	35.9	36.5	44.12
	26	39.8	42.1	48.6	46.3	52.6	52.4	49.9	47.2	46.2	45.8	46.1	46.8	46.98
	27	45.0	44.7	46.2	48.4	52.7	53.2	49.9	48.1	44.2	43.5	45.1	42.5	46.96
	28	44.1	46.1	50.1	51.6	55.6	53.7	50.2	46.5	45.1	—	—	—	48.37
	29	—	—	—	—	—	—	—	—	—	47.2	45.7	44.5	
	30	44.8	45.5	45.3	46.6	49.6	47.6	49.8	42.6	38.8	39.6	39.2	39.5	44.07
	31	42.5	47.8	49.8	52.6	52.4	53.0	51.0	46.0	40.7	39.1	41.6	39.9	46.37
	Hourly Means	40.24	43.56	46.24	48.02	49.21	49.99	47.90	43.48	41.15	40.17	39.53	39.13	44.05
JUNE.	1	44.3	48.4	50.3	52.4	55.5	57.1	55.5	45.7	41.3	40.0	39.0	37.2	47.22
	2	42.6	47.9	52.6	54.7	55.0	56.7	53.6	49.7	48.3	46.2	49.6	50.8	50.64
	3	51.6	52.9	54.6	54.3	51.0	52.6	54.7	53.7	54.1	54.2	52.6	52.1	53.20
	4	52.7	55.6	57.6	59.5	59.4	62.5	63.1	53.7	53.0	—	—	—	54.57
	5	—	—	—	—	—	—	—	—	—	48.2	46.0	43.6	
	6	42.6	43.0	43.4	43.0	42.1	43.8	43.2	37.2	34.7	35.2	35.4	33.5	39.76
	7	37.9	42.0	45.8	46.1	47.8	48.0	45.8	40.6	41.0	42.6	43.0	43.6	43.68
	8	45.3	47.8	49.4	49.4	47.8	46.0	45.4	45.9	46.7	46.5	47.6	47.8	47.13
	9	49.4	52.1	55.1	55.7	57.5	57.0	57.0	54.0	53.2	53.6	52.4	50.4	53.95
	10	49.0	49.7	50.2	48.3	44.1	41.8	40.8	38.8	36.0	32.8	29.5 <sup>a</sup>	27.8	40.73
	11	32.1	36.2	39.1	42.6	51.8	54.3	54.5	45.7	40.0	—	—	—	44.45
	12	—	—	—	—	—	—	—	—	—	49.2	45.3	42.6	
	13	47.8	53.1	54.6	57.3	59.5	55.3	59.5	50.4	47.1	44.2	42.6	42.5	51.16
	14	47.9	50.9	55.5	60.9	59.5	57.2	54.6	52.2	50.8	48.0	45.5	44.3	52.27
	15	48.1	53.2	56.4	60.0	61.7	61.1	60.9	55.0	53.2	51.0	50.4	49.7	55.06
	16	54.4	57.7	62.1	62.5	62.6	67.1	62.3	57.6	55.0	51.0	49.2	45.7	57.27
	17	48.1	49.8	51.9	55.0	53.7	55.3	51.4	47.8	46.2	44.9	46.0	46.7	49.73
	18	50.6	57.1	60.5	64.5	67.4	63.2	64.0	61.7	61.9	—	—	—	57.11
	19	—	—	—	—	—	—	—	—	—	47.8	45.0	41.6	
	20	45.3	48.0	52.6	55.6	57.2	57.4	58.9	53.3	47.6	44.9	46.3	47.0	51.17
	21	49.1	54.4	58.3	60.7	61.4	59.8	59.1	54.0	53.7	51.0	52.6	52.2	55.52
	22	55.6	58.5	61.4	65.8	66.0	64.6	61.1	58.4	58.1	57.0	55.8	52.2	59.54
	23	50.2	51.0	51.2	54.9	57.6	58.1	55.8	50.7	47.6	44.5	43.0	43.5	50.67
	24	46.3	51.3	51.4	57.0	58.8	58.7	59.0	51.4	48.1	47.6	47.0	47.2	51.98
	25	52.0	55.0	56.1	56.4	57.5	57.2	61.0	58.7	57.1	—	—	—	56.85
	26	—	—	—	—	—	—	—	—	—	56.6	56.6	58.0	
	27	58.1	58.1	59.8	61.7	67.1	64.3	61.3	59.0	55.1	52.0	56.1	55.9	59.04
	28	56.3	59.6	58.5	60.1	64.1	67.8	67.6	61.0	55.8	49.6	47.4	45.8	57.80
	29	48.4	50.9	55.6	58.4	61.5	63.5	60.0	53.7	54.1	54.3	53.0	53.1	55.54
	30	57.1	62.4	65.0	63.3	66.6	69.0	68.4	64.7	66.7	57.6	56.6	57.1	62.87
Hourly Means	48.57	51.79	54.19	56.16	57.47	57.67	56.87	52.10	50.25	48.10	47.44	46.61	52.27	

<sup>a</sup> Approximate.

WET THERMOMETER.													
Hours of Mean Göttingen Time. } Hours of Mean Toronto Time. }	0	1	2	3	4	5	6	7	8	9	10	11	
	18	19	20	21	22	23	0	1	2	3	4	5	
JULY.	1	56°1	56°3	58°0	57°8	58°9	59°8	58°8	58°9	60°5	59°9	60°1	58°8
	2	57°3	57°0	57°0	57°0	58°1	59°7	61°5	61°7	64°5	64°3	62°3	64°2
	3	—	—	—	—	—	—	—	—	—	—	—	—
	4	54°7	57°0	60°5	61°1	61°5	62°1	62°9	61°7	61°9	61°7	61°5	61°0
	5	61°1	62°7	62°4	57°2	57°4	57°6	59°5	58°2	58°6	55°8	55°5	54°7
	6	47°5	49°9	51°6	51°6	50°8	52°4	52°8	57°4	59°3	57°9	57°8	59°4
	7	45°8	49°1	53°2	55°9	57°4	59°6	59°8	61°2	60°7	62°1	61°9	63°3
	8	52°3	54°2	55°9	56°8	56°8	59°1	60°8	65°3	65°1	63°5	62°5	62°5
	9	52°6	52°2	53°3	54°0	54°7	56°6	56°0	56°6	57°0	56°6	62°0	62°3
	10	—	—	—	—	—	—	—	—	—	—	—	—
	11	52°1	55°3	58°3	60°3	61°5	63°1	64°1	65°5	66°3	65°7	64°9	66°4
	12	54°4	59°2	60°7	62°3	63°2	64°3	67°1	70°2	71°7	72°5	73°2	75°0
	13	59°6	63°8	64°2	65°4	66°9	69°5	71°4	72°4	73°4	72°6	71°7	71°1
	14	62°4	62°7	63°5	64°7	65°8	63°9	64°0	63°0	64°8	63°8	61°5	62°9
	15	55°8	56°5	57°3	57°3	58°0	59°0	62°2	62°9	63°1	65°3	65°1	65°7
	16	50°0	54°3	58°2	61°1	62°5	63°5	63°7	64°2	65°8	66°3	68°6	68°2
	17	—	—	—	—	—	—	—	—	—	—	—	—
	18	58°3	62°7	64°2	67°2	66°7	69°3	71°8	72°1	71°1	71°1	70°4	72°0
	19	62°4	66°4	68°8	69°3	70°2	71°4	73°9	74°6	74°3	66°9	65°9	63°6
	20	53°7	50°7	50°7	51°7	52°7	53°3	53°7	55°1	57°1	61°5	61°4	62°5
	21	47°8	52°2	55°0	57°6	59°5	61°6	61°9	62°5	62°2	63°3	63°7	62°5
	22	52°6	56°8	60°1	61°0	64°2	65°5	67°4	68°0	68°0	68°6	67°1	63°9
	23	59°0	62°1	63°2	65°1	68°1	70°5	68°8	70°6	72°8	75°5	72°4	71°2
	24	—	—	—	—	—	—	—	—	—	—	—	—
	25	47°8	50°5	54°8	55°8	55°8	57°2	58°4	58°1	60°1	58°9	59°0	60°0
	26	58°0	60°7	61°1	63°0	64°9	66°7	67°7	66°7	66°6	68°0	67°5	68°4
	27	64°6	64°3	64°3	64°3	65°3	67°5	68°0	71°8	69°5	70°7	70°3	69°7
	28	54°4	56°5	58°2	58°0	58°6	59°2	59°9	61°7	61°9	61°2	62°8	62°9
	29	51°9	55°6	60°6	62°8	64°4	64°9	66°6	68°4	67°3	66°2	68°0	66°7
	30	68°2	68°9	71°1	70°9	71°7	67°4	63°8	62°5	61°2	60°8	60°3	59°2
	31	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means	55°40	57°60	59°43	60°35	61°37	62°49	63°33	64°28	64°80	64°64	64°52	64°54	
AUGUST.	1	44°8	46°7	48°4	50°5	51°6	53°0	52°9	53°7	54°2	55°4	55°5	56°6
	2	47°1	50°3	53°3	53°9	54°5	55°0	56°0	60°7	60°3	60°2	60°4	62°1
	3	50°2	51°4	53°2	53°2	56°0	58°2	60°0	60°0	61°7	62°2	63°9	61°7
	4	48°4	53°9	56°2	58°4	60°3	62°1	61°8	61°1	63°5	63°8	64°0	65°9
	5	58°0	57°0	59°3	60°4	61°7	63°2	65°9	64°6	63°2	64°3	63°7	64°1
	6	59°3	59°5	60°0	61°1	62°6	63°5	62°8	62°9	64°7	63°0	62°7	61°8
	7	—	—	—	—	—	—	—	—	—	—	—	—
	8	59°6	60°4	62°1	63°0	63°5	64°8	62°9	63°7	65°0	65°3	65°5	64°9
	9	58°6	59°0	59°4	60°0	60°7	60°9	62°3	62°8	66°8	67°8	64°5	64°5
	10	61°8	62°9	64°1	63°7	65°0	66°3	67°2	66°5	67°0	66°3	69°2	65°5
	11	59°2	60°9	63°1	65°7	66°4	66°3	66°0	68°2	68°8	69°2	69°0	70°3
	12	58°2	61°6	63°0	65°0	65°8	67°8	69°0	70°3	69°2	71°0	71°2	70°1
	13	60°5	63°8	65°0	65°3	66°5	67°3	68°8	68°6	70°1	69°7	68°7	69°7
	14	—	—	—	—	—	—	—	—	—	—	—	—
	15	55°9	60°0	63°5	64°5	66°7	68°8	68°8	71°3	71°0	71°4	70°0	72°8
	16	61°4	64°7	67°5	68°5	68°8	70°1	69°3	70°0	69°9	70°1	70°0	69°1
	17	67°3	68°4	68°7	71°6	70°9	72°8	70°7	71°8	70°0	71°6	70°8	69°5
	18	63°7	63°6	64°3	64°0	66°2	67°0	67°8	69°0	69°7	69°7	69°2	67°6
	19	56°6	57°0	58°2	57°8	59°3	59°9	61°7	61°7	62°2	62°8	60°5	60°3
	20	54°5	54°7	55°3	55°2	56°4	57°2	60°6	62°2	62°3	63°1	62°5	63°9
	21	—	—	—	—	—	—	—	—	—	—	—	—
	22	47°5	51°9	56°3	58°6	58°8	59°6	61°3	61°4	63°4	62°2	63°6	62°4
	23	53°1	56°5	60°4	62°8	65°9	67°3	68°7	68°4	68°6	68°2	68°0	67°8
	24	56°7	60°7	65°6	65°8	66°2	67°0	67°8	67°6	66°7	66°5	67°8	67°0
	25	57°0	59°1	60°4	63°5	64°3	63°7	64°7	66°9	65°7	66°2	67°0	65°7
	26	64°9	65°4	66°2	67°1	68°5	68°8	68°7	69°0	70°9	72°8	72°1	70°5
	27	66°7	67°0	67°5	69°0	70°9	70°3	72°0	73°7	71°3	71°4	72°0	73°0
	28	—	—	—	—	—	—	—	—	—	—	—	—
	29	63°8	64°3	64°1	65°1	65°6	65°3	65°6	66°5	68°0	68°0	69°3	69°2
	30	50°6	54°1	58°1	61°6	64°2	64°5	61°6	63°5	63°9	60°7	65°5	62°0
	31	57°1	60°9	62°3	64°5	64°3	65°3	66°9	68°0	67°3	66°7	67°3	67°0
Hourly Means	57°13	59°10	60°94	63°21	63°39	64°30	64°88	65°71	66°13	66°28	66°44	66°11	

WET THERMOMETER.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
57.8	57.6	57.0	56.8	57.0	57.2	57.2	57.0	57.2	57.2	57.3	57.2	57.93
66.5	62.9	60.7	58.4	55.6	55.2	—	—	—	—	—	—	58.58
60.0	58.7	57.6	56.8	56.1	55.6	56.4	55.1	54.5	52.6	51.6	51.8	58.96
52.6	51.5	49.2	48.4	47.5	47.1	55.3	55.0	56.4	57.2	58.6	60.1	53.33
60.3	57.0	51.4	49.8	47.9	47.0	47.0	44.8	44.7	43.2	42.7	41.8	50.86
59.0	56.2	54.7	53.4	53.7	52.4	53.0	53.1	53.4	52.9	52.6	52.4	55.70
61.3	59.2	58.0	57.2	55.5	55.4	55.5	55.3	54.3	53.7	53.5	53.0	57.78
64.0	56.1	53.6	50.1	51.5	49.0	—	—	—	—	—	—	53.95
63.5	60.2	56.9	55.9	55.6	53.2	50.2	50.2	49.7	49.2	48.4	48.8	58.20
74.0	70.5	65.7	64.0	62.2	60.4	53.1	52.4	51.2	51.0	50.1	50.1	64.04
71.0	68.1	64.5	62.3	60.7	60.1	59.8	58.9	58.0	57.4	56.2	56.0	65.71
63.1	60.3	58.8	57.6	57.0	56.8	60.3	60.2	62.6	62.2	61.8	61.8	60.48
67.5	61.3	58.4	56.1	58.5	53.1	57.1	56.5	55.7	55.3	55.0	55.3	57.58
68.2	64.9	62.0	60.0	58.3	57.4	52.7	52.3	52.2	49.5	46.6	45.5	60.62
73.0	69.7	68.7	68.8	68.1	66.5	—	58.1	56.9	57.1	55.9	54.8	66.87
60.5	58.8	57.5	57.4	56.0	55.1	58.6	65.6	64.3	62.5	61.0	59.8	62.34
59.4	56.6	53.5	51.8	49.3	49.7	54.2	53.1	53.0	54.1	55.0	53.9	52.44
61.3	58.6	55.9	54.2	52.2	53.0	49.5	47.8	45.2	44.5	44.0	43.2	55.85
67.6	64.4	63.5	62.0	61.5	59.6	50.6	50.6	50.1	49.2	48.3	47.2	61.93
66.6	66.3	65.3	65.2	64.7	63.3	58.6	58.0	57.2	57.0	57.0	56.7	62.05
59.7	58.2	55.7	53.2	53.4	53.0	50.8	47.8	45.7	45.0	45.0	44.2	55.40
66.5	66.3	63.0	62.1	64.7	63.7	53.2	52.9	52.6	51.6	51.0	58.7	64.71
67.4	60.9	59.2	50.0	61.5	56.0	62.9	65.3	66.1	65.6	64.1	63.4	62.74
63.3	59.2	55.7	52.8	51.6	51.4	55.3	55.2	55.6	55.7	54.8	53.9	56.30
67.2	67.0	66.4	65.3	67.4	68.0	50.7	50.6	50.6	50.4	49.6	49.9	65.48
58.4	56.6	55.5	53.6	51.8	50.6	68.0	67.7	68.1	67.4	67.7	68.0	57.32
—	—	—	—	—	—	44.6	44.2	43.6	43.4	43.2	43.7	59.12
63.83	61.04	58.78	57.43	56.89	55.76	54.79	54.30	53.96	53.43	52.90	52.99	
55.6	52.2	50.2	49.6	48.6	46.7	45.6	44.8	43.7	44.8	44.7	44.9	49.78
60.9	55.6	53.7	52.5	50.8	48.4	47.0	46.6	45.8	45.6	47.7	48.9	53.22
64.1	60.9	56.2	53.4	52.0	51.4	50.2	49.4	48.2	47.8	46.6	48.3	55.01
62.7	58.6	56.7	54.1	53.7	53.2	54.3	55.1	54.0	53.7	54.3	54.7	57.69
61.5	61.3	61.0	60.7	60.7	60.5	61.3	61.0	60.2	59.4	59.3	59.1	61.31
61.7	61.5	61.3	61.3	60.5	59.4	—	—	—	—	—	—	60.87
67.6	63.7	63.2	62.9	62.1	62.1	57.8	58.4	58.2	58.9	58.7	59.3	62.56
63.4	62.7	62.5	62.6	62.0	61.6	61.2	60.5	59.8	59.4	59.4	58.8	61.94
64.0	62.8	60.3	59.0	59.5	60.1	61.4	59.8	59.4	57.3	56.4	57.9	62.48
69.3	60.0	61.5	59.5	58.4	57.8	57.0	56.6	56.2	56.7	56.7	57.2	62.50
69.3	65.7	63.4	62.8	62.2	62.2	61.8	61.5	61.0	60.8	60.3	60.1	64.72
68.8	66.1	61.8	59.6	58.4	57.8	—	—	—	—	—	—	63.03
69.2	65.6	62.0	60.5	60.0	58.4	58.9	56.8	56.6	55.3	54.8	53.9	63.89
67.3	66.4	66.5	66.8	67.0	66.8	58.1	58.0	58.6	58.8	59.4	60.0	67.57
71.0	68.0	64.4	63.7	63.9	63.2	66.6	66.3	66.1	67.1	67.8	67.7	67.92
65.2	64.8	65.2	64.3	64.3	64.0	63.7	65.1	66.7	65.6	65.9	64.7	63.97
59.7	59.7	58.8	59.1	57.8	58.8	64.0	61.8	57.9	56.2	55.2	50.6	59.03
60.2	56.2	53.2	51.8	51.1	49.8	58.9	58.9	58.4	57.4	56.6	56.1	54.43
62.5	60.7	57.0	56.5	56.1	55.1	47.6	47.2	46.0	44.7	44.5	46.2	57.40
65.0	63.0	61.5	61.1	60.3	59.1	53.9	53.9	53.2	52.6	51.6	—	61.90
64.0	61.1	60.8	60.1	59.2	59.3	56.9	56.6	57.4	56.4	56.1	56.4	62.10
65.1	65.0	64.8	65.7	65.7	65.5	58.2	57.6	57.2	56.1	55.3	56.0	64.72
69.9	69.3	69.2	67.3	68.6	67.6	66.0	66.1	66.3	66.3	65.9	66.8	68.28
74.2	70.1	67.4	65.2	64.7	64.5	67.2	67.4	67.3	67.1	66.2	66.8	67.86
65.5	61.5	59.2	58.0	59.5	59.1	64.6	64.4	63.0	62.1	60.9	62.8	61.73
60.6	56.4	54.3	54.5	53.7	53.3	57.8	54.6	53.9	54.2	52.7	50.8	57.91
66.1	65.9	65.7	65.0	65.0	64.3	53.5	54.1	54.7	53.9	54.5	56.0	64.35
—	—	—	—	—	—	63.5	62.3	62.9	62.5	62.5	61.2	61.42
64.98	62.40	60.81	59.91	59.47	58.89	58.41	57.94	57.39	57.05	56.89	57.17	

WET THERMOMETER.													
Hours of Mean Göttingen Time	0	1	2	3	4	5	6	7	8	9	10	11	
Hours of Mean Toronto Time	18	19	20	21	22	23	0	1	2	3	4	5	
SEPTEMBER.	1	63.7	67.1	68.9	69.8	70.7	72.0	72.4	72.4	73.6	73.6	72.2	72.0
	2	57.9	60.8	62.1	57.1	56.9	58.7	62.5	60.8	60.5	58.5	58.1	61.7
	3	54.0	54.5	54.8	55.8	54.9	56.2	55.7	56.0	57.4	60.0	60.2	61.1
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	60.7	62.8	62.3	61.5	60.1	65.4	59.3	57.6	57.0	57.2	57.0	57.4
	6	44.8	48.9	52.4	55.1	55.3	56.6	58.0	59.4	60.2	60.8	59.3	59.9
	7	58.1	59.0	59.1	63.1	63.2	63.5	65.0	62.8	63.4	63.2	62.7	62.8
	8	49.9	51.1	53.6	53.9	55.0	55.6	56.6	55.3	55.6	55.0	54.1	52.5
	9	50.6	50.4	51.2	51.7	51.9	52.5	52.8	53.0	53.9	54.3	53.7	52.8
	10	45.3	47.1	49.8	52.0	53.8	56.0	57.7	59.1	58.0	58.5	57.5	58.4
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	58.1	57.6	58.6	57.8	58.6	61.5	60.3	60.7	59.5	59.5	59.3	58.8
	13	50.0	51.4	52.7	53.2	53.7	54.7	54.9	55.7	56.0	59.2	57.3	56.9
	14	51.3	52.3	53.7	54.6	59.2	58.8	58.6	57.6	57.2	57.6	57.3	56.8
	15	55.0	55.8	55.7	59.1	59.7	61.0	62.5	64.7	64.9	63.9	64.9	63.2
	16	49.3	49.9	50.6	51.4	52.2	52.4	53.7	54.3	53.4	53.6	53.7	54.4
	17	43.2	48.1	50.5	52.1	52.5	52.1	53.5	52.7	52.7	53.5	55.0	58.5
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	44.0	45.5	47.5	48.0	48.2	49.4	49.3	49.0	48.7	48.2	47.0	47.2
	20	35.7	40.4	45.3	48.8	51.5	54.2	54.4	55.1	53.0	54.0	56.3	54.3
	21	44.3	45.9	46.0	46.5	46.0	45.4	44.9	44.1	44.9	43.9	41.9	42.8
	22	34.7	35.0	36.0	37.1	36.8	37.4	37.3	38.4	39.7	38.8	38.8	36.7
	23	29.6	31.8	32.4	35.9	38.1	39.5	42.8	43.5	46.4	47.2	48.2	50.2
	24	40.3	40.6	42.2	44.5	46.1	46.2	49.5	50.0	50.3	51.6	51.6	50.2
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	36.4	40.2	46.0	49.2	52.2	52.2	51.7	52.8	54.0	52.1	52.6	55.6
	27	39.0	42.9	49.0	51.7	53.8	56.6	58.8	60.5	62.0	61.7	60.4	60.7
	28	48.6	53.8	54.2	55.1	55.7	56.6	56.8	60.3	60.7	61.1	61.1	60.0
	29	49.4	51.8	54.0	57.7	58.2	58.0	58.1	58.2	57.3	58.0	58.2	57.5
	30	45.4	46.0	48.6	50.4	53.3	54.3	54.0	50.1	51.7	52.0	52.1	53.0
	Hourly Means	47.67	49.64	51.43	52.81	53.75	54.88	55.43	55.54	55.85	56.08	55.79	55.98
OCTOBER.	1	47.9	50.4	52.2	54.6	56.3	57.3	58.2	56.6	55.1	57.2	56.4	56.0
	2	—	—	—	—	—	—	—	—	—	—	—	—
	3	43.0	44.9	46.2	45.3	46.3	46.8	47.4	48.0	48.5	47.6	47.0	46.4
	4	39.6	41.2	41.9	43.3	44.4	45.8	47.0	47.5	48.7	48.2	48.0	46.3
	5	36.0	38.6	44.6	46.4	48.3	48.6	48.0	48.8	49.8	50.4	49.6	49.0
	6	37.4	39.2	43.5	43.8	45.5	47.3	47.8	48.8	48.4	48.0	47.1	46.0
	7	35.5	38.7	45.1	50.5	52.3	54.4	56.1	57.6	59.0	58.0	56.4	55.3
	8	51.8	50.9	53.1	52.2	53.5	54.2	54.0	55.6	56.0	55.1	53.8	53.6
	9	—	—	—	—	—	—	—	—	—	—	—	—
	10	33.5	36.5	39.9	42.3	45.7	47.4	48.6	49.3	50.3	50.6	51.1	49.5
	11	41.4	44.7	47.4	49.6	53.2	54.2	56.0	56.6	56.4	57.0	58.3	54.5
	12	43.1	43.7	46.2	47.5	47.1	47.4	48.2	48.1	48.4	48.3	47.3	46.0
	13	32.5	33.3	40.1	44.9	47.3	49.4	49.2	49.5	49.0	49.3	46.9	46.1
	14	42.1	44.7	46.3	47.6	48.4	48.2	48.0	49.2	48.4	48.1	47.1	47.6
	15	38.4	39.9	41.7	43.8	44.3	45.8	44.8	44.8	44.7	43.9	43.6	42.6
	16	—	—	—	—	—	—	—	—	—	—	—	—
	17	36.9	36.4	38.7	41.1	43.0	46.6	45.6	47.7	46.3	47.8	47.5	45.4
	18	37.0	35.6	35.1	36.0	36.3	37.0	38.4	39.2	39.9	40.1	40.0	40.3
	19	36.1	35.0	36.3	38.5	39.3	39.2	41.7	40.3	41.2	38.6	40.1	38.2
	20	32.2	33.7	35.7	37.6	37.9	37.7	38.8	39.0	41.0	40.6	40.1	38.4
	21	31.9	32.1	32.3	37.6	39.9	42.3	44.2	45.3	45.9	46.3	45.2	43.2
	22	44.8	45.3	46.0	47.1	48.3	49.3	50.6	50.3	51.4	49.6	46.7	45.1
	23	—	—	—	—	—	—	—	—	—	—	—	—
	24	46.0	46.1	46.8	47.6	49.6	49.9	49.8	51.0	51.6	52.4	52.3	53.4
	25	43.8	43.0	42.8	43.3	44.4	43.8	44.8	43.2	42.8	41.8	39.6	37.6
	26	30.5	30.7	34.3	37.8	41.2	43.2	42.6	41.9	43.8	43.8	41.4	41.0
	27	32.3	32.7	35.7	37.7	37.3	38.1	39.3	42.1	42.4	42.3	40.9	39.4
	28	30.7	30.6	34.9	39.8	42.8	44.6	46.9	47.4	47.0	46.8	45.5	44.5
	29	37.4	38.6	40.6	42.9	43.9	44.2	44.5	44.3	44.3	43.9	44.1	43.9
	30	—	—	—	—	—	—	—	—	—	—	—	—
	31	42.3	43.0	44.0	44.1	44.7	45.5	45.8	46.0	47.1	48.8	—	41.6
Hourly Means	38.62	39.60	41.98	43.96	45.43	46.47	47.17	47.62	47.98	47.87	47.04	45.80	

WET THERMOMETER.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
69.0	68.4	68.0	67.8	67.4	67.1	68.0	64.5	62.1	60.9	59.9	57.6	67.88
58.8	56.8	55.6	53.9	51.8	53.2	54.4	54.7	55.4	57.6	57.0	56.2	57.54
60.7	53.2	54.4	52.9	52.2	51.6	—	—	—	—	—	—	57.62
—	—	—	—	—	—	63.3	63.0	62.6	63.2	62.9	62.2	57.73
55.7	53.7	51.6	51.0	48.2	48.4	44.7	43.7	42.9	43.5	43.9	44.0	55.98
57.6	57.5	57.4	56.5	55.8	55.0	55.5	55.1	55.3	55.5	55.6	56.1	58.48
60.3	58.2	57.3	56.8	56.2	56.4	54.5	53.1	52.7	51.5	50.7	49.9	52.54
51.0	50.8	51.3	51.4	51.0	50.9	50.9	51.0	51.2	51.3	51.0	50.9	51.30
52.2	52.0	51.6	51.4	51.4	51.1	51.1	50.8	49.8	48.0	46.5	46.5	57.12
55.6	54.3	53.4	53.6	54.5	56.4	—	—	—	—	—	—	56.77
—	—	—	—	—	—	65.9	66.4	66.3	66.8	66.7	57.9	54.04
58.6	58.0	58.0	57.5	56.2	54.7	53.2	52.7	51.6	51.6	51.0	49.3	54.31
56.3	56.2	56.2	55.8	54.7	53.7	52.4	52.1	51.5	50.7	50.8	50.8	58.55
55.3	52.0	53.0	51.9	51.0	51.1	51.1	51.2	52.3	52.6	53.0	54.0	50.77
60.7	61.2	60.9	58.0	56.1	55.5	57.4	56.3	54.6	52.5	51.3	50.3	49.96
53.7	53.4	52.5	50.8	50.7	48.5	48.5	47.4	47.6	47.0	46.2	43.2	43.05
56.0	49.9	47.5	48.0	47.3	46.8	—	—	—	—	—	—	49.94
—	—	—	—	—	—	48.2	48.0	47.3	46.2	45.2	44.3	49.90
44.7	43.2	41.9	39.2	37.6	36.6	36.0	35.2	35.6	37.9	36.7	36.6	40.65
51.2	50.8	50.0	49.1	48.1	48.4	49.6	50.3	51.6	51.9	48.8	45.8	43.64
40.5	40.1	39.8	37.6	37.3	36.8	36.3	35.2	34.9	35.6	35.6	35.2	46.27
36.4	35.4	34.4	31.5	30.5	30.0	30.6	30.2	28.3	28.9	29.4	29.0	55.75
47.2	40.2	39.5	37.8	39.5	41.4	41.4	40.6	40.6	40.6	40.7	40.5	53.58
46.2	43.6	42.2	41.0	40.6	40.0	—	—	—	—	—	—	55.35
—	—	—	—	—	—	40.2	39.5	38.6	37.9	36.9	37.5	50.66
50.6	45.3	44.3	43.7	42.8	42.7	41.9	41.6	42.0	40.8	39.7	39.1	53.99
59.3	58.3	57.9	57.2	58.0	57.0	58.2	58.2	56.4	55.5	53.5	51.5	52.23
55.5	53.9	53.0	51.6	50.2	50.0	49.4	48.0	46.8	47.2	47.6	48.8	51.62
57.2	57.5	58.0	57.4	59.0	56.2	53.6	51.6	51.1	51.3	51.4	47.7	50.58
53.5	54.0	52.3	51.7	51.4	49.3	49.0	49.4	49.0	48.8	48.6	47.9	49.98
—	—	—	—	—	—	—	—	—	—	—	—	49.57
53.99	52.23	51.62	50.58	49.98	49.57	50.20	49.60	49.16	49.05	48.48	47.42	50.20
—	—	—	—	—	—	—	—	—	—	—	—	49.60
53.7	54.0	53.9	54.0	54.1	51.6	—	—	—	—	—	—	49.16
—	—	—	—	—	—	45.4	45.2	45.4	45.5	45.2	44.7	49.05
45.3	44.3	43.2	40.7	41.4	42.0	42.3	43.0	42.0	42.6	41.8	41.7	48.48
43.4	42.2	40.8	40.4	37.0	35.0	33.3	33.3	33.9	34.9	34.6	36.2	47.9
43.9	40.6	39.2	37.8	38.8	37.6	38.2	37.4	35.7	35.0	36.4	36.5	46.2
43.6	42.7	43.0	42.1	41.1	41.3	40.1	38.5	37.6	36.0	36.0	35.9	45.3
54.1	54.9	53.1	54.1	56.0	55.1	55.5	55.0	54.5	54.4	53.9	53.4	44.3
52.5	49.6	48.2	47.2	46.8	47.0	—	—	—	—	—	—	43.2
—	—	—	—	—	—	39.6	39.4	36.5	35.6	35.8	34.1	42.3
47.6	47.8	47.6	45.3	45.4	45.3	47.0	46.6	46.0	46.2	45.5	44.5	41.7
54.0	49.3	48.2	46.8	44.9	44.9	44.5	43.7	43.5	42.9	42.3	42.7	41.2
44.9	44.1	43.0	42.3	38.6	36.5	35.3	34.6	34.9	36.9	34.1	32.7	40.8
45.0	46.4	46.3	44.7	44.8	44.7	44.6	43.3	42.4	41.2	40.9	41.2	39.3
47.6	48.4	47.1	46.0	44.5	44.6	43.6	43.6	43.2	42.6	41.2	38.2	38.2
40.8	40.1	39.3	39.1	38.4	38.2	—	—	—	—	—	—	37.7
—	—	—	—	—	—	41.6	41.8	40.0	39.3	38.2	37.7	36.5
40.6	40.5	42.1	42.8	42.2	41.8	41.5	41.0	39.9	38.0	36.3	36.5	35.6
39.0	38.4	37.0	36.9	36.2	35.6	34.9	35.0	35.7	35.6	35.4	36.2	34.9
36.0	35.5	34.9	34.7	33.9	34.4	34.9	34.5	33.1	31.7	31.7	30.4	31.7
35.1	32.6	32.8	31.1	29.9	29.5	29.6	29.6	31.1	31.0	31.7	32.2	31.0
42.3	42.0	41.2	39.2	38.8	39.8	41.0	41.4	42.3	42.8	43.6	44.7	31.0
44.1	43.0	43.2	42.2	41.0	40.2	—	—	—	—	—	—	42.8
—	—	—	—	—	—	41.1	42.0	44.8	46.0	46.1	45.8	42.5
53.0	52.4	51.6	52.1	52.2	52.2	50.9	48.4	47.5	47.1	47.1	45.8	42.1
37.5	36.7	36.8	35.6	34.3	33.8	32.2	30.6	32.1	31.7	31.7	30.3	42.5
39.8	38.9	38.8	37.9	37.8	37.2	35.2	34.7	33.7	32.7	31.7	31.9	42.1
38.5	35.3	33.3	31.9	31.4	31.0	31.3	32.4	31.4	31.0	32.2	31.6	42.5
44.5	44.1	44.1	43.9	43.3	43.1	43.1	43.0	42.6	42.5	42.4	40.3	42.4
43.4	43.3	43.3	42.7	42.7	42.1	—	—	—	—	—	—	42.4
—	—	—	—	—	—	43.3	42.4	42.2	42.1	42.5	42.8	42.1
40.9	43.0	42.5	40.1	36.8	35.0	34.2	33.4	32.2	32.6	32.1	31.9	42.8
—	—	—	—	—	—	—	—	—	—	—	—	32.6
44.27	43.47	42.87	41.98	41.24	40.75	40.16	39.76	49.39	39.15	38.86	38.46	32.1



WET THERMOMETER.													
Hours of Mean Göttingen Time	0	1	2	3	4	5	6	7	8	9	10	11	
Hours of Mean Toronto Time	18	19	20	21	22	23	0	1	2	3	4	5	
NOVEMBER.	1	32.1	32.1	34.4	40.0	45.0	47.9	50.9	50.7	51.7	50.7	47.3	45.5
	2	40.2	40.3	40.6	41.1	41.9	42.6	43.2	42.8	42.6	42.9	42.7	39.7
	3	31.5	31.0	33.1	35.2	39.6	39.4	40.2	40.9	40.0	39.4	37.4	34.7
	4	27.8	27.8	31.6	32.7	38.9	40.0	41.2	42.2	41.0	40.6	39.0	34.8
	5	29.1	28.9	32.4	38.6	42.0	44.3	43.2	46.6	45.6	45.5	43.9	42.7
	6	—	—	—	—	—	—	—	—	—	—	—	—
	7	46.5	46.4	46.0	46.0	46.0	46.4	46.0	45.3	44.4	44.0	43.7	43.2
	8	40.2	40.4	40.6	41.1	40.9	41.1	40.8	40.5	40.2	39.7	38.8	38.2
	9	38.2	41.5	41.2	40.1	40.5	36.8	38.3	42.8	37.3	35.5	35.5	35.4
	10	28.0	28.9	31.3	32.2	32.4	34.5	32.6	34.3	34.9	36.0	36.6	36.6
	11	36.4	36.2	37.4	38.8	40.3	41.2	42.0	42.9	44.0	42.7	41.1	39.9
	12	38.3	38.7	39.0	38.4	38.3	38.5	39.9	40.7	41.2	41.0	41.2	38.6
	13	—	—	—	—	—	—	—	—	—	—	—	—
	14	37.4	37.1	38.1	39.3	40.0	40.1	40.9	40.7	41.1	40.8	40.3	37.7
	15	30.0	29.8	30.8	31.7	32.3	32.4	33.2	33.4	33.0	33.3	33.2	32.3
	16	32.1	31.9	32.5	32.6	33.7	34.4	34.8	35.2	35.4	35.4	34.2	34.4
	17	37.2	36.6	37.2	37.6	37.2	37.6	37.8	38.2	38.7	39.3	40.2	40.4
	18	23.5	23.5	23.2	22.5	22.5	22.4	19.9	19.1	17.9	17.7	17.6	16.4
	19	23.7	24.0	25.6	26.9	29.1	30.1	30.1	30.6	30.8	32.3	29.2	28.5
	20	—	—	—	—	—	—	—	—	—	—	—	—
	21	21.2	21.4	22.4	24.5	25.4	27.7	27.9	27.9	27.3	26.8	25.8	25.3
	22	20.1	20.8	21.5	22.2	24.9	27.5	28.5	29.4	30.2	30.6	29.9	29.3
	23	29.7	30.1	30.6	31.1	32.4	32.5	34.3	35.5	35.1	34.7	33.8	33.6
	24	34.2	32.6	32.3	32.5	32.6	30.8	31.5	31.0	30.8	29.5	28.7	27.2
	25	27.6	27.8	28.1	28.7	28.9	29.2	29.7	32.2	29.8	30.0	31.1	30.4
	26	16.8	16.8	18.0	19.9	22.0	24.0	25.7	27.2	27.3	27.7	27.4	28.9
	27	—	—	—	—	—	—	—	—	—	—	—	—
	28	12.5	13.8	14.7	16.3	19.0	22.0	22.4	23.0	22.8	22.8	22.2	19.7
	29	16.0	15.2	14.9	17.6	18.1	18.9	20.0	20.5	21.1	21.9	20.9	17.3
	30	25.4	25.0	26.0	26.1	25.4	25.5	26.2	25.8	25.8	26.3	26.3	26.7
Hourly Means	29.83	29.95	30.90	32.07	33.43	34.15	34.66	35.36	35.00	34.89	34.15	32.98	
DECEMBER.	1	21.7	20.6	21.2	21.9	23.3	23.7	24.9	25.8	26.5	26.9	25.6	25.9
	2	24.2	24.6	25.2	26.0	27.5	28.3	29.2	30.0	30.6	30.0	30.0	29.5
	3	34.9	34.6	34.8	35.2	35.2	35.2	35.4	35.8	37.3	36.5	34.8	33.6
	4	—	—	—	—	—	—	—	—	—	—	—	—
	5	32.5	34.6	34.8	33.7	33.8	33.5	33.4	33.5	33.4	33.3	32.4	31.0
	6	7.9	9.7	7.9	13.3	15.9	18.0	18.3	19.7	19.6	20.0	18.8	18.9
	7	14.9	12.3	14.1	18.9	22.8	25.3	26.4	27.7	27.9	28.1	27.9	26.8
	8	26.6	28.7	30.4	31.7	32.1	32.0	32.2	32.2	32.7	32.8	32.8	32.9
	9	32.7	32.7	31.7	30.8	30.8	31.4	31.4	31.1	31.9	31.5	30.7	28.7
	10	17.3	17.3	17.5	17.9	18.2	18.7	19.0	19.6	19.9	19.7	20.3	19.0
	11	—	—	—	—	—	—	—	—	—	—	—	—
	12	24.0	24.4	25.2	26.9	30.5	32.1	33.1	33.5	33.1	32.9	32.4	31.0
	13	28.3	26.8	28.4	27.1	25.7	25.6	24.9	24.6	24.4	24.0	22.7	21.8
	14	18.6	18.2	18.4	19.7	21.7	24.0	26.5	27.9	29.6	29.8	29.6	28.2
	15	—	20.9	20.6	22.1	26.4	25.5	26.8	27.4	27.2	26.9	26.5	24.6
	16	20.7	20.7	22.2	23.5	23.8	25.5	25.4	25.7	26.3	25.3	22.9	21.9
	17	13.3	16.3	16.9	17.9	22.1	23.6	24.6	25.5	25.7	25.6	26.4	27.7
	18	—	—	—	—	—	—	—	—	—	—	—	—
	19	23.5	24.4	25.6	27.3	29.4	32.0	32.4	33.2	32.8	32.7	32.7	30.3
	20	14.4	11.5	13.3	19.3	25.3	25.6	29.6	31.4	32.5	32.6	32.4	25.7
	21	24.4	26.6	27.7	29.2	32.4	33.0	33.4	35.3	35.1	34.9	34.4	34.1
	22	19.0	14.9	12.1	11.3	10.9	12.7	11.5	11.7	10.6	8.8	7.8	6.9
	23	1.9	2.0	3.9	5.1	8.0	10.3	10.9	12.1	13.9	14.6	14.7	14.5
	24	8.7	8.9	11.1	12.6	14.8	15.7	18.2	19.1	20.5	19.7	18.9	17.9
	25	—	—	—	—	—	—	—	—	—	—	—	—
	26	29.2	29.1	29.2	29.4	29.8	30.3	29.9	30.0	30.0	29.8	29.6	29.4
	27	28.1	28.1	28.3	28.7	28.7	30.0	30.8	31.0	31.8	30.3	30.0	29.5
	28	17.4	20.5	21.1	22.0	22.9	23.8	23.4	22.8	22.7	23.2	23.0	23.5
	29	30.8	30.7	30.7	30.9	31.5	31.7	32.0	32.4	32.6	32.8	33.0	32.8
	30	32.7	—	32.8	29.6	27.3	26.9	24.4	22.1	21.9	21.5	19.9	19.4
	31	—	9.7	9.1	10.1	12.1	14.3	14.9	17.3	17.9	17.1	16.3	15.1
	32	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means	21.91	21.11	22.01	23.04	24.55	25.51	26.03	26.61	26.94	26.71	26.17	25.21	



WET THERMOMETER.												
12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
46.1	46.1	45.2	44.8	44.6	44.3	43.3	42.4	42.0	42.0	40.8	40.4	43.76
37.4	36.4	36.4	36.4	35.8	35.2	34.6	35.7	34.9	34.8	33.5	32.4	38.50
31.5	30.8	30.4	29.6	29.5	28.5	29.4	28.2	27.6	27.9	28.4	27.5	32.99
32.6	31.4	29.8	30.2	31.5	32.2	29.5	29.7	29.8	29.6	29.8	29.6	33.47
39.4	38.3	38.0	38.8	39.4	38.7	—	—	—	—	—	—	—
—	—	—	—	—	—	41.4	43.8	46.0	46.9	46.8	47.4	41.15
42.5	41.8	40.5	39.9	39.9	40.5	41.0	40.8	40.4	39.6	39.6	39.7	42.92
38.2	37.7	37.3	37.4	37.2	37.2	37.0	36.7	36.8	36.9	37.3	37.7	38.75
34.7	33.5	32.3	32.9	32.8	31.2	31.7	31.1	30.4	29.7	28.8	29.2	35.06
38.1	38.2	37.8	37.8	37.8	37.7	37.4	37.5	37.6	37.3	36.8	36.8	35.38
40.5	40.7	40.4	40.2	39.7	39.6	39.4	38.8	38.8	39.0	40.2	39.3	39.98
38.4	37.9	37.9	37.6	37.2	37.4	—	—	—	—	—	—	—
—	—	—	—	—	—	34.3	35.8	36.0	35.8	35.8	36.2	38.09
36.5	35.1	34.0	33.5	33.4	32.9	32.3	31.6	30.9	29.9	30.0	30.7	36.01
31.9	29.2	29.6	29.5	29.5	29.7	30.3	30.1	30.6	30.9	31.4	31.9	31.25
33.7	33.9	34.4	34.5	34.2	34.9	34.8	35.4	34.9	35.1	36.8	37.1	34.43
40.8	41.2	41.0	41.2	41.9	36.2	34.5	32.3	30.8	29.4	25.9	24.5	36.57
17.0	17.6	19.0	19.9	19.1	19.5	20.5	21.4	22.0	22.0	22.9	23.0	20.42
28.7	27.0	26.8	26.0	25.3	24.7	—	—	—	—	—	—	—
—	—	—	—	—	—	22.8	23.3	23.5	22.8	22.7	21.6	26.50
24.3	23.4	22.9	22.7	22.9	22.8	22.8	22.7	22.6	21.2	21.4	21.6	23.95
30.2	30.5	31.5	30.9	30.3	31.0	31.1	31.7	32.2	30.4	29.5	29.9	28.50
33.8	33.4	32.9	32.8	33.9	34.5	34.7	34.7	33.1	33.3	33.9	34.1	33.27
26.4	26.0	23.2	21.6	20.9	21.2	22.2	22.8	25.6	26.5	28.2	27.3	27.73
29.4	27.2	25.8	26.0	25.7	24.3	23.8	22.0	20.8	20.4	18.3	17.2	26.43
29.0	27.7	27.5	27.6	26.9	26.4	—	—	—	—	—	—	—
—	—	—	—	—	—	18.3	14.0	12.6	8.7	12.9	13.0	21.93
19.0	17.9	18.4	18.1	18.2	18.2	18.1	18.0	16.8	14.3	13.4	—	18.33
15.9	14.7	14.4	14.4	16.4	17.9	19.7	20.1	24.1	25.4	24.9	25.3	18.98
26.9	27.7	28.1	28.0	29.2	28.6	27.4	25.4	23.5	23.4	23.1	22.1	26.00
32.42	31.74	31.37	31.24	31.28	30.97	30.47	30.23	30.17	29.74	29.73	30.22	31.96
25.6	25.6	25.5	25.4	25.1	25.2	25.3	25.1	24.9	24.6	24.0	24.2	24.52
30.0	30.5	31.2	32.1	32.3	32.5	33.1	33.8	35.0	35.6	35.4	35.2	30.49
32.2	32.0	32.4	31.9	—	28.0	—	—	—	—	—	—	—
—	—	—	—	—	—	31.9	30.9	31.5	31.4	31.9	32.6	33.48
28.3	26.6	24.0	21.0	19.9	17.3	12.7	10.6	7.5	7.5	6.6	4.7	24.44
17.5	18.1	18.9	18.6	18.5	17.8	17.3	20.5	20.8	20.1	20.3	18.7	17.30
25.1	25.7	26.0	26.1	25.4	25.3	25.6	25.3	25.3	25.3	25.7	25.5	24.14
32.7	32.4	32.4	32.4	32.5	31.5	31.8	32.5	31.2	31.7	32.8	32.9	31.83
27.2	26.0	24.9	23.4	22.8	22.4	20.9	19.7	18.3	17.9	17.5	17.4	26.41
19.1	19.1	19.3	19.8	19.9	20.4	—	—	—	—	—	—	—
—	—	—	—	—	—	23.1	22.7	21.9	21.9	22.7	23.1	19.89
29.9	28.0	27.9	29.8	30.0	28.7	28.5	28.9	28.9	29.0	27.9	28.1	29.36
21.7	21.5	20.7	20.3	20.3	19.8	19.7	19.1	19.2	19.4	18.9	18.4	22.64
27.9	27.7	26.7	26.5	24.5	25.3	22.9	22.8	19.6	19.7	19.2	—	24.13
24.5	24.4	23.5	23.2	21.5	21.5	20.9	20.5	20.3	20.3	20.3	20.3	23.31
21.9	20.9	18.3	17.1	16.9	16.1	15.9	13.6	11.4	10.1	9.5	10.0	19.40
28.7	27.9	27.9	26.0	28.3	32.4	—	—	—	—	—	—	—
—	—	—	—	—	—	20.8	21.8	22.0	21.7	22.1	22.9	23.67
28.7	24.4	24.0	23.8	18.3	18.4	18.8	18.5	14.1	17.1	16.3	17.8	24.85
25.1	24.2	23.9	24.2	22.7	22.7	23.0	18.9	19.5	19.5	21.0	24.2	23.44
33.9	34.0	33.0	32.8	33.6	33.7	33.6	33.6	33.0	32.6	25.1	20.6	31.67
6.4	5.6	5.5	5.3	4.7	7.3	6.5	4.1	3.7	2.6	3.8	2.5	8.17
13.9	13.5	13.6	12.3	12.4	13.4	13.3	13.0	12.5	12.0	10.7	9.5	10.92
17.0	17.9	17.0	16.6	17.5	17.2	—	—	—	—	—	—	—
—	—	—	—	—	—	28.4	28.9	29.4	29.8	29.8	30.0	19.40
29.3	29.2	28.5	29.4	28.2	28.1	28.0	28.3	28.3	28.2	28.2	28.5	29.08
29.5	29.6	29.9	31.2	28.8	25.1	20.7	18.1	14.7	14.1	13.7	16.1	26.12
23.8	24.6	25.7	26.9	26.7	27.2	27.9	28.6	28.8	29.0	29.0	30.0	24.77
32.9	32.8	33.9	34.4	34.3	34.0	33.7	33.4	33.6	33.5	32.9	32.6	32.66
18.3	17.0	16.4	15.7	14.7	13.2	13.1	12.4	12.2	12.9	12.8	—	19.87
13.9	14.0	13.8	13.2	11.3	10.7	—	—	—	—	—	—	—
—	—	—	—	—	—	15.9	17.7	19.4	20.5	21.2	20.9	15.06
24.63	24.19	23.88	23.71	22.73	22.79	22.71	22.34	21.74	21.78	21.46	21.87	23.75

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.																															
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16																																
Humidity of the Air.	JANUARY.	1	86	90	79	73	61	66	64	65	75	—	—	—	} 79																														
		2	—	—	—	—	—	—	—	—	—	90	95	100		} 87																													
		3	100	100	80	67	75	82	76	82	88	97	95	95			} 88																												
		4	91	98	92	100	82	88	84	81	79	81	96	84				84	} 88																										
		5	93	94	89	72	67	71	87	87	83	76	89	86				86		} 88																									
		6	88	82	79	78	90	85	90	95	99	100	91	80				80			} 80																								
		7	85	75	77	72	67	61	74	91	93	94	84	86				86				} 88																							
		8	88	96	82	84	80	81	83	92	92	96	—	—				—					} 88																						
		9	—	—	—	—	—	—	—	—	—	—	95	88				88						} 88																					
		10	91	88	88	82	75	80	92	99	91	91	82	85				100							} 78																				
		11	97	98	94	78	58	50	73	76	84	83	65	78				78								} 75																			
		12	81	88	68	60	70	76	69	74	74	79	79	83				83									} 90																		
		13	85	89	94	86	97	88	91	88	89	90	90	90				90										} 74																	
		14	86	65	67	51	89	93	66	69	78	72	78	79				79											} 77																
		15	79	82	69	71	66	73	70	75	71	—	—	—				—												} 82															
		16	—	—	—	—	—	—	—	—	—	94	88	85				85													} 78														
		17	92	88	73	73	65	58	63	74	84	100	87	92				92														} 83													
		18	98	100	90	86	78	74	83	92	83	67	72	68				68															} 76												
		19	74	57	75	68	79	77	80	86	84	88	75	92				92																} 69											
		20	96	98	100	96	96	98	98	98	99	96	86	86				86																	} 86										
		21	86	83	79	74	74	82	84	83	75	76	76	72				72																		} 82									
		22	74	78	80	74	79	75	71	77	83	—	—	—				—																			} 73								
		23	—	—	—	—	—	—	—	—	—	100	100	100				100																				} 80							
		24	90	100	88	71	70	62	73	72	75	68	67	78				78																					} 78						
		25	74	76	70	57	43	71	72	73	72	68	70	88				88																						} 81					
		26	90	94	78	64	82	96	99	100	86	82	79	82				82																							} 81				
		27	84	86	75	70	72	71	89	78	78	93	93	93				93																								} 81			
		28	93	88	82	73	73	77	75	68	54	71	58	66				66																									} 73		
		29	72	82	82	72	73	79	91	98	91	—	—	—				—																										} 80	
		30	—	—	—	—	—	—	—	—	—	82	70	72				72																											} 78
		31	92	96	100	81	71	66	65	73	73	77	72	70				70																											
Hourly Means		87	87	82	74	74	76	79	83	82	85	82	84	81																															
Tension of the Vapour.	JANUARY.	1	In. .111	In. .137	In. .146	In. .151	In. .143	In. .145	In. .141	In. .145	In. .159	—	—	—	} .121																														
		2	—	—	—	—	—	—	—	—	—	.055	.052	.057		} .096																													
		3	.055	.057	.065	.063	.078	.088	.081	.091	.098	.114	.120	.126			.126	} .110																											
		4	.112	.120	.132	.166	.136	.129	.107	.096	.081	.080	.083	.081			.081		} .076																										
		5	.084	.074	.078	.071	.071	.069	.055	.057	.055	.081	.106	.106			.106			} .169																									
		6	.113	.115	.120	.128	.160	.166	.185	.200	.215	.230	.219	.176			.176				} .113																								
		7	.166	.144	.134	.125	.118	.102	.098	.095	.081	.094	.102	.105			.105					} .133																							
		8	.102	.111	.135	.146	.143	.145	.147	.157	.163	—	—	—			—						} .121																						
		9	—	—	—	—	—	—	—	—	—	.125	.112	.110			.110							} .134																					
		10	.115	.116	.134	.140	.148	.141	.123	.120	.102	.085	.088	.143			.143								} .101																				
		11	.112	.120	.156	.156	.134	.118	.146	.138	.141	.145	.116	.127			.127									} .102																			
		12	.127	.135	.119	.108	.119	.125	.104	.098	.083	.071	.065	.062			.062										} .152																		
		13	.059	.059	.069	.078	.093	.094	.106	.113	.129	.140	.140	.139			.139											} .117																	
		14	.157	.139	.174	.142	.217	.210	.133	.134	.140	.124	.126	.120			.120												} .155																
		15	.119	.114	.101	.104	.099	.105	.097	.105	.104	—	—	—			—													} .168															
		16	—	—	—	—	—	—	—	—	—	.154	.152	.150			.150														} .176														
		17	.165	.168	.154	.171	.176	.165	.153	.151	.138	.151	.125	.136			.136															} .196													
		18	.136	.151	.170	.198	.200	.178	.167	.162	.210	.143	.157	.152			.152																} .118												
		19	.143	.100	.181	.198	.209	.204	.184	.183	.179	.181	.177	.184			.184																	} .066											
		20	.191	.197	.214	.202	.202	.203	.206	.208	.207	.200	.167	.160			.160																		} .093										
		21	.159	.148	.135	.128	.130	.138	.128	.123	.093	.081	.079	.072			.072																			} .135									
		22	.073	.076	.070	.071	.077	.066	.058	.057	.065	—	—	—			—																				} .147								
		23	—	—	—	—	—	—	—	—	—	.060	.058	.058			.058																					} .100							
		24	.056	.069	.088	.089	.100	.094	.102	.098	.105	.107	.102	.112			.112																						} .156						
		25	.111	.125	.135	.128	.107	.168	.149	.144	.142	.140	.133	.129			.129																							} .200					
		26	.140	.170	.157	.137	.161	.178	.182	.175	.132	.116	.108	.108			.108																								} .146				
		27	.102	.102	.089	.097	.108	.106	.124	.109	.104	.083	.080	.092			.092																									} .100			
		28	.142	.137	.137	.152	.168	.179	.171	.160	.138	.168	.156	.168			.168																										} .156		
		29	.173	.189	.225	.217	.226	.206	.211	.237	.227	—	—	—			—																											} .200	
		30	—	—	—	—	—	—	—	—	—	.176	.152	.157			.157																												} .146
		31	.190	.196	.213	.197	.147	.128	.116	.122	.118	.121	.112	.099			.099																												
Hourly Means		.124	.126	.132	.138	.141	.141	.133	.134	.131	.120	.118	.120	.130																															

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16	
Humidity of the Air.  FEBRUARY.	1	75	74	66	61	60	61	64	65	82	90	81	79	71
	2	79	78	62	74	71	71	81	86	98	100	100	100	83
	3	98	100	100	100	98	94	98	100	83	79	82	85	93
	4	88	92	84	82	89	96	96	98	94	93	86	85	90
	5	83	82	81	79	75	88	81	84	83	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	98	79	84	83
	7	86	86	83	69	74	66	75	80	92	93	95	91	82
	8	88	93	79	82	76	79	79	84	95	84	94	94	86
	9	75	80	91	81	65	62	65	68	74	73	74	79	74
	10	84	87	71	74	47	67	78	70	98	92	93	94	80
	11	100	98	78	96	98	100	98	100	100	100	94	91	95
	12	85	90	94	89	79	81	87	91	93	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	68	67	57	82
	14	75	74	72	74	77	72	70	88	78	81	86	88	78
	15	94	93	78	69	66	64	73	77	85	89	92	77	80
	16	94	87	80	79	80	79	81	82	80	80	87	81	82
	17	90	90	83	71	68	68	71	82	90	82	80	95	81
	18	91	88	80	80	78	94	94	94	96	100	98	96	91
	19	79	76	77	78	72	74	75	80	80	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	68	81	95	78
	21	84	81	74	64	75	73	78	74	76	89	90	94	79
	22	95	100	81	73	89	72	79	81	90	90	88	89	85
	23	88	92	84	81	78	82	79	68	82	79	84	89	82
	24	92	95	73	71	60	71	81	83	76	80	89	83	79
	25	84	86	88	85	90	87	80	79	83	89	92	93	86
	26	94	92	99	98	98	96	96	96	94	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	97	90	94	95
	28	98	98	93	89	90	91	92	95	93	94	95	99	94
Hourly Means		87	88	81	79	77	79	81	84	87	87	87	88	84
Tension of the Vapour.  FEBRUARY.	1	.103	.111	.114	.113	.121	.126	.113	.106	.145	.157	.151	.152	.126
	2	.152	.150	.135	.176	.187	.182	.196	.200	.215	.232	.245	.256	.193
	3	.241	.240	.272	.332	.340	.303	.273	.265	.241	.198	.185	.177	.255
	4	.173	.188	.194	.205	.216	.219	.225	.237	.230	.204	.181	.168	.203
	5	.148	.137	.146	.148	.150	.166	.151	.148	.157	—	—	—	—
	6	—	—	—	—	—	—	—	—	—	.189	.150	.152	.153
	7	.153	.152	.163	.144	.153	.128	.135	.129	.130	.131	.127	.116	.138
	8	.089	.081	.067	.069	.068	.065	.053	.053	.058	.049	.055	.062	.064
	9	.060	.067	.091	.096	.094	.095	.097	.109	.114	.122	.111	.112	.097
	10	.110	.116	.123	.148	.113	.164	.162	.143	.200	.137	.133	.133	.140
	11	.146	.175	.158	.208	.215	.234	.229	.228	.220	.241	.200	.175	.202
	12	.150	.140	.147	.147	.145	.154	.141	.147	.159	—	—	—	—
	13	—	—	—	—	—	—	—	—	—	.147	.140	.118	.144
	14	.115	.094	.092	.079	.076	.061	.056	.067	.062	.068	.075	.076	.077
	15	.076	.081	.095	.088	.095	.096	.103	.107	.133	.135	.137	.130	.106
	16	.156	.142	.135	.135	.135	.111	.083	.070	.064	.059	.060	.052	.100
	17	.054	.053	.057	.059	.067	.074	.070	.071	.066	.072	.100	.109	.071
	18	.107	.108	.121	.136	.153	.174	.174	.176	.192	.206	.197	.174	.160
	19	.105	.091	.089	.099	.084	.083	.074	.073	.072	—	—	—	—
	20	—	—	—	—	—	—	—	—	—	.082	.078	.090	.085
	21	.084	.082	.089	.096	.117	.113	.110	.101	.107	.130	.132	.121	.107
	22	.128	.127	.128	.134	.145	.127	.113	.096	.090	.086	.089	.084	.112
	23	.093	.108	.122	.141	.146	.163	.153	.135	.143	.124	.130	.133	.133
	24	.131	.129	.136	.144	.133	.144	.142	.133	.128	.141	.138	.113	.134
	25	.102	.103	.114	.117	.131	.135	.126	.123	.129	.138	.145	.158	.127
	26	.174	.174	.198	.200	.204	.200	.195	.196	.195	—	—	—	—
	27	—	—	—	—	—	—	—	—	—	.202	.166	.156	.188
	28	.159	.176	.210	.217	.209	.192	.184	.191	.186	.188	.181	.196	.191
Hourly Means		.125	.126	.133	.143	.145	.146	.140	.138	.143	.143	.138	.134	.138

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.																
Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	MARCH.	1	96	96	94	96	96	94	100	100	98	98	98	100	96	
		2	98	100	100	100	100	100	100	94	73	82	82	82	82	91
		3	84	79	78	77	69	70	75	84	78	80	86	86	86	79
		4	94	98	98	80	85	93	92	96	90	92	98	88	88	92
		5	88	87	88	90	83	88	86	86	96	—	—	—	—	89
		6	—	—	—	—	—	—	—	—	—	—	92	90	92	81
		7	82	84	82	66	68	46	98	89	89	88	88	89	92	82
		8	97	91	83	84	71	80	73	79	83	81	76	85	85	82
		9	85	86	81	87	98	98	98	100	100	100	100	44	44	90
		10	46	61	62	54	49	60	56	60	98	77	77	78	78	65
		11	77	96	84	76	71	69	66	84	77	—	70	73	73	77
		12	87	69	67	72	69	71	80	83	81	—	—	—	—	77
		13	—	—	—	—	—	—	—	—	—	80	78	81	81	85
		14	81	90	74	77	70	71	94	87	96	96	88	98	98	85
		15	100	83	63	71	33	26	35	47	56	75	81	83	83	63
		16	79	88	64	66	53	59	68	74	79	75	82	63	63	71
		17	72	65	61	38	30	22	22	94	94	48	58	54	54	55
		18	69	60	60	57	40	41	51	55	66	79	98	83	83	63
		19	86	64	66	72	35	30	39	39	43	—	—	—	—	54
		20	—	—	—	—	—	—	—	—	—	51	54	66	66	80
		21	71	70	72	80	69	70	60	90	96	94	89	94	94	80
		22	94	91	83	71	71	74	82	86	86	88	90	88	88	84
		23	86	81	75	75	81	70	83	88	90	90	91	94	94	84
		24	96	81	80	83	75	80	82	92	94	—	—	—	—	86
		25	—	—	—	—	—	—	—	—	—	92	94	90	90	86
		26	82	78	75	71	52	45	45	49	52	—	—	—	—	60
		27	—	—	—	—	—	—	—	—	—	57	55	60	60	64
		28	72	68	51	49	41	49	43	64	77	86	84	87	87	64
		29	89	77	84	88	88	83	85	90	92	90	98	90	90	88
		30	88	83	75	65	53	35	38	34	35	41	50	62	62	55
		31	68	73	58	64	61	74	85	66	63	81	81	79	79	71
Hourly Means		83	81	75	73	66	65	70	76	80	80	82	80	76		
Tension of the Vapour.	MARCH.	1	In. .187	In. .196	In. .206	In. .213	In. .225	In. .206	In. .213	In. .226	In. .227	In. .219	In. .210	In. .213	In. .212	
		2	.208	.218	.246	.263	.276	.305	.309	.216	.205	.189	.184	.183	.233	
		3	.186	.193	.224	.270	.263	.287	.218	.236	.214	.205	.202	.200	.225	
		4	.192	.271	.349	.276	.252	.214	.204	.206	.181	.174	.181	.155	.221	
		5	.148	.142	.150	.170	.156	.159	.153	.153	.168	—	—	—	—	
		6	—	—	—	—	—	—	—	—	—	.159	.157	.158	.156	
		7	.140	.148	.143	.129	.137	.109	.181	.143	.144	.130	.122	.122	.137	
		8	.123	.145	.163	.180	.181	.196	.164	.164	.171	.163	.161	.169	.165	
		9	.166	.185	.236	.232	.251	.264	.255	.269	.260	.232	.254	.133	.228	
		10	.114	.133	.146	.140	.139	.167	.130	.120	.179	.134	.127	.127	.138	
		11	.124	.146	.136	.122	.116	.104	.088	.103	.095	—	.079	.075	.108	
		12	.082	.077	.092	.112	.120	.127	.120	.123	.131	—	—	—	—	
		13	—	—	—	—	—	—	—	—	—	.137	.132	.133	.115	
		14	.130	.156	.152	.185	.172	.166	.172	.142	.145	.147	.135	.141	.154	
		15	.160	.157	.159	.209	.094	.074	.079	.089	.094	.104	.102	.121	.120	
		16	.121	.164	.149	.182	.177	.190	.192	.178	.172	.179	.179	.172	.171	
		17	.176	.183	.217	.194	.163	.105	.084	.259	.228	.102	.112	.102	.160	
		18	.121	.133	.149	.154	.119	.119	.118	.115	.129	.135	.175	.147	.134	
		19	.152	.137	.205	.240	.220	.168	.174	.153	.156	—	—	—	—	
		20	—	—	—	—	—	—	—	—	—	.100	.092	.110	.158	
		21	.111	.115	.130	.134	.121	.134	.121	.154	.164	.158	.147	.148	.136	
		22	.149	.152	.163	.146	.148	.152	.161	.160	.157	.159	.160	.158	.155	
		23	.157	.155	.154	.156	.165	.160	.159	.164	.164	.154	.154	.160	.158	
		24	.168	.167	.185	.197	.173	.177	.178	.196	.199	—	—	—	—	
		25	—	—	—	—	—	—	—	—	—	.190	.184	.174	.182	
		26	.163	.160	.174	.186	.167	.155	.150	.128	.118	—	—	—	—	
		27	—	—	—	—	—	—	—	—	—	.131	.118	.111	.146	
		28	.122	.122	.104	.113	.105	.138	.106	.121	.124	.128	.138	.142	.122	
		29	.150	.154	.193	.191	.186	.209	.211	.205	.208	.203	.243	.280	.203	
		30	.301	.263	.245	.234	.212	.149	.142	.115	.104	.096	.111	.123	.173	
		31	.117	.113	.090	.108	.116	.142	.150	.099	.088	.098	.096	.096	.109	
Hourly Means		.152	.161	.175	.182	.171	.168	.162	.163	.162	.153	.152	.148	.162		

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.																														
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16																															
Humidity of the Air.	APRIL.	1	79	71	94	57	54	65	66	65	74	75	80	75	71																													
		2	85	75	62	46	38	41	43	50	64	—	—	—		57																												
		3	—	—	—	—	—	—	—	—	—	57	54	69																														
		4	55	57	52	58	75	86	94	94	92	96	96	98			91	79																										
		5	96	98	93	67	62	61	54	77	88	92	92	92			91		81																									
		6	100	100	71	72	65	66	80	82	74	85	83	83			83			80																								
		7	74	57	60	78	83	86	84	87	93	94	94	94			88				81																							
		8	94	96	86	92	94	90	92	96	94	92	92	94			94					93																						
		9	100	86	82	86	73	67	72	84	92	—	—	—			—						74																					
		10	—	—	—	—	—	—	—	—	—	52	52	47			—							43																				
		11	48	44	34	27	41	38	27	34	45	51	66	63			54								55																			
		12	70	64	55	50	53	46	45	51	55	65	57	54			92									87																		
		13	60	74	88	96	98	97	97	94	97	73	83	92			91										69																	
		14	92	89	53	42	52	52	34	59	83	90	91	91			83											68																
		15	91	54	54	54	60	62	54	68	71	82	81	83			—												73															
		16	88	75	58	72	62	53	59	83	79	—	—	—			—													91														
		17	—	—	—	—	—	—	—	—	—	70	84	89			91														85													
		18	94	94	96	96	96	91	85	87	91	91	89	91			89															73												
		19	93	88	91	87	85	88	75	77	80	79	85	89			89																66											
		20	87	80	73	80	61	45	41	65	83	87	82	93			78																	56										
		21	93	80	69	59	54	48	50	63	52	68	76	78			70																		61									
		22	81	73	58	57	25	31	42	43	56	66	71	70			—																			71								
		23	71	60	63	65	62	50	54	76	80	—	—	—			—																				71							
		24	—	—	—	—	—	—	—	—	—	51	50	48			—																					71						
		25	60	57	58	57	65	64	68	73	80	81	89	97			87																						68					
		26	100	100	100	100	98	67	58	80	85	94	97	79			55																							64				
		27	81	74	55	52	58	59	68	71	68	71	78	79			89																								65			
		28	80	71	58	56	54	42	37	50	54	55	55	55			80																									65		
		29	59	56	62	59	48	46	48	71	84	65	79	89			—																										65	
		30	86	60	66	55	49	43	53	70	82	—	—	—			—																											65
		31	—	—	—	—	—	—	—	—	—	58	76	80			—																											
Hourly Means		81	74	69	66	64	61	61	71	77	75	78	80	71																														
Tension of the Vapour.	APRIL.	1	In. .097	In. .114	In. .174	In. .127	In. .138	In. .151	In. .150	In. .142	In. .163	In. .157	In. .181	In. .209	In. .150																													
		2	.207	.218	.259	.239	.214	.228	.203	.290	.328	—	—	—	—	217																												
		3	—	—	—	—	—	—	—	—	—	.140	.126	.143	—																													
		4	.121	.126	.123	.132	.170	.183	.201	.206	.204	.221	.221	.227	.227		177																											
		5	.219	.239	.250	.244	.229	.212	.197	.185	.172	.165	.157	.145	.145			201																										
		6	.161	.211	.202	.228	.215	.213	.227	.200	.223	.207	.205	.207	.207				208																									
		7	.192	.168	.173	.216	.229	.235	.231	.224	.226	.220	.206	.188	.188					209																								
		8	.188	.198	.202	.204	.220	.201	.197	.206	.199	.178	.167	.168	.168						194																							
		9	.181	.183	.200	.237	.225	.237	.193	.182	.201	—	—	—	—							184																						
		10	—	—	—	—	—	—	—	—	—	.135	.124	.120	—								149																					
		11	.122	.136	.131	.127	.194	.216	.136	.115	.135	.142	.170	.163	.163									138																				
		12	.166	.164	.150	.132	.147	.132	.120	.130	.129	.147	.125	.118	.118										196																			
		13	.129	.157	.181	.206	.229	.237	.237	.234	.239	.168	.171	.172	.172											159																		
		14	.186	.209	.164	.155	.155	.151	.111	.148	.163	.156	.156	.152	.152												155																	
		15	.149	.121	.140	.174	.173	.168	.146	.147	.144	.163	.163	.167	.167													179																
		16	.161	.167	.151	.187	.199	.185	.168	.166	.153	—	—	—	—														225															
		17	—	—	—	—	—	—	—	—	—	.180	.213	.221	—																													
		18	.226	.230	.225	.227	.229	.225	.211	.216	.223	.225	.227	.231	.231															246														
		19	.240	.256	.263	.276	.268	.279	.250	.243	.244	.222	.211	.209	.209																241													
		20	.222	.243	.296	.311	.276	.207	.223	.230	.237	.224	.208	.210	.210																	280												
		21	.222	.258	.265	.324	.316	.291	.268	.290	.267	.280	.303	.281	.281																		287											
		22	.285	.333	.361	.394	.313	.349	.344	.259	.233	.212	.193	.174	.174																			175										
		23	.164	.159	.178	.201	.209	.194	.186	.184	.175	—	—	—	—																				231									
		24	—	—	—	—	—	—	—	—	—	.155	.155	.146	—																													
		25	.172	.182	.206	.220	.280	.274	.254	.254	.237	.221	.233	.243	.243																					273								
		26	.250	.274	.327	.321	.338	.284	.234	.258	.259	.271	.244	.216	.216																						174							
		27	.195	.196	.172	.158	.172	.164	.178	.182	.164	.167	.169	.167	.167																							143						
		28	.175	.158	.145	.152	.159	.147	.138	.145	.135	.126	.120	.125	.125																								179					
		29	.133	.162	.136	.221	.203	.232	.232	.201	.190	.141	.148	.150	.150																									208				
		30	.159	.179	.218	.229	.246	.229	.257	.235	.264	—	—	—	—																													
		31	—	—	—	—	—	—	—	—	—	.142	.166	.173	—																													
Hourly Means		.181	.194	.204	.217	.222	.216	.204	.203	.204	.184	.183	.181	.200																														

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.															
Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.	
Hours of Mean Toronto Time.		18	20	22	0	2	4	6	8	10	12	14	16		
Humidity of the Air.	MAY.	2	80	68	68	60	58	59	59	67	81	65	77	82	69
		3	87	73	63	70	63	70	61	52	58	65	70	69	67
		4	67	57	39	35	31	26	28	42	47	51	53	68	45
		5	66	71	58	51	51	50	50	67	68	65	66	69	61
		6	43	45	40	32	23	33	38	41	46	53	44	67	42
		7	74	48	57	58	53	47	41	52	61	—	—	—	—
		8	—	—	—	—	—	—	—	—	—	65	67	58	57
		9	72	52	51	61	45	47	62	66	64	82	82	91	65
		10	92	82	72	66	61	61	56	70	76	81	81	61	72
		11	70	67	60	59	58	56	53	57	62	67	70	60	62
		12	70	67	72	66	58	46	56	66	84	88	94	88	71
		13	85	80	88	70	57	46	39	46	49	64	78	83	65
		14	75	52	67	50	36	47	38	70	82	—	—	—	—
		15	—	—	—	—	—	—	—	—	—	67	77	76	61
		16	61	49	33	30	26	29	35	38	51	63	74	72	47
		17	63	43	52	52	52	50	59	74	86	90	88	84	66
		18	84	77	74	72	64	51	65	78	86	88	86	78	75
		19	88	84	83	61	36	57	62	78	63	77	80	62	69
		20	55	48	48	47	43	40	43	63	75	78	84	79	59
		21	80	68	52	52	45	41	42	54	66	—	—	—	—
		22	—	—	—	—	—	—	—	—	—	95	95	92	65
		23	84	85	86	78	79	69	72	84	94	95	95	95	85
		24	95	89	55	74	89	61	50	66	66	76	85	90	75
		25	87	77	69	31	24	52	23	37	51	67	65	67	54
		26	81	52	64	55	53	45	44	61	59	68	73	78	61
		27	74	75	70	75	69	69	67	86	93	95	94	91	80
		28	91	70	73	68	57	56	64	73	78	—	—	—	—
		29	—	—	—	—	—	—	—	—	—	86	81	76	73
		30	82	77	72	61	54	33	43	29	68	64	64	68	60
		31	70	59	44	54	46	27	28	49	74	81	65	71	56
		Hourly Means		76	66	62	57	51	49	49	60	69	74	76	76
Tension of the Vapour.	MAY.	2	.178	.181	.204	.204	.208	.230	.258	.228	.235	.198	.202	.200	.210
		3	.232	.240	.251	.287	.292	.266	.258	.167	.163	.179	.181	.173	.224
		4	.166	.166	.136	.136	.130	.114	.114	.119	.121	.120	.123	.147	.133
		5	.142	.208	.220	.227	.248	.222	.225	.225	.210	.202	.205	.212	.214
		6	.184	.198	.197	.196	.145	.186	.172	.141	.134	.138	.110	.132	.161
		7	.152	.126	.165	.181	.199	.200	.140	.171	.185	—	—	—	—
		8	—	—	—	—	—	—	—	—	—	.124	.120	.109	.156
		9	.132	.121	.140	.189	.170	.186	.197	.197	.169	.169	.204	.193	.192
		10	.199	.247	.274	.334	.333	.371	.342	.356	.356	.349	.340	.340	.292
		11	.258	.258	.241	.229	.210	.185	.162	.164	.162	.169	.166	.147	.196
		12	.166	.182	.231	.244	.262	.256	.270	.227	.237	.236	.224	.249	.232
		13	.261	.276	.310	.240	.205	.178	.140	.127	.119	.134	.137	.148	.190
		14	.149	.148	.213	.177	.143	.217	.184	.183	.171	—	—	—	—
		15	—	—	—	—	—	—	—	—	—	.225	.248	.247	.192
		16	.243	.249	.218	.195	.171	.178	.181	.151	.140	.148	.148	.154	.181
		17	.168	.159	.232	.269	.267	.273	.287	.279	.274	.267	.279	.303	.255
		18	.325	.388	.414	.445	.481	.428	.375	.402	.402	.381	.378	.283	.392
		19	.279	.257	.252	.215	.155	.241	.227	.208	.183	.184	.188	.149	.212
		20	.144	.142	.159	.172	.182	.198	.209	.156	.153	.143	.141	.139	.161
		21	.173	.225	.229	.261	.241	.202	.199	.214	.242	—	—	—	—
		22	—	—	—	—	—	—	—	—	—	.333	.333	.324	.248
		23	.310	.341	.340	.380	.380	.377	.388	.306	.288	.275	.282	.298	.330
		24	.305	.325	.250	.363	.374	.338	.255	.261	.233	.215	.209	.207	.278
		25	.232	.261	.288	.188	.143	.307	.134	.159	.169	.169	.162	.168	.198
		26	.216	.182	.270	.224	.285	.260	.231	.247	.232	.248	.261	.279	.244
		27	.252	.251	.255	.290	.328	.334	.291	.305	.275	.272	.287	.254	.283
		28	.270	.255	.305	.312	.336	.307	.287	.266	.260	—	—	—	.285
		29	—	—	—	—	—	—	—	—	—	.299	.272	.249	—
		30	.266	.262	.251	.243	.256	.173	.228	.127	.185	.187	.181	.192	.212
		31	.219	.248	.231	.289	.266	.196	.181	.207	.214	.208	.202	.202	.221
		Hourly Means		.217	.227	.241	.249	.246	.248	.228	.215	.212	.216	.214	.209

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

Hours of Mean Göttingen Time		0	2	4	6	8	10	12	14	16	18	20	22	Daily and Monthly Means.		
Hours of Mean Toronto Time		18	20	22	0	2	4	6	8	10	12	14	16			
Humidity of the Air.	JUNE.	1	70	69	60	52	44	38	42	63	78	81	82	85	64	
		2	79	61	56	51	45	44	40	43	50	64	73	72	56	
		3	69	65	59	55	64	86	92	90	96	94	96	97	80	
		4	98	97	89	85	67	60	60	76	97	—	—	—	—	80
		5	—	—	—	—	—	—	—	—	—	—	77	81	77	57
		6	82	65	54	42	31	36	36	48	57	66	66	77	85	59
		7	83	64	63	47	48	32	47	47	62	56	56	73	82	89
		8	74	71	70	81	92	96	96	96	98	98	98	98	96	89
		9	95	90	88	79	79	85	88	89	94	96	96	94	91	89
		10	88	92	90	89	85	84	89	84	86	92	92	91	96	89
		11	75	69	53	42	66	57	42	69	91	—	—	—	—	71
		12	—	—	—	—	—	—	—	—	—	—	95	94	94	87
		13	94	90	86	79	64	91	72	86	96	91	91	97	98	85
		14	100	93	88	79	75	75	72	81	82	89	89	90	96	83
		15	97	90	97	72	71	60	62	77	89	94	94	94	94	83
		16	100	87	75	66	95	89	89	89	84	73	72	72	76	83
		17	84	65	61	59	48	38	41	64	70	67	70	70	64	61
		18	71	81	85	88	74	72	79	89	90	—	—	—	—	79
		19	—	—	—	—	—	—	—	—	—	—	71	74	76	73
		20	84	69	65	68	57	51	65	71	88	93	93	78	83	72
		21	86	84	79	73	55	58	51	54	66	82	82	81	91	85
		22	92	88	85	84	86	87	86	86	93	91	91	86	71	64
		23	67	66	54	60	63	57	50	78	85	67	67	62	59	63
		24	63	54	45	60	50	44	24	67	82	88	88	89	92	88
		25	94	84	81	75	88	91	81	89	89	—	—	—	—	86
		26	—	—	—	—	—	—	—	—	—	—	93	89	91	77
		27	84	82	88	79	80	69	80	95	94	94	94	93	91	69
		28	95	85	84	78	89	67	63	81	76	64	64	68	77	83
		29	78	74	72	62	54	54	61	67	71	69	69	77	89	83
		30	89	82	77	77	74	76	91	80	91	87	87	83	89	83
Hourly Means		84	80	73	69	67	65	65	75	83	82	83	85	76		
Tension of the Vapour.	JUNE.	1	In. .237	In. .278	In. .276	In. .280	In. .293	In. .286	In. .284	In. .236	In. .223	In. .218	In. .210	In. .199	In. .252	
		2	.236	.255	.293	.305	.290	.308	.257	.228	.228	.245	.299	.311	.271	
		3	.314	.322	.328	.315	.296	.362	.405	.386	.402	.403	.379	.376	.376	.358
		4	.387	.428	.445	.466	.421	.450	.460	.356	.388	—	—	—	—	.384
		5	—	—	—	—	—	—	—	—	—	—	.292	.274	.243	.384
		6	.241	.216	.197	.164	.128	.153	.151	.139	.139	.139	.159	.175	.171	.170
		7	.205	.204	.235	.200	.219	.174	.197	.160	.192	.192	.192	.230	.250	.205
		8	.253	.273	.292	.316	.315	.300	.295	.300	.311	.308	.308	.324	.322	.301
		9	.341	.363	.400	.393	.419	.423	.431	.389	.386	.396	.396	.377	.346	.388
		10	.322	.339	.340	.314	.260	.237	.237	.211	.193	.176	.176	.156	.149	.244
		11	.154	.169	.159	.161	.309	.319	.273	.248	.233	—	—	—	—	.243
		12	—	—	—	—	—	—	—	—	—	—	.338	.289	.261	.243
		13	.317	.375	.392	.415	.413	.408	.433	.335	.314	.314	.272	.264	.266	.350
		14	.330	.353	.407	.479	.440	.405	.360	.348	.331	.312	.312	.285	.280	.360
		15	.325	.378	.442	.441	.468	.425	.432	.378	.375	.356	.356	.351	.342	.393
		16	.416	.440	.484	.467	.543	.618	.521	.445	.392	.316	.316	.293	.262	.433
		17	.302	.284	.300	.331	.283	.264	.235	.261	.255	.239	.239	.250	.248	.271
		18	.305	.416	.482	.481	.591	.498	.530	.514	.519	.519	—	—	—	.271
		19	—	—	—	—	—	—	—	—	—	—	.274	.252	.222	.424
		20	.271	.274	.316	.367	.359	.343	.407	.338	.306	.306	.285	.275	.291	.320
		21	.320	.385	.433	.455	.417	.398	.364	.306	.333	.333	.336	.351	.369	.373
		22	.418	.458	.499	.577	.588	.561	.493	.642	.460	.436	.436	.408	.328	.489
		23	.295	.300	.272	.334	.382	.372	.316	.323	.298	.229	.229	.211	.207	.295
		24	.242	.272	.247	.362	.361	.335	.241	.306	.299	.303	.303	.301	.308	.298
		25	.371	.392	.401	.393	.440	.440	.484	.463	.433	—	—	—	—	.427
		26	—	—	—	—	—	—	—	—	—	—	.433	.425	.455	.427
		27	.441	.435	.475	.491	.596	.508	.484	.456	.413	.371	.371	.426	.421	.460
		28	.433	.466	.449	.456	.556	.576	.556	.484	.386	.278	.278	.266	.264	.430
		29	.297	.318	.377	.392	.412	.446	.410	.336	.352	.350	.350	.348	.372	.367
		30	.433	.508	.545	.512	.571	.624	.654	.544	.613	.440	.440	.413	.433	.525
Hourly Means		.315	.342	.365	.380	.399	.393	.381	.352	.337	.306	.301	.296	.348		

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.														
Hours of Mean Göttingen Time		0	1	2	3	4	5	6	7	8	9	10	11	
Hours of Mean Toronto Time		18	19	20	21	22	23	0	1	2	3	4	5	
Humidity of the Air.	JULY.	1	87	84	91	87	89	87	85	87	86	90	91	88
		2	94	94	94	96	94	92	90	88	80	89	86	83
		3	—	—	—	—	—	—	—	—	—	—	—	—
		4	93	84	84	80	78	73	74	66	65	69	71	74
		5	95	96	89	71	69	68	65	57	67	70	70	68
		6	81	79	76	65	56	55	54	60	60	67	56	51
		7	93	86	88	87	84	76	62	58	50	52	44	60
		8	77	74	77	76	88	92	90	84	81	84	85	87
		9	80	82	78	74	64	60	52	50	47	43	48	56
		10	—	—	—	—	—	—	—	—	—	—	—	—
		11	94	84	84	78	74	72	70	66	62	59	55	55
		12	94	88	81	76	73	70	66	66	62	60	55	58
		13	95	89	81	79	76	74	71	67	64	60	54	56
		14	82	82	77	69	62	51	49	46	53	46	41	44
		15	76	72	64	57	53	51	57	56	56	60	57	50
		16	88	80	73	72	69	65	61	57	59	53	54	46
		17	—	—	—	—	—	—	—	—	—	—	—	—
		18	91	78	68	72	70	68	38	60	58	60	61	62
		19	94	91	85	78	75	71	68	66	47	26	34	34
		20	69	52	47	43	41	36	35	36	37	49	49	50
		21	95	85	78	74	75	71	37	59	52	52	59	63
		22	94	86	81	77	77	73	68	57	55	57	59	48
		23	92	80	72	73	72	67	64	67	57	60	58	64
		24	—	—	—	—	—	—	—	—	—	—	—	—
		25	81	68	69	68	61	57	58	57	56	58	52	58
		26	91	91	84	78	75	69	59	51	42	45	51	48
		27	81	69	61	60	58	57	52	60	56	55	50	46
		28	69	66	60	47	86	42	38	44	42	44	42	44
		29	76	74	77	73	66	64	61	63	51	50	55	58
		30	91	86	74	70	72	84	88	88	91	95	91	94
		31	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means		87	81	77	73	71	67	62	62	59	60	59	59	
Tension of the Vapour.	JULY.	1	In. .413	In. .412	In. .455	In. .444	In. .465	In. .472	In. .454	In. .460	In. .481	In. .483	In. .486	In. .459
		2	.448	.444	.444	.446	.463	.485	.510	.510	.542	.557	.513	.544
		3	—	—	—	—	—	—	—	—	—	—	—	—
		4	.407	.421	.476	.480	.483	.477	.500	.455	.456	.462	.465	.466
		5	.513	.546	.526	.395	.394	.395	.415	.374	.409	.373	.371	.354
		6	.293	.317	.330	.304	.272	.290	.291	.370	.395	.399	.363	.371
		7	.292	.321	.373	.414	.430	.442	.410	.423	.383	.412	.383	.463
		8	.340	.359	.391	.400	.427	.473	.498	.567	.558	.535	.518	.521
		9	.348	.351	.352	.357	.344	.354	.324	.324	.321	.301	.400	.429
		10	—	—	—	—	—	—	—	—	—	—	—	—
		11	.371	.395	.444	.459	.472	.494	.503	.521	.523	.503	.476	.505
		12	.406	.466	.475	.487	.501	.509	.555	.624	.643	.655	.652	.708
		13	.486	.551	.540	.561	.586	.631	.666	.679	.693	.656	.633	.605
		14	.507	.513	.517	.516	.514	.441	.436	.406	.468	.419	.363	.401
		15	.385	.387	.377	.359	.358	.363	.434	.446	.446	.499	.484	.474
		16	.334	.374	.418	.461	.476	.484	.475	.468	.506	.493	.541	.505
		17	—	—	—	—	—	—	—	—	—	—	—	—
		18	.459	.503	.504	.578	.558	.606	.541	.644	.613	.620	.611	.654
		19	.535	.609	.645	.634	.650	.667	.726	.730	.642	.375	.401	.361
		20	.340	.262	.249	.245	.247	.238	.238	.254	.283	.410	.393	.413
		21	.319	.356	.379	.409	.434	.464	.350	.445	.415	.434	.466	.455
		22	.377	.422	.463	.473	.529	.544	.573	.543	.535	.553	.532	.430
		23	.473	.496	.499	.535	.594	.630	.581	.630	.648	.725	.647	.637
		24	—	—	—	—	—	—	—	—	—	—	—	—
		25	.294	.299	.356	.367	.349	.358	.378	.370	.393	.385	.367	.402
		26	.455	.498	.488	.511	.540	.555	.547	.491	.454	.492	.510	.518
		27	.547	.507	.484	.479	.494	.534	.525	.638	.567	.593	.560	.529
		28	.353	.372	.383	.338	.454	.335	.328	.378	.371	.371	.386	.398
		29	.335	.380	.466	.494	.504	.507	.530	.573	.507	.482	.536	.520
		30	.649	.653	.667	.654	.676	.616	.549	.523	.509	.509	.490	.479
		31	—	—	—	—	—	—	—	—	—	—	—	—
Hourly Means		.411	.431	.450	.454	.470	.476	.475	.494	.492	.488	.482	.484	



HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
91	92	92	93	93	94	94	93	93	94	94	94	90
73	83	87	86	89	92	—	—	—	—	—	—	89
—	—	—	—	—	—	87	89	94	94	94	93	82
75	82	85	84	92	87	89	95	93	93	89	90	74
68	70	72	73	72	75	75	77	78	80	81	81	73
48	57	78	85	88	88	88	90	93	97	93	93	76
73	75	74	84	86	88	85	84	86	86	84	81	84
88	85	86	87	87	86	84	87	83	81	83	84	70
56	49	69	73	77	72	—	—	—	—	—	—	76
—	—	—	—	—	—	91	94	94	95	92	94	78
57	59	71	81	84	85	90	89	91	90	93	93	75
57	65	76	85	88	89	91	95	92	93	92	95	63
58	61	65	72	85	87	90	91	85	82	73	77	62
49	51	59	60	62	67	71	75	74	75	79	78	71
62	45	59	53	76	55	60	63	65	75	86	84	74
48	47	64	79	83	86	—	—	—	—	—	—	77
—	—	—	—	—	—	83	87	86	87	89	91	60
60	66	80	79	82	85	85	89	90	93	92	96	60
30	35	41	49	49	55	54	62	68	76	76	70	58
41	45	51	58	64	68	72	80	88	90	93	93	77
59	70	77	85	90	93	93	94	95	95	95	94	74
56	61	68	69	77	79	86	92	91	92	92	91	71
61	73	67	71	78	82	—	—	—	—	—	—	74
—	—	—	—	—	—	54	66	78	84	84	82	74
56	65	82	84	92	93	94	93	93	94	94	98	70
32	42	60	73	78	82	86	92	82	84	92	88	62
52	42	61	71	88	64	63	66	68	69	70	70	63
52	58	74	75	80	82	79	82	77	77	81	76	74
66	73	81	86	85	86	87	86	88	89	90	92	88
94	92	93	92	91	87	—	—	—	—	—	—	88
—	—	—	—	—	—	91	82	87	88	90	91	73
60	63	72	76	81	81	82	84	85	87	87	87	73
In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
.452	.451	.439	.437	.441	.448	.448	.441	.445	.448	.448	.448	.451
.566	.523	.488	.453	.412	.411	—	—	—	—	—	—	.462
—	—	—	—	—	—	.420	.402	.406	.377	.365	.365	.448
.448	.447	.436	.419	.424	.407	.405	.413	.433	.445	.460	.483	.356
.324	.316	.293	.287	.274	.275	.275	.284	.283	.289	.286	.284	.315
.370	.352	.331	.326	.309	.298	.275	.276	.266	.264	.250	.248	.385
.427	.390	.367	.369	.378	.364	.365	.362	.374	.367	.356	.352	.438
.502	.462	.446	.433	.404	.402	.399	.400	.381	.368	.369	.362	.345
.461	.314	.340	.304	.328	.289	—	—	—	—	—	—	.426
—	—	—	—	—	—	.343	.348	.371	.338	.322	.331	.534
.455	.409	.390	.400	.402	.368	.375	.366	.354	.348	.342	.342	.557
.684	.623	.558	.545	.518	.489	.482	.478	.458	.449	.428	.429	.421
.610	.559	.502	.478	.484	.476	.487	.490	.520	.505	.475	.486	.382
.419	.383	.388	.374	.368	.379	.391	.393	.380	.375	.382	.382	.450
.552	.377	.384	.327	.431	.296	.306	.308	.313	.304	.291	.274	.575
.510	.446	.454	.459	.442	.436	—	—	—	—	—	—	.454
—	—	—	—	—	—	.437	.428	.426	.413	.402	.402	.496
.665	.608	.632	.627	.622	.595	.576	.560	.529	.509	.489	.492	.374
.299	.300	.308	.335	.315	.320	.311	.314	.330	.361	.375	.349	.512
.333	.308	.290	.288	.274	.290	.295	.291	.279	.274	.273	.266	.466
.424	.412	.390	.385	.366	.380	.348	.345	.347	.339	.324	.311	.359
.532	.486	.491	.466	.481	.450	.453	.458	.440	.440	.439	.432	.550
.530	.558	.522	.532	.542	.524	—	—	—	—	—	—	.481
—	—	—	—	—	—	.266	.263	.266	.269	.269	.257	.496
.390	.396	.397	.365	.385	.380	.386	.380	.374	.365	.356	.482	.374
.400	.448	.459	.479	.539	.534	.531	.589	.578	.573	.560	.544	.512
.515	.362	.400	.438	.505	.357	.347	.355	.367	.370	.359	.349	.466
.432	.390	.379	.341	.336	.339	.325	.328	.317	.317	.316	.316	.359
.561	.576	.585	.574	.619	.633	.635	.627	.637	.629	.637	.647	.550
.468	.431	.419	.389	.363	.338	—	—	—	—	—	—	.456
—	—	—	—	—	—	.278	.257	.257	.260	.261	.268	.438
.474	.435	.427	.417	.422	.403	.390	.390	.389	.384	.378	.381	.438

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.															
Hours of Mean Göttingen Time		0	1	2	3	4	5	6	7	8	9	10	11		
Hours of Mean Toronto Time		18	19	20	21	22	23	0	1	2	3	4	5		
Humidity of the Air.	AUGUST.	1	87	83	78	73	63	62	57	55	52	52	51	43	
		2	79	74	68	55	47	44	44	58	56	52	47	45	
		3	88	76	80	72	64	63	58	61	63	56	63	86	
		4	97	94	80	69	65	66	56	59	63	60	57	63	63
		5	100	75	70	59	54	54	64	58	60	69	67	69	69
		6	85	82	80	79	74	73	73	79	75	73	72	71	71
		7	—	—	—	—	—	—	—	—	—	—	—	—	—
		8	89	89	91	82	78	68	75	72	76	69	61	80	80
		9	87	91	89	88	92	93	91	88	93	86	92	91	91
		10	95	94	91	91	93	89	82	84	84	79	80	81	81
		11	97	96	95	93	85	82	84	82	83	77	71	65	65
		12	94	91	85	83	73	75	77	75	67	67	64	61	61
		13	95	95	90	82	83	82	82	82	77	76	74	68	62
		14	—	—	—	—	—	—	—	—	—	—	—	—	—
		15	93	89	81	73	73	71	64	67	65	62	59	69	69
		16	91	91	91	86	83	85	82	80	78	77	75	81	81
		17	96	94	90	92	82	81	79	83	87	87	84	74	74
		18	87	84	83	72	77	76	78	77	73	71	68	67	67
		19	79	73	67	57	60	58	67	62	58	54	60	59	59
		20	87	81	81	70	68	62	70	67	66	68	60	63	63
		21	—	—	—	—	—	—	—	—	—	—	—	—	—
		22	89	82	78	67	55	54	54	52	57	48	51	53	53
		23	93	89	88	78	82	77	74	76	72	70	69	65	65
		24	95	95	96	85	78	73	66	62	58	57	62	68	68
		25	86	95	71	70	58	58	63	59	47	53	63	64	64
		26	79	79	82	83	84	89	87	85	72	68	70	72	72
		27	92	92	96	94	93	86	76	74	81	78	82	75	75
		28	—	—	—	—	—	—	—	—	—	—	—	—	—
		29	91	86	77	77	74	78	77	75	68	65	66	64	64
		30	85	79	76	77	77	75	56	57	57	42	58	51	51
		31	88	94	88	87	53	72	65	65	71	67	74	76	76
Hourly Means		90	87	83	78	73	72	70	70	69	66	66	67		
Tension of the Vapour.	AUGUST.	1	In. .272	In. .286	In. .296	In. .310	In. .299	In. .314	In. .301	In. .305	In. .301	In. .318	In. .315	In. .301	
		2	.283	.309	.332	.310	.290	.284	.295	.411	.397	.385	.368	.387	
		3	.337	.326	.357	.339	.359	.390	.401	.409	.446	.431	.483	.505	
		4	.330	.400	.402	.409	.426	.458	.423	.421	.475	.469	.465	.522	
		5	.473	.400	.423	.413	.416	.443	.527	.480	.463	.507	.493	.502	
		6	.461	.457	.460	.479	.492	.507	.494	.513	.534	.498	.487	.470	
		7	—	—	—	—	—	—	—	—	—	—	—	—	
		8	.473	.489	.522	.520	.520	.518	.503	.508	.543	.527	.507	.553	
		9	.455	.470	.473	.478	.501	.509	.526	.531	.624	.626	.572	.567	
		10	.526	.548	.557	.553	.586	.600	.605	.591	.605	.575	.639	.565	
		11	.487	.515	.551	.601	.594	.582	.582	.626	.639	.631	.609	.619	
		12	.467	.513	.528	.560	.549	.597	.626	.649	.601	.642	.637	.601	
		13	.504	.564	.578	.567	.591	.605	.636	.616	.649	.633	.594	.596	
		14	—	—	—	—	—	—	—	—	—	—	—	—	
		15	.426	.481	.526	.524	.566	.604	.583	.650	.635	.635	.596	.692	
		16	.513	.571	.633	.642	.639	.676	.647	.661	.655	.653	.648	.640	
		17	.639	.660	.657	.729	.688	.730	.675	.712	.681	.720	.688	.629	
		18	.546	.535	.545	.512	.570	.586	.606	.627	.632	.624	.604	.568	
		19	.403	.396	.403	.368	.395	.400	.457	.443	.438	.438	.416	.410	
		20	.390	.381	.382	.365	.378	.372	.445	.465	.463	.482	.451	.481	
		21	—	—	—	—	—	—	—	—	—	—	—	—	
		22	.306	.348	.397	.404	.374	.378	.406	.402	.454	.403	.434	.422	
		23	.380	.425	.486	.506	.577	.592	.613	.613	.600	.590	.583	.566	
		24	.440	.506	.601	.580	.572	.575	.569	.552	.517	.510	.557	.563	
		25	.426	.449	.446	.496	.473	.464	.495	.533	.461	.494	.548	.522	
		26	.551	.561	.583	.604	.637	.655	.649	.649	.659	.688	.678	.647	
		27	.616	.626	.644	.670	.716	.684	.699	.731	.691	.689	.715	.716	
		28	—	—	—	—	—	—	—	—	—	—	—	—	
		29	.553	.550	.525	.545	.548	.553	.555	.569	.581	.571	.598	.591	
		30	.333	.369	.422	.480	.530	.527	.419	.458	.466	.356	.499	.407	
		31	.431	.510	.518	.560	.454	.535	.552	.571	.575	.548	.586	.586	
Hourly Means		.445	.468	.491	.501	.508	.524	.530	.545	.548	.543	.547	.542		

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
42	46	57	60	65	63	66	74	79	74	78	80	64
45	64	75	84	82	88	89	94	90	94	92	85	69
71	80	83	86	86	88	91	92	91	94	94	98	79
56	67	81	86	86	89	85	84	85	85	82	82	75
70	73	67	66	64	67	71	85	85	83	82	84	71
75	82	81	84	86	88	—	—	—	—	—	—	79
—	—	—	—	—	—	74	76	81	87	86	89	
74	80	91	91	89	90	90	89	88	87	89	85	82
91	90	93	95	95	94	94	94	96	95	96	95	92
84	86	91	94	95	95	95	95	94	95	96	97	90
66	58	85	89	91	94	92	95	95	95	95	97	86
66	80	87	89	87	89	90	90	91	94	95	96	82
67	78	82	87	91	92	—	—	—	—	—	—	84
—	—	—	—	—	—	90	88	92	91	89	92	
68	81	85	90	95	91	88	89	91	91	92	92	80
86	86	90	93	92	94	92	94	96	94	96	96	88
80	85	89	94	95	94	95	92	96	91	92	91	88
71	78	81	79	84	85	89	86	76	77	74	56	77
60	68	73	80	79	86	90	91	87	87	86	88	72
57	75	82	76	70	72	—	—	—	—	—	—	75
—	—	—	—	—	—	81	81	86	90	90	86	
64	80	80	87	84	89	88	86	89	76	90	—	72
71	77	79	88	90	90	91	93	92	91	95	95	83
68	71	80	80	82	81	77	74	74	73	76	81	76
66	66	64	69	71	70	73	73	73	75	77	79	68
80	84	86	87	90	87	89	91	90	91	86	92	83
71	85	87	81	87	72	—	—	—	—	—	—	83
—	—	—	—	—	—	78	77	79	86	90	91	
66	76	88	89	94	94	86	75	78	84	84	83	79
57	73	85	85	89	86	86	89	88	89	88	89	75
78	80	84	86	87	78	91	93	94	95	91	85	81
69	76	82	84	85	85	86	87	87	88	88	88	79
In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
·290	·258	·268	·267	·271	·245	·241	·249	·248	·249	·255	·262	·280
·373	·356	·353	·356	·331	·314	·301	·304	·287	·292	·315	·317	·331
·506	·480	·410	·374	·355	·351	·343	·336	·317	·317	·304	·329	·384
·438	·406	·411	·384	·378	·375	·385	·392	·382	·376	·377	·384	·412
·460	·466	·445	·435	·430	·436	·461	·491	·477	·460	·453	·455	·459
·480	·493	·486	·491	·483	·470	—	—	—	—	—	—	·476
—	—	—	—	—	—	·414	·431	·437	·460	·457	·469	
·591	·528	·544	·540	·517	·519	·506	·489	·474	·468	·473	·454	·512
·549	·532	·535	·543	·530	·518	·518	·499	·496	·502	·515	·517	·524
·542	·526	·490	·475	·486	·494	·490	·486	·448	·436	·458	·468	·531
·598	·402	·498	·473	·463	·460	·439	·436	·434	·441	·441	·454	·523
·598	·568	·542	·534	·516	·521	·515	·510	·506	·506	·498	·496	·553
·591	·567	·497	·468	·463	·455	—	—	—	—	—	—	·529
—	—	—	—	—	—	·467	·427	·431	·408	·399	·395	
·606	·566	·507	·491	·494	·463	·450	·452	·463	·467	·481	·489	·535
·616	·597	·609	·624	·626	·626	·616	·613	·611	·631	·649	·649	·627
·684	·630	·563	·561	·568	·552	·564	·583	·624	·590	·608	·571	·637
·532	·544	·563	·535	·548	·546	·556	·505	·422	·394	·372	·268	·531
·404	·426	·427	·445	·427	·457	·467	·463	·436	·436	·418	·416	·425
·401	·390	·363	·332	·307	·298	—	—	—	—	—	—	·368
—	—	—	—	—	—	·293	·288	·282	·276	·275	·285	
·463	·472	·413	·420	·408	·402	·387	·384	·375	·341	·357	—	·398
·526	·507	·485	·498	·487	·467	·436	·433	·447	·428	·429	·436	·505
·499	·457	·475	·460	·453	·451	·428	·410	·402	·383	·378	·400	·489
·512	·512	·503	·537	·542	·535	·553	·555	·560	·565	·565	·589	·514
·660	·651	·657	·618	·652	·623	·623	·633	·626	·623	·593	·621	·631
·741	·676	·624	·561	·564	·521	—	—	—	—	—	—	·626
—	—	—	—	—	—	·542	·535	·513	·510	·503	·539	
·522	·478	·466	·452	·483	·475	·442	·366	·366	·382	·359	·333	·495
·409	·390	·385	·388	·383	·370	·376	·389	·397	·389	·393	·418	·414
·568	·573	·577	·568	·573	·532	·549	·529	·548	·538	·533	·494	·542
·525	·498	·485	·475	·472	·462	·458	·451	·445	·439	·439	·443	·491

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.															
Hours of Mean Göttingen Time		0	1	2	3	4	5	6	7	8	9	10	11		
Hours of Mean Toronto Time		18	19	20	21	22	23	0	1	2	3	4	5		
Humidity of the Air	SEPTEMBER.	1	95	91	86	78	75	73	69	64	68	65	58	55	
		2	64	80	86	57	46	48	53	59	60	49	52	71	
		3	78	89	92	89	91	92	91	88	87	74	63	75	
		4	—	—	—	—	—	—	—	—	—	—	—	—	—
		5	92	90	78	70	58	78	50	49	43	39	40	40	40
		6	93	89	81	77	69	67	66	64	63	57	61	63	63
		7	93	94	88	86	74	68	73	62	60	55	58	55	55
		8	74	81	78	74	76	77	76	74	77	78	86	88	88
		9	94	90	91	93	93	91	91	90	93	94	93	93	93
		10	87	85	81	75	77	78	77	72	67	70	70	70	70
		11	—	—	—	—	—	—	—	—	—	—	—	—	—
		12	89	91	91	84	82	80	78	77	74	80	87	89	89
		13	95	91	90	81	72	66	62	53	56	71	68	68	68
		14	87	83	79	74	75	76	79	67	67	65	60	61	61
		15	88	92	95	95	91	90	85	81	77	77	81	80	80
		16	91	85	74	70	60	53	54	53	51	53	54	61	61
		17	94	98	91	82	71	70	67	52	52	51	52	72	72
		18	—	—	—	—	—	—	—	—	—	—	—	—	—
		19	87	87	81	75	62	64	56	62	57	59	54	58	58
		20	92	100	87	80	80	79	72	73	56	57	65	59	59
		21	76	84	71	68	65	62	58	61	70	65	69	73	73
		22	84	75	70	69	64	62	61	62	58	54	56	61	61
		23	90	92	65	75	71	62	64	55	68	68	66	67	67
		24	78	79	75	72	71	64	73	70	67	59	62	61	61
		25	—	—	—	—	—	—	—	—	—	—	—	—	—
		26	84	87	81	74	83	66	55	59	59	49	48	72	72
		27	97	100	98	88	85	83	76	71	67	63	62	72	72
		28	94	98	76	68	61	59	50	71	65	63	62	62	62
		29	95	94	89	86	83	72	75	77	72	76	84	87	87
		30	82	83	82	72	78	76	65	36	38	35	34	38	38
		Hourly Means		87	89	83	77	74	71	68	65	64	63	63	67
Tension of the Vapour.	SEPTEMBER.	1	In. .564	In. .623	In. .652	In. .650	In. .662	In. .689	In. .686	In. .668	In. .713	In. .703	In. .645	In. .626	
		2	.392	.476	.510	.355	.316	.349	.426	.417	.415	.351	.353	.468	
		3	.367	.395	.405	.415	.405	.428	.415	.416	.436	.446	.422	.468	
		4	—	—	—	—	—	—	—	—	—	—	—	—	
		5	.501	.536	.496	.460	.400	.558	.363	.337	.307	.296	.294	.302	
		6	.283	.325	.351	.377	.351	.374	.394	.412	.422	.412	.400	.418	
		7	.460	.475	.463	.531	.504	.490	.535	.460	.468	.446	.447	.441	
		8	.306	.330	.360	.356	.374	.387	.396	.373	.388	.379	.384	.364	
		9	.351	.343	.354	.362	.368	.372	.375	.375	.397	.403	.391	.377	
		10	.276	.293	.319	.332	.361	.393	.417	.424	.397	.413	.396	.415	
		11	—	—	—	—	—	—	—	—	—	—	—	—	
		12	.452	.448	.463	.438	.443	.488	.460	.466	.438	.453	.465	.464	
		13	.347	.357	.372	.361	.348	.349	.339	.324	.338	.426	.387	.383	
		14	.346	.353	.363	.362	.431	.434	.438	.392	.384	.387	.366	.361	
		15	.400	.421	.423	.478	.482	.503	.519	.549	.545	.525	.556	.520	
		16	.331	.326	.313	.314	.300	.285	.300	.306	.288	.297	.302	.332	
		17	.268	.327	.346	.348	.330	.322	.334	.283	.283	.291	.311	.418	
		18	—	—	—	—	—	—	—	—	—	—	—	—	
		19	.262	.279	.291	.284	.260	.277	.257	.269	.251	.253	.230	.240	
		20	.197	.250	.276	.305	.335	.372	.359	.366	.298	.316	.367	.324	
		21	.247	.280	.257	.256	.244	.232	.219	.217	.245	.225	.215	.229	
		22	.180	.170	.170	.174	.165	.165	.159	.173	.175	.145	.165	.159	
		23	.154	.170	.140	.178	.184	.181	.213	.198	.254	.262	.258	.294	
		24	.215	.219	.226	.243	.256	.244	.298	.298	.294	.288	.295	.278	
		25	—	—	—	—	—	—	—	—	—	—	—	—	
		26	.193	.230	.274	.297	.353	.315	.280	.303	.320	.277	.269	.374	
		27	.231	.269	.340	.354	.379	.413	.434	.446	.461	.447	.420	.453	
		28	.328	.404	.365	.357	.347	.352	.328	.442	.432	.435	.430	.412	
		29	.341	.368	.389	.438	.441	.412	.417	.429	.397	.423	.444	.438	
		30	.272	.277	.307	.307	.353	.365	.336	.203	.226	.223	.215	.240	
		Hourly Means		.318	.344	.355	.359	.361	.375	.373	.367	.368	.366	.363	.377

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
61	65	68	75	80	67	85	75	74	71	67	58	72
67	70	66	75	85	88	80	75	69	81	86	81	69
63	64	89	91	94	94	—	—	—	—	—	—	87
—	—	—	—	—	—	93	99	98	95	95	94	87
45	70	65	73	85	89	84	87	94	93	93	93	71
68	74	75	70	71	75	72	77	78	83	87	87	73
62	70	74	77	82	83	88	80	86	77	71	72	74
91	91	93	93	94	94	94	94	94	93	93	94	86
93	93	96	94	91	88	88	88	84	81	79	90	90
76	82	81	76	79	83	—	—	—	—	—	—	81
—	—	—	—	—	—	96	96	97	98	97	86	81
92	97	97	96	95	92	96	90	87	88	91	92	88
75	82	89	89	84	86	82	82	83	82	85	86	78
68	71	81	81	82	82	86	82	82	82	84	85	77
81	89	94	93	95	96	97	92	89	93	87	91	89
67	74	75	77	86	84	85	89	90	90	92	93	73
82	78	75	77	80	81	—	—	—	—	—	—	76
—	—	—	—	—	—	78	81	81	80	82	85	76
62	74	74	85	93	96	92	96	94	94	96	98	77
63	71	70	66	72	75	84	90	93	98	84	76	77
78	79	85	83	86	86	90	86	82	84	80	79	76
65	70	75	90	92	92	92	98	98	96	91	89	76
78	68	84	83	71	80	81	76	84	78	79	78	74
77	90	93	93	93	91	—	—	—	—	—	—	79
—	—	—	—	—	—	87	85	87	85	88	85	79
77	88	93	93	93	97	98	94	97	94	94	98	81
77	76	79	86	89	92	79	77	84	88	93	96	82
78	85	77	83	90	94	94	94	94	94	94	95	79
88	89	89	87	95	81	83	83	90	91	94	80	85
65	80	77	75	81	70	74	79	81	72	71	82	68
73	78	81	83	86	86	87	86	87	87	87	86	78
In.	In. <sup>2</sup>	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
·578	·581	·581	·598	·606	·560	·630	·530	·482	·458	·428	·367	·595
·409	·387	·362	·360	·350	·373	·377	·370	·367	·426	·426	·405	·394
·427	·322	·395	·378	·374	·365	—	—	—	—	—	—	—
—	—	—	—	—	—	·550	·558	·548	·555	·551	·531	·440
·298	·343	·304	·316	·306	·317	·265	·260	·266	·268	·273	·273	·348
·395	·406	·409	·383	·375	·373	·372	·378	·383	·400	·407	·413	·384
·419	·411	·402	·402	·407	·413	·393	·354	·364	·328	·307	·301	·426
·351	·349	·356	·359	·356	·356	·356	·356	·359	·356	·353	·356	·361
·371	·368	·367	·362	·357	·345	·345	·343	·324	·297	·277	·297	·355
·385	·377	·364	·356	·376	·414	—	—	—	—	—	—	—
—	—	—	—	—	—	·611	·620	·618	·634	·626	·446	·427
·466	·468	·468	·454	·433	·405	·388	·369	·353	·354	·351	·333	·430
·390	·408	·422	·415	·389	·378	·354	·348	·343	·331	·336	·338	·365
·360	·325	·358	·345	·333	·333	·340	·336	·351	·354	·362	·382	·366
·476	·504	·510	·460	·429	·424	·457	·428	·399	·374	·346	·343	·461
·336	·350	·339	·321	·338	·307	·311	·306	·309	·304	·295	·266	·312
·403	·314	·280	·289	·285	·283	—	—	—	—	—	—	—
—	—	—	—	—	—	·294	·297	·290	·275	·269	·262	·308
·224	·235	·222	·217	·214	·209	·201	·200	·199	·220	·211	·211	·238
·295	·308	·299	·277	·280	·290	·321	·340	·362	·378	·314	·262	·312
·217	·215	·223	·201	·202	·198	·200	·187	·180	·186	·181	·177	·218
·165	·165	·167	·166	·161	·158	·162	·166	·153	·157	·156	·150	·164
·282	·197	·217	·203	·196	·227	·230	·214	·227	·217	·221	·217	·214
·269	·263	·255	·244	·240	·233	—	—	—	—	—	—	—
—	—	—	—	—	—	·230	·219	·214	·207	·203	·202	·247
·317	·279	·275	·271	·262	·264	·260	·250	·258	·244	·234	·233	·276
·442	·427	·430	·431	·452	·439	·434	·428	·415	·408	·389	·365	·404
·386	·382	·347	·344	·340	·345	·339	·320	·306	·311	·314	·333	·362
·435	·441	·452	·436	·478	·404	·371	·344	·348	·354	·362	·291	·402
·331	·372	·341	·327	·337	·290	·295	·310	·310	·290	·285	·280	·296
·363	·353	·351	·342	·341	·335	·349	·340	·336	·334	·326	·309	·350

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.															
Hours of Mean Göttingen Time		0	1	2	3	4	5	6	7	8	9	10	11		
Hours of Mean Toronto Time		18	19	20	21	22	23	0	1	2	3	4	5		
Humidity of the Air.	OCTOBER.	1	73	73	82	75	73	68	70	64	64	82	83	93	
		2	—	—	—	—	—	—	—	—	—	—	—	—	—
		3	91	88	78	65	58	57	58	53	57	61	67	62	
		4	89	81	76	70	62	62	61	60	69	68	69	69	59
		5	86	93	94	90	81	78	71	69	69	69	72	68	75
		6	94	97	91	69	63	68	66	69	69	68	68	65	67
		7	94	100	98	96	89	85	78	72	70	72	73	73	77
		8	93	96	94	83	84	79	66	78	76	65	67	67	72
		9	—	—	—	—	—	—	—	—	—	—	—	—	—
		10	92	94	98	86	88	86	75	73	71	70	71	71	72
		11	90	88	81	81	82	77	75	71	59	49	51	51	42
		12	73	75	83	69	56	51	51	46	46	47	48	48	52
		13	98	96	100	94	90	84	75	69	64	68	67	67	80
		14	98	100	98	95	95	94	94	98	86	91	81	81	85
		15	94	97	93	83	69	65	63	66	63	65	67	67	64
		16	—	—	—	—	—	—	—	—	—	—	—	—	—
		17	96	88	84	76	66	81	65	69	67	67	66	66	70
		18	90	92	94	92	94	92	91	87	85	84	85	85	94
		19	84	82	80	76	71	58	68	60	72	78	87	87	78
		20	92	94	88	74	63	56	74	54	53	52	54	54	59
		21	92	92	67	85	82	86	85	75	68	71	78	78	77
		22	98	100	100	98	98	95	94	91	82	74	68	68	70
		23	—	—	—	—	—	—	—	—	—	—	—	—	—
		24	90	90	92	81	84	83	84	82	83	93	94	94	94
		25	83	85	83	83	80	70	67	62	57	47	58	58	62
		26	94	92	96	82	83	67	54	52	63	63	53	53	61
		27	88	92	86	82	78	72	65	71	70	66	73	73	84
		28	96	96	98	98	97	93	83	81	74	74	80	80	79
		29	93	94	93	83	79	72	71	72	76	77	80	80	83
		30	—	—	—	—	—	—	—	—	—	—	—	—	—
		31	91	93	93	91	91	90	88	88	85	85	—	—	84
Hourly Means		90	91	89	83	79	76	73	70	69	70	70	73		
Tension of the Vapour.	OCTOBER.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.		
		1	·282	·311	·352	·366	·387	·387	·411	·367	·347	·423	·414	·426	
		2	—	—	—	—	—	—	—	—	—	—	—	—	
		3	·261	·277	·273	·236	·229	·235	·243	·236	·251	·250	·258	·243	
		4	·227	·228	·227	·227	·221	·233	·244	·247	·281	·273	·273	·232	
		5	·193	·222	·283	·296	·299	·299	·276	·282	·293	·307	·287	·297	
		6	·214	·233	·265	·230	·233	·262	·263	·284	·278	·271	·255	·246	
		7	·198	·234	·292	·353	·363	·388	·393	·405	·420	·412	·390	·381	
		8	·365	·358	·383	·353	·369	·373	·339	·390	·386	·349	·339	·348	
		9	—	—	—	—	—	—	—	—	—	—	—	—	
		10	·180	·206	·243	·244	·284	·301	·293	·296	·302	·303	·310	·296	
		11	·243	·273	·294	·317	·364	·368	·386	·386	·353	·328	·357	·276	
		12	·231	·241	·281	·268	·235	·227	·233	·218	·223	·222	·217	·213	
		13	·181	·183	·246	·287	·306	·321	·300	·291	·275	·285	·258	·272	
		14	·260	·291	·305	·316	·327	·322	·320	·343	·312	·315	·287	·299	
		15	·224	·241	·250	·256	·235	·242	·231	·236	·229	·226	·225	·211	
		16	—	—	—	—	—	—	—	—	—	—	—	—	
		17	·213	·199	·211	·218	·217	·283	·238	·270	·249	·265	·260	·249	
		18	·205	·197	·195	·201	·205	·208	·219	·220	·225	·223	·225	·240	
		19	·190	·180	·187	·199	·194	·172	·210	·185	·212	·201	·228	·199	
		20	·172	·184	·192	·188	·171	·157	·195	·161	·174	·170	·169	·168	
		21	·172	·172	·141	·203	·220	·244	·262	·256	·248	·257	·261	·240	
		22	·290	·297	·305	·316	·329	·338	·354	·343	·340	·301	·258	·245	
		23	—	—	—	—	—	—	—	—	—	—	—	—	
		24	·290	·290	·303	·295	·325	·325	·325	·334	·345	·374	·374	·390	
		25	·256	·252	·247	·251	·258	·233	·237	·214	·199	·167	·176	·166	
		26	·163	·162	·193	·200	·230	·223	·190	·182	·217	·219	·178	·190	
		27	·167	·176	·189	·198	·189	·187	·184	·217	·218	·211	·213	·217	
		28	·167	·167	·200	·241	·267	·281	·291	·291	·273	·270	·267	·255	
		29	·212	·224	·240	·248	·250	·239	·241	·239	·246	·247	·252	·257	
		30	—	—	—	—	—	—	—	—	—	—	—	—	
31	·252	·264	·273	·270	·278	·285	·284	·284	·293	·315	—	·235			
Hourly Means		·223	·233	·252	·260	·268	·274	·275	·276	·277	·277	·270	·262		

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
93	89	92	89	89	94	—	—	—	—	—	—	82
—	—	—	—	—	—	85	84	85	87	88	88	75
70	76	82	87	88	90	90	85	83	90	86	86	78
72	71	65	78	90	92	92	96	96	96	94	94	87
85	93	94	94	96	94	94	96	96	98	98	94	83
79	85	88	90	93	94	93	94	96	94	96	96	89
79	84	90	96	97	97	97	97	96	96	96	96	82
77	67	72	71	74	79	—	—	—	—	—	—	84
—	—	—	—	—	—	94	98	98	100	96	94	63
75	82	85	80	84	90	94	96	89	89	87	83	70
51	42	44	44	46	45	96	46	53	60	66	72	88
62	63	66	72	75	86	90	94	98	94	94	100	91
85	93	88	91	96	96	94	97	100	98	100	100	81
92	94	90	91	96	93	93	90	77	91	91	78	81
78	82	84	91	93	93	—	—	—	—	—	—	81
—	—	—	—	—	—	94	88	84	84	83	94	81
79	87	91	90	65	81	90	93	93	94	92	94	89
89	91	90	90	90	90	90	86	88	84	86	82	79
79	79	77	77	76	71	77	84	96	94	96	92	78
70	80	88	88	92	91	91	94	92	92	94	92	86
79	83	88	91	93	94	97	97	98	98	100	98	87
73	67	77	79	80	81	—	—	—	—	—	—	90
—	—	—	—	—	—	93	93	93	94	93	93	77
91	94	94	94	94	93	90	92	94	95	95	85	76
66	67	72	75	84	92	88	90	94	92	96	90	86
70	71	71	76	78	83	86	84	86	85	88	88	88
85	90	94	94	96	94	96	96	96	96	98	96	85
79	83	83	88	88	90	91	93	93	93	93	94	93
85	86	86	88	85	78	—	—	—	—	—	—	93
—	—	—	—	—	—	91	88	90	91	93	94	93
93	97	98	98	98	98	96	98	96	98	96	96	83
78	81	83	85	86	88	92	90	91	92	92	91	83
In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
·391	·389	·395	·389	·389	·365	—	—	—	—	—	—	·352
—	—	—	—	—	—	·277	·271	·277	·279	·279	·273	·247
·247	·244	·248	·234	·240	·248	·250	·251	·237	·254	·239	·239	·222
·232	·219	·195	·217	·205	·193	·178	·183	·191	·198	·192	·205	·249
·260	·240	·230	·218	·229	·216	·222	·217	·202	·200	·211	·206	·242
·245	·246	·256	·248	·244	·248	·236	·224	·219	·203	·206	·206	·378
·370	·392	·375	·402	·434	·418	·425	·418	·408	·408	·402	·392	—
·344	·286	·282	·260	·271	·283	—	—	—	—	—	—	·306
—	—	—	—	—	—	·228	·235	·211	·207	·204	·188	·279
·281	·296	·298	·264	·274	·282	·309	·309	·287	·290	·279	·262	·274
·297	·220	·216	·202	·192	·189	·285	·180	·194	·206	·212	·224	·219
·226	·219	·217	·221	·196	·196	·192	·192	·200	·210	·188	·186	·271
·272	·301	·287	·278	·288	·286	·283	·271	·267	·253	·254	·256	·290
·311	·325	·304	·292	·283	·281	·268	·263	·240	·256	·243	·199	—
·220	·221	·216	·223	·222	·220	—	—	—	—	—	—	·228
—	—	—	—	—	—	·250	·242	·223	·215	·207	·216	·234
·219	·232	·250	·257	·208	·232	·243	·244	·236	·220	·203	·206	·206
·221	·219	·205	·205	·200	·194	·190	·185	·192	·186	·188	·190	·184
·183	·178	·172	·170	·165	·161	·172	·179	·182	·172	·175	·161	·169
·162	·161	·172	·161	·158	·156	·156	·158	·165	·165	·172	·172	·236
·232	·237	·238	·225	·224	·236	·249	·253	·262	·269	·281	·288	—
·240	·221	·241	·233	·226	·220	—	—	—	—	—	—	·282
—	—	—	—	—	—	·244	·253	·283	·297	·295	·292	·337
·378	·377	·365	·371	·374	·371	·348	·322	·314	·311	·311	·280	·197
·174	·171	·178	·174	·177	·184	·167	·160	·174	·170	·175	·157	·190
·198	·192	·190	·195	·195	·197	·187	·180	·174	·168	·166	·168	·188
·211	·192	·180	·174	·173	·167	·171	·179	·173	·170	·179	·173	·252
·255	·257	·257	·265	·258	·259	·261	·264	·259	·257	·257	·240	—
·255	·255	·255	·251	·246	·230	—	—	—	—	—	—	·247
—	—	—	—	—	—	·263	·249	·250	·250	·257	·264	·242
·244	·269	·264	·243	·213	·200	·193	·187	·177	·183	·177	·177	—
·256	·252	·249	·245	·241	·240	·240	·233	·231	·231	·229	·224	·250

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.															
Hours of Mean Göttingen Time		0	1	2	3	4	5	6	7	8	9	10	11		
Hours of Mean Toronto Time		18	19	20	21	22	23	0	1	2	3	4	5		
Humidity of the Air.	NOVEMBER.	1	98	98	98	98	98	92	90	86	83	85	81	87	
		2	97	89	89	86	86	82	82	83	83	83	83	83	85
		3	75	78	75	77	89	77	73	71	66	67	64	64	68
		4	89	87	88	55	79	76	72	66	62	68	77	77	79
		5	98	100	82	91	94	88	73	81	67	84	87	87	91
		6	—	—	—	—	—	—	—	—	—	—	—	—	—
		7	92	92	88	88	86	88	84	85	85	83	83	83	83
		8	97	97	94	97	94	97	94	94	94	97	93	94	98
		9	98	98	93	89	82	55	61	98	79	73	82	82	92
		10	94	98	94	90	85	65	90	94	92	92	92	92	96
		11	94	98	94	91	85	81	78	80	76	80	86	86	93
		12	87	87	87	91	93	94	97	97	97	97	91	98	96
		13	—	—	—	—	—	—	—	—	—	—	—	—	—
		14	93	84	85	85	85	85	90	93	93	93	93	93	91
		15	83	88	83	81	73	65	61	65	65	66	72	72	78
		16	90	86	82	78	83	92	94	92	92	96	98	98	98
		17	94	94	93	87	86	91	93	94	93	94	98	98	94
		18	73	78	79	77	88	91	74	67	66	71	76	76	76
		19	82	87	97	98	91	81	86	88	75	85	78	78	77
		20	—	—	—	—	—	—	—	—	—	—	—	—	—
		21	91	94	86	89	73	63	67	63	64	64	65	65	70
		22	78	84	76	72	75	90	91	94	88	83	79	79	75
		23	94	98	98	98	96	85	85	89	91	91	96	96	88
		24	98	92	92	98	94	81	78	70	64	56	62	62	72
		25	81	82	82	94	88	84	83	96	76	83	90	90	81
		26	82	85	82	84	88	75	79	89	89	89	93	93	94
		27	—	—	—	—	—	—	—	—	—	—	—	—	—
		28	93	86	87	73	67	78	65	61	66	66	84	84	81
		29	75	100	90	82	61	65	74	63	71	63	68	68	76
		30	90	95	86	84	90	100	98	98	100	100	98	98	98
		Hourly Means		89	91	88	86	85	82	81	83	80	81	84	85
Tension of the Vapour.	NOVEMBER.	1	.179	.179	.197	.243	.292	.317	.348	.338	.344	.336	.288	.279	
		2	.243	.233	.235	.233	.242	.241	.248	.246	.243	.248	.243	.243	.221
		3	.150	.150	.156	.174	.227	.207	.207	.208	.192	.189	.168	.168	.157
		4	.142	.140	.164	.127	.205	.210	.212	.211	.192	.199	.203	.203	.173
		5	.159	.161	.163	.219	.255	.267	.232	.283	.243	.274	.262	.262	.256
		6	—	—	—	—	—	—	—	—	—	—	—	—	—
		7	.298	.298	.284	.284	.282	.290	.279	.274	.265	.257	.255	.255	.250
		8	.243	.245	.242	.249	.246	.246	.244	.242	.243	.232	.226	.226	.227
		9	.227	.255	.246	.231	.225	.150	.172	.269	.193	.171	.184	.184	.196
		10	.147	.159	.168	.179	.166	.152	.173	.190	.193	.201	.204	.204	.209
		11	.206	.210	.214	.220	.227	.228	.230	.243	.244	.238	.233	.233	.236
		12	.212	.216	.218	.219	.220	.224	.241	.247	.251	.241	.253	.253	.227
		13	—	—	—	—	—	—	—	—	—	—	—	—	—
		14	.212	.197	.207	.217	.225	.225	.239	.242	.244	.242	.238	.238	.211
		15	.149	.153	.154	.159	.149	.140	.138	.145	.142	.144	.152	.152	.156
		16	.170	.166	.163	.158	.171	.190	.193	.195	.196	.201	.195	.195	.197
		17	.212	.206	.210	.206	.202	.211	.216	.222	.224	.230	.245	.245	.242
		18	.106	.110	.109	.104	.115	.117	.092	.081	.077	.080	.084	.084	.080
		19	.115	.120	.131	.147	.152	.147	.152	.158	.145	.164	.139	.139	.132
		20	—	—	—	—	—	—	—	—	—	—	—	—	—
		21	.110	.115	.113	.126	.113	.113	.119	.114	.112	.110	.106	.106	.110
		22	.095	.103	.100	.099	.114	.142	.147	.158	.155	.153	.145	.145	.136
		23	.159	.165	.169	.172	.179	.166	.151	.147	.152	.154	.189	.189	.177
		24	.195	.176	.172	.181	.178	.165	.153	.139	.130	.114	.116	.116	.121
		25	.133	.135	.136	.151	.148	.148	.148	.177	.139	.149	.163	.163	.150
		26	.085	.087	.090	.100	.113	.109	.121	.139	.139	.142	.144	.144	.154
		27	—	—	—	—	—	—	—	—	—	—	—	—	—
		28	.079	.077	.081	.076	.080	.104	.093	.091	.094	.094	.110	.110	.096
		29	.077	.091	.084	.088	.072	.078	.091	.082	.092	.089	.089	.089	.081
		30	.131	.134	.130	.128	.131	.140	.142	.139	.141	.144	.142	.142	.144
		Hourly Means		.163	.165	.167	.173	.182	.182	.184	.191	.184	.184	.184	.178



HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
94	94	93	93	91	93	94	90	93	97	94	97	92
96	98	96	94	94	98	96	88	84	82	76	73	88
86	90	92	91	91	91	94	89	89	82	87	89	81
82	92	92	94	100	100	96	98	98	98	100	98	85
84	94	96	96	97	96	—	—	—	—	—	—	89
—	—	—	—	—	—	88	90	91	92	92	94	89
79	76	74	76	78	81	91	93	93	94	94	94	86
96	96	96	96	94	96	94	96	96	96	96	98	96
94	96	94	98	96	96	96	96	94	94	91	94	89
93	89	87	91	83	93	91	93	96	96	96	94	91
94	93	94	94	94	97	98	96	96	94	91	89	90
94	96	94	93	93	91	—	—	—	—	—	—	90
—	—	—	—	—	—	94	75	77	75	77	80	90
88	86	83	83	83	78	77	81	79	78	86	83	86
98	90	91	90	91	88	88	75	74	78	79	88	80
96	94	98	98	98	98	98	98	98	98	96	96	94
97	93	94	94	86	73	77	67	69	73	67	72	86
82	80	86	89	77	78	79	78	81	84	79	82	79
84	80	87	81	80	76	—	—	—	—	—	—	85
—	—	—	—	—	—	84	87	87	88	88	86	85
67	76	66	66	68	70	73	77	79	84	86	86	74
78	79	79	78	78	78	75	83	98	90	94	92	83
92	94	98	98	98	98	98	98	96	98	98	98	95
77	88	84	91	91	94	91	97	98	90	98	84	85
80	70	71	75	81	78	78	78	79	82	77	82	81
89	87	90	98	96	98	—	—	—	—	—	—	89
—	—	—	—	—	—	88	86	88	96	93	93	82
81	82	85	88	97	88	88	88	97	93	96	—	82
84	84	81	81	71	74	78	84	82	84	80	87	77
90	91	96	96	98	96	100	100	97	100	100	94	96
87	88	88	89	89	88	89	88	89	89	89	89	86
In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
·297	·297	·287	·283	·278	·275	·268	·252	·253	·258	·244	·245	·274
·217	·211	·209	·206	·201	·202	·196	·192	·182	·178	·161	·151	·217
·162	·161	·161	·156	·156	·147	·158	·144	·140	·136	·143	·140	·166
·165	·168	·157	·161	·177	·182	·161	·164	·164	·163	·166	·163	·174
·232	·222	·223	·229	·235	·229	—	—	—	—	—	—	—
—	—	—	—	—	—	·240	·266	·292	·306	·303	·31	·244
·235	·225	·212	·211	·214	·223	·241	·242	·240	·234	·234	·234	·252
·225	·219	·215	·217	·212	·215	·210	·211	·211	·213	·215	·221	·228
·193	·186	·174	·184	·181	·171	·175	·170	·163	·159	·151	·156	·191
·218	·215	·208	·213	·203	·214	·209	·212	·219	·215	·211	·208	·195
·242	·242	·242	·240	·234	·237	·237	·229	·229	·228	·235	·227	·231
·224	·223	·220	·214	·210	·209	—	—	—	—	—	—	·215
—	—	—	—	—	—	·190	·176	·180	·176	·178	·187	·215
·199	·185	·175	·170	·169	·159	·154	·157	·152	·143	·152	·153	·194
·179	·152	·156	·154	·156	·153	·155	·140	·142	·159	·155	·168	·152
·187	·188	·197	·197	·195	·200	·198	·203	·200	·200	·211	·213	·191
·247	·246	·246	·248	·243	·181	·170	·142	·138	·137	·111	·109	·202
·087	·087	·097	·105	·090	·091	·097	·101	·107	·109	·108	·111	·098
·143	·129	·135	·125	·121	·113	—	—	—	—	—	—	—
—	—	—	—	—	—	·112	·116	·118	·116	·116	·109	·131
·101	·110	·095	·094	·097	·098	·101	·105	·106	·104	·108	·109	·108
·144	·148	·155	·150	·144	·150	·147	·161	·179	·159	·158	·158	·142
·184	·182	·184	·184	·193	·197	·198	·198	·182	·185	·193	·193	·177
·123	·132	·114	·113	·109	·113	·116	·125	·138	·136	·153	·135	·139
·143	·119	·112	·119	·123	·112	·110	·104	·098	·100	·086	·086	·129
·150	·140	·142	·149	·145	·143	—	—	—	—	—	—	·115
—	—	—	—	—	—	·095	·078	·076	·067	·080	·080	·115
·092	·090	·094	·094	·102	·095	·094	·094	·096	·084	·083	—	·091
·084	·079	·076	·076	·075	·083	·093	·100	·116	·125	·120	·128	·090
·140	·144	·150	·150	·161	·154	·151	·140	·127	·129	·126	·118	·139
·177	·173	·171	·171	·170	·167	·164	·162	·163	·162	·162	·165	·173

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.															
Hours of Mean Göttingen Time		0	1	2	3	4	5	6	7	8	9	10	11		
Hours of Mean Toronto Time		18	19	20	21	22	23	0	1	2	3	4	5		
Humidity of the Air.	DECEMBER.	1	97	97	97	91	92	87	86	81	80	89	79	86	
		2	89	95	98	92	90	84	84	88	86	81	83	83	
		3	84	85	88	88	73	65	67	65	72	70	61	72	
		4	—	—	—	—	—	—	—	—	—	—	—	—	—
		5	73	94	96	88	88	83	81	83	92	96	98	98	96
		6	61	69	68	80	70	66	58	65	61	68	62	62	76
		7	81	96	77	73	73	75	71	74	77	72	80	78	78
		8	84	96	83	86	83	83	88	92	94	85	92	96	96
		9	88	92	86	81	90	81	81	81	83	83	83	82	82
		10	71	71	74	74	74	77	86	76	74	73	87	70	70
		11	—	—	—	—	—	—	—	—	—	—	—	—	—
		12	89	89	89	96	98	92	90	90	90	85	98	96	96
		13	79	87	91	93	81	92	89	86	89	87	88	86	86
		14	77	74	77	73	76	79	90	82	85	80	83	80	80
		15	—	76	82	81	84	79	78	80	80	76	77	72	72
		16	72	75	76	79	82	84	75	73	77	72	77	69	69
		17	67	64	65	74	76	75	74	67	67	71	76	80	80
		18	—	—	—	—	—	—	—	—	—	—	—	—	—
		19	75	76	77	78	78	79	69	63	50	51	66	63	63
		20	71	72	73	86	96	71	91	92	85	78	92	84	84
		21	85	98	98	91	92	81	75	90	92	90	92	94	94
		22	58	50	45	44	43	57	42	43	37	36	34	36	36
		23	32	28	44	46	46	53	50	48	46	49	49	49	49
		24	47	52	55	57	56	56	64	67	69	64	63	59	59
		25	—	—	—	—	—	—	—	—	—	—	—	—	—
		26	88	84	83	83	85	86	83	79	81	80	81	81	81
		27	84	87	84	82	75	75	74	73	81	75	78	80	80
		28	76	72	74	69	79	85	79	68	68	79	77	79	79
		29	100	100	100	100	100	100	98	98	98	98	100	100	100
		30	100	—	100	98	90	89	79	78	76	74	66	75	75
		31	—	55	55	56	56	55	37	45	48	45	39	43	43
		32	—	—	—	—	—	—	—	—	—	—	—	—	—
		Hourly Means		77	78	79	79	79	77	76	75	75	74	76	76
Tension of the Vapour.	DECEMBER.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.		
		1	·118	·113	·115	·115	·120	·119	·125	·123	·126	·138	·120	·130	
		2	·123	·131	·137	·136	·142	·140	·148	·154	·156	·147	·149	·147	
		3	·146	·150	·150	·147	·131	·123	·161	·161	·182	·174	·148	·157	
		4	—	—	—	—	—	—	—	—	—	—	—	—	
		5	·151	·192	·196	·177	·179	·169	·167	·169	·180	·183	·181	·170	
		6	·045	·054	·049	·072	·073	·076	·069	·082	·078	·086	·075	·094	
		7	·078	·079	·072	·085	·103	·115	·116	·126	·130	·125	·134	·126	
		8	·131	·154	·152	·164	·163	·163	·167	·172	·178	·169	·177	·182	
		9	·171	·176	·164	·153	·162	·158	·157	·154	·156	·159	·153	·140	
		10	·077	·077	·081	·083	·084	·088	·096	·091	·091	·087	·103	·083	
		11	—	—	—	—	—	—	—	—	—	—	—	—	
		12	·122	·124	·130	·145	·168	·172	·174	·177	·174	·169	·181	·170	
		13	·133	·135	·147	·142	·123	·133	·129	·122	·124	·120	·116	·112	
		14	·087	·084	·087	·088	·100	·113	·136	·136	·150	·144	·147	·135	
		15	—	·096	·101	·107	·130	·120	·126	·131	·130	·125	·124	·108	
		16	·092	·094	·103	·111	·115	·125	·116	·114	·122	·112	·106	·095	
		17	·063	·069	·072	·083	·102	·107	·112	·108	·109	·112	·121	·133	
		18	—	—	—	—	—	—	—	—	—	—	—	—	
		19	·107	·111	·118	·128	·141	·159	·146	·140	·119	·120	·143	·127	
		20	·069	·061	·067	·097	·135	·111	·156	·168	·166	·160	·174	·126	
		21	·120	·144	·151	·154	·174	·164	·159	·192	·193	·190	·190	·188	
		22	·069	·053	·042	·040	·039	·054	·040	·031	·035	·031	·028	·028	
		23	·020	·018	·028	·031	·036	·045	·044	·045	·047	·051	·052	·051	
		24	·038	·041	·048	·054	·059	·060	·075	·080	·088	·080	·076	·070	
		25	—	—	—	—	—	—	—	—	—	—	—	—	
		26	·150	·146	·145	·147	·151	·153	·149	·145	·147	·144	·145	·145	
		27	·139	·141	·140	·140	·131	·140	·143	·143	·159	·141	·143	·143	
		28	·082	·091	·094	·095	·108	·117	·111	·096	·096	·109	·106	·111	
		29	·172	·172	·171	·174	·177	·179	·179	·181	·183	·184	·187	·187	
		30	·186	—	·187	·163	·141	·138	·113	·104	·102	·098	·084	·089	
		31	—	·045	·043	·046	·051	·057	·043	·054	·060	·054	·047	·048	
		32	—	—	—	—	—	—	—	—	—	—	—	—	
Hourly Means		·108	·106	·111	·114	·120	·122	·124	·126	·129	·126	·126	·122		

HUMIDITY OF THE AIR, AND TENSION OF THE ATMOSPHERIC VAPOUR.

12	13	14	15	16	17	18	19	20	21	22	23	Daily and Monthly Means.
6	7	8	9	10	11	12	13	14	15	16	17	
84	84	86	90	92	92	92	89	87	89	87	87	88
83	83	88	81	80	64	73	76	82	84	86	88	84
74	74	88	92	—	80	—	—	—	—	—	—	81
—	—	—	—	—	—	94	92	94	92	98	92	85
84	81	74	66	68	82	88	83	87	96	95	62	69
60	61	70	66	70	72	71	79	79	78	74	70	80
80	77	77	81	79	80	88	86	83	86	84	84	93
100	100	100	100	100	100	100	98	92	98	83	88	78
81	81	79	71	73	70	71	74	64	70	65	71	77
73	73	75	74	74	75	—	—	—	—	—	—	88
—	—	—	—	—	—	82	84	84	84	86	86	84
90	89	87	85	83	82	82	81	79	79	87	77	81
84	86	84	84	87	84	83	77	78	78	77	77	75
87	82	87	87	81	86	82	82	76	78	78	—	68
74	76	73	75	69	74	71	69	66	66	66	72	73
67	74	62	58	63	62	70	58	48	53	52	56	72
82	82	82	84	84	73	—	—	—	—	—	—	77
—	—	—	—	—	—	77	70	67	66	67	73	88
68	74	78	75	72	77	80	80	77	80	70	74	84
87	87	79	89	88	88	88	81	83	81	86	95	90
96	98	98	98	100	98	100	94	92	92	63	56	41
38	33	33	37	36	53	44	40	43	33	37	33	48
48	48	53	51	51	55	55	49	48	48	46	49	65
68	72	53	62	40	34	—	—	—	—	—	—	83
—	—	—	—	—	—	84	84	85	88	88	92	79
83	83	82	94	80	80	82	82	82	87	82	84	78
81	81	81	85	79	80	79	77	68	68	73	87	99
79	80	81	81	76	80	78	77	77	79	81	98	73
96	98	100	100	98	96	98	98	100	100	98	100	53
70	65	68	63	60	61	60	60	56	60	60	—	76
30	39	41	40	36	37	—	—	—	—	—	—	77
—	—	—	—	—	—	79	76	73	79	78	78	77
76	76	76	77	74	75	80	78	76	77	76	77	77
In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.
.125	.125	.127	.131	.131	.132	.132	.129	.127	.126	.120	.121	.124
.149	.153	.162	.161	.160	.139	.155	.164	.181	.186	.188	.190	.154
.147	.153	.169	.172	—	.185	—	—	—	—	—	—	.160
—	—	—	—	—	—	.174	.165	.170	.168	.179	.174	.130
.140	.128	.107	.087	.086	.086	.076	.067	.059	.064	.062	.039	.077
.070	.072	.083	.078	.081	.080	.077	.097	.098	.095	.092	.082	.115
.120	.119	.121	.125	.120	.121	.129	.126	.124	.126	.126	.125	.171
.186	.184	.184	.184	.184	.177	.179	.181	.166	.177	.166	.172	.128
.132	.125	.118	.102	.101	.097	.092	.089	.075	.079	.074	.079	.093
.085	.085	.088	.090	.091	.093	—	—	—	—	—	—	.150
—	—	—	—	—	—	.111	.112	.109	.109	.114	.115	.113
.156	.143	.141	.151	.149	.140	.139	.141	.134	.139	.141	.130	.117
.110	.108	.103	.101	.103	.099	.098	.089	.090	.091	.089	.087	.106
.141	.135	.133	.132	.129	.126	.111	.112	.091	.093	.090	—	.086
.111	.111	.105	.105	.093	.098	.092	.088	.085	.085	.085	.090	.108
.093	.094	.073	.066	.070	.066	.073	.056	.044	.044	.043	.046	.111
.140	.136	.136	.128	.140	.151	—	—	—	—	—	—	.118
—	—	—	—	—	—	.096	.096	.094	.092	.094	.102	.169
.124	.109	.111	.108	.082	.087	.091	.090	.072	.084	.074	.082	.034
.127	.121	.113	.123	.116	.116	.117	.092	.098	.096	.105	.128	.043
.191	.193	.184	.184	.192	.187	.192	.184	.177	.174	.101	.076	.085
.029	.025	.025	.027	.025	.040	.034	.027	.028	.022	.025	.022	.144
.049	.047	.052	.048	.049	.054	.054	.049	.047	.045	.041	.041	.126
.063	.081	.061	.068	.050	.042	—	—	—	—	—	—	.117
—	—	—	—	—	—	.141	.146	.150	.153	.153	.158	.184
.145	.145	.139	.158	.135	.134	.136	.137	.137	.142	.137	.143	.095
.145	.145	.147	.164	.138	.120	.098	.085	.068	.065	.068	.086	.057
.112	.117	.123	.131	.122	.130	.132	.134	.136	.139	.141	.165	—
.182	.184	.196	.200	.195	.191	.189	.187	.191	.191	.184	.186	—
.080	.072	.073	.066	.061	.058	.057	.055	.052	.057	.057	—	—
.035	.042	.043	.042	.035	.035	—	—	—	—	—	—	—
—	—	—	—	—	—	.080	.083	.087	.097	.099	.098	—
.118	.117	.115	.116	.109	.110	.113	.110	.107	.109	.105	.109	.116



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Mean Solar Time (Astronom'. Reckg.)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
JANUARY.							
D.	H.	D.	H.				In.
1	02	1	08	S. W.	Brisk.		
1	08	1	14	S. W.	Brisk.	38·8	27·6
SUNDAY.							
2	14	2	20	N. W.	Nearly calm.	38·0	1·9
2	20	3	02	N. W.	Nearly calm.		
3	02	3	08	N. W.	Very light.		
3	08	3	14	S. by W.	Moderate.	25·0	3·5
3	14	3	20	S. E.	Light.		
3	20	4	02	—	Calm.		
4	02	4	08	N. W.	Light.		
4	08	4	14	N. N. W.	Moderate.	31·1	10·5
4	14	4	20	—	Calm.		
4	20	5	02	Northerly	Nearly calm.		
5	02	5	08	—	Calm.		
5	08	5	14	N. Westerly	Nearly calm.		
5	14	5	20	S. E.	Light.	26·2	5·7
5	20	6	02	S. E.	Light.		
6	02	6	08	S. E.	Light.		
6	08	6	14	S.	Light.		
6	14	6	20	Northerly	Light.	40·7	25·4
6	20	7	02	S. W.	Light.		
7	02	7	08	N. W.	Light.		
7	08	7	14	—	Calm.		
7	14	7	20	N. Westerly	Very light.	34·6	13·4
7	20	8	02	N. E.	Light.		
8	02	8	08	E. by N.	Very light.	31·9	21·0
SUNDAY.							
9	14	9	20	—	Calm.		
9	20	10	02	Northerly	Nearly calm.	37·6	21·2
10	02	10	08	S.	Nearly calm.		
10	08	10	14	—	Calm.		
10	14	10	20	—	Calm.	33·9	17·1
10	20	11	02	N. Westerly	Nearly calm.		
11	02	11	08	S. W.	Light.		
11	08	11	14	W. N. W.	Light.		
11	14	11	20	W.	Nearly calm.	39·1	21·0
11	20	12	02	W.	Light.		
12	02	12	08	W.	Light.		
12	08	12	14	W. by N.	Brisk.		
12	14	12	20	N.	Light.	32·6	6·8
12	20	13	02	N. N. E.	Light.		
13	02	13	08	N. E.	Light.		
13	08	13	14	S. by E.	Light.		
13	14	13	20	—	Calm.	37·0	7·4
13	20	14	02	S. by W.	Light.		
14	02	14	08	W.	Very high.		
14	08	14	14	W.	Brisk.	44·4	24·5
14	14	14	20	W.	Light.		
14	20	15	02	W. N. W.	Very light.		
15	02	15	08	W. N. W.	Moderate.		
15	08	15	14	—	Calm.	28·6	17·3
SUNDAY.							
16	14	16	20	S. W.	Nearly calm.	33·6	22·7
16	20	17	02	W. S. W.	Very light.		
17	02	17	08	N. Westerly	Very light.		
17	08	17	14	—	Calm.	44·4	24·3
17	14	17	20	—	Calm.		
17	20	18	02	—	Calm.		
18	02	18	08	—	Calm.		
18	08	18	14	—	Calm.		
18	14	18	20	—	Calm.	41·2	27·5
18	20	19	02	—	Calm.		

\* No fall recorded.

Mean Solar Time (Astronom. Reck's.)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Göttingen.		Direction.	Force.				
<b>JANUARY.</b>									
D.	H.	D.	H.				°	°	In.
19	02	19	08	—	Calm.	Overcast; cirri and haze			
19	08	19	14	—	Calm.	Clouded; detached cirro-cumuli; clear spaces in zenith	45.2	32.3	—
19	14	19	20	—	Calm.	Densely clouded; cirro-strati and cirro-cumuli; at 14 <sup>h</sup> 20 <sup>m</sup> shower of rain for			
19	20	20	02	N. E.	Very light.	Densely overcast; cirri, cirro-strati and haze; a few drops of rain [5 minutes			
20	02	20	08	E.	Light.	Densely clouded; light and moderate rain since 20 <sup>h</sup> 30 <sup>m</sup>			
20	08	20	14	—	Calm.	Densely clouded; rain ceased at 7 <sup>h</sup>	37.4	30.2	1.25
20	14	20	20	S. by W.	Light.	Densely clouded			
20	20	21	02	S. W.	Moderate.	Densely clouded; snowing very slightly			
21	02	21	08	W.	Brisk.	(Densely clouded; cirro-cumuli and haze; slight snow; moderate fall at 1 <sup>h</sup> . Temp. of soil, 3 ft. deep, 36°·5; 6 ft. deep 40°·5; surface water of the lake 34°·5	31.4	13.4	—
21	08	21	14	W.	Light.	Partially clouded; cirro-cumuli; lunar halo from 7 <sup>h</sup> 50 <sup>m</sup> to 8 <sup>h</sup> 20 <sup>m</sup> , diam. 30°			
21	14	21	20	W. N. W.	Moderate.	Clear, except a dense bank of strati in S. horizon; occasional brisk gusts of wind			
21	20	22	02	W. N. W.	Light.	¾ overcast; cirri, cirro-cumuli, and cumulo-strati; wind in moderate gusts			
22	02	22	08	N. N. W.	Moderate.	Partially clouded; cirro-cumuli, and cumuli; snow from 20 <sup>h</sup> 5 <sup>m</sup> to 20 <sup>h</sup> 20 <sup>m</sup> ;	17.9	2.9	—
22	08	22	14	N. N. W.	Nearly calm.	Clear, except a few cumuli in S. horizon			
<b>SUNDAY.</b>									
23	14	23	20	Northerly	Nearly calm.	1 clouded in N. W. and S.	13.9	2.9	—
23	20	24	02	Northerly	Nearly calm.	Overcast; cirri and cirro-cumuli; fair			
24	02	24	08	S. W.	Light.	{ Overcast; light cirri and haze; parhelia on N. E. side of sun from 23 <sup>h</sup> to 4 <sup>h</sup> ; solar halo from 2 <sup>h</sup> to 4 <sup>h</sup> ; wind in gusts	29.9	9.6	—
24	08	24	14	S. W.	Brisk.	Clear, except a few light cirri dispersed about; lunar halo from 6 <sup>h</sup> to 7 <sup>h</sup> 45 <sup>m</sup>			
24	14	24	20	—	Calm.	Clear; lunar halo visible again from 8 <sup>h</sup> 30 <sup>m</sup> to 13 <sup>h</sup>			
24	20	25	02	S. W.	Light.	¾ overcast; cirri and cirro-strati; wind in gusts			
25	02	25	08	S. W.	Moderate.	Clear, except a few cirri in S. horizon			
25	08	25	14	S. W.	Nearly calm.	¾ overcast; light cirri and haze; lunar halo since 7 <sup>h</sup> 10 <sup>m</sup> , diameter about 40°	40.1	25.7	—
25	14	25	20	—	Calm.	¾ clouded round horizon; cirri and cirro-strati			
25	20	26	02	S. W.	Very light.	Overcast; strati and haze			
26	02	26	08	Westerly.	Nearly calm.	Overcast; dense cirro-strati and haze; slight snow since 0 <sup>h</sup> 15 <sup>m</sup>			
26	08	26	14	Northerly.	Light.	Densely clouded; moderate snow continued since 2 <sup>h</sup> [diameter 30°	37.0	20.3	—
26	14	26	20	N. by W.	Moderate.	Densely overcast; cirri and haze; perfect lunar halo from 12 <sup>h</sup> to 13 <sup>h</sup> 20 <sup>m</sup> ,			
26	20	27	02	N. Westerly.	Nearly calm.	¾ overcast; detached cirro-cumuli [spaces in zenith			
27	02	27	08	N. W.	Light.	Clouded; cumulo-strati and cirro-cumuli, very dense round horizon; clear			
27	08	27	14	W. by N.	Light.	{ Densely clouded; cirro-cumuli, strati, and haze; clouds breaking in zenith; at 11 <sup>h</sup> sky perfectly clear [visible from 13 <sup>h</sup> to 16 <sup>h</sup>	29.1	12.8	—
27	14	27	20	—	Calm.	Overcast with light haze; a very perfect lunar halo, diameter about 30°			
27	20	28	02	S. S. W.	Light.	Overcast; cirri and cirro-strati, but fair; wind in gusts [diameter 35°			
28	02	28	08	Southerly.	Very light.	Overcast; light cirro-strati, cirri, and haze; imperfect lunar halo since noon,			
28	08	28	14	—	Calm.	Overcast with light haze; a few stars visible [diameter 40°	49.4	28.2	—
28	14	28	20	—	Calm.	Densely clouded; strati, cirro-cumuli, and haze; lunar halo since 11 <sup>h</sup> ,			
28	20	29	02	Southerly.	Very light.	{ Clear, except light cirro-strati and haze round horizon; imperfect solar halo from 22 <sup>h</sup> to 0 <sup>h</sup> , diameter 35° -			
29	02	29	08	—	Calm.	Partially clouded; light flexuous cirri and haze [at 9 <sup>h</sup> , clearing in N. W.	47.7	33.3	0.48
29	08	29	14	S. E.	Moderate.	Heavy rain since 5 <sup>h</sup> , with occasional sheet lightning and distant thunder, ceased			
<b>SUNDAY.</b>									
30	14	30	20	—	Calm.	Densely clouded; strati, cirro-cumuli, and haze	42.2	34.2	0.22
30	20	31	02	N. E.	Nearly calm.	Moderate and heavy rain from 18 <sup>h</sup> to 21 <sup>h</sup>			
31	02	31	08	N. W.	Moderate.	Clouded; cumuli and cumulo-strati, with clear patches			
31	08	31	14	N. W.	Light.	Clear, except a low range of strati in N.	40.2	24.2	—
31	14	31	20	N. W.	Light.	Clear, except a few cirro-cumuli round horizon; wind in gusts			
31	20	1	02	N. W.	Light.	Clear, except a few scattered cirri			
<b>FEBRUARY.</b>									
1	02	1	08	W. by N.	Light.	¾ overcast; low range of cumulo-strati in S., and a few cirro-cumuli in zenith			
1	08	1	14	—	Calm.	Clear	35.7	26.8	—
1	14	1	20	S. W.	Light.	Overcast with light haze; lunar halo, diameter 35°			
1	20	2	02	S. by W.	Very light.	Overcast; cirri, cirro-strati, and dense haze			
2	02	2	08	S. by W.	Light.	Overcast; light cirro-strati, with a low range of strati in S.			
2	08	2	14	—	Calm.	Densely clouded, very dark	43.2	33.9	1.57
2	14	2	20	S. E.	Nearly calm.	Heavy rain since 8 <sup>h</sup> 30 <sup>m</sup>			
2	20	3	02	—	Calm.	Densely clouded; heavy and light rain from 14 <sup>h</sup> to 19 <sup>h</sup> 30 <sup>m</sup> [the lake			
3	02	3	08	Southerly.	Nearly calm.	Densely clouded; cirro-cumuli, cumuli, and haze; dense vapour rising from			
3	08	3	14	—	Calm.	Overcast with dense haze	50.2	33.4	—
3	14	3	20	—	Calm.	Densely clouded, very dark			
3	20	4	02	Northerly.	Nearly calm.	Clouded; cirro cumuli and strati; fair			

Mean Solar Time (Astronom. Reck.)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
<b>FEBRUARY.</b>							
D. H.	D. H.				°	°	In.
4 02	4 08	E. by N.	Light.	Densely clouded; cirro-strati and haze; slight rain since 1 <sup>h</sup> 30 <sup>m</sup> [in gusts]			
4 08	4 14	Easterly.	Fresh.	Heavy rain, with very vivid lightning and loud thunder from 7 <sup>h</sup> to 9 <sup>h</sup> ; wind	42·8	29·3	0·78
4 14	4 20	N.	Moderate.	Densely clouded; drizzling rain since 12 <sup>h</sup> ; wind in brisk gusts			
4 20	5 02	N. W.	Moderate.	Detached cirri, cirro-cumuli, and cumuli moving rapidly across the sky;			
5 02	5 08	N. N. W.	Moderate.	Overcast; cirro-cumuli and cirro-strati - [wind in brisk gusts]	35·2	29·4	—
5 08	5 14	—	Calm.	Clouded; strati and cirro-cumuli; a few clear spaces			
<b>SUNDAY.</b>							
6 14	6 20	—	Calm.	Densely clouded, very dark	44·0	30·4	—
6 20	7 02	N. Easterly.	Nearly calm.	Densely clouded; cirro-cumuli, cirro-strati, and haze; slight snow			
7 02	7 08	W. by N.	Very light.	Clouded; cirro-cumuli and cirro-strati; a few clear spaces in zenith			
7 08	7 14	Northerly.	Light.	Densely clouded; cumulo-strati and cirro-cumuli	36·7	13·1	—
7 14	7 20	—	Calm.	Overcast with dense haze; snowing slightly or moderately since 9 <sup>h</sup>			
7 20	8 02	N. by W.	Moderate.	Snow continuing			
8 02	8 08	N. W.	High.	¾ clouded; cirro-cumuli and cumulo-strati; squally			
8 08	8 14	N. W.	Light.	Clear; wind in gusts	14·8	2·9	—
8 14	8 20	Northerly.	Nearly calm.	Nearly overcast with haze			
8 20	9 02	S. W.	Moderate.	Clouded; cirro-strati and haze; wind in gusts			
9 02	9 08	S. W.	Very light.	Clouded; strati and haze			
9 08	9 14	S. W.	Very light.	Clouded; dense haze	29·9	13·4	—
9 14	9 20	—	Calm.	Clear, except light haze round horizon			
9 20	10 02	—	Calm.	Clear, except light haze and cirri round horizon			
10 02	10 08	—	Calm.	Uncolored; very light haze			
10 08	10 14	—	Calm.	Clear	40·2	24·7	—
10 14	10 20	—	Calm.	Clear			
10 20	11 02	—	Calm.	Clouded; cirri, cirro-strati, and haze			
11 02	11 08	—	Calm.	Overcast; dense haze; drizzling rain between 23 <sup>h</sup> and 0 <sup>h</sup>			
11 08	11 14	—	Calm.	Overcast; very dense haze; extremely dark	39·7	27·5	0·32
11 14	11 20	—	Calm.	Densely clouded; moderate rain since 11 <sup>h</sup> , ceased at 15 <sup>h</sup>			
11 20	12 02	N. by W.	Light.	¾ clouded; detached cirro-cumuli			
12 02	12 08	—	Calm.	Clear, except a few light cirro-cumuli	40·7	27·2	—
12 08	12 14	—	Calm.	Clouded with cirro-cumuli; clear patches			
<b>SUNDAY.</b>							
13 14	13 20	S. W.	Nearly calm.	Partially clouded; cirri and cirro-cumuli	42·7	22·2	—
13 20	14 02	N. W.	Fresh.	Partially clouded; dense cirro-cumuli and cirro-strati; wind in gusts			
14 02	14 08	N. W.	High.	Partially clouded; cumulo-strati and cirro-cumuli; squalls			
14 08	14 14	N. W.	Light.	Clear, except round horizon; wind in gusts	24·2	10·3	—
14 14	14 20	—	Calm.	Densely clouded; slight snow			
14 20	15 02	—	Calm.	¾ clouded; cumulo-strati and cirro-cumuli; slight snow			
15 02	15 08	S. W.	Very light.	Partially clouded; cumulo-strati and cirro-cumuli; fair			
15 08	15 14	S.	Light.	Overcast with dense haze	30·6	13·4	—
15 14	15 20	S. Easterly.	Very light.	Densely clouded; slight snow			
15 20	16 02	S.	Very light.	Overcast; cirri, cirro-strati, and dense haze			
16 02	16 08	N. W.	Moderate.	Heavy snow from 2 <sup>h</sup> to 3 <sup>h</sup>			
16 08	16 14	N. by W.	Fresh.	Overcast with light haze; imperfect lunar halo, diameter about 35°; squally	31·4	3·7	—
16 14	16 20	N. by W.	High.	Partially overcast with haze; violent squalls			
16 20	17 02	N. W.	Moderate.	Cirro-cumuli round horizon; remainder clear; wind in gusts			
17 02	17 08	N. W.	Fresh.	¾ clouded; cumulo-strati and cirro-cumuli; wind in gusts			
17 08	17 14	N. W.	Very light.	Clear, except a few light cirro-strati in S. W. horizon	22·8	5·6	—
17 14	17 20	S.	Brisk.	Overcast with dense haze; squalls			
17 20	18 02	S. E.	Very light.	Clouded; cirri and cirro-cumuli, slight or moderate snow from 14 <sup>h</sup> 30 <sup>m</sup> to 16 <sup>h</sup> .			
18 02	18 08	S. by W.	Moderate.	{ Densely clouded; cirro-cumuli and haze; solar halo and double parhelia visible from 22 <sup>h</sup> to 0 <sup>h</sup> - [rain and sleet; wind in gusts.	36·0	21·5	0·60
18 08	18 14	S. E.	Light.	Densely clouded; moderate snow from 2 <sup>h</sup> 15 <sup>m</sup> to 7 <sup>h</sup> 30 <sup>m</sup> ; since 7 <sup>h</sup> 30 <sup>m</sup> light			
18 14	18 20	S.	Very light.	Constant rain or sleet since 8 <sup>h</sup>			
18 20	19 02	N. W.	Moderate.	¾ clouded, heavy cumuli; wind in gusts			
19 02	19 08	N. W. by W.	Moderate.	Partially clouded, cumuli and haze; wind in gusts	23·7	10·9	—
19 08	19 14	N. W.	Very light.	A few cirro-cumuli detached about			
<b>SUNDAY.</b>							
20 14	20 20	W. by S.	Light.	¾ clear; range of cirro-strati round S. horizon	24·0	12·8	—
20 20	21 02	N. W.	Very light.	Fair; detached cirro-cumuli and cirro-strati			
21 02	21 08	S. W.	Light.	Densely clouded; strati, cumulo-strati and haze			
21 08	21 14	—	Calm.	Overcast with light haze; lunar halo from 9 <sup>h</sup> to 9 <sup>h</sup> 50 <sup>m</sup>	29·5	18·0	—
21 14	21 20	Southerly	Light.	Clouded; cirro-cumuli and haze; a few stars visible			
21 20	22 02	—	Calm.	Partially overcast with very light haze			



Mean Solar Time (Astronom <sup>1</sup> Recks <sup>s</sup> ).		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
<b>FEBRUARY.</b>							
D.	H.	D.	H.				In.
22	02	22	08	N. W.	Moderate.	Heavy snow from 1 <sup>h</sup> 50 <sup>m</sup> to 2 <sup>h</sup> 40 <sup>m</sup>	— <sup>a</sup>
22	08	22	14	Northerly.	Very light.	½ clear; range of cumulo-strati round horizon	33·7
22	14	22	20	—	Calm.	¾ overcast; light cirri and cirro-strati; lunar halo from 12 <sup>h</sup> to 13 <sup>h</sup> 30 <sup>m</sup>	14·7
22	20	23	02	Westerly.	Nearly calm.	Densely clouded; cirro-cumuli, cirro-strati and haze	—
23	02	23	08	Southerly.	Very light.	Densely clouded; cirro-strati and haze	—
23	08	23	14	N. Westerly.	Light.	Densely clouded; cumulo-strati, cirro-cumuli and haze	35·3
23	14	23	20	—	Calm.	Dense haze; lunar halo since 13 <sup>h</sup> , diam. about 35°	22·2
23	20	24	02	Northerly.	Nearly calm.	¾ clouded; detached cirro-cumuli and cirri	—
24	02	24	08	S. Easterly.	Nearly calm.	¾ clouded; cumulo-strati and cirro-strati	—
24	08	24	14	—	Calm.	Overcast; very light cirro-strati and haze, very faint lunar halo	37·4
24	14	24	20	E.	Fresh.	Partially clouded; light cirro-cumuli and haze; lunar halo from 12 <sup>h</sup> 40 <sup>m</sup>	21·4
24	20	25	02	E. by N.	Moderate.	Overcast; light cirro-cumuli and haze; wind in gusts [to 13 <sup>h</sup> 20 <sup>m</sup> , diam. 35°]	—
25	02	25	08	Easterly.	Fresh.	Densely clouded; cumulo-strati, cirro-cumuli and haze; wind in gusts	—
25	08	25	14	E.	Brisk.	Overcast with light haze; wind in gusts	33·7
25	14	25	20	E.	Moderate.	Clouded; cirro-cumuli, cumulo-strati and haze; wind in gusts	21·4
25	20	26	02	E.	Moderate.	Rain or sleet since 18 <sup>h</sup> ; wind in gusts	0·35
26	02	26	08	E.	Very light.	{ Densely clouded; rain ceased at 0 <sup>h</sup> . Temperature of soil 3 feet deep 34°·5, 6 feet deep 38°·5; surface water of the lake 34°·5	42·8
26	08	26	14	E.	Light.	Densely clouded; cirri and haze; slight rain at 6 <sup>h</sup>	36·2
<b>SUNDAY.</b>							
27	14	27	20	—	Calm.	Clear, except a low range of strati in S. horizon	45·6
27	20	28	02	—	Calm.	Overcast; cirro-cumuli and haze; fair	28·6
28	02	28	08	E.	Light.	Densely clouded; cumulo-strati, cirro-cumuli and haze	—
28	08	28	14	E.	Very light.	Densely clouded; cirro-cumuli and haze	39·9
28	14	28	20	Easterly.	Light.	Overcast with very dense haze	33·0
28	20	1	02	—	Calm.	Densely overcast; cirri and haze	—
<b>MARCH.</b>							
1	02	1	08	N. E.	Nearly calm.	Overcast; dense haze and cirro-strati, very light rain between 0 <sup>h</sup> and 1 <sup>h</sup>	—
1	08	1	14	E.	Very light.	Densely clouded; steady rain since 3 <sup>h</sup> 10 <sup>m</sup>	39·2
1	14	1	20	—	Calm.	Dense haze; drizzling rain since 8 <sup>h</sup>	35·3
1	20	2	02	—	Calm.	Dense fog; drizzling rain since 18 <sup>h</sup>	0·80
2	02	2	08	—	Calm.	Densely clouded; haze; showers of rain at intervals since 20 <sup>h</sup>	—
2	08	2	14	N. W.	Very light.	Clear	49·4
2	14	2	20	S. W.	Nearly calm.	Clear, except a few cirro-cumuli in zenith, and a low range of strati in S.	36·2
2	20	3	02	Westerly.	Nearly calm.	Overcast; cirri, cirro-strati and haze; fair	—
3	02	3	08	S. W.	Very light.	¾ overcast with light cirro-strati and haze; clear in S. horizon	—
3	08	3	14	—	Calm.	Partially clouded; cirro-cumuli, sheet lightning almost incessantly from	54·8
3	14	3	20	—	Calm.	Partially clouded; cirro-strati and haze [8 <sup>h</sup> 20 <sup>m</sup> to 11 <sup>h</sup> 10 <sup>m</sup>	34·9
3	20	4	02	—	Calm.	Overcast; cirro-cumuli, cirro-strati and haze; haze very dense round horizon	—
4	02	4	08	N. N. E.	Moderate.	Densely clouded; moderate rain since 1 <sup>h</sup> 45 <sup>m</sup>	—
4	08	4	14	Northerly.	Light.	Densely clouded; moderate rain continued since 2 <sup>h</sup>	56·6
4	14	4	20	Northerly.	Light.	Densely clouded; slight rain since 8 <sup>h</sup>	29·2
4	20	5	02	N. N. E.	Light.	Densely overcast; cirri, cirro-strati and haze; rain ceased at 15 <sup>h</sup>	0·70
5	02	5	08	S.	Light.	Densely overcast; cumulo-strati and cirro-strati	—
5	08	5	14	Northerly.	Nearly calm.	Densely clouded; very dark; slight snow	34·3
<b>SUNDAY.</b>							
6	14	6	20	—	Calm.	Densely clouded, very dark	32·4
6	20	7	02	N. N. E.	Very light.	Densely overcast; cirri, cirro-cumuli and haze	22·6
7	02	7	08	N.	Light.	¾ overcast; detached cirro-cumuli and cumulo-strati; fair	38·9
7	08	7	14	—	Calm.	¾ clouded round horizon with strati	—
7	14	7	20	—	Calm.	Clear	—
7	20	8	02	S. Westerly.	Nearly calm.	Clear, except round horizon	—
8	02	8	08	S. S. W.	Light.	Clear, except a few light cirro-strati round horizon	42·1
8	08	8	14	Southerly.	Nearly calm.	Overcast with haze; a few stars visible	29·8
8	14	8	20	—	Calm.	Densely overcast, very dark	—
8	20	9	02	—	Calm.	Overcast; cirri, cirro-cumuli and haze; fair	—
9	02	9	08	S. by W.	Very light.	Densely clouded; moderate rain commencing, ceased at 7 <sup>h</sup>	47·1
9	08	9	14	—	Calm.	¾ clouded; clear in N.	36·7
9	14	9	20	—	Calm.	Densely clouded; fog rising; sheet lightning from 8 <sup>h</sup> 30 <sup>m</sup> to 12 <sup>h</sup>	—
9	20	10	02	N. W.	Moderate.	¾ overcast; cirro-cumuli and cirro-strati, wind in gusts	—
10	02	10	08	W. by N.	Light.	Partially clouded with cirro-cumuli; fair	44·1
10	08	10	14	W. by N.	Light.	Densely overcast with cirrus haze	27·6
10	14	10	20	Northerly.	Very light.	Densely clouded, very dark	—
10	20	11	02	Northerly.	Nearly calm.	Densely overcast; slight snow began at 19 <sup>h</sup> 30 <sup>m</sup>	—

<sup>a</sup> The amount of melted snow is not stated in the Observatory record.

<sup>b</sup> Fall of rain not recorded.

Mean Solar Time (Astronom. Recks).		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
<b>MARCH.</b>							
D.	H.	D.	H.		°	°	In.
11	02	11	08	N. by W.	Moderate.		
11	08	11	14	N. N. W.	Light.	30·9	15·1
11	14	11	20	—	Calm.		
11	20	12	02	N. Easterly.	Nearly calm.		
12	02	12	08	S. by E.	Light.	31·7	22·0
12	08	12	14	—	Calm.		
<b>SUNDAY.</b>							
13	14	13	20	—	Calm.	39·6	27·1
13	20	14	02	—	Calm.		
14	02	14	08	S. S. E.	Light.	40·9	25·7
14	08	14	14	—	Calm.		
14	14	14	20	—	Calm.		
14	20	15	02	Westerly.	Nearly calm.		
15	02	15	08	N. W. by W.	Fresh.		
15	08	15	14	N. W.	Nearly calm.	46·3	21·3
15	14	15	20	—	Calm.		
15	20	16	02	—	Calm.		
16	02	16	08	S. Westerly.	Very light.		
16	08	16	14	—	Calm.	47·9	34·7
16	14	16	20	—	Calm.		
16	20	17	02	—	Calm.		
17	02	17	08	W. by N.	Brisk.		
17	08	17	14	N. W.	Light.	62·1	29·4
17	14	17	20	—	Calm.		
17	20	18	02	N. W.	Nearly calm.		
18	02	18	08	E.	Nearly calm.		
18	08	18	14	N. E.	Very light.	46·3	30·0
18	14	18	20	—	Calm.		
18	20	19	02	—	Calm.		
19	02	19	08	Westerly.	Moderate.	70·3	38·1
19	08	19	14	—	Calm.		
<b>SUNDAY.</b>							
20	14	20	20	N. E.	Very light.	52·0	28·3
20	20	21	02	E.	Light.		
21	02	21	08	E.	Light.		
21	08	21	14	E. by S.	Brisk.	34·7	28·7
21	14	21	20	Easterly.	Moderate.		
21	20	22	02	N. by E.	Very light.		
22	02	22	08	N.	Nearly calm.		
22	08	22	14	Northerly.	Light.	36·7	30·2
22	14	22	20	—	Calm.		
22	20	23	02	N. Easterly.	Very light.		
23	02	23	08	Easterly.	Very light.		
23	08	23	14	—	Calm.	38·6	29·2
23	14	23	20	—	Calm.		
23	20	24	02	E.	Light.		
24	02	24	08	E.	Moderate.	39·7	32·2
24	08	24	14	E.	Light.		1·55
<b>GOOD FRIDAY.</b>							
25	14	25	20	N.	Light.	39·3	33·7
25	20	26	02	N. by W.	Light.		
26	02	26	08	N. N. W.	Moderate.	49·3	27·6
26	08	26	14	N. W.	Nearly calm.		
<b>SUNDAY.</b>							
27	14	27	20	N. W. by N.	High.	54·0	30·7
27	20	28	02	W. N. W.	Brisk.		
28	02	28	08	N. W.	Moderate.		
28	08	28	14	—	Calm.	43·9	26·2
28	14	28	20	—	Calm.		
28	20	29	02	Southerly.	Nearly calm.		

\* Fall not recorded.

Mean Solar Time (Astronom. Reck.)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Göttingen.		Direction.	Force.				
<b>MARCH.</b>									
D.	H.	D.	H.			[and distant thunder in N. W.]			In.
29	02	29	08	E. N. E.	Light.	Overcast; cirro-cumuli and haze; slight showers since 0 <sup>h</sup> 30 <sup>m</sup> , with lightning			
29	08	29	14	—	Calm.	Overcast with haze, a few stars visible - - - [thunder in S.]	51.8	35.9	0.10
29	14	29	20	—	Calm.	Densely overcast; cirro-cumuli and haze, short showers at 13 <sup>h</sup> 50 <sup>m</sup> , distant			
29	20	30	02	N.	Light.	Densely clouded; cirro-cumuli, cirro-strati and haze - - -			
30	02	30	08	N. Westerly.	Light.	Fair; strati and cumulo-strati in S., a few cirro-cumuli in N. E. and N. -			
30	08	30	14	N. W.	Light.	Partially clouded; light cirro-strati and haze - - -	55.5	28.0	—
30	14	30	20	N. W.	Moderate.	Clear; wind in gusts - - -			
30	20	31	02	N. W. by N.	Brisk.	Partially clouded; cirro-cumuli and cirro-strati; very heavy squalls -			
31	02	31	08	N.	Brisk.	Clear, except a range of cumuli in S. horizon; fresh gusts - - -			
31	08	31	14	—	Calm.	Clear - - -			
31	14	31	20	—	Calm.	Unclouded; imperfect lunar halo, diameter 5°, disappeared at 14 <sup>h</sup> 45 <sup>m</sup> -	34.4	20.1	—
31	20	1	02	—	Calm.	Overcast; light cirri and haze; very bright solar halo, diam. 35°, parhelia at [N. and S. edges.]			
<b>APRIL.</b>									
1	02	1	08	S. by E.	Light.	Fair; light cirro-strati and very light haze; halo disappeared at 23 <sup>h</sup> -			
1	08	1	14	S. E.	Light.	Densely overcast - - -	47.0	31.7	—
1	14	1	20	S.	Nearly calm.	Overcast with dense haze - - -			
1	20	2	02	Westerly.	Nearly calm.	Overcast; cirri and haze - - -			
2	02	2	08	S. W.	Moderate.	Overcast; light cirri and haze - - -			
2	08	2	14	S. W. by W.	Moderate.	Overcast with haze; wind in brisk gusts - - -	65.0	42.5	
<b>SUNDAY.</b>									
3	14	3	20	E. by N.	Brisk.	Densely clouded; very slight rain; wind in gusts - - [18 <sup>h</sup> and 19 <sup>h</sup> .]	49.4	35.7	
3	20	4	02	E. by N.	Light.	Densely clouded; cirro-strati and haze; wind in gusts; rain ceased between			0.55
4	02	4	08	E.	Brisk.	Densely clouded; cirro-cumuli and cumulo-strati; squalls - - -			
4	08	4	14	E.	Brisk.	Densely overcast; slight rain since 5 <sup>h</sup> ; wind in squalls - - -	39.9	35.7	
4	14	4	20	—	Calm.	[Densely overcast; very heavy thunder-storm from 10 <sup>h</sup> to 12 <sup>h</sup> with heavy rain, a remarkable rise and fall of the barometer, wind changed frequently]			
4	20	5	02	S. Westerly.	Nearly calm.	Overcast with dense haze, fog rising - - -			
5	02	5	08	W.	Moderate.	Clouded; cirro-cumuli and cumulo-strati; fair - - -			
5	08	5	14	—	Calm.	Clear - - -	52.8	28.0	—
5	14	5	20	—	Calm.	Clear - - -			
5	20	6	02	—	Calm.	Clear, except a few scattered cirro-strati - - -			
6	02	6	08	S. S. E.	Very light.	Densely clouded; cirri and haze - - - [from calm]			
6	08	6	14	E.	Light.	Densely clouded; drizzling rain since 7 <sup>h</sup> 50 <sup>m</sup> , when the wind sprung up	49.6	39.2	
6	14	6	20	—	Calm.	Densely overcast; occasional light rain since 8 <sup>h</sup> - - -			
6	20	7	02	N. E.	Light.	Densely overcast; cirro-cumuli and cirro-strati - - -			
7	02	7	08	E. by N.	Light.	Densely overcast; cumulo-strati and haze; slight or moderate rain since			
7	08	7	14	Northerly.	Nearly calm.	Densely clouded; slight rain - - - [21 <sup>h</sup> 30 <sup>m</sup> ]	46.1	33.7	0.50
7	14	7	20	N. E.	Nearly calm.	Densely clouded; slight rain since 12 <sup>h</sup> - - -			
7	20	8	02	N. Easterly.	Nearly calm.	Densely clouded; moderate snow since 19 <sup>h</sup> - - -			
8	02	8	08	—	Calm.	Densely clouded; cirro-cumuli and haze; drizzling rain since 20 <sup>h</sup> - -			
8	08	8	14	—	Calm.	Overcast with strati and haze, except in zenith; rain ceased at 6 <sup>h</sup> - -	40.6	29.8	
8	14	8	20	—	Calm.	Clear - - -			
8	20	9	02	N. Easterly.	Nearly calm.	A few cirri scattered about, otherwise clear - - -			
9	02	9	08	Southerly.	Nearly calm.	Partially overcast; light haze, with cumulo-strati and cirro-cumuli round			
9	08	9	14	—	Calm.	Clear - - [horizon; faint solar halo from 2 <sup>h</sup> to 4 <sup>h</sup> , diameter 35°]	49.6	36.0	—
<b>SUNDAY.</b>									
10	14	10	20	N. W.	Light.	Clear; bright bank of auroral light in N., a few faint patches and streamers	51.8	39.1	—
10	20	11	02	N. by W.	Light.	Clear - - -			
11	02	11	08	S. W.	Very light.	Fair; a few cirro-cumuli and cirro-strati round horizon - - -			
11	08	11	14	—	Calm.	Clear, except some light cirri in N. and E. horizons - - -	63.1	36.3	—
11	14	11	20	—	Calm.	Clouded; cumulo-strati and cirro-cumuli - - -			
11	20	12	02	E. by S.	Light.	Overcast, except in zenith; cirro-strati, strati and cirro-cumuli - -			
12	02	12	08	E. by S.	Nearly calm.	Partially clouded; cirro-cumuli and cirro-strati - - -			
12	08	12	14	—	—	—	44.4	36.2	—
12	14	12	20	E.	Brisk.	§ clouded; cirro-cumuli and cumulo-strati; wind in gusts - - -			
12	20	13	02	E. by N.	Brisk.	Densely overcast; strati and haze; fresh gusts - [heavy squalls]			
13	02	13	08	E. by N.	Fresh.	Overcast; dense haze scudding rapidly; heavy or moderate rain since 21 <sup>h</sup> ;			
13	08	13	14	—	Calm.	Densely clouded; very slight rain - - -	42.4	33.1	0.65
13	14	13	20	—	Calm.	Clear - - -			
13	20	14	02	N. Westerly.	Nearly calm.	§ overcast; detached cirro-cumuli - - -			

Mean Solar Time (Astronom. Reck <sup>s</sup> ).		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
<b>APRIL.</b>							
D.	H.	D.	H.				In.
14	02	14	08	W. N. W.	Brisk.		
14	08	14	14	—	Calm.	52.4	28.2
14	14	14	20	—	Calm.		
14	20	15	02	Northerly.	Nearly calm.		
15	02	15	08	S. Westerly.	Nearly calm.		
15	08	15	14	—	Calm.	50.6	31.5
15	14	15	20	—	Calm.		
15	20	16	02	N.	Light.		
16	02	16	08	S.	Light.		
16	08	16	14	—	Calm.	49.4	30.4
<b>SUNDAY.</b>							
17	14	17	20	Easterly.	Nearly calm.	49.7	37.2
17	20	18	02	E. by S.	Moderate.		
18	02	18	08	E.	Moderate.		
18	08	18	14	E.	Moderate.		
18	14	18	20	—	Calm.	44.6	38.0
18	20	19	02	E.	Nearly calm.		
19	02	19	08	—	Calm.		
19	08	19	14	N.	Light.	49.1	39.0
19	14	19	20	N.	Nearly calm.		
19	20	20	02	N. N. E.	Light.		
20	02	20	08	S. W.	Light.		
20	08	20	14	S. Westerly.	Nearly calm.		
20	14	20	20	—	Calm.	62.0	37.2
20	20	21	02	S. Westerly.	Very light.		
21	02	21	08	S. by W.	Light.		
21	08	21	14	—	Calm.	65.0	46.7
21	14	21	20	—	Calm.		
21	20	22	02	Southerly.	Nearly calm.		
22	02	22	08	W.	Moderate.		
22	08	22	14	N. W.	Moderate.	89.8	37.7
22	14	22	20	N. by W.	Light.		
22	20	23	02	N. by E.	Light.		
23	02	23	08	S. by E.	Light.		
23	08	23	14	—	Calm.	50.3	32.1
<b>SUNDAY.</b>							
24	14	24	20	N. Easterly.	Light.	54.7	43.0
24	20	25	02	E.	Light.		
25	02	25	08	S. E.	Light.		
25	08	25	14	Northerly.	Very light.	57.0	40.5
25	14	25	20	E.	Light.		
25	20	26	02	—	Calm.		
26	02	26	08	W.	Nearly calm.		
26	08	26	14	W.	Very light.	57.7	39.4
26	14	26	20	W.	Light.		
26	20	27	02	W.	Light.		
27	02	27	08	W.	Moderate.		
27	08	27	14	W. by N.	Light.	45.8	35.6
27	14	27	20	W.	Nearly calm.		
27	20	28	02	W. by N.	Light.		
28	02	28	08	N. W.	Moderate.		
28	08	28	14	N. W.	Nearly calm.	51.3	36.0
28	14	28	20	N. Westerly	Very light.		
28	20	29	02	—	Calm.		
29	02	29	08	S. by W.	Moderate.		
29	08	29	14	—	Calm.	59.4	29.9
29	14	29	20	E. N. E.	Nearly calm.		
29	20	30	02	—	Calm.		
30	02	30	08	—	Calm.		
30	08	30	14	—	Calm.	61.3	39.7

\* A detailed description of this Aurora will be given in the Volume of Disturbance Observations, Part II.

Mean Solar Time (Astronom. Reck <sup>s</sup> .)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Göttingen.		Direction.	Force.				
<b>MAY.</b>									
<b>SUNDAY.</b>									
D.	H.	D.	H.						In.
1	14	1	20	—	Calm.	½ clouded in S. horizon - - - - -	61.4	32.6	—
1	20	2	02	N. by W.	Light.	¾ overcast; cirro-cumuli and cumulo-strati - - - - -			
2	02	2	08	N. by W.	Light.	¾ clouded; cirro-cumuli and cirro-strati - - - - -			
2	08	2	14	—	Calm.	Partially clouded; cirro-cumuli and cirro-strati - - - - -	55.8	38.9	—
2	14	2	20	—	Calm.	Clear; cleared suddenly between 10 <sup>h</sup> and 11 <sup>h</sup> - - - - -			
2	20	3	02	N. N. E.	Very light.	Clear, except a few light clouds round horizon - - - - -			
3	02	3	08	Southerly.	Nearly calm.	¾ clouded; cirro-cumuli and cumulo-strati - - - - -			
3	08	3	14	N. by W.	Light.	¾ clouded in S.; cirri and cirro-strati - - - - -	58.2	39.8	—
3	14	3	20	N.	Moderate.	Clear; slight rain at midnight - - - - -			
3	20	4	02	N.	Light.	Clear; wind in gusts - - - - -			
4	02	4	08	N. by W.	Moderate.	Clear; wind in gusts - - - - -			
4	08	4	14	N. by W.	Light.	Clear - - - - -	55.3	32.4	—
4	14	4	20	—	Calm.	Clear - - - - -			
4	20	5	02	S. Westerly.	Nearly calm.	Clear - - - - -			
5	02	5	08	S.	Moderate.	Partially overcast; very light cirri and haze - - - - -			
5	08	5	14	S. by W.	Light.	Clouded; cirro-strati and haze; partially clear in zenith - - - - -	60.2	42.8	—
5	14	5	20	S. by W.	Nearly calm.	Clear - - - - -			
5	20	6	02	S. W.	Moderate.	Overcast; cirro-cumuli and haze - - - - -			
6	02	6	08	W. N. W.	Moderate.	Haze round horizon, otherwise clear - - - - -			
6	08	6	14	N.	Light.	Clear; wind in gusts - - - - -	66.7	33.8	—
6	14	6	20	N. by W.	Light.	Clear - - - - -			
6	20	7	02	Northerly.	Nearly calm.	Very light cirri dispersed generally - - - - -			
7	02	7	08	S. W.	Light.	Overcast with thin haze; no clouds - - - - -			
7	08	7	14	S. by W.	Nearly calm.	Overcast with dense haze - - - - -	54.8	40.6	—
<b>SUNDAY.</b>									
8	14	8	20	N. by W.	Nearly calm.	Clear - - - - -			
8	20	9	02	Northerly.	Light.	Clear - - - - -	59.7	27.3	—
9	02	9	08	S. by W.	Light.	Light cirro-cumuli and cirro-strati dispersed about; haze round horizon - - - - -			
9	08	9	14	—	Calm.	Overcast; very dense haze - - - - -	53.9	35.6	—
9	14	9	20	—	Calm.	Densely clouded, very dark - - - - -			
9	20	10	02	S. Westerly.	Nearly calm.	Overcast; very dense haze - - - - -			
10	02	10	08	E. S. E.	Nearly calm.	Overcast; cirri and haze - - - - -			
10	08	10	14	—	Calm.	Clear; lightning and distant thunder in N. W. and W. - - - - -	68.0	49.1	— <sup>a</sup>
10	14	10	20	—	Calm.	Clear; heavy shower at 11 <sup>h</sup> with lightning and distant thunder - - - - -			
10	20	11	02	N. W.	Very light.	Overcast; cirro-cumuli and haze; fair - - - - -			
11	02	11	08	W. by N.	Light.	Densely clouded; cirro-cumuli, cirro-strati and haze - - - - -			
11	08	11	14	W. N. W.	Moderate.	Densely clouded; cirro-cumuli, cirro-strati and haze - - - - -	54.4	37.8	—
11	14	11	20	—	Calm.	¾ clouded; strati and haze; zenith clear - - - - - [in S.			
11	20	12	02	N. W.	Light.	¾ clouded; light cirro-cumuli passing across zenith; a bank of cumulo-strati - - - - -			
12	02	12	08	S. by W.	Light.	Clear, except a few light cirro-strati in W. - - - - -			
12	08	12	14	—	Calm.	Overcast; cirro-strati and dense haze round horizon, elsewhere light haze - - - - -	61.0	39.1	0.15
12	14	12	20	S. by E.	Nearly calm.	Partially overcast; light cirri and haze - - - - - [and 23 <sup>h</sup>			
12	20	13	02	—	Calm.	Overcast; cirro-strati and haze; moderate rain from 19 <sup>h</sup> 45 <sup>m</sup> to between 22 <sup>h</sup> - - - - -			
13	02	13	08	N. W.	High.	¾ clouded; cumulo-strati and large detached cirro-cumuli passing rapidly - - - - -	52.8	31.0	—
13	08	13	14	N. W.	Nearly calm.	Clear - - - - - [from N. W.			
13	14	13	20	—	Calm.	Clear - - - - -			
13	20	14	02	N. Westerly.	Nearly calm.	Clear - - - - -			
14	02	14	08	S. S. W.	Light.	Overcast; light cirri; solar halo, diam. 30° - - - - -	57.9	31.8	—
14	08	14	14	N. W.	Nearly calm.	¾ overcast; cirro-cumuli and cirro-strati - - - - -			
<b>SUNDAY.</b>									
15	14	15	20	—	Calm.	Densely clouded; cirro-cumuli and haze - - - - -	64.0	46.5	—
15	20	16	02	N. W.	Light.	Partially clouded; detached cirro-cumuli and haze - - - - - [diam 30°			
16	02	16	08	N. N. W.	Brisk.	Overspread with light flexuous cirri and haze; squally; solar halo at 4 <sup>h</sup> , - - - - -			
16	08	16	14	N. N. W.	Light.	Light cirri and haze round horizon; zenith clear - - - - -	70.1	34.6	—
16	14	16	20	—	Calm.	Haze in horizon, remainder clear - - - - -			
16	20	17	02	S. E.	Light.	Partially overcast; cirro-cumuli and haze - - - - -			
17	02	17	08	E. by S.	Light.	Partially overcast; cirro-cumuli and haze - - - - -			
17	08	17	14	—	Calm.	Partially overcast; cirro-strati and haze - - - - -			
17	14	17	20	—	Calm.	Partially clouded with cirro-cumuli; zenith clear - - - - -	64.3	45.0	—
17	20	18	02	S. Westerly.	Nearly calm.	Overcast; cirri and cirro-cumuli - - - - -			
18	02	18	08	S.	Light.	¾ clouded; cirro-cumuli in zenith; well-defined cumuli in N. W. horizon - - - - -			
18	08	18	14	—	Calm.	Densely clouded; cumuli, cirro-cumuli and haze; distant thunder in W. - - - - -			
18	14	18	20	N. by W.	Moderate.	Overcast; cirro-cumuli and haze; wind in gusts, freshened at 13 <sup>h</sup> - - - - -	74.8	46.4	—
18	20	19	02	N. N. W.	Light.	Clouded; cirro-cumuli and cirro-strati - - - - -			

<sup>a</sup> Fall of rain not recorded.

Mean Solar Time (Astronom. Reck <sup>s</sup> )		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
<b>MAY.</b>							
D. H.	D. H.						In.
19 02	19 08	N.	Moderate.	½ clouded; light cirro-cumuli and cirro-strati - [11 <sup>h</sup> 35 <sup>m</sup> , diameter 45°			
19 08	19 14	—	Calm.	Overcast; light cirro-strati and haze; perfect lunar halo from 8 <sup>h</sup> 30 <sup>m</sup> to	58.6	38.6	0.05
19 14	19 20	N. E.	Light.	Clear			
19 20	20 02	E.	Moderate.	Partially clouded; light scattered cirro-strati; wind in gusts - - -			
20 02	20 08	S. S. E.	Light.	Overcast with light haze; very light cirri in S. - - - - -			
20 08	20 14	—	Calm.	Partially overcast; very light cirri and haze - - - - -			
20 14	20 20	Northerly.	Nearly calm.	Clear - - - - - [21 <sup>h</sup> 30 <sup>m</sup> and noon, diam. 30°	59.4	30.2	—
20 20	21 02	S. Easterly.	Nearly calm.	Overcast; cirri, cirro-strati and haze; solar halo visible occasionally between			
21 02	21 08	Easterly.	Moderate.	Partially overcast; light cirro-cumuli - - - - -	61.7	46.0	—
21 08	21 14	—	Calm.	Densely clouded; strati, cirro-cumuli and haze - - - - -			
<b>SUNDAY.</b>							
22 14	22 20	—	Calm.	Densely clouded; very slight drizzling rain from 2 <sup>h</sup> to 15 <sup>h</sup> 30 <sup>m</sup> - - -	54.0	46.5	0.33
22 20	23 02	Northerly.	Very light.	Densely clouded; cumuli and cirro-cumuli - - - - -			
23 02	23 08	S.	Light.	Clouded; cirro-cumuli, with dense cumuli and cumulo-strati round horizon;			
23 08	23 14	S.	Light.	Cirro-strati and haze round horizon; otherwise clear - - - [fair	62.3	43.7	—
23 14	23 20	—	Calm.	Clouded with cirro-cumuli; faint lunar halo from 10 <sup>h</sup> to 13 <sup>h</sup> 30 <sup>m</sup> , diam. 40°			
23 20	24 02	S. E.	Nearly calm.	Clouded; cirro-cumuli, cumulo-strati and haze [from 0 <sup>h</sup> 20 <sup>m</sup> to 2 <sup>h</sup> 40 <sup>m</sup>			
24 02	24 08	—	Calm.	Densely clouded; cirro-cumuli, cirro-strati and haze, slight or moderate rain			
24 08	24 14	—	Calm.	Partially clouded; cirro-cumuli with very dense cumuli in N. horizon; at	64.4	36.2	0.10
24 14	24 20	—	Calm.	Clear - - - - - [3 <sup>h</sup> 10 <sup>m</sup> wind rising and sky clearing in N.W.			
24 20	25 02	S. W.	Light.	Clear, except a few cirro-cumuli dispersed about - - - - -			
25 02	25 08	W.	Moderate.	Nearly clear; range of cumuli in S. E. and a few detached cirro-cumuli in			
25 08	25 14	—	Calm.	Clear - - - - - [zenith; wind in gusts	66.0	36.3	—
25 14	25 20	N. W.	Nearly calm.	Clear - - - - -			
25 20	26 02	Northerly.	Nearly calm.	Overcast with cirro-strati; fair - - - - - [diam. 30°			
26 02	26 08	S. by E.	Nearly calm.	Partially clouded; light cirri and haze; solar halo from 22 <sup>h</sup> to 23 <sup>h</sup> 30 <sup>m</sup> ,			
26 08	26 14	—	Calm.	Densely clouded; cirro-cumuli and cumulo-strati arranged in layers extend-	63.6	47.2	0.03
26 14	26 20	—	Calm.	ing from E. to W., very dense in - - - - -			
26 20	27 02	E.	Light.	Densely clouded; cirro-cumuli and haze, drizzling rain since 12 <sup>h</sup> - - -			
27 02	27 08	E. by S.	Light.	Densely clouded; cirro-cumuli and haze, slight rain since 18 <sup>h</sup> - - -			
27 08	27 14	—	Calm.	Partially clouded; cirro-cumuli, cirro-strati and haze - - - - -			
27 14	27 20	—	Calm.	Clouded with detached cirro-cumuli; fair - - - - -	59.3	40.7	—
27 20	28 02	W. by N.	Light.	Clear, except a bank of strati in S. horizon - - - - -			
28 02	28 08	Southerly.	Light.	A few cirro-cumuli and cirro-strati dispersed about - - - - -			
28 08	28 14	—	Calm.	½ clouded; light cirri in zenith, strati in S. Temperature of soil 3 feet deep	64.2	46.7	
				51°·5; 6 feet deep 48°·0; surface water of the lake at 5 <sup>h</sup> , 58°·5 - - -			0.37
				Overcast; cirro-strati and dense haze; rain from 28 <sup>h</sup> 18 <sup>h</sup> 30 <sup>m</sup> until after 29 <sup>h</sup> 2 <sup>h</sup>			
<b>SUNDAY.</b>							
29 14	29 20	N. by W.	Light.	Heavy clouds round horizon, light cirri above; imperfect lunar halo, diam. 35°	51.5	47.0	
29 20	30 02	N. N. W.	Light.	Clouded; cumuli and cirro-cumuli; a few clear patches - - - - -			
30 02	30 08	N.	Moderate.	½ clouded; cumuli, cirro-cumuli and cirro-strati - - - - -			
30 08	30 14	N. Westerly.	Nearly calm.	Fair; light cirro-strati and haze round horizon - - - - -	61.0	41.9	—
30 14	30 20	N. W.	Light.	Clear - - - - -			
30 20	31 02	N. N. W.	Very light.	Range of cirro-strati in S. horizon, otherwise clear - - - - -			
31 02	31 08	—	Calm.	½ clouded; dense cumuli and cumulo-strati - - - - -			
31 08	31 14	—	Calm.	Clear - - - - -	71.8	41.5	—
31 14	31 20	—	Calm.	Clear - - - - -			
31 20	1 02	S. W.	Nearly calm.	Unclouded but hazy - - - - -			
<b>JUNE.</b>							
1 02	1 08	S. S. E.	Nearly calm.	Unclouded, light haze - - - - -			
1 08	1 14	—	Calm.	Unclouded, slight haze round horizon - - - - -	71.8	38.7	—
1 14	1 20	—	Calm.	Clear - - - - -			
1 20	2 02	S. E.	Light.	Clear; haze in horizon - - - - -			
2 02	2 08	E. by S.	Moderate.	Clear, except very light cirri and haze round horizon - - - - -			
2 08	2 14	E.	Nearly calm.	Overcast; dense cirro-strati and light haze - - - - -	70.3	49.8	—
2 14	2 20	E. by N.	Nearly calm.	Overcast; cirro-cumuli and haze - - - - -			
2 20	3 02	E.	Light.	½ overcast; light cirri, strati and haze - - - - -			
3 02	3 08	E.	Light.	Densely clouded; cumulo-strati, cirro-cumuli and haze - - - - -			
3 08	3 14	—	Calm.	Densely clouded; moderate rain at intervals since 3 <sup>h</sup> - - - - -	65.5	52.2	0.90
3 14	3 20	Easterly.	Light.	Constant moderate rain since 10 <sup>h</sup> - - - - -			
3 20	4 02	—	Calm.	Overcast with dense haze, rain ceased at 18 <sup>h</sup> 30 <sup>m</sup> - - - - -			
4 02	4 08	S. W.	Light.	Clouded; cumuli and cumulo-strati, clear spaces - - - - -			
4 08	4 14	—	Calm.	Clear; brilliant Aurora - - - - -	72.0	50.5	—

\* A detailed description of this Aurora will be given in Part II. of the Volume of Disturbance Observations.

Mean Solar Time (Astronom. Reck <sup>s</sup> ).		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
JUNE.							
SUNDAY.							
D. H.	D. H.						In.
5 14	5 20	N. W.	Moderate.	Partially overcast with light cirri; heavy squall of wind and rain from 0 <sup>h</sup> 40 <sup>m</sup>	67.5	45.1	0.10
5 20	6 02	N. N. W.	Light.	¾ overcast; detached cirro-cumuli - - - - - [to 1 <sup>h</sup> 30 <sup>m</sup>			
6 02	6 08	N.	Brisk.	Clear, except a few cumulo-strati in S. W.; wind in gusts - - - - -			
6 08	6 14	N. by W.	Light.	Clear - - - - -	56.3	34.2	—
6 14	6 20	N.	Nearly calm.	Clear - - - - -			
6 20	7 02	Easterly.	Nearly calm.	Light cirro-strati scattered round horizon, otherwise clear - - - - -			
7 02	7 08	E.	Light.	{Light flexuous cirri in longitudinal streaks from E. to W.; perfect solar halo, diameter 38°, visible since 1 <sup>h</sup> - - - - -	61.6	46.1	—
7 08	7 14	E. by N.	Light.	Very light cirro-strati round horizon, chiefly in N. and S. - - - - -			
7 14	7 20	—	Calm.	Unclouded; very light haze - - - - -			
7 20	8 02	Easterly.	Nearly calm.	Overcast; cirri, cirro-strati and haze; fair - - - - -			
8 02	8 08	E.	Very light.	Densely overcast; cirro-strati and haze; slight rain since 21 <sup>h</sup> 45 <sup>m</sup> - - - - -			
8 08	8 14	E.	Light.	Constant moderate rain since 2 <sup>h</sup> - - - - -	56.8	44.8	1.28
8 14	8 20	E. by N.	Light.	Constant light or moderate rain since 8 <sup>h</sup> ; ceased between 18 <sup>h</sup> and 19 <sup>h</sup> - - - - -			
8 20	9 02	N. W.	Light.	Densely clouded; cirro-cumuli and cumulo-strati, clearing slightly in zenith - - - - -			
9 02	9 08	S. W.	Light.	Densely clouded; cumulo-strati, cirro-cumuli and haze, very dark in N. W. - - - - -			
9 08	9 14	—	Calm.	Densely clouded; cumulo-strati, cirro-cumuli and haze, mist rising - - - - -	61.8	50.7	
9 14	9 20	—	Calm.	Densely clouded; drizzling rain since 10 <sup>h</sup> - - - - -			
9 20	10 02	N. by E.	Light.	Densely clouded; slight or moderate rain since 18 <sup>h</sup> - - - - -			0.56
10 02	10 08	N. by W.	Brisk.	Densely clouded; slight rain since 20 <sup>h</sup> ; wind in gusts - - - - -			
10 08	10 14	N. by W.	Nearly calm.	¾ densely clouded; clear in N.; rain ceased at 7 <sup>h</sup> 20 <sup>m</sup> - - - - -	52.7	28.1	
10 14	10 20	—	Calm.	Clear - - - - -			
10 20	11 02	N. W.	Very light.	Clear - - - - -			
11 02	11 08	S.	Light.	Clear - - - - -			
11 08	11 14	Westerly.	Nearly calm.	Light cirro-cumuli in zenith, remainder clear - - - - -	68.2	38.4	—
SUNDAY.							
12 14	12 20	—	Calm.	Partially clouded; strati and cirro-strati - - - - -	61.5	43.2	—
12 20	13 02	S. Westerly.	Very light.	Clouded; light cirri, with strati and cirro-cumuli in S. - - - - -			
13 02	13 08	S. E.	Nearly calm.	Partially clouded; light cirri, with very heavy cumuli in W. and N. W. - - - - -			
13 08	13 14	S. by W.	Nearly calm.	Clear, except in W. and S. horizons; heavy shower, with thunder and light-	67.1	42.3	0.41
13 14	13 20	—	Calm.	Clear - - - - - [ning from 2 <sup>h</sup> 45 <sup>m</sup> to 3 <sup>h</sup> 45 <sup>m</sup>			
13 20	14 02	S.	Very light.	¾ overcast; light flexuous cirro-strati - - - - -			
14 02	14 08	E. by S.	Light.	¾ overcast; light cirri and strati scattered generally - - - - -			
14 08	14 14	E.	Nearly calm.	¾ clouded; strati, cirro-strati and cirro-cumuli - - - - -	66.7	44.3	—
14 14	14 20	—	Calm.	Clear - - - - -			
14 20	15 02	—	Calm.	Overcast; cirro-strati, cirro-cumuli and haze - - - - -			
15 02	15 08	E.	Nearly calm.	A few cirro-cumuli and cirro-strati dispersed about; otherwise clear - - - - -			
15 08	15 14	—	Calm.	Clear, except haze round horizon - - - - -	71.8	50.4	—
15 14	15 20	—	Calm.	Clear; haze round horizon - - - - -			
15 20	16 02	—	Calm.	Overcast; detached cirri and cirro-cumuli, strati, cirro-strati, and dense haze			
16 02	16 08	—	Calm.	Densely clouded; heavy or moderate rain from 1 <sup>h</sup> 15 <sup>m</sup> to 2 <sup>h</sup> 40 <sup>m</sup> ; thunder			
				in N. W. - - - - -			
16 08	16 14	N. by W.	Light.	{Densely clouded, except in N. W. horizon; cirro-cumuli and haze; moderate	73.6	46.9	0.97
				or heavy rain from 5 <sup>h</sup> 50 <sup>m</sup> to 7 <sup>h</sup> , and distant thunder in N. W. - - - - -			
16 14	16 20	Northerly.	Nearly calm.	Clouded; cirro-cumuli and cirro-strati; clear spaces; very dark in S. horizon			
16 20	17 02	N. Easterly.	Nearly calm.	¾ overcast; detached cirri, cirro-cumuli and strati - - - - -			
17 02	17 08	E.	Very light.	Overcast with light cirri; fair - - - - -			
17 08	17 14	—	Calm.	¾ overcast; light cirro-cumuli and haze - - - - -	70.6	48.2	—
17 14	17 20	—	Calm.	Clear, except in N. W. and S. W. horizons - - - - -			
17 20	18 02	—	Calm.	Overcast; cirro-cumuli and haze - - - - -			
18 02	18 08	Southerly.	Nearly calm.	Partially overcast; light cirri and haze - [to 23 <sup>h</sup> ; heavy showers	75.1	58.9	0.36
18 08	18 14	—	Calm.	Overcast; light cirri and a very dense mass of cumulo-strati; rain from 20 <sup>h</sup>			
SUNDAY.							
19 14	19 20	—	Calm.	Clear - - - - -	74.7	41.4	—
19 20	20 02	Northerly.	Nearly calm.	Clear, except a few detached cirro-strati in S. - - - - -			
20 02	20 08	Southerly.	Light.	Clear, except a few cumulo-strati round horizon - - - - -			
20 08	20 14	S.	Light.	Clear - - - - -	68.0	44.7	—
20 14	20 20	—	Calm.	Clear - - - - -			
20 20	21 02	S.	Nearly calm.	Clear, except haze round horizon - - - - -			
21 02	21 08	S. by E.	Light.	Overcast; light cirrous haze - - - - -			
21 08	21 14	S. Westerly.	Very light.	Overcast; cirri and haze - - - - -	72.1	53.0	—
21 14	21 20	—	Calm.	Overcast; light cirri and haze - - - - -			
21 20	22 02	—	Calm.	Densely overcast; cirri, cirro-cumuli and haze - - - - -			

Mean Solar Time (Astronom. Reck.)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.		
Toronto.	Göttingen.	Direction.	Force.						
<b>JUNE.</b>									
D.	H.	D.	H.				In.		
22	02	22	08	—	Calm.	{Densely clouded; cumulo-strati, cirro-cumuli and haze; drizzling rain since 0 <sup>h</sup> 40 <sup>m</sup> ; air close	°	°	In.
22	08	22	14	Northerly.	Light.	Densely clouded; cirro-cumuli, cirro-strati, and haze; at 8 <sup>h</sup> 45 <sup>m</sup> slight rain	71·3	55·8	0·09
22	14	22	20	Northerly.	Very light.	Densely clouded; sprinkling rain [commenced			
22	20	23	02	N. N. E.	Light.	Overcast; light cirro-cumuli, cirro-strati, and haze			
23	02	23	08	Southerly.	Very light.	{Unclothed; light haze; solar halo at 23 <sup>h</sup> , diam. 35°. Temp. of soil 3 ft. deep, 55°·0; 6 ft. deep, 51°·5; surface water of the lake at 6 <sup>h</sup> , 63°·5			
23	08	23	14	—	Calm.	Clear, except a range of cirro-strati in S. W.	67·0	48·2	—
23	14	23	20	—	Calm.	Clear in zenith; light cirro-strati and haze round horizon			
23	20	24	02	N.	Light.	Partially clouded; very light cirri and haze			
24	02	24	08	S. S. W.	Light.	Partially overcast; very light cirri and haze			
24	08	24	14	—	Calm.	Overcast; cirri, cirro-cumuli and cirro-strati	71·8	47·2	—
24	14	24	20	—	Calm.	Partially clouded; light cirro-cumuli			
24	20	25	02	S. E.	Nearly calm.	Densely clouded; cirri, cirro-strati, and haze			
25	02	25	08	—	Calm.	Densely clouded; strati, cirro-cumuli, and haze; moderate showers since 0 <sup>h</sup>			
25	08	25	14	—	Calm.	Clouded; dense cumulo-strati and cumuli; low masses of cirro-cumuli pass- [ing rapidly from the W.	66·3	51·5	0·18
<b>SUNDAY.</b>									
26	14	26	20	E.	Moderate.	{Partially clouded; dense in N. and N. W.; sheet lightning in N. W.; several showers during the afternoon - [N. W.	74·4	55·8	0·32
26	20	27	02	E. N. E.	Moderate.	Densely clouded; cirro-cumuli, cumulo-strati, and haze; distant thunder in			
27	02	27	08	W. N. W.	Light.	{Partially clouded; dense masses of cumuli, cumulo-strati, and cirro-cumuli; distant thunder and drops of rain since 20 <sup>h</sup>			
27	08	27	14	—	Calm.	{Clouded; cumuli, cirro-cumuli, cirri, and haze; light rain from 6 <sup>h</sup> 15 <sup>m</sup> to 6 <sup>h</sup> 40 <sup>m</sup> ; double rainbow in E.	73·4	52·8	0·20
27	14	27	20	S. S. W.	Nearly calm.	{clouded; light cirro-cumuli in close arrangement			
27	20	28	02	S. W.	Nearly calm.	{overcast; cirro-cumuli and cirro-strati; moderate rain from 22 <sup>h</sup> 40 <sup>m</sup> to 1 <sup>h</sup> 30 <sup>m</sup>			
28	02	28	08	Easterly.	Nearly calm.	Partially clouded; cirro-cumuli, cumuli, and cumulo-strati, dense at horizon;			
28	08	28	14	N. E.	Nearly calm.	{clouded with cirro-cumuli, and heavy well-defined cumuli in S. E. [fair	76·2	48·5	—
28	14	28	20	N. W.	Light.	Clear			
28	20	29	02	S. W.	Very light.	Partially clouded; detached cirri, cirro-strati and haze round horizon			
29	02	29	08	S. by E.	Light.	Clear, except a few light cirri in S. W. and W.			
29	08	29	14	S. S. E.	Very light.	Densely clouded; cirro-cumuli and cumulo-strati, rose in N. W. at 7 <sup>h</sup> 40 <sup>m</sup>	76·0	53·0	—
29	14	29	20	Easterly.	Light.	Clear; moderate thunder storm from 10 <sup>h</sup> to 12 <sup>h</sup>			
29	20	30	02	Easterly.	Nearly calm.	Clear, except light cirro-strati in S. horizon			
30	02	30	08	Southerly.	Nearly calm.	Clouded; cumulo-strati, cirro-cumuli and haze; light shower at 1 <sup>h</sup> 40 <sup>m</sup>			
30	08	30	14	S. W.	Light.	Densely clouded; cumulo-strati, cirro-strati, and cirro-cumuli	80·2	57·8	0·37
30	14	30	20	—	Calm.	Clouded; cirro-strati and haze			
30	20	1	02	—	Calm.	Densely clouded; cirro-strati and haze			
<b>JULY.</b>									
1	02	1	08	S. E.	Nearly calm.	Densely clouded; cirro-strati, cirro-cumuli and haze			
1	08	1	14	—	Calm.	Densely clouded; cirro-cumuli and haze	63·1	57·7	1·30
1	14	1	20	E.	Light.	Densely clouded; slight rain since 12 <sup>h</sup>			
1	20	2	02	E.	Light.	Densely clouded; moderate or heavy rain since 14 <sup>h</sup> , ceased at 23 <sup>h</sup> .			
2	02	2	08	—	Calm.	Densely clouded; cirro-cumuli, cumulo-strati, and haze			
2	08	2	14	—	Calm.	Overcast with light haze; a heavy bank of cumuli in N.	72·2	49·9	—
<b>SUNDAY.</b>									
3	14	3	20	—	Calm.	Clear, except a few scattered cirro-cumuli; brilliant Aurora *	75·2	51·5	—
3	20	4	02	—	Calm.	Overcast with light cirri and haze			
4	02	4	08	S. Westerly.	Very light.	Overcast generally with cirro-strati and haze; cumuli and cirro-cumuli round			
4	08	4	14	—	Calm.	Overcast with dense haze [horizon	71·3	56·0	0·43
4	14	4	20	—	Calm.	{Overcast with haze, dense round horizon; occasional sheet lightning in W.; thunder storm with rain at 13 <sup>h</sup>			
4	20	5	02	Westerly.	Nearly calm.	Overcast; cirri, heavy cirro-cumuli and haze			
5	02	5	08	N. by E.	Light.	Clouded; cumuli, cumulo-strati, and haze			
5	08	5	14	N. N. W.	Nearly calm.	Overcast; detached cirro-cumuli, cumulo-strati, and haze	69·0	49·6	—
5	14	5	20	—	Calm.	Clouded; cirro-cumuli and cumulo-strati; a few stars visible in zenith			
5	20	6	02	N.	Very light.	{clouded; cirri, cirro-cumuli, and cumulo-strati			
6	02	6	08	S. S. W.	Light.	{clouded; detached cirro-cumuli and cumulo-strati; wind backed at 1 <sup>h</sup> 0 <sup>m</sup> from N. E. to W., and at 1 <sup>h</sup> 40 <sup>m</sup> from W. to S. S. W.	72·3	42·5	—
6	08	6	14	—	Calm.	Clear			
6	14	6	20	—	Calm.	Clear			
6	20	7	02	—	Calm.	Clear, except round horizon; very light cirro-strati and haze			

\* A detailed description of this Aurora will be given in Part II. of the Volume of Disturbance Observations.



Mean Solar Time (Astronom. Reck <sup>s</sup> .)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Göttingen.		Direction.	Force.				
<b>JULY.</b>									
D.	H.	D.	H.						
7	02	7	08	S. Westerly.	Light.	Generally overcast with very light cirri; a few cirro-cumuli in N. W. horizon	°	°	In.
7	08	7	14	—	Calm.	Partially clouded; light cirro-cumuli, cirro-strati, and haze	75·8	54·7	—
7	14	7	20	Easterly.	Light.	Densely clouded; cirro-cumuli and haze			
7	20	8	02	E.	Light.	Overcast; cirri, cirro-strati, and haze; fair			
8	02	8	08	Easterly.	Light.	Clouded; cirro-cumuli, cirro-strati, and haze; fair; slight rain from 21 <sup>h</sup> 30 <sup>m</sup>			
8	08	8	14	N.	Brisk.	Densely clouded; cirro-cumuli, cumuli, and haze	69·8	55·0	—
8	14	8	20	Northerly.	Moderate.	Densely clouded			
8	20	9	02	N. Easterly.	Moderate.	Clouded; cirro-cumuli and cumulo-strati; partially clear in zenith; wind in			
9	02	9	08	N.	Moderate.	A few patches of cirro-cumuli dispersed about	74·2	44·6	—
9	08	9	14	—	Calm.	Clear, except a low bank of cumulo-strati in S.			
<b>SUNDAY.</b>									
10	14	10	20	—	Calm.	Clear	74·4	48·6	—
10	20	11	02	—	Calm.	Very light cirri and haze round horizon			
11	02	11	08	S. S. E.	Nearly calm.	Unclouded; very slight haze			
11	08	11	14	S. S. E.	Nearly calm.	Clear, except haze round horizon - [N. W., alt. 15°, disappeared at 14 <sup>h</sup> 40 <sup>m</sup>	77·4	50·5	—
11	14	11	20	—	Calm.	Clear; light haze round horizon; bright arch of auroral light from N. E. to			
11	20	12	02	—	Calm.	Light cirro-strati and dense haze round horizon			
12	02	12	08	Southerly.	Nearly calm.	Clear; hazy			
12	08	12	14	—	Calm.	Cirro-strati and haze round horizon	86·4	56·6	—
12	14	12	20	—	Calm.	Haze in horizon; remainder clear			
12	20	13	02	Southerly.	Nearly calm.	Unclouded, but hazy, dense round horizon			
13	02	13	08	—	Calm.	Unclouded, but hazy			
13	08	13	14	—	Calm.	Unclouded, but hazy; light cirro-strati round horizon	84·2	56·5	—
13	14	13	20	N. by E.	Light.	{ Light cirro-cumuli rising in N. W., and gradually covering the sky; wind			
13	20	14	02	N. N. W.	Moderate.	§ sprung up at 13 <sup>h</sup> 30 <sup>m</sup> from E., and backed at 14 <sup>h</sup> to N. by E.			
14	02	14	08	—	Calm.	§ clouded; strati in E. and S.			
14	08	14	14	Northerly.	Light.	Clouded; dense cumuli and cumulo-strati; air close			
14	14	14	20	—	Calm.	Unclouded; light haze	79·6	58·2	0·07
14	20	15	02	N.	Light.	Clear			
15	02	15	08	S.	Light.	Clear, except a few cumuli in N., and cumulo-strati in S.			
15	08	15	14	Northerly.	Very light.	Overcast; very light cirri and haze	78·2	47·2	—
15	14	15	20	—	Calm.	Clear; haze round horizon			
15	20	16	02	—	Calm.	Clear			
16	02	16	08	S. W.	Light.	Overcast; light cirri and haze	82·6	55·3	—
16	08	16	14	—	Calm.	Clear, but hazy			
<b>SUNDAY.</b>									
17	14	17	20	S. Westerly.	Very light.	Clear	85·8	55·9	—
17	20	18	02	—	Calm.	Clear, except round horizon; detached cumuli and haze			
18	02	18	08	S.	Moderate.	Clear, except round horizon; cumulo-strati in N. W., haze round remainder;			
18	08	18	14	—	Calm.	Clouded; cumulo-strati, cirro-cumuli, and haze	84·8	55·8	—
18	14	18	20	—	Calm.	Overcast; light haze			
18	20	19	02	—	Calm.	Overcast generally with thin haze; cirro-strati and dense haze round horizon			
19	02	19	08	W.	Brisk.	§ clouded; detached cirro-cumuli; a very dense mass of cumuli in S. E.; wind			
19	08	19	14	N. W.	Light.	Overcast; cirri and haze, very dense in horizon	91·0	58·1	—
19	14	19	20	N. W.	Moderate.	Clear			
19	20	20	02	N. N. W.	Moderate.	Clear; light haze round horizon			
20	02	20	08	Northerly.	Very light.	Unclouded; light haze, dense round horizon			
20	08	20	14	N. by W.	Light.	Cirro-strati and haze round horizon	74·2	43·7	—
20	14	20	20	—	Calm.	Clear			
20	20	21	02	—	Calm.	Overcast with light haze; a few cirro-cumuli in N. W.			
21	02	21	08	S. Easterly.	Nearly calm.	{ Overcast; light cirri and cirro-cumuli. Temperature of soil, three feet deep,			
21	08	21	14	S. Easterly.	Nearly calm.	63°·0; six feet deep, 56°·5; surface water of the lake at 5 <sup>h</sup> 71°·0	76·3	47·7	—
21	14	21	20	—	Calm.	Cirro-strati and haze round horizon; very light haze elsewhere			
21	20	22	02	S. by W.	Nearly calm.	Overcast; light cirri and haze			
22	02	22	08	S. by E.	Moderate.	Overcast; light cirri and haze			
22	08	22	14	S.	Light.	Partially clouded; strati, cirro-strati, and haze	81·4	57·2	—
22	14	22	20	—	Calm.	Overcast; light cirri, cirro-cumuli, and haze; constant sheet lightning in W.			
22	20	23	02	S.	Very light.	Light cirri and haze scattered generally			
23	02	23	08	S.	Very light.	Partially clouded; cirri, cirro-strati, and cirro-cumuli			
23	08	23	14	—	Calm.	{ Clouded; cirro-cumuli, cirro-strati, and haze; thunder storm and violent	88·6	62·0	—
						squall, with slight rain, passed from W. and S. W. to the S. E. between			
						5 <sup>h</sup> 50 <sup>m</sup> and 6 <sup>h</sup> 30 <sup>m</sup>			

Mean Solar Time (Astronom. Reck.)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Göttingen.		Direction.	Force.				
JULY.									
SUNDAY.									
D.	H.	D.	H.						In.
24	14	24	20	—	Calm.	Clear	81.0	46.1	—
24	20	25	02	N. E.	Very light.	Clouded; cirri and cirro-strati; fair			
25	02	25	08	S. E.	Light.	Overcast; cirro-strati, cirro-cumuli, and haze			
25	08	25	14	—	Calm.	Light haze in zenith; cirro-strati and haze round horizon	70.6	51.2	—
25	14	25	20	—	Calm.	Clear; hazy			
25	20	26	02	—	Calm.	Unclassified, but hazy			
26	02	26	08	S. S. W.	Brisk.	Unclassified, but hazy; wind in gusts			
26	08	26	14	—	Calm.	Overcast; light cirri and haze	84.1	63.9	—
26	14	26	20	—	Calm.	Unclassified, but hazy			
26	20	27	02	N. W.	Light.	¾ overcast; cirri, cirro-cumuli, and cirro-strati; haze in horizon			
27	02	27	08	S. W.	Light.	Overcast; light haze and detached cumuli			
27	08	27	14	—	Calm.	Strati and dense haze round horizon, otherwise clear	84.6	59.2	—
27	14	27	20	N.	Light.	Partially clouded with cirro-cumuli			
27	20	28	02	N. Easterly.	Nearly calm.	Overcast; cirri, cirro-strati, and haze			
28	02	28	08	E.	Light.	Overcast; light flexuous cirri, and haze			
28	08	28	14	—	Calm.	Overcast; light flexuous cirri and haze	77.8	51.4	—
28	14	28	20	E. N. E.	Light.	Unclassified, but hazy			
28	20	29	02	—	Calm.	Unclassified; haze round horizon			
29	02	29	08	S. E.	Nearly calm.	Hazy; a few light cirro-strati [very distant thunder in N.			
29	08	29	14	—	Calm.	Overcast; cirri and cirro-cumuli with dense cumulo-strati in N., air close;	80.0	68.2	—
29	14	29	20	S.	Light.	¾ clouded; light cirro-cumuli from S.W.; sheet lightning in E. and S.E.			
29	20	30	02	N. W.	Light.	Clouded; cumuli and cirro-cumuli			
30	02	30	08	N.	Light.	[Loud thunder and vivid lightning, flashes passing across zenith from the W. and S.W. Moderate or heavy rain since 22 <sup>h</sup> 20 <sup>m</sup> [since 2 <sup>h</sup>	80.3	50.2	1.25
30	08	30	14	N.	Moderate.	Densely clouded; cirro-cumuli and haze; constant, moderate, or light rain			
SUNDAY.									
31	14	31	20	N. W.	Light.	Clear; bank of auroral light in N., altitude 8°	62.5	44.1	—
31	20	1	02	N. W.	Light.	¾ clouded; cirri and dense cirro-cumuli from N.W.			
AUGUST.									
1	02	1	08	N. N. W.	Brisk.	¾ clouded; detached cirro-cumuli and cumulo-strati; wind in gusts			
1	08	1	14	—	Calm.	Clear	69.3	46.7	—
1	14	1	20	—	Calm.	Clear			
1	20	2	02	N. Westerly.	Nearly calm.	Very light cirri and cirro-strati generally dispersed			
2	02	2	08	S.	Light.	¾ clouded; detached cirro-cumuli			
2	08	2	14	—	Calm.	Clear, except a range of cirro-strati in N.W.	75.4	45.7	—
2	14	2	20	—	Calm.	Unclassified, but hazy			
2	20	3	02	—	Calm.	Overcast; cirri, cirro-strati, and haze			
3	02	3	08	Southerly.	Light.	Partially overcast; cirri and light haze			
3	08	3	14	—	Calm.	Partially overcast; cirri and light haze	74.8	45.9	—
3	14	3	20	—	Calm.	Unclassified; light haze			
3	20	4	02	—	Calm.	Unclassified; light haze, denser round horizon			
4	02	4	08	S. by W.	Light.	Unclassified; light haze, denser round horizon]			
4	08	4	14	—	Calm.	Overcast; cirri and haze	74.5	54.5	—
4	14	4	20	N. by E.	Light.	Unclassified, but hazy			
4	20	5	02	N. by E.	Light.	Unclassified, but hazy			
5	02	5	08	E.	Nearly calm.	Clouded; cirri, cirro-cumuli and dense haze; a few drops of rain			
5	08	5	14	N. E.	Light.	Clouded; cirro-cumuli and haze	77.8	61.9	—
5	14	5	20	E.	Very light.	Clear; auroral light in N. from 11 <sup>h</sup> to 13 <sup>h</sup> 30 <sup>m</sup>			
5	20	6	02	S. E.	Light.	Clouded; cirro-cumuli and cirro-strati			
6	02	6	08	E.	Light.	Clouded; cumulo-strati and cirro-cumuli			
6	08	6	14	N. E.	Light.	Densely clouded; cirro-cumuli and cumulo-strati	71.8	54.7	—
SUNDAY.									
7	14	7	20	N. Easterly	Light.	A few light cirro-strati generally dispersed	76.8	60.3	—
7	20	8	02	Northerly.	Nearly calm.	Densely clouded; distant thunder in S.E. and S., shower of rain at 18 <sup>h</sup> 50 <sup>m</sup>			
8	02	8	08	N. by E.	Light.	Partially clouded; cirro-cumuli and haze			
8	08	8	14	—	Calm.	[Densely clouded; cirro-cumuli and cirro-cumulo-strati passing to S.W., partially clear in N. horizon. Heavy thunder storm since 7 <sup>h</sup> 10 <sup>m</sup> , commenced in E. and moved round by N. to S.W.; vivid forked and sheet lightning; very loud thunder and heavy rain until 7 <sup>h</sup> 50 <sup>m</sup> ; rain ceased at 7 <sup>h</sup> 50 <sup>m</sup> , and thunder more distant	76.3	60.0	1.65
8	14	8	20	—	Calm.	¾ clouded; cirro-cumuli and cumulo-strati; very dark			
8	20	9	02	E. N. E.	Very light.	Densely clouded; cirri, cirro-cumuli and haze; slight rain since 17 <sup>h</sup> 30 <sup>m</sup>			

Mean Solar Time (Astronom. Reck <sup>s</sup> .)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
AUGUST.							
D. H.	D. H.						
9 02	9 08	N. E.	Nearly calm.	Densely clouded; cirro-cumuli, and cirro-cumulo-strati; smart shower from 2 <sup>h</sup> to 2 <sup>h</sup> 20 <sup>m</sup> , heavy shower from 3 <sup>h</sup> 20 <sup>m</sup> to 3 <sup>h</sup> 40 <sup>m</sup> - - - - -	°	°	In.
9 08	9 14	—	Calm.	Densely clouded; cumulo-strati, cirro-cumuli and strati [suddenly at 13 <sup>h</sup>	71.6	59.8	—
9 14	9 20	—	Calm.	Clouded; cirro-cumuli and haze; light rain from 8 <sup>h</sup> 30 <sup>m</sup> to 12 <sup>h</sup> , cleared			
9 20	10 02	E.	Nearly calm.	Densely clouded; cirro-strati and haze, occasionally slight showers - - -			
10 02	10 08	S.	Nearly calm.	§ clouded; cumuli, cirro-strati and cirro-cumuli - - - - -			
10 08	10 14	—	Calm.	§ clouded; light cirri, cirro-cumuli, and cumulo-strati - - - - -	73.6	57.1	—
10 14	10 20	—	Calm.	Partially clouded; light cirro-strati and haze - - - - -			
10 20	11 02	—	Calm.	Overcast; cirri, cirro-strati, and haze - - - - -			
11 02	11 08	S. S. E.	Light.	§ overcast; very light cirro-cumuli passing over from S.E. range of cumulo-strati from N.E. to S.W.; great evaporation from the lake - - -			
11 08	11 14	—	Calm.	Heavy cumuli in N.W. and N.; mist rising - - - - -	78.8	56.9	—
11 14	11 20	—	Calm.	Unclouded; light haze round horizon - - - - -			
11 20	12 02	—	Calm.	Detached cirri scattered about, haze in horizon - - - - -			
12 02	12 08	S. E.	Very light.	A bank of cumuli round the whole horizon, alt. 8° - - - - -			
12 08	12 14	N. E.	Nearly calm.	§ clouded; cirro-strati and cirro-cumuli in E., cumulo-strati in W. and S.;	79.6	60.0	—
12 14	12 20	—	Calm.	Clear - - - - - [forked and sheet lightning in N.E.			
12 20	13 02	N. E.	Nearly calm.	§ clouded; cirri and cirro-cumuli, moving rapidly from E. - - - - -			
13 02	13 08	S. E.	Light.	Clear, except a few detached cumuli round horizon - - - - -			
13 08	13 14	—	Calm.	Unclouded; light haze round horizon - - - - -	78.8	57.5	—
SUNDAY.							
14 14	14 20	—	Calm.	Unclouded; very thin haze - - - - -	78.8	55.0	—
14 20	15 02	—	Calm.	Unclouded; haze - - - - -			
15 02	15 08	S. E.	Nearly calm.	Overcast with haze - - - - -			
15 08	15 14	—	Calm.	Overcast with haze - - - - -	81.8	59.3	—
15 14	15 20	E. by S.	Very light.	Unclouded; light haze - - - - -			
15 20	16 02	E.	Light.	Overcast with haze; very dense in horizon - - - - -			
16 02	16 08	E. by S.	Light.	Overcast with haze - - - - -			
16 08	16 14	N. Easterly.	Light.	Overcast; light cirri and haze; dense haze in horizon - - - - -	75.6	67.0	—
16 14	16 20	—	Calm.	Densely clouded; cirro-cumuli and cirro-strati - - - [15 <sup>h</sup> 40 <sup>m</sup>			
16 20	17 02	—	Calm.	Clouded; cirri, cirro-cumuli and cumulo-strati; slight rain from 15 <sup>h</sup> to			
17 02	17 08	S. E.	Moderate.	(Densely clouded; cumulo-strati, cirro-cumuli and cumuli; low cirro-cumuli passing rapidly from E.; smart shower at 1 <sup>h</sup> 30 <sup>m</sup> , with distant thunder passing from S.W. by W. to N. - - - - -	78.6	63.2	0.30
17 08	17 14	—	Calm.	§ clouded; cirri and cirro-cumuli; sheet lightning in E. since 7 <sup>h</sup> 30 <sup>m</sup> - - -			
17 14	17 20	S.	Moderate.	Heavy rain from 13 <sup>h</sup> 30 <sup>m</sup> to 14 <sup>h</sup> 10 <sup>m</sup> - - - - -			
17 20	18 02	W.	Light.	§ clouded; cirri, cirro-cumuli, and heavy cumulo-strati - - - - -			
18 02	18 08	S.	Fresh.	Partially clouded; cirro-cumuli and cumuli; wind in gusts - - - - -			
18 08	18 14	S.	Moderate.	Overcast; cirro-cumuli and haze - - - - -	76.8	57.5	—
18 14	18 20	Southerly.	Nearly calm.	Clear; light haze in horizon - - - - -			
18 20	19 02	S. by W.	Moderate.	Bank of cumuli in S. and S.W. horizons - - - [in gusts			
19 02	19 08	S. S. W.	Moderate.	Densely clouded; cumulo-strati and cirro-cumuli, a few clear spaces; wind			
19 08	19 14	S. W.	Moderate.	Densely clouded; spitting rain; wind in gusts - - - - -	79.2	56.8	—
19 14	19 20	—	Calm.	Clouded with cirro-cumuli in close arrangement - - - - -			
19 20	20 02	N. W.	Light.	Clouded; cirri, cirro-cumuli and cirro-strati; a few clear spaces - - -			
20 02	20 08	S. by E.	Light.	Low range of cumulo-strati in S.; a few dispersed cirro-cumuli - - -			
20 08	20 14	—	Calm.	Clear, except a few cirro-cumuli round horizon - - - - -	72.3	43.9	—
SUNDAY.							
21 14	21 20	—	Calm.	Clear - - - - -	73.2	45.7	—
21 20	22 02	N. E.	Nearly calm.	Unclouded; haze in horizon - - - - -			
22 02	22 08	S. E.	Light.	Unclouded; light haze round horizon - - - - -	75.9	51.5	—
22 08	22 14	—	Calm.	Light cirro-strati and haze round horizon - - - - -			
22 14	22 20	N. E.	Nearly calm.	Overcast with very light haze - - - - -			
22 20	23 02	—	Calm.	§ overcast; detached cirro-cumuli - - - - -			
23 02	23 08	S. E.	Nearly calm.	Overcast; cirro-cumuli, cirro-strati, and haze; air close - - - - -	78.4	56.4	—
23 08	23 14	—	Calm.	Partially clouded; light cirro-cumuli and cirri - - - - -			
23 14	23 20	—	Calm.	A few light cirro-strati round horizon - - - - -			
23 20	24 02	—	Calm.	Overcast; light cirro-strati and haze - - - - -			
24 02	24 08	S. E.	Very light.	Overcast with light haze. Solar halo from 23 <sup>h</sup> to 2 <sup>h</sup> - - - - -			
24 08	24 14	N. E.	Nearly calm.	Light cirro-strati and haze round horizon - - - - -	77.8	59.0	—
24 14	24 20	—	Calm.	§ overcast; light cirro-cumuli, cirro-strati and haze - - - - -			
24 20	25 02	N. Easterly.	Nearly calm.	Overcast; cirri, light cirro-strati, and haze - - - - -			
25 02	25 08	E. by S.	Moderate.	Partially overcast; light cirri, cirro-cumuli, and haze - - - - -	79.6	69.0	—
25 08	25 14	E.	Light.	Densely clouded; strati and cirro-cumuli - - - - -			
25 14	25 20	N. N. E.	Light.	Densely clouded; cirro-cumuli and haze - - - - -			

Mean Solar Time (Astronom'. Recks).		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.	Göttingen.	Direction.	Force.				
AUGUST.							
D.	H.	D.	H.				In.
25	20	26	02	N. by E.	Light.	Densely clouded; cirro-strati and haze; spitting rain - - - -	0
26	02	26	08	E.	Light.	Clouded; cirro-strati and cirro-cumuli; fair - - - -	0
26	08	26	14	—	Calm.	Densely clouded - - - -	80.6
26	14	26	20	—	Calm.	Densely clouded; raining slightly - - - -	68.0
26	20	27	02	—	Calm.	Densely clouded; moderate or heavy rain since 18 <sup>h</sup> 10 <sup>m</sup> - - - -	0.55
27	02	27	08	E.	Light.	{ § clouded; cumulo-strati and cirro-strati; distant thunder in W., rain ceased. Temp. of soil 13 feet deep 64°·5; 6 feet deep 61°·0; surface water of the lake, at 6 <sup>h</sup> 70°·5 - - - -	81.5
27	08	27	14	—	Calm.	{ Heavy cumuli and cirro-cumuli in N. and N. E., remainder clear; vivid sheet lightning and distant thunder commenced in N. and N.E. and ended [at 10 <sup>h</sup> in S.W.; very slight rain.	64.0
SUNDAY.							
28	14	28	20	N. N. W.	Nearly calm.	Clear - - - -	80.8
28	20	29	02	N. by E.	Light.	{ § clouded; detached cirri and cirro-cumuli - - - -	62.5
29	02	29	08	S. by W.	Light.	{ § clouded; cirro-cumuli and cumulo-strati - - - -	77.8
29	08	29	14	—	Calm.	Clear - - - -	52.7
29	14	29	20	E.	Light.	Clear - - - -	—
29	20	30	02	N.	Nearly calm.	Clear; haze in horizon - - - -	—
30	02	30	08	S. E.	Light.	Clear; light haze round horizon - - - -	75.4
30	08	30	14	—	Calm.	{ § clouded in N.W. with cirro-strati - - - -	54.7
30	14	30	20	—	Calm.	Clouded; cirro-cumuli and cirro-strati; clear spaces - - - -	—
30	20	31	02	—	Calm.	Clouded; cirro-cumuli and cirro-strati; clear spaces - - - -	—
31	02	31	08	—	Calm.	Partially overcast; cirro-strati and cirro-cumuli - - - -	79.4
31	08	31	14	—	Calm.	Clouded; strati and cirro-cumuli; clear spaces - - - -	62.4
31	14	31	20	—	Calm.	Unclouded; light haze round horizon - - - -	—
31	20	1	02	S. W.	Light.	Partially overcast; light cirro-strati and haze - - - -	—
SEPTEMBER.							
1	02	1	08	S.	Moderate.	Range of cumuli in N. horizon - - - -	—
1	08	1	14	—	Calm.	{ Partially clouded; cirro-cumuli, cumulo-strati, and cirro-strati; constant sheet and forked lightning in N. W., N., and N. E. horizons since 7 <sup>h</sup> - - - -	83.8
1	14	1	20	W.	Light.	Densely clouded, except in N. and zenith; faint auroral light visible between the	—
1	20	2	02	—	Calm.	Densely clouded; strati and cirro-cumuli [clouds in N.; rain from 10 <sup>h</sup> to 13 <sup>h</sup> .	—
2	02	2	08	—	Calm.	Clouded; strati and cirro-cumuli - - - -	75.3
2	08	2	14	—	Calm.	{ § clouded; dispersed cirro-cumuli - - - - [9 <sup>h</sup> and 10 <sup>h</sup> .	53.5
2	14	2	20	W.	Light.	Densely clouded; cirro-cumuli, cirro-strati, and haze; faint auroral light at	1.27
2	20	3	02	N. Easterly.	Nearly calm.	Heavy rain from 18 <sup>h</sup> 30 <sup>m</sup> to 24 <sup>h</sup> - - - -	—
3	02	3	08	N.	Nearly calm.	Clouded; cirro-strati, strati, and haze; clearing in N. - - - -	68.4
3	08	3	14	—	Calm.	Clear - - - -	48.2
SUNDAY.							
4	14	4	20	—	Calm.	Densely clouded; cirro-cumuli and cirro-strati; clear space in N.W. - - - -	71.1
4	20	5	02	N. W.	Light.	Clouded; scattered cirro-cumuli; dense cumulo-strati in S. - - - -	61.0
5	02	5	08	N. W.	Moderate.	A few detached cumuli; wind in gusts - - - -	—
5	08	5	14	N. W.	Light.	Clear - - - -	72.8
5	14	5	20	—	Calm.	Clear - - - -	42.7
5	20	6	02	Northerly.	Nearly calm.	Generally overcast; cirri and cirro-strati - - - -	—
6	02	6	08	S. by E.	Light.	Partially overcast; light cirro-strati and haze - - - -	71.2
6	08	6	14	S.	Light.	Overcast; cirro-cumuli and haze - - - -	57.2
6	14	6	20	—	Calm.	Densely clouded and very dark - - - - [45 <sup>m</sup> to 15 <sup>h</sup> 40 <sup>m</sup> .	0.12
6	20	7	02	N. Westerly.	Nearly calm.	Densely clouded; cirri, cirro-cumuli, and cirro-strati; slight rain from 14 <sup>h</sup>	—
7	02	7	08	N.	Light.	Clouded; dense cumulo-strati and cirro-cumuli; a few clear spaces - - - -	74.6
7	08	7	14	N.	Light.	A few cirro-strati dispersed about - - - -	54.1
7	14	7	20	Northerly.	Light.	Unclouded; haze round horizon - - - -	—
7	20	8	02	N. E.	Light.	{ § overcast; cirro-cumuli and cirro-strati - - - -	61.1
8	02	8	08	E.	Light.	Densely clouded; cirro-cumuli, cirro-strati, and haze; slight rain - - - -	51.1
8	08	8	14	N. E.	Light.	Densely clouded; constant light and drizzling rain since 3 <sup>h</sup> - - - -	—
8	14	8	20	N.	Moderate.	Constant rain since 8 <sup>h</sup> ; wind in gusts - - - -	0.82
8	20	9	02	E. N. E.	Light.	Overcast; rain since 14 <sup>h</sup> , except between 19 <sup>h</sup> and 19 <sup>h</sup> 30 <sup>m</sup> - - - -	—
9	02	9	08	Northerly.	Nearly calm.	Constant light rain since 20 <sup>h</sup> , ceased at 5 <sup>h</sup> 40 <sup>m</sup> - - - -	57.8
9	08	9	14	Northerly.	Light.	Densely overcast; dropping rain - - - -	46.7
9	14	9	20	—	Calm.	Partially clear in zenith, remainder densely clouded - - - -	—
9	20	10	02	N. E.	Nearly calm.	Heavy bank of cumuli in S., remainder clear - - - -	67.8
10	02	10	08	S.	Nearly calm.	{ § clouded; light cirro-strati and cirro-cumuli - - - -	56.2
10	08	10	14	S. E.	Nearly calm.	{ § overcast; light cirro-strati - - - -	—

Mean Solar Time (Astronom. Reck.)		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.	
Toronto.	Göttingen.	Direction.	Force.					
SEPTEMBER.								
SUNDAY.								
D.	H.	D.	H.				In.	
11	14	11	20	—	Calm.	80°0	59°0	2.93
11	20	12	02	—	Calm.			
12	02	12	08	E.	Very light.			
12	08	12	14	N. E.	Light.	66°4	48°8	
12	14	12	20	N.	Light.			—
12	20	13	02	N.	Nearly calm.			
13	02	13	08	N. E.	Light.			
13	08	13	14	—	Calm.	66°3	52°8	
13	14	13	20	N. E.	Light.			—
13	20	14	02	N.	Very light.			
14	02	14	08	—	Calm.			
14	08	14	14	E.	Nearly calm.	65°5	53°5	
14	14	14	20	E.	Light.			0.37
14	20	15	02	—	Calm.			
15	02	15	08	S. by E.	Light.			
15	08	15	14	S. by E.	Nearly calm.	70°6	50°2	
15	14	15	20	Westerly.	Light.			—
15	20	16	02	N. Westerly.	Nearly calm.			
16	02	16	08	S. W.	Moderate.			
16	08	16	14	W. S. W.	Moderate.	65°5	42°4	
16	14	16	20	—	Calm.			—
16	20	17	02	S. Westerly.	Nearly calm.			
17	02	17	08	W. by S.	Light.			
17	08	17	14	—	Calm.	64°7	49°0	
SUNDAY.								
18	14	18	20	N.	Brisk.	61°4	45°2	0.25
18	20	19	02	N.	Moderate.			—
19	02	19	08	N. by W.	Moderate.			
19	08	19	14	—	Calm.	57°6	35°3	
19	14	19	20	—	Calm.			
19	20	20	02	—	Calm.			
20	02	20	08	S. S. W.	Light.			
20	08	20	14	S. by W.	Light.	63°1	47°1	
20	14	20	20	—	Calm.			0.25
20	20	21	02	N. W.	Light.			
21	02	21	08	N.	Brisk.			
21	08	21	14	N. W.	Moderate.	53°6	36°5	
21	14	21	20	N. W.	Light.			—
21	20	22	02	N. N. W.	Moderate.			
22	02	22	08	N.	Moderate.			
22	08	22	14	N. by W.	Nearly calm.	46°8	27°9	
22	14	22	20	—	Calm.			—
22	20	23	02	—	Calm.			
23	02	23	08	S. W.	Light.			
23	08	23	14	—	Calm.	55°8	38°4	
23	14	23	20	—	Calm.			—
23	20	24	02	N. E.	Nearly calm.			
24	02	24	08	S. E.	Very light.			
24	08	24	14	—	Calm.	58°4	38°4	
SUNDAY.								
25	14	25	20	N.	Very light.	59°8	37°2	—
25	20	26	02	Northerly.	Nearly calm.			—
26	02	26	08	S. Easterly.	Nearly calm.			
26	08	26	14	—	Calm.	63°4	39°2	
26	14	26	20	—	Calm.			
26	20	27	02	S. Westerly.	Nearly calm.			
27	02	27	08	S. by E.	Light.			
27	08	27	14	—	Calm.	70°6	48°7	
27	14	27	20	—	Calm.			—
27	20	28	02	N. Westerly.	Nearly calm.			
28	02	28	08	S. W.	Light.			
28	08	28	14	—	Calm.	70°4	46°9	
28	14	28	20	—	Calm.			—
28	20	29	02	—	Calm.			

Mean Solar Time (Astronom'. Reckon'g.)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Gottingen.		Direction.	Force.				
<b>SEPTEMBER.</b>									
D.	H.	D.	H.				°	°	In.
29	02	29	08	E.	Light.	Overcast; light cirro-cumuli, cirro-strati, and haze	64.7	46.7	0.25
29	08	29	14	—	Calm.	Densely clouded			
29	14	29	20	W.	Light	Clear			
29	20	30	02	Westerly.	Very light.	Clear			
30	02	30	08	W. S. W.	Brisk.	§ clouded; detached cirro-cumuli and cumuli; wind in gusts	66.6	50.5	—
30	08	30	14	Westerly.	Light.	Clear			
30	14	30	20	—	Calm.	Partially overcast; light cirri and haze			
30	20	1	02	S. Westerly.	Nearly calm.	Overcast; cirri and cirro-strati; fair			
<b>OCTOBER.</b>									
1	02	1	08	S. W.	Light.	Clouded; cirri, cirro-strati, and haze; slight shower of rain	66.6	43.2	0.25
1	08	1	14	S. W.	Moderate.	{ Densely clouded; incessant sheet lightning and distant thunder in N. W.; showers of rain at intervals; wind in gusts			
<b>SUNDAY.</b>									
2	14	2	20	Westerly.	Nearly calm.	Densely clouded	57.8	43.7	—
2	20	3	02	N. W.	Moderate.	A few cirro-cumuli and cirro-strati in N. W. and S. horizons			
3	02	3	08	N. W.	Light.	Clouded; dense cirro-cumuli and cumulo-strati; a few clear spaces	57.6	40.3	—
3	08	3	14	—	Calm.	Clear			
3	14	3	20	—	Calm.	Partially clouded; cirro-cumuli and haze; zenith clear	55.6	33.2	—
3	20	4	02	N. N. W.	Light.	Range of strati round horizon			
4	02	4	08	S. W.	Light.	§ clouded; cirro-cumuli and cumulo-strati	55.3	34.7	—
4	08	4	14	N. E.	Nearly calm.	Clear			
4	14	4	20	—	Calm.	Clear	55.3	34.7	—
4	20	5	02	—	Calm.	A few light clouds round horizon			
5	02	5	08	S. E. by E.	Light.	Clear	54.6	35.9	—
5	08	5	14	—	Calm.	Clear			
5	14	5	20	—	Calm.	Clear; mist rising from the ground	65.3	51.2	0.59
5	20	6	02	—	Calm.	Clear			
6	02	6	08	Easterly.	Moderate.	Clear; wind in gusts	62.3	46.1	1.12
6	08	6	14	N. E.	Light.	Clear			
6	14	6	20	—	Calm.	Clear	62.3	46.1	1.12
6	20	7	02	—	Calm.	Clear; haze in horizon			
7	02	7	08	S. E.	Nearly calm.	Overcast; light cirri; bank of cumuli in N. and E.	65.3	51.2	0.59
7	08	7	14	—	Calm.	Densely clouded; rain since 7 <sup>h</sup> 30 <sup>m</sup> ; heavy at 8 <sup>h</sup>			
7	14	7	20	—	Calm.	Densely clouded; rain ceased at 10 <sup>h</sup> 30 <sup>m</sup>	62.3	46.1	1.12
7	20	8	02	—	Calm.	Clouded; cirri, cirro-cumuli and cirro-strati; fair			
8	02	8	08	S. by W.	Nearly calm.	Partially clouded; cirri and cirro-strati	62.3	46.1	1.12
8	08	8	14	W.	Light.	§ clouded in S.; cirro-cumuli and cumulo-strati; heavy showers from 13 <sup>h</sup> to [18 <sup>h</sup> , and constant rain from 21 <sup>h</sup> to 2 <sup>h</sup> 30 <sup>m</sup>			
<b>SUNDAY.</b>									
9	14	9	20	N. W.	Light.	Clear	50.8	33.0	—
9	20	10	02	—	Calm.	Clear			
10	02	10	08	S.	Moderate.	§ clouded; cumulo-strati in S. and W. and detached cirro-cumuli	56.2	41.9	—
10	08	10	14	Westerly.	Nearly calm.	§ clouded; cirro-cumuli and cirro-strati			
10	14	10	20	—	Calm.	Clear; haze round horizon	68.6	46.2	—
10	20	11	02	—	Calm.	A few detached cirri passing from N. W.			
11	02	11	08	S. by W.	Moderate.	Clear; haze in horizon	68.6	46.2	—
11	08	11	14	W. by S.	Light.	§ clouded; cumuli, cirro-cumuli, and cumulo-strati			
11	14	11	20	N. W.	Nearly calm.	Clear	59.2	32.3	—
11	20	12	02	N. W.	Light.	Clear			
12	02	12	08	N. by W.	Moderate.	Clear, except a few cirro-cumuli in S. and S. W. Wind in gusts	59.2	32.3	—
12	08	12	14	N.	Light.	Clear			
12	14	12	20	Northerly.	Nearly calm.	Clear	56.0	40.0	—
12	20	13	02	Northerly.	Nearly calm.	Light flexuous cirro-strati scattered generally			
13	02	13	08	E. S. E.	Light.	Bank of cumulo-strati in N. W., alt. 18°; light cirri scattered generally	56.0	40.0	—
13	08	13	14	E.	Nearly calm.	Partially overcast; very light cirri, cirro-strati and haze; imperfect lunar			
13	14	13	20	E. by N.	Nearly calm.	Clear, except a few dense cirro-cumuli in N. near horizon. [halo, diam. 40°	51.4	37.5	0.17
13	20	14	02	—	Calm.	Densely overcast; cirri, cirro-cumuli, and haze			
14	02	14	08	S. W.	Nearly calm.	{ Densely clouded; cirro-cumuli, cirro-strati, and haze; moderate rain from 23 <sup>h</sup> to 0 <sup>h</sup> ; light rain from 0 <sup>h</sup> to 2 <sup>h</sup>	51.4	37.5	0.17
14	08	14	14	—	Calm.	Clouded; cirro-cumuli, cirro-strati, and haze			
14	14	14	20	—	Calm.	Densely clouded; cirro-cumuli and haze	51.8	36.3	—
14	20	15	02	Westerly.	Nearly calm.	§ overcast; cirri, cirro-cumuli, and cirro-strati			
15	02	15	08	W. by S.	Light.	§ clouded; cumulo-strati, cumuli, and cirro-cumuli, very dense round horizon	51.8	36.3	—
15	08	15	14	W. by N.	Nearly calm.	Clear			

Mean Solar Time (Astronom. Reck <sup>g</sup> ).				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Rain.
Toronto.		Göttingen.		Direction.	Force.				
<b>OCTOBER.</b>									
<b>SUNDAY.</b>									
D.	H.	D.	H.						In.
16	14	16	20	N. W.	Light.	Clear	53.8	36.5	—
16	20	17	02	N. W.	Light.	Light strati and haze round horizon			
17	02	17	08	S.	Light.	§ clouded; detached cirro-cumuli			
17	08	17	14	—	Calm.	A few light cirro-cumuli in N. W., cumulo-strati and cirro-strati in S., haze	53.9	35.2	2.15
17	14	17	20	N.	Light.	Constant moderate rain since 10 <sup>h</sup> [round horizon]			
17	20	18	02	N. N. E.	Light.	Moderate or heavy rain since 14 <sup>h</sup> ; wind in gusts			
18	02	18	08	N. by E.	Brisk.	Densely clouded; cirro-strati and haze; rain ceased at noon; wind in gusts			
18	08	18	14	—	Calm.	Partially clouded; cirro-cumuli and cirri; clearing rapidly	42.2	35.5	—
18	14	18	20	N. W.	Light.	§ clouded; well-defined cirro-cumuli			
18	20	19	02	N. W.	Very light.	§ clouded; cirri, cirro-cumuli, and cumulo-strati			
19	02	19	08	W. by S.	Light.	Partially clouded; detached cumuli and cirro-cumuli			
19	08	19	14	N. W.	Light.	§ clouded; light detached cirro-cumuli and cirro-strati			
19	14	19	20	—	Calm.	Clouded with cirro-cumuli; a few clear spaces	47.7	30.5	0.04
19	20	20	02	N. W.	Nearly calm.	Clear, except a bank of cumulo-strati in N. E. and S. E.			
20	02	20	08	N. W.	Light.	§ clouded; detached cirro-cumuli and cumulo-strati			
20	08	20	14	N. Westerly.	Very light.	Light cirro-cumuli round horizon. Temp. of soil 3 feet deep 53°·0; 6 feet deep 55°·0; surface water of the lake at 5 <sup>h</sup> , 49°·0	48.6	27.5	—
20	14	20	20	—	Calm.	Partially clouded; cirro-cumuli and cirri			
20	20	21	02	—	Calm.	Partially overcast; cirri, cirro-cumuli, and cumulo-strati			
21	02	21	08	S. E.	Very light.	Partially overcast; light cirri, cirro-strati and haze [lunar halo, diam. 35°]			
21	08	21	14	—	Calm.	Partially clouded in E. and S. E.; light cirro-cumuli and cirri; very perfect	51.6	38.7	0.40
21	14	21	20	—	Calm.	Densely overcast; cirro-strati and haze; light rain from 13 <sup>h</sup> to 16 <sup>h</sup> 10 <sup>m</sup>			
21	20	22	02	—	Calm.	Densely clouded			
22	02	22	08	Southerly.	Nearly calm.	Densely clouded; cirro-cumuli and haze			
22	08	22	14	N. W.	Moderate.	Partially overcast; light cirri and cirro-cumuli	55.2	31.5	—
<b>SUNDAY.</b>									
23	14	23	20	Southerly.	Nearly calm.	Overcast; light cirro-strati and haze; rain from 14 <sup>h</sup> 15 <sup>m</sup> to 14 <sup>h</sup> 30 <sup>m</sup>	54.3	38.5	—
23	20	24	02	E. S. E.	Light.	Overcast; cirro-cumuli and haze; fair			
24	02	24	08	Easterly.	Light.	Overcast; cirro-cumuli and dense haze; slight rain since 1 <sup>h</sup> 53 <sup>m</sup>			
24	08	24	14	Southerly.	Light.	Densely clouded; light or moderate rain since 1 <sup>h</sup> 53 <sup>m</sup>	55.3	45.0	0.45
24	14	24	20	S. W.	Very light.	Densely clouded; drizzling rain from 9 <sup>h</sup> to 14 <sup>h</sup> 30 <sup>m</sup>			
24	20	25	02	S. W.	Light.	Overcast; cirri, cirro-cumuli, cirro-strati, and haze; fair; wind in gusts			
25	02	25	08	W. N. W.	Brisk.	Partially clouded; cirro-cumuli and cumuli; wind in gusts			
25	08	25	14	N. W.	Moderate.	Clouded; cirro-cumuli and cumulo-strati; clear spaces in W. and zenith;	52.0	29.5	—
25	14	25	20	N. W.	Very light.	Unclouded; dense haze in S. horizon [wind in gusts]			
25	20	26	02	S. W.	Nearly calm.	Clear			
26	02	26	08	N. N. W.	Moderate.	§ clouded; detached cirro-cumuli and cumulo-strati			
26	08	26	14	—	Calm.	§ clouded; dense cumulo-strati, and cirro-cumuli; slight showers at 5 <sup>h</sup> 15 <sup>m</sup>	51.2	32.3	—
26	14	26	20	—	Calm.	Clear [and 7 <sup>h</sup> ]			
26	20	27	02	—	Calm.	A few light clouds round horizon			
27	02	27	08	S. by W.	Very light.	Clear except round hor.; cumulo-strati in S.; detached cumuli and cumulo-			
27	08	27	14	—	Calm.	Clear [strati round remainder]	46.8	30.7	—
27	14	27	20	Northerly.	Nearly calm.	Partially clouded; light cirro-cumuli			
27	20	28	02	—	Calm.	Hazy, thick round horizon; light strati in N. W.			
28	02	28	08	Easterly.	Light.	A few cirro-cumuli and cirro-strati in W. and N. W.			
28	08	28	14	—	Calm.	Densely clouded; very dark	58.4	34.9	—
28	14	28	20	—	Calm.	Densely overcast; spitting rain			
28	20	29	02*	—	Calm.				
29	02	29	08	N. E.	Light.	Densely clouded; cirro-cumuli, cirri and haze			
29	08	29	14	N. Easterly.	Nearly calm.	Densely overcast	49.5	40.3	—
<b>SUNDAY.</b>									
30	14	30	20	—	Calm.	Densely clouded	52.8	37.9	—
30	20	31	02	—	Calm.	Densely clouded			
31	02	31	08	—	Calm.	Overcast with haze, very dense in horizon			
31	08	31	14	Eastward.	Nearly calm.	Haze round horizon; fog rising	51.5	31.0	—
31	14	31	20	—	Calm.	Moderately dense fog; a few stars visible in zenith			
31	20	1	02	—	Calm.	Overcast; light cirrous haze			
<b>NOVEMBER.</b>									
1	02	1	08	Southerly.	Nearly calm.	Unclouded but hazy			
1	08	1	14	E.	Light.	Densely overcast	55.5	39.8	—
1	14	1	20	—	Calm.	Overcast with dense haze			
1	20	2	02	Easterly.	Nearly calm.	Overcast; cirro-strati and dense haze			

\* Observation omitted.

Mean Solar Time (Astronom'. Recks').		Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Rain.
Toronto.	Göttingen.	Direction.	Force.					
<b>NOVEMBER.</b>								
D.	H.	D.	H.					
2	02	2	08	E.	Light.	Overcast; cirro-strati and dense haze	o	o
2	08	2	14	Easterly.	Light.	Thick haze round horizon, remainder clear	45.7	33.1
2	14	2	20	N. Easterly.	Nearly calm.	A few cirro-strati in S., remainder clear		
2	20	3	02	E. N. E.	Light.	Partially clouded with cumulo-strati		
3	02	3	08	E. by S.	Light.	Clear		
3	08	3	14	—	Calm.	Clear	51.6	28.0
3	14	3	20	N. E.	Light.	Clear		
3	20	4	02	—	Calm.	Cirrous haze generally diffused		
4	02	4	08	—	Calm.	Overcast; light cirri and haze		
4	08	4	14	Northerly.	Nearly calm.	Very light cirri round horizon; zenith clear	47.0	27.5
4	14	4	20	—	Calm.	Light haze in horizon; many falling stars		
4	20	5	02	—	Calm.	Light cirri in N. and S.; hazy		
5	02	5	08	Southerly.	Nearly calm.	Partially overcast; very light cirri, cirro-strati and haze		
5	08	5	14	—	Calm.	½ overcast with cirro-cumuli; hazy	49.8	38.2
<b>SUNDAY.</b>								
6	14	6	20	E. by N.	Very light.	Overcast with dense haze, except in zenith	56.8	40.7
6	20	7	02	E. by N.	Brisk.	Densely overcast; cirro-cumuli and haze; wind in gusts		
7	02	7	08	E. by N.	Brisk.	Densely clouded; cirro-cumuli, cirro-strati and haze; wind in gusts		
7	08	7	14	E. by N.	Brisk.	Densely clouded; cirro-cumuli and haze		
7	14	7	20	N. E.	High.	Densely overcast; constant heavy rain since 12 <sup>h</sup> ; squally	48.8	39.0
7	20	8	02	E. N. E.	High.	Densely overcast; cirro-cumuli, cirro-strati and haze; clouds very low and scudding rapidly from E.; heavy rain from 14 <sup>h</sup> to 16 <sup>h</sup> , moderate from 16 <sup>h</sup> to 20 <sup>h</sup> ; squally [wind in gusts]		
8	02	8	08	E. N. E.	Moderate.	Densely clouded; cirro-cumuli, cirro-strati and haze; light rain since 20 <sup>h</sup> ;		
8	08	8	14	N. N. E.	Light.	Densely overcast; light rain from 2 <sup>h</sup>	42.7	37.0
8	14	8	20	—	Calm.	Densely overcast; rain ceased at 10 <sup>h</sup> [rain from 17 <sup>h</sup> to 19 <sup>h</sup> 40		
8	20	9	02	S. W.	Light.	Densely clouded except in S. W.; cirro-cumuli and haze; light drizzling		
9	02	9	08	S. W. by S.	Light.	Densely clouded; cirro-cumuli and haze; slight rain since 1 <sup>h</sup> 30 <sup>m</sup>		
9	08	9	14	—	Calm.	Overcast; heavy cumuli and cirro-cumuli in S. and S. W.; light cirri in streaks from S. E. to N. W.	44.1	28.2
9	14	9	20	N. W.	Light.	Clouded round horizon; cirro-cumuli and cirro-strati		
9	20	10	02	—	Calm.	Lightly overcast; cumuli in S. horizon		
10	02	10	08	S. W.	Light.	Densely overcast; cirri and haze, and dense cirro-cumuli in S. and W.		
10	08	10	14	S. W.	Light.	Overcast; cirri and haze; clearing in S. W. and W.; slight rain since 2 <sup>h</sup>	40.1	33.4
10	14	10	20	S. Westerly.	Very light.	Densely overcast; slight rain since 8 <sup>h</sup>		
10	20	11	02	—	Calm.	Partially overcast; light cirro-cumuli; rain ceased at 16 <sup>h</sup> [S. W.]		
11	02	11	08	Southerly.	Nearly calm.	¾ clouded; dense cirro-cumuli and cumulo-strati; clear spaces in zenith and	47.8	38.4
11	08	11	14	—	Calm.	Densely clouded; cumulo-strati, cirro-cumuli and haze; occasional drops of		
11	14	11	20	—	Calm.	Densely clouded; cirro-cumuli and haze [rain		
11	20	12	02	S. E.	Moderate.	Densely clouded; cirro-cumuli, cirro-strati and haze; light rain since 16 <sup>h</sup> 25 <sup>m</sup>		
12	02	12	08	S.	Light.	Densely overcast; cirro-cumuli, cirro-strati and haze; drizzling rain since 21 <sup>h</sup>	49.4	30.7
12	08	12	14	S. W.	Very light.	¾ clouded; cirro-cumuli, cirro-strati and haze; rain ceased at 7 <sup>h</sup> 45 <sup>m</sup>		
<b>SUNDAY.</b>								
13	14	13	20	S.	Light.	Clouded; cirro-cumuli and haze	46.2	33.8
13	20	14	02	S. by E.	Light.	Overcast; cirro-strati, cirro-cumuli and haze [wind in gusts]		
14	02	14	08	S. W.	Brisk.	Densely clouded; cirro-cumuli, cirro-strati and haze; light rain since 2 <sup>h</sup> 40 <sup>m</sup>		
14	08	14	14	Westerly.	Light.	Light cirro-cumuli and haze round horizon; wind in gusts	42.7	31.0
14	14	14	20	N. W.	Light.	Range of cumulo-strati in S. and W., altitude 5°		
14	20	15	02	W.	Light.	¾ overcast; cirro-cumuli and cirro-strati; clear in S.		
15	02	15	08	Westerly.	Nearly calm.	Clouded; cirro-cumuli, cirro-strati and cumulo-strati; partially clear in S.		
15	08	15	14	—	Calm.	Overcast; light cirri and haze; perfect lunar halo, diameter 40°	38.1	29.7
15	14	15	20	N. Easterly.	Very light.	Densely overcast; cumulo-strati, cirro-cumuli and haze		
15	20	16	02	N. E.	Light.	Overcast; cirro-cumuli, strati and haze		
16	02	16	08	N. E.	Light.	Densely clouded; cirro-cumuli and haze; very slight rain or snow since 22 <sup>h</sup>		
16	08	16	14	N. N. E.	Light.	Densely overcast; cirro-strati and haze; rain or sleet from 2 <sup>h</sup> to 7 <sup>h</sup> 10 <sup>m</sup>	39.5	33.0
16	14	16	20	N. E.	Light.	Densely clouded; cirro-cumuli, cumulo-strati and haze; wind in gusts		
16	20	17	02	E.	Fresh.	Clouds in double strata; cirro-cumuli in detached masses		
17	02	17	08	E.	Moderate.	Densely clouded; cirro-cumuli and haze; rain since 21 <sup>h</sup> ; wind in gusts		
17	08	17	14	E. S. E.	Brisk.	Overcast with dense haze; rain since 2 <sup>h</sup> ; wind in gusts	44.8	23.7
17	14	17	20	S. W.	Very high.	Heavy bank of cumuli round horizon; zenith clear; rain ceased at 11 <sup>h</sup> 40 <sup>m</sup>		
17	20	18	02	S. W.	Moderate.	Overcast; cirro-cumuli and cirro-strati		
18	02	18	08	W. by S.	Brisk gale.	Densely clouded; cirro-cumuli and cirro-strati		
18	08	18	14	W. by S.	Brisk gale.	Densely clouded; cirro-cumuli, cirro-strati and haze		
18	14	18	20	W. by S.	Brisk.	¾ clouded; light cirro-cumuli passing rapidly over from N. W. and settling into cumulo-strati in S. and S. E.	28.4	18.3
18	20	19	02	W. S. W.	Light.	¾ clouded; bank of cirro-strati in S. horizon, with detached cirri below		

\* A shock of an Earthquake, severe for the country, was felt in Lower Canada on the forenoon of this day, at Quebec, at Three Rivers, at Nicolet, on the St. Francis, and elsewhere.



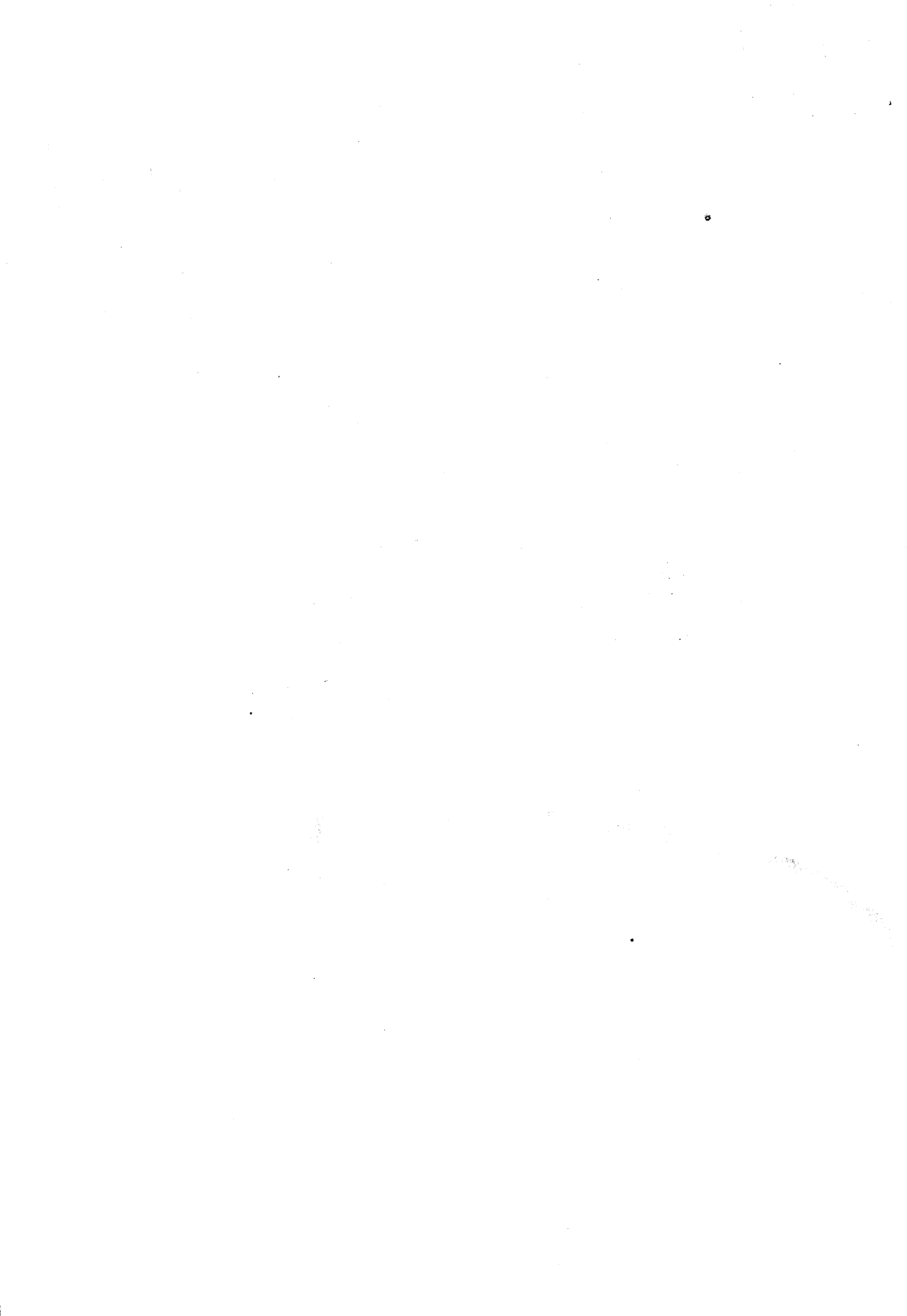
Mean Solar Time (Astronom. Reck <sup>s</sup> ).				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Rain.
Toronto.		Göttingen.		Direction.	Force.					
NOVEMBER.										
D.	H.	D.	H.							
19	02	19	08	S. W. by S.	Brisk.	¾ clouded; cirro-cumuli and haze in horizon - - - -	°	°	°	In.
19	08	19	14	W. S. W.	Moderate.	A few cirro-cumuli dispersed about - - - -	34.6	22.5	41.7	—
SUNDAY.										
20	14	20	20	W. S. W.	Light.	Banks of strati in N. and S. horizons - - - -	31.9	21.0	41.5	—
20	20	21	02	—	Calm.	Cumulo-strati in S. and cirro-cumuli in E. and N. - - - -				
21	02	21	08	S. W.	Light.	Densely clouded; cirro-cumuli and cirro-strati - - - -				
21	08	21	14	S. W.	Very light.	¾ densely clouded; cirro-cumuli and haze; clear in zenith - - - -	40.5	19.3	45.7	—
21	14	21	20	W.	Light.	Densely clouded; cirro-cumuli, cirro-strati and cumulo-strati - - - -				
21	20	22	02	—	Calm.	Lightly overcast; cirro-strati - - - -				
22	02	22	08	S. W.	Nearly calm.	Clouded; cirro-cumuli and strati; snow from 22 <sup>h</sup> to 1 <sup>h</sup> 15 <sup>m</sup> - - - -				
22	08	22	14	Southerly.	Light.	Densely overcast; very dark - - - -	34.5	25.0	36.2	—
22	14	22	20	Southerly.	Nearly calm.	Densely overcast; a few particles of snow - - - -				
22	20	23	02	S. by W.	Very light.	Slight snow since 18 <sup>h</sup> - - - -				
23	02	23	08	—	Calm.	Overcast; cirro-cumuli, cirro-strati, and haze - - - -				
23	08	23	14	—	Calm.	Densely overcast; slight snow; drizzling rain between 5 <sup>h</sup> and 7 <sup>h</sup> - - - -	37.6	31.5	49.4	0.73
23	14	23	20	S. by E.	Light.	Densely overcast; moderate snow since 13 <sup>h</sup> 30 <sup>m</sup> ; rain from 8 <sup>h</sup> to 13 <sup>h</sup> 30 <sup>m</sup> - - - -				
23	20	24	02	S. by E.	Very light.	Densely overcast; mixed snow and rain since 14 <sup>h</sup> , ceased at 21 <sup>h</sup> - - - -				
24	02	24	08	N. W. by W.	Moderate.	Clear, except a low range of clouds in S. - - - -				
24	08	24	14	N. W. by W.	Very light.	Clear; haze round horizon - - - -	35.2	20.6	45.5	—
24	14	24	20	—	Calm.	Clouded; cirro-cumuli and haze, a few clear spaces - - - -				
24	20	25	02	S. S. W.	Fresh.	Densely overcast; slight snow - - - -				
25	02	25	08	S. S. W.	Fresh.	Densely clouded; cumulo-strati, cirro-cumuli, and haze - - - -				
25	08	25	14	S. W.	Light.	Nearly overcast; cumulo-strati - - - -	32.8	17.8	45.0	—
25	14	25	20	S. W. by W.	Moderate.	Overcast; cirro-strati and light haze; a few stars visible; wind in gusts - - - -				
25	20	26	02	S. W.	Light.	Partially clouded; light cirro-cumuli - - - -				
26	02	26	08	S. W.	Light.	Overcast; cirri and haze, very dense in horizon; slight snow. Temperature of soil 3 feet deep, 42°·8; 6 feet deep, 47°·4; surface water of the lake at 4 <sup>h</sup> 30 <sup>m</sup> , 34°·4 - - - -	30.9	17.9	36.5	—
26	08	27	14	S. W.	Light.	Densely overcast; snow ceased at 7 <sup>h</sup> - - - -				
SUNDAY.										
27	14	27	20	—	Calm.	Heavy bank of clouds in S. and S. W.; remainder clear - - - -	24.9	8.1	38.5	—
27	20	28	02	—	Calm.	Partially clouded; scattered cirri and cirro-strati in S. - - - -				
28	02	28	08	W.	Light.	Partially clouded; cirri and cumuli - - - -				
28	08	28	14	W.	Very light.	Overcast in N. and N. E. with light cirri - - - -	27.7	12.9	39.2	—
28	14	28	20	—	Calm.	Overcast round horizon; cirro-strati and haze - - - -				
28	20	29	02	W. by S.	Light.	Strati and haze round horizon - - - -				
29	02	29	08	N.	Nearly calm.	Hazy; strati and light cirro-strati round horizon - - - -				
29	08	29	14	Westerly.	Light.	¾ clouded; cirro-strati and cirro-cumuli - - - -	28.5	14.7	50.5	—
29	14	29	20	E.	Brisk.	Densely clouded; cirri and cirro-cumuli; squally - - - -				
29	20	30	02	E. by S.	High.	Densely overcast; cirro-cumuli; squally - - - -				
30	02	30	08	E. by S.	Moderate.	Heavy snow and drift since 22 <sup>h</sup> - - - -				
30	08	30	14	S. E. by E.	Light.	Densely overcast with haze; slight or moderate snow since 2 <sup>h</sup> - - - -	29.6	20.4	38.0	— <sup>a</sup>
30	14	30	20	E.	Nearly calm.	Slight snow since 8 <sup>h</sup> - - - -				
30	20	1	02	N.	Very light.	Partially clouded; snow ceased at 19 <sup>h</sup> - - - -				
DECEMBER.										
1	02	1	08	N. by W.	Light.	¾ clouded; cirro-cumuli and cumulo-strati; very dense in S. horizon; wind [in gusts] - - - -	29.2	23.1	40.7	—
1	08	1	14	N. W.	Light.	Densely clouded - - - -				
1	14	1	20	N. W.	Light.	Overcast; dense haze - - - -				
1	20	2	02	—	Calm.	Overcast with haze - - - -				
2	02	2	08	S. by W.	Light.	Densely clouded; strati and haze - - - -				
2	08	2	14	Southerly.	Light.	Densely clouded - - - -	39.2	26.2	38.0	—
2	14	2	20	S. W.	Light.	Overcast with dense haze - - - -				
2	20	3	02	—	Calm.	Overcast; hazy - - - -				
3	02	3	08	W. by S.	Light.	¾ clouded; scattered cirri and cirro-cumuli - - - -	40.5	21.9	52.2	—
3	08	3	14	—	Calm.	Light cirro-strati and haze round horizon - - - -				
SUNDAY.										
4	14	4	20	—	Calm.	Overcast with dense haze - - - -	39.0	29.0	58.7	—
4	20	5	02	S.	Very light.	Overcast; cirro-strati round horizon - - - -				
5	02	5	08	N.	Light.	Overcast; strati and haze; slight snow since 1 <sup>h</sup> - - - -				
5	08	5	14	N.	Brisk.	¾ clouded in S., cleared since 7 <sup>h</sup> 30 <sup>m</sup> ; snow ceased at 5 <sup>h</sup> - - - -	36.2	4.1	40.7	—
5	14	5	20	—	Calm.	Clear; faint auroral light in N. - - - -				
5	20	6	02	—	Calm.	Partially clouded with cirri and strati in S. - - - -				

<sup>a</sup> The fall of snow is not recorded.

Mean Solar Time (Astronom <sup>l</sup> . Reck <sup>s</sup> ).				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Rain.
Toronto.		Göttingen.		Direction.	Force.					
<b>DECEMBER.</b>										
D.	H.	D.	H.							In.
6	02	6	08	Northerly.	Very light.	Partially clouded; cirri and cirro-strati; range of cumulo-strati in S.				
6	08	6	14	N. by E.	Light.	Partially overcast; cirro-cumuli and dense haze	24.3	11.3	42.3	—
6	14	6	20	N. E.	Light.	Overcast with haze				
6	20	7	02	—	Calm.	Cirro-strati and cirri generally diffused				
7	02	7	08	S. W.	Very light.	Overcast; cirro-cumuli and haze, with strati and cumulo-strati in S.				
7	08	7	14	—	Calm.	Overcast; dense haze	33.7	21.1	36.9	—
7	14	7	20	—	Calm.	Densely overcast				
7	20	8	02	—	Calm.	Densely overcast; cirro-cumuli and haze				
8	02	8	08	E.	Brisk.	Densely overcast; hail or sleet since 23 <sup>h</sup> 40 <sup>m</sup>				
8	08	8	14	E.	Fresh.	Mixed hail and rain since 2 <sup>h</sup> ; squally	36.8	30.8	—	0.44
8	14	8	20	W. by N.	Light.	Densely overcast; hail and snow ceased at 13 <sup>h</sup> 40 <sup>m</sup>				
8	20	9	02	N. E.	Very light.	Overcast; cirro-cumuli and cirro-strati in S.; slight hail				
9	02	9	08	W. by S.	Light.	Densely clouded; cirro-cumuli and cumulo-strati				
9	08	9	14	N. by W.	Light.	Densely clouded; cirro-cumuli and cumulo-strati	33.8	18.7	—	—
9	14	9	20	Northerly.	Nearly calm.	Densely clouded				
9	20	10	02	—	Calm.	Densely clouded; a few flakes of snow				
10	02	10	08	Northerly.	Very light.	Densely clouded; a few particles of snow				
10	08	10	14	Northerly.	Very light.	Densely clouded	25.1	19.9	—	—
<b>SUNDAY.</b>										
11	14	11	20	—	Calm.	Densely clouded	31.2	22.5	—	—
11	20	12	02	—	Calm.	Overcast; very thick cirro-strati in S.				
12	02	12	08	—	Calm.	Overcast; light cirro-strati and cirro-cumuli				
12	08	12	14	N. Easterly.	Very light.	Clouded; dense cumulo-strati, cirro-cumuli, and haze; a few clear spaces	37.0	26.8	—	—
12	14	12	20	E. S. E.	Light.	Overcast; cirro-strati, cirro-cumuli, and haze				
12	20 <sup>a</sup>	13	02	—	Calm.	Overcast with dense haze; slight snow since 19 <sup>h</sup> ; wind in gusts				
13	02	13	08	E. by N.	Fresh.	Densely overcast; constant moderate snow since 2 <sup>h</sup>	27.7	19.7	—	0.19
13	08	13	14	N. E.	Light.	Overcast with haze; constant light or moderate snow since 8 <sup>h</sup>				
13	14	13	20	N.	Light.	Overcast with haze; snow ceased				
13	20	14	02	—	Calm.	¾ clouded with light cirro-cumuli				
14	02	14	08	N. W.	Light.	Clouded; cirro-cumuli and cumulo-strati				
14	08	14	14	—	Calm.	Cumulo-strati in S.; cirro-cumuli closely arranged in N. W. and W.; [remainder clear	33.0	15.5	—	—
14	14	14	20	—	Calm.	Partially clouded; cirro-strati and cirro-cumuli				
14	20	15	02	—	Calm.	Densely clouded; cirro-cumuli and haze				
15	02	15	08	S. W.	Moderate.	Densely clouded; cirro-cumuli and haze				
15	08	15	14	W.	Light.	Overcast; dense haze	30.5	22.3	—	—
15	14	15	20	S. W.	Light.	Thickly overcast; light snow				
15	20	16	02	S. W.	Light.	¾ clouded; cirro-cumuli and cumulo-strati; wind in gusts				
16	02	16	08	S. W.	Moderate.	{ Dense cumuli and strati in S.; strati in E. and S. E.; wind in gusts; at				
16	08	16	14	N. Westerly.	Moderate.	{ 3 <sup>h</sup> 50 <sup>m</sup> heavy shower of snow with brisk wind	28.7	11.6	—	—
16	14	16	20	N. Westerly.	Light.	Range of cumulo-strati round horizon, cleared rapidly after 13 <sup>h</sup> 20 <sup>m</sup>				
16	20	17	02	S. W.	Brisk.	Densely overcast; cirro-strati and haze; particles of snow; wind in gusts				
17	02	17	08	S. S. W.	Moderate.	Densely overcast; cumulo-strati, cirro-cumuli and haze				
17	08	17	14	S. W.	Light.	¾ clouded with cirro-cumuli; clear in S. W.	36.0	19.6	—	—
<b>SUNDAY.</b>										
18	14	18	20	S. W.	Light.	Densely overcast; a few flakes of snow	30.5	15.4	—	—
18	20	19	02	—	Calm.	Overcast; cirro-strati and haze				
19	02	19	08	N. W.	Very light.	Partially clouded; strati, cirro-cumuli, and cumuli-strati				
19	08	19	14	—	Calm.	Clear	39.7	11.9	—	—
19	14	19	20	—	Calm.	Clear				
19	20	20	02	N. Westerly.	Very light.	Overcast; cirro-strati and haze, with cirro-cumuli in S.				
20	02	20	08	S. W.	Light.	A few light cirri dispersed				
20	08	20	14	—	Calm.	Overcast; light cirro-strati and haze	35.0	19.0	—	—
20	14	20	20	S. Westerly.	Very light.	Overcast; light cirro-strati, cirri and haze; a few stars visible				
20	20	21	02	—	Calm.	Overcast; cirri and haze				
21	02	21	08	E. N. E.	Light.	Partially clouded; detached cirro-cumuli and cirro-strati				
21	08	21	14	—	Calm.	Overcast	37.3	14.7	—	—
21	14	21	20	S. W.	Light.	Clouded; cirro-cumuli and haze				
21	20	22	02	W. N. W.	Brisk.	¾ clouded round horizon; cirro-cumuli and cirro-strati				
22	02	22	08	W.	Brisk.	¾ clouded; heavy detached cirro-cumuli and cumulo-strati; squally				
22	08	22	14	Westerly.	Brisk.	{ Thick round horizon. Temp. of soil, 3 ft. deep, 37°·5; 6 ft. deep, 41°·0; surface water of the lake at 4 <sup>h</sup> , 33°·0	17.7	4.1	—	—
22	14	22	20	N. W.	Light.	Overcast with haze; slight snow from 10 <sup>h</sup> 40 <sup>m</sup> to 14 <sup>h</sup> 30 <sup>m</sup>				
22	20	23	02	—	Calm.	Overcast with haze; lunar halo at 16 <sup>h</sup> and 17 <sup>h</sup>				

<sup>a</sup> Observation omitted.

Mean Solar Time (Astronom <sup>l</sup> . Reckont.)				Wind.		Weather and Phenomena.	Max. Therm.	Min. Therm.	Solar Rad.	Rain.				
Toronto.		Göttingen.		Direction.	Force.									
<b>DECEMBER.</b>														
D.	H.	D.	H.				°	°	°	In.				
23	02	23	08	W. N. W.	Light.	§ clouded; cumulo-strati and cirro-cumuli - - - - -	19·2	8·1	—	—				
23	08	23	14	N. W.	Light.	Densely overcast - - - - -								
23	14	23	20	W. N. W.	Light.	Densely overcast; cirro-cumuli and cirro-strati - - - - -								
23	20	24	02	—	Calm.	Overcast; well-defined cirro-strati in S. - - - - -	28·4	15·4	—	—				
24	02	24	08	S.	Light.	Densely clouded; cirro-cumuli and cirro-strati - - - - -								
24	08	24	14	E. S. E.	Very light.	Cirro-strati round horizon; zenith clear - - - - -	31·2	27·1	—	—				
<b>CHRISTMAS DAY.</b>														
25	14	25	20	—	Calm.	Overcast; dense haze - - - - -								
25	20	26	02	—	Calm.	Densely overcast - - - - -								
26	02	26	08	—	Calm.	Overcast - - - - -								
26	08	26	14	—	Calm.	Overcast - - - - -								
26	14	26	20	—	Calm.	Densely overcast - - - - -								
26	20	27	02	—	Calm.	Densely overcast; cirro-cumuli and haze - - - - -								
27	02	27	08	Westerly.	Light.	Clouded; cumulo-strati and cirro-strati; a few clear spaces - - - - -								
27	08	27	14	N. W.	Very light.	Densely overcast; very dark - - - - -								
27	14	27	20	—	Calm.	Haze round horizon; clear in zenith - - - - -								
27	20	28	02	N. by E.	Very light.	Densely overcast - - - - -								
28	02	28	08	Easterly.	Light.	Densely overcast; cirro-strati and haze - - - - -								
28	08	28	14	Easterly.	Brisk.	Densely overcast; wind in gusts - - - - -								
28	14	28	20	Easterly.	Brisk.	Densely overcast; wind in gusts - - - - -								
28	20	29	02	S. E.	Brisk.	Snow since 15 <sup>h</sup> 40 <sup>m</sup> - - - - -								
29	02	29	08	S. E.	Moderate.	Densely overcast; moderate snow since the last observation hour - - - - -								
29	08	29	14	S. E.	Light.	Densely overcast; snow since 3 <sup>h</sup> , ceased at 9 <sup>h</sup> 25 <sup>m</sup> - - - - -								
29	14	29	20	Southerly.	Nearly calm.	Densely overcast; very slight rain - - - - -								
29	20	30	02	—	Calm.	Densely overcast; very light sleet since 19 <sup>h</sup> ; rain ceased at 18 <sup>h</sup> - - - - -								
30	02	30	08	N. by W.	Brisk.	Heavy snow since noon, now ceasing; squally - - - - -								
30	08	30	14	N. W.	Light.	Densely overcast; a few flakes of snow - - - - -								
30	14	30	20	N. N. W.	Fresh.	Clouded round horizon; wind in gusts - - - - -								
30	20	31	02	N. N. W.	Very light.	Dark round horizon, remainder clear - - - - -								
31	02	31	08	—	Calm.	Densely overcast; cirro-strati, cirro-cumuli, and haze; a few flakes of snow - - - - -								
31	08	31	14	Westerly.	Light.	Densely overcast; snow ceased at 7 <sup>h</sup> - - - - -								



**OBSERVATIONS OF THE MAGNETIC INCLINATION.**

1840, 1841, and 1842.

AT OR NEAR THE TEMPORARY OBSERVATORY, BATHURST STREET BARRACKS.

1840	Needle.	Poles Direct.				Poles Inverted.				Means.	Azimuth of the Vertical Circle.	Inclination.	
		Face of Needle				Face of Needle							
		Direct.		Reversed.		Direct.		Reversed.					
		a	a'	a''	a'''	b	b'	b''	b'''				
Jan. —	1	74 20.0	75 50.0	74 24.0	75 46.0	75 50.6	74 25.5	75 52.5	74 21.0	75 06.0	0 and 180	75 06.0	Mean.
—	1	77 32.7	76 06.5	77 35.5	76 05.0	76 05.2	77 39.8	76 08.7	77 34.5	76 51.0	30 and 210	75 09.8	
—	1	83 02.2	83 30.2	81 57.8	83 28.0	83 30.0	82 02.7	83 36.8	81 59.0	82 53.2	120 and 300		
Feb. 26	1	74 04.2	76 05.8	74 14.4	75 56.0	76 01.0	74 19.5	76 04.0	74 06.0	75 06.3	0 and 180	75 06.3	
Mar. 3	2	75 25.0	75 15.5	75 32.4	75 11.8	74 40.2	74 53.8	74 48.0	74 48.9	75 04.4	0 and 180	75 04.4	
—	3	77 14.5	77 37.6	77 21.0	77 32.3	76 54.2	77 03.8	76 57.3	76 56.2	77 12.1	30 and 210	75 04.4	
—	3	82 18.2	82 05.8	82 25.7	82 01.3	82 00.1	81 55.2	82 02.5	81 42.8	82 03.9	120 and 300		
Apr. 13	1	74 19.0	76 02.0	74 11.0	75 58.0	75 50.0	74 17.0	75 59.0	74 22.0	75 07.0	0 and 180	75 07.0	75° 06' .9
—	14	73 58.2	76 04.3	74 39.0	75 50.0	76 10.3	73 51.7	76 20.8	74 15.8	75 08.8	0 and 180	75 08.8	
May 14	2	75 21.0	75 29.8	75 19.9	75 26.1	74 53.5	74 53.2	74 52.0	75 06.0	75 10.2	0 and 180	75 10.2	
June 16	1	75 23.5	75 23.5	75 05.8	75 35.0	75 06.0	74 41.2	74 43.1	75 00.0	75 07.3	0 and 180	75 07.3	
—	2	74 05.5	76 00.0	73 53.1	76 10.0	76 45.4	73 40.3	76 35.0	73 54.0	75 08.0	0 and 180	75 08.0	
July 11	1	74 04.2	76 04.7	76 15.8	73 53.5	76 35.2	73 42.5	76 24.0	73 57.5	75 07.1	0 and 180	75 07.1	
Aug. 7	2	75 35.0	75 19.0	75 26.2	75 28.9	74 54.5	74 48.0	74 47.0	75 27.0	75 13.3	0 and 180	75 13.3	

AT THE PERMANENT OBSERVATORY.

Sept. 16	1	74 07.5	76 16.3	73 53.5	76 30.4	77 05.2	73 39.4	76 58.0	73 54.5	75 18.1	0 and 180	75 18.1	}
—	2	75 44.5	75 19.5	75 30.7	75 32.6	75 10.0	74 44.7	74 54.4	75 00.0	75 14.5	0 and 180	75 14.5	
Oct. 16	2	75 43.4	75 22.0	75 24.5	75 28.0	75 09.4	74 48.5	75 02.5	74 56.0	75 14.3	0 and 180	75 14.3	
Nov. 25	1	74 33.2	75 55.8	73 20.0	77 12.5	77 25.0	73 12.5	76 16.8	74 24.4	75 17.5	59° 30' and 239° 30'	75 13.3	}
—	1	89 15.0	88 48.6	88 02.5	88 11.2	88 05.0	87 41.2	88 57.5	89 01.7	88 30.3	149° 30' and 329° 30'		
—	1	76 26.2	77 26.7	75 09.5	78 55.0	79 20.0	75 03.1	78 08.5	76 20.0	77 06.1	29° 30' and 309° 30'	75 22.0	}
—	1	83 08.7	81 45.0	84 37.5	83 00.0	80 29.5	84 45.0	81 33.0	83 30.0	82 51.1	119° 30' and 299° 30'		
—	1	77 47.5	76 27.5	78 59.5	75 12.5	75 10.0	79 21.3	76 16.4	78 09.6	77 10.5	89° 30' and 269° 30'	75 15.3	}
—	1	81 45.3	83 01.7	80 33.7	84 20.0	84 42.5	80 16.7	83 32.5	81 37.2	82 28.7	179° 30' and 359° 30'		
1841													
Jan. 22	2	74 13.3	76 03.1	72 52.7	77 26.7	77 36.0	73 15.3	76 17.7	74 30.0	75 16.6	0 and 180	75 16.6	
—	2	76 03.7	75 09.0	75 10.3	76 06.7	75 28.3	74 22.0	74 26.7	75 19.0	75 15.7	0 and 180	75 15.7	
Feb. 4	1	77 01.0	73 10.0	76 00.0	74 11.0	74 32.0	76 15.0	73 30.0	77 10.0	75 13.6	0 and 180	75 13.6	
Mar. 19	1	74 34.5	76 06.0	72 28.0	77 48.1	77 45.0	73 00.2	76 25.0	74 20.0	75 18.3	0 and 180	75 18.3	
—	24	74 01.6	76 11.6	72 54.2	77 30.1	78 19.1	72 32.1	76 46.1	73 57.0	75 16.5	0 and 180	75 16.5	
—	31	74 03.1	76 10.7	72 46.6	77 29.6	78 05.0	72 43.2	76 37.5	74 09.6	75 15.3	0 and 180	75 15.3	



Observations of Inclination made on Tuesdays and Fridays, about four hours before and four hours after Noon. The place of observation was at the N. E. corner of the Observatory Enclosure, and the same Needle, No. 1, was used throughout.

Toronto Time.	Poles Direct.								Poles Inverted.								Means.	Inclination.		Monthly Means.
	Face of Needle								Face of Needle									A. M.	P. M.	
	Direct.				Reversed.				Direct.				Reversed.							
	a	a'	a''	a'''	b	b'	b''	b'''	b	b'	b''	b'''	b	b'	b''	b'''				
1841																				
D. H.																				
2 4	72 15.8	77 13.3	71 26.2	78 08.5	79 01.4	72 39.2	78 25.0	73 19.0	75 18.5											
5 20	72 02.5	77 19.2	71 18.3	78 08.7	79 37.5	72 22.5	78 53.3	73 06.2	75 21.0											
9 4	73 18.4	77 00.6	72 49.7	77 44.2	78 16.1	72 35.7	77 34.0	73 16.4	75 19.3											
12 20	72 40.9	77 37.4	71 54.2	78 36.6	77 47.4	72 56.5	77 05.0	73 29.6	75 15.9											
16 4	72 52.0	77 30.0	72 04.5	78 30.9	78 02.6	72 44.4	77 17.7	73 18.6	75 17.5	75 18.7	75 19.1	75 18.9								
19 20	72 36.0	77 37.1	71 49.9	78 45.1	78 20.9	72 29.1	77 36.2	73 02.6	75 17.1											
23 4	72 21.7	78 05.6	71 35.6	79 05.9	78 03.1	72 47.9	77 34.9	73 05.9	75 20.0											
26 20	72 11.4	78 03.2	71 44.5	79 02.2	78 08.4	72 54.9	77 28.2	73 13.0	75 20.7											
30 4	72 44.4	77 36.2	72 06.0	78 35.6	78 34.2	72 20.8	77 43.4	73 01.9	75 20.3											
October.																				
2 20	72 36.2	77 46.5	71 52.1	78 52.5	78 48.7	72 07.2	77 53.9	72 47.5	75 20.5											
6 4	72 49.7	77 32.1	72 05.4	78 27.9	79 14.0	71 50.7	78 20.1	72 26.4	75 20.8											
9 20	72 42.1	77 47.2	71 50.4	78 49.4	78 26.4	72 14.7	77 32.0	72 50.7	75 16.6											
13 4	72 18.2	78 07.1	71 24.5	79 20.4	78 36.1	72 25.5	77 20.0	72 52.1	75 17.9											
16 20	72 42.7	77 34.2	71 50.6	78 52.6	77 26.3	73 00.9	76 50.1	73 32.1	75 13.6	75 17.3	75 18.5	75 17.9								
20 4	72 55.9	77 30.6	72 08.1	78 20.9	77 56.9	72 46.4	77 26.2	73 14.2	75 17.4											
23 20	72 22.2	78 08.5	71 49.5	78 49.5	77 47.8	72 55.0	77 03.4	73 32.9	75 18.6											
27 4	72 22.5	78 06.5	71 32.5	79 04.7	78 47.5	72 01.8	78 01.2	72 27.9	75 18.0											
30 20 <sup>a</sup>	72 08.7	78 30.4	71 17.5	79 38.7	79 00.8	71 45.6	78 20.0	72 23.1	75 23.1											
November.																				
4 4	72 57.9	77 38.1	72 15.0	78 26.0	78 25.2	72 14.4	77 45.7	72 53.6	75 19.4											
8 20	72 37.9	77 49.9	71 50.4	78 49.1	78 39.5	72 02.5	77 52.4	72 36.5	75 17.2											
11 4	72 43.9	77 43.0	71 57.2	78 45.5	78 09.7	72 27.4	77 25.8	73 04.7	75 17.1											
14 20	72 20.7	78 12.2	71 18.7	79 24.3	78 23.8	72 15.7	77 40.5	72 49.5	75 18.2	75 21.0	75 18.8	75 19.9								
18 4	72 32.2	77 53.2	72 05.9	78 46.2	78 43.0	72 10.1	77 50.4	72 43.1	75 20.5											
21 20	71 58.8	78 58.9	71 38.2	79 13.4	79 12.0	71 44.5	78 26.9	72 11.8	75 25.5											
29 4	72 55.0	77 35.4	72 15.2	78 31.2	78 14.1	72 28.7	77 22.5	73 05.0	75 18.4											
December.																				
1842																				
1 4	72 45.7	77 40.4	72 00.6	78 39.0	77 57.9	72 43.0	77 18.0	73 15.9	75 17.5											
4 20	73 14.7	77 13.7	72 42.2	77 54.7	77 58.1	72 46.7	77 05.2	73 06.2	75 15.1											
8 4	72 35.2	78 15.6	71 48.9	79 32.0	78 12.0	72 09.5	77 18.4	72 35.5	75 18.3											
11 20	72 43.0	78 05.5	71 55.7	79 11.9	77 56.5	72 18.1	77 09.9	72 53.2	75 16.7											
15 4	72 54.8	77 59.5	72 40.4	78 44.0	77 35.0	72 52.0	77 00.1	73 06.8	75 21.6	75 19.7	75 16.5	75 17.9								
18 20	72 29.0	78 27.9	71 52.8	79 38.5	78 01.1	72 14.9	77 28.0	73 01.0	75 24.1											
22 4	71 40.8	78 30.6	70 50.9	79 46.9	78 44.7	71 37.5	77 57.5	72 06.5	75 09.4											
25 20	72 35.0	78 21.7	71 55.0	79 44.2	77 47.2	72 34.2	77 01.2	73 05.0	75 22.9											
29 4	73 09.9	77 37.6	72 28.5	78 34.2	77 46.7	72 27.6	76 58.7	73 04.7	75 15.9											
January.																				
1 20	73 29.0	77 06.7	72 53.0	77 54.2	77 57.6	72 20.5	76 57.5	73 07.0	75 13.2											
5 4	73 52.4	76 48.7	73 08.6	77 56.1	78 04.0	72 14.1	77 10.1	73 00.4	75 16.7											
8 20	73 47.1	76 59.5	73 11.5	77 33.6	79 15.9	71 16.5	78 18.6	71 46.6	75 16.2											
12 4	73 39.2	77 14.6	72 52.5	77 55.1	78 57.8	71 39.5	78 02.0	72 02.7	75 17.9	75 15.1	75 17.1	75 16.1								
15 20	73 33.1	77 00.6	72 52.1	78 13.4	79 19.7	71 15.7	78 25.6	71 44.1	75 18.0											
19 4	73 13.4	77 21.7	72 36.2	78 36.1	77 55.0	72 25.6	77 07.5	73 05.0	75 17.5											
22 20	73 28.7	77 10.0	72 55.0	78 08.7	79 37.5	70 36.2	78 55.0	70 51.9	75 12.8											
26 4	73 44.5	76 57.7	73 10.2	77 58.4	77 42.9	72 32.5	76 48.5	73 16.0	75 16.3											
February.																				
1 20	73 33.1	77 08.6	73 01.4	78 05.2	77 53.9	72 16.2	76 51.4	73 09.5	75 14.9											
5 4	73 31.6	77 15.6	72 52.7	78 18.7	77 30.6	72 41.4	76 41.2	73 29.4	75 17.6											
8 20	73 32.6	77 10.5	72 58.1	78 11.0	77 36.2	72 34.7	76 46.0	73 24.7	75 16.7											
12 4	73 41.6	77 13.2	72 58.5	78 13.4	79 05.1	71 10.7	78 20.7	70 58.1	75 12.6											
15 20	72 33.7	79 30.1	71 20.9	80 55.9	78 45.7	71 42.9	77 52.1	71 49.7	75 33.8	75 20.6	75 14.7	75 18.0								
19 4	73 48.1	76 57.5	73 04.4	77 48.2	77 22.5	72 51.7	76 45.0	73 31.9	75 16.1											
22 20	72 47.2	77 55.0	72 08.8	79 13.5	77 55.8	72 22.5	77 05.8	73 00.0	75 17.5											
26 4	73 35.2	77 07.1	72 50.2	78 07.6	77 11.5	72 54.6	76 25.5	73 35.5	75 12.5											
29 20	72 44.4	77 37.1	72 05.2	78 36.6	78 33.6	72 21.0	77 42.1	73 01.5	75 20.1											
March.																				

<sup>a</sup> This observation is included in the December means.



Observations of Inclination made on Tuesdays and Fridays, about four hours before and four hours after Noon. The place of observation was at the N. E. corner of the Observatory Enclosure, and the same Needle, No. 1, was used throughout.

Toronto Time.	Poles Direct.				Poles Inverted.				Means.	Inclination.		Monthly Means.											
	Face of Needle				Face of Needle					A. M.	P. M.												
	Direct.		Reversed.		Direct.		Reversed.																
	a	a'	a''	a'''	b	b'	b''	b'''															
1842																							
	D.	H.	o	'	o	'	o	'	o	'	o	'											
April.	2	4	73	18.9	77	39.4	72	41.9	78	37.5	77	34.5	72	40.0	77	10.0	73	19.1	75	22.6	75 21.7	75 17.6	75 19.0
	5	20	72	15.5	79	10.0	71	30.6	80	29.4	77	36.2	72	38.1	77	08.1	73	10.0	75	29.6			
	9	4	73	25.0	77	23.1	72	45.0	78	31.2	77	38.7	72	29.4	76	46.4	73	15.8	75	16.8			
	14	20	72	43.3	78	12.5	71	57.5	79	35.6	77	35.0	72	42.5	76	47.5	73	20.6	75	21.8			
	16	4	74	10.0	76	19.2	73	55.5	76	45.2	77	39.7	72	59.1	76	29.0	74	16.5	75	19.3			
	19	20	73	54.0	76	33.9	73	15.2	77	17.6	76	44.0	73	35.5	75	56.4	74	25.7	75	12.8			
	23	4	74	24.7	76	24.2	73	23.9	77	07.8	76	34.2	73	50.1	76	26.5	74	05.4	75	17.0			
26	20	73	13.1	77	23.6	72	36.4	78	37.5	77	57.0	72	25.9	77	08.0	73	06.7	75	18.5				
30	4	74	21.0	76	11.7	73	47.6	76	39.1	77	01.9	73	30.4	76	05.0	74	03.9	75	12.5				
May.	3	20	72	14.4	77	43.1	73	34.4	77	41.6	76	57.5	73	47.5	77	09.7	73	23.5	75	18.9	75 18.3	75 15.7	75 17.0
	7	4	73	15.7	77	02.5	74	19.4	76	10.0	77	21.7	73	20.0	77	35.6	72	50.0	75	14.3			
	10	20	73	05.0	77	10.8	74	23.1	76	10.0	77	02.5	73	41.2	77	16.2	73	02.5	75	13.9			
	14	4	76	12.5	74	28.2	76	49.1	73	31.9	77	41.1	73	44.7	77	01.4	73	29.5	75	22.3			
	17	20	73	48.4	76	36.0	74	29.2	76	01.1	77	19.0	74	32.6	76	39.6	73	23.6	75	21.2			
	21	4	73	00.7	77	14.7	74	12.2	76	26.6	76	21.5	74	20.2	76	22.4	73	50.5	75	13.5			
	24	20	72	16.5	77	43.5	73	34.1	77	43.2	76	53.1	73	48.4	77	10.2	73	25.3	75	19.2			
28	4	73	50.6	76	30.0	74	30.6	76	00.6	76	43.7	73	55.9	77	08.7	73	01.9	75	12.7				
31	20 <sup>c</sup>	72	36.2	77	21.9	74	03.7	77	03.7	77	19.7	73	12.2	77	36.6	72	46.2	75	15.0				
June.	4	4	73	21.2	77	05.0	74	27.5	76	16.5	77	11.2	73	05.6	77	28.7	72	34.4	75	11.1	75 13.1	75 09.9	75 11.7
	7	20	73	21.9	76	55.0	74	25.0	76	16.2	76	26.9	74	05.0	76	25.8	73	53.7	75	13.6			
	10	4	73	21.2	76	55.2	74	26.0	76	11.9	76	13.5	74	14.2	76	18.5	73	59.5	75	12.5			
	14	20	73	26.9	76	56.2	74	30.2	76	07.1	73	12.5	76	32.6	73	59.7	76	25.9	75	08.9			
	18	4	69	05.0	78	48.0	73	04.0	77	49.9	77	46.4	73	00.1	78	26.7	72	02.2	75	00.2			
	21	20	67	42.4	82	42.9	72	24.9	77	42.1	77	33.5	73	09.6	78	10.7	72	24.7	75	13.8			
	25	4	66	53.7	84	00.0	70	41.6	79	25.2	77	06.9	73	35.6	78	05.0	72	19.7	75	15.9			
28	20	66	08.7	83	07.5	71	50.6	78	44.4	77	47.5	73	22.5	78	47.5	72	03.7	75	14.0				
July. <sup>a</sup>	2	4	67	29.4	82	55.8	72	20.0	78	10.0	77	37.4	73	07.5	78	12.5	72	13.1	75	15.7	75 14.7	75 17.1	75 16.1
	5	20	61	25.0	88	30.0	70	16.2	80	58.1	78	00.8	73	25.8	78	15.8	72	31.5	75	25.4			
	9	4	64	11.5	90	20.5	71	08.4	78	10.0	77	53.0	72	51.0	78	18.1	72	04.6	75	37.1			
	12	20	69	31.5	80	37.9	72	45.9	77	44.7	78	06.7	72	59.7	78	46.0	71	44.0	75	17.0			
	16	4	64	24.8	81	40.1	70	04.5	79	53.5	77	40.6	73	53.1	79	21.9	72	36.7	74	56.9			
	19	20	65	24.0	90	06.2	69	55.0	79	46.9	76	47.8	73	24.5	78	05.2	72	25.4	75	44.2			
	23	4	67	46.9	80	52.5	72	35.6	78	53.1	78	13.1	73	01.2	78	23.1	72	35.6	75	17.6			
26	20	67	39.4	80	50.0	71	56.9	78	24.4	78	11.9	73	13.1	79	08.1	72	14.4	75	12.3				
30	4	65	56.2	83	37.5	71	31.9	79	30.0	77	23.3	73	31.9	78	14.4	72	38.7	75	18.0				
August.	2	20	66	10.0	88	33.1	71	39.4	78	30.0	77	58.1	73	21.2	78	23.7	72	29.2	75	53.0	75 17.1	75 15.5	75 16.3
	6	4	73	12.0	76	59.2	74	20.0	76	06.2	76	29.2	74	05.0	76	46.5	73	54.7	75	14.0			
	9	20	66	35.2	83	54.2	71	38.6	78	30.5	77	16.0	73	36.9	77	42.7	73	16.6	75	18.8			
	13	4	73	09.1	76	56.7	74	29.4	75	54.1	76	24.5	74	07.5	76	41.5	73	56.1	75	12.3			
	16	20	73	32.6	77	11.2	72	57.6	78	10.4	77	36.6	72	35.4	76	45.7	73	27.7	75	17.1			
	20	4	73	43.7	77	11.9	72	00.6	78	06.2	76	56.2	73	43.1	77	23.7	73	40.6	75	20.7			
	23	20	71	45.4	77	51.9	74	00.6	76	30.6	77	30.6	73	28.1	77	50.0	73	15.6	75	17.2			
27	4	71	47.5	77	46.2	73	25.0	76	44.0	77	13.1	73	51.5	77	29.4	73	42.5	75	14.9				
30	20	72	52.5	77	05.0	74	05.6	76	15.0	76	47.1	74	00.0	77	10.0	73	46.9	75	15.2				
September.	3	4	72	52.5	77	05.0	73	59.2	76	20.7	76	37.6	74	04.1	76	49.7	73	59.6	75	13.5	75 15.7	75 14.1	75 14.9
	6 <sup>b</sup>	20	72	49.4	77	07.6	74	01.6	76	20.2	77	13.0	73	47.1	77	32.2	73	39.1	75	18.7			
	10	4	73	30.4	76	35.4	74	26.1	76	00.2	76	30.7	74	01.1	76	42.5	73	55.6	75	12.7			
	13	20	73	28.6	76	36.7	74	22.7	76	00.4	76	35.4	74	10.2	76	42.4	74	01.5	75	14.7			
	17	4	73	25.6	76	30.6	74	23.5	76	10.6	76	42.5	74	03.7	76	54.4	73	54.4	75	15.6			
	20	20	73	25.6	76	45.0	74	10.4	76	04.4	76	32.5	74	09.7	76	49.4	74	11.9	75	16.1			
	24	4	73	23.2	76	42.5	74	15.6	76	04.0	76	39.4	74	03.7	77	02.5	73	45.6	75	14.5			
27	20	73	19.4	76	37.5	74	13.7	76	07.5	76	44.4	73	57.5	77	00.0	73	46.9	75	13.3				

<sup>a</sup> At this period a new method of magnetising was adopted in which the observers were previously unpractised. The discordance of the results in the different positions of the needle is probably to be ascribed to this cause. The Inclinations observed on July 5, 9, 16, 19, and August 2, which exhibit this discordance in a high degree, have been omitted in the means.

<sup>b</sup> New and more powerful magnets were employed from this date in magnetising the needle.

<sup>c</sup> This observation is included in the June means.

Observations of Inclination made on Tuesdays and Fridays, about four hours before and four hours after Noon. The place of observation was at the N. E. corner of the Observatory Enclosure, and the same Needle, No. 1, was used throughout.

Toronto Time.		Poles Direct.				Poles Inverted.				Means.	Inclination.		Monthly Means.
		Face of Needle				Face of Needle					A. M.	P. M.	
		Direct.		Reversed.		Direct.		Reversed.					
		a	a'	a''	a'''	b	b'	b''	b'''				
1842													
October.	D. H.	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	° /	
	1 4	73 22.1	76 41.4	74 14.2	76 04.1	76 21.9	74 14.1	76 32.9	74 04.7	75 11.9			
	4 20	73 37.5	76 23.1	74 31.2	76 02.5	76 56.9	73 43.1	77 45.0	73 13.7	75 16.7			
	8 4	73 17.5	76 34.4	74 16.2	76 13.7	77 05.6	74 00.6	77 13.1	73 40.6	75 17.7			
	11 20	73 18.1	76 46.9	74 10.0	76 06.9	76 50.0	74 00.0	76 57.9	73 47.5	75 14.6			
	15 4	73 15.0	76 43.3	74 10.0	76 07.5	76 53.1	74 07.5	77 06.2	73 45.6	75 16.0	75 16.7	75 15.6	
	18 20	73 13.7	76 50.0	74 15.0	76 10.0	76 53.7	74 04.4	77 03.7	73 53.1	75 17.9			
	22 4	73 20.7	76 40.0	74 13.1	76 05.0	76 50.6	74 07.5	77 04.2	73 57.1	75 17.2			
25 20	73 15.0	76 52.5	74 05.6	76 20.0	76 50.0	74 03.1	76 59.4	73 55.0	75 17.6				
29 4	73 24.5	76 39.5	74 17.3	76 03.8	76 37.0	74 08.5	76 47.0	74 02.9	75 15.0				
November.	1 20	73 24.7	76 37.8	74 12.4	76 05.7	76 41.3	74 06.0	76 50.9	73 59.2	75 14.7			
	5 4	73 21.8	76 45.3	74 14.0	75 59.6	76 50.5	74 08.5	77 14.0	74 00.4	75 19.2			
	8 20	73 08.5	76 40.0	74 09.8	76 10.8	77 09.8	73 51.0	77 26.0	73 39.5	75 16.9			
	12 4	73 13.0	76 46.4	74 17.8	76 07.0	76 52.6	74 09.9	77 21.0	74 11.0	75 22.3			
	15 20	73 15.6	76 52.7	74 16.4	76 03.2	76 52.3	74 06.8	77 10.6	73 41.8	75 17.4	75 16.4	75 18.3	
	19 4	73 06.4	76 54.0	74 18.0	76 13.2	77 03.0	74 01.5	77 15.5	73 36.0	75 18.4			
	22 20	72 52.5	77 08.0	74 00.5	76 23.5	77 14.0	73 51.0	77 17.0	73 46.5	75 19.1			
	26 4	73 41.8	76 24.4	74 14.4	76 05.3	76 20.7	74 16.9	76 28.9	74 14.8	75 13.4			
29 20	73 45.2	76 20.9	74 20.0	75 58.2	76 27.1	74 18.3	76 32.8	74 09.7	75 14.0				
December.	3 4	73 53.2	76 12.1	74 31.8	75 48.8	76 12.0	74 35.8	76 21.1	74 19.0	75 14.2			
	6 20	73 54.2	76 12.2	74 33.0	75 49.9	76 16.8	74 32.5	76 29.0	74 16.8	75 15.5			
	10 4	74 09.8	76 15.6	74 37.6	76 02.7	76 19.8	74 21.9	76 23.3	74 07.4	75 17.2			
	13 20	73 56.0	76 17.4	74 32.5	76 04.0	76 17.5	74 41.2	76 49.7	74 07.8	75 20.7			
	17 4	74 14.0	76 18.0	74 27.5	76 01.0	76 20.0	74 13.7	76 23.2	74 10.0	75 15.9	75 16.5	75 15.8	
	20 20	74 03.5	76 24.0	74 25.2	76 02.5	76 17.7	74 20.0	76 22.0	74 12.5	75 15.9			
	24 4	73 50.5	76 11.7	74 52.2	75 57.8	76 19.1	74 20.9	76 26.2	74 14.0	75 16.5			
27 20	73 47.6	76 08.9	74 18.7	76 02.8	76 26.9	74 23.0	76 31.0	74 12.3	75 13.9				
31 4	73 44.8	76 15.1	74 17.9	75 52.0	76 26.3	74 29.5	76 37.3	74 19.7	75 15.3				

NOTE.—In the record of the Observations of Inclinations received from the Observatory, the columns referring to the "Face of the needle direct," and "Face of the needle reversed," have apparently been transposed from May to December, 1842. The record, however, has not been altered, the transposition having no influence on the results.

**PERIODICAL OBSERVATIONS OF METEORS.**

**1840, 1841, and 1842.**

Date.	Period of Observation Mean Toronto Time.		Quarter, or General Direction.	Number of			Number Visible about			Number Falling			Total Number.	Number leaving trains of light.	Remarks.
				1st Mag.	2nd Mag.	3rd Mag.	// 1·0	// 0·5	// 0·25	Verti- cally.	Diag- onally.	Hori- zonally.			
1840 July.	23	11 0 to 11 30	S. W.	— <sup>a</sup>	—	1	—	1	—	—	—	—	1	—	Clear.
	—	12 25 ,, 13 30	S. E.	—	1	3	1	2	1	1	3	—	4	1	{ Clear; the train of light left by one of the meteors visible during about 0''·25.
	24	10 30 ,, 11 30	N. W. to S.	1	2	2	—	2	3	—	—	—	5	1	{ Clear; train visible 0''·5.
	—	12 40 ,, 13 50	{ N. N. W. to S.	1	5	6	1	8	3	5	5	—	12	—	{ Clear; the course of the meteors falling diagonally, generally westerly.
	27	9 0 ,, 9 40	{ S. E. to S. W.	—	2	2	—	—	4	—	—	—	4	—	{ Clouded round horizon; zenith clear; overcast after 10 <sup>h</sup>
	—	About 12 0	W. to S. W.	1	1	1	—	1	2	1	1	1	3	1	{ Clouded; clearing in W.; a brilliant train left by the meteor of 1st magnitude, visible 0''·5.
August.	30	10 45 to 11 45	S. to N. W.	1	—	4	1	—	4	4	1	—	5	1	{ Haze round horizon; clouds rising in N. W.; overcast after midnight; the meteor with train very brilliant, the train emitting sparks, visible 2''·0.
	4	9 0 ,, 9 50	S. to N. W.	1	1	5	1	2	4	3	4	—	7	1	{ Unclouded; general course of the diagonals to S. W.; the train visible 1''·5.
	—	10 20 ,, 11 30	S. to N. W.	2	5	4	3	5	3	4	6	1	11	2	{ Clouds rising in S. W.; overcast at midnight; trains visible 2''·0 and 3''·0; general course westerly.
	—	14 45 ,, 15 30	W. to S. E.	3	7	7	1	6	10	8	7	2	17	2	{ Course of two of the diagonals easterly; remainder westerly; trains of light very brilliant, leaving a greenish tinge, visible about 5''·0 and 3''·0.
	5	10 15 ,, 11 30	S. E. and E.	—	2	—	—	—	2	—	—	—	2	—	{ Clouding over.
	6	14 45 ,, 15 30	{ N. W. to S. E.	2	9	9	1	5	14	16	4	—	20	2	{ Partially clouded; meteors radiating generally from a point E. or E. N. E. of zenith.
	8	8 45 ,, 9 45	N. W.	2	1	3	—	2	3	—	6	—	6	2	{ Clear; course of diagonals westerly; radiating point E. of Polaris.
	9	12 45 ,, 13 45	—	16	9	5	8	15	7	—	—	—	30	16	{ Clear; moon nearly at the full; set at 13 <sup>h</sup> 40 <sup>m</sup> ; the different trains visible about 2''·5, 2''·0, 1''·5, 1''·0, and 0''·25; two very brilliant, emitting sparks, and one at 13 <sup>h</sup> 41 <sup>m</sup> throwing out a strong light; radiating point about 10° E. of zenith.
	12	9 30 ,, 10 30	N. W. to E.	—	1	4	—	—	—	—	—	—	5	—	{ Partially overcast with thin haze until 10 <sup>h</sup> ; from 10 <sup>h</sup> to 14 <sup>h</sup> clear; moon full and very bright; stars of less than the 2nd and 3rd magnitudes not visible.
	—	About 12 0	—	1	7	—	—	—	—	—	—	—	8	—	{ From 9 <sup>h</sup> 30 <sup>m</sup> to 10 <sup>h</sup> 30 <sup>m</sup> two observers, looking chiefly to the N., the brightness of the moon rendering it impossible that any could be seen in its neighbourhood. From 10 <sup>h</sup> 30 <sup>m</sup> to 12 <sup>h</sup> three observers; from 12 <sup>h</sup> to 13 <sup>h</sup> 30 <sup>m</sup> one observer; at 14 <sup>h</sup> clouded over.
	—	10 30 to 12 0	N. E.	1	2	5	—	—	—	—	—	—	8	1	{
	—	10 30 ,, 11 45	N. W.	1	3	4	2	2	2	—	—	—	8	1	{
	—	12 0 ,, 13 30	—	3	1	1	—	—	—	—	—	—	5	1	{
	13	9 0 ,, 10 0	{ N. W. to S. W.	—	3	3	—	—	—	—	—	—	6	1	{ Clear; bright moon.
—	10 30 ,, 11 30	—	—	—	—	—	—	—	—	—	—	0	—	{ Clear.	
—	14 30 ,, 15 30	N. W. to N.	—	—	—	—	—	—	—	—	—	0	—	{ Clouded; clear in N.	
14	10 30 ,, 11 30	N. W. & N.	—	—	—	—	—	—	—	—	—	0	—	{ Clear; bright moonlight.	

The observations previous to the 12th instant were taken by one observer, and in addition to the particulars entered above, the time of each observation, the direction in which the star fell, and the altitudes (upper and lower) were noted down; many stars must have been lost during the time so employed. On and after the 12th (when two or three observers were employed) the magnitudes, and the number leaving trains of light, were alone noted. Thirty meteors were seen by one observer between 12<sup>h</sup> 45<sup>m</sup> and 13<sup>h</sup> 45<sup>m</sup> of the 9th, and if the time occupied in recording particulars is considered, there appears good reason for concluding that an unusual number of meteors fell on that night. The nights of the 7th, 10th, and 11th were clouded; from the 12th to the 16th the nights were either partially clouded or so bright that none but the larger meteors could have been visible; the nights of the 17th and 18th were wholly clouded.

At 16<sup>d</sup> 12<sup>h</sup> 25<sup>m</sup> a very brilliant meteor was seen in the N. W. falling vertically from near  $\alpha$  Ursæ Majoris to the horizon, leaving a train of light, and emitting sparks, some of which were larger than stars of the 1st magnitude, its time of flight was about 4''·0. The train remained visible about 5'' after the disappearance of the meteor.

<sup>a</sup> The magnitudes of the meteors were estimated according to the following rule:—1st class to include meteors larger than stars of the 1st magnitude; the 2nd those equal to stars of the 1st and 2nd magnitudes; the 3rd those equal to stars of the 3rd or lower magnitudes.

Date.	Number.	Magni- tude.	Mean Solar Time of Appearance.		Direction.	Altitude.		Time of Flight.	Remarks.
			Göttingen.	Toronto.		Highest.	Lowest.		
1840 November 12	1	1	H. M. 12 30	H. M. 6 30	N.	° 43	° 27	// 0.5	Left a train of light.
	2	3	12 30	6 30	N.	30	0	.25	
	3	1	12 45	6 45	N. E.	30	—	.5	Passing horizontally to North.
	4	3	13 30	7 30	N. E.	30	—	.25	Passing horizontally to North.
	5	2	13 35	7 35	W.	20	10	.25	
	6	4	13 40	7 40	W.	20	—	.25	Passing horizontally to North.
	7	4	13 45	7 45	N.	20	0	.25	

No more meteors were seen on this night: it clouded over about midnight. The night of the 13th was clear, but there being an Aurora, accompanied by disturbance of the magnets, the observers were occupied at the magnetometers.

1841 August 9th	1	1	14 37	8 37	S. E.	70	30	.5	Movement diagonal, leaving a train of light visible for 1".
	2	1	14 43	8 43	S. W.	65	30	.5	Falling perpendicularly, left a train of light visible for 1".5.
	3	3	14 45	8 45	N.E. to S.W.	50	40	.5	Movement diagonal.
	4	3	14 56	8 56	E. to S. E.	30	25	.5	Movement diagonal.
	5	3	14 58	8 58	E.	65	50	.5	Falling perpendicularly.
	6	1	15 00	9 00	N. to S.	85	60	1.5	{ Very remarkable; larger than Jupiter, leaving a train of light visible for 2".
	7	1	15 02	9 02	N. W. to W.	65	40	1.0	Leaving a train of light visible for 1".5.
	8	3	15 03	9 03	N. W. to W.	80	65	.5	
	9	3	15 12	9 12	S.	55	40	.5	Falling perpendicularly.
	10	3	15 13	9 13	S.	60	45	.5	Falling perpendicularly.
	11	3	15 14	9 14	N. to S. W.	75	70	.5	Moving diagonally.
	12	1	15 18	9 18	N. to S. E.	70	50	1.0	Moving diagonally, leaving a train of light visible for 1".5.
	13	1	15 22	9 22	E. to S.	65	35	1.0	Moving diagonally, leaving a train of light visible for 1".5.
	14	3	15 25	9 25	S. to W.	60	45	.5	Moving diagonally.
	15	1	15 27	9 27	N. to S.	80	40	1.5	{ Falling perpendicularly, very large, leaving a train of light visible for 2".

The general direction of these meteors was Southerly, and they appeared to proceed from a belt about 20° in breadth, extending across the zenith from North to South. The observations were discontinued at 15<sup>h</sup> 30<sup>m</sup>, and resumed at 16<sup>h</sup> 30<sup>m</sup>.

1841 August 9th	1	1	16 33	10 33	N. to S. by E.	80	45	1.5	{ Very large and of an orange colour; falling perpendicularly, leaving a train of light visible for 2".
	2	1	16 43	10 43	E. to S. E.	55	45	1.0	Moving diagonally.
	3	2	16 49	10 49	S. W.	45	20	.5	Falling perpendicularly.
	4	1	16 55	10 55	S.	45	35	.5	Falling perpendicularly.
	5	1	16 59	10 59	E. to S.	70	30	1.0	Moving diagonally, leaving a train of light visible for 1".5.
	6	1	17 11	11 11	S.	65	25	1.0	Falling perpendicularly.
	7	2	17 14	11 14	S. W.	30	15	.5	Falling perpendicularly.
	8	1	17 15	11 15	S. W.	85	30	1.0	{ Large; falling perpendicularly, leaving a train of light visible for 1".5.
	9	2	17 26	11 26	S. W.	45	25	.5	Falling perpendicularly.

The moon rose at about 10<sup>h</sup> 40<sup>m</sup>, and probably rendered the meteors indistinct; about 11<sup>h</sup> P.M. the sky became partially overcast with cirro-strati, the direction of the meteors seemed more Westerly during this hour than during the one previous.

1841 August 9th	1	2	19 32	13 32	W.	90	75	.5	
	2	2	19 35	13 35	W.	85	70	.5	
	3	3	19 39	13 39	S.	50	45	.5	
	4	1	19 40	13 40	S. W.	45	40	1.0	Left a train of light visible for 1".5.
	5	3	19 45	13 45	S.	30	15	1.0	
	6	4	20 12	14 12	S. W.	45	45	.5	
	7	2	20 20	14 20	N.	75	70	1.0	
	8	2	20 24	14 24	N.	60	40	1.0	
	9	2	20 40	14 40	N. W.	80	75	.5	
	10	3	20 42	14 42	N. W.	45	35	1.0	
	11	4	21 05	15 05	S.	60	55	.5	
	12	2	21 22	15 22	S. W.	75	75	1.0	

From the 11th to the 14th November, 1841, the nights were clouded.

Date.	Time of Appearance.		Magni- tude.	Direction.	Time of Flight.	Remarks.
	Göttingen.	Toronto.				
1842 August 10th	H. M.	H. M.			"	
	19 15	13 15	3	S. W.	.5	Three meteors seen together in S. W.
	to	to	3	W.	.5	
	19 25	13 25	3	N. W.	.5	
	19 25	13 25	1	W.	2.0	Leaving a train of light.
	to	to	3	N. W.	1.5	
	19 30	13 30	3	W.	0.5	
	19 30	13 30	2	W.	1.0	
	to	to	3	S.	.5	
	19 45	13 45	3	S. W.	.5	
	20 30	14 30	2	S. W.	1.0	
	to	to	2	S. W.	1.0	
	20 40	14 40	1	N.	.5	
	20 40	14 40	3	S. W.	.5	
			1	S.	.5	
			3	W.	.5	Three meteors seen together in W.
			3	S.	.5	
	to	to	3	S.	.5	Three meteors seen together in S.
			3	S. E.	.5	
			3	N. W.	.5	
20 50	14 50	1	S. W.	2.0	Very large, leaving a train of light visible for 5".	
21 15	15 15	2	S. W.	.5	Two meteors seen together in the S. W.	
to	to	1	S. W.	2.0	Leaving a train of light.	
		3	S. W.	.5	Three meteors seen together in the S. W.	
21 20	15 20	1	W.	1.5		
Overcast with haze after 21 <sup>h</sup> 20 <sup>m</sup> . From 19 <sup>h</sup> 15 <sup>m</sup> to 19 <sup>h</sup> 45 <sup>m</sup> the meteors fell principally from zenith to S. W.; from 20 <sup>h</sup> 30 <sup>m</sup> to 21 <sup>h</sup> from zenith to S. & W.						
1842 August 11th	15 20	9 20	}	Five meteors seen, two very large, leaving trains of light.		
	to	to				
	15 50	9 50	}	Seven meteors seen; no large ones.		
	16 15	10 15				
	to	to				
	16 50	10 50	}	Three meteors seen; one large, leaving a train of light.		
	17 20	11 20				
	to	to	}	Six meteors of the 1st and 2nd magnitude. (Casually observed.)		
17 50	11 50					
18 15	12 15					
to	to					
19 0	13 0					
1842 August 11th	19 10	13 10	1	W.	.5	
	19 12	13 12	3	S. W.	.5	
	19 15	13 15	1	S. S. E.	.75	Leaving a train of light.
	19 20	13 20	3	S. E.	.5	
	19 22	13 22	2	Z.	.5	
	19 23	13 23	3	S. E.	.5	
	19 25	13 25	2	S. E.	.75	
	19 25	13 25	1	S. E.	1.0	Leaving a train of light.
	19 27	13 27	4	S. E.	.5	
	19 30	13 30	1	S. E.	.5	Two meteors seen each of 1st magnitude, leaving trains of light.
	19 32	13 32	2	S.	.5	
	19 33	13 33	3	S. E.	.5	
	19 33	13 33	2	S. W.	.5	
	19 34	13 34	1	S. E.	1.0	Leaving a train of light.
	19 35	13 35	4	S. E.	.5	
	19 36	13 36	3	S. S. E.	.5	
	19 40	13 40	4	S.	.25	
	19 44	13 44	3	S. E.	.5	
	19 45	13 45	3	S. E.	.5	
	19 45	13 45	2	S. E.	.5	
19 46	13 46	1	S. E.	1.0	Leaving a train of light.	
19 47	13 47	4	S.	.5		

Date.	Time of Appearance.		Magni- tude.	Direction.	Time of Flight.	Remarks.
	Göttingen.	Toronto.				
1842 August 11th, <i>continued.</i>	H. M.	H. M.			"	
	19 47	13 47	4	S.	.5	
	19 50	13 50	2	S. E.	.5	
	19 52	13 52	2	S. W.	.5	
	19 53	13 53	2	S. E.	.5	
	19 54	13 54	3	E.	.5	
	20 15	14 15	2	S.	.5	
	20 20	14 20	3	S. S. E.	.5	
	20 24	14 24	1	S. E.	1.0	
	20 26	14 26	3	S. W.	.5	
	20 30	14 30	3	S. S. W.	.25	
	20 34	14 34	3	S. E.	.5	
	20 37	14 37	1	S.	1.0	Leaving a train of light.
	20 45	14 45	4	S. S. E.	.5	
20 52	14 52	2	S. E.	.5		
20 54	14 54	3	S. W.	.5		

Observed generally the Southern portion of the sky ; the greatest number falling apparently in the South-East.

No meteors were seen on the night of the 12th of August.

On the 13th of August the Western portion of the sky was observed from 9<sup>h</sup> 10<sup>m</sup> to 9<sup>h</sup> 55<sup>m</sup>, Toronto time ; one meteor only was seen of the 3rd magnitude in the N. W. The southern portion of the sky was observed from 10<sup>h</sup> 15<sup>m</sup> to 10<sup>h</sup> 45<sup>m</sup>, and two meteors only were seen and these of small magnitude.

1842 August 13th	19 15	13 15	4	S.	.5	
	19 16	13 16	2	S. W.	.5	
	19 18	13 18	2 & 3	S. S. E.	.5	
	19 20	13 20	2	S.	.5	
	19 23	13 23	2	W.	.5	Leaving a train of light.
	19 28	13 28	3	S.	.5	
	19 33	13 33	4	S. S. W.	.5	
	19 36	13 36	2	S.	1.0	Leaving a train of light.
	19 38	13 38	3	W.	.5	
	19 39	13 39	3	S. W.	.5	
	19 41	13 41	3	S. W.	.5	
	19 43	13 43	2	S. E.	.5	
	20 12	14 12	3	W.	.5	Leaving a train of light.
	20 15	14 15	3	S.	.5	
	20 18	14 18	1	S. S. E.	1.5	Leaving a train of light.
	20 50	14 50	3	S. W.	.5	
20 53	14 53	3	S.	.5		
20 55	14 55	3	S. W.	.5		
20 56	14 56	2 & 3	S. & S. W.	.5		

The general direction of the meteors on this night was downwards. No meteors were observed in November 1842, the nights before and after the 13th being generally clouded.

## ERRATA.

WOOLWICH, 12th February, 1845.

The following Errata have been detected on a very careful collation with the original returns, and re-examination of the reductions, to which the sheets containing the observations have been subjected since they were printed. They were all, with two exceptions, corrected in the copy from which the Tables, in the part of the Volume entitled "Adjustments, Abstracts, and Comments," were prepared.

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- 12 Reading of Vertical Force at 14<sup>h</sup> 57<sup>m</sup> 30<sup>s</sup> for 42·6 read 41·6.  
,, ,, at 20<sup>h</sup> 17<sup>m</sup> 30<sup>s</sup> for 32·1 read 31·1.
- 14 Coefficient of Vertical Force for ·000071 read ·00071.
- 15 Temperature Coefficient of Horizontal Force for ·00026 read ·00022.
- 16 Angular Value of Declinometer Scale for 0'·732 read 0'·723.  
,, Vertical Force Coefficient for ·00009 read ·0009.
- 20 Barometer at 23<sup>d</sup> 10<sup>h</sup> for 29·275 read 29·285.
- 24 March 9th Daily Mean for 2·070 read 2·062.  
,, March 17th Daily Mean for 2·455 read 2·468.  
,, March Monthly Mean for 2·517 read 2·524.  
,, April 6th Daily Mean for 2·561 read 2·978.
- 25 June 1st Daily Mean for 2·59 read 2·592.
- 26 July Mean at 22<sup>h</sup> for 2·651 read 2·688.
- 35 The observations entered opposite to May 30<sup>d</sup> 18<sup>h</sup>, 20<sup>h</sup> and 22<sup>h</sup>, were taken on the 31st.
- 37 October Mean at 0<sup>h</sup> for 38·3 read 38·6. Monthly Mean for 42·6 read 42·3.
- 40 April 4th and 5th Daily Mean for ·162 read ·154.  
,, April Monthly Mean for ·211 read ·217.
- 42 June Mean at 2<sup>h</sup> for ·397 read ·389; Mean at 4<sup>h</sup> for ·410 read ·421.  
,, June Mean at 6<sup>h</sup> for ·437 read ·445; Mean at 8<sup>h</sup> for ·424 read ·428.
- 43 July 16th Daily Mean for 89 read 79; Mean at 2<sup>h</sup> for ·496 read ·481.
- 44 August 21st Daily Mean for ·678 read ·668.
- 45 September Mean at 12<sup>h</sup> for ·348 read ·368; Mean at 20<sup>h</sup> for ·324 read ·313.
- 46 October Mean at 0<sup>h</sup> for 93 read 90. The observations entered opposite to October 31<sup>d</sup> 18<sup>h</sup>, 20<sup>h</sup>, and 22<sup>h</sup>, were taken on the 1st November.
- 47 November 6th Daily Mean for 84 read 88; Mean at 2<sup>h</sup> for ·194 read ·184.
- 48 December 5th and 6th Daily Mean for ·089 read ·079.
- 90 March 8th Daily Mean for 106·2 read 107·1; Mean at 18<sup>h</sup> for 96·81 read 96·90.  
,, April 17th and 18th Daily Mean for 81·7 read 79·2.
- 91 March 18th Daily Mean for 43·9 read 43·5; Mean at 18<sup>h</sup> for 43·4 read 43·8.
- 92 May Mean at 22<sup>h</sup> for 79·0 read 78·0.  
,, June 4th Daily Mean for 101·1 read 101·5.  
,, June 21st Daily Mean for 93·7 read 92·8.



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- 93 May 10th Daily Mean *insert* 54°·2.  
,, May 28th Daily Mean *for* 65·8 *read* 68·3.  
,, June 2nd Daily Mean *for* 65·7 *read* 66·8.  
94 August 3rd Daily Mean *for* 100·6 *read* 99·8.  
96 September 1st Daily Mean *for* 95·8 *read* 96·6.  
,, September 21st Daily Mean *for* 87·6 *read* 86·5 ; Mean at 16<sup>h</sup> *for* 91·6 *read* 92·0.  
,, Note <sup>b</sup> after " and 26th" *insert* " and 30th."  
97 September 29th Daily Mean *for* 57·3 *read* 58·0.  
,, October 4th Daily Mean *for* 54·8 *read* 55·3.  
,, October 19th Daily Mean *for* 51·0 *read* 50·2.  
98 November 15th Daily Mean *for* 106·9 *read* 106·0.  
,, December 24th and 26th Daily Mean *for* 113·0 *read* 113·6.  
126 January 30th 4<sup>h</sup> *for* 2·569 *read* 2·596.  
127 March Monthly Mean *for* 2·656 *read* 2·658.  
,, April 24th and 25th Daily Mean *for* 2·650 *read* 2·647.  
130 September Monthly Mean *for* 2·511 *read* 2·605.  
131 December 10th Daily Mean *for* 2·005 *read* 2·088.  
132 February Mean at 18<sup>h</sup> *for* 22·6 *read* 21·8.  
134 June, Mean at 20<sup>h</sup> *for* 59·6 *read* 59·1.  
135 August 2nd Daily Mean *for* 63·1 *read* 66·4.  
137 December 8th Daily Mean *for* 39·4 *read* 38·6.  
139 March Mean at 4<sup>h</sup> *for* 27·1 *read* 27·9.  
140 May 12th Daily Mean *for* 46·0 *read* 44·3.  
,, May 20th Daily Mean *for* 48·9 *read* 47·9. Mean at 22<sup>h</sup> *for* 41·0 *read* 40·6.  
,, June 25th Daily Mean *for* 61·6 *read* 62·4.  
141 July 21st Daily Mean *for* 66·8 *read* 66·1.  
142 September 6th Daily Mean *for* 66·9 *read* 65·8. Mean at 20<sup>h</sup> *for* 54·4 *read* 54·8.  
,, October 6th Daily Mean *for* 44·6 *read* 43·8.  
143 December 7th Daily Mean *for* 26·9 *read* 28·6.  
145 February 23rd Daily Mean *for* 73 *read* 78.  
148 May 21st Daily Mean *for* ·219 *read* ·319.  
150 July 21st Daily Mean *for* ·551 *read* ·568.  
,, July 30th Daily Mean *for* ·454 *read* ·437.  
151 August Mean at 16<sup>h</sup> *for* ·443 *read* ·450.  
183 January 4th Daily Mean *for* 137·16 *read* 137·99.  
,, January 13th Daily Mean *for* 137·84 *read* 137·01.  
,, February 14th Daily Mean *for* 137·97 *read* 136·61.  
,, February Fortnightly Mean *for* 133·28 *read* 133·17.  
184 March 3rd Daily Mean *for* 131·37 *read* 133·04.  
,, March 5th and 6th Daily Mean *for* 131·92 *read* 131·83.  
,, March Fortnightly Mean *for* 132·22 *read* 132·35.  
,, April 14th Daily Mean *for* 136·00 *read* 134·37.  
,, April 21st Daily Mean *for* 129·64 *read* 129·72.  
,, April 28th Daily Mean *for* 130·71 *read* 130·78.  
,, April Fortnightly Mean *for* 132·20 *read* 132·07.

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- 184 April Mean at 18<sup>h</sup> for 134·19 read 132·44.  
 ,, April Mean at 20<sup>h</sup> for 133·72 read 134·97.  
 ,, April Mean at 22<sup>h</sup> for 136·79 read 137·97.
- 185 May 11th Daily Mean for 130·17 read 131·00.  
 ,, May 12th Daily Mean for 130·70 read 131·52.  
 ,, May Fortnightly Mean for 131·13 read 131·26.  
 ,, June 13th Daily Mean for 130·25 read 130·02.  
 ,, June Fortnightly Mean for 130·24 read 130·18.  
 ,, June Mean at 18<sup>h</sup> for 131·25 read 130·86.
- 187 July 21st Daily Mean for 132·90 read 133·31.  
 ,, July Fortnightly Mean for 132·79 read 132·83.  
 ,, August 9th Daily Mean for 132·35 read 132·25.  
 ,, August 26th Daily Mean for 131·90 read 132·32.  
 ,, August Fortnightly Means for 131·93 read 131·96.
- 191 December Mean at 18<sup>h</sup> for 128·39 read 128·36.  
 ,, December Mean at 20<sup>h</sup> for 128·20 read 128·15.  
 ,, December Mean at 21<sup>h</sup> for 128·00 read 127·70.  
 ,, December Mean at 23<sup>h</sup> for 128·53 read 128·82.
- 196 June 13th Daily Mean for 436·81 read 436·51.
- 284 January 17th Daily Mean for 82 read 79; 3rd Daily Mean for ·096 read ·086.  
 ,, January Mean at 4<sup>h</sup> for ·132 read ·136; at 18<sup>h</sup> for ·120 read ·124.

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- lxxxix, Table XLVIII., January 1842, at 4<sup>h</sup> for ·132 read ·136; and at 18<sup>h</sup> for ·120 read ·124.  
 lxxxvi, Table LII., January 1842, at 4<sup>h</sup> for ·399 read 395; and at 18<sup>h</sup> for ·413 read ·409.

