RESULTS

OF THE

MAGNETICAL AND METEOROLOGICAL

OBSERVATIONS

MADE AT

THE ROYAL OBSERVATORY, GREENWICH,

1867.

REDUCTION

OF THE

GREENWICH MAGNETIC OBSERVATIONS,

1858 TO 1863.

(EXTRACTED FROM THE GREENWICH OBSERVATIONS, 1867.)

INDEX.

	PAGE
INTRODUCTION.	
LOCALITY *and* BUILDINGS *of the Magnetic Observatory*	*iii*
Description of the Magnetic Observatory and Magnetic Basement	*iii and iv*
Positions of the Instruments, and Fittings of the Room	*iv and v*
Variation of Temperature in the Magnetic Basement	*v*
Position of the Electrometers and of the Pole supporting the Conducting Wires	*v*
Apparatus for Naphthalizing the Gas	*v*
Range of Seven Rooms, called Magnetic Offices	*v*
Position and Description of the Photographic Thermometer Shed	*v*
UPPER DECLINATION MAGNET, *and Apparatus for observing it*	*vi*
Theodolite	*vi*
Stand, Double Box, Suspension and Dimensions of the Declination Magnet	*vi*
Silk Fibre and Steel Wire used for suspending the Magnet	*vi and vii*
Collimator on the Magnet	*vii*
Copper Damper, its Construction, and Effect upon the Oscillations of the Magnet	*vii*
New Water-Damper	*vii*
Inequality of the Pivots of the Theodolite Telescope	*vii*
Value of One Revolution of the Micrometer Screw of the Theodolite Telescope	*viii*
Determination of the Micrometer Reading for the Line of Collimation of the Theodolite Telescope	*viii*
Determination of the Effect of the Mean Time Clock on the Declination Magnet	*viii*
Determination of the Compound Effects of the Vertical Force Magnet and Horizontal Force Magnet on the Declination Magnet	*viii*
Determination of the Error of Collimation for the Plane Glass in front of the Boxes of the Declination Magnet	*viii*
Determination of the Error of Collimation of the Magnet Collimator with reference to the Magnetic Axis of the Magnet	*viii and ix*
Effect of the Damper on the Position of the Magnet	*ix and x*
Calculation of the Constant used in the Reduction of the Observations of the Upper Declination Magnet	*x*
Determination of the Time of Vibration of the Declination Magnet under the Action of Terrestrial Magnetism	*x*
Fraction expressing the Proportion of the Torsion Force to the Earth's Magnetic Force	*x*
Determination of the Readings of the Horizontal Circle of the Theodolite corresponding to the Astronomical Meridian	*x*
Correction for the Error of Level of the Axis of the Theodolite	*x*
Formula and Tabular Numbers used in Computation of the Correction to Azimuth for the Hour-angle of the Star observed	*xi*
Days of Observations for determining the Readings corresponding to the Astronomical Meridian	*xii*
Check on the continued Steadiness of the Theodolite	*xii*
Method of Making and Reducing the Observations for Magnetic Declination	*xii*

INDEX.

PAGE

INTRODUCTION—*continued.*

GENERAL PRINCIPLE OF PHOTOGRAPHIC SELF-REGISTERING APPARATUS FOR CONTINUOUS RECORD OF MAGNETIC AND OTHER INDICATIONS . . . . *xiii*

Photographic Paper on Revolving Cylinder of Glass or Ebonite . . . . *xiii*

Concave Mirror carried by the Magnet . . . . *xiv*

Astigmatism of the Reflected Pencil of Light, and Use of Cylindrical Lens . . . . *xiv*

Image of a Spot of Light formed on the Cylinder . . . . *xiv*

Photographic Line of Abscissæ, or Base-Line . . . . *xiv*

Adjustment of the Time-Scale . . . . *xiv and xv*

LOWER DECLINATION MAGNET; AND PHOTOGRAPHIC SELF-REGISTERING APPARATUS FOR CONTINUOUS RECORD OF MAGNETIC DECLINATION . . . . *xv*

Dimensions and Suspension of Lower Declination Magnet . . . . *xv*

Position of the Photographic Cylinder . . . . *xv*

Dimensions and Position of the Concave Mirror; its Distance from the Light-Aperture and from the Cylinder . . . . *xvi*

Zero and Measure of the Ordinates of the Photographic Curve . . . . *xvi*

New Base Line . . . . *xvi*

HORIZONTAL FORCE MAGNET, *and Apparatus for observing it* . . . . *xvi*

Dimensions of the Horizontal Force Magnet . . . . *xvi*

Brick Pier, and Upper Suspension Pulleys . . . . *xvi*

Description of the Carrier of the Horizontal Force Magnet . . . . *xvi and xvii*

Plane Mirror and Fixed Telescope for Eye-Observation . . . . *xvii*

Silk Suspension and Double Box of the Horizontal Force Magnet . . . . *xvii*

Heights above Floor of Brass Pulleys of Suspension Piece; of Pulleys of Magnet Carrier; and of Center of Plane Mirror . . . . *xvii*

Distances between the Branches of the Silk Shein at the Upper and Lower Pulleys . . *xvii*

Oval Copper Damping Bar . . . . *xvii*

Position of the Scale and the Telescope for observing the Horizontal Force Magnet . *xvii and xviii*

Observation of the Times of Vibration and of the different Readings of the Scale for Different Readings of the Torsion-Circle, and determination of the Reading of the Torsion-Circle and the Time of Vibration when the Magnet is Transverse to the Magnetic Meridian . . . . *xviii and xix*

Computation of the Angle corresponding to One Division of the Scale, and of the Variation of the Horizontal Force (in Terms of the whole Horizontal Force) which moves the Magnet through a Space corresponding to One Division of the Scale . . *xx*

Determination of the Compound Effect of the Vertical Force Magnet and the Declination Magnet on the Horizontal Force Magnet, when suspended with its marked End towards the West . . . . *xx*

Effect of the Damper when changed in Angular Position . . . . *xx*

Effect of the Damper in modifying Deflections produced by exterior Causes . . . . *xxi*

Determination of the Correction for the Effect of Temperature on the Horizontal Force Magnet . . . . *xxi*

Principle adopted for this Determination in 1846 *and* 1847 . . . . *xxi*

Formula for the Temperature Correction . . . . *xxi*

Hot-air Experiments for the Temperature-coefficient made in 1864 . . . . *xxi and xxii*

Experiments for determining the Temperature-coefficient under the actual Circumstances of Observation, made in 1867 *and* 1868 . . . . *xxii*

Method of Making the ordinary Eye-Observations . . . . *xxii*

Times of Thermometric Observation for Horizontal Force Temperature . . . . . *xxii*

PHOTOGRAPHIC SELF-REGISTERING APPARATUS FOR CONTINUOUS RECORD OF MAGNETIC HORIZONTAL FORCE . . . . *xxii*

Concave Mirror, its Diameter and Distance from Lamp-aperture and Cylinder . . ***xxii and xxiii***

INDEX.

	PAGE
INTRODUCTION—*continued.*	
Part of the Cylinder upon which the Spot of Light for the Horizontal Force Register falls	*xxiii*
Determination of the Time-Scale	*xxiii*
Calculation of the Scale of Horizontal Force on the Photographic Sheet	*xxiii*
VERTICAL FORCE MAGNET, *and Apparatus for observing it*	*xxiii*
Dimensions, Supports, Carrier, and Knife-edge	*xxiii and xxiv*
Plane Mirror and Fixed Telescope for Eye-Observation	*xxiv*
Position of the Concave Mirror for Photographic Registration	*xxiv*
Description of adjustible Screw-weights attached to the Magnet	*xxiv*
Rectangular Box, Telescope, and Scale of the Vertical Force Magnet	*xxiv*
Determination of he Compound Effect of the Declination Magnet, the Horizontal Force Magnet, and the Iron affixed to the Electrometer Pole, on the Vertical Force Magnet	*xxv*
Determination of the Times of Vibration of the Vertical Force Magnet in the Vertical Plane and in the Horizontal Plane	*xxv*
Computation of the Angle through which the Magnet moves for a Change of One Division of the Scale; and Calculation of the Disturbing Force producing a Movement through One Division, in Terms of the whole Vertical Force	*xxv and xxvi*
Investigation of the Temperature Correction of the Vertical Force Magnet	*xxvi*
Method of making the ordinary Eye-Observations	*xxvi*
Times of Thermometric Observation for Vertical Force Temperature	*xxvi*
PHOTOGRAPHIC SELF-REGISTERING APPARATUS FOR CONTINUOUS RECORD OF MAGNETIC VERTICAL FORCE	*xxvii*
Diameter of Concave Mirror, and Distance from Light-aperture and from Cylinder	*xxvii*
Position of Cylindrical Lens	*xxvii*
Support of the Revolving Cylinder	*xxvii*
Reference to the Register of the Barometer	*xxvii*
Pencil of Light for Instrumental Base-line Register	*xxvii*
Method of computing the Scale for the Ordinates of the Photographic Curve of the Vertical Force	*xxvii*
DIPPING NEEDLES, *and Method of observing the Magnetic Dip*	*xxvii*
Description of the Peculiarities of Airy's Instrument	*xxvii to xxix*
Illuminating Apparatus, Needles, and Zenith Point Needle	*xxix and xxx*
Occasional Examinations of the Dip-Instrument and Needles	*xxxi*
OBSERVATIONS FOR THE ABSOLUTE MEASURE OF THE HORIZONTAL FORCE OF TERRESTRIAL MAGNETISM	*xxxi*
Description of the Unifilar Instrument, similar to those used in the Kew Observatory	*xxxi*
Description of the Deflected and Deflecting Magnets	*xxxi*
Explanation of Method of Reduction	*xxxi and xxxii*
Correction of the Magnetic Power for Temperature	*xxxii*
Moment of Inertia of the Magnet as mounted	*xxxii*
Difference between Results of Old and New Instruments	*xxxii*
Conversion of Results into French Measure	*xxxii*
EXPLANATION OF THE TABLES OF INDICATIONS OF THE MAGNETOMETERS	*xxxii*
Indications, whence derived	*xxxii*
Number of Telescope-observations of the Magnetometers daily	*xxxiii*
Method of translating the Photographic Curve-ordinates into Numbers	*xxxiii*
Indications for Horizontal Force and Vertical Force not corrected for Temperature	*xxxiii*
Difficulty occasionally experienced in measuring the Ordinates of the Vertical Force Curves on account of Dislocation of the Curve	*xxxiii*

INDEX.

PAGE

INTRODUCTION—*continued.*

WIRES AND PHOTOGRAPHIC SELF-REGISTERING APPARATUS FOR CONTINUOUS RECORD OF SPONTANEOUS TERRESTRIAL GALVANIC CURRENTS . . . . *xxxiii*

Lengths and Earth-Connexions of the Terrestrial Current Wires . . . . . *xxxiii and xxxiv*

Galvanometer Needles acted on by the Galvanic Currents . . . . *xxxiv*

Plane Mirrors, Gas-lamp, Pencils of Light, Cylindrical Lenses, and Photographic Cylinder for Registration of Galvanic Currents . . . . *xxxiv*

Method of obtaining a Portion of a Base-line . . . . *xxxiv*

Date of Commencement of Photographic Records . . . . *xxxiv*

Method used in a Discussion of the Photographic Records for Seventeen Days, and Computation of the Equivalent Galvanic Currents in the West and North Directions *xxxiv and xxxv*

Correspondence between the apparent Magnetic Disturbances in West and North Directions, deduced from the Galvanic Currents, with those indicated by the Magnetometers . . . . *xxxv*

Values of the Ordinate Scales of the Dartford and Croydon Curves . . . . *xxxv*

STANDARD BAROMETER . . . . *xxxv*

Position and Description of the Standard Barometer . . . . *xxxv*

Diameter of Tube, Correction for Capillarity . . . . *xxxv*

Its Adjustment to Verticality . . . . *xxxv*

Readings as compared with Royal Society's Flint Glass Standard Barometer . . . *xxxv*

Removal of the Sliding Rod to remedy a Defect in the Slow-motion Screw . . . . *xxxv*

Comparisons of the Standard Barometer with three Auxiliary Barometers, before and after Change . . . . *xxxv*

Correction required to Readings of Barometer in its new state . . . . *xxxvi*

Reduction of the Readings to the temperature 32° Fahrenheit . . . . *xxxvi*

Height of the Cistern above the Level of the Sea . . . . *xxxvi*

Hours of Observation . . . . *xxxvi*

Formation of Mean Daily Readings . . . . *xxxvi*

Definition of the Day in printed Meteorological Records . . . . *xxxvi*

PHOTOGRAPHIC SELF-REGISTERING APPARATUS FOR CONTINUOUS RECORD OF THE READINGS OF THE BAROMETER . . . . *xxxvi*

Position, and Diameter of Bore of Syphon Barometer used for Photographic Self-Registration . . . . *xxxvi*

Description of the Method adopted for Registering the Barometric Variations . . . . *xxxvi*

Dates when this Barometer first came into use, and when the Mercury was boiled in the Tube . . . . *xxxvii*

THERMOMETERS FOR ORDINARY OBSERVATION OF THE TEMPERATURES OF THE AIR AND OF EVAPORATION . . . . *xxxvii*

Description of the Revolving Stand upon which the Thermometers are mounted . . . *xxxvii*

Attachment of the Thermometers to the Stand . . . . *xxxvii*

Comparison of Thermometers with Standard Thermometer . . . . *xxxvii*

Authenticity of Standard Thermometer, whence derived . . . . *xxxvii*

Table of Corrections required to the Dry-Bulb Thermometer . . . . *xxxviii*

" " *Wet-Bulb Thermometer* . . . . *xxxviii*

Dry-Bulb and Wet-Bulb Thermometers on Roof of Library . . . . *xxxviii*

Times of Eye-Readings of the Dry-Bulb and Wet-Bulb Thermometers . . . . . . *xxxviii*

Method adopted for obtaining the Temperature of the Dew-Point . . . . *xxxviii*

Investigation for Formation of Factors for deducing the Dew-Point Temperature, where published . . . . *xxxix*

Table of Factors to facilitate the Deduction of the Dew-Point Temperature from Observations of the Dry-Bulb and Wet-Bulb Thermometers . . . . *xxxix*

PAGE

INTRODUCTION—*continued.*

Description of the Maximum Self-registering Thermometer, and Corrections . . . *xxxix and xl*
Similar Thermometer for the Maximum Wet-Bulb Reading . . . . *xl*
Description of the Minimum Self-registering Thermometers ; their Corrections . . . *xl*
Method of obtaining the adopted Mean Daily Temperature and Mean Daily Value of Dew-Point . . . . *xl and xli*

PHOTOGRAPHIC SELF-REGISTERING APPARATUS FOR CONTINUOUS RECORD OF THE READINGS OF THE DRY-BULB AND WET-BULB THERMOMETERS . . . . *xli*
Position of the Self-registering Apparatus . . . . *xli*
Dimensions of the Bulbs of the Thermometers . . . . *xli*
Method of raising and depressing the Thermometers . . . . *xli*
Thermometer Frames, and System of Wires placed on them . . . . *xlii*
Position of Lamps and Lenses . . . . *xlii*
Revolution of Cylinder covered with Paper, and Photographic Trace . . . . . . *xlii*
Time of Revolution, and Dimensions, of the Photographic Cylinder . . . . . . *xlii*

THERMOMETERS FOR SOLAR RADIATION AND RADIATION TO THE SKY . . . . . . *xlii*
Position and Description of the Thermometer for Solar Radiation . . . . *xlii*
Times of Observation . . . . *xlii*
Position and Description of the Thermometer for Radiation to the Sky . . . . . *xlii*
Times of Observation . . . . *xlii*
Days on which the Thermometer for Radiation to the Sky was out of order . . . . *xlii*

THERMOMETERS SUNK BELOW THE SURFACE OF THE SOIL AT DIFFERENT DEPTHS . . *xliii*
Number and Situation of the Thermometers ; Nature of the Soil . . . . *xliii*
Shape and Size of the Bulbs and Tubes of the Thermometers . . . . *xliii*
Depth in the Ground to which each Thermometer has been sunk . . . . *xliii*
Method of Sinking the Thermometers, and Height of the Upper Part of the Tube of each above the Surface of the Ground . . . . *xliii*
Wooden Case for covering the Thermometers . . . . *xliii*
Fluid of the Four Long Thermometers . . . . *xliii*
Values of 1° *on the different Scales of the Thermometers* . . . . *xliii*
Ranges of the Scales of the Thermometers . . . . *xliii*
Ranges on some of the Thermometers found to be insufficient . . . . *xliii and xliv*
Removal of Fluid from Two of the Thermometers ; too much Fluid removed . . . . *xliv*
Limits of the Scales of the 6*-foot and* 3*-foot Thermometers* . . . . *xliv*
Portions of the Series of Observations, defective . . . . *xliv*
Time of Observation of the several Thermometers . . . . *xliv*

THERMOMETERS IMMERSED IN THE WATER OF THE THAMES . . . . *xliv*
Time of making the Observations, and Position of the Thermometers . . . . . . *xliv*
Observations, by whom made . . . . *xliv*
Days on which these Thermometers were out of Order . . . . *xliv*
Index-error Corrections to the Thames Thermometers . . . . *xliv*

OSLER'S ANEMOMETER . . . . *xliv*
,, *its Vane and Direction Pencil* . . . . *xlv*
,, *Method of giving Motion to the Travelling Board* . . . . . . *xlv*
,, *its Registering Paper* . . . . *xlv*
,, *its Adjustment for Azimuth* . . . . *xlv*
,, *its Pressure Apparatus introduced in* 1866, *and reference to Engraving* *xlv*
,, *Anti-Friction Rollers to the Vane-Shaft* . . . . *xlv*
,, *Description of the Springs of the Pressure Apparatus* . . . . *xlv and xlvi*
,, *Radial-Bar carrying the Pressure Pencil* . . . . *xlvi*

INDEX.

PAGE

INTRODUCTION—*continued.*

OSLER'S ANEMOMETER, *Adjustment to Zero of the Pressure Pencil* xlvi
,, *Area of the Presure Plate* xlvi
,, *Scale of Pressure-Indications on Recording Sheet* xlvi
,, *Its Rain-gauge* xlvi
,, *Hour of changing the Registering Paper* xlvi

ROBINSON'S ANEMOMETER xlvi
,, *its Principles, where described* xlvi
,, *New Self-recording Instrument mounted, and Reference to Engraving* xlvi
,, *Distance of Centers of Hemispherical Cups from Axis of Rotation* xlvi
,, *Rack and Pinion upon the Axis of One of the Motive Wheels* . . xlvi
,, *Connection of the Rack with a Sliding Rod, and Sliding Pencil Carrier* xlvi
,, *Record of Indications, how made* xlvi
,, *Time of Revolution of Recording Barrel* xlvi
,, *Amount of Upward Motion of the Recording Pencil corresponding to a Motion of the Air of* 100 *Miles* xlvii
,, *Curve traced upon the Barrel* xlvii
,, *Experiments to verify the Correctness of its Theory, and Results of Experimental Observations* xlvii

RAIN-GAUGES xlvii
,, *No.* 1, *Osler's, Situation of, and Heights above the Ground and above Mean Level of the Sea* xlvii
,, *Area of exposed Surface* xlvii
,, *Syphon Principle of Discharging the Water* xlvii
,, *Method of Recording its Results* xlviii
,, *Formation of Scale for Determining the Quantity of Rain* xlviii
,, *No.* 2, *Situation of, and Area of exposed Surface* xlviii
,, *Position with regard to No.* 1 xlviii
,, *No.* 3, *Situation of, and Heights above the Ground and above the Mean Level of the Sea* xlviii
,, *Area of exposed Surface and General Description* xlviii
,, *Arrangement to prevent Evaporation* xlviii
,, *No.* 4, *Situation of, Area of exposed Surface, and Heights above the Ground and above Mean Level of the Sea* xlviii
,, *No.* 5, *Situation of, and Heights above the Ground and above the Mean Level of the Sea* xlviii
,, *No.* 6, *Crosley's, Area of exposed Surface* xlviii
,, *Description of its Mode of Action* . . . . xlviii and xlix
,, *Method of Recording its Observations* xlix
,, *Situation of, and Height above Mean Level of the Sea* xlix
,, *Nos.* 7 *and* 8, *Situation of, Heights of Receiving Surfaces above the Ground and above the Mean Level of the Sea* xlix
,, *Times at which the Gauges are read* xlix
,, *List of the Makers of the several Gauges* xlix

ELECTRICAL APPARATUS xlix
,, *Electrometer Mast and Moveable Apparatus* . . . . xlix and l
,, *Wire from the Moveable Box to the Turret of the Octagon Room* .
,, *Insulation of both Ends of the Wire* l

INDEX.

	PAGE
INTRODUCTION—*continued.*	
ELECTRICAL APPARATUS, *Communication from this Wire to the Apparatus within the Room*	*l*
" *Insulation of the Attachment within the Room*	*l*
" *Electrometers, Volta's, Henley's, Ronalds' Spark-Measurer, Dry Pile Apparatus, Galvanometer*	*l to lii*
EXPLANATION OF THE TABLES OF METEOROLOGICAL OBSERVATIONS	*lii*
Mean, Greatest, and Least Differences between Temperatures of the Air and Dew-Point Temperatures, how obtained	*lii*
Differences between Mean Daily Temperatures and Average Temperatures, how found .	*lii*
Explanation of Results from Osler's and Robinson's Anemometers	*lii*
Register of Rain, whence derived	*lii*
Explanation of the Divisions of Time under the Heads of Electricity and Weather . .	*lii*
Explanation of Notation employed for Record of Electrical Observations	*liii*
Explanation of Notation for the Description of Clouds and Weather	*liii and liv*
Foot-Notes, whence derived	*liv*
OBSERVATIONS OF LUMINOUS METEORS	*liv*
Arrangements for Observations	*liv*
Special Nights for Observation as laid down by the British Association Committee . .	*liv*
Special Arrangements in August and November	*liv*
Observers in the Year 1867	*liv*
DETAILS OF THE CHEMICAL OPERATIONS FOR THE PHOTOGRAPHIC RECORDS	*liv*
CHEMICAL PREPARATION AND TREATMENT OF THE PHOTOGRAPHIC PAPER FOR PRIMARIES .	*lv*
Description of the Paper employed	*lv*
First Operation.—Preliminary Preparation of the Paper	*lv*
Chemical Solutions, how prepared	*lv*
Preparation of the Paper	*lv*
Second Operation.—Rendering the Paper sensitive to the Action of Light	*lv*
Chemical Solution, how prepared	*lv*
Preparation of the Paper	*lv*
Third Operation.—Development of the Photographic Trace	*lvi*
Fourth Operation.—Fixing the Photographic Trace	*lvi*
CHEMICAL PREPARATION AND TREATMENT OF THE PHOTOGRAPHIC PAPER FOR SECONDARIES	*lvi*
Method of Darkening the Back of the Primary Curve	*lvi*
Description of the Paper employed for Secondaries	*lvi*
First Operation.—Preliminary Preparation of the Paper	*lvii*
Chemical Solution, how prepared, and Preparation of the Paper	*lvii*
Second Operation.—Rendering the Paper sensitive to the Action of Light	*lvii*
Preparation of the Chemical Solution, and of the Paper	*lvii*
Third Operation.—Formation of the Photographic Copy	*lvii*
Fourth Operation.—Fixing the Photographic Secondary	*lviii*
Brief Notice of the Process for obtaining a Tertiary from a Secondary	*lviii*
PERSONAL ESTABLISHMENT	*lviii*
RESULTS OF MAGNETICAL AND METEOROLOGICAL OBSERVATIONS IN TABULAR ARRANGEMENT :—	
INDICATIONS OF THE MAGNETOMETERS	(iii)
Tables of the Values of the Magnetic Declination, Horizontal Force, and Vertical Force, at numerous times on every day, as inferred from the Measures of the Ordinates of the Photographic Curves ; including also frequent Readings of the Thermometers of the Horizontal Force and Vertical Force Magnets	(iv)

INDEX.

PAGE

RESULTS OF MAGNETICAL AND METEOROLOGICAL OBSERVATIONS—*continued.*

Table of the Approximate Mean Monthly Western Declination . . . . (cxxxiv)

INDICATIONS OF THE GALVANOMETERS MEASURING SPONTANEOUS GALVANIC CURRENTS ON SEVENTEEN DAYS IN THE YEARS 1865, 1866, 1867 . . . . (cxxxv)

Tables of Measures of Ordinates of the Croydon and Dartford Curves . . . . . . (cxxxvi)

RESULTS OF OBSERVATIONS OF THE MAGNETIC DIP . . . . (clv)

Dips observed . . . . (clvi)

Monthly Means of Magnetic Dips . . . . (clvii)

Yearly Means of Magnetic Dips, and General Mean . . . . (clviii)

OBSERVATIONS OF DEFLEXION OF A MAGNET FOR ABSOLUTE MEASURE OF HORIZONTAL FORCE . . . . (clix)

Abstract of Observations of Deflexion of a Magnet for Absolute Measure of Horizontal Force . . . . (clx)

Computation of the Values of Absolute Measure of Horizontal Force . . . . . . (clxi)

RESULTS OF METEOROLOGICAL OBSERVATIONS . . . . (clxiii)

Results of daily Meteorological Observations . . . . (clxiv)

Maxima and Minima Readings of the Barometer . . . . (clxxxviii)

Absolute Maxima and Minima Readings of the Barometer for each Month . . . . . (cxc)

Monthly Means of Results for Meteorological Elements . . . . (cxci)

Readings of Thermometers sunk in the Ground . . . . (cxcii)

Weekly Means of Readings of Deep-sunk Thermometers . . . . (cxcvii)

Abstract of the Changes of the Direction of the Wind, as derived from Osler's Anemometer (cxcviii)

Amount of Rain collected in each Month by the different Rain Gauges . . . . . . (cc)

Observations of Luminous Meteors . . . . (cci)

REDUCTION, WITH REFERENCE TO THE POSITIONS OF THE SUN AND MOON, OF THE MAGNETIC OBSERVATIONS FROM 1858 TO 1863 (EXCLUDING THE DAYS OF GREAT MAGNETIC DISTURBANCE) . . . . (ccix)

METHODS OF INTERPRETING THE PHOTOGRAPHIC REGISTERS . . . . (ccxi)

Description of the Photographic Self-registering Apparatus; where found . . . . (ccxi)

List of Days rejected as Days of Great Magnetic Disturbance . . . . (ccxi)

Curve drawn by Hand for the Suppression of the Irregularities of the Photographic Curve . . . . (ccxi) *and* (ccxii)

Measurement of Ordinates, and Determination of Daily and Hourly Means . . . . (ccxii)

REDUCTIONS REFERRED TO THE SUN'S PLACE :—

Remarks on the Reduction of the Observations of Magnetic Western Declination, referred to the Sun's Place . . . . (ccxii) *and* (ccxiii)

Remarks on the Reduction of the Observations of Magnetic Horizontal Force, referred to the Sun's Place. . . . . (ccxiii) *to* (ccxvi)

Remarks on the Combination of the Diurnal Inequalities of Declination and of Horizontal Force . . . . (ccxvi)

Diagram explanatory of the Magnitude and Direction of the Forces acting on the North End of the Magnet at Greenwich at different Hours of the Solar Day . . . . . (ccxvi)

Remarks on the Reduction of the Observations of Magnetic Vertical Force referred to the Sun's Place . . . . (ccxvii) *and* (ccxviii)

Remarks on the Relation of the Vertical Disturbing Force to the Disturbing Forces in the Horizontal Plane . . . . (ccxviii)

REDUCTIONS REFERRED TO THE MOON'S PLACE :—

Remarks on the Reduction of the Observations of Magnetic Western Declination, referred to the Moon's Place . . . . (ccxviii)

Remarks on the Reduction of the Observations of Magnetic Horizontal Force, referred to the Moon's Place . . . . (ccxviii) *and* (ccxix)

INDEX.

PAGE

REDUCTIONS REFERRED TO THE MOON'S PLACE—*continued.*

Remarks on the Combination of the Luno-Diurnal Inequalities in Declination and in Horizontal Force . . . . (ccxix)

Remarks on the Reduction of the Observations of Magnetic Vertical Force, referred to the Moon's Place . . . . (ccxix)

REDUCTIONS OF MAGNETIC DECLINATION REFERRED TO THE SUN'S PLACE :—

TABLE I.—Mean Westerly Declination of the Magnet on each Astronomical Day, as deduced from the Mean of Twenty-four Hourly Measures of Ordinates of the Photographic Register on that Day . . . . (ccxx)

TABLE II.—Mean Westerly Declination of the Magnet in each Month, and Mean Westerly Declination in each Year, showing the Monthly and Annual Progress of Secular Variation . . . . (ccxxii)

TABLE III.—Monthly Means of all the actual Diurnal Ranges of the Western Declination, showing the Monthly and Annual Changes of Actual Diurnal Range. . . . . . . (ccxxii)

TABLE IV.—Mean Monthly Determination of the Western Declination of the Magnet at every Hour of the Day . . . . (ccxxii)

TABLE V.—Mean, through the Range of Years, of the Monthly Mean Determinations of the Diurnal Inequality of Declination ; exhibited separately for the different Months. . (ccxxiv)

TABLE VI.—Mean, through the Range of Months, of the Monthly Mean Determinations of the Diurnal Inequality of Declination; exhibited separately for the different Years . . . . (ccxxiv)

REDUCTIONS OF MAGNETIC HORIZONTAL FORCE REFERRED TO THE SUN'S PLACE :—

TABLE VII.—Mean Horizontal Magnetic Force (diminished by a Constant of 0·8850 nearly) on each Astronomical Day, as deduced from the Mean of Twenty-four Hourly Measures of Ordinates of the Photographic Register on that Day, each corrected for Temperature . . . . (ccxxv)

TABLE VIII.—Mean Horizontal Magnetic Force (diminished by a Constant 0·8850 nearly) in each Month, and Mean Horizontal Magnetic Force in each Year, all corrected for Temperature ; showing the apparent Monthly Change of Horizontal Force in each Year . . . . (ccxxviii)

TABLE IX.—Mean Monthly Determination of the Horizontal Magnetic Force (diminished by a Constant 0·8850 nearly), corrected for Temperature, at every Hour of the Day . . . . (ccxxviii)

TABLE X.—Mean, through the Range of Years, of the Monthly Mean Determinations of the Diurnal Inequality of Horizontal Force: exhibited separately for the different Months . . . . (ccxxxi)

TABLE XI.—Mean, through the Range of Months, of the Monthly Mean Determinations of the Diurnal Inequality of Horizontal Force: exhibited separately for the different Years . . . . (ccxxxii)

REDUCTIONS OF MAGNETIC VERTICAL FORCE REFERRED TO THE SUN'S PLACE :—

TABLE XII.—Mean Vertical Magnetic Force (diminished by a Constant 0·9600 nearly) on each Astronomical Day, as deduced from the Mean of Twenty-four Hourly Measures of Ordinates of the Photographic Register on that Day ; each corrected for Temperature . . . . (ccxxxii)

TABLE XIII.—Mean Vertical Magnetic Force (diminished by a Constant 0·9600 nearly) in each Month, corrected for Temperature ; showing the apparent Monthly Change of Vertical Force . . . . (ccxxxv)

TABLE XIV.—Mean Monthly Determination of the Vertical Magnetic Force (diminished by a Constant 0·9600 nearly), corrected for Temperature, at every Hour of the Day . (ccxxxvi)

INDEX.

PAGE

REDUCTIONS OF MAGNETIC VERTICAL FORCE REFERRED TO THE SUN'S PLACE :—

TABLE XV.—Mean, through the Range of Years, of the Monthly Mean Determinations of the Diurnal Inequality of Vertical Force : exhibited separately for the different Months . . . . (ccxxxix)

TABLE XVI.—Mean, through the Range of Months, of the Monthly Mean Determinations of the Diurnal Inequality of Vertical Force: exhibited separately for the different Years . . . . (ccxxxix)

REDUCTIONS OF MAGNETIC DECLINATION REFERRED TO THE MOON'S PLACE :—

TABLE XVII.—Mean Lunation-Inequality of the Western Declination of the Magnet, exhibited separately for the different Years ; with the Mean of all the Years, corrected for the Daily Proportion of Secular Change of Western Declination . . . (ccxl)

TABLE XVIII.—Mean Lunation-Determination of the Western Declination of the Magnet at every Lunar Hour of the Lunar Day . . . . (ccxl)

TABLE XIX.—Mean, through the Range of Lunations, of the Lunation-Mean Determinations of the Luno-Diurnal Inequality of Declination ; exhibited separately for the different Years ; with the Mean of all the Years . . . . (ccxliii)

REDUCTIONS OF MAGNETIC HORIZONTAL FORCE REFERRED TO THE MOON'S PLACE :—

TABLE XX.—Mean Lunation-Inequality of the Magnetic Horizontal Force, exhibited separately for the different Years ; with the Mean for all the Years, corrected for the Daily Proportion of Secular Change of Horizontal Force . . . . (ccxliv)

TABLE XXI.—Mean Lunar-Monthly Determination of the Horizontal Magnetic Force, uncorrected for Temperature, at every Lunar Hour of the Lunar Day . . . . (ccxliv)

TABLE XXII.—Mean, through the Range of Lunations, of the Lunation-Mean Determinations of the Luno-Diurnal Inequality of Horizontal Force ; exhibited separately for the different Years, with the Mean of all the Years . . . . (ccxlvii)

REDUCTIONS OF MAGNETIC VERTICAL FORCE REFERRED TO THE MOON'S PLACE :—

TABLE XXIII.—Mean Lunation-Inequality of the Magnetic Vertical Force ; exhibited separately for the different Years ; with the Mean of all the Years . . . . . . (ccxlviii)

TABLE XXIV.—Mean Lunar-Monthly Determination of the Vertical Magnetic Force, uncorrected for Temperature, at every Lunar Hour of the Lunar Day . . . . (ccxlviii)

TABLE XXV.—Mean, through the Range of Lunations, of the Lunation-Mean Determinations of the Luno-Diurnal Inequality of Vertical Force ; exhibited separately for the different Years ; with the Mean of all the Years . . . . (ccli)

DIAGRAM EXHIBITING THE VARIATIONS OF THE BAROMETER FROM 1867, OCTOBER 26, TO DECEMBER 11, &c.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

MAGNETICAL AND METEOROLOGICAL OBSERVATIONS.

1867.

GREENWICH MAGNETICAL AND METEOROLOGICAL OBSERVATIONS, 1867.

INTRODUCTION.

§ 1. *Buildings of the Magnetic Observatory.*

In consequence of a representation by the Astronomer Royal, dated 1836, January 12, and a memorial by the Board of Visitors of the Royal Observatory, dated 1836, February 26, addressed to the Lords Commissioners of the Admiralty, an additional space of ground on the south-east side of the former boundary of the Observatory grounds was inclosed from Greenwich Park for the site of a Magnetic Observatory, in the summer of 1837, and the Magnetic Observatory was erected in the spring of 1838. Its nearest angle in its present form is about 174 feet from the nearest point of the S.E. dome, and about 30 feet from the office of Clerk of Works. It is based on concrete and built of wood, united for the most part by pegs of bamboo; no iron was admitted in its construction, or in subsequent alterations. Its form, as originally built, was that of a cross with four equal arms, very nearly in the direction of the cardinal magnetic points as they were in 1838; the length within the walls, from the extremity of one arm of the cross to the extremity of the opposite arm, was 40 feet, the breadth of each arm 12 feet. In the spring of 1862, the northern arm was extended 8 feet. The height of the walls inside is 10 feet, and the ceiling of the room is about 2 feet higher. The northern arm of the cross is separated from the central square by a partition, so as to form an ante-room. The meridional magnet, for observations of absolute declination and of variations of declination (placed in its position in 1838), is mounted in the southern arm; and the theodolite by which the magnet collimator is viewed, and by which circumpolar stars for determination of the astronomical meridian are also observed (for which observation an opening is made in the roof, with proper shutters,) is in the southern arm, near the southern boundary of the central square. The bifilar magnet, for variations of horizontal magnetic force (erected at the end of 1840) was mounted near the northern wall of the eastern arm; and the balance-magnetometer, for variations of vertical magnetic force (erected in 1841) was mounted near the northern wall of the western arm. Important changes have lately been made in the positions of these instruments, as will be mentioned below. The sidereal time-clock is in the south arm, near the south-east re-entering angle. The fire-grate (constructed of copper, as far as possible,) is near the north end of the west side of the ante-room. Some of these fixtures may contain trifling quantities of iron, and, as the ante-room is used as a computing room it is impossible to avoid the introduction of iron in small quantities; great care, however, is taken to avoid it as far as possible.

In 1864, a room, called the Magnetic Basement, was excavated below the whole of the Magnetic Observatory except the ante-room; the descent to it is by a staircase close to the south wall of the western arm of the building. For the theodolite, a brick pier was built from the ground below the floor of the basement, rising through the ceiling into the south arm of the upper room, and supporting the theodolite in exactly the same position as before.

Instead of a single meridional magnet performing the double functions of "magnet for determining absolute magnetic declination," and "magnet carrying a mirror for photographic register," there are now two meridional magnets, one in the upper room and one in the basement. The upper magnet is in a position about 10 inches north of the former position of the declination-magnet; it carries a collimator, for observation by the theodolite; but, in reversion of position of the collimator, the collimator is always either above or below the magnet, so that the magnet is always in the same vertical. The lower magnet, which is in the same vertical with the upper magnet, carries the mirror for the photographic register of the continual changes of declination. A massive brick pier is built in the south arm of the basement, covered by a stone slab; upon it is fixed the photographic lamp; from the stone slab rise three smaller piers, upon which crossed slates are placed; and from these rises a small pier through the ceiling, to the height of 18 inches above the upper floor, carrying the suspension of the lower magnet. Upon the tops of the three piers rest the feet of the original wooden stand carrying the suspension of the upper magnet.

The bifilar-magnetometer is in the basement, in a position vertically below its former position. A massive brick pier, surmounted by a thick slab of stone (upon which the photograph lamp is fixed) carries a pier consisting of a back and return-sides, which rises through the ceiling about 2 feet above the upper floor, and is crowned by a slate slab that carries the suspension of the bifilar-magnetometer.

The vertical-force magnetometer is in the basement, in a position vertically below its former position; it rests upon a brick pier, capped by a thick stone; to which also is fixed the plate of metal with narrow chink through which passes the light of the photographic lamp.

To the theodolite-pier are fixed telescopes for eye-observation of the bifilar and vertical-force magnetometers.

At the south-east re-entering angle (which has been rebated for the purpose) is the horizontal photographic cylinder, which receives the traces of the movements of the declination-magnet and the bifilar-magnet. The angle is so far cut away that the straight line joining their suspensions passes at the distance of one foot from the wall, and thus the cylinder receives the light from both instruments at right angles to its surface. The vertical cylinder which receives the traces of the movements of the vertical-force-magnet, and, of the self-registering barometer near it, is east of the vertical force pier.

In the south-west corner of the western arm, and partially beneath the staircase is the apparatus for self-registration of the spontaneous galvanic currents on the wires leading respectively to Croydon and to Dartford. (See below, § 12). After the year 1867 these wires were taken down and refixed in new directions; the self-registering apparatus, however, was not moved.

The mean-time-clock is on the west wall of the south arm of the basement.

Adjoining the north wall is the table for photographic operations. Much water is used in these operations, and therefore a pump is provided in the grounds at a distance of about 30 feet from the nearest magnetometer, by which the water is withdrawn from the cistern at the east end of the photographic table and at once discharged into a covered drain.

The basement is warmed by a gas-stove, and ventilated by a large copper tube nearly two feet in diameter, receiving the flues from the stove and all the lamps, and passing through the upper room to a revolving cowl above the roof. Each of the arms of the basement has a window facing the south, but in general the window wells are closely stopped.

The variations in the temperature of the instruments have been greatly reduced by their location within this basement.

On the outside of the Magnetic Observatory, near the north-east corner of the ante-room, a pole 79 feet in height is fixed, for the support of the conducting wires to the electrometers; the electrometers, &c., are planted in the window-seat at the north-end of the ante-room.

The apparatus for naphthalizing the gas used in the photographic registration was formerly fixed in a corner of the ante-room, but is now (1867) mounted in a small detached zinc-built room, erected in 1863, near the west side of the ante-room.

A small wooden building, in the direction S.S.E. (magnetic) from the Magnetic Observatory, 64 feet from its nearest angle, and very near the southern boundary of the grounds, was used till 1863 for the observation of Magnetic Dip; and another small building, in the direction S. (magnetic) from the Magnetic Observatory, 50 feet from the western angle of the southern arm, was used till 1862 for the observation of Deflexions. In 1863, these buildings were removed, and a range of seven rooms, usually called the Magnetic Offices, was erected near the southern fence of the grounds. Since the summer of 1863, observations of Dip and Deflexion have been made in the westernmost of these rooms.

At the distance of 28 feet south (magnetic) from the south-east angle of the southern arm is a square shed about $10^{ft}\ 6^{in}$ square, supported by four posts at the height 8 feet, with an adjustable opening at the center of the top. Under this shed are placed the large dry-bulb and wet-bulb thermometers, with a photographic cylinder, axis vertical, between them; and external to these are the gas flames, whose light passing through the thermometer-tubes above the quicksilver makes photographic traces upon the paper which covers the cylinder.

For better understanding of these descriptions, the reader is referred to the Descriptions of Buildings and Grounds with accompanying Maps, attached to the Volumes of Astronomical Observations for the years 1845 and 1862.

§ 2. *Upper Declination-Magnet and Apparatus for observing it.*

The theodolite with which the meridional magnet is observed is by Simms: the radius of its horizontal circle is 8·3 inches: it is divided to 5′, and reads to 5″, by three verniers, carried by the revolving frame of the theodolite. The fixed frame stands upon three foot-screws, which rest in brass channels let into a stone pier, that stands upon the brick pier rising from the ground of the Magnetic Basement. The revolving frame carries the Y's (with vertical adjustment at one end) for a telescope with transit-axis: the length of the axis is $10\frac{1}{2}$ inches: the length of the telescope 21 inches: the aperture of the object glass 2 inches. The Y's are not carried immediately by the T head which crosses the vertical axis of the revolving frame, but by pieces supported by the ends of that T head, and projecting horizontally from it: the use of this construction is to allow the telescope to be pointed sufficiently high to see δ Ursæ Minoris above the pole. The eye-piece of the telescope carries only one fixed horizontal wire, and one vertical wire moved by a micrometer-screw. The opening in the roof of the building permits the observation of circumpolar stars, as high as δ Ursæ Minoris above the pole, and as low as β Cephei below the pole.

For supporting the magnet, a braced wooden tripod-stand is provided, whose mounting has been described above. Upon the cross-bars of the stand rests a double rectangular box (one box completely inclosed within another), both boxes being covered with gilt paper on their exterior and interior sides. On the southern side of the principal upright piece of the stand is a moveable upright bar, turning in the vertical E. and W. plane, upon a pin in its center (which is fixed in the principal upright), and carrying at its top the pulleys for suspension of the magnet; this construction is adopted as convenient for giving an E. and W. movement (now very rarely required) to the point of suspension, by giving a motion to the lower end of the bar. The top of the upright piece carries a brass frame with two pulleys, whose axes are E. and W.: one of these pulleys projects beyond the north side of the principal upright, and from it depends the suspension skein: the other pulley projects on the south side: the suspension skein, being brought from the magnet up to the north pulley, is carried over it and over the south pulley, to a small windlass, carried by the lower part of the moveable upright. The height of the two pulleys above the floor is about 11 ft. $3\frac{3}{4}$ in., and the height of the magnet is about 2 ft. 10 in.; the length of the metal carrier which bears the magnet is 1 ft. 3 in.; so that the length of the free suspending skein is about 7 ft. $2\frac{3}{4}$ in.

The magnet was made by Meyerstein, of Göttingen: it is a bar 2 feet long, $1\frac{1}{2}$ inch broad, and about $\frac{1}{4}$ inch thick: it is of hard steel throughout. The magnet carrier was also made by Meyerstein, but it has since been altered by Simms. The magnet is inserted sideways and fixed by screws in a double square hook which constitutes the lower part of the magnet carrier. This lower part turns stiffly by a vertical axis with index in a graduated horizontal circle (usually called the torsion circle) attached to the upper part. The upper part of the magnet carrier is simply hooked into the skein.

The suspending skein was originally of silk fibre, in the state in which it is first prepared by silk manufacturers for further operations; namely, when seven or more fibres from the cocoon are united by juxtaposition only (without twist) to form a single thread. The skein was strong enough to support perhaps three times the weight of the magnet, &c.

In the summer and autumn of 1864, an attempt was made to suspend the magnet by a steel wire, capable of supporting the weight 15 lbs.; but the torsion force was found to be so large as greatly to diminish the value of the observations; and the skein was finally restored on 1865, January 20. A similar attempt was made for suspension of the lower magnet; the skein, however, was restored on 1865, January 30.

Upon the magnet there slide two brass frames, firmly fixed in their places by means of pinching-screws. One of these contains, between two plane glasses, a cross of delicate cobwebs; the other holds a lens of 13 inches focal length and nearly 2 inches aperture. This combination, therefore, serves as a collimator without a tube: the cross of cobwebs is seen very well with the theodolite-telescope, when the suspension-bar of the magnet is so adjusted as to place the object-glass of the collimator in front of the object-glass of the theodolite, their axes coinciding. The wires are illuminated by a lamp and lens in the night, and by a reflector in the day.

In the original mounting of this magnet the small vibrations were annihilated by a copper oval or "damper," thus constructed: A copper bar, about one inch square, is bent into a long oval form, intended to contain within itself the magnet (the plane of the oval curve being vertical). A lateral bend is made in the upper half of the oval, to avoid interference with the suspension-piece of the magnet. The effect of this damper was, that after every complete or double vibration of the magnet, the amplitude of the oscillation is reduced in the proportion of 5 : 2 nearly.

On mounting the photographic magnetometer in the basement, the damper was removed from its place surrounding the upper magnet, and was adjusted to encircle the photographic magnet. The upper magnet remained unchecked in its vibrations till 1866, January 23, when the lower part of its magnet-carrier was connected with a brass bar which vibrates in water.

OBSERVATIONS RELATING TO THE PERMANENT ADJUSTMENTS OF THE UPPER DECLINATION-MAGNET AND ITS THEODOLITE.

1. Determination of the inequality of the pivots of the theodolite-telescope.

1862, December 26. The theodolite was clamped, so that the transit axis was at right angles to the astronomical meridian. The illuminated end of the axis of the telescope was first placed to the East: the level was applied, and its scale was read; the level was then reversed, and its scale was again read; it was then again reversed, and again read, and so on successively six times. The illuminated end of the telescope was then placed to the West, and the level was applied and read as before. This process was repeated four times, and the result was that, when the level indicates the axis to be horizontal, the axis at the illuminated end is really too low by $0''\cdot 3$ nearly.

2. Value of one revolution of the micrometer-screw of the theodolite telescope.

On 1862, December 26, observations were made, giving for the value of one revolution of the micrometer 1′. 33″·85. On 1865, December 27, the magnet was made to rest on blocks of wood, and its collimator was used as a fixed mark at an infinite distance. The micrometer of the theodolite was placed in different positions, and the telescope of the theodolite was then turned till the micrometer wire bisected the cross. The result of ten comparisons of theodolite-readings with large values and with small values of the micrometer-reading was, that one revolution = 1′. 34″·8. This is used through the year 1867.

3. Determination of the micrometer-reading for the line of collimation of the theodolite-telescope.

1867, January 1. The vertical axis of the theodolite had been adjusted to verticality, and the transit axis was made horizontal. The declination-magnet was made to rest on blocks, and the cross-wires carried by it were used as a collimator for determining the line of collimation of the telescope of the theodolite. The telescope was reversed after each observation. The mean of 20 double observations was 100^{r}·090. This value is used throughout the year 1867.

4. Determination of the effect of the mean-time-clock on the declination-magnet.

The observations by which this has been determined are detailed in the volumes for 1840, 1841, 1844, and 1845. It appeared that it was necessary to add 9″·41 to every reading of the theodolite. The clock was removed to the basement in 1864, having now nearly the same relative position to the lower declination-magnet which formerly it had to the upper. No correction is now applied to the upper declination-magnet.

5. Determination of the compound effects of the vertical-force-magnet and the horizontal-force-magnet on the declination-magnet.

The details applying to the effect of the horizontal-force-magnet and first vertical-force-magnet will be found in the volumes for 1840, 1841, 1844, and 1845. It appeared that it was necessary to subtract 55″·22 from all readings of the theodolite. In 1848 a new vertical-force-magnet was introduced, and the subtractive quantity was then found to be 42″·2. A few experiments in 1865 seemed to show that the correction is now 36″·9. No numerical correction has been applied.

6. Determination of the error of collimation for the plane glass in front of the boxes of the declination-magnet.

1867, January 1. The magnet was made to rest entirely on blocks. The micrometer head of the telescope was to the East. The plane glass has the word "top" engraved on it, and, in ordinary use, this word is always kept east. The cross-wire carried by the collimator of the magnet was observed with the engraved word alternately east and west. The result of 20 double observations was, that in the ordinary position of the glass 16″·7 is to be added to all readings.

7. Determination of the error of collimation of the magnet-collimator, with reference to the magnetic axis of the magnet.

1867, January 1. Observations were made by placing the declination-magnet in its stirrup, with its collimator alternately above and below, and observing the collimator-wire by the theodolite-telescope; the windlass of the suspending skein being so moved that the collimator in each observation was in the line of the theodolite-telescope. Seven pairs of observations were taken. The mean half excess of reading with collimator above, (its usual position) over that with collimator below was 24'. 31"·0. This value is used in the reductions for 1867.

8. Effect of the damper.

In the volume for 1841 observations are exhibited shewing that the oval copper bar, or damper, which then surrounded what is now the upper declination-magnet, had but little or no effect. Repeated observations, of less formal character, in succeeding years, have confirmed this result. The same bar has encircled the lower declination-magnet since the year 1865. The following observations were made in the year 1865, for ascertaining the effect of the damper on the lower declination-magnet under various circumstances.

On 1865, February 8 and 10, and March 2, the time of vibration of the magnet was observed:—

Mean of times with damper in usual position	$23^{s}\cdot888$
Mean of times with damper reversed end for end......................	$24^{s}\cdot508$
Mean of times when damper was removed...........................	$23^{s}\cdot153$

These seem to indicate a repulsion of the magnet by the damper, but the magnet came to rest so rapidly that the observations are very uncertain.

On several days from 1865, April 2 to May 12, observations were made for ascertaining the deflexion of the magnet produced by turning the damper through a small angle round a vertical axis, passing through its center.

DAMPER IN USUAL POSITION.

		' "
Damper turned through 2°	N. end towards E., increase of western declination	−1. 27
	N. end towards W., „ „ „	+1. 25
Damper turned through 4°	N. end towards E., „ „ „	−2. 16
	N. end towards W., „ „ „	+3. 11
Damper turned through 6°	N. end towards E., „ „ „	−3. 10
	N. end towards W., „ „ „	+2. 55
Damper turned through 8°	N. end towards E., „ „ „	−1. 22
	N. end towards W., „ „ „	+1. 45

DAMPER REVERSED END FOR END.

Damper turned through 2°	N. end towards E., increase of western declination	+0. 12
	N. end towards W., „ „ „	+0. 20
Damper turned through 4°	N. end towards E., „ „ „	0. 0
	N. end towards W., „ „ „	+0. 26
Damper turned through 6°	N. end towards E., „ „ „	+0. 5
	N. end towards W., „ „ „	+0. 5
Damper turned through 8°	N. end towards E., „ „ „	−0. 10
	N. end towards W., „ „ „	+0. 5

The first series shews clearly that the damper in its usual position drags the magnet; the second shews no certain effect. It seems that the damper possesses two kinds of magnetism, one permanent, the other transiently induced, of nearly equal magnitude; their sum being about $\frac{1}{100}$ part of the terrestrial effect for the same deflexion.

From 1865, July 25 to August 9, observations were made to ascertain whether the effect of an external deflecting cause is the same with the damper present and the damper removed. The observation was extremely difficult, as the magnet was perpetually in vibration when the damper was removed. A small magnet on the east side of the N. end of the magnetometer, with its north end pointing towards the East (and therefore diminishing the western declination of the magnetometer), was moved to the distance (about five feet) at which it produced a deviation of 5′ nearly. The apparent western declination was observed, damper present, and damper removed. It appeared to be less with damper present than with damper removed, by 0′. 53″. The separate results are very discordant. If the conclusion has any validity, it tends to shew a repulsive power in the damper, opposite to that found in the preceding experiments. This experiment is regarded as inconclusive.

9. Calculation of the constant used in the reduction of the observations of the upper declination-magnet, the micrometer-head of the theodolite-telescope being East.

		° ′ ″
Micrometer equivalent for reading for line of collimation, 100r·090	—	2. 38. 8·5
Correction for the plane glass in front of the box, in its usual position......	+	16·7
The collimator above the magnet. Correction for error of collimation....	—	24. 31·0
Constant to be used in the reduction of the observations......................	—	3. 2. 22·8

10. Determination of the time of vibration of the upper declination-magnet under the action of terrestrial magnetism.

On 1866, September 13, it was found to be 30s·55. On September 18, it was found to be 30s·65. On 1868, January 12, it was found to be 30s·60.

11. Fraction expressing the proportion of the torsion-force to the earth's magnetic force.

By the same process which is described in the Magnetical Observations 1847, but with the silk skein now in use, the proportion was found, on 1865, January 31, $\frac{1}{214}$; on February 17, $\frac{1}{227}$; on April 27, $\frac{1}{207}$; and on December 27, $\frac{1}{230}$.

DETERMINATION OF THE READINGS OF THE HORIZONTAL CIRCLE OF THE THEODOLITE CORRESPONDING TO THE ASTRONOMICAL MERIDIAN.

The error of the level is determined by application of the spirit-level at the time of observation: due regard being paid, in the reduction, to the inequality of pivots already found. One division of the level is considered = 1″·0526. The azimuth-reading is then corrected by this quantity;

Correction = Elevation of W. end of axis × tan star's altitude.

The readings of the azimuth circle increase as the instrument is turned from N. to E., S., and W.; from which it follows that the correction must have the same sign as the elevation of the W. end.

The correction for the azimuth of the star observed has been computed independently in every observation, by a peculiar method, of which the principle is fully explained in the volumes for 1840, 1841, 1843, 1844, 1845. The formula and table used are the following:—

Let $A_{\prime\prime}$ = seconds of arc in star's azimuth,

C_s = seconds of time in star's hour-angle,

$a_{\prime\prime}$ = seconds of arc in star's N.P.D. for the day of observation,

Then $\log. A_{\prime\prime} = \log. C_s + \log. E + \log. (a_{\prime\prime} + F) + \log. \cos \varphi$.

The values of log. E, F, and log. cos φ, are given in the following table:—

TABULATED VALUES of LOG. Cos ϕ, for DIFFERENT VALUES of C_s, and of the QUANTITIES LOG. E and F, for the STARS POLARIS and δ URSÆ MINORIS.

Hour Angle.	Log. Cos ϕ for			
	Polaris.	δ Ursæ Minoris.	Polaris S.P.	δ Ursæ Min. S.P.
m 1	9·99999	9·99999	9·99999	9·99999
2	999	999	999	999
3	999	999	999	999
4	998	998	998	998
5	996	996	997	997
6	994	994	996	996
7	992	992	994	995
8	990	989	992	993
9	988	986	990	991
10	985	983	988	989
11	981	979	985	987
12	978	975	982	984
13	974	971	979	981
14	970	966	975	978
15	966	961	972	975
16	961	955	968	971
17	956	950	964	968
18	951	944	959	964
19	945	937	955	960
20	939	930	950	956
21	932	923	945	951
22	926	915	939	946
23	919	908	933	941
24	912	900	928	936
25	904	891	922	930
26	896	882	915	925
27	888	873	909	919
28	880	863	902	912
29	871	853	894	906
30	9·99862	9·99843	9·99887	9·99900
Log. E	6·09721	6·13638	−6·03899	−6·00617
F	−186″·79	−944″·71	+181″·57	+886″·86

Observations for determining the readings for the astronomical meridian were made on the following days in 1867:—January 4, 28; February 4, 14; March 5, 26; April 29; May 6, 24; June 12, 24; July 8, 27; August 2, 12, 22; September 20; October 26; November 6, 23; December 18. As a check on the continued steadiness of the theodolite, observations of a fixed mark (a small hole in a plate of metal above the Observatory Library, illuminated by a reflector of sky-light in the day and by a lamp at night,) have been taken about thirty times at nearly equal intervals through the year.

The following is a description of the method of making and reducing the eye-observations of the declination-magnet:—

A fine horizontal wire (as stated above) is fixed in the field of view of the theodolite-telescope, and another fine vertical wire is fixed to a wire-plate, moved right and left by a micrometer screw. On looking into the telescope, the cross of the magnetometer is seen; and during the vibration of the magnet, this cross is seen to pass alternately right and left. The observation is made by turning the micrometer till its wire bisects the image of the magnet-cross at the pre-arranged times, and reading the micrometer. The verniers of the horizontal circle are read.

The mean-time clock is kept very nearly to Greenwich mean time (its error being ascertained each day), and the clock-time for each determination is arranged beforehand. Chronometer M‘Cabe 649 has usually been employed for observation.

If the magnet is in a state of disturbance, the first observation is made by the observer applying his eye to the telescope about one minute before the pre-arranged time; he bisects the magnet-cross by the micrometer wire at 45^s, and again at 15^s before that time, also at 15^s and 45^s after that time. The intervals of these four observations are therefore the same as the time of vibration of the magnet, and the mean of all the times is the same as the Greenwich pre-arranged mean time.

The mean of each pair of adjacent readings of the micrometer is taken (giving three means), and the mean of these three is adopted as the result. In practice, this is done by adding the first and fourth readings to the double of the second and third, and dividing the sum by 6.

Till 1866, January 23, the magnet was usually in a state of vibration; but since the introduction of the water damper on that day the number of instances of vibration has been very small. When it is found to be quite free from vibration, two bisections only of the cross are made, one about 15^s before the time recorded, the other about 15^s after that time, 30^s being nearly the time of a single vibration. (The lower magnet, furnished with the copper damper, never exhibits any troublesome vibrations.)

The adopted result is converted into arc, supposing $1^r = 1'.\ 34''\cdot 8$, and the quantity thus deduced is added to the mean of the vernier-readings, from which is subtracted the constant given in article 9 of the permanent adjustments; the difference between this number and the adopted reading for the Astronomical South Meridian is taken;

and thus is deduced the magnetic declination, which is used in determining the zero for the photographic register.

§ 3. *General principle of construction of Photographic self-registering Apparatus for continuous Record of Magnetic and other Indications.*

The general principle adopted for all the photographic instruments is the same. The photographic paper is wrapped round a glass or ebonite cylinder, (ebonite being adopted for the earth-current-apparatus and, in the year 1868, for all the other cylinders) and the axis of the cylinder is made parallel to the direction of the movement which is to be registered.

The following is the arrangement of glass cylinders, for the Declination and Horizontal Force. One glass cylinder with a hemispherical extremity (in all respects similar to those used as shades or protectors of small clocks, works of art, &c.), about 11½ inches long in its cylindrical part, and about 14½ inches in circumference, is covered internally with a black pigment, and is stopped at the open end by insertion in a metallic cap, in the center of which is a short spindle and winch-arm. Round this cylinder the photographic paper is wrapped, and the moisture on the photographic paper agglutinates its overlapping ends with sufficient firmness. The cylinder and mounted paper are then covered by another glass cylinder with hemispherical end, whose open end is fixed, by friction, on the rim of the metallic cap to which the inner cylinder is attached, a collar of tape being inserted between. In this state the cylinders are placed in their working-mounting; the short spindle in the cap, and the large cylinder near its hemispherical end, rest upon anti-friction-rollers, the axis of the cylinder being horizontal. The winch-arm is lodged in a fork at the end of the hour-hand of a timepiece, which is made for the purpose, not exceeding in size an ordinary box-chronometer, but with very strong wheels and powerful spring, and with duplex escapement. The mounting of the ebonite cylinders is the same except that they and their external glass cylinders have no hemispherical ends, and that both ends of the ebonite cylinders turn by spindles, which rest on anti-friction wheels; and that the clock-communication is made by a toothed wheel instead of a winch-arm. In order to avoid the ordinary shake of the hour-hand of a clock, due to the play of the motion-wheels under the dial, the hour-hand is placed upon the central axis, and the second wheel, which is usually placed in the center and carries the minute hand, is placed on one side. The peculiarities of the Vertical Force and Thermometer cylinders will be mentioned in their respective sections. The cylinders of the magnetic and earth-current registers turn in twenty-four hours: those of the thermometers, in forty-eight hours.

The light, by which the trace of each magnet is made, originates in a lamp (formerly of camphine, but, since 1849, of coal-gas charged with the vapour of coal-naphtha) placed slightly out of the direction of a straight line drawn from the concave-mirror of the magnet (to be mentioned shortly) to the center of the photographic sheet. Before the flame of the lamp is placed a small aperture, about $0^{in.}3$ high and $0^{in.}01$ broad, independent of the lamp, and supported by a part of the stone capping of the brick pier which carries the magnet. The light from the aperture falls upon the concave mirror of speculum-metal, which is carried by a part of the magnet-carrier, and which, although it has a small movement of adjustment relative to the magnet-carrier, is in practice very firmly clamped to it, so that the mirror receives all the angular movements of the magnet. By the concave mirror, the light diverging from the aperture is made to converge to a place nearly on the surface of the cylinder of photographic paper. The form of the aperture, however, and the astigmatism caused by the inclined reflexion from the mirror, produce this effect, that the image is somewhat elongated in the vertical direction, and is at the same time slightly curved. To diminish the length there is placed near the cylinder a plano-convex cylindrical lens of glass, with its axis parallel to the axis of the cylinder, and the image is thus reduced to a neat spot of light. This system applies equally to the magnetic and the earth-current registers; but for the thermometers the arrangement is different, as will be mentioned.

The spot of light (for the magnets, the earth currents, and the barometer) or the boundary of the line of light (for the thermometers) moves, with the movements which are to be registered, in the direction of the axis of the cylinder, while the cylinder itself is turned round. Consequently, when the paper is unwrapped from its cylindrical form, there is traced upon it (though not visible till the proper chemical agents have been applied) a curve, of which the abscissa measured in the direction of a line surrounding the cylinder is proportional to the time, while the ordinate measured in the direction parallel to the axis of the cylinder is proportional to the movement which is the subject of measure.

In the instruments for registering the motions of the magnets, the earth-currents, and the barometer, a line of abscissæ is actually traced on the paper, by a lamp giving a spot of light in an invariable position, the effect of which on the revolving paper is to trace a line surrounding the cylinder. For the thermometers this is not necessary, as the thermometer-scales are made to carry and to transfer to the photographic paper sufficient indications of the actual reading of the thermometers.

Every part of the cylinder-apparatus for the declination and horizontal force, except those on which the spots of light fall, is covered with a double case of blackened zinc, having a slit for each moveable spot of light and a hole for the invariable spot; and every part of the path of the photographic light is protected by blackened zinc tubes from the admixture of extraneous light. The cylinder-apparatus for the thermometers is protected in the same manner, except that the whole space including the gas-light is enclosed in a zinc case, blackened internally. The earth-current apparatus is enclosed in a mahogany case, similarly blackened.

In all the instruments, the following method is used for attaching, to the sheet of photographic paper, indications of the time when certain parts of the photographic trace were actually made, and for giving the means of laying down a time-scale applicable to every part of the trace. By means of a small moveable plate, arranged expressly for this purpose, the light which makes the trace can at any moment be completely cut off. An assistant, therefore, occasionally cuts off the light (registering in the proper book the clock-time of doing so), and after a few minutes withdraws the plate (again registering the time). The effect of this is to make a visible interruption in the trace, corresponding to registered times. By drawing lines from these points of interruption parallel to the axis of the cylinder, to meet the photographic line of abscissæ, or an adopted line of abscissæ parallel to it, points are defined upon the line of abscissæ corresponding to registered times. The whole length of the photographic sheet (except where one end, in the cylindrical arrangement, laps over the other) corresponds to the known time of revolution of the cylinder. A scale being prepared beforehand, whose value for the time of revolution corresponds to the circumference of the cylinder, and the scale-reading for the registered time of interruption of light being applied to the foot of the ordinate corresponding to that interruption, the divisions of hours and minutes may be transferred at once from the scale to the line of abscissæ. In practice it is found that the length of the paper is not always the same, and it is necessary, therefore, to use for each instrument several pasteboard scales of different lengths, adapted to various lengths of the photographic sheets.

§ 4. *Lower Declination-Magnet; and Photographic self-registering Apparatus for Continuous Record of Magnetic Declination.*

The lower declination-magnet is made by Simms. It is 2 feet long, $1\frac{1}{2}$ inch broad, $\frac{1}{4}$ inch thick, of hard steel throughout, much harder than the upper declination-magnet.

The magnet-frame consists of an upper piece, whose top is a hook, (to be hooked into the suspension-skein), and which carries a concave mirror 5 inches in diameter, used for the photographic record in the manner to be hereafter mentioned. The lower part of this upper piece turns in a graduated horizontal circle, similar to the torsion circle of the upper magnet, and attached to the lower piece or magnet-carrier proper. The lowest part of the carrier is a double square hook, in which the magnet is inserted and is kept in position by the pressure of three screws.

It has been mentioned in § 1 that a small pier built upon one of the crossed slates which are laid upon three piers rising from below, carries the suspension-pulleys. The suspension-skein rises to one of these pulleys, passes horizontally over a second pulley about 5 inches south of it, and then descends obliquely to a windlass which is fixed to the stone slab about 2 ft. 3 in. south of the center of the magnet.

The height of the pulley above the floor of the Basement is 10 ft. $4\frac{3}{4}$ in. As the height of the magnet above the floor is 2 ft. $10\frac{1}{2}$ in., and the length of the magnet frame is 1 ft. 3 in., there remains 6 ft. $3\frac{1}{4}$ in. of free suspending skein.

One of the revolving cylinders is used for the photographic record of the Declination-Magnet and the Horizontal Force Magnet. In the preparation of the basement in 1864, as has been stated, the south-eastern re-entering angle was cut away, so that the straight line from the suspending skein of the declination-magnet to the center of the bifilar magnet passes through a clear space, in which the registering apparatus is placed.

The concave mirror of the declination-magnet is 5 inches in diameter, and is above the top of the magnet-box. The distance of the light-aperture from the mirror is about 25·3 inches. The spot of light from the mirror is received on the south side of the cylinder, near its west end.

For the declination-magnet, the values, in minutes and seconds of arc, of movements of the photographic spot in the direction of the ordinate, are thus deduced from a geometrical calculation founded on the measures of different parts of the apparatus. The distance of the cylinder from the concave mirror is about $11^{ft.}\ 0^{in.} \cdot 1$, and a movement of 1° of the mirror produces a movement of 2° in the reflected ray. From this it is found that 1° of movement of the mirror is represented by 4·611 inches upon the photographic paper. A small scale of pasteboard is prepared, whose graduations correspond in value to minutes and seconds so calculated. The zero of the ordinate-scale is found in the following manner. The time-scale having been laid down as is already described, and actual observations of the position of the magnet having been made with the eye and the telescope, (as has been fully described above), at certain registered times, there is no difficulty (by means of these registered times) in defining the points of the photographic trace which correspond to the observed positions. The pasteboard scale being applied as an ordinate to one of these points, and being slid up and down till the scale reading which represents the reading actually taken by the eye-observation falls on that point, the reading of the scale where it crosses the line of abscissæ is immediately found. The various readings given by different observations, so long as there is no instrumental change, will scarcely differ, and may be combined in groups, and thus an adopted reading for the line of abscissæ may be obtained. From this, with the assistance of the same pasteboard scale, there will be laid down without difficulty a new line, parallel to that line of abscissæ whose ordinate would represent some whole number of degrees, or other convenient quantity.

§ 5. *Horizontal-Force-Magnet and Apparatus for observing it.*

The horizontal-force-magnet, furnished by Meyerstein of Göttingen, is, like the declination-magnet, 2 feet long, $1\frac{1}{2}$ inch broad, and about $\frac{1}{4}$ inch thick. For its support (as is mentioned above), a brick pier in the eastern arm of the Magnetic Observatory, built on the ground below the basement floor, rises through the floor of the upper room, and carries a slate slab, to the top of which a brass frame is attached, carrying two brass pulleys (with their axes in the same east and west line) in front of the pier, and two (in a similar position) at the back of the pier; these constitute the upper suspension-piece. A small windlass is attached to the back of the pier at a convenient height. The magnet-carrier consists of two parts. The upper part is a horizontal bar, $2\frac{1}{2}$ inches long, whose ends are furnished with verniers for reading the graduations of the torsion-circle (a portion of the lower part, to be mentioned below). On the upper side of this horizontal bar are two small pulleys with axes horizontal and at right angles to the vertical plane passing through the length of the bar: by these pulleys the apparatus is suspended, as will be mentioned. From the lower side of the horizontal bar, a vertical axis projects downwards through the center of the torsion-circle, in which it turns by stiff friction. The lower part of the magnet-carrier consists, first of the torsion-circle, a graduated circle about 3 inches in diameter: next, immediately below the central part of the torsion-circle, is attached (but not firmly fixed) a circular piece of metal from which projects downwards a frame that, by means of three cramps and screws, carries the photographic concave mirror, with the plane of its front under the center of the vertical axis: this circular piece of metal has a radial arm upon which acts a screw carried by the torsion-circle, for giving to the concave mirror small changes of azimuthal position. Thirdly, there is fixed to the torsion-circle, at the back of the mirror frame but not touching it, a bar projecting downwards, bent horizontally under the mirror frame and then again bent downwards, carrying the cramps in which the magnet rests, and, still lower, a small plane mirror, to which a fixed telescope is directed for observing by reflexion the graduations of a fixed scale (to be mentioned shortly). Under the two small pulleys mentioned above passes a skein of silk; its two branches rise up and pass over the front pulleys of the suspension-piece, then over its back pulleys, and then descend and pass under a single large pulley, whose axis is attached to a wire that passes down to the windlass. Supported by the two branches of the skein, the magnet swings freely, but the direction that it takes will depend on the angular position of its stirrup with respect to the upper horizontal bar; it is intended that the index should be brought to such a position on the torsion-circle that the two suspending branches should not hang in one plane, but should be so twisted that their torsion-force will maintain the magnet in a direction very nearly E. and W. magnetic (its marked end being W.); in which state an increase of the earth's magnetic force draws the marked end towards the N., till the torsion-force is sufficiently increased to resist it; or a diminution allows the torsion-force to draw it towards the S. The magnet, with its plane mirror, hangs within a double rectangular box (one box completely inclosed within another) covered with gilt paper, similar to that used for the declination-magnet; in its S. side there is one long hole, covered with glass, through which the rays of light from the scale enter to fall on the plane mirror, and the rays reflected by the mirror pass to the fixed telescope. The vertical rod (below the torsion-circle), which carries the magnet-stirrup, passes through a hole in the top of the box. Above the magnet box is the concave mirror above mentioned. The height of the brass pulleys of the suspension-piece above the floor is $11^{\text{ft.}}\ 8^{\text{in.}}\ 5$; that of the pulleys of the magnet-carrier is $4^{\text{ft.}}\ 2^{\text{in.}}\ 5$; and that of the center of the plane mirror is about $3^{\text{ft.}}\ 1^{\text{in.}}$. The distance between the branches of the silk skein, where they pass over the upper pulleys, is $1^{\text{in.}}\cdot 14$; at the lower part the distance between them is $0^{\text{in.}}\cdot 80$.

An oval copper bar (exactly similar to that for the declination-magnet), embraces the magnet, for the purpose of diminishing its vibrations.

The scale, which is observed by means of the plane mirror, is in a horizontal position, and is fixed to the South wall of the East arm of the Magnetic Basement. The numbers of the scale increase from East to West, so that when the magnet is inserted in the magnet-cell with its marked end towards the West, increasing readings of the scale (as seen with a fixed telescope directed to the mirror which the magnet carries) denote an increasing horizontal force. A normal from the plane-mirror to the scale meets it at the division 51 nearly; the distance from the center of the plane-mirror to the scale is $7^{ft.}\ 6^{in.} \cdot 8$.

The telescope is fixed on the east side of the brick pier which supports the stone pier of the declination-theodolite in the upper observing room. The angle between the normal to the scale (which usually coincides nearly with the normal to the axis of the magnet) and the axis of the telescope, is about 38°, and the plane of the mirror is therefore inclined to the axis of the magnet about 19°.

OBSERVATIONS RELATING TO THE PERMANENT ADJUSTMENTS OF THE HORIZONTAL-FORCE-MAGNET.

1. Determination of the times of vibration and of the different readings of the scale for different readings of the torsion-circle, and of the reading of the torsion-circle and the time of vibration when the magnet is transverse to the magnetic meridian.

To render the process intelligible, it may be convenient to premise the following explanation.

Suppose that the magnet is suspended in its stirrup which is firmly connected with the small plane mirror, with its marked end in a magnetic westerly direction (not exactly W., but in any westerly direction between N. and S.), and suppose that, by means of the telescope directed towards that mirror, the scale is read, or (which is the same thing) the position of the plane mirror and of the stirrup, and therefore that of the axis of the magnet, are defined. Now let the magnet be taken out of the stirrup and replaced with its marked end easterly. The terrestrial magnetic power will now act, as regards torsion, in the direction opposite to that in which it acted before, and therefore the magnet will not take the same position as before. But by turning the torsion-circle, which changes the amount and direction of the torsion-power produced by the oblique tension of the suspending cords, the magnet may be made to take the same position as at first (which will be proved by the reading of the scale, as viewed in the plane mirror, being the same). The reading of the torsion-circle will be different from what it was. The effect of this operation then is, to give us the difference of torsion-circle-readings for the same position of the magnet-axis with the marked end opposite ways, but it gives no information as to whether the magnet-axis is transverse to the meridian, inasmuch as the same operation can be performed whether the magnet-axis is transverse or not.

But there is another observation which will inform us whether the magnet-axis is or is not transverse. Let the time of vibration be taken in each position of the magnet. Resolve the terrestrial magnetic force acting on the poles of the magnet into two parts, one transverse to the magnet, the other longitudinal. In the two positions of the magnet (marked end westerly and marked end easterly, with axis in the same position), the magnitude of the transversal force is the same, and the changes which the torsion undergoes in a vibration of given extent are the same, and the time of vibration (if there were no other force) would be the same. But there is another force, namely, the longitudinal force; and when the marked end is northerly this tends from the center of the magnet's length, and when it is southerly it tends towards the center of the magnet's length; and in a vibration of given extent this produces force, in one case increasing that from the torsion and in the other case diminishing it. The times of vibration therefore will be different. There is only one exception to this, which is when the magnet-axis is transverse to the magnetic meridian, in which case the longitudinal force vanishes.

The criterion then of the position truly transverse to the meridian (which position is necessary in order that the indications of our instrument may apply truly to changes of the magnitude of terrestrial magnetic force without regard to changes of direction) is this. Find the readings of the torsion-circle which, with magnet in reversed positions, will give the same readings of the scale as viewed by reflexion in the plane mirror, and will also give the same time of vibration for the magnet. With these readings of the torsion-circle the magnet is transverse to the meridian; and the difference of the readings of the torsion-circle is the difference between the position when terrestrial magnetism acting on the magnet twists it one way, and the position when the same force twists it the opposite way, and is therefore double the angle due to the torsion-force of the suspending lines when they neutralize the force of terrestrial magnetism.

The following table exhibits the elements of one of the determinations made in 1867:—

1867. Day.	The Marked end of the Magnet.							
	West.				East.			
	Torsion-Circle Reading.	Scale Reading.	Difference of Scale Readings for 1° of Torsion.	Mean of the Times of Vibration.	Torsion-Circle Reading.	Scale Reading.	Difference of Scale Readings for 1° of Torsion.	Mean of the Times of Vibration.
	°	div.	div.	s	°	div.	div.	s
Jan. 8	140	14·58		21·54	222	10·71		20·00
	141	23·69	9·11	21·40	223	18·32	7·61	20·16
	142	32·73	9·04	21·30	224	26·28	7·96	20·26
	143	40·75	8·02	21·14	225	33·71	7·43	20·40
	144	49·40	8·65	20·92	226	41·75	8·04	20·52
	145	57·20	7·80	20·72	227	49·90	8·15	20·58
	146	64·99	7·79	20·60	228	57·76	7·86	20·74
	147	72·71	7·72	20·50	229	66·48	8·72	21·00
	148	81·58	8·87	20·32	230	74·72	8·24	21·20
	149	88·92	7·34	20·16	231	83·04	8·32	21·34
	150	96·64	7·72	20·08	232	91·50	8·46	21·50

The times of vibration and scale readings were sensibly the same, when the torsion-circle read 145°., marked end West, and 227°. 56′, marked end East, differing 82°. 56′. Half this difference, or 41°. 28′, is the angle of torsion when the magnet is transverse to the meridian.

The mean of several determinations gave 41°. 23′. The value adopted for the year 1867 was the same as that used in 1866, namely, 41°. 14′. The reading adopted for the torsion-circle, marked end of the magnet West, was 145° for the year.

2. Computation of the angle corresponding to one division of the scale, and of the variation of the horizontal force (in terms of the whole horizontal force) which moves the magnet through a space corresponding to one division of the scale.

It was found by accurate measurements, on 1864, November 3, that the distance from $51^{div.}$ on the scale to the center of the face of the plane mirror is $7^{ft.}\ 6^{in.}\ 84$, and that the length of $30^{div.}\cdot 85$ of the scale is exactly 12 inches; consequently the angle at the mirror subtended by one division of the scale is 14′. 43″·25, or, for one division of the scale, the magnet is turned through an arc of 7′. 21″·625.

The adopted angle of torsion as mentioned above is 41°. 14′; consequently the variation of horizontal force (in terms of the whole horizontal force) for a disturbance through one division of the scale, computed by the formula, "Cotan. angle of torsion × value of one division in terms of radius," is 0·0024428. This number has been used for the year 1867.

3. Determination of the compound effect of the vertical-force-magnet and the declination-magnet on the horizontal-force-magnet, when suspended with its marked end towards the West.

The details of the experiments, made while the old vertical-force-magnet was in use, will be found in the volumes for 1841, 1842, 1843, 1844, 1845. The effect was to increase the readings by $0^{div.}\cdot 487$. On mounting a new vertical-force-magnet in 1848, similar experiments were made, and the resulting number was $0^{div.}\cdot 45$. These quantities are totally unimportant in their influence on the registers of changes of horizontal force. No experiments have been made since the magnets were placed in the basement.

4. Effect of the damper.

In the year 1865, from May 17 to May 25, observations were made for ascertaining the deflection of the magnet produced by turning the damper through a small angle round a vertical axis passing through its center.

DAMPER IN USUAL POSITION.

			div.
Damper turned through 2°	W. end towards S.,	increase of scale-reading	−0·251
	W. end towards N.,	,, ,, ...	+0·050
Damper turned through 4°	W. end towards S.,	,, ,, ...	−0·34
	W. end towards N.,	,, ,, ...	+0·16

DAMPER REVERSED END FOR END.

Damper turned through 2°	W. end towards S.,	increase of scale-reading	−0·15
	W. end towards N.,	,, ,, ...	−0·02
Damper turned through 4°	W. end towards S.,	,, ,, ...	−0·12
	W. end towards N.,	,, ,, ...	+0·08

On 1865, July 25, observations were made to ascertain whether the effect of an external deflecting cause is the same with the damper present and the damper removed.

A small magnet was placed with its marked end pointing N. at the distance 4 feet S. of the unmarked end of the horizontal-force-magnet, deflecting the magnet through $1^{\text{div.}}$ of the scale, and the scale-readings were observed with the damper in its usual place and the damper away. Three experiments were made, containing twenty-four observations of position. Not the smallest difference of position of the horizontal-force-magnet was produced by the presence or absence of the damper. The observations were very easy, and the result is certain.

No experiments on the damper have been made since 1865.

5. Determination of the correction for the effect of temperature on the horizontal-force-magnet.

In the Introduction to the volume of Magnetical and Meteorological Observations for 1847 will be found a detailed account of observations made in the years 1846 and 1847 for determination of this element. The principle adopted was that of observing the deflection which the magnet (to be tried) produces on another magnet; the magnet (to be tried) being carried by the same frame which carries the telescope that is directed to the plane mirror attached to the other magnet, and which also carries the scale that is viewed in these experiments by reflection in that plane mirror. The rotation of the frame was measured by a graduated circle about 23 inches in diameter. The magnet (to be tried) was always on the eastern side of the other magnet. It was enclosed in a copper trough, which was filled with water at different temperatures. One end of the magnet (to be tried) was directed towards the other magnet. The values found for correction of the results as to horizontal force determined with the magnet at temperature t° in order to reduce them to what they would have been if the temperature of the magnet had been 32°, expressed as multiples of the whole horizontal force, were,*

When the marked end of the magnet (to be tried) was West,

$$0{\cdot}00007137\ (t-32) + 0{\cdot}000000898\ (t-32)^2.$$

When the marked end of the magnet (to be tried) was East,

$$0{\cdot}00009050\ (t-32) + 0{\cdot}000000626\ (t-32)^2.$$

The mean, or

$$0{\cdot}00008093\ (t-32) + 0{\cdot}000000762\ (t-32)^2$$

has been embodied in tables which have been used in the computation of the "Reduction of Magnetic Observations 1848–1857," attached to the Volume of Observations 1859, and in the computation for "Days of Great Magnetic Disturbance 1841–1857," attached to the volume for 1862. The same formula has been employed in the Reduction of Magnetic Observations 1858–1863, published in the present volume.

In the year 1864 observations were made for ascertaining the temperature-coefficient by heating the magnet by hot air. The deflecting magnet was placed in a copper box planted upon the top of a copper gas-stove, whose heat could be regulated by manipu-

* By inadvertence in printing the Introduction 1847, the letter *t* has been used in two different senses.

lation of a tap, and from which rose a stream of heated air (not the air vitiated by combustion) through a large opening in the bottom of the box. With this apparatus, the force that acted upon a deflected magnet was measured by the tangent of the angle of deflection. The apparent effect of the temperature was so great (five or six times that found by use of water) that I imagine that some untraced cause of error existed in the operation, and I therefore abstain from publishing it.

From 1867, December 30, to 1868, February 21, experiments were made for determining the temperature-coefficient under the actual circumstances of observation, by heating the Magnetic Basement to different temperatures, and observing the changes of scale reading as viewed in the telescope, and also, the changes of indications on the photographic registers. The general result is, that the correction required for the horizontal-force-magnet is small, but that required for the vertical-force-magnet is large and negative in sign. A more detailed account will be given in a subsequent volume.

The method of observing with the horizontal-force-magnet is the following:—

A fine vertical wire is fixed in the field of view of the telescope, which is directed to the plane mirror carried by the magnet. On looking into the telescope, the graduations of the fixed scale, mentioned in page *xvii*, are seen; and during the oscillations of the magnet, the divisions of the scale are seen to pass alternately right and left across the wire. The clock-time, for which the position of the magnet is to be determined, is the same as that for the observation of declination. The first observation is made by the observer applying his eye to the telescope 40^s before that time, and, if the magnet is in a state of vibration, he observes the next four extreme points of vibration of the scale, and the mean of these is adopted in the same manner as for the declination-observations; but if it is at rest, then at 10^s before the pre-arranged time, he notes the division of the scale bisected by the wire; and 10^s after the pre-arranged time he notes whether the same division continues bisected, and if it does, that reading is adopted as the result.

The number of instances when the magnet was observed in a state of vibration during the year 1867 is very small.

Outside the double box is suspended a thermometer, which is read at every hour of observation. On every day except Sundays, the readings of the thermometer were taken at 21^h, 22^h, 23^h, 0^h, 1^h, 2^h, 3^h, and 9^h. From August 9, an additional observation was taken at 6^h, occasional observations have been taken at other hours. Self-registering maximum and minimum thermometers placed outside the box were read twice every day, but in consequence of the very small diurnal range of temperature, their readings are not printed in the volume.

§ 6. *Photographic self-registering Apparatus for Continuous Record of Magnetic Horizontal Force.*

Much of the description of the photographic apparatus attached to the declination-magnet applies also to that which is attached to the horizontal-force-magnet. A concave mirror of speculum-metal, 4 inches in diameter, is carried by the magnet-carrier. The light of a lamp of naphthalized gas shines through a small aperture $0^{in.}\cdot 3$ high, and $0^{in.}\cdot 01$ broad (which is supported by the solid base of the brick pier carrying the magnet-support), at the distance of about 21·25 inches from the concave mirror, and is made to converge to a point, on the north surface and near the east end of the same revolving cylinder which receives the light from the concave mirror of the declination-magnet. A cylindrical lens parallel to the axis of the cylinder receives the somewhat elongated image of the source of light, and converts it into a well-defined spot. The motions of this spot parallel to the axis represent the angular movements of the magnet which are produced by an increase of terrestrial magnetic force overcoming more completely the torsion-force of the bifilar suspension, or by a diminution of terrestrial force yielding to the torsion-force.

As the spot of light from the horizontal-force-mirror falls on the side of the cylinder opposite to that on which the light from the declination-mirror falls, the same time-scale will not apply to both; it is necessary to prepare a time-scale independently for each.

The following is the calculation by which the scale of horizontal force on the photographic sheet is determined. The distance between the surface of the concave mirror and the surface of the cylinder is 134·436 inches; consequently, one degree of angular motion of the magnet, producing two degrees of angular motion of the reflected ray, moves the spot of light through 4·6927 inches. Now the variation of horizontal force (in terms of the whole horizontal force) corresponding to one degree of angular motion of the magnet $=$ sin. $1^\circ \times$ cotan $41^\circ. 14'.$ $=$ 0·019914 nearly. From these numbers it is immediately found that a movement of the spot of light through 2·3565 inches corresponds to a variation of horizontal force expressed by 0·01 part of the whole horizontal force. With this fundamental number, the graduations of the pasteboard scale for measure of horizontal force have been prepared.

§ 7. *Vertical-Force-Magnet, and Apparatus for observing it.*

The vertical-force-magnet in use to 1848 was made by Robinson; that in use from 1848 to 1864, January 20, was by Barrow. The magnet now in use is by Simms. Its length is $1^{ft.}\ 6^{in.}$; it is pointed at the ends. After some trials, it was re-magnetized by Mr. Simms on 1864, June 15. Between 1864, August 27, and September 27, a new knife-edge was attached to it, to remedy a defect which, as was afterwards found, arose from a cause that had no relation to the knife-edge. Its supporting frame rests upon a solid pier, built of brick and capped with a thick block of Portland stone, in the western arm of the magnetic basement. Its position is as nearly as possible symmetrical with that of the horizontal-force-magnet in the eastern arm. Upon the stone block is fixed the supporting frame, consisting of two pillars (connected at their bases) on whose tops are the agate planes upon which vibrate the extreme parts of the knife-edge (to be mentioned immediately). The carrier of the magnet is an iron frame, to which is attached, by clamps and pinching screws, a steel knife-edge, about 8 inches long. The steel knife-edge passes through an aperture in the magnet. The axis of the magnet is as nearly as possible transverse to the meridian, its marked end being E. The axis of vibration is as nearly as possible N. and S. To the southern end of the iron frame, and projecting further south than the end of the knife-edge, is fixed a small plane mirror, whose plane makes with the axis of the magnet an angle of $52\frac{3}{4}^{\circ}$ nearly. The fixed telescope (to be mentioned) is directed to this mirror, and by reflexion at the surface of the mirror it views a vertical scale (to be mentioned shortly). The height of this mirror above the floor is about $2^{\text{ft.}}\ 10^{\text{in.}}\cdot6$. Before the introduction of the photographic methods, the magnet was placed in a perforation of a brass frame midway between its knife-edges. But since the photographic method was introduced, the magnet has been placed excentrically; the distance of its southern face from the nearest end of the southern knife-edge being nearly 2 inches, and a space of $4\frac{1}{2}$ inches in the northern part of the iron frame being left disposable. In this disposable space there is attached to the iron frame by three clips a concave mirror of speculum-metal, with its face at right angles to the length of the magnet; it is used in the photographic system (shortly to be described). Near the north end of the iron frame are fixed in it two screw stalks, upon which are adjustible screw-weights; one stalk is horizontal, and the movement of its weight affects the position of equilibrium of the magnet (which depends on the equilibrium between the moments of the vertical force of terrestrial magnetism on the one hand and of the magnet's center of gravity on the other hand); the other stalk is vertical, and the movement of its weight affects the delicacy of the balance, and varies the magnitude of its change of position produced by a change in the vertical force of terrestrial magnetism.

The whole is inclosed in a rectangular box. This box is based upon the stone block above mentioned; and in it, in a space separated from the rest by a thin partition, the magnet can vibrate freely in the vertical plane. In the south side of the box is a hole covered by glass, through which pass the rays of light from the scale to the plane mirror, and through which they are reflected from the plane mirror to the telescope. And at the east end is a large hole covered by glass, through which passes the light from the lamp to the concave mirror, and through which it is reflected to the photographic cylinder (to be described hereafter).

The telescope is fixed to the west side of the brick pier which supports the stone pier in the upper room carrying the declination-theodolite. Its position is symmetrical with that of the telescope by which the horizontal-force-magnet is observed; so that a person seated in a convenient position can, by an easy motion of the head left and right, observe the vertical-force and horizontal-force-magnets.

The scale is vertical: it is fixed to the pier which carries the telescope, and is at a very small distance from the object-glass of the telescope. The wire in the field of view of the telescope is horizontal. The telescope being directed towards the mirror, the observer sees in it the divisions of the scale passing upwards and downwards over the fixed wire as the magnet vibrates. The numbers of the scale increase from top to bottom; so that, when the magnet is placed with its marked end towards the East, increasing readings (as seen with the fixed telescope) denote an increasing vertical force.

OBSERVATIONS RELATING TO THE PERMANENT ADJUSTMENTS OF THE VERTICAL-FORCE-MAGNET.

1. Determination of the compound effect of the declination-magnet, the horizontal-force-magnet, and the iron affixed to the electrometer pole, on the vertical-force-magnet.

The experiments applying to the magnets are given in the volumes for 1840–1841 to 1845: and those applying to the electrometer pole in the volume for 1842. It appeared that no sensible disturbance was produced on the magnet formerly in use. No experiments have been made with the new magnet.

2. Determination of the time of vibration of the vertical-force-magnet in the vertical plane.

In the year 1867, vibrations of the vertical-force-magnet were observed on 147 different days, and with readings of various divisions of the scale. The mean time of vibration adopted from January 1 to September 30 was $12^{s}\cdot51$, and from October 1 to the end of the year $12^{s}\cdot25$.

3. Determination of the time of vibration of the vertical-force-magnet in the horizontal plane.

1866, December 31. The magnet with all its apparatus was suspended from a tripod in the Record Room, its broad side being in a plane parallel to the horizon; therefore, its moment of inertia was the same as when it is in observation. A telescope, with a wire in its focus, was directed to the reflector carried by the magnet. A scale of numbers was placed on the floor of the Record Room, at right angles to the long axis of the magnet, or parallel to the mirror. The magnet was observed only at times when it was swinging through a small arc. From 300 vibrations, the mean time of one vibration $=15^{s}\cdot1873$. This number is used through the year 1867.

4. Computation of the angle through which the magnet moves for a change of one division of the scale; and calculation of the disturbing force producing a movement through one division, in terms of the whole vertical force.

The distance from the scale to the mirror is 186·07 inches, and each division of the scale $=\frac{12}{30\cdot85}$ inches. Hence the angle which one division subtends, as seen from the mirror, is $7'.\ 11''\cdot19$; and therefore the angular movement of the normal to the mirror, corresponding to a change of one division of the scale, is half this quantity, or $3'.\ 35''\cdot60$.

But the angular movement of the normal to the mirror is not the same as the angular movement of the magnet; but is less in the proportion of unity to the cosine of the angle which the normal to the mirror makes with the magnet, or in the proportion of unity to the sine of the angle which the plane of the mirror makes with the magnet. This angle has been found to be $52\frac{3}{4}°$: therefore, dividing the result just obtained by sine $52\frac{3}{4}°$, we have, for the angular motion of the magnet corresponding to a change of one division of the scale, $4'. 30''\cdot85$.

From this, the value, in terms of the whole vertical force, of the disturbing force producing a change of one division, is to be computed by the formula, "Value of Division in terms of radius $\times$ cotan. dip $\times \frac{T'^2}{T^2}$" where T′ is the time of vibration in the horizontal plane, and T the time of vibration in the vertical plane.

From 1867, January 1 to September 30, T′ was assumed $= 15^s\cdot1873$, $T = 12^s\cdot51$, dip $= 67°. 57'. 38''$. From 1867, October 1 to December 23, the values assumed were $T' = 15^s\cdot1873$, $T = 12^s\cdot25$, dip $= 67°. 55'. 50''$. From these numbers, the change of vertical force (in terms of the whole vertical force) corresponding to a change of one division of the scale is found $= 0\cdot00078345$ part of the whole vertical force for the first period, and $= 0\cdot00081829$ for the second period.

5. Investigation of the temperature-correction of the vertical-force-magnet.

An attempt was made to investigate the thermometric correction of the new vertical-force-magnet by the use of heated air, at the same time and in the same manner as for the horizontal-force-magnet (mentioned on pages *xxi* and *xxii*). The results were so much larger than I expected, that I conceive some unknown cause of error to have affected them. At the end of 1867 and the beginning of 1868, experiments were made by heating the air of the room, as is mentioned in page *xxii*, giving a large negative correction. No correction has been applied to the observations with the new vertical-force-magnet.

The method of observing with the vertical-force-magnet is the following :—

A fine horizontal wire is fixed in the field of view of the telescope, which is directed to the small plane mirror carried by the magnet. On looking into the telescope, the graduations of the fixed vertical scale are seen; and during the oscillations of the magnet, the divisions of the scale are seen to pass alternately upwards and downwards across the wire. The clock-time, for which the position of the magnet is to be determined, is the same as that for the other two magnets. The observer applies his eye to the telescope about two vibrations before the arranged time, and if the magnet is in motion he observes its places at four extreme vibrations; and the mean of these is taken as for the horizontal-force-magnet. But if the magnet is at rest, then at one-half time of vibration before the arranged time, and at an equal interval after the arranged time, the division of the scale is noted; if there is a slight difference, the mean is taken.

The number of instances in 1867 in which the magnet was found in a state of vibration is very small.

Outside the box is placed a thermometer, which is read at every hour of observation, and also on every day except Sundays, at the hours 21^h, 22^h, 23^h, 0^h, 1^h, 2^h, 3^h, and 9^h; and from August 9 at 6^h also. Occasional readings of the thermometer are also taken at other hours.

A maximum and a minimum thermometer have also been read twice daily; but the results are not printed.

§ 8. *Photographic self-registering Apparatus for Continuous Record of Magnetic Vertical Force.*

The concave mirror which is carried by the vertical-force-magnet is 4 inches in diameter; its mounting has been described in the last article. At the distance of about 22 inches from that mirror, and external to the box, is the horizontal aperture, about $0^{\text{in}}\cdot3$ in length and $0^{\text{in}}\cdot01$ in breadth, carried by the same stone block which carries the supports of the agate planes. The lamp which shines through this aperture is carried by a wooden stand. The light reflected from the mirror passes through a cylindrical lens with its axis vertical, very near to the cylinder carrying the photographic paper, and finally forms a well-defined spot of light on the cylinder of paper, at the distance of 100·18 inches from the mirror. As the movements of the magnet are vertical, the axis of the cylinder is vertical. The cylinder is about 15½ inches in circumference, or somewhat larger than that used for the declination and horizontal-force magnets. The forms of the exterior and interior cylinders, and the method of mounting the paper, are in all respects the same as for the declination and horizontal-force magnets; but the cylinder is supported by being merely planted upon a circular horizontal plate (its position being defined by fitting a central hole in the metallic cap of the cylinder upon a central pin in the plate), which rests on anti-friction rollers and is turned by watchwork once in twenty-four hours. The trace of the vertical-force-magnet is on the west side of the cylinder.

On the east side, the cylinder receives the trace produced by the barometer (to be described hereafter). A pencil of light from the lamp which is used for the barometer shines through a fixed aperture with a small cylindrical lens, for tracing a photographic base-line upon the cylinder of paper, similar to that for the cylinder of the declination and horizontal-force magnets.

The scale for the ordinates of the photographic curve of the vertical force is thus computed. Remarking that the radius which determines the range of the motion of the spot of light is double the distance 100·18 inches, and is therefore = 200·36 inches, the formula used in the last section, when applied to $\frac{\text{disturbing force}}{\text{whole vertical force}} = 0\cdot01$, gives value of division $= 200\cdot36 \times \text{tan. dip.} \times \left(\frac{\text{T}}{\text{T}'}\right)^2 \times 0\cdot01$. The value of the ordinate of the photographic curve for $\frac{\text{disturbing force}}{\text{whole vertical force}} = 0\cdot01$, thus obtained, is, from 1867 January 1 to September 30, 3·358 inches, and from October 1 to the end of the year, 3·215 inches. With these values, the pasteboard scales, used for measuring the photographic ordinates, have been prepared.

§ 9. *Dipping Needles, and Method of observing the Magnetic Dip.*

The instrument with which all the dips in the year 1867 have been observed, is that which, for distinction, is called Airy's instrument. The following description will probably suffice to convey an idea of its peculiarities:—

The form of the needles, the form of their axes, the form of the agate bearings, and the general arrangement of the relieving apparatus, are precisely the same as those in

Robinson's and other needles. But the form of the observing apparatus is greatly modified, in order to secure the following objects :—

I. To obtain a microscopic view of the points of the needles, as in the instruments introduced by Dr. Lloyd and Lieut.-General Sabine.

II. To possess at the same time the means of observing the needles while in a state of vibration.

III. To have the means of observing needles of different lengths.

IV. To give an illumination to the field of view of each microscope, directed from the side opposite to the observer's eye, so that the light may enter past the point of the needle into the object glass of the microscope, forming a black image of the needle-point in a bright field of view.

V. To give facility for observing by day or night.

With these views, the following form is given to the apparatus :—

The needle, and the bodies of the microscopes, are inclosed in a square box. The base of the box, two vertical sides, and the top, are made of gun-metal (carefully selected to insure its freedom from iron); but the sides parallel to the plane of vibration of the needle are of glass. Of the two glass sides, that which is next the observer is firmly fixed; it is hereafter called "the graduated glass-plate." The other glass side can be withdrawn, to open the box, for inserting the needle, &c.

An axis, whose length is perpendicular to the plane of vibration of the needles, and is as nearly as possible in the line of the axis of the needle, supported on two bearings (of which one is cemented in a hole in the graduated glass-plate, the other being upon a horizontal bar near to the agate support of the needle-axis), carries a transverse arm, about 11 inches long, or rather two arms, projecting about $5\frac{1}{2}$ inches on each side of the axis. Each of these projecting arms has a long opening, or slot, about 1 inch wide, extending from the neighbourhood of the center-work nearly to the end of the arm. Through this opening the tube of a microscope passes, in a direction parallel to the axis of the needle, and is firmly fixed by a shoulder-bearing on one side of the arm, and a circular nut, working in a thread cut upon the microscope-tube, on the other side of the arm. The microscope can thus be fixed at any distance from the central axis, within the limits of the length of the projecting arm. In 1863, between February 24 and May 11, the slot for a single moveable microscope on each side was changed for three fixed microscopes on each side, adapted in position to the lengths of the needles to be mentioned shortly.

The microscope-tube thus carried is not the entire microscope, but so much as contains the object-glass and the field-glass. Upon the plane side of the field-glass (which is turned towards the object-glass), a series of parallel lines is engraved by etching with fluoric acid. The object-glass is so adjusted that the image of the needle-point is formed upon the plane side of the field-glass; and thus the parallel lines can be used for observing the needle in a state of vibration; and, one of them being adopted as standard, the lines can be used for reference to the graduated circle (to be mentioned). All this requires that there be an eye-glass also for the microscope.

The axis of which we have spoken is continued through the graduated glass-plate, and there it carries another transverse arm parallel to the former, and generally similar to it. In each part of this slides a short eye-piece, carrying the eye-glass. In 1863, at the time mentioned above, the slotted arm and moveable eye-socket were changed for an arm with three sockets and eye-glasses. Thus, reckoning from the observer's eye, there are the following parts:—

(1.) The eye-glass.

(2.) The graduated glass-plate (its graduations, however, not intervening in this part of the glass, the graduated circle being so large as to include all the microscopes).

(3.) The field-glass, on the further surface of which the parallel lines are engraved.

(4.) The object-glass.

(5.) The needle.

(6.) The removeable glass side of the box.

(7.) The illuminating reflector, to be described hereafter.

The optical part of the apparatus being thus described, we may proceed to speak of the graduated circle.

The graduations of the circle (whose diameter is about 9¾ inches) are etched on the inner surface of the graduated glass-plate. These divisions (as well as the parallel lines on the field glasses of the microscopes) are beautifully neat and regular, and are, I think, superior to any that I have seen on metal. The same piece of metal, which carries the transverse arms supporting the microscope bodies, carries also two arms with verniers for reading their graduations. These verniers (being adapted to transmitted light) are thin plates of metal, with notches instead of lines. The reading of the verniers is very easy. The portion of the axis which is external to the graduated glass-plate (towards the observer), and which has there, as already stated, two arms for carrying the microscope eye-glasses, has also two arms for carrying the lenses by which the verniers and glass-plate graduations are viewed. These four arms are the radii of a circle, which can be fixed in position by a clamp, attached to the gun-metal casing of the graduated glass-plate, and furnished with the usual slow-motion screw.

The entire system of the two arms carrying the microscope-bodies, the two arms carrying the microscope eye-glasses, the two arms carrying the verniers, and the two arms carrying the reading-glasses for the verniers, is turned rapidly by means of a button on the external side of the graduated glass-plate, or is moved slowly by means of the slow-motion screw just mentioned.

It now remains only to describe the illuminating apparatus. On the outside of the removeable glass plate, there are supports for the axis of a metallic circle turning in a plane parallel to the plane of needle-vibration. This circle has four slotted radii, and in these slots or openings there slide small frames carrying prismatic glass reflectors, each of which can turn on an axis, in the plane of the circle but transverse to the radius. Two of these reflectors are for the purpose of sending light through the verniers, and therefore are fixed in radial distance; the other two were intended for sending light past the ends of the needle through the microscopes, and therefore required adjustment on change of needle and corresponding change of position of microscopes. In 1863 these were changed for fixed reflectors, corresponding to the fixed microscopes. The circle was originally turned by a small winch near the observer's hand; at present, the winch is removed, as its axis was found to be slightly magnetic. At each observation, it is necessary to turn the circle which carries the reflectors; but this is the work of an instant.

The light which illuminates the whole is a gas-burner, in the line of the axis of rotation. Its rays fall upon the glass prisms, and each of these is adjusted, by turning on its axis, to throw the reflected light in the required direction.

The whole of the apparatus, as thus described, is planted upon a horizontal plate admitting of rotation in azimuth: the plate is graduated in azimuth, and verniers are fixed to the gun-metal tripod stand. The gas-pipe is led down the central vertical axis, and there communicates by a rotatory joint with the fixed gas-pipes.

The needles adapted for use with this instrument are—

B_1, a plain needle	each 9 inches long.
B_2, a plain needle	
B_3, a loaded needle with adjustible load	
B_4, a needle whose plane passes through the axis of the needle	
C_1, a plain needle	each 6 inches long.
C_2, a plain needle	
C_3, a loaded needle with adjustible load	
C_4, a needle whose plane passes through the axis of the needle	
D_1, a plain needle	each 3 inches long.
D_2, a plain needle	
D_3, a loaded needle with adjustible load	
D_4, a needle whose plane passes through the axis of the needle	

The needles constantly employed are B_1, C_1, D_1, B_2, C_2, D_2.

In discussing carefully the observations taken with this instrument (as well as with other dip-instruments), great trouble was experienced in determining the zenith-point (or reading of the vertical circle when the points of the needle are in the same vertical). To remedy this, a "zenith-point-needle" was constructed under my instructions by Mr. Simms; and it has since been used as need required. It is a flat bar of brass; with pivots similar to those of the dip-needles; and with three pairs of points corresponding to the three lengths of needles used; loaded at one end so as to take a position perfectly definite with respect to the direction of gravity; observed with the microscopes, and reversed for another observation, exactly as the dip-needles. For each of the different lengths of dip-needles, the zenith-point is determined by observation of that pair of points of the zenith-point-needle whose interval is the same as the length of the dip-needle.

The Dip Instrument and all the needles are examined, at the close of each year and at other times if thought desirable, by Mr. Simms. Needle D_2 was in the hands of Mr. Simms for repair from 1867, July 31 to September 9, and Needle C_2 from 1867, December 24, to 1868, March 3.

§ 10. *Observations for the absolute Measure of the Horizontal Force of Terrestrial Magnetism.*

In the spring of 1861, a Unifilar Instrument, similar in all respects (as is understood) to those used in and issued by the Kew Observatory, was procured by the courteous application of Lieut.-General Sabine, from the makers, Messrs. J. T. Gibson and Son; and after having been subjected to the usual examinations, at the Kew Observatory, for determination of its constants (for which I am indebted to the kindness of Balfour Stewart, Esq.), was mounted at the Royal Observatory. Observations with this instrument commenced on 1861, June 11, and were continued through the year; and, after some slight modifications of its verniers, it is still maintained in use (1868).

The deflected magnet (whose use is merely to ascertain the proportion which the power of the deflecting magnet at a given distance bears to the power of terrestrial magnetism) is 3 inches long, carrying a small plane mirror. The deflecting magnet is 4 inches long; it is a hollow cylinder, carrying in its internal tube a collimator, by means of which its time of vibration is observed in another apparatus. The frame which supports the suspension-piece of the deflected magnet carries also the telescope directed to the magnet-mirror; it rotates round the vertical axis of a horizontal graduated circle whose external diameter is 10 inches. The deflecting magnet is always placed on the E. or W. side of the deflected magnet, with one end towards the deflected magnet. In the reduction of the observations, the precepts contained in the Skeleton Form prepared by the Kew Observatory have received the strictest attention.

The following is the explanation of the method of reduction.

The distance of the centers of the deflected and deflecting magnet being known, it is supposed (from observations made at Kew, of which the details have not reached me) that the magnetism of the deflecting magnet is so altered by induction that the following multipliers ought to be used in computing the Absolute Force:—

At distance 1·0 foot, factor is	1·00031
1·1	1·00023
1·2	1·00018
1·3	1·00014
1·4	1·00011
1·5	1·00009

The correction of the magnetic power for temperature t_0 of Fahrenheit, reducing all to 35° of Fahrenheit, is

$$0 \cdot 000131261\ (t_0 - 35) + 0 \cdot 000000259\ (t_0 - 35)^2$$

A_1 is $\frac{1}{2}$(distance)^3 × sine deflection, corrected by the two last-mentioned quantities, for distance 1 foot; A_2 is the similar expression for distance 1·3 foot; A'_2 is $\frac{A_2}{(1 \cdot 3)^2}$ P is $\frac{A_1 - A_2}{A_1 - A'_2}$. A mean value of P is adopted from various observations; then $\frac{m}{X} = A_1 \times \left(1 - \frac{P}{1}\right)$ for smaller distance, or $= A_2 \times \left(1 - \frac{P}{1 \cdot 69}\right)$ for larger distance. The mean of these is usually adopted for the true value of $\frac{m}{X}$.

For computing the value of mX from observed vibrations, it is necessary to know K, the moment of inertia of the magnet as mounted. The value of log. $\pi^2 K$ furnished by Mr. Stewart is 1·66073 at temperature 30° and 1·66109 at temperature 90°. Then, putting T for the time of the magnet's vibration as corrected for induction, temperature, and torsion-force, the value of mX is $= \frac{\pi^2 K}{T^2}$. From the combination of this value of mX with the former value of $\frac{m}{X}$, m and X are immediately found.

It appears, from a comparison of observations given in the Introduction to the *Magnetical and Meteorological Observations*, 1862, that the determinations with the Old Instrument (in use to 1861) ought to be diminished by $\frac{1}{117}$ part, to make them comparable with those of the Kew Unifilar.

The computation of the values of m and X has, to the year 1857, been made in reference to English measure only, using the foot and the grain as the units of length and weight; but, for comparison with foreign observations of the Absolute Intensity of Magnetism, it is desirable that X should be expressed also in reference to French measure, in terms of the millimètre and milligramme. If an English foot be supposed equal to α times the millimètre, and a grain be equal to β times the milligramme, then it is seen that, for the reduction of $\frac{m}{X}$ and mX to French measure, these must be multiplied by α^3 and $\alpha^2\beta$ respectively. Hence X^2 must be multiplied by $\frac{\beta}{\alpha}$, and X by $\sqrt{\frac{\beta}{\alpha}}$. Assuming that the mètre is equal to 39·37079 inches, and the gramme equal to 15·43249 grains, log. $\sqrt{\frac{\beta}{\alpha}}$ will be found to be $= 9 \cdot 6637805$, and the factor for reducing the English values of X to French values will be 0·46108 or $\frac{1}{2 \cdot 1689}$. The values of X in French measure thus derived from those in English measure are given in the proper table.

§ 11. *Explanation of the Tables of Indications of the Magnetometers.*

The Indications are derived entirely from the measures of the ordinates of the Photographic Curves, except in a few instances in which the results are marked with an asterisk, in which case the results are those given by eye-observations, usually because the photographic process has failed.

Telescope-observations of the Magnetometers have usually been made four times every day, except on Sundays, on which days two or three observations only have been taken; but, though these observations are employed in forming the base lines on the photographic sheets, their immediate results are not necessarily given in the Tables.

For each photographic record, a new base-line, representing a convenient reading in round numbers of the element to which it applies, has been drawn on the sheet. Then the Assistant, who is charged with the translation of the curve-ordinates into numbers, remarks the salient points of the curve, or the points which if connected by straight lines would produce a polygon not sensibly differing from the photographic curve; to each of these he applies the pasteboard scale proper for the element under consideration; the base of the pasteboard scale determines the time on the time-scale, and the reading of the pasteboard scale for the point of the photographic curve gives the quantity which is to be added to the value for the new base-line. The ordinate-reading so formed is printed without alteration in the Tables. It is particularly to be remarked that the indications for horizontal force and vertical force are *not corrected for temperature.*

In measuring the ordinates of the Vertical Force Curves, the same difficulty that is mentioned in preceding volumes has still occasionally, though rarely, been felt. Apparently without cause, the curve is dislocated; one part being raised above or depressed below the contiguous part, in the direction of the ordinate, usually by small quantities. In all cases the displacement is accompanied by vibration, the original position being at the extremity of the arc of vibration, and the new position being at its center; showing that there has been no want of delicacy in the movement, and that the change is precisely the same as would be caused by the quiet application of a small weight upon one end of the magnet.

In translating the ordinates into numbers on these occasions, two ordinates have been taken for the same abscissa; these are connected, in the printed Indications, by a brace, and the difference of the numbers indicates the amount of the disturbance.

§ 12. *Wires and Photographic self-registering Apparatus for continuous Record of Spontaneous Terrestrial Galvanic Currents.*

In order to obtain an exhibition of the spontaneous galvanic currents which in some measure are almost always discoverable in the earth, and which occasionally are very powerful, it was necessary to extend two insulated wires from an earth connexion at the Royal Observatory, in two directions nearly at right angles to each other, to considerable distances, where they would again make connexion with the earth. By the kindness of the Directors of the South Eastern Railway Company, to whom the Royal Observatory has on several occasions been deeply indebted, two connexions are made; one to a station near Dartford, at the direct distance $9\frac{3}{4}$ miles nearly, in azimuth (measured from North, to East, South, West), 102° astronomical or 122° magnetical, the length of the connecting wire being about 15⅝ miles; the other to a station near Croydon, at the direct distance 8 miles, in azimuth, 209° astronomical, or 229° magnetical, the length of the connecting wire being about 10½ miles. At these two stations connexion is made with earth. The details of the course are as follows. The wires are soldered to a water pipe in the Magnetic Ground at the Royal Observatory. Thence they enter the Magnetic Basement, and pass through the photographic self-registering apparatus (to be shortly described). From it they are led up the electrometer mast to a height exceeding 50 feet, and thence they are swung across the grounds to a chimney above the Octagon Room. They descend thence, and are led to a terminal board in the Computing Room, to which an intermediate galvanometer can be attached for eye-observation of the currents. From this point they are led to the "Battery Basement," and, with other wires, pass under the Park to the Greenwich Railway Station, and upon the telegraph poles. One wire branches off at the junction with the North Kent Railway to Dartford, the other at the junction with the Croydon Branch Railway to Croydon. At both places their connexion with earth is made by soldering to waterpipes, as at the Royal Observatory.

The apparatus for receiving the effects of the galvanic currents consists essentially of two magnetic needles (one for each wire), each suspended by a hair so as to vibrate horizontally within a galvanic coil, exactly as in the ordinary speaking telegraph; these coils being respectively in the courses of the two long wires. A current of one kind, in either wire, causes the corresponding needle to turn itself through an angle nearly proportioned to the strength of the current, in one direction; a current of the opposite kind causes it to turn in the opposite direction. These turnings are registered by the following apparatus.

The carrier of each magnet carries also a small plane mirror, which receives all the azimuthal motions of the magnet. The light of a gas-lamp passes through a minute aperture, and shines upon the mirror; the divergent pencil is converted into a convergent pencil by refraction through crossed cylindrical lenses (with axes vertical before the pencil reaches the mirror, and with axes horizontal where the pencil is received from the mirror), which, under the circumstances, were more convenient than spherical lenses. A spot of light is thus formed upon the photographic paper wrapped upon a cylinder of ebonite, which is covered by a glass cylinder, and made to rotate in twenty-four hours by clock-work, exactly as for the register of the magnetic elements. As in the case of declination and horizontal-force, the two earth currents make their registers upon opposite sides of the same barrel, and upon different parts of the sheet; the same gaslight serving for the illumination of both.

A portion of a base-line for either record is obtained at any time by simply breaking the galvanic communication.

The photographic records have been regularly made since 1865, March 15. Seventeen days were selected for special examination, and for these the equivalent galvanic currents in the north and west directions were computed, and their effects in producing apparent magnetic disturbances in the west and north directions were inferred. They correspond almost exactly with those indicated by the magnetometers. The discussion of these has been communicated to the Royal Society, and is printed in the Philosophical Transactions, 1868.

For these seventeen days, the measures of the ordinates of the Dartford curve (with scale G, in which 0·01 part of the whole Horizontal Force is 5·47 inches), and those of the Croydon curve (with scale H, in which 0·01 of Horizontal Force is 4·90 inches), are printed in this volume, after the Indications of the Magnetometers.

§ 13. *Standard Barometer.*

The Barometer is a standard, by Newman, mounted in 1840. It is fixed on the South wall of the West arm of the Magnetic Observatory. The graduated scale which measures the height of the mercury is made of brass, and to it is affixed a brass rod, passing down the inside of one of the upright supports, and terminating in a conical point of ivory; this point in observation is made just to touch the surface of the mercury in the cistern, and the contact is easily seen by the reflected and the actual point appearing *just* to meet each other. The rod and scale are made to slide up and down by means of a slow-motion screw. The scale is divided to $0^{\text{in}}\cdot05$.

The vernier subdivides the scale divisions to $0^{\text{in}}\cdot002$; it is moved by a slow-motion screw, and in observation is adjusted so that the ray of light, passing under the back and front of the semi-cylindrical plate carried by the vernier, is a tangent to the highest part of the convex surface of the mercury in the tube.

The tube is $0^{\text{in}}\cdot565$ in diameter; the correction for the effect of capillary attraction is therefore only $+ 0^{\text{in}}\cdot002$. The cistern is of glass.

At the bottom of the instrument are three screws, turning in the fixed part of the support, and acting on the piece in which the lower pivot of the barometer-frame turns, for adjustment to verticality: this adjustment is examined weekly.

The readings of this barometer, until 1866, August 20^{d}, 0^{h}, are considered to be coincident with those of the Royal Society's flint-glass standard barometer. On that day a change was made in the barometer. It had been remarked that the slow-motion-screw at the bottom of the sliding rod (for adjusting the ivory point to the surface of the mercury in the cistern) was partly worn away: and on August 20 the sliding rod was removed from the barometer by Mr. Zambra to remedy this defect. It was restored on 1866, August 30^{d}, 3^{h}. Before the removal of the sliding rod, barometric comparisons had been made with a standard barometer the property of Messrs. Murray and Heath, and with two barometers, Negretti and Zambra, Nos. 646 and 647. While the sliding rod of the Greenwich standard was removed, Negretti and Zambra 647 was used for daily observations. After the new equipment of the standard barometer, another series of comparisons with the same barometers was made: from which it was found (the three auxiliaries giving accordant results) that the readings of the barometer, in its new state, required a correction of $-0^{\text{in}}\cdot006$. This is applied in the printed observations commencing with 1866, August 30.

All observations of this barometer have been corrected for the difference of temperature of the mercury in the tube at the time of observation from 32°, by the application of the corrections contained in the table for barometers whose scales are engraved upon a rod of brass reaching from the level of the mercury to the vernier. (See the report of the Committee of Physics and Meteorology approved by the Royal Society.)

The height of the cistern above the mean level of the sea is 159 feet. This element is founded upon the determination of Mr. Lloyd, in the *Phil. Trans.*, 1831; the elevation of the cistern above the brass piece inserted in a stone in the transit-room (to which Mr. Lloyd refers) being $5^{\text{ft}}.2^{\text{in}}$.

The barometer has been read at 21^{h}, 0^{h}, 3^{h}, 9^{h} (astronomical), on every day, excepting on Sundays, and on Good Friday and Christmas Day, on which days fewer observations have been taken. Every reading has been reduced to the reading which would have been obtained at the temperature 32° of the mercury and scale, by application of the correction given in Table II. (pages 82 to 87) of the Report of the Committee of Physics of the Royal Society. The mean of the reduced readings has then been taken for each civil day, and finally converted into mean daily reading, by application of the correction inferred from Mr. Glaisher's paper in the *Philosophical Transactions*, 1848, Part I, Table I, page 127.

In the printed record of the barometrical and all other meteorological observations, the day is to be understood, generally, as defined in civil reckoning.

§ 14. *Photographic self-registering Apparatus for continuous Record of the Readings of the Barometer.*

The Photographic self-registering Apparatus for continuous Record of Magnetic Vertical Force is furnished (as has been stated) with a vertical cylinder covered with photographic paper and revolving in 24 hours. North of the surface of this cylinder, at the distance of about 30 inches, is a large syphon barometer, the bore of the upper and lower extremities of its arms being about 1·1 inch. A glass float partly immersed in the quicksilver of the lower extremity is partially supported by a counterpoise acting on a light lever (which turns on delicate pivots), so that the wire supporting the float is constantly stretched, leaving a definite part of the weight of the float to be supported by the quicksilver. This lever is lengthened to carry a vertical plate of opaque mica with a small aperture, whose distance from the fulcrum is nearly eight times the distance of the point of attachment of the float wire, and whose movement, therefore, is nearly four times the movement of the column of a cistern-barometer. Through this hole the light of a lamp, collected by a cylindrical lens, shines upon the photographic paper.

The scale of time is established by means of occasional interruptions of the light, and the scale of measure is established by comparison with occasional eye-observations.

This barometer was brought into use in 1848, but its indications were not satisfactory till the mercury was boiled in the tube by Messrs. Negretti and Zambra on 1853, August 18, since which time they have appeared unexceptionable. Results of the indications are printed in the *Maxima and Minima of the Barometer*, near the end of the Meteorological Results.

§ 15. *Thermometers for ordinary Observation of the Temperature of the Air and Evaporation.*

The Dry-Bulb Thermometer, the Wet-Bulb Thermometer, the Maximum Self-Registering Thermometers, both dry and wet, and the Minimum Self-Registering Thermometers, dry and wet, all for determination of the temperature of the air and of evaporation, are mounted on a revolving frame whose fixed vertical axis is planted in the ground. From the year 1846 to 1863 the post forming the vertical axis was about 23 feet south (magnetic) of the S.S.E. angle of the south arm of the Magnetic Observatory; in 1863 it was moved to a position about 35 feet south (astronomical) of the south angle. A frame revolves on this post, consisting of a horizontal board as base, of a vertical board projecting upwards from it connected with one edge of the horizontal board, and of two parallel inclined boards (separated about three inches) connected at the top with the vertical board, and at the bottom with the other edge of the horizontal board. The outer inclined board is covered with zinc. The air passes freely between all these boards.

The dry and wet-bulb thermometers are attached to the outside, and near the center of the vertical board; the maximum and minimum thermometers for air towards one vertical edge, and those for evaporation towards the other vertical edge, with their bulbs at almost the same level, and near to those of the dry and wet-bulb thermometers; their bulbs are about 4 feet above the ground and projecting from 2 inches to 3 inches below the horizontal board. Above the thermometers is a small projecting roof to protect them from rain. The frame is always turned with the inclined side towards the sun. It is presumed that the thermometers are thus sufficiently protected.

The graduations of all the thermometers used in the Royal Observatory rest fundamentally upon those of a Standard Thermometer, the property of Mr. Glaisher, which derives its authority from comparison with original thermometers constructed by the late Rev. R. Sheepshanks about the years 1840–1843, in the course of his preparations for the construction of the National Standard of Length. The whole of the radical determinations of Freezing Point, Boiling Point, and Subdivision of Volume of Tube, were made by Mr. Sheepshanks with the utmost care: it is believed that these were the first original thermometers that had been constructed in England for many years. Mr. Glaisher's thermometer has been adopted as the standard of reference for all the thermometers used in the Royal Observatory since 1840.

The Dry-Bulb Thermometer is by Newman. The corrections required for its readings, as found by comparison with the standard above-mentioned, are as follows:—

Between 8° and 11°	subtract	0°.4
12 and 19		0.5
20 and 24		0.6
25 and 30		0.7
31 and 37		0.8
38 and 44		0.9
45 and 52		1.0
53 and 59		1.1
60 and 64		1.2
65 and 68		1.3
69 and 71		1.4
72 and 74		1.5
75 and 77		1.6
78 and 79		1.7
80 and 82		1.8
83 and 84		1.9
85 and 86		2.0
87 and 90		2.1
91 and 95		2.2
96 and 100		2.3
101 and 104		2.4

The wet-bulb thermometer is by Negretti and Zambra, and is in every respect similar to the dry-bulb thermometer.

The corrections required to the readings of this thermometer are—

Between 32° and 49°		0°.0
50 and 81	add	0.2
82 and 91		0.0
92 and 105	subtract	0.2

Dry-bulb and wet-bulb thermometers, with pea-bulbs and porcelain scales, Negretti and Zambra 1179, are also mounted on the roof of the library, 4 feet above the leads and 22 feet above the ground.

No corrections for index error are applied to the readings of these thermometers.

The eye-readings of the dry-bulb and wet-bulb thermometers have usually been taken at the hours (astronomical reckoning) 21^h, 0^h, 3^h, 9^h, and corrected by application of the numbers given above. They are not printed in the present volume.

The dew-point has been inferred exclusively from the simultaneous observations of the dry-bulb and wet-bulb thermometers, by multiplying the difference between the readings of these thermometers by a factor peculiar to the temperature of the air, and subtracting the product from the reading of the dry-bulb thermometer.

These factors have been found by Mr. Glaisher from the comparison of a great number of dew-point determinations, obtained by use of Daniell's hygrometer, with simultaneous observations of dry-bulb and wet-bulb thermometers. The first part of this investigation was published in full, in the volume of *Magnetical and Meteorological Observations* for 1844, pages 67–72; it was based upon all the observations made up to that time. Subsequently, the comparison was extended to include all the simultaneous observations of these instruments made at the Royal Observatory, Greenwich, from 1841 to 1854, with some observations taken at high temperatures in India, and others at low and medium temperatures at Toronto. The results at the same temperature were found to be the same at these different localities, so far as the climatic circumstances permitted comparison. (See Glaisher's Hygrometrical Tables, 4th Edition). The following table exhibits the result of the entire comparison; it has been used in forming the dew-points in the present volume.

TABLE OF FACTORS by which the DIFFERENCE of READINGS of the DRY-BULB and WET-BULB THERMOMETERS is to be MULTIPLIED in order to PRODUCE the DIFFERENCE between the READINGS of the DRY-BULB and DEW-POINT THERMOMETERS.

Reading of Dry-bulb Thermometer.	Factor.	Reading of Dry-bulb Thermometer.	Factor.	Reading of Dry-bulb Thermometer.	Factor.	Reading of Dry-bulb Thermometer.	Factor.
°		°		°		°	
10	8·78	33	3·01	56	1·94	79	1·69
11	8·78	34	2·77	57	1·92	80	1·68
12	8·78	35	2·60	58	1·90	81	1·68
13	8·77	36	2·50	59	1·89	82	1·67
14	8·76	37	2·42	60	1·88	83	1·67
15	8·75	38	2·36	61	1·87	84	1·66
16	8·70	39	2·32	62	1·86	85	1·65
17	8·62	40	2·29	63	1·85	86	1·65
18	8·50	41	2·26	64	1·83	87	1·64
19	8·34	42	2·23	65	1·82	88	1·64
20	8·14	43	2·20	66	1·81	89	1·63
21	7·88	44	2·18	67	1·80	90	1·63
22	7·60	45	2·16	68	1·79	91	1·62
23	7·28	46	2·14	69	1·78	92	1·62
24	6·92	47	2·12	70	1·77	93	1·61
25	6·53	48	2·10	71	1·76	94	1·60
26	6·08	49	2·08	72	1·75	95	1·60
27	5·61	50	2·06	73	1·74	96	1·59
28	5·12	51	2·04	74	1·73	97	1·59
29	4·63	52	2·02	75	1·72	98	1·58
30	4·15	53	2·00	76	1·71	99	1·58
31	3·70	54	1·98	77	1·70	100	1·57
32	3·32	55	1·96	78	1·69		

The maximum self-registering thermometer is a mercurial thermometer, of the construction invented by Messrs. Negretti and Zambra. There is a small detached piece of glass in the tube, just above a bent part of the tube (near the bulb), through which the piece of glass cannot pass down. The column of mercury in rising lifts the glass up and passes freely; but in descending it is unable to pass the glass, and the lower mass of mercury descends, leaving a vacant space below the glass, and leaving a portion of the mercury above it. The piece of glass operates as an efficient valve. The corrections to the readings of this thermometer are as follows:—

Between 32° and 54°	subtract	0°·3
54 and 72		0·2
72 and 80		0·1
80 and 93		0·0
93 and 96	add	0·1
96 and 99		0·2
99 and 102		0·4

There is a similar thermometer for the maximum wet-bulb reading (Negretti and Zambra No. 7537): no corrections have been applied to its readings.

The minimum self-registering thermometers are alcohol thermometers, of the construction known as Rutherford's. A sliding glass index allows the alcohol in rising to pass above it, but is drawn down by the peculiar action of the bounding surface of the fluid when it sinks. The readings of that which gives the minimum temperature of the air require the following corrections, viz.:—

Below 12°	add	0°·2
Between 13 and 18°		0·3
19 and 25		0·4
26 and 35		0·5
36 and 39		0·6
40 and 43		0·7
44 and 47		0·8
48 and 50		0·9
51 and 54		1·0
55 and 57		1·1
58 and 61		1·2
62 and 64		1·3
65 and 67		1·4
68 and 70		1·5
71 and 74		1·6
75 and 77		1·7
78 and 80		1·8

The readings of the minimum wet-bulb thermometer require the following corrections:—

Between 31° and 37°	add	1°·0
37 and 78		0·7

The mean daily values of dry thermometer in the printed columns are found by combining two results derived from different sources. The first and simpler result is the mean of the maximum and minimum, corrected by a small quantity depending on the month, given in Table III. of Mr. Glaisher's paper in the *Philosophical Transactions*, 1848, page 130. The second result is formed by taking the means of the four eye-observations at 21^h, 0^h, 3^h, 9^h, and applying a correction thus investigated. The daily range being found by taking the difference between the maximum and minimum, this daily range is multiplied by the mean of the factors in Table IV. of Mr. Glaisher's paper before mentioned corresponding to the hours of observation; the application of this correction to the mean of the eye-observations gives the second result. (It is evident that this process is applicable to any number of eye-observations.) These two results are then combined to form a mean, weights being given proportional to the number of observations contributing to each result.

For the mean daily value of dew point, the usual process is,—by observing the difference between dry and wet thermometers, and by use of the table of factors printed in page *xxxix* above, to form the difference between air-temperature and dew point at each of the hours of reading; to take the mean of the deduced dew-points, and to apply a correction which is the mean of the corrections in Mr. Glaisher's Table VIII. for the several hours of observation. Sometimes, however, the following process is used. The correction for diurnal range applicable to the mean of the eye-observations of the dry thermometer having been found (as is described above), this correction is multiplied by a fraction, whose numerator is the mean of corrections to wet bulb thermometer in Table VII. for the hours of observations, and whose denominator is the mean of corrections to dry thermometer in Table II. for the same hours; and thus a correction is found which is applied to the mean of the eye-observations of wet bulb thermometer, to form the mean wet bulb for the day. Then by use of the mean dry bulb reading for the day and the mean wet bulb reading for the day and the table of factors above, the mean dew point for the day is formed.

§ 16. *Photographic self-registering Apparatus for continuous Record of the Readings of the Dry-Bulb and Wet-Bulb Thermometers.*

About 28 feet south (magnetic) of the south-east angle of the south arm of the Magnetic Observatory, and about 25 feet east of the thermometers for eye-observations, is a shed 10 ft. 6 in. square, standing upon posts 8 feet high, under which are placed the photographic thermometers, the dry-bulb thermometer towards the east, and the wet-bulb thermometer towards the west. The bulbs of the thermometers are 8 inches in length, and 0·4 inch internal bore, and their centers are about 4 feet above the ground. The bulb of one of the thermometers is covered with muslin throughout its whole length, which is kept moist by means of capillary passage of water along cotton wicks leading to a vessel filled with water.

There are small adjustments admitting the raising or dropping of the thermometers, so that the register of their changing readings may be on a convenient part of the paper. The thermometer frames are covered by plates having longitudinal apertures, so narrow, that any light which may pass through them is completely, or almost completely, intercepted by the broad flat column of mercury in the thermometer-tube. Across these plates a fine wire is placed at every degree; and at the decades of the degrees, and also at 32°, 52°, and 72°, a coarser wire is placed. A gas lamp is placed about 9 inches from each thermometer (east of the dry bulb and west of the wet bulb), and its light, condensed by a cylindrical lens, whose axis is vertical, shines through the thermometer-tube above the surface of the mercury, and forms a well-defined line of light upon the photographic paper, which is wrapped around the cylinder. The axis of this cylinder is vertical; its mounting is in all respects similar to that of the Vertical Force cylinder. As the cylinder, covered with photographic paper, revolves under the light, which passes through the thermometer-tube, it receives a broad sheet of photographic trace, whose breadth (in the direction of the axis of the cylinder) varies with the varying height of the mercury in the thermometer-tube. The light in its passage is intercepted by the wires placed across the tube at every degree, and there are, therefore, left upon the paper corresponding lines in which there is no photogenic action.

The cylinder revolves in 48 hours; the daily photographic traces of the two thermometers are thus simultaneously registered on opposite sides of the cylinder without intermixing. The length of the cylinder is 13½ inches, and its circumference is 19 inches.

§ 17. *Thermometers for Solar Radiation and Radiation to the Sky.*

The thermometer for Solar Radiation, which to the end of the year 1864 was placed in an open box about 10 feet south of the south-west angle of the south arm of the Magnetic Observatory, is now laid on the grass, near the same place.

The thermometer is a self-registering maximum mercurial thermometer of Negretti and Zambra's construction; its bulb is blackened, and enclosed in a glass sphere from which the air has been exhausted. Its graduations are correct, and the numbers inserted in the tables are those read from the instrument without alteration. The thermometer is read at 9^h a.m., noon, 3^h p.m., and occasionally at 9^h p.m.; the highest of these readings is adopted as the maximum for the day.

The use of a thermometer with blackened bulb not inclosed in an exhausted sphere was discontinued at the end of 1865.

The thermometer for radiation to the sky is placed near to the Solar Radiation thermometer, with its bulb resting on short grass, and fully exposed to the sky. It is a self-registering minimum spirit thermometer of Rutherford's construction, made by Negretti and Zambra. Its graduation is correct, and the numbers inserted in the table are those read from the scale without alteration. It is read every day at 9^h a.m., and occasionally at 9^h p.m.

This thermometer was out of order on May 31, July 7 and 25, August 1 and 9, September 20, December 27.

§ 18. *Thermometers sunk below the Surface of the Soil at different Depths.*

These thermometers were made by Messrs. Adie of Edinburgh, under the immediate superintendence of the late Professor J. D. Forbes. The graduation was made by Professor Forbes himself.

The thermometers are four in number. They are all placed in one hole in the ground, the diameter of which in its upper half is 1 foot, and in its lower half about 6 inches. Each thermometer is attached in its whole length to a slender piece of wood, which is planted in the hole with it. The place of the hole is 20 feet south of the extremity of the south arm of the Magnetic Observatory, and opposite the center of its south front.

The soil consisted of beds of sand; of flint-gravel with a large proportion of sand; and of flints with a small proportion of sand, cemented almost to the consistency of pudding-stone. Every part of the gravel and sand extracted from the hole was perfectly dry.

The bulbs of the thermometers are cylindrical, 10 or 12 inches long and 2 or 3 inches in diameter. The bore of the principal part of the tubes, from the bulb to the graduated scale, is very small. In that part to which the scale is attached, the tube is larger.

The thermometer No. 1 was dropped into the hole to such a depth that the center of its bulb was 24 French feet (25·6 English feet) below the surface: then dry sand was poured in till the hole was filled to nearly half its height. Then No. 2 was dropped in till the center of its bulb was 12 French feet below the surface; No. 3 and No. 4 till the centers of their bulbs were respectively 6 and 3 French feet below the surface; and the hole was then completely filled with dry sand. The upper parts of the tubes, carrying the scales, were left projecting above the surface: No. 1 by 27·5 inches, No. 2 by 28·0 inches, No. 3 by 30·0 inches, and No. 4 by 32·0 inches. Of these lengths, the parts 8·5, 10·0, 11·0, and 14·5 inches, respectively are tube with narrow bore.

The projecting parts of the tubes are protected by a wooden case or box fixed to the ground; the sides of the box are perforated with numerous holes, and it has a double roof. In the North face of this box is a large plate of glass through which the thermometers are read. Within the box are two smaller thermometers, one (No. 5) whose bulb is sunk one inch in the ground, and one (No. 6) whose bulb is in the free air nearly in the center of the box.

The fluid of the four long thermometers is alcohol tinged with a red colour.

The values of 1° on the scales of Nos. 1, 2, 3 and 4, are respectively $2^{\text{in.}}$, $1^{\text{in.}}1$, $0^{\text{in.}}9$, and $0^{\text{in.}}55$; and the ranges of the scales, as first mounted, were, 43°·0 to 52°·7, 42°·0 to 56°·8, 39°·0 to 57°·5, and 34°·2 to 64°·5.

These ranges for Nos. 2, 3, and 4, were found to be insufficient in some years, particularly those of Nos. 3 and 4, or the thermometers sunk to the depth of 6 feet and 3 feet.

In 1857, June 22, Messrs. Negretti and Zambra removed from Nos. 3 and 4 a quantity of fluid corresponding to the extent of 5° on their scales, and the scales of these two thermometers were then lowered by that linear extent, making the readings the same as before. Their ranges are now, respectively, 44° to 62°·5, and 39°·2 to 69°·5.

In subsequent years it was found that the amount of fluid removed was somewhat too great, for now at the lower end of the scale the 6-foot thermometer sometimes falls below the limit of its scale or 44°; and the 3-foot thermometer below 39°·0; in which cases the alcohol sinks into the capillary tube.

The readings at the early part of the series were at times defective at high temperatures, but always complete at low temperatures; now, they are generally complete at high temperatures, and are at times defective at low temperatures. The two combined, however, will enable us to complete all readings.

These thermometers are read once a day, at noon, and the readings appear in the printed volumes as read from their scales without correction.

§ 19. *Thermometers immersed in the Water of the Thames.*

The self-registering maximum and minimum thermometers for determining the highest and lowest temperatures of the water of the Thames are by Messrs. Negretti and Zambra, and are observed every day at 9^h a. m.

A strong wooden trunk is firmly fixed to the side of the Dreadnought Hospital Ship, about 5 feet in length, and closed at the bottom; the bottom and the sides, to the height of 3 feet, are perforated with a great number of holes, so that the water can easily flow through; the thermometers are suspended within this trunk so as to be about 2 feet below the surface of the water, and 1 foot from the bottom of the trunk.

The regular observations are made under the superintendence of the Medical Officers of the Ship.

These thermometers were not read on March 25, June 3 and 18, July 2, 7, and 8, August 5, 17, and 18, September 3 and 9, October 18, 24, and 27, November 4, 15, 21 and 30, December 18, 25 to 31. The thermometer for minimum temperature was out of order on January 15.

The index-error corrections to these thermometers were :—

For the maximum thermometer,	subtract 1°·2
For the minimum thermometer,	subtract 0·3

§ 20. *Osler's Anemometer.*

This anemometer is self-registering: it was made by Newman, on a plan furnished by A. Follett Osler, Esq., F.R.S., but has received several changes since it was originally constructed. A large vane, which is turned by the wind, and from which a vertical spindle proceeds down nearly to the table in the north-western turret of the ancient part of the Observatory, gives motion by a pinion upon the spindle to a rack-work carrying a pencil. This pencil makes a mark upon a paper affixed to a board which is moved uniformly in a direction transverse to the direction of the rack-motion. The movement of the board is effected by means of a second rack connected with the pinion of a clock. The paper has lines printed upon it corresponding to the positions which the pencil must take when the direction of the vane is N., E., S., or W.; and also has transversal lines corresponding to the positions of the pencil at every hour. The first adjustment for azimuth was obtained by observing from a certain point the time of passage of a star behind the vane-shaft, and computing from that observation the azimuth; then on a calm day drawing the vane by a cord to that position, and adjusting the rack, &c., so that the pencil position on the sheet corresponded to that azimuth.

This construction originally arranged by Mr. Osler was in use till the middle of 1866, when the following modifications were made in it by Mr. Browning:—

The vane-shaft was made to bear upon anti-friction-rollers running in a cup of oil. For elucidation of the following description of the apparatus which it carries, I refer to Figure 3 on the engraving at the end of the Introduction to the volume of 1866. To the vane-shaft is attached a rectangular frame C, which rotates with the vane. To this frame are firmly attached the ends of four strong springs D, which rise from the point of attachment in a vertical direction, are then bent so as to descend below the frame C, and are then bent upwards so as to rise a short distance, where they terminate, each of them thus forming a large hook. To the interior of each strong spring, near to its upper bend, is affixed a very weak spring, which descends free into the lower bend or hook of the strong spring, so that its lower end may be moved by a light pressure till it reaches and takes bearing against the bent-up part of the strong spring, after which it cannot be further moved without moving the strong spring, and will therefore require much greater pressure. The four ends of these four light springs carry the circular pressure-plate A by the following connexions. The two which are farthest from A, or which are below the wide part of the vane, are united by a light horizontal cross-bar G; and from the ends of these springs proceed four light bars E, which are attached to points of the pressure-plate A, near its circumference. The two ends of light springs which are nearest to A are also united by a light horizontal cross bar, which is attached to a projection from the center of the plate A. (The diagonal lines upon A, in the diagram, represent indistinctly two strengthening edge-bars upon the pressure-plate, and the projection above-mentioned is fixed to their intersection.) The weight of the pressure-plate thus rests entirely on the slender springs; it is held steadily in position, as regards the opposition to the wind, and it moves without sensible friction. A light wind drives it through a considerable space, until the ends of one pair of light springs touch their large hooks; then for every additional pound of pressure the movement is smaller, till the ends of the other pair of light springs touch their large hooks; after this the movement for every additional pound of pressure is still further diminished. This apparatus was arranged by Mr. Browning. The communication with the pencil below is similar to that in the first construction: the cord and pulley are omitted in the drawing to avoid confusion.

The pressure-pencil below is carried by a radial bar, whose length is parallel to the scale of hours; it is brought to zero by a small weight on a cord running over a pulley.

The surface of the pressure-plate is 2 square feet, or double that in the old construction. The scale of indications on the recording-sheet was determined experimentally as in the old instrument; yet it is remarked that the pressures of wind per square foot appear generally greater than formerly.

The scale for small pressures is much larger, and their indications much more certain than formerly. A pressure of an ounce per square foot is clearly shown.

A rain gauge of peculiar construction is carried by this instrument, by which the fall of rain is registered with reference to the time of the fall. It is described in § 22.

A fresh sheet of paper is applied to this instrument every day at 22^h mean solar time.

§ 21. *Robinson's Anemometer.*

In the latter part of the year 1866, a new instrument, on the principles described by Dr. Robinson in the Transactions of the Royal Irish Academy, vol xxii, adapted to give a continuous record of the velocity of the wind, was mounted by Mr. Browning, of which the principal parts are represented in Figures 1 and 2 of the engraving in the Introduction 1866. The motion is given (as in the former) by the pressure of the air on four hemispherical cups, the distance of the center of each from the axis of rotation being 15·00 inches. The foot of the axis is a hollow flat cone bearing upon a sharp cone which rises up from the base of a cup of oil. The horizontal arms are connected with a vertical spindle, upon which is an endless screw, working in a toothed wheel connected with a train of wheels, furnished with indices capable of registering one mile and decimal multiples of a mile up to 1,000 miles. A pinion C upon the axis of one of the wheels (which, in the figure, occupies a place too high) acts in a rack J, drawing it upwards by the ordinary motion of the revolving cups. The rack is pressed to the pinion by a spring, and, when it has been drawn up, it can be pressed by hand in opposition to the spring so as to release it from the pinion, and can then be pushed down, again to be raised by the action of the wheel-work. The rack is connected at the bottom with a sliding rod D, which passes down into the chamber below, where it draws up the sliding pencil-carrier E. The pencil F, which it carries, traces its indications upon the sheet of paper wrapped round a barrel, whose axis is vertical, and which by spindle connexion with the clock H is made to revolve in 24 hours. The revolving cups and wheel-work are so adjusted that a motion of the pencil upwards of one inch represents a motion of the air through 100 miles. The curve traced upon the barrel exhibits, therefore, the aggregate of the air's movements, and also the air's velocity, at every instant of the day.

In the year 1860, on July 3, 4, and 13, experiments were made in Greenwich Park, with the instrument then in use, to ascertain the correctness of the theory of Robinson's anemometer; the point to be verified being that the scale of the instrument, founded on the supposition that the horizontal motion of the air is about three times the space described by the centers of the cups, is correct.

A post about 5 feet high with a vertical spindle in the top was erected, and on this spindle turned a horizontal arm, carrying at the extremity of its longer portion Robinson's anemometer, and on its shorter portion a counterpoise. The distance from the vertical spindle of the post to the vertical axis of the anemometer was $17^{\text{ft.}}\ 8^{\text{in.}}\cdot 7$. The reading of the dial was taken, and then the arm was made to revolve in the horizontal plane 50 or 100 times, an attendant counting the number of revolutions, and the reading of the dial was again taken. In this manner 1,000 revolutions were made in the direction N.E.S.W.N., and 1,000 revolutions in the direction N.W.S.E.N. In some of the experiments the air was sensibly quiet, and in others there was a little wind; the result was,

For a movement of the instrument through one mile,

Beam revolving N.E.S.W. (opposite to the direction of rotation of the Anemometer-cups)	1·15 was registered.
Beam revolving N.W.S.E. (in the same direction as the Anemometer-cups)	0·97 was registered.

The results from rapid revolutions and from slow revolutions were sensibly the same.

This may be considered as confirming in a very high degree the accuracy of the theory.

§ 22. *Rain Gauges.*

The rain-gauge connected with Osler's anemometer is 50 feet 8 inches above the ground, and 205 feet 6 inches above the mean level of the sea. It exposes to the rain an area of 200 square inches (its horizontal dimensions being 10 by 20 inches).

The collected water passes through a tube into a vessel suspended in a frame by spiral springs, which lengthen as the water increases, until 0·24 of an inch is collected in the receiver; it then discharges itself by means of the following modification of the syphon. A copper tube, open at both ends, is fixed in the receiver, in a vertical position, with its end projecting below the bottom. Over the top of this tube a larger tube, closed at the top, is placed loosely. The smaller tube thus forms the longer leg, and the larger tube the shorter leg, of a syphon. The water, having risen to the top of the smaller tube, gradually falls through it into the uppermost portion of a tumbling bucket, fixed in a globe under the receiver. When full, the bucket falls over, throwing the water into a small pipe at the lower part of the globe; the water completely fills the bore of the pipe; its descent causes an imperfect vacuum in the globe, sufficient to cause a draught in the longer leg of the syphon, and the whole contents run off. After leaving the globe, the water is carried away by a waste-pipe attached to the building. The springs then shorten and raise the receiver. The ascent and descent of the water-vessel move a radius-bar which carries a pencil; and this pencil makes a trace upon the paper carried by the sliding board of the self-registering anemometer. As the trace is rather long in proportion to the length of the radius-bar, the bar has now been furnished by Mr. Browning with a "parallel motion," which makes the trace sensibly straight.

The scale of the printed paper was adjusted by repeatedly filling the water-vessel until it emptied itself, then weighing the water, and thus ascertaining its bulk, and dividing this bulk by the area of the surface of the rain receiver.

A second gauge, with an area 77 square inches nearly, is placed close to the preceding, the receiving surface of both being on the same horizontal plane.

A third gauge is placed on the roof of the Octagon room, at 38 feet $4\frac{1}{2}$ inches above the ground, and 193 feet $2\frac{1}{2}$ inches above the mean level of the sea. It is a simple cylinder gauge, 8 inches in diameter and about $50\frac{1}{4}$ inches in area. The height of the cylinder is $13\frac{1}{2}$ inches; at the depth of 1 inch from the top within the cylinder is fixed a funnel (an inverted cone) of 6 inches perpendicular height; with the point of this funnel is connected a tube, $\frac{1}{5}$ of an inch in diameter, and $1\frac{1}{2}$ inch in length; $\frac{3}{4}$ of an inch of this tube is slightly curved, and the remaining $\frac{3}{4}$ of an inch is bent upwards, terminating in an aperture of $\frac{1}{8}$ of an inch in diameter. By this arrangement, the last few drops of water remain in the bent part of the tube, and the water is some days evaporating. The upper part of the funnel or bore of the cone is connected with a brass ring, which has been turned in a lathe, and this is connected with a circular piece 6 inches in depth, which passes outside the cylinder, and rests in a water joint, attached to the inner cylinder, and extending all round.

A fourth gauge is placed on the top of the Library; it is a funnel, whose top has a diameter of 6 inches; its exposed area is $28\frac{1}{4}$ inches nearly. The receiving surface of the gauge is 22 feet 4 inches above the ground, and 177 feet 2 inches above the mean level of the sea.

A fifth gauge is planted on the roof of the Photographic Thermometer shed, 10 feet above the ground, and 164 feet 10 inches above the mean level of the sea. Its construction is the same as that of the third gauge.

A sixth gauge is a self-registering rain-gauge on Crosley's construction, made by Watkins and Hill. The surface exposed to the rain is 100 square inches. The collected water falls into a vibrating bucket, whose receiving concavity is entirely above the center of motion, and which is divided into two equal parts by a partition whose plane passes through the axis of motion. The pipe from the rain-receiver terminates immediately above the axis. Thus that part of the concavity which is highest is always in the position for receiving water from the pipe. When a certain quantity of water has fallen into it, it preponderates, and, falling, discharges its water into a cistern below; then the other part of the concavity receives the rain, and after a time preponderates. Thus the bucket is kept in a state of vibration. To its axis is attached an anchor with pallets, which acts upon a toothed wheel by a process exactly the reverse of that of a clock-escapement. This wheel communicates motion to a train of wheels, each of which carries a hand upon a dial-plate; and thus inches, tenths, and hundredths are registered. Sometimes, when the escapement has obviously failed, the water which has descended to the lower cistern has again been passed through the gauge, in order to enable an assistant to observe the indication of the dial-plates without fear of an imperfection in the machinery escaping notice. The gauge is placed on the ground, 21 feet South of the Magnetic Observatory, and 156 feet 6 inches above the mean level of the sea.

The seventh and eighth gauges are placed near together, about 16 feet south of the Magnetic Observatory, 5 inches above the ground, and 155 feet 3 inches above the mean level of the sea. They are similar in construction and area to No. 3. These cylinders are sunk about 8 inches in the ground.

All these gauges, except No. 7, are read at 22^{h} daily; in addition, Crosley's gauge and No. 8 are read daily at 9^{h} p.m., and No. 7 at the end of each month only, to check the summation of the daily readings of No. 8. All are read at midnight of the last day of each month.

Gauges Nos. 1, 2, 3, 5, 8 were made by Messrs. Negretti and Zambra; No. 4 by Troughton; No. 6 by Watkins and Hill; and No. 7 is an old gauge.

§ 23. *Electrical Apparatus.*

The electrical apparatus consists of two parts, namely, the Moveable Apparatus, which is connected with a pole nearly 80 feet high planted 7 feet North and 2 feet East of the north-east angle of the north arm of the Magnetic Observatory (as extended in 1862); and the Fixed Apparatus, which is mounted in a projecting window in the ante-room of the Magnetic Observatory.

On the top of the pole is fixed a projecting cap, to which are fastened the ends of two iron rods, which terminate in a pit sunk in the ground, and are kept in tension by attached weights. These rods are to guide the moveable apparatus in its ascents and descents. Near the bottom of the pole is fixed a windlass; the rope upon which it acts passes over a pulley in the cap, and is used to raise the moveable apparatus, which when raised to the top is suspended on a hook.

The moveable apparatus consists of the following parts:—A plank in a nearly vertical position is attached to perforated iron bars, which slide upon the iron rods. On the upper part of this plank is a cubical box. The box incloses a stout pillar of glass, having a conical hollow in its lower part. In the bottom of the box there is a large hole through which a cone of copper passes into the conical hollow of the glass pillar. In the lower part of the box a gas-lamp is placed, by the flame of which the copper cone and the lower part of the glass pillar are kept in a state of warmth. A copper wire is fastened round the glass pillar; its end is carried to a similar glass pillar, warmed in the same manner, near the north-western turret of the Octagon room; by this wire, whose length is about 400 feet, the atmospheric electricity is collected. To this wire, near the box, is attached another copper wire (now covered with gutta percha) 0·1 inch in diameter, and about 73 feet long, at the end of which is a hook; a loaded brass lever connected with the fixed apparatus presses upon this hook, and thus keeps the wire in a state of tension, and at the same time establishes the electrical communication between the long horizontal wire and the fixed apparatus.

The fixed apparatus consists of these parts:—A glass bar, nearly 3 feet long, and thickest at its middle, is supported in a horizontal position, its ends being fixed in pieces of wood projecting downwards from the roof of the projecting window. Near to each end is placed a small gas-lamp, whose chimney encircles the glass, and whose heat keeps the glass in a state of warmth proper for insulation. A brass collar surrounds the center of the glass bar; it carries one brass rod, projecting vertically upwards through a hole in the roof of the window-recess, to which rod are attached a small metallic umbrella and the loaded lever above-mentioned; and it carries another rod projecting vertically downwards, to which is attached a horizontal brass tube in an East and West direction. On the North and South sides of this tube there project four horizontal rods, through the ends of which there pass vertical rods, which can be fixed by screws at any elevation; these are placed in connexion with the electrometers, which rest on the window seat.

The electrometers during the year 1867 consisted of two Volta's Electrometers, denoted by Nos. 1 and 2; a Henley's Electrometer; a Ronalds' Spark Measurer; a Dry-pile Apparatus; and a Galvanometer.

Volta 1 and Volta 2 are of the same construction; each is furnished with a pair of straws 2 Paris inches in length; those of the latter being much heavier than those of the former: each instrument is furnished with a graduated ivory scale, whose radius is 2 Paris inches, and it is graduated into half Paris lines. In the original construction of these instruments it was intended that each division of No. 2 should correspond to five of No. 1: the actual relation between them has not yet been determined by observations at the Royal Observatory. The straws are suspended by hooks of fine copper wire to the suspension-piece, and they are separated by an interval of half a line.

Henley's Electrometer is supported on the West end of the large horizontal tube by means of a vertical rod fixed in it. On each side of the upper part of this rod is affixed a semicircular plate of ivory, whose circumference is graduated; at the centers of these ivory plates two pieces of brass are fixed, which are drilled to receive fine steel pivots, carrying a brass axis, into which the index or pendulum is inserted; the pendulum terminates with a pith ball. The relation between the graduations of this instrument and those of the other electrometers has not been determined. This instrument has seldom been affected till Volta 2 has risen to above 100 divisions of its scale.

The spark measurer consists of a vertical sliding rod terminated by a brass ball, which ball can be brought into contact with one of the vertical rods before referred to, also terminating in a ball; and it can be moved from it or towards it by means of a lever, with a wooden handle. During the operation of separating the balls, an index runs along a graduated scale, and exhibits the distance between the balls, and this distance measures the length of the spark.

The electrometers and the spark measurer were originally constructed under the superintendence of Francis Ronalds, Esq., but have since received small alterations.

The dry-pile apparatus was made by Watkins and Hill; it is placed in connexion with the brass bar by a system of wires and brass rods. The indicator, which vibrates between the two poles, is a small piece of gold leaf. This instrument is very delicate, and it indicates at once the quality of the electricity. When the inclination of the gold leaf is such that it is directed towards the top of either pile, it remains there as long as the quantity of electricity continues the same or becomes greater: the position is sometimes expressed in the notes by the words "as far as possible." The angle which the gold leaf makes with the vertical at this time is about 40°.

The galvanometer was made by Gourjon of Paris, and consists of an astatic needle, composed of two large sewing needles, suspended by a split silk fibre, one of the needles of the pair vibrating within a ring formed by 2,400 coils of fine copper wire. The connexions of the two portions of wire forming these 2,400 coils are so arranged that it is possible to use a single system of 1,200 coils of single wire, or a system of 1,200 coils of double wire, or a system of 2,400 coils of single wire: in practice the last has always been used. A small ball communicating by a wire with one end of the coils is placed in contact at pleasure with the electric conductor, and a wire leading from the other end of the coil communicates with the earth. An adjustible circular card, graduated to degrees, is placed immediately below the upper needle; the numeration of its divisions proceeds in both directions from a zero. One of these directions is distinguished by the letter A, and the other by the letter B; and the nature of the indication represented by the deflection of the needle towards A or towards B will be ascertained from the following experiment. A voltaic battery being formed by means of a silver coin and a copper coin, having a piece of blotting paper moistened with saliva between them: when the copper touches the small ball, and the wire which usually communicates with the earth is made to touch the silver, the needle turns towards A; when the silver touches the small ball, and the wire is made to touch the copper, the needle turns towards B.

§ 24. *Explanation of the Tables of Meteorological Observations.*

The mean daily value of the difference between dew-point temperature and air-temperature is the difference between the two numbers in the sixth and seventh columns. The Greatest and Least are the greatest and least among the differences corresponding to the times of observation in the civil day, or they are found from the absolute maxima and minima, as determined by comparing the observations of the self-registering wet-bulb thermometers with those of the self-registering dry-bulb thermometers.

The difference between the mean temperature for the day and the mean for the same day of the year on an average of fifty years, is found by comparison with a table of results deduced by Mr. Glaisher from fifty years' observations, made at the Royal Observatory, ending 1863.

Little explanation of the results deduced from Osler's Anemometer appears to be necessary. It may be understood generally that the greatest pressure occurred in gusts of short duration.

To 1867, October 31, the indication of Robinson's Anemometer was read off every day at 22^h (10^h A.M.), and the difference between consecutive readings was entered opposite to the civil day on which the first reading was taken. From 1867, November 1, the daily values have been extracted from the sheets of the continuous record, applying to the interval from midnight to midnight, and are entered opposite to the civil day to which each value belongs.

The daily register of rain is given for each civil day ending at midnight. This applies to the Cylinder Rain-gauge partly sunk in the ground, described above as the "eighth." If, however, there appears to be any doubt as to the correctness of the results, reference is made to a Rain-gauge of similar construction and placed near to it, called above the "seventh."

For understanding the divisions of time under the heads of Electricity and Weather, the following remarks are necessary:—The day is divided by columns into two parts (from midnight to noon, and from noon to midnight), and each of these parts is roughly subdivided into two or three parts by colons (:). Thus, when there is a single colon in the first column, it denotes that the remarks before it apply (roughly) to the interval from midnight to 6 A.M., and those following it to the interval from 6 A.M. to noon. When there are two colons in the first column, it is to be understood that the twelve hours are divided into three nearly equal parts of four hours each. And similarly for the second column.

The following is the explanation of the notation employed for record of electrical observations, it being premised that the quality of the Electricity is always to be supposed positive when no indication of quality is given:—

g cur.	denotes	*galvanic currents*	s	denotes	*strong*
m	...	*moderate*	sp	...	*sparks*
N	...	*negative*	v	...	*variable*
P	...	*positive*	w	...	*weak*

The duplication of the letter denotes an intensity of the modification described, thus, s s is very strong; v v, very variable.

The Clouds and Weather are described generally by Howard's Nomenclature; the figure denotes the proportion of sky covered by clouds, the whole sky being represented by 10. The notation is as follows:

a	denotes	*aurora borealis*	n	denotes	*nimbus*
ci	...	*cirrus*	r	...	*rain*
ci-cu	...	*cirro-cumulus*	th-r	...	*thin rain*
ci-s	...	*cirro-stratus*	oc-r	...	*occasional rain*
cu	...	*cumulus*	oc-th-r	...	*occasional thin rain*
cu-s	...	*cumulo-stratus*	fr-r	...	*frozen rain*
d	...	*dew*	h-r	...	*heavy rain*
h-d	...	*heavy dew*	shs-r	...	*showers of rain*
f	...	*fog*	c-r	...	*continued rain*
sl-f	...	*slight fog*	c-h-r	...	*continued heavy rain*
th-f	...	*thick fog*	m-r	...	*misty rain*
fr	...	*frost*	fr-m-r	...	*frequent misty rain*
g	...	*gale*	oc-m-r	...	*occasional misty rain*
h-g	...	*heavy gale*	sl-r	...	*slight rain*
glm	...	*gloom*	h-shs	...	*heavy showers*
gt-glm	..	*great gloom*	fr-shs	...	*frequent showers*
h-fr	...	*hoar frost*	fr-h-shs	...	*frequent heavy showers*
h	...	*haze*	li-shs	...	*light showers*
hl	...	*hail*	oc-shs	...	*occasional showers*
so-ha	...	*solar halo*	oc-h-shs	...	*occasional heavy showers*
l	...	*lightning*	sq	...	*squall*
li-cl	...	*light clouds*	sqs	...	*squalls*
lu-co	...	*lunar corona*	fr-sqs	...	*frequent squalls*
lu-ha	...	*lunar halo*	h-sqs	...	*heavy squalls*
m	...	*meteor*	fr-h-sqs	...	*frequent heavy squalls*
ms	...	*meteors*	oc-sqs	...	*occasional squalls*
mt	...	*mist*	sc	...	*scud*

li-sc denotes	*light scud*	t-s denotes	*thunder storm*
sl ...	*sleet*	th-cl ...	*thin clouds*
sn ...	*snow*	v ...	*variable*
oc-sn ...	*occasional snow*	vv ...	*very variable*
sl-sn ...	*slight snow*	w ...	*wind*
s ...	*stratus*	st-w ...	*strong wind*
t ...	*thunder*		

The foot-notes show the means and extremes of readings, and their departure in each month from average values, as found from the preceding Twenty-six Years' Observations; those relating to Humidity have been calculated from the Fourth Edition of Glaisher's Hygrometrical Tables.

§ 25. *Observations of Luminous Meteors.*

In arranging for the observations of meteors, the directions circulated by the Committee of the British Association have received the most careful attention. The observers have been educated in the knowledge of the principal stars by observations of the stars themselves, and by means of globes and maps. The general instruction to all observers has been, to look out for meteors on every clear night; but the observer specially appointed for the evening's duties has been more particularly charged with this observation.

On the nights specially mentioned in the directions of the British Association Committee, greater attention was given to the sky, and the observations of meteors were made more systematically. The principal nights are, January 2 and 10; February 6; March 1; April 19; May 18; June 6 and 20; July 17, 20, and 29; August 3, August 7–13; September 10; October 1 and 23; November 9–14, November 19, 28, and 30; December 8–14, especially December 11. A more extended list of days has been published by the British Association Committee.

Special arrangements were made in the August period for observing till the morning; and in the November period for observing through the night, one or two observers being on duty till midnight, and then all the observers till daybreak. The observers were so stationed as to command different views of the sky, to secure observation of all the meteors which might present themselves, and to guard against the observation of the same meteor by different observers.

The observers in the year 1867 were Mr. Nash, Mr. Harding, Mr. Trapaud, Mr. Jones, Mr. Wright, and Mr. Farncomb. Their observations are distinguished by the initials N., H., T., J., W., and F., respectively.

§ 26. *Details of the Chemical Operations for the Photographic Records.*

Mr. Glaisher has drawn up the following account of the Chemical Processes employed in the Photographic Operations for the self-registration of the Magnetical and Meteorological Indications.

CHEMICAL PREPARATION AND TREATMENT OF THE PHOTOGRAPHIC PAPER FOR PRIMARIES.

The paper used is similar to that made by Whatman; it is made by his successor Hollingsworth; it is strong and of even texture, and is prepared expressly for Photographic purposes.

First Operation.—Preliminary Preparation of the Paper.

The chemical solutions used in this process are the following:—

(1.) Sixteen grains of Iodide of Potassium are dissolved in one ounce of distilled water.

(2.) Twenty-four grains of Bromide of Potassium are dissolved in one ounce of distilled water.

(3.) When the crystals are dissolved, the two solutions are mixed together, forming the iodising solution. The mixture will keep through any length of time. Immediately before use, it is filtered through filtering paper.

A quantity of the paper, sufficient for the consumption of several weeks, is treated in the following manner, sheet after sheet.

The sheet of paper is pinned by its four corners to a horizontal board. Upon the paper, a sufficient quantity (about 50 minims, or $\frac{5}{48}$ of an ounce troy) of the iodising solution is applied, by pouring it upon the paper in front of a glass rod, which is then moved to and fro till the whole surface is uniformly wetted by the solution. Or, the solution may be evenly distributed by means of a camel-hair brush.

The paper thus prepared is allowed to remain in a horizontal position for a few minutes, and is then hung up to dry in the air; when dry, it is placed in a drawer, and may be kept through any length of time.

Second Operation.—Rendering the Paper sensitive to the Action of Light.

A solution of Nitrate of Silver is prepared by dissolving 50 grains of crystallized Nitrate of Silver in one ounce of distilled water. Since the magnetic basement has been used for photography, 15 grains of Acetic Acid have always been added to the solution.

Then the following operation is performed in a room illuminated by yellow light.

The paper is pinned as before upon a board somewhat smaller than itself, and (by means of a glass rod, as before,) its surface is wetted with 50 minims of the Nitrate of Silver solution. It is allowed to remain a short time in a horizontal position, and, if any part of the paper still shines from the presence of a part of the solution unabsorbed into its texture, the superfluous fluid is taken off by the application of blotting paper.

The paper, still damp, is immediately placed upon the interior cylinder, and is covered by the exterior glass cylinder, and the united cylinders are mounted upon the revolving apparatus, to receive the spot of light formed by the mirror, which is carried by the magnet; or to receive the line of light passing through the thermometer tube.

Third Operation.—Development of the Photographic Trace.

When the paper is removed from the cylinder, it is placed as before upon a board, and a saturated solution of Gallic Acid, to which a few drops of Aceto-Nitrate of Silver are occasionally added, is spread over the paper by means of a glass rod, and this action is continued until the trace is fully developed. The solutions are kept in the magnetic basement, and are always used at the temperature of that room. When the trace is well developed, the paper is placed in a vessel with water, and repeatedly washed with several waters; a brush being passed lightly over both sides of the paper to remove any crystalline deposit.

Fourth Operation.—Fixing the Photographic Trace.

The Photograph is placed in a solution of Hyposulphite of Soda, made by dissolving four or five ounces of the Hyposulphite in a pint of water; it is plunged completely in the liquid, and allowed to remain from one to two hours, until the yellow tint of the Iodide of Silver is removed. After this the sheet is washed repeatedly with water, allowed to remain immersed in water for 24 hours, and afterwards placed within folds of cotton cloths till nearly dry. Finally it is placed between sheets of blotting-paper, and is pressed.

CHEMICAL PREPARATION AND TREATMENT OF THE PHOTOGRAPHIC PAPER FOR SECONDARIES.

Before taking a Secondary, the Primary is examined to ascertain whether the tint of the photographic curve is sufficiently dark. If it is not, the Primary is laid, face downwards, upon a desk of transparent plate-glass, below which is a large silvered plane mirror, so placed that the light from the sky is reflected upwards through the transparent glass and through the Primary; and the photographic curve is seen from the upper side or back with perfect distinctness. An assistant then darkens the back of the photographic curve by the application of sepia; the original photograph being untouched.

The paper used for the Secondaries is made by Rive; it is a strong wove paper, of tolerably even texture, thin, but able to bear a great deal of wear.

First Operation.—Preliminary Preparation of the Paper.

The chemical solution required for this purpose is as follows:—

Two grains of Chloride of Ammonium are dissolved in one ounce of distilled water. A sufficient quantity of this solution is placed in a flat-bottomed porcelain dish, and sheets of paper, one by one, are plunged within it; care being taken that no air bubbles remain between the paper and the solution; this may be prevented by slight pressure over the sheet by means of a bent glass rod. When a few sheets are thus immersed, they are turned over, and are taken out and hung to dry. Any number of sheets may thus be prepared.

An equally good result is obtained, by spreading over one side by means of a glass rod, as in the preparation of the Primaries, a solution of Chloride of Ammonium made by dissolving five grains of the chloride in one ounce of distilled water.

Second Operation.—Rendering the Paper sensitive to the Action of Light.

The solution required for this purpose is as follows:—

To a filtered solution of Nitrate of Silver (made by dissolving 50 grains of Crystallized Nitrate of Silver in one ounce of distilled water) some strong solution of Ammonia is added; the whole becomes at first of a dark brown colour, but when a sufficient quantity of Ammonia is added the solution becomes perfectly clear; a few crystals of Nitrate of Silver are then added till the solution is a little dull, forming "Ammoniacal Nitrate of Silver"; it is then ready for use.

The following operation is performed in a room illuminated by yellow light:—

By means of a glass rod this solution is spread over the paper, whilst pinned on a board; the paper is dried before a fire, and is then in a fit state to be used for producing a Secondary.

Third Operation.—Formation of the Photographic Copy.

A sheet of the paper so prepared is placed in a printing frame with its prepared side upwards, upon a bed of blotting paper resting upon a sheet of plate-glass; the Primary is then placed on the paper with its own face downwards; and as it is necessary, for obtaining a correct copy of the Primary, that it should be in close contact with the prepared surface, a second sheet of plate-glass is placed over it, and the two are pressed together by clamps and screws. The whole is then exposed to the light (the Primary to be copied being above the paper on which the copy is to be made). The time required to produce a copy depends, in a great measure, upon the thickness of the paper on which the Primary is made, and on the actinic quality of the light; a period of five minutes in a bright sunshine, or one hour in clear daylight, is generally sufficient.

Fourth Operation.—Fixing the Photographic Secondary.

When an impression has been thus obtained, it is necessary that the undecomposed Salts of Silver remaining in the paper be removed.

For this purpose the Secondary is at once plunged into water and well washed on both sides, passing a camel-hair brush over every part of it; it is then plunged into a solution of Hyposulphite of Soda (made by dissolving two or three ounces of the Hyposulphite in a pint of water), and is left through a period varying from half an hour to an hour. It is then removed, and washed in plain water several times; and running water is allowed to pass over it for twenty-four hours.

The sheets are then placed within the folds of drying cloths, till nearly dry, and finally between sheets of blotting paper.

The process of obtaining a Tertiary from a Secondary is in every respect the same as that of obtaining a Secondary from a Primary.

§ 27. *Personal Establishment.*

The personal establishment during the year 1867 has consisted of James Glaisher, Esq., F.R.S., Superintendent of the Magnetical and Meteorological Department, and Mr. William Carpenter Nash, Assistant.

Three or four computers have usually been attached to the Department.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

MAGNETICAL OBSERVATIONS.

1867.

ROYAL OBSERVATORY, GREENWICH.

INDICATIONS

OF

MAGNETOMETERS.

1867.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 1		Jan. 1		Jan. 1		Jan. 1		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 26. 40	0. 0	·1430	0. 0	·04104	0. 0	52 ·0	53 ·0
1. 14	26. 30	0. 8	·1433	1. 50	·04052	1. 0	52 ·2	53 ·2
2. 24	24. 45	0. 43	·1432	3. 50	·04057	2. 0	52 ·5	53 ·2
4. 8	23. 0	1. 5	·1436		(†)	3. 0	52 ·6	53 ·3
4. 43	23. 30	3. 45	·1436	4. 43	·03284	9. 0	51 ·8	53 ·0
5. 10	22. 0	4. 47	·1432	8. 34	·03276	21. 5	48 ·9	49 ·6
5. 25	22. 50	5. 5	·1428	9. 29	·03248	22. 0	49 ·0	50 ·0
6. 32	23. 55	5. 57	·1432	11. 29	·03220	23. 0	49 ·3	50 ·5
7. 23	23. 5	9. 46	·1432	19. 25	·03099			
9. 8	23. 40	10. 46	·1430	22. 0	·03088			
10. 38	22. 20	15. 19	·1434	22. 57	·03068			
11. 5	20. 50	15. 50	·1433	23. 59	·03074			
13. 53	23. 40	19. 31	·1437					
	***	21. 32	·1433					
16. 5	22. 45	22. 10	·1436					
16. 18	23. 25	23. 59	·1439					
17. 13	23. 10							
17. 30	23. 30							
	***							
19. 27	22. 50							
22. 0	24. 5							
23. 59	25. 10							
Jan. 2		Jan. 2		Jan. 2		Jan. 2		
0. 0	20. 25. 10	0. 0	·1439	0. 0	·03074	1. 0	51 ·3	52 ·5
0. 24	25. 0	0. 40	·1439	1. 7	·03108	3. 0	51 ·1	52 ·5
1. 26	25. 10	1. 0	·1439	2. 46	{·03080	9. 0	50 ·3	51 ·4
1. 37	26. 0	1. 24	·1446		·02997	21. 5	47 ·2	48 ·2
	(†)	2. 37	·1442	5. 31	·02970	22. 0	47 ·4	48 ·2
3. 0	23. 26*	2. 45	·1446	9. 2	·02970	23. 0	47 ·8	48 ·0
4. 33	23. 10	2. 47	·1434	10. 12	·02943			
10. 14	22. 35	6. 30	·1437	12. 0	·02960			
12. 5	23. 0	12. 25	·1428	16. 4	·02928			
12. 34	22. 0	12. 38	·1434	21. 6	·02854			
13. 6	24. 0	12. 58	·1428	23. 30	·02820			
13. 25	22. 50	13. 34	·1430		(†)			
15. 36	24. 0	14. 5	·1428					
15. 57	25. 15	15. 55	·1429					
16. 45	23. 0	17. 1	·1436					
17. 34	23. 50	18. 11	·1435					
19. 30	22. 30	19. 5	·1438					
21. 34	23. 25		***					
21. 48	23. 0	22. 36	·1431					
23. 38	24. 35	23. 5	·1432					
	(†)		***					
		23. 22	·1425					
		23. 59	·1434					
Jan. 3		Jan. 3		Jan. 3		Jan. 3		
	(†)	0. 0	·1434		(†)	0. 0	47 ·8	48 ·0
0. 5	20. 25. 15	0. 35	·1436	0. 37	·02817	1. 0	48 ·0	48 ·4
0. 53	26. 0	2. 30	·1441	6. 27	·02830	2. 0	48 ·0	48 ·4
2. 28	24. 10	4. 2	·1440	8. 40	·02828	3. 0	48 ·1	48 ·6
4. 34	24. 35	4. 25	·1436	12. 19	·02806	9. 0	47 ·7	47 ·8
9. 0	22. 50	5. 25	·1440	14. 40	·02773	21. 0	44 ·7	45 ·0
14. 20	24. 10	9. 47	·1439	16. 23	·02741	22. 0	44 ·1	44 ·3
15. 10	25. 50	13. 37	·1435	20. 30	·02660	23. 0	44 ·3	44 ·3
15. 48	24. 0	13. 55	·1438		(†)			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 3		Jan. 3		Jan. 3				
h m	° ′ ″	h m		h m		h m	°	°
16. 59	20. 24. 0	14. 57	·1440	21. 0	·02659*			
	***	15. 10	·1438					
20. 4	22. 20	15. 46	·1443					
21. 30	24. 10	18. 14	·1446					
22. 6	23. 40	19. 30	·1440					
23. 19	26. 45	21. 0	·1439*					
23. 59	27. 15		(†)					
Jan. 4		Jan. 4		Jan. 4		Jan. 4		
0. 0	20. 27. 15		(†)		(†)	0. 0	44 ·3	44 ·3
1. 49	25. 0	0. 24	·1447	1. 0	·02585*	1. 0	44 ·3	44 ·3
2. 30	26. 0	2. 19	·1449	2. 31	·02586	3. 0	45 ·1	45 ·8
3. 5	25. 10	2. 59	·1442	6. 10:	·02627	9. 0	45 ·6	46 ·6
3. 59	25. 35	3. 15	·1444	9. 24	·02644	10. 0	45 ·1	46 ·1
4. 54	24. 45	3. 51	·1441	12. 48	·02610	21. 0	42 ·1	42 ·4
6. 57	24. 50	4. 4	·1445	16. 26	·02533	22. 0	42 ·0	42 ·1
7. 40	22. 50	4. 58	·1445	20. 41	·02452	23. 0	42 ·4	42 ·5
8. 4	23. 30	6. 54	·1440		(†)			
8. 15	22. 30	7. 35	·1429	21. 0	·02448*			
8. 36	24. 20	8. 15	·1428					
9. 8	21. 0	8. 26	·1430					
9. 30	21. 50	8. 43	·1428					
10. 5	21. 30	9. 35	·1431					
10. 18	22. 20	9. 55	·1429					
10. 30	21. 55	10. 40	·1435					
10. 54	22. 20	10. 59	·1431					
11. 8	21. 50	15. 24	·1440					
11. 22	22. 50	19. 8	·1445					
11. 30	22. 0	21. 3	·1444					
12. 40	24. 0		(†)					
13. 12	22. 55							
14. 35	25. 0							
14. 58	23. 35							
	***							
20. 44	23. 0							
23. 6	25. 10							
	(†)							
Jan. 5		Jan. 5		Jan. 5		Jan. 5		
	(†)		(†)		(†)	0. 0	42 ·8	43 ·1
0. 24	20. 26. 10	0. 54	·1447	1. 0	·02521*	1. 0	44 ·9	45 ·8
1. 43	24. 10	1. 40	·1450	1. 46	·02670	3. 0	46 ·5	47 ·9
1. 50	22. 50	2. 4	·1457	3. 8	·02703	9. 0	48 ·6	50 ·6
2. 44	22. 0	2. 42	·1456	6. 34	·02836	21. 50	50 ·0	51 ·8
2. 54	22. 15	2. 59	·1467	10. 42	·02916			
3. 25	21. 55	6. 33	·1462	14. 36	·02960			
4. 14	22. 40	7. 39	·1457	16. 4	·02969			
8. 3	22. 30	8. 19	·1458	22. 46	·03036			
8. 13	22. 0	8. 45	·1454	23. 59	·03038			
8. 57	22. 10	9. 19	·1459					
9. 14	21. 0	9. 35	·1455					
9. 25	21. 20	9. 54	·1460					
10. 9	20. 0	10. 10	·1454					
10. 34	21. 50	10. 34	·1462					
10. 50	20. 40	11. 42	·1449					
11. 4	21. 30	17. 41	·1459					
11. 20	20. 10		***					
12. 7	21. 15	22. 39	·1446					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

January 1d. 3h. 50m. The Vertical Force Magnet was re-adjusted.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 5		Jan. 5						
h m	° ′ ″	h m		h m		h m	°	°
12.20	20.20.40	23.19	·1453					
13.10	21.25		(†)					
13.29	21. 5							
13.50	22.10							
16.50	22.50							
20.38	21.55							
23.24	25. 5							
	(†)							
Jan. 6		Jan. 6		Jan. 6		Jan. 6		
	(†)		(†)	0. 0	·03038	1. 0	51·9	53·3
0.40	20.25.20	0.50	·1460	2.12	·03122	9. 0	53·2	55·0
3. 4	22.55	1.54	·1463	6.25	·03205	21. 0	55·2	56·6
3.23	23.50		***	10. 0	·03231	22. 0	55·2	56·9
4.13	23.10	4.37	·1467	13.30	·03292	23. 0	55·3	57·0
4.19	24.20	8.35	·1453	14.25	·03281			
4.51	23.10	8.49	·1448	15.14	·03298			
5.12	23.20	9. 3	·1456	21. 0	·03347			
5.18	22.55	9.42	·1462	22.34	·03355			
5.34	23.25	10.16	·1452	23. 0	·03375			
6.44	22. 0	11.25	·1445	23.59	·03384			
7.44	21.30	13. 8	·1444					
8. 0	20. 0	13.55	·1451					
8.17	21. 0	14.45	·1448					
8.35	19.50	19.24	·1456					
8.57	20. 0	20.41	·1452					
9. 8	20.55	20.49	·1457					
9.30	19.15	21. 0	·1453					
9.50	20.25	21.40	·1447					
10.18	19.25	21.57	·1436					
10.44	21. 0	22.15	·1439					
13.10	21.15	22.25	·1416					
13.54:	25.50		(†)					
14.36	21.40							
16. 5	23. 0							
	***							
17.30	21.50							
17.57	22.30							
20.44	20.45							
21.59	21.55							
22.17	23.50							
22.28	22. 0							
	(†)							
Jan. 7		Jan. 7		Jan. 7		Jan. 7		
	(†)		(†)	0. 0	·03384	0. 0	55·6	57·3
0. 8	20.23. 0	0.53	·1437	1. 8	·03414	1. 0	56·7	58·0
1. 4	24.10	1. 9	·1440	2.35	·03463	3. 0	58·0	59·0
1.15	26.20	1.39	·1434	5.18	·03510	9. 0	57·4	59·0
2.10:	23. 0	2.47	·1435	6. 5	·03529	21. 0	57·0	58·4
3.15	22.15	4.17	·1427	8.28	·03525	22. 0	57·5	58·5
3.27	23. 0	4.54	·1419	10.49	·03509	23. 0	57·5	58·7
3.43	22. 0	5. 0	·1421	12.49	·03502			
4.46	25. 0	5.16	·1416	13. 5	·03510			
4.59	23.50	5.40	·1413	13.45:	·03473			
5. 9	24.10	5.57	·1418	14.48	·03493			
5.33	22. 0	6. 5	·1413	21. 2	·03495			
5.45	22. 5	6.20	·1415	22.42	·03513			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 7		Jan. 7		Jan. 7				
h m	° ′ ″	h m		h m		h m	°	°
6. 0	20.24. 0	6.34	·1413	23.48	·03508			
6.35	23. 5	7.18	·1420	23.59	·03515			
6.43	24. 0	7.35	·1416					
7.56	16.50	7.56	·1419					
8. 9	13. 0	8. 9	·1414					
8.20	13.20	8.27	·1419					
8.30	12.30	9.54	·1425					
9.45	22.10	10. 9	·1422					
10. 3	21.30	10.29	·1425					
11. 9	22. 5	11.55	·1418					
11.46	20.30	12.19	·1423					
12. 4	21.50	12.59	·1418					
12.45	19.55	13.30	·1443					
13. 5	28. 0	14.14	·1420					
13.28	21. 5	15.44	·1427					
13.49	19.35	16. 5	·1429					
14. 5	22. 0	16.36	·1425					
14.43	21.50	19.15	·1428					
15. 4	20.10	19.44	·1420					
15.35	21.55	21. 8	·1426					
15.57	21.30		***					
16.40	22.50	23.40	·1418					
19.45	21. 0		(†)					
23.59	24.15							
Jan. 8		Jan. 8		Jan. 8		Jan. 8		
0. 0	20.24.15		(†)	0. 0	·03515	0. 0	59·0	59·0
2.14	22.50	4.35	·1373	2.52	·03550	1. 0	59·8	59·2
3.34	23. 0	7. 3	·1374	6.50	·03570	2. 0	59·9	59·2
3.40	22. 0	8.26	·1374	10.50	·03532	3. 0	59·9	59·0
8. 6	21. 0	8.43	·1368	12.23	·03532	9. 0	58·5	58·8
8.38	21.30	9.11	·1376	13. 0	·03518	21. 0	56·1	56·7
9. 5	17. 0		***	14. 5	·03516	22.30	55·2	55·9
9.35	21.30	11.44	·1372	17.23	·03495	23. 0	55·2	55·9
11.57	22.15	12.18	·1379	23.59	·03420			
12.20	24.20	12.57	·1373					
12.43	22.25	13. 9	·1375					
13. 2	22.30	13.59	·1373					
13.24	22. 0	14.16	·1376					
13.42	22.40	14.30	·1373					
14. 8	21.20	16. 4	·1380					
	***	19.49	·1380					
16. 4	21.10	21.30	·1373					
16.45	22.10	23.19	·1377					
17.29	21.30		(†)					
19.14	22. 0							
21.20	24. 0							
21.40	23.50							
22.26	25.10							
23.29	25.30							
	(†)							
Jan. 9		Jan. 9		Jan. 9		Jan. 9		
	(†)		(†)	0. 0	·03420	0. 0	55·5	56·1
0.11	20.25.10	1. 0	·1378*	1.10	·03430	1. 0	55·9	56·3
1.30	23.50	3. 0	·1400*	8.19	·03460	2. 0	55·8	56·5
2.42	23.30	5.40	·1404	21. 8	·03435	3. 0	56·0	57·0
3. 0	22.10	6.58	·1401	22.35	·03409	9. 0	56·0	57·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

January 8. The Horizontal Force Magnet was under adjustment till 4^{h}. 35^{m}.

Greenwich Mean Solar Time.	Western Declination.
Jan. 9	
h m	° ′ ″
4. 0	20. 23. 0
4. 22	22. 30
4. 57	23. 10
5. 19	22. 0
6. 38	21. 20
7. 2	18. 55
7. 55	16. 0
8. 38	19. 0
9. 5	18. 10
9. 40	20. 15
10. 9	20. 0
11. 55	21. 45
12. 13	21. 0
13. 4	22. 50
13. 15	22. 10
14. 40	22. 0
14. 56	22. 50
15. 8	22. 5
16. 44	22. 20
17. 29	21. 35
17. 45	22. 5
20. 8	21. 30
23. 6	24. 0
23. 45	23. 30
	(†)
Jan. 10	
	(†)
0. 8	20. 23. 50
0. 34	24. 30
2. 45:	21. 55
4. 57	23. 10
5. 9	22. 45
6. 5	23. 15
7. 58	22. 15
8. 26	21. 0
8. 45	21. 50
9. 29	22. 0
9. 44	21. 0
11. 9	21. 10
11. 34	19. 0
12. 16	20. 50
12. 33	21. 0
13. 35	24. 20
14. 4	22. 30
15. 20	22. 0
16. 10	22. 45
17. 14	22. 0
18. 40	23. 10
19. 36	21. 20
	***
23. 23	23. 30
23. 59	24. 45
Jan. 11	
0. 0	20. 24. 45
0. 34	25. 40
3. 30	22. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 9	
h m	
7. 17	·1403
7. 35	·1400
8. 9	·1409
8. 27	·1409
9. 15	·1395
9. 44	·1400
10. 23	·1397
13. 15	·1398
13. 34	·1394
14. 9	·1397
	***
18. 59	·1405
19. 33	·1398
22. 30	·1393
23. 55	·1397
	(†)
Jan. 10	
	(†)
0. 17	·1398
2. 35	·1405
6. 34	·1399
	***
8. 31	·1403
10. 48	·1397
11. 9	·1417
11. 46	·1400
12. 50	·1393
13. 28	·1398
14. 23	·1396
17. 0	·1405
18. 15	·1401
19. 30	·1408
20. 36	·1404
22. 20	·1397
23. 59	·1402
Jan. 11	
0. 0	·1402
1. 30	·1405
2. 45	·1397

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Jan. 9	
h m	
23. 40	·03400
23. 59	·03400
Jan. 10	
0. 0	·03400
1. 23	·03403
2. 9	·03418
3. 15:	·03410
4. 44	·03425
10. 53	·03363
11. 7	·03369
11. 31:	·03345
13. 45	·03330
21. 29	·03230
22. 23	·03240
23. 59	·03240
Jan. 11	
0. 0	·03240
9. 8	·03290
12. 10	·03242

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 9		
h m	°	°
21. 0	55·6	55·9
22. 0	55·8	56·2
23. 0	55·0	56·0
Jan. 10		
0. 0	55·1	56·3
1. 0	55·6	56·6
3. 0	55·4	56·5
9. 0	54·8	55·7
21. 0	52·1	52·8
22. 0	53·0	53·8
23. 0	53·1	54·0
Jan. 11		
0. 0	54·0	54·9
1. 0	54·2	55·3
2. 0	54·3	55·3

Greenwich Mean Solar Time.	Western Declination.
Jan. 11	
h m	° ′ ″
4. 6	20. 23. 45
4. 38	22. 50
5. 28	23. 45
6. 10:	22. 25
6. 45	23. 10
7. 10	21. 40
	***
8. 5	23. 55
8. 35	20. 10
8. 59	21. 10
10. 5	21. 0
10. 28	22. 0
10. 56	21. 0
11. 16	18. 35
11. 44	20. 30
11. 57	20. 25
12. 12	19. 15
12. 28	23. 0
13. 10	14. 10
14. 0	19. 15
14. 20	19. 10
14. 32	21. 0
14. 44	19. 10
15. 16	18. 55
15. 46	19. 30
16. 16	30. 50
17. 16	20. 30
17. 59	21. 45
18. 50	19. 0
19. 37	19. 30
20. 10	21. 20
20. 22	20. 45
21. 15	22. 20
21. 38	22. 15
22. 26	26. 45
23. 14	26. 10
23. 26	27. 15
	(†)
Jan. 12	
	(†)
0. 14	20. 27. 5
0. 58	24. 0
1. 10	25. 10
1. 34	24. 0
1. 40	24. 50
2. 4	23. 30
2. 24	25. 10
2. 55	24. 0
3. 25	24. 15
3. 40	26. 0
4. 19	16. 0
4. 54	22. 5
5. 15	23. 20
5. 46	22. 30
6. 0	23. 45
6. 23	23. 0
6. 46	23. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Jan. 11	
h m	
5. 15	·1401
7. 5	·1389
8. 27	·1390
8. 55	·1396
9. 38	·1398
9. 48	·1410
10. 3	·1403
10. 28	·1404
10. 46	·1402
10. 56	·1406
11. 10	·1401
11. 19	·1403
11. 32	·1399
11. 40	·1400
11. 49	·1396
12. 0	·1399
12. 8	·1396
12. 52	·1424
13. 43	·1385
14. 12	·1392
14. 22	·1389
14. 46	·1396
14. 54	·1391
16. 4	·1403
16. 27	·1397
17. 12	·1416
17. 46	·1408
	***
20. 35	·1405
20. 55	·1398
21. 48	·1400
21. 57	·1394
22. 15	·1398
23. 0	·1397
23. 41	·1384
	(†)
Jan. 12	
	(†)
0. 25	·1384
1. 0	·1391
1. 18	·1400
1. 43	·1405
1. 59	·1403
2. 9	·1407
2. 35	·1401
3. 15	·1406
3. 57	·1381
4. 45	·1411
5. 28	·1406
5. 42	·1409
6. 2	·1406
6. 19	·1409
6. 47	·1408
7. 10	·1402
7. 21	·1405

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Jan. 11	
h m	
12. 28	·03253
13. 15:	·03200
14. 0	·03223
16. 22	·03213
17. 28	·03160
21. 11	·03145
23. 59	·03110
Jan. 12	
0. 0	·03110
1. 10	·03152
4. 38	·03190
5. 23	·03175
8. 6	·03152
8. 33	·03152
9. 19	·03175
9. 50	·03116
12. 30	·03102
13. 0	·03103
13. 24	·03080
13. 46	·03095
14. 54	·03045
15. 18	·03064
16. 48	·03019
18. 7	·03018
19. 28	·03036
22. 0	·03020

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 11		
h m	°	°
3. 0	54·4	55·6
9. 0	53·1	54·2
21. 0	50·5	51·2
22. 0	50·0	50·8
23. 0	50·1	51·0
Jan. 12		
0. 0	50·8	51·8
1. 0	51·7	52·6
2. 0	51·5	52·7
3. 0	51·7	52·7
9. 0	50·2	51·0
21. 50	48·6	49·8

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 12		Jan. 12		Jan. 12				
h m	° ′ ″	h m		h m		h m	°	°
7.55	20. 23. 20	7. 39	·1395	23. 30	·02980			
8. 8	20. 45	7. 50	·1399	23. 59	·02975			
8. 13	21. 20	8. 4	·1387					
8. 36	11. 0	8. 17	·1393					
8. 47	11. 10	8. 38	·1382					
8. 55	10. 20	8. 49	·1370					
9. 33	22. 50	9. 9	·1380					
9. 42	19. 45	9. 26	·1414					
9. 50	19. 20	9. 35	·1405					
10. 9	14. 55	9. 45	·1410					
10. 16	16. 0	9. 57	·1400					
10. 32	15. 0	10. 9	·1403					
10. 50	20. 15	10. 25	·1390					
11. 9	21. 0	10. 35	·1398					
11. 19	20. 15	10. 55	·1385					
12. 0	20. 0	11. 41	·1392					
12. 40	18. 15		***					
13. 5	22. 35	12. 29	·1382					
13. 34	18. 0	12. 54	·1395					
13. 55	20. 0	12. 56	·1392					
14. 5	22. 35	13. 9	·1398					
15. 4	9. 5	13. 25	·1392					
15. 37	15. 0	13. 55	·1399					
15. 47	16. 0	14. 25	·1390					
16. 8	14. 35	14. 48	·1379					
16. 25	16. 0	15. 19	·1403					
16. 39	15. 0		***					
16. 51	18. 5	16. 30	·1404					
17. 17	20. 5	16. 48	·1394					
17. 25	18. 50	17. 8	·1389					
17. 39	20. 30	17. 38	·1403					
18. 4	18. 45	18. 17	·1384					
18. 12	19. 5	18. 55	·1398					
18. 19	18. 35	19. 5	·1394					
18. 35	21. 25	19. 19	·1398					
18. 50	20. 25	20. 58	·1401					
19. 4	22. 45	21. 10	·1396					
19. 34	19. 50	21. 24	·1399					
19. 46	19. 50	21. 37	·1394					
19. 56	21. 0	21. 49	·1399					
20. 55	20. 0	22. 25	·1393					
21. 6	21. 30	23. 37	·1392					
	***	23. 59	·1397					
23. 10	24. 20							
23. 18	23. 0							
23. 33	22. 15							
23. 59	26. 10							
Jan. 13		Jan. 13		Jan. 13		Jan. 13		
0. 0	20. 26. 10	0. 0	·1397	0. 0	·02975	1. 0	49·4	50·8
0. 57	26. 0	0. 35	·1388	1. 15	·03010	9. 0	49·3	50·4
1. 5	27. 5	1. 33	·1398	3. 7	·03048	21. 0	46·3	47·4
1. 27	26. 0	1. 38	·1395	3. 38	·03042	22. 0	46·4	47·1
1. 59	23. 0	2. 19	·1406	4. 30	·03063	23. 0	46·3	47·3
3. 15	26. 0	3. 3	·1408	5. 49	·03065			
4. 7	19. 0	3. 45	·1384	7. 19	·03075			
4. 40	24. 5	4. 9	·1393	8. 6	·03060			
5. 18	25. 30		***	8. 24	·03073			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 13		Jan. 13		Jan. 13				
h m	° ′ ″	h m		h m		h m	°	°
5. 24	20. 24. 10	4. 38	·1391	9. 43	·03029			
5. 47	24. 0	4. 56	·1396	10. 24	·03045			
6. 0	24. 55	5. 6	·1400	10. 49	·03025			
6. 19	23. 0	5. 17	·1398	11. 9	·03035			
6. 35	22. 45	5. 47	·1401	13. 8	·02980			
6. 44	23. 0	6. 15	·1388	14. 39	·02985			
6. 55	21. 0	6. 47	·1390	15. 45	·02960			
7. 7	21. 5	7. 0	·1398	16. 31	·02945			
7. 15	20. 40	7. 27	·1394	17. 18	·02937			
7. 23	21. 50	7. 47	·1402	18. 8	·02915			
7. 56	20. 40	8. 4	·1395	18. 29	·02930			
8. 19	9. 10	8. 23	·1418	22. 49	·02888			
8. 40	16. 45	8. 42	·1405		(†)			
8. 58	11. 55	9. 8	·1415					
9. 15	16. 50	9. 28	·1398					
9. 37	14. 25	9. 37	·1400					
9. 49	11. 20	9. 55	·1391					
10. 3	13. 45	10. 10	·1376					
10. 19	13. 40	10. 24	·1388					
10. 33	19. 30	10. 54	·1386					
10. 59	9. 0	11. 11	·1402					
11. 15	14. 30	11. 41	·1393					
11. 25	14. 30	12. 3	·1377					
11. 34	18. 0	13. 7	·1409					
11. 51	22. 30	13. 41	·1390					
12. 6	20. 15	14. 9	·1399					
12. 17	21. 10	14. 35	·1392					
12. 40	18. 0	15. 36	·1396					
12. 49	19. 15	16. 3	·1388					
12. 57	18. 0	16. 19	·1396					
13. 10	21. 20	16. 38	·1382					
13. 27	20. 5	17. 0	·1385					
13. 40	16. 55	17. 22	·1403					
13. 49	17. 5	17. 50	·1408					
14. 4	15. 0	18. 11	·1397					
14. 24	19. 55	18. 35	·1407					
14. 37	18. 30	19. 4	·1406					
14. 43	19. 50	19. 37	·1383					
14. 55	18. 45	19. 57	·1386					
15. 27	19. 20	20. 10	·1382					
15. 48	21. 10	20. 49	·1389					
15. 58	20. 10	21. 43	·1396					
16. 9	22. 0		***					
16. 23	20. 50	22. 9	·1388					
16. 39	22. 50	22. 18	·1393					
16. 48	22. 15	22. 34	·1382					
16. 59	23. 10	22. 49	·1400					
17. 20	22. 20	23. 0	·1395					
17. 26	23. 25		***					
17. 40	21. 50	23. 47	·1408					
18. 1	18. 30	23. 59	·1409					
18. 17	21. 30							
18. 37	20. 0							
19. 22	25. 20							
19. 27	24. 10							
20. 5	27. 0							
20. 29	25. 30							
21. 4	30. 0							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 13								
h m	° ′ ″	h m		h m		h m	°	°
21.29	20.28.30							
21.59	25. 0							
22.13	27.45							
22.25	25. 0							
22.42	30. 0							
23. 6	27.15							
23.35	27. 5							
23.51	27. 0							
23.59	28.35							
Jan. 14		Jan. 14		Jan. 14		Jan. 14		
0. 0	20.28.35	0. 0	·1409		(†)	0. 0	45·4	46·6
0.31	28.10	0.21	·1408	1. 0	·02921*	1. 0	47·1	47·9
0.56	29.45	0.40	·1410	3. 0	·02907*	2. 0	47·1	48·0
1. 6	28. 0	1.25	·1402	4.28	·02885	3. 0	47·1	48·0
1.35	22.20	2.13	·1418	5. 5	·02900	9. 0	47·0	47·5
1.57	20.35	2.45	·1418	6. 2	·02890	21. 0	46·2	46·3
2. 8	22. 0	3.19	·1407	6.45	·02905	22. 0	45·2	45·3
2.50	23. 0	3.35	·1411	7.15	·02890	23. 0	45·8	46·0
3.46	18.10	3.49	·1409	7.50	·02892			
4.15	21. 0	3.59	·1413	8.43	·02850			
4.36	21.55	4.36	·1411	10. 0	·02840			
5.27	21.15	4.51	·1416		(†)			
6. 8	16.45	5. 9	·1414	15.58	·02809			
6.27	11.55	5.25	·1419	20. 4	·02780			
6.50	20.55	5.56	·1406		(†)			
7. 8	16.10	6.23	·1409	21. 0	·02778*			
7.24	15.55	6.45	·1428					
7.55	21. 0	7. 6	·1411					
8.19	16. 0	7.33	·1430					
8.31	16.55	7.56	·1416					
8.45	21. 5	8. 9	·1412					
9. 5	21.55	8.39	·1435					
9.23	20. 0	8.47	·1430					
9.38	21.55	8.54	·1419					
10.19	21.15	9. 7	·1412					
10.33	22. 5	9.26	·1422					
10.56	22.10	9.41	·1415					
11. 8	21. 5		***					
11.27	21.20	10.35	·1416					
11.43	22.10	11.20	·1409					
12.14	24.55	12. 6	·1417					
12.30	22.35	12.43	·1412					
12.40	24.10		***					
12.54	23. 0	14.25	·1412					
13. 6	25.35	16. 7	·1417					
13.54	22. 0	17.29	·1425					
14. 8	22.50	18.47	·1424					
14.28	21.45		(†)					
14.44	22.20	21. 0	·1423*					
15.16	20.50	23.59	·1421					
15.27	21.10							
15.39	19.50							
16. 9	20.50							
	***							
17.17	21.50							
19.20	22.20							
	***							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 14								
h m	° ′ ″	h m		h m		h m	°	°
22.45	20.25. 0							
23.59	25. 0							
Jan. 15		Jan. 15		Jan. 15		Jan. 15		
0. 0	20.25. 0	0. 0	·1421		(†)	0. 0	46·1	46·5
1.18	25. 0	3. 7	·1427	1. 0	·02769*	1. 0	46·5	47·1
3.36	21.50	5. 8	·1419	1.42	·02770	3. 0	47·3	48·0
4.30	22.20	6.26	·1422	4.15	·02796	9. 0	47·9	49·1
4.45	21.30	6.45	·1412	6. 0	·02832	21. 0	46·8	47·7
5.25	22.30	7.10	·1421	9. 6	·02865	22. 0	46·9	47·5
5.35	23.45	7.17	·1418	9.20	·02848	23. 0	46·7	47·5
5.47	22.40	7.47	·1418	9.35	·02860			
6.20:	23. 0	8.21	·1414	13.50	·02855			
7. 4	21.10	8.50	·1418	14. 7	·02865			
7.13	22.10	9.16	·1415	14.20	·02855			
7.17	23.20	9.34	·1431	19. 5	·02852			
7.22	22. 5	10.45	·1410	20.49	·02838			
7.44	22.30	11.30	·1417		(†)			
7.56	21.45	11.47	·1413	21. 0	·02841*			
8.40	21.30	12.14	·1416					
9. 7	23. 0	12.24	·1413					
9.30	8.15	13.19	·1415					
9.50	11.55	13.50	·1412					
10.22	19.15	14. 7	·1418					
11. 7	24. 0	14.25	·1415					
11.24	22.35	14.41	·1417					
11.46	23. 0		***					
12. 3	22. 0	18.52	·1418					
12.56	23.10	19. 8	·1414					
13.29	21.30	19.29	·1417					
13.56	22.10	20. 4	·1414					
13.44	22. 0	20.18	·1417					
13.59	25. 0	20.34	·1413					
14.23	23.20	20.50	·1415					
14.38	24.15	22. 4	·1410					
15.24	22. 0	23.13	·1410					
15.45	22.15	23.29	·1400					
16. 3	20.10	23.43	·1408					
16.13	21. 0		(†)					
16.35	20.15							
16.58	20.15							
17.20	21.15							
18.23	20.55							
18.55	21.50							
19.19	21.10							
21.18	23.50							
21.40	23.15							
21.59	27. 0							
22.22	26.40							
22.28	27.15							
22.45	26.20							
23. 7	28.10							
23.29	27.15							
23.59	28.25							
Jan. 16		Jan. 16		Jan. 16		Jan. 16		
0. 0	20.28.25		(†)		(†)	0. 0	46·8	48·0
0.26	30.15	1. 0	·1423*	1. 0	·02846*	1. 0	47·5	48·2

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 16		Jan. 16		Jan. 16		Jan. 16		
h m	° ′ ″	h m		h m		h m	°	°
1. 0	20. 27. 50	1. 40	·1420	2. 56	·02879	2. 0	47·5	48·5
2. 9	24. 0	2. 50	·1421	3. 25	·02855	3. 0	47·9	48·4
2. 48	26. 20	3. 19	·1411	8. 38	·02915	9. 0	48·2	50·0
3. 6	24. 35	3. 56	·1421	11. 43	·02925	21. 0	47·3	49·2
3. 19	24. 50	4. 3	·1417	13. 34	·02934	22. 0	47·2	49·0
3. 56	20. 15	4. 25	·1421	17. 30	·02925	23. 0	47·3	49·2
4. 33	22. 10	4. 37	·1416	22. 35	·02893			
10. 4	20. 20	4. 51	·1420	23. 30	·02900			
10. 28	22. 55	5. 47	·1416	23. 59	·02915			
10. 46	15. 0	6. 8	·1423					
11. 15	20. 55	6. 23	·1416					
11. 54	19. 50	7. 5	·1419					
12. 20	21. 45	8. 40	·1419					
12. 40	20. 25	8. 52	·1422					
13. 19	23. 0	9. 8	·1418					
13. 39	22. 10	9. 55	·1416					
14. 14	22. 20	10. 5	·1419					
14. 41	21. 0	10. 17	·1415					
15. 20	22. 15	10. 38	·1426					
16. 0	21. 15	11. 55	·1410					
16. 45	21. 55	12. 28	·1414					
17. 58	20. 15	12. 46	·1411					
19. 4	20. 35	14. 30	·1416					
19. 54	21. 10	14. 54	·1413					
20. 34	22. 0	18. 57	·1421					
21. 35	22. 35		***					
22. 0	25. 30	21. 49	·1416					
22. 25	23. 30	22. 5	·1417					
22. 41	24. 10	22. 20	·1407					
22. 48	26. 50	22. 43	·1413					
22. 56	24. 40	22. 50	·1406					
23. 11	26. 0	23. 59	·1418					
23. 59	25. 15							
Jan. 17		Jan. 17		Jan. 17		Jan. 17		
0. 0	20. 25. 15	0. 0	·1418	0. 0	·02915	0. 0	48·0	50·0
0. 18	26. 10	1. 48	·1422	2. 10	·02953	1. 0	48·5	50·2
2. 3	24. 10	2. 55	·1420	3. 9	·02962	3. 0	48·4	50·2
2. 24	24. 30	3. 14	·1427	4. 24	·02958	9. 0	48·0	50·0
3. 5	22. 40	4. 37	·1412	5. 38	·02970	21. 0	47·7	49·7
3. 36	25. 0	4. 55	·1412	6. 27	·02994	23. 0	47·5	49·7
4. 17	25. 50	5. 6	·1407	8. 10	·03005			
4. 29	24. 55	5. 33	·1408	8. 25	·02990			
4. 49	24. 5	5. 58	·1393	9. 0	·02992			
5. 0	25. 15	6. 25	·1405	9. 27	·02975			
5. 19	25. 40	6. 46	·1412	9. 37	·02985			
5. 29	24. 40	7. 21	·1396	10. 22	·02940			
5. 45	24. 30	7. 35	·1400	12. 51	·02960			
6. 29	12. 55	7. 48	·1396	17. 21	·02945			
6. 53	9. 30	8. 5	·1408	22. 12	·02948			
7. 3	10. 40	8. 16	·1403	23. 59	·02948			
7. 15	13. 0	8. 41	·1415					
7. 23	12. 15	8. 55	·1410					
7. 50	17. 0	9. 3	·1415					
7. 57	16. 10	9. 14	·1409					
8. 9	19. 0	9. 30	·1429					
8. 30	16. 0	10. 10	·1411					
8. 44	18. 25	10. 28	·1423					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 17		Jan. 17						
h m	° ′ ″	h m		h m		h m	°	°
9. 4	20. 17. 35	11. 15	·1413					
9. 13	19. 35	11. 48	·1416					
9. 27	11. 55	12. 12	·1408					
9. 45	19. 40	12. 25	·1413					
9. 57	24. 20	12. 40	·1409					
10. 7	25. 0	13. 11	·1413					
10. 30	19. 0	13. 51	·1405					
11. 5	23. 0	14. 0	·1410					
11. 19	21. 50	14. 10	·1408					
12. 23	22. 0	14. 20	·1413					
12. 34	22. 30	14. 37	·1407					
12. 45	21. 0	15. 46	·1412					
13. 8	23. 0	15. 58	·1409					
13. 35	23. 0	17. 0	·1417					
13. 45	22. 5	17. 27	·1409					
14. 5	25. 5	18. 5	·1414					
14. 16	23. 15	18. 28	·1406					
14. 25	23. 30	18. 47	·1409					
14. 34	24. 50	19. 5	·1404					
15. 17	23. 10	19. 25	·1409					
15. 35	21. 30	19. 39	·1406					
16. 0	24. 50		***					
16. 30	23. 0	21. 5	·1412					
16. 37	23. 20		***					
17. 9	20. 20	23. 48	·1406					
17. 25	21. 50	23. 59	·1410					
17. 35	20. 55							
17. 42	22. 30							
18. 4	21. 30							
18. 27	23. 0							
18. 57	21. 20							
19. 18	22. 0							
19. 30	21. 0							
20. 18	20. 10							
	***							
22. 17	22. 30							
22. 30	24. 20							
22. 39	24. 0							
22. 51	24. 50							
23. 13	24. 0							
23. 39	24. 15							
23. 59	26. 30							
Jan. 18		Jan. 18		Jan. 18		Jan. 18		
0. 0	20. 26. 30	0. 0	·1410	0. 0	·02948	0. 0	48·1	50·3
0. 20	26. 50	2. 20	·1418	0. 53	·02960	1. 0	48·9	50·8
0. 55	25. 0	5. 36	·1422	1. 58	·02988	2. 0	49·1	51·2
1. 18	26. 5	5. 59	·1418	5. 19	·02995	3. 0	49·3	51·1
1. 33	25. 0	6. 24	·1424	7. 40	·03025	9. 0	49·6	51·4
2. 18	23. 35	6. 41	·1418	11. 3	·03015	21. 0	48·2	50·0
2. 27	24. 10	6. 51	·1420	11. 18	·03020	22. 45	48·0	50·0
2. 58	23. 0	7. 19	·1410	11. 54	·02990	23. 30	48·2	50·2
3. 29	22. 45	7. 57	·1416	14. 13	·02954			
	***	8. 7	·1417	16. 0	·02976			
6. 23	22. 50	8. 39	·1413	21. 10	·02970			
6. 38	23. 50	8. 57	·1416		(†)			
6. 54	23. 20	9. 35	·1410					
7. 0	23. 0	10. 5	·1416					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 18		Jan. 18						
h m	° ′ ″	h m		h m		h m	°	°
7. 14	20. 21. 55	10. 37	·1407					
7. 32	17. 20	11. 4	·1405					
7. 39	16. 50	11. 40	·1412					
7. 53	18. 30	11. 59	·1408					
7. 59	17. 40	12. 35	·1403					
8. 18	19. 50	13. 35	·1426					
8. 48	18. 0	14. 3	·1416					
9. 7	20. 0	14. 35	·1410					
10. 5	16. 0	15. 27	·1405					
10. 34	20. 0	18. 0	·1413					
10. 44	17. 50	19. 35	·1414					
11. 6	18. 0		***					
11. 23	22. 50	20. 35	·1409					
11. 34	22. 0	21. 10	·1413					
11. 42	24. 55	23. 47	·1415					
12. 4	21. 50		(†)					
12. 29	23. 55							
13. 27	17. 20							
13. 50	19. 55							
14. 11	17. 0							
14. 36	16. 20							
14. 52	18. 40							
15. 17	21. 0							
15. 54	21. 5							
16. 6	23. 0							
16. 34	20. 30							
16. 44	21. 15							
16. 53	21. 0							
17. 7	22. 30							
17. 47	22. 5							
17. 57	21. 10							
18. 17	22. 0							
	***							
20. 39	21. 0							
21. 15	22. 30							
	***							
23. 46	23. 10							
23. 59	23. 45							
Jan. 19		Jan. 19		Jan. 19		Jan. 19		
0. 0	20. 23. 45		(†)		(†)	0. 0	49 ·0	50 ·6
0. 11	25. 10	0. 30	·1414	1. 0	·03033*	1. 0	49 ·5	51 ·1
0. 44	24. 45	0. 45	·1416	3. 0	·03025	2. 0	49 ·5	51 ·3
1. 14	25. 50	1. 5	·1410	9. 5	·03035	3. 0	49 ·6	51 ·4
2. 13	23. 50	1. 21	·1416	13. 36	·03010	9. 0	49 ·5	51 ·3
4. 39	21. 40	2. 53	·1419	17. 7	·02994	22. 30	48 ·0	49 ·8
5. 57	22. 30	6. 44	·1416	22. 34	·02954			
6. 28	22. 0	6. 57	·1419	23. 15	·02960			
6. 50	21. 0	7. 14	·1416	23. 59	·02980			
7. 10	22. 25	8. 45	·1414					
7. 18	22. 0	9. 5	·1418					
7. 35	22. 10	10. 7	·1410					
8. 4	19. 45	10. 34	·1419					
8. 43	21. 20	11. 9	·1414					
9. 3	19. 15	11. 30	·1418					
9. 26	20. 10	12. 39	·1408					
9. 44	19. 50	13. 14	·1408					
10. 24	21. 50	13. 29	·1415					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Jan. 19		Jan. 19						
h m	° ′ ″	h m		h m		h m	°	°
10. 57	20. 18. 55	13. 45	·1411					
11. 27	19. 10	14. 4	·1416					
11. 47	18. 0	15. 34	·1409					
12. 10	19. 10	16. 19	·1414					
12. 25	21. 30	18. 53	·1420					
13. 12	22. 0	19. 16	·1416					
13. 35	25. 20	20. 19	·1415					
13. 50	24. 0	20. 35	·1410					
14. 37	21. 40	20. 56	·1414					
15. 8	21. 0	22. 16	·1410					
15. 32	21. 0	23. 59	·1418					
15. 45	22. 10							
17. 40	22. 15							
17. 48	21. 20							
19. 49	22. 0							
20. 5	21. 0							
20. 26	21. 50							
20. 46	20. 0							
	***							
21. 35	23. 15							
22. 25	22. 40							
23. 59	24. 0							
Jan. 20		Jan. 20		Jan. 20		Jan. 20		
0. 0	20. 24. 0	0. 0	·1418	0. 0	·02980	0. 30	48 ·2	50 ·1
0. 7	23. 35	2. 2	·1422	0. 42	·02973	8. 30	48 ·0	49 ·7
0. 47	24. 0	2. 57	·1411	3. 15	·02990	21. 0	46 ·9	48 ·8
1. 14	25. 40	3. 57	·1422	7. 49	·02985	22. 0	46 ·9	48 ·8
1. 19	25. 5		***	8. 52	·02964	23. 0	47 ·0	49 ·0
2. 26	25. 30	6. 48	·1412	9. 15	·02975			
2. 59	21. 30	7. 13	·1427	9. 32	·02950			
3. 14	21. 40	7. 26	·1421	9. 45	·02957			
3. 24	21. 0	7. 44	·1438	10. 5	·02946			
3. 41	22. 30	8. 16	·1414	10. 25	·02955			
4. 12	23. 20	8. 50	·1413	10. 45	·02945			
4. 49	25. 15	9. 7	·1422	13. 59	·02940			
5. 0	24. 0	9. 23	·1444	20. 25	·02914			
5. 38	22. 55	9. 48	·1426	21. 13	·02898			
5. 45	24. 0	10. 10	·1413	22. 30	·02880			
6. 25	24. 20	10. 29	·1425	23. 20	·02898			
6. 37	23. 0	11. 5	·1415	23. 59	·02900			
6. 57	18. 5	11. 24	·1419					
7. 4	18. 10	12. 4	·1414					
7. 19	19. 40	13. 9	·1416					
7. 35	14. 0	13. 25	·1412					
7. 53	21. 40	13. 39	·1416					
8. 25	20. 10	14. 4	·1413					
8. 35	20. 20	14. 30	·1418					
8. 58	13. 50	14. 49	·1417					
9. 7	15. 30	15. 17	·1422					
9. 15	13. 30	18. 49	·1424					
9. 24	15. 15	20. 4	·1423					
9. 35	15. 30		***					
9. 54	19. 15	22. 54	·1410					
10. 18	19. 5	23. 59	·1413					
10. 33	21. 0							
10. 48	20. 5							
11. 22	21. 50							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 20								
h m	° ′ ″	h m		h m		h m	°	°
12. 27	20. 21. 0							
13. 10	23. 30							
13. 38	23. 0							
13. 55	24. 0							
14. 9	24. 0							
14. 25	25. 0							
14. 50	23. 0							
15. 20	23. 30							
15. 39	22. 55							
19. 41	21. 20							
21. 3	20. 0							
22. 21	22. 55							
23. 5	25. 0							
23. 59	24. 50							
Jan. 21		Jan. 21		Jan. 21		Jan. 21		
0. 0	20. 24. 50	0. 0	·1413	0. 0	·02900	0. 0	47 ·0	49 ·0
0. 56	26. 30	1. 47	·1423	1. 20	·02906	1. 0	47 ·9	49 ·6
1. 37	26. 15	2. 45	·1421	2. 0	·02930	2. 0	47 ·5	49 ·8
2. 38	24. 0	8. 55	·1426	3. 8	·02940	3. 0	47 ·6	49 ·6
4. 26	22. 30	9. 37	·1422	4. 6	·02940	9. 0	48 ·0	49 ·8
8. 50	22. 0	10. 14	·1424	8. 20	·02930	21. 0	46 ·2	47 ·6
14. 40	22. 35	10. 18	·1420	15. 0	·02909	22. 0	46 ·4	48 ·1
15. 10	22. 0	10. 28	·1423	21. 9	·02848	23. 0	46 ·4	48 ·2
15. 26	23. 5	11. 35	·1420	23. 52	·02850			
15. 40	23. 0	11. 50	·1424	23. 59	·02840			
15. 57	23. 30	12. 10	·1418					
16. 29	22. 10	12. 35	·1421					
17. 25	22. 50	15. 13	·1421					
17. 37	21. 30	16. 27	·1425					
18. 0	21. 50	17. 37	·1429					
18. 24	20. 30	18. 16	·1422					
18. 57	21. 50	18. 33	·1426					
19. 8	20. 50	19. 39	·1430					
19. 37	22. 10	20. 13	·1421					
20. 4	21. 50	20. 25	·1424					
20. 23	22. 30	21. 26	·1413					
21. 8	21. 40		***					
21. 54	21. 25	23. 43	·1410					
23. 28	23. 35	23. 59	·1415					
23. 37	25. 40							
23. 44	25. 10							
23. 59	26. 20							
Jan. 22		Jan. 22		Jan. 22		Jan. 22		
0. 0	20. 26. 20	0. 0	·1415	0. 0	·02840	0. 0	46 ·9	48 ·8
0. 18	26. 50	0. 33	·1418	1. 10	·02850	1. 0	47 ·3	49 ·0
1. 5	24. 20	1. 8	·1408	4. 0	·02916	2. 0	47 ·2	49 ·0
1. 23	26. 10	1. 23	·1398	9. 5	·02885	3. 0	47 ·1	49 ·0
4. 8	22. 40	1. 48	·1398	10. 40	·02857	9. 0	46 ·3	48 ·3
4. 45	20. 20	2. 27	·1403	23. 25	·03014	10. 0	46 ·4	48 ·4
5. 37	21. 45	2. 47	·1400	23. 59	·03030	21. 0	49 ·8	52 ·0
7. 23	21. 10	3. 13	·1404			22. 0	50 ·0	52 ·3
8. 35	20. 10	4. 18	·1401			23. 0	50 ·4	52 ·9
9. 22	20. 45	4. 39	·1396					
9. 45	19. 20	5. 31	·1404					
10. 12	18. 50	6. 49	·1407					
10. 39	15. 10	7. 6	·1403					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 22		Jan. 22						
h m	° ′ ″	h m		h m		h m	°	°
11. 36	20. 19. 35	7. 54	·1407					
11. 50	19. 5	10. 11	·1406					
12. 10	20. 20	10. 46	·1424					
12. 50	22. 10	11. 16	·1404					
13. 7	21. 10	11. 30	·1407					
13. 17	21. 10	11. 49	·1401					
13. 37	22. 30	13. 0	·1406					
18. 36	21. 10	13. 32	·1404					
18. 48	20. 15	17. 39	·1413					
20. 55	20. 20	19. 3	·1414					
21. 40	22. 25	22. 4	·1397					
22. 35	23. 10	23. 59	·1405					
22. 45	24. 30							
23. 15	24. 0							
23. 59	25. 20							
Jan. 23		Jan. 23		Jan. 23		Jan. 23		
0. 0	20. 25. 20	0. 0	·1405	0. 0	·03030	0. 0	51 ·1	53 ·4
0. 36	24. 0	0. 40	·1398	2. 5	·03109	1. 0	51 ·9	54 ·1
0. 52	26. 0	1. 5	·1402	5. 5	·03177	2. 0	52 ·0	54 ·6
2. 8	25. 0	1. 19	·1406	8. 46	·03220	3. 0	52 ·5	55 ·0
2. 37	24. 10	2. 41	·1413	23. 40	·03368	9. 0	53 ·1	56 ·0
2. 56	25. 0	4. 6	·1407	23. 59	·03370	21. 0	55 ·0	57 ·3
4. 6	23. 5	4. 35	·1412			22. 0	55 ·6	57 ·7
4. 25	23. 40	4. 51	·1409			23. 0	55 ·9	58 ·0
4. 56	21. 55	6. 37	·1411					
5. 15	22. 20	11. 53	·1400					
5. 55	21. 50	12. 18	·1404					
9. 4	20. 50	13. 23	·1401					
13. 30	21. 50	13. 37	·1407					
13. 39	23. 0	16. 37	·1406					
13. 56	21. 10	17. 3	·1409					
14. 43	21. 0	19. 23	·1406					
15. 15	20. 15	22. 12	·1394					
15. 39	21. 45	23. 50	·1395					
15. 56	20. 55		(†)					
16. 7	21. 35							
18. 9	21. 0							
21. 12	21. 20							
23. 59	24. 0							
Jan. 24		Jan. 24		Jan. 24		Jan. 24		
0. 0	20. 24. 0		(†)	0. 0	·03370	0. 0	56 ·1	58 ·2
0. 34	24. 30	0. 30	·1396	5. 20	·03450	1. 0	56 ·7	58 ·3
0. 47	24. 0	1. 27	·1398	17. 6	·03476	2. 0	56 ·7	58 ·4
1. 19	24. 35	2. 37	·1407	23. 59	·03440	3. 0	56 ·7	58 ·3
2. 28	23. 30	3. 17	·1404			9. 0	57 ·5	59 ·1
3. 27	21. 20	3. 56	·1406			21. 0	56 ·5	58 ·1
4. 20	21. 0	5. 54	·1397			22. 0	56 ·4	58 ·2
4. 32	21. 50	7. 3	·1401			23. 0	56 ·2	58 ·1
4. 54	21. 10	7. 35	·1408					
5. 21	22. 0	8. 34	·1404					
6. 4	21. 0	8. 56	·1407					
6. 49	22. 0	11. 39	·1396					
6. 58	21. 30	12. 4	·1399					
7. 35	22. 0	13. 34	·1396					
11. 7	20. 50	18. 37	·1402					
11. 15	20. 10	21. 41	·1391					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 24		Jan. 24						
h m	° ′ ″	h m		h m		h m	°	°
11.34	20. 20. 0	22. 7	·1393					
11.55	18. 55	23. 14	·1386					
14. 19	21. 15	23. 59	·1388					
18. 3	21. 20							
21. 27	20. 10							
	***							
23. 59	23. 30							
Jan. 25		Jan. 25		Jan. 25		Jan. 25		
0. 0	20. 23. 30	0. 0	·1388	0. 0	·03440	0. 0	56·5	58·2
0. 47	24. 40	2. 56	·1399	0. 35	·03453	1. 0	57·0	58·5
0. 54	23. 30	4. 37	·1390	5. 20	·03480	2. 0	56·8	58·5
0. 57	24. 20	5. 17	·1395	9. 45	·03440	3. 0	57·0	58·5
3. 23	23. 15	5. 59	·1394	23. 59	·03390	9. 0	55·7	57·3
3. 47	22. 45	7. 39	·1402			21. 0	55·2	56·7
4. 24	23. 15	8. 14	·1402			22. 0	55·2	56·7
4. 47	21. 55	8. 36	·1404			23. 0	55·3	56·8
5. 4	22. 20	9. 30	·1398					
5. 36	21. 45	10. 18	·1400					
6. 19	23. 10	10. 47	·1397					
6. 43	22. 0	12. 34	·1397					
12. 52	20. 50	13. 10	·1394					
16. 14	22. 15	13. 48	·1398					
19. 57	21. 10	14. 38	·1395					
22. 7	22. 0	15. 43	·1394					
23. 15	21. 50	19. 59	·1404					
23. 28	23. 0	23. 15	·1394					
23. 59	22. 55	23. 59	·1398					
Jan. 26		Jan. 26		Jan. 26		Jan. 26		
0. 0	20. 22. 55	0. 0	·1398	0. 0	·03390	0. 0	56·2	57·3
1. 25	24. 10	2. 44	·1406	1. 59	·03418	1. 0	56·3	57·6
3. 59	22. 0	5. 5	·1400	6. 43	·03428	2. 0	56·2	57·3
5. 7	22. 20	5. 11	·1396	12. 8	·03410	3. 0	56·1	57·6
5. 22	21. 10	5. 55	·1402	22. 51	·03463	9. 0	55·5	57·0
5. 54:	22. 0	6. 18	·1396	23. 59	·03475	21. 30	56·7	58·8
6. 26	20. 0	7. 5	·1406					
6. 52	21. 35		***					
14. 33	20. 20	13. 15	·1401					
14. 47	21. 10	13. 44	·1406					
15. 21	20. 15	19. 25	·1406					
16. 40	21. 30	22. 58	·1400					
20. 8	21. 15	23. 59	·1400					
23. 59	24. 20							
Jan. 27		Jan. 27		Jan. 27		Jan. 27		
0. 0	20. 24. 20	0. 0	·1400	0. 0	·03475	0. 15	57·8	59·6
0. 56	25. 30	2. 15	·1405	1. 33	·03500	9. 30	58·5	60·1
3. 12	22. 0	5. 16	·1405	2. 45	·03515	21. 0	58·9	60·3
4. 15	21. 15	12. 23	·1400	8. 0	·03537	22. 30	59·0	60·3
12. 25	20. 45	12. 43	·1406	23. 59	·03550	23. 0	58·9	60·0
12. 56	22. 10	13. 19	·1400					
13. 26	20. 45	15. 44	·1400					
19. 4	21. 15	19. 38	·1405					
21. 23	20. 20	23. 59	·1396					
22. 2	20. 55							
23. 59	24. 30							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 28		Jan. 28		Jan. 28		Jan. 28		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 24. 30	0. 0	·1396	0. 0	·03550	0. 0	58·2	59·2
0. 17	25. 10	1. 39	·1403	0. 55	·03548	1. 0	58·8	59·7
1. 22	24. 15		***	8. 53	·03556	2. 0	58·9	59·8
1. 38	25. 5	6. 35	·1405	10. 5	·03539	3. 0	58·5	59·5
3. 26	22. 0		***	12. 18	·03540	9. 0	58·1	59·4
10. 20	20. 35	9. 41	·1398	21. 0	·03490	21. 0	57·0	58·0
14. 50	21. 50	14. 0	·1399	22. 2	·03465	22. 0	56·3	57·3
17. 39	21. 50	19. 21	·1406	23. 44	·03468	23. 0	56·8	58·0
21. 14	21. 0	21. 48	·1403		(†)			
21. 56	22. 5	23. 19	·1406					
23. 16	23. 20	23. 59	·1403					
23. 45	23. 10							
23. 59	23. 25							
Jan. 29		Jan. 29		Jan. 29		Jan. 29		
0. 0	20. 23. 25	0. 0	·1403		(†)	0. 0	56·9	58·0
0. 48	25. 10	0. 40	·1402	0. 56	·03465	1. 0	57·3	58·3
3. 42	22. 40	0. 55	·1409	3. 15	·03468	2. 0	57·2	58·2
3. 56	23. 0	1. 54	·1412	8. 45	·03511	3. 0	57·0	57·9
5. 9	21. 45	2. 15	·1408	20. 3	·03534	9. 0	58·0	59·0
6. 11	22. 10	2. 34	·1411	22. 16	·03520	21. 0	58·6	60·0
8. 8	21. 0	3. 20	·1404	23. 49	·03481	22. 0	58·0	59·1
12. 20	20. 20	5. 29	·1404	23. 59	·03495	23. 0	57·5	58·6
13. 5	19. 15	5. 50	·1408					
15. 0	19. 45	7. 39	·1403					
16. 4	20. 25	12. 39	·1398					
16. 36	19. 50	13. 0	·1404					
16. 55	20. 15	13. 36	·1398					
17. 22	20. 0	15. 35	·1396					
18. 48	21. 20	18. 7	·1401					
21. 0	20. 20	22. 4	·1394					
21. 50	20. 50	23. 59	·1402					
23. 59	24. 0							
Jan. 30		Jan. 30		Jan. 30		Jan. 30		
0. 0	20. 24. 0	0. 0	·1402	0. 0	·03495	0. 0	58·3	59·6
0. 25	24. 25	2. 0	·1402	0. 58	·03500	1. 0	58·5	59·8
2. 14	23. 10	5. 46	·1407	1. 15	·03528	3. 0	57·9	59·4
3. 40	21. 10	7. 15	·1403	4. 33	·03525	9. 0	58·1	59·7
5. 27	21. 0	7. 27	·1399	4. 59	·03535	21. 0	55·4	56·2
7. 19	21. 20	8. 47	·1403	7. 44	·03533	22. 0	55·1	56·3
7. 34	20. 0	9. 34	·1400	8. 24	·03553	23. 0	55·6	57·0
7. 49	19. 0	10. 24	·1389	9. 34	·03540			
7. 58	19. 30	11. 29	·1418	10. 43	·03545			
8. 15	15. 30	12. 10	·1399	12. 0	·03503			
8. 44	20. 0	12. 26	·1401	13. 23	·03505			
9. 4	21. 10	13. 37	·1396	21. 6	·03435			
9. 45	21. 0	14. 45	·1399	22. 21	·03400			
10. 34	16. 35	19. 5	·1401	23. 30	·03405			
10. 50	20. 15	23. 59	·1398	23. 59	·03405			
11. 18	11. 25							
11. 45	10. 30							
11. 54	11. 5							
12. 16	17. 0							
12. 43	17. 35							
13. 30	21. 10							
	***							
15. 12	20. 10							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Jan. 30								
h m	° ′ ″	h m		h m		h m	°	°
18. 10	20. 20. 55							
20. 54	20. 0							
21. 57	20. 45							
23. 59	24. 0							
Jan. 31		Jan. 31		Jan. 31		Jan. 31		
0. 0	20. 24. 0	0. 0	·1398	0. 0	·03405	0. 0	56 ·0	57 ·2
1. 23	25. 20	0. 15	·1400	2. 42	·03450	1. 0	57 ·0	58 ·1
1. 28	24. 35	1. 36	·1406	9. 4	·03457	3. 0	56 ·2	57 ·9
1. 35	25. 10	2. 43	·1402	10. 50	·03437	9. 0	56 ·2	58 ·0
4. 11	21. 55	3. 17	·1398	23. 30	·03394	21. 0	55 ·4	57 ·1
5. 53	22. 30	3. 57	·1403	23. 50	·03392	22. 0	55 ·2	56 ·9
14. 6	21. 0	4. 4	·1400	23. 59	·03392	23. 0	55 ·4	57 ·0
15. 43	21. 55	4. 22	·1403					
17. 24	21. 0	9. 46	·1397					
18. 42	20. 40	13. 35	·1398					
21. 35	19. 0	13. 59	·1395					
23. 46	23. 10	18. 48	·1406					
23. 59	24. 0	21. 10	·1399					
		23. 59	·1403					
Feb. 1		Feb. 1		Feb. 1		Feb. 1		
0. 0	20. 24. 0	0. 0	·1403	0. 0	·03392	0. 0	55 ·7	57 ·5
0. 46	24. 50	3. 4	·1410	1. 8	·03392	1. 0	56 ·4	58 ·1
1. 56	24. 10	6. 9	·1404	2. 49	·03436	2. 0	56 ·4	58 ·0
4. 14:	21. 15	7. 42	·1405	10. 48	·03487	3. 0	56 ·4	58 ·2
4. 59	22. 0	8. 33	·1396	13. 35	·03485	9. 0	57 ·3	59 ·3
6. 54	22. 0	8. 50	·1398	17. 36	·03505	21. 0	58 ·1	59 ·0
7. 10	20. 0	9. 8	·1395	21. 5	·03492	22. 0	57 ·4	58 ·7
7. 34	20. 0	9. 42	·1397	23. 59	·03455	23. 0	57 ·4	58 ·7
8. 3	21. 50	10. 3	·1393					
8. 34	20. 10	10. 50	·1397					
8. 45	19. 30	11. 0	·1395					
9. 6	20. 50	11. 20	·1400					
9. 44	18. 55	13. 15	·1403					
9. 55	19. 15	13. 55	·1400					
10. 10	18. 35	14. 15	·1403					
10. 50	19. 40	15. 4	·1404					
11. 4	20. 30	16. 3	·1401					
11. 17	19. 40	18. 20	·1405					
13. 10	22. 0	19. 56	·1406					
13. 32	21. 15	20. 14	·1402					
13. 58	21. 0	20. 28	·1405					
14. 23	22. 50	21. 57	·1400					
14. 45	21. 55	22. 7	·1405					
14. 57	22. 30	22. 28	·1395					
16. 4	20. 35	22. 58	·1403					
16. 39	20. 30	23. 18	·1406					
17. 3	21. 20	23. 36	·1400					
17. 22	20. 35	23. 59	·1396					
17. 40	21. 20							
17. 59	20. 30							
18. 34	21. 5							
18. 54	20. 30							
19. 13	20. 55							
20. 34	19. 35							
21. 15	20. 0							
21. 57	21. 20							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 1								
h m	° ′ ″	h m		h m		h m	°	°
21. 59	20. 22. 50							
22. 9	22. 5							
22. 23	23. 20							
22. 50	22. 0							
23. 43	25. 0							
23. 59	24. 10							
Feb. 2		Feb. 2		Feb. 2		Feb. 2		
0. 0	20. 24. 10	0. 0	·1396	0. 0	·03455	0. 0	57 ·4	58 ·7
1. 9:	26. 0	0. 14	·1402	1. 10	·03450	1. 0	57 ·5	58 ·7
3. 50	22. 20	2. 14	·1398	5. 21	·03500	2. 0	57 ·5	58 ·8
4. 41	23. 45	2. 19	·1404	9. 0	·03500	3. 0	57 ·5	59 ·0
5. 16	22. 40	3. 8	·1396	12. 44	·03470	9. 0	57 ·5	58 ·7
5. 50	23. 10	3. 47	·1394	14. 35	·03443	21. 0	55 ·1	56 ·1
7. 7	22. 50	4. 0	·1398	21. 4	·03390			
8. 15	19. 40	4. 13	·1396	23. 8	·03325			
9. 37	21. 35	4. 34	·1399	23. 59	·03338			
10. 13	20. 50	5. 4	·1389					
11. 16	20. 20	5. 35	·1393					
12. 27	22. 15	6. 19	·1390					
12. 53	21. 30	6. 43	·1397					
13. 14	20. 30	7. 24	·1394					
13. 29	21. 20	8. 21	·1399					
13. 46	23. 0	8. 36	·1393					
14. 10	21. 0	9. 24	·1392					
14. 25	21. 15	10. 27	·1396					
14. 36	22. 50	11. 43	·1392					
15. 6	21. 0	12. 35	·1398					
15. 37	22. 5	13. 25	·1397					
16. 15	20. 0	13. 38	·1401					
16. 26	20. 50	14. 38	·1393					
17. 15	21. 30	15. 9	·1397					
17. 43	20. 45	15. 22	·1392					
18. 34	21. 0	15. 48	·1396					
19. 0	20. 0	16. 5	·1393					
19. 15	20. 45	18. 43	·1397					
20. 49	20. 0	19. 0	·1400					
21. 43	21. 0	19. 45	·1396					
22. 8	21. 0		* * *					
22. 26	21. 55	22. 12	·1401					
22. 54	22. 10	23. 59	·1396					
23. 59	24. 10							
Feb. 3		Feb. 3		Feb. 3		Feb. 3		
0. 0	20. 24. 10	0. 0	·1396	0. 0	·03338	1. 0	54 ·5	55 ·1
2. 4	25. 50	0. 58	·1393	2. 26	·03330	8. 0	55 ·2	56 ·5
2. 56	23. 0	2. 5	·1397	5. 15	·03360	21. 0	54 ·1	55 ·4
4. 33	24. 45	2. 55	·1394	10. 17	·03330	22. 0	54 ·7	56 ·2
5. 4	20. 20	4. 6	·1397	10. 30	·03335	23. 0	54 ·5	55 ·9
5. 12	21. 10	4. 54	·1390	10. 54	·03315			
5. 34	18. 20	5. 15	·1399	11. 15	·03320			
6. 4	21. 10	5. 27	·1394	21. 10	·03270			
6. 54	22. 0	6. 3	·1408	23. 59	·03295			
7. 40	21. 40	8. 19	·1399					
8. 44	20. 55	8. 38	·1402					
9. 7	20. 0	8. 50	·1396					
9. 49	20. 0	9. 11	·1400					
12. 4	16. 0	9. 24	·1396					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 3		Feb. 3						
h m	° ′ ″	h m		h m		h m	°	°
12. 49	20. 18. 40	9. 47	·1399					
13. 4	18. 10	10. 10	·1396					
13. 31	20. 20	10. 28	·1410					
13. 50	20. 10	10. 56	·1396					
15. 15	20. 55	11. 8	·1398					
15. 27	20. 5	11. 24	·1393					
15. 34	21. 0	12. 45	·1394					
15. 43	20. 20	13. 5	·1390					
15. 52	21. 25	13. 18	·1396					
16. 4	19. 15	13. 45	·1393					
16. 21	21. 50	16. 26	·1400					
16. 30	20. 20	19. 46	·1404					
17. 7	19. 35	20. 30	·1400					
17. 16	20. 30	21. 9	·1402					
	***	21. 57	·1397					
20. 40	19. 35	23. 25	·1406					
	***	23. 59	·1406					
23. 59	22. 0							
Feb. 4		Feb. 4		Feb. 4		Feb. 4		
0. 0	20. 22. 0	0. 0	·1406	0. 0	·03295	0. 0	54·6	56·1
0. 48	24. 0	0. 18	·1404	1. 5	·03290	1. 0	55·4	56·6
1. 9	22. 50	0. 40	·1410	4. 0	·03330	2. 0	55·3	56·9
2. 26	22. 55	1. 8	·1407	8. 49	·03352	3. 0	55·4	56·9
4. 7:	21. 30	1. 54	·1411	10. 57	·03360	9. 0	56·0	57·4
6. 20	23. 0	4. 20	·1412	11. 17	·03333	11. 30	56·5	57·4
7. 35	22. 10	6. 0	·1406	11. 34	·03352	21. 0	55·0	56·3
8. 5	22. 30	6. 15	·1409	14. 55	·03340	22. 0	54·4	55·6
8. 43	21. 0	6. 53	·1409	15. 35	·03320	23. 0	54·5	56·0
9. 43	21. 0	7. 29	·1404	23. 34	·03284			
10. 3	19. 50	7. 54	·1409	23. 59	·03300			
10. 33	19. 10	8. 30	·1405					
10. 40	19. 50	9. 8	·1407					
10. 58	17. 0	9. 32	·1400					
11. 6	17. 20	9. 38	·1406					
11. 17	16. 10	9. 50	·1399					
11. 39	18. 10	10. 16	·1401					
11. 58	20. 25	10. 30	·1398					
12. 29	19. 40	10. 42	·1401					
12. 57	20. 50	10. 57	·1418					
13. 25	21. 0	11. 20	·1398					
13. 53	20. 5	11. 27	·1400					
14. 30	22. 0	11. 37	·1396					
14. 43	23. 10	11. 50	·1399					
14. 55	23. 10	12. 5	·1395					
15. 30	21. 0		***					
15. 57	19. 15	14. 26	·1398					
16. 17	19. 55	15. 5	·1406					
16. 35	19. 10	15. 39	·1407					
17. 8	20. 30	16. 15	·1403					
	***	16. 34	·1407					
20. 4	22. 15	17. 5	·1401					
20. 17	21. 15	18. 36	·1405					
21. 15	20. 30	19. 39	·1395					
21. 39	21. 55	20. 10	·1396					
21. 55	21. 0	20. 25	·1402					
22. 4	22. 0	21. 23	·1399					
22. 27	22. 0	21. 38	·1402					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 4		Feb. 4						
h m	° ′ ″	h m		h m		h m	°	°
22. 37	20. 22. 45	21. 56	·1398					
22. 45	22. 0	22. 4	·1401					
22. 50	23. 5		***					
22. 55	22. 55	23. 59	·1398					
23. 59	24. 15							
Feb. 5		Feb. 5		Feb. 5		Feb. 5		
0. 0	20. 24. 15	0. 0	·1398	0. 0	·03300	0. 0	55·3	56·5
0. 50	25. 15	1. 20	·1407	2. 50	·03350	1. 0	55·5	57·0
1. 6	25. 0		***	7. 10	·03362	2. 0	55·4	57·0
1. 15	26. 0	3. 29	·1406	9. 25	·03350	3. 0	55·6	57·1
2. 40	24. 0	5. 59	·1403	14. 47	·03381	9. 0	56·0	57·5
3. 5	24. 30	6. 9	·1408	15. 19	·03375	21. 0	56·3	57·3
5. 10	22. 15	6. 47	·1399	15. 57	·03385	22. 0	56·5	57·5
5. 40	22. 45	7. 9	·1408	21. 4	·03375	23. 0	56·6	57·7
5. 55	22. 10	8. 22	·1399	23. 20	·03370			
6. 24	22. 20	8. 44	·1414	23. 59	·03375			
7. 8	18. 35	8. 56	·1410					
7. 34	21. 5	9. 5	·1413					
8. 30	21. 0	9. 15	·1407					
8. 47	15. 20	9. 40	·1400					
9. 40	20. 0		***					
14. 34	21. 45	11. 29	·1407					
14. 55	23. 35	14. 29	·1404					
15. 33	20. 45	15. 9	·1411					
	***	15. 54	·1407					
17. 18	22. 35	16. 50	·1405					
18. 6	21. 0	18. 0	·1409					
18. 58	21. 30	18. 40	·1405					
20. 59	20. 10	19. 45	·1409					
23. 30	23. 35	21. 17	·1398					
23. 59	24. 30	23. 59	·1396					
Feb. 6		Feb. 6		Feb. 6		Feb. 6		
0. 0	20. 24. 30	0. 0	·1396	0. 0	·03375	0. 0	57·3	58·4
1. 8	25. 10	1. 20	·1402	3. 30	·03440	1. 0	57·4	58·7
1. 23	26. 20	2. 21	·1408	8. 58	·03420	2. 0	57·7	58·8
2. 18	26. 0	2. 36	·1403	10. 37	·03395	3. 0	58·0	59·0
2. 40	23. 50	3. 10	·1400	20. 56	·03331	9. 0	56·9	58·0
2. 48	24. 0	3. 50	·1402	23. 24	·03296	21. 0	54·2	56·0
3. 19	22. 0	6. 47	·1393	23. 59	·03300	22. 30	54·0	55·2
4. 5	21. 35	7. [illegible]9	·1395			23. 0	54·0	55·1
4. 44	22. 35	7. 42	·1392					
5. 51	22. 55	8. 15	·1396					
8. 4	21. 0	9. 27	·1395					
8. 27	19. 55	9. 38	·1392					
9. 37	20. 55	10. 6	·1398					
10. 49	19. 10	11. 22	·1396					
11. 7	19. 55	17. 39	·1398					
12. 20	21. 0	18. 30	·1403					
16. 57	21. 15	19. 46	·1399					
17. 45	23. 10	20. 11	·1402					
18. 18	20. 30	22. 16	·1393					
18. 57	20. 35	23. 59	·1397					
20. 56	19. 5							
23. 54	24. 0							
23. 59	25. 50							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Feb. 7	
h m	° ′ ″
0. 0	20. 25. 50
0. 50	26. 30
0. 57	26. 10
1. 8	26. 50
3. 5	24. 50
5. 12	21. 45
7. 18	21. 0
7. 48	18. 35
8. 45	20. 0
13. 4	21. 0
	***
16. 57	21. 0
19. 15	21. 0
21. 5	20. 5
21. 46	21. 30
22. 15	23. 30
23. 20	26. 0
23. 40	26. 55
23. 59	25. 40
Feb. 8	
0. 0	20. 25. 40
0. 27	26. 10
1. 2	28. 40
1. 24	28. 0
1. 35	28. 35
3. 6	26. 40
3. 14	27. 10
3. 55	25. 55
4. 49	27. 20
5. 35	25. 10
5. 46	29. 0
6. 9	25. 15
7. 9	18. 50
7. 11	19. 10
7. 34	15. 30
7. 56	17. 0
8. 9	15. 0
8. 35	8. 0
8. 50	11. 50
9. 13	15. 10
9. 26	12. 5
9. 34	13. 50
10. 8	2. 0
10. 18	4. 0
10. 30	4. 50
10. 38	3. 15
10. 45	3. 0
11. 9	7. 50
11. 25	6. 0
11. 49	10. 55
11. 57	10. 20
12. 4	13. 50
12. 33	4. 20
12. 40	20. 9. 45
13. 19	19. 57. 0
13. 33	19. 59. 0
13. 57	20. 9. 55
14. 17	20. 7. 10
14. 34	12. 5
15. 5	21. 50
15. 37	19. 5
16. 8	18. 10
17. 0	33. 50
17. 32	27. 40
17. 47	27. 55
18. 26	21. 30
18. 57	23. 40
19. 7	23. 0
19. 15	24. 0
19. 40	23. 40
19. 55	25. 45
20. 30	22. 0
20. 40	23. 0
20. 45	25. 10
20. 57	23. 20
21. 39	22. 35
21. 54	23. 30
22. 15	21. 50
22. 22	23. 0
23. 5	23. 30
23. 30	27. 50
23. 51	29. 30
23. 59	29. 0
Feb. 9	
0. 0	20. 29. 0
0. 34	28. 35
0. 45	29. 50
1. 24	26. 15
1. 43	27. 55
3. 39	25. 15
4. 20	14. 20
5. 6	22. 55
5. 39	22. 30
5. 56	23. 50
6. 18	22. 35
6. 50	23. 10
7. 10	22. 0
7. 45	6. 20
7. 55	12. 15
8. 36	19. 45
9. 8	20. 30
9. 16	22. 0
9. 56	19. 10
10. 7	19. 55
10. 25	18. 10
10. 48	18. 55
11. 2	19. 50
11. 29	18. 0
11. 43	18. 35
11. 52	20. 50

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Feb. 7	
h m	
0. 0	·1397
0. 35	·1395
1. 14	·1398
1. 28	·1394
3. 39	·1398
5. 10	·1397
7. 13	·1397
7. 44	·1391
8. 19	·1397
	***
19. 17	·1409
21. 34	·1396
22. 26	·1400
22. 57	·1397
23. 35	·1404
	(†)
Feb. 8	
	(†)
0. 36	·1407
1. 7	·1404
1. 35	·1412
2. 17	·1406
2. 40	·1411
3. 34	·1407
4. 43	·1411
5. 30	·1403
5. 39	·1407
5. 49	·1396
5. 54	·1403
6. 8	·1396
6. 28	·1390
6. 55	·1374
7. 18	·1381
7. 41	·1386
7. 49	·1380
7. 57	·1382
8. 30	·1358
9. 16	·1383
9. 24	·1381
9. 39	·1389
9. 57	·1369
10. 5	·1348
10. 20	·1356
10. 45	·1370
10. 55	·1382
10. 58	·1371
11. 12	·1375
11. 30	·1364
11. 35	·1368
11. 47	·1366
12. 12	·1453
12. 24	·1432
12. 37	·1443
12. 59	·1380
13. 30	·1398
13. 39	·1406
13. 56	·1406
14. 25	·1379
14. 40	·1373
15. 9	·1380
15. 50	·1381
16. 5	·1378
16. 30	·1387
16. 54	·1373
17. 5	·1377
17. 29	·1399
17. 59	·1399
18. 44	·1386
18. 58	·1389
19. 11	·1384
19. 24	·1391
	***
20. 34	·1378
20. 56	·1389
21. 2	·1383
21. 10	·1386
21. 34	·1380
21. 56	·1372
	***
22. 53	·1383
23. 8	·1380
23. 17	·1383
23. 43	·1374
23. 59	·1379
Feb. 9	
0. 0	·1379
0. 30	·1374
0. 49	·1356
1. 9	·1360
1. 56	·1383
2. 9	·1380
2. 33	·1387
2. 57	·1383
3. 40	·1388
4. 28	·1372
4. 47	·1385
6. 24	·1393
7. 10	·1384
7. 35	·1374
7. 50	·1410
8. 35	·1387
9. 35	·1388
10. 6	·1393
10. 27	·1386
	***
11. 31	·1387
11. 49	·1394
12. 25	·1384
12. 49	·1389
13. 6	·1384
13. 39	·1398

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Feb. 7	
h m	
0. 0	·03300
1. 10	·03310
1. 23	·03318
2. 12	·03345
4. 47	·03368
13. 29	·03295
17. 5	·03322
20. 27	·03345
23. 25	·03330
23. 59	·03340
Feb. 8	
0. 0	·03340
2. 16	·03385
3. 30	·03385
6. 40	·03443
7. 6	·03485
8. 4	·03473
8. 45	·03500
10. 0	·03429
10. 10	·03440
	***
11. 56	·03386
12. 2	·03405
12. 19	·03328
12. 48	·03262
13. 24	·03293
13. 37	·03275
13. 53	·03295
14. 12	·03285
14. 53	·03335
15. 15	·03340
16. 15	·03370
16. 59	·03366
17. 26	·03335
18. 8	·03334
18. 40	·03350
20. 54	·03375
21. 5	·03370
22. 20	·03385
23. 59	·03390
Feb. 9	
0. 0	·03390
1. 0	·03420
1. 43	·03445
3. 31	·03435
4. 33	·03485
7. 32	·03470
7. 50	·03480
8. 45	·03468
11. 47	·03472
12. 25	·03450
13. 6	·03460
13. 50	·03420
14. 4	·03430
14. 40	·03392
15. 50	·03440
22. 17	·03432
22. 58	·03431
23. 59	·03440

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 7		
h m	°	°
0. 0	54·5	55·6
1. 0	55·0	56·0
2. 0	55·2	56·9
3. 0	55·8	57·1
9. 0	55·0	56·0
21. 0	56·1	57·7
22. 0	55·9	57·3
23. 0	55·9	57·1
Feb. 8		
0. 0	57·1	58·1
1. 0	57·8	58·7
3. 0	56·4	57·7
9. 0	57·1	58·8
21. 0	56·0	57·0
22. 0	56·0	57·2
23. 0	56·1	57·6
Feb. 9		
0. 0	56·9	58·0
1. 0	58·0	59·0
2. 0	57·0	58·1
3. 0	57·4	58·5
7. 0	58·0	59·4
8. 0	57·9	59·4
9. 0	57·5	59·1
21. 45	57·4	58·8

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 9		Feb. 9						
h m	° ′ ″	h m		h m		h m	°	°
12. 8	20. 19. 0	13. 48	·1394					
12. 17	19. 30	13. 59	·1403					
12. 40	16. 55	14. 17	·1407					
13. 5	17. 15	14. 36	·1395					
13. 22	24. 0	15. 7	·1390					
13. 54	23. 0	15. 22	·1383					
14. 22	33. 50	15. 47	·1389					
15. 9	21. 30	16. 37	·1398					
15. 15	21. 45	16. 56	·1393					
15. 26	19. 30	17. 17	·1394					
16. 17	20. 30	17. 49	·1385					
16. 27	19. 0	18. 40	·1395					
16. 55	18. 50	20. 0	·1396					
17. 27	20. 50		***					
17. 57	20. 0	22. 43	·1383					
18. 10	22. 0	23. 59	·1380					
18. 27	21. 55							
18. 45	23. 0							
19. 16	21. 10							
21. 18	20. 45							
21. 39	22. 0							
21. 57	21. 0							
22. 18	21. 20							
22. 25	23. 30							
22. 48	22. 0							
23. 13	23. 0							
23. 59	26. 0							
Feb. 10		Feb. 10		Feb. 10		Feb. 10		
0. 0	20. 26. 0	0. 0	·1380	0. 0	·03440	1. 0	57·8	59·0
0. 19	27. 0	0. 30	·1380	3. 0	·03475	9. 0	58·1	59·6
0. 56	25. 10	1. 43	·1393	8. 23	·03510	21. 0	56·0	57·0
1. 27	24. 50	3. 30	·1392	9. 3	·03508	22. 0	55·6	56·7
1. 44	25. 50	4. 34	·1396	9. 58	·03513	23. 0	55·1	56·2
2. 27	25. 50	5. 0	·1393	10. 40	·03480			
3. 20	24. 35	5. 39	·1395	14. 12	·03475			
3. 50	22. 30	6. 34	·1384	14. 37	·05456			
4. 45	22. 20	6. 52	·1389	17. 4	·03458			
5. 34	21. 10	7. 15	·1382	20. 40	·03430			
6. 5	23. 0	7. 25	·1384	22. 50	·03390			
6. 14	22. 5	7. 47	·1378	23. 59	·03380			
6. 34	21. 10	8. 9	·1409					
6. 47	20. 0	8. 23	·1414					
7. 8	20. 25	8. 40	·1398					
7. 17	21. 55	8. 49	·1386					
7. 46	20. 20. 0	9. 19	·1368					
8. 16	19. 59. 0	9. 49	·1380					
8. 35	20. 6. 5	9. 59	·1411					
9. 10	17. 15	10. 19	·1407					
9. 14	17. 20	10. 45	·1388					
9. 20	18. 45	11. 18	·1378					
9. 29	18. 5	11. 47	·1382					
9. 40:	19. 10	13. 0	·1379					
9. 57	12. 30	13. 37	·1388					
10. 6	16. 0	13. 55	·1384					
10. 14	15. 0	14. 19	·1389					
10. 28	15. 15	14. 58	·1383					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 10		Feb. 10						
h m	° ′ ″	h m		h m		h m	°	°
10. 45	20. 18. 0	17. 15	·1383					
10. 56	14. 35	19. 17	·1393					
11. 16	13. 50	21. 15	·1384					
11. 18	14. 20	21. 27	·1388					
11. 35	15. 30	22. 5	·1380					
11. 58	14. 15	22. 15	·1386					
12. 30	17. 15	22. 30	·1381					
12. 47	17. 10		***					
13. 1	18. 35	23. 35	·1383					
13. 21	16. 0	23. 44	·1392					
13. 48	18. 10		(†)					
13. 59	20. 45							
14. 14	20. 30							
14. 29	18. 0							
15. 25	19. 15							
16. 4	18. 30							
17. 8	19. 40							
17. 55	18. 50							
18. 39	18. 45							
19. 20	19. 30							
19. 50	18. 0							
20. 46	20. 0							
21. 14	18. 55							
21. 22	20. 20							
	***							
22. 7	19. 50							
22. 17	20. 55							
22. 27	20. 15							
	***							
23. 46	22. 10							
23. 59	23. 0							
Feb. 11		Feb. 11		Feb. 11		Feb. 11		
0. 0	20. 23. 0		(†)	0. 0	·03380	0. 0	56·4	57·6
1. 43	25. 55	0. 16	·1384	1. 30	·03413	1. 0	56·6	57·9
2. 52	23. 50	1. 30	·1388	3. 17	·03398	2. 0	55·9	56·9
3. 0	24. 30	2. 31	·1385	5. 28	·03468	3. 0	55·6	57·0
4. 17	23. 40	4. 23	·1397	6. 5	·03495	9. 0	56·1	57·6
4. 52	21. 35	5. 9	·1376	6. 43	·03500	21. 0	56·5	58·0
5. 27	13. 50	5. 35	·1365	6. 59	·03478	22. 30	57·0	58·3
5. 40	10. 10	5. 54	·1371	7. 29	·03498	23. 0	56·9	58·2
5. 47	10. 30	6. 5	·1365	8. 53	·03515			
6. 5	16. 0	6. 18	·1361	9. 16	·03505			
6. 11	16. 55	6. 24	·1364	9. 45	·03460			
6. 24	14. 30	6. 36	·1358	9. 55	·03470			
6. 27	15. 20	6. 57	·1369	10. 6	·03435			
6. 43	14. 30	7. 23	·1345	10. 19	·03450			
7. 4	20. 5	7. 37	·1351	10. 30	·03436			
7. 18	15. 30	7. 54	·1348	10. 40	·03445			
7. 27	14. 0	8. 19	·1362	13. 20	·03415			
7. 45	17. 55	8. 34	·1352	13. 28	·03435			
7. 55	21. 40	9. 13	·1351	14. 25	·03355			
8. 9	17. 30	9. 28	·1382	14. 56	·03385			
8. 26	19. 20	9. 36	·1372	17. 54	·03380			
8. 48	17. 15	9. 45	·1384	23. 59	·03432			
9. 4	23. 0	9. 53	·1372					
9. 15	22. 40	10. 5	·1399					
9. 24	19. 10	10. 11	·1372					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 11		Feb. 11						
h m	° ′ ″	h m		h m		h m	°	°
9. 33	20. 25. 30	10. 28	·1387					
9. 40	22. 0	10. 38	·1367					
9. 46	26. 15	11. 16	·1379					
9. 57	14. 0	11. 25	·1377					
10. 8	17. 35	11. 57	·1387					
10. 19	10. 0	12. 16	·1375					
10. 34	16. 0	12. 37	·1384					
10. 43	13. 40	13. 4	·1373					
10. 51	16. 40	13. 34	·1379					
11. 15	22. 40	13. 50	·1403					
11. 25	21. 45	14. 6	·1413					
11. 30	23. 10	14. 16	·1407					
11. 36	23. 0	14. 53	·1373					
11. 48	25. 25	15. 19	·1379					
11. 57	23. 30		***					
12. 16	21. 10	16. 51	·1386					
12. 28	21. 15	16. 58	·1379					
12. 40	19. 10	17. 56	·1392					
13. 31	16. 50	18. 32	·1389					
13. 44	25. 30	18. 56	·1395					
13. 58	21. 20	19. 43	·1380					
14. 15	22. 0	19. 57	·1386					
14. 27	17. 55	20. 9	·1384					
14. 36	16. 20	20. 34	·1395					
14. 47	15. 40	20. 58	·1385					
15. 5	17. 40	21. 10	·1389					
15. 16	17. 20	21. 23	·1388					
15. 21	19. 30	21. 51	·1383					
16. 5	21. 0	22. 17	·1370					
16. 12	22. 0	22. 49	·1392					
16. 27	20. 45	22. 54	·1383					
16. 56	21. 15	23. 7	·1393					
17. 25	23. 50	23. 15	·1383					
17. 47	22. 35		***					
17. 55	23. 0	23. 59	·1391					
18. 18	21. 0							
18. 43	22. 0							
19. 11	20. 15							
19. 43	20. 15							
20. 7	22. 10							
20. 10	22. 10							
20. 22	23. 55							
20. 37	22. 10							
20. 57	23. 0							
21. 23	20. 45							
21. 44	23. 50							
22. 4	22. 50							
22. 22	21. 0							
22. 35	25. 0							
22. 43	23. 0							
22. 56	26. 30							
23. 5	23. 45							
23. 19	22. 45							
23. 35	26. 30							
23. 48	25. 0							
	(†)							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 12		Feb. 12		Feb. 12		Feb. 12		
h m	° ′ ″	h m		h m		h m	°	°
	(†)	0. 0	·1391	0. 0	·03432	0. 0	57·5	58·9
0. 53	20. 24. 25	0. 46	·1396	1. 8	·03430	1. 0	58·0	59·0
0. 58	25. 30	1. 10	·1391	1. 46	·03445	3. 0	57·5	58·8
1. 35:	24. 50	1. 38	·1385	3. 4	·03455	9. 0	58·0	59·5
1. 54	26. 30	1. 58	·1396	3. 49	·03480	21. 0	57·3	58·9
2. 15	24. 10	2. 48	·1385	5. 7	·03505	22. 0	56·7	58·2
2. 35	26. 55	3. 6	·1394	5. 24	·03525	23. 0	56·4	58·0
3. 25	24. 50	3. 40	·1399	5. 54	·03512			
4. 22	24. 40	4. 19	·1385	6. 9	·03536			
4. 37	27. 10	4. 43	·1394	6. 47	·03493			
4. 47	25. 20	5. 5	·1390	7. 42	·03518			
5. 19	24. 0	5. 19	·1374	8. 35	·03480			
5. 40	24. 30	5. 39	·1385	8. 44	·03490			
5. 59	21. 40	6. 3	·1363	8. 50	·03478			
6. 14	23. 0	6. 16	·1409	9. 35	·03500			
6. 35	3. 10	6. 36	·1398	10. 26	·03505			
6. 48	11. 0	6. 46	·1401	11. 55	·03480			
6. 59	16. 45	6. 57	·1375	12. 12	·03465			
7. 6	15. 30	7. 4	·1382	13. 18	·03477			
7. 17	20. 0	7. 13	·1369	13. 47	·03454			
7. 25	16. 0	7. 26	·1383	16. 23	·03450			
7. 35	20. 55	7. 39	·1370	21. 25	·03453			
7. 45	18. 0	7. 50	·1386	23. 30	·03422			
7. 55	21. 55	8. 16	·1414	23. 59	·03430			
8. 12	8. 30	8. 38	·1389					
8. 18	10. 0	8. 54	·1366					
8. 27	7. 35	9. 25	·1368					
8. 55	16. 5	9. 33	·1365					
9. 4	15. 50	9. 57	·1368					
9. 8	17. 55	10. 3	·1362					
9. 20	13. 10	10. 29	·1374					
9. 45	16. 0	10. 47	·1373					
10. 0	15. 10	11. 19	·1379					
10. 15	11. 50	11. 43	·1374					
10. 30	8. 30	12. 16	·1392					
10. 45	10. 10	12. 59	·1382					
11. 5	13. 10	13. 26	·1388					
11. 25	15. 0	13. 56	·1388					
11. 35	13. 0	14. 9	·1392					
12. 0	16. 0	14. 24	·1387					
12. 25	6. 0	14. 55	·1383					
12. 55	10. 50	16. 5	·1386					
13. 40	21. 0	16. 37	·1370					
14. 5	18. 5	17. 6	·1375					
14. 20	19. 50	17. 36	·1389					
15. 17	18. 10	18. 7	·1406					
15. 30	19. 45	18. 29	·1398					
15. 55	17. 0	19. 4	·1398					
16. 18	19. 20	19. 39	·1386					
16. 45	27. 30	20. 17	·1392					
17. 0	26. 50	21. 10	·1383					
17. 8	24. 30		***					
17. 48	20. 50	22. 5	·1393					
18. 7	21. 55	22. 42	·1385					
18. 29	21. 5	23. 6	·1373					
19. 27	19. 50	23. 25	·1382					
19. 55	22. 10	23. 59	·1380					
20. 45	22. 55							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Feb. 12	
h m	° ′ ″
20. 58	20. 21. 45
21. 35	21. 15
22. 9	27. 15
22. 57	24. 35
23. 18	25. 0
23. 35	29. 0
23. 59	25. 0
Feb. 13	
0. 0	20. 25. 0
0. 19	24. 0
0. 45	30. 5
0. 57	28. 0
1. 4	29. 0
1. 21	28. 10
1. 40	26. 0
2. 0	24. 30
2. 23	27. 30
3. 19	23. 30
3. 37	24. 15
3. 55	17. 50
4. 6	29. 15
4. 22	15. 0
4. 57	21. 0
5. 23	24. 20
5. 39	22. 50
5. 54	24. 0
6. 12	5. 15
6. 23	8. 0
6. 44	1. 0
7. 5	9. 55
7. 9	8. 0
7. 20	10. 0
7. 34	6. 5
7. 48	14. 30
8. 5	18. 0
8. 8	17. 15
8. 19	16. 10
8. 34	18. 0
8. 45	17. 30
9. 5	20. 40
9. 55	19. 50
10. 20	16. 0
10. 44	32. 20
10. 49	29. 30
10. 58	33. 0
11. 19	20. 25
11. 27	21. 10
11. 39	18. 0
11. 54	19. 55
12. 15	12. 10
12. 19	15. 0
12. 39	20. 0
12. 50	19. 0
13. 53	21. 35
14. 10	23. 30
14. 35	21. 55
14. 56	22. 50
15. 29	20. 21. 45
16. 45	21. 0
16. 55	22. 0
17. 26	20. 20
18. 50	20. 20
19. 56	21. 30
20. 13	20. 5
20. 48	22. 10
21. 4	21. 0
21. 56	22. 0
22. 24	24. 0
23. 40	24. 50
23. 53	24. 0
23. 59	25. 0
Feb. 14	
0. 0	20. 25. 0
0. 20	26. 50
0. 59	25. 0
1. 30	26. 0
1. 47	24. 25
2. 0	26. 0
3. 34	24. 30
4. 18	10. 0
5. 18	22. 50
6. 3	21. 40
6. 23	22. 15
7. 30	20. 55
7. 51	16. 0
8. 9	18. 50
8. 22	14. 25
8. 47	18. 10
8. 57	17. 0
9. 24	19. 35
9. 38	18. 5
9. 50	19. 10
10. 9	19. 40
10. 25	18. 55
10. 42	19. 45
10. 50	18. 50
11. 10	19. 10
11. 20	21. 0
11. 44	20. 15
12. 15	21. 40
13. 8	21. 25
13. 24	22. 50
13. 39	21. 30
14. 24	21. 50
14. 47	20. 40
15. 43	22. 10
15. 57	22. 0
16. 25	23. 0
16. 57	21. 35

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
Feb. 13	
0. 0	·1380
	***
0. 25	·1389
0. 57	·1382
1. 6	·1384
1. 27	·1380
1. 42	·1388
1. 55	·1381
2. 12	·1390
2. 29	·1379
	***
3. 31	·1388
3. 40	·1375
3. 48	·1382
3. 58	·1394
4. 13	·1380
4. 34	·1397
5. 2	·1400
5. 17	·1394
5. 45	·1396
6. 0	·1379
6. 17	·1425
6. 31	·1410
6. 47	·1406
7. 0	·1391
7. 8	·1397
7. 21	·1381
7. 33	·1395
	***
8. 12	·1378
8. 23	·1383
8. 40	·1374
9. 9	·1383
9. 23	·1379
9. 34	·1384
9. 40	·1381
9. 56	·1387
10. 14	·1383
10. 37	·1410
10. 45	·1392
10. 54	·1403
11. 4	·1386
11. 20	·1406
11. 38	·1398
11. 59	·1370
12. 17	·1384
12. 30	·1380
12. 57	·1384
13. 9	·1382
13. 40	·1385
13. 47	·1383
14. 7	·1393
15. 3	·1384
15. 26	·1387
15. 48	·1385
17. 33	·1388
17. 57	·1395
18. 36	·1386
19. 14	·1390
19. 20	·1386
19. 29	·1396
19. 38	·1387
	***
20. 37	·1389
21. 0	·1382
21. 38	·1377
23. 29	·1387
23. 59	·1384
Feb. 14	
0. 0	·1384
0. 34	·1383
0. 47	·1382
1. 24	·1393
1. 39	·1392
1. 53	·1396
2. 9	·1393
3. 31	·1396
3. 51	·1384
4. 17	·1407
4. 36	·1395
4. 49	·1398
5. 40	·1395
6. 20	·1397
6. 52	·1393
7. 16	·1396
7. 40	·1404
7. 57	·1400
8. 14	·1410
8. 36	·1399
8. 47	·1407
9. 8	·1404
9. 20	·1396
9. 30	·1398
9. 39	·1390
10. 55	·1388
11. 10	·1392
11. 34	·1387
12. 46	·1390
13. 6	·1387
13. 35	·1391
	***
14. 18	·1391
14. 59	·1384
15. 43	·1392
16. 4	·1391
17. 2	·1398

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Feb. 13	
0. 0	·03430
2. 12	·03499
3. 6	·03499
5. 3	·03520
5. 25	·03503
5. 50	·03511
6. 3	·03485
6. 15	·03520
6. 30	·03490
7. 25	·03499
8. 49	·03511
10. 37	·03510
11. 6	·03415
11. 57	·03422
12. 22	·03468
14. 8	·03480
14. 33	·03470
17. 29	·03490
21. 7	·03470
23. 40	·03440
23. 59	·03445
Feb. 14	
0. 0	·03445
2. 3	·03483
3. 22	·03499
4. 20	·03530
5. 23	·03508
8. 45	·03475
9. 28	·03460
11. 59	·03472
21. 26	·03411
22. 33	·03385
23. 59	·03410

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Feb. 13		
0. 0	57·8	59·0
1. 0	58·1	59·3
2. 0	58·1	59·1
3. 0	57·8	59·0
9. 0	58·0	59·5
21. 0	57·4	59·0
22. 0	56·5	58·4
23. 0	56·4	58·3
Feb. 14		
0. 0	57·1	58·9
1. 0	57·6	59·1
2. 0	57·8	59·3
3. 0	57·6	59·0
9. 0	57·3	58·9
21. 0	56·0	57·7
22. 0	55·5	57·0
23. 0	55·6	57·1

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Feb. 14	
h m	° ′ ″
17. 6	20. 20. 10
17. 25	20. 0
17. 48	20. 30
18. 50	20. 10
19. 5	19. 45
20. 46	19. 10
20. 56	20. 30
21. 28	19. 0
21. 51	19. 30
22. 8	21. 50
22. 26	21. 0
23. 59	23. 10
Feb. 15	
0. 0	20. 23. 10
0. 19	24. 0
0. 45	26. 10
1. 35	24. 10
1. 59	26. 10
2. 35	24. 40
2. 55	25. 15
4. 5	22. 50
5. 3	21. 0
6. 54	21. 50
7. 4	21. 0
7. 25	21. 25
7. 47	21. 0
8. 3	20. 10
8. 11	21. 10
8. 30	20. 0
9. 4	17. 15
9. 25	18. 5
9. 36	17. 50
10. 35	20. 35
10. 47	20. 0
11. 4	21. 0
12. 37	21. 10
12. 59	21. 40
13. 46	21. 0
14. 23	21. 30
15. 4	20. 50
15. 34	21. 15
18. 10	20. 0
18. 30	20. 55
19. 25	20. 20
19. 39	19. 55
21. 0	21. 15
21. 26	20. 30
23. 59	24. 0
Feb. 16	
0. 0	20. 24. 0
1. 3	24. 15
2. 36	22. 45
2. 54	23. 0
4. 15	21. 15

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Feb. 14	
h m	
17. 50	·1394
18. 23	·1394
18. 39	·1400
18. 49	·1395
19. 5	·1400
19. 35	·1400
20. 14	·1396
20. 25	·1390
20. 37	·1393
21. 19	·1388
21. 43	·1394
22. 39	·1383
23. 23	·1370
23. 59	·1377
Feb. 15	
0. 0	·1377
0. 55	·1392
1. 19	·1389
1. 55	·1395
2. 18	·1391
2. 49	·1396
3. 7	·1394
4. 34	·1397
5. 7	·1394
6. 0	·1398
7. 52	·1392
8. 7	·1396
8. 38	·1391
8. 57	·1397
9. 30	·1394
10. 7	·1397
10. 40	·1392
10. 54	·1396
	***
14. 19	·1394
14. 42	·1399
15. 24	·1395
18. 13	·1400
19. 27	·1398
20. 4	·1399
21. 17	·1393
21. 29	·1394
21. 40	·1389
22. 43	·1389
23. 16	·1396
23. 59	·1399
Feb. 16	
0. 0	·1399
0. 25	·1400
4. 29	·1406
5. 8	·1401
6. 6	·1403

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Feb. 15	
0. 0	·03410
0. 39	·03435
7. 0	·03470
10. 19	·03458
23. 10	·03385
23. 59	·03398
Feb. 16	
0. 0	·03398
3. 18	·03440
10. 57	·03449
13. 13	·03440
13. 59	·03409

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
h m	°	°
Feb. 15		
0. 0	57·0	58·1
1. 0	57·2	58·4
2. 0	57·1	58·8
3. 0	57·0	58·8
7. 0	57·8	59·3
9. 0	57·2	58·9
21. 0	56·3	57·3
22. 0	56·2	57·3
23. 0	56·4	57·7
Feb. 16		
0. 0	57·6	58·4
1. 0	57·3	58·3
2. 0	57·5	58·6
3. 0	57·9	59·0
9. 0	57·9	59·2

Greenwich Mean Solar Time.	Western Declination.
Feb. 16	
h m	° ′ ″
4. 56	20. 22. 0
5. 30	22. 0
6. 27	22. 10
7. 57	20. 55
9. 16	20. 30
9. 27	19. 45
9. 29	20. 35
9. 49	21. 0
10. 21	17. 10
10. 47	19. 0
11. 4	18. 10
11. 25	19. 15
12. 15	19. 0
12. 44	17. 45
13. 8	19. 0
13. 19	22. 30
13. 40	21. 30
14. 7	16. 0
14. 45	16. 20
15. 19	20. 0
16. 14	21. 0
	***
20. 26	17. 55
20. 59	18. 50
21. 26	18. 10
23. 25	24. 10
23. 59	23. 50
Feb. 17	
0. 0	20. 23. 50
0. 16	22. 15
0. 45	24. 50
1. 11	23. 50
1. 32	25. 55
1. 36	25. 10
1. 59	25. 5
2. 11	25. 50
2. 38	24. 0
4. 26	22. 30
4. 52	23. 20
5. 18	22. 20
6. 15	21. 20
6. 35	21. 45
6. 43	21. 10
7. 29	22. 0
8. 56	20. 10
9. 20	11. 35
9. 54	17. 55
10. 39	19. 50
11. 48	21. 50
12. 57	21. 55
13. 17	22. 50
13. 34	22. 15
13. 45	23. 0
14. 20	21. 45
15. 15	22. 5
15. 29	24. 10
16. 4	21. 50

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Feb. 16	
h m	
6. 30	·1399
8. 9	·1406
8. 39	·1400
9. 20	·1399
9. 35	·1413
10. 15	·1399
10. 54	·1394
11. 39	·1402
12. 13	·1398
12. 34	·1400
12. 47	·1393
13. 5	·1399
13. 15	·1396
13. 40	·1407
14. 19	·1400
14. 51	·1390
18. 45	·1403
20. 24	·1394
22. 51	·1398
23. 59	·1388
Feb. 17	
0. 0	·1388
0. 37	·1395
1. 26	·1405
2. 51	·1404
3. 35	·1407
4. 43	·1404
6. 14	·1408
7. 17	·1404
7. 35	·1408
7. 49	·1404
8. 40	·1403
8. 56	·1395
9. 12	·1408
9. 35	·1409
10. 5	·1404
12. 0	·1408
12. 57	·1402
13. 35	·1406
14. 45	·1400
17. 25	·1405
19. 8	·1402
19. 19	·1406
21. 18	·1394
23. 30	·1393
23. 59	·1398

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Feb. 16	
h m	
15. 8	·03428
20. 10	·03412
23. 59	·03396
Feb. 17	
0. 0	·03396
4. 8	·03435
8. 53	·03433
9. 6	·03423
9. 32	·03440
23. 59	·03320

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 16		
h m	°	°
21. 30	56·7	57·9
Feb. 17		
0. 0	57·3	58·7
8. 0	57·1	58·5
21. 0	55·9	57·0
22. 0	55·4	56·1
23. 0	55·4	56·3

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 17								
h m	° ′ ″	h m		h m		h m	°	°
16. 31	20. 22. 25							
16. 57	21. 5							
17. 47	20. 0							
18. 36	20. 20							
21. 16	18. 25							
21. 39	19. 20							
21. 50	18. 20							
23. 59	24. 0							
Feb. 18		Feb. 18		Feb. 18		Feb. 18		
0. 0	20. 24. 0	0. 0	·1398	0. 0	·03320	1. 0	55·3	56·8
2. 0	25. 40	4. 0	·1408	9. 58	·03320	2. 0	55·1	56·5
3. 41	23. 0	6. 40	·1412	21. 0	·03335	3. 0	54·6	56·0
8. 39	21. 30	7. 28	·1407	23. 59	·03310	9. 0	55·3	56·7
9. 0	18. 50	7. 53	·1409			21. 0	56·0	57·5
9. 19	20. 0 ***	8. 37	·1407			22. 0	55·4	57·0
10. 58	20. 0	8. 58	·1401			23. 0	55·0	56·9
11. 36	21. 20	9. 55	·1407					
11. 47	20. 40	10. 15	·1405					
12. 18	20. 40	10. 44	·1406 ***					
12. 26	21. 50	12. 0	·1402					
13. 4	20. 45	12. 59	·1407					
13. 19	22. 50	13. 26	·1410					
13. 46	22. 0	14. 57	·1406					
13. 57	22. 30	18. 30	·1407					
14. 21	21. 30	19. 22	·1403					
15. 28	21. 25	19. 58	·1407 ***					
15. 39	20. 50	21. 56	·1408 ***					
16. 45	20. 10	22. 49	·1404					
17. 7	20. 50	23. 30	·1408					
17. 46	19. 50	23. 59	·1405					
18. 43	21. 10							
19. 48	19. 45							
21. 8	18. 10							
22. 44	21. 20							
23. 59	24. 10							
Feb. 19		Feb. 19		Feb. 19		Feb. 19		
0. 0	20. 24. 10	0. 0	·1405	0. 0	·03310	0. 0	55·8	57·6
2. 9	24. 50	0. 15	·1407	2. 2	·03356	1. 0	56·3	58·1
2. 40	23. 25	2. 4	·1412	5. 57	·03381	3. 0	56·5	58·2
3. 50	22. 0	2. 37	·1408	14. 0	·03370	9. 0	57·1	58·6
6. 55	20. 50	3. 18	·1411	21. 0	·03343	21. 0	56·1	57·5
8. 58	20. 30	3. 56	·1407	22. 50	·03320	22. 0	55·8	57·4
9. 7	19. 10	5. 25	·1411	23. 59	·03325	23. 0	55·9	57·8
10. 5	20. 15	5. 35	·1409					
10. 20	19. 15	6. 56	·1410					
12. 28	21. 35	7. 57	·1406					
16. 49	21. 40	8. 20	·1409					
20. 53	19. 0	8. 54	·1403					
22. 44	21. 0	10. 20	·1408					
23. 24	22. 40	10. 47	·1404					
23. 34	24. 5	16. 9	·1406					
23. 39	23. 40	19. 30	·1413					
23. 49	25. 15	20. 1	·1408					
23. 59	24. 50	20. 53	·1410					
		22. 39	·1400					
		23. 47	·1402 (†)					
Feb. 20		Feb. 20		Feb. 20		Feb. 20		
0. 0	20. 24. 50		(†)	0. 0	·03325	0. 0	56·4	58·0
1. 25	26. 35	0. 9	·1401	4. 12	·03405	1. 0	57·7	59·0
5. 20	21. 40	1. 12	·1402	9. 8	·03430	2. 0	57·0	58·7
5. 57	22. 25	1. 25	·1405	11. 35	·03412	3. 0	57·3	59·0
8. 3	20. 50	1. 58	·1397	12. 11	·03391	9. 0	57·8	59·3
8. 19	21. 15	3. 40	·1409	17. 8	·03370	21. 0	56·3	57·3
8. 25	21. 55	7. 5	·1409	21. 24	·03339	22. 0	55·9	56·9
8. 55	18. 30	7. 43	·1400	23. 59	·03305	23. 0	55·4	56·6
9. 13	17. 45	7. 48	·1405					
10. 27	19. 10	8. 8	·1399					
10. 44	18. 45	8. 18	·1394					
11. 50	21. 40	8. 29	·1400					
12. 24	17. 20	9. 12	·1391					
13. 0	20. 30	10. 59	·1400 ***					
13. 44	21. 25	12. 0	·1414					
14. 7	20. 20	13. 17	·1403					
15. 0	21. 10	13. 44	·1407					
16. 3	20. 30	14. 18	·1402					
16. 27	21. 0	18. 18	·1408 ***					
19. 13	20. 15	23. 6	·1398					
20. 50;	19. 0	23. 59	·1403					
23. 59	24. 50							
Feb. 21		Feb. 21		Feb. 21		Feb. 21		
0. 0	20. 24. 50	0. 0	·1403	0. 0	·03305	0. 0	56·3	57·3
0. 34	24. 0	0. 34	·1399	5. 51	·03394	1. 0	56·6	58·0
0. 58	25. 0	0. 53	·1403	14. 56	·03395	2. 0	56·4	57·8
1. 54	24. 50	1. 19	·1401	23. 59	·03348	3. 0	56·7	58·0
2. 8	23. 40	1. 43	·1406			9. 0	57·3	58·8
2. 30	23. 55	2. 4	·1402			21. 0	56·3	57·9
4. 24	21. 15	3. 19	·1408			22. 0	56·5	58·1
5. 25	20. 35	4. 51	·1407			23. 0	56·6	58·2
6. 44	22. 0	5. 29	·1411					
6. 55	21. 40	6. 27	·1410					
7. 14	21. 55	7. 10	·1404					
9. 3	21. 0	8. 39	·1407					
13. 30	20. 55	16. 39	·1404					
15. 12	21. 20	17. 19	·1410					
16. 15	21. 0	18. 9	·1404					
16. 39	23. 0	18. 26	·1408 ***					
17. 15	20. 10	22. 58	·1399					
17. 38	20. 0	23. 59	·1406					
18. 8	22. 0							
18. 55	20. 30							
20. 8	20. 0 ***							
22. 30	21. 20							
22. 41	23. 5							
23. 4	22. 50							
23. 34	24. 0							
23. 59	25. 0							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ; attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 22		Feb. 22		Feb. 22		Feb. 22		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 25. 0	0. 0	·1406	0. 0	·03348	0. 0	56·9	58·2
1. 26	24. 50	0. 35	·1413	3. 6	·03360	1. 0	56·9	58·2
3. 56	22. 30		***	5. 14	·03390	2. 0	56·5	57·3
5. 43	21. 50	6. 10	·1400	18. 0	·03376	3. 0	56·5	57·5
6. 10	22. 55	7. 16	·1406	21. 47	·03340	9. 0	57·1	58·5
7. 36	22. 0	7. 43	·1404	22. 38	·03307	21. 0	56·0	57·3
9. 16	20. 55	9. 9	·1408	23. 59	·03296	22. 0	55·3	56·6
16. 45	21. 20	12. 5	·1403			23. 0	55·3	56·8
16. 58	20. 25′	19. 8	·1408					
17. 11	21. 0	20. 57	·1401					
20. 24	19. 30	21. 45	·1401					
21. 48	21. 0	22. 6	·1396					
22. 3	20. 45	23. 19	·1395					
23. 13	23. 50	23. 39	·1398					
23. 24	23. 20		(†)					
23. 32	24. 20							
	(†)							
Feb. 23		Feb. 23		Feb. 23		Feb. 23		
	(†)		(†)	0. 0	·03296	0. 0	56·0	57·5
1. 2	20. 24. 50	0. 29	·1399	5. 10	·03380	1. 0	56·8	58·2
2. 7	25. 30	2. 54	·1400	8. 30	·03370	2. 0	56·6	57·9
3. 21	24. 50	3. 20	·1408	11. 24	·03332	3. 0	56·7	58·0
4. 34	22. 55	4. 5	·1407	22. 26	·03210	9. 0	56·3	57·2
7. 6	22. 0	4. 16	·1413	23. 59	·03202	21. 5	54·3	55·7
7. 36	20. 20	5. 55	·1411					
8. 0	21. 15	6. 3	·1416					
9. 57	21. 50	7. 33	·1408					
10. 27	21. 0	8. 9	·1413					
12. 30	21. 30	8. 19	·1409					
13. 55	20. 45	12. 54	·1406					
14. 24	22. 30	13. 6	·1408					
15. 9:	20. 0	13. 45	·1405					
15. 39	21. 55	14. 27	·1412					
16. 10	20. 20	15. 4	·1407					
16. 29	20. 25	16. 0	·1413					
16. 50	20. 0	18. 53	·1417					
17. 2	20. 10	21. 20	·1407					
19. 17	20. 10	21. 55	·1410					
20. 44:	19. 25	23. 59	·1413					
21. 43	20. 0							
22. 40	22. 0							
23. 59	26. 10							
Feb. 24		Feb. 24		Feb. 24		Feb. 24		
0. 0	20. 26. 20	0. 0	·1413	0. 0	·03202	0. 0	54·6	55·7
0. 30	26. 0	0. 50	·1407	4. 44	·03293	8. 45	56·1	57·8
1. 14	26. 25	3. 47	·1414	10. 13	·03300	21. 0	54·8	56·2
2. 55	25. 20	4. 9	·1409	14. 57	·03295	22. 0	53·1	55·2
3. 55	23. 20		***	21. 8	·03260	23. 0	52·8	55·0
4. 7	21. 50	4. 57	·1418	23. 59	·03190			
5. 54	22. 0	6. 35	·1413					
6. 22	21. 20	7. 43	·1418					
7. 38	22. 0	7. 57	·1414					
7. 56	21. 15	9. 37	·1412					
8. 24	22. 0	10. 2	·1419					
9. 7	21. 0	10. 20	·1412					
9. 28	21. 15	10. 35	·1421					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Feb. 24		Feb. 24						
h m	° ′ ″	h m		h m		h m	°	°
10. 7	20. 19. 20	10. 48	·1415					
10. 34	20. 50	11. 0	·1420					
10. 50	20. 35	11. 32	·1412					
11. 5	21. 15	11. 55	·1419					
11. 27	20. 45	12. 36	·1413					
12. 3	21. 50	14. 14	·1411					
12. 16	20. 30	19. 18	·1418					
13. 21	21. 15	22. 19	·1406					
13. 54	20. 15	23. 52	·1408					
15. 24	20. 50		(†)					
16. 25	20. 5							
16. 48	20. 50							
18. 28	20. 50							
20. 9	20. 10							
22. 25	21. 40							
22. 51	24. 0							
23. 59	26. 10							
Feb. 25		Feb. 25		Feb. 25		Feb. 25		
0. 0	20. 26. 10		(†)	0. 0	·03190	0. 0	54·5	55·9
0. 13	26. 10	0. 16	·1415	1. 37	·03230	1. 0	55·0	56·5
0. 35	27. 0	1. 8	·1417	2. 26	·03220	2. 0	54·5	56·0
1. 7	25. 55	1. 40	·1421	3. 14	·03220	3. 0	55·0	56·1
1. 39	27. 20	1. 59	·1419	6. 12	·03270	9. 0	56·0	57·7
2. 9	27. 30	3. 14	·1420	11. 8	·03273	21. 0	55·0	54·9
4. 13	23. 5	3. 21	·1428	13. 59	·03251	22. 0	54·2	54·3
4. 55	23. 0	4. 48	·1428	19. 13	·03256	23. 0	54·0	54·1
5. 34	21. 10	5. 26	·1420		(†)			
6. 26	22. 45	6. 27	·1426	21. 0	·03207*			
6. 59	18. 35	6. 51	·1417					
7. 50:	22. 10	7. 49	·1426					
8. 26	21. 15	8. 9	·1423					
			***					
9. 0	22. 5							
10. 22	21. 55	10. 59	·1428					
10. 41	21. 5	11. 33	·1425					
11. 32	21. 30	11. 49	·1429					
11. 47	20. 30	12. 1	·1428					
11. 55	21. 20	12. 17	·1431					
12. 22	20. 25	12. 36	·1426					
12. 30	20. 55	13. 4	·1424					
13. 14	18. 55	13. 21	·1428					
13. 32	19. 25	13. 34	·1425					
14. 22	18. 15	13. 48	·1428					
15. 7	21. 30	14. 16	·1419					
15. 37	19. 30		***					
16. 19	20. 50	18. 16	·1426					
	***	19. 28	·1426					
19. 14	21. 30		(†)					
	(†)	21. 0	·1432*					
21. 0	20. 28*							
Feb. 26		Feb. 26		Feb. 26		Feb. 26		
	(†)		(†)		(†)	0. 0	54·0	54·0
1. 0	20. 27. 56*	1. 0	·1432*	1. 0	·03131*	1. 0	54·0	54·0
2. 24	26. 55	2. 33	·1432	2. 30	·03120	2. 0	53·8	53·8
	***	3. 4	·1428	3. 54	·03156	3. 0	54·7	55·2
3. 15	24. 50	3. 47	·1433	8. 55	·03175	9. 0	54·2	55·5
5. 20	24. 50	6. 9	·1433	15. 0	·03127	21. 0	53·0	53·6
6. 15	23. 50	6. 26	·1428	21. 3	·03072	22. 0	51·0	52·5

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 26		Feb. 26		Feb. 26		Feb. 26		
h m	° ′ ″	h m		h m		h m	°	°
6.39	20.22.30	6.58	·1432	23.0	·03000	23.0	51·0	52·6
7.4	23.30		***	23.59	·03012			
7.54	22.45	10.4	·1424					
10.48	21.0	10.39	·1431					
11.9	18.50	10.54	·1428					
11.47	21.20	11.9	·1432					
17.15	21.0	11.35	·1426					
21.7	20.10	12.50	·1425					
23.59	25.0	18.57	·1429					
		21.18	·1426					
		21.59	·1418					
		23.5	·1423					
		23.16	·1429					
		23.59	·1433					
Feb. 27		Feb. 27		Feb. 27		Feb. 27		
0.0	20.25.0	0.0	·1433	0.0	·03012	0.0	52·5	54·1
0.26	25.0	0.38	·1433	0.40	·03040	1.0	53·1	54·8
0.40	24.10	3.39	·1440	1.27	·03060	2.0	53·0	54·8
1.10	23.55	4.47	·1436	4.0	·03090	3.0	53·5	55·0
1.40	24.40	7.15	·1440	14.0	·03050	9.0	53·4	54·7
3.50	22.10	7.28	·1436	14.55	·03030	21.0	51·2	52·4
4.43	21.30	12.23	·1432	21.35	·02990	22.0	52·2	53·6
6.54	22.0	12.36	·1439	23.59	·03020	23.0	52·3	53·7
12.27	21.10	13.30	·1430					
13.8	18.25	14.10	·1427					
13.30	19.30	14.32	·1432					
13.40	19.15	15.10	·1430					
13.58	23.0	18.29	·1439					
15.18	17.35	22.15	·1423					
17.0	19.0	23.29	·1424					
19.10	20.10	23.45	·1427					
20.34	19.55	23.53	·1425					
21.30	21.10	23.59	·1427					
23.16	24.50							
23.59	25.20							
Feb. 28		Feb. 28		Feb. 28		Feb. 28		
0.0	20.25.20	0.0	·1427	0.0	·03020	0.0	53·0	54·2
1.40	25.50	0.10	·1430	4.6	·03068	1.0	53·3	54·7
3.20	23.40	1.24	·1439	8.50	·03080	2.0	53·4	54·8
4.30	21.50	3.35	·1438	15.5	·03022	3.0	53·5	55·1
5.0	21.50	4.19	·1439	15.50	·03004	9.0	53·3	54·8
6.35	23.10	4.35	·1436	22.33	·02962	21.0	51·0	51·8
7.20	22.30	6.21	·1437	23.40	·02965	22.0	51·0	52·4
8.20	23.0	6.40	·1434	23.59	·02965	23.0	51·3	52·9
11.12	21.30	8.18	·1438					
13.30	21.0	9.14	·1436					
13.54	20.10	9.34	·1439					
13.59	21.20	10.4	·1437					
14.14	20.10	11.0	·1437					
14.32:	18.35	13.34	·1430					
15.9	20.0	13.49	·1433					
15.16	23.50	14.57	·1424					
15.56	18.30	15.22	·1433					
16.14	18.25	16.56	·1427					
16.50	19.40	19.0	·1435					
18.43	19.55		***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Feb. 28		Feb. 28						
h m	° ′ ″	h m		h m		h m	°	°
21.8	20.19.0	22.54	·1425					
23.46	23.30	23.6	·1429					
23.49	24.50	23.39	·1429					
23.59	25.35	23.47	·1434					
		23.59	·1432					
Mar. 1		Mar. 1		Mar. 1		Mar. 1		
0.0	20.25.35	0.0	·1432	0.0	·02965	0.0	52·0	53·4
1.16	27.0	1.30	·1434	3.40	·03030	1.0	52·3	53·8
1.30	26.5	2.45	·1438	6.14	·03025	2.0	52·5	54·0
2.0	26.15	2.54	·1435	6.45	·03042	3.0	52·6	54·0
2.29	25.25	4.25	·1432	9.26	·03020	9.0	52·0	53·4
2.45	25.40	5.55	·1436	15.26	·02968	21.0	50·5	52·0
3.18	24.20	6.28	·1424	18.0	·02957	22.0	50·3	51·7
3.49	24.0	6.47	·1429	21.6	·02932	23.0	50·3	51·7
4.51	22.50	7.5	·1424	23.59	·02900			
5.9	23.55	7.25	·1432					
5.54	23.30	7.39	·1430					
6.37	15.50	7.55	·1434					
7.4	20.30	8.24	·1428					
7.37	21.35	8.39	·1432					
8.39	20.10	9.10	·1429					
8.50	20.40	9.24	·1421					
9.19	18.0	11.24	·1435					
9.39	16.0	11.49	·1433					
10.22	20.40	11.59	·1439					
11.17	20.40	12.19	·1433					
11.28	21.40	12.29	·1438					
12.21	20.40	13.4	·1426					
12.38	21.50	13.24	·1434					
13.16	20.10	14.9	·1430					
13.39	22.15	14.18	·1434					
14.15	22.10	14.36	·1429					
14.37	26.20	14.55	·1436					
15.3	23.30	15.10	·1437					
15.19	24.50	15.22	·1434					
15.49	22.15	16.40	·1432					
16.23	21.0	17.0	·1437					
16.34	21.50	18.15	·1437					
16.46	19.55	18.54	·1434					
17.0	19.10	20.22	·1435					
17.30	19.50	22.59	·1421					
17.49	19.20	23.49	·1425					
18.9	20.10		(†)					
18.19	19.50							
	***							
20.55	20.0							
21.50	21.10							
23.50	25.15							
	(†)							
Mar. 2		Mar. 2		Mar. 2		Mar. 2		
	(†)		(†)	0.0	·02900	0.0	50·6	52·0
0.56	20.26.10	0.56	·1427	1.5	·02910	1.0	51·0	52·2
2.9	27.30	4.15	·1433	3.30	·02950	2.0	51·1	52·6
4.39	24.30	4.28	·1438	7.45	·02946	3.0	51·2	52·7
5.55	23.15	5.16	·1436	13.27	·02895	9.0	50·4	52·0
6.30	23.50	5.27	·1442	16.18	·02872	21.30	48·4	49·4

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 2		Mar. 2		Mar. 2				
h m	° ' "	h m		h m		h m	°	°
6. 47	20. 23. 0	5. 35	·1437	22. 45	·02785			
7. 5	23. 20	5. 44	·1440	23. 59	·02760			
7. 34	20. 55	6. 35	·1436					
7. 46	21. 30	7. 0	·1439					
9. 5	22. 50	7. 25	·1432					
9. 16	22. 30	7. 37	·1440					
9. 35	21. 50	7. 47	·1438					
9. 56	19. 10	8. 15	·1441					
10. 10	20. 40	8. 37	·1437					
10. 27	19. 55	8. 55	·1439					
10. 38	20. 20	9. 41	·1434					
11. 4	19. 15	10. 35	·1436					
11. 22	21. 0	10. 50	·1444					
11. 38	20. 30	11. 8	·1436					
11. 50	21. 40	11. 37	·1432					
12. 17	20. 30	11. 59	·1441					
12. 32	24. 30	12. 20	·1434					
12. 45	23. 0	12. 58	·1443					
13. 4	22. 30	13. 21	·1433					
13. 14	23. 40	13. 49	·1435					
13. 56	21. 30	14. 5	·1433					
14. 18	21. 50	15. 26	·1436					
15. 8	21. 50	15. 42	·1434					
15. 20	21. 0	16. 49	·1439					
15. 37	22. 0	17. 15	·1437					
16. 47	20. 55	17. 47	·1440					
16. 59	21. 10	19. 8	·1440					
17. 29	21. 15	20. 12	·1433					
17. 43	20. 20	20. 41	·1434					
18. 9	20. 55	20. 59	·1430					
18. 33	21. 30	22. 6	·1423					
19. 19	20. 15	23. 0	·1428					
	***	23. 25	·1423					
20. 40	20. 0	23. 59	·1424					
21. 50	21. 15							
22. 49	24. 30							
23. 59	25. 10							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force	Greenwich Mean Solar Time.	Vertical Force	Greenwich Mean Solar Time.	Of H. F. Magnet.	Of V. F. Magnet.
Mar. 3		Mar. 3		Mar. 3		Mar. 3		
0. 0	20. 25. 10	0. 0	·1424	0. 0	·02760	0. 30	48·1	49·0
1. 14	26. 55	1. 11	·1430	0. 55	·02750	8. 0	49·8	51·0
1. 35	25. 55	1. 37	·1428	5. 12	·02816	21. 0	48·5	49·2
3. 4	27. 0	2. 57	·1437	10. 15	·02815	22. 0	48·3	49·1
3. 35	25. 0	4. 0	·1429	11. 5	·02790	23. 0	48·5	49·5
3. 47	25. 10	4. 28	·1436	13. 30	·02790			
4. 0	23. 55	5. 0	·1437	15. 35	·02750			
4. 55	22. 10	5. 20	·1444	17. 28	·02755			
5. 22	22. 0	5. 43	·1439	21. 10	·02735			
5. 44	23. 0	7. 34	·1440	23. 20	·02715			
8. 34	21. 0	8. 39	·1437	23. 59	·02728			
8. 55	17. 5	8. 54	·1440					
9. 29	20. 20	10. 14	·1437					
10. 13	21. 30	10. 24	·1447					
10. 23	24. 10	10. 49	·1449					
11. 28	19. 0	11. 45	·1435					
12. 10	21. 30	12. 4	·1440					
12. 25	21. 55	12. 59	·1440					
12. 47	20. 50	13. 16	·1436					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 3		Mar. 3						
h m	° ' "	h m		h m		h m	°	°
13. 8	20. 21. 10	14. 39	·1439					
13. 47	23. 50	15. 8	·1434					
14. 9	23. 40	16. 24	·1433					
14. 22	21. 40	17. 26	·1436					
14. 40	21. 0	17. 58	·1443					
14. 59	21. 5	18. 34	·1440					
15. 14	22. 35		(†)					
15. 59	20. 0	21. 0	·1434*					
	***							
17. 50	19. 40							
18. 6	20. 10							
18. 57	17. 30							
19. 28	18. 55							
19. 50	18. 35							
20. 23	19. 55							
20. 29	19. 10							
20. 39	21. 20							
20. 45	21. 0							
20. 50	22. 30							
20. 57	21. 30							
	(†)							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force	Greenwich Mean Solar Time.	Vertical Force	Greenwich Mean Solar Time.	Of H. F. Magnet.	Of V. F. Magnet.
Mar. 4		Mar. 4		Mar. 4		Mar. 4		
0. 0	20. 26. 55	0. 0	·1427	0. 0	·02728	0. 0	48·8	49·8
0. 35	27. 0	0. 34	·1428	8. 18	·02810	1. 0	49·0	50·2
0. 40	26. 10	0. 43	·1425	9. 30	·02832	3. 0	49·5	51·0
1. 18	27. 50	1. 15	·1432	13. 15	·02795	9. 0	50·1	51·2
1. 25	27. 30	2. 23	·1434	17. 33	·02790	21. 0	49·4	50·5
2. 5	28. 0	2. 35	·1438	19. 4	·02765	22. 0	49·8	50·6
4. 35	23. 0	2. 43	·1430	21. 29	·02761	23. 0	49·9	50·6
5. 49	22. 30	3. 2	·1437		(†)			
6. 59	22. 55		***					
7. 14	22. 0	4. 50	·1440					
8. 6	22. 55	5. 13	·1438					
8. 26	19. 10	6. 15	·1446					
8. 45	19. 0	6. 27	·1443					
8. 57	17. 50	6. 39	·1447					
9. 17	17. 10	6. 59	·1440					
9. 26	17. 20	7. 13	·1446					
9. 46	20. 10	7. 34	·1445					
10. 57	21. 55	8. 19	·1427					
11. 7	21. 30	8. 56	·1426					
12. 5	22. 10	9. 49	·1435					
12. 25	21. 55	10. 25	·1433					
12. 43	22. 50	11. 38	·1434					
13. 9	21. 25	11. 58	·1438					
13. 54	22. 10	12. 19	·1433					
14. 14	21. 15	12. 45	·1439					
14. 43	21. 5	13. 12	·1434					
15. 3	22. 20	17. 20	·1432					
16. 27	21. 5	18. 20	·1439					
16. 40	21. 55	19. 11	·1434					
16. 54	21. 20	19. 28	·1438					
17. 19	23. 10	20. 7	·1437					
17. 22	28. 25	20. 34	·1432					
18. 15	22. 10	21. 43	·1437					
	***		***					
20. 6	21. 50	23. 34	·1428					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
Mar. 4		Mar. 4						
h m	° ′ ″	h m		h m		h m	°	°
20.55	20.20.0	23.50	·1433					
21.17	20.10	23.59	·1434					
21.22	22.0							
21.34	21.10							
21.47	22.0							
22.0	21.10							
22.7	22.40							
22.15	22.10							
22.54	22.45							
23.8	24.45							
23.29	24.30							
23.52	27.50							
23.59	28.0							
Mar. 5		Mar. 5		Mar. 5		Mar. 5		
0.0	20.28.0	0.0	·1434		(†)	0.0	50·3	51·0
0.36	28.35	0.45	·1437	1.0	·02616*	1.0	50·3	51·2
0.42	30.0	2.6	·1432	1.43	·02625	2.0	50·6	51·4
1.36	30.0	2.25	·1437	7.10	·02690	3.0	50·8	51·7
4.29	25.0	2.35	·1434	9.58	·02666	9.0	50·9	51·7
5.25	25.30	4.9	·1432	16.24	·02615	21.0	49·0	49·4
5.48	23.40	4.25	·1428	21.2	·02572	22.0	49·5	50·1
6.17	24.50	5.19	·1436	23.35	·02580	23.0	49·7	50·4
6.28	24.30	5.40	·1431		(†)			
6.45	25.0	6.10	·1433					
7.5	24.35	6.52	·1427					
7.39	25.30	7.55	·1433					
8.4	26.0	8.11	·1429					
8.45	24.35	8.59	·1432					
8.59	25.10	9.23	·1439					
10.0	20.40	10.35	·1426					
10.44	23.0	11.37	·1429					
12.7	21.0	12.5	·1425					
12.49	22.15	12.50	·1425					
13.24	22.20	13.46	·1430					
13.27	23.20	14.19	·1424					
13.39	21.25	14.55	·1428					
13.46	22.0	15.14	·1427					
14.0	20.50	16.37	·1437					
14.18	21.40	17.16	·1439					
14.35	21.50	18.2	·1433					
14.47	22.55	18.35	·1439					
15.7	22.30	19.27	·1437					
16.3	25.0	19.45	·1430					
16.44	21.35	20.46	·1428					
17.5	20.20	21.42	·1419					
17.50	22.5	22.19	·1429					
17.58	21.30	23.16	·1422					
18.16	22.30	23.59	·1419					
18.45	22.0							
19.17	22.50							
19.47	22.10							
20.44	24.55							
21.15	24.55							
21.37	26.55							
21.49	26.15							
22.27	29.10							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
Mar. 5								
h m	° ′ ″	h m		h m		h m	°	°
22.55	20.30.25							
23.59	30.15							
Mar. 6		Mar. 6		Mar. 6		Mar. 6		
0.0	20.30.15	0.0	·1419		(†)	0.0	49·8	49·7
0.37	30.0	1.9	·1420	0.35	·02583	1.0	50·6	51·2
0.58	30.10	1.33	·1416	2.6	·02650	2.0	50·6	51·4
1.5	31.20		***	2.18	·02642	3.0	50·8	51·6
1.23	30.15	2.14	·1429	2.55	·02660	9.7	50·1	51·8
1.33	31.10	2.34	·1416	3.42	·02710	21.0	49·2	50·1
1.39	30.10	2.38	·1420	5.8	·02725	22.0	49·2	50·0
2.0	32.0	2.55	·1416	5.53	·02770	23.0	49·2	50·1
2.7	34.20	3.3	·1402	7.35	·02733			
2.17	33.0	3.25	·1415	7.50	·02740			
2.27	33.35	3.37	·1414	8.9	·02713			
2.30	35.20	3.58	·1426	9.22	·02680			
2.46	34.0	4.17	·1415	13.39	·02680			
2.55	29.40	4.54	·1416	14.53	·02660			
3.6	27.15	5.3	·1419	15.26	·02625			
3.21	30.20	5.26	·1395	15.53	·02620			
3.35	30.15	5.48	·1402	16.27	·02635			
3.59	33.25	6.5	·1416	17.5	·02626			
4.45	29.10	6.26	·1425	18.43	·02635			
5.0	29.20	6.44	·1414	22.43	·02589			
5.23	20.50	7.17	·1425	23.59	·02600			
5.47	14.0	7.42	·1415					
6.4	17.5	8.8	·1447					
6.29	25.0	8.34	·1415					
6.50	24.10	8.57	·1432					
7.20	26.50	9.25	·1403					
7.30	25.0	9.40	·1394					
7.47	13.5	9.58	·1384					
8.6	17.45	10.10	·1401					
8.19	13.20	10.36	·1417					
8.44	6.10	10.56	·1410					
8.57	8.25	11.29	·1422					
9.4	6.20	11.49	·1413					
9.20	4.25	12.26	·1423					
9.36	10.0	12.45	·1420					
10.9	3.35	12.54	·1423					
10.18	3.55	13.6	·1417					
10.44	13.10	13.34	·1420					
11.18	20.20	13.49	·1426					
11.38	20.15	14.6	·1420					
11.48	22.0	14.27	·1421					
12.15	24.0	14.54	·1414					
12.29	23.35	15.9	·1426					
12.45	22.10	15.48	·1430					
13.0	23.0	16.9	·1417					
13.14	23.0	16.36	·1419					
13.27	24.15	16.57	·1425					
13.46	22.20		***					
14.10	22.20	20.9	·1424					
14.47	27.0	21.6	·1421					
15.25	22.0		***					
15.50	23.10	23.59	·1422					
16.13	27.0							
16.54	22.30							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 6								
h m	° ′ ″	h m		h m		h m	°	°
17. 10	20. 23. 45							
18. 19	23. 0							
18. 48	23. 30							
	***							
19. 28	22. 30							
20. 25	24. 10							
23. 5	27. 0							
23. 59	26. 45							
Mar. 7		Mar. 7		Mar. 7		Mar. 7		
0. 0	20. 26. 45	0. 0	·1422	0. 0	·02600	0. 0	49·8	50·5
0. 20	28. 10	2. 9	·1424	3. 20	·02660	1. 0	50·0	50·8
0. 28	27. 20	2. 35	·1429	8. 34	·02665	2. 0	49·9	50·8
2. 59	25. 55		***	9. 10	·02628	3. 0	50·0	51·0
4. 47	24. 50	7. 4	·1431	10. 43	·02572	9. 0	49·5	50·7
6. 15	25. 5	7. 23	·1439	11. 6	·02610	21. 0	47·6	48·2
7. 13	24. 50	7. 50	·1430	11. 25	·02590	22. 0	48·1	49·0
7. 34	25. 10	8. 0	·1432	11. 36	·02609	23. 0	48·4	49·2
7. 49	24. 0	8. 19	·1423	11. 55	·02579			
8. 6	25. 55	8. 42	·1465	12. 27	·02583			
8. 19	25. 30	8. 54	·1447	12. 56	·02510			
8. 37	7. 0	9. 7	·1406	13. 58	·02529			
8. 44	9. 30	9. 30	·1420	14. 37	·02507			
8. 49	6. 0	9. 48	·1410	15. 24	·02559			
9. 11	0. 50	10. 6	·1390	16. 2	·02481			
9. 15	20. 1. 20	10. 34	·1376	16. 14	·02486			
9. 27	19. 55. 0	11. 2	·1398	17. 9	·02540			
10. 4	20. 9. 30	11. 15	·1380	18. 16	·02540			
10. 26	3. 5	11. 32	·1396	19. 5	·02555			
10. 37	2. 5	11. 50	·1391	22. 40	·02517			
10. 59	6. 5	12. 13	·1398	23. 59	·02530			
11. 14	11. 0	12. 26	·1413					
11. 30	6. 0	12. 40	·1400					
11. 39	10. 0	12. 57	·1398					
11. 48	13. 50	13. 49	·1433					
12. 4	15. 0	14. 15	·1427					
12. 24	25. 0	14. 49	·1409					
12. 35	24. 20	15. 19	·1415					
12. 42	25. 0	15. 49	·1395					
13. 0	21. 0	16. 7	·1407					
13. 22	20. 50	16. 37	·1414					
13. 30	22. 25	17. 19	·1435					
13. 50	20. 55	17. 49	·1418					
14. 16	11. 0	18. 6	·1413					
14. 33	11. 50	18. 24	·1418					
15. 20	26. 55	18. 49	·1413					
15. 54	21. 30	19. 15	·1427					
16. 7	25. 0	19. 34	·1416					
16. 13	25. 30	19. 47	·1424					
16. 27	26. 55	19. 55	·1415					
16. 55	24. 0	20. 7	·1422					
17. 23	25. 15	20. 21	·1417					
17. 37	24. 50	20. 45	·1416					
17. 45	22. 10	21. 39	·1419					
18. 0	23. 0	22. 21	·1414					
18. 15	22. 40	22. 49	.1419					
18. 21	24. 0	23. 2	·1417					
18. 37	24. 15	23. 59	·1424					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 7								
h m	° ′ ″	h m		h m		h m	°	°
18. 57	20. 21. 15							
19. 10	23. 10							
19. 26	22. 0							
19. 39	23. 45							
19. 46	22. 20							
19. 57	23. 0							
20. 26	20. 55							
20. 45	22. 30							
20. 59	21. 20							
21. 46	24. 0							
21. 55	23. 30							
22. 30	24. 50							
22. 47	26. 20							
22. 57	25. 20							
23. 59	26. 0							
Mar. 8		Mar. 8		Mar. 8		Mar. 8		
0. 0	20. 26. 0	0. 0	·1424	0. 0	·02530	0. 0	48·6	49·4
0. 57	26. 45	0. 28	·1432	2. 52	·02599	1. 0	49·2	50·0
1. 24	29. 30	1. 24	·1440	4. 10	·02615	3. 0	49·7	50·4
1. 47	30. 10	1. 49	·1436	5. 46	·02603	9. 0	49·4	50·3
2. 5	27. 30	2. 1	·1428	7. 49	·02673	21. 0	48·0	48·7
2. 19	28. 0	2. 18	·1436	8. 5	·02649	22. 0	48·1	48·9
2. 26	27. 10	2. 26	·1433	9. 2	·02640	23. 0	48·1	49·0
3. 0	30. 55	2. 34	·1441	9. 42	·02570			
3. 35	26. 5	2. 44	·1435	9. 57	·02592			
4. 25	24. 30	2. 50	·1438	10. 27	·02556			
4. 37	25. 10	3. 3	·1429	11. 30	·02575			
5. 0	24. 10	3. 22	·1425	12. 39	·02568			
5. 55	25. 5	3. 34	·1433	15. 5	·02580			
6. 24	24. 15	3. 40	·1428	23. 30	·02510			
6. 44	21. 0	4. 18	·1422	23. 59	·02515			
7. 10	7. 30	4. 37	·1431					
7. 23	6. 20	4. 45	·1429					
7. 46	10. 25		***					
8. 0	20. 50	5. 33	·1432					
8. 34	21. 0	5. 43	·1429					
8. 58	22. 35	5. 55	·1439					
9. 15	31. 15	6. 15	·1432					
9. 29	26. 30	6. 34	·1412					
9. 35	27. 0	7. 0	·1395					
9. 51	19. 55	7. 17	·1398					
10. 3	27. 30	7. 54	·1432					
10. 13	27. 45	8. 6	·1411					
10. 50	20. 15	8. 37	·1418					
11. 2	21. 0	9. 7	·1437					
11. 20	20. 0	9. 19	·1427					
11. 56	22. 5	9. 28	·1434					
12. 15	25. 50	9. 37	·1423					
12. 45	23. 30	9. 57	·1459					
13. 8	25. 50	10. 29	·1417					
14. 55	22. 55	10. 49	·1424					
16. 16	23. 20	12. 14	·1417					
16. 27	22. 30	12. 25	·1421					
17. 36	23. 10	12. 40	·1414					
17. 49	21. 55	13. 20	·1417					
18. 0	22. 40	13. 28	·1413					
18. 16	22. 10	13. 45	·1419					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 8		Mar. 8						
h m	° ′ ″	h m		h m		h m	°	°
18. 49	20. 24. 0	16. 9	·1424					
20. 7	22. 0	16. 42	·1430					
22. 17	24. 35	17. 56	·1424					
	***	18. 20	·1417					
23. 11	24. 55	19. 39	·1425					
23. 32	27. 5	20. 31	·1413					
23. 59	27. 55	21. 35	·1414					
		21. 51	·1410					
		22. 18	·1414					
		22. 30	·1411					
			***					
		23. 55	·1425					
			(†)					
Mar. 9		Mar. 9		Mar. 9		Mar. 9		
0. 0	20. 27. 55		(†)	0. 0	·02515	0. 0	48 ·4	49 ·2
0. 15	29. 0	0. 14	·1425	4. 20	·02596	1. 0	48 ·7	49 ·6
0. 37	28. 0	0. 42	·1425	11. 19	·02577	2. 0	48 ·8	49 ·4
1. 17	29. 0	1. 28	·1422	11. 44	·02563	3. 0	48 ·8	49 ·7
1. 27	30. 0	1. 45	·1425	12. 10	·02573	9. 0	48 ·4	49 ·5
1. 34	29. 10	2. 10	·1430	14. 49	·02560	22. 0	49 ·2	50 ·1
2. 6	28. 15	5. 0	·1432	19. 36	·02592			
2. 35	28. 30	5. 39	·1422	23. 27	·02550			
2. 46	27. 55	5. 59	·1432	23. 59	·02560			
3. 19	28. 0	6. 30	·1430					
3. 50	25. 40	9. 15	·1431					
5. 19	23. 40	9. 29	·1437					
5. 55	21. 0	10. 9	·1430					
6. 33	23. 5	11. 7	·1431					
8. 21	22. 50	11. 27	·1443					
8. 45	21. 15	11. 43	·1434					
9. 16	22. 50	12. 6	·1429					
9. 58	20. 45	12. 27	·1436					
10. 30	22. 20	13. 35	·1430					
11. 13	22. 35	14. 16	·1431					
11. 25	21. 40	14. 38	·1425					
11. 35	23. 55	15. 10	·1432					
11. 57	21. 0	15. 36	·1430					
12. 10	23. 10	17. 40	·1433					
12. 33	24. 55	18. 47	·1430					
13. 10	22. 0	19. 30	·1432					
13. 27	25. 30	20. 47	·1425					
14. 6	22. 45	23. 9	·1427					
14. 47	24. 55	23. 59	·1429					
15. 14	23. 0							
17. 20	23. 0							
17. 49	22. 20							
18. 48	22. 20							
20. 4	21. 0							
20. 54	20. 50							
22. 7	22. 10							
23. 59	26. 15							
Mar. 10		Mar. 10		Mar. 10		Mar. 10		
0. 0	20. 26. 15	0. 0	:1429	0. 0	·02560	1. 0	49 ·6	50 ·5
1. 2	27. 20	0· 40	:1431	4. 43	·02616	9. 0	49 ·9	50 ·5
1. 47	27. 25	2. 4	·1435	6. 47	·02628	21. 0	48 ·7	49 ·2
1. 58	28. 0	3. 36	·1436	9. 8	·02610	22. 0	49 ·1	49 ·9

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 10		Mar. 10		Mar. 10		Mar. 10		
h m	° ′ ″	h m		h m		h m	°	°
2. 54	20. 27. 50	4. 40	·1442	9. 55	·02540	23. 0	49 ·1	49 ·9
4. 23	25. 10	5. 37	·1442	10. 45	·02540			
5. 40	25. 0	6. 23	·1431	11. 8	·02510			
6. 4	23. 0	6. 59	·1438	11. 18	·02528			
6. 34	18. 5	7. 15	·1434	12. 39	·02383			
7. 0	22. 15	7. 25	·1441	12. 55	·02408			
7. 19	21. 50	7. 40	·1443	13. 9	·02390			
7. 38	19. 15	7. 49	·1439	13. 17	·02430			
7. 47	21. 15	8. 16	·1445	13. 44	·02365			
8. 4	20. 30	8. 43	·1436	13. 49	·02388			
8. 33	20. 30	8. 48	·1446	13. 55	·02380			
8. 57	22. 30	8. 59	·1442	14. 27	·02480			
9. 12	18. 10	9. 19	·1487	16. 6	·02560			
9. 37	25. 0	9. 37	·1473	18. 46	·02583			
10. 8	17. 0	9. 44	·1459	23. 22	·02530			
10. 35	10. 35	10. 0	·1449	23. 59	·02530			
10. 57	13. 5	10. 15	·1438					
11. 10	3. 25	10. 30	·1441					
11. 35	16. 0	10. 47	·1434					
12. 0	12. 50	11. 7	·1389					
12. 32	5. 10	11. 26	·1408					
13. 3	19. 50	11. 58	·1406					
13. 10	24. 55	12. 40	·1382					
13. 21	26. 0	13. 7	·1382					
13. 27	27. 50	13. 20	·1448					
13. 40	15. 10	13. 44	·1396					
13. 59	8. 0	13. 55	·1434					
14. 25	18. 10	14. 13	·1423					
14. 40	16. 30	14. 24	·1426					
15. 4	16. 35	14. 39	·1415					
15. 28	20. 10	14. 50	·1418					
16. 14	22. 0	15. 44	·1415					
16. 25	21. 0	16. 46	·1420					
16. 32	22. 5	18. 45	·1424					
16. 40	21. 10	18. 50	·1417					
17. 4	22. 20	19. 19	·1422					
17. 37	22. 0	19. 59	·1415					
18. 9	22. 30	20. 36	·1414					
18. 26	21. 30	20. 43	·1407					
18. 39	23. 0	21. 7	·1416					
18. 50	21. 25		***					
	***	22. 34	·1425					
20. 24	22. 5	23. 5	·1422					
20. 35	23. 10	23. 59	·1428					
20. 40	22. 0							
20. 55	24. 30							
21. 0	26. 20							
21. 48	23. 30							
	***							
22. 18	24. 0							
22. 27	25. 10							
22. 45	24. 40							
22. 55	25. 45							
23. 2	25. 0							
23. 49	26. 20							
23. 59	27. 0							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 11		Mar. 11		Mar. 11		Mar. 11		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 27. 0	0. 0	·1428	0. 0	·02530	0. 0	49·4	50·3
0. 15	26. 30	0. 35	·1432	2. 26	·02602	1. 0	50·0	50·8
0. 46	29. 30	0. 47	·1437	2. 30	·02598	2. 0	50·0	50·8
0. 57	28. 20	0. 57	·1429	3. 0	·02640	3. 0	50·0	50·8
1. 14	31. 15	1. 9	·1438	4. 43	·02669	9. 0	49·9	50·7
1. 30	30. 30	2. 20	·1432	5. 27	·02660	21. 0	48·4	48·9
2. 3	31. 50	2. 35	·1416	6. 15	·02670	22. 0	48·1	48·8
2. 15	33. 0	3. 11	·1431	7. 19	·02655	23. 0	48·0	48·7
2. 29	29. 15	3. 30	·1428	7. 34	·02630			
2. 45	27. 0		***	8. 1	·02620			
2. 58	25. 50	4. 24	·1426	10. 0	·02615			
	***	4. 49	·1417	10. 10	·02625			
3. 25	27. 55	5. 3	·1422	11. 2	·02567			
3. 46	26. 0	5. 10	·1418	11. 43	·02583			
3. 59	26. 20	5. 35	·1429	14. 30	·02562			
4. 9	28. 0	5. 58	·1417	16. 37	·02580			
4. 34	26. 0	6. 15	·1416	21. 30	·02530			
4. 54	25. 5	6. 26	·1431	22. 29	·02511			
5. 4	26. 0	6. 34	·1428	23. 50	·02508			
5. 29	23. 45	6. 40	·1437		(†)			
5. 37	24. 35	6. 50	·1431					
5. 47	23. 40	7. 3	·1439					
6. 5	25. 50	7. 16	·1456					
6. 24	20. 15	7. 24	·1443					
6. 29	22. 0	7. 29	·1446					
6. 39	20. 5	7. 36	·1443					
6. 47	22. 50	7. 45	·1446					
7. 8	18. 0	7. 59	·1432					
7. 20	21. 15	8. 7	·1434					
7. 36	20. 0	8. 24	·1425					
7. 55	22. 30	9. 17	·1426					
8. 0	21. 35	9. 55	·1419					
8. 22	23. 55	10. 11	·1443					
8. 40	22. 30	10. 25	·1454					
8. 57	23. 10	10. 52	·1435					
9. 14	20. 50	11. 9	·1436					
9. 33	14. 30	11. 24	·1421					
9. 37	15. 0	12. 8	·1428					
9. 50	13. 50	12. 25	·1422					
9. 59	11. 45	12. 35	·1424					
10. 10	15. 0	12. 44	·1420					
10. 26	18. 50	13. 27	·1428					
10. 39	18. 10	13. 59	·1422					
11. 7	12. 50	14. 19	·1426					
11. 23	18. 10	14. 39	·1423					
11. 34	20. 0	15. 19	·1425					
12. 4	17. 0	15. 47	·1419					
12. 25	16. 50	18. 25	·1432					
12. 51	21. 10	18. 49	·1429					
13. 9	20. 35	19. 5	·1431					
13. 20	23. 5	19. 45	·1426					
13. 43	24. 25	20. 25	·1426					
13. 58	23. 10	20. 55	·1420					
14. 14	23. 0	21. 19	·1425					
14. 28	21. 55	21. 39	·1415					
15. 19	21. 30	22. 13	·1409					
15. 51	24. 0	22. 23	·1412					
16. 18	23. 50	22. 46	·1405					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 11		Mar. 11						
h m	° ′ ″	h m		h m		h m	°	°
16. 37	20. 22. 30	23. 4	·1412					
16. 46	22. 0	23. 19	·1409					
18. 23	23. 30	23. 59	·1404					
19. 6	22. 55							
20. 43	21. 55							
21. 36	24. 35							
21. 50	24. 0							
22. 28	27. 10							
22. 40	26. 0							
23. 33	30. 30							
23. 59	29. 50							
Mar. 12		Mar. 12		Mar. 12		Mar. 12		
0. 0	20. 29. 50	0. 0	·1404		(†)	0. 0	48·5	48·9
0. 15	29. 0	0. 25	·1415	0. 49	·02502	1. 0	48·5	49·0
1. 26	28. 50	1. 27	·1428	3. 30	·02545	2. 0	48·1	48·5
2. 8	29. 30	2. 16	·1431	5. 58	·02552	3. 0	48·5	48·9
2. 55	28. 5	2. 48	·1428	8. 59	·02599	9. 0	49·0	50·2
3. 0	27. 0	3. 20	·1433	9. 42	·02569	21. 0	48·2	49·8
3. 20	26. 50		(†)	10. 59	·02580	22. 0	48·4	49·8
	(†)	4. 29	·1424	18. 39	·02580	23. 0	48·4	49·8
4. 25	24. 15	5. 15	·1433	23. 49	·02530			
5. 18	25. 5	5. 46	·1431	23. 59	·02530			
5. 46	24. 0	6. 4	·1423					
6. 13	21. 15	6. 26	·1426					
6. 29	18. 10	6. 44	·1438					
6. 45	21. 0	7. 19	·1434					
7. 0	23. 20	7. 39	·1437					
7. 20	24. 20	8. 14	·1430					
7. 58	24. 0	8. 30	·1443					
8. 23	17. 50	8. 47	·1434					
8. 41	22. 15	9. 4	·1445					
8. 52	21. 40	9. 19	·1438					
10. 12	23. 15	9. 25	·1441					
10. 34	22. 21	10. 48	·1427					
11. 9	24. 50	12. 51	·1430					
11. 59	25. 10	14. 32	·1421					
12. 28	24. 30	14. 46	·1424					
12. 48	25. 35	15. 5	·1420					
13. 48	23. 5	15. 43	·1427					
14. 24	21. 35	16. 7	·1424					
14. 29	22. 50	16. 57	·1428					
14. 49	23. 20	21. 24	·1419					
15. 5	25. 50	21. 43	·1416					
15. 44	23. 0	22. 44	·1418					
16. 9	24. 0	23. 17	·1424					
16. 40	23. 30	23. 36	·1419					
17. 10	21. 45	23. 59	·1423					
19. 15	22. 30							
20. 49	22. 0							
22. 56	26. 0							
23. 17	28. 0							
23. 35	27. 10							
23. 59	28. 10							
Mar. 13		Mar. 13		Mar. 13		Mar. 13		
0. 0	20. 28. 10	0. 0	·1423	0. 0	·02530	0. 0	48·6	50·0
0. 14	28. 30	0. 30	·1430	1. 8	·02560	1. 0	49·0	50·3

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Mar. 13		Mar. 13		Mar. 13		Mar. 13		
h m	° ′ ″	h m		h m		h m	°	°
0. 40	20. 30. 20	1. 6	·1426	2. 42	·02540	2. 0	48 ·0	48 ·3
1. 6	29. 30		(†)	5. 9	·02599	3. 0	48 ·2	49 ·1
	(†)	3. 0	·1434	8. 56	·02640	9. 0	49 ·2	50 ·9
2. 37	27. 10	3. 34	·1430	13. 29	·02623	21. 0	50 ·9	52 ·6
2. 54	27. 50	3. 57	·1418	13. 45	·02633	22. 30	50 ·9	52 ·9
3. 44	26. 25	4. 47	·1427	14. 15	·02604	23. 0	50 ·9	52 ·9
4. 28	23. 50	7. 50	·1426	15. 7	·02624			
6. 18	25. 30	8. 16	·1428	15. 49	·02620			
6. 26	25. 0	9. 31	·1422	16. 37	·02648			
7. 38	25. 30	10. 10	·1427	17. 39	·02660			
8. 54	23. 20	10. 25	·1424	19. 30	·02693			
9. 37	24. 0	10. 50	·1430	21. 27	·02696			
10. 37	22. 0	11. 12	·1424	23. 27	·02695			
11. 10	23. 0	11. 27	·1429	23. 59	·02700			
11. 25	24. 15	11. 55	·1421					
11. 34	23. 25	12. 50	·1429					
12. 6	22. 10	13. 0	·1424					
12. 19	24. 0	13. 17	·1422					
12. 55	21. 0	13. 34	·1428					
13. 6	21. 50	13. 45	·1422					
13. 29	20. 45	14. 11	·1435					
13. 58	25. 50	14. 46	·1410					
14. 18	22. 10	14. 51	·1414					
14. 44	22. 10	15. 5	·1408					
15. 18	25. 35	15. 44	·1422					
15. 45	23. 0	16. 9	·1413					
16. 32	20. 10	17. 36	·1426					
16. 43	23. 0	18. 6	·1422					
17. 24	21. 5	19. 6	·1420					
17. 29	21. 30	19. 24	·1426					
17. 55	19. 0	19. 49	·1428					
18. 15	19. 0	20. 47	·1418					
18. 24	20. 0	21. 21	·1412					
18. 40	21. 0	21. 41	·1416					
18. 54	22. 0	21. 57	·1412					
19. 15	21. 15	22. 11	·1413					
19. 34	22. 10	22. 23	·1410					
20. 5	22. 55	22. 34	·1415					
20. 26	21. 55	23. 4	·1408					
20. 55	22. 30	23. 59	·1415					
21. 7	24. 0							
21. 29	23. 30							
22. 8	27. 0							
22. 25	26. 55							
22. 29	27. 50							
23. 2	26. 55							
23. 17	27. 35							
23. 59	27. 0							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force	Greenwich Mean Solar Time.	Vertical Force	Greenwich Mean Solar Time.	Of H.F. Magnet.	Of V.F. Magnet.
Mar. 14		Mar. 14		Mar. 14		Mar. 14		
0. 0	20. 27. 0	0. 0	·1415	0. 0	·02700	0. 0	51 ·9	53 ·5
0. 17	28. 50	0. 40	·1420	6. 15	·02835	1. 0	52 ·0	53 ·4
0. 45	27. 55	0. 56	·1425	6. 33	·02829	3. 0	53 ·0	53 ·9
0. 54	28. 10	1. 27	·1423	6. 46	·02848	9. 0	52 ·1	53 ·2
1. 28	28. 45	1. 50	·1417	7. 22	·02820	21. 0	52 ·6	54 ·0
2. 27	27. 30	2. 47	·1421	7. 47	·02820	22. 0	52 ·3	54 ·1
2. 59	28. 40	3. 9	·1414	8. 6	·02836	23. 0	53 ·0	54 ·7
3. 50	26. 15	3. 40	·1416	9. 4	·02829			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force	Greenwich Mean Solar Time.	Vertical Force	Greenwich Mean Solar Time.	Of H.F. Magnet.	Of V.F. Magnet.
Mar. 14		Mar. 14		Mar. 14				
h m	° ′ ″	h m		h m		h m	°	°
4. 27	20. 27. 0	4. 5	·1427	10. 50	·02790			
4. 33	28. 0	4. 35	·1416	12. 36	·02810			
4. 59	26. 0	4. 57	·1412	16. 10	·02805			
5. 14	26. 55	5. 5	·1414	17. 3	·02800			
5. 34	22. 55	5. 20	·1408	17. 25	·02780			
6. 0	22. 45	5. 43	·1416	21. 6	·02810			
6. 17	23. 50	6. 10	·1420	23. 30	·02780			
6. 36	19. 0	6. 30	·1414	23. 59	·02810			
6. 45	12. 10	6. 47	·1433					
7. 4	14. 5	6. 57	·1442					
7. 9	13. 50	7. 10	·1436					
7. 23	17. 0	7. 25	·1424					
7. 37	22. 10	7. 51	·1401					
7. 47	21. 10	8. 16	·1416					
8. 10	22. 30	8. 35	·1410					
8. 37	21. 45	8. 55	·1418					
9. 8	23. 0	10. 4	·1419					
9. 55	21. 15	10. 23	·1439					
10. 4	22. 0	10. 39	·1436					
10. 18	15. 0	11. 9	·1413					
10. 42	18. 0		***					
11. 10	19. 30	13. 24	·1418					
11. 25	19. 5	14. 20	·1416					
11. 43	20. 50	15. 3	·1420					
12. 59	23. 50	15. 25	·1418					
14. 24	22. 55	15. 59	·1423					
15. 8	21. 0	16. 44	·1408					
15. 26	23. 20	17. 19	·1427					
15. 59	23. 0	18. 0	·1419					
16. 40	31. 0	19. 19	·1421					
16. 57	30. 30	20. 57	·1409					
17. 35	21. 10	23. 3	·1404					
17. 54	21. 5	23. 59	·1409					
18. 0	22. 0							
18. 35	20. 55							
18. 55	21. 15							
19. 15	20. 35							
21. 25	22. 30							
23. 10	26. 5							
23. 59	26. 30							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force	Greenwich Mean Solar Time.	Vertical Force	Greenwich Mean Solar Time.	Of H.F. Magnet.	Of V.F. Magnet.
Mar. 15		Mar. 15		Mar. 15		Mar. 15		
0. 0	20. 26. 30	0. 0	·1409	0. 0	·02810	0. 0	53 ·4	55 ·0
1. 34	27. 55	2. 4	·1413	3. 49	·02885	1. 0	53 ·7	55 ·2
2. 34	27. 50	2. 19	·1408	8. 37	·02916	2. 0	53 ·9	55 ·2
2. 40	26. 30	2. 37	·1416	10. 51	·02910	3. 0	54 ·0	55 ·2
2. 59	26. 50	2. 47	·1413	13. 58	·02880	9. 0	54 ·0	55 ·1
3. 17	26. 0	3. 3	·1418	17. 42	·02868	21. 0	52 ·2	53 ·6
3. 35	26. 5	3. 20	·1414	22. 56	·02825	22. 0	52 ·3	53 ·8
3. 45	25. 30	5. 0	·1420	23. 59	·02842	23. 0	53 ·0	54 ·2
6. 20	24. 0	5. 28	·1417					
6. 40	20. 0	6. 20	·1420					
7. 0	18. 55	6. 40	·1415					
7. 53	23. 55	7. 7	·1424					
8. 3	23. 0	7. 34	·1422					
9. 3	22. 40	8. 9	·1425					
9. 29	21. 5	8. 29	·1418					
9. 47	22. 15	8. 58	·1420					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ⁚ attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 15		Mar. 15						
h m	° ′ ″	h m		h m		h m	°	°
10. 18	20. 21. 40	10. 14	·1416					
10. 34	19. 0	10. 33	·1404					
10. 41	15. 30	10. 57	·1426					
11. 16	18. 0	11. 12	·1421					
11. 37	20. 10	11. 37	·1416					
12. 15	21. 30	12. 49	·1421					
13. 37	20. 45	13. 53	·1412					
13. 47	20. 0	14. 20	·1415					
14. 10	21. 40	14. 56	·1412					
14. 35	20. 40	16. 26	·1419					
15. 3	21. 55	16. 49	·1416					
15. 44	22. 0	19. 19	·1419					
16. 27	20. 0	20. 18	·1412					
16. 58	22. 0	20. 37	·1403					
18. 29	22. 5	21. 35	·1409					
19. 34	21. 20	22. 49	·1408					
19. 58	20. 15	23. 57	·1417					
20. 22	21. 0	23. 59	·1412					
20. 40	22. 50							
20. 47	22. 0							
21. 19	23. 10							
21. 25	25. 0							
21. 50	23. 35							
22. 6	25. 0							
22. 36	25. 15							
22. 50	25. 0							
23. 13	27. 15							
23. 59	29. 55							
Mar. 16		Mar. 16		Mar. 16		Mar. 16		
0. 0	20. 29. 55	0. 0	·1412	0. 0	·02842	0. 0	53·8	55·0
0. 6	31. 0	0. 26	·1408	4. 39	·02940	1. 0	55·0	55·3
0. 29	31. 5	1. 12	·1412	6. 58	·02956	2. 0	55·2	56·0
0. 37	32. 50	1. 35	·1410	7. 10	·02943	3. 0	55·4	56·1
1. 21	32. 0	2. 4	·1410	7. 31	·02960	9. 0	55·2	55·8
1. 30	30. 45	2. 39	·1418	15. 38	·02896	21. 50	52·5	53·0
2. 5	29. 0	3. 19	·1415	18. 11	·02850			
2. 35	29. 45	3. 46	·1419	23. 27	·02806			
6. 18	23. 30	4. 34	·1417	23. 59	·02830			
6. 26	24. 30	5. 24	·1423					
6. 55	24. 45	5. 40	·1420					
7. 16	17. 0	6. 55	·1421					
7. 48	21. 0	7. 7	·1411					
8. 10	20. 0	7. 29	·1425					
8. 55	21. 20	7. 40	·1420					
9. 35	20. 0	8. 4	·1417					
9. 49	20. 0	8. 16	·1419					
10. 0	21. 0	8. 27	·1415					
10. 15	20. 50	8. 40	·1418					
10. 19	22. 0	8. 58	·1416					
11. 24	21. 0	9. 9	·1420					
11. 56	21. 55	9. 46	·1420					
12. 10	21. 25	9. 55	·1423					
12. 44	23. 10	10. 13	·1416					
13. 13	22. 0	10. 40	·1416					
13. 47	23. 20	10. 49	·1420					
14. 46	23. 0	11. 0	·1416					
15. 9	24. 0	11. 24	·1415					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 16		Mar. 16						
h m	° ′ ″	h m		h m		h m	°	°
15. 17	20. 25. 10	11. 56	·1419					
15. 40	23. 45	12. 5	·1413					
16. 4	23. 30	12. 19	·1418					
16. 9	23. 55	13. 33	·1413					
16. 16	22. 50	14. 0	·1416					
16. 25	24. 0	15. 13	·1410					
17. 0	24. 35	15. 20	·1413					
17. 26	24. 20	15. 29	·1412					
18. 18	20. 40	16. 4	·1416					
18. 35	21. 35	16. 44	·1408					
18. 39	21. 0	17. 7	·1412					
18. 59	21. 10	17. 46	·1424					
19. 17	20. 0	18. 39	·1417					
20. 35	19. 25	18. 47	·1419					
21. 5	20. 55	20. 29	·1412					
21. 13	19. 30	20. 37	·1415					
21. 30	23. 0	20. 40	·1412					
21. 48	22. 15	20. 50	·1414					
22. 0	23. 35	21. 7	·1408					
22. 59	25. 0	21. 22	·1414					
23. 19	26. 50	21. 27	·1416					
23. 42	26. 40	21. 45	·1408					
23. 59	29. 0	21. 57	·1413					
		22. 6	·1410					
		22. 40	·1407					
		23. 9	·1410					
		23. 17	·1409					
		23. 59	·1417					
Mar. 17		Mar. 17		Mar. 17		Mar. 17		
0. 0	20. 29. 0	0. 0	·1417	0. 0	·02830	1. 0	53·6	54·0
0. 27	27. 45	0. 17	·1403	3. 35	·02870	8. 30	52·0	52·4
0. 46	30. 0	1. 9	·1408	8. 58	·02815	21. 0	50·3	50·4
1. 5	30. 45	1. 29	·1404	16. 11	·02695	22. 0	50·2	50·3
1. 27	29. 35	1. 40	·1411	23. 10	·02620	23. 0	50·3	50·7
1. 37	31. 25	1. 54	·1408	23. 59	·02635			
1. 55	30. 10	2. 22	·1413					
2. 57	31. 0	2. 35	·1417					
	***	2. 50	·1415					
3. 54	29. 10	2. 58	·1418					
4. 19	28. 45	3. 8	·1416					
4. 49	25. 55	3. 34	·1418					
5. 59	25. 10	3. 43	·1416					
8. 19	23. 0	3. 50	·1417					
8. 36	21. 45	4. 17	·1413					
9. 3	23. 0	4. 25	·1415					
9. 39	22. 0	4. 30	·1411					
10. 40	23. 50	4. 49	·1412					
11. 15	22. 55	5. 33	·1418					
13. 56	22. 0	5. 47	·1416					
15. 4	26. 0	6. 13	·1420					
15. 39	25. 20	7. 3	·1424					
16. 15	22. 20	7. 27	·1421					
17. 5	24. 0	7. 59	·1424					
18. 6	23. 5	8. 35	·1417					
19. 16	20. 50	9. 1	·1418					
20. 35	20. 35	9. 17	·1423					
22. 3	23. 20	9. 44	·1419					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 17		Mar. 17						
h m	° ′ ″	h m		h m		h m	°	°
23. 5	20. 26. 45	10. 11	·1418					
23. 59	28. 15	10. 24	·1421					
		10. 56	·1417					
		11. 35	·1420					
		11. 45	·1422					
		11. 56	·1418					
		12. 6	·1422					
		12. 30	·1418					
		12. 56	·1420					
		13. 15	·1417					
		13. 34	·1419					
		14. 39	·1414					
		14. 55	·1416					
		15. 19	·1416					
		15. 50	·1421					
		16. 27	·1424					
		17. 3	·1421					
		17. 16	·1424					
		17. 33	·1420					
		18. 1	·1424					
		19. 23	·1424					
		19. 31	·1421					
		20. 10	·1415					
		21. 6	·1418					
		21. 43	·1415					
			***					
		23. 6	·1417					
		23. 59	·1419					
Mar. 18		Mar. 18		Mar. 18		Mar. 18		
0. 0	20. 28. 15	0. 0	·1419	0. 0	·02635	0. 0	50 ·5	51 ·0
1. 19	30. 35	2. 5	·1420	5. 35	·02710	1. 0	50 ·3	51 ·2
2. 15	29. 0	2. 20	·1434	8. 15	·02747	2. 0	50 ·5	51 ·3
2. 18	30. 30	2. 33	·1429	9. 38	·02726	3. 0	50 ·4	51 ·1
2. 33	29. 0	2. 59	·1434	16. 50	·02718	9. 0	50 ·5	51 ·8
2. 54	29. 45	3. 24	·1429	21. 2	·02693	21. 0	51 ·1	52 ·0
3. 27	28. 5	3. 33	·1435	21. 30	·02668	22. 0	51 ·1	52 ·0
3. 34	28. 55	3. 40	·1428	23. 19	·02652	23. 0	51 ·1	52 ·0
3. 40	27. 50	3. 55	·1432		(†)			
4. 16	26. 50	4. 20	·1425					
5. 9	25. 25	4. 35	·1425					
6. 6	21. 30	4. 48	·1429					
6. 15	22. 20	5. 19	·1423					
	***	5. 28	·1424					
6. 56	21. 0	5. 49	·1412					
7. 10	22. 30	6. 36	·1418					
7. 27	20. 0	6. 52	·1408					
7. 43	20. 0	6. 58	·1410					
7. 54	21. 0	7. 19	·1398					
8. 10	19. 55	7. 46	·1407					
8. 29	21. 55	8. 5	·1399					
8. 47	21. 0	8. 40	·1408					
9. 4	21. 35	9. 0	·1414					
9. 18	20. 55	9. 16	·1411					
10. 11	22. 0	9. 41	·1414					
10. 50	23. 0	9. 57	·1419					
11. 15	22. 10	10. 40	·1416					
11. 34	23. 55	10. 55	·1419					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet	Readings of Thermometers. Of V. F. Magnet.
Mar. 18		Mar. 18						
h m	° ′ ″	h m		h m		h m	°	°
11. 58	20. 21. 50	11. 15	·1416					
12. 19	23. 55	11. 46	·1419					
12. 35	22. 30	11. 54	·1416					
13. 44	22. 50	12. 13	·1418					
14. 16	21. 5	12. 58	·1414					
14. 57	23. 55	13. 57	·1416					
15. 49	23. 55	14. 34	·1413					
16. 9	22. 50	17. 50	·1422					
16. 30	23. 30	18. 9	·1419					
17. 36	22. 5	18. 45	·1418					
18. 29	21. 55	19. 33	·1420					
20. 0	20. 0	20. 9	·1413					
20. 8	20. 45	20. 17	·1416					
20. 50	21. 0	20. 54	·1408					
21. 27	23. 30	21. 33	·1413					
21. 38	22. 50	21. 42	·1407					
23. 22	28. 0	21. 50	·1411					
23. 59	27. 55	23. 6	·1415					
		23. 19	·1413					
			(†)					
Mar. 19		Mar. 19		Mar. 19		Mar. 19		
0. 0	20. 27. 55		(†)		(†)	0. 0	51 ·8	52 ·4
0. 6	29. 5	0. 8	·1420	0. 50	·02660	1. 0	51 ·9	52 ·5
0. 40	30. 15	0. 40	·1420	5. 21	·02735	3. 0	52 ·1	52 ·7
0. 55	28. 45	0. 55	·1415	6. 7	·02755	5. 0	51 ·5	52 ·8
2. 22	27. 35	1. 29	·1417	6. 16	·02737	9. 0	53 ·1	54 ·8
2. 29	28. 0	1. 55	·1422	6. 50	·02780	21. 0	54 ·2	55 ·0
2. 53	26. 10	2. 30	·1424	7. 15	·02765	22. 0	53 ·0	53 ·3
4. 37	23. 50	2. 57	·1420	9. 0	·02800	23. 0	52 ·1	52 ·6
5. 9	24. 0	3. 29	·1426	14. 24	·02840			
5. 35	21. 15	3. 48	·1420	15. 37	·02825			
5. 45	22. 0	3. 55	·1423	18. 42	·02850			
6. 2	18. 0	4. 4	·1421	21. 36	·02849			
6. 15	11. 0	4. 26	·1424		(†)			
6. 35	12. 5	4. 52	·1422					
6. 55	19. 0	5. 15	·1427					
7. 6	18. 50	5. 37	·1419					
7. 23	19. 30	6. 0	·1427					
7. 57	18. 0	6. 15	·1407					
8. 16	19. 50	6. 26	·1414					
9. 2	20. 0	6. 47	·1437					
9. 44	21. 20	7. 11	·1426					
9. 59	23. 0	7. 45	·1415					
11. 26	24. 0	8. 0	·1417					
11. 54	22. 55	8. 25	·1413					
13. 30	22. 50	9. 9	·1414					
13. 39	24. 0	9. 26	·1419					
14. 44	24. 0	9. 38	·1417					
15. 17	22. 5	9. 51	·1423					
15. 56	19. 0	10. 27	·1420					
17. 2	23. 10	10. 45	·1424					
18. 14	23. 0	11. 9	·1422					
18. 29	21. 55	11. 19	·1425					
19. 15	22. 0	12. 15	·1420					
20. 25	21. 0	13. 33	·1420					
21. 36	22. 10	14. 21	·1413					
	(†)	14. 37	·1420					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	° ′ ″	Mar.19 h m		h m		h m	°	°
		15. 24	·1426					
		16. 50	·1414					
		17. 34	·1418					
		19. 25	·1416					
		21. 25	·1405					
		21. 37	·1408					
			(†)					
Mar.20		Mar.20		Mar.20		Mar.20		
	(†)		(†)		(†)	0. 0	52·0	52·0
1. 0	20. 30. 32*	1. 0	·1419*	1. 0	·02762*	1. 0	51·8	51·6
2. 6	28. 30	2. 0	·1422	2. 0	·02772	2. 0	51·7	51·7
2. 53	28. 10	3. 45	·1427	5. 4	·02860	3. 0	52·4	53·6
3. 19	27. 0	4. 16	·1421	8. 30	·02895	9. 0	54·2	55·9
4. 3	26. 10	5. 46	·1425	10. 8	·02890	21. 0	53·4	54·6
4. 33	23. 25	6. 10	·1422	10. 22	·02895	23. 0	53·8	55·0
4. 59	24. 15	6. 35	·1425	11. 20	·02860			
5. 35	23. 50	7. 10	·1421	14. 2	·02895			
5. 47	24. 0	7. 34	·1422	22. 55	·02865			
6. 5	23. 15	8. 9	·1421	23. 43	·02850			
6. 25	24. 10	8. 20	·1423	23. 59	·02838			
6. 47	23. 30	9. 8	·1417					
7. 37	23. 30	9. 56	·1425					
8. 5	22. 0	10. 7	·1419					
8. 27	22. 0	10. 35	·1443					
9. 27	21. 50	10. 53	·1432					
9. 57	19. 30	11. 9	·1440					
10. 16	22. 5	11. 30	·1423					
10. 27	21. 10	12. 34	·1417					
10. 39	24. 55	19. 13	·1417					
10. 59	24. 15	22. 5	·1403					
11. 6	23. 10	22. 46	·1400					
11. 18	23. 50	23. 59	·1408					
11. 44	22. 10							
16. 8	23. 5							
17. 5	23. 5							
18. 47	22. 0							
20. 14	20. 0							
21. 37	21. 30							
23. 50	27. 35							
23. 59	27. 55							
Mar.21		Mar.21		Mar.21		Mar.21		
0. 0	20. 27. 55	0. 0	·1408	0. 0	·02838	0. 0	54·3	55·5
1. 26	29. 50	3. 26	·1422	3. 27	·02930	1. 0	55·0	56·0
4. 44	25. 0		***	8. 43	·02935	2. 0	54·8	55·9
5. 50	23. 55	5. 52	·1420	12. 31	·02925	3. 0	54·9	56·1
6. 20	20. 25	6. 39	·1415	14. 12	·02910	9. 0	54·5	56·0
7. 16	24. 0	7. 5	·1421	19. 33	·02881	21. 0	53·0	54·5
9. 41	23. 55	9. 47	·1418	22. 33	·02850	22. 0	52·9	54·4
10. 17	22. 35	10. 20	·1423		(†)	23. 0	53·0	54·5
11. 25	23. 0	10. 35	·1419					
11. 55	22. 30	11. 14	·1419					
12. 30	23. 0	11. 26	·1423					
12. 44	24. 0	11. 40	·1419					
13. 4	24. 5	12. 20	·1417					
14. 15	20. 30	13. 7	·1424					
15. 34	21. 45	13. 25	·1419					
	***	13. 55	·1422					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Mar.21 h m	° ′ ″	Mar.21 h m		h m		h m	°	°
17. 40	20. 22. 0	14. 50	·1416					
20. 30	19. 15	19. 15	·1425					
21. 29	20. 15	19. 39	·1420					
21. 45	21. 55	21. 38	·1414					
22. 26	22. 20	21. 55	·1409					
23. 40	26. 20	23. 59	·1412					
23. 59	27. 5							
Mar.22		Mar.22		Mar.22		Mar.22		
0. 0	20. 27. 5	0. 0	·1412		(†)	0. 0	53·8	55·0
1. 35	29. 50	2. 28	·1423	0. 26	·02875	1. 0	54·1	55·6
4. 58	25. 0		***	3. 27	·02937	2. 0	54·4	55·8
14. 43	23. 0	6. 50	·1423	10. 53	·02978	3. 0	55·0	56·3
16. 0	24. 0	9. 59	·1426	16. 30	·03008	9. 0	56·0	57·3
16. 47	22. 35	10. 10	·1423	21. 4	·03005	21. 0	56·5	57·8
17. 5	21. 30	10. 20	·1426	23. 43	·02977	22. 0	56·5	58·0
17. 39	22. 55	11. 6	·1422		(†)	23. 0	56·6	58·0
18. 35	22. 55	15. 29	·1421					
21. 18	21. 0	16. 19	·1424					
22. 9	23. 0	17. 35	·1422					
23. 27	26. 55	18. 30	·1425					
	(†)	21. 30	·1406					
		22. 34	·1407					
		23. 21	·1409					
			(†)					
Mar.23		Mar.23		Mar.23		Mar.23		
	(†)		(†)		(†)	0. 0	56·0	56·6
1. 0	20. 29. 28*	1. 0	·1413*	1. 0	·02979*	1. 0	55·4	55·8
2. 26	28. 25	2. 28	·1420	2. 28	·02960	2. 0	54·9	55·1
3. 50	27. 5	3. 18	·1425	9. 12	·03016	3. 0	55·2	56·0
5. 9	25. 0	3. 24	·1420	19. 35	·03031	9. 0	56·3	57·6
7. 44	23. 55	3. 35	·1427	22. 36	·02990	21. 45	56·6	57·7
10. 52	23. 40	4. 26	·1421	23. 59	·03010			
11. 21	23. 0	5. 5	·1425					
16. 14	22. 35	5. 20	·1424					
17. 15	22. 0	5. 33	·1428					
18. 57	20. 45	5. 40	·1425					
19. 48	21. 35	6. 14	·1429					
20. 10	20. 30	6. 53	·1427					
21. 26	20. 55	7. 14	·1431					
22. 59	24. 0	7. 30	·1427					
23. 59	25. 55	8. 16	·1430					
		8. 29	·1428					
			***					
		12. 55	·1426					
		19. 1	·1418					
		19. 45	·1424					
		22. 25	·1410					
		23. 59	·1411					
Mar.24		Mar.24		Mar.24		Mar.24		
0. 0	20. 25. 55	0. 0	·1411	0. 0	·03010	1. 0	58·1	59·0
1. 9	29. 0	1. 46	·1413	5. 58	·03112	8. 0	58·5	59·4
1. 19	28. 55	2. 1	·1419	10. 29	·03112	21. 0	57·1	57·8
1. 27	29. 15	3. 8	·1410	11. 6	·03089	22. 0	56·6	56·6
1. 41	29. 0	4. 25	·1419	17. 23	·03080	23. 0	56·6	56·4
1. 57	30. 0	5. 17	·1417	23. 30	·02999			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 24		Mar. 24		Mar. 24				
h m	° ′ ″	h m		h m		h m	°	°
2. 15	20. 28. 45	5. 27	·1420	23. 59	·02990			
3. 19	28. 0	5. 43	·1409					
3. 56	28. 5	6. 24	·1419					
5. 24	26. 0	6. 39	·1417					
5. 49	22. 30	6. 58	·1424					
6. 9	21. 0	7. 9	·1419					
6. 31	23. 0	7. 36	·1418					
7. 53	23. 30	8. 12	·1422					
9. 39	23. 0	8. 35	·1416					
10. 7	21. 30	8. 57	·1420					
10. 17	22. 0	10. 28	·1415					
10. 29	20. 0	10. 49	·1435					
10. 48	18. 50	11. 15	·1424					
11. 34	21. 15	12. 22	·1415					
12. 18	21. 5	15. 48	·1416					
13. 19	22. 50	18. 20	·1424					
14. 29	22. 30	19. 26	·1422					
14. 53	21. 50	20. 13	·1414					
15. 55	21. 55	20. 29	·1417					
16. 9	22. 30	21. 26	·1415					
17. 8	20. 55	22. 0	·1410					
18. 4	21. 50	23. 59	·1418					
19. 20	20. 0							
20. 16	20. 30							
21. 0	21. 20							
21. 46	21. 0							
23. 44	26. 0							
23. 59	27. 0							
Mar. 25		Mar. 25		Mar. 25		Mar. 25		
0. 0	20. 27. 0	0. 0	·1418	0. 0	·02990	0. 0	56 ·7	57 ·0
1. 38	28. 50	1. 12	·1423	2. 18	·03000	1. 0	56 ·7	56 ·7
3. 48	26. 55	2. 37	·1424	5. 52	·03030	2. 0	56 ·6	56 ·7
5. 34	25. 0	2. 59	·1419	9. 0	·03050	3. 0	56 ·6	57 ·0
6. 0	19. 0	3. 25	·1423	14. 0	·03012	9. 0	56 ·8	57 ·3
6. 25	19. 10	3. 48	·1418	22. 10	·02923	21. 0	55 ·9	55 ·9
6. 55	15. 10	4. 46	·1424	23. 29	·02938	22. 0	56 ·0	55 ·8
7. 26	20. 0	5. 18	·1421	23. 59	·02943	23. 0	56 ·6	56 ·7
8. 11	20. 0	5. 37	·1425					
8. 22	21. 0	5. 59	·1418					
8. 40	20. 55	6. 25	·1428					
8. 54	22. 50	6. 29	·1422					
9. 30	24. 0	6. 48	·1419					
13. 23	22. 50	7. 8	·1428					
13. 36	24. 50	7. 30	·1423					
14. 16	22. 20	8. 6	·1419					
14. 36	24. 0	8. 23	·1425					
15. 38	20. 55	8. 42	·1420					
16. 30	20. 10	10. 9	·1427					
16. 59	20. 55	12. 5	·1427					
17. 39	22. 0	13. 8	·1423					
18. 10	21. 30	15. 20	·1429					
18. 39	22. 55	16. 27	·1427					
19. 18	21. 15	16. 40	·1429					
20. 4	21. 0	16. 59	·1425					
20. 24	24. 0	17. 35	·1428					
21. 37	27. 10	17. 50	·1424					
22. 7	24. 10	18. 52	·1427					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 25		Mar. 25						
h m	° ′ ″	h m		h m		h m	°	°
22. 27	20. 27. 55	19. 21	·1420					
23. 6	25. 20	19. 39	·1412					
	***	20. 7	·1405					
23. 35	25. 40		***					
23. 59	27. 0	21. 39	·1406					
		21. 56	·1401					
		22. 16	·1409					
		22. 29	·1405					
			***					
		23. 18	·1409					
		23. 26	·1402					
		23. 59	·1411					
Mar. 26		Mar. 26		Mar. 26		Mar. 26		
0. 0	20. 27. 0	0. 0	·1411	0. 0	·02943	0. 0	57 ·0	57 ·7
0. 27	30. 10	0. 24	·1413	5. 33	·03061	1. 0	57 ·2	57 ·8
1. 5	31. 5	1. 16	·1404	11. 55	·03009	2. 0	57 ·1	57 ·4
1. 29	33. 30	1. 29	·1407	12. 32	·02982	3. 0	57 ·4	57 ·6
1. 47	31. 0	1. 49	·1393	13. 45	·02990	6. 30	57 ·4	58 ·3
2. 2	33. 0	2. 7	·1401	17. 47	·03030	9. 0	57 ·1	57 ·7
	***	2. 25	·1393	22. 17	·03009	13. 0	56 ·6	57 ·2
4. 37	28. 0	2. 39	·1399	23. 39	·02980	21. 0	57 ·1	58 ·0
5. 4	28. 35	2. 48	·1394	23. 59	·02980	22. 0	56 ·9	56 ·9
5. 35	26. 0		***			23. 0	56 ·8	56 ·5
6. 8	25. 0	3. 52	·1406					
7. 14	24. 5	4. 0	·1402					
8. 48	23. 0	4. 36	·1414					
9. 35	23. 5	4. 59	·1411					
9. 54	21. 0	5. 6	·1405					
10. 27	20. 45	5. 40	·1416					
10. 45	19. 10	5. 52	·1413					
11. 12	20. 30	6. 10	·1418					
11. 28	15. 55	6. 25	·1416					
12. 0	22. 30	6. 58	·1420					
12. 45	21. 0	9. 33	·1418					
13. 15	22. 25	9. 55	·1427					
13. 27	21. 15	10. 8	·1421					
14. 58	22. 5	10. 25	·1424					
15. 14	21. 10	11. 4	·1417					
16. 17	21. 35	11. 19	·1429					
16. 27	22. 50	11. 57	·1435					
16. 45	22. 5	12. 53	·1414					
17. 24	23. 15	13. 8	·1418					
17. 48	25. 10	13. 45	·1409					
18. 19	24. 0	14. 9	·1414					
19. 29	22. 5		***					
20. 5	21. 0	17. 3	·1418					
20. 45	20. 15	18. 0	·1425					
21. 29	21. 5	18. 23	·1422					
21. 37	22. 0	19. 0	·1425					
23. 8	25. 0	22. 6	·1405					
23. 29	26. 30	22. 16	·1410					
23. 59	27. 0	22. 58	·1403					
		23. 28	·1408					
			(†)					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 27		Mar. 27		Mar. 27		Mar. 27		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 27. 0		(†)	0. 0	·02980	0. 0	58·0	58·7
1. 15	28. 30	0. 16	·1409	3. 45	·03090	1. 0	58·8	59·3
1. 49	28. 10	1. 16	·1410	9. 27	·03035	2. 0	58·9	59·6
2. 21	30. 0	1. 38	·1405	11. 49	·03053	3. 0	58·9	59·8
4. 15	28. 0	2. 15	·1413	17. 26	·03050	9. 0	57·0	57·3
5. 19	24. 10	3. 4	·1415	22. 0	·03010	21. 0	57·3	57·7
	***	3. 10	·1406	23. 49	·02961	22. 0	56·6	36·8
5. 59	24. 5	3. 44	·1416		(†)	23. 0	56·5	56·7
6. 19	25. 10	4. 55	·1413					
6. 46	24. 5	6. 8	·1427					
7. 10	24. 45	6. 35	·1423					
10. 26	22. 55	7. 2	·1428					
10. 54	23. 5	8. 44	·1424					
11. 41	23. 15	10. 34	·1420					
12. 4	25. 15	10. 46	·1427					
12. 34	23. 0	11. 37	·1423					
12. 48	26. 0	11. 50	·1424					
13. 15	22. 0	12. 5	·1430					
13. 34	22. 55	12. 25	·1424					
13. 43	25. 0	12. 47	·1428					
14. 49	22. 0	13. 55	·1419					
15. 24	23. 0	14. 44	·1422					
17. 19	21. 10	15. 25	·1416					
18. 18	22. 30	17. 25	·1422					
20. 7	20. 20	21. 20	·1413					
21. 20	21. 0	21. 45	·1410					
	***	22. 40	·1399					
23. 23	26. 0	23. 5	·1404					
23. 27	28. 35	23. 24	·1403					
23. 34	25. 50	23. 30	·1395					
23. 59	28. 0	23. 59	·1406					
Mar. 28		Mar. 28		Mar. 28		Mar. 28		
0. 0	20. 28. 0	0. 0	·1406		(†)	c. 0	57·1	57·3
0. 10	29. 20	0. 25	·1408	1. 0	·02982*	1. 0	58·0	58·2
0. 52	30. 5	0. 49	·1402	2. 3	·03018	2. 0	58·0	58·2
1. 30	30. 10	0. 58	·1409	3. 59	·03020	3. 0	57·0	57·6
1. 40	29. 40	1. 30	·1412	7. 7	·03030	9. 0	57·0	57·4
2. 9	30. 30	1. 45	·1407	8. 33	·03055	21. 0	58·0	58·3
2. 40	29. 0	2. 13	·1418	8. 52	·03050	22. 0	56·5	57·0
2. 54	30. 15	2. 39	·1410	11. 23	·03070	23. 0	56·3	56·7
5. 37	25. 0	2. 57	·1425	18. 30	·03075			
6. 7	26. 0	3. 24	·1422	21. 23	·03055			
6. 39	25. 40	3. 35	·1426	23. 30	·03005			
6. 58	24. 0	3. 56	·1423		(†)			
7. 17	23. 5	4. 17	·1425					
7. 46	15. 20	5. 10	·1423					
7. 55	15. 5	5. 23	·1428					
8. 16	14. 0	5. 47	·1422					
8. 43	19. 30	6. 27	·1425					
9. 10	17. 25	7. 10	·1422					
9. 47	21. 55	7. 33	·1409					
10. 8	21. 0	7. 49	·1413					
10. 34	22. 55	8. 0	·1409					
11. 0	21. 30	8. 17	·1415					
11. 43	26. 0	8. 24	·1402					
11. 55	25. 0	8. 37	·1412					
12. 24	26. 35	8. 50	·1413					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar. 28		Mar. 28						
h m	° ′ ″	h m		h m		h m	°	°
12. 47	20. 24. 10	9. 6	·1409					
13. 10	25. 30	9. 40	·1414					
14. 4	23. 15	9. 58	·1410					
14. 15	22. 0	10. 29	·1420					
14. 17	22. 55	11. 2	·1416					
14. 41	22. 55	11. 49	·1418					
14. 50	21. 40	12. 9	·1413					
15. 9	21. 35	12. 35	·1417					
15. 15	20. 50	13. 0	·1410					
15. 24	21. 50	14. 3	·1416					
16. 10	22. 15	14. 18	·1406					
16. 48	20. 55	14. 26	·1411					
18. 17	22. 10	15. 18	·1414					
18. 30	21. 30	15. 54	·1410					
18. 47	22. 50	17. 16	·1420					
19. 46	20. 0	18. 16	·1414					
19. 54	21. 0	19. 7	·1416					
20. 6	20. 0	19. 42	·1408					
20. 35	22. 10	19. 50	·1413					
20. 43	21. 0	20. 39	·1408					
20. 52	22. 0	21. 25	·1392					
21. 23	21. 50	21. 47	·1396					
21. 39	22. 5	23. 28	·1404					
21. 48	24. 0	23. 36	·1399					
22. 56	25. 15	23. 59	·1400					
23. 17	28. 15							
23. 59	28. 30							
Mar. 29		Mar. 29		Mar. 29		Mar. 29		
0. 0	20. 28. 30	0. 0	·1400		(†)	0. 0	57·0	57·5
0. 40	29. 50	1. 16	·1407	1. 0	·03000	1. 0	57·0	58·0
1. 22	30. 10	1. 45	·1405	5. 30	·03050	2. 0	57·1	58·0
2. 34	29. 10	2. 12	·1409	9. 0	·03048	3. 0	57·0	57·6
4. 9	25. 10	3. 4	·1406	11. 39	·03070	9. 0	56·5	57·5
5. 37	23. 55	4. 46	·1418	20. 21	·03050	21. 0	57·9	58·0
6. 9	24. 10	5. 13	·1413	22. 57	·02972	22. 0	56·0	56·5
7. 4	23. 0	5. 37	·1416	23. 55	·02955	23. 0	55·7	55·9
7. 54	23. 0	5. 55	·1414	23. 59	·02985			
8. 40	23. 55	6. 11	·1417					
9. 33	23. 55	6. 21	·1413					
9. 46	22. 55	7. 10	·1418					
11. 44	24. 0	8. 49	·1418					
12. 6	23. 0	11. 26	·1413					
12. 34	24. 0	11. 40	·1417					
15. 6	22. 0	14. 34	·1408					
16. 37	22. 45	19. 39	·1416					
18. 0	22. 0	20. 58	·1409					
18. 9	21. 0	21. 47	·1393					
18. 22	21. 30	22. 23	·1399					
20. 26	19. 15	23. 5	·1394					
21. 15	20. 10	23. 51	·1403					
22. 10	25. 0		(†)					
22. 21	26. 5							
23. 9	27. 0							
23. 49	30. 10							
	(†)							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Mar.30		Mar.30		Mar.30		Mar.30		
h m	° ′ ″	h m		h m		h m	°	°
	(†)		(†)	0. 0	·02985	0. 0	56·8	57·5
0. 16	20. 30. 45	0. 11	·1401	4. 18	·03005	1. 0	57·0	57·6
0. 30	29. 0	0. 30	·1395	5. 18	·03032	2. 0	56·9	57·3
1. 15	31. 15	1. 18	·1410	13. 30	·02990	3. 0	56·0	56·3
4. 3	25. 0	1. 55	·1407	20. 9	·02950	9. 0	56·3	56·7
4. 58	22. 0	4. 14	·1415	22. 47	·02896	21. 30	55·0	55·6
5. 18	22. 15	4. 39	·1410	23. 59	·02890			
6. 10	21. 45	5. 37	·1420					
6. 39	22. 5	6. 0	·1417					
7. 17	22. 0	6. 10	·1424					
7. 40	23. 0	6. 31	·1419					
8. 5	22. 15	7. 38	·1423					
8. 45	22. 5	8. 58	·1418					
9. 6	21. 15	9. 24	·1421					
9. 30	22. 0	9. 30	·1418					
9. 45	21. 10	10. 8	·1423					
10. 39	21. 50	10. 30	·1421					
11. 7	23. 35	11. 9	·1427					
11. 37	21. 40	12. 28	·1415					
12. 58	22. 45		***					
14. 51	22. 0	14. 50	·1413					
15. 5	24. 0	15. 22	·1407					
15. 29	25. 55	15. 51	·1414					
16. 17	21. 45	16. 46	·1415					
17. 59	19. 35	17. 35	·1421					
20. 0	19. 10	19. 15	·1411					
20. 50	19. 35	19. 47	·1413					
22. 56	26. 15	21. 29	·1401					
23. 59	29. 0	22. 6	·1403					
		22. 49	·1396					
		23. 59	·1401					
Mar.31		Mar.31		Mar.31		Mar.31		
0. 0	20. 29. 0	0. 0	·1401	0. 0	·02890	0. 0	55·3	55·3
0. 39	30. 50	0. 38	·1405	5. 4	·02915	5. 0	55·5	55·6
3. 55	25. 50	0. 55	·1401	11. 20	·02990	9. 0	56·2	57·2
6. 40	23. 55	1. 12	·1401	12. 54	·02983	21. 0	55·8	56·6
7. 30	24. 5	1. 24	·1407	18. 41	·02978	22. 0	56·0	57·0
7. 59	22. 55	2. 19	·1416	21. 46	·02938	23. 0	55·8	56·2
9. 17	24. 5	2. 35	·1412	23. 55	·02910			
9. 57	23. 0	6. 11	·1424	23. 59	·02925			
11. 0	23. 35	7. 45	·1419					
11. 15	24. 55	8. 55	·1420					
11. 46	23. 0	9. 17	·1423					
12. 14	23. 40	9. 39	·1417					
12. 35	26. 20	10. 7	·1420					
13. 28	22. 55	10. 44	·1415					
13. 55	23. 25	11. 28	·1423					
15. 33	21. 35	12. 25	·1417					
15. 39	22. 0	12. 40	·1422					
16. 46	23. 0	13. 8	·1417					
18. 33	20. 55	14. 25	·1412					
19. 43	21. 10	14. 39	·1415					
20. 15	20. 45	16. 25	·1412					
21. 17	22. 30	18. 18	·1418					
21. 54	24. 0	19. 50	·1407					
22. 36	28. 5	20. 25	·1410					
23. 49	30. 0	21. 37	·1397					
23. 59	30. 25	22. 15	·1395					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		Mar.31						
h m	° ′ ″	h m		h m		h m	°	°
		22. 40	·1396					
		23. 59	·1406					
Apr. 1		Apr. 1		Apr. 1		Apr. 1		
0. 0	20. 30. 30	0. 0	·1406	0. 0	·02925	0. 0	56·5	57·0
1. 22	30. 25	0. 10	·1400	3. 0	·02980	1. 0	56·8	57·1
5. 18	23. 25	2. 8	·1414	9. 28	·02980	2. 0	56·8	57·1
13. 7	23. 15	3. 45	·1411	15. 22	·03070	3. 0	56·9	57·2
15. 2	22. 35	6. 42	·1420	16. 44	·03072	9. 0	56·8	57·3
15. 30	23. 0	16. 9	·1414	22. 10	·03119	21. 0	59·2	60·1
15. 44	25. 5	16. 35	·1420	23. 59	·03090	22. 0	59·1	59·9
16. 30	22. 10	16. 57	·1414			23. 0	59·1	59·8
17. 12	23. 25	17. 35	·1420					
21. 50	22. 45	21. 32	·1404					
23. 55	28. 25	22. 37	·1410					
23. 59	27. 30	23. 59	·1410					
Apr. 2		Apr. 2		Apr. 2		Apr. 2		
0. 0	20. 27. 30	0. 0	·1410	0. 0	·03090	0. 0	59·1	59·8
0. 29	28. 5	4. 50	·1424	10. 13	·03144	1. 0	59·2	59·2
1. 18	29. 15	5. 39	·1422	18. 0	·03065	2. 0	59·3	59·6
5. 27	23. 0	6. 9	·1428	23. 25	·03000	3. 0	59·4	59·8
8. 15	23. 40	7. 58	·1420	23. 59	·03015	9. 0	59·6	60·1
8. 36	22. 20	8. 23	·1424			21. 0	56·5	57·0
9. 3	23. 5	8. 38	·1420			22. 0	56·8	57·0
12. 59	22. 55	9. 3	·1423			23. 0	56·9	57·1
15. 9	22. 40	15. 30	·1417					
16. 5	23. 35	16. 57	·1421					
20. 42	19. 5	19. 28	·1418					
23. 26	26. 30	21. 57	·1406					
23. 59	28. 0	23. 42	·1412					
		23. 59	·1417					
Apr. 3		Apr. 3		Apr. 3		Apr. 3		
0. 0	20. 28. 0	0. 0	·1417	0. 0	·03015	0. 0	57·5	57·8
1. 5	29. 30	1. 30	·1416	5. 0	·03080	1. 0	58·1	58·3
1. 26	29. 25	2. 8	·1422	11. 46	·03126	2. 0	58·5	58·5
2. 0	30. 10	2. 39	·1418	20. 53	·03099	3. 0	58·8	59·0
2. 38	28. 45	2. 49	·1428	23. 35	·03030	9. 0	59·5	60·0
2. 50	30. 15	2. 58	·1423	23. 59	·03042	21. 0	59·0	59·8
3. 20	28. 15	3. 8	·1429			22. 0	57·8	58·0
8. 10	24. 25	3. 17	·1424			23. 0	57·7	57·7
12. 58	22. 40	3. 30	·1428					
15. 27	21. 15	3. 58	·1427					
15. 49	21. 50	4. 12	·1423					
16. 9	21. 10	6. 18	·1428					
17. 0	22. 15	6. 50	·1433					
17. 38	21. 40	9. 0	·1431					
17. 55	22. 25	10. 19	·1425					
18. 25	21. 10	12. 39	·1420					
18. 35	21. 40	12. 55	·1423					
19. 35	19. 20	13. 14	·1421					
20. 47	20. 10	14. 48	·1421					
21. 37	22. 40	15. 48	·1426					
22. 26	26. 10	16. 44	·1422					
22. 52	29. 0	18. 13	·1430					
23. 20	27. 50	19. 40	·1418					
23. 59	28. 30	20. 33	·1415					
		20. 56	·1420					
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		Apr. 3						
h m	° ′ ″	h m		h m		h m	°	°
		22. 29	·1401					
		22. 45	·1414					
		22. 50	·1404					
		23. 7	·1415					
		23. 59	·1423					
Apr. 4		Apr. 4		Apr. 4		Apr. 4		
0. 0	20. 28. 30	0. 0	·1423	0. 0	·03042	0. 0	58 ·5	59 ·0
0. 16	29. 25	0. 9	·1425	1. 6	·03045	1. 0	58 ·5	59 ·0
0. 38	34. 10	0. 22	·1419	2. 45	·03115	2. 0	58 ·7	59 ·0
0. 58	28. 40	0. 35	·1438	3. 11	·03104	3. 0	58 ·9	58 ·9
1. 14	29. 50	1. 4	·1407	6. 0	·03172	9. 0	58 ·7	59 ·6
1. 22	33. 0	1. 20	·1413	6. 24	·03209	21. 0	57 ·6	57 ·8
1. 49	32. 0	1. 32	·1434	6. 58	·03150	22. 0	57 ·1	57 ·4
2. 0	34. 0	1. 55	·1425	9. 4	·03140	23. 0	57 ·7	58 ·0
2. 10	32. 40	2. 13	·1437	9. 33	·03142			
2. 37	33. 45	2. 30	·1420	9. 58	·03120			
2. 54	31. 45	2. 40	·1427	11. 47	·03120			
2. 58	29. 40	2. 54	·1420	12. 0	·03100			
3. 29	29. 10	3. 2	·1405	12. 54	·03105			
3. 39	28. 0	3. 19	·1398	14. 30	·03079			
4. 2	30. 0	3. 37	·1408	14. 58	·03084			
4. 25	30. 30	3. 42	·1402	15. 16	·03069			
4. 44	30. 0	4. 7	·1428	18. 9	·03080			
5. 0	27. 30	4. 25	·1419	23. 38	·03020			
5. 26	27. 20		***	23. 59	·03020			
6. 0	22. 50	5. 35	·1410					
6. 26	7. 0	5. 50	·1418					
6. 49	16. 0	6. 3	·1409					
7. 2	13. 20	6. 18	·1419					
7. 28	22. 25	6. 26	·1443					
7. 38	20. 15	6. 38	·1453					
7. 51	23. 0	6. 59	·1415					
8. 10	22. 25	7. 7	·1417					
8. 16	23. 45	7. 20	·1413					
8. 44	23. 40	7. 31	·1400					
9. 16	20. 30	7. 48	·1400					
9. 31	16. 25	8. 8	·1411					
9. 47	16. 45	8. 57	·1415					
10. 0	20. 0	9. 19	·1406					
10. 19	19. 5	9. 45	·1429					
10. 44	21. 30	9. 56	·1423					
11. 18	21. 0	10. 4	·1425					
11. 27	22. 40	10. 19	·1417					
11. 46	22. 15	11. 9	·1416					
11. 55	21. 0	11. 28	·1410					
12. 7	21. 35	11. 56	·1425					
12. 24	20. 0	12. 32	·1407					
12. 46	24. 0	13. 2	·1417					
12. 56	24. 0	13. 33	·1408					
12. 59	25. 0	13. 50	·1411					
13. 25	20. 25	14. 3	·1409					
13. 45	20. 35	14. 16	·1415					
14. 17	22. 25	14. 55	·1408					
14. 38	20. 15	15. 5	·1410					
15. 0	23. 25	15. 18	·1418					
15. 24	21. 20	15. 55	·1409					
15. 53	23. 30	17. 18	·1415					
16. 28	21. 30	17. 31	·1410					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Apr. 4		Apr. 4						
h m	° ′ ″	h m		h m		h m	°	°
17. 21	20. 20. 0	18. 49	·1406					
17. 42	21. 0	19. 26	·1409					
18. 55	21. 45	21. 4	·1400					
19. 12	20. 50	21. 49	·1405					
20. 45	20. 35	22. 5	·1400					
	21. 30	23. 59	·1407					
21. 12	20. 40							
21. 26	22. 5							
21. 40	21. 40							
22. 3	23. 30							
22. 13	22. 50							
23. 59	26. 40							
Apr. 5		Apr. 5		Apr. 5		Apr. 5		
0. 0	20. 26. 40	0. 0	·1407	0. 0	·03020	0. 0	58 ·8	59 ·2
1. 43	27. 50	1. 5	·1410	5. 15	·03132	1. 0	58 ·8	59 ·1
4. 1	24. 30	2. 6	·1413	5. 35	·03125	2. 0	58 ·8	58 ·9
5. 5	24. 0	2. 15	·1411	6. 31	·03155	3. 0	58 ·9	59 ·1
5. 29	25. 0	2. 33	·1417	6. 52	·03142	9. 0	59 ·7	60 ·3
6. 1	18. 50	3. 7	·1413	7. 53	·03140	21. 0	58 ·3	58 ·4
6. 8	20. 35	3. 50	·1417	8. 18	·03170	22. 0	57 ·7	58 ·0
6. 18	19. 45	3. 59	·1409	13. 34	·03120	23. 0	57 ·7	58 ·0
6. 50	25. 10	4. 24	·1417	13. 50	·03125			
7. 45	22. 15	5. 30	·1425	14. 34	·03065			
8. 9	0. 0	5. 53	·1405	17. 30	·03091			
8. 30	8. 10	5. 57	·1408	20. 18	·03072			
9. 15	19. 25	6. 14	·1402	23. 59	·03020			
9. 30	21. 30	6. 48	·1415					
9. 55	21. 45	6. 56	·1410					
10. 15	23. 30	7. 10	·1424					
11. 36	22. 10	7. 27	·1423					
12. 44	23. 30	7. 45	·1411					
13. 40	21. 50	7. 54	·1392					
14. 0	30. 0	8. 7	·1415					
14. 15	29. 0	8. 20	·1424					
14. 30	24. 20	9. 17	·1405					
14. 45	22. 10	9. 37	·1411					
14. 55	22. 50	9. 45	·1408					
15. 17	18. 0	10. 20	·1416					
15. 40	18. 0	11. 2	·1414					
16. 5	20. 10	11. 17	·1419					
16. 29	19. 30	11. 30	·1414					
16. 36	21. 25	12. 6	·1411					
16. 49	20. 15	12. 39	·1419					
18. 23	20. 15	13. 4	·1415					
18. 47	19. 55	13. 17	·1418					
19. 3	21. 30	13. 34	·1412					
19. 17	19. 30	14. 10	·1428					
19. 35	22. 25	14. 36	·1410					
19. 57	20. 10	14. 49	·1416					
20. 12	19. 10	15. 14	·1409					
20. 32	21. 50	15. 50	·1404					
20. 50	20. 10	16. 23	·1402					
21. 34	21. 10	16. 30	·1409					
22. 19	24. 30	16. 36	·1404					
22. 37	24. 0	16. 51	·1407					
22. 53	24. 55		***					
22. 58	26. 50	19. 0	·1410					
23. 24	27. 0	19. 12	·1407					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 5		Apr. 5						
h m	° ′ ″	h m		h m		h m	°	°
23. 47	20. 28. 50	19. 28	·1411					
	(†)	20. 9	·1400					
		20. 17	·1404					
		20. 29	·1401					
		21. 7	·1402					
		22. 33	·1396					
		23. 5	·1406					
		23. 47	·1412					
			(†)					
Apr. 6		Apr. 6		Apr. 6		Apr. 6		
	(†)		(†)	0. 0	·03020	0. 0	58·5	58·7
0. 10	20. 30. 0	0. 6	·1417	3. 6	·03115	1. 0	59·0	59·1
0. 40	30. 0	1. 40	·1426	10. 12	·03142	3. 0	59·3	59·3
1. 44	32. 0	2. 45	·1420	15. 18	·03125	9. 0	59·8	60·5
2. 36	31. 50	3. 16	·1409	20. 6	·03090	21. 30	58·0	58·3
3. 0	27. 15	3. 24	·1413	22. 37	·03040			
3. 32	25. 0	3. 30	·1410	23. 59	·03051			
4. 21	26. 40	3. 40	·1417					
5. 46	24. 30	4. 14	·1423					
6. 44	23. 45	4. 35	·1417					
7. 9	24. 20	5. 18	·1422					
10. 35	23. 55	5. 42	·1419					
10. 47	22. 50	6. 5	·1423					
11. 15	23. 20	6. 27	·1419					
12. 57	22. 50	10. 25	·1416					
16. 5	22. 5	10. 43	·1422					
18. 17	23. 15	10. 59	·1415					
18. 43	21. 10	11. 30	·1417					
18. 50	23. 25	12. 3	·1414					
19. 2	23. 0	12. 17	·1419					
19. 7	21. 35	12. 35	·1416					
19. 26	22. 30	17. 11	·1416					
19. 28	21. 10	17. 35	·1411					
19. 45	20. 15	17. 53	·1417					
20. 9	21. 0	18. 6	·1413					
20. 31	20. 10	19. 49	·1414					
21. 50	22. 40	21. 47	·1400					
21. 57	25. 50	22. 14	·1406					
22. 6	24. 20	22. 41	·1398					
22. 46	28. 50	22. 50	·1390					
23. 59	31. 25	23. 23	·1390					
		23. 47	·1402					
		23. 56	·1400					
		23. 59	·1402					
Apr. 7		Apr. 7		Apr. 7		Apr. 7		
0. 0	20. 31. 25	0. 0	·1402	0. 0	·03051	0. 0	58·2	58·5
0. 39	33. 0	0. 36	·1411	2. 53	·03097	9. 0	58·1	58·6
0. 50	32. 0	1. 15	·1403	3. 57	·03130	21. 0	57·3	57·3
1. 0	33. 20	1. 25	·1411	4. 33	·03162	22. 0	55·8	56·5
1. 19	33. 0	1. 47	·1417	4. 57	·03140	23. 0	55·5	56·3
1. 33	31. 5	2. 18	·1410	5. 27	·03170			
2. 25	33. 0	2. 26	·1417	6. 19	·03129			
2. 36	32. 0	2. 37	·1411	7. 35	·03118			
2. 42	33. 0	2. 45	·1417	7. 45	·03130			
3. 5	26. 10	2. 55	·1402	8. 15	·03080			
3. 13	27. 20	3. 13	·1422	8. 56	·03096			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr. 7		Apr. 7		Apr. 7				
h m	° ′ ″	h m		h m		h m	°	°
3. 26	20. 27. 0	3. 37	·1428	10. 26	·03080			
3. 55	30. 0	3. 47	·1425	11. 4	·03030			
4. 3	28. 0	4. 9	·1408	14. 27	·03073			
4. 9	29. 0	4. 44	·1434	19. 5	·03048			
4. 30	20. 5	5. 1	·1390	22. 22	·02992			
4. 58	27. 15	5. 59	·1425	23. 40	·02956			
5. 30	18. 40	6. 23	·1411	23. 59	·02954			
5. 43	19. 20	7. 0	·1408					
6. 13	24. 50	7. 16	·1409					
6. 45	22. 10	7. 26	·1416					
7. 19	21. 10	7. 36	·1416					
7. 47	11. 10	7. 56	·1454					
8. 11	22. 10	8. 27	·1398					
8. 36	14. 30	8. 57	·1416					
9. 11	20. 0	9. 25	·1410					
9. 44	21. 55	9. 56	·1423					
10. 5	21. 20	10. 19	·1416					
10. 46	26. 0	10. 45	·1431					
11. 14	21. 50	11. 19	·1418					
11. 27	22. 0	11. 29	·1419					
11. 50	17. 30	11. 39	·1416					
13. 5	22. 25	12. 4	·1424					
13. 29	21. 30	12. 15	·1419					
14. 5	22. 30	12. 24	·1421					
14. 29	24. 45	13. 4	·1410					
15. 30	22. 5	14. 35	·1408					
17. 14	20. 5	17. 57	·1416					
18. 15	22. 30	18. 9	·1414					
18. 34	21. 25	18. 30	·1406					
19. 26	25. 30	19. 30	·1406					
20. 29	21. 40	19. 57	·1410					
20. 55	21. 30	21. 16	·1398					
21. 50	23. 35	22. 6	·1403					
22. 0	24. 40	23. 26	·1411					
22. 20	24. 30	23. 59	·1410					
23. 40	28. 10							
23. 59	29. 25							
Apr. 8		Apr. 8		Apr. 8		Apr. 8		
0. 0	20. 29. 25	0. 0	·1410	0. 0	·02954	0. 0	57·3	57·8
0. 39	31. 40	0. 26	·1413	3. 5	·03081	1. 0	58·0	58·6
0. 53	30. 10	0. 56	·1407	5. 32	·03140	3. 0	59·1	59·3
1. 38	30. 10	1. 13	·1416	5. 43	·03138	9. 0	59·9	60·5
2. 21	28. 0	1. 30	·1414	6. 0	·03158	21. 0	58·2	58·7
2. 34	28. 15	3. 45	·1422	6. 31	·03150	22. 0	57·1	57·7
3. 41	27. 30	4. 20	·1415	9. 0	·03163	23. 0	57·5	57·8
5. 33	24. 40	4. 37	·1417	11. 9	·03138			
5. 49	16. 0	4. 46	·1422	11. 27	·03144			
6. 20	22. 45	5. 5	·1416	11. 54	·03120			
6. 42	20. 0	5. 29	·1420	12. 33	·03104			
7. 13	21. 55	5. 40	·1410	12. 50	·03114			
7. 42	22. 0	5. 59	·1430	13. 34	·03100			
7. 56	20. 35	6. 30	·1409	14. 23	·03117			
8. 15	20. 0	6. 58	·1413	17. 52	·03089			
8. 23	20. 55	8. 8	·1409	19. 9	·03100			
8. 55	20. 0	8. 28	·1413	23. 33	·03032			
9. 58	22. 0	9. 10	·1402	23. 59	·03030			
10. 40	20. 30	9. 39	·1411					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H.F. Magnet.	Of V.F. Magnet.
Apr. 8		Apr. 8						
h m	° ′ ″	h m		h m		h m	°	°
11. 18	20. 16. 45	9. 48	·1408					
11. 39	20. 0	10. 39	·1417					
12. 5	17. 30	11. 4	·1415					
12. 31	23. 25	11. 15	·1407					
12. 45	21. 5	11. 38	·1417					
12. 53	21. 0	12. 20	·1410					
13. 7	23. 10	12. 33	·1404					
13. 50	18. 5	13. 17	·1416					
14. 28	21. 30	13. 54	·1404					
15. 20	18. 0	14. 20	·1402					
16. 35	18. 50	14. 50	·1410					
16. 58	20. 30	15. 46	·1407					
18. 10	22. 40	17. 40	·1420					
18. 20	21. 20	18. 19	·1408					
18. 42	22. 10	18. 27	·1411					
19. 6	21. 0	19. 10	·1406					
19. 17	19. 20	19. 23	·1411					
19. 38	20. 5	19. 46	·1412					
20. 14	21. 0	20. 37	·1399					
21. 35	24. 30	22. 39	·1388					
23. 50	31. 45		***					
23. 59	32. 30	23. 59	·1396					
Apr. 9		Apr. 9		Apr. 9		Apr. 9		
0. 0	20. 32. 30	0. 0	·1396	0. 0	·03030	0. 0	58 ·9	58 ·9
1. 27	34. 55	0. 59	·1408	3. 20	·03100	1. 0	58 ·4	58 ·5
1. 40	36. 0	1. 19	·1404	4. 19	·03160	2. 0	58 ·0	58 ·1
2. 27	34. 0	1. 35	·1409	6. 52	·03178	3. 0	57 ·9	58 ·3
2. 51	35. 5	2. 0	·1404	7. 10	·03160	9. 0	58 ·2	58 ·8
3. 20	31. 0	2. 30	·1414	9. 39	·03112	21. 0	57 ·7	58 ·0
3. 45	33. 0	2. 52	·1413	14. 30	·03110	22. 0	56 ·5	57 ·0
4. 10	31. 15	3. 18	·1392	19. 0	·03080	23. 0	56 ·4	56 ·9
4. 27	33. 0	3. 48	·1419	20. 50	·03050			
4. 36	30. 0	4. 20	·1411	23. 23	·02979			
4. 58	30. 0	4. 25	·1414	23. 59	·02990			
5. 8	27. 50	4. 33	·1403					
5. 13	28. 0	4. 55	·1415					
5. 5	24. 55	5. 7	·1406					
6. 15	27. 0	5. 11	·1410					
6. 25	25. 40	5. 22	·1398					
6. 32	26. 20	5. 27	·1405					
6. 53	19. 40	5. 32	·1402					
7. 4	25. 30	5. 55	·1415					
7. 13	24. 30	5. 59	·1411					
7. 39	26. 20	6. 7	·1416					
7. 59	26. 0	6. 21	·1406					
8. 25	24. 15	6. 28	·1410					
8. 55	25. 30	6. 40	·1399					
11. 15	23. 35	6. 57	·1416					
13. 18	23. 0	7. 8	·1407					
13. 43	21. 40	7. 56	·1412					
14. 8	22. 45	8. 13	·1410					
17. 40	21. 55	8. 39	·1415					
18. 9	20. 0	9. 16	·1415					
18. 30	20. 0	13. 19	·1405					
18. 54	21. 25	13. 35	·1408					
20. 20	19. 45	13. 51	·1403					
20. 31	20. 25	19. 48	·1408					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers.	
							Of H.F. Magnet.	Of V.F. Magnet.
Apr. 9		Apr. 9						
h m	° ′ ″	h m		h m		h m	°	°
21. 35	20. 21. 55	21. 25	·1402					
21. 49	23. 55	22. 13	·1390					
22. 9	22. 20	22. 30	·1397					
22. 15	24. 0	23. 25	·1392					
23. 27	27. 40	23. 59	·1403					
23. 54	32. 0							
23. 59	28. 40							
Apr. 10		Apr. 10		Apr. 10		Apr. 10		
0. 0	20. 28. 40	0. 0	·1403	0. 0	·02990	0. 0	57 ·9	58 ·2
1. 53	28. 50		***	3. 6	·03024	1. 0	57 ·6	57 ·5
2. 46	27. 30	3. 49	·1418	5. 50	·03060	2. 0	57 ·7	57 ·5
2. 53	28. 0	5. 5	·1419	11. 5	·03083	3. 0	57 ·4	57 ·7
4. 30	24. 15	8. 17	·1420	13. 16	·03085	9. 0	58 ·3	58 ·9
9. 19	23. 45	8. 33	·1427	15. 28	·03077	21. 0	57 ·8	57 ·9
9. 52	18. 35	9. 27	·1417	18. 3	·03073	22. 0	56 ·0	56 ·1
10. 16	18. 35	9. 39	·1421	21. 9	·03040	23. 0	56 ·1	36 ·3
10. 39	20. 30	10. 34	·1418	22. 47	·02970			
11. 1	19. 0	10. 50	·1412	23. 59	·02985			
	***	11. 9	·1415					
12. 25	22. 30	12. 2	·1415					
13. 0	23. 0	12. 40	·1407					
13. 25	24. 20	13. 56	·1409					
13. 55	23. 55	14. 29	·1406					
14. 15	24. 0	15. 49	·1411					
14. 30	25. 30	17. 1	·1407					
14. 44	25. 0	17. 20	·1411					
15. 19	21. 35	18. 9	·1412					
16. 22	19. 55	18. 55	·1403					
17. 37	21. 15	20. 7	·1409					
18. 21	20. 35		***					
19. 34	22. 55	22. 20	·1399					
20. 16	20. 0	23. 5	·1396					
21. 19	20. 10	23. 22	·1390					
22. 25	22. 0	23. 38	·1392					
22. 32	23. 35	23. 59	·1397					
23. 59	27. 10							
Apr. 11		Apr. 11		Apr. 11		Apr. 11		
0. 0	20. 27. 10	0. 0	·1397	0. 0	·02985	0. 0	57 ·8	58 ·0
0. 30	28. 40	0. 39	·1401	3. 50	·03073	1. 0	58 ·5	58 ·5
2. 33	29. 5	1. 51	·1405	5. 35	·03115	2. 0	58 ·0	58 ·1
3. 6	27. 45	2. 51	·1413	10. 21	·03080	3. 0	57 ·9	58 ·1
3. 40	28. 0	3. 5	·1408	13. 19	·03100	9. 0	58 ·1	59 ·0
4. 11	25. 35	3. 40	·1414	14. 6	·03089	21. 0	58 ·7	59 ·0
4. 20	25. 40	3. 59	·1407	17. 0	·03095	22. 0	57 ·6	58 ·1
5. 4	21. 0	4. 22	·1415	18. 49	·03114	23. 0	57 ·3	57 ·7
5. 25	21. 20	4. 30	·1411	21. 10	·03080			
6. 17	24. 0	4. 39	·1415	23. 29	·03020			
8. 35	24. 40	5. 0	·1407	23. 59	·03029			
9. 29	11. 30	6. 15	·1423					
9. 40	13. 30	7. 45	·1422					
9. 50	13. 5	7. 59	·1418					
10. 6	18. 10	8. 34	·1425					
10. 21	17. 0	9. 10	·1407					
10. 42	21. 15	9. 41	·1427					
10. 58	20. 50	10. 18	·1398					
12. 5	23. 0	10. 36	·1407					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declina-tion.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Apr. 11		Apr. 11						
h m	° ′ ″	h m		h m		h m	°	°
12. 27	20. 22. 50	10. 48	·1403					
12. 51	20. 45	11. 37	·1410					
13. 40	22. 20	12. 5	·1406					
14. 31	18. 5	13. 59	·1408					
15. 5	19. 25	15. 34	·1399					
15. 24	18. 45	16. 25	·1409					
16. 14	22. 40	18. 16	·1406					
17. 38	19. 30	18. 39	·1408					
18. 14	19. 45	20. 48	·1397					
19. 38	18. 40	23. 30	·1396					
22. 28	24. 45	23. 59	·1402					
23. 0	27. 15							
23. 30	27. 45							
23. 59	29. 0							
Apr. 12		Apr. 12		Apr. 12		Apr. 12		
0. 0	20. 29. 0	0. 0	·1402	0. 0	·03029	0. 0	58·7	59·2
1. 18:	30. 0	2. 37	·1412	2. 32	·03065	1. 0	58·7	59·1
4. 35	24. 25	2. 50	·1408	3. 4	·03055	2. 0	58·2	58·6
5. 18	23. 20	5. 15	·1420	5. 42	·03100	3. 0	58·2	58·6
6. 40	24. 10	6. 15	·1413	10. 41	·03110	9. 0	58·9	59·5
9. 49	24. 0	7. 37	·1419	18. 4	·03093	21. 0	58·9	59·0
10. 39	21. 10	9. 20	·1423	23. 59	·03029	22. 0	58·2	58·9
11. 12	12. 10	10. 35	·1412			23. 0	58·4	59·0
11. 51	19. 30	10. 59	·1422					
12. 2	18. 55	11. 6	·1420					
12. 25	21. 0	11. 17	·1423					
12. 33	20. 50	11. 29	·1416					
13. 23	23. 0	11. 36	·1417					
14. 58	21. 45	12. 0	·1406					
15. 50	22. 20	12. 17	·1409					
16. 5	23. 0	12. 30	·1404					
18. 4	21. 0	12. 58	·1408					
18. 47	19. 30	18. 42	·1404					
19. 45	19. 25	20. 51	·1394					
22. 4	23. 30	22. 15	·1393					
23. 0	26. 20	23. 53	·1401					
23. 59	28. 0	23. 59	·1403					
Apr. 13		Apr. 13		Apr. 13		Apr. 13		
0. 0	20. 28. 0	0. 0	·1403	0. 0	·03029	0. 0	59·1	60·0
1. 6	30. 0	1. 59	·1420	3. 55	·03125	1. 0	60·0	60·3
2. 20	28. 20	3. 17	·1424	5. 51	·03140	2. 0	60·0	60·2
3. 18	25. 55	4. 14	·1419	7. 27	·03130	3. 0	59·8	60·3
4. 19	25. 0	4. 35	·1413	13. 57	·03160	9. 0	59·9	60·1
5. 6	20. 0	5. 19	·1424	19. 8	·03148	21. 30	60·0	60·2
6. 6	23. 30	5. 37	·1424	23. 26	·03096			
7. 5	23. 50	5. 53	·1428	23. 59	·03112			
7. 24	24. 30		***					
8. 30	23. 50	9. 29	·1424					
8. 55	24. 20	10. 25	·1427					
9. 25	23. 5	10. 54	·1424					
10. 34	24. 0	11. 49	·1426					
10. 43	23. 20	14. 25	·1417					
12. 15	23. 0	18. 18	·1419					
12. 50	22. 0	22. 12	·1401					
15. 17	21. 50	22. 29	·1408					
16. 5	20. 15	23. 6	·1401					

Greenwich Mean Solar Time.	Western Declina-tion.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Apr. 13		Apr. 13						
h m	° ′ ″	h m		h m		h m	°	°
17. 53	20. 21. 30	23. 59	·1400					
18. 32	20. 0							
19. 55	18. 30							
22. 7	22. 20							
22. 21	24. 30							
23. 59	28. 50							
Apr. 14		Apr. 14		Apr. 14		Apr. 14		
0. 0	20. 28. 50	0. 0	·1400	0. 0	·03112	1. 0	60·3	60·5
0. 32	30. 0	1. 9	·1413	3. 0	·03177	8. 0	60·5	61·0
4. 25	22. 30	2. 58	·1421	8. 53	·03180	19. 0	59·5	59·9
5. 31	22. 25	3. 40	·1419	13. 45	·03180	21. 0	59·0	59·5
6. 36	23. 30	4. 0	·1421	18. 55	·03150	22. 0	58·4	58·4
9. 45	24. 15	4. 25	·1419	21. 0	·03110	23. 0	58·6	58·4
11. 51	22. 30	5. 45	·1423	23. 36	·03070			
13. 28	23. 0	7. 40	·1419	23. 59	·03065			
	***	8. 6	·1422					
15. 47	20. 25	9. 3	·1420					
16. 51	21. 20	9. 43	·1424					
17. 16	19. 55	10. 0	·1421					
17. 23	20. 40	11. 17	·1419					
18. 16	20. 0	11. 39	·1422					
19. 9	17. 40	11. 59	·1419					
19. 25	18. 15	16. 18	·1411					
19. 40	17. 25	17. 4	·1414					
20. 53	18. 25	17. 37	·1410					
23. 12	27. 15	19. 57	·1410					
23. 59	28. 20	22. 43	·1402					
		23. 59	·1410					
Apr. 15		Apr. 15		Apr. 15		Apr. 15		
0. 0	20. 28. 20	0. 0	·1410	0. 0	·03065	0. 0	59·0	59·2
0. 44	29. 45	0. 8	·1414	2. 55	·03118	1. 0	59·4	59·6
0. 50	29. 10	0. 38	·1418	8. 28	·03132	3. 0	..	59·5
0. 57	30. 40	0. 45	·1415	12. 28	·03120	9. 0	59·3	59·5
1. 29	29. 35	1. 0	·1423	20. 31	·03022	21. 0	57·5	57·0
1. 42	30. 25	1. 6	·1416	23. 30	·02960	22. 0	56·1	57·0
1. 50	28. 45	1. 13	·1420	23. 59	·02958	23. 0	55·6	56·6
2. 18	28. 55	1. 50	·1411					
2. 32	27. 30	2. 15	·1420					
3. 50	25. 0	3. 8	·1417					
5. 31	23. 20	3. 40	·1427					
7. 4	22. 40	3. 54	·1423					
7. 20	23. 30	4. 6	·1427					
7. 40	23. 0	4. 30	·1424					
8. 17	23. 15	5. 18	·1428					
8. 31	23. 0	5. 27	·1424					
8. 58	23. 35	5. 50	·1429					
9. 20	22. 25	6. 12	·1426					
9. 46	24. 0	6. 30	·1428					
10. 5	22. 40	7. 2	·1426					
15. 43	21. 40	7. 17	·1429					
15. 59	22. 35	7. 27	·1422					
16. 26	22. 5	8. 10	·1425					
16. 35	22. 30	8. 23	·1420					
17. 30	20. 30	9. 0	·1425					
17. 49	21. 0	9. 16	·1413					
18. 21	18. 45	9. 30	·1420					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Apr.15		Apr.15						
h m	° ′ ″	h m		h m		h m	°	°
19. 10	20. 17. 30	9. 49	·1430					
21. 7	19. 30	10. 9	·1416					
23. 21	25. 5	10. 16	·1425					
23. 59	26. 10	12. 29	·1422					
		12. 39	·1417					
		12. 49	·1421					
		16. 7	·1418					
		16. 32	·1422					
		17. 57	·1420					
		19. 3	·1414					
		21. 59	·1404					
		23. 59	·1420					
Apr.16		Apr.16		Apr.16		Apr.16		
0. 0	20. 26. 10	0. 0	·1420	0. 0	·02958	0. 0	56 ·4	56 ·9
0. 37	27. 40	2. 44	·1433	1. 3	·02970	1. 0	57 ·3	57 ·3
2. 24	27. 20	3. 29	·1432	3. 59	·03020	2. 0	57 ·8	57 ·9
3. 14	25. 5	3. 39	·1435	13. 46	·03096	3. 0	58 ·0	58 ·0
9. 58	22. 20	4. 17	·1427	18. 20	·03115	9. 0	58 ·9	59 ·1
10. 45	21. 45	7. 4	·1433	23. 45	·03073	21. 0	60 ·1	60 ·3
16. 11	21. 10	9. 8	·1428	23. 59	·03050	22. 0	60 ·1	60 ·5
18. 21	19. 0	9. 29	·1432			23. 0	59 ·6	60 ·1
19. 58	18. 0	9. 57	·1429					
23. 26	27. 20	10. 21	·1431					
23. 59	28. 30	10. 42	·1426					
		14. 45	·1424					
		16. 44	·1426					
		17. 19	·1423					
		17. 32	·1425					
		18. 5	·1421					
		18. 34	·1424					
		21. 20	·1407					
		22. 56	·1408					
		23. 59	·1412					
Apr.17		Apr.17		Apr.17		Apr.17		
0. 0	20. 28. 30	0. 0	·1412	0. 0	·03050	0. 0	60 ·3	60 ·5
2. 2	29. 0	0. 15	·1418	4. 26	·03140	1. 0	60 ·5	61 ·0
2. 27	27. 15	0. 27	·1416	12. 34	·03173	2. 0	61 ·0	61 ·0
3. 30	26. 15	2. 0	·1431	19. 10	·03150	3. 0	61 ·1	61 ·1
3. 36	25. 5	2. 31	·1426	23. 40	·03100	9. 0	61 ·0	61 ·2
3. 45	25. 45	2. 59	·1429		(†)	21. 0	60 ·5	60 ·5
6. 29	23. 30	3. 25	·1424			22. 0	60 ·7	60 ·0
15. 10	21. 20	3. 33	·1427			23. 0	60 ·5	59 ·9
15. 16	20. 15	3. 37	·1419					
15. 26	21. 40	3. 43	·1426					
18. 18	20. 10	5. 8	·1425					
19. 34	18. 20	7. 29	·1431					
20. 40	18. 35	12. 26	·1425					
23. 36	27. 10	12. 36	·1433					
23. 59	27. 0	12. 48	·1427					
		13. 23	·1430					
		15. 17	·1428					
		15. 26	·1423					
		17. 57	·1423					
		20. 50	·1412					
			***					
		23. 12	·1415					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		Apr.17						
h m	° ′ ″	h m		h m		h m	°	°
		23. 47	·1422					
		23. 59	·1420					
Apr.18		Apr.18		Apr.18		Apr.18		
0. 0	20. 27. 0	0. 0	·1420		(†)	0. 0	60 ·6	60 ·0
0. 54	30. 15	0. 58	·1437	0. 10	·03088	1. 0	60 ·9	60 ·5
1. 4	29. 10	1. 18	·1429	1. 0	·03100	2. 0	59 ·8	59 ·0
1. 45	30. 0	3. 17	·1429	5. 0	·03136	3. 0	60 ·0	59 ·5
2. 21	27. 30	4. 16	·1435	6. 48	·03160	9. 0	60 ·5	60 ·6
2. 35	27. 50	4. 39	·1439	10. 20	·03150	21. 0	59 ·0	59 ·1
3. 20	26. 25	5. 0	·1423	10. 52	·03118			
4. 55	24. 35	5. 9	·1428	18. 45	·03116			
5. 9	25. 15	5. 38	·1428	21. 40	·03060			
6. 19	20. 0	5. 56	·1420	23. 5	·03056			
6. 57	20. 50	6. 10	·1416	23. 59	·03070			
8. 6	22. 30	6. 20	·1419					
8. 35	22. 15	6. 33	·1428					
8. 46	20. 55	6. 47	·1424					
8. 55	21. 10	6. 57	·1426					
9. 10	17. 0	7. 8	·1423					
9. 45	20. 0	7. 50	·1424					
9. 55	20. 5	8. 5	·1429					
10. 6	19. 40	8. 35	·1424					
10. 20	22. 0	8. 49	·1430					
10. 48	17. 10	9. 3	·1426					
11. 5	18. 40	9. 19	·1429					
11. 43	17. 45	9. 29	·1426					
11. 53	18. 30	9. 56	·1430					
12. 20	17. 10	10. 19	·1453					
12. 45	18. 30	10. 37	·1449					
13. 32	21. 0	11. 27	·1429					
13. 45	20. 35	11. 39	·1432					
14. 6	22. 0		***					
15. 15	20. 20	13. 56	·1423					
17. 59	18. 20	17. 47	·1425					
18. 5	19. 30	18. 45	·1419					
18. 53	18. 40	20. 20	·1415					
19. 2	18. 0	20. 33	·1409					
19. 12	18. 40	21. 5	·1415					
19. 59	18. 30	21. 37	·1410					
20. 4	18. 0		***					
20. 25	19. 30	23. 59	·1416					
20. 59	19. 0							
21. 41	21. 5							
23. 59	27. 25							
Apr.19		Apr.19		Apr.19		Apr.19		
0. 0	20. 27. 25	0. 0	·1416	0. 0	·03070	0. 0	59 ·8	59 ·8
1. 15	28. 40	1. 9	·1423	2. 4	·03080	10. 15	59 ·8	60 ·3
1. 30	28. 15	1. 27	·1418	5. 16	·03132	21. 0	58 ·7	59 ·2
1. 48	29. 25	1. 44	·1425	13. 36	·03122	22. 0	59 ·0	59 ·0
6. 10	23. 30	2. 17	·1420	17. 35	·03100	23. 0	58 ·8	58 ·7
8. 25	23. 0	4. 7	·1422	21. 36	·03040			
8. 46	21. 0	6. 9	·1426	23. 59	·03020			
9. 3	22. 0	7. 38	·1431					
9. 33	21. 15	7. 55	·1428					
14. 33	21. 40	9. 5	·1428					
18. 20	19. 0	9. 20	·1434					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Apr. 19 h m	° ′ ″
18. 34	20. 18. 20
18. 47	18. 40
19. 23	17. 20
19. 30	15. 40
20. 0	17. 20
20. 27	17. 40
20. 39	19. 0
23. 24	26. 0
23. 59	28. 30
Apr. 20	
0. 0	20. 28. 30
1. 39	33. 25
2. 6	33. 0
2. 19	31. 50
2. 36	32. 40
3. 14	28. 30
3. 50	25. 25
4. 24	24. 30
4. 47	23. 50
5. 55	22. 30
7. 23	22. 45
7. 54	18. 30
8. 15	20. 0
8. 34	18. 0
9. 2	18. 40
9. 23	20. 35
9. 35	20. 0
9. 49	21. 30
9. 57	21. 20
10. 6	22. 20
10. 37	21. 20
10. 56	23. 30
11. 37	19. 0
12. 36	21. 0
14. 0	21. 20
14. 46	20. 0
14. 54	20. 50
15. 2	19. 50
15. 37	17. 40
15. 45	18. 30
15. 55	17. 55
16. 50	22. 0
18. 40	18. 15
19. 56	19. 20
21. 25	22. 35
21. 32	22. 5
23. 35	28. 0
23. 59	29. 30
Apr. 21	
0. 0	20. 29. 30
1. 26	30. 0
4. 37	24. 30
6. 57	23. 15
7. 14	22. 15
7. 52	22. 20
8. 20	23. 30
10. 27	20. 22. 35
10. 38	22. 0
10. 55	22. 40
12. 10	22. 15
14. 23	23. 0
14. 35	22. 10
14. 53	23. 0
15. 17	27. 0
16. 25	21. 10
18. 16	20. 30
19. 21	18. 20
21. 18	20. 0
23. 20	26. 25
23. 59	27. 30
Apr. 22	
0. 0	20. 27. 30
1. 18	28. 50
4. 3	24. 25
6. 15	23. 45
7. 4	23. 45
7. 27	21. 50
7. 55	22. 5
8. 20	20. 5
8. 49	22. 10
11. 28	21. 20
15. 3	20. 20
15. 15	19. 35
16. 10	18. 20
17. 7	19. 0
18. 27	20. 0
19. 4	22. 0
19. 50	19. 40
20. 5	20. 5
21. 23	25. 35
21. 38	25. 0
22. 42	28. 30
23. 19	26. 15
23. 59	26. 30
Apr. 23	
0. 0	20. 26. 30
1. 17	27. 20
2. 27	26. 40
2. 30	28. 50
2. 56	25. 20
3. 19	26. 0
3. 32	25. 20

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 19 h m	
10. 1	·1427
11. 6	·1430
12. 9	·1426
14. 55	·1428
17. 34	·1430
19. 42	·1425
20. 49	·1412
	***
23. 59	·1416
Apr. 20	
0. 0	·1416
1. 20	·1432
1. 39	·1433
1. 50	·1437
2. 10	·1436
2. 56	·1412
3. 33	·1420
4. 9	·1426
4. 24	·1435
4. 40	·1429
5. 0	·1432
5. 23	·1430
5. 45	·1426
6. 15	·1431
6. 40	·1428
7. 27	·1434
7. 46	·1426
8. 3	·1430
8. 19	·1427
8. 36	·1435
8. 58	·1427
9. 28	·1425
9. 56	·1428
10. 17	·1425
10. 56	·1434
11. 12	·1428
11. 50	·1428
12. 37	·1423
14. 36	·1422
14. 55	·1425
17. 45	·1419
18. 9	·1423
18. 45	·1421
19. 44	·1418
20. 30	·1408
21. 24	·1406
23. 59	·1420
Apr. 21	
0. 0	·1420
0. 48	·1430
2. 45	·1435
3. 49	·1429
3. 57	·1432
4. 47	·1429
6. 37	·1433
7. 17	·1422
8. 5	·1427
11. 9	·1426
13. 44	·1421
14. 26	·1425
14. 45	·1420
15. 45	·1424
15. 55	·1428
16. 33	·1422
18. 19	·1424
19. 49	·1417
21. 55	·1405
23. 5	·1401
	(†)
Apr. 22	
	(†)
0. 26	·1405
1. 30	·1417
1. 50	·1413
3. 46	·1422
3. 57	·1420
5. 7	·1427
6. 42	·1426
7. 46	·1423
8. 19	·1435
8. 41	·1427
11. 47	·1433
11. 59	·1428
12. 19	·1432
12. 40	·1429
13. 28	·1434
14. 34	·1432
14. 59	·1435
15. 15	·1431
15. 26	·1434
15. 56	·1433
16. 57	·1424
17. 41	·1426
18. 16	·1422
18. 59	·1429
19. 44	·1414
20. 39	·1417
20. 57	·1411
21. 7	·1414
22. 22	·1397
22. 57	·1400
23. 36	·1415
23. 59	·1414
Apr. 23	
0. 0	·1414
2. 14	·1415
2. 29	·1413
2. 39	·1423
2. 59	·1409
3. 10	·1415
3. 36	·1415

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Apr. 20 h m	
0. 0	·03020
4. 10	·03120
7. 48	·03100
8. 8	·03109
10. 55	·03090
11. 15	·03073
17. 0	·03010
18. 59	·02975
23. 30	·02849
23. 59	·02850
Apr. 21	
0. 0	·02850
6. 15	·02979
8. 56	·02990
12. 35	·03020
16. 0	·03013
18. 20	·03029
22. 2	·02999
23. 59	·02965
Apr. 22	
0. 0	·02965
1. 35	·03000
3. 34	·03000
7. 57	·03029
18. 47	·03044
19. 31	·03029
23. 18	·03009
23. 59	·03020
Apr. 23	
0. 0	·03020
2. 40	·03080
3. 0	·03073
9. 58	·03099
19. 38	·03040
23. 20	·02991
23. 59	·03000

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Apr. 20		
0. 0	60·0	59·8
1. 6	60·0	59·8
2. 0	59·9	59·8
3. 0	59·8	59·8
9. 0	59·6	59·6
22. 0	56·1	55·6
Apr. 21		
1. 0	57·1	56·6
3. 0	57·0	57·0
5. 0	58·0	58·0
8. 0	58·1	58·0
21. 0	58·8	58·8
22. 0	58·4	58·6
23. 0	58·9	58·9
Apr. 22		
0. 0	59·6	59·5
1. 0	59·9	59·7
2. 0	58·9	58·3
3. 0	58·2	58·4
6. 0	58·4	59·0
9. 0	58·4	59·0
21. 8	59·0	59·7
22. 0	59·4	59·5
23. 0	59·5	59·5
Apr. 23		
0. 0	59·9	60·1
1. 0	60·0	60·4
2. 0	59·9	60·0
3. 0	60·2	60·1
9. 0	60·3	60·8
21. 0	58·6	59·1
22. 0	58·6	58·5

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Apr.23		Apr.23				Apr.23		
h m	° ′ ″	h m		h m		h m	°	°
4. 4	20. 27. 20	3. 55	·1420			23. 0	58·7	58·7
4. 24	27. 30	5. 5	·1418					
6. 33	23. 30	5. 56	·1428					
11. 45	21. 45	6. 16	·1424					
15. 51	19. 25	6. 56	·1428					
16. 15	20. 50	8. 6	·1428					
17. 21	20. 30	8. 16	·1424					
18. 15	17. 40	8. 26	·1429					
18. 50	18. 20	8. 35	·1420					
19. 11	16. 0	9. 19	·1424					
19. 31	18. 30	9. 30	·1420					
21. 7	19. 45	13. 16	·1414					
23. 18	23. 15	13. 53	·1420					
23. 59	25. 55	14. 28	·1417					
		14. 39	·1420					
			***					
		15. 54	·1419					
		16. 24	·1415					
		17. 35	·1424					
		19. 5	·1417					
		19. 25	·1423					
			***					
		23. 38	·1404					
		23. 59	·1413					
Apr.24		Apr.24		Apr.24		Apr.24		
0. 0	20. 25. 55	0. 0	·1413	0. 0	·03000	0. 0	59·5	59·3
0. 15	27. 40	0. 7	·1414	2. 15	·03058	1. 0	60·2	60·1
0. 46	26. 5	1. 6	·1404	5. 55	·03080	2. 0	59·7	59·7
1. 21	27. 0	1. 23	·1410	9. 15	·03089	3. 0	59·8	59·7
2. 27	26. 15	1. 53	·1405	20. 7	·03014	9. 0	59·9	60·0
3. 14	24. 40	2. 22	·1415	23. 28	·02950	21. 0	58·0	58·2
5. 50	24. 30	3. 18	·1415	23. 59	·02942	22. 0	57·1	57·1
6. 12	23. 20	3. 58	·1423			23. 0	56·9	56·9
7. 33	23. 40	4. 14	·1423					
8. 4	20. 10	5. 24	·1427					
8. 28	20. 0	5. 47	·1433					
8. 39	21. 10	7. 39	·1427					
9. 25	18. 35	7. 55	·1423					
10. 5	20. 55	8. 23	·1427					
10. 17	20. 15	8. 31	·1425					
11. 33	20. 50	8. 43	·1429					
12. 46	22. 45	9. 16	·1424					
13. 29	22. 30	10. 17	·1427					
13. 57	21. 20	11. 53	·1422					
14. 17	22. 5	13. 6	·1419					
14. 56	20. 45	13. 19	·1423					
15. 6	21. 45	13. 59	·1417					
15. 14	21. 20	14. 49	·1420					
15. 30	23. 45	15. 29	·1415					
15. 41	22. 30	15. 45	·1420					
15. 55	24. 25	17. 26	·1420					
17. 5	19. 35	18. 13	·1424					
18. 23	18. 40	18. 38	·1419					
19. 21	21. 0	19. 41	·1417					
19. 35	20. 15	20. 29	·1419					
19. 42	20. 45	21. 25	·1408					
21. 5	20. 10	22. 33	·1410					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Apr.24		Apr.24						
h m	° ′ ″	h m		h m		h m	°	°
21. 53	20. 21. 35	23. 34	·1404					
23. 47	24. 45	23. 59	·1406					
23. 59	26. 0							
Apr.25		Apr.25		Apr.25		Apr.25		
0. 0	20. 26. 0	0. 0	·1406	0. 0	·02942	0. 0	57·8	58·0
0. 47	26. 30		***	2. 0	·02980	1. 0	57·5	57·5
2. 31	24. 50	4. 20	·1427	3. 8	·02964	2. 0	57·0	57·0
4. 59	22. 45	4. 41	·1426	8. 46	·02989	3. 0	57·5	57·5
5. 6	23. 30	5. 13	·1429	10. 5	·02973	9. 0	57·1	57·5
6. 50	21. 45	5. 20	·1435	12. 7	·02957	21. 0	56·3	56·6
7. 23	22. 0	6. 15	·1430	18. 43	·02935	22. 0	56·4	56·8
7. 45	21. 10	6. 24	·1435	23. 30	·02876	23. 0	56·4	56·8
8. 5	22. 45	6. 40	·1430	23. 59	·02880			
8. 43	17. 0	6. 56	·1435					
9. 10	20. 20	7. 30	·1430					
9. 31	18. 40	7. 42	·1425					
10. 30	22. 20	8. 9	·1425					
10. 48	21. 10	8. 28	·1431					
11. 11	24. 40	8. 37	·1429					
11. 46	23. 45	9. 11	·1434					
12. 22	20. 40	9. 36	·1423					
12. 56	22. 25	9. 57	·1420					
	***	10. 49	·1422					
13. 28	22. 20	10. 59	·1427					
13. 38	20. 35	11. 37	·1429					
13. 50	22. 15	11. 50	·1435					
14. 5	20. 55	12. 10	·1427					
14. 16	22. 40	12. 38	·1427					
14. 50	19. 10	13. 9	·1422					
15. 5	21. 35	13. 53	·1418					
16. 13	21. 40	14. 7	·1421					
16. 31	22. 45	14. 18	·1416					
17. 19	20. 20	14. 27	·1420					
18. 8	20. 45	15. 55	·1414					
	***	16. 19	·1419					
20. 39	19. 30	19. 7	·1418					
21. 7	21. 5	20. 27	·1412					
23. 3	24. 30	21. 13	·1411					
23. 35	28. 15	22. 39	·1401					
	(†)	23. 59	·1406					
Apr.26		Apr.26		Apr.26		Apr.26		
	(†)	0. 0	·1406	0. 0	·02880	0. 0	56·9	57·2
0. 6	20. 28. 45	1. 4	·1416	1. 36	·02925	1. 0	57·2	57·6
0. 59	30. 0	1. 24	·1414	5. 37	·02969	2. 0	57·4	57·8
1. 21	28. 40	1. 45	·1424	13. 45	·02968	3. 0	57·4	58·0
1. 35	30. 0	2. 6	·1414	15. 18	·02960	9. 0	57·4	58·3
1. 51	28. 20	3. 29	·1427	17. 44	·02969	21. 0	57·6	58·0
2. 42	26. 5	3. 47	·1431	21. 25	·02930	22. 0	57·6	58·0
3. 45	25. 20	4. 5	·1428	23. 33	·02928	23. 0	57·7	58·2
4. 9	24. 0	4. 28	·1430	23. 59	·02940			
4. 26	24. 0	4. 52	·1428					
5. 0	20. 50	5. 39	·1437					
5. 26	22. 0	6. 2	·1429					
6. 59	22. 40	7. 10	·1427					
7. 25	21. 30	7. 39	·1429					
7. 40	22. 25	8. 5	·1435					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V. F. Magnet.
Apr.26		Apr.26						
h m	° ′ ″	h m		h m		h m	°	°
7. 50	20. 21. 45	8. 20	·1427					
8. 2	22. 30	8. 46	·1430					
8. 7	21. 20	10. 29	·1422					
8. 20	22. 5	10. 43	·1424					
8. 47	21. 2	10. 57	·1421					
9. 39	22. 0	11. 10	·1426					
10. 33	21. 0	11. 35	·1423					
12. 10	20. 0	11. 54	·1425					
13. 45	22. 50	12. 13	·1421					
14. 0	24. 35	12. 29	·1424					
15. 19	21. 0	12. 59	·1418					
17. 9	20. 30	14. 26	·1420					
18. 0	18. 20	15. 30	·1417					
18. 43	18. 45	17. 5	·1422					
19. 22	18. 0	19. 12	·1422					
20. 7	18. 5	20. 29	·1416					
20. 36	18. 45	21. 9	·1406					
21. 18	21. 15	21. 38	·1402					
21. 54	22. 55	21. 56	·1407					
22. 20	25. 10	22. 31	·1402					
22. 56	24. 0	22. 57	·1407					
23. 38	26. 10	23. 29	·1403					
23. 59	26. 0	23. 49	·1407					
			(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	H. F.	Greenwich Mean Solar Time.	V. F.	Greenwich Mean Solar Time.	Of H.F. Magnet.	Of V. F. Magnet.
Apr.27		Apr.27		Apr.27		Apr.27		
0. 0	20. 26. 0		(†)	0. 0	·02940	0. 0	58·1	58·6
2. 26	26. 40	0. 18	·1408	2. 36	·02970	1. 0	58·5	59·0
3. 3	24. 10	0. 48	·1414	3. 19	·02995	2. 0	58·6	59·1
6. 16	21. 5	1. 2	·1412	12. 15	·03030	3. 0	59·0	59·3
7. 25	22. 0	2. 21	·1424	17. 51	·03020	9. 0	59·0	59·7
7. 45	20. 30	2. 55	·1418	20. 15	·02990	21. 35	58·1	59·0
8. 2	21. 55	3. 19	·1427	22. 35	·02988			
9. 43	23. 10	5. 18	·1426	23. 59	·02987			
10. 35	21. 5	5. 37	·1430					
13. 45	21. 40	6. 9	·1426					
16. 15	21. 20	10. 15	·1424					
19. 24	18. 40	11. 45	·1416					
21. 1	19. 35	12. 8	·1419					
22. 45	23. 0	19. 10	·1407					
23. 59	26. 0	20. 27	·1409					
		21. 48	·1402					
		23. 59	·1401					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	H. F.	Greenwich Mean Solar Time.	V. F.	Greenwich Mean Solar Time.	Of H.F. Magnet.	Of V. F. Magnet.
Apr.28		Apr.28		Apr.28		Apr.28		
0. 0	20. 26. 0	0. 0	·1401	0. 0	·02987	0. 0	58·6	59·0
1. 15	27. 25	4. 38	·1425	10. 24	·03019	8. 0	58·6	59·3
6. 48	22. 30	9. 15	·1422	17. 38	·02970	21. 0	56·4	56·7
9. 40	23. 0	12. 38	·1422	22. 50	·02898	22. 0	56·1	56·5
15. 59	21. 50	15. 57	·1418	23. 59	·02900	23. 0	56·3	56·8
18. 8	18. 55	19. 19	·1417					
18. 30	19. 10	22. 23	·1410					
20. 25	17. 25	23. 59	·1414					
22. 25	20. 30							
23. 59	25. 0							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	H. F.	Greenwich Mean Solar Time.	V. F.	Greenwich Mean Solar Time.	Of H.F. Magnet.	Of V. F. Magnet.
Apr.29		Apr.29		Apr.29		Apr.29		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 25. 0	0. 0	·1414	0. 0	·02900	0. 0	56·9	57·4
2. 31	24. 50	0. 47	·1418	2. 11	·02940	1. 0	57·5	58·1
7. 58	22. 40	2. 59	·1416	11. 17	·02993	2. 0	57·6	58·1
9. 9	23. 15	5. 30	·1424	13. 26	·02972	3. 0	57·8	58·3
9. 26	22. 10	6. 40	·1425	19. 14	·02950	9. 0	58·0	58·7
10. 0	22. 45	6. 56	·1429	23. 24	·02880	11. 0	58·1	59·0
11. 18	22. 10	7. 13	·1426		(†)	21. 0	57·5	58·3
11. 26	23. 30	8. 43	·1424			22. 0	57·2	57·5
12. 0	21. 50	11. 14	·1423			23. 0	57·5	57·6
12. 18	23. 20	11. 27	·1426					
12. 39	22. 10	12. 49	·1422					
13. 4	23. 55	13. 13	·1428					
13. 42	21. 25	13. 43	·1423					
15. 51	20. 55	14. 29	·1419					
16. 31	21. 40	16. 13	·1417					
16. 53	20. 0	16. 33	·1421					
18. 40	18. 20	18. 0	·1414					
19. 14	20. 0	20. 22	·1412					
19. 27	19. 20	21. 26	·1405					
			***					
21. 20	20. 40							
23. 59	27. 20	23. 25	·1418					
		23. 59	·1423					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	H. F.	Greenwich Mean Solar Time.	V. F.	Greenwich Mean Solar Time.	Of H.F. Magnet.	Of V. F. Magnet.
Apr.30		Apr.30		Apr.30		Apr.30		
					(†)			
0. 0	20. 27. 20	0. 0	·1423			0. 0	58·2	58·5
0. 42	29. 20	0. 9	·1433	0. 31	·02903	1. 0	59·2	59·5
0. 55	28. 30	0. 35	·1427	2. 37	·02976	3. 0	59·8	59·9
2. 18	29. 50	0. 47	·1428	3. 24	·02992	9. 0	59·5	60·2
3. 19	27. 40	1. 1	·1423	9. 7	·03043	21. 0	57·8	58·0
3. 46	28. 0	2. 20	·1430	17. 34	·02980	22. 0	57·2	57·4
3. 56	27. 0	2. 59	·1416	21. 25	·02920	23. 0	57·6	58·1
4. 13	27. 30	3. 42	·1433	23. 30	·02906			
5. 10	26. 40	3. 55	·1424	23. 59	·02925			
5. 33	25. 20	4. 9	·1431					
8. 0	23. 20	4. 17	·1425					
8. 42	22. 10	5. 7	·1436					
8. 59	18. 0	5. 30	·1424					
9. 36	21. 0	5. 59	·1433					
10. 40	17. 10	7. 4	·1434					
11. 58	19. 0	8. 16	·1423					
12. 16	16. 30	8. 33	·1427					
13. 2	19. 50	8. 45	·1422					
13. 22	19. 25	9. 0	·1428					
14. 5	20. 35	9. 8	·1425					
14. 42	19. 30	9. 19	·1431					
15. 30	20. 0	9. 36	·1426					
16. 17	19. 0	9. 57	·1434					
16. 25	18. 0	10. 7	·1430					
17. 10	17. 20	10. 19	·1433					
18. 43	14. 0	10. 44	·1422					
20. 3	16. 50	10. 50	·1423					
21. 6	20. 10	12. 55	·1414					
21. 15	22. 0	13. 9	·1417					
21. 30	22. 5	13. 28	·1414					
22. 22	27. 30	14. 10	·1418					
23. 23	26. 20	16. 21	·1416					
23. 59	27. 0	16. 37	·1421					
			***					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ⁏ attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
May 1	
0. 0	20. 27. 0
2. 0	28. 5
3. 41	25. 0
3. 59	24. 0
4. 8	24. 35
5. 5	23. 35
5. 15	22. 20
7. 17	21. 25
7. 50	18. 30
8. 37	21. 30
9. 22	21. 0
9. 52	18. 0
10. 13	18. 5
10. 19	19. 30
10. 56	21. 15
11. 29	16. 5
12. 5	23. 15
12. 25	23. 0
12. 45	21. 0
13. 5	21. 40
14. 0	23. 55
15. 15	13. 40
15. 42	17. 0
16. 7	18. 10
16. 52	18. 15
17. 8	16. 0
17. 31	16. 0
17. 43	13. 25
17. 58	15. 25
18. 27	13. 0
18. 32	15. 0
18. 48	14. 35
18. 59	17. 20
19. 5	16. 10
19. 36	16. 45
19. 46	19. 10
20. 23	19. 5
20. 34	17. 0
20. 44	20. 55
21. 9	21. 0
21. 15	19. 25
21. 39	22. 30
21. 56	22. 5
22. 5	24. 30
22. 25	23. 50
23. 59	28. 30
May 2	
0. 0	20. 28. 30
0. 45	27. 30
1. 5	29. 5
2. 9	29. 40
2. 27	28. 30
2. 35	29. 40
3. 29	26. 30
3. 45	26. 50
4. 6	25. 45
4. 29	24. 0
6. 27	24. 0
6. 59	22. 20
9. 16	23. 20
9. 44	20. 50
10. 7	21. 50
10. 22	20. 30
10. 49	26. 0
11. 33	17. 0
12. 20	12. 35
13. 13	20. 20
14. 18	16. 0
14. 40	19. 30
15. 32	26. 0
16. 27	19. 30
16. 58	20. 30
17. 16	18. 35
18. 5	20. 0
19. 0	17. 30
19. 17	18. 50
19. 45	17. 40
20. 21	19. 20
20. 39	21. 40
22. 14	24. 0
23. 59	29. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Apr. 30	
h m	
19. 25	·1423
19. 45	·1419
20. 11	·1419
21. 7	·1412
22. 33	·1406
	***
23. 43	·1418
23. 59	·1416
May 1	
0. 0	·1416
1. 37	·1416
2. 7	·1420
2. 39	·1410
2. 45	·1414
3. 6	·1408
3. 55	·1418
4. 4	·1414
4. 18	·1426
4. 40	·1416
5. 9	·1426
6. 0	·1417
6. 27	·1423
6. 57	·1417
7. 15	·1422
7. 40	·1416
8. 57	·1428
9. 34	·1426
10. 7	·1418
10. 21	·1428
10. 36	·1422
10. 53	·1425
11. 43	·1420
12. 27	·1431
13. 14	·1407
13. 34	·1411
13. 59	·1423
14. 29	·1419
15. 10	·1410
15. 37	·1413
16. 57	·1407
17. 13	·1412
17. 37	·1406
17. 55	·1415
18. 9	·1415
18. 25	·1401
18. 35	·1406
19. 30	·1407
19. 43	·1413
19. 50	·1409
20. 25	·1402
20. 32	·1413
20. 39	·1406
21. 9	·1406
21. 53	·1415
22. 6	·1408
22. 26	·1419
22. 44	·1414
22. 50	·1419
23. 3	·1412
23. 10	·1418
23. 38	·1412
23. 59	·1421
May 2	
0. 0	·1421
0. 20	·1421
0. 33	·1418
0. 47	·1428
1. 6	·1428
1. 19	·1419
1. 25	·1425
2. 0	·1423
2. 9	·1417
2. 23	·1414
2. 29	·1426
2. 38	·1418
2. 40	·1422
2. 54	·1419
3. 9	·1425
3. 21	·1420
3. 26	·1427
3. 37	·1431
3. 59	·1433
4. 9	·1421
4. 18	·1427
4. 20	·1423
4. 45	·1431
5. 10	·1443
6. 43	·1430
7. 47	·1426
9. 5	·1430
9. 44	·1416
9. 57	·1423
10. 7	·1418
10. 29	·1456
10. 45	·1433
11. 3	·1418
	***
11. 57	·1422
12. 24	·1409
13. 23	·1419
13. 46	·1418
14. 29	·1405
15. 57	·1410
16. 40	·1419
17. 39	·1400
18. 34	·1410
19. 8	·1409
19. 38	·1402
20. 36	·1396
22. 25	·1402
23. 17	·1408
23. 26	·1403
23. 59	·1410

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
May 1	
0. 0	·02925
5. 45	·03000
7. 24	·03005
9. 6	·03023
10. 48	·03030
11. 4	·03018
11. 50	·03030
14. 26	·02970
16. 29	·03013
17. 31	·03012
17. 47	·03020
21. 24	·02980
22. 41	·02940
23. 59	·02933
May 2	
0. 0	·02933
2. 2	·02988
4. 25	·03020
10. 5	·03040
10. 18	·03056
10. 48	·03009
11. 35	·03023
12. 22	·03013
12. 49	·03030
13. 58	·02995
16. 59	·03000
17. 13	·02988
18. 20	·03000
23. 40	·02976
23. 59	·02980

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
May 1		
0. 0	57·9	58·5
1. 0	58·0	58·7
2. 0	57·9	58·5
3. 0	58·0	58·5
9. 0	59·0	59·9
21. 0	58·7	59·4
22. 0	58·4	58·9
23. 0	58·6	58·9
May 2		
0. 0	59·0	59·4
1. 0	59·3	59·8
2. 0	59·2	59·8
3. 0	59·6	59·8
9. 0	59·6	60·0
21. 0	59·0	59·4
22. 0	59·0	59·0
23. 0	59·4	59·4

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
May 3	
h m	° ′ ″
0. 0	20. 29. 40
0. 56	28. 40
1. 40	27. 20
2. 10	27. 15
4. 44	23. 0
6. 44	20. 40
6. 59	19. 40
8. 38	22. 0
10. 8	21. 30
10. 45	21. 10
10. 55	22. 10
11. 46	20. 20
11. 58	21. 0
12. 6	20. 40
12. 26	22. 30
13. 7	20. 0
14. 20	13. 0
14. 45	14. 0
15. 32	19. 30
16. 17	17. 0
16. 43	17. 0
16. 58	16. 5
18. 1	17. 50
18. 16	17. 0
19. 6	17. 0
19. 22	21. 5
19. 43	19. 35
19. 57	21. 5
20. 9	21. 0
20. 50	25. 5
21. 51	26. 0
23. 59	31. 0
May 4	
0. 0	20. 31. 0
0. 45	32. 35
1. 55	31. 15
2. 29	30. 0
2. 48	30. 50
3. 22	25. 40
4. 31	25. 20
4. 55	25. 55
5. 59	23. 10
6. 20	23. 50
6. 36	22. 40
7. 25	23. 45
7. 43	22. 15
9. 10	21. 15
9. 30	22. 40
10. 2	20. 21. 50
10. 33	22. 0
10. 58	20. 30
11. 22	20. 30
12. 10	14. 55
12. 30	16. 15
13. 40	17. 30
13. 53	17. 0
14. 8	17. 50
14. 50	21. 50
15. 3	23. 5
15. 38	17. 10
16. 7	16. 0
16. 38	13. 30
16. 51	14. 50
17. 0	14. 0
17. 45	17. 30
17. 53	16. 30
18. 0	18. 0
18. 26	18. 30
18. 33	16. 45
18. 42	18. 40
18. 59	17. 50
19. 17	19. 10
19. 25	17. 50
19. 35	19. 0
19. 40	17. 20
20. 0	20. 10
20. 10	18. 0
20. 19	19. 30
20. 30	18. 0
20. 50	20. 50
21. 22	21. 55
22. 25	29. 10
22. 38	28. 0
23. 10	33. 0
23. 33	30. 0
	(†)
May 5	
	(†)
0. 31	20. 30. 5
1. 22	28. 50
2. 21	28. 40
2. 59	26. 30
3. 18	22. 20
4. 20	25. 30
4. 58	24. 30
5. 32	25. 0
6. 6	24. 0
6. 38	24. 30
6. 44	23. 40
8. 49	24. 0
11. 13	23. 20
11. 46	22. 15
12. 36	23. 0
13. 3	25. 30
13. 35	23. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
May 3	
h m	
0. 0	·1410
0. 27	·1413
0. 36	·1409
1. 3	·1414
1. 24	·1407
2. 18	·1416
2. 47	·1413
3. 14	·1418
3. 27	·1415
4. 10	·1423
4. 39	·1415
5. 4	·1421
	***
6. 25	·1419
6. 45	·1425
7. 30	·1419
7. 45	·1423
9. 48	·1417
10. 49	·1423
11. 27	·1420
11. 34	·1416
11. 48	·1420
11. 59	·1416
12. 11	·1430
12. 36	·1429
12. 56	·1422
13. 37 :	·1430
14. 54	·1406
15. 27	·1404
15. 50	·1412
16. 24	·1416
16. 59	·1410
19. 0	·1410
19. 36	·1402
20. 21	·1385
20. 48	·1386
21. 47	·1395
	***
23. 6	·1393
23. 47	·1398
23. 59	·1397
May 4	
0. 0	·1397
1. 5	·1398
1. 36	·1395
2. 24	·1399
2. 41	·1388
3. 8	·1405
3. 15	·1401
3. 33	·1408
3. 50	·1402
4. 6	·1408
4. 24	·1406
5. 10	·1413
5. 27	·1419
6. 36	·1409
7. 5	·1417
7. 19	·1415
7. 29	·1416
7. 51	·1414
8. 15	·1419
9. 0	·1410
9. 15	·1415
9. 52	·1410
10. 27	·1421
11. 14	·1412
11. 27	·1413
12. 12	·1398
12. 39	·1412
12. 58	·1402
13. 38	·1408
14. 14	·1400
14. 30	·1407
15. 14	·1409
15. 29	·1413
15. 44	·1411
15. 58	·1414
16. 44	·1402
17. 21	·1405
17. 57	·1403
18. 14	·1397
18. 20	·1401
19. 4	·1395
19. 15	·1398
19. 21	·1393
19. 27	·1398
	***
20. 57	·1389
21. 35	·1361
21. 57	·1367
21. 59	·1365
22. 33	·1384
22. 50	·1383
23. 13	·1390
23. 59	·1406
May 5	
0. 0	·1406
0. 18	·1400
0. 37	·1403
0. 58	·1397
1. 22	·1408
2. 14	·1410
2. 32	·1402
2. 47	·1404
3. 6	·1399
3. 27	·1418
3. 40	·1416
3. 57	·1414
4. 14	·1420
4. 47	·1414
5. 29	·1424
5. 40	·1420
6. 21	·1418
6. 47	·1425

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
May 3	
h m	
0. 0	·02980
4. 45	·03058
12. 12	·03080
14. 32	·03019
16. 0	·03036
19. 52	·03010
22. 4	·02982
23. 2	·03000
23. 59	·03030
May 4	
0. 0	·03030
4. 35	·03130
11. 15	·03110
11. 55	·03089
12. 13	·03102
12. 50	·03085
13. 10	·03097
14. 8	·03087
14. 57	·03050
18. 9	·03073
21. 5	·03020
22. 50	·03050
23. 59	·03072
May 5	
0. 0	·03072
3. 59	·03141
8. 4	·03133
11. 22	·03153
13. 17	·03140
14. 29	·03120
16. 8	·03130
20. 22	·03108
23. 0	·03090
23. 42	·03100
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
May 3		
h m	°	°
0. 0	59·7	59·7
1. 0	60·0	60·2
2. 0	60·7	60·7
3. 0	60·7	61·0
9. 0	60·2	61·2
21. 0	59·0	59·7
22. 0	60·0	60·0
23. 0	60·6	60·4
May 4		
0. 0	61·0	60·9
1. 0	62·3	61·1
2. 0	61·4	61·1
3. 0	62·0	61·7
7. 30	60·9	61·5
9. 0	61·0	61·8
21. 30	60·0	60·0
May 5		
0. 30	61·0	61·0
8. 0	61·8	62·6
21. 0	61·0	61·4
22. 0	61·0	61·5
23. 0	61·1	61·7

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 5		May 5						
h m	° ′ ″	h m		h m		h m	°	°
14. 9	20. 23. 20	7. 9	·1414					
14. 43	21. 25	7. 24	·1421					
15. 13	23. 5	7. 45	·1417					
15. 20	22. 20	8. 46	·1422					
15. 59	23. 5	9. 5	·1419					
16. 10	21. 45	11. 18	·1415					
16. 39	21. 15	11. 39	·1419					
17. 41	22. 50	12. 25:	·1411					
18. 19	21. 0	13. 34	·1420					
18. 28	21. 30	15. 23	·1404					
18. 38	20. 15	15. 51	·1409					
19. 0	20. 0	16. 30	·1407					
19. 11	21. 30	17. 6	·1400					
19. 22	19. 15	18. 25	·1403					
20. 19	19. 20	19. 40	·1394					
20. 40	21. 30	19. 53	·1396					
21. 7	21. 45	20. 6	·1389					
21. 27	23. 30	20. 28	·1383					
21. 37	22. 15	20. 57	·1386					
22. 23	25. 55	21. 43	·1378					
22. 32	25. 0	23. 6	·1400					
23. 10	26. 30	23. 59	·1414					
23. 20	26. 5							
23. 59	27. 15							
May 6		May 6		May 6		May 6		
0. 0	20. 27. 15	0. 0	·1414		(†)	0. 0	62·0	62·7
1. 27	28. 40	0. 20	·1415	0. 15	·03104	1. 0	62·2	62·8
3. 24	24. 10	1. 45	·1424	6. 24	·03225	2. 0	62·2	63·0
5. 12	22. 40	2. 50	·1417	9. 46	·03238	3. 0	62·7	63·4
6. 5	17. 0	3. 19	·1422	10. 16	·03220	6. 45	62·9	64·2
6. 27	18. 30	5. 10	·1422	14. 38	·03210	9. 0	63·7	64·9
6. 47	18. 5	5. 47	·1430	17. 35	·03220	10. 30	63·8	65·0
6. 58	19. 20	6. 10	·1428	22. 46	·03156	19. 15	63·0	63·4
8. 3	19. 20	6. 22	·1431	23. 59	·03142	21. 0	62·8	63·1
9. 14	20. 0	6. 57	·1420			22. 0	63·0	63·1
9. 33	19. 30	10. 24	·1419			23. 0	63·2	63·4
9. 50	23. 10	11. 5	·1414					
10. 19	19. 30	12. 12	·1413					
10. 50	20. 10	12. 46	·1408					
11. 15	22. 10	14. 36	·1410					
11. 50	19. 5	15. 29	·1403					
12. 15	18. 10	16. 10	·1408					
13. 3	20. 30	21. 50	·1396					
13. 27	19. 10	22. 59	·1400					
14. 2	21. 10	23. 59	·1406					
14. 32	19. 0							
15. 38	22. 20							
16. 40	20. 0							
19. 36	18. 30							
21. 38	21. 0							
23. 0	25. 30							
23. 59	26. 30							
May 7		May 7		May 7		May 7		
0. 0	20. 26. 30	0. 0	·1406	0. 0	·03142	0. 0	63·2	63·4
6. 34	22. 0	2. 7	·1406	3. 53	·03230	1. 0	63·6	64·0
9. 2	22. 0	5. 49	·1420	8. 52	·03246	2. 0	63·6	64·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 7		May 7		May 7		May 7		
h m	° ′ ″	h m		h m		h m	°	°
9. 29	20. 21. 0	6. 9	·1418	19. 53	·03175	3. 0	63·7	64·0
10. 3	21. 5	6. 29	·1420	21. 15	·03140	6. 0	63·7	64·5
	(†)	7. 0	·1415	22. 48	·03139	9. 0	63·7	64·6
10. 57	20. 30	11. 7	·1417		(†)	19. 0	62·6	62·8
11. 23	21. 0	14. 6	·1408			21. 0	62·2	62·2
14. 59	21. 30	16. 10	·1414			22. 0	62·1	62·2
17. 20	19. 0	17. 18	·1413			23. 0	62·5	62·7
17. 46	17. 30	17. 58	·1406					
19. 10	21. 0	18. 12	·1409					
19. 33	22. 45	19. 44	·1394					
19. 52	25. 50	20. 9	·1404					
20. 19	25. 10	23. 59	·1404					
23. 59	31. 0							
May 8		May 8		May 8		May 8		
0. 0	20. 31. 0	0. 0	·1404		(†)	0. 0	62·6	62·8
0. 54	33. 30	0. 19	·1414	1. 0	·03150*	1. 0	62·6	63·0
1. 27	33. 5	0. 29	·1404	2. 34	·03199	2. 0	62·7	63·4
1. 49	30. 20	0. 39	·1408	5. 52	·03342	3. 0	63·2	63·9
2. 17	31. 30	0. 45	·1404	9. 41	·03305	8. 15	66·0	66·7
2. 48	29. 5	1. 0	·1409	15. 0	·03283	9. 0	65·0	66·0
3. 36	30. 20	1. 48	·1401	20. 55	·03184	9. 30	..	65·4
4. 2	32. 0	2. 5	·1423	22. 28	·03181	21. 0	63·1	63·8
4. 15	30. 0		(†)	23. 59	·03210	22. 0	63·0	63·8
4. 23	30. 40	3. 0	·1414*			23. 0	63·2	64·0
4. 47	26. 0	5. 10	·1414					
5. 9	25. 45	7. 6	·1420					
	(†)	8. 8	·1418					
8. 52	24. 20	9. 7	·1422					
10. 17	22. 5		***					
10. 40	24. 15	9. 59	·1421					
11. 15	21. 10	10. 14	·1412					
11. 29	23. 0	10. 35	·1429					
12. 18	20. 0	10. 39	·1423					
14. 12	20. 20	10. 46	·1430					
14. 20	19. 5	11. 10	·1418					
14. 29	19. 55	11. 28	·1428					
14. 39	18. 40	13. 8	·1411					
14. 46	21. 0	14. 15	·1411					
15. 0	18. 30	14. 34	·1408					
15. 42	19. 30	14. 45	·1414					
16. 3	16. 40	14. 58	·1409					
16. 28	22. 25	15. 35	·1414					
17. 23	22. 0	16. 27	·1400					
17. 38	23. 30	16. 48	·1406					
17. 58	23. 30	17. 47	·1398					
18. 14	25. 45	18. 43	·1411					
19. 25	20. 0	20. 35	·1406					
20. 37	19. 40	20. 50	·1407					
22. 50	24. 30	22. 26	·1393					
23. 59	25. 55	23. 59	·1396					
May 9		May 9		May 9		May 9		
0. 0	20. 25. 55	0. 0	·1396	0. 0	·03210	0. 0	63·5	64·3
0. 11	26. 0	4. 47	·1420	4. 20	·03262	1. 0	64·0	64·7
0. 29	27. 0	5. 35	·1418	10. 2	·03260	2. 0	64·0	65·0
2. 9	27. 40	5. 51	·1422	19. 30	·03213	3. 0	64·0	65·0
3. 59	25. 15	9. 35	·1420	22. 25	·03185	9. 0	64·1	65·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 9		May 9		May 9		May 9		
h m	° ′ ″	h m		h m		h m	°	°
11.36	20.21.30	10.19	·1415	23.59	·03200	9.20	63·7	63·5
12.20	22.25	12. 2	·1413			19.30	63·3	63·5
13. 5	20.55	12.17	·1416			21. 0	63·1	63·6
13.11	22.20	12.57	·1410			22. 0	63·3	63·8
13.38	19.50	13.13	·1418			23. 0	63·7	64·5
14.27	21. 0	13.31	·1412					
15.13	19.40	14.17	·1415					
15.25	20.45	14.34	·1410					
15.46	19.50	18.16	·1415					
16. 0	21.10	22.39	·1404					
16.53	19.35	23.59	·1401					
17.53	20.15							
19.39	19.40							
19.49	20.20							
20. 0	19. 0							
20.15	21. 0							
20.30	20.50							
20.34	19. 5							
21.50	23.30							
22.43	25. 0							
23.59	26.30							
May 10		May 10		May 10		May 10		
0. 0	20.26.30	0. 0	·1401	0. 0	·03200	0. 0	63·9	64·5
0.26	25.20	2.52	·1416	4.30	·03252	1. 0	64·0	64·6
1.35	26.25	3.10	·1413	9. 1	·03269	2. 0	64·1	64·9
3.43	23.15	3.23	·1418	10.45	·03249	3. 0	64·1	65·0
7.11	23.55	3.47	·1414	16.44	·03230	8. 0	64·3	65·4
7.53	22.35		***	19.49	·03220	9. 0	63·8	64·3
8. 9	19.10	5. 0	·1425	22.50	·03175	9.30	63·3	64·2
8.49	22.10	5.17	·1415	23.59	·03160	21. 0	63·6	63·9
9.31	23. 0	5.40:	·1423			22. 0	63·7	63·8
13. 4	21.40	7.59	·1420			23. 0	64·0	64·0
16.12	20.45	8.10	·1425					
18.24	19. 5	10.27	·1414					
19.22	18.20	16.50	·1412					
23.22	27.50	19.39	·1407					
23.59	28. 0	22.35	·1404					
		23.16	·1406					
			(†)					
May 11		May 11		May 11		May 11		
0. 0	20.28. 0		(†)	0. 0	·03160	0. 0	64·2	64·3
1.28	27. 0	0.24	·1407	1. 5	·03180	1. 0	64·2	64·2
3.23:	22.30	2.26	·1414	1.20	·03200	2. 0	64·7	65·0
6.18	24. 5	2.49	·1413	2.44	·03200	3. 0	64·7	65·0
7.14	22.50	4.46	·1421	3.31	·03238	7. 0	64·1	64·6
7.45	23. 0	7.50	·1423	6.30	·03250	7.30	63·2	63·6
8.24	21.10	8. 9	·1427	8.36	·03210	8. 0	63·0	63·2
9. 0	22. 0	9.50	·1418	11. 4	·03224	9. 0	63·3	63·8
9.15	21.30	12.49	·1420	21.40	·03130	21.45	62·0	62·2
9.41	22.40	13.22	·1416	23. 0	·03105			
9.54	21.50	14. 8	·1419	23.59	·03120			
10.31	23. 5	18.50	·1417					
10.45	22.20	22.40	·1410					
11.17	22.50	23.59	·1420					
12.48	21.55							
13.16:	24. 0							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
May 11								
h m	° ′ ″	h m		h m		h m	°	°
14.10	20.21.45							
17. 2	19.10							
19.45	19.10							
21.37	21. 0							
23.10	25.55							
23.59	26.20							
May 12		May 12		May 12		May 12		
0. 0	20.26.20	0. 0	·1420	0. 0	·03120	0. 0	62·0	62·5
2.14	25.50	2.48	·1424	5. 5	·03120	1. 0	61·0	61·2
2.53	23.35	3. 3	·1416	8.59	·03110	3.20	61·4	61·6
3.14	24. 5	3.27	·1429	19.22	·02988	4.45	61·4	61·7
3.33	23. 0	3.39	·1424	22. 0	·02910	9. 0	60·2	60·7
4.43	21.50	4. 3	·1427	23.59	·02910	21. 0	58·3	58·6
8.13	22. 0	4.16	·1421			22. 0	58·9	59·0
8.49	20.10	4.35	·1426			23. 0	59·2	59·3
9.16	21.30	4.48	·1425					
9.35	20.40	7.29	·1433					
9.51	22.20	10.48	·1428					
10.52	22.30	12.10	·1431					
18. 8	19.10	12.30	·1428					
18.35:	17.50	17.58	·1424					
19.55:	22.50	20. 0	·1408					
20.55	21.50	23.59	·1418					
23.59	25.30							
May 13		May 13		May 13		May 13		
0. 0	20.25.30	0. 0	·1418	0. 0	·02910	0. 0	59·6	59·7
1. 2	26. 0	1.58	·1420	5.26	·02978	1. 0	59·7	59·8
1.52	25.55	2.32	·1413	9.39	·02962	2. 0	59·7	59·8
3.47	23.10	2.44	·1420	14. 4	·02980	3. 0	59·7	59·8
7.49	21.30	3.22	·1423	17.38	·02976	9. 0	59·6	59·4
11.34	21.45	3.50	·1418	22.48	·02909	21. 0	59·4	59·4
16. 8	20.40	5. 2	·1422	23.59	·02920	22. 0	59·0	59·2
17.27	24. 0	5.19	·1429			23. 0	59·2	59·5
17.40	21.40	6.44	·1430					
17.46	22.20	14. 4	·1421					
19.58	17.45	14.31	·1423					
20.30	19. 5	17.15	·1415					
21.26	20. 0	17.56	·1421					
23.59	27. 0	21.29	·1410					
		23.59	·1419					
May 14		May 14		May 14		May 14		
0. 0	20.27. 0	0. 0	·1419	0. 0	·02920	0. 0	59·3	59·6
1.15	27.30	1.26	·1427	2.24	·02959	1. 0	59·1	59·1
2. 3	25.40	1.54	·1420	4.31	·02942	2. 0	59·2	59·5
2.20	26.30	2.36	·1429	5.23	·02945	3. 0	59·1	59·3
3.24	24.50	3.28	·1413	5.40	·02960	5.30	59·0	59·2
5.25	23. 0	4.47	·1435	6. 2	·02950	8. 0	59·0	59·2
6. 2	23.40	5.17	·1426	10.10	·02939	9. 0	58·8	59·1
6.38	22.15	5.36	·1441	10.26	·02953	21. 0	58·7	59·0
7. 5	23. 0	6. 7	·1425	10.43	·02926	22. 0	58·6	59·0
7.57	21.30	9.31	·1425	13.52	·02928	23. 0	58·8	59·2
9.26	22.30	9.47	·1428	17.19	·02937			
10.20	20.30	10. 9	·1423	22.41	·02866			
10.31	21.30	10.19	·1435	23.59	·02885			
10.49	17. 0	10.38	·1425					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 14		May 14						
h m	° ′ ″	h m		h m		h m	°	°
11. 5	20. 15. 50	11. 9	·1425					
11. 25	18. 50	11. 27	·1419					
11. 40	16. 30	12. 9	·1423					
12. 59	19. 55		***					
13. 58	15. 55	13. 59	·1415					
15. 20	19. 30	17. 1	·1417					
17. 18	18. 30	21. 5	·1406					
19. 24	18. 25	23. 3	·1409					
22. 47	23. 35	23. 59	·1419					
23. 59	25. 50							
May 15		May 15		May 15		May 15		
0. 0	20. 25. 50	0. 0	·1419	0. 0	·02885	0. 0	59 ·1	59 ·4
1. 25	26. 30	0. 10	·1420	4. 51	·02940	1. 0	59 ·0	59 ·5
2. 38	24. 20	2. 37	·1416	8. 35	·02939	2. 0	59 ·2	59 ·7
8. 18	22. 0	4. 5	·1418	11. 57	·02956	3. 0	59 ·4	59 ·7
16. 16	20. 0		***	20. 20	·02920	8. 0	59 ·1	59 ·5
17. 30	19. 0	5. 57	·1427	22. 57	·02880	9. 0	59 ·1	59 ·6
18. 17	19. 25	6. 45	·1422	23. 59	·02900	9. 40	59 ·5	60 ·0
18. 48	18. 15	7. 9	·1428			21. 0	58 ·3	58 ·8
20. 9	18. 55	7. 37	·1423			22. 0	58 ·3	58 ·9
20. 18	18. 0	12. 7	·1423			23. 0	58 ·7	59 ·3
20. 43	20. 0	13. 59	·1416					
21. 41	21. 0	16. 37	·1417					
23. 21	25. 0	21. 9	·1412					
23. 59	25. 20	23. 59	·1422					
May 16		May 16		May 16		May 16		
0. 0	20. 25. 20	0. 0	·1422	0. 0	·02900	0. 0	59 ·0	59 ·6
0. 30	26. 30	0. 33	·1427	1. 18	·02934	1. 0	59 ·1	59 ·6
1. 55	26. 25	1. 39	·1429	5. 52	·02953	2. 0	59 ·2	59 ·8
3. 48	22. 50	2. 27	·1421	13. 51	·02930	3. 0	59 ·1	59 ·8
6. 11	21. 45	4. 30	·1416	18. 30	·02910	7. 0	59 ·0	59 ·7
10. 45	22. 50	5. 37	·1419	22. 48	·02830	9. 0	59 ·4	59 ·6
14. 24	21. 50	6. 6	·1427	23. 59	·02840	21. 0	58 ·1	58 ·6
14. 59	20. 50	6. 27	·1421			22. 0	58 ·7	58 ·8
15. 58	20. 30	7. 26	·1425			23. 0	58 ·6	59 ·0
18. 5	17. 30	10. 40	·1428					
18. 27	17. 20	12. 47	·1421					
18. 47	16. 5	16. 47	·1421					
19. 23	18. 30	19. 9	·1414					
19. 43	18. 10	23. 59	·1420					
19. 53	20. 0							
19. 59	19. 0							
20. 37	18. 30							
23. 0	26. 0							
23. 59	27. 10							
May 17		May 17		May 17		May 17		
0. 0	20. 27. 10	0. 0	·1420	0. 0	·02840	0. 0	59 ·3	59 ·8
1. 31	27. 0	2. 1	·1424	4. 40	·02935	1. 0	59 ·0	59 ·5
3. 30	23. 30	4. 54	·1421	9. 59	·02948	2. 0	59 ·4	59 ·9
4. 55	22. 15	6. 27	·1428	13. 40	·02940	3. 0	59 ·6	60 ·0
5. 50	20. 55	6. 36	·1422	19. 10	·02900	9. 0	59 ·7	60 ·3
	***	6. 50	·1432	22. 56	·02840	21. 0	58 ·1	58 ·5
18. 34	18. 30	6. 58	·1429	23. 59	·02850	22. 0	58 ·6	58 ·6
	***	10. 47	·1424			23. 0	58 ·5	58 ·7
20. 22	18. 20	17. 17	·1424					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 17		May 17						
h m	° ′ ″	h m		h m		h m	°	°
21. 6	20. 19. 40	18. 3	·1426					
23. 5	26. 0	22. 10	·1419					
23. 59	29. 20	23. 0	·1406					
		23. 59	·1415					
May 18		May 18		May 18		May 18		
0. 0	20. 29. 20	0. 0	·1415	0. 0	·02850	0. 0	59 ·0	59 ·1
1. 5	29. 55	0. 8	·1421	3. 40	·02930	1. 0	59 ·1	59 ·5
3. 52	24. 15	0. 19	·1414	8. 50	·02946	2. 0	59 ·5	59 ·8
5. 35	22. 10	0. 56	·1420	21. 50	·02885	3. 0	59 ·6	60 ·0
6. 50	21. 45	1. 36	·1410	22. 40	·02890	7. 0	59 ·6	60 ·0
7. 4	20. 50	2. 9	·1423	23. 59	·02900	9. 0	59 ·7	60 ·3
7. 30	21. 10	3. 20	·1429			22. 0	59 ·3	59 ·8
7. 49	18. 10	3. 59	·1424					
8. 5	18. 0	5. 19	·1430					
8. 54	20. 40	5. 47	·1426					
9. 32	21. 30	7. 7	·1433					
15. 27	20. 45	8. 16	·1426					
16. 20	19. 20	9. 7	·1431					
16. 29	19. 55	11. 19	·1431					
18. 42	17. 0	11. 35	·1427					
18. 51	16. 0	13. 3	·1429					
19. 0	17. 50	16. 9	·1424					
19. 5	16. 35	17. 4	·1428					
19. 16	15. 50	21. 0	·1409					
19. 24	16. 20	21. 42	·1409					
20. 14	16. 50	22. 24	·1404					
21. 30	18. 40	23. 30	·1419					
23. 5	26. 0	23. 59	·1418					
23. 59	28. 10							
May 19		May 19		May 19		May 19		
0. 0	20. 28. 10	0. 0	·1418	0. 0	·02900	1. 0	60 ·2	60 ·7
0. 44	29. 45	0. 30	·1417	2. 47	·02940	5. 0	60 ·6	61 ·1
2. 10	28. 40	1. 56	·1428	5. 40	·02980	8. 0	60 ·9	61 ·7
3. 49	26. 10	2. 37	·1423	11. 13	·03010	21. 0	60 ·2	60 ·8
4. 24	26. 0	3. 46	·1429	11. 23	·02998	22. 0	60 ·8	61 ·0
6. 28	22. 5	4. 47	·1424	15. 20	·02980	23. 0	60 ·9	61 ·5
10. 28	21. 0	5. 9	·1434	20. 5	·02980			
11. 0	17. 0	5. 24	·1430	22. 30	·02936			
11. 28	15. 0	5. 34	·1434	23. 59	·02950			
12. 29	13. 30	5. 58	·1432					
13. 11	16. 50	6. 59	·1435					
14. 5	18. 0	9. 27	·1430					
14. 36	21. 55	10. 16	·1434					
14. 56	22. 0	10. 30	·1429					
15. 17	20. 0	11. 2	·1432					
16. 45	16. 0	11. 22	·1438					
17. 3	17. 15	13. 8	·1418					
17. 27	16. 40	14. 44	·1416					
17. 53	17. 15	15. 15	·1423					
18. 7	19. 0	17. 9	·1420					
18. 26	17. 55	19. 15	·1406					
19. 10	18. 0	19. 49	·1410					
19. 36	19. 30	20. 44	·1409					
20. 22	16. 55	23. 9	·1400					
22. 55	24. 20	23. 26	·1394					
23. 59	28. 30	23. 59	·1402					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 20		May 20		May 20		May 20		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 28. 30	0. 0	·1402	0. 0	·02950	0. 0	60·9	61·5
2. 18	29. 30	1. 47	·1419	1. 20	·02961	1. 0	61·4	62·0
4. 0	27. 55	2. 25	·1415	3. 56	·03020	2. 0	61·2	61·7
4. 24	29. 0	3. 28	·1429	14. 0	·03009	3. 0	61·4	61·8
4. 59	26. 0	3. 57	·1417	20. 4	·02980	8. 0	61·4	61·5
6. 39	23. 5	4. 24	·1414	22. 40	·02940	8. 20	61·0	60·8
6. 50	23. 40	5. 59	·1433	23. 59	·02939	9. 0	61·2	61·7
7. 16	22. 15	6. 15	·1431			21. 0	60·1	60·6
8. 33	21. 0	6. 40	·1437			22. 0	60·2	60·5
9. 10	18. 0	7. 16	·1431			23. 0	60·3	60·7
9. 45	20. 10	7. 27	·1440					
10. 11	16. 40	8. 48	·1426					
10. 46	18. 30		***					
11. 8	17. 30	9. 57	·1424					
11. 19	18. 20	10. 15	·1430					
11. 30	17. 10	10. 27	·1425					
11. 43	18. 20	11. 6	·1429					
12. 0	16. 50	11. 18	·1420					
12. 59	20. 15	11. 37	·1425					
13. 55	18. 30	11. 45	·1423					
14. 30	20. 0	12. 35	·1426					
14. 53:	23. 40	14. 57	·1416					
15. 45	20. 20	15. 44	·1426					
17. 55	17. 20	17. 46	·1426					
20. 15	18. 20	18. 50	·1418					
22. 40	23. 25	21. 56	·1408					
23. 59	27. 25	23. 59	·1410					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 21		May 21		May 21		May 21		
0. 0	20. 27. 25	0. 0	·1410	0. 0	·02939	0. 0	59·6	60·1
0. 51	28. 30	0. 51	·1414	1. 2	·02930	1. 0	59·5	59·9
3. 40	25. 0	1. 19	·1415	2. 26	·02963	2. 0	59·5	59·9
3. 53	25. 15	2. 35	·1425	10. 10	·02960	3. 0	59·3	59·7
5. 39	23. 50	3. 5	·1424	15. 36	·02977	5. 30	59·5	59·5
5. 55	24. 0	3. 48	·1430	21. 10	·02918	9. 0	59·5	59·8
8. 44	22. 10	3. 57	·1440	21. 23	·02922	20. 0	59·2	59·2
8. 58	19. 45	4. 37	·1434	22. 50	·02910	21. 0	59·0	59·4
9. 10	20. 40	5. 16	·1441	23. 59	·02910	22. 0	59·0	59·2
9. 23	20. 0	5. 39	·1435			23. 0	59·2	59·5
9. 49	21. 55	5. 49	·1443					
10. 15	20. 40	6. 20	·1438					
12. 12	20. 20	6. 55	·1439					
13. 5	21. 0	7. 0	·1444					
14. 0	18. 35	7. 14	·1439					
14. 14	20. 0	7. 40	·1444					
14. 40	20. 0	8. 6	·1439					
14. 56	21. 10	8. 15	·1444					
15. 40	22. 0	8. 28	·1434					
15. 55	19. 55	8. 51	·1426					
16. 15	19. 50	9. 30	·1436					
16. 56	21. 20	10. 40	·1434					
17. 15	19. 30	10. 50	·1429					
17. 20	20. 20	10. 59	·1432					
17. 31	18. 20	12. 0	·1429					
17. 55	18. 20	12. 16	·1431					
19. 17	16. 0	12. 25	·1423					
21. 15	17. 35	13. 9	·1430					
22. 6	19. 20	13. 19	·1425					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 21		May 21						
h m	° ′ ″	h m		h m		h m	°	°
22. 43	20. 22. 0	13. 49	·1420					
22. 53	21. 10	14. 16	·1425					
23. 10	22. 40	14. 35	·1419					
23. 59	24. 30	15. 17	·1429					
		15. 29	·1426					
		15. 45	·1431					
		15. 57	·1425					
		17. 6	·1425					
		17. 24	·1429					
		17. 33	·1426					
		17. 58	·1434					
		19. 20	·1421					
		20. 55	·1422					
		21. 40	·1413					
		22. 30	·1415					
		23. 7	·1406					
		23. 40	·1406					
		23. 59	·1415					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 22		May 22		May 22		May 22		
0. 0	20. 24. 30	0. 0	·1415	0. 0	·02910	0. 0	59·8	59·8
0. 27	26. 0	0. 13	·1410	0. 33	·02920	0. 30	59·4	59·5
0. 59	25. 0	0. 25	·1417	1. 0	·02905	1. 0	59·3	59·5
2. 55	25. 50	0. 50	·1409	5. 25	·02962	2. 0	59·5	59·8
5. 23	22. 25	1. 47	·1414	9. 43	·02937	3. 0	59·5	59·9
6. 31	22. 20	2. 3	·1424	11. 30	·02940	6. 20	59·2	59·2
6. 59	21. 5	2. 18	·1418	16. 10	·02910	9. 0	59·0	59·4
7. 58	20. 55	3. 18	·1425	22. 50	·02810	21. 0	57·2	57·5
8. 28	22. 5	4. 8	·1423	23. 59	·02841	22. 0	57·6	57·8
11. 50	21. 30	5. 9	·1431			23. 0	58·2	58·5
12. 5	22. 30	5. 49	·1427					
12. 40	20. 30	6. 14	·1430					
13. 32	20. 50	6. 27	·1425					
13. 50	20. 0	8. 17	·1430					
14. 7	20. 40	8. 51	·1423					
15. 0	18. 40	9. 15	·1429					
16. 3	22. 20	9. 55	·1424					
16. 26	22. 0		***					
16. 58	19. 15	12. 25	·1426					
19. 26	17. 0	14. 29	·1424					
20. 12	17. 5	15. 42	·1415					
23. 16	24. 0	16. 17	·1422					
23. 59	24. 30	16. 49	·1419					
		18. 0	·1421					
		19. 28	·1419					
		22. 12	·1401					
		23. 30	·1412					
		23. 45	·1407					
		23. 59	·1409					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 23		May 23		May 23		May 23		
0. 0	20. 24. 30	0. 0	·1409	0. 0	·02841	0. 0	58·8	59·1
4. 32	24. 25	0. 37	·1413	1. 29	·02850	1. 0	58·3	58·7
7. 1	21. 20	1. 15	·1421	3. 0	·02850	2. 0	58·2	58·6
7. 30	19. 55	1. 37	·1420	9. 6	·02917	3. 0	58·5	58·7
8. 30	22. 0	2. 39	·1429	9. 21	·02904	9. 0	59·1	59·9
8. 55	21. 0	3. 9	·1426	14. 59	·02950	21. 0	59·7	60·0
9. 5	22. 0	3. 25	·1434	15. 33	·02940	22. 0	59·7	60·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 23		May 23		May 23		May 23		
h m	° ′ ″	h m		h m		h m	°	°
9. 33	20. 20. 30	3. 56	·1425	22. 30	·02870	23. 0	59·7	60·0
10. 47	21. 50	4. 39	·1435	23. 59	·02883			
10. 59	21. 0	8. 6	·1430					
11. 15	20. 40	8. 28	·1433					
11. 31	22. 0	8. 55	·1429					
12. 10	20. 0	9. 4	·1433					
12. 40	20. 50	9. 30	·1424					
13. 22	19. 50	9. 59	·1426					
13. 55	20. 45	10. 20	·1423					
14. 30	19. 30	10. 44	·1428					
14. 45	21. 45		***					
15. 20	22. 45	14. 39	·1413					
15. 34	22. 0	14. 55	·1419					
16. 9	23. 40	15. 6	·1416					
16. 49	21. 0	15. 10	·1420					
16. 59	21. 0	15. 49	·1412					
17. 20	19. 30	16. 37	·1419					
18. 1	19. 30	17. 16	·1419					
18. 39	25. 40	17. 45	·1429					
18. 58	24. 20	18. 24	·1422					
19. 19	25. 25	18. 45	·1424					
20. 17	19. 5	19. 3	·1409					
20. 30	19. 35	19. 35	·1424					
20. 48	18. 45	19. 50	·1417					
23. 12	21. 50	20. 36	·1418					
23. 59	22. 45	22. 51	·1405					
		23. 51	·1415					
		23. 59	·1409					
May 24		May 24		May 24		May 24		
0. 0	20. 22. 45	0. 0	·1409	0. 0	·02883	0. 0	59·9	60·2
2. 37	24. 55	0. 16	·1407	1. 26	·02921	1. 0	60·0	60·2
3. 0	24. 50	0. 41	·1411	6. 18	·02940	2. 0	59·9	60·2
4. 45	25. 10	1. 23	·1411	6. 38	·02958	3. 0	59·7	60·0
5. 4	24. 10	1. 49	·1419	9. 6	·02925	5. 40	59·5	59·8
5. 27	24. 10	2. 14	·1413	18. 10	·02880	7. 40	59·3	59·8
6. 4	22. 5	2. 49	·1422	22. 40	·02816	9. 0	59·2	59·9
6. 29	15. 10	3. 5	·1416	23. 59	·02790	11. 15	59·6	60·0
6. 49	17. 5	3. 46	·1419			21. 0	57·6	57·7
7. 14	20. 10	3. 55	·1426			22. 0	57·7	58·0
7. 33	20. 0	4. 39	·1419			23. 0	57·9	58·0
8. 43	22. 5	4. 47	·1428					
9. 30	21. 50	5. 4	·1423					
9. 47	22. 10	6. 2	·1429					
10. 5	21. 10	6. 20	·1421					
10. 17	22. 0	6. 36	·1438					
11. 9	21. 0	6. 59	·1431					
16. 29	20. 0	7. 31	·1421					
19. 14	18. 20	7. 40	·1425					
19. 58	19. 10	8. 35	·1418					
21. 39	20. 0	10. 26	·1423					
23. 6	23. 30	12. 16	·1416					
23. 59	24. 50	14. 47	·1420					
		19. 45	·1415					
		23. 9	·1408					
		23. 50	·1417					
		23. 59	·1415					
May 25		May 25		May 25		May 25		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 24. 50	0. 0	·1415	0. 0	·02790	0. 0	58·0	58·2
0. 40	25. 20	0. 23	·1412	1. 58	·02830	1. 0	58·0	58·3
6. 25	23. 45	0. 55	·1419	8. 18	·02879	2. 0	58·1	58·4
6. 55	24. 0	2. 58	·1425	20. 40	·02917	3. 0	58·3	58·7
8. 7	22. 55		***	22. 40	·02890	3. 30	58·6	58·8
9. 15	22. 0	4. 21	·1423	23. 59	·02885	7. 0	59·2	59·4
10. 0	22. 30	5. 20	·1432			8. 0	59·5	59·7
10. 23	21. 55	5. 34	·1429			9. 0	59·0	59·8
12. 5	21. 35	5. 59	·1436			21. 35	59·7	60·1
	***	6. 10	·1431			22. 30	59·5	59·7
16. 9	20. 15	6. 20	·1436					
16. 43	18. 50	7. 25	·1429					
17. 8	18. 35	7. 54	·1434					
17. 13	19. 0	8. 24	·1429					
17. 24	18. 15	13. 26	·1420					
17. 45	18. 55	14. 4	·1422					
20. 38	17. 30	14. 35	·1418					
22. 46	22. 0	17. 29	·1417					
23. 59	25. 0	18. 30	·1418					
		22. 8	·1405					
		23. 59	·1407					
May 26		May 26		May 26		May 26		
0. 0	20. 25. 0	0. 0	·1407	0. 0	·02885	0. 0	59·7	60·2
2. 28	26. 0	2. 48	·1425	3. 11	·02908	3. 0	60·0	60·4
4. 57	23. 0	3. 15	·1425	5. 5	·02930	4. 0	60·1	60·5
12. 18	21. 5	4. 30	·1431	8. 59	·02935	9. 0	60·3	61·2
12. 47	22. 5	4. 43	·1439	16. 45	·02955	10. 0	59·9	60·7
13. 15	20. 50	4. 55	·1435	22. 15	·02901	19. 30	60·4	60·6
15. 0	21. 0	5. 4	·1438	23. 59	·02915	21. 0	60·0	60·6
15. 20	20. 10	7. 31	·1437			21. 30	..	60·4
16. 11	19. 50	9. 10	·1433			22. 0	60·1	60·6
17. 47	17. 15	9. 59	·1435			23. 0	60·2	60·8
19. 15	17. 40	11. 5	·1428					
19. 28	17. 0	11. 18	·1433					
20. 30	19. 20	12. 29	·1427					
21. 57	20. 30	12. 49	·1432					
23. 25	23. 20	13. 25	·1428					
23. 59	23. 35	16. 50	·1426					
		19. 47	·1421					
		21. 5	·1414					
		21. 46	·1420					
		22. 9	·1412					
		23. 59	·1413					
May 27		May 27		May 27		May 27		
0. 0	20. 23. 35	0. 0	·1413	0. 0	·02915	0. 0	60·6	61·1
0. 54	24. 0		***	2. 9	·02955	1. 0	60·9	61·2
0. 57	24. 55	0. 40	·1418	2. 14	·02976	2. 0	62·1	62·1
2. 46	24. 0	0. 45	·1413	2. 27	·02989	3. 0	63·5	64·0
4. 32	22. 0	0. 55	·1420	3. 24	·03041	5. 30	60·8	61·3
8. 0	21. 35	1. 41	·1423	4. 27	·03040	7. 0	61·0	61·4
8. 12	23. 20	1. 43	·1416	7. 14	·03004	9. 0	60·5	61·1
8. 32	24. 10	2. 33	·1425	11. 0	·02968	19. 0	59·4	59·6
8. 58	23. 55	3. 4	·1419	11. 6	·02940	21. 0	59·7	59·9
9. 40	22. 20	3. 12	·1425	11. 13	·02990	22. 0	59·9	60·0
9. 55	22. 55	3. 30	·1415	11. 16	·02961	23. 0	59·9	60·2
9. 59	22. 15	5. 44	·1431	11. 25	·02977			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
May 27		May 27		May 27				
h m	° ′ ″	h m		h m		h m	°	°
10. 16	20. 23. 0	6. 32	·1432	13. 6	·02940			
10. 55	16. 55	6. 44	·1436	13. 45	·02816			
11. 5	16. 50	7. 40	·1437	14. 15	·02857			
11. 10	11. 45	7. 50	·1432	15. 1	·02850			
11. 13	14. 30	7. 59	·1451	15. 45	·02820			
11. 22	11. 0	9. 6	·1442	16. 23	·02840			
11. 38	3. 35	9. 29	·1445	16. 38	·02832			
12. 40	12. 0	9. 51	·1453	17. 46	·02861			
12. 44	11. 10	9. 57	·1448	18. 5	·02840			
12. 55	13. 5	10. 0	·1459		***			
13. 18	29. 0	10. 27	·1455	20. 17	·02900			
14. 0	8. 20	10. 55	·1447	21. 39	{·02890			
14. 13	8. 35	10. 59	·1408		{·02970			
14. 33	10. 30	11. 5	·1434	22. 38	·02969			
14. 42	8. 10	11. 11	·1413	22. 55	·02956			
15. 10	16. 20	11. 24	·1439	23. 59	·02993			
15. 33	17. 30	11. 40	·1450					
15. 59	12. 20	12. 20	·1423					
16. 15	6. 30	12. 25	·1427					
16. 30	10. 35	12. 39	·1412					
16. 56	10. 25	12. 48	·1417					
	***	12. 58	·1406					
17. 20	13. 30	13. 14	·1406					
17. 29	11. 20	13. 24	·1420					
17. 40	13. 20	13. 41	·1404					
17. 47	17. 25	14. 11	·1419					
18. 2	13. 10	14. 30	·1409					
18. 32	16. 5	14. 58	·1428					
18. 38	19. 0	15. 41	·1418					
18. 45	17. 55	16. 0	·1417					
18. 48	21. 30	16. 13	·1419					
19. 25	15. 20	16. 26	·1404					
19. 40	18. 0	16. 44	·1400					
19. 55	15. 20	16. 55	·1403					
20. 5	18. 20	16. 59	·1401					
20. 43	17. 25	17. 3	·1404					
20. 54	19. 50	17. 15	·1396					
21. 19	19. 10	17. 20	·1402					
21. 29	23. 15	17. 26	·1388					
21. 49	21. 55	17. 40	·1381					
21. 59	21. 0	17. 45	·1386					
23. 4	28. 0	17. 52	·1374					
23. 7	28. 30	18. 14	·1373					
23. 20	27. 15	18. 23	·1376					
23. 49	30. 30	18. 29	·1374					
23. 59	29. 40	18. 34	·1386					
		18. 43	·1397					
		19. 19	·1392					
		19. 38	·1400					
		19. 50	·1393					
		20. 23	·1390					
		20. 40	·1380					
		20. 42	·1386					
		20. 55	·1381					
			***					
		22. 19	·1388					
		22. 37	·1379					
		22. 57	·1369					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
		May 27						
h m	° ′ ″	h m		h m		h m	°	°
		23. 48	·1384					
		23. 59	·1400					
May 28		May 28		May 28		May 28		
0. 0	20. 29. 40	0. 0	·1400	0. 0	·02993	0. 0	60 ·2	60 ·6
0. 5	30. 20	0. 9	·1411	1. 5	·03010	1. 0	60 ·3	60 ·7
0. 39	27. 20	0. 22	·1405	1. 33	·03003	2. 0	60 ·6	60 ·9
0. 56	29. 0	0. 59	·1414	2. 49	·03110	3. 0	60 ·6	61 ·0
1. 6	28. 15	1. 15	·1416	5. 44	·03078	5. 0	60 ·8	61 ·2
1. 15	30. 30	1. 23	·1406	6. 55	·03109	7. 0	60 ·8	61 ·6
1. 22	29. 50	1. 34	·1400	7. 5	·03080	9. 0	61 ·0	62 ·0
1. 33	26. 40	1. 49	·1412	7. 14	·03120	10. 30	61 ·0	61 ·0
1. 42	27. 10	1. 55	·1409	7. 54	·03076	21. 0	60 ·4	61 ·2
1. 58	21. 50	2. 5	·1418	8. 42	·03083	22. 0	60 ·6	61 ·4
2. 5	25. 15	2. 15	·1407	8. 55	·03071	23. 0	60 ·7	61 ·5
2. 13	21. 50	2. 19	·1411	9. 22	·03078			
	***	2. 33	·1403	10. 20	·03034			
2. 50	24. 15	2. 45	·1415	10. 42	·03032			
2. 59	23. 5	3. 15	·1429	10. 54	·03012			
3. 32	27. 5	3. 20	·1426	14. 48	·02992			
5. 45	22. 20	3. 33	·1436	15. 11	·02970			
6. 7	22. 5	4. 2	·1426	15. 50	·02975			
6. 17	23. 35	4. 37	·1440	16. 15	·02958			
6. 45	20. 0	4. 45	·1433	16. 28	·02968			
6. 58	20. 20. 35	4. 55	·1439	16. 40	·02960			
7. 12	19. 58. 30	5. 24	·1438	19. 9	·03009			
7. 28	20. 13. 30	5. 30	·1447	22. 52	·03015			
7. 47	15. 40	5. 39	·1440	23. 59	·03036			
8. 19	13. 15	6. 17	·1454					
8. 24	14. 50	6. 34	·1447					
8. 36	14. 0	6. 43	·1448					
8. 55	18. 55	6. 59	·1431					
9. 6	16. 5	7. 18	·1487					
9. 22	18. 10	7. 31	·1470					
9. 52	14. 30	7. 55	·1446					
10. 17	19. 15	8. 24	·1432					
10. 39	16. 30	8. 37	·1436					
10. 56	24. 30	8. 55	·1424					
11. 32	15. 30	9. 23	·1428					
11. 52	18. 5	9. 32	·1435					
12. 11	18. 30	9. 38	·1433					
12. 20	16. 30	9. 49	·1445					
12. 41	17. 35	10. 11	·1440					
12. 49	16. 35	10. 28	·1427					
13. 13	22. 5	10. 39	·1433					
13. 20	21. 50	10. 55	·1421					
13. 34	26. 15	11. 14	·1426					
14. 4	23. 50	11. 18	·1437					
14. 14	20. 10	11. 37	·1443					
14. 31	20. 45	11. 55	·1437					
14. 54	22. 45	12. 18	·1431					
15. 9	20. 20	12. 59	·1399					
15. 18	20. 35	13. 34	·1414					
15. 42	25. 0	13. 51	·1419					
16. 3	22. 15	14. 18	·1421					
16. 17	17. 0	14. 34	·1431					
16. 32	17. 55	14. 58	·1435					
16. 39	15. 40	15. 17	·1425					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 28		May 28						
h m	° ′ ″	h m		h m		h m	°	°
16. 55	20. 18. 5	15. 33	·1416					
17. 12	20. 0	16. 0	·1424					
17. 25	17. 40	16. 24	·1415					
17. 52	14. 55	16. 31	·1417					
18. 18	17. 55	16. 40	·1402					
18. 33	16. 5	17. 47	·1414					
18. 43	17. 30	18. 11	·1406					
19. 10	17. 40	18. 20	·1410					
19. 31	15. 20	18. 35	·1407					
20. 30	17. 35	18. 56	·1413					
21. 22	17. 5	19. 28	·1406					
22. 32	21. 5	20. 4	·1410					
22. 57	21. 10	20. 43	·1405					
23. 25	23. 20		***					
23. 55	23. 10	21. 53	·1405					
23. 59	23. 15	22. 17	·1399					
		23. 3	·1402					
		23. 25	·1408					
		23. 33	·1403					
		23. 59	·1410					
May 29		May 29		May 29		May 29		
0. 0	20. 23. 15	0. 0	·1410	0. 0	·03036	0. 0	61 ·1	62 ·2
0. 37	25. 50	0. 37	·1417	4. 49	·03142	1. 0	61 ·5	62 ·5
1. 17	24. 30	0. 47	·1410	5. 9	·03163	2. 0	61 ·7	62 ·7
3. 17	24. 15	1. 6	·1410	5. 46	·03150	3. 0	61 ·9	62 ·8
3. 50	23. 10	1. 35	·1422	7. 31	·03141	8. 50	62 ·5	63 ·2
4. 22	24. 0	1. 47	·1420	7. 58	·03123	9. 0	62 ·4	63 ·0
4. 59	12. 10	1. 57	·1429	10. 2	·03132	10. 45	61 ·4	61 ·8
5. 12	14. 50	2. 37	·1425	12. 26	·03091	21. 0	61 ·6	61 ·9
5. 26	18. 15	2. 57	·1429	12. 43	·03110	22. 0	61 ·7	62 ·1
6. 45	22. 0	3. 48	·1418	13. 35	·03050	23. 0	62 ·1	62 ·7
7. 15	17. 20	4. 47	·1432	14. 20	·03051			
7. 27	18. 55	5. 11	·1461	15. 6	·03048			
8. 7	19. 10	5. 37	·1444	16. 38	·03050			
8. 29	17. 15	6. 19	·1440	19. 16	·03088			
8. 59	19. 0	6. 40	·1437	23. 16	·03070			
9. 15	18. 15	6. 55	·1432	23. 59	·03040			
9. 24	19. 55	7. 10	·1435					
9. 44	19. 5	7. 24	·1447					
10. 50	21. 10	8. 51	·1428					
11. 23	20. 15	9. 10	·1430					
11. 45	18. 15	10. 3	·1428					
12. 9	20. 50	10. 57	·1438					
12. 28	18. 40	11. 30	·1425					
12. 57	27. 10	11. 41	·1432					
13. 57	20. 15	12. 23	·1428					
14. 27	20. 15	12. 55	·1438					
15. 24	15. 20	13. 16	·1429					
16. 5	23. 50	13. 54	·1426					
16. 57	19. 10	14. 26	·1429					
17. 34	18. 20	14. 49	·1439					
18. 7	14. 30	15. 24	·1421					
19. 17	14. 0	15. 40	·1406					
20. 39	18. 20	16. 15	·1422					
20. 59	17. 40	17. 19	·1424					
21. 36	18. 30	18. 54	·1409					
22. 4	21. 0	19. 16	·1410					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
May 29		May 29						
h m	° ′ ″	h m		h m		h m	°	°
22. 58	20. 23. 0	20. 24	·1399					
23. 24	24. 50	21. 39	·1408					
23. 59	27. 0	22. 29	·1401					
		22. 46	·1411					
		23. 59	·1390					
May 30		May 30		May 30		May 30		
0. 0	20. 27. 0	0. 0	·1390	0. 0	·03040	0. 0	62 ·9	63 ·2
0. 50	28. 10	0. 48	·1400	4. 15	·03160	1. 0	63 ·0	63 ·2
1. 45	26. 10	1. 6	·1390	11. 31	·03119	2. 0	63 ·1	63 ·5
2. 4	25. 15	1. 30	·1408	18. 51	·03079	3. 0	63 ·2	63 ·5
2. 17	26. 10	1. 33	·1406	21. 58	·03035	3. 45	63 ·2	63 ·5
3. 10	24. 10	1. 50	·1419	23. 40	·03039	5. 30	63 ·2	63 ·2
3. 34	20. 55	2. 4	·1411	23. 59	·03042	6. 0	63 ·0	63 ·0
4. 14	23. 0	2. 30	·1415			9. 0	62 ·7	62 ·7
5. 5	22. 10	2. 39	·1410			9. 50	61 ·6	61 ·8
5. 47	20. 35	2. 55	·1414			21. 0	61 ·1	61 ·1
6. 19	21. 10	3. 24	·1403			22. 0	61 ·1	61 ·1
6. 30	20. 20	3. 45	·1418			23. 0	61 ·3	61 ·5
8. 18	21. 5	4. 0	·1423					
8. 53	20. 0	4. 19	·1422					
9. 26	20. 50	4. 27	·1414					
10. 7	19. 5	4. 55	·1414					
10. 28	20. 0	5. 25	·1419					
12. 45	21. 50	5. 48	·1414					
13. 14	20. 55	7. 27	·1416					
13. 30	22. 10	8. 6	·1420					
15. 29	18. 15	8. 23	·1416					
16. 33	19. 15	9. 16	·1419					
19. 10	15. 55	9. 24	·1417					
19. 57	15. 50	9. 56	·1415					
23. 20	23. 35	10. 13	·1419					
23. 59	24. 5	11. 20	·1410					
		11. 55	·1415					
		13. 5	·1404					
		14. 8	·1410					
		17. 39	·1406					
		19. 48	·1397					
		23. 19	·1400					
		23. 59	·1409					
May 31		May 31		May 31		May 31		
0. 0	20. 24. 5	0. 0	·1409	0. 0	·03042	0. 0	61 ·8	62 ·0
0. 16	26. 0	0. 17	·1427	4. 6	·03139	1. 0	62 ·0	62 ·2
0. 29	25. 30	0. 35	·1406	6. 46	·03130	2. 0	62 ·5	62 ·6
1. 15	27. 10	0. 57	·1409	8. 8	·03148	3. 0	63 ·0	63 ·0
1. 52	26. 10	1. 39	·1409	8. 28	·03120	4. 0	63 ·0	63 ·1
2. 39	27. 55	2. 15	·1421	8. 45	·03138	8. 30	63 ·0	63 ·5
3. 3	27. 50	3. 34	·1416	10. 48	·03045	9. 0	62 ·3	62 ·0
3. 16	27. 0	3. 43	·1410	11. 20	·03040	9. 45	60 ·9	61 ·5
3. 32	27. 5	4. 9	·1417	11. 56	·02998	11. 0	62 ·0	62 ·1
4. 12	26. 0	4. 41	·1415	12. 21	·03000	12. 0	61 ·4	62 ·7
4. 42	24. 15	4. 56	·1416	13. 5	·02969	21. 0	61 ·4	62 ·2
5. 5	24. 50	5. 8	·1423	13. 12	·02979	22. 0	61 ·1	62 ·4
7. 6	22. 20	5. 47	·1417	13. 59	·02917	23. 0	61 ·7	63 ·0
7. 32	20. 15	6. 0	·1423	14. 28	·02930			
7. 49	21. 15	6. 16	·1420	14. 50	·02920			
7. 59	20. 5	6. 33	·1429	15. 17	·02939			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

May 31

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
8. 11	20. 21. 35
8. 32	8. 5
9. 7	16. 0
9. 22	14. 35
9. 50	8. 55
10. 6	11. 0
10. 22	8. 25
10. 23	9. 0
10. 42	6. 50
11. 7	11. 40
11. 37	10. 35
11. 50	11. 40
11. 57	8. 35
12. 9	9. 0
12. 24	10. 35
12. 43	7. 30
13. 10	10. 25
13. 40	7. 20
14. 1	2. 15
14. 26	9. 50
14. 56	7. 20
15. 5	8. 40
15. 27	6. 30
15. 59	15. 15
16. 53	18. 30
17. 0	17. 20
17. 20	18. 5
17. 56	17. 35
18. 20	15. 20
19. 7	19. 20
19. 27	18. 50
19. 52	21. 5
20. 24	20. 20
21. 32	21. 50
22. 6	25. 45
22. 29	25. 0
	(†)

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
6. 46	·1427
6. 54	·1428
7. 35	·1422
7. 42	·1425
7. 52	·1423
8. 3	·1426
8. 14	·1417
8. 27	·1402
8. 34	·1416
8. 42	·1410
8. 49	·1415
9. 16	·1411
9. 38	·1401
9. 47	·1407
10. 3	·1406
10. 28	·1420
10. 50	·1400
11. 13	·1398
11. 38	·1410
11. 51	·1396
12. 17	·1414
12. 58	·1394
13. 40	·1427
13. 59	·1411
14. 15	·1404
14. 44	·1407
15. 15	·1405
15. 35	·1398
16. 5	·1414
16. 32	·1391
16. 54	·1386
17. 41	·1391
18. 13	·1386
18. 23	·1388
19. 6	·1382
19. 34	·1388
19. 57	·1383
20. 7	·1384
21. 15	·1376
21. 59	·1378
22. 18	·1381
	(†)

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
15. 53	·02968
16. 30	·02965
17. 10	·03000
19. 45	·03032
22. 20	·03030
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°

June 1

Greenwich Mean Solar Time.	Western Declination.
	(†)
1. 0	20. 31. 42*
3. 0	28. 55*
6. 0	21. 0
7. 54	20. 45
8. 58	19. 10
9. 22	19. 0
9. 58	17. 10
10. 20	17. 30
10. 34	14. 45
10. 51	17. 35
11. 21	5. 30
11. 30	8. 35
11. 50	3. 0
12. 0	20. 8. 20
12. 35	19. 58. 50
12. 41	59. 50
12. 56	19. 58. 0
13. 21	20. 11. 5
13. 29	11. 0
13. 42	12. 10
14. 2	16. 5
14. 10	15. 20
14. 27	21. 15
14. 47	10. 0
15. 10	9. 0
15. 18	7. 15
15. 31	12. 40
15. 48	21. 30
15. 59	18. 5
16. 14	18. 10
16. 34	14. 45
16. 48	16. 40
16. 50	12. 10
16. 57	14. 10
17. 18	16. 15
17. 35	12. 15
18. 0	9. 30
18. 40	13. 5
18. 58	12. 45
19. 5	14. 20
19. 11	14. 0
19. 18	16. 25
19. 23	15. 10
20. 4	15. 35
20. 30	13. 20
20. 44	16. 50
21. 5	16. 25
22. 0	20. 10
22. 8	22. 35
22. 53	23. 25
23. 59	25. 35

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
	(†)
1. 0	·1397*
3: 0	·1392*
6. 0	·1407
6. 18	·1406
6. 24	·1413
7. 18	·1405
8. 18	·1409
8. 57	·1406
9. 15	·1410
10. 13	·1405
10. 35	·1469
10. 52	·1455
11. 2	·1458
11. 44	·1428
12. 2	·1376
12. 15	·1384
12. 24	·1383
12. 31	·1389
12. 58	·1360
13. 54	·1395
14. 15	·1387
14. 23	·1403
14. 39	·1389
15. 14	·1385
15. 25	·1393
15. 36	·1389
15. 40	·1392
15. 57	·1384
16. 11	·1392
16. 21	·1390
16. 47	·1393
16. 55	·1402
17. 9	·1401
17. 20	·1392
18. 4	·1384
18. 15	·1385
18. 21	·1390
18. 41	·1380
18. 49	·1383
18. 59	·1392
19. 3	·1391
19. 21	·1403
19. 37	·1399
20. 5	·1401
20. 20	·1395
20. 52	·1396
22. 0	·1389
22. 6	·1393
22. 20	·1386
22. 49	·1387
23. 4	·1390
23. 25	·1383
23. 37	·1393
23. 59	·1393

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
	(†)
1. 0	·03100*
3. 0	·03167*
6. 0	·03263
10. 30	·03220
10. 35	·03248
11. 2	·03152
11. 25	·03141
12. 40	·02980
13. 1	·03000
13. 20	·03090
13. 40	·03100
14. 15	·03060
14. 23	·03070
14. 39	·03026
15. 35	·03110
15. 52	·03071
16. 37	·03060
16. 42	·03049
18. 5	·03105
22. 44	·03157
23. 59	·03180

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
0. 0	..	63 ·5
1. 0	63 ·8	64 ·2
2. 20	62 ·9	65 ·4
3. 0	64 ·7	65 ·4
7. 0	63 ·8	66 ·3
8. 0	63 ·6	65 ·8
9. 0	63 ·6	64 ·7
11. 30	62 ·2	62 ·8
12. 0	62 ·0	62 ·5
21. 30	62 ·4	64 ·0

June 2

Greenwich Mean Solar Time.	Western Declination.
0. 30	20. 28. 55*
8. 30	20. 47*
21. 0	19. 15*

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
0. 0	·1393
0. 26	·1389
0. 54	·1407
1. 5	·1410
1. 38	·1400
1. 59	·1405
2. 14	·1391
2. 20	·1395
2. 29	·1390
2. 41	·1405
2. 54	·1408
2. 59	·1403
3. 7	·1407
3. 16	·1345
3. 54	·1399

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
0. 0	·03180
3. 5	·03240
3. 10	·03209
3. 20	·03250
4. 12	·03288
7. 35	·03261
11. 18	·03274
19. 13	·03192
21. 54	·03203
22. 53	·03177
23. 59	·03170

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
0. 30	62 ·9	64 ·7
5. 0	63 ·3	65 ·8
8. 30	63 ·6	65 ·8
10. 45	63 ·6	66 ·0
11. 0	63 ·6	65 ·4
21. 0	62 ·5	64 ·1
22. 0	62 ·0	63 ·0
23. 0	62 ·3	63 ·4

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

June 2. The declination photographic trace is suspected to be incorrect, and is therefore not used : it is supposed that the lower declination magnet was in contact. There is no suspicion over the eye observations made with the upper declination magnet, and therefore they are inserted.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		June 2						
h m	° ′ ″	h m		h m		h m	°	°
		4.16	·1407					
		4.25	·1424					
		4.49	·1417					
		5.48	·1404					
		5.55	·1412					
		6.43	·1409					
		6.57	·1404					
		7.27	·1401					
		8.10	·1399					
		8.42	·1404					
		9.15	·1399					
		10.44	·1396					
		11.33	·1398					
		17.57	·1398					
		19.7	·1398					
		20.30	·1388					
		21.50	·1393					
		22.15	·1389					
		23.20	·1392					
		23.59	·1393					
June 3		June 3		June 3		June 3		
0.0	20.25.0	0.0	·1393	0.0	·03170	0.0	62·5	63·9
1.17	25.15	1.14	·1401	3.54	·03192	1.0	61·8	62·9
3.19	24.30	1.39	·1395	5.38	·03150	2.0	61·8	63·1
5.28	20.40		***	6.45	·03170	3.0	61·6	63·0
6.34	20.50	5.14	·1415	7.6	·03152	5.0	59·0	61·3
6.47	21.15	5.24	·1408	7.30	·03165	9.0	60·8	62·6
6.58	20.55	5.37	·1416	9.52	·03144	9.30	59·8	61·5
7.18	17.15	5.49	·1410	15.50	·03134	21.0	60·9	61·8
8.8	20.55	5.59	·1414	23.10	·03045	22.0	61·0	61·9
8.46	21.10	6.8	·1410	23.59	·03060	23.0	61·2	62·2
9.47	20.5	6.37	·1423					
10.5	20.35	6.59	·1404					
14.50	20.5	7.29	·1418					
16.24	17.40	8.0	·1415					
17.10	17.30	10.23	·1410					
17.58	18.20	10.33	·1415					
18.18	17.30	11.55	·1407					
18.28	18.15	14.31	·1407					
18.54	16.30	15.14	·1412					
19.4	18.30	17.10	·1409					
19.35	16.35	17.32	·1403					
21.15	19.40	17.47	·1407					
23.12	24.10	18.55	·1394					
23.59	26.35	19.24	·1400					
		19.39	·1397					
		19.57	·1402					
		21.36	·1396					
		23.17	·1402					
		23.45	·1397					
		23.59	·1403					
June 4		June 4		June 4		June 4		
0.0	20.26.35	0.0	·1403	0.0	·03060	0.0	61·2	62·3
0.49	27.55	0.27	·1411	4.28	·03140	1.0	61·4	62·5
2.10	26.50	0.44	·1400	8.5	·03119	2.0	61·5	62·6
2.20	27.30	0.59	·1405	9.57	·03096	3.0	61·5	62·7

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 4		June 4		June 4		June 4		
h m	° ′ ″	h m		h m		h m	°	°
2.43	20.25.5	1.35	·1396	12.0	·03110	7.30	61·5	62·8
3.29	24.45	2.5	·1409	22.46	·03037	9.0	60·8	61·6
3.50	23.35	2.20	·1401	23.59	·03040	9.25	60·4	61·0
4.9	24.10	2.38	·1412			21.0	60·6	61·2
4.48	23.0	3.9	·1405			22.0	60·7	61·4
5.30	19.50	3.45	·1419			23.0	60·7	61·4
6.24	20.45	3.57	·1411					
14.36	19.40	4.12	·1419					
14.55	20.40	4.25	·1414					
15.32	19.0	4.32	·1416					
16.37	19.10	4.43	·1405					
17.58	17.45	5.9	·1403					
18.32	20.30	5.39	·1414					
19.12	18.0	6.59	·1418					
19.21	24.0	8.5	·1414					
19.54	17.0	12.25	·1415					
20.59	17.30	14.9	·1411					
22.57	23.10	17.35	·1409					
23.59	25.10	18.38	·1407					
		19.12	·1396					
		19.27	·1400					
		19.54	·1398					
		20.10	·1404					
		22.59	·1393					
		23.40	·1405					
		23.54	·1401					
		23.59	·1407					
June 5		June 5		June 5		June 5		
0.0	20.25.10	0.0	·1407	0.0	·03040	0.0	61·0	62·0
0.18	27.20	0.20	·1409	0.55	·03035	1.0	61·0	62·0
0.44	28.15	1.14	·1407	6.15	·03092	2.0	61·0	61·9
1.24	27.10	1.30	·1418	9.2	·03070	3.0	61·1	62·0
2.56	27.0	1.50	·1415	9.23	·03056	8.30	..	61·3
3.37	24.50	2.18	·1425	18.33	·03051	9.0	59·9	60·4
5.40	21.0	3.37	·1418	22.40	·03000	21.0	60·8	61·5
6.49	20.35	4.25	·1427	23.59	·02992	22.0	60·8	61·7
7.39	21.0	4.55	·1424			23.0	60·9	61·4
8.20	18.10	5.16	·1428					
8.56	12.35	6.16	·1427					
9.17	16.0	6.48	·1422					
9.37	15.30	7.2	·1425					
10.0	16.30	7.12	·1420					
10.39	19.10	7.24	·1425					
11.54	20.0	7.59	·1428					
13.24	19.15	8.36	·1416					
13.47	20.0	9.4	·1428					
14.10	19.0	9.49	·1410					
14.55	19.0	10.9	·1414					
15.26	19.45	14.53	·1414					
16.37	17.35	15.15	·1417					
17.4	18.30	16.58	·1408					
17.50	16.55	17.19	·1413					
18.30	16.35	17.39	·1404					
18.37	17.10	20.4	·1396					
19.27	16.5	21.26	·1404					
20.4	17.10	23.31	·1402					
20.27	19.10	23.59	·1406					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 5								
h m	° ′ ″	h m		h m		h m	°	°
20.54	20. 18. 20							
21. 5	17. 30							
21. 26	18. 10							
21. 39	18. 0							
23. 28	22. 55							
23. 59	23. 10							
June 6		June 6		June 6		June 6		
0. 0	20. 23. 10	0. 0	·1406	0. 0	·02992	0. 0	60·9	61·9
1. 50	24. 10	1. 19	·1406	4. 26	·03058	1. 0	61·1	62·4
6. 16	22. 15	3. 27	·1415	10. 45	·03038	2. 0	61·3	62·8
7. 15	22. 0	3. 50	·1410	17. 50	·03036	3. 0	61·4	62·6
8. 20	21. 0	4. 32	·1419	19. 30	·03040	8. 0	61·4	62·7
9. 27	21. 25	5. 0	·1415	22. 43	·03008	9. 0	60·7	61·4
10. 7	20. 35	7. 0	·1422	23. 59	·03002	10. 0	60·2	60·7
11. 48	21. 0	7. 12	·1420			21. 0	60·8	61·7
13. 34	20. 30	8. 40	·1420			22. 0	60·9	61·8
13. 54	21. 0	10. 32	·1416			23. 0	61·1	62·1
14. 16	20. 0	13. 55	·1418					
15. 30	19. 45	14. 35	·1416					
15. 40	20. 0	16. 27	·1419					
16. 1	18. 35	18. 26	·1418					
16. 24	19. 50	20. 24	·1405					
16. 44	16. 50	20. 59	·1399					
17. 17	16. 0	21. 7	·1404					
17. 27	17. 0	21. 19	·1399					
17. 35	16. 20	21. 56	·1393					
17. 41	17. 10	23. 4	·1397					
18. 19	15. 0	23. 55	·1407					
18. 35	17. 10	23. 59	·1403					
18. 49	16. 10							
19. 29	17. 0							
19. 50	16. 20							
20. 49	16. 0							
21. 10	18. 15							
21. 18	18. 0							
22. 5	19. 20							
22. 33	22. 0							
23. 4	22. 30							
23. 23	23. 0							
23. 47	25. 10							
23. 59	24. 50							
June 7		June 7		June 7		June 7		
0. 0	20. 24. 50	0. 0	·1403	0. 0	·03002	0. 0	61·3	62·5
0. 58	28. 35	0. 44	·1410	1. 34	·03002	1. 0	61·4	62·6
1. 19	28. 20	0. 53	·1419	2. 30	·03029	2. 0	61·3	62·8
1. 32	29. 5	1. 17	·1414	2. 38	·03017	3. 0	61·4	62·9
2. 6	29. 0	1. 34	·1406	2. 44	·03035	9. 0	60·9	62·0
2. 23	30. 30	2. 2	·1414	2. 53	·03020	10. 20	59·9	60·7
2. 44	28. 20	2. 24	·1434	3. 2	·03060	19. 30	60·2	60·8
2. 49	29. 25	2. 27	·1430	3. 10	·03020	19. 43	59·8	60·5
2. 58	28. 20	2. 33	·1434	4. 24	·03072	21. 0	60·4	60·6
3. 3	31. 30	2. 35	·1422	8. 45	·03092	22. 0	59·6	60·1
3. 15	27. 10	2. 45	·1437	10. 31	·03035	23. 0	59·7	60·4
3. 18	28. 0	2. 57	·1421	19. 18	·03003			
4. 17	23. 50	3. 4	·1447	22. 23	·02925			
5. 3	24. 40	3. 15	·1409	23. 59	·02930			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 7		June 7						
h m	° ′ ″	h m		h m		h m	°	°
5. 49	20. 23. 0	3. 19	·1412					
6. 15	22. 55	3. 31	·1405					
6. 45	24. 0	3. 47	·1410					
7. 22	23. 0	3. 55	·1409					
7. 49	19. 20	4. 6	·1424					
8. 5	19. 55	4. 20	·1413					
8. 30	18. 20	4. 35	·1416					
9. 7	20. 30	4. 45	·1423					
10. 0	20. 0	5. 48	·1426					
10. 12	20. 40	5. 58	·1424					
10. 36	19. 50	6. 18	·1434					
11. 0	21. 15	6. 34	·1428					
11. 26	20. 15	6. 43	·1432					
11. 48	20. 50	6. 59	·1420					
12. 15	19. 50	7. 14	·1422					
13. 18	19. 50	7. 32	·1412					
13. 40	21. 0	7. 57	·1419					
14. 47	19. 45	8. 20	·1414					
15. 3	20. 50	8. 54	·1421					
15. 22	18. 25	9. 31	·1416					
15. 45	18. 15	10. 40	·1415					
15. 56	19. 20	10. 52	·1419					
16. 14	17. 0	11. 6	·1418					
16. 34	17. 55	11. 20	·1414					
	***	12. 45	·1419					
17. 20	15.:40	14. 57	·1415					
17. 30	17. 40	15. 10	·1419					
21. 10	19. 35	15. 21	·1416					
21. 20	21. 0	16. 40	·1416					
21. 56	21. 25	18. 9	·1412					
23. 12	25. 10	20. 18	·1400					
23. 46	25. 30	22. 0	·1400					
23. 59	25. 0	23. 59	·1409					
June 8		June 8		June 8		June 8		
0. 0	20. 25. 0	0. 0	·1409	0. 0	·02930	0. 0	60·6	61·2
0. 43	23. 0	0. 24	·1395	5. 12	·03049	1. 0	60·4	61·4
2. 36	23. 0	1. 57	·1417	9. 5	·03005	2. 0	60·6	61·5
2. 55	24. 10	2. 7	·1415	11. 9	·03000	3. 0	60·6	61·6
3. 26	22. 15	2. 27	·1424	11. 40	·03015	7. 20	60·8	62·2
3. 49	22. 20	2. 56	·1416	12. 20	·03000	9. 0	59·6	60·2
4. 13	21. 30	3. 29	·1403	19. 0	·02993	11. 15	60·8	62·1
4. 55	22. 0	4.:37	·1416	22. 33	·02967	21. 30	60·5	61·5
5. 50	22. 55	4. 59	·1414	23. 59	·02975			
6. 54	22. 10	5. 8	·1421					
7. 24	22. 15	6. 48	·1418					
8. 35	21. 20	8. 36	·1419					
9. 4	20. 0	8. 50	·1421					
9. 39	20. 0	8. 59	·1418					
9. 49	20. 55	9. 29	·1415					
10. 21	19. 15	9. 43	·1420					
10. 36	20. 55	9. 58	·1417					
10. 58	20. 0	10. 34	·1425					
11. 38	19. 30	11. 35	·1412					
11. 55	23. 10	11. 59	·1419					
12. 46	19. 30	12. 57	·1414					
13. 36	19. 55	13. 35	·1417					
13. 54	18. 35	14. 24	·1409					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 8		June 8						
h m	° ′ ″	h m		h m		h m	°	°
14.57	20.20.45	17.57	·1414					
15.42	19. 0	23. 3	·1405					
16. 8	18. 5	23.59	·1407					
17.40	17.45							
17.48	18.20							
17.58	17.15							
21.27	16.40							
23.59	23.15							
June 9		June 9		June 9		June 9		
0. 0	20.23.15	0. 0	·1407	0. 0	·02975	0. 0	61·2	62·4
2.30	22.50	2.49	·1409	5.10	·03060	1. 0	61·4	62·7
5.18	21.15	4. 4	·1416	8. 0	·03058	7.30	61·4	63·4
6.30	22. 0	4.39	·1412	10.30	·03012	9. 0	61·3	62·4
6.57	21.10	4.47	·1420	19.29	·02977	10.20	60·3	61·4
11.40	21.45	6.49	·1415	22. 0	·02980	11.10	61·1	62·2
12. 9	20. 0	7.41	·1418	23.59	·03012	21. 0	60·8	62·0
14.22	19.15	9.59	·1415			22. 0	61·1	62·3
15. 3	22.15	11.53	·1419			23. 0	61·5	63·0
15.31	19.20	14.35	·1417					
16.49	16.15	15. 0	·1410					
18.42	17.45	15.20	·1415					
19.43	20.30	18.28	·1414					
20.15	19.50	19. 9	·1412					
22.40	20.45	19.28	·1406					
23.59	23.20	19.52	·1409					
		21. 4	·1408					
		21.38	·1410					
		23.59	·1408					
June 10		June 10		June 10		June 10		
0. 0	20.23.20	0. 0	·1408	0. 0	·03012	0. 0	61·6	63·4
0.28	24.15	0.34	·1406	5.10	·03092	1. 0	61·6	63·4
2.24	22.30	1.13	·1409	7. 3	·03105	2. 0	61·8	63·8
2.45	23. 0	2.24	·1406	9.31	·03150	3. 0	62·0	64·0
4. 0	22.20	5.19	·1416	14.48	·03081	6. 0	62·2	64·8
9.40	20.50	5.47	·1414	18. 4	·03060	8.30	62·6	65·4
10. 2	19.20	8. 5	·1422	22. 0	·03060	9. 0	62·9	65·2
12.15	20.30	8.49	·1412	23.59	·03110	10.20	63·2	64·4
13.15	19. 0	9.40	·1420			11.10	62·6	64·0
13.40	19.15	13.12	·1414			21. 0	62·0	63·6
14.12	21.30	13.41	·1409			22. 0	62·0	63·9
14.50	17.30	14.27	·1414			23. 0	62·4	64·4
15.43	18.25	15.55	·1410					
16. 9	17. 0	17.59	·1412					
16.29	18. 0	19.59	·1405					
16.56	16.30	21. 7	·1408					
19.40	15.20	22.10	·1400					
19.56	16.30	23.59	·1402					
22. 7	17.10							
23. 6	19.30							
23.59	22.40							
June 11		June 11		June 11		June 11		
0. 0	20.22.40	0. 0	·1402	0. 0	·03110	0. 0	62·7	64·9
0.20	23.30	0.59	·1403	2.18	·03124	1. 0	62·8	65·2
1.54	23.40	1.43	·1409	4.10	·03162	2. 0	63·0	65·7
4. 1	21.10	1.58	·1415	9.59	·03222	3. 0	63·2	65·9

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 11		June 11		June 11		June 11		
h m	° ′ ″	h m		h m		h m	°	°
4.29	20.21.40	2.22	·1411	11.42	·03212	8.30	63·9	66·9
5.16	21. 0	2.58	·1412	14.13	·03165	9. 0	64·1	66·6
7.24	21.55	3.17	·1418	19.42	·03170	9.30	64·3	66·3
10.12	20. 0	3.43	·1409	22.10	·03140	11. 0	64·1	65·4
10.33	18.30	3.59	·1412	23.59	·03183	12. 0	63·3	64·9
11.35	20. 0	4.15	·1418			13.20	62·9	64·4
11.51	21.50	4.40	·1410			21. 0	63·6	65·6
16.55	18. 0	4.50	·1415			22. 0	63·7	65·8
17. 5	17. 0	5.48	·1408			23. 0	63·8	65·8
19.41	18. 0	6.10	·1413					
20.17	16.40	6.37	·1412					
21. 3	19. 0	7.19	·1419					
22.30	19.50	8.28	·1417					
22.54	20.35	8.40	·1408					
23.59	23.30	9. 5	·1416					
		10.17	·1411					
		10.41	·1415					
		11. 9	·1408					
		11.37	·1409					
		11.47	·1413					
		12.55	·1408					
		17.17	·1413					
		18.39	·1405					
		19.10	·1409					
		19.41	·1404					
		20.26	·1395					
		21.28	·1401					
		22.38	·1399					
		23.59	·1385					
June 12		June 12		June 12		June 12		
0. 0	20.23.30	0. 0	·1385	0. 0	·03183	0. 0	64·3	66·2
2.39	23.10	2.14	·1382	4.21	·03280	1. 0	64·3	66·7
4. 5	20.25	3.26	·1395	9.29	·03288	2. 0	64·5	67·1
5.49	20. 0	4. 9	·1395	13.25	·03155	3. 0	64·6	67·1
6.20	20.40	4.27	·1400	16.35	·03128	9. 0	65·3	67·6
6.46	20.10	6.19	·1400	19.22	·03089	10. 0	64·8	66·4
9.56	20.20	6.37	·1405	22.20	·03100	11. 0	64·1	65·4
10. 8	20.50	7. 9	·1401	23.59	·03112	21. 0	62·4	63·5
11.36	20.10	7.25	·1406			22. 0	62·6	63·8
15.21	18.50	10.49	·1394			23. 0	62·9	64·4
17.13	16. 0		***					
18.48	15.50	15.30	·1395					
21.30	19. 5		***					
22.50	22. 0	17.31	·1399					
23.59	24.30	22. 5	·1379					
		23.59	·1383					
June 13		June 13		June 13		June 13		
0. 0	20.24.30	0. 0	·1383	0. 0	·03112	0. 0	62·7	64·0
5. 0	21.10	1.16	·1392	4. 8	·03110	1. 0	63·1	63·8
12.46	20.55	4.24	·1403	9.50	·03075	2. 0	63·4	63·9
13. 8	20. 0		***	16.37	·03049	3. 0	62·9	63·5
15.27	19.20	6.57	·1403	21.22	·02983	7. 0	62·4	63·0
17.11	16.20	7.25	·1404	23.59	·03000	9. 0	62·1	62·8
18.26	16.20	9.59	·1407			9.30	61·1	62·1
19.37	14.30	12.18	·1403			11. 0	61·9	62·7
21.49	18.10	17.18	·1402			21. 0	61·6	61·7

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
June 13	
h m	° ′ ″
23. 6	20. 24. 0
23. 59	25. 30
June 14	
0. 0	20. 25. 30
1. 35	25. 55
2. 49	24. 0
4. 7	22. 45
5. 4	22. 50
5. 25	22. 0
6. 15	22. 0
6. 25	21. 10
9. 8	20. 10
12. 19	20. 55
13. 3	22. 0
13. 36	20. 35
13. 47	21. 40
14. 6	21. 10
14. 25	25. 0
15. 37	17. 20
16. 9	19. 10
17. 40	18. 50
18. 5	14. 50
19. 25	14. 30
20. 40	15. 20
21. 47	18. 10
22. 50	23. 50
23. 59	27. 50
June 15	
0. 0	20. 27. 50
0. 55	28. 20
2. 8	27. 45
3. 7	27. 30
5. 28	21. 30
6. 44	20. 5
7. 45	20. 30
9. 25	18. 40
9. 48	13. 30
9. 55	16. 30
10. 5	15. 5
11. 10	17. 0
11. 43	19. 0
13. 50	20. 25
14. 6	19. 35
15. 50	19. 20
16. 16	17. 40
16. 34	18. 0
18. 10	14. 30
19. 35	15. 30
19. 58	15. 0
20. 46	16. 30
21. 29	18. 0
22. 26	21. 50
22. 31	23. 20
22. 56	24. 0
23. 11	25. 50
23. 59	27. 0
June 16	
0. 0	20. 27. 0
1. 0	28. 0
4. 13	24. 0
4. 23	24. 50
4. 42	23. 40
5. 33	22. 50
5. 41	24. 45
6. 4	23. 15
7. 11	23. 30
7. 16	24. 0
8. 19	22. 40
8. 40	20. 0
9. 39	19. 0
10. 2	19. 40
10. 12	20. 40
10. 50	21. 20
11. 5	19. 10
11. 35	18. 20
11. 47	21. 30
12. 15	16. 20
12. 25	16. 0
13. 38	19. 20
14. 5	18. 40
14. 16	17. 0
14. 29	18. 0
14. 43	16. 55
15. 47	20. 0
16. 23	17. 55
17. 18	17. 20
17. 30	18. 45
17. 35	17. 40
17. 49	19. 0
18. 2	17. 50
18. 13	19. 0
18. 40	18. 0
19. 3	18. 55
19. 38	17. 5
19. 43	18. 15
19. 48	17. 10
19. 54	18. 0
20. 31	18. 0
20. 43	17. 0
21. 3	18. 15
22. 50	23. 20
23. 59	27. 20
June 17	
0. 0	20. 27. 20
0. 10	27. 50

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
June 13	
h m	
23. 15	·1391
23. 59	·1392
June 14	
0. 0	·1392
1. 45	·1397
2. 56	·1397
3. 10	·1405
4. 4	·1403
4. 14	·1398
4. 39	·1402
5. 4	·1398
5. 55	·1408
6. 9	·1411
6. 26	·1406
6. 54	·1411
8. 4	·1409
9. 57	·1412
12. 36	·1407
13. 15	·1409
14. 19	·1406
15. 10	·1415
15. 48	·1405
16. 47	·1411
17. 8	·1407
17. 29	·1412
22. 8	·1390
23. 59	·1392
June 15	
0. 0	·1392
1. 21	·1402
1. 43	·1398
1. 51	·1405
2. 0	·1399
2. 40	·1404
2. 50	·1399
3. 44	·1393
3. 59	·1399
4. 6	·1398
4. 19	·1405
5. 45	·1411
6. 23	·1407
6. 54	·1413
7. 16	·1412
7. 46	·1417
9. 9	·1407
9. 26	·1410
9. 40	·1406
9. 55	·1410
10. 25	·1408
10. 50	·1400
11. 48	·1406
15. 14	·1403
17. 34	·1404
18. 34	·1397
21. 5	·1392
21. 32	·1395
21. 47	·1392
22. 19	·1393
22. 37	·1385
23. 59	·1393
June 16	
0. 0	·1393
0. 15	·1392
0. 59	·1399
1. 19	·1392
2. 49	·1406
3. 31	·1405
4. 9	·1409
4. 26	·1418
4. 39	·1410
5. 7	·1412
5. 13	·1413
5. 29	·1405
5. 39	·1420
6. 0	·1411
6. 29	·1415
7. 7	·1429
7. 26	·1418
8. 0	·1436
8. 10	·1431
8. 24	·1418
8. 43	·1411
9. 19	·1418
9. 35	·1414
9. 47	·1415
9. 59	·1409
10. 26	·1414
10. 40	·1409
10. 56	·1416
11. 5	·1413
11. 11	·1419
11. 45	·1414
12. 6	·1426
12. 39	·1410
13. 24	·1400
14. 10	·1406
14. 19	·1401
14. 37	·1404
14. 50	·1400
15. 4	·1402
15. 22	·1400
15. 36	·1402
15. 49	·1400
16. 6	·1405
17. 55	·1397
18. 26	·1397
20. 6	·1392
21. 10	·1398
23. 59	·1403
June 17	
0. 0	·1403
0. 40	·1398

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
June 14	
0. 0	·03000
3. 20	·03010
9. 9	·02973
14. 37	·02970
15. 14	·02950
16. 9	·02950
21. 26	·02913
22. 30	·02891
23. 59	·02900
June 15	
0. 0	·02900
1. 30	·02900
5. 15	·02936
8. 45	·02910
13. 4	·02930
22. 12	·02874
23. 59	·02870
June 16	
0. 0	·02870
5. 25	·02930
5. 33	·02946
5. 40	·02930
11. 40	·02940
12. 8	·02902
15. 19	·02920
18. 13	·02917
21. 25	·02877
23. 59	·02870
June 17	
0. 0	·02870
4. 50	·02920

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 13		
h m	°	°
22. 0	61·8	62·3
23. 0	62·0	62·7
June 14		
0. 0	62·0	62·7
1. 0	62·0	62·8
2. 0	62·0	62·8
3. 0	61·8	62·7
8. 15	60·5	60·8
8. 40	60·8	61·3
9. 0	60·7	61·3
11. 30	60·4	61·2
21. 0	60·4	60·8
22. 0	60·1	60·6
23. 0	60·4	60·9
June 15		
0. 0	60·4	61·0
1. 0	60·4	60·7
2. 0	60·4	60·9
3. 0	60·4	60·9
8. 0	59·6	60·4
9. 0	60·1	61·0
22. 0	60·2	61·2
June 16		
1. 0	60·4	61·1
2. 10	..	60·5
3. 30	60·2	61·3
9. 0	59·7	61·0
21. 0	60·0	60·9
22. 0	59·7	60·7
23. 0	60·0	61·1
June 17		
0. 0	60·1	61·3
1. 0	60·0	61·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
June 17	
h m	° ′ ″
2. 18	20. 26. 50
4. 10	22. 45
6. 2	22. 0
6. 39	19. 0
7. 30	20. 40
11. 40	20. 50
16. 26	18. 35
17. 40	16. 40
18. 0	17. 30
20. 27	15. 5
21. 29	16. 30
22. 47	20. 0
23. 59	25. 0
June 18	
0. 0	20. 25. 0
1. 27	27. 50
1. 36	27. 30
2. 5	27. 40
4. 41	23. 30
5. 0	23. 45
5. 49	21. 40
6. 5	21. 55
6. 15	21. 0
6. 35	21. 40
6. 44	21. 0
7. 20	21. 30
7. 27	22. 5
8. 10	21. 0
8. 32	21. 25
8. 51	20. 30
8. 55	21. 35
9. 2	19. 50
9. 30	18. 55
10. 33	20. 0
11. 14	19. 15
11. 26	20. 30
11. 42	19. 50
13. 20	20. 0
13. 33	20. 30
13. 49	19. 50
13. 58	20. 45
14. 12	19. 40
15. 18	20. 30
16. 29	16. 45
17. 43	17. 30
17. 50	16. 45
18. 26	17. 10
18. 29	20. 16. 30
19. 43	16. 15
21. 20	17. 55
23. 5	21. 50
23. 36	23. 0
23. 59	25. 0
June 19	
0. 0	20. 25. 0
0. 25	24. 15
1. 55	26. 30
4. 7	23. 40
4. 42	24. 10
4. 54	23. 0
5. 15	23. 30
5. 20	22. 40
5. 30	23. 45
5. 41	21. 20
5. 48	22. 5
6. 19	20. 25
6. 29	20. 45
6. 57	17. 30
7. 5	18. 0
7. 18	17. 30
7. 43	20. 0
9. 35	21. 5
9. 55	20. 10
10. 16	21. 25
10. 59	20. 0
11. 49	15. 0
12. 10	13. 30
12. 33	18. 30
13. 53	18. 0
14. 0	19. 20
14. 4	18. 0
15. 9	17. 20
15. 18	18. 0
15. 33	17. 5
15. 49	19. 30
15. 57	19. 10
16. 2	19. 15
16. 20	16. 20
16. 29	17. 15
16. 49	24. 0
17. 3	25. 0
17. 26	21. 45
17. 58	21. 30
18. 8	19. 40
18. 33	23. 50
18. 36	23. 5
18. 57	25. 0
19. 12	20. 30
19. 28	22. 5
19. 55	19. 10
20. 15	20. 50
20. 33	18. 20
20. 49	20. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
June 17	
h m	
0. 59	·1402
1. 19	·1398
2. 27	·1412
2. 59	·1408
3. 38	·1412
4. 7	·1408
4. 48:	·1422
5. 19	·1414
5. 37	·1422
6. 6	·1420
6. 23	·1412
6. 55	·1415
7. 45	·1412
8. 19	·1414
9. 0	·1410
9. 39	·1414
10. 0	·1409
12. 14	·1408
12. 59	·1407
14. 8	·1404
17. 45	·1406
23. 7	·1386
23. 59	·1390
June 18	
0. 0	·1390
0. 39	·1392
1. 18	·1406
1. 45	·1397
2. 35	·1406
3. 24	·1411
3. 37	·1408
3. 56	·1412
4. 17	·1410
4. 36	·1413
4. 50	·1423
5. 9	·1412
	***
5. 44	·1413
6. 1	·1419
6. 26	·1413
6. 35	·1418
6. 46	·1414
7. 4	·1415
7. 30	·1420
8. 46	·1410
8. 57	·1416
9. 27	·1412
9. 49	·1417
10. 4	·1414
10. 54	·1420
11. 13	·1410
11. 49	·1411
12. 4	·1416
12. 56	·1410
13. 33	·1414
14. 6	·1406
14. 46	·1409
14. 56	·1407
15. 39	·1411
16. 54	·1406
19. 50	·1398
22. 0	·1379
23. 49	·1382
23. 59	·1392
June 19	
0. 0	·1392
1. 35	·1396
1. 48	·1402
2. 4	·1399
2. 19	·1404
2. 59	·1402
3. 17	·1410
3. 34	·1405
3. 55	·1414
4. 20	·1406
4. 39	·1420
4. 54	·1402
5. 20	·1415
5. 23	·1409
5. 33	·1422
5. 41	·1406
5. 50	·1415
6. 7	·1418
6. 19	·1408
6. 25	·1412
6. 38	·1400
7. 2	·1412
7. 18	·1408
7. 40	·1411
8. 0	·1409
8. 20	·1418
8. 42	·1413
9. 50	·1410
9. 59	·1415
10. 35	·1413
10. 44	·1408
11. 39	·1424
11. 49	·1421
12. 3	·1432
12. 41	·1405
12. 59	·1400
13. 50	·1404
13. 57	·1410
14. 6	·1404
	***
15. 57	·1407
16. 35	·1390
17. 15	·1409
18. 0	·1388
18. 38	·1396
19. 7	·1382
19. 27	·1388
20. 10	·1383
20. 25	·1370

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
June 17	
h m	
7. 5	·02950
9. 2	·02930
14. 10	·02928
20. 10	·02910
22. 21	·02900
23. 59	·02910
June 18	
0. 0	·02910
5. 6	·02982
10. 50	·03000
12. 29	·02981
17. 20	·03020
19. 40	·03021
21. 15	·03010
23. 59	·03018
June 19	
0. 0	·03018
1. 14	·03030
4. 35	·03090
4. 50	·03080
6. 20	·03098
7. 36	·03085
11. 20	·03043
12. 5	·03000
15. 43	·03000
16. 21	·02990
16. 49	·03002
17. 30	·02950
18. 15	·02969
19. 2	·02943
22. 30	·02973
23. 59	·02990

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 17		
h m	°	°
2. 0	59 ·9	61 ·0
3. 0	59 ·9	61 ·0
8. 0	59 ·9	61 ·4
9. 0	59 ·7	61 ·5
21. 0	60 ·0	61 ·1
22. 0	59 ·9	61 ·1
23. 0	60 ·4	61 ·9
June 18		
0. 0	60 ·4	62 ·2
1. 0	60 ·7	62 ·5
2. 0	60 ·7	62 ·5
3. 0	60 ·8	62 ·8
9. 0	61 ·5	63 ·8
10. 0	..	62 ·9
11. 0	..	62 ·0
11. 45	..	61 ·7
21. 0	61 ·7	63 ·9
22. 0	61 ·8	64 ·0
23. 0	62 ·0	64 ·5
June 19		
0. 0	62 ·2	64 ·7
1. 0	62 ·4	64 ·8
2. 0	62 ·3	64 ·8
3. 0	62 ·3	64 ·8
9. 0	62 ·2	63 ·9
10. 30	61 ·8	63 ·6
11. 15	61 ·5	62 ·9
11. 30	61 ·4	62 ·8
21. 0	60 ·7	62 ·0
22. 0	60 ·8	62 ·0
23. 0	61 ·2	62 ·6

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 19		June 19						
h m	° ′ ″	h m		h m		h m	°	°
20. 55	20. 18. 0	20. 39	·1376					
21. 3	20. 0	20. 49	·1372					
21. 9	19. 10	21. 19	·1377					
21. 29	22. 20	21. 37	·1372					
22. 22	20. 0	22. 26	·1384					
23. 9	24. 0	22. 37	·1379					
23. 25	23. 45	22. 47	·1387					
23. 59	25. 30	23. 59	·1390					
June 20		June 20		June 20		June 20		
0. 0	20. 25. 30	0. 0	·1390	0. 0	·02990	0. 0	61 ·9	63 ·1
0. 45	27. 10	0. 57	·1394	5. 27	·03060	1. 0	61 ·8	63 ·0
3. 8	25. 55	1. 3	·1402	7. 23	·03058	2. 0	61 ·7	62 ·9
3. 37	26. 30	1. 14	·1396	7. 40	·03040	3. 0	61 ·6	62 ·7
4. 5	24. 30	1. 36	·1399	7. 51	·03057	8. 20	59 ·9	61 ·8
4. 13	26. 0	1. 47	·1393	8. 6	·03024	9. 0	60 ·3	61 ·1
4. 22	26. 0	1. 53	·1403	15. 51	·02956	9. 35	60 ·7	61 ·9
5. 5	22. 0	2. 8	·1402	16. 13	·02924	10. 15	60 ·6	61 ·9
5. 10	23. 30	2. 25	·1408	19. 9	·02887	21. 0	59 ·6	60 ·8
5. 31	22. 0	2. 36	·1398	22. 0	·02880	22. 0	59 ·8	61 ·1
5. 50	23. 20	2. 49	·1414	23. 59	·02900	23. 0	60 ·0	61 ·4
6. 11	21. 10	3. 10	·1408					
7. 4	20. 30	3. 35	·1412					
7. 15	21. 0	4. 9	·1391					
7. 33	12. 25	4. 25	·1400					
7. 49	19. 30	4. 48	·1386					
7. 59	17. 20	5. 4	·1397					
8. 17	20. 0	5. 10	·1410					
8. 40:	15. 35		***					
9. 7	18. 0	5. 37	·1410					
9. 39	18. 0	5. 40	·1418					
10. 2	20. 0	6. 5	·1404					
10. 17	18. 35	6. 35	·1417					
10. 50	18. 30	6. 59	·1412					
11. 53	20. 5	7. 12	·1422					
12. 9	19. 15	7. 17	·1435					
13. 24	19. 0	7. 19	·1414					
13. 40	20. 0	7. 47	·1444					
13. 58	19. 5	8. 0	·1421					
14. 35	19. 10	8. 10	·1424					
14. 46	20. 5	8. 34	·1409					
15. 9	17. 50	8. 55	·1418					
15. 29	19. 25	9. 40	·1403					
15. 57	24. 35	11. 0	·1410					
16. 38	22. 40	12. 21	·1404					
17. 6	25. 55	12. 29	·1408					
17. 19	25. 0	13. 6	·1404					
17. 31	25. 30	14. 15	·1403					
17. 46	24. 0	14. 49	·1409					
18. 2	23. 50	15. 29	·1397					
18. 30	30. 15	15. 50	·1402					
18. 36	29. 10	16. 17	·1396					
18. 40	30. 5	16. 49	·1409					
19. 3	24. 20	17. 18	·1410					
19. 20	21. 10	17. 48	·1392					
19. 27	21. 55	18. 8	·1399					
19. 35	21. 30	18. 45	·1397					
19. 43	19. 35	18. 55	·1405					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 20		June 20						
h m	° ′ ″	h m		h m		h m	°	°
20. 32	20. 17. 30	19. 19	·1397					
21. 6	19. 20	19. 49	·1402					
22. 22	20. 55	20. 54	·1394					
22. 50	24. 25	21. 19	·1387					
22. 56	23. 0	22. 7	·1379					
23. 0	25. 10	22. 59	·1376					
23. 59	26. 0	23. 25	·1381					
		23. 35	·1376					
		23. 59	·1392					
June 21		June 21		June 21		June 21		
0. 0	20. 26. 0	0. 0	·1392	0. 0	·02900	0. 0	60 ·2	61 ·6
0. 15	25. 0	0. 43	·1393	1. 30	·02908	1. 0	59 ·9	60 ·9
3. 0	26. 10	1. 17	·1398	4. 1	·02973	2. 0	60 ·8	62 ·1
4. 35	24. 50	1. 29	·1403	6. 50	·02985	3. 0	60 ·6	62 ·2
4. 47	23. 50	1. 43	·1399	14. 15	·02880	4. 20	60 ·8	61 ·7
5. 23	24. 25	2. 9	·1406	14. 42	·02840	9. 0	59 ·6	61 ·0
6. 52	21. 0	2. 37	·1397	16. 0	·02841	21. 0	58 ·1	59 ·2
7. 37	21. 45	2. 58	·1407	16. 53	·02810	22. 0	58 ·6	59 ·7
8. 9	19. 35	3. 10	·1398	22. 52	·02811	23. 0	59 ·0	60 ·4
9. 5	20. 40	4. 7	·1417	23. 59	·02820			
10. 48	18. 30	4. 26	·1397					
11. 0	19. 0	5. 3	·1402					
11. 38	18. 0	5. 19	·1416					
11. 58	19. 0	5. 30	·1403					
12. 55	18. 50	5. 37	·1407					
13. 2	20. 10	5. 50	·1401					
13. 34	21. 20	6. 4	·1412					
13. 45	20. 0	6. 29	·1402					
14. 5	20. 40	6. 50	·1412					
14. 40	27. 55	7. 21	·1404					
15. 0	24. 0	8. 39	·1413					
15. 21	20. 10	10. 35	·1408					
15. 48	19. 20	11. 49	·1418					
16. 20	21. 5	12. 6	·1412					
16. 35	20. 25	13. 7	·1408					
16. 46	20. 50	13. 24	·1413					
17. 29	16. 50	13. 49	·1412					
17. 39	18. 20	14. 14	·1400					
17. 49	17. 30	14. 39	·1410					
18. 10	19. 40	14. 58	·1405					
18. 55	19. 30	15. 18	·1407					
19. 1	21. 20	15. 57	·1401					
19. 42	17. 50	16. 30:	·1411					
20. 1	17. 0	17. 38	·1392					
20. 15	17. 20	18. 22	·1398					
20. 25	16. 15	19. 34	·1389					
20. 30	18. 30	21. 20	·1394					
20. 39	16. 40	23. 10	·1375					
20. 59	18. 10	23. 40	·1393					
21. 25	17. 55	23. 59	·1394					
23. 45	23. 30							
23. 59	24. 0							
June 22		June 22		June 22		June 22		
0. 0	20. 24. 0	0. 0	·1394	0. 0	·02820	0. 0	59 ·6	61 ·4
1. 45	27. 45	0. 29	·1393	4. 0	·02901	1. 0	59 ·7	61 ·7
2. 18	27. 0	0. 57	·1402	6. 30	·02925	2. 0	59 ·8	61 ·9

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 22		June 22		June 22		June 22		
h m	° ′ ″	h m		h m		h m	°	°
2. 43	20. 25. 0	1. 24	·1403	7. 31	·02948	3. 0	60 ·0	62 ·1
4. 8	23. 0	1. 39	·1410	9. 50	·02913	7. 0	60 ·5	63 ·0
4. 25	23. 30	2. 24	·1408	10. 13	·02890	9. 0	60 ·1	62 ·1
4. 42	22. 20	2. 50	·1400	11. 35	·02879	10. 20	59 ·6	61 ·5
5. 23	22. 40	2. 59	·1406	12. 40	·02810	11. 15	59 ·4	61 ·0
5. 33	21. 30	4. 5	·1416	14. 1	·02780	21. 0	59 ·8	61 ·5
6. 4	22. 45	4. 15	·1411	14. 53	·02800			
6. 52	19. 30	4. 29	·1420	15. 8	·02790			
7. 8	19. 55	5. 0	·1411	17. 41	·02843			
7. 20	15. 0	5. 23	·1419	19. 55	·02829			
8. 2	19. 50	5. 37	·1412	22. 15	·02851			
8. 34	18. 0	6. 7	·1418	23. 59	·02890			
9. 18	19. 30	6. 29	·1408					
9. 33	18. 50	7. 3	·1415					
9. 58	14. 10	7. 16	·1412					
10. 9	16. 20	7. 29	·1420					
10. 20	12. 20	8. 9	·1412					
10. 35	12. 30	8. 16	·1414					
10. 44	10. 50	8. 26	·1407					
11. 0	14. 20	8. 52	·1408					
11. 7	14. 0	9. 11	·1413					
11. 33	16. 0	9. 19	·1410					
11. 52	22. 55	9. 27	·1413					
12. 2	21. 20	9. 43	·1408					
12. 10	21. 15	9. 59	·1411					
12. 43	18. 0	10. 19	·1395					
13. 0	19. 5	10. 56	·1402					
13. 24	17. 50	11. 2	·1397					
13. 30	18. 30	11. 35	·1400					
13. 46	17. 0	11. 48	·1392					
14. 10	11. 0		***					
14. 22	10. 30	12. 47	·1403					
14. 57	11. 5	13. 5	·1396					
15. 20	13. 20	13. 46	·1409					
15. 40	13. 10	14. 8	·1399					
15. 53	12. 15	14. 43	·1394					
16. 58	14. 10	14. 57	·1399					
17. 49	16. 0	15. 16	·1394					
18. 9	15. 0	15. 47	·1400					
18. 46	14. 30	17. 42	·1402					
20. 18	16. 0	19. 29	·1395					
20. 26	15. 0	20. 30	·1387					
21. 37	18. 0	22. 9	·1389					
23. 37	22. 50	22. 27	·1386					
23. 59	23. 50	23. 49	·1396					
		23. 59	·1394					
June 23		June 23		June 23		June 23		
0. 0	20. 23. 50	0. 0	·1394	0. 0	·02890	0. 0	60 ·4	62 ·5
0. 40	25. 10	0. 47	·1400	4. 5	·02935	3. 30	60 ·9	63 ·4
0. 49	27. 0	1. 10	·1387	4. 47	·02965	6. 15	61 ·1	63 ·6
1. 10	24. 0	1. 34	·1399	7. 6	·02980	8. 45	61 ·3	63 ·7
1. 47	25. 30	1. 47	·1408	7. 26	·02994	10. 30	59 ·4	62 ·3
2. 0	24. 15	2. 3	·1395	9. 34	·02987	11. 15	59 ·1	62 ·0
2. 10	25. 5	2. 35	·1396	10. 59	·02928	11. 30	58 ·8	61 ·9
2. 33	24. 30	3. 0	·1414	12. 22	·02920	21. 0	60 ·9	62 ·2
2. 45	26. 0	3. 13	·1410	13. 31	·02930	22. 0	60 ·9	62 ·5
2. 57	26. 0	3. 19	·1420	20. 43	·02939	23. 0	61 ·2	63 ·2

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
June 23		June 23		June 23				
h m	° ′ ″	h m		h m		h m	°	°
3. 10	20. 24. 55	3. 28	·1414	22. 51	·02923			
3. 24	25. 30	3. 34	·1424	23. 59	·02935			
3. 34	27. 0	3. 55	·1407					
4. 3	24. 10	4. 2	·1401					
4. 23	25. 25	4. 33	·1420					
4. 35	25. 20	4. 39	·1416					
4. 43	24. 30	4. 43	·1431					
4. 48	26. 0	4. 59	·1416					
5. 0	25. 0	5. 4	·1418					
5. 12	25. 10	5. 17	·1406					
5. 20	24. 0	5. 26	·1410					
6. 39	24. 0	5. 32	·1407					
7. 5	18. 45	5. 37	·1410					
7. 20	17. 30	5. 44	·1405					
7. 55	21. 40		***					
8. 36	22. 20	6. 10	·1409					
9. 24	20. 30	6. 23	·1415					
9. 40	18. 0	7. 9	·1408					
10. 6	22. 20	7. 22	·1414					
10. 35	20. 45	7. 40	·1408					
10. 45	21. 10	9. 19	·1406					
10. 52	19. 35	9. 47	·1423					
11. 16	20. 0	10. 35	·1404					
11. 31	18. 30		***					
12. 27	18. 0	11. 48	·1411					
13. 10	19. 5	13. 4	·1400					
13. 36	22. 0	13. 17	·1404					
14. 56	18. 5	13. 55	·1410					
15. 1	17. 0	14. 35	·1411					
15. 8	18. 10	14. 59	·1408					
15. 25	17. 30	15. 5	·1399					
15. 37	16. 0	15. 15	·1406					
16. 16	17. 30	15. 40	·1403					
16. 36	16. 45	15. 49	·1397					
17. 10	17. 40	16. 16	·1404					
17. 34	16. 20	16. 25	·1399					
17. 46	17. 0	17. 45	·1401					
18. 0	15. 20	17. 58	·1398					
18. 5	16. 55	18. 43	·1402					
18. 18	15. 50		***					
18. 25	16. 50	20. 35	·1396					
18. 35	15. 40	22. 15	·1382					
18. 48	18. 0	22. 49	·1385					
18. 56	16. 30	23. 14	·1390					
19. 35	16. 20	23. 59	·1398					
20. 0	18. 5							
20. 10	17. 20							
21. 20	19. 25							
22. 30	23. 0							
23. 10	23. 10							
23. 59	24. 50							
June 24		June 24		June 24		June 24		
0. 0	20. 24. 50	0. 0	·1398	0. 0	·02935	0. 0	61 ·7	63 ·5
0. 30	24. 30	0. 9	·1395	0. 27	·02930	1. 0	61 ·5	63 ·7
0. 55	26. 40	0. 29	·1402	4. 15	·03017	2. 0	62 ·5	63 ·6
1. 10	26. 0	0. 46	·1395	5. 21	·03012	3. 0	61 ·8	63 ·8
1. 20	26. 20	0. 54	·1408	5. 55	·03034	8. 0	..	63 ·0

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

June 24

Greenwich Mean Solar Time. h m	Western Declination. ° ′ ″
1. 35	20. 24. 50
1. 55	26. 0
2. 16	23. 45
2. 48	25. 50
3. 3	24. 20
3. 36	24. 30
3. 50	25. 30
4. 45	23. 0
5. 0	23. 0
5. 28	16. 30
6. 15	21. 30
6. 48	21. 50
7. 28	21. 0
7. 40	14. 20
7. 50	19. 0
8. 1	20. 0
8. 15	18. 20
8. 30	20. 0
8. 50	19. 20
9. 8	16. 45
9. 40	18. 0
9. 55	21. 5
10. 30	18. 50
11. 5	25. 0
11. 18	25. 15
11. 52	21. 25
12. 30	19. 10
12. 58	19. 10
13. 40	15. 5
14. 8	17. 30
14. 48	15. 45
14. 58	16. 50
15. 10	19. 0
15. 40	19. 0
15. 58	17. 45
16. 7	18. 15
16. 30	16. 0
16. 43	16. 40
17. 14	14. 30
17. 42	13. 30
17. 55	14. 50
18. 8	14. 40
18. 15	15. 35
18. 36	14. 30
18. 50	15. 5
19. 2	14. 30
19. 10	15. 15
19. 30	14. 50
21. 10	19. 40
22. 50	25. 40
23. 59	26. 10

Greenwich Mean Solar Time. h m	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
1. 21	·1382
1. 39	·1401
1. 43	·1385
2. 12	·1406
2. 29	·1390
2. 53	·1414
3. 10	·1392
	***
4. 21	·1392
	***
7. 17	·1426
7. 32	·1412
7. 50	·1444
8. 8	·1421
8. 36	·1414
8. 41	·1425
8. 54	·1406
	***
10. 7	·1400
10. 40	·1406
10. 49	·1417
11. 9	·1402
11. 10	·1404
11. 17	·1401
11. 24	·1407
12. 15	·1409
12. 26	·1404
12. 50	·1404
13. 0	·1407
13. 35	·1399
13. 55	·1397
14. 20	·1411
14. 30	·1398
14. 41	·1400
15. 6	·1387
15. 29	·1394
15. 49	·1394
16. 7	·1399
16. 30	·1405
16. 58	·1398
17. 8	·1401
17. 31	·1399
17. 59	·1394
18. 55	·1397
20. 6	·1397
21. 9	·1389
21. 57	·1374
22. 47	·1377
23. 45	·1389
23. 59	·1394

Greenwich Mean Solar Time. h m	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
7. 40	·03012
7. 50	·03025
8. 8	·02996
10. 45	·02970
11. 39	·02930
14. 32	·02920
16. 52	·02909
23. 59	·02940

Greenwich Mean Solar Time. h m	Readings of Thermometers. Of H. F. Magnet. °	Of V. F. Magnet. °
9. 0	60 ·7	62 ·6
10. 0	59 ·7	61 ·7
11. 30	59 ·6	61 ·5
12. 15	60 ·1	61 ·7
21. 0	61 ·0	62 ·4
22. 0	61 ·0	62 ·4
23. 0	61 ·2	62 ·7

June 25

Greenwich Mean Solar Time. h m	Western Declination. ° ′ ″
0. 0	20. 26. 10
1. 23	28. 15
1. 42	27. 0
1. 59	28. 0
2. 22	25. 15
2. 32	20. 26. 30
3. 42	22. 15
4. 55	22. 50
5. 5	22. 0
5. 43	21. 5
6. 5	21. 30
7. 33	20. 55
7. 58	18. 10
8. 13	19. 5
8. 31	19. 5
8. 44	20. 35
10. 8	18. 20
11. 10	19. 15
11. 53	5. 55
12. 1	10. 40
12. 15	10. 30
12. 45	14. 5
13. 6	10. 0
13. 37	10. 30
14. 0	9. 0
14. 25	9. 10
15. 6	19. 0
15. 41	13. 30
16. 33	12. 0
17. 5	14. 20
17. 31	13. 45
17. 45	14. 35
17. 56	13. 25
18. 3	15. 20
18. 10	14. 5
18. 18	16. 30
18. 38	17. 0
18. 41	14. 30
19. 6	15. 30
19. 11	18. 0
19. 19	15. 50
22. 35	24. 30
22. 48	24. 10
23. 7	24. 50
23. 59	23. 55

Greenwich Mean Solar Time. h m	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
0. 0	·1394
0. 42	·1400
0. 57	·1407
1. 45	·1401
2. 7	·1410
2. 20	·1403
2. 39	·1415
2. 59	·1401
3. 35	·1400
3. 44	·1406
4. 37	·1410
5. 38	·1403
6. 3	·1408
7. 9	·1404
7. 24	·1408
7. 36	·1401
7. 58	·1406
8. 9	·1404
8. 24	·1408
9. 29	·1400
10. 39	·1403
11. 9	·1412
11. 36	·1409
11. 47	·1402
12. 20	·1419
12. 35	·1413
12. 44	·1416
12. 55	·1413
13. 8	·1403
14. 15	·1412
14. 30	·1406
14. 45	·1392
15. 15	·1410
15. 24	·1419
15. 25	·1419
16. 18	·1415
16. 50	·1396
17. 15	·1391
17. 58	·1396
18. 34	·1393
18. 49	·1385
19. 8	·1392
19. 15	·1387
21. 58	·1379
22. 27	·1383
23. 17	·1375
23. 59	·1384

Greenwich Mean Solar Time. h m	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
0. 0	·02940
6. 2	·03036
9. 7	·03050
11. 45	·02946
11. 58	·02953
13. 6	·02878
15. 30	·02820
16. 42	·02818
22. 10	·02858
23. 59	·02870

Greenwich Mean Solar Time. h m	Readings of Thermometers. Of H. F. Magnet. °	Of V. F. Magnet. °
0. 0	61 ·4	63 ·2
1. 0	61 ·5	63 ·4
2. 0	61 ·6	63 ·6
3. 0	61 ·7	64 ·0
9. 0	61 ·0	61 ·8
21. 0	59 ·9	61 ·2
22. 0	60 ·0	61 ·6
23. 0	60 ·4	62 ·2

June 26

Greenwich Mean Solar Time. h m	Western Declination. ° ′ ″
0. 0	20. 23. 55
1. 43	23. 0
3. 10	21. 15
3. 37	22. 0
4. 3	20. 50
4. 46	21. 35
4. 56	20. 50
6. 3	21. 0
6. 35	18. 50
7. 52	20. 30
7. 58	19. 35
8. 25	19. 40
8. 48	20. 40
9. 47	18. 0

Greenwich Mean Solar Time. h m	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
0. 0	·1384
0. 38	·1398
1. 15	·1405
1. 27	·1403
1. 49	·1413
2. 9	·1409
2. 59	·1410
3. 20	·1405
3. 39	·1413
3. 55	·1407
4. 5	·1409
4. 15	·1404
4. 25	·1408
4. 35	·1403

Greenwich Mean Solar Time. h m	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
0. 0	·02870
3. 45	·02965
6. 0	·02980
7. 57	·03012
9. 42	·03015
11. 48	·02920
15. 5	·02882
17. 29	·02840
19. 48	·02840
22. 45	·02871
23. 59	·02870

Greenwich Mean Solar Time. h m	Readings of Thermometers. Of H. F. Magnet. °	Of V. F. Magnet. °
0. 0	60 ·9	62 ·9
1. 0	61 ·0	63 ·2
2. 0	61 ·0	63 ·4
3. 0	61 ·2	63 ·8
9. 0	61 ·7	64 ·2
9. 40	59 ·4	61 ·5
21. 0	59 ·6	61 ·1
22. 0	59 ·9	61 ·4
23. 0	60 ·3	62 ·1

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 26		June 26						
h m	° ′ ″	h m		h m		h m	°	°
10. 2	20. 14. 5	4. 47	·1414					
10. 14	16. 50	5. 7	·1404					
10. 45	10. 25	5. 40	·1409					
10. 52	10. 10	5. 55	·1406					
11. 43	15. 35	6. 9	·1410					
12. 2	15. 20	6. 24	·1407					
12. 12	17. 0	6. 43	·1415					
13. 58	18. 40	7. 5	·1407					
14. 17	18. 0	7. 24	·1411					
14. 38	19. 0	8. 45	·1406					
14. 52	18. 15	9. 10	·1412					
15. 17	19. 5	9. 50	·1404					
15. 42	18. 30	10. 9	·1414					
16. 0	19. 50	10. 22	·1409					
16. 30	19. 10	10. 57	·1416					
17. 20	15. 30	11. 50	·1399					
17. 40	16. 0	12. 49	·1400					
17. 51	17. 0	14. 4	·1407					
18. 53	16. 0	16. 19	·1404					
19. 23	17. 0	17. 9	·1409					
19. 38	16. 0	17. 51	·1403					
20. 15	16. 50	18. 29	·1407					
20. 26	16. 30	21. 24	·1385					
22. 59	21. 20	22. 55	·1392					
23. 57	21. 15	23. 59	·1391					
23. 59	21. 25							
June 27		June 27		June 27		June 27		
0. 0	20. 21. 25	0. 0	·1391	0. 0	·02870	0. 0	60·6	62·5
0. 13	22. 35	0. 15	·1398	4. 48	·02980	1. 0	60·6	62·9
1. 41	24. 30	0. 50	·1394	9. 29	·03018	2. 0	60·9	63·4
2. 3	23. 0	1. 9	·1398	10. 39	·02980	3. 0	61·0	63·8
2. 27	23. 15	1. 37	·1396	13. 14	·02952	9. 0	62·6	64·8
3. 2	22. 0	1. 51	·1390	16. 31	·02970	10. 15	60·4	61·6
4. 20	21. 15	2. 9	·1390	17. 40	·02960	21. 0	62·1	63·3
4. 33	20. 30	2. 38	·1397	22. 0	·02950	22. 0	61·7	62·9
4. 53	20. 50	3. 5	·1395	23. 59	·02970	23. 0	62·0	63·6
5. 34	20. 0	4. 9	·1403					
6. 28	20. 0	4. 30	·1400					
7. 50	19. 0	5. 27	·1403					
9. 45	20. 0	5. 59	·1408					
10. 17	20. 35	6. 44	·1403					
11. 10	19. 5	7. 0	·1408					
11. 33	22. 0	7. 18	·1409					
12. 8	19. 0	7. 28	·1406					
12. 44	19. 0	9. 4	·1401					
13. 5	20. 5	9. 19	·1396					
13. 30	19. 15		***					
13. 40	19. 55	11. 0	·1400					
14. 19	17. 50	11. 29	·1408					
16. 35	17. 25	12. 5	·1400					
16. 46	16. 20	12. 16	·1405					
17. 11	15. 30	12. 59	·1397					
19. 9	15. 0	14. 9	·1400					
19. 20	16. 0	17. 22	·1402					
19. 43	15. 15	18. 51	·1397					
21. 27	19. 0		***					
22. 55	23. 30	21. 42	·1393					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
June 27		June 27						
h m	° ′ ″	h m		h m		h m	°	°
23. 23	20. 24. 0	23. 59	·1402					
23. 59	24. 10							
June 28		June 28		June 28		June 28		
0. 0	20. 24. 10	0. 0	·1402	0. 0	·02970	0. 0	62·2	64·1
1. 28	24. 35	2. 50	·1407	1. 43	·03010	1. 0	62·2	64·3
5. 10	19. 20	3. 12	·1399	5. 16	·03015	2. 0	62·2	64·3
7. 8	20. 0		***	12. 6	·02895	3. 0	62·3	64·4
10. 54	19. 5	9. 5	·1409	18. 7	·02720	6. 15	61·3	62·8
11. 24	17. 30	11. 19	·1406	22. 40	·02734	7. 0	60·2	62·1
12. 3	19. 35	12. 5	·1412	23. 59	·02762	9. 0	59·0	60·9
12. 58	14. 25	12. 49	·1410			21. 0	58·8	59·8
14. 51	16. 5	13. 20	·1406			22. 0	58·9	60·0
17. 15	12. 50	16. 24	·1409			23. 0	59·2	60·5
18. 40	13. 30	18. 30	·1409					
21. 47	17. 50	20. 59	·1397					
22. 57	20. 50	22. 47	·1400					
23. 59	23. 20	23. 59	·1404					
June 29		June 29		June 29		June 29		
0. 0	20. 23. 20	0. 0	·1404	0. 0	·02762	0. 0	59·8	61·4
1. 18	24. 40	2. 10	·1402	4. 51	·02877	1. 0	60·0	61·7
5. 59	18. 40	4. 25	·1413	9. 3	·02920	2. 0	60·1	61·9
6. 55	20. 0	4. 36	·1408	12. 15	·02924	3. 0	60·8	62·1
13. 33	19. 0	5. 19	·1416	18. 21	·02856	8. 37	..	63·9
15. 9	16. 0	5. 57	·1413	22. 30	·02870	9. 0	61·5	62·7
17. 35	15. 0	6. 49	·1422	23. 59	·02873	9. 35	..	61·6
19. 44	15. 40	9. 41	·1410			21. 30	60·6	62·2
21. 5	18. 0	13. 13	·1409					
22. 43	25. 0	13. 55	·1413					
23. 16	25. 30	15. 49	·1405					
23. 59	24. 40	16. 50	·1409					
		21. 10	·1395					
		23. 59	·1407					
June 30		June 30		June 30		June 30		
0. 0	20. 24. 40	0. 0	·1407	0. 0	·02873	0. 30	61·6	64·0
0. 39	24. 0	0. 48	·1414	5. 0	·02980	7. 0	62·2	64·9
1. 20	25. 0	1. 50	·1410	7. 2	·02989	9. 0	62·6	65·4
2. 4	24. 30	2. 47	·1417	10. 5	·03020	10. 0	62·8	64·1
3. 3	19. 55	3. 38	·1413	18. 57	·02930	10. 30	..	63·3
8. 10	18. 35	8. 40	·1416	22. 0	·02923	21. 0	62·0	63·4
10. 30	19. 0	10. 9	·1408	23. 59	·02950	22. 0	62·0	63·8
10. 55	18. 20	10. 38	·1412			23. 0	62·2	64·3
12. 10	19. 25	12. 47	·1413					
12. 54	17. 45	13. 28	·1409					
13. 34	18. 10	13. 56	·1413					
13. 59	17. 5	14. 17	·1410					
14. 15	18. 0	14. 38	·1413					
14. 50	15. 10	15. 33	·1409					
15. 20	15. 40	17. 5	·1410					
15. 47	14. 45	21. 13	·1385					
16. 47	16. 45	23. 44	·1392					
19. 26	14. 5	23. 59	·1393					
20. 13	14. 45							
21. 38	19. 30							
22. 19	20. 5							
23. 59	24. 15							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

July 1

Greenwich Mean Solar Time. h m	Western Declination. ° ′ ″
0. 0	20. 24. 15
1. 8	25. 0
3. 3	21. 40
4. 40	20. 30
6. 28	21. 10
9. 38	19. 50
10. 5	17. 0
11. 42	18. 35
12. 6	17. 30
12. 35	19. 0
14. 29	17. 50
15. 9	18. 0
16. 15	16. 0
16. 31	16. 30
17. 5	15. 5
17. 31	16. 30
17. 40	16. 0
18. 13	17. 0
19. 4	17. 20
20. 2	17. 0
21. 0	16. 15
21. 50	17. 45
23. 59	25. 30

Greenwich Mean Solar Time. h m	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
0. 0	·1393
4. 4	·1414
7. 27	·1418
8. 5	·1415
9. 20	·1411
10. 15	·1415
10. 57	·1412
11. 15	·1418
	***
13. 29	·1413
17. 9	·1413
18. 47	·1411
19. 46	·1406
21. 56	·1400
22. 30	·1394
23. 59	·1406

Greenwich Mean Solar Time. h m	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
0. 0	·02950
5. 57	·03056
7. 4	·03050
10. 30	·03080
13. 2	·03050
13. 44	·03032
22. 0	·03020
23. 59	·03000

Greenwich Mean Solar Time. h m	Readings of Thermometers. Of H. F. Magnet. °	Of V. F. Magnet. °
0. 0	62 ·3	64 ·3
1. 0	62 ·5	64 ·7
2. 0	62 ·6	64 ·9
3. 0	62 ·8	65 ·3
6. 0	63 ·0	65 ·7
9. 0	63 ·5	66 ·3
9. 50	64 ·5	65 ·5
11. 0	64 ·0	64 ·8
11. 30	63 ·7	64 ·9
12. 0	63 ·5	64 ·3
12. 30	63 ·2	64 ·2
13. 0	62 ·3	64 ·0
13. 15	61 ·9	63 ·8
21. 0	62 ·2	64 ·2
22. 0	63 ·8	64 ·3
23. 0	63 ·1	64 ·0

July 2

Greenwich Mean Solar Time. h m	Western Declination. ° ′ ″
0. 0	20. 25. 30
1. 0	24. 40
1. 45	25. 45
4. 26	22. 20
4. 38	23. 0
5. 23	20. 40
7. 0	20. 45
8. 7	19. 10
9. 10	18. 30
10. 0	19. 30
10. 55	19. 0
13. 6	19. 35
14. 5	20. 50
14. 39	19. 30
14. 55	19. 45
15. 9	21. 0
15. 43	18. 0
18. 14	14. 30
19. 25	13. 30
19. 43	15. 50
20. 4	15. 40
20. 16	16. 40
20. 40	16. 0
21. 39	17. 45
22. 25	20. 0
23. 9	24. 0 ⁏
23. 59	25. 50

Greenwich Mean Solar Time. h m	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
0. 0	·1406
0. 24	·1398
1. 47	·1407
1. 56	·1405
2. 27	·1412
3. 40	·1418
4. 25	·1417
4. 37	·1425
5. 20	·1416
6. 29	·1419
6. 39	·1415
6. 49	·1420
7. 40	·1412
	***
9. 24	·1417
12. 56	·1410
13. 12	·1413
14. 20	·1411
15. 17	·1418
15. 55	·1412
17. 27	·1414
18. 34	·1410
19. 22	·1404
20. 14	·1405
21. 24	·1395
22. 12	·1393
22. 44	·1395
23. 59	·1406

Greenwich Mean Solar Time. h m	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
0. 0	·03000
3. 16	·03060
6. 30	·03080
19. 24	·02991
20. 18	·02965
21. 25	·02965
23. 59	·02953

Greenwich Mean Solar Time. h m	Readings of Thermometers. Of H. F. Magnet. °	Of V. F. Magnet. °
0. 0	63 ·2	64 ·5
1. 0	63 ·5	65 ·3
2. 0	63 ·4	65 ·2
3. 0	63 ·6	65 ·3
8. 0	64 ·3	65 ·4
9. 0	63 ·5	64 ·4
10. 0	63 ·0	64 ·3
11. 0	62 ·4	63 ·9
11. 20	62 ·6	63 ·6
21. 0	62 ·0	62 ·8
22. 0	61 ·5	62 ·3
23. 0	62 ·5	63 ·5

July 3

Greenwich Mean Solar Time. h m	Western Declination. ° ′ ″
0. 0	20. 25. 50
1. 31	27. 50
3. 36	26. 30
4. 37	20. 25. 50
5. 40	20. 0
5. 53	20. 30
7. 40	29. 0
7. 49	19. 30
9. 5	18. 40
9. 52	19. 30
10. 59	18. 40
13. 42	20. 0
14. 20	18. 10
14. 35	18. 40
15. 18	17. 30
15. 35	18. 10
16. 35	15. 0
17. 10	15. 0
17. 16	13. 55
17. 45	15. 0
17. 58	13. 40
18. 13	16. 20
19. 0	15. 40
19. 8	13. 0
19. 16	14. 0
19. 52	12. 30
20. 30	12. 50
21. 50	14. 50
23. 59	24. 30

Greenwich Mean Solar Time. h m	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
0. 0	·1406
0. 5	·1412
1. 0	·1419
1. 24	·1406
2. 55	·1423
2. 59	·1415
3. 14	·1419
3. 38	·1414
4. 10	·1421
4. 41	·1421
5. 36	·1397
6. 32	·1410
7. 4	·1409
7. 23	·1414
8. 4	·1408
8. 50	·1412
	***
13. 29	·1416
14. 27	·1413
16. 15	·1420
17. 47	·1412
18. 5	·1415
19. 5	·1413
20. 59	·1398
22. 49	·1394
23. 59	·1394

Greenwich Mean Solar Time. h m	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
0. 0	·02953
4. 19	·03069
5. 58	·03086
7. 50	·03069
9. 0	·03030
14. 47	·03000
21. 10	·02995
22. 33	·02978
23. 59	·02982

Greenwich Mean Solar Time. h m	Readings of Thermometers. Of H. F. Magnet. °	Of V. F. Magnet. °
0. 0	62 ·6	63 ·8
1. 0	62 ·8	64 ·2
2. 0	62 ·8	64 ·3
3. 0	63 ·0	64 ·8
7. 30	63 ·2	64 ·9
9. 0	62 ·1	62 ·7
21. 0	62 ·5	63 ·3
22. 0	62 ·7	63 ·3
23. 0	62 ·7	64 ·0

July 4

Greenwich Mean Solar Time. h m	Western Declination. ° ′ ″
0. 0	20. 24. 30
0. 51	28. 10
1. 13	28. 0
1. 30	29. 40
3. 12	28. 50
3. 26	29. 20
4. 20	24. 45
5. 50	20. 45
6. 3	21. 5
6. 31	20. 0
6. 59	20. 50
7. 25	20. 0
8. 16	20. 25
8. 49	16. 25
9. 24	18. 35
10. 18	18. 40
10. 34	19. 10
12. 11	19. 20
15. 8	19. 0
15. 21	20. 10
17. 36	17. 30
17. 42	16. 5
17. 47	17. 10
18. 39	17. 0
18. 46	16. 0
19. 5	16. 55
19. 21	16. 0
19. 57	16. 20
20. 27	15. 20
21. 23	17. 45

Greenwich Mean Solar Time. h m	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
0. 0	·1394
0. 49	·1399
1. 16	·1396
1. 33	·1406
1. 40	·1402
	***
2. 55	·1409
3. 5	·1419
3. 13	·1413
3. 25	·1423
4. 0	·1417
4. 15	·1409
4. 44	·1417
5. 25	·1417
5. 40	·1414
5. 57	·1416
6. 20	·1419
6. 54	·1411
7. 9	·1416
	***
8. 40	·1410
9. 17	·1414
11. 0	·1407
11. 30	·1411
11. 58	·1408
16. 59	·1409
19. 48	·1400
21. 24	·1385
22. 43	·1380
23. 18	·1390

Greenwich Mean Solar Time. h m	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
0. 0	·02982
1. 15	·02984
3. 40	·03050
6. 30	·03065
10. 12	·03040
19. 6	·03030
22. 38	·03005
23. 59	·03030

Greenwich Mean Solar Time. h m	Readings of Thermometers. Of H. F. Magnet. °	Of V. F. Magnet. °
0. 0	62 ·9	64 ·6
1. 0	62 ·8	64 ·6
2. 0	62 ·9	64 ·9
3. 0	63 ·0	65 ·1
6. 30	63 ·2	65 ·3
7. 45	63 ·7	64 ·8
9. 0	63 ·0	64 ·0
10. 0	62 ·8	63 ·5
21. 0	62 ·7	63 ·9
22. 0	62 ·8	64 ·3
23. 0	63 ·1	64 ·9

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ⁏ attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 4		July 4						
h m	° ′ ″	h m		h m		h m	°	°
22. 58	20. 24. 0	23. 59	·1391					
23. 59	26. 30							
July 5		July 5		July 5		July 5		
0. 0	20. 26. 30	0. 0	·1391	0. 0	·03030	0. 0	63 ·1	64 ·9
1. 35	26. 25	0. 37	·1392	2. 2	·03031	1. 0	63 ·1	65 ·1
3. 32	23. 15	1. 34	·1400	4. 56	·03069	2. 0	63 ·0	65 ·0
5. 10	20. 0	3. 47	·1407	8. 2	·03056	3. 0	63 ·0	65 ·0
5. 48	20. 30	6. 28	·1410	9. 12	·03010	7. 30	63 ·0	65 ·1
9. 39	20. 0	7. 10	·1406	14. 24	·02970	9. 0	61 ·8	63 ·1
10. 49	20. 5	7. 39	·1408	17. 4	·02940	21. 0	61 ·0	61 ·7
10. 58	21. 0	8. 19	·1400	19. 40	·02884	22. 0	61 ·2	62 ·1
11. 18	20. 30	11. 29	·1402	21. 10	·02870	23. 0	61 ·5	62 ·5
11. 33	19. 20	11. 48	·1406	22. 48	·02876			
14. 31	20. 0	12. 43	·1399	23. 59	·02878			
15. 39	18. 15	17. 0	·1406					
16. 16	18. 30	18. 57	·1399					
17. 40	15. 50	21. 28	·1382					
19. 40	17. 0	22. 17	·1381					
19. 50	16. 15	23. 35	·1382					
21. 9	18. 5	23. 45	·1390					
21. 16	17. 30	23. 59	·1390					
23. 7	24. 30							
23. 59	25. 50							
July 6		July 6		July 6		July 6		
0. 0	20. 25. 50	0. 0	·1390	0. 0	·02878	0. 0	61 ·8	63 ·1
1. 44	25. 40	1. 27	·1400	4. 36	·02970	1. 0	61 ·8	63 ·5
3. 27	23. 0	2. 45	·1413	7. 38	·02984	2. 0	61 ·9	63 ·8
3. 35	23. 40	3. 7	·1409	8. 47	·02985	3. 0	61 ·9	63 ·9
4. 47	20. 40	3. 19	·1415	11. 48	·02930	7. 30	62 ·3	64 ·8
6. 4	20. 5	3. 24	·1410	17. 22	·02858	9. 0	62 ·1	62 ·9
8. 41	21. 0	3. 34	·1418	18. 24	·02863	22. 0	61 ·2	62 ·6
9. 29	19. 30	3. 39	·1416	19. 16	·02840			
10. 47	19. 45	4. 24	·1418	21. 50	·02848			
11. 50	18. 50	4. 43	·1412	23. 59	·02885			
14. 11	19. 45	4. 53	·1419					
14. 19	20. 20	5. 4	·1417					
14. 35	19. 20	5. 17	·1426					
14. 57	20. 55	6. 0	·1418					
15. 46	18. 30	6. 16	·1420					
16. 12	19. 50	6. 24	·1416					
16. 30	19. 0	6. 42	·1416					
16. 56	19. 0	6. 51	·1423					
17. 4	18. 0	10. 7	·1414					
17. 48	17. 30	10. 50	·1418					
18. 6	21. 0	12. 28	·1413					
18. 23	21. 10	15. 7	·1422					
18. 37	23. 25	15. 20	·1416					
19. 40	19. 55	16. 49	·1423					
20. 10	19. 10	17. 41	·1420					
21. 49	26. 0	17. 55	·1410					
22. 5	25. 30	18. 19	·1403					
22. 15	26. 30	19. 1:	·1420					
22. 28	26. 10	19. 54	·1406					
22. 57	29. 50	21. 57	·1390					
23. 15	30. 0	22. 34	·1391					
23. 59	28. 20	23. 59	·1410					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 7		July 7		July 7		July 7		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 28. 20	0. 0	·1410	0. 0	·02885	1. 0	61 ·8	63 ·8
0. 19	27. 40	0. 27	·1420	5. 36	·03010	7. 35	..	64 ·7
1. 4	29. 0	0. 47	·1412	8. 0	·03010	8. 0	61 ·2	62 ·6
1. 21	31. 0	0. 59	·1421	12. 10	·02909	21. 0	60 ·4	61 ·6
2. 5	30. 20	1. 29	·1410	15. 35	·02840	22. 0	60 ·6	62 ·1
2. 21	30. 55	1. 49	·1397	18. 30	·02831	23. 0	61 ·0	62 ·7
2. 24	30. 0	2. 7	·1396	22. 49	·02850			
3. 8	26. 35	2. 10	·1391	23. 59	·02869			
3. 36	27. 30	2. 20	·1392					
4. 3	27. 0	2. 44	·1410					
4. 19	25. 30	3. 12	·1407					
4. 25	25. 50	3. 26	·1418					
4. 31	24. 50	3. 35	·1410					
4. 42	24. 40	3. 49	·1415					
4. 50	25. 50	3. 58	·1410					
5. 24	25. 10	4. 13	·1417					
5. 40	21. 35	4. 29	·1416					
6. 0	22. 35	5. 18	·1396					
6. 18	22. 5	5. 49	·1410					
7. 10	23. 10	6. 14	·1421					
7. 35	22. 30	6. 30	·1419					
8. 27	22. 20	6. 46	·1414					
8. 47	21. 40	6. 57	·1418					
9. 9	19. 30	7. 25	·1411					
9. 27	20. 0	7. 39	·1416					
9. 41	19. 5	7. 59	·1412					
10. 10	20. 10	8. 9	·1420					
10. 35	20. 10	8. 49	·1411					
10. 56	21. 0	9. 35	·1415					
11. 55	20. 25	9. 47	·1411					
12. 7	17. 0	11. 9	·1416					
13. 10	19. 50	11. 39	·1411					
13. 35	19. 5	11. 50	·1416					
14. 3	19. 55	12. 8	·1409					
14. 25	19. 10	13. 20	·1412					
14. 42	20. 50	14. 44	·1422					
15. 22	17. 20	15. 7	·1419					
15. 32	18. 0	16. 20	·1423					
16. 38	16. 0	17. 10	·1409					
17. 0	17. 10	18. 49	·1420					
17. 15	16. 30	19. 59	·1408					
17. 28	17. 0	20. 21	·1410					
17. 38	16. 5	20. 39	·1407					
17. 55	18. 0	20. 58	·1411					
18. 36	16. 20	21. 19	·1404					
18. 58	18. 30	21. 57	·1395					
19. 15	18. 15	22. 6	·1398					
19. 58:	16. 10	22. 48	·1393					
20. 30	17. 35	23. 59	·1397					
20. 46	17. 0							
23. 59	23. 10							
July 8		July 8		July 8		July 8		
0. 0	20. 23. 10	0. 0	·1397	0. 0	·02869	0. 0	61 ·2	63 ·2
0. 12	23. 30	0. 44	·1397	5. 23	·02947	1. 0	61 ·2	63 ·2
0. 33	25. 0	0. 58	·1393	9. 0	·02975	2. 0	61 ·4	63 ·6
1. 38	24. 55	1. 38	·1403	10. 44	·02903	3. 0	61 ·5	63 ·8
2. 51	25. 30	2. 53	·1411	15. 27	·02865	8. 40	..	64 ·9
			***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 8		July 8		July 8		July 8		
h m	° ′ ″	h m		h m		h m	°	°
3. 45	20. 24. 0	3. 36	·1408	15. 55	·02850	9. 0	60·4	63·1
7. 21	21. 30	4. 18	·1415	22. 12	·02853	10. 20	59·9	61·8
9. 9	20. 30	4. 29	·1410	23. 59	·02880	11. 0	60·8	62·5
9. 29	19. 10	4. 47	·1413			21. 0	60·7	62·1
11. 45	19. 0	5. 9	·1410			22. 0	60·9	62·5
14. 25	18. 20	5. 37	·1417			23. 0	61·2	63·1
15. 20	22. 40	7. 41	·1420					
16. 6	18. 20	7. 54	·1416					
16. 36	18. 40	8. 4	·1420					
17. 5	17. 5	9. 23	·1412					
18. 3	16. 20	10. 56	·1416					
19. 10	17. 40	12. 17	·1412					
20. 36	16. 40	13. 33	·1413					
23. 9	21. 10	15. 4	·1408					
23. 59	21. 35	15. 49	·1410					
		16. 21	·1407					
		17. 5	·1410					
		18. 55	·1405					
		20. 41	·1406					
		22. 53	·1395					
		23. 59	·1396					
July 9		July 9		July 9		July 9		
0. 0	20. 21. 35	0. 0	·1396	0. 0	·02880	0. 0	61·5	63·3
0. 58	23. 5	2. 55	·1408	1. 20	·02885	1. 0	61·6	63·9
2. 39	23. 35	4. 40	·1408	4. 29	·02950	2. 0	61·8	64·2
4. 20	21. 20	5. 33	·1414	6. 16	·02959	3. 0	62·1	64·3
8. 7	20. 45	6. 40	·1418	8. 35	·02980	8. 0	62·2	65·0
8. 17	20. 0	11. 31	·1420	9. 30	·02940	9. 0	60·6	62·7
10. 29	20. 0	11. 49	·1418	15. 20	·02845	21. 0	60·9	62·1
10. 45	20. 20	12. 35	·1420	21. 0	·02814	22. 0	60·9	62·3
11. 50	19. 0	12. 49	·1417	22. 30	·02829	23. 0	61·4	62 9
12. 47	19. 0	13. 14	·1421	23. 59	·02860			
13. 16	20. 0	13. 57	·1412					
13. 54	17. 20	14. 9	·1416					
14. 28	18. 30	14. 27	·1413					
14. 46	17. 40	16. 53	·1419					
15. 5	18. 35	17. 39	·1414					
15. 32	17. 40	18. 11	·1418					
16. 3	18. 0	19. 34	·1408					
16. 21	17. 5	20. 8	·1410					
16. 34	18. 0	21. 6	·1406					
17. 0	17. 50	22. 0	·1402					
17. 25:	16. 50	22. 45	·1409					
17. 55	18. 0	22. 55	·1405					
18. 53	18. 0	23. 50	·1410					
18. 59	17. 30	23. 59	·1408					
22. 19	19. 30							
22. 59	21. 40							
23. 9	21. 10							
23. 59	24. 0							
July 10		July 10		July 10		July 10		
0. 0	20. 24. 0	0. 0	·1408	0. 0	·02860	0. 0	61·6	63·3
0. 45	24. 30	1. 7	·1407	4. 18	·02950	1. 0	61·7	63·8
3. 0	22. 55	1. 59	·1413	9. 2	·02980	2. 0	61·8	64·0
4. 8	20. 40	2. 35	·1409	9. 37	·02940	3. 0	62·1	64·3

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 10		July 10		July 10		July 10		
h m	° ′ ″	h m		h m		h m	°	°
6. 32	20. 20. 30	3. 5	·1415	13. 5	·02890	9. 0	61·0	62·4
7. 14	21. 0	4. 8	·1409	17. 5	·02840	9. 15	60·6	62·0
7. 59	20. 30	4. 30	·1413	19. 50	·02820	21. 0	61·0	62·3
11. 30	20. 30	4. 55	·1413	21. 55	·02860	22. 0	61·2	62·8
12. 30	19. 30	5. 14	·1414	23. 59	·02870	23. 0	61·6	63·4
14. 47	19. 5	5. 49	·1411					
15. 25	19. 30	6. 24	·1416					
16. 28	17. 55	6. 49	·1414					
17. 14	17. 0	6. 58	·1420					
17. 32	17. 20	7. 33	·1420					
17. 45	16. 15	7. 49	·1412					
17. 59	17. 25	8. 44	·1410					
19. 7	17. 0	9. 19	·1403					
21. 9	18. 30	9. 39	·1406					
22. 10	21. 0	12. 38	·1404					
23. 59	25. 0	16. 59	·1408					
		19. 40	·1408					
		23. 59	·1400					
July 11		July 11		July 11		July 11		
0. 0	20. 25. 0	0. 0	·1400	0. 0	·02870	0. 0	61·6	63·6
0. 20	25. 20	0. 40	·1398	4. 59	·02956	1. 0	61·8	64·0
1. 35	23. 50	2. 9	·1412	7. 25	·02960	2. 0	61·7	64·1
2. 11	23. 55	3. 9	·1406	18. 5	·02890	3. 0	61·9	64·5
4. 15	20. 50	3. 57	·1412	19. 18	·02900	7. 0	62·3	65·2
5. 38	20. 5	5. 57	·1409	21. 10	·02892	7. 15	62·8	64·9
6. 38	20. 50	8. 45	·1418	23. 59	·02919	9. 0	62·2	64·0
11. 11	19. 15		***			10. 15	61·0	63·2
13. 10	20. 0	11. 56	·1409			21. 0	61·8	63·6
13. 52	19. 10	16. 35	·1414			22. 0	61·8	63·8
14. 23	19. 40	17. 19	·1410			23. 0	62·1	64·1
14. 58	18. 40	18. 24	·1411					
15. 33	19. 0	18. 37	·1408					
16. 13	18. 0	18. 48	·1410					
17. 23	14. 50	19. 4	·1402					
18. 30	14. 0	19. 44	·1400					
18. 40	13. 25	20. 10	·1403					
19. 5	15. 20	22. 43	·1408					
19. 15	15. 0	23. 59	·1412					
19. 35	16. 0							
19. 45	15. 10							
20. 7	17. 20							
20. 17	16. 25							
21. 35	19. 20							
22. 8	19. 30							
23. 59	24. 40							
July 12		July 12		July 12		July 12		
0. 0	20. 24. 40	0. 0	·1412	0. 0	·02919	0. 0	62·3	64·4
1. 16	26. 15	0. 15	·1416	4. 0	·02960	1. 0	62·3	64·4
1. 31	27. 40	0. 48	·1399	7. 2	·02990	2. 0	62·4	64·6
2. 31	25. 30	1. 11	·1393	9. 27	·02985	3. 0	62·4	64·7
3. 7	24. 55	1. 30	·1403	12. 6	·02960	8. 35	..	65·1
3. 17	23. 40	2. 19	·1408	12. 52	·02902	9. 0	62·7	63·9
3. 27	24. 10	2. 28	·1404	15. 50	·02912	9. 30	..	62·9
3. 36	23. 30	3. 7	·1412	22. 39	·02888	21. 0	61·8	62·9
4. 34	23. 30	3. 17	·1407	23. 59	·02915	22. 0	61·3	62·6
5. 9	22. 20	3. 27	·1411			23. 0	61·9	63·3

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 12		July 12						
h m	° ′ ″	h m		h m		h m	°	°
5. 17	20. 22. 30	3. 35	·1408					
6. 39	20. 30	4. 7	·1417					
7. 29	20. 0	4. 57	·1416					
7. 56	21. 0	5. 20	·1423					
9. 10	20. 50	5. 44	·1418					
9. 26	20. 0	5. 57	·1423					
10. 59	19. 55	6. 20	·1411					
11. 6	20. 40	6. 59	·1422					
11. 22	20. 0	7. 33	·1419					
11. 44	20. 50	7. 48	·1425					
12. 4	17. 20	8. 10	·1421					
12. 30	18. 0	9. 37	·1424					
13. 0	16. 0	10. 50	·1420					
13. 17	16. 40	11. 7	·1425					
13. 39	15. 0	11. 27	·1422					
14. 0	12. 55	11. 52	·1425					
14. 7	13. 30	12. 0	·1422					
14. 15	12. 40	12. 26	·1444					
14. 40	14. 40	13. 15	·1404					
14. 59	17. 0	13. 55	·1412					
15. 48	15. 25	14. 55	·1409					
16. 0	16. 45	15. 23	·1414					
16. 12	16. 0	15. 40	·1408					
16. 30	13. 5	15. 59	·1415					
16. 35	14. 5	16. 35	·1416					
16. 42	13. 10	16. 54	·1408					
17. 16	14. 40	17. 59	·1410					
17. 45	13. 0	20. 27	·1400					
18. 25	14. 20		***					
18. 33	13. 40	22. 44	·1413					
19. 57	15. 25	23. 0	·1409					
20. 6	16. 20	23. 14	·1404					
20. 44	16. 0	23. 31	·1407					
22. 53	21. 30	23. 59	·1395					
23. 59	24. 0							
July 13		July 13		July 13		July 13		
0. 0	20. 24. 0	0. 0	·1395	0. 0	·02915	0. 0	62 ·2	63 ·6
1. 9	29. 0	0. 47	·1409	0. 30	·02930	1. 0	62 ·2	63 ·9
1. 32	29. 30	1. 19	·1400	3. 3	·02950	2. 0	62 ·2	64 ·0
1. 48	28. 10	1. 30	·1405	6. 16	·02993	3. 0	62 ·3	64 ·2
1. 58	28. 30	1. 38	·1401	8. 4	·02987	7. 30	62 ·8	64 ·6
2. 24	26. 20	1. 57	·1414	9. 48	·02945	9. 0	61 ·6	62 ·1
2. 35	26. 40	2. 18	·1409	17. 36	·02890	21. 40	62 ·1	63 ·2
3. 9	24. 15	2. 24	·1414	19. 35	·02915			
4. 20	24. 0	2. 59	·1404	22. 25	·02900			
4. 36	23. 0	3. 19	·1413	23. 59	·02910			
4. 56	22. 55	3. 45	·1403					
5. 10	23. 40	4. 10	·1406					
5. 58	20. 0	4. 25	·1399					
6. 25	20. 20	4. 34	·1407					
6. 53	19. 30	4. 40	·1401					
7. 24	19. 10	5. 3	·1416					
9. 20	20. 0	5. 17	·1410					
9. 38	19. 35	5. 51	·1401					
12. 18	18. 55		***					
13. 0	22. 0	7. 59	·1416					
13. 46	20. 35		***					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 13		July 13						
h m	° ′ ″	h m		h m		h m	°	°
14. 23	20. 21. 20	10. 8	·1413					
14. 37	20. 50		***					
14. 55	20. 50	12. 57	·1417					
15. 32	17. 5	14. 15	·1409					
15. 50:	17. 0	15. 25:	·1416					
16. 30	24. 20	16. 15	·1396					
16. 57	21. 0	17. 10	·1408					
17. 59	17. 50	18. 31	·1408					
18. 15	18. 0	20. 35	·1389					
18. 45	16. 20	21. 43	·1386					
19. 36	15. 5	22. 24	·1392					
20. 36	16. 50	23. 59	·1396					
22. 46	22. 50							
23. 59	23. 30							
July 14		July 14		July 14		July 14		
0. 0	20. 23. 30	0. 0	·1396	0. 0	·02910	0. 0	62 ·4	64 ·0
1. 10	25. 0	0. 50	·1395	5. 13	·02980	1. 0	62 ·4	64 ·1
4. 2	23. 0	1. 20	·1402	8. 55	·02970	8. 30	62 ·6	64 ·5
4. 17	22. 10	1. 56	·1399	9. 15	·02935	9. 0	60 ·7	61 ·7
4. 29	22. 20	2. 10	·1398	12. 15	·02890	9. 25	61 ·1	62 ·1
4. 38	21. 20	2. 35	·1406	19. 56	·02870	21. 0	61 ·1	61 ·6
4. 55	21. 20	2. 59	·1400	20. 33	·02858	22. 0	61 ·6	62 ·0
5. 7	20. 35	4. 5	·1408	22. 26	·02850	23. 0	61 ·4	62 ·3
6. 18	20. 20	4. 48	·1394		(†)			
7. 4	19. 25	5. 17	·1407					
9. 16	18. 10	7. 42	·1416					
9. 36	19. 0	8. 29	·1415					
10. 20	18. 0	9. 0	·1412					
11. 48	21. 15	9. 48	·1415					
12. 0	20. 20	13. 39	·1410					
13. 18	19. 20	20. 9	·1412					
15. 37	19. 30	21. 5	·1406					
17. 42	16. 30	23. 7	·1410					
17. 52	17. 50	23. 30	·1400					
	***	23. 59	·1413					
18. 20	16. 10							
18. 29	17. 50							
	***							
19. 24	16. 20							
20. 5	17. 25							
20. 14	17. 0							
20. 38	19. 0							
20. 46	18. 10							
21. 26	21. 40							
21. 46	22. 0							
23. 11	26. 55							
23. 20	26. 30							
23. 49	27. 50							
23. 59	26. 50							
July 15		July 15		July 15		July 15		
0. 0	20. 26. 50	0. 0	·1413	1. 0	·02870*	0. 0	61 ·4	62 ·4
0. 23	25. 0	0. 15	·1419	3. 0	·02886*	1. 0	60 ·8	61 ·4
1. 23	24. 30		(†)	9. 0	·02857*	2. 0	61 ·2	61 ·5
1. 35	25. 5	1. 0	·1421*	21. 0	·02871*	3. 0	60 ·8	60 ·8
2. 6	24. 0	3. 0	·1394*			3. 50	61 ·2	61 ·0
2. 51	24. 45	3. 27	·1410			8. 15	60 ·6	60 ·4

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 15		July 15				July 15		
h m	° ′ ″	h m		h m		h m	°	°
4. 3	20. 22. 40	5. 42	·1404			9. 0	61 ·1	60 ·8
6. 0	21. 50	6. 6	·1410			21. 0	61 ·5	62 ·8
6. 17	20. 50	6. 29	·1407			22. 0	61 ·6	63 ·2
6. 36	21. 5	6. 45	·1413			23. 0	61 ·8	63 ·7
7. 4	20. 0	7. 20	·1415					
7. 38	21. 0	7. 41	·1407					
8. 20	18. 55	8. 19	·1414					
8. 42	19. 35	8. 28	·1419					
9. 13	17. 30	8. 33	·1417					
9. 35	18. 30	8. 37	·1419					
9. 49	16. 0	8. 45	·1410					
10. 4	17. 0	8. 55	·1416					
10. 25	14. 10	9. 0	·1410					
10. 40	16. 55	9. 9	·1417					
11. 52	17. 0		***					
12. 2	16. 0	9. 54	·1417					
12. 50	14. 30	10. 3	·1412					
13. 19	16. 35	10. 19	·1422					
13. 57	14. 10	10. 59	·1415					
14. 16	15. 20	11. 37	·1418					
14. 34	16. 0	12. 44	·1413					
15. 4	19. 20	13. 18	·1418					
15. 26	17. 0	14. 38	·1412					
15. 37	17. 0	14. 48	·1415					
15. 52	16. 0	14. 56	·1414					
16. 12	16. 50	15. 27	·1424					
16. 49	16. 0	16. 9	·1408					
17. 6	17. 0	16. 29	·1408					
17. 24	15. 45	16. 48	·1400					
18. 49	15. 0	17. 47	·1405					
19. 2	16. 0	18. 36	·1415					
19. 14	15. 0	19. 48	·1403					
19. 27	15. 20	22. 15	·1390					
19. 37	14. 30	23. 59	·1400					
22. 18	20. 0							
23. 59	25. 0							
July 16		July 16		July 16		July 16		
0. 0	20. 25. 0	0. 0	·1400	0. 0	·02890	0. 0	62 ·1	64 ·1
0. 59	25. 40	0. 57	·1404	1. 45	·02910	1. 0	62 ·1	64 ·1
1. 20	26. 50	1. 24	·1417	2. 0	·02902	2. 0	62 ·2	64 ·3
1. 34	25. 50	1. 38	·1410	3. 9	·02936	3. 0	62 ·1	64 ·2
1. 50	26. 40	1. 50	·1414	4. 46	·02923	9. 0	60 ·6	62 ·4
2. 4	24. 55	2. 4	·1395	10. 15	·02902	9. 20	59 ·7	61 ·7
2. 44	24. 55	2. 18	·1391	11. 10	·02890	11. 0	61 ·0	62 ·4
3. 5	23. 0	2. 47	·1401	15. 11	·02860	21. 0	61 ·1	62 ·2
4. 14	21. 10	3. 16	·1396	15. 39	·02850	22. 0	61 ·2	62 ·6
5. 10	21. 30	3. 39	·1405	16. 15	·02860	23. 0	61 ·6	63 ·1
7. 20	20. 0	5. 9	·1414	22. 39	·02829			
9. 20	19. 45	6. 57	·1421	23. 59	·02850			
9. 40	17. 30	7. 59	·1413					
9. 59	12. 20	8. 18	·1418					
10. 19	15. 0	8. 25	·1416					
11. 19	15. 40	8. 49	·1420					
12. 10	19. 0	8. 57	·1416					
12. 21	18. 0	9. 46	·1413					
13. 50	19. 30	9. 54	·1406					
14. 10	19. 0	10. 12	·1419					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 16		July 16						
h m	° ′ ″	h m		h m		h m	°	°
14. 59	20. 23. 0	10. 32	·1410					
15. 45	18. 30	10. 50	·1413					
16. 49	18. 40	11. 15	·1405					
17. 14	17. 0	12. 26	·1412					
17. 22	17. 50	14. 30	·1410					
17. 57	17. 0	14. 50	·1406					
18. 29	19. 5	15. 17	·1415					
18. 51	18. 15	15. 57	·1409					
19. 3	18. 40	16. 47	·1412					
19. 17	17. 0	17. 19	·1412					
19. 33	17. 50	17. 59	·1406					
19. 43	17. 0	18. 40	·1395					
20. 50	18. 0	19. 29	·1399					
21. 9	16. 45	21. 26	·1394					
21. 25	18. 30		***					
22. 1	19. 0	22. 28	·1397					
22. 33	21. 20	22. 57	·1390					
23. 59	24. 20	23. 52	·1401					
		23. 59	·1402					
July 17		July 17		July 17		July 17		
0. 0	20. 24. 20	0. 0	·1402	0. 0	·02850	0. 0	61 ·8	63 ·7
1. 56	27. 0	1. 55	·1415	5. 18	·02949	1. 0	61 ·9	63 ·8
2. 5	26. 0	2. 26	·1405	8. 54	·02920	2. 0	61 ·9	64 ·1
2. 44	25. 30	2. 58	·1413	9. 53	·02870	3. 0	62 ·0	64 ·1
4. 11	23. 10	3. 29	·1411	13. 10	·02860	9. 0	61 ·2	62 ·9
4. 49	23. 0	3. 46	·1406	13. 41	·02820	10. 0	60 ·0	62 ·3
4. 59	22. 0	3. 59	·1408	18. 2	·02885	10. 30	60 ·0	61 ·7
6. 0	21. 20	4. 24	·1400	20. 50	·02890	21. 0	62 ·2	63 ·4
6. 27	22. 0	4. 39	·1407	23. 59	·02890	22. 0	62 ·1	63 ·3
6. 50	21. 10	4. 57	·1400			23. 0	62 ·2	63 ·7
7. 4	21. 10	5. 10	·1408					
8. 27	19. 0	5. 29	·1402					
8. 42	16. 10	5. 56	·1409					
9. 10	18. 0	6. 29	·1410					
9. 30	15. 0	6. 39	·1417					
9. 55	16. 50	7. 28	·1415					
10. 7	14. 30	8. 8	·1422					
10. 20	15. 50	8. 19	·1418					
10. 57	12. 50	8. 37	·1425					
11. 10	15. 0		(†)					
11. 25	14. 30	9. 0	·1434*					
11. 44	16. 0	10. 37	·1410					
12. 15	16. 55	10. 50	·1414					
13. 7	20. 50	11. 13	·1409					
13. 29	26. 5	11. 27	·1412					
13. 55	21. 10	11. 43	·1407					
14. 14	20. 50	12. 8	·1415					
15. 10	16. 40	12. 22	·1412					
15. 25	17. 0	12. 49	·1423					
16. 0	15. 10	13. 30	·1429					
17. 36	14. 40	14. 4	·1418					
18. 17	15. 50	15. 9	·1410					
18. 50	15. 15	16. 44	·1416					
19. 46	17. 30	17. 44	·1410					
20. 47	15. 55	18. 29	·1398					
21. 34	17. 40		***					
22. 27	21. 55	20. 39	·1389					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
July 17, h m	° ′ ″
22. 43	20. 21. 45
23. 59	23. 25
July 18	
0. 0	20. 23. 25
2. 7	23. 50
4. 8	20. 45
4. 49	20. 40
5. 19	19. 40
7. 2	19. 35
7. 27	20. 40
8. 3	17. 30
9. 35	14. 30
9. 50	12. 30
10. 19	14. 0
10. 37	10. 40
10. 51	10. 45
11. 3	12. 0
11. 27	17. 0
12. 0	15. 40
12. 17	16. 50
12. 56	18. 30
13. 33	18. 20
14. 5	19. 0
14. 11	18. 20
16. 17	18. 20
16. 47	17. 5
17. 10	17. 30
18. 16	15. 45
18. 33	15. 55
18. 45	15. 0
19. 13	18. 0
19. 45	16. 50
20. 9	19. 0
20. 41	18. 15
22. 26	22. 0
23. 59	25. 0
July 19	
0. 0	20. 25. 0
0. 47	25. 0
2. 8	27. 40
2. 36	26. 0
2. 55	26. 40
3. 4	25. 30
3. 15	26. 20
3. 49	23. 30
5. 15	20. 50
5. 27	21. 0
6. 10	20. 0
7. 15	19. 55
7. 29	19. 10
8. 25	19. 20
9. 18	17. 10
9. 51	19. 5
10. 43	18. 10
11. 0	20. 18. 30
11. 23	17. 50
11. 52	18. 30
12. 19	20. 0
13. 18	20. 0
13. 45	23. 0
14. 38	19. 0
16. 43	17. 20
17. 4	16. 0
17. 14	16. 20
17. 41	15. 0
18. 20	16. 20
19. 6	15. 0
20. 18	15. 50
22. 10	19. 10
22. 55	21. 45
23. 59	23. 0
July 20	
0. 0	20. 23. 0
3. 5	23. 55
5. 12	21. 0
5. 21	21. 15
5. 33	21. 0
5. 55	21. 40
7. 2	20. 55
7. 33	21. 25
8. 30	19. 0
8. 55	20. 0
9. 58	14. 15
10. 29	18. 0
11. 14	12. 40
11. 20	15. 0
12. 11	17. 30
12. 41	17. 5
13. 16	20. 40
13. 25	19. 20
13. 44	22. 20
13. 58	22. 10
14. 45	19. 10
15. 11	19. 35
15. 22	18. 35
15. 59	18. 40
16. 35	15. 50
17. 24	13. 55
17. 31	14. 5
17. 52	13. 5
18. 40	13. 25
19. 30	15. 10
19. 40	15. 0
19. 50	16. 0
20. 13	15. 0
20. 22	16. 30
20. 36	16. 0
23. 7	21. 45
23. 59	23. 5

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
July 17, h m	
20. 52	·1392
22. 9	·1382
22. 35	·1379
23. 59	·1404
July 18	
0. 0	·1404
0. 15	·1409
	(†)
1. 0	·1404*
3. 0	·1415*
3. 11	·1417
3. 29	·1402
4. 27	·1414
4. 50	·1407
5. 20	·1410
5. 37	·1421
6. 7	·1409
6. 49	·1413
7. 9	·1420
8. 0	·1408
8. 13	·1411
9. 0	·1406
9. 25	·1411
9. 39	·1406
10. 27	·1410
11. 0	·1419
13. 37	·1414
14. 6	·1418
15. 37	·1415
17. 0	·1415
17. 16	·1411
19. 4	·1413
20. 5	·1396
21. 49	·1400
23. 59	·1406
July 19	
0. 0	·1406
0. 47	·1404
0. 58	·1412
2. 20	·1418
2. 57	·1409
3. 10	·1412
3. 19	·1406
3. 27	·1409
3. 43	·1405
4. 9	·1409
4. 23	·1418
4. 36	·1412
5. 17	·1415
5. 40	·1409
6. 30	·1410
6. 45	·1419
7. 8	·1408
7. 27	·1413
7. 47	·1409
8. 46	·1415
	***
12. 7	·1411
13. 4	·1413
13. 27	·1408
14. 8	·1414
14. 40	·1410
16. 14	·1411
16. 24	·1416
18. 25	·1412
19. 24	·1407
21. 37	·1393
22. 36	·1393
23. 59	·1402
July 20	
0. 0	·1402
3. 14	·1415
4. 6	·1416
4. 37	·1425
5. 7	·1414
5. 17	·1423
5. 34	·1416
5. 59	·1422
6. 24	·1419
6. 37	·1425
7. 36	·1422
	***
8. 39	·1428
8. 54	·1436
9. 8	·1425
9. 34	·1420
9. 49	·1428
9. 58	·1424
	***
11. 15	·1428
11. 40	·1417
	***
12. 35	·1418
12. 46	·1422
12. 56	·1413
13. 26	·1419
14. 7	·1414
14. 44	·1423
15. 14	·1416
16. 0	·1416
16. 20	·1419
18. 9	·1412
18. 21	·1415
18. 48	·1410
20. 17	·1403
20. 29	·1406
21. 29	·1397
21. 57	·1398

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
July 18	
0. 0	·02890
2. 8	·02900
3. 20	·02920
8. 37	·02965
9. 48	·02930
12. 15	·02878
15. 30	·02856
22. 20	·02800
23. 59	·02820
July 19	
0. 0	·02820
5. 24	·02920
14. 24	·02846
16. 10	·02857
22. 25	·02805
23. 59	·02820
July 20	
0. 0	·02820
1. 6	·02832
3. 3	·02897
6. 20	·02903
7. 33	·02918
9. 2	·02880
13. 49	·02914
14. 43	·02890
20. 1	·02894
23. 59	·02903

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
July 18		
0. 0	62·4	64·1
1. 0	61·2	62·6
2. 0	61·6	62·8
3. 0	62·3	63·5
8. 35	..	64·2
9. 0	60·6	62·5
9. 15	..	61·8
21. 0	60·7	61·3
22. 0	60·6	62·0
23. 0	61·1	62·5
July 19		
0. 0	61·3	62·9
1. 0	61·4	63·2
2. 0	61·6	63·4
3. 0	61·8	63·4
9. 0	61·8	63·0
12. 15	59·9	62·2
21. 0	60·5	61·5
22. 0	60·9	62·0
23. 0	61·2	62·8
July 20		
0. 0	61·5	63·3
1. 0	61·4	63·4
2. 0	61·7	63·5
3. 0	61·7	63·9
7. 40	61·8	64·0
9. 0	61·0	61·8
21. 30	63·2	64·2

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
		July 20						
h m	° ′ ″	h m		h m		h m	°	°
		22. 12	·1394					
		23. 59	·1394					
July 21		July 21		July 21		July 21		
0. 0	20. 23. 5	0. 0	·1394	0. 0	·02903	0. 0	62·8	64·7
1. 15	22. 55	0. 52	·1404	5. 43	·02993	9. 20	63·2	65·4
1. 46	24. 0	1. 0	·1413	5. 48	·02980	9. 40	62·7	64·1
3. 44	23. 10	1. 12	·1412	5. 55	·03005	10. 25	61·6	63·1
3. 53	24. 0	1. 25	·1416	6. 40	·03017	21. 0	62·7	63·4
4. 6	22. 50	2. 10	·1413	6. 50	·03040	22. 0	62·4	63·8
4. 50	23. 20	2. 44	·1420	6. 53	·03029	23. 0	62·8	64·2
5. 3	22. 30	2. 58	·1415	7. 5	·03060			
5. 13	23. 40	3. 44	·1418	7. 28	·03030			
6. 29	21. 55	5. 24	·1442	10. 27	·02995			
6. 53	5. 45	5. 44	·1438	10. 39	·02980			
7. 25	19. 15	5. 57	·1441	11. 5	·02978			
7. 37	18. 40	6. 22	·1402	11. 29	·02940			
8. 5	21. 5	6. 34	·1406	11. 46	·02875			
9. 37	19. 0	6. 49	·1434	12. 58	·02916			
10. 7	17. 0	7. 20	·1408	17. 19	·02898			
10. 27	18. 30	7. 50	·1418	22. 20	·02906			
10. 40	14. 50	8. 15	·1412	23. 59	·02925			
11. 2	11. 55	8. 40	·1419					
11. 10	15. 0	9. 18	·1419					
11. 20	12. 20	9. 40	·1420					
11. 30	16. 55	10. 5	·1410					
11. 59	10. 0	10. 29	·1398					
12. 39	15. 45	10. 44	·1399					
12. 50	14. 50	11. 18	·1450					
13. 4	16. 20	11. 49	·1402					
13. 26	14. 20	12. 25	·1403					
13. 39	15. 0	12. 39	·1397					
14. 3	15. 0	12. 57	·1402					
15. 5	16. 40	13. 50	·1408					
16. 1	14. 45	14. 36	·1398					
16. 19	14. 40	14. 59	·1410					
16. 33	13. 45	16. 37	·1406					
16. 50	15. 0	16. 53	·1411					
17. 20	12. 45	17. 47	·1402					
17. 29	13. 20	18. 30	·1398					
17. 39	12. 10	19. 17	·1401					
17. 59	14. 45	22. 0	·1385					
18. 10	14. 5	23. 59	·1392					
18. 24	14. 40							
18. 35	13. 50							
19. 32	15. 50							
19. 45	15. 10							
23. 15	21. 0							
23. 59	24. 30							
July 22		July 22		July 22		July 22		
0. 0	20. 24. 30	0. 0	·1392	0. 0	·02925	0. 0	62·8	64·5
0. 34	25. 30	1. 19	·1393	4. 33	·02983	1. 0	62·8	64·7
1. 33	25. 40	1. 39	·1396	6. 37	·02990	2. 0	62·9	64·9
1. 55	27. 0	2. 2	·1405	8. 55	·02990	3. 0	62·9	65·1
2. 42	25. 20	2. 25	·1398	9. 55	·02950	8. 15	63·1	65·2
7. 0	20. 25	3. 48	·1406	10. 41	·02960	9. 0	62·6	63·6
7. 30	19. 0	5. 15	·1403	13. 43	·02926	9. 15	62·0	63·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 22		July 22		July 22		July 22		
h m	° ′ ″	h m		h m		h m	°	°
8. 48	20. 19. 40	5. 30	·1408	14. 56	·02877	21. 0	62·2	63·4
9. 8	21. 0	6. 22	·1404	16. 16	·02890	22. 0	62·5	63·7
9. 30	22. 40	6. 59	·1408	18. 1	·02910	23. 0	62·6	64·2
10. 21	17. 0		***	19. 54	·02894			
10. 30	17. 50	9. 7	·1405	23. 59	·02900			
11. 5	16. 0	9. 23	·1418					
11. 46	17. 0	9. 38	·1412					
11. 59	19. 0	9. 45	·1413					
12. 15	17. 20	10. 8	·1407					
12. 21	18. 0	10. 35	·1406					
12. 37	16. 45	10. 45	·1412					
13. 10	19. 30	11. 58	·1403					
13. 15	19. 20	12. 15	·1407					
14. 5	24. 40	12. 21	·1402					
15. 15	15. 55	12. 59	·1404					
18. 27	13. 50	13. 5	·1408					
19. 30	14. 0	13. 10	·1404					
19. 46	13. 10	13. 26	·1405					
20. 22	15. 5	14. 14	·1406					
20. 44	13. 50	14. 45	·1409					
20. 54	16. 0	16. 15	·1403					
21. 9	15. 30	17. 13	·1407					
21. 27	16. 30	18. 7	·1402					
21. 40	15. 30	18. 54	·1407					
22. 50	19. 50		***					
23. 9	22. 0	21. 35	·1388					
23. 26	22. 0	21. 50	·1394					
23. 59	23. 30	22. 29	·1384					
		23. 5	·1386					
		23. 20	·1394					
		23. 30	·1390					
		23. 59	·1396					
July 23		July 23		July 23		July 23		
0. 0	20. 23. 30	0. 0	·1396	0. 0	·02900	0. 0	62·8	64·6
1. 19	25. 0	0. 39	·1398	6. 10	·02992	1. 0	61·9	64·7
2. 39	24. 0	0. 50	·1403	8. 29	·02992	2. 0	62·8	64·8
3. 27	24. 20	1. 31	·1403	9. 5	·02960	3. 0	63·0	65·0
3. 38	23. 30	2. 9	·1410	15. 10	·02865	9. 0	62·0	63·0
3. 55	23. 30	2. 24	·1412	20. 3	·02823	21. 0	61·6	62·2
4. 2	24. 50	2. 41	·1408	22. 25	·02831	22. 0	61·6	62·8
4. 18	23. 30	3. 7	·1416	23. 59	·02850	23. 0	61·8	63·2
4. 36	24. 0	3. 19	·1414					
4. 46	23. 0	3. 37	·1417					
5. 17	21. 30	3. 56	·1407					
5. 48	22. 20	4. 15	·1422					
6. 53	20. 20	4. 39	·1408					
7. 19	21. 0	4. 48	·1411					
8. 18	20. 30	5. 6	·1399					
8. 30	17. 25	5. 57	·1420					
8. 40	19. 15	6. 19	·1404					
9. 2	16. 30	6. 35	·1408					
9. 20	18. 30	6. 38	·1404					
9. 46	17. 10	7. 27	·1411					
10. 12	18. 30	7. 33	·1408					
10. 58	16. 0	8. 19	·1413					
11. 25	17. 0	8. 30	·1409					
11. 38	15. 50	8. 49	·1432					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 23		July 23						
h m	° ′ ″	h m		h m		h m	°	°
11. 46	20. 16. 10	9. 14	·1418					
12. 5	15. 30	9. 46	·1409					
12. 18	18. 40	10. 19	·1412					
12. 45	19. 40	11. 30	·1404					
13. 18	17. 45	11. 45	·1407					
13. 35	18. 35	12. 17	·1402					
13. 50	17. 30	12. 49	·1409					
14. 13	18. 20	13. 6	·1406					
14. 33	17. 30	13. 46	·1410					
14. 42	18. 50	15. 0	·1400					
14. 52	18. 0	17. 35	·1406					
15. 8	19. 55	18. 36	·1395					
15. 26	19. 30	19. 29	·1401					
15. 30	20. 0	20. 7	·1398					
16. 16	18. 0	22. 54	·1390					
16. 40	18. 20	23. 55	·1398					
17. 0	16. 30	23. 59	·1395					
19. 23	15. 0							
20. 20	16. 0							
22. 30	20. 20							
22. 45	21. 40							
22. 56	20. 40							
23. 9	21. 10							
23. 59	23. 30							
July 24		July 24		July 24		July 24		
0. 0	20. 23. 30	0. 0	·1395	0. 0	·02850	0. 0	62 ·0	63 ·5
2. 38	25. 5	1. 30	·1400	5. 48	·02916	1. 0	62 ·0	63 ·7
3. 0	24. 30	2. 24	·1408	8. 9	·02905	2. 0	62 ·2	64 ·0
3. 30	24. 40	3. 13	·1404	8. 55	·02869	3. 0	62 ·1	64 ·0
4. 22	22. 30	4. 16	·1409	11. 35	·02830	7. 45	62 ·4	64 ·5
4. 33	22. 40	4. 36	·1415	20. 4	·02748	9. 0	60 ·7	61 ·7
5. 20	20. 0	5. 23	·1418	22. 35	·02753	11. 0	59 ·4	61 ·3
5. 50	20. 50	5. 47	·1414	23. 59	·02793	21. 0	60 ·6	61 ·6
6. 59	20. 30	6. 35	·1416			22. 0	60 ·7	62 ·1
7. 12	20. 0	7. 7	·1409			23. 0	61 ·2	62 ·8
7. 33	20. 20	7. 21	·1412					
8. 11	19. 50	7. 55	·1406					
8. 56	20. 0	8. 19	·1411					
11. 12	18. 40	10. 55	·1409					
11. 30	19. 40	11. 18	·1414					
12. 2	18. 0	12. 27	·1409					
12. 22	18. 40	13. 23	·1413					
12. 46	18. 0	15. 0	·1409					
13. 10	18. 45	17. 54	·1411					
15. 53	18. 0	18. 34	·1405					
16. 29	17. 5	19. 57	·1400					
16. 44	17. 50	21. 28	·1398					
17. 47	16. 50	22. 45	·1403					
18. 12	17. 30	23. 59	·1395					
18. 38	16. 55							
18. 55	18. 0							
19. 4	17. 40							
23. 59	22. 0							
July 25		July 25		July 25		July 25		
0. 0	20. 22. 0	0. 0	·1395	0. 0	·02793	0. 0	61 ·4	63 ·2
0. 9	23. 0	0. 14	·1399	8. 44	·02892	1. 0	61 ·4	63 ·6

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 25		July 25		July 25		July 25		
h m	° ′ ″	h m		h m		h m	°	°
0. 22	20. 22. 30	0. 29	·1396	9. 39	·02860	2. 0	61 ·6	63 ·8
2. 3	24. 15	1. 17	·1406	11. 56	·02858	3. 0	61 ·8	64 ·0
3. 59	23. 25	1. 50	·1406	22. 50	·02788	8. 10	62 ·1	64 ·3
5. 12	21. 30	2. 4	·1410	23. 59	·02785	9. 0	61 ·7	63 ·1
7. 44	21. 20	2. 14	·1407			9. 25	61 ·5	62 ·3
8. 28	20. 20	3. 0	·1413			21. 0	60 ·4	62 ·0
9. 9	18. 0	3. 43	·1409			22. 0	60 ·4	61 ·8
9. 25	15. 50	4. 6	·1412			23. 0	61 ·0	62 ·4
10. 0	18. 10	4. 57	·1408					
10. 16	17. 40	6. 58	·1414					
10. 29	18. 20	7. 30	·1419					
10. 54	17. 30	8. 34	·1416					
11. 1	18. 10	8. 48	·1425					
11. 30	17. 5	9. 27	·1419					
12. 1	18. 30	9. 44	·1411					
12. 26	17. 40	9. 57	·1413					
12. 32	18. 0	10. 9	·1409					
12. 48	17. 0	10. 29	·1410					
13. 37	19. 20	10. 43	·1404					
13. 47	18. 30	11. 2	·1409					
13. 57	19. 0	11. 28	·1406					
14. 10	18. 10	13. 42	·1411					
14. 57:	21. 20	14. 29	·1409					
15. 34	18. 50	15. 2	·1414					
16. 7	18. 0	17. 36	·1413					
16. 21	18. 10	21. 24	·1407					
17. 0	16. 50	22. 33	·1397					
17. 5	18. 0	23. 24	·1403					
17. 19	16. 40		(†)					
18. 8	16. 30							
18. 51	17. 30							
19. 0	16. 55							
21. 20	16. 10							
21. 53	16. 40							
22. 18	16. 10							
23. 59	20. 0							
July 26		July 26		July 26		July 26		
0. 0	20. 20. 0		(†)	0. 0	·02785	0. 0	61 ·6	63 ·0
1. 57	22. 50	1. 0	·1415*	1. 7	·02763	1. 0	61 ·0	61 ·8
4. 35	21. 30	2. 48	·1420	5. 31	·02775	2. 0	59 ·8	61 ·2
4. 47	20. 50	4. 27	·1422	12. 18	·02757	3. 0	60 ·0	61 ·3
8. 5	19. 55	5. 27	·1426	17. 35	·02722	3. 40	60 ·3	61 ·3
10. 15	19. 25	6. 9	·1420	22. 44	·02669	8. 45	..	60 ·7
10. 25	20. 10	6. 47	·1426	23. 59	·02690	9. 0	59 ·2	60 ·4
10. 58	18. 30	10. 9	·1420			9. 15	..	60 ·4
11. 37	19. 20	10. 34	·1426			21. 0	59 ·3	60 ·4
12. 6	18. 20	10. 48	·1425			22. 0	59 ·1	60 ·3
12. 45	19. 0	11. 4	·1427			23. 0	59 ·8	61 ·0
13. 17	17. 55	12. 3	·1418					
16. 7	17. 55	17. 13	·1410					
17. 26	16. 30	17. 34	·1413					
17. 56	17. 30	17. 42	·1410					
18. 2	16. 40	19. 47	·1406					
18. 12	17. 0	21. 5	·1410					
19. 13	15. 25	22. 19	·1410					
21. 22	17. 25	22. 29	·1404					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 26		July 26						
h m	° ′ ″	h m		h m		h m	°	°
22. 46	20. 20. 0	22. 56	·1411					
23. 59	25. 10	23. 59	·1412					
July 27		July 27		July 27		July 27		
0. 0	20. 25. 10	0. 0	·1412	0. 0	·02690	0. 0	59 ·9	61 ·3
0. 10	25. 40	1. 48	·1416	3. 20	·02692	1. 0	59 ·9	61 ·0
1. 31	23. 45	4. 30	·1421	5. 30	·02708	2. 0	59 ·7	60 ·7
2. 48	22. 40	4. 46	·1426	7. 25	·02685	3. 0	59 ·8	60 ·8
4. 44	22. 30	4. 53	·1420	9. 23	·02685	7. 0	57 ·9	59 ·6
6. 58	20. 45	5. 10	·1421	12. 8	·02730	8. 0	58 ·9	60 ·2
7. 33	18. 35	7. 9	·1426	15. 58	·02710	9. 0	58 ·9	60 ·0
7. 55	19. 30	7. 24	·1422	18. 19	·02713	10. 0	59 ·8	61 ·3
8. 18	19. 0	7. 40	·1425	21. 35	·02673	10. 45	59 ·8	61 ·3
9. 33	19. 40	8. 16	·1423	22. 49	·02667	21. 35	59 ·9	61 ·0
12. 10	19. 30	8. 34	·1425		(†)			
13. 10	18. 20	16. 18	·1417					
13. 29	19. 5	20. 23	·1409					
13. 53	18. 30	23. 59	·1415					
14. 25	19. 10							
14. 50	18. 30							
15. 19	19. 5							
16. 20	16. 30							
19. 24	15. 30							
20. 28	16. 30							
22. 48	23. 20							
23. 50	24. 10							
23. 59	23. 30							
July 28		July 28		July 28		July 28		
0. 0	20. 23. 30	0. 0	·1415	0. 0	·02683*	0. 0	60 ·4	61 ·9
1. 32	23. 40	0. 49	·1414		(†)	1. 25	60 ·4	62 ·2
2. 15	24. 50	1. 4	·1417	4. 50	·02760	8. 40	60 ·9	63 ·1
3. 25	24. 5	1. 36	·1411	8. 40	·02775	9. 0	59 ·5	61 ·3
4. 3	22. 25	1. 59	·1413	15. 12	·02665	9. 20	59 ·0	61 ·1
6. 10	22. 0	2. 47	·1413	16. 30	·02660	9. 40	60 ·5	61 ·9
7. 23	21. 0	3. 8	·1410	18. 39	·02624	9. 50	60 ·5	62 ·1
7. 56	21. 10	3. 19	·1414	21. 56	·02650	10. 15	60 ·0	61 ·0
8. 2	22. 0	4. 47	·1416	23. 59	·02695	21. 0	59 ·5	60 ·5
8. 17	21. 0	5. 23	·1413			22. 0	59 ·7	60 ·8
8. 24	21. 5	5. 35	·1418			23. 0	60 ·0	61 ·6
9. 12	18. 35	5. 54	·1417					
9. 40	18. 50	6. 10	·1423					
10. 28	20. 20	6. 40	·1416					
10. 50	19. 15	7. 30	·1426					
11. 32	20. 0	7. 56	·1425					
11. 56	18. 50	8. 7	·1429					
12. 34	23. 30	8. 25	·1421					
13. 2	19. 5	9. 2	·1422					
13. 31	17. 15	9. 15	·1418					
13. 33	19. 40	9. 44	·1427					
13. 40	18. 15	9. 51	·1424					
14. 2	20. 0	10. 7	·1427					
14. 25	18. 10	10. 16	·1424					
14. 31	18. 0	10. 38	·1432					
14. 55	14. 35	11. 18	·1425					
15. 29	11. 55	11. 47	·1431					
15. 49	13. 0	11. 59	·1423					
15. 56	12. 0	12. 17	·1434					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
July 28		July 28						
h m	° ′ ″	h m		h m		h m	°	°
16. 29	20. 15. 0	12. 27	·1438					
16. 54	13. 25	12. 52	·1429					
17. 12	14. 0	13. 20	·1432					
17. 46	10. 55	13. 39	·1416					
18. 50	12. 5	13. 59	·1424					
19. 45	12. 15	14. 37	·1424					
20. 29	15. 40	14. 55	·1416					
21. 25	17. 55	16. 14	·1402					
21. 38	17. 50	16. 44	·1418					
23. 5	23. 50	17. 38	·1422					
23. 59	26. 10	19. 9	·1407					
		20. 11	·1409					
		22. 46	·1404					
		23. 27	·1408					
		23. 59	·1396					
July 29		July 29		July 29		July 29		
0. 0	20. 26. 10	0. 0	·1396	0. 0	·02695	0. 0	60 ·5	62 ·2
0. 54	26. 0	0. 45	·1399	5. 50	·02830	1. 0	60 ·5	62 ·4
1. 6	27. 10	1. 9	·1406	7. 27	·02814	2. 0	60 ·7	62 ·7
1. 59	27. 10	1. 40	·1400	8. 40	·02760	3. 0	60 ·7	62 ·9
2. 2	28. 55	2. 2	·1404	11. 36	·02701	4. 0	60 ·6	62 ·8
2. 15	27. 20	2. 17	·1399	12. 27	·02660	7. 0	60 ·9	63 ·2
2. 55	26. 30	2. 31	·1404	13. 30	·02660	9. 0	58 ·9	60 ·3
3. 3	27. 25	2. 59	·1408	15. 26	·02620	10. 0	59 ·6	61 ·0
3. 13	25. 55	3. 13	·1404	17. 25	·02570	11. 0	59 ·2	60 ·5
3. 25	26. 45	3. 27	·1407	19. 0	·02569	21. 0	59 ·2	60 ·1
4. 20	24. 50	3. 44	·1404	19. 23	·02559	22. 0	59 ·3	60 ·4
4. 35	25. 30	4. 34	·1409	23. 0	·02630	23. 0	59 ·7	61 ·0
4. 53	23. 20	4. 50	·1403		(†)			
5. 3	24. 5	5. 0	·1409					
5. 28	15. 30	5. 15	·1390					
5. 38	16. 10	5. 29	·1413					
5. 47	15. 50	5. 39	·1408					
6. 17	17. 10	6. 25	·1416					
6. 45	19. 50	6. 56	·1409					
7. 21	19. 30	7. 35	·1416					
	(†)	7. 43	·1425					
9. 10	21. 55	8. 36	·1418					
9. 51	21. 55	9. 11	·1425					
10. 3	24. 0	9. 47	·1421					
10. 29	20. 0	10. 0	·1425					
10. 49	21. 50	10. 24	·1420					
11. 29	16. 40	10. 40	·1429					
11. 39	18. 0	10. 54	·1425					
12. 10	17. 0	11. 14	·1421					
12. 30	14. 55	11. 24	·1423					
13. 18	19. 0	11. 40	·1414					
14. 31	13. 0	11. 57	·1436					
15. 5	14. 0	12. 28	·1415					
	***	12. 59	·1410					
16. 3	9. 50	13. 30 ⁏	·1417					
16. 48	14. 0	13. 52	·1414					
17. 15	12. 0	14. 0	·1423					
	***	14. 9	·1420					
18. 40	24. 30	14. 20	·1427					
19. 3	31. 0	14. 35	·1420					
19. 31	24. 55	14. 50	·1421					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ⁏ attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 29		July 29						
h m	° ′ ″	h m		h m		h m	°	°
20. 50	20. 19. 30	15. 6	·1428					
21. 30	17. 55	15. 21	·1422					
21. 55	19. 20	16. 19	·1423					
22. 22	23. 40	16. 54	·1430					
23. 6	23. 30	17. 39	·1403					
23. 59	26. 0	18. 23	·1403					
		18. 49	·1387					
		19. 14	·1407					
		19. 33	·1411					
		20. 30	·1399					
		22. 28	·1396					
		22. 49	·1389					
		23. 59	·1392					
July 30		July 30		July 30		July 30		
0. 0	20. 26. 0	0. 0	·1392		(†)	0. 0	60 ·0	61 ·6
0. 25	27. 20	0. 17	·1402	1. 0	·02662*	1. 0	60 ·2	61 ·8
0. 39	25. 30	0. 39	·1394	3. 0	·02717*	2. 0	60 ·2	62 ·0
0. 49	26. 40	0. 50	·1400	3. 40	·02760	3. 0	60 ·4	62 ·2
1. 20	25. 0	1. 19	·1396	5. 5	·02760	8. 30	59 ·8	61 ·7
1. 32	25. 30	2. 19	·1398	5. 40	·02771	9. 0	59 ·5	61 ·0
2. 6	23. 30	2. 49	·1407	6. 15	·02760	9. 20	59 ·4	60 ·3
2. 48	23. 15	3. 39	·1400	9. 2	·02770	9. 40	59 ·9	60 ·3
4. 38	19. 5	4. 35	·1402	9. 32	·02740	21. 0	59 ·6	60 ·8
5. 0	19. 20	5. 7	·1406	11. 41	·02717	22. 0	59 ·7	61 ·2
5. 30	15. 30	5. 45	·1417	12. 8	·02689	23. 0	60 ·2	61 ·9
6. 20	18. 0	6. 8	·1417	21. 6	·02650			
6. 41	17. 50	6. 37	·1412	22. 43	·02668			
8. 34	20. 0	6. 48	·1416	23. 59	·02688			
	(†)	7. 12	·1415					
9. 25	19. 35	7. 30	·1418					
9. 47	18. 5	8. 7	·1414					
10. 10	20. 30	8. 18	·1417					
10. 22	19. 30	8. 31	·1414					
11. 19	20. 25	9. 24	·1413					
11. 32	19. 0	9. 35	·1419					
11. 55	27. 0	9. 58	·1414					
12. 7	22. 0	11. 9	·1413					
13. 19	17. 0	11. 29	·1417					
13. 37	18. 20	11. 48	·1430					
14. 7	17. 0	12. 7	·1418					
14. 27	19. 0	12. 14	·1420					
	***	12. 38	·1414					
16. 30	15. 40	16. 10	·1415					
	***	18. 35	·1411					
19. 16	16. 55	20. 18	·1401					
19. 45	14. 20	20. 49	·1391					
20. 43	21. 0	21. 14	·1396					
21. 14	21. 25	22. 24	·1394					
21. 30	23. 10	22. 45	·1404					
22. 1	20. 55	22. 54	·1399					
22. 27	22. 30	23. 59	·1410					
23. 59	24. 30							
July 31		July 31		July 31		July 31		
0. 0	20. 24. 30	0. 0	·1410	0. 0	·02688	0. 0	60 ·4	62 ·4
0. 5	24. 50	0. 8	·1409	3. 15	·02768	1. 0	60 ·6	62 ·8
	(†)	0. 48	·1420	3. 45	·02795	2. 0	60 ·7	63 ·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
July 31		July 31		July 31		July 31		
h m	° ′ ″	h m		h m		h m	°	°
0. 38	20. 25. 35	1. 33	·1395	6. 0	·02809	3. 0	61 ·0	63 ·5
0. 54	27. 0	1. 56	·1392	6. 15	·02842	8. 50	61 ·4	64 ·4
1. 20	26. 50	2. 15	·1409	6. 50	·02811	9. 0	60 ·7	62 ·6
1. 44	27. 20	2. 28	·1410	8. 23	·02830	9. 30	60 ·6	61 ·4
2. 10	26. 0	2. 50	·1386	8. 51	·02819	9. 50	60 ·6	61 ·3
2. 40	26. 50	3. 7	·1390	9. 42	·02755	20. 0	60 ·4	61 ·4
2. 49	25. 20	3. 39	·1419	10. 26	·02742	21. 0	60 ·4	61 ·4
2. 55	26. 0	4. 9	·1390	11. 1	·02746	22. 0	60 ·3	61 ·1
3. 30	22. 55	4. 19	·1408	11. 41	·02722	23. 0	61 ·1	62 ·6
3. 57	23. 20	4. 47	·1411	12. 21	·02720			
4. 2	24. 0	5. 8	·1404	12. 48	·02700			
4. 20	22. 30	5. 38	·1419	12. 58	·02710			
5. 45	20. 30	5. 54	·1404	14. 15	·02710			
6. 2	19. 0	6. 13	·1450	16. 2	·02720			
6. 15	9. 0	6. 29	·1431	22. 32	·02681			
6. 30	15. 20	6. 58	·1416	23. 59	·02730			
6. 52	18. 55	7. 13	·1422					
7. 15	14. 15	7. 36	·1408					
7. 33	17. 0	8. 3	·1413					
7. 52	14. 50	8. 9	·1410					
8. 10	16. 55	8. 20	·1418					
8. 25	12. 15	8. 29	·1413					
8. 31	13. 0	8. 47	·1412					
8. 44	12. 5	9. 6	·1424					
8. 59	15. 0	9. 51	·1419					
9. 9	11. 0	10. 7	·1410					
9. 20	15. 50	10. 15	·1414					
9. 49	14. 50	10. 30	·1403					
10. 6	17. 55	10. 50	·1410					
10. 15	17. 25	10. 58	·1408					
10. 23	19. 0	11. 6	·1412					
10. 36	15. 45	11. 20	·1411					
10. 50	17. 0	11. 54	·1397					
11. 26	15. 0	12. 0	·1399					
11. 38	15. 45	12. 8	·1398					
11. 50	13. 30	12. 25	·1403					
12. 5	15. 30	12. 57	·1389					
12. 17	14. 50	13. 32	·1404					
12. 28	20. 30	16. 30	·1408					
12. 39	19. 35	16. 40	·1405					
12. 50	20. 0	18. 27	·1404					
13. 6	23. 0	19. 37	·1397					
13. 20	22. 0	20. 18	·1392					
13. 41	21. 0	21. 17	·1394					
13. 47	21. 30	21. 54	·1388					
14. 35	17. 50	22. 50	·1391					
16. 42	17. 30	23. 47	·1397					
18. 14	16. 0	23. 59	·1396					
18. 28	17. 0							
19. 50	16. 25							
20. 55	16. 40							
21. 56	20. 0							
23. 6	23. 30							
23. 27	23. 20							
23. 59	25. 0							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
Aug. 1		Aug. 1		Aug. 1		Aug. 1		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 25. 0	0. 0	·1396	0. 0	·02730	0. 0	60·4	61·7
1. 28	24. 20	0. 30	·1407	0. 15	·02739	1. 0	60·2	61·0
2. 15	25. 30	0. 40	·1400	1. 54	·02710	2. 0	60·1	60·9
2. 39	24. 30	2. 7	·1417	4. 55	·02745	3. 0	60·1	60·9
2. 58	25. 30	2. 57	·1400	5. 59	·02749	8. 20	..	60·5
3. 40	23. 30	3. 29	·1415	9. 53	·02703	9. 0	59·2	59·8
4. 2	24. 40	3. 59	·1419	17. 13	·02680	21. 0	59·4	60·0
5. 3	22. 50	4. 25	·1407	22. 35	·02610	22. 0	59·3	60·1
5: 12	21. 30	4. 50	·1414	23. 59	·02650	23. 0	59·7	60·4
6. 9	23. 0	5. 7	·1398					
6. 42	21. 40	5. 32	·1419					
9. 40	20. 40	5. 43	·1415					
10. 3	20. 50	6. 9	·1419					
10. 23	18. 25	6. 35	·1407					
11. 33	18. 35	7. 49	·1419					
11. 53	19. 50	8. 0	·1415					
12. 9	18. 30	9. 10	·1418					
12. 45	19. 50	9. 37	·1414					
13. 0	19. 10	9. 54	·1417					
13. 10	20. 0	10. 41	·1413					
13. 52	22. 20	10. 57	·1415					
15. 5	20. 0	11. 35	·1410					
15. 17	20. 40	11. 45	·1413					
16. 18	18. 15	13. 5	·1404					
17. 26	16. 30	13. 59	·1410					
17. 45	17. 50	14. 59	·1410					
19. 0	16. 50	16. 54	·1413					
19. 23	17. 0	17. 51	·1403					
19. 33	16. 25	19. 37	·1402					
19. 52	17. 30	20. 27	·1393					
19. 57	16. 30	20. 46	·1395					
20. 0	18. 5	21. 7	·1388					
20. 11	19. 0	22. 18	·1392					
20. 16	18. 0	22. 48	·1398					
21. 9	20. 50	23. 59	·1396					
21. 20	22. 30							
21. 39	22. 35							
23. 59	27. 50							
Aug. 2		Aug. 2		Aug. 2		Aug. 2		
0. 0	20. 27. 50	0. 0	·1396	0. 0	·02650	0. 0	59·8	60·6
1. 39	24. 25	0. 13	·1404	3. 24	·02680	1. 0	59·6	60·5
3. 35	21. 0	0. 29	·1399	9. 1	·02670	2. 0	59·7	60·6
3. 50	21. 30	1. 10	·1410	10. 50	·02650	3. 0	59·8	60·5
4. 9	20. 40	2. 26	·1413	15. 18	·02628	9. 0	59·2	60·1
5. 53	22. 0	3. 35	·1413	18. 10	·02620	10. 0	59·0	59·9
6. 56	21. 5	3. 58	·1420	22. 15	·02600	21. 0	59·1	59·8
9. 58	20. 50	4. 20	·1410	23. 59	·02600	22. 0	59·3	60·4
10. 21	21. 10	5. 39	·1419			23. 0	59·6	60·8
10. 53	19. 20	8. 6	·1412					
11. 12	21. 0	8. 49	·1418					
11. 48	19. 20	10. 4	·1412					
12. 4	22. 25	10. 30:	·1420					
12. 33	20. 10	11. 0	·1415					
13. 7	21. 10	11. 30	·1419					
14. 1	19. 30	11. 56	·1414					
14. 32	20. 55	12. 18	·1420					
15. 1	19. 30	12. 59	·1415					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
Aug. 2		Aug. 2						
h m	° ′ ″	h m		h m		h m	°	°
15. 57	20. 20. 10	13. 20	·1419					
16. 27	19. 20	14. 28	·1413					
17. 0	20. 40	14. 54	·1418					
18. 10	17. 50	15. 11	·1415					
20. 30	17. 50	16. 26	·1416					
21. 45	19. 15	16. 48	·1412					
23. 18	24. 30	17. 40	·1412					
23. 59	27. 0	21. 35	·1392					
		23. 28	·1397					
		23. 59	·1401					
Aug. 3		Aug. 3		Aug. 3		Aug. 3		
0. 0	20. 27. 0	0. 0	·1401	0. 0	·02600	0. 0	59·8	61·1
0. 54	26. 30	0. 21	·1399	1. 5	·02620	1. 0	59·8	61·5
1. 22	26. 50	1. 18	·1406	5. 8	·02710	2. 0	60·0	61·6
4. 22	21. 30	2. 5	·1407	9. 10	·02708	3. 0	60·0	61·7
4. 28	20. 5	2. 30	·1415	10. 45	·02668	4. 0	60·4	62·0
6. 42	19. 50	3. 4	·1409	17. 26	·02665	4. 40	60·4	62·0
7. 26	20. 10	3. 13	·1413	22. 39	·02648	9. 0	60·0	61·0
7. 43	19. 20	4. 20	·1407	23. 59	·02665	11. 0	59·2	59·9
8. 45	20. 0	4. 56	·1415			21. 30	60·6	61·8
8. 59	16. 55	6. 24	·1415					
9. 27	20. 55	6. 45	·1422					
9. 58	19. 40	8. 34	·1411					
11. 40	20. 20	8. 57	·1413					
12. 44	20. 5	9. 9	·1424					
13. 5	21. 0	10. 24	·1414					
13. 54	20. 15	12. 18	·1409					
14. 9	20. 25	14. 7	·1415					
14. 18	22. 10	14. 57	·1412					
14. 56	22. 10	15. 39	·1414					
15. 15	20. 50	17. 0	·1407					
16. 3	19. 20	17. 55	·1413					
16. 50	19. 20	19. 0	·1407					
17. 58	15. 10	21. 39	·1402					
18. 47	16. 20	22. 24	·1394					
19. 24	16. 30	23. 59	·1398					
20. 18	18. 20							
21. 28	19. 35							
23. 59	25. 20							
Aug. 4		Aug. 4		Aug. 4		Aug. 4		
0. 0	20. 25. 20	0. 0	·1398	0. 0	·02665	0. 0	61·0	63·1
0. 35	26. 15	1. 17	·1404	6. 19	·02797	1. 0	60·9	63·0
1. 48	26. 20	2. 3	·1404	8. 59	·02800	4. 40	61·2	63·6
2. 46	25. 30	2. 42	·1411	10. 47	·02770	6. 45	61·4	63·9
4. 0	24. 0	3. 26	·1409	18. 35	·02690	9. 0	61·9	63·0
5. 42	20. 0	4. 9	·1415	22. 22	·02699	9. 20	61·4	62·5
8. 10	19. 20	4. 30:	·1406	23. 59	·02705	10. 15	61·0	61·9
9. 37	19. 40	5. 39	·1414			10. 40	60·8	61·6
10. 50	19. 0	5. 56	·1410			21. 0	60·8	61·8
14. 3	19. 15	7. 25	·1418			22. 0	60·8	62·2
14. 16	20. 0	13. 30	·1414			23. 0	61·2	62·9
14. 41	18. 25	15. 45	·1416					
17. 40	16. 0	16. 30	·1412					
18. 47	17. 10	17. 48	·1417					
19. 20	16. 30	18. 35	·1413					
19. 38	17. 20	19. 44	·1412					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 4		Aug. 4						
h m	° ′ ″	h m		h m		h m	°	°
20. 46	20. 17. 20	20. 54	·1397					
21. 51	19. 30	22. 36	·1392					
22. 40	22. 30	23. 59	·1402					
23. 59	26. 0							
Aug. 5		Aug. 5		Aug. 5		Aug. 5		
0. 0	20. 26. 0	0. 0	·1402	0. 0	·02705	0. 0	61 ·4	63 ·2
0. 17	26. 15	0. 39	·1412	3. 45	·02770	1. 0	61 ·4	63 ·4
0. 35	27. 55	0. 53	·1406	6. 35	·02804	2. 0	61 ·6	63 ·6
0. 58	26. 50	1. 28	·1412	8. 50	·02820	3. 0	61 ·6	63 ·6
1. 23	27. 45	1. 44	·1408	11. 15	·02752	8. 25	. .	64 ·5
1. 39	26. 40	2. 42	·1413	15. 4	·02750	9. 0	61 ·0	62 ·2
2. 29	26. 20	2. 50	·1411	15. 48	·02730	9. 15	. .	62 ·0
3. 48	24. 20	3. 19	·1419	18. 40	·02730	21. 0	60 ·8	61 ·8
4. 51	22. 0	3. 38	·1414	19. 11	·02706	22. 0	60 ·1	61 ·4
6. 39	21. 10	3. 50	·1416	19. 58	·02721	23. 0	60 ·6	61 ·9
7. 27	22. 0	4. 24	·1409	22. 38	·02690			
7. 47	21. 15	5. 19	·1420	23. 59	·02700			
8. 8	22. 0	5. 32	·1416					
8. 29	17. 20	6. 50	·1422					
9. 1	15. 20	7. 5	·1420					
9. 11	16. 25	7. 14	·1423					
9. 23	16. 0	7. 27	·1420					
9. 50	18. 45	7. 49	·1425					
10. 3	18. 10	8. 6	·1420					
10. 31	18. 35	8. 21	·1410					
10. 55	20. 20	8. 37	·1418					
11. 9	18. 0	8. 50	·1417					
11. 35	16. 10	8. 57	·1422					
12. 9	18. 30	9. 30	·1412					
12. 39	16. 55	9. 48	·1418					
13. 8	18. 0	10. 7	·1413					
13. 37	14. 0	10. 37	·1420					
13. 59	17. 0	10. 44	·1419					
14. 17	17. 20	10. 58	·1427					
14. 30	18. 55	11. 9	·1420					
14. 44	18. 40	11. 18	·1425					
15. 12:	22. 50	11. 59	·1410					
16. 4	17. 25	12. 28	·1418					
16. 18	16. 55	12. 39	·1416					
16. 30	17. 15	13. 9	·1422					
16. 48	15. 40	13. 40	·1414					
17. 11	17. 15	13. 56	·1417					
17. 24	17. 10	14. 9	·1412					
17. 36	19. 30	14. 18	·1417					
18. 19	21. 30	14. 34	·1414					
18. 24	23. 5	15. 45	·1426					
18. 35	22. 50	16. 12	·1423					
18. 42	23. 10	16. 59	·1430					
18. 50	22. 30	17. 45	·1406					
19. 15	21. 55	18. 16	·1403					
19. 33	18. 35	18. 49	·1421					
20. 28	19. 30	19. 8	·1420					
21. 55	19. 5	19. 35	·1409					
23. 11	20. 30	19. 50	·1411					
23. 59	23. 10	21. 17	·1397					
		23. 48	·1404					
			(†)					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Aug. 6		Aug. 6		Aug. 6		Aug. 6		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 23. 10		(†)	0. 0	·02700	0. 0	60 ·8	62 ·4
1. 7	24. 55	1. 0	·1407*	0. 36	·02716	1. 0	59 ·6	60 ·7
2. 45	23. 55	2. 0	·1408	2. 10	·02698	2. 0	59 ·6	60 ·8
4. 17	24. 0	2. 22	·1406	6. 42	·02750	3. 0	60 ·7	61 ·3
5. 58	22. 0	2. 51	·1417	9. 15	·02710	9. 0	59 ·1	60 ·4
6. 30	20. 40	3. 27	·1408	9. 35	·02688	9. 30	58 ·4	60 ·4
7. 11	16. 0	4. 35	·1412	12. 22	·02685	21. 0	59 ·5	60 ·7
7. 48	19. 30	5. 17	·1420	13. 0	·02652	22. 0	59 ·8	61 ·0
8. 35	20. 0	5. 58	·1420	14. 45	·02629	23. 0	60 ·2	61 ·5
8. 54	19. 0	6. 13	·1416	15. 39	·02623			
9. 11	20. 0	6. 28	·1420	16. 17	·02600			
9. 25	19. 30		(†)	17. 11	·02610			
9. 39	20. 20	8. 45	·1433	19. 15	·02598			
9. 59	19. 0	9. 16	·1431	22. 30	·02610			
11. 9	19. 0	9. 50	·1417	23. 59	·02630			
11. 21	20. 20	11. 10	·1415					
11. 50	19. 20	11. 19	·1420					
12. 27	23. 45	12. 9	·1416					
13. 5	18. 30	12. 24	·1424					
13. 32	21. 5	13. 10	·1416					
14. 43	16. 0	13. 58:	·1424					
15. 34	20. 30	15. 9	·1413					
15. 47	20. 30	15. 50	·1423					
16. 23	15. 40	16. 40	·1414					
17. 5	18. 45	17. 54	·1418					
18. 3	17. 30	19. 22	·1409					
19. 32	19. 5	19. 38	·1412					
20. 2	17. 30	20. 2	·1407					
20. 48	19. 50	20. 44	·1413					
21. 51	17. 0	23. 15	·1393					
22. 47	20. 0	23. 59	·1398					
23. 38	24. 30							
23. 55	23. 40							
23. 59	24. 0							
Aug. 7		Aug. 7		Aug. 7		Aug. 7		
0. 0	20. 24. 0	0. 0	·1398	0. 0	·02630	0. 0	60 ·2	61 ·7
0. 8	24. 40	0. 44	·1416	0. 35	·02643	1. 0	60 ·3	61 ·2
0. 28	22. 50	2. 0	·1412	1. 50	·02645	2. 0	60 ·4	61 ·4
0. 39	24. 0	3. 4	·1424	4. 5	·02680	3. 0	60 ·0	61 ·1
1. 0	24. 0	5. 4	·1419		(†)	8. 0	60 ·4	61 ·4
1. 44	25. 30	6. 8	·1427	9. 0	·02705*	9. 0	59 ·7	60 ·5
4. 15	24. 30	6. 17	·1423	21. 0	·02696*	9. 30	59 ·7	60 ·5
5. 37	21. 50	7. 34	·1414	21. 33	·02702	21. 0	61 ·2	62 ·5
5. 48	22. 0		(†)	22. 50	·02690	22. 0	61 ·0	62 ·8
6. 40	20. 20	9. 0	·1420*	23. 59	·02700	23. 0	61 ·3	63 ·4
7. 5	20. 35	9. 29	·1422					
7. 37	16. 15	9. 50	·1424					
7. 52	17. 55	10. 19	·1418					
8. 43	19. 0	10. 33	·1419					
9. 8	16. 30	10. 49	·1418					
9. 29	17. 50	11. 59	·1424					
9. 40	16. 50	12. 19	·1433					
9. 54	18. 30	12. 54	·1420					
10. 10	17. 40	14. 20	·1413					
11. 38	19. 10	15. 30	·1412					
12. 0	25. 35	17. 57	·1418					
12. 25	21. 0	19. 17	·1414					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 7		Aug. 7						
h m	° ′ ″	h m		h m		h m	°	°
13. 34	20. 18. 0	21. 34	·1397					
13. 50	18. 50	22. 49	·1406					
14. 11	18. 5	23. 59	·1408					
14. 49	19. 15							
16. 53	18. 30							
17. 40	17. 20							
18. 22	17. 40							
18. 55	16. 30							
19. 15	17. 20							
20. 23	17. 10							
21. 58	19. 20							
23. 9	22. 0							
23. 59	24. 30							
Aug. 8		Aug. 8		Aug. 8		Aug. 8		
0. 0	20. 24. 30	0. 0	·1408	0. 0	·02700	0. 0	61 ·6	63 ·9
1. 16	27. 35	0. 56	·1413	1. 40	·02750	1. 0	61 ·6	64 ·0
1. 42	26. 0	1. 26	·1413	3. 0	·02810	3. 0	61 ·8	64 ·6
1. 51	24. 30	1. 49	·1406	6. 19	·02831	8. 40	62 ·2	65 ·5
2. 13	25. 30	2. 14	·1418	8. 44	·02863	9. 0	62 ·7	64 ·1
2. 27	24. 0	2. 30	·1414	9. 26	·02870	9. 30	61 ·8	63 ·4
2. 53	23. 20	3. 1	·1413	10. 0	·02833	10. 0	61 ·2	63 ·0
4. 44	22. 50	3. 15	·1418	14. 55	·02771	10. 30	60 ·9	62 ·7
5. 53	22. 50	3. 56	·1414	18. 25	·02780	21. 0	62 ·0	63 ·4
6. 6	22. 20	5. 4	·1420	20. 13	·02763	22. 0	62 ·0	63 ·7
7. 21	21. 35	5. 46	·1418	22. 52	·02760	23. 0	62 ·0	64 ·1
8. 5	19. 45	5. 59	·1419	23. 59	·02780			
8. 19	19. 55	6. 55	·1413					
8. 45	12. 40	7. 12	·1417					
9. 26	12. 5	7. 24	·1419					
9. 51	17. 10	7. 48	·1416					
10. 34	16. 0	7. 59	·1418					
11. 35	20. 0	8. 9	·1416					
12. 22	19. 25	8. 20	·1420					
12. 39	20. 30	8. 39	·1408					
13. 23	20. 15	9. 52	·1426					
14. 6	23. 0	10. 47	·1414					
14. 28	21. 0	10. 55	·1418					
14. 52	20. 5	13. 19	·1414					
15. 10	20. 50	14. 35	·1416					
15. 42	18. 0	15. 19	·1409					
16. 15	17. 35	15. 39	·1414					
16. 41	16. 0	15. 57	·1413					
17. 45	14. 15	17. 19	·1416					
18. 6	16. 55	18. 6	·1408					
18. 24	16. 5	18. 29	·1414					
18. 51	17. 40	18. 46	·1408					
19. 23	17. 0	21. 19	·1403					
19. 33	18. 5	21. 46	·1395					
20. 4	18. 0	21. 55	·1401					
20. 19	19. 0	22. 30	·1399					
20. 31	18. 45	22. 58	·1403					
21. 24	19. 10	23. 12	·1398					
21. 48	21. 0	23. 59	·1405					
22. 15	21. 5							
23. 10	24. 0							
23. 59	24. 50							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 9		Aug. 9		Aug. 9		Aug. 9		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 24. 50	0. 0	·1405	0. 0	·02780	0. 0	62 ·5	64 ·7
2. 15	25. 50	1. 7	·1410	4. 14	·02860	1. 0	62 ·5	64 ·7
3. 30	23. 30	1. 25	·1405	8. 50	·02902	2. 0	62 ·6	65 ·0
3. 54	23. 20	2. 19	·1410	10. 21	·02843	3. 0	62 ·8	65 ·3
5. 40	19. 20	2. 44	·1394	12. 14	·02820	6. 0	62 ·8	65 ·6
7. 24	20. 0	4. 0	·1415	12. 57	·02795	8. 30	..	65 ·6
7. 59	18. 30	4. 24	·1400	15. 40	·02763	9. 0	62 ·1	63 ·3
8. 15	19. 25	5. 30	·1407	18. 31	·02715	9. 30	..	62 ·9
8. 45	17. 0	5. 59	·1415	21. 29	·02723	21. 0	61 ·3	62 ·4
9. 23	18. 20	7. 10	·1410	23. 5	·02746	22. 0	61 ·4	63 ·1
9. 30	17. 15	7. 23	·1415	23. 59	·02742	23. 0	61 ·7	63 ·4
10. 24	20. 0	8. 10	·1409					
10. 57	20. 35	8. 35	·1399					
11. 53	21. 10	8. 54	·1407					
12. 10	22. 30	9. 25	·1402					
12. 32	22. 10	10. 23	·1409					
12. 51	23. 0	10. 38	·1406					
13. 53	19. 55	11. 20	·1410					
14. 46:	22. 50	11. 35	·1406					
15. 48	19. 15	12. 35	·1419					
16. 59:	16. 25	13. 5	·1408					
17. 55	18. 0	13. 40	·1411					
18. 31	17. 50	14. 24	·1407					
18. 49	18. 45	16. 44	·1417					
19. 46	17. 20	17. 39	·1414					
21. 1	20. 50	18. 14	·1404					
21. 23	20. 5	18. 54	·1407					
23. 59	25. 35	19. 36	·1409					
		20. 7	·1405					
		21. 9	·1405					
		21. 58	·1403					
		22. 54	·1408					
		23. 59	·1407					
Aug. 10		Aug. 10		Aug. 10		Aug. 10		
0. 0	20. 25. 35	0. 0	·1407	0. 0	·02742	0. 0	62 ·4	64 ·4
0. 27	26. 0	1. 5	·1409	3. 41	·02830	1. 0	62 ·5	64 ·8
1. 15	25. 35	2. 11	·1397	8. 36	·02878	2. 0	62 ·6	65 ·1
2. 17	24. 0	2. 40	·1404	12. 36	·02769	3. 0	62 ·6	65 ·3
2. 59	23. 0	3. 50	·1405	18. 33	·02753	6. 0	62 ·8	65 ·8
3. 47	22. 45	4. 17	·1396	22. 52	·02779	8. 30	63 ·0	66 ·1
4. 15	21. 20	6. 4	·1408	23. 59	·02789	9. 0	63 ·1	64 ·0
5. 40	19. 40	6. 39	·1405			9. 30	61 ·9	63 ·1
6. 12	19. 30	7. 29	·1409			10. 40	62 ·0	63 ·7
7. 13	16. 35	8. 0	·1405			11. 10	60 ·4	61 ·8
8. 22	18. 50	9. 36	·1407			11. 40	60 ·7	62 ·5
9. 17	19. 0	9. 55	·1418			12. 0	60 ·2	62 ·3
9. 43	17. 40	10. 44	·1411			13. 0	60 ·4	62 ·2
9. 54	19. 0	11. 11	·1413			14. 0	60 ·7	62 ·2
10. 12	15. 30	11. 40	·1406			22. 0	62 ·1	64 ·0
10. 44	19. 0	16. 54	·1405					
11. 15	17. 30	19. 39	·1395					
13. 55	18. 30	21. 7	·1387					
14. 9	20. 0	21. 57	·1393					
17. 5	17. 40	22. 34	·1390					
18. 30	18. 0	23. 59	·1401					
18. 35	17. 5							
19. 15	18. 30							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Aug. 10	
h m	° ′ ″
19. 35	20. 17. 40
20. 28	19. 45
21. 28	19. 45
22. 5	21. 50
22. 28	22. 0
23. 16	24. 30
23. 28	24. 30
23. 59	26. 30
Aug. 11	
0. 0	20. 26. 30
0. 19	26. 50
1. 35	24. 55
2. 7	25. 10
2. 27	24. 0
2. 35	24. 15
4. 24	21. 20
5. 31	19. 55
5. 47	20. 10
6. 1	18. 40
6. 13	19. 0
6. 30	17. 30
6. 43	17. 55
6. 54	17. 0
7. 3	17. 0
7. 14	15. 35
7. 55	18. 55
8. 10	18. 45
8. 50	20. 0
9. 5	18. 55
9. 29	19. 40
10. 15	18. 30
12. 54	18. 20
13. 3	24. 30
13. 30	19. 45
13. 51	17. 30
14. 43	18. 0
16. 9	16. 25
18. 1	16. 55
18. 36	15. 55
19. 37	16. 50
20. 36	18. 30
21. 28	18. 30
23. 13	23. 20
23. 59	24. 30
Aug. 12	
0. 0	20. 24. 30
1. 0	25. 50
2. 56	24. 30
4. 26	21. 50
5. 46	21. 0
6. 11	18. 40
6. 59	17. 15
7. 45	20. 0
13. 10	20. 10
13. 35	18. 50
14. 35	18. 10
14. 48	20. 19. 25
16. 2	17. 30
16. 33	21. 20
17. 7	20. 0
17. 51	15. 50
18. 2	16. 25
18. 27	15. 25
18. 31	17. 10
18. 40	17. 0
18. 55	17. 50
19. 3	19. 15
19. 19	18. 10
20. 2	18. 15
20. 37	22. 0
20. 45	21. 5
20. 58	23. 0
21. 7	22. 55
22. 42	25. 0
23. 15	26. 30
23. 37	27. 45
23. 59	28. 30
Aug. 13	
0. 0	20. 28. 30
0. 19	29. 5
0. 37	27. 15
1. 17	26. 35
1. 42	26. 5
1. 55	27. 0
2. 15	26. 10
2. 25	24. 55
2. 48	23. 40
3. 58	23. 40
5. 40	19. 50
7. 52	19. 5
8. 8	19. 55
9. 3	18. 15
9. 42	18. 55
9. 53	18. 0
10. 21	19. 55
10. 39	17. 40
11. 15	16. 0
11. 36	18. 0
12. 10	15. 40
12. 38	20. 45
12. 49	19. 55
13. 33	19. 30
13. 59	15. 0
14. 13	14. 30
14. 36	12. 20
15. 4	14. 30
15. 29	20. 55
15. 46	17. 30
16. 25	13. 55
16. 50	15. 50
17. 0	15. 0
17. 14	16. 50
17. 30	15. 50

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
Aug. 11	
0. 0	·1401
	***
2. 44	·1408
2. 59	·1403
5. 50	·1408
6. 3	·1398
6. 17	·1406
7. 2	·1396
7. 43	·1409
8. 35	·1405
9. 27	·1410
10. 43	·1406
11. 16	·1410
12. 7	·1407
12. 56	·1412
13. 9	·1419
13. 29	·1418
14. 13	·1402
15. 59	·1406
16. 25	·1402
18. 44	·1400
20. 21	·1387
22. 50	·1393
23. 59	·1403
Aug. 12	
0. 0	·1403
3. 48	·1404
4. 19	·1398
4. 36	·1407
5. 8	·1402
5. 47	·1400
6. 16	·1406
7. 36	·1403
12. 29	·1404
12. 39	·1413
12. 53	·1404
	***
16. 19	·1405
16. 40	·1400
17. 38	·1409
19. 9	·1396
19. 28	·1399
19. 55	·1392
20. 7	·1382
20. 37	·1383
20. 52	·1393
21. 27	·1392
22. 4	·1387
23. 59	·1399
Aug. 13	
0. 0	·1399
0. 46	·1390
1. 38	·1400
1. 49	·1397
2. 16	·1400
2. 27	·1392
3. 17	·1394
4. 16	·1405
4. 25	·1401
4. 36	·1407
4. 49	·1401
5. 19	·1403
5. 42	·1398
6. 54	·1397
7. 22	·1407
7. 47	·1397
7. 59	·1402
8. 34	·1397
9. 18	·1408
9. 58	·1402
10. 12	·1408
10. 34	·1402
11. 4	·1402
11. 35	·1407
11. 48	·1403
12. 15	·1418
12. 48	·1403
13. 9	·1409
13. 30	·1404
13. 50	·1410
14. 40	·1406
15. 8	·1386
16. 1	·1409
16. 59	·1396
17. 18	·1399

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Aug. 11	
0. 0	·02789
7. 35	·02905
13. 2	·02889
13. 35	·02852
18. 40	·02850
22. 20	·02871
23. 59	·02910
Aug. 12	
0. 0	·02910
5. 8	·02960
10. 0	·02955
14. 8	·02870
17. 48	·02813
21. 50	·02800
23. 59	·02820
Aug. 13	
0. 0	·02820
3. 43	·02935
6. 1	·02937
9. 0	·02970
11. 35	·02946
12. 21	·02900
15. 0	·02880
15. 33	·02903
16. 3	·02892
18. 21	·02892
19. 50	·02910
23. 59	·02900

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Aug. 11		
1. 0	62·6	65·0
8. 30	..	66·0
8. 45	..	66·5
9. 0	64·5	65·8
10. 0	..	64·7
10. 50	..	64·0
12. 0	..	64·0
21. 0	64·0	66·2
22. 0	63·8	66·1
23. 0	63·9	66·5
Aug. 12		
0. 0	64·2	67·1
1. 0	64·4	67·3
2. 0	64·4	67·2
3. 0	64·4	67·2
6. 0	64·5	67·1
7. 30	64·5	67·4
9. 0	65·0	66·7
10. 0	64·8	66·0
11. 0	64·2	64·8
12. 0	63·4	64·2
21. 0	63·6	64·6
22. 0	63·7	64·8
23. 0	63·9	65·2
Aug. 13		
0. 0	64·1	65·8
1. 0	64·2	66·2
2. 0	64·4	66·4
3. 0	64·6	66·6
6. 0	64·8	67·3
8. 40	65·2	67·5
9. 0	65·3	67·5
10. 0	65·4	66·7
11. 0	65·0	65·9
12. 0	64·8	65·5
21. 0	65·0	66·4
22. 0	65·0	66·5
23. 0	65·1	66·8

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
Aug. 13		Aug. 13						
h m	° ′ ″	h m		h m		h m	°	°
17.35	20. 17. 5	19.27	·1386					
18.13	16. 10	19.54	·1390					
18.44	17. 0	21.24	·1385					
19.21	15. 55	23.59	·1396					
19.34	16. 35							
19.42	15. 20							
19.46	17. 45							
19.52	17. 0							
22.28	22. 10							
23.59	26. 30							
Aug. 14		Aug. 14		Aug. 14		Aug. 14		
0. 0	20. 26. 30	0. 0	·1396	0. 0	·02900	0. 0	65·4	67·5
1. 9	29. 30	0.25	·1393	4.19	·03009	1. 0	65·5	67·6
2.52	26. 10	1. 5	·1401	8. 0	·03025	2. 0	65·6	67·9
3.13	27. 0	1.28	·1393	8.15	·03003	3. 0	65·8	68·1
4.25	22. 0	1.59	·1396	8.38	·03020	6. 0	66·0	68·5
6.29	19. 10	2.19	·1400	9.14	·03000	7. 0	66·1	68·7
7.40	19. 10	2.44	·1395	9.37	·03014	8.40	66·3	69·0
8. 5	16. 0	3.11	·1396	10. 5	·02980	9. 0	66·5	69·2
8.19	9. 40	3.24	·1391	15.55	·02976	10. 0	66·5	69·2
8.57	20. 0	4. 1	·1391	17. 9	·02951	11. 0	66·6	69·3
9.20	17. 0	4.37	·1393	19. 0	·02955	12. 0	66·7	69·1
9.55	19. 20	4.57	·1385	21. 0	·02898	13. 0	66·9	69·1
10.40	19. 25	5.10	·1393	23. 0	·02882	13.30	66·8	68·9
10.45	21. 50	5.18	·1390	23.59	·02890	19. 0	66·6	67·8
10.52	19. 50	5.27	·1398			20. 0	65·1	66·0
11.20	19. 20	5.57	·1391			21. 0	65·0	65·3
11.36	20. 0	6.17	·1397			22. 0	65·9	66·5
12.15	20. 0	6.40	·1395			23. 0	64·9	65·2
12.45	18. 15	7.32	·1405					
12.55	20. 0	7.57	·1418					
14. 0	20. 20	8. 9	·1402					
14.38	19. 55	8.30	·1427					
14.49	18. 30	9.13	·1393					
15. 1	19. 30	9.51	·1400					
15.52	20. 40	10.17	·1396					
16.46	20. 40	11.21	·1404					
17. 5	19. 10	11.48	·1398					
17.32	18. 55	12.16	·1404					
17.43	17. 20	13. 4	·1396					
17.58	17. 25	13.27	·1398					
18. 7	19. 0	13.55	·1396					
18.16	17. 25	14.42	·1399					
18.56	17. 20		***					
19. 9	16. 25	15.50	·1387					
20. 5	17. 30	16.16	·1393					
20.16	16. 10	18.20	·1394					
20.31	16. 20	19. 9	·1389					
20.40	17. 50	19.35	·1393					
20.55	16. 40	20.29	·1386					
21. 8	18. 0	21.45	·1376					
21.49	17. 45	23.59	·1395					
22.24	19. 30							
22.40	18. 40							
23.59	23. 20							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
Aug. 15		Aug. 15		Aug. 15		Aug. 15		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 23. 20	0. 0	·1395	0. 0	·02890	0. 0	65·7	66·1
0.24	24. 0	1.21	·1405	3.50	·02865	1. 0	64·8	64·7
0.55	23. 30	2. 7	·1400	13.43	·02735	2. 0	64·5	64·6
1.17	24. 20	2.34	·1405	18. 3	·02666	3. 0	64·1	64·0
1.36	23. 20	3.19	·1399	22.15	·02633	6. 0	..	63·4
3. 0	22. 20	3.57	·1406	23.59	·02670	9. 0	62·6	62·6
4.12	18. 20	4.19	·1398			10. 0	62·7	62·7
7.31	17. 0		***			10.20	62·8	62·7
8.50	18. 30	9. 0	·1413			21. 0	63·1	63·0
9.29	17. 30	10.24	·1414			22. 0	63·2	63·2
9.37	18. 15	10.47	·1417			23. 0	63·5	63·4
9.51	17. 20	11. 4	·1414					
10.54	18. 20		***					
11.16	17. 30	16.25	·1404					
12.48	19. 30	19.25	·1407					
15. 6	18. 30	21.58	·1390					
15.13	19. 5	23.59	·1386					
16.15	17. 10							
16.45	17. 10							
17.24	15. 30							
17.56	16. 40							
18.10	15. 50							
	***							
19. 7	14. 40							
19.48	15. 10							
20. 0	14. 10							
22.21	19. 15							
23.49	25. 30							
23.59	25. 30							
Aug. 16		Aug. 16		Aug. 16		Aug. 16		
0. 0	20. 25. 30	0. 0	·1386	0. 0	·02670	0. 0	63·5	63·5
0.23	27. 0	0.31	·1387	5. 4	·02750	1. 0	63·8	64·2
2. 2	26. 0	2.35	·1402	8.53	·02665	2. 0	63·8	64·2
3: 46	21. 5	2.56	·1407	14.10	·02580	3. 0	63·8	64·4
5. 4	19. 35	4. 8	·1402	22.44	·02568	5. 0	63·8	64·4
6.58	18. 30	6. 0	·1406	23.59	·02590	6. 0	63·8	64·3
7.33	18. 55	6.30	·1398			9. 0	60·5	60·7
7.48	18. 0		***			9.40	60·9	61·4
11.55	18. 25	12.25	·1415			21. 0	62·8	62·6
13.11	19. 10	15.54	·1410			22. 0	62·4	62·6
13.27:	21. 20	18.39	·1412			23. 0	62·5	63·0
14.10	18. 40	22.45	·1385					
18.30	15. 50	23.46	·1375					
19.46	15. 50	23.59	·1378					
21.35	18. 40							
23.59	25. 30							
Aug. 17		Aug. 17		Aug. 17		Aug. 17		
0. 0	20. 25. 30	0. 0	·1378	0. 0	·02590	0. 0	62·6	63·2
0.45	27. 0	1.27	·1382	1. 7	·02589	1. 0	62·8	63·6
1.44	26. 40	1.49	·1388	4.12	·02671	2. 0	62·8	63·7
4.10	22. 0	2.57	·1386	6.27	·02685	3. 0	62·8	63·9
4.33	20. 0	3.15	·1388	8.57	·02645	6. 0	63·4	64·2
5.25	18. 45	3.29	·1387	10.35	·02629	8.30	62·7	62·7
7.15	19. 35	3.55	·1395	22.17	·02640	9. 0	62·3	62·4
8.43	19. 10	4.19	·1393	23.59	·02633	10.30	62·0	62·2
9.13	18. 5	4.35	·1383			11.10	62·4	62·6

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 17		Aug. 17				Aug. 17		
h m	° ′ ″	h m		h m		h m	°	°
11.20	20.19.20	4.59	·1389			21.15	63·7	63·7
12.58	19.50	5.57	·1383					
13. 5	20.50	6.27	·1385					
13.27	19. 0		(†)					
13.47	19.30	9. 0	·1396*					
14.18	18.10	9.41	·1387					
15.27	18.50	12.48	·1392					
15.50	17.50	13. 0	·1401					
16. 3	18.20	15.24	·1397					
16.19	17.45	17.35	·1396					
16.55	19. 0	19.30	·1380					
17.48	17.50	20.29	·1380					
18. 8	16. 0	21.49	·1366					
18.22	16. 0	23.59	·1373					
18.30	15.30							
18.58	17.10							
19.13	17. 0							
19.39	19. 0							
20.37	17.20							
21.13	18. 0							
22.41	23. 0							
23.59	27.20							
Aug. 18		Aug. 18		Aug. 18		Aug. 18		
0. 0	20.27.20	0. 0	·1373	0. 0	·02633	0. 0	63·5	64·3
	***	0.25	·1377	5.39	·02720	1. 0	63·4	64·5
1. 3	29.40	0.33	·1374	9.14	·02740	5. 0	63·6	65·1
1.10	29. 0	0.40	·1377	12. 4	·02719	8. 0	63·9	65·4
1.58	28.30	0.47	·1376	12.58	·02669	8.45	64·2	64·8
4.14	22.50	0.57	·1383	14.10	·02681	9.15	64·1	64·5
4.32	21. 0	1. 6	·1377	22.35	·02630	10.45	63·7	64·1
5.54	19.15	1.44	·1383	23.59	·02623	11.30	63·3	63·4
7.37	19.40	1.59	·1393			12. 0	62·8	62·9
8. 4	18. 0	2.59	·1390			12.15	62·6	62·7
9.38	19.55	3.16	·1395			21. 0	63·0	63·2
9.49	18. 0	3.46	·1391			22. 0	63·1	63·7
10. 2	19.50	4.17	·1393			23. 0	63·4	63·8
10.30	17.30	4.34	·1383					
11. 1	19. 5	4.50	·1394					
11.58	17. 0	5.15	·1387					
12.50	22. 0	6. 8	·1395					
13.15	17.30	6.36	·1392					
13.38	16. 0	7.19	·1397					
13.51	16.15	7.40	·1390					
14. 1	15. 0	8. 7	·1395					
14.35	19. 0	9.44	·1392					
15.27	16.30	9.58	·1398					
16.14	16. 0	10.29	·1385					
16.22	15. 0	11. 8	·1393					
16.29	16.30	11.50	·1390					
16.35	16.45	12.44	·1404					
16.42	16. 0	14. 3	·1383					
17.27	15.30	16.30	·1383					
17.50	16. 0	18.28	·1385					
18.15	14.30	21.26	·1376					
18.23	14.50	21.48	·1370					
18.39	13.40	22.24	·1375					
20. 2	14. 0	22.46	·1369					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 18		Aug. 18						
h m	° ′ ″	h m		h m		h m	°	°
21.32	20.17.40	23.59	·1376					
21.40	18.55							
21.54	18.55							
23. 5	24.30							
23.59	27.40							
Aug. 19		Aug. 19		Aug. 19		Aug. 19		
0. 0	20.27.40	0. 0	·1376	0. 0	·02623	0. 0	63·8	64·0
0.27	30.15	0.26	·1383	3. 3	·02743	1. 0	64·0	65·6
1.20	30.30	0.48	·1376	4.34	·02776	2. 0	64·0	66·0
1.27	29.55	1.38	·1388	11.11	·02829	3. 0	64·2	66·5
1.35	30.30	1.50	·1381	12.26	·02808	5.30	64·3	67·1
1.43	28.30	2. 7	·1386	14.59	·02836	6. 0	64·5	67·3
2.55	25.40	2.47	·1383	22.57	·02810	7. 0	64·6	67·5
3. 3	27. 0	3. 9	·1402	23.59	·02800	8. 0	66·0	67·3
3.10	25.30	3.24	·1379			9. 0	66·0	67·3
3.50	24.50	4.12	·1388			10.30	65·8	67·2
6. 3	19. 0	4.34	·1377			11.15	65·7	66·9
6.32	18.30	5.40	·1383			11.30	65·5	66·9
7.16	19.30	6. 0	·1379			18.30	65·4	66·2
10.44	19.10	7.26	·1384			19. 0	65·0	66·7
11. 0	20.50	7.47	·1379			19.20	65·0	66·8
11.30	16.30	7.57	·1384			21. 0	65·0	66·5
11.45	17.15	9.45	·1387			22. 0	65·2	67·0
12.13	16. 0	10.36	·1381			23. 0	64·8	66·2
12.47	16.30	11.45:	·1396					
13.12	18.15	12.59	·1379					
14.55	18.10	13.57	·1383					
15.18	20. 0	14.56	·1384					
15.45	20. 0	15.24	·1381					
16.25	16.40	16.26	·1389					
18.18	16.45	16.50	·1386					
18.30	15.55	18.36	·1389					
19.40	16.50	19.23	·1383					
19.56	16.30	20.14	·1385					
21.45	18.45	21.50	·1376					
23.25	24.30	23.59	·1380					
23.59	25.30							
Aug. 20		Aug. 20		Aug. 20		Aug. 20		
0. 0	20.25.30	0. 0	·1380	0. 0	·02800	0. 0	65·2	67·0
1. 0	27. 0	1.58	·1392	5.29	·02881	1. 0	65·4	67·4
1.12	28. 0	2.17	·1390	8.35	·02789	2. 0	65·7	67·7
2. 5	27.15	2.35	·1396	10.43	·02764	3. 0	65·7	67·8
3.20	23.40	2.57	·1388	11. 7	·02745	5.30	65·4	67·4
3.30	24.10	3. 9	·1391	11.36	·02758	6. 0	64·6	66·0
4.54	21.30	3.18	·1385	12. 9	·02737	7. 0	63·5	65·1
5. 0	22. 0	3.29	·1397	12.47	·02739	8. 0	62·4	64·2
5.21	21.20	3.48	·1390	17.41	·02660	9. 0	62·5	63·5
5.25	21.50	4. 9	·1387	18.53	·02656	9.45	62·0	63·5
5.59	20.30	4.28	·1391	23. 0	·02652	21. 0	62·8	63·0
9.15	18.30	4.50	·1388	23.59	·02680	22. 0	63·0	64·6
10. 0	18.50	4.59	·1397			23. 0	63·4	65·2
10.12	18.10	5.19	·1390					
10.30	18. 5	5.27	·1396					
11. 5	14.25	5.58	·1381					
11.31	20.25		***					
12. 6	17. 0	6.45	·1397					
			***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 20		Aug. 20						
h m	° ′ ″	h m		h m		h m	°	°
12. 45	20. 19. 10	10. 2	·1405					
13. 19	17. 30	10. 24	·1398					
14. 19	18. 0	10. 44	·1418					
14. 44	18. 45	11. 19	·1394					
14. 58	18. 0	11. 40	·1406					
15. 30	18. 30	12. 6	·1403					
16. 14	17. 0	12. 27	·1394					
16. 43	17. 10	12. 56	·1401					
17. 24	16. 40	13. 20	·1397					
17. 40	16. 45	18. 37	·1392					
18. 50	14. 55	20. 50	·1380					
20. 56	15. 55	22. 55	·1377					
21. 55	17. 30	23. 59	·1378					
23. 8	21. 0							
23. 27	22. 55							
23. 59	24. 30							
Aug. 21		Aug. 21		Aug. 21		Aug. 21		
0. 0	20. 24. 30	0. 0	·1378	0. 0	·02680	0. 0	63·8	65·6
1. 6	26. 20	0. 44	·1383	5. 0	·02777	1. 0	64·2	66·1
2. 33	26. 30	1. 30	·1381	6. 56	·02765	2. 0	64·2	66·2
3. 24	24. 55	2. 11	·1387	11. 10	·02670	3. 0	64·2	66·2
4. 5	23. 35	2. 54	·1386	11. 24	·02688	5. 30	64·3	66·5
4. 15	23. 45		***	11. 55	·02663	6. 0	64·3	65·6
4. 29	22. 40	4. 58	·1393	12. 16	·02660	7. 0	63·5	64·7
5. 48	20. 50	6. 24	·1390	12. 54	·02600	8. 0	61·9	63·3
8. 5:	26. 0		***	18. 32	·02561	9. 0	62·4	63·5
9. 50	23. 0	8. 26	·1397	19. 0	·02580	10. 0	61·6	63·4
10. 38	17. 25	8. 44	·1403	23. 20	·02600	21. 0	61·9	63·1
11. 16	18. 40	9. 0	·1403	23. 59	·02598	22. 0	62·2	63·8
12. 2	17. 0	9. 20	·1397			23. 0	62·5	64·2
12. 10	18. 30	9. 37	·1407					
13. 43:	9. 0	9. 54	·1400					
16. 17:	17. 20	10. 49	·1407					
18. 56	13. 30	11. 2	·1400					
20. 2	14. 0	11. 9	·1380					
22. 8	18. 30	11. 28	·1405					
23. 59	24. 30	11. 42	·1402					
		11. 47	·1392					
		12. 7	·1385					
		12. 15	·1393					
		12. 37	·1373					
		12. 51	·1371					
		13. 39	·1387					
		14. 9	·1383					
		14. 36	·1390					
		17. 39	·1380					
		18. 30:	·1389					
		20. 12	·1386					
		21. 54	·1373					
		23. 59	·1378					
Aug. 22		Aug. 22		Aug. 22		Aug. 22		
0. 0	20. 24. 30	0. 0	·1378	0. 0	·02598	0. 0	63·0	64·8
1. 0	25. 35	1. 38	·1394	4. 43	·02705	1. 0	63·4	65·4
1. 24	25. 0	2. 39	·1392	7. 39	·02714	2. 0	63·4	65·6
1. 40	25. 35	2. 53	·1396	11. 30	·02653	3. 0	63·6	65·8
3. 55	22. 0	3. 18	·1392	18. 23	·02513	6. 0	63·8	66·3

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 22		Aug. 22		Aug. 22		Aug. 22		
h m	° ′ ″	h m		h m		h m	°	°
7. 26	20. 21. 5	3. 29	·1396	18. 58	·02530	7. 0	64·1	65·6
7. 48	19. 30	3. 45	·1390	22. 17	·02534	8. 0	63·4	64·8
8. 7	15. 0	5. 40	·1387	23. 59	·02590	9. 0	62·7	63·4
9. 5	18. 55	6. 39	·1397			9. 15	62·2	63·1
11. 3	17. 50		***			10. 0	61·8	63·0
11. 25	16. 40	8. 2	·1406			21. 0	61·6	63·1
12. 45	16. 55	9. 0	·1394			22. 0	62·0	63·4
13. 20	17. 55	10. 24	·1394			23. 0	62·5	63·9
13. 27	17. 0	10. 48	·1400					
15. 46	16. 30	11. 50	·1393					
16. 46	16. 55	12. 29:	·1400					
17. 24	15. 30	13. 9	·1392					
17. 41	18. 15	15. 17	·1395					
18. 19	14. 30	17. 30	·1393					
18. 31	13. 55	18. 49	·1383					
18. 55	15. 0	20. 15	·1378					
19. 24	15. 0	20. 30	·1385					
19. 38	17. 10	21. 10	·1388					
20. 15	14. 55	22. 32	·1370					
20. 55	17. 30	22. 47	·1369					
21. 12	16. 40	23. 59	·1394					
21. 32	19. 20							
21. 43	19. 0							
23. 5	25. 10							
23. 20	25. 0							
23. 30	25. 25							
23. 59	28. 0							
Aug. 23		Aug. 23		Aug. 23		Aug. 23		
0. 0	20. 28. 0	0. 0	·1394	0. 0	·02590	0. 0	62·8	64·7
0. 51	28. 45	0. 56	·1386	1. 0	·02615	1. 0	63·0	65·0
1. 12	26. 20	1. 16	·1372	1. 35	·02638	2. 0	63·2	65·4
1. 35	28. 40	1. 39	·1391	2. 49	·02663	3. 0	63·6	65·5
2. 2	23. 50	2. 2	·1381	3. 11	·02661	6. 0	64·1	66·2
4. 40	22. 20	2. 46	·1394	7. 54	·02740	7. 0	63·9	66·5
6. 11	19. 30	3. 7	·1382	13. 15	·02644	8. 0	63·9	65·1
6. 51	19. 50	4. 10	·1397	16. 46	·02553	9. 0	63·5	64·5
7. 0	19. 30	4. 21	·1392	17. 55	·02540	9. 25	63·5	64·4
7. 48	4. 30	4. 36	·1394	23. 22	·02590	11. 30	61·2	62·8
8. 3	7. 0	4. 49	·1390	23. 59	·02610	21. 0	61·8	63·6
8. 19	7. 30	5. 20	·1391			22. 0	62·0	63·8
8. 35	12. 15	5. 57	·1396			23. 0	62·3	64·2
8. 44	12. 35	6. 39	·1399					
9. 12	17. 0	7. 37	·1375					
9. 27	16. 30	7. 57	·1386					
9. 41	18. 0	8. 9	·1384					
10. 3	17. 50	8. 29	·1394					
10. 30	18. 30	10. 9	·1390					
11. 30	17. 30	11. 24	·1394					
14. 20	18. 15	13. 12	·1388					
14. 36	17. 30	13. 20	·1394					
14. 55	18. 0	13. 47	·1388					
15. 10	19. 30	14. 0	·1393					
15. 40	18. 0	14. 49	·1388					
15. 59	19. 40	15. 49	·1397					
16. 20	19. 25	16. 18	·1390					
16. 50	17. 20	17. 25	·1387					
17. 20	18. 5	18. 4	·1396					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 23		Aug. 23						
h m	° ′ ″	h m		h m		h m	°	°
18. 29	20. 16. 5	18. 54	·1388					
18. 34	17. 0	20. 42	·1386					
18. 44	16. 0	21. 28	·1380					
18. 49	17. 30	21. 50	·1364					
19. 15	19. 5	22. 29	·1375					
	***	23. 59	·1382					
20. 8	18. 0							
20. 22	18. 45							
20. 36	18. 0							
21. 40	21. 10							
21. 55	20. 25							
22. 2	21. 10							
22. 11	20. 0							
22. 33	23. 0							
23. 6	22. 55							
23. 59	26. 0							
Aug. 24		Aug. 24		Aug. 24		Aug. 24		
0. 0	20. 26. 0	0. 0	·1382	0. 0	·02610	0. 0	62·6	64·8
0. 27	26. 30	0. 57	·1387	3. 39	·02701	1. 0	63·0	65·3
0. 50	26. 0	1. 24	·1383	6. 1	·02717	2. 0	63·2	65·6
1. 3	26. 40	1. 40	·1388	8. 23	·02742	3. 0	63·1	65·7
2. 37	23. 40	2. 29	·1376	11. 15	·02650	6. 0	63·5	66·6
2. 49	21. 15	3. 8	·1393	12. 23	·02640	7. 0	63·7	66·7
3. 9	20. 55	3. 40	·1396	13. 0	·02620	8. 0	62·9	65·5
3. 15	21. 40	4. 5	·1387	13. 57	·02625	9. 0	63·2	64·3
5. 50	19. 50	4. 17	·1393	17. 27	·02620	11. 15	61·2	62·5
5. 59	20. 35	4. 41	·1386	19. 25	·02651	21. 0	62·8	64·7
7. 51	18. 50	5. 47	·1392	22. 50	·02641			
8. 16	10. 5	6. 13	·1396	23. 59	·02660			
9. 13	17. 20	7. 19	·1392					
9. 39	18. 50	7. 50	·1395					
10. 1	18. 0	8. 5	·1388					
10. 52	18. 35	8. 24	·1399					
11. 19:	17. 0	8. 47	·1393					
12. 0	20. 0	9. 12	·1397					
12. 27	20. 5	9. 55	·1391					
12. 55	18. 0	11. 10	·1391					
13. 36	17. 50	12. 39	·1398					
14. 5:	21. 50	13. 18	·1392					
14. 47	18. 0	14. 30	·1396					
15. 7	17. 0	22. 21	·1376					
16. 47	15. 30	23. 59	·1391					
19. 39	18. 50							
19. 54	20. 10							
20. 21	19. 0							
20. 51	18. 50							
21. 20	20. 45							
22. 22	20. 45							
22. 28	22. 0							
23. 59	24. 30							
Aug. 25		Aug. 25		Aug. 25		Aug. 25		
0. 0	20. 24. 30	0. 0	·1391	0. 0	·02660	0. 30	63·6	66·1
0. 20	26. 25	0. 57	·1394	2. 25	·02730	6. 45	64·2	67·2
1. 10	27. 0	1. 30	·1381	3. 21	·02733	10. 15	63·5	64·7
1. 50	24. 20	2. 37	·1384	7. 46	·02772	11. 0	62·9	64·7
2. 8	25. 10	3. 57	·1381	10. 25	·02730	12. 0	62·4	64·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 25		Aug. 25		Aug. 25		Aug. 25		
h m	° ′ ″	h m		h m		h m	°	°
2. 15	20. 24. 5	5. 28	·1392	10. 51	·02700	21. 0	63·3	65·2
3. 15	24. 0	5. 48	·1388	14. 45	·02682	22. 0	63·4	65·5
4. 10	21. 55	8. 45	·1390	15. 36	·02651	23. 0	63·5	65·8
8. 50	19. 0	8. 59	·1400	18. 40	·02670			
9. 3	20. 0	9. 11	·1394	22. 0	·02670			
9. 6	18. 30	9. 57	·1393	23. 59	·02700			
9. 55	18. 0	10. 11	·1397					
10. 12	19. 20	10. 32	·1388					
10. 30	24. 15	11. 6	·1402					
11. 1	17. 0	12. 17	·1388					
11. 18	18. 0	13. 40	·1396					
11. 30	17. 20	14. 54	·1388					
12. 0	18. 30	15. 20	·1395					
13. 29	18. 30	16. 4	·1386					
13. 42	16. 30	17. 31	·1393					
14. 18	17. 20	18. 47	·1392					
14. 50	23. 20	19. 59	·1380					
15. 34	16. 20	20. 24	·1385					
16. 20	17. 0	21. 20	·1375					
16. 53	15. 30	22. 38	·1341					
17. 8	16. 20	23. 59	·1373					
17. 50	15. 35							
18. 20	16. 40							
18. 30	16. 0							
18. 35	15. 50							
18. 46	17. 0							
18. 59	17. 0							
19. 12	16. 20							
19. 55	16. 0							
20. 25	17. 0							
20. 32	19. 0							
20. 40	19. 0							
20. 50	17. 40							
20. 57	18. 45							
21. 13	19. 40							
21. 20	19. 20							
21. 38	21. 0							
22. 17	22. 20							
23. 5	29. 10							
23. 59	27. 0							
Aug. 26		Aug. 26		Aug. 26		Aug. 26		
0. 0	20. 27. 0	0. 0	·1373	0. 0	·02700	0. 0	64·0	66·2
1. 30	25. 30	1. 36	·1394	1. 45	·02740	1. 0	64·4	65·9
1. 42	26. 10	2. 26	·1380	2. 27	·02725	2. 0	63·8	65·4
2. 16	24. 40	2. 47	·1387	6. 35	·02665	3. 0	63·1	64·4
2. 38	24. 40	3. 12	·1379	7. 1	·02683	6. 0	61·8	63·1
4. 48	19. 30	3. 37	·1386	8. 39	·02663	7. 0	61·3	63·1
6. 19	19. 10	5. 2	·1390	9. 16	·02593	8. 0	61·0	62·2
6. 30	20. 20	5. 30	·1402	9. 35	·02620	9. 0	60·8	62·3
6. 59	16. 10	5. 47	·1396	10. 3	·02622	21. 0	61·5	61·4
7. 55	18. 0	6. 42	·1377	10. 25	·02635	22. 0	61·1	62·0
8. 25	17. 30	7. 7	·1393	11. 40	·02615	23. 0	61·1	62·2
8. 50	24. 0	7. 33	·1398	13. 39	·02591			
9. 14	10. 0	7. 57	·1392	14. 10	·02550			
9. 29	15. 50	8. 29	·1398	16. 1	·02555			
9. 43	17. 40	8. 49	·1432	18. 48	·02510			
10. 4	12. 30	9. 11	·1389	20. 59	·02508			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time. (h m)	Western Declination. (° ′ ″)
Aug. 26 10. 23	20. 16. 5
10. 36	15. 45
10. 50	17. 0
11. 0	19. 0
11. 14	19. 10
12. 0	16. 0
12. 35	17. 20
12. 51	15. 50
13. 13	19. 15
13. 38	30. 0
14. 29	16. 30
15. 28:	15. 0
16. 0	18. 0
16. 14	17. 10
16. 44	15. 35
17. 10	16. 55
17. 20	16. 0
18. 2	16. 10
18. 42	17. 0
18. 49	15. 10
19. 10	19. 0
19. 23	16. 45
19. 30	18. 30
19. 44	17. 20 ***
21. 30	20. 25
22. 4	20. 30
22. 55	22. 30
23. 54	24. 15
23. 59	25. 0
Aug. 27 0. 0	20. 25. 0
0. 35	26. 40
0. 48	26. 0
1. 10:	27. 50
1. 45	26. 5
1. 57	26. 45
2. 10	24. 10
2. 20	24. 50
2. 38	23. 15 ***
5. 15	19. 20
5. 30	16. 5
6. 37	18. 40
6. 50	17. 0
7. 5	18. 30
7. 27	17. 55
7. 40	13. 20
7. 48	16. 50
8. 0	16. 10
8. 16	18. 0
8. 46	16. 5
9. 25	18. 30
9. 57	17. 20
10. 12	18. 0
10. 38	13. 0
11. 3	18. 0
11. 40	20. 13. 20
12. 18	17. 0
12. 34	16. 25
12. 56	18. 40
13. 5	18. 35
13. 16	20. 45
13. 28	20. 20
13. 48	22. 0
14. 30	18. 0
15. 0	16. 30
15. 11	17. 30
15. 32	16. 0
15. 49	16. 55
16. 25	15. 50
16. 30	17. 0
16. 40	16. 35
17. 6	18. 0
17. 28	17. 0
17. 42	17. 20
17. 57	16. 20
18. 21	17. 0
18. 28	15. 50
19. 11	15. 50
19. 35	17. 0
19. 59	16. 0
20. 20	17. 50
20. 35	17. 25
21. 3	18. 30
21. 42	18. 20
21. 59	19. 30
22. 8	18. 30
22. 14	21. 50
22. 30	20. 40
23. 2	22. 25
23. 10	23. 30
23. 37	22. 40
23. 49	23. 30
23. 59	23. 30
Aug. 28 0. 0	20. 23. 30
1. 1	25. 0
1. 27	23. 15
1. 36	24. 0
1. 49	23. 10
2. 18	23. 40
2. 37	23. 0
2. 43	21. 10
2. 51	21. 15
3. 34	19. 10
4. 11	20. 10
4. 44	19. 40
4. 57	19. 50
5. 19	17. 20
5. 55	17. 0
6. 3	17. 30
6. 38	17. 0
7. 21	1. 0

Greenwich Mean Solar Time. (h m)	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Aug. 26 9. 39	·1407
10. 10	·1384
10. 28	·1395
10. 52	·1387
11. 48	·1397
13. 10	·1393
13. 32	·1380
14. 7	·1395
14. 45:	·1403
15. 20	·1391
15. 35	·1384
17. 10	·1389
17. 30	·1380
18. 4	·1381
18. 50	·1388
19. 5	·1381
19. 17	·1387
19. 38	·1373
20. 39	·1373
21. 5	·1378
21. 34	·1373
22. 44	·1385
23. 59	·1394
Aug. 27 0. 0	·1394
0. 7	·1397
0. 26	·1395
0. 56	·1385
1. 16	·1392
1. 32	·1386
1. 47	·1392
2. 38	·1378
3. 56	·1389
4. 6	·1387
4. 27	·1394
4. 34	·1386
4. 41	·1393
4. 56	·1385
5. 6	·1390
5. 22	·1380
5. 41	·1400
6. 1	·1393
6. 17	·1392
6. 36	·1383
6. 57	·1392
7. 16	·1384
7. 45	·1401
8. 10	·1399
8. 23	·1389
9. 31	·1397
9. 37	·1393
10. 10	·1396
10. 23	·1404
10. 41	·1424
10. 54	·1410
10. 58	·1415
11. 7	·1413
11. 38	·1393
11. 50	·1396
12. 10	·1387
12. 54	·1390
13. 32	·1385
14. 19	·1396
15. 20	·1396
15. 30	·1391
16. 20	·1396
17. 5	·1385
17. 33	·1383
18. 27	·1392
19. 12	·1392
20. 10	·1384
20. 50	·1373
21. 16	·1373
22. 16	·1387
22. †31	·1381
23. 4	·1387
23. 59	·1391
Aug. 28 0. 0	·1391
0. 59	·1400
1. 21	·1389
2. 21	·1399
2. 47	·1389
3. 5	·1385
3. 40	·1395
3. 59	·1390
4. 9	·1396
4. 24	·1393
4. 35	·1396
4. 54	·1389
5. 26	·1391
6. 18	·1399
7. 4	·1387
7. 33	·1436
8. 30	·1389
9. 42	·1392

Greenwich Mean Solar Time. (h m)	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Aug. 26 23. 21	·02484
23. 59	·02500
Aug. 27 0. 0	·02500
2. 1	·02575
4. 21	·02609
5. 13	·02609
5. 29	·02625
6. 52	·02605
8. 28	·02535
10. 29	·02522
11. 21	·02490
11. 57	·02495
13. 54	·02491
14. 37	·02472
18. 50	·02429
23. 13	·02450
23. 59	·02470
Aug. 28 0. 0	·02470
5. 53	·02596
7. 10	·02599
7. 30	·02613
7. 51	·02580
12. 40	·02550
13. 10	·02530
23. 20	·02585
23. 59	·02580

Greenwich Mean Solar Time. (h m)	Readings of Thermometers. Of H. F. Magnet. (°)	Of V. F. Magnet. (°)
Aug. 27 0. 0	61·6	63·1
1. 0	61·9	63·7
2. 0	62·0	63·8
3. 0	62·1	64·0
6. 0	62·1	64·2
7. 0	61·0	62·4
8. 0	59·1	60·7
9. 0	60·8	62·1
21. 0	60·4	61·5
22. 0	60·5	61·6
23. 0	60·8	62·2
Aug. 28 0. 0	61·2	62·9
1. 0	61·4	63·4
2. 0	61·6	63·6
3. 0	61·6	63·7
6. 0	61·8	64·3
7. 0	62·4	63·7
8. 0	62·1	63·3
9. 0	61·7	62·6
9. 30	..	62·1
21. 0	62·6	64·5
22. 0	62·2	64·6
23. 0	62·5	65·1

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug.28		Aug.28						
h m	° ′ ″	h m		h m		h m	°	°
7.41	20. 9. 0	11.28	·1402					
7.53	8.50	12.22	·1396					
8.15	15.50	13. 5	·1410					
8.59	15. 0	13.57	·1394					
9.30	16.30	14. 6	·1399					
9.54	15.10	14.28	·1395					
10.19	16.30	14.55	·1398					
10.38	15.20	17.34	·1393					
10.48	16. 5	18.41	·1399					
11.19	16.20	20.54	·1389					
11.30	17. 0	22. 4	·1378					
11.56	15.50	22.18	·1380					
12.15	15.50	22.28	·1371					
12.35	14.30	22.40	·1372					
12.57	12. 0	23. 0	·1365					
13. 9	10.40	23.28	·1373					
13.14	11.20	23.44	·1380					
13.27	11.15	23.59	·1376					
14. 9	16.10							
14.33	14.20							
14.42	16. 0							
14.48	16. 0							
15. 5	14.25							
15.20	14.50							
15.38	16.10							
15.57	15. 0							
16.15	16.55							
16.28	16. 5							
17.25	17.55							
17.47	16.30							
19.14	14.20							
19.24	15.20							
19.40	14.30							
20.25	16.50							
20.34	15.30							
21. 4	18.30							
21.16	17.30							
22.32	22. 0							
22.49	23.30							
23. 5	22.40							
23.27	25.30							
23.45	25. 0							
23.59	26.45							
Aug.29		Aug.29		Aug.29		Aug.29		
0. 0	20.26.45	0. 0	·1376	0. 0	·02580	0. 0	62·8	65·5
0.15	26.10	0.15	·1387	2. 1	·02645	1. 0	63·0	65·9
0.52	29.30	0.26	·1382	3.15	·02704	2. 0	63·8	65·9
1.15	27.50	0.57	·1399	7.58	·02725	3. 0	63·4	66·1
1.45	28.10	1.28	·1387	11.30	·02691	5.30	63·2	66·2
1.50	26.40	1.46	·1395	11.58	·02678	6. 0	64·2	66·1
2. 6	27. 0	2.45	·1396	14.27	·02651	7. 0	64·2	66·0
3. 0	18.10	3. 9	·1384	14.59	·02632	8. 0	63·7	65·3
3.47	22. 0	3.20	·1392	16. 7	·02620	9. 0	63·4	64·8
3.57	21.40	3.37	·1386	17.19	·02598	11. 0	62·8	64·3
4.10	22.50	4. 6	·1395	18.23	·02590	21. 0	62·4	64·5
4.29	23. 0	4.19	·1391	23.22	·02630	22. 0	62·6	64·7
4.33	22. 0	4.27	·1395	23.59	·02635	23. 0	62·8	65·0

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug.29		Aug.29						
h m	° ′ ″	h m		h m		h m	°	°
5.40	20.20.30	4.47	·1382					
5.57	19.15	5.56	·1399					
6.20	19.55	7.36	·1400					
7.11	18.45	8. 1	·1410					
7.42	13.45	9.17	·1396					
8. 5	16.30	11. 7	·1397					
8.20	16.15	11.43	·1414					
8.38	17. 0	12.20	·1398					
9.15	16.10	14. 7	·1392					
9.53	17.30	14.36	·1400					
10.50	17. 0	15.57	·1396					
11.16	18.30	16.47	·1403					
11.36	16.40	17.25	·1396					
12.11	17.40	17.55	·1398					
12.27	16.30	18.18	·1389					
13.25	15. 0	19. 5	·1390					
14. 0	18.50	19.19	·1397					
14.29	20. 0	19.55	·1393					
15. 7	17. 0	20.16	·1377					
16. 2	16.40	20.22	·1382					
16.24	17.30	20.45	·1377					
16.47	16.55	21.27	·1382					
17. 2	16. 0	23.59	·1390					
18. 9	19. 0							
18.18	20.15							
18.23	19.55							
19. 2	17.30							
19.59	20.30							
20.10	19.50							
20.18	20.50							
20.30	20. 0							
20.50	23. 0							
21. 7	23. 0							
22.23	20.50							
23.26	23. 0							
23.59	25.30							
Aug.30		Aug.30		Aug.30		Aug.30		
0. 0	20.25.30	0. 0	·1390	0. 0	·02635	0. 0	63·1	65·3
0.15	26.50	0.30	·1396	2.50	·02710	1. 0	63·3	65·6
1. 5	26. 0	1.12	·1391	5.30	·02723	2. 0	63·3	65·8
2.25	24.10	1.32	·1386	6.25	·02740	3. 0	63·5	66·2
2.49	24.30	2.58	·1393	8. 9	·02692	6. 0	63·5	66·2
3.13	22.40	3.16	·1381	8.20	·02700	9. 0	62·1	63·3
5.25	19. 5	3.39	·1387	8.38	·02665	9.30	62·4	64·0
5.35	17.30	3.57	·1382	9.33	·02649	20.30	63·1	65·0
5.54	18. 5		***	10. 7	·02657	21. 0	63·2	65·2
7. 2	18.30	5. 5	·1387	12.10	·02644	22. 0	63·2	65·4
7.13	16.20	5.38	·1380	12.40	·02630	23. 0	63·4	66·0
7.23	17.30	6. 5	·1392	13.53	·02645			
7.52	16.30	6.30	·1394	15.28	·02643			
8. 8	10.20	6.57	·1384	18.35	·02640			
8.27	17.50	7.17	·1385	19. 0	·02658			
8.54	15. 0	7.33	·1393	23.21	·02681			
9.25	17. 0	8. 4	·1385	23.59	·02682			
9.46	14.30	8.30	·1413					
9.55	15.30	8.46	·1396					
10. 5	14.55	9.14	·1394					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 30		Aug. 30						
h m	° ′ ″	h m		h m		h m	°	°
10. 13	20. 15. 30	9. 46	·1381					
10. 30	14. 0	10. 25	·1392					
10. 44	16. 55	11. 6	·1383					
10. 57	15. 40	11. 18	·1390					
11. 10	18. 0	12. 0	·1391					
11. 55	17. 55	12. 35	·1402					
12. 8	15. 30	13. 20	·1388					
12. 38	13. 30	14. 22	·1388					
13. 1	15. 40	15. 6	·1380					
13. 19	15. 5	15. 38	·1389					
13. 45	19. 0	16. 28	·1385					
14. 25	15. 35	18. 10	·1391					
14. 39	18. 35	18. 56	·1379					
15. 12	18. 25	19. 41	·1385					
15. 23	19. 30	20. 44	·1378					
16. 5	17. 20	21. 30	·1363					
16. 36	18. 5	22. 17	·1361					
16. 51	17. 0	23. 59	·1376					
17. 22	16. 20							
17. 30	17. 10							
17. 45	16. 10							
18. 19:	18. 10							
18. 48	15. 45							
18. 59	17. 0							
19. 9	16. 30							
19. 46	17. 30							
20. 25	15. 30							
21. 19	17. 45							
21. 30	16. 0							
21. 40	16. 0							
22. 9	18. 30							
22. 21	18. 40							
22. 43	20. 35							
23. 59	24. 35							
Aug. 31		Aug. 31		Aug. 31		Aug. 31		
0. 0	20. 24. 35	0. 0	·1376	0. 0	·02682	0. 0	63·8	66·5
0. 58	27. 0	0. 57	·1382	5. 33	·02782	1. 0	64·0	66·7
1. 19	26. 20	1. 14	·1380	7. 40	·02800	3. 0	64·2	66·9
1. 42	27. 0	1. 39	·1387	10. 52	·02751	6. 0	64·4	67·5
1. 55	25. 30	2. 13	·1375	11. 39	·02731	7. 0	64·5	67·2
2. 20	24. 50	2. 32	·1379	12. 49	·02739	7. 30	64·5	67·0
2. 32	23. 0	2. 54	·1375	14. 11	·02715	9. 0	64·6	66·6
3. 53	21. 50	4. 7	·1390	15. 12	·02720	9. 30	64·6	66·5
4. 11:	23. 10	4. 21	·1371	15. 55	·02698	11. 0	64·6	66·2
4. 55	19. 30	4. 46	·1365	19. 2	·02740	12. 0	64·6	66·2
5. 36	18. 0	5. 3	·1373	22. 54	·02713	21. 45	64·5	66·4
6. 49	17. 0	6. 11	·1383	23. 59	·02723			
7. 12	14. 30	6. 17	·1393					
7. 25	6. 10	7. 16	·1372					
7. 35	8. 0	7. 29	·1385					
7. 43	7. 0	7. 40	·1377					
8. 20	15. 30	9. 15	·1383					
8. 38	17. 30	10. 38	·1390					
9. 20	17. 0	10. 58	·1397					
10. 10	17. 35	11. 15	·1393					
10. 25	16. 20	11. 42	·1399					
10. 48	16. 10	12. 40	·1382					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Aug. 31		Aug 31						
h m	° ′ ″	h m		h m		h m	°	°
10. 57	20. 17. 30	13. 58	·1394					
11. 31	13. 50	14. 30	·1384					
11. 54	12. 45	16. 16	·1386					
12. 5	11. 0	18. 12	·1375					
13. 24	16. 15	19. 20	·1381					
14. 18	12. 0	21. 58	·1356					
14. 50	16. 30	23. 59	·1367					
15. 5	17. 0							
15. 21	22. 0							
15. 35	23. 20							
16. 57	16. 0							
17. 22	17. 0							
17. 30	17. 50							
17. 40	17. 45							
17. 49	16. 10							
17. 55	17. 45							
18. 14	16. 25							
18. 27	18. 0							
19. 12	15. 25							
19. 42	15. 50							
19. 55	13. 50							
20. 50	14. 0							
23. 59	25. 0							
Sept. 1		Sept. 1		Sept. 1		Sept. 1		
0. 0	20. 25. 0	0. 0	·1367	0. 0	·02723	1. 0	64·8	67·5
0. 35	27. 0	1. 37	·1381	4. 19	·02810	8. 0	..	68·0
1. 35	27. 10	1. 57	·1378	6. 32	·02841	9. 0	65·0	66·9
1. 45	27. 40	3. 13	·1385	7. 1	·02881	21. 0	63·6	65·4
2. 3	26. 20	4. 57	·1383	8. 38	·02850	22. 0	63·8	65·5
4. 53	20. 0	5. 30	·1392	9. 20	·02813	23. 0	64·0	66·1
6. 21	18. 40	5. 42	·1387	12. 29	·02750			
6. 38	16. 50	6. 2	·1388	12. 50	·02755			
7. 5	3. 40	6. 40	·1356	13. 21	·02700			
8. 13	17. 55	7. 15	·1369	18. 49	·02640			
8. 27	15. 0	7. 32	·1365	19. 2	·02660			
8. 30	16. 35	7. 59	·1372	22. 14	·02665			
8. 48	16. 20	8. 10	·1368	23. 59	·02666			
8. 55	17. 30	8. 32	·1379					
9. 38	15. 5	8. 53	·1382					
9. 55	15. 0	9. 16	·1378					
10. 2	15. 40	9. 40	·1384					
10. 35	13. 50	10. 14	·1380					
10. 45	17. 0	10. 37	·1387					
11. 22	16. 0	10. 49	·1384					
11. 50	17. 50	12. 33	·1384					
12. 12	16. 45	13. 0	·1403					
12. 49	26. 30	13. 11	·1396					
13. 30	18. 0	13. 37	·1390					
13. 50	18. 50	14. 45	·1383					
14. 24	18. 0	15. 29	·1391					
15. 0	20. 5	15. 46	·1382					
15. 54	16. 30	15. 59	·1385					
16. 35	20. 30	16. 27	·1369					
16. 47	19. 10	17. 40	·1381					
17. 43	18. 30	18. 48	·1368					
18. 5	16. 25	19. 11	·1372					
18. 51	15. 0	20. 38	·1360					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 1		Sept. 1						
h m	° ′ ″	h m		h m		h m	°	°
19. 16	20. 16. 0	21. 16	·1368					
19. 27	14. 30	23. 59	·1372					
19. 54	17. 20							
20. 2	17. 10							
20. 28	19. 35							
20. 39	19. 0							
22. 19	21. 35							
23. 12	24. 50							
23. 59	25. 30							
Sept. 2		Sept. 2		Sept. 2		Sept. 2		
0. 0	20. 25. 30	0. 0	·1372	0. 0	·02666	0. 0	64 ·2	66 ·4
0. 32	26. 25	1. 30	·1384	5. 9	·02770	1. 0	64 ·5	66 ·8
5. 3	19. 30	2. 6	·1379	7. 2	·02771	3. 0	64 ·7	67 ·4
6. 45	18. 30	4. 32	·1380	10. 40	·02709	6. 0	64 ·9	67 ·7
7. 49	18. 40	4. 53	·1384	12. 6	·02729	9. 0	64 ·4	65 ·3
8. 13	18. 0	5. 20	·1381	16. 26	·02740	21. 0	64 ·8	66 ·7
8. 49	18. 40	7. 46	·1388	23. 0	·02719	22. 0	64 ·8	66 ·0
10. 14	17. 50	8. 55	·1387	23. 59	·02718	23. 0	65 ·1	66 ·0
10. 29	19. 30	10. 6	·1383					
10. 49	18. 0	10. 21	·1391					
11. 12	17. 20	11. 18	·1384					
11. 56	18. 45	12. 26	·1389					
12. 23	20. 5	13. 34	·1386					
13. 1	18. 5	15. 29	·1390					
13. 18	20. 0	16. 11	·1379					
14. 53	18. 0	16. 57	·1390					
15. 13	16. 0	18. 24	·1386					
15. 40	18. 0	20. 15	·1362					
16. 19	21. 50	22. 49	·1369					
17. 13	18. 25	23. 59	·1374					
17. 26	18. 50							
18. 6	16. 50							
19. 30	16. 10							
19. 49	17. 30							
20. 13	16. 55							
23. 34	26. 30							
23. 46	25. 0							
23. 59	25. 15							
Sept. 3		Sept. 3		Sept. 3		Sept. 3		
0. 0	20. 25. 15	0. 0	·1374	0. 0	·02718	0. 0	65 ·0	67 ·0
1. 34	25. 0	0. 46	·1384	3. 42	·02793	1. 0	65 ·2	67 ·3
3. 35	20. 20	1. 30	·1385	6. 44	·02819	2. 0	65 ·2	67 ·4
4. 0	20. 30	3. 11	·1380	7. 27	·02830	3. 0	65 ·3	67 ·6
4. 10	19. 50	3. 57	·1385	13. 30	·02760	6. 0	65 ·4	67 ·9
5. 0	18. 30	4. 57	·1380	16. 36	·02740	9. 0	65 ·1	66 ·7
6. 5	18. 10	5. 31	·1385	23. 25	·02735	21. 0	64 ·8	66 ·5
6. 33	19. 20	5. 56	·1381	23. 59	·02739	22. 0	64 ·8	66 ·5
7. 0	17. 50	7. 39	·1387			23. 0	64 ·9	66 ·7
7. 30	19. 0	8. 26	·1383					
8. 27	19. 20	9. 12	·1389					
8. 53	18. 30	12. 20	·1382					
9. 42	18. 50	13. 4	·1387					
10. 28	17. 55	14. 5	·1388					
10. 42	18. 40	14. 59	·1380					
11. 15	16. 0	15. 49	·1386					
11. 36	17. 30	17. 48	·1385					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 3		Sept. 3						
h m	° ′ ″	h m		h m		h m	°	°
12. 12	20. 16. 30	20. 14	·1365					
12. 40	19. 0	23. 59	·1378					
13. 2	19. 0							
13. 30	17. 50							
13. 47	18. 0							
14. 7	17. 50							
14. 25	18. 20							
15. 5	21. 0							
17. 8	17. 50							
18. 0	17. 50							
18. 18	16. 45							
19. 46	16. 30							
21. 0	18. 0							
23. 20	25. 5							
23. 59	25. 30							
Sept. 4		Sept. 4		Sept. 4		Sept. 4		
0. 0	20. 25. 30	0. 0	·1378	0. 0	·02739	0. 0	65 ·1	67 ·0
0. 12	25. 40	5. 36	·1385	2. 7	·02760	1. 0	65 ·1	67 ·2
1. 4	25. 0	6. 8	·1382	3. 5	·02750	2. 0	65 ·3	67 ·3
3. 37	19. 55	9. 24	·1394	6. 21	·02769	3. 0	65 ·3	66 ·8
5. 50	18. 0	10. 7	·1388	8. 5	·02700	6. 0	65 ·1	66 ·8
10. 7	16. 50	10. 25	·1393	9. 44	·02682	7. 30	62 ·5	63 ·8
10. 20	17. 20	10. 56	·1389	14. 22	·02680	8. 0	61 ·8	63 ·4
10. 42	14. 30	12. 8	·1396	15. 1	·02660	9. 0	62 ·1	63 ·5
11. 9	16. 10	13. 30	·1392	16. 18	·02659	9. 30	62 ·1	62 ·8
12. 7	17. 0	13. 58	·1395	19. 26	·02680	21. 7	63 ·3	64 ·8
12. 37	17. 0	14. 18	·1391	22. 55	·02630	22. 0	62 ·8	64 ·1
13. 8	17. 50	16. 8	·1404	23. 59	·02640	23. 0	64 ·0	64 ·8
13. 13	18. 50	17. 18	·1394					
13. 29	18. 0	19. 12	·1390					
14. 2	24. 0	20. 10	·1380					
15. 12	17. 30	22. 6	·1374					
15. 30	17. 50	23. 59	·1372					
16. 4	15. 5							
16. 48	16. 40							
18. 2	14. 45							
18. 10	15. 0							
18. 25	13. 40							
18. 43	14. 45							
19. 5	13. 0							
21. 0	18. 10							
21. 15	18. 0							
21. 40	19. 20							
21. 50	19. 20							
23. 59	27. 0							
Sept. 5		Sept. 5		Sept. 5		Sept. 5		
0. 0	20. 27. 0	0. 0	·1372	0. 0	·02640	0. 0	64 ·0	65 ·5
0. 35	27. 0	1. 17	·1386	3. 10	·02730	1. 0	64 ·2	65 ·9
1. 8	28. 55	1. 30	·1384	5. 15	·02735	2. 0	64 ·2	66 ·2
1. 29	28. 0	2. 6	·1382	5. 21	·02730	3. 0	64 ·2	66 ·3
1. 40	28. 40	3. 5	·1384	6. 30	·02740	6. 0	64 ·2	66 ·3
2. 25	26. 0	3. 32	·1375	7. 37	·02665	9. 0	60 ·9	61 ·7
2. 42	25. 55	5. 14	·1384	9. 26	·02605	21. 0	62 ·0	63 ·3
4. 3	20. 55	5. 30	·1378	10. 10	·02602	22. 0	62 ·1	63 ·6
4. 58	19. 30	6. 6	·1390	14. 12	·02528	23. 0	62 ·3	64 ·0
5. 10	20. 0	6. 26	·1388	14. 32	·02536			

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 5		Sept. 5		Sept. 5				
h m	° ′ ″	h m		h m		h m	°	°
5.46	20.14.30	6.57	·1392	15.7	·02500			
5.55	14.0	9.6	·1396	18.35	·02476			
7.1	19.10	9.22	·1394	19.22	·02486			
7.20	19.15	14.17	·1390	20.6	·02480			
7.32	18.30	14.46	·1407	21.11	·02500			
9.10	17.30	16.0	·1396	23.5	·02511			
9.37	17.30	16.31	·1403	23.59	·02530			
9.54	18.45	17.19	·1396					
12.20	17.55	18.2	·1400					
12.37	19.30	19.34	·1392					
13.3	17.50	20.9	·1384					
13.23	18.30	20.39	·1366					
14.1	16.0	21.8	·1361					
14.20	21.25	22.0	·1381					
15.10	13.35	22.32	·1372					
15.43	12.30	22.46	·1378					
16.8	14.0	23.5	·1374					
16.30	14.0	23.8	·1376					
16.35	13.35	23.25	·1372					
16.59	15.50	23.59	·1376					
17.13	15.20							
17.25	16.25							
17.38	16.50							
17.40	15.30							
17.50	16.45							
18.3	15.20							
18.59	14.20							
19.15	15.10							
19.34	14.55							
19.59	15.50							
20.12	17.0							
20.37	17.0							
20.50	19.30							
21.13	26.0							
21.54	23.0							
22.7	25.0							
22.40	23.0							
22.44	25.20							
22.58	24.0							
23.11	26.30							
23.37	25.0							
23.59	25.30							
Sept. 6		Sept. 6		Sept. 6		Sept. 6		
0.0	20.25.30	0.0	·1376	0.0	·02530	0.0	62·8	64·3
0.14	26.0	0.15	·1384	5.15	·02623	1.0	63·0	64·9
0.20	25.10	0.22	·1379	6.5	·02659	2.0	63·0	65·1
0.40	26.10	0.53	·1386	7.38	·02590	3.0	62·9	65·0
4.15	21.45	1.44	·1387	9.5	·02555	6.9	62·8	64·9
5.12	20.50	2.0	·1382	10.50	·02535	9.0	60·8	61·8
5.35	19.20	2.12	·1388	11.10	·02519	21.0	61·7	63·0
5.50	20.10	2.40	·1383	15.25	·02497	22.0	61·7	63·6
6.20	18.30	4.4	·1392	16.10	·02465	23.0	62·1	63·9
6.33	18.30	4.19	·1385	16.32	·02462			
6.53	21.0	4.30	·1389	17.9	·02457			
7.41	20.50	5.2	·1387	17.34	·02441			
7.55	19.30	5.26	·1373	18.56	·02447			
8.16	20.30	5.57	·1386	21.26	·02499			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 6		Sept. 6		Sept. 6				
h m	° ′ ″	h m		h m		h m	°	°
9.6	20.18.30	6.6	·1384	21.35	·02490			
9.43	16.35	6.8	·1365	21.51	·02505			
10.15	18.30	6.42	·1380	23.30	·02510			
10.33	18.20		***	23.59	·02493			
10.53	21.20	10.27	·1394					
11.26	17.15	10.55	·1404					
12.5	15.0	11.57	·1396					
12.45	17.30	12.14	·1388					
12.59	18.5	13.10	·1392					
13.16	17.0	13.31	·1388					
14.4	18.0	14.9	·1393					
14.22	16.15	15.12	·1387					
14.45	19.30	15.59	·1397					
14.58	19.0	16.12	·1394					
15.6	20.0	16.39	·1404					
15.25	26.25	16.54	·1398					
16.3	19.30	17.11	·1405					
16.27	19.55	17.38	·1396					
16.29	21.55	18.20	·1397					
16.47	18.20	19.6	·1390					
17.24	22.0	19.44	·1389					
17.40	19.30	19.57	·1396					
17.49	19.10	21.20	·1367					
18.2	17.50	21.40	·1363					
18.16	18.0	21.55	·1371					
18.19	17.0	22.5	·1379					
19.21	15.0	23.0	·1375					
19.30	15.55	23.43	·1382					
19.46	12.30		(†)					
20.0	17.50							
20.8	17.0							
20.27	18.55							
20.35	18.0							
20.47	19.30							
20.58	18.30							
21.19	21.30							
21.42	22.0							
22.10	28.0							
22.20	26.10							
22.40	25.0							
22.50	25.50							
23.5	24.10							
23.41	24.0							
23.49	25.10							
	(†)							
Sept. 7		Sept. 7		Sept. 7		Sept. 7		
	(†)		(†)	0.0	·02493	0.0	62·2	64·1
1.10	20.32.30	1.13	·1376	1.25	·02550	1.0	62·5	64·6
1.20	32.20	1.26	·1389	1.36	·02540	2.0	62·4	64·6
1.27	33.30	1.41	·1381	2.12	·02630	3.0	62·6	64·8
1.39	27.0	1.57	·1363	2.31	·02606	6.0	62·9	65·0
1.42	28.30	2.17	·1384	3.0	·02624	9.0	60·8	62·0
2.0	21.0	2.36	·1358	3.19	·02600	9.20	60·1	61·8
2.5	22.5	2.41	·1367	3.49	·02695	21.0	61·4	62·5
2.10	21.30	2.48	·1365	4.2	·02680			
2.30	31.30	3.5	·1377	4.9	·02690			
2.39	29.20	3.28	·1365	4.38	·02669			

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 7		Sept. 7		Sept. 7				
h m	° ′ ″	h m		h m		h m	°	°
2. 45	20. 31. 0	3. 41	·1368	7. 44	·02585			
2. 59	28. 0	3. 58	·1383	7. 50	·02609			
3. 10	31. 20	4. 4	·1365	8. 4	·02582			
3. 30	23. 0	4. 12	·1372	8. 15	·02582			
3. 39	24. 0	4. 26	·1359	8. 37	·02545			
3. 54	24. 0	4. 42	·1359	8. 49	·02544			
4. 2	28. 0	5. 12	·1382	9. 5	·02521			
4. 10	25. 40	5. 30	·1376	10. 34	·02515			
4. 12	27. 5	6. 3	·1384	11. 2	·02485			
4. 26	27. 0	6. 23	·1386	11. 19	·02486			
4. 40	25. 50	6. 42	·1393	12. 0	·02435			
4. 54	21. 25	7. 16	·1375	12. 38	·02420			
5. 18	21. 55	7. 38	·1362	13. 6	·02452			
5. 42	19. 30	7. 57	·1393	13. 55	·02429			
6. 7	21. 20	8. 19	·1430	14. 20	·02439			
6. 30	20. 30	8. 35	·1395	15. 45	·02413			
6. 38	20. 45	8. 44	·1402	17. 15	·02425			
6. 49	19. 30	9. 7	·1382	17. 56	·02406			
7. 2	17. 20	9. 21	·1389	22. 30	·02450			
7. 10	17. 55	9. 43	·1383	23. 59	·02500			
7. 22	15. 35	10. 20	·1384					
7. 29	20. 15. 0	10. 44	·1406					
7. 51	19. 52. 20	11. 0	·1401					
7. 59	58. 0	11. 19	·1412					
8. 8	19. 53. 10	11. 47	·1402					
8. 30	20. 10. 20	11. 59	·1410					
8. 40	9. 40	12. 8	·1406					
8. 58	15. 55	12. 48	·1370					
9. 7	13. 30	13. 26	·1390					
9. 27	18. 0	13. 56	·1376					
9. 40	18. 45	14. 44	·1379					
9. 48	17. 45	14. 59	·1374					
10. 2	17. 40	16. 16	·1390					
10. 15	18. 35	16. 31	·1386					
10. 29	17. 30	17. 14	·1393					
10. 40	19. 0	17. 45	·1384					
11. 1	16. 0	18. 51	·1372					
11. 31	24. 0	19. 14	·1383					
11. 55	10. 55	19. 58	·1376					
12. 40	6. 30	20. 32	·1379					
13. 9	19. 0	21. 28	·1375					
13. 23	16. 55	22. 25	·1378					
13. 30	18. 50	23. 59	·1368					
13. 47	16. 30							
14. 0	16. 30							
14. 25	20. 20							
14. 27	19. 20							
14. 55	23. 20							
15. 40	22. 20							
15. 49	23. 0							
16. 5	20. 0							
16. 23	18. 0							
16. 45	17. 50							
16. 59	18. 55							
17. 3	18. 15							
17. 33	19. 30							
17. 44	18. 10							
17. 57	19. 40							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 7								
h m	° ′ ″	h m		h m		h m	°	°
18. 17	20. 19. 30							
18. 25	18. 15							
18. 33	19. 30							
19. 7	19. 30							
19. 13	20. 50							
19. 37	18. 50							
19. 53	20. 0							
20. 2	19. 30							
20. 8	21. 0							
20. 19	21. 0							
20. 30	20. 0							
20. 37	20. 20							
21. 35	17. 30							
22. 0	19. 55							
22. 9	19. 0							
22. 44	23. 0							
23. 40	26. 30							
23. 57	25. 0							
23. 59	25. 10							
Sept. 8		Sept. 8		Sept. 8		Sept. 8		
0. 0	20. 25. 10	0. 0	·1368	0. 0	·02500	0. 0	61 ·8	63 ·7
0. 55	27. 55	0. 42	·1375	1. 0	·02520	1. 0	61 ·8	63 ·9
1. 54	21. 30	0. 55	·1370	1. 53	·02559	6. 30	62 ·3	65 ·0
2. 18	22. 5	1. 6	·1375	6. 27	·02577	9. 0	62 ·3	65 ·5
2. 40	21. 0	1. 12	·1367	11. 55	·02520	21. 0	61 ·8	63 ·9
2. 55	23. 0	1. 27	·1374	13. 57	·02420	22. 0	62 ·0	64 ·3
3. 29	23. 10	2. 2	·1380	14. 54	·02440	23. 0	62 ·3	64 ·7
3. 50	22. 0	2. 10	·1374	15. 44	·02435			
4. 3	22. 50	3. 7	·1374	18. 50	·02458			
4. 25	22. 0	3. 18	·1369	22. 3	·02499			
4. 51	22. 15	3. 33	·1375	23. 0	·02509			
6. 29	19. 0	4. 6	·1371	23. 59	·02533			
6. 40	20. 5	4. 28	·1380					
7. 48	18. 30		***					
8. 3	19. 0	5. 18	·1378					
8. 40	17. 20	5. 22	·1383					
9. 25	18. 45	5. 44	·1380					
11. 19	18. 5	6. 8	·1384					
11. 33	19. 35	6. 21	·1390					
11. 55	23. 35	6. 57	·1388					
12. 11	20. 45	8. 18	·1393					
12. 29	22. 20	10. 59	·1387					
13. 5	14. 30	11. 30	·1388					
13. 20	14. 50	11. 58	·1404					
13. 55	10. 50	13. 2	·1399					
14. 11	11. 0	13. 31	·1405					
15. 7	16. 30	14. 15	·1380					
15. 18	15. 30	15. 22	·1390					
15. 43	15. 25	16. 4	·1380					
16. 15	19. 30	17. 15	·1382					
17. 5	18. 35	17. 34	·1387					
17. 23	19. 0	18. 15	·1393					
17. 46	20. 30	19. 5	·1376					
18. 10	20. 30	20. 0	·1368					
18. 54	21. 40	20. 12	·1374					
19. 7	20. 40	20. 27	·1369					
19. 51	23. 55	21. 6	·1367					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 8		Sept. 8						
h m	° ′ ″	h m		h m		h m	°	°
20. 5	20. 22. 0	22. 5	·1377					
20. 15	22. 30	22. 20	·1374					
20. 30	20. 0	22. 48	·1384					
20. 45	19. 55	23. 59	·1382					
20. 53	20. 45							
21. 2	19. 15							
21. 11	21. 30							
21. 25	20. 30							
21. 57	20. 40							
22. 20	20. 0							
23. 30	23. 10							
23. 43	22. 30							
23. 59	22. 25							
Sept. 9		Sept. 9		Sept. 9		Sept. 9		
0. 0	20. 22. 25	0. 0	·1382	0. 0	·02533	0. 0	62·5	65·0
0. 12	23. 30	0. 37	·1392	2. 29	·02579	1. 0	63·0	65·6
0. 20	22. 55	1. 11	·1380	3. 37	·02640	3. 0	62·9	65·9
0. 38	25. 0	1. 27	·1386	6. 58	·02635	6. 0	63·1	66·2
1. 10	23. 0	2. 3	·1372	9. 5	·02558	9. 0	60·9	62·0
1. 25	24. 0	2. 11	·1376	10. 40	·02530	9. 45	61·4	62·6
2. 2	22. 10	2. 30	·1366	11. 5	·02503	21. 0	62·1	63·0
2. 33	19. 40	2. 47	·1380	14. 28	·02551	22. 0	62·3	63·8
3. 2	19. 10	3. 27	·1369	16. 10	·02512	23. 0	62·4	64·3
3. 38	20. 0	3. 34	·1371	18. 43	·02500			
3. 52	18. 0	3. 51	·1365	19. 39	·02515			
4. 10	20. 0	4. 8	·1375	22. 24	·02510			
4. 53	20. 30	4. 15	·1370	23. 59	·02545			
5. 20	19. 30	4. 55	·1381					
5. 35	20. 5	5. 10	·1388					
5. 55	19. 10	5. 35	·1382					
6. 3	20. 0	5. 48	·1388					
6. 25	16. 30	5. 57	·1383					
6. 47	10. 0	6. 7	·1393					
6. 59	12. 55	6. 38	·1380					
7. 19	9. 30	6. 56	·1393					
7. 33	10. 0	7. 16	·1380					
7. 43	9. 30	7. 56	·1397					
8. 30	17. 0	8. 23	·1386					
9. 0	16. 30	9. 6	·1392					
9. 15	14. 30	9. 20	·1401					
9. 35	16. 30	9. 45	·1386					
9. 59	14. 30	10. 3	·1396					
10. 9	17. 0	10. 20	·1396					
10. 35	15. 30	10. 38	·1412					
10. 49	19. 30	11. 0	·1388					
12. 2	16. 30	11. 19	·1382					
12. 40	16. 50	12. 3	·1390					
13. 53	18. 30	12. 35	·1387					
14. 17	20. 0	13. 6	·1390					
15. 5	19. 45	13. 46	·1387					
15. 30	20. 50	15. 0	·1394					
16. 8	18. 0	15. 55	·1396					
16. 38	18. 10	16. 57	·1390					
17. 2	18. 30	18. 0	·1395					
17. 50	20. 0	18. 40	·1384					
18. 11	19. 30	18. 50	·1377					
18. 33	20. 0	19. 26	·1375					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 9		Sept. 9						
h m	° ′ ″	h m		h m		h m	°	°
18. 41	20. 20. 35	20. 16	·1381					
19. 24	20. 10	20. 37	·1377					
19. 45	22. 0	21. 22	·1385					
20. 35	18. 15	21. 58	·1377					
21. 21	18. 0	22. 16	·1380					
21. 38	20. 40	22. 35	·1373					
22. 54	22. 10	22. 57	·1380					
23. 6	21. 35	23. 59	·1387					
23. 59	23. 0							
Sept. 10		Sept. 10		Sept. 10		Sept. 10		
0. 0	20. 23. 0	0. 0	·1387	0. 0	·02545	0. 0	62·7	64·6
0. 30	24. 50	1. 10	·1383	2. 55	·02607	1. 0	62·9	64·9
0. 40	24. 30	1. 39	·1368	4. 40	·02613	2. 0	63·0	65·1
1. 10	25. 0	2. 0	·1367	4. 50	·02609	3. 0	63·0	65·3
1. 24	24. 0	2. 48	·1382	5. 19	·02625	6. 0	63·1	65·4
1. 43	24. 0	3. 7	·1376	6. 26	·02620	9. 0	60·0	60·9
2. 5	21. 50	4. 31	·1382	7. 30	·02540	10. 15	59·8	61·1
3. 23	22. 50	4. 55	·1372	10. 21	·02468	10. 30	59·8	61·2
4. 38	20. 30	5. 8	·1384	11. 33	·02470	11. 0	59·8	61·4
5. 2	16. 30	5. 30	·1388	12. 18	·02469	11. 30	60·7	62·0
5. 35	17. 50	5. 57	·1383	12. 35	·02478	21. 0	61·2	62·4
6. 2	15. 45	6. 15	·1386	12. 57	·02457	22. 0	61·5	62·6
6. 25	16. 30	6. 56	·1384	13. 27	·02452	23. 0	61·9	62·9
7. 3	15. 50	7. 16	·1388	14. 0	·02462			
7. 9	16. 15	7. 46	·1386	17. 43	·02445			
7. 46	15. 50	9. 20	·1387	23. 16	·02450			
8. 5	16. 45	9. 45	·1395	23. 59	·02455			
8. 42	15. 30	10. 40	·1388					
9. 0	17. 25	11. 42	·1397					
9. 35	16. 50	12. 10	·1391					
9. 40	14. 30	12. 35	·1409					
10. 0	16. 50	13. 39	·1384					
10. 22	16. 0	15. 14	·1390					
10. 41	18. 30	15. 28	·1393					
11. 5	16. 30	15. 36	·1387					
11. 55	19. 10	16. 23	·1393					
12. 6	18. 10	17. 20	·1393					
12. 25	18. 20	18. 16	·1382					
12. 42	22. 25	19. 7	·1389					
13. 33	18. 30	21. 6	·1383					
14. 11	20. 10	22. 5	·1384					
14. 31	19. 10	22. 41	·1378					
15. 23	18. 0	23. 59	·1382					
15. 35	19. 0							
15. 50	18. 0							
16. 5	19. 0							
16. 25	18. 40							
16. 30	17. 30							
16. 56	18. 30							
17. 38	17. 25							
19. 49	16. 0							
21. 12	17. 20							
22. 9	20. 20							
22. 32	20. 50							
23. 59	26. 50							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 11		Sept. 11		Sept. 11		Sept. 11		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 26. 50	0. 0	·1382	0. 0	·02455	0. 0	62·2	63·6
0. 37	24. 40	0. 19	·1375	1. 57	·02525	1. 0	62·2	64·1
1. 2	25. 30	1. 24	·1382	7. 49	·02579	2. 0	62·2	64·2
1. 48	23. 30	3. 0	·1377	8. 16	·02540	3. 0	62·5	64·6
2. 41	24. 40	3. 21	·1387	9. 45	·02535	7. 0	62·6	64·8
3. 20	21. 40	3. 42	·1382	9. 55	·02520	9. 0	62·0	62·9
3. 32	21. 55	4. 20	·1389	11. 41	·02517	9. 30	62·0	62·8
3. 49	20. 45	5. 16	·1385	11. 56	·02523	21. 0	63·4	63·9
5. 16	20. 0	5. 57	·1375	12. 21	·02503	22. 0	63·6	64·6
5. 39	17. 30	6. 10	·1384	18. 28	·02500	23. 0	63·7	64·8
6. 4	9. 55	6. 32	·1388	20. 36	·02512			
6. 52	17. 0	7. 35	·1380	23. 0	·02500			
8. 7	16. 20	9. 44	·1396	23. 59	·02523			
8. 27	14. 20	10. 7	·1390					
8. 40	14. 30	10. 22	·1396					
8. 55	16. 20		***					
9. 12	17. 30	11. 28	·1390					
9. 29	16. 30		***					
9. 44	17. 0	13. 13	·1386					
10. 2	16. 0		***					
10. 16	18. 0	16. 36	·1398					
10. 33	18. 20		***					
11. 35	18. 40	21. 13	·1382					
11. 58	24. 30	21. 56	·1372					
12. 43	19. 0	23. 18	·1386					
13. 2	20. 5	23. 59	·1390					
13. 20	19. 30							
13. 29	20. 0							
14. 54	16. 50							
16. 12	18. 55							
16. 25	16. 20							
16. 45	17. 30							
18. 0	16. 30							
18. 9	17. 45							
18. 30	15. 50							
18. 42	16. 55							
19. 45	16. 30							
19. 56	15. 10							
19. 58	17. 20							
20. 5	16. 50							
20. 49	19. 55							
21. 10	19. 15							
21. 20	20. 5							
22. 15	19. 20							
23. 22	23. 45							
23. 59	24. 0							
Sept. 12		Sept. 12		Sept. 12		Sept. 12		
0. 0	20. 24. 0	0. 0	·1390	0. 0	·02523	0. 0	63·3	65·3
0. 38	25. 30	1. 26	·1394	2. 20	·02590	1. 0	63·2	65·7
3. 15	20. 0	4. 10	·1382	5. 54	·02620	3. 0	63·3	66·1
6. 32	18. 30	4. 25	·1387	8. 18	·02568	6. 0	63·3	66·1
7. 41	18. 45	4. 55	·1382	23. 4	·02437	7. 0	62·7	64·2
8. 1	17. 10	5. 32	·1387	23. 35	·02440	9. 0	61·8	63·0
8. 12	17. 40	6. 10	·1384	23. 59	·02440	9. 30	61·0	62·0
8. 21	16. 0	8. 26	·1395			10. 25	60·7	63·0
8. 52	18. 30	9. 32	·1392			21. 0	61·2	62·4
12. 51	18. 0	10. 14	·1389			22. 0	60·5	62·2

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 12		Sept. 12				Sept. 12		
h m	° ′ ″	h m		h m		h m	°	°
13. 30	20. 17. 0	10. 49	·1393			23. 0	61·5	62·6
15. 9	17. 0	15. 16	·1385					
15. 25	18. 0	16. 6	·1394					
15. 36	17. 35	18. 28	·1392					
16. 19	18. 0	21. 54	·1376					
17. 5	16. 55	23. 59	·1381					
17. 13	17. 50							
17. 15	17. 55							
17. 33	16. 0							
19. 47	15. 40							
23. 26	22. 55							
23. 59	24. 0							
Sept. 13		Sept. 13		Sept. 13		Sept. 13		
0. 0	20. 24. 0	0. 0	·1381	0. 0	·02440	0. 0	62·3	63·6
1. 6	25. 0	1. 14	·1394	3. 4	·02526	1. 0	62·3	64·2
2. 15	22. 5	1. 38	·1390	6. 18	·02560	2. 0	62·4	64·5
2. 25	22. 55	2. 17	·1386	9. 17	·02526	3. 0	62·6	64·7
2. 37	21. 50	2. 28	·1394	9. 41	·02450	6. 0	63·0	65·1
4. 45	19. 30	4. 46	·1392	10. 2	·02445	9. 0	61·1	62·0
6. 50	20. 0	5. 10	·1397	10. 12	·02420	11. 30	61·0	63·1
7. 15	12. 50	5. 21	·1396	10. 25	·02432	11. 45	60·8	62·8
7. 21	13. 0	6. 10	·1408	10. 39	·02420	21. 0	61·2	62·1
7. 29	15. 20	6. 57	·1396	11. 15	·02462	22. 0	61·3	62·6
7. 35	15. 15	7. 16	·1405	12. 25	·02374	23. 0	61·6	62·9
8. 0	12. 30	7. 23	·1397	12. 59	·02470			
8. 22	13. 35	7. 55	·1391	13. 33	·02385			
8. 37	16. 50	8. 10	·1396	13. 54	·02415			
8. 56	13. 30	8. 15	·1385	15. 9	·02462			
9. 21	20. 9. 20	8. 30	·1391	23. 35	·02459			
9. 44	19. 58. 25	8. 58	·1368	23. 59	·02475			
9. 55	20. 4. 0	9. 8	·1378					
10. 10	2. 20	9. 33	·1366					
10. 26	3. 50	9. 44	·1385					
10. 47	2. 30	9. 57	·1378					
11. 10	20. 5. 45	9. 59	·1386					
12. 10	19. 54. 50	10. 10	·1377					
12. 25	20. 3. 0	10. 41	·1364					
12. 38	3. 50	11. 21	·1378					
13. 5	22. 50	12. 3	·1366					
13. 11	23. 0	12. 22	·1346					
13. 35	17. 0	12. 42	·1365					
13. 43	17. 20	13. 8	·1402					
14. 1	14. 5	13. 15	·1399					
14. 40	11. 0	13. 19	·1404					
15. 5	14. 20	13. 35	·1390					
15. 32	14. 50	14. 0	·1398					
15. 54	14. 0	14. 45	·1384					
16. 3	15. 45	15. 12	·1387					
16. 55	15. 30	17. 7	·1386					
17. 3	16. 30		***					
17. 14	15. 10	18. 58	·1375					
17. 38	15. 0	21. 5	·1368					
17. 44	14. 0	21. 59	·1373					
17. 50	16. 10	22. 8	·1363					
17. 55	14. 50	23. 5	·1372					
17. 59	14. 55	23. 16	·1362					
18. 5	12. 40	23. 59	·1376					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
Sept. 13								
h m	° ′ ″	h m		h m		h m	°	°
18. 21	20. 16. 0							
18. 40	14. 50							
19. 0	16. 0							
19. 9	15. 0							
19. 11	17. 0							
19. 21	16. 0							
19. 37	17. 0							
19. 58	15. 5							
20. 20	16. 35							
20. 37	18. 20							
21. 39	19. 30							
21. 55	22. 10							
22. 0	20. 50							
22. 10	21. 40							
22. 29	20. 30							
22. 34	23. 50							
22. 49	21. 50							
23. 0	24. 50							
23. 5	23. 0							
23. 25	24. 55							
23. 59	24. 10							
Sept. 14		Sept. 14		Sept. 14		Sept. 14		
0. 0	20. 24. 10	0. 0	·1376	0. 0	·02475	0. 0	61 ·9	63 ·4
0. 10	26. 40		(†)	4. 40	·02549	1. 0	62 ·1	64 ·0
0. 13	25. 30	1. 0	·1382*	7. 26	·02545	2. 0	62 ·3	64 ·1
0. 26	26. 40	2. 5	·1380	10. 0	·02483	3. 0	62 ·3	64 ·1
0. 42	25. 0	2. 46	·1394	12. 24	·02489	7. 0	62 ·4	64 ·2
1. 15	25. 40	3. 29	·1387	13. 1	·02476	9. 0	61 ·6	62 ·1
1. 23	26. 50	4. 16	·1395	20. 14	·02464	21. 30	62 ·2	62 ·7
1. 29	25. 30	4. 34	·1394	22. 47	·02443			
1. 47	26. 55	4. 56	·1384	23. 59	·02470			
1. 55	26. 5	5. 6	·1388					
2. 11	24. 10	5. 29	·1381					
2. 35	24. 45	5. 41	·1389					
2. 44	24. 0	6. 10	·1386					
2. 49	24. 55	6. 30	·1378					
3. 3	23. 0	6. 56	·1391					
3. 11	21. 0	8. 24	·1392					
3. 43	19. 20	9. 3	·1386					
4. 37	20. 50	9. 35	·1413					
5. 35	20. 0	10. 24	·1392					
5. 40	18. 0	12. 33	·1389					
6. 11	16. 40	12. 54	·1382					
6. 48:	9. 0	13. 46	·1388					
7. 3	11. 0	14. 12	·1384					
7. 16	10. 30	15. 40	·1392					
7. 27	13. 30	16. 52	·1386					
8. 3	13. 40	18. 0	·1391					
8. 20	10. 30	21. 35	·1376					
8. 59	11. 45	23. 59	·1381					
9. 14	6. 0							
9. 30	5. 30							
9. 59	8. 50							
10. 7	8. 25							
10. 35	10. 30							
11. 4	14. 30							
11. 38	14. 10							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
Sept. 14								
h m	° ′ ″	h m		h m		h m	°	°
12. 49	20. 18. 0							
13. 4	17. 20							
13. 18	17. 20							
13. 40	18. 20							
13. 59	17. 50							
14. 20	18. 35							
15. 31	16. 40							
15. 45	17. 5							
16. 3	16. 45							
16. 37	17. 0							
17. 19	16. 0							
17. 29	16. 40							
17. 37	15. 30							
19. 43	13. 30							
21. 46	17. 50							
22. 5	20. 0							
22. 55	21. 10							
23. 9	23. 0							
23. 23	21. 50							
23. 40	22. 0							
23. 59	23. 20							
Sept. 15		Sept. 15		Sept. 15		Sept. 15		
0. 0	20. 23. 20	0. 0	·1381	0. 0	·02470	0. 30	61 ·7	63 ·3
0. 33	25. 0	0. 58	·1384	4. 32	·02518	6. 30	61 ·9	63 ·7
1. 0	24. 0	1. 34	·1393	8. 7	·02503	7. 25	61 ·8	63 ·4
1. 16	24. 55	1. 52	·1388	9. 11	·02482	9. 0	60 ·9	62 ·9
2. 8	22. 5	2. 32	·1387	9. 39	·02458	10. 30	60 ·6	62 ·0
2. 23	22. 50	3. 57	·1392	15. 11	·02450	11. 0	60 ·3	61 ·5
2. 46	21. 50	4. 54	·1384	22. 10	·02358	21. 0	59 ·9	60 ·6
2. 52	22. 0	5. 7	·1390	23. 59	·02365	22. 0	59 ·9	60 ·6
3. 42	19. 40	5. 32	·1384			23. 0	60 ·4	61 ·0
5. 11	19. 0	6. 17	·1394					
5. 51	15. 10	6. 56	·1388					
6. 36	16. 55	7. 28	·1394					
6. 50	15. 50	7. 35	·1390					
7. 3	16. 0	8. 25	·1389					
7. 27	14. 0	8. 55	·1421					
7. 35	16. 0	9. 40	·1392					
8. 25	16. 30	11. 37	·1396					
8. 43	13. 0	12. 31	·1390					
8. 50	12. 50	17. 28	·1394					
9. 3	16. 30	23. 6	·1380					
9. 17	15. 20	23. 59	·1388					
9. 35	15. 45							
10. 3	14. 10							
11. 33	17. 30							
11. 56	17. 0							
12. 33	18. 0							
13. 31	17. 10							
13. 53	17. 55							
17. 0	18. 0							
20. 7	14. 50							
21. 35	16. 0							
23. 59	23. 0							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 16		Sept. 16		Sept. 16		Sept. 16		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 23. 0	0. 0	·1388	0. 0	·02365	0. 0	60·8	61·8
0. 29	24. 50	0. 46	·1388	3. 53	·02415	1. 0	61·0	62·1
0. 45	23. 50	1. 6	·1394	13. 50	·02337	2. 0	61·0	62·1
1. 7	25. 0	1. 18	·1392	14. 57	·02329	3. 0	61·0	62·1
1. 17	23. 55	1. 33	·1398	15. 13	·02310	6. 0	60·0	60·9
1. 30	25. 0	1. 57	·1394	15. 28	·02332	7. 0	59·5	61·1
2. 11	25. 0	3. 15	·1399	15. 57	·02302	9. 0	59·6	60·4
2. 24	23. 30	4. 56	·1396	19. 10	·02304	21. 0	59·4	60·1
2. 49	22. 50	6. 23	·1400	23. 30	·02297	22. 0	59·6	60·3
3. 10	23. 40	6. 58	·1411	23. 59	·02299	23. 0	59·5	60·3
3. 39	22. 20	7. 41	·1405					
3. 47	23. 15	8. 22	·1407					
5. 56	20. 50	9. 54	·1400					
6. 55	20. 45	10. 7	·1404					
7. 37	21. 0	10. 28	·1399					
10. 25	19. 30	11. 16	·1402					
11. 26	15. 45	11. 31	·1398					
13. 6	20. 0	11. 39	·1417					
13. 55	16. 30	12. 20	·1402					
14. 35	19. 20	12. 32	·1406					
14. 47	17. 50	13. 0	·1402					
14. 55	20. 30	13. 14	·1409					
15. 10	15. 20	13. 30	·1405					
15. 35	19. 20	13. 43	·1411					
15. 40	17. 30	14. 1	·1402					
15. 49	18. 30		***					
16. 3	15. 10	14. 37	·1411					
16. 15	15. 0	14. 46	·1407					
17. 30	18. 30	14. 57	·1415					
18. 5	18. 50	15. 9	·1398					
18. 14	17. 30	15. 27	·1410					
18. 26	18. 0	15. 44	·1407					
18. 49	18. 10	15. 52	·1416					
19. 0	17. 0	16. 0	·1405					
19. 33	17. 50	16. 27	·1409					
19. 40	16. 5	17. 20	·1399					
20. 7	17. 15	18. 49	·1392					
20. 15	18. 50	19. 4	·1397					
20. 27	18. 0	19. 29	·1390					
20. 37	18. 0	19. 37	·1394					
20. 49	17. 0	20. 5	·1395					
20. 55	18. 30	20. 12	·1387					
21. 21	19. 50	20. 32	·1384					
21. 40	19. 15	20. 43	·1391					
23. 37	23. 30	21. 30	·1378					
23. 59	23. 0	21. 38	·1385					
		21. 50	·1378					
		23. 59	·1385					
Sept. 17		Sept. 17		Sept. 17		Sept. 17		
0. 0	20. 23. 0	0. 0	·1385	0. 0	·02299	0. 0	59·8	60·8
0. 29	26. 30	0. 12	·1391	3. 39	·02351	1. 0	59·9	61·1
0. 45	24. 0	0. 27	·1407	4. 22	·02334	2. 0	60·1	61·0
1. 13	25. 0	0. 40	·1385	5. 2	·02347	3. 0	60·1	61·0
1. 24	26. 30	1. 7	·1388	5. 30	·02335	6. 0	59·4	60·8
1. 37	25. 30		***	9. 56	·02337	6. 30	59·2	60·8
2. 10	25. 50	2. 13	·1401	10. 16	·02324	9. 0	59·1	60·4
2. 23	24. 10	2. 27	·1396	14. 20	·02342	21. 0	60·0	61·1

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 17		Sept. 17		Sept. 17		Sept. 17		
h m	° ′ ″	h m		h m		h m	°	°
3. 15	20. 24. 40	3. 5	·1406	15. 24	·02293	22. 0	60·4	61·5
3. 20	22. 30	3. 16	·1398	15. 35	·02300	23. 0	60·6	62·0
3. 25	23. 40	3. 41	·1412	16. 10	·02240			
4. 0	24. 40	4. 5	·1414	16. 38	·02240			
4. 32	21. 50	4. 15	·1400	16. 59	·02217			
4. 55	21. 0	4. 26	·1391	17. 9	·02239			
5. 25	22. 0	4. 39	·1403	17. 51	·02235			
5. 58	20. 55	4. 56	·1400	18. 55	·02285			
7. 1	20. 30	5. 8	·1417	23. 22	·02338			
7. 8	19. 40	5. 20	·1405	23. 59	·02310			
7. 47	20. 50	5. 25	·1411					
8. 24	18. 30	5. 31	·1396					
8. 36	18. 30		***					
8. 49	18. 0	5. 57	·1408					
9. 5	18. 20	6. 12	·1403					
9. 18	17. 30	6. 35	·1414					
9. 30	17. 10	6. 42	·1402					
10. 0	20. 0	6. 45	·1414					
10. 39	18. 10	7. 0	·1408					
11. 40	18. 55	7. 36	·1412					
14. 9	17. 55	7. 53	·1398					
14. 29	23. 0	8. 29	·1397					
15. 7	22. 40	8. 36	·1405					
15. 25	25. 0	9. 9	·1395					
15. 44	31. 30	10. 5	·1411					
15. 59	28. 40	10. 26	·1402					
16. 5	28. 55	10. 47	·1411					
16. 18	26. 20		***					
16. 35	26. 55	11. 29	·1402					
16. 36	31. 30	11. 48	·1407					
16. 47	29. 5	12. 46	·1410					
16. 55	29. 0	12. 58	·1406					
17. 5	25. 0	14. 30	·1406					
17. 9	27. 55	14. 59	·1415					
17. 30	24. 0	15. 18	·1413					
17. 40	24. 0	15. 36	·1433					
17. 56	17. 0	15. 58	·1432					
18. 6	18. 0	16. 4	·1437					
18. 16	16. 30	16. 24	·1431					
18. 39	18. 35	16. 56	·1416					
18. 59	17. 30	17. 4	·1391					
19. 17	19. 15	17. 16	·1402					
19. 41	16. 20	17. 34	·1395					
20. 5	16. 0	17. 57	·1373					
20. 24	16. 45	18. 4	·1378					
20. 32	15. 20	18. 14	·1370					
20. 47	17. 0	19. 18	·1388					
20. 56	15. 20	19. 56	·1373					
21. 35	20. 20	20. 7	·1377					
22. 14	17. 0	20. 46	·1371					
23. 19	20. 30	20. 58	·1378					
23. 59	26. 0	21. 54	·1375					
		21. 57	·1379					
		22. 36	·1383					
		22. 53	·1378					
		23. 29	·1394					
		23. 44	·1377					
		23. 59	·1388					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 18		Sept. 18		Sept. 18		Sept. 18		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 26. 0	0. 0	·1388	0. 0	·02310	0. 0	60·9	62·9
0. 15	26. 40	0. 17	·1385	1. 36	·02360	1. 0	61·2	63·1
0. 32	26. 15	0. 27	·1391	1. 57	·02410	2. 0	61·1	63·0
0. 36	27. 10	0. 33	·1379	2. 0	·02405	3. 0	61·2	63·3
0. 43	26. 0	0. 42	·1395	2. 35	·02440	6. 0	61·2	62·8
1. 9	31. 30	0. 47	·1388	3. 10	·02440	9. 0	60·4	61·7
1. 19	29. 10	0. 57	·1399	3. 20	·02460	9. 30	59·9	60·4
1. 27	29. 55	1. 10	·1399	3. 36	·02450	21. 0	60·6	62·1
1. 37	27. 0	1. 39	·1379	4. 13	·02488	22. 0	60·8	62·4
1. 50	29. 0	1. 57	·1395	4. 19	·02510	23. 0	61·1	62·9
1. 59	26. 30	2. 16	·1378	4. 43	·02504			
2. 20	28. 45	2. 29	·1395	5. 29	·02445			
2. 29	27. 15	2. 48	·1379	6. 17	·02438			
2. 41	31. 55	2. 59	·1387	6. 30	·02450			
2. 58	32. 10	3. 10	·1374	6. 35	·02440			
3. 10	29. 0	3. 21	·1391	6. 56	·02460			
3. 29	28. 55	3. 40	·1377	7. 49	·02436			
3. 41	26. 30	3. 56	·1386	8. 32	·02440			
4. 4	28. 0	4. 12	·1358	9. 58	·02406			
4. 20	13. 50	4. 20	·1386	11. 29	·02400			
4. 40	15. 0	4. 48	·1408	11. 58	·02375			
5. 27	23. 0	5. 29	·1394	12. 38	·02390			
6. 27	20. 0	6. 7	·1396	21. 20	·02379			
6. 59	10. 30	6. 25	·1384	23. 3	·02395			
7. 10	13. 40	6. 35	·1368	23. 59	·02383			
7. 19	11. 55	7. 6	·1391					
7. 28	14. 0	7. 39	·1380					
7. 51	11. 0	7. 55	·1370					
8. 30	16. 40	9. 20	·1389					
8. 37	16. 0	9. 57	·1386					
8. 50	18. 0	10. 28	·1389					
9. 15	18. 0	10. 35	·1386					
10. 38	19. 0	10. 59	·1390					
10. 56	17. 40	11. 10	·1401					
11. 6	17. 0	11. 30	·1418					
11. 15	18. 0	12. 18	·1384					
11. 25	16. 0	12. 37	·1389					
11. 40	18. 50	13. 22	·1388					
11. 54	17. 20	14. 22	·1395					
12. 11	16. 45	15. 40	·1392					
12. 41	18. 50	15. 59	·1387					
15. 54	17. 30	16. 46	·1394					
16. 30	19. 0	17. 9	·1393					
16. 48	18. 30	17. 56	·1379					
18. 35	18. 10	18. 56	·1389					
19. 11	16. 20	20. 39	·1380					
19. 57	15. 0	20. 55	·1382					
20. 20	16. 0	22. 5	·1364					
20. 47	15. 30	22. 38	·1371					
21. 5	16. 50	23. 59	·1376					
21. 33	15. 50							
22. 31	17. 5							
23. 4	19. 10							
23. 16	19. 10							
23. 27	21. 40							
23. 54	21. 20							
23. 59	22. 0							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 19		Sept. 19		Sept. 19		Sept. 19		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 22. 0	0. 0	·1376	0. 0	·02383	0. 0	61·6	63·5
0. 4	22. 40	0. 51	·1385	3. 25	·02455	1. 0	61·6	63·7
0. 28	22. 0	1. 6	·1393	4. 45	·02460	3. 0	61·7	63·8
0. 47	22. 0	2. 28	·1399	5. 4	·02475	6. 0	61·4	63·3
1. 5	23. 0	2. 57	·1395	9. 34	·02451	7. 0	61·3	63·0
1. 19	22. 0	3. 12	·1402	11. 35	·02432	8. 0	61·1	62·8
1. 40	22. 40	3. 33	·1392	12. 5	·02409	9. 0	60·2	62·7
2. 15	21. 30	4. 35	·1400	12. 21	·02422	11. 0	60·5	61·9
3. 13	22. 0	4. 43	·1396	13. 27	·02404	11. 45	60·4	61·5
3. 35	20. 55	4. 58	·1403	14. 4	·02412	21. 0	60·8	62·1
4. 40	19. 55	5. 48	·1394	14. 23	·02390	22. 0	60·5	61·2
5. 11	18. 30	6. 0	·1386	16. 3	·02402	23. 0	60·8	61·6
5. 35	19. 30	6. 7	·1394	20. 48	·02410			
6. 28	18. 10	6. 23	·1387	23. 30	·02375			
7. 5	12. 50	6. 46	·1387	23. 59	·02380			
7. 25	15. 0	7. 6	·1394					
7. 33	14. 0	7. 19	·1394					
7. 56	17. 15	7. 27	·1404					
8. 19	18. 0	7. 34	·1400					
8. 42	17. 10	7. 57	·1400					
9. 10	17. 40	8. 12	·1394					
9. 36	15. 30	8. 24	·1400					
9. 42	16. 0	8. 30	·1397					
9. 51	15. 30	9. 52	·1396					
10. 5	8. 20	10. 2	·1405					
10. 29	12. 50	10. 26	·1382					
10. 48	14. 0	10. 52	·1394					
10. 56	16. 0	11. 0	·1390					
11. 17	15. 10	11. 17	·1397					
11. 29	17. 10	11. 34	·1408					
11. 38	15. 40	11. 59	·1386					
11. 49	17. 30	12. 20	·1398					
12. 4	16. 50	12. 32	·1394					
12. 10	14. 30	12. 56	·1406					
12. 15	17. 10	13. 37	·1396					
12. 40	14. 50	14. 0	·1410					
13. 14	13. 55	14. 33	·1393					
13. 43	18. 20	16. 32	·1397					
13. 54	21. 10	17. 26	·1397					
14. 16	17. 0	17. 39	·1392					
14. 31	17. 0	17. 47	·1395					
14. 36	17. 55	18. 7	·1392					
14. 44	16. 15	18. 17	·1397					
14. 51	16. 0	21. 46	·1384					
15. 20	20. 0	23. 59	·1386					
15. 50	17. 5							
16. 11	18. 30							
16. 20	17. 25							
16. 37	18. 0							
16. 45	17. 0							
17. 8	18. 20							
17. 17	17. 30							
17. 33	18. 30							
17. 39	17. 0							
17. 49	18. 0							
18. 3	18. 0							
	***							
20. 0	16. 0							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 19								
h m	° ′ ″	h m		h m		h m	°	°
21. 19	20. 18. 30							
21. 30	18. 0							
22. 28	20. 5							
23. 46	24. 40							
23. 54	24. 10							
23. 59	24. 25							
Sept. 20		Sept. 20		Sept. 20		Sept. 20		
0. 0	20. 24. 25	0. 0	·1386	0. 0	·02380	0. 0	61·4	63·0
2. 18	23. 50	1. 34	·1392	2. 23	·02442	1. 0	61·6	63·4
2. 25	24. 40	2. 21	·1385	2. 41	·02440	2. 0	61·7	63·6
2. 45	22. 0	2. 43	·1380	3. 21	·02469	3. 0	61·6	63·3
3. 45	22. 50	3. 30	·1393	4. 1	·02455	6. 0	61·5	62·3
3. 58	22. 0	4. 3	·1394	8. 58	·02410	7. 0	60·5	62·0
4. 42	23. 30	4. 16	·1400	10. 24	·02370	7. 30	60·4	62·0
5. 25	21. 25	4. 46	·1387	11. 0	·02330	9. 0	60·0	61·5
5. 37	21. 55	5. 6	·1398	11. 49	·02340	9. 30	..	61·2
6. 50	19. 50	6. 8	·1402	12. 20	·02225	21. 0	59·8	60·7
7. 45	20. 30	6. 25	·1397	12. 37	·02237	22. 0	59·9	61·1
8. 5	16. 0	7. 3	·1408	12. 40	·02218	23. 0	60·0	61·1
8. 17	16. 30	7. 26	·1399	12. 55	·02221			
8. 24	16. 0	7. 55	·1404	13. 16	·02269			
8. 50	11. 20	8. 6	·1415	14. 32	·02340			
9. 10	12. 20	8. 17	·1410	15. 31	·02331			
9. 36	10. 50	8. 32	·1406	16. 27	·02345			
9. 48	11. 0	8. 47	·1413	23. 34	·02341			
10. 10	7. 20	9. 11	·1391		(†)			
10. 22	7. 0	9. 29	·1398					
10. 37	4. 20	10. 11	·1387					
10. 46	4. 0	10. 25	·1379					
11. 5	1. 10	10. 46	·1382					
11. 33	8. 10	11. 10	·1367					
11. 40	8. 0	11. 28	·1375					
12. 24	28. 50	11. 57	·1399					
13. 9	8. 0	12. 10	·1381					
13. 19	5. 55	12. 21	·1402					
13. 35	5. 50	12. 46	·1382					
13. 59	12. 30	12. 59	·1386					
14. 20	16. 10	13. 32	·1402					
14. 26	16. 0	13. 50	·1403					
14. 34	17. 30	14. 6	·1390					
14. 45	16. 30	14. 15	·1393					
15. 18	19. 10	14. 24	·1387					
15. 39	18. 50	14. 33	·1396					
16. 4	19. 30	15. 14	·1393					
16. 25	22. 30	15. 37	·1384					
17. 9	19. 0	16. 5	·1391					
18. 8	18. 10	17. 38	·1392					
18. 14	19. 0	18. 10	·1399					
18. 34	17. 15		***					
18. 39	18. 40	18. 56	·1395					
18. 45	17. 0	19. 25	·1383					
19. 20	20. 0	20. 0	·1381					
19. 45	20. 50	20. 14	·1388					
20. 3	19. 30	21. 5	·1390					
20. 45	19. 5	21. 40	·1381					
21. 10	21. 45	22. 34	·1386					
22. 10	22. 10	23. 5	·1380					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 20		Sept. 20						
h m	° ′ ″	h m		h m		h m	°	°
22. 48	20. 24. 10	23. 59	·1382					
23. 6	24. 30							
23. 15	25. 10							
23. 59	23. 55							
Sept. 21		Sept. 21		Sept. 21		Sept. 21		
0. 0	20. 23. 55	0. 0	·1382		(†)	0. 0	60·6	61·3
0. 15	25. 25	0. 11	·1386	0. 20	·02348	1. 0	60·8	62·1
0. 28	24. 40	0. 54	·1380	1. 15	·02380	3. 0	61·0	62·7
0. 44	24. 45	1. 9	·1365	6. 30	·02470	6. 0	61·0	63·0
1. 0	23. 0	1. 22	·1375	7. 56	·02410	9. 0	59·6	60·2
1. 7	20. 0	1. 39	·1382	9. 31	·02371	21. 15	60·7	62·5
1. 15	21. 20	2. 19	·1376	10. 11	·02340	22. 15	60·9	62·4
1. 19	21. 50	2. 56	·1390	10. 30	·02360			
1. 39	24. 40	3. 16	·1383	10. 48	·02334			
1. 45	24. 50	3. 39	·1388	11. 47	·02358			
1. 50	25. 25	4. 7	·1388	12. 8	·02340			
2. 19	22. 5	4. 22	·1379	13. 14	·02320			
2. 57	23. 30	4. 31	·1379	13. 29	·02330			
3. 15	22. 10	4. 43	·1387	14. 5	·02302			
4. 16	23. 5	4. 57	·1380	14. 38	·02300			
4. 50	22. 20	5. 17	·1398	14. 59	·02275			
5. 15	20. 50	5. 46	·1374	15. 31	·02292			
5. 45	24. 0	6. 3	·1382	16. 32	·02295			
6. 23	18. 0	6. 11	·1373	17. 30	·02334			
6. 38	20. 0	6. 30	·1381	22. 46	·02400			
6. 49	19. 0	6. 36	·1372	23. 0	·02402			
7. 7	21. 10	7. 5	·1384	23. 59	·02410			
7. 39	20. 55		***					
7. 54	17. 45	7. 52	·1387					
8. 4	17. 5	8. 14	·1399					
8. 26	20. 40	8. 31	·1390					
9. 0	10. 30	8. 44	·1392					
9. 35	20. 20	9. 7	·1407					
10. 8	8. 0	9. 24	·1409					
10. 20	10. 50	9. 35	·1409					
10. 50	4. 20	9. 50	·1397					
11. 45	20. 40	10. 11	·1386					
12. 40	14. 20	10. 19	·1376					
13. 0	15. 30	10. 27	·1384					
13. 5	17. 20	10. 40	·1389					
13. 16	15. 30	10. 49	·1380					
13. 24	17. 20	11. 6	·1396					
13. 31	17. 0	11. 20	·1386					
13. 40	18. 10	11. 29	·1392					
14. 2	17. 40	11. 36	·1390					
14. 36	26. 50	11. 53	·1398					
15. 5	18. 35	12. 34	·1401					
15. 15	19. 25	13. 0	·1392					
15. 31	18. 0	13. 12	·1382					
15. 41	18. 50	13. 36	·1387					
16. 15	17. 55	14. 30	·1370					
16. 45:	16. 0	16. 6	·1415					
17. 14	19. 0	16. 47	·1392					
17. 41	20. 0	16. 53	·1394					
17. 58	17. 50	17. 20	·1378					
18. 14	19. 55	17. 31	·1384					
18. 25	19. 40	17. 47	·1374					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 21		Sept. 21						
h m	° ′ ″	h m		h m		h m	°	°
18.30	20.17. 0	18. 5	·1392					
18.41	19.40	18.29	·1388					
19.12	15.30	18.32	·1390					
19.24	16.20	19. 0	·1381					
19.46	15.30	19.51	·1385					
20. 9	17.20	20.22	·1375					
20.45	15.30	20.58	·1380					
21.20	19.35	21.34	·1365					
21.38	17.40	22.59	·1370					
22. 0	16.50	23.30	·1366					
22.14	17.50	23.59	·1377					
22.27	17.50							
22.53	21.10							
23.36	20. 0							
23.59	21.20							
Sept. 22		Sept. 22		Sept. 22		Sept. 22		
0. 0	20.21.20	0. 0	·1377	0. 0	·02410	0.20	61·3	63·3
0.14	19.25	0.10	·1364	1.53	·02470	1. 0	61·4	63·3
0.47	18. 0	0.32	·1376	2.12	·02464	8. 0	61·2	63·0
0.50	18.50	1.14	·1378	2.33	·02492	8.30	60·4	62·0
1.10	18.50	1.41	·1387	3.20	·02481	9. 0	59·8	61·4
1.37	21.50	2. 6	·1363	5.41	·02505	9.15	59·6	61·3
1.47	23.55	2.36	·1384	5.54	·02490	9.30	59·6	61·0
1.59	23.30	2.55	·1365	6.23	·02503	21. 0	60·1	61·1
2. 4	24.30	3.14	·1373	6.41	·02484	22. 0	60·2	60·3
2.18	24.30	3.40	·1383	6.55	·02497	23. 0	60·4	60·9
2.29	21. 0	4. 0	·1386	7.10	·02480			
2.36	20. 0	4.11	·1380	7.42	·02500			
2.45	22. 0	4.27	·1387	8. 3	·02435			
3.20	19.15	4.58	·1367	8.20	·02389			
3.37	21.30	5. 4	·1372	8.37	·02418			
3.48	21. 0	5.17	·1364	8.51	·02382			
4. 0	22.20	5.25	·1373	9.29	·02380			
4.15	21.50	5.43	·1370	9.35	·02350			
4.39	23.10	6.20	·1405	9.58	·02364			
4.53	22.10	6.38	·1384	10.10	·02315			
5.10	23.40	6.56	·1390	10.43	·02332			
5.22	20.40	7. 8	·1363	10.58	·02323			
5.41	19.30	7.23	·1372	11.45	·02350			
5.55	12.10	7.32	·1368	12.41	·02345			
6. 1	12.30	7.44	·1382	12.57	·02358			
6.12	10. 0	7.55	·1375	15.30	·02335			
6.29	15. 0	8. 6	·1405	17.39	·02362			
6.39	11. 0	8.23	·1346	22.35	·02357			
6.59	18. 0	8.37	·1394	23.59	·02372			
7.15	10.45	8.54	·1361					
7.35	15.20	9.21	·1381					
7.47	23.10	9.29	·1372					
7.55	24. 0	9.54	·1410					
8. 0	15.40	10. 8	·1370					
8.12	28.30	10.34	·1378					
8.33	4.55	10.43	·1377					
8.37	8. 0	11. 3	·1387					
8.51	10.20	11.10	·1382					
8.59	7.30	11.36	·1383					
9. 9	11.10	12. 5	·1393					
9.19	10.25	12.27	·1386					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 22		Sept. 22						
h m	° ′ ″	h m		h m		h m	°	°
9.25	20.14.15	12.36	·1377					
9.35	8.50	12.45	·1380					
9.46	13.40	13. 8	·1372					
9.59	22.55		***					
10.18	22. 0	14.33	·1388					
10.25	21. 0	15. 5	·1391					
10.45	20.50	15.56	·1372					
10.59	16. 0	16.33	·1381					
11.21	19. 0	17.37	·1389					
11.35	19. 0	17.56	·1383					
11.44	20.10	18.11	·1381					
12. 3	17.50	18.27	·1385					
12.45	17. 0	18.37	·1380					
13. 3	22. 0	19. 8	·1380					
13.17	22. 0	19.20	·1375					
13.30	22.50	19.36	·1380					
13.38	22. 0	20. 6	·1380					
13.51	22.40	20.15	·1374					
14. 4	21.10	20.35	·1379					
14.22	22.50	21. 6	·1372					
14.35	22.30	22. 5	·1376					
14.46	21.15	22.21	·1382					
14.55	22. 0	22.40	·1374					
15. 8	21. 0	22.50	·1381					
15.25	22.10	23.59	·1334					
15.49	20.50							
16. 4	21. 0							
16.10	22. 0							
17. 8	19.30							
17.32	20. 0							
17.43	21. 5							
17.59	19.50							
18.25	19. 0							
18.35	19.55							
19. 4	18.50							
19.45	19. 0							
19.55	18.10							
20.15	18.20							
20.20	17. 0							
20.26	18.25							
20.50	19. 0							
21. 7	17.20							
21.25	17.45							
21.32	16.50							
21.50	16.30							
22. 5	17. 0							
22.14	16. 5							
22.29	18.40							
22.48	17.40							
23.35	22. 0							
23.50	20.10							
23.55	20.30							
23.59	20. 0							
Sept. 23		Sept. 23		Sept. 23		Sept. 23		
0. 0	20.20. 0	0. 0	·1334	0. 0	·02372	0. 0	60·6	61·8
0.12	20.50	0.41	·1363	0.30	·02410	1. 0	61·1	62·3
0.33	19.30	1.11	·1375	3.54	·02450	2. 0	61·6	62·8

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 23		Sept. 23		Sept. 23		Sept. 23		
h m	° ′ ″	h m		h m		h m	°	°
0. 43	20. 20. 30	1. 33	·1373	4. 57	·02457	3. 0	61 ·4	62 ·9
0. 57	20. 0	2. 6	·1382	9. 52	·02436	6. 0	61 ·5	63 ·3
1. 14	21. 5	2. 32	·1383	10. 38	·02403	9. 0	61 ·0	62 ·4
1. 19	20. 40	3. 7	·1375	11. 54	·02412	9. 40	..	61 ·5
1. 36	21. 40	3. 20	·1382	12. 50	·02384	21. 0	59 ·6	60 ·5
2. 9	20. 25	3. 42	·1384	16. 4	·02384	22. 0	59 ·8	60 ·6
2. 50	21. 5	4. 11	·1376	16. 54	·02346	23. 0	60 ·1	60 ·9
3. 43	19. 20	4. 58	·1389	17. 8	·02350			
3. 54	19. 20	5. 32	·1381	17. 37	·02330			
4. 29	16. 0	6. 9	·1386	18. 0	·02321			
6. 35	17. 0	6. 57	·1385	19. 6	·02337			
6. 58	16. 15	7. 30	·1398	23. 20	·02300			
7. 11	14. 10	7. 45	·1394	23. 59	·02310			
7. 25	13. 55	7. 57	·1402					
7. 35	15. 0	8. 20	·1390					
7. 55	11. 5	8. 43	·1396					
8. 15	15. 20	9. 38	·1389					
8. 55	16. 35	10. 0	·1404					
9. 25	15. 30	10. 9	·1395					
9. 35	16. 0	10. 20	·1400					
9. 45	15. 15	10. 51	·1388					
10. 4	18. 0	11. 0	·1390					
10. 9	17. 20	11. 19	·1386					
10. 20	20. 0	11. 59	·1392					
10. 36	17. 20	12. 30	·1388					
10. 53	17. 0	13. 8	·1391					
11. 0	18. 0	13. 17	·1388					
11. 22	17. 20	15. 41	·1380					
11. 33	18. 20	16. 13	·1383					
11. 44	20. 40	16. 46	·1372					
11. 55	21. 20	17. 41	·1398					
12. 10	20. 0	18. 56	·1384					
12. 19	22. 0	19. 36	·1386					
12. 49	18. 0	20. 11	·1374					
13. 45	17. 10	20. 32	·1377					
13. 55	17. 55	20. 57	·1365					
14. 8	17. 5	22. 12	·1374					
14. 20	18. 5	23. 6	·1376					
14. 44	17. 20		(†)					
15. 18	17. 30							
15. 46	19. 0							
16. 35	25. 0							
16. 51	24. 40							
17. 7	27. 25							
17. 57	21. 10							
18. 47	18. 55							
19. 17	19. 30							
19. 30	19. 5							
19. 39	20. 30							
20. 0	18. 20							
20. 26	20. 20							
20. 40	20. 15							
20. 46	21. 0							
21. 13	20. 0							
22. 23	23. 10							
22. 45	22. 50							
23. 32	25. 35							
23. 40	25. 15							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 23								
h m	° ′ ″	h m		h m		h m	°	°
23. 53	20. 26. 30							
23. 59	26. 5							
Sept. 24		Sept. 24		Sept. 24		Sept 24		
0. 0	20. 26. 5		(†)	0. 0	·02310	0. 0	60 ·4	61 ·4
0. 20	25. 0	0. 17	·1372	2. 0	·02370	1. 0	60 ·7	62 ·0
0. 46	27. 0	0. 27	·1378	5. 53	·02355	2. 0	60 ·5	61 ·7
1. 0	24. 30	0. 41	·1379	7. 18	·02340	3. 0	60 ·2	61 ·4
1. 39	23. 10	1. 15	·1355	9. 10	·02300	6. 0	59 ·0	60 ·3
1. 50	24. 30	1. 44	·1369	12. 58	·02320	9. 0	58 ·8	60 ·1
2. 0	24. 0	2. 27	·1381	13. 16	·02285	21. 0	58 ·8	59 ·4
2. 35	25. 50	2. 49	·1374	13. 53	·02270	22. 0	58 ·8	59 ·4
3. 0	25. 20	3. 4	·1378	16. 24	·02267	23. 0	58 ·9	59 ·6
3. 12	25. 45	3. 44	·1366	16. 50	·02280			
3. 53	23. 0	4. 16	·1379	19. 35	·02270			
4. 8	23. 10	4. 23	·1368	23. 12	·02244			
4. 25	22. 40	4. 48	·1369	23. 59	·02232			
4. 55	24. 30	6. 15	·1388					
5. 9	23. 20	6. 33	·1382					
5. 54	22. 40	6. 56	·1381					
6. 7	20. 50	7. 16	·1400					
6. 36	22. 55	7. 59	·1395					
7. 10	17. 0	8. 25	·1382					
7. 18	17. 20	9. 6	·1391					
7. 35	20. 0	10. 8	·1383					
8. 2	18. 50	10. 44	·1383					
8. 24	19. 20	10. 54	·1387					
8. 50	18. 30	11. 8	·1384					
9. 0	16. 55	12. 32	·1387					
9. 40	17. 30	12. 59	·1403					
9. 53	16. 45	13. 32	·1389					
10. 16	17. 50	14. 9	·1391					
10. 33	20. 20	15. 8	·1383					
10. 57	20. 45	15. 27	·1389					
11. 0	21. 50	15. 35	·1385					
11. 8	21. 0	15. 55	·1387					
11. 18	21. 40	16. 7	·1385					
12. 29	20. 30	16. 23	·1375					
12. 59	22. 50	17. 54	·1387					
13. 12	28. 30	18. 20	·1379					
13. 58	23. 30	18. 33	·1381					
14. 5	23. 20	19. 47	·1371					
14. 25	21. 45	21. 17	·1369					
15. 23	21. 50	21. 53	·1375					
15. 33	21. 5	22. 6	·1363					
15. 47	23. 0	23. 25	·1377					
16. 29	20. 50	23. 59	·1365					
16. 55	21. 50							
17. 7	22. 45							
18. 3	21. 50							
18. 22	22. 0							
18. 45	21. 0							
19. 29	20. 50							
19. 43	20. 0							
20. 48	20. 45							
20. 56	20. 0							
21. 51	21. 35							
22. 47	24. 30							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 24								
h m	° ′ ″	h m		h m		h m	°	°
23. 39	20. 28. 0							
23. 59	28. 0							
Sept. 25		Sept. 25		Sept. 25		Sept. 25		
0. 0	20. 28. 0	0. 0	·1365	0. 0	·02232	0. 0	59 ·4	60 ·3
0. 15	27. 5	0. 38	·1374	1. 10	·02270	1. 0	59 ·5	60 ·4
0. 34	27. 55	0. 54	·1376	4. 18	·02324	2. 0	59 ·4	60 ·6
0. 50	27. 0	1. 30	·1387	4. 30	·02340	3. 0	59 ·4	60 ·6
1. 8	28. 0	2. 20	·1390	5. 11	·02348	6. 0	59 ·3	60 ·6
2. 5	26. 20	3. 22	·1382	5. 24	·02380	9. 0	59 ·5	61 ·0
2. 25	27. 0	3. 40	·1391	5. 36	·02355	21. 0	59 ·2	59 ·9
2. 33	25. 40	4. 18	·1384	8. 14	·02311	22. 0	59 ·2	60 ·0
3. 20	25. 0	4. 32	·1392	11. 8	·02310	23. 0	59 ·2	60 ·0
3. 30	24. 20	4. 50	·1390	11. 39	·02230			
4. 8	23. 30	5. 16	·1364	11. 50	·02223			
4. 27	19. 50	5. 28	·1414	12. 5	·02191			
4. 35	19. 10	5. 39	·1388	12. 23	·02233			
4. 45	17. 25	5. 58	·1370	12. 37	·02205			
5. 0	18. 30	6. 15	·1365	12. 51	·02223			
5. 17	6. 40	6. 44	·1375	13. 9	·02199			
5. 30	13. 0	7. 34	·1384	13. 30	·02203			
5. 36	13. 0	9. 57	·1385	13. 49	·02186			
5. 45	16. 55	10. 10	·1392	14. 15	·02195			
5. 55	14. 0	10. 22	·1385	15. 21	·02155			
6. 37	21. 55	10. 55	·1383	15. 35	·02120			
6. 50	21. 50	11. 2	·1372	15. 49	·02142			
7. 4	22. 20	11. 14	·1434	16. 15	·02114			
8. 7	22. 30	11. 48	·1400	16. 59	·02100			
8. 40	20. 30	12. 12	·1349	17. 10	·02125			
8. 55	20. 50	12. 28	·1393	19. 55	·02235			
9. 7	19. 10	12. 41	·1360	23. 31	·02269			
9. 48	21. 45	12. 57	·1393	23. 59	·02290			
9. 59	21. 50	13. 24	·1393					
10. 33	14. 0	13. 59	·1377					
10. 45	17. 0	14. 33	·1392					
10. 55	9. 30	15. 26	·1405					
11. 23	20. 50	15. 39	·1369					
11. 57	22. 25	16. 2	·1395					
12. 15	8. 30	16. 24	·1402					
12. 32	20. 30	16. 45	·1390					
12. 45	12. 0	16. 50	·1394					
13. 0	16. 0	17. 0	·1373					
13. 25	11. 0	17. 22	·1391					
13. 34	11. 55		***					
13. 53	10. 0	18. 48	·1358					
14. 8	10. 55	19. 9	·1369					
14. 12	12. 5	19. 27	·1359					
14. 50	12. 45	19. 44	·1364					
15. 39	22. 0	20. 20	·1351					
15. 52	35. 0	20. 37	·1354					
16. 48	29. 40	20. 59	·1345					
16. 59	29. 55	23. 59	·1366					
17. 10	23. 50							
17. 17	25. 0							
17. 25	22. 40							
17. 32	23. 35							
17. 40	23. 30							
17. 48	26. 50							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 25								
h m	° ′ ″	h m		h m		h m	°	°
17. 59	20. 27. 50							
18. 5	26. 0							
18. 22	28. 50							
18. 33	28. 0							
18. 47	30. 0							
19. 5	29. 50							
19. 9	27. 10							
19. 19	27. 50							
19. 39	25. 0							
20. 5	24. 30							
20. 33	26. 10							
21. 38	27. 0							
21. 50	26. 0							
22. 47	31. 0							
23. 44	31. 0							
23. 59	30. 40							
Sept. 26		Sept. 26		Sept. 26		Sept. 26		
0. 0	20. 30. 40	0. 0	·1366	0. 0	·02290	0. 0	59 ·4	60 ·3
0. 40	27. 30	0. 50	·1378	2. 9	·02304	1. 0	59 ·4	60 ·4
0. 45	25. 0	1. 12	·1396	3. 53	·02349	2. 0	59 ·5	60 ·6
0. 55	24. 30	1. 48	·1397	5. 6	·02404	3. 0	59 ·3	60 ·6
1. 9	25. 40	2. 10	·1374	5. 21	·02435	4. 0	59 ·4	60 ·7
1. 18	24. 45	3. 20	·1399	5. 27	·02420	6. 0	59 ·4	60 ·7
1. 30	25. 15	4. 12	·1382	5. 34	·02430	9. 0	59 ·8	61 ·4
1. 40	24. 30	4. 33	·1392	5. 41	·02415	21. 0	59 ·9	61 ·1
2. 0	26. 0	4. 47	·1390	5. 58	·02416	22. 0	59 ·8	61 ·0
2. 40	21. 40	4. 55	·1383	6. 38	·02346	23. 0	59 ·8	61 ·0
3. 3	20. 30	5. 0	·1390	8. 15	·02349			
3. 30	23. 0	5. 18	·1364	9. 28	·02310			
3. 49	23. 15	5. 27	·1370	11. 25	·02304			
4. 20	19. 0	5. 30	·1359	12. 7	·02262			
4. 28	20. 0	6. 2	·1420	13. 28	·02281			
4. 37	19. 20	6. 8	·1404	14. 39	·02222			
4. 55	20. 20	6. 20	·1408	16. 19	·02282			
5. 0	18. 0	6. 41	·1370	22. 5	·02300			
5. 7	18. 55	6. 50	·1370	23. 27	·02290			
5. 22	20. 11. 30	7. 5	·1364	23. 59	·02288			
5. 39	19. 49. 15	8. 8	·1381					
5. 44	50. 0	8. 18	·1391					
5. 49	19. 47. 55	8. 33	·1381					
6. 15	20. 7. 0	8. 58	·1401					
6. 27	14. 30	9. 17	·1392					
6. 35	16. 40	9. 29	.1395					
6. 48	13. 30	9. 53	·1377					
6. 56	14. 0	10. 22	·1387					
7. 3	13. 30	10. 55	·1378					
7. 36	17. 40	11. 12	·1382					
7. 53	16. 40	11. 48	·1406					
8. 3	17. 0	12. 12	·1397					
8. 16	15. 50	12. 30	·1384					
8. 26	16. 20	13. 7	·1382					
8. 36	13. 30	14. 10	·1394					
8. 40	13. 30	14. 20	·1382					
8. 57	9. 0	14. 37	·1381					
9. 16	9. 30	14. 54	·1394					
9. 24	9. 0	15. 5	·1391					
9. 45	13. 40	15. 56	·1399					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 26		Sept. 26						
h m	° ′ ″	h m		h m		h m	°	°
10. 10	20. 11. 20	16. 12	·1390					
10. 55	12. 20	16. 30	·1392					
11. 25:	18. 30	16. 38	·1388					
11. 58	9. 50	17. 28	·1397					
12. 30	8. 30	19. 5	·1397					
13. 33	20. 0	20. 22	·1372					
13. 48	18. 50	20. 40	·1378					
14. 28	25. 15	21. 57	·1372					
14. 45	23. 55	23. 16	·1385					
14. 55	19. 0	23. 59	·1379					
15. 5	18. 30							
15. 20	14. 30							
15. 35	13. 50							
15. 59	14. 20							
16. 21	17. 10							
16. 39	17. 30							
17. 5	19. 55							
18. 20:	17. 20							
18. 53	19. 30							
19. 20	18. 0							
19. 31	18. 30							
20. 35	16. 40							
21. 13	19. 0							
21. 27	18. 10							
22. 25	18. 50							
22. 36	18. 0							
22. 55	21. 0							
23. 59	23. 0							
Sept. 27		Sept. 27		Sept. 27		Sept. 27		
0. 0	20. 23. 0	0. 0	·1379	0. 0	·02288	0. 0	60·0	61·3
0. 35	20. 15	0. 36	·1380	3. 38	·02340	1. 0	60·1	61·5
0. 49	21. 10	1. 47	·1398	4. 45	·02380	2. 0	60·2	61·5
1. 47	19. 55		***	4. 55	·02372	3. 0	60·2	61·9
1. 53	20. 50	4. 21	·1410	5. 20	·02449	6. 0	59·9	61·2
4. 13	18. 30	4. 34	·1397	5. 26	·02438	9. 0	59·1	60·3
4. 45:	20. 0	4. 41	·1402	6. 2	·02460	21. 0	60·2	61·9
5. 10	18. 5	5. 10	·1365	6. 19	·02415	22. 0	60·4	61·4
5. 16	14. 5		***	6. 31	·02430	23. 0	60·4	61·8
5. 20	15. 30	5. 53	·1390	8. 31	·02346			
5. 30	12. 0	6. 3	·1382	9. 37	·02330			
5. 47	13. 20	6. 22	·1388	10. 49	·02350			
5. 58	15. 25	6. 25	·1378	11. 14	·02343			
6. 3	7. 0	6. 33	·1401	11. 46	·02352			
6. 11	12. 0	6. 54	·1386	12. 20	·02315			
6. 16	9. 0	7. 3	·1394	16. 53	·02337			
6. 24	9. 55	7. 14	·1383	17. 18	·02329			
6. 30	4. 30		***	20. 35	·02340			
6. 44	13. 0	8. 7	·1394	22. 52	·02309			
6. 56	13. 10	8. 30	·1390	23. 59	·02319			
7. 9	18. 20	8. 47	·1402					
7. 18	18. 0	9. 8	·1389					
7. 23	19. 20	9. 30	·1393					
7. 33	18. 30	9. 58	·1385					
7. 40	19. 55	10. 34	·1393					
7. 56	18. 55		***					
8. 15	19. 45	11. 26	·1390					
8. 36	13. 50	11. 58	·1411					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Sept. 27		Sept. 27						
h m	° ′ ″	h m		h m		h m	°	°
8. 54	20. 15. 45	13. 14	·1390					
9. 0	15. 0	13. 36	·1394					
9. 18	15. 50	14. 7	·1392					
9. 47	14. 20	14. 14	·1396					
10. 3	12. 30	14. 48	·1393					
10. 50	18. 30	15. 57	·1397					
11. 8	15. 25	16. 21	·1387					
11. 20	15. 30	16. 58	·1398					
11. 39	20. 0	17. 18	·1392					
11. 54	20. 35	17. 45	·1400					
12. 6	17. 0	17. 57	·1393					
12. 25	15. 30	18. 15	·1391					
12. 59	17. 30	18. 38	·1402					
13. 10	19. 55	19. 24	·1393					
14. 6	20. 0	20. 22	·1396					
15. 30	19. 35	21. 14	·1387					
16. 4	18. 0	22. 35	·1367					
16. 55	20. 50	23. 41	·1387					
17. 31	19. 10	23. 59	·1389					
17. 55	20. 50							
18. 2	19. 55							
18. 20	20. 30							
18. 25	18. 0							
18. 48	20. 0							
19. 10	18. 0							
20. 10	16. 30							
21. 15	17. 40							
22. 28	21. 0							
22. 47	21. 5							
23. 5	20. 50							
23. 11	21. 30							
23. 19	20. 55							
23. 44	22. 0							
23. 59	21. 55							
Sept. 28		Sept. 28		Sept. 28		Sept. 28		
0. 0	20. 21. 55	0. 0	·1389	0. 0	·02319	1. 0	60·9	62·9
0. 20	21. 20	1. 22	·1397	2. 57	·02399	2. 0	60·9	63·0
1. 10	23. 40	1. 57	·1376	7. 33	·02384	3. 0	60·9	62·8
1. 36	23. 30	3. 21	·1397	7. 54	·02400	6. 0	61·1	62·7
1. 44	24. 50	3. 30	·1394	8. 15	·02390	9. 0	60·6	62·1
2. 18	18. 20	3. 50	·1400	11. 11	·02338	10. 0	59·4	61·2
2. 42	19. 50	4. 11	·1396	13. 24	·02326	21. 45	60·8	61·2
3. 12	19. 10	4. 52	·1400	15. 20	·02257			
4. 2	20. 50	5. 12	·1395	17. 18	·02280			
4. 45	18. 40	6. 36	·1405	20. 15	·02310			
4. 58	19. 30	7. 30	·1393	22. 33	·02296			
5. 44	18. 10	7. 54	·1402	23. 59	·02310			
6. 20	18. 30	8. 17	·1402					
6. 33	17. 30	8. 52	·1413					
7. 3	18. 0	9. 14	·1399					
7. 16	16. 5	9. 57	·1386					
7. 37	8. 25	10. 56	·1404					
7. 55	12. 0	12. 27	·1403					
8. 23	5. 50	13. 22	·1411					
8. 33	7. 30	14. 24	·1406					
8. 40	7. 0	14. 59	·1428					
9. 5	10. 0	15. 27	·1426					
9. 18	9. 10	15. 58	·1406					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 28		Sept. 28						
h m	° ′ ″	h m		h m		h m	°	°
9. 47	20. 13. 0	16. 14	·1400					
10. 3	11. 30	17. 21	·1407					
10. 58	17. 0	18. 0	·1400					
11. 18	15. 50	18. 21	·1404					
11. 50	15. 45	20. 57	·1389					
11. 59	16. 50	21. 22	·1393					
12. 10	16. 20	22. 14	·1383					
12. 35	18. 30	22. 59	·1382					
12. 51	17. 5		***					
13. 9	17. 30	23. 59	·1391					
13. 44	15. 30							
15. 4	21. 0							
15. 20	17. 0							
16. 6	11. 20							
16. 34	15. 0							
16. 57	16. 0							
17. 1	17. 40							
17. 29	16. 0							
18. 16	17. 55							
19. 22	15. 40							
19. 36	14. 0							
19. 47	15. 0							
19. 52	13. 30							
20. 30	14. 40							
20. 49	13. 0							
20. 59	13. 40							
21. 19	13. 0							
21. 32	14. 0							
21. 36	13. 10							
21. 45	14. 55							
22. 5	14. 0							
22. 30	15. 30							
23. 7	19. 0							
23. 59	20. 0							
Sept. 29		Sept. 29		Sept. 29		Sept. 29		
0. 0	20. 20. 0	0. 0	·1391	0. 0	·02310	0. 0	60 ·2	61 ·5
0. 20	20. 30	0. 20	·1390	1. 36	·02329	1. 0	..	61 ·5
0. 27	21. 50	0. 44	·1393	2. 1	·02370	5. 0	60 ·5	62 ·2
0. 45	21. 0	1. 26	·1377	2. 9	·02355	9. 0	59 ·7	60 ·6
0. 59	22. 40	1. 47	·1393	2. 36	·02383	21. 0	59 ·9	61 ·0
1. 9	21. 50	1. 53	·1384	3. 25	·02364	22. 0	60 ·1	61 ·3
1. 15	22. 5	2. 24	·1390	3. 57	·02375	23. 0	60 ·7	62 ·4
1. 36	18. 0	2. 50	·1383	10. 29	·02317			
1. 51	20. 30	3. 29	·1380	10. 55	·02306			
2. 0	17. 0	3. 54	·1393	11. 25	·02320			
2. 19	18. 0	4. 12	·1391	12. 17	·02290			
2. 30	19. 0	5. 0	·1398	12. 37	·02295			
2. 34	18. 20	6. 56	·1403	12. 54	·02251			
2. 50	21. 0	7. 43	·1413	13. 20	·02224			
5. 10	18. 0	8. 3	·1410	14. 30	·02287			
6. 55	17. 55	8. 21	·1415	23. 3	·02300			
7. 18	16. 0	9. 13	·1399	23. 59	·02322			
7. 35	13. 0	9. 18	·1404					
7. 48	14. 0	9. 45	·1400					
8. 3	11. 30	10. 34	·1409					
8. 45 :	16. 5	11. 8	·1400					
9. 10	16. 10	11. 39	·1410					
9. 21	17. 0	12. 22	·1398					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Sept. 29		Sept. 29						
h m	° ′ ″	h m		h m		h m	°	°
10. 38	20. 12. 20	12. 59	·1414					
10. 50	12. 30	13. 20	·1401					
11. 22	18. 0	14. 9	·1398					
11. 48	19. 30	15. 10	·1412					
12. 0	18. 0	16. 12	·1402					
12. 18	25. 15	16. 40	·1410					
12. 28	27. 30	18. 33	·1399					
12. 50	23. 30	19. 0	·1402					
13. 35	13. 30	20. 8	·1388					
13. 55	16. 0	20. 33	·1391					
14. 27	16. 50	21. 28	·1383					
14. 40	15. 20	22. 10	·1384					
14. 45	16. 10	22. 30	·1391					
15. 5	15. 20	23. 4	·1375					
15. 20	16. 20	23. 18	·1379					
15. 58	16. 0	23. 27	·1373					
16. 55	19. 30		(†)					
17. 5	18. 20							
17. 24	19. 0							
17. 27	20. 30							
17. 35	19. 20							
20. 17	18. 20							
20. 46	16. 0							
21. 3	18. 30							
21. 10	17. 20							
22. 13	15. 0							
22. 39	18. 30							
23. 18	19. 30							
23. 38	18. 20							
23. 59	19. 30							
Sept. 30		Sept. 30		Sept. 30		Sept. 30		
0. 0	20. 19. 30		(†)	0. 0	·02322	0. 0	60 ·8	62 ·8
0. 50	22. 0	0. 18	·1379	4. 35	·02385	1. 0	61 ·1	63 ·1
1. 0	21. 45	0. 50	·1384	9. 20	·02359	2. 0	61 ·0	62 ·9
2. 6	21. 20	1. 54	·1384	9. 50	·02336	3. 0	61 ·2	62 ·5
	(†)		(†)	10. 10	·02340	4. 0	61 ·4	63 ·0
3. 15	20. 0	3. 3	·1396	10. 26	·02328	6. 0	60 ·9	62 ·6
3. 35	20. 40		***	11. 59	·02335	9. 0	59 ·9	61 ·4
	***	6. 31	·1406	17. 45	·02310	9. 30	59 ·8	60 ·7
7. 35	16. 0	7. 47	·1404	20. 40	·02270	21. 0	59 ·2	60 ·2
9. 8	18. 40	8. 59	·1395	23. 3	·02257	22. 0	59 ·2	60 ·2
9. 25	12. 5	9. 12	·1402	23. 59	·02190	23. 0	59 ·4	60 ·3
10. 12	18. 30	9. 32	·1419					
10. 55	17. 45	10. 0	·1402					
13. 33	19. 50	10. 12	·1407					
17. 43	21. 30	10. 24	·1403					
18. 9	23. 50	10. 44	·1407					
18. 53	21. 40	11. 23	·1397					
20. 45	20. 55	17. 12	·1407					
21. 33	19. 30	17. 45	·1402					
21. 47	21. 0	18. 29	·1410					
22. 4	21. 10	18. 50	·1405					
23. 20	26. 30	20. 31	·1393					
23. 59	26. 30	20. 50	·1386					
		22. 23	·1383					
		23. 14	·1370					
		23. 59	·1379					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 1		Oct. 1		Oct. 1		Oct. 1		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 26. 30	0. 0	·1379	0. 0	·02190	0. 0	60·0	61·0
0. 20	26. 30	0. 10	·1381	2. 43	·02242	1. 0	59·8	61·0
0. 50	24. 40	0. 30	·1374	7. 17	·02225	2. 0	59·8	61·0
1. 56	27. 0	1. 10	·1393	7. 51	·02236	3. 0	59·6	60·9
2. 21	26. 0	2. 49	·1398	9. 54	·02190	6. 0	..	60·3
2. 45	27. 0	3. 10	·1390	10. 23	·02174	9. 0	58·9	60·0
2. 55	26. 30	4. 14	·1402	10. 33	·02180	21. 0	58·8	59·6
3. 3	27. 0	4. 52	·1400	10. 47	·02160	22. 0	58·3	59·1
3. 21	25. 40	5. 55	·1409	12. 46	·02183	23. 0	58·9	59·7
3. 58	25. 40	6. 28	·1407	13. 15	·02151			
5. 55	22. 30	6. 30	·1396	14. 56	·02170			
6. 26	22. 5	7. 6	·1391	18. 28	·02177			
6. 57	22. 50	7. 27	·1383	21. 18	·02144			
7. 39	16. 50	8. 15	·1392	23. 32	·02135			
8. 21	21. 5	8. 35	·1386	23. 59	·02140			
9. 7	20. 5	9. 11	·1389					
9. 30	21. 40	10. 24	·1396					
9. 40	23. 40	10. 37	·1405					
9. 48	23. 0	11. 0	·1397					
9. 55	25. 0	11. 5	·1398					
10. 18	21. 0	11. 30	·1393					
10. 33	25. 20	12. 26	·1395					
11. 8	20. 0	12. 50	·1406					
11. 54	20. 50	13. 18	·1394					
12. 12	20. 0	17. 11	·1396					
12. 49	28. 10	17. 30	·1393					
13. 20	21. 15	18. 20	·1396					
13. 36	21. 10	20. 10	·1380					
14. 10	19. 30	20. 44	·1386					
15. 3	19. 30	23. 26	·1388					
16. 5	20. 25	23. 59	·1391					
16. 15	21. 5							
16. 29	20. 50							
17. 40	21. 30							
18. 4	20. 50							
18. 20	21. 10							
19. 15	19. 20							
19. 46	19. 55							
20. 25	23. 25							
21. 20	20. 0							
22. 28	20. 30							
23. 59	22. 0							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 2		Oct. 2		Oct. 2		Oct. 2		
0. 0	20. 22. 0	0. 0	·1391	0. 0	·02140	0. 0	59·0	60·0
0. 14	23. 30	1. 27	·1388	3. 17	·02182	1. 0	59·2	60·3
0. 50	23. 50	2. 57	·1400	6. 33	·02200	2. 0	59·2	60·5
3. 20	23. 20	3. 26	·1394	7. 23	·02231	3. 0	59·2	60·5
3. 51	22. 0	4. 41	·1398	7. 36	·02250	6. 0	59·5	61·3
4. 35	21. 25	4. 56	·1410	8. 33	·02210	9. 0	59·6	61·4
4. 45	20. 50		***	8. 48	·02232	21. 0	58·6	59·4
5. 20	21. 50	5. 33	·1411	9. 12	·02200	22. 0	58·6	59·4
6. 11	20. 40	6. 10	·1400	9. 29	·02205	23. 0	58·8	59·5
6. 25	18. 30	6. 16	·1404	9. 51	·02185			
6. 30	18. 0	6. 40	·1380	10. 37	.02215			
7. 5	6. 5	7. 3	·1386	10. 59	·02180			
7. 27	3. 40	7. 10	·1383	11. 20	·02110			
7. 38	9. 0	7. 59	·1397	11. 35	·02120			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 2		Oct. 2		Oct. 2				
h m	° ′ ″	h m		h m		h m	°	°
8. 0	20. 13. 50	8. 1	·1394	12. 0	·02060			
8. 25:	15. 50	8. 20	·1400	12. 25	·02110			
8. 44	14. 15	8. 35	·1382	13. 13	·02060			
8. 59	15. 50	9. 0	·1398	14. 2	·02069			
9. 27	8. 0	9. 10	·1379	14. 25	·02100			
9. 33	8. 30	9. 23	·1381	14. 48	·02100			
9. 45	7. 0	9. 30	·1376	15. 3	·02120			
9. 59	11. 40	9. 43	·1385	15. 47	·02122			
10. 10	12. 0	10. 4	·1370	16. 12	·02080			
10. 20	11. 5	10. 30	·1381	16. 57	·02080			
10. 56	12. 50	10. 38	·1393	17. 8	·02100			
11. 5	4. 30	10. 57	·1382	17. 30	·02099			
11. 12	6. 50	11. 6	·1396	18. 47	·02163			
11. 20	6. 0	11. 22	·1380	21. 32	·02160			
11. 30	20. 8. 5	11. 50	·1410	22. 51	·02183			
11. 45	19. 58. 0	12. 7	·1395	23. 18	·02175			
11. 58	19. 56. 30	12. 23	·1402	23. 59	·02160			
12. 38	20. 12. 50	12. 50	·1381					
13. 19	4. 0	13. 3	·1392					
13. 53	18. 50	13. 7	·1381					
14. 35	21. 0	13. 10	·1387					
15. 2	17. 25	13. 17	·1382					
15. 19	19. 55	13. 29	·1393					
15. 29	19. 5	13. 45	·1376					
16. 2	29. 20	13. 50	·1381					
16. 24	21. 40	13. 56	·1375					
16. 37	23. 55	14. 32	·1393					
16. 46	23. 30	14. 41	·1390					
17. 0	27. 55	15. 0	·1395					
17. 9	26. 30	15. 16	·1394					
17. 24	30. 0	15. 55	·1408					
17. 50	22. 55	16. 47	·1363					
18. 8	22. 55	17. 17	·1383					
18. 19	20. 50	17. 30	·1379					
18. 29	22. 0	18. 4	·1380					
18. 36	19. 25	18. 14	·1386					
18. 49	19. 5	18. 23	·1379					
18. 50	18. 30	18. 35	·1379					
18. 54	21. 20	18. 39	·1387					
19. 3	19. 30	18. 47	·1378					
19. 40	18. 50	19. 0	·1386					
19. 48	19. 5	19. 42	·1378					
19. 55	17. 0	19. 58	·1388					
20. 18	21. 50	20. 17	·1368					
20. 23	24. 0	21. 13	·1343					
20. 29	22. 0	21. 28	·1319					
20. 43	21. 20	21. 43	·1326					
20. 58	22. 0	21. 57	·1316					
21. 0	20. 50	23. 20	·1372					
21. 6	22. 10	23. 59	·1352					
21. 23	24. 25							
21. 27	24. 5							
21. 38	25. 30							
21. 50	24. 25							
21. 57	27. 20							
22. 5	25. 0							
22. 10	26. 20							
22. 21	24. 30							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers: Of H.F. Magnet.	Readings of Thermometers: Of V.F. Magnet.
Oct. 2								
h m	° ′ ″	h m		h m		h m	°	°
22.29	20.26.10							
22.37	25.10							
22.50	28. 0							
23. 4	27. 0							
23.30	29.40							
23.52	31.30							
23.59	29.35							
Oct. 3		Oct. 3		Oct. 3		Oct. 3		
0. 0	20.29.35	0. 0	·1352	0. 0	·02160	0. 0	59·0	59·7
0.20	26. 0	0.45	·1373	0.40	·02200	1. 0	59·0	59·8
0.40	25.50	1. 8	·1360	2.14	·02213	2. 0	59·1	60·0
0.51	29. 0	1.35	·1374	3. 0	·02261	3. 0	59·0	60·1
0.56	27.50	1.47	·1375	3.37	·02319	6. 0	59·3	60·4
1.46	27.25	2. 3	·1385	4. 9	·02320	9. 0	59·0	60·0
2. 5	28.50	2.26	·1378	5. 4	·02240	9.40	59·4	60·3
2.20	28.20	2.44	·1366	6.23	·02201	21. 0	58·0	58·3
2.40	30.50	2.49	·1372	7.47	·02195	22. 0	58·4	58·5
3. 1	25. 0	3. 5	·1362	8.26	·02224	23. 0	58·8	59·5
3.20	26. 0	3.17	·1375	8.50	·02195			
3.25	20.50	3.43	·1356	9.20	·02183			
3.28	21.50	3.56	·1367	9.41	·02155			
3.38	21.10	4. 4	·1358	9.55	·02160			
3.48	14. 0	4.31	·1387	10.13	·02125			
4. 3	17. 0	4.44	·1381	10.37	·02140			
4. 5	15. 0	6.47	·1397	11.22	·02122			
4.15	15. 0	7. 6	·1392	13. 6	·02135			
4.22	17.45	7.17	·1395	13.59	·02120			
4.33	18. 0	7.52	·1364	15.15	·02150			
4.40	21. 0	8.24	·1392	17. 0	·02142			
4.48	21. 0	8.35	·1395	19.35	·02150			
5. 3	21.45	8.46	·1374	23.21	·02100			
6.39	20. 0	9.19	·1393	23.59	·02095			
7.10	14.30	9.40	·1386					
7.28	20.16. 0	9.59	·1403					
8. 4	19.51. 0	10.18	·1384					
8.40	20.12. 0	10.31	·1385					
8.50	9.10	10.55	·1397					
9.18	15. 0	11.42	·1384					
9.45	10. 0	12.10	·1391					
9.59	16.40	12.49	·1384					
10. 5	15.30	13. 0	·1393					
10.29	20.50	13.35	·1383					
10.39	20.10	13.48	·1392					
10.47	20.50	14.19	·1385					
11. 3	19.30	15.57	·1392					
11.20	18.20	16.22	·1398					
11.41	19. 0	16.45	·1396					
12.18	16.50	17. 0	·1387					
12.49	19. 0	18.11	·1392					
13.34	23.30	18.45	·1383					
13.45	21.25	19. 0	·1389					
14.20	18.20		***					
14.45	18. 0	20. 0	·1374					
14.48	19. 0		(†)					
14.58	18. 0	21.35	·1368					
16. 5	17.50	21.54	·1376					
16.12	19. 0	23.28	·1374					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers: Of H.F. Magnet.	Readings of Thermometers: Of V.F. Magnet.
Oct. 3		Oct. 3						
h m	° ′ ″	h m		h m		h m	°	°
16.25	20.18. 0	23.59	·1381					
16.35	18.40							
16.45	17.40							
16.58	19. 0							
17.11	17. 0							
17.21	18. 0							
17.38	17.25							
17.45	18.10							
17.50	17.10							
17.57	18. 5							
18.37	16.50							
	***							
19.21	18. 0							
19.30	16. 0							
19.39	17. 0							
19.44	16. 0							
19.59	17. 0							
20. 9	15.10							
20.11	16.55							
20.21	16.40							
	(†)							
21.25	14.50							
21.34	14.40							
21.49	16.10							
	***							
23.59	21.50							
Oct. 4		Oct. 4		Oct. 4		Oct. 4		
0. 0	20.21.50	0. 0	·1381	0. 0	·02095	0. 0	58·9	59·7
0.21	22.15		***	3.38	·02195	1. 0	58·9	59·9
0.49	24. 0	2. 4	·1393	3.56	·02190	2. 0	59·0	60·0
1.15	23. 0	2.19	·1382	4.20	·02210	3. 0	58·9	60·0
1.24	25. 0	2.50	·1400	5. 2	·02182	5.25	59·3	60·5
1.36	25. 0	3. 6	·1393	9.40	·02155	6. 0	59·4	60·5
2.15	24. 0	3.45	·1397	10.51	·02140	9. 0	59·1	60·1
2.28	21.50	3.57	·1382	11. 5	·02115	21. 0	58·8	59·1
2.51	22.30	4.20	·1398	11.49	·02115	22. 0	58·8	59·2
3.15	14.30	6.12	·1399	12.19	·02067	23. 0	59·1	59·6
3.37	15. 0	6.40	·1396	13. 6	·02084			
4. 5	13.20	7. 7	·1402	14.18	·02115			
4.14	13.40	7.45	·1397	15.56	·02103			
4.40	19. 0	8.10	·1405	19.36	·02130			
5.20	17.30	8.59	·1405	23. 3	·02105			
5.38	18.30	9. 8	·1398	23.59	·02140			
7. 7	19.20	9.35	·1411					
7.28	18. 0	10. 0	·1399					
7.43	18. 0	10.15	·1395					
7.57	17. 0	10.37	·1397					
8.10	18. 0	10.46	·1404					
8.38	16. 0	11. 1	·1385					
9. 0	16. 0	11.28	·1398					
9.15	15. 0	11.35	·1395					
10. 2	14. 0	11.57	·1402					
10.25	11. 0	12. 8	·1396					
10.35	11.25	12.36	·1411					
10.43	17.50	12.48	·1412					
11. 2	17.50	13.16	·1400					
11.25	16. 0	13.45	·1393					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 4		Oct. 4						
h m	° ′ ″	h m		h m		h m	°	°
11. 33	20. 17. 55	15. 12	·1400					
11. 39	17. 30	16. 3	·1390					
11. 47	22. 30	18. 12	·1398					
11. 55	22. 0	18. 57	·1394					
12. 4	23. 30	19. 22	·1380					
12. 15	19. 45	20. 5	·1386					
12. 36	19. 30	20. 25	·1382					
13. 32	13. 0	20. 40	·1387					
14. 3	14. 40	22. 39	·1376					
14. 13	13. 20	23. 3	·1363					
14. 43	14. 30	23. 54	·1384					
15. 20	20. 0	23. 59	·1386					
15. 39	18. 50							
15. 57	16. 10							
17. 15	17. 45							
17. 26	18. 40							
17. 46	17. 0							
18. 1	18. 0							
18. 18	17. 0							
19. 1	18. 30							
19. 16	20. 15							
19. 55	20. 0							
20. 29	17. 0							
20. 43	18. 40							
20. 59	17. 0							
21. 49	20. 0							
21. 59	18. 30							
22. 39	21. 50							
23. 15	20. 25							
23. 32	22. 40							
23. 42	22. 20							
23. 59	23. 0							
Oct. 5		Oct. 5		Oct. 5		Oct. 5		
0. 0	20. 23. 0	0. 0	·1386	0. 0	·02140	0. 0	59·2	59·9
0. 5	24. 0	0. 27	·1384	1. 38	·02150	1. 0	59·2	60·0
0. 26	23. 5	0. 55	·1392	2. 22	·02175	2. 0	59·1	60·0
0. 41	24. 0	1. 7	·1385	3. 5	·02165	3. 0	59·4	60·0
0. 47	23. 10	1. 10	·1388	5. 25	·02175	6. 0	59·2	60·3
1. 5	24. 55	1. 25	·1375	5. 41	·02190	9. 0	59·4	60·6
1. 10	24. 10	1. 35	·1375	7. 15	·02180	21. 30	59·2	59·7
1. 18	25. 25	1. 55	·1393	7. 25	·02171			
1. 26	24. 30	2. 27	·1402	7. 37	·02195			
1. 41	20. 0	3. 13	·1395	8. 13	·02150			
1. 59	18. 50	4. 50	·1394	9. 14	·02170			
2. 30	21. 40	5. 18	·1386	10. 29	·02165			
2. 47	22. 0	5. 45	·1414	10. 50	·02153			
3. 14	20. 40	6. 0	·1402	11. 18	·02156			
3. 45	21. 10	6. 26	·1404	11. 40	·02130			
4. 41	19. 5	6. 48	·1394	13. 10	·02150			
4. 49	19. 30	7. 0	·1395	14. 30	·02143			
5. 10	17. 45	7. 20	·1384	15. 1	·02116			
5. 29	6. 10	7. 38	·1431	15. 36	·02108			
5. 59	14. 0	8. 29	·1382	16. 10	·02123			
6. 30	16. 0	9. 43	·1394	17. 30	·02093			
6. 57	14. 45	10. 1	·1400	17. 50	·02070			
7. 12	15. 0	10. 17	·1394	18. 18	·02095			
7. 26	0. 35	10. 38	·1404	18. 43	·02083			

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 5		Oct. 5		Oct. 5				
h m	° ′ ″	h m		h m		h m	°	°
7. 42	20. 12. 20	11. 1	·1396	22. 31	·02140			
8. 3	18. 30	11. 30	·1404	23. 59	·02150			
8. 19	16. 0	11. 46	·1397					
8. 29	10. 30	12. 1	·1399					
8. 48	10. 5	13. 3	·1391					
9. 16	15. 10	13. 32	·1394					
9. 58	17. 30	14. 1	·1391					
10. 11	16. 0	14. 14	·1395					
10. 30	19. 0	14. 48	·1382					
10. 45	18. 0	15. 31	·1402					
11. 33	25. 30	15. 58	·1402					
11. 59	18. 50	16. 31	·1415					
12. 18	17. 5	16. 48	·1416					
12. 47	18. 30	17. 35	·1395					
12. 57	17. 50	18. 0	·1366					
13. 10	17. 30	18. 20	·1390					
13. 25	19. 50	18. 34	·1395					
13. 40	19. 0	19. 0	·1392					
14. 10	19. 55	19. 13	·1399					
14. 20	18. 30	19. 30	·1398					
14. 54	27. 0	20. 17	·1375					
15. 19	21. 35	20. 40	·1375					
15. 26	21. 50	21. 28	·1342					
15. 41	16. 30	22. 34	·1362					
16. 0	17. 55	23. 13	·1368					
16. 27	20. 50		***					
16. 40	20. 0	23. 59	·1369					
16. 55	20. 0							
17. 26	26. 0							
17. 47	32. 0							
17. 59	31. 35							
18. 11	33. 50							
18. 19	33. 0							
18. 25	36. 10							
19. 5	23. 5							
19. 35	23. 40							
19. 45	22. 0							
19. 59	22. 50							
20. 12	21. 50							
20. 20	19. 20							
20. 59	20. 0							
21. 27	25. 0							
21. 31	21. 40							
21. 53	26. 0							
22. 3	25. 0							
22. 35	26. 10							
22. 52	23. 15							
23. 10	24. 0							
23. 18	23. 0							
23. 28	23. 30							
23. 40	25. 50							
23. 59	26. 0							
Oct. 6		Oct. 6		Oct. 6		Oct. 6		
0. 0	20. 26. 0	0. 0	·1369	0. 0	·02150	0. 0	59·6	60·1
0. 20	24. 10	0. 10	·1374	3. 3	·02175	0. 45	59·2	59·8
1. 25	26. 50	1. 0	·1386	3. 34	·02213	1. 20	59·2	59·9
1. 55	20. 50	1. 31	·1379	3. 44	·02202	9. 0	59·4	60·5

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Oct. 6

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
2.48	20.22.20
2.59	21. 0
3.15	10.50
3.26	10.30
3.30	12. 0
3.38	9. 0
3.55	15.50
4. 4	16.40
4.20	17. 0
4.35	14. 0
4.40	15.10
4.53	15. 0
5. 2	17. 0
5.55	18. 0
6. 7	17. 0
6.17	17.55
6.30	15.55
7. 5	15.50
7.25	13. 0
7.31	10. 5
8. 7	18.45
8.21	15.30
8.37	17. 0
8.47	16.20
9. 3	17.20
9.18	16. 0
10.25	17. 5
10.39	19. 0
11.19	18.20
11.53	20.40
12. 5	19.25
12.18	20.50
12.35	18.40
13.17	20.50
14. 9	17.30
15.11	18. 0
15.45	16.30
16.25	18. 0
16.43	16.30
17.19	17. 0
19.48	15.55
21.48	17.30
23.21	21.25
	(†)

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
1.50	·1387
2. 6	·1397
2.33	·1395
3.12	·1380
3.25	·1395
3.33	·1385
3.58	·1408
4.10	·1396
4.17	·1398
4.28	·1386
4.35	·1391
4.49	·1381
5. 5	·1388
5.15	·1386
5.27	·1392
5.50	·1395
6.19	·1392
7. 0	·1407
7.12	·1398
7.37	·1422
7.50	·1408
8. 5	·1411
8.17	·1401
8.33	·1403
8.40	·1397
8.57	·1403
10. 9	·1396
10.38	·1403
11.42	·1395
12.21	·1403
12.59	·1401
13.20	·1404
14.20	·1396
15.30	·1400
16.37	·1395
17. 6	·1400
21.40	·1386
22.27	·1388
23.59	·1400

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
3.55	·02220
4.17	·02196
6.15	·02168
8. 5	·02160
8.19	·02150
11.58	·02176
13.52	·02178
17.57	·02212
20.14	·02231
23. 3	·02206
23.59	·02195

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
21. 0	60·7	62·0
22. 0	60·4	62·0
23. 0	59·7	61·3

Oct. 7

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
	(†)
0.10	20.22.50
0.59	23.20
1.19	22.10
2. 2	22. 0
2.39	20.35
3.15	20.15
3.50	18.30
4.31	18.30
5.29	16. 0
6. 4	18.55
6.18	18.30
6.25	20.16. 0
6.33	16. 5
6.45	11. 0
6.55	11.30
7. 3	11. 0
7.22	15. 0
7.42	17. 5
10.42	17.30
10.53	18.55
11.10	17.30
12.15	18.20
12.29	20. 0
12.48	19.10
14.20	18.40
14.38	19. 0
14.43	18.50
15.14	19. 0
16. 3	17.30
16.27	18. 0
16.49	17.30
17.20	18. 0
17.30	18. 0
17.47	19.30
18. 2	19.15
18.17	20.25
18.29	20.25
18.40	19.30
20.18	18.30
20.55	16.10
21.14	17.10
21.24	17. 0
21.39	21.30
21.49	21. 0
21.59	22. 0
22. 5	21.20
22.12	23. 0
22.17	22. 0
22.21	23. 0
22.27	22. 0
22.35	22. 0
22.40	23. 0
22.47	22.50
23. 4	25.50
23.10	24.50
23.49	28. 0
23.59	28.20

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
0. 0	·1400
0.40	·1402
1.10	·1398
2.53	·1400
3.32	·1395
4.27	·1395
5.17	·1390
5.34	·1394
6.14	·1390
6.47	·1403
7. 0	·1398
7.11	·1402
7.46	·1396
8.12	·1400
10.23	·1400
10.50	·1409
11.35	·1398
11.58	·1397
12.22	·1401
14.51	·1399
15.34	·1402
16.46	·1399
17.14	·1394
18.42	·1398
19.35	·1394
20.36	·1397
20.47	·1393
21. 1	·1396
21.25	·1386
21.38	·1397
21.45	·1389
21.54	·1392
22. 1	·1382
22.10	·1387
22.15	·1383
22.19	·1389
22.28	·1379
22.40	·1380
22.56	·1386
23. 4	·1382
23.59	·1383

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
0. 0	·02195
3.53	·02190
6.31	·02220
11.13	·02170
12.20	·02180
19.36	·02141
22.55	·02090
23.59	·02096

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
0. 0	59·7	61·5
1. 0	59·7	60·9
2. 0	59·5	60·5
3. 0	59·1	60·2
6. 0	59·8	61·1
9. 0	59·6	60·6
21. 0	58·7	59·0
22. 0	59·0	59·1
23. 0	59·0	59·1

Oct. 8

Greenwich Mean Solar Time.	Western Declination.
h m	° ′ ″
0. 0	20.28.20
0. 5	26.30
0.51	30. 0
0.59	33. 0
1. 2	31.30
1.11	31.20
1.49	43.45
2. 0	39.30
2.20	33. 0
2.28	33. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
0. 0	·1383
0.11	·1392
0.40	·1395
0.48	·1390
0.57	·1399
1.10	·1387
1.27	·1404
1.41	·1389
1.53	·1404
2. 0	·1397

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
0. 0	·02096
1.30	·02160
2.15	·c2215
2.50	·02180
3. 0	·02205
4.30	·02170
9.40	·02170
11.50	·02180
16.21	·02150
22.32	·02082

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
0. 0	59·1	59·4
1. 0	59·2	59·8
2. 0	59·2	59·9
3. 0	59·2	59·9
5. 0	59·2	60·0
6. 0	59·3	60·1
7. 0	59·3	60·3
8. 0	59·3	60·3
9. 0	59·4	60·3
21. 0	58·8	58·5

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol **:** attached to a time denotes that the reading will apply equally well to a considerable range of time near which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 8		Oct. 8		Oct. 8		Oct. 8		
h m	° ′ ″	h m		h m		h m	°	°
2. 45	20. 26. 0	2. 2	·1406	23. 31	·02095	22. 0	58·9	59·0
2. 59	29. 30	2. 20	·1387		(†)	23. 0	59·2	59·4
3. 10	30. 0	2. 28	·1393					
3. 19	28. 0	2. 40	·1381					
3. 21	28. 5	3. 2	·1406					
3. 29	27. 0	3. 15	·1398					
3. 41	26. 30	3. 16	·1402					
3. 55	27. 30	3. 33	·1398					
4. 16	25. 0	4. 0	·1403					
4. 22	26. 30	4. 20	·1400					
4. 33	22. 55	4. 30	·1393					
5. 12	24. 40	5. 6	·1404					
6. 50	19. 30	5. 21	·1396					
9. 59	17. 0	5. 57	·1403					
10. 10	17. 10	6. 3	·1397					
11. 23	16. 40	6. 15	·1404					
11. 34	17. 30	6. 38	·1400					
12. 2	17. 0		***					
12. 22	17. 30	7. 32	·1409					
14. 7	17. 30	7. 42	·1382					
14. 30	16. 20	7. 57	·1404					
15. 41	17. 0	8. 2	·1397					
15. 58	19. 0	8. 12	·1407					
16. 39	17. 30	8. 18	·1387					
18. 48	16. 10	8. 55	·1400					
20. 53	16. 10	9. 59	·1394					
22. 0	19. 0	13. 40	·1393					
22. 9	20. 0	14. 34	·1396					
22. 18	20. 0	15. 30	·1389					
22. 48	22. 30		(†)					
23. 0	22. 10	20. 29	·1388					
23. 5	23. 50	21. 6	·1382					
23. 30	24. 0	22. 0	·1382					
23. 40	26. 30	22. 21	·1385					
23. 59	25. 0	22. 51	·1379					
		23. 32	·1394					
		23. 59	·1394					
Oct. 9		Oct. 9		Oct. 9		Oct. 9		
0. 0	20. 25. 0	0. 0	·1394		(†)	0. 0	59·4	60·0
0. 17	23. 30	1. 25	·1401	1. 0	·02117*	1. 0	59·7	60·8
0. 20	24. 30	3. 27	·1398	1. 30	·02147	2. 0	59·5	60·5
0. 29	24. 0	5. 27	·1394	3. 32	·02190	3. 0	59·5	60·5
0. 37	24. 0	8. 47	·1394	8. 29	·02235	6. 0	59·9	61·2
1. 16	22. 0	9. 6	·1399	19. 30	·02250	7. 0	59·9	61·3
1. 35	22. 5	9. 53	·1398	22. 5	·02220	8. 0	59·9	61·3
1. 39	21. 40	10. 18	·1393	23. 59	·02243	9. 0	59·9	61·3
3. 30	17. 50	11. 9	·1398			21. 0	60·6	61·7
5. 50	17. 0	13. 59	·1390			22. 0	60·4	61·3
6. 13	17. 30	14. 14	·1395			23. 0	60·4	61·3
9. 1	16. 10	14. 36	·1391					
9. 50	17. 0	16. 2	·1392					
10. 3	16. 30	16. 54	·1396					
13. 59	15. 55	18. 40	·1396					
14. 12	16. 50	20. 57	·1385					
15. 10	16. 20	22. 21	·1387					
16. 49	17. 25	22. 42	·1382					
20. 38	15. 30	23. 4	·1389					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 9		Oct. 9						
h m	° ′ ″	h m		h m		h m	°	°
21. 23	20. 16. 0	23. 59	·1385					
22. 34	19. 0							
22. 48	18. 0							
23. 10	21. 30							
23. 34	22. 0							
23. 43	23. 30							
23. 59	22. 0							
Oct. 10		Oct. 10		Oct. 10		Oct. 10		
0. 0	20. 22. 0	0. 0	·1385	0. 0	·02243	0. 0	60·4	61·5
0. 6	21. 55		***	0. 59	·02252	1. 0	60·5	61·7
0. 33	24. 40	3. 20	·1409	1. 33	·02241	3. 0	60·3	61·5
0. 43	24. 10	3. 42	·1419	3. 7	·02260	6. 0	60·3	62·0
0. 48	26. 30	4. 16	·1392	3. 31	·02279	7. 0	60·3	61·8
0. 59	24. 0	4. 26	·1399	3. 49	·02277	8. 0	60·4	61·7
1. 4	26. 20	5. 11	·1369	5. 19	·02360	9. 0	60·3	61·6
1. 45	22. 25	5. 37	·1393	5. 30	·02400	21. 0	58·9	58·5
2. 58	22. 10	5. 45	·1379	5. 40	·02408	22. 0	58·5	58·1
3. 20	23. 0	5. 50	·1384	5. 50	·02370	23. 0	58·4	57·5
3. 35	25. 50	6. 5	·1361	6. 19	·02382			
4. 2	27. 0	6. 20	·1388	7. 16	·02340			
4. 19	22. 30	6. 28	·1382	9. 51	·02280			
4. 30	24. 30	6. 50	·1389	21. 30	·02123			
4. 45	26. 0	7. 6	·1379	23. 59	·02076			
4. 55	24. 30	7. 20	·1384					
5. 5	25. 0	7. 40	·1384					
5. 21	20. 0	8. 11	·1393					
5. 28	19. 55	9. 11	·1396					
5. 35	23. 0	11. 26	·1389					
5. 45	15. 0	12. 29	·1395					
5. 53	16. 55	12. 51	·1391					
6. 15	1. 0	16. 26	·1395					
6. 24	6. 0	17. 3	·1399					
6. 38	10. 20	17. 50	·1394					
7. 3	18. 0	19. 0	·1397					
7. 12	17. 35	20. 14	·1391					
7. 23	18. 30	20. 35	·1380					
7. 43	17. 30	21. 12	·1378					
7. 51	18. 10	21. 47	·1383					
8. 21	17. 30		(†)					
8. 53	18. 0	23. 59	·1392					
10. 9	16. 50							
10. 19	17. 10							
10. 32	17. 0							
10. 50	17. 35							
11. 3	17. 0							
12. 36	17. 0							
13. 3	17. 30							
13. 59	17. 30							
17. 5	16. 0							
17. 41	16. 50							
18. 15	18. 50							
18. 52	18. 30							
19. 8	19. 5							
19. 35	17. 0							
20. 5	16. 35							
21. 12	19. 10							
21. 45	18. 20							
	(†)							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct.10								
h m	° ′ ″	h m		h m		h m	°	°
23.40	20.21.0							
23.59	21.30							
Oct.11		Oct.11		Oct.11		Oct.11		
0.0	20.21.30	0.0	·1392	0.0	·02076	0.0	59·1	58·8
1.25	23.40	1.20	·1404	1.50	·02155	1.0	59·4	59·7
2.0	21.50	2.30	·1402	3.45	·02190	2.0	59·4	59·8
4.31	18.30	3.9	·1409	7.54	·02217	3.0	59·4	60·0
6.35	18.0	3.12	·1400	10.18	·02180	6.0	59·5	60·9
6.49	18.30	4.12	·1399	14.33	·02180	7.0	59·6	60·9
7.57	17.50	6.23	·1402	14.56	·02160	7.50	59·7	60·9
8.30	18.0	6.35	·1410	16.49	·02178	8.30	59·6	60·7
8.50	16.30	7.0	·1404	21.22	·02200	9.0	59·6	60·7
9.0	17.20	7.19	·1409	23.12	·02180	21.0	60·8	62·1
9.42	15.30	8.37	·1404	23.59	·02183	22.0	60·4	61·7
9.54	16.0	9.0	·1407			23.0	60·3	61·5
10.35	14.30	9.30	·1402					
11.10	17.0	9.55	·1405					
12.2	15.50	10.17	·1400					
12.15	17.0	11.6	·1403					
13.20	16.55	11.18	·1411					
13.43	17.40	12.11	·1402					
14.19	16.20	12.35	·1404					
14.45	22.5	13.7	·1399					
15.55	15.50	13.20	·1404					
16.11	16.0	13.30	·1400					
17.22	19.0	13.50	·1407					
17.36	17.30	14.12	·1403					
17.49	17.40	14.39	·1415					
20.11	14.30	16.50:	·1395					
21.21	15.30	18.53:	·1404					
21.33	14.50		***					
21.55	19.0	21.12	·1386					
22.9	17.0		***					
22.13	17.50	21.55	·1392					
22.18	17.5	22.7	·1386					
22.46	19.30	23.5	·1394					
23.0	21.20	23.32	·1385					
23.33	21.10	23.59	·1388					
23.59	22.30							
Oct.12		Oct.12		Oct.12		Oct.12		
0.0	20.22.30	0.0	·1388	0.0	·02183	0.0	60·4	61·6
0.21	22.55	0.10	·1386	3.21	·02212	1.0	60·4	61·6
0.29	23.50	0.27	·1391	10.15	·02200	2.0	60·4	61·7
0.32	22.35	0.36	·1398	12.47	·02209	3.0	60·4	61·6
0.43	25.30	0.42	·1390	21.5	·02170	5.45	60·4	61·8
0.53	24.0	0.50	·1395	22.47	·02150	6.0	60·4	61·8
1.15	23.0	0.55	·1389	23.59	·02135	7.0	60·4	61·7
1.20	25.0	1.0	·1397			8.0	60·4	61·8
1.47	22.5	1.9	·1390			9.0	60·3	61·6
5.29	17.50	1.19	·1398			9.45	60·4	61·6
8.41	16.40	1.35	·1390			22.15	60·2	60·9
12.3	16.15	2.11	·1395					
12.21	15.30	2.23	·1395					
12.39	16.50	5.47	·1405					
12.58	16.0	9.44	·1407					
13.22	14.10	10.2	·1403					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct.12		Oct.12						
h m	° ′ ″	h m		h m		h m	°	°
13.30	20.14.45	11.55	·1401					
13.48	14.0	12.8	·1408					
14.36	15.40	12.17	·1405					
14.42	16.0	12.50	·1413					
15.6	16.0	13.12	·1408					
15.30	17.0		***					
15.49	15.25	15.11	·1405					
16.10	16.10	16.9	·1408					
16.33	14.50	18.10	·1398					
17.19	17.50	19.7	·1402					
17.43	17.0	20.16	·1384					
17.59	18.45	21.1	·1384					
18.5	18.20	21.46	·1392					
18.31	19.15	23.7	·1386					
19.16	17.20	23.59	·1397					
19.53	17.10							
20.27	16.0							
21.24	17.20							
21.42	18.55							
22.5	18.20							
22.38	19.30							
22.45	20.20							
23.30	21.20							
23.59	20.40							
Oct.13		Oct.13		Oct.13		Oct.13		
0.0	20.20.40	0.0	·1397	0.0	·02135	0.0	59·8	60·5
0.53	20.50	1.13	·1405	5.3	·02180	2.0	59·8	60·5
1.4	21.30	2.20	·1407	9.48	·02170	5.0	60·1	60·9
1.42	21.10	2.50	·1404	12.21	·02190	9.0	60·1	61·0
2.19	21.55	4.30	·1403	12.47	·02180	21.0	61·2	62·6
3.31	19.50	4.50	·1399	19.0	·02193	22.0	60·8	61·2
4.25	19.55	5.20	·1406	21.50	·02188	23.0	61·2	61·7
4.54	17.0	7.9	·1410	23.59	·02200			
5.27	18.0	7.49	·1406					
5.45	17.25	8.10	·1407					
6.42	17.30	8.28	·1404					
7.7	16.0	9.17	·1407					
7.11	17.0	10.24	·1404					
7.19	16.25	11.2	·1408					
7.56	17.5	12.5	·1403					
8.23	15.0	12.18	·1415					
8.59	17.0	13.23	·1402					
9.55	16.50	13.39	·1407					
11.5	16.20	15.18	·1404					
12.5	17.0	15.46	·1406					
12.21	20.30	18.40	·1404					
12.56	16.0	21.22	·1394					
13.15	15.30	21.56	·1402					
13.28	16.55	23.59	·1394					
14.21	16.10							
14.48	16.35							
14.55	16.0							
15.21	17.40							
17.50	17.20							
20.13:	15.0							
21.34	16.10							
23.18	21.50							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 13								
h m	° ′ ″	h m		h m		h m	°	°
23. 50	20. 22. 40							
23. 59	22. 25							
Oct. 14		Oct. 14		Oct. 14		Oct. 14		
0. 0	20. 22. 25	0. 0	·1394	0. 0	·02200	0. 0	60·8	62·0
0. 48	23. 30	0. 43	·1400	3. 38	·02251	1. 0	60·9	62·3
2. 45	20. 50	2. 26	·1406	8. 3	·02230	2. 0	60·9	62·4
3. 55	20. 0	4. 11	·1403	8. 37	·02240	3. 0	61·6	62·6
5. 11	20. 0	6. 12	·1414	10. 36	·02221	6. 0	60·9	62·3
6. 16	18. 0		***	13. 50	·02236	7. 0	60·8	62·2
7. 3	18. 50	7. 57	·1403	18. 52	·02220	8. 0	60·7	62·1
7. 39	18. 20	8. 15	·1412	23. 45	·02200	9. 0	60·7	62·0
8. 0	13. 0	8. 28	·1406		(†)	10. 0	60·6	61·9
8. 26	14. 50	8. 52	·1410			21. 0	60·8	62·0
8. 36	14. 50	11. 20	·1414			22. 0	61·0	61·9
9. 16	17. 0	11. 53	·1410			23. 0	61·2	62·0
13. 33	16. 50	12. 8	·1414					
14. 48	18. 10	14. 19	·1409					
15. 30	17. 0	16. 6	·1413					
15. 39	18. 20	17. 9	·1407					
17. 5	16. 55	17. 35	·1410					
17. 15	17. 30	17. 50	·1405					
17. 46	17. 10	18. 11	·1409					
18. 0	18. 0	18. 47	·1409					
19. 58	16. 10	20. 16	·1402					
20. 9	17. 0	20. 35	·1406					
20. 18	16. 25	21. 12	·1400					
20. 44	17. 15	22. 56	·1403					
20. 58	17. 0	23. 59	·1413					
21. 41	16. 55							
23. 18	20. 0							
23. 28	19. 20							
23. 59	20. 0							
Oct. 15		Oct. 15		Oct. 15		Oct. 15		
0. 0	20. 20. 0	0. 0	·1413		(†)	0. 0	62·0	62·6
0. 27	20. 20	0. 20	·1412	1. 0	·02233*	1. 0	62·2	62·7
1. 3	19. 55	1. 58	·1411	1. 33	·02230	2. 0	62·2	62·8
5. 13	19. 0	3. 9	·1407	3. 48	·02270	3. 0	62·0	62·7
5. 39	17. 50	5. 7	·1414	10. 19	·02250	5. 20	61·5	62·4
6. 41	17. 50	6. 8	·1407	10. 45	·02270	6. 0	61·4	62·6
7. 7	16. 0	6. 42	·1414	11. 10	·02241	7. 0	60·0	62·4
7. 38	17. 0	7. 14	·1410	12. 0	·02270	8. 0	60·8	62·6
9. 34	16. 25	7. 42	·1413	12. 55	·02266	9. 0	60·8	62·5
10. 19	8. 30	9. 12	·1410	17. 12	·02268	9. 45	60·7	62·5
10. 31	12. 0	10. 6	·1419	22. 14	·02220	21. 0	60·3	61·8
11. 0	3. 0	10. 32	·1403	22. 37	·02209	22. 0	59·8	61·4
11. 22	0. 25	11. 4	·1424	23. 59	·02200	23. 0	60·3	61·7
12. 20	15. 10	12. 0	·1392					
12. 34	13. 20	12. 52	·1406					
12. 55	13. 5	16. 25	·1404					
13. 40	16. 10	16. 45	·1407					
14. 42	17. 50	17. 10	·1404					
14. 50	15. 55	19. 21	·1402					
15. 25	16. 45	22. 12	·1394					
15. 45	14. 20	23. 59	·1404					
16. 24	16. 30							
16. 39	15. 5							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 15								
h m	° ′ ″	h m		h m		h m	°	°
17. 5	20. 17. 0							
17. 26	16. 20							
18. 37	16. 10							
18. 54	16. 50							
19. 38	15. 20							
19. 43	16. 15							
21. 55	16. 30							
22. 0	17. 50							
22. 12	17. 10							
23. 12	21. 10							
23. 59	22. 0							
Oct. 16		Oct. 16		Oct. 16		Oct. 16		
0. 0	20. 22. 0	0. 0	·1404	0. 0	·02200	0. 0	60·6	61·8
0. 16	21. 55	0. 19	·1402	2. 49	·02233	1. 0	60·6	62·0
0. 32	23. 10	0. 33	·1409	6. 19	·02198	2. 0	60·5	61·7
0. 52	21. 55	0. 56	·1404	9. 36	·02215	3. 0	60·4	61·5
2. 55	19. 55	1. 14	·1412	12. 28	·02220	6. 0	59·4	59·8
4. 15	19. 10	3. 56	·1405	12. 55	·02210	7. 0	60·1	61·4
5. 0	19. 15	4. 53	·1412	18. 30	·02213	8. 0	60·4	61·6
5. 14	20. 5	5. 24	·1404	21. 23	·02190	9. 0	60·2	61·6
5. 29	19. 55	5. 57	·1410	22. 10	·02199	10. 0	60·4	61·8
5. 57	21. 55	6. 19	·1397	23. 32	·02190	21. 0	60·2	61·4
6. 29	17. 0	6. 59	·1405	23. 59	·02199	22. 0	60·2	61·3
7. 25	19. 55	8. 14	·1409			23. 0	60·3	61·5
8. 22	18. 0	9. 25	·1405					
8. 34	18. 30	9. 47	·1416					
9. 32	15. 30	10. 25	·1404					
9. 55	17. 0	12. 14	·1404					
10. 10	17. 0	12. 43	·1414					
10. 25	17. 55	13. 26	·1403					
10. 49	17. 30	16. 12	·1411					
11. 3	18. 0	17. 4	·1405					
11. 25	17. 20	17. 32	·1409					
11. 53	17. 10	19. 24	·1397					
12. 8	18. 30	19. 48	·1401					
12. 30	18. 30	21. 23	·1381					
12. 53	17. 0	22. 16	·1397					
13. 27	17. 10	22. 33	·1391					
14. 48	18. 50	22. 55	·1396					
16. 19	16. 20	23. 18	·1388					
16. 50	17. 0	23. 52	·1397					
16. 58	18. 0	23. 59	·1392					
17. 21	16. 35							
17. 55	16. ·0							
17. 59	17. 40							
18. 21	17. 0							
19. 10	19. 5							
19. 23	18. 40							
19. 43	19. 0							
19. 58	20. 0							
20. 9	19. 20							
21. 2	20. 30							
21. 29	19. 35							
22. 29	23. 0							
22. 39	22. 0							
23. 17	22. 30							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 16								
h m	° ′ ″	h m		h m		h m	°	°
23. 27	20. 24. 10							
23. 35	23. 30							
23. 48	23. 10							
23. 59	24. 0							
Oct. 17		Oct. 17		Oct. 17		Oct. 17		
0. 0	20. 24. 0	0. 0	·1392	0. 0	·02199	0. 0	60·7	62·1
0. 2	25. 0	0. 3	·1385	3. 10	·02303	1. 0	60·6	62·5
0. 8	23. 45	0. 50	·1393	3. 26	·02288	2. 0	60·8	62·7
0. 28	24. 30	1. 22	·1395	3. 58	·02300	3. 0	60·9	62·9
0. 41	23. 5	1. 32	·1388	5. 24	·02269	5. 0	60·3	61·2
1. 31	24. 5	1. 59	·1393	6. 32	·02260	6. 0	60·3	61·3
1. 54	22. 0	2. 38	·1381	7. 2	·02275	7. 0	60·1	61·2
2. 5	23. 30	3. 12	·1397	8. 0	·02226	8. 0	59·7	60·8
2. 27	23. 0	3. 30	·1383	10. 8	·02218	9. 0	60·1	61·1
2.:34	23. 0	3. 59	·1389	11. 12	·02196	21. 0	59·8	60·7
2. 57	17. 55	4. 30	·1384	11. 34	·02220	22. 0	59·9	60·5
3. 25	20. 30	5. 6	·1394	12. 52	·02180	23. 0	59·9	60·8
3. 36	20. 45	5. 33	·1388	15. 55	·02220			
3. 52	19. 10	6. 11	·1395	19. 58	·02200			
4. 24	23. 30	6. 43	·1383	21. 12	·02180			
4. 45	21. 25	7. 18	·1430	23. 0	·02178			
4. 53	21. 20	8. 2	·1383	23. 59	·02198			
5. 37	19. 0	8. 20	·1394					
5. 55	14. 30	8. 37	·1395					
6. 27	16. 55	8. 59	·1407					
7. 0	0. 0	9. 26	·1395					
7. 28	8. 40	10. 32	·1401					
7. 56	13. 40	10. 52	·1397					
8. 10	11. 0	11. 2	·1399					
8. 24	14. 5	11. 20	·1389					
8. 49	12. 30	11. 49	·1408					
9. 5	13. 0	13. 0	·1391					
9. 10	11. 30	13. 31	·1398					
9. 53	13. 0	14. 0	·1394					
10. 10	15. 50	15. 30	·1390					
10. 24	15. 0	16. 34	·1396					
10. 35	16. 0	16. 50	·1390					
10. 45	15. 0	17. 50	·1396					
10. 55	16. 0		***					
11. 13	13. 0	18. 26	·1395					
11. 40	19. 55		***					
11. 53	20. 30	19. 8	·1373					
12. 11	19. 0		***					
12. 33	21. 25	20. 7	·1380					
12. 53	19. 35	20. 30	·1372					
13. 20	20. 30	20. 44	·1376					
13. 59	18. 0	21. 50	·1365					
14. 30	18. 30	22. 6	·1370					
14. 43	19. 0	22. 20	·1364					
15. 1	16. 0	22. 30	·1367					
15. 26	18. 20		***					
15. 43	18. 5	23.:18	·1358					
16. 3	19. 55	23. 30	·1364					
17. 49	19. 0	23. 57	·1360					
17. 58	19. 30	23. 59	·1370					
18. 30	18. 0							
18. 45	21. 5							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 17								
h m	° ′ ″	h m		h m		h m	°	°
18. 51	20. 19. 30							
19. 17	17. 55							
19. 29	22. 10							
19. 53	20. 0							
20. 34	22. 0							
20. 40	21. 10							
20. 49	22. 0							
21. 18	20. 0							
21. 47	21. 10							
21. 58	20. 5							
22. 34	22. 0							
22. 50	25. 50							
23. 0	23. 20							
23. 6	24. 0							
23. 21	23. 30							
23. 38	26. 30							
23. 49	25. 10							
23. 59	26. 30							
Oct. 18		Oct. 18		Oct. 18		Oct. 18		
0. 0	20. 26. 30	0. 0	·1370	0. 0	·02198	0. 0	60·3	61·3
0. 23	25. 0	0. 42	·1391	2. 28	·02279	1. 0	60·4	61·8
0. 28	25. 30		***	3. 15	·02245	2. 0	60·6	61·4
0. 55	24. 50	1. 19	·1393	3. 36	·02250	3. 0	60·2	61·3
1. 21	27. 5	1. 28	·1387	4. 58	·02212	4. 30	59·6	60·2
1. 28	26. 30	1. 40	·1392	6. 39	·02223	5. 0	60·2	61·7
1. 42	32. 10	1. 51	·1370	7. 43	·02209	6. 0	60·4	61·3
1. 49	28. 30	2. 5	·1360	8. 56	·02220	7. 0	59·6	61·2
1. 56	28. 50	2. 20	·1379	9. 14	·02182	8. 0	59·9	61·6
2. 10	19. 30	2. 45	·1393	9. 30	·02190	9. 0	60·1	61·7
2. 28	17. 0	3. 0	·1384	9. 43	·02175	21. 0	59·4	60·2
2. 57	22. 40	3. 30	·1394	11. 23	·02200	22. 0	59·2	59·4
3. 18	21. 0	3. 44	·1383	14. 0	·02184	23. 0	59·2	59·2
3. 40	22. 50	4. 6	·1386	15. 51	·02190			
3. 52	22. 0	4. 22	·1398	20.:6	·02164			
4. 2	22. 0	4. 41	·1383	21. 43	·02142			
4. 18	20. 0	5. 12	·1395		(†)			
4. 40	20. 50	6. 2	·1392					
4. 52	17. 30	6. 30	·1402					
5. 12	17. 0	7. 7	·1393					
5. 30	19. 0	7. 26	·1398					
6. 19	11. 0	8. 12	·1386					
7. 13	18. 0	8. 43	·1396					
8. 15	15. 20	8. 59	·1426					
8. 29	15. 50	9. 12	·1415					
8. 48	10. 0	9. 32	·1421					
9. 2	14. 30	9. 51	·1404					
9. 18	12. 0	10. 1	·1404					
9. 41	18. 10	10. 12	·1396					
9. 55	15. 5	10. 18	·1402					
10. 28	13. 0	10. 42	·1391					
10. 32	14. 0	11. 13	·1390					
10. 37	13. 20	11. 38	·1398					
11. 0	16. 0	12. 26	·1390					
11. 5	17. 50	13. 6	·1396					
11. 38	19. 0	13. 17	·1393					
11. 55	18. 0	13. 50	·1398					
12. 12	21. 0	14. 22	·1390					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 18		Oct. 18						
h m	° ′ ″	h m		h m		h m	°	°
13. 2	20. 20. 0	14. 56	·1398					
13. 20	22. 0	15. 32	·1393					
13. 50	18. 55	16. 27	·1403					
14. 7	20. 30	17. 57	·1393					
14. 18	19. 40		***					
14. 28	19. 50	20. 45	·1391					
14. 36	20. 50	21. 28	·1369					
15. 9	18. 30	21. 38	·1375					
16. 5	19. 0		(†)					
16. 28	17. 30							
16. 35	18. 0							
16. 50	17. 0							
17. 20	18. 0							
17. 49	18. 30							
18. 0	17. 55							
18. 13	19. 0							
18. 21	18. 15							
18. 36	18. 55							
19. 59	17. 0							
20. 11	18. 10							
	***							
20. 37	17. 0							
20. 53	19. 5							
21. 3	19. 0							
21. 41	20. 10							
	(†)							
Oct. 19		Oct. 19		Oct. 19		Oct. 19		
	(†)		(†)	0. 0	·02110	0. 0	59 ·2	59 ·2
0. 19	20. 20. 55	0. 31	·1397	1. 9	·02113	1. 0	59 ·4	60 ·3
1. 3	22. 0	1. 47	·1384	2. 6	·02150	2. 0	59 ·4	60 ·4
1. 59	21. 50	2. 0	·1388	7. 23	·02170	3. 0	59 ·4	59 ·7
2. 9	20. 0		(†)	10. 33	·02170	6. 0	59 ·7	61 ·1
	(†)	3. 10	·1398	11. 13	·02152	7. 0	59 ·7	61 ·1
3. 10	19. 35	4. 41	·1395	15. 26	·02158	8. 0	59 ·7	61 ·2
5. 1	19. 0	5. 1	·1399	20. 10	·02137	9. 0	59 ·7	61 ·0
5. 42	17. 20	6. 8	·1394	23. 59	·02140	21. 30	59 ·6	60 ·3
5. 54	16. 0	6. 46	·1400					
6. 19	16. 30	7. 45	·1399					
6. 50:	18. 35	8. 21	·1404					
7. 35	17. 0	9. 17	·1398					
8. 30	18. 0	9. 31	·1400					
8. 39	17. 25	10. 22	·1392					
9. 3	17. 30	10. 57	·1428					
9. 54	13. 55	11. 27	·1400					
10. 10	14. 55	11. 33	·1407					
10. 20	14. 0	12. 12	·1405					
10. 30	15. 50	12. 57	·1388					
10. 35	12. 0	13. 33	·1394					
10. 55	15. 5	14. 55	·1395					
11. 18	14. 25	15. 20	·1384					
11. 35	19. 30	16. 31	·1398					
12. 3	15. 0	17. 16	·1398					
12. 31	14. 20	17. 27	·1390					
12. 57	18. 10	18. 4	·1394					
13. 56	19. 50	18. 14	·1388					
14. 23	17. 30		***					
14. 45	18. 0	20. 3	·1393					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Oct. 19		Oct. 19						
h m	° ′ ″	h m		h m		h m	°	°
14. 54	20. 17. 25	21. 7	·1371					
15. 3	19. 0	21. 54	·1370					
15. 20	19. 5	22. 12	·1360					
16. 15	23. 20	22. 45	·1375					
17. 10	19. 0	23. 59	·1385					
17. 33	21. 5							
18. 10	20. 5							
18. 20	21. 25							
18. 28	20. 5							
18. 39	20. 30							
19. 47	17. 30							
20. 29	20. 10							
21. 28	20. 30							
22. 11	25. 40							
22. 37	22. 30							
23. 35	25. 20							
23. 59	24. 20							
Oct. 20		Oct. 20		Oct. 20		Oct. 20		
0. 0	20. 24. 20	0. 0	·1385	0. 0	·02140	0. 0	59 ·6	60 ·8
0. 15	23. 30	1. 44	·1396	1. 50	·02149	0. 20	59 ·6	60 ·8
0. 58	24. 40	2. 19	·1394	3. 0	·02170	1. 0	59 ·4	60 ·5
1. 5	24. 0	2. 50	·1362	3. 58	·02235	8. 0	59 ·8	61 ·5
2. 34	23. 55	3. 9	·1373	5. 20	·02205	21. 0	61 ·4	63 ·0
2. 41	23. 0	3. 15	·1367	8. 50	·02182	22. 0	60 ·6	62 ·6
2. 47	23. 30	4. 11	·1381	13. 32	·02210	23. 0	60 ·6	61 ·6
3. 29	6. 30	4. 21	·1378	15. 3	·02195			
4. 6	10. 40	4. 58	·1378	16. 4	·02200			
4. 31	17. 0	5. 18	·1387	20. 10	·02197			
5. 12	20. 10	5. 49	·1386	22. 3	·02200			
5. 31	20. 10	6. 19	·1394	23. 10	·02179			
6. 2	17. 15	6. 29	·1390		(†)			
6. 11	17. 10	6. 40	·1396					
6. 21	15. 15	6. 59	·1390					
6. 39	15. 0	9. 22	·1397					
7. 11	17. 0	13. 35	·1392					
7. 21	16. 30	14. 2	·1388					
8. 1	18. 20	15. 12	·1394					
8. 15	18. 0	15. 50	·1392					
8. 29	18. 50	16. 47	·1402					
8. 45	18. 20	17. 20	·1386					
12. 0	18. 20	17. 56	·1391					
13. 33	18. 50	18. 16	·1390					
13. 41	19. 55	18. 41	·1394					
13. 54	19. 5	19. 1	·1389					
14. 3	20. 55	19. 15	·1392					
14. 23	20. 10	20. 28	·1378					
14. 38	23. 0	21. 7	·1358					
14. 48:	23. 40	21. 30	·1370					
15. 25	19. 0	22. 1	·1378					
15. 43	18. 0	23. 18	·1373					
16. 0	18. 0	23. 52	·1376					
16. 13	19. 0	23. 59	·1376					
16. 29	18. 0							
17. 0	19. 15							
17. 54	24. 10							
18. 14	23. 0							
18. 23	21. 25							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 20								
h m	° ′ ″	h m		h m		h m	°	°
18. 32	20. 21. 0							
19. 15	20. 30							
19. 25	21. 20							
19. 49	22. 0							
20. 32	20. 30							
21. 7	22. 0							
21. 25	20. 0							
21. 39	20. 0							
22. 12	22. 30							
22. 54	22. 25							
23. 47	24. 20							
23. 59	23. 55							
Oct. 21		Oct. 21		Oct. 21		Oct. 21		
0. 0	20. 23. 55	0. 0	·1376		(†)	0. 0	60·8	62·0
0. 5	23. 50	0. 43	·1368	1. 5	·02238	1. 0	60·7	62·0
0. 40	25. 15	2. 10	·1386	4. 1	·02220	2. 0	60·8	62·1
1. 29	21. 0	2. 31	·1384	9. 22	·02230	3. 0	60·6	62·2
2. 13	23. 20	3. 30	·1392	12. 27	·02205	5. 0	60·7	62·4
2. 33	22. 0	4. 5	·1394	21. 10	·02258	6. 0	60·8	62·5
3. 6	22. 30	4. 40	·1386	22. 0	·02250	7. 0	60·8	62·6
4. 26	19. 30	5. 23	·1402	23. 41	·02243	8. 0	60·8	62·5
5. 1	14. 0	5. 36	·1398		(†)	9. 0	60·9	62·7
5. 19	13. 0	5. 48	·1404			21. 0	61·2	63·0
5. 31	14. 0	6. 11	·1396			22. 0	61·7	63·2
5. 41	14. 0	6. 27	·1399			23. 0	61·9	63·3
7. 10	18. 25	7. 1	·1400					
7. 18	18. 0	7. 12	·1397					
7. 58	18. 20	7. 55	·1399					
8. 17	16. 0	8. 10	·1396					
8. 34	17. 0	8. 31	·1402					
8. 48	16. 50	9. 47	·1405					
9. 19	18. 0	10. 44	·1397					
9. 31	17. 30	10. 51	·1399					
10. 1	13. 50	11. 0	·1394					
10. 29	15. 40	11. 20	·1395					
10. 39	13. 30	11. 41	·1406					
11. 9	20. 30	11. 53	·1405					
11. 20	19. 0	12. 12	·1426					
11. 29	18. 20	12. 50	·1405					
11. 40	20. 25	13. 18	·1405					
11. 55	18. 40	13. 33	·1400					
12. 14	20. 55	14. 4	·1405					
12. 40	18. 0	14. 43	·1399					
13. 36	16. 30	15. 8	·1401					
14. 3	16. 0	15. 17	·1398					
14. 23	16. 5	15. 28	·1403					
14. 47	15. 10	15. 42	·1396					
15. 22	17. 0	15. 56	·1400					
15. 39	18. 55	16. 4	·1398					
15. 58	17. 0	19. 12	·1405					
16. 41	18. 10	19. 32	·1393					
19. 15	17. 40	20. 26	·1400					
19. 59	19. 10	21. 12	·1398					
20. 45	16. 20	22. 11	·1408					
21. 0	17. 0	23. 55	·1396					
21. 46	16. 5	23. 59	·1395					
22. 29	18. 0							
22. 35	19. 30							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 21								
h m	° ′ ″	h m		h m		h m	°	°
22. 45	20. 19. 0							
22. 55	21. 0							
23. 7	20. 30							
23. 15	22. 50							
23. 48	22. 50							
23. 59	23. 30							
Oct. 22		Oct. 22		Oct. 22		Oct. 22		
0. 0	20. 23. 30	0. 0	·1395		(†)	0. 0	61·6	63·3
0. 14	24. 0	0. 42	·1390	0. 30	·02268	1. 0	61·8	63·8
1. 35	20. 45	1. 4	·1395	5. 33	·02315	2. 0	61·7	63·6
2. 40	20. 0	3. 33	·1399	5. 59	·02300	3. 0	62·6	63·7
4. 18	18. 30	4. 37	·1397	9. 16	·02270	6. 0	60·0	61·9
4. 28	17. 30	6. 56	·1403	11. 21	·02294	7. 0	61·4	62·3
4. 40	13. 45	8. 17	·1397	13. 16	·02300	8. 0	61·6	62·1
5. 4	14. 30	8. 54	·1399	21. 55	·02270	9. 0	61·7	61·7
5. 18	12. 30	9. 20	·1406	23. 59	·02275	21. 0	61·6	63·4
6. 6	17. 5*	9. 48	·1399			22. 0	61·4	62·0
6. 18	16. 15	10. 24	·1398			23. 0	61·7	62·6
7. 14	17. 30	10. 43	·1402					
7. 32	16. 40	11. 32	·1398					
8. 12	17. 30	13. 48	·1398					
8. 35	15. 30	16. 40	·1400					
9. 4	16. 50	17. 14:	·1396					
9. 21	13. 55	17. 57	·1402					
10. 20	17. 50	19. 44	·1402					
10. 30	17. 0	20. 32	·1395					
13. 45	18. 30	21. 16	·1394					
14. 0	18. 45	21. 42	·1387					
14. 44	19. 30	23. 22	·1394					
16. 55	19. 10	23. 59	·1392					
17. 16	21. 0							
17. 40	20. 30							
18. 3	18. 55							
18. 30	19. 10							
19. 39	18. 20							
20. 10	19. 0							
20. 37	18. 30							
21. 16	19. 30							
21. 45	19. 10							
23. 35	24. 0							
23. 59	24. 0							
Oct. 23		Oct. 23		Oct. 23		Oct. 23		
0. 0	20. 24. 0	0. 0	·1392	0. 0	·02275	0. 0	61·8	63·2
0. 46	22. 45	1. 5	·1392	2. 17	·02320	1. 0	62·3	64·1
0. 55	23. 45	1. 22	·1397	3. 5	·02300	2. 0	62·0	63·4
1. 5	22. 0	2. 1	·1392	3. 32	·02309	3. 0	61·6	62·8
2. 10	21. 55	2. 23	·1399	4. 37	·02276	5. 0	60·6	61·8
2. 30	23. 55	2. 40	·1391	6. 3	·02264	6. 0	59·9	61·8
3. 12	19. 30	2. 48	·1393	7. 20	·02272	7. 0	60·2	61·6
3. 25:	17. 0	3. 6	·1384	9. 25	·02256	8. 0	60·1	61·4
4. 17	20. 50	3. 57	·1407	14. 59	·02263	9. 0	60·8	62·1
4. 35	20. 0	4. 9	·1403	21. 15	·02220	21. 0	61·0	62·2
5. 39	19. 40	4. 58	·1402	22. 19	·02202	22. 0	60·6	61·3
5. 51	20. 0	5. 42	·1406	23. 59	·02220	23. 0	60·8	62·0
6. 30	18. 0	6. 6	·1395					
7. 2	15. 0	6. 28	·1399					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 23		Oct. 23						
h m	° ′ ″	h m		h m		h m	°	°
7. 15	20. 15. 50	6. 45	·1393					
7. 25	15. 0	7. 3	·1399					
8. 20	17. 50	7. 38	·1394					
9. 30	18. 30	9. 50	·1403					
9. 39	18. 0	10. 8	·1401					
10. 18	17. 40	10. 38	·1412					
10. 30	15. 45	11. 59	·1399					
10. 45	15. 0	14. 48	·1394					
11. 1	16. 0	17. 33	·1404					
11. 35	15. 35	21. 38	·1398					
12. 15	17. 20	22. 0	·1403					
14. 20	18. 30	22. 20	·1396					
16. 26	18. 0	22. 58	·1402					
16. 37	18. 55	23. 59	·1399					
16. 55	17. 30							
20. 58	17. 55							
21. 23	18. 25							
21. 33	18. 5							
21. 57	19. 20							
22. 10	19. 40							
22. 19	19. 0							
22. 35	20. 30							
23. 55	23. 30							
23. 59	24. 0							
Oct. 24		Oct. 24		Oct. 24		Oct. 24		
0. 0	20. 24. 0	0. 0	·1399	0. 0	·02220	0. 0	60·6	61·4
0. 29	24. 30		***	3. 20	·02233	1. 0	60·8	61·7
	***	1. 14	·1392	3. 47	·02257	2. 0	60·5	61·1
1. 10	22. 30	2. 46	·1396	4. 2	·02255	3. 0	60·6	61·3
1. 26	22. 20	3. 20	·1378	4. 25	·02262	5. 30	59·9	61·5
2. 0	25. 0	3. 44	·1387	5. 45	·02231	6. 0	59·8	61·4
2. 29	25. 0	4. 0	·1374	7. 47	·02217	7. 0	59·9	61·2
3. 14	22. 10	4. 11	·1380	8. 8	·02226	8. 0	59·9	61·1
3. 36	23. 10	4. 21	·1374	8. 30	·02208	9. 0	59·8	61·1
4. 2	12. 30	5. 10	·1401	8. 52	·02220	21. 0	60·5	61·4
4. 19	16. 0	5. 57	·1408	9. 48	·02207	22. 0	60·5	61·3
4. 27	14. 30	6. 19	·1402	11. 6	·02220	23. 0	60·5	61·6
4. 35	16. 30	6. 30	·1406	11. 38	·02178			
5. 20	20. 50	6. 44	·1399	12. 14	·02170			
5. 30	20. 20	6. 57	·1402	12. 55	·02190			
6. 15	21. 25	7. 2	·1398	13. 40	·02180			
6. 37	21. 5	7. 11	·1402	15. 11	·02200			
7. 2	19. 0	7. 40	·1397	18. 9	·02180			
7. 31	18. 0	8. 1	·1405	21. 15	·02190			
7. 49	16. 0	8. 27	·1393	23. 26	·02191			
8. 11	18. 0	8. 44	·1403	23. 59	·02200			
8. 35	10. 0	9. 11	·1401					
8. 49	14. 0	9. 26	·1406					
9. 21	15. 10	9. 55	·1398					
9. 28	16. 5	10. 18	·1407					
10. 13	18. 0	10. 30	·1402					
10. 45	17. 25	10. 51	·1403					
11. 0	18. 50	11. 5	·1416					
11. 18	9. 0	11. 20	·1426					
11. 38	4. 30	11. 47	·1413					
11. 49	6. 20	12. 14	·1388					
12. 17	6. 50	12. 37	·1393					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 24		Oct. 24						
h m	° ′ ″	h m		h m		h m	°	°
12. 26	20. 4. 45	12. 44	·1387					
13. 14	19. 30	13. 26	·1396					
13. 44	15. 40	13. 47	·1390					
14. 19	18. 0	14. 47	·1390					
14. 23	19. 20	15. 17	·1381					
14. 45	16. 50	15. 37	·1382					
15. 32	23. 30	15. 47	·1390					
15. 48	21. 10	16. 15	·1394					
16. 9	22. 0	16. 36	·1393					
16. 20	21. 5	17. 3	·1396					
16. 59	22. 25	17. 25	·1403					
17. 13	21. 10	17. 30	·1401					
17. 27	22. 30	18. 19	·1407					
17. 41	22. 30	19. 10	·1397					
18. 3	26. 30	19. 45	·1383					
18. 55	22. 10	19. 51	·1389					
19. 11	22. 20	20. 0	·1385					
19. 40	24. 10	20. 8	·1390					
20. 3	22. 10	20. 14	·1382					
20. 12	23. 20	20. 18	·1391					
20. 28	20. 5	20. 21	·1381					
20. 42	23. 50	20. 39	·1387					
20. 52	22. 10	20. 47	·1380					
21. 16	22. 0	21. 12	·1367					
21. 22	20. 5	21. 40	·1386					
21. 35	19. 30	21. 48	·1381					
21. 43	21. 0	21. 59	·1389					
	***		***					
23. 31	21. 25	23. 59	·1385					
23. 59	22. 20							
Oct. 25		Oct. 25		Oct. 25		Oct. 25		
0. 0	20. 22. 20	0. 0	·1385	0. 0	·02200	0. 0	60·4	61·5
0. 33	21. 10	0. 47	·1394	3. 30	·02240	1. 0	60·6	61·5
0. 57	23. 25	1. 15	·1382	7. 29	·02230	2. 0	60·6	61·6
1. 14	21. 50	1. 50	·1387	9. 13	·02200	3. 0	60·8	61·7
4. 0	19. 30	3. 46	·1390	9. 45	·02175	6. 0	60·7	61·7
4. 26	16. 30	4. 2	·1382	10. 30	·02188	7. 0	60·8	61·7
4. 50	17. 40	4. 31	·1390	12. 8	·02213	8. 0	60·6	61·7
5. 7	16. 30	4. 56	·1384	17. 10	·02193	9. 0	60·2	61·0
5. 20	17. 5	5. 27	·1394	21. 57	·02160	21. 0	60·0	60·9
5. 32	18. 50	5. 36	·1389	23. 59	·02142	22. 0	60·1	60·5
5. 51	15. 55	6. 8	·1399			23. 0	59·9	60·2
6. 37	17. 40	6. 44	·1391					
7. 17	13. 0	6. 57	·1394					
7. 33	17. 0	7. 6	·1392					
8. 55	17. 20	7. 20	·1400					
9. 29	13. 0	7. 52	·1396					
10. 0	17. 40	8. 59	·1398					
10. 55	11. 0	9. 28	·1424					
	***	9. 46	·1411					
12. 31	19. 0	10. 9	·1398					
12. 50	17. 30	10. 33	·1394					
13. 7	19. 50	10. 44	·1400					
13. 31	19. 0	10. 58	·1397					
13. 45	20. 50	11. 5	·1387					
14. 16	19. 0	11. 22	·1392					
14. 50	18. 30	11. 46	·1389					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 25		Oct. 25						
h m	° ′ ″	h m		h m		h m	°	°
15. 6	20. 19. 10	12. 30	·1398					
	***	12. 48	·1392					
16. 15	17. 25	13. 39	·1397					
	***	13. 49	·1393					
17. 54	19. 10	14. 2	·1398					
18. 13	17. 40	15. 15	·1395					
18. 37	18. 50	15. 47	·1397					
18. 43	17. 50	16. 1	·1403					
19. 18	18. 30	16. 10	·1398					
20. 40	20. 55	16. 28	·1402					
20. 46	21. 50	16. 38	·1396					
21. 19	23. 50	18. 4	·1394					
21. 58	22. 10	18. 32	·1399					
	(†)	18. 40	·1394					
23. 19	21. 50	19. 5	·1402					
23. 59	24. 5	19. 44	·1395					
		20. 38	·1378					
		21. 15	·1386					
		21. 50	·1384					
			(†)					
Oct. 26		Oct 26		Oct. 26		Oct. 26		
0. 0	20. 24. 5		(†)	0. 0	·02142	0. 0	60·5	61·1
0. 31	21. 0	0. 12	·1386	2. 55	·02175	1. 0	60·7	61·7
1. 35	21. 15	0. 28	·1393	2. 57	·02157	2. 0	60·5	61·3
4. 6	19. 0	1. 59	·1391	3. 15	·02163	3. 0	60·3	60·7
4. 36	19. 20	2. 58	·1387	6. 17	·02122	6. 0	59·5	60·0
5. 32	18. 20	5. 17	·1399	7. 46	·02140	7. 0	60·2	61·3
5. 45	19. 0	5. 59	·1397	8. 4	·02156	8. 0	60·3	61·4
6. 28	13. 0	6. 19	·1388	8. 19	·02143	9. 0	60·3	61·3
6. 55	17. 0	6. 34	·1395	8. 46	·02150	10. 20	60·3	61·4
7. 49	11. 40	7. 0	·1391	9. 13	·02130	11. 0	60·3	61·4
8. 15	17. 0	7. 35	·1397	9. 23	·02138	21. 30	60·0	60·6
8. 38	14. 20	7. 59	·1390	9. 45	·02109			
9. 0	19. 0	8. 9	·1399	13. 30	·02142			
9. 18	16. 0	8. 19	·1388	17. 55	·02119			
9. 39	20. 30	8. 39	·1393	19. 39	·02133			
9. 55	18. 50	8. 59	·1404	22. 0	·02105			
10. 5	19. 0	9. 16	·1390	22. 57	·02105			
10. 15	17. 50	9. 33	·1407	23. 59	·02105			
10. 37	16. 10	9. 58	·1394					
11. 40	18. 30	10. 14	·1399					
12. 17	18. 10	11. 13	·1393					
12. 30	19. 15	13. 15	·1398					
12. 48	18. 30	14. 47	·1395					
13. 34	19. 55	15. 47	·1398					
13. 56	18. 10	16. 7	·1393					
14. 18	19. 0	16. 29	·1400					
14. 45	18. 20	17. 40	·1402					
15. 10	19. 50	18. 16	·1391					
16. 0	19. 10	19. 0	·1394					
16. 18	20. 35	19. 29	·1390					
16. 36	20. 5	20. 2	·1397					
16. 50	21. 0	22. 20	·1384					
17. 20	19. 45	22. 50	·1391					
18. 28	20. 40	23. 59	·1386					
18. 50	20. 15							
19. 16	21. 20							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 26								
h m	° ′ ″	h m		h m:		h m	°	°
19. 52	20. 20. 50							
20. 33	21. 0							
20. 49	19. 50							
21. 18	19. 45							
21. 31	20. 50							
22. 34	23. 0							
23. 12	26. 0							
23. 59	24. 10							
Oct. 27		Oct. 27		Oct. 27		Oct. 27		
0. 0	20. 24. 10	0. 0	·1386	0. 0	·02105	0. 0	60·1	60·8
0. 25	23. 40	0. 49	·1392	3. 6	·02130	8. 45	59·7	60·3
0. 40	25. 25	2. 58	·1402	11. 23	·02098	21. 0	59·0	58·8
1. 36	22. 5	4. 40	·1396	12. 5	·02075	22. 0	59·2	58·9
3. 55	19. 30	7. 59	·1403	15. 39	·02060	23. 0	59·5	59·5
4. 9	18. 55	9. 19	·1392	16. 20	·02030			
4. 27	19. 40	9. 58	·1400	20. 30	·02020			
7. 30	18. 15	10. 44	·1393	22. 5	·02003			
7. 59	18. 30	11. 10	·1398	23. 45	·02010			
8. 29	17. 30	11. 19	·1398	23. 59	·02035			
9. 0	18. 30	11. 29	·1407					
9. 26	16. 0	11. 38	·1404					
9. 35	16. 55	11. 49	·1408					
9. 46	16. 0	11. 58	·1404					
10. 35	18. 5	12. 16	·1404					
11. 55	18. 30	12. 32	·1408					
12.:10	17. 0	13. 3	·1399					
12. 20	16. 0	14. 0	·1391					
12. 40	17. 55	14. 11	·1397					
12. 55	17. 0	14. 21	·1394					
13. 17	17. 30	14. 43	·1397					
13. 35	16. 30	15. 18	·1391					
14. 20	19. 0	16. 6	·1406					
14. 50	16. 0	16. 20	·1407					
15. 18	19. 50	16. 59	·1396					
15. 42	22. 20	17. 58	·1399					
16. 27	18. 0	19. 4	·1394					
19. 5	18. 10	19. 17	·1397					
19. 43	19. 55	19. 47	·1390					
20. 2	19. 30	21. 6	·1387					
20. 28	20. 5	21. 29	·1377					
21. 38	19. 25	21. 58	·1382					
22. 0	21. 50	22. 6	·1376					
22. 4	20. 20	22. 16	·1382					
22. 16	21. 5	23. 5	·1386					
22. 54	21. 30	23. 59	·1386					
23. 36	23. 30							
23. 59	22. 40							
Oct. 28		Oct. 28		Oct. 28		Oct. 28		
0. 0	20. 22. 40	0. 0	·1386	0. 0	·02035	0. 0	59·7	60·0
1. 4	22. 55	2. 33	·1398	2. 39	·02076	1. 0	60·0	60·6
2. 15	20. 20	3. 23	·1394	9. 11	·02060	2. 0	59·7	60·3
2. 27	21. 10	3. 58	·1387	15. 5	·02050	3. 0	59·7	60·3
2. 46	20. 20	4. 40	·1395	21. 46	·02083	6. 0	59·7	60·3
3. 20	20. 25	6. 16	·1397	23. 59	·02085	7. 0	59·7	60·2
4. 10	16. 30	7. 32	·1390			8. 0	59·7	60·2

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 28		Oct. 28				Oct. 28		
h m	° ′ ″	h m		h m		h m	°	°
5. 24	20. 19. 30	8. 8	·1396			9. 0	59·8	60·2
6. 25	18. 35	8. 30	·1392			9. 30	59·9	60·3
7. 3	16. 30	8. 49	·1399			21. 0	60·5	61·3
8. 26	18. 35	10. 9	·1393			22. 0	60·2	61·2
8. 38	16. 0	11. 9	·1397			23. 0	60·2	61·3
8. 50	16. 40	12. 7	·1390					
9. 4	16. 0	12. 26	·1397					
9. 38	17. 30	13. 58	·1389					
10. 15	16. 30	14. 19	·1395					
11. 6	17. 10	14. 34	·1392					
11. 25	16. 0	15. 11	·1396					
11. 35	16. 35	16. 49	·1393					
11. 44	16. 25	17. 25	·1396					
11. 55	17. 40	18. 34	·1392					
12. 5	17. 0	19. 15	·1395					
12. 24	17. 50	20. 23	·1389					
12. 40	17. 20	20. 48	·1382					
13. 25	19. 0	21. 37	·1380					
13. 36	17. 50	23. 8	·1392					
13. 58	17. 15	23. 59	·1396					
14. 19	20. 0							
14. 41	19. 20							
15. 13	22. 0							
15. 58	17. 25							
16. 50	18. 55							
17. 15	17. 50							
17. 23	18. 15							
17. 38	17. 50							
19. 13	18. 50							
19. 28	18. 10							
20. 34	18. 15							
21. 15	19. 50							
21. 47	18. 30							
22. 3	19. 30							
22. 50	20. 5							
23. 59	22. 20							
Oct. 29		Oct. 29		Oct. 29		Oct. 29		
0. 0	20. 22. 20	0. 0	·1396	0. 0	·02085	0. 0	60·4	61·4
0. 31	23. 0	2. 48	·1406	3. 53	·02130	1. 0	60·3	61·3
1. 50	20. 30	3. 5	·1399	7. 2	·02103	2. 0	60·4	61·4
2. 30	20. 20	4. 10	·1396	10. 53	·02129	3. 0	60·5	61·6
3. 1	18. 10	5. 43	·1405	11. 14	·02100	5. 0	60·6	61·6
3. 55	17. 5	6. 10	·1402	11. 53	·02083	6. 0	60·6	61·6
4. 37	16. 50	6. 39	·1413	12. 33	·02101	7. 0	60·6	61·6
4. 59	18. 30	7. 10	·1396	13. 22	·02070	8. 0	60·6	61·7
6. 6	18. 20	7. 30	·1400	15. 17	·02091	9. 0	60·7	61·3
6. 39	15. 0	7. 49	·1394	17. 19	·02080	21. 0	60·4	61·1
6. 53	15. 50	8. 14	·1400	17. 51	·02058	22. 0	60·4	61·2
7. 13	14. 0	9. 16	·1398	19. 30	·02080	23. 0	60·2	61·1
7. 29	14. 0	9. 52	·1387	20. 40	·02080			
7. 50	17. 0	10. 3	·1393	21. 30	·02070			
8. 9	16. 0	10. 25	·1384	23. 59	·02135			
8. 27	17. 0	10. 39	·1397					
8. 45	15. 10	10. 47	·1394					
9. 55	13. 0	10. 58	·1407					
10. 20	14. 35	11. 58	·1372					
10. 30	13. 45	12. 24	·1376					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 29		Oct. 29						
h m	° ′ ″	h m		h m		h m	°	°
10. 59	20. 16. 30	13. 3	·1404					
11. 22	11. 40	13. 59	·1386					
11. 31	11. 30	14. 15	·1380					
12. 0	4. 20	14. 39	·1381					
12. 31	10. 0	14. 59	·1390					
12. 46	8. 50	15. 7	·1388					
13. 5	10. 30	16. 25	·1396					
13. 11	9. 20	16. 59	·1382					
13. 18	9. 35	17. 56	·1408					
13. 36	5. 40	18. 17	·1399					
13. 50	4. 0	18. 40	·1399					
14. 5	5. 10	18. 55	·1393					
14. 13	5. 0	19. 38	·1394					
14. 44	11. 30	20. 0	·1385					
14. 59	12. 50	20. 47	·1385					
15. 31	10. 0	21. 6	·1378					
15. 48	12. 0	21. 38	·1374					
16. 20	13. 15	21. 49	·1378					
16. 53	22. 0	22. 15	·1375					
17. 8	21. 45	22. 27	·1378					
17. 29	26. 25	22. 50	·1366					
18. 39	15. 0	23. 22	·1367					
19. 10	18. 20	23. 59	·1382					
20. 11	21. 20							
22. 3	24. 10							
22. 43	28. 50							
22. 59	27. 30							
23. 46	26. 30							
23. 59	28. 0							
Oct. 30		Oct. 30		Oct. 30		Oct. 30		
0. 0	20. 28. 0	0. 0	·1382	0. 0	·02135	0. 0	60·3	61·3
0. 22	28. 20	0. 22	·1385	0. 39	·02138	1. 0	60·5	61·4
0. 44	24. 15	0. 42	·1380	1. 11	·02161	2. 0	60·5	61·5
1. 24	24. 50	1. 17	·1384	5. 8	·02142	3. 0	60·4	60·9
2. 23	21. 0	1. 30	·1384	7. 10	·02145	6. 0	60·6	61·8
3. 28	19. 30	2. 59	·1396	7. 39	·02155	7. 0	60·8	62·0
	(†)		(†)	13. 30	·02140	8. 0	60·8	62·0
6. 10	19. 0	7. 1	·1395	14. 21	·02132	9. 0	60·7	61·9
7. 5	19. 5	7. 43	·1393	18. 58	·02117	21. 0	60·6	61·3
7. 34	18. 25	8. 27	·1397	23. 28	·02095	22. 0	60·6	61·3
8. 5	13. 20	9. 0	·1392	23. 59	·02102	23. 0	60·6	61·1
8. 22	13. 0	9. 35	·1396					
8. 54	16. 50	9. 58	·1393					
9. 56	16. 50	11. 58	·1396					
10. 25	18. 0	12. 30	·1398					
10. 50	17. 20	13. 9	·1394					
11. 39	17. 50	14. 6	·1400					
11. 55	17. 5	15. 0	·1397					
12. 5	17. 30	17. 7	·1404					
12. 20	17. 25	17. 58	·1391					
12. 33	15. 25	18. 35	·1400					
12. 48	14. 30	19. 35	·1394					
13. 20	18. 15	20. 3	·1396					
13. 43	19. 0	21. 50	·1380					
14. 33	16. 30	23. 0	·1381					
14. 43	17. 10	23. 41	·1384					
15. 35	17. 50	23. 59	·1377					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Oct. 30								
h m	° ′ ″	h m		h m		h m	°	°
15. 45	20. 18. 30							
15. 55	17. 20							
16. 5	18. 0							
16. 36:	16. 30							
17. 7	17. 20							
17. 33	19. 30							
17. 54	21. 0							
18. 19	19. 55							
18. 30	20. 0							
18. 45	18. 30							
19. 47	18. 0							
20. 8	17. 0							
21. 58	17. 30							
22. 42	21. 20							
23. 3	20. 10							
23. 36	23. 35							
23. 59	22. 30							
Oct. 31		Oct. 31		Oct. 31		Oct. 31		
0. 0	20. 22. 30	0. 0	·1377	0. 0	·02102	0. 0	60·8	61·7
0. 32	22. 10	0. 39	·1376	3. 45	·02140	1. 0	60·7	61·7
0. 54	22. 5	1. 54	·1391	8. 15	·02149	2. 0	60·6	61·4
1. 0	23. 0	2. 48	·1388	8. 40	·02125	3. 0	60·6	61·6
1. 8	22. 5	3. 45	·1396	9. 30	·02110	6. 0	60·9	62·1
1. 35	22. 15	3. 54	·1394	10. 50	·02115	7. 0	60·9	62·2
1. 46	21. 30	6. 6	·1394	12. 59	·02100	8. 0	61·0	62·2
2. 20	21. 40	6. 42	·1399	14. 45	·02131	9. 0	60·9	62·2
2. 59	20. 0	7. 0	·1395	16. 1	·02140	10. 0	60·9	62·1
4. 50	18. 50	7. 25	·1398	20. 10	·02120	21. 0	60·8	61·8
4. 59	19. 35	7. 34	·1402	23. 12	·02109	22. 0	60·8	61·6
5. 55	19. 10	7. 50	·1403	23. 59	·02115	23. 0	61·0	61·9
6. 35	18. 0	8. 28	·1421					
6. 55	18. 45	9. 29	·1392					
7. 19	18. 45	10. 10	·1397					
7. 55	14. 20	10. 48	·1387					
8. 22	13. 0	11. 30	·1389					
8. 27	10. 55	12. 4	·1401					
8. 36	12. 25	12. 19	·1394					
8. 50	10. 0	12. 40	·1399					
9. 28	12. 40	13. 28	·1392					
9. 40	10. 0	16. 59	·1400					
9. 58	8. 0	19. 4	·1402					
10. 25	7. 30	22. 10	·1391					
11. 44	14. 20	23. 23	·1388					
12. 27	10. 30	23. 59	·1392					
13. 11	15. 20							
13. 38	15. 30							
13. 59	16. 15							
14. 18	16. 0							
14. 55	19. 0							
17. 50	19. 0							
18. 57	18. 0							
19. 12	18. 20							
21. 0	17. 5							
22. 29	18. 30							
23. 59	20. 40							
Nov. 1		Nov. 1		Nov. 1		Nov. 1		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 20. 40	0. 0	·1392	0. 0	·02115	0. 0	61·0	62·2
0. 32	21. 0	2. 50	·1396	2. 43	·02142	1. 0	61·0	62·4
2. 24	19. 55	5. 55	·1396	3. 46	·02130	2. 0	61·1	62·6
4. 45	18. 0	6. 18	·1391	9. 20	·02115	3. 0	60·4	61·5
5. 58	18. 30	7. 5	·1398	9. 53	·02080	6. 0	60·9	61·6
6. 21	15. 55	7. 59	·1392	11. 21	·02090	7. 0	60·8	61·5
6. 48	18. 0	9. 19	·1394	13. 6	·02080	8. 0	60·8	61·5
7. 24	18. 45	9. 35	·1421	16. 9	·02055	9. 0	60·6	61·1
8. 23	16. 30	10. 10	·1397	16. 32	·02039	21. 0	58·4	58·3
9. 8	17. 0	10. 20	·1399	20. 15	·02004	22. 0	58·6	58·3
9. 21	15. 0	10. 48	·1394	21. 49	·01990	23. 0	59·2	59·3
9. 36	19. 55	12. 7	·1396		(†)			
9. 55	17. 0	15. 48	·1398	22. 29	·01970			
10. 38	14. 0	16. 29	·1408	23. 59	·01987			
12. 21	17. 30	17. 6	·1403					
12. 38	17. 0	17. 38	·1407					
15. 43	18. 0	18. 30	·1402					
16. 9	22. 20	18. 57	·1407					
16. 55	17. 20	20. 17	·1399					
17. 35	18. 20	20. 28	·1392					
18. 9	15. 40	20. 50	·1387					
18. 28	16. 30	22. 34	·1394					
19. 27	16. 15	23. 16	·1392					
19. 46	17. 0	23. 59	·1395					
20. 14	16. 0							
20. 31	16. 0							
21. 16	17. 15							
21. 40	19. 5							
21. 55	17. 55							
23. 28	20. 40							
23. 59	21. 30							
Nov. 2		Nov. 2		Nov. 2		Nov. 2		
0. 0	20. 21. 30	0. 0	·1395	0. 0	·01987	0. 0	59·8	60·2
0. 39	22. 0	1. 18	·1397	2. 13	·02050	1. 0	59·9	60·5
0. 56	21. 20	2. 30	·1394	7. 21	·02069	2. 0	59·8	60·6
1. 36	21. 50	6. 34	·1394	7. 50	·02052	3. 0	59·8	60·5
3. 58	19. 20	6. 49	·1397	8. 12	·02045	6. 0	59·9	60·8
6. 58	18. 0	7. 0	·1394	13. 50	·02088	7. 0	59·9	60·8
7. 5	17. 0	7. 47	·1412	18. 0	·02090	8. 0	59·9	60·7
7. 27	16. 0	7. 59	·1411	20. 45	·02070	9. 0	59·9	60·6
7. 35	15. 0	8. 18	·1396	22. 15	·02050	9. 50	60·4	61·2
7. 44	15. 40	8. 28	·1396	23. 59	·02090	21. 45	60·9	61·4
7. 52	14. 20	9. 15	·1386					
8. 4	15. 50	9. 46	·1392					
8. 28	15. 15	10. 7	·1388					
8. 47	15. 25	10. 56	·1393					
9. 0	15. 0	11. 33	·1386					
9. 19	15. 30	11. 45	·1392					
9. 25	15. 0	11. 59	·1385					
10. 2	17. 0	12. 20	·1388					
13. 30	15. 10	12. 47	·1384					
13. 43	16. 0	13. 4	·1388					
14. 5	15. 20	13. 19	·1384					
14. 40	17. 30	13. 51	·1392					
15. 18	17. 45	14. 18	·1387					
15. 27	17. 20	14. 33	·1390					
16. 1	19. 0	15. 50	·1386					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 2		Nov. 2						
h m	° ′ ″	h m		h m		h m		°
16. 12	20. 18. 30	17. 55	·1392					
16. 53	19. 5	20. 17	·1386					
17. 0	18. 20	20. 57	·1378					
20. 55	17. 55	22. 12	·1376					
22. 16	19. 0	23. 59	·1398					
22. 40	21. 50							
23. 38	23. 30							
23. 59	22. 30							
Nov. 3		Nov. 3		Nov. 3		Nov. 3		
0. 0	20. 22. 30	0. 0	·1398	0. 0	·02090	0. 0	60·3	60·8
0. 21	23. 50	1. 57	·1403	3. 50	·02090	1. 0	60·8	61·2
0. 30	23. 20	3. 8	·1404	8. 40	·02090	4. 45	60·7	60·9
0. 56	23. 45	3. 40	·1398	10. 20	·02080	9. 0	60·5	60·9
1. 31	21. 55	4. 37	·1404	16. 18	·02070	21. 0	60·7	61·0
2. 4	22. 25	5. 3	·1398	19. 27	·02060	22. 0	60·7	61·1
2. 40	21. 40	6. 38	·1408	23. 40	·02060	23. 0	60·6	60·7
3. 2	22. 40	7. 7	·1400	23. 59	·02080			
3. 29	21. 0	7. 44	·1404					
4. 5	20. 30	8. 5	·1400					
4. 21	21. 50	8. 24	·1408					
4. 33	21. 55	8. 34	·1404					
4. 50	23. 55	8. 53	·1409					
5. 59	19. 0	9. 59	·1402					
6. 12	19. 40	12. 13	·1406					
6. 27	19. 10	12. 31	·1402					
6. 53	19. 30	12. 50	·1407					
7. 8	18. 30	13. 2	·1404					
7. 55	16. 25	13. 44	·1404					
8. 15	11. 10	14. 24	·1409					
8. 39	13. 30	14. 39	·1404					
9. 8	16. 50	15. 40	·1410					
9. 30	16. 30		***					
9. 48	17. 30	17. 47	·1408					
10. 10	16. 20	18. 8	·1413					
10. 27	17. 0	18. 40	·1391					
10. 47	16. 35	19. 0	·1392					
11. 53	17. 55	19. 18	·1398					
12. 5	16. 55	19. 40	·1389					
12. 22	16. 20	20. 28	·1390					
12. 49	16. 45	21. 18	·1380					
13. 12	15. 40	21. 31	·1383					
14. 9	17. 0	21. 38	·1379					
14. 24	16. 35	22. 14	·1390					
14. 32	14. 20	22. 25	·1384					
14. 59	17. 40	22. 32	·1390					
15. 11	17. 10	23. 30	·1395					
15. 30	18. 0	23. 59	·1400					
15. 57	16. 5							
16. 21	17. 5							
16. 39	19. 30							
16. 55	17. 30							
17. 5	18. 10							
17. 16	17. 25							
17. 30	18. 30							
17. 40	17. 0							
18. 31	18. 0							
18. 40	17. 30							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 3								
h m	° ′ ″	h m		h m		h m	°	°
19. 22	20. 22. 10							
19. 30	22. 30							
19. 45	21. 50							
19. 52	22. 10							
20. 8	20. 10							
20. 36	19. 20							
20. 50	19. 55							
21. 15	22. 30							
21. 31	22. 55							
22. 0	19. 20							
22. 20	23. 0							
23. 0	20. 0							
23. 59	21. 20							
Nov. 4		Nov. 4		Nov. 4		Nov. 4		
0. 0	20. 21. 20	0. 0	·1400	0. 0	·02080	0. 0	60·7	60·9
0. 11	22. 10	2. 15	·1403	2. 10	·02095	1. 0	60·6	61·0
0. 27	20. 55	3. 17	·1403	6. 19	·02095	2. 0	60·6	61·0
0. 56	20. 50	5. 20	·1413	8. 30	·02120	3. 0	60·7	61·0
1. 29	19. 30	5. 59	·1406	8. 41	·02100	6. 0	60·7	61·4
2. 6	20. 0	6. 40	·1409	9. 7	·02115	7. 0	60·7	61·5
3. 3	18. 55	7. 27	·1396	9. 54	·02100	8. 0	60·7	61·4
7. 1	19. 0	8. 12	·1408	10. 29	·02060	9. 0	60·7	61·5
7. 30	17. 10	8. 17	·1403	11. 18	·02070	10. 0	60·8	61·6
8. 33	20. 17. 55	8. 24	·1409	11. 55	·02030	21. 0	60·4	60·6
9. 3	19. 53. 0	8. 32	·1392	12. 35	·02035	22. 0	60·5	60·7
9. 40	20. 4. 50	8. 58	·1426	13. 50	·02070	23. 0	60·5	60·8
9. 49	5. 0	9. 35	·1410	14. 17	·02050			
10. 8	9. 50	9. 57	·1416	14. 30	·02061			
10. 30	6. 25	10. 17	·1408	14. 52	·02050			
10. 39	8. 0	10. 27	·1409	16. 19	·02070			
11. 0	15. 10	10. 42	·1386	21. 38	·02068			
11. 13	15. 5	10. 50	·1389	23. 43	·02050			
11. 25	16. 55	10. 59	·1387	23. 59	·02060			
11. 32	15. 30	11. 17	·1397					
11. 50	19. 55	11. 22	·1393					
12. 8	17. 0	12. 17	·1412					
12. 28	16. 30	12. 55	·1400					
12. 37	14. 55	13. 50	·1394					
13. 9	14. 20	14. 4	·1397					
13. 35	11. 10	14. 21	·1389					
13. 42	11. 10	14. 42	·1404					
13. 59	15. 30	14. 58	·1407					
14. 20	20. 5	15. 8	·1403					
14. 42	20. 40	15. 40	·1408					
14. 54	18. 15	16. 12	·1402					
15. 2	18. 35	17. 42	·1406					
15. 15	16. 0	20. 12	·1404					
15. 20	16. 40		***					
15. 33	15. 10	22. 23	·1397					
15. 45	15. 30		***					
16. 0	16. 0	23. 59	·1393					
16. 14	18. 0							
16. 20	17. 30							
16. 40	18. 15							
18. 22	17. 30							
20. 0	17. 50							
20. 36	17. 20							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 4								
h m	° ′ ″	h m		h m		h m	°	°
20.43	20. 18. 5							
20.58	18. 0							
21. 3	18. 40							
21. 13	18. 0							
21. 20	18. 30							
21. 28	17. 5							
21. 36	18. 20							
22. 0	19. 0							
22. 48	19. 0							
23. 7	21. 0							
23. 17	20. 15							
23. 25	21. 10							
23. 59	22. 0							
Nov. 5		Nov. 5		Nov. 5		Nov. 5		
0. 0	20. 22. 0	0. 0	·1393	0. 0	·02060	0. 0	60·8	61·1
0. 32	24. 30	1. 0	·1396	1. 50	·02088	1. 0	60·6	61·2
1. 33	21. 55	1. 48	·1404	4. 18	·02083	2. 0	60·7	61·2
2. 11	22. 5	3. 13	·1406	11. 23	·02081	3. 0	60·6	61·2
3. 49	20. 0	7. 16	·1406	15. 26	·02110	5. 15	60·6	61·3
4. 0	20. 10	8. 8	·1404	20. 20	·02128	6. 0	60·6	61·2
5. 24	19. 0	9. 8	·1402	22. 17	·02105	7. 0	60·6	61·1
5. 36	18. 25	9. 48	·1406	23. 21	·02110	8. 0	60·5	61·0
5. 55	18. 30	10. 16	·1412	23. 59	·02100	9. 0	60·7	61·2
6. 36	16. 0	10. 50	·1403			21. 10	61·5	62·0
7. 18	17. 40	11. 14	·1409			22. 0	61·4	61·6
7. 49	17. 50	12. 45	·1402			23. 0	61·3	61·4
8. 10	17. 20	18. 12	·1408					
9. 45	17. 0	22. 36	·1399					
10. 11	13. 10	23. 59	·1398					
10. 26	14. 20							
10. 35	13. 40							
11. 22	16. 30							
11. 54	17. 0							
12. 5	16. 0							
12. 30	17. 40							
12. 50	17. 0							
13. 15	18. 10							
13. 30	18. 0							
13. 37	18. 40							
13. 50	17. 30							
15. 19	19. 10							
20. 40	17. 0							
21. 32	18. 0							
23. 4	21. 10							
23. 16	21. 20							
23. 46	22. 20							
23. 59	21. 0							
Nov. 6		Nov. 6		Nov. 6		Nov. 6		
0. 0	20. 21. 0	0. 0	·1398	0. 0	·02100	0. 0	61·2	61·3
0. 51	21. 5	1. 56	·1408	2. 35	·02120	1. 0	61·2	61·4
1. 9	22. 40	2. 12	·1403	9. 58	·02103	2. 0	61·2	61·2
1. 19	21. 30	3. 35	·1406	20. 50	·02080	3. 0	61·0	61·1
1. 45	21. 30	8. 14	·1405	22. 15	·02060	6. 0	61·1	61·3
1. 53	22. 5	9. 1	·1402	23. 35	·02065	7. 0	61·1	61·5
2. 17	20. 10	9. 27	·1409	23. 59	·02078	8. 0	61·0	61·5
4. 40	19. 10	9. 37	·1402			9. 0	61·0	61·2

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 6		Nov. 6				Nov. 6		
h m	° ′ ″	h m		h m		h m	°	°
8. 39	20. 18. 5	9. 57	·1412			10. 0	61·1	61·4
8. 59	16. 0	10. 33	·1400			21. 0	60·6	60·6
9. 11	12. 25	10. 58	·1413			22. 0	60·5	60·5
9. 32	15. 50	12. 20	·1396			23. 0	60·6	60·7
9. 41	16. 10	15. 34	·1398					
9. 45	15. 10	16. 10	·1394					
10. 11	15. 0	17. 32	·1403					
10. 20	18. 30	18. 0	·1400					
10. 30	18. 0	18. 25	·1403					
10. 45	14. 0	19. 24	·1401					
10. 53	14. 40	21. 30	·1394					
11. 9	14. 30	23. 17	·1400					
11. 29	13. 5	23. 59	·1402					
11. 57	16. 25							
12. 55	18. 40							
14. 4	19. 10							
14. 48	18. 35							
15. 25	19. 0							
16. 4	20. 45							
16. 12	21. 45							
16. 31	20. 40							
17. 0	20. 25							
17. 17	19. 0							
17. 38	19. 0							
17. 49	17. 50							
19. 0	17. 45							
19. 22	18. 10							
20. 51	17. 30							
21. 45	18. 0							
22. 47	20. 50							
23. 26	23. 30							
23. 59	22. 10							
Nov. 7		Nov. 7		Nov. 7		Nov. 7		
0. 0	20. 22. 10	0. 0	·1402	0. 0	·02078	0. 0	60·7	61·0
0. 28	22. 30	3. 10	·1409	3. 45	·02098	1. 0	60·9	61·2
3. 15	18. 45	4. 23	·1407	9. 39	·02070	2. 0	60·9	61·3
5. 30	17. 40	8. 12	·1409	12. 4	·02099	3. 0	60·8	61·3
8. 30	17. 30	14. 58	·1403	18. 40	·02109	6. 0	60·8	61·4
8. 59	16. 0	18. 56	·1405	21. 11	·02090	7. 0	60·8	61·3
9. 28	16. 40	21. 32	·1394	22. 25	·02062	8. 0	60·8	61·1
9. 37	16. 0	23. 36	·1398	23. 21	·02070	9. 0	60·7	60·9
10. 9	16. 50		(†)	23. 59	·02085	21. 0	61·4	61·5
10. 23	16. 10					22. 0	61·1	61·1
10. 52	17. 20					23. 0	61·0	61·0
11. 19	17. 0							
11. 40	18. 0							
11. 50	17. 30							
13. 24	19. 0							
14. 52	18. 30							
15. 10	19. 0							
20. 28:	16. 30							
21. 41	17. 55							
22. 40	20. 15							
23. 2	20. 5							
23. 33	20. 30							
	(†)							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 8		Nov. 8		Nov. 8		Nov. 8		
h m	° ′ ″	h m		h m		h m	°	°
	(†)		(†)	0. 0	·02085	0. 0	61·2	61·3
0.19	20. 22. 0	2.20	·1408	6.17	·02100	1. 0	61·2	61·2
1. 5	22.30	5.30	·1415	10.32	·02085	2. 0	61·0	61·2
1.46	22. 0	6.54	·1406	14.50	·02056	3. 0	61·0	61·2
2.57	19.30	9.13	·1409	18. 1	·02023	6. 0	61·3	61·8
5.18	18. 0	14. 0	·1407	20.17	·02022	9. 0	61·0	61·3
5.40	18.20	18.59	·1414	21.32	·02015	21. 0	59·7	59·7
7.41	18. 0	22.14	·1398		(†)	22. 0	60·3	60·3
7.56	17.25		(†)			23. 0	59·7	59·7
8.17	17.50	23.32	·1399					
9.55	17. 0	23.59	·1402					
11.39	17. 0							
11.53	17.50							
12.34	16.10							
13. 1	17.50							
13.13	17.10							
14.22	17.30							
20.56	16. 0							
22.22	18.30							
	(†)							
23.59	21.50							
Nov. 9		Nov. 9		Nov. 9		Nov. 9		
0. 0	20. 21.50	0. 0	·1402		(†)	0. 0	60·3	60·4
0.50	22.30	3.46	·1406	1. 0	·02018*	1. 0	60·3	60·4
2. 1	20.50	4.46	·1402	3. 0	·02050*	3. 0	60·2	60·4
3.20	18.55	5.21	·1393	9. 0	·02059*	6. 0	60·5	60·9
4. 4	18.30	6.17	·1402	10.34	·02075	9. 0	60·5	61·1
5.40	19.40	6.47	·1396	15.12	·02056	21.45	60·3	60·7
6.13	18.40	8.34	·1408	22. 4	·02032			
6.42	19. 0	9.58	·1401	23. 0	·02030			
6.56	18. 5	10.17	·1403		(†)			
8.10	17. 0	10.42	·1400					
8.42	16.35	11.38	·1400					
9.47	16.55	17. 0	·1406					
10. 8	16.10	18.24	·1408					
10.45	14. 0	22. 7	·1391					
11. 0	15.40	22.37	·1398					
11.28	16. 5	23.59	·1411					
12. 0	17.10							
13.10	17. 0							
13.53	17.35							
15.40	17.10							
16.10	17.35							
20.48	16.35							
22.22	18.45							
22.50	21.10							
22.55	21. 0							
23.59	21.30							
Nov. 10		Nov. 10		Nov. 10		Nov. 10		
0. 0	20. 21.30	0. 0	·1411		(†)	0.15	60·5	61·1
0.16	21.15	3. 7	·1410	0.15	·02042*	2. 0	60·3	60·9
0.31	21.50	9.20	·1406	9.30	·02053*	8.40	60·5	61·3
2.42	19. 0	12.14	·1405	13.27	·02070	9.30	60·7	61·3
7.48	16.35	12.30	·1408	15.30	·02044	21. 0	60·1	60·3
11.14	16.30	12.49	·1406	21. 3	·02035	22. 0	59·9	60·1

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 10		Nov. 10		Nov. 10		Nov. 10		
h m	° ′ ″	h m		h m		h m	°	°
13.53	20. 17.50	17.18	·1407	23.36	·02010	23. 0	60·1	60·3
15.25	17.30	23.59	·1397		(†)			
17. 9	18. 0							
20.28	16.45							
22. 3	18.40							
23.16	21.10							
23.59	21.20							
Nov. 11		Nov. 11		Nov. 11		Nov. 11		
0. 0	20. 21.20	0. 0	·1397		(†)	0. 0	60·4	60·9
0.10	21.45	1.57	·1406	1. 0	·02041*	1. 0	60·6	61·4
1. 2	21. 0	7.45	·1404	3. 0	·02062*	2. 0	60·6	61·4
3.11	18. 0	12. 4	·1401	3.12	·02080	3. 0	60·0	61·6
8.51	17. 0	12.30	·1404	9. 2	·02062	6. 0	60·6	61·5
11.58	16.30	13. 0	·1401	12.15	·02082	9. 0	60·5	61·3
12.11	17.50	17.59	·1404	14.50	·02060	21. 0	60·2	60·8
12.28	16.40	21.54	·1394	22.15	·02036	22. 0	60·2	60·6
13. 0	17. 5	23.59	·1399	23.12	·02035	23. 0	60·5	60·8
13. 6	18.30			23.59	·02099			
13.31	18.55							
13.50	17.30							
14.17	17.20							
14.46	17.50							
18.28	17. 0							
21.29	18. 0							
22.48	20. 0							
23.59	20.30							
Nov. 12		Nov. 12		Nov. 12		Nov. 12		
0. 0	20. 20.30	0. 0	·1399	0. 0	·02090	0. 0	60·4	61·1
1.18	20.55	0.37	·1399	4.24	·02060	0.30	60·6	61·3
2.46	18.30	1.19	·1402	11.58	·02055	1. 0	60·3	61·0
5. 0	18. 0	2. 0	·1401	22.16	·02075	1.30	60·2	60·9
5.44	17.20	3.47	·1405		(†)	1.45	60·1	60·7
6.11	17.40	9.24	·1406			2. 0	60·1	60·6
8.40	16.20	9.36	·1415			3. 0	60·0	60·6
8.55	16.35	10.37	·1409			6. 0	60·5	61·4
10.16	16. 0	12.54	·1407			9. 0	60·0	61·0
11. 0	16.50	14.27	·1410			21. 0	60·8	61·6
12.39	16.35	16.17	·1404			22. 0	60·6	61·2
13. 0	17.40	16.25	·1407			23. 0	60·6	61·1
13.11	17.50	16.45	·1400					
13.20	18.30	16.55	·1405					
13.34	17.50	17. 4	·1400					
13.44	18.20	17.32	·1404					
14.45	16.10	18.17	·1396					
15. 0	16.55	18.34	·1403					
15.12	16. 0	18.49	·1407					
15.16	16.30	19. 9	·1398					
15.33	16.30	19.34	·1400					
15.40	17. 5	19.55	·1387					
16. 3	16.15	20. 1	·1391					
16.38	17.30	20.27	·1380					
16.55	17.20	21.24	·1376					
17.10	18. 0	21.44	·1382					
17.25	21.30	21.59	·1381					
18.18	21. 0	22.14	·1386					
18.32	25.40	22.24	·1381					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Nov. 12	
h m	° ′ ″
19. 0	20. 21. 50
19. 26	24. 55
20. 10	18. 5
20. 50	21. 25
21. 11	21. 0
21. 25	21. 40
21. 33	20. 40
21. 53	21. 0
22. 0	20. 0
22. 14	20. 10
22. 22	17. 55
22. 44	19. 0
22. 57	18. 5
23. 0	19. 55
23. 13	18. 30
23. 26	22. 55
23. 40	23. 0
23. 59	22. 10
Nov. 13	
0. 0	20. 22. 10
0. 38	26. 0
1. 11	24. 0
1. 27	23. 15
1. 42	21. 5
1. 54	22. 50
2. 5	21. 45
2. 15	22. 15
3. 38	19. 0
3. 48	19. 50
4. 24	19. 40
4. 55	17. 20
5. 7	17. 30
5. 34	15. 0
5. 53	16. 0
6. 0	16. 20
6. 10	17. 25
6. 19	17. 10
6. 28	17. 30
7. 30	16. 5
7. 45	16. 40
7. 55	16. 10
8. 27	15. 10
8. 47	13. 0
9. 5	12. 40
9. 23	7. 35
9. 50	13. 5
10. 32	14. 0
11. 7	16. 0
13. 34	17. 40
13. 54	17. 15
15. 12	17. 55
16. 0	18. 0
16. 7	18. 55
16. 49	17. 30
17. 12	18. 0
17. 31	16. 50
17. 49	17. 10
Nov. 13	
h m	° ′ ″
18. 20	20. 16. 50
18. 40	17. 30
20. 32	16. 30
20. 44	17. 0
20. 53	16. 0
21. 0	16. 50
21. 8	16. 20
21. 26	17. 20
22. 22	18. 30
23. 59	20. 0
Nov. 14	
0. 0	20. 20. 0
0. 18	20. 20
0. 40	19. 40
0. 55	20. 5
1. 20	19. 20
1. 38	19. 55
4. 7	17. 0
4. 48	17. 30
5. 5	16. 30
5. 26	17. 0
9. 0	15. 0
11. 30	14. 20
13. 27	15. 55
14. 10	15. 30
14. 25	16. 30
14. 55	15. 30
15. 44	16. 0
16. 15	15. 0
16. 23	15. 30
16. 46	15. 5
17. 24	17. 5
17. 47	16. 0
18. 29	16. 45
19. 36	15. 25
19. 49	16. 5
20. 30	15. 30
21. 32	17. 0
23. 59	20. 30
Nov. 15	
0. 0	20. 20. 30
0. 22	20. 0
0. 31	20. 50
0. 43	20. 45
0. 54	21. 5
1. 17	20. 0
1. 25	21. 30
1. 40	20. 40
1. 50	20. 30
2. 2	19. 0
2. 41	20. 55
2. 55	20. 55
3. 8	22. 0
3. 22	21. 5
3. 32	22. 40
3. 40	21. 50

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 12	
h m	
22. 36	·1391
22. 41	·1385
22. 48	·1390
22. 50	·1378
23. 3	·1384
23. 11	·1374
23. 26	·1384
23. 32	·1380
23. 43	·1380
	(†)
Nov. 13	
	(†)
0. 30	·1362
1. 42	·1364
1. 52	·1374
2. 2	·1371
2. 40	·1381
3. 30	·1384
3. 42	·1391
5. 20	·1373
5. 46	·1390
6. 16	·1386
6. 51	·1391
8. 31	·1388
8. 50	·1391
9. 2	·1390
9. 15	·1392
9. 33	·1398
9. 50	·1389
10. 15	·1396
10. 50	·1390
12. 1	·1392
13. 9	·1389
13. 37	·1393
13. 52	·1392
16. 58	·1399
17. 20	·1396
18. 4	·1402
19. 5	·1395
19. 36	·1398
21. 5	·1390
21. 15	·1396
21. 45	·1390
22. 5	·1394
23. 59	·1395
Nov. 14	
0. 0	·1395
1. 14	·1397
1. 25	·1392
1. 40	·1398
4. 16	·1405
5. 2	·1402
5. 32	·1405
9. 14	·1404
10. 9	·1405
11. 37	·1403
	***
15. 3	·1404
	***
17. 24	·1406
19. 17	·1410
19. 35	·1404
19. 56	·1411
20. 28	·1406
23. 5	·1394
23. 59	·1396
Nov. 15	
0. 0	·1396
0. 23	·1392
1. 46	·1404
2. 0	·1398
2. 56	·1405
3. 12	·1399
3. 28	·1403
3. 57	·1390
4. 5	·1394
4. 14	·1390
4. 40	·1401
5. 13	·1394
6. 11	·1402
6. 30	·1400
7. 5	·1405
7. 8	·1404

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Nov. 13	
	(†)
1. 0	·02112
3. 50	·02093
6. 27	·02090
8. 20	·02052
12. 2	·02025
17. 35	·02031
22. 10	·02025
23. 59	·02020
Nov. 14	
0. 0	·02020
5. 30	·02060
12. 50	·02063
20. 33	·02040
21. 40	·02020
23. 0	·02030
23. 59	·02040
Nov. 15	
0. 0	·02040
2. 2	·02078
2. 28	·02093
3. 5	·02090
3. 52	·02094
4. 49	·02121
13. 50	·02070
14. 16	·02020
14. 35	·02038
15. 16	·02012
16. 35	·02025
21. 0	·01995
22. 49	·01975
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Nov. 13		
0. 0	60·4	60·9
1. 0	60·4	60·8
2. 0	60·1	60·6
3. 0	59·9	60·5
6. 0	60·2	60·6
7. 0	60·0	60·4
8. 0	60·0	60·4
9. 0	60·0	60·4
10. 0	60·0	60·4
11. 0	59·9	60·3
12. 0	59·8	60·1
13. 0	59·6	60·4
14. 0	59·7	60·3
15. 0	60·0	60·6
16. 0	59·9	60·5
17. 0	60·0	60·5
18. 0	59·9	60·4
19. 0	60·0	60·4
21. 0	59·9	60·5
22. 0	60·0	60·6
23. 0	60·2	60·7
Nov. 14		
0. 0	60·2	60·8
1. 0	60·2	60·9
2. 0	60·2	60·9
3. 0	60·2	60·9
6. 0	60·2	61·3
9. 0	60·3	61·7
11. 0	60·3	61·8
12. 0	60·3	61·8
13. 0	60·2	61·6
14. 0	60·2	61·4
15. 0	60·4	61·3
16. 0	60·3	61·3
17. 0	60·3	61·3
18. 0	60·3	61·3
19. 0	60·2	61·4
19. 30	60·3	61·4
21. 0	60·1	61·2
22. 0	60·2	61·2
23. 0	60·2	61·2
Nov. 15		
0. 0	60·4	61·5
1. 0	60·4	61·5
2. 0	60·4	61·4
3. 0	60·3	61·0
6. 0	60·5	61·5
9. 0	60·5	61·5
10. 0	60·5	61·5
21. 0	59·0	59·6
22. 0	59·4	59·9
23. 0	59·0	59·0

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 15		Nov. 15						
h m	° ′ ″	h m		h m		h m	°	°
3. 42	20. 22. 20	7. 25	·1401					
3. 44	22. 30	7. 51	·1404					
3. 54	21. 0	8. 18	·1405					
4. 11	16. 10	8. 38	·1402					
4. 25	13. 20	8. 48	·1406					
4. 56	21. 20	9. 42	·1402					
5. 18	21. 30	9. 57	·1406					
6. 0	18. 15	10. 4	·1402					
6. 27	17. 45	10. 44	·1404					
6. 41	18. 10	11. 27	·1402					
6. 57	17. 40	11. 37	·1404					
9. 46	15. 55	12. 0	·1398					
9. 59	16. 25	12. 36	·1403					
10. 15	15. 20	13. 6	·1400					
10. 33	16. 0	13. 16	·1404					
10. 43	17. 0	13. 40	·1403					
11. 0	16. 0	14. 2	·1411					
12. 50	16. 35	14. 26	·1404					
13. 3	15. 40	14. 57	·1419					
13. 20	17. 30	15. 35	·1408					
13. 40	18. 5	16. 20	·1404					
13. 55	23. 55	16. 58	·1412					
14. 18	20. 0	17. 10	·1409					
14. 40	20. 10	18. 35	·1412					
15. 5	15. 0	19. 5	·1404					
15. 31	13. 0	20. 9	·1406					
16. 33	16. 55	21. 6	·1396					
17. 12	15. 0	22. 54	·1398					
17. 40	15. 50		(†)					
17. 59	15. 25							
18. 31	16. 20							
18. 35	17. 10							
19. 4	17. 30							
19. 45	18. 30							
21. 7	18. 30							
21. 55	20. 50							
22. 56	20. 30							
	(†)							
Nov. 16		Nov. 16		Nov. 16		Nov. 16		
	(†)		(†)		(†)	0. 0	59 ·1	59 ·1
0. 20	20. 23. 30	0. 26	·1408	0. 22	·01950	1. 0	59 ·7	59 ·6
0. 30	23. 50	1. 40	·1413	3. 2	·01980	2. 0	59 ·6	59 ·7
0. 45	22. 40	2. 27	·1412	8. 12	·01970	3. 0	59 ·6	59 ·7
1. 4	23. 10	2. 58	·1412	8. 31	·01960	6. 0	59 ·5	59 ·6
3. 0	20. 50	3. 10	·1407	12. 40	·01940	9. 0	59 ·4	59 ·5
3. 15	19. 30	3. 47	·1408	13. 18	·01909	10. 30	59 ·4	59 ·4
3. 27	19. 50	3. 59	·1404	13. 43	·01925	21. 45	59 ·2	58 ·6
5. 40	17. 35	4. 42	·1409	14. 20	·01900			
6. 15	18. 0	6. 18	·1404	16. 15	·01907			
6. 58	17. 30	6. 40	·1407	18. 14	·01903			
7. 46	17. 50	7. 44	·1400	21. 27	·01877			
8. 10	16. 0	8. 6	·1403	22. 50	·01890			
8. 21	16. 55	8. 37	·1419	23. 59	·01900			
8. 30	14. 30	8. 50	·1408					
8. 50	15. 30	9. 4	·1409					
8. 58	15. 50	9. 16	·1402					
9. 27	14. 0	9. 28	·1407					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 16		Nov. 16						
h m	° ′ ″	h m		h m		h m	°	°
10. 6	20. 15. 0	10. 0	·1399					
10. 50	16. 50	10. 49	·1402					
11. 17	15. 50	11. 7	·1396					
11. 49	16. 20	12. 17	·1395					
11. 59	15. 45	12. 45	·1423					
12. 16	16. 25	13. 24	·1392					
12. 40	14. 0	14. 0	·1404					
12. 45	14. 40	14. 15	·1401					
13. 0	14. 0	14. 30	·1406					
13. 18	12. 25	14. 58	·1406					
13. 43	22. 25	15. 4	·1402					
14. 45	16. 50	15. 28	·1404					
14. 56	17. 0	15. 38	·1400					
15. 3	16. 0	16. 35	·1404					
15. 40	17. 0	17. 6	·1396					
15. 52	18. 0	17. 38	·1402					
16. 7	17. 40	17. 40	·1399					
17. 39	20. 0	18. 13	·1406					
18. 22	19. 20	18. 23	·1401					
18. 29	18. 10	18. 50	·1410					
18. 38	18. 40	19. 28	·1399					
18. 44	17. 30	19. 47	·1402					
18. 51	18. 40	19. 59	·1395					
19. 3	17. 30	20. 6	·1400					
19. 14	18. 0	20. 18	·1396					
19. 37	17. 15	20. 48	·1400					
19. 50	18. 25	22. 10	·1382					
20. 4	16. 40	22. 38	·1374					
20. 17	17. 30	23. 52	·1374					
20. 29	17. 10	23. 59	·1366					
20. 58	19. 10							
21. 45	19. 10							
22. 22	21. 10							
23. 29	26. 35							
23. 54	25. 30							
23. 57	26. 30							
23. 59	26. 0							
Nov. 17		Nov. 17		Nov. 17		Nov. 17		
0. 0	20. 26. 0	0. 0	·1366	0. 0	·01900	1. 0	59 ·8	59 ·8
0. 6	23. 30	0. 8	·1361	0. 30	·01940	4. 45	59 ·4	58 ·8
0. 22	24. 30	0. 30	·1374	2. 30	·01950	8. 0	59 ·6	59 ·6
0. 27	26. 20	0. 41	·1372	5. 8	·01939	21. 0	59 ·4	59 ·1
0. 40	25. 0	1. 23	·1394	8. 44	·01934	22. 0	59 ·4	59 ·1
1. 3	24. 0	2. 20	·1388	14. 59	·01912	23. 0	59 ·6	59 ·4
1. 51	25. 40	3. 44	·1394	18. 49	·01920			
3. 39	21. 30	4. 46	·1394	22. 59	·01900			
4. 32	21. 0	5. 8	·1389		(†)			
4. 51	20. 0	5. 30	·1392					
5. 7	19. 50	6. 11	·1388					
5. 31	18. 0	7. 0	·1390					
7. 5	17. 40	7. 22	·1386					
7. 15	17. 0	8. 0	·1388					
7. 23	17. 20	8. 30	·1400					
7. 45	16. 25	8. 44	·1392					
7. 58	16. 50	9. 5	·1406					
8. 27	8. 30	9. 22	·1395					
8. 46	13. 0	10. 1	·1386					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 17		Nov. 17						
h m	° ′ ″	h m		h m		h m	°	°
9. 1	20. 11. 30	10. 22	·1390					
9. 11	15. 0	10. 48	·1388					
9. 32	15. 30	13. 32	·1387					
9. 55	16. 45	14. 12	·1398					
10. 20	15. 50	14. 58	·1392					
10. 35	16. 50	17. 57	·1399					
10. 45	15. 30	19. 35	·1392					
11. 5	15. 0	20. 37	·1390					
11. 17	16. 5	21. 24	·1384					
11. 38	17. 0	22. 4	·1382					
12. 30	17. 55	23. 24	·1390					
12. 56	17. 0	23. 59	·1388					
13. 7	17. 55							
13. 18	18. 10							
13. 40	24. 0							
14. 15	23. 10							
14. 46	17. 20							
15. 10	15. 25							
16. 9	18. 0							
16. 23	17. 25							
17. 11	18. 55							
17. 19	17. 30							
17. 45	17. 25							
17. 53	17. 50							
18. 0	17. 5							
18. 59	17. 55							
19. 11	17. 5							
19. 19	18. 0							
19. 28	17. 20							
22. 5	18. 30							
22. 33	19. 30							
23. 9	19. 30							
23. 30	21. 15							
23. 59	20. 30							
Nov. 18		Nov. 18		Nov. 18		Nov. 18		
0. 0	20. 20. 30	0. 0	·1388 ***		(†)	0. 0	59·5	59·4
1. 43	19. 20			1. 5	·01920	1. 0	59·3	59·2
1. 53	19. 55	2. 27	·1400	4. 28	·01920	2. 0	59·4	59·2
4. 0	18. 0	4. 14	·1394	6. 13	·01945	3. 0	59·4	59·3
4. 22	16. 10	4. 44	·1399	10. 13	·01945	6. 0	60·6	60·6
4. 48	18. 5	5. 10	·1400	21. 37	·01907	9. 0	59·8	60·2
5. 1	17. 55	5. 16	·1396	23. 0	·01905	21. 0	59·7	59·6
5. 9	18. 0	5. 52	·1403	23. 59	·01915	22. 0	59·5	59·6
5. 30	14. 5	6. 10	·1398			23. 0	59·7	59·9
6. 6	18. 20	6. 36	·1402					
7. 32	17. 55	8. 0	·1396					
8. 30	15. 50	8. 18	·1395					
8. 57	13. 5	8. 59	·1392					
9. 3	13. 30	9. 25	·1384					
9. 16	12. 55	9. 58	·1388					
9. 33	11. 25	10. 25	·1390					
11. 35	17. 40	11. 1	·1397					
12. 39	16. 55	11. 35	·1392					
14. 38	18. 30	12. 10	·1398					
14. 55	20. 50	14. 34	·1397					
15. 13	19. 0	15. 12	·1404					
15. 59	20. 40	15. 33	·1397					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 18		Nov. 18						
h m	° ′ ″	h m		h m		h m	°	°
16. 9	20. 20. 0	16. 22	·1405					
16. 15	20. 35	18. 34	·1408					
16. 34	17. 20	22. 0	·1395					
16. 48	17. 50	22. 17	·1398					
18. 55	17. 10	23. 20	·1400					
19. 7	17. 55	23. 59	·1408					
22. 9	18. 30							
22. 20	19. 10							
23. 32	19. 50							
23. 59	20. 0							
Nov. 19		Nov. 19		Nov. 19		Nov. 19		
0. 0	20. 20. 0	0. 0	·1408	0. 0	·01915	0. 0	..	60·0
0. 27	20. 35	1. 12	·1406	6. 39	·01958	1. 0	59·7	60·1
0. 48	19. 55	1. 55	·1410	10. 7	·01940	2. 0	59·8	60·1
5. 0	19. 0	2. 8	·1408	13. 23	·01964	3. 0	59·9	60·4
5. 15	18. 10	2. 57	·1416	20. 10	·01968	6. 0	59·9	60·5
6. 0	18. 55	5. 14	·1409	22. 10	·01951	9. 0	59·7	60·0
7. 36	17. 30	6. 36	·1412	23. 59	·01940	21. 0	60·0	60·1
11. 31	17. 55	11. 36	·1412			22. 0	60·0	59·9
12. 0	17. 30	11. 51	·1409			23. 0	60·0	59·8
12. 24	17. 50	12. 50	·1406					
12. 55	17. 50	13. 30	·1415					
13. 15	19. 30	14. 48	·1406					
13. 25	19. 0	18. 14	·1410					
13. 39	20. 0	22. 34	·1402					
13. 56	18. 0	23. 55	·1406					
14. 35	17. 35	23. 59	·1405					
14. 46	19. 10							
20. 50	18. 20							
22. 45	19. 55							
23. 59	20. 0							
Nov. 20		Nov. 20		Nov. 20		Nov. 20		
0. 0	20. 20. 0	0. 0	·1405	0. 0	·01940	0.	60·2	60·2
1. 7	20. 0	6. 34	·1410	7. 31	·01980	1. 0	60·3	60·3
4. 29	17. 50	9. 34	·1404	16. 13	·01950	3. 0	60·2	60·2
8. 36	17. 55	10. 13	·1408	23. 15	·01930	6. 0	60·4	60·5
8. 53	16. 5	10. 29	·1404	23. 59	·01930	9. 0	60·4	60·6
9. 55	17. 10	15. 26	·1410			21. 0	..	59·8
10. 35	16. 0	16. 21	·1414			22. 0	60·1	60·0
11. 13	17. 30	16. 50	·1412			23. 0	60·1	60·0
14. 8	17. 30	19. 43	·1415					
15. 30	18. 0	23. 24	·1410					
15. 39	19. 40	23. 59	·1410					
15. 48	19. 10							
16. 21	16. 30							
17. 5	17. 45							
19. 50	18. 30							
21. 45	18. 0							
22. 11	18. 10							
23. 32	19. 55							
23. 59	20. 0							
Nov. 21		Nov. 21		Nov. 21		Nov. 21		
0. 0	20. 20. 0	0. 0	·1410	0. 0	·01930	0. 0	60·4	60·4
0. 57	21. 0	1. 0	·1416	2. 35	·01960	1. 0	60·4	60·4
3. 28	19. 20	3. 33	·1420	7. 27	·01952	2. 0	60·4	60·4

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Nov. 21	
h m	° ′ ″
5. 17	20. 19. 0
8. 46	17. 50
8. 55	17. 35
9. 5	15. 20
9. 21	16. 0
9. 39	14. 40
9. 54	14. 50
10. 10	10. 0
10. 29	9. 30
10. 55	13. 55
11. 19	15. 0
11. 35	14. 5
11. 50	15. 0
12. 3	14. 55
12. 20	16. 55
12. 30	16. 10
12. 45	17. 0
13. 7	15. 0
13. 24	16. 0
14. 31	14. 30
15. 18	16. 50
15. 31	16. 35
15. 55	18. 5
16. 26	16. 30
17. 15	16. 55
17. 25	17. 20
17. 57	17. 30
18. 52	18. 10
19. 32	17. 50
19. 40	18. 0
19. 48	17. 25
20. 35	17. 25
20. 41	16. 30
21. 0	17. 15
21. 8	16. 10
21. 15	17. 15
21. 30	16. 50
21. 45	17. 0
22. 0	18. 25
22. 22	17. 25
23. 7	19. 30
23. 33	19. 10
23. 59	20. 30
Nov. 22	
0. 0	20. 20. 30
1. 0	22. 0
1. 20	21. 0
1. 59	21. 5
3. 1	19. 0
3. 40	20. 30
4. 9	20. 0
4. 19	20. 5
4. 35	19. 0
5. 28	17. 30
5. 45	19. 5
6. 2	19. 30
6. 18	18. 30
6. 35	20. 19. 30
6. 55	17. 20
7. 9	16. 15
7. 13	17. 15
7. 29	17. 10
7. 38	17. 55
8. 0	12. 30
8. 36	15. 30
9. 15	15. 50
9. 29	14. 20
9. 42	14. 30
10. 10	13. 50
10. 52	9. 30
11. 5	11. 0
11. 11	10. 55
11. 27	13. 0
11. 40	12. 0
11. 55	13. 15
12. 6	13. 10
12. 16	13. 55
12. 30	14. 0
12. 41	16. 5
14. 11	15. 50
14. 39	17. 55
15. 58	18. 40
16. 6	19. 20
17. 35	17. 55
20. 50	17. 20
20. 58	17. 50
21. 18	17. 10
21. 49	17. 20
23. 59	20. 0
Nov. 23	
0. 0	20. 20. 0
0. 54	20. 30
3. 19	18. 0
5. 39	17. 10
6. 22	17. 50
6. 38	15. 0
6. 58	14. 10
7. 18	17. 0
7. 40	18. 0
8. 17	16. 0
8. 56	16. 0
9. 14	17. 0
12. 14	18. 0
12. 30	19. 0
12. 51	19. 15
13. 16	17. 20
14. 5	18. 0
14. 24	19. 0
15. 0	17. 30
15. 55	17. 30
16. 36	18. 10
17. 7	17. 10
18. 10	17. 50
18. 33	18. 45

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 21	
h m	
3. 55	·1418
4. 9	·1420
6. 20	·1420
7. 9	·1413
8. 10	·1414
8. 28	·1410
9. 4	·1410
9. 39	·1396
9. 56	·1404
10. 11	·1398
10. 21	·1401
10. 38	·1397
11. 22	·1401
11. 34	·1399
11. 55	·1402
12. 8	·1400
12. 40	·1405
13. 6	·1404
13. 38	·1414
14. 27	·1410
18. 30	·1410
18. 58	·1413
23. 59	·1410
Nov. 22	
0. 0	·1410
1. 12	·1404
2. 3	·1414
2. 27	·1411
3. 4	·1415
4. 47	·1407
5. 28	·1414
6. 7	·1403
6. 10	·1405
6. 46	·1398
7. 8	·1404
7. 21	·1402
7. 46	·1392
8. 46	·1402
9. 8	·1408
9. 45	·1406
10. 11	·1421
10. 16	·1416
10. 49	·1425
11. 30	·1412
11. 59	·1410
12. 22	·1414
12. 47	·1406
13. 29	·1414
14. 20	·1410
17. 22	·1417
19. 12	·1418
20. 34	·1412
20. 56	·1405
22. 1	·1410
	(†)
23. 0	·1412
23. 59	·1414
Nov. 23	
0. 0	·1414
4. 47	·1418
6. 35	·1415
6. 59	·1404
7. 20	·1409
7. 33	·1407
7. 46	·1418
7. 52	·1414
8. 33	·1418
8. 56	·1414
12. 14	·1415
12. 55	·1420
13. 36	·1415
14. 26	·1419
15. 0	·1416
15. 38	·1420
17. 34	·1420
18. 10	·1417
18. 55	·1421
19. 34	·1415
22. 43	·1411
23. 59	·1416

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Nov. 21	
h m	
9. 5	·01960
11. 0	·01985
14. 1	·01940
20. 47	·01915
23. 3	·01880
	(†)
Nov. 22	
1. 0	·01902*
3. 0	·01914*
9. 0	·01963*
21. 0	·01952*
Nov. 23	
0. 0	·01970
2. 15	·02020
4. 18	·02030
5. 31	·02058
8. 45	·02064
13. 38	·02040
16. 11	·02050
18. 53	·02028
20. 54	·02036
22. 57	·02012
23. 59	·02018

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 21		
h m	°	°
3. 0	60·4	60·4
6. 0	60·2	60·2
9. 0	60·2	60·2
21. 0	59·6	59·0
22. 0	59·6	58·9
23. 0	59·6	59·1
Nov. 22		
0. 0	59·7	59·3
1. 0	59·6	59·5
2. 0	59·6	59·5
3. 0	59·4	59·3
6. 0	59·9	60·4
9. 0	60·1	60·9
21. 0	60·1	60·4
22. 0	60·0	60·4
23. 0	59·7	59·7
Nov. 23		
0. 0	59·9	60·5
1. 0	59·8	60·6
2. 0	59·7	60·5
3. 0	59·6	60·6
6. 0	59·7	61·0
7. 0	59·7	61·1
8. 0	59·6	60·9
9. 0	59·6	60·9
10. 0	59·6	60·9
11. 0	59·6	60·9
21. 30	59·3	60·5
23. 0	59·6	60·7

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 23								
h m	° ′ ″	h m		h m		h m	°	°
19. 29	20. 17. 0							
20. 7	17. 10							
20. 41	17. 0							
20. 50	16. 10							
	***							
21. 58	18. 40							
22. 12	18. 30							
23. 59	20. 55							
Nov. 24		Nov. 24		Nov. 24		Nov. 24		
0. 0	20. 20. 55	0. 0	·1416	0. 0	·02018	0. 40	59 ·5	60 ·4
1. 27	20. 50	1. 39	·1421	4. 40	·01970	1. 30	59 ·4	60 ·2
1. 42	20. 0	3. 5	·1417	9. 42	·01970	8. 40	59 ·3	60 ·0
4. 12	18. 20	5. 14	·1417	11. 27	·01936	9. 10	59 ·3	60 ·0
4. 55	18. 30	6. 17	·1417	19. 22	·01873	21. 0	58 ·8	58 ·8
6. 0	16. 55	7. 6	·1408	21. 41	·01846	22. 0	58 ·8	58 ·6
6. 29	17. 0	7. 16	·1410	23. 0	·01850	23. 0	58 ·8	58 ·7
6. 44	18. 0	7. 46	·1397		(†)			
7. 7	16. 45	8. 42	·1398					
7. 20	17. 0	9. 17	·1406					
7. 57	10. 10	9. 46	·1416					
8. 39	15. 0	10. 6	·1408					
9. 1	13. 0	10. 37	·1433					
9. 29	8. 30	11. 3	·1417					
9. 59	14. 0	11. 12	·1398					
10. 16	10. 30	11. 22	·1411					
10. 40	18. 40	12. 13	·1414					
10. 58	17. 20	12. 34	·1408					
11. 6	15. 0	13. 22	·1414					
11. 29	16. 20	13. 32	·1410					
11. 40	16. 40	13. 46	·1415					
11. 48	17. 0	14. 0	·1413					
12. 35	15. 5	14. 57	·1420					
12. 46	17. 30	15. 18	·1417					
13. 1	17. 40	15. 57	·1428					
13. 19	18. 30	16. 33	·1419					
13. 32	22. 10	17. 12	·1426					
13. 45	22. 5	18. 20	·1419					
13. 55	23. 30	18. 58	·1423					
15. 1	18. 15	20. 4	·1414					
15. 35	20. 0	20. 14	·1416					
16. 10	17. 0	20. 35	·1410					
16. 34	17. 30	21. 6	·1401					
16. 41	18. 30	21. 32	·1399					
16. 59	17. 30	22. 10	·1404					
17. 10	18. 20	23. 14	·1400					
18. 6	18. 30	23. 59	·1403					
18. 27	19. 30							
18. 39	18. 30							
19. 0	18. 30							
19. 19	17. 30							
19. 35	18. 5							
19. 41	19. 30							
19. 59	18. 15							
20. 10	19. 30							
20. 25	18. 55							
21. 55	21. 0							
22. 38	21. 10							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Nov. 24								
h m	° ′ ″	h m		h m		h m	°	°
22. 50	20. 22. 50							
23. 21	22. 55							
23. 35	24. 30							
23. 59	24. 20							
Nov. 25		Nov. 25		Nov. 25		Nov. 25		
0. 0	20. 24. 20	0. 0	·1403		(†)	0. 0	58 ·8	58 ·8
0. 31	24. 0	0. 58	·1414	1. 0	·01869*	1. 0	58 ·8	59 ·0
0. 59	25. 0	1. 16	·1410	3. 0	·01891*	3. 0	58 ·8	59 ·0
1. 45	20. 55	4. 6	·1413	5. 33	·01995	6. 0	58 ·8	59 ·6
2. 0	21. 0	4. 46	·1400	6. 56	·01975	7. 0	59 ·0	59 ·9
2. 13	20. 0	5. 10	·1384	8. 5	·01976	8. 30	58 ·9	59 ·7
2. 30	20. 10	5. 15	·1379	12. 29	·01890	9. 0	59 ·0	59 ·9
4. 7	18. 5	5. 41	·1373	13. 13	·01862	21. 0	59 ·0	59 ·6
4. 15	18. 40	6. 24	·1392	16. 50	·01909	22. 0	59 ·0	59 ·7
4. 29	18. 15	6. 46	·1385	19. 21	·01910	23. 0	59 ·1	59 ·7
4. 50	20. 40	7. 12	·1388	22. 20	·01890			
4. 58	20. 0	7. 22	·1382	23. 59	·01905			
5. 45	12. 0	7. 44	·1399					
6. 0	15. 30	8. 13	·1392					
6. 12	14. 0	9. 6	·1412					
6. 25	16. 30	9. 22	·1405					
6. 35	16. 55	9. 34	·1409					
6. 50	14. 30	10. 33	·1403					
7. 3	14. 40	10. 49	·1412					
7. 32	3. 10	11. 0	·1406					
7. 48	7. 25	11. 36	·1412					
7. 59	9. 30	11. 57	·1420					
8. 30	11. 50	12. 11	·1410					
9. 3	16. 0	12. 30	·1406					
9. 26	16. 20	12. 48	·1416					
10. 8	15. 30	12. 57	·1412					
10. 34	12. 30	13. 8	·1414					
10. 41	12. 20	13. 18	·1406					
10. 54	12. 10	13. 38	·1412					
11. 8	15. 30	14. 5	·1411					
11. 35	9. 30	14. 15	·1415					
12. 11	11. 0	14. 50	·1409					
12. 22	10. 0	15. 52	·1407					
12. 38	15. 50	16. 58	·1413					
12. 55	11. 30	17. 5	·1411					
13. 4	13. 0	17. 49	·1416					
13. 11	12. 0	17. 58	·1415					
13. 19	12. 50	18. 6	·1417					
13. 30	12. 30	18. 12	·1411					
14. 1	10. 5	18. 29	·1411					
14. 55	18. 30	18. 37	·1415					
15. 9	18. 55	18. 47	·1411					
15. 32	20. 25	19. 21	·1418					
15. 50	19. 0		***					
17. 29	18. 0	20. 10	·1412					
18. 20	20. 30	21. 0	·1413					
18. 45	19. 0	22. 20	·1396					
19. 1	18. 35	22. 42	·1404					
19. 12	19. 55	23. 31	·1408					
19. 43	20. 20	23. 56	·1404					
19. 58	21. 10	23. 59	·1400					
20. 23	20. 50							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Nov. 25	
h m	° ′ ″
20. 29	20. 20. 15
20. 40	20. 25
21. 0	19. 45
21. 14	21. 45
21. 25	21. 10
21. 30	22. 15
21. 41	21. 0
22. 15	21. 50
22. 25	20. 0
22. 40	21. 0
22. 55	20. 30
22. 59	22. 10
23. 4	21. 30
23. 19	22. 40
23. 45	22. 25
23. 59	23. 0
Nov. 26	
0. 0	20. 23. 0
0. 20	25. 20
0. 58	22. 45
1. 11	20. 0
1. 34	20. 5
1. 52	21. 25
1. 59	20. 55
2. 28	20. 30
2. 51	19. 15
3. 24	21. 0
4. 11	17. 0
4. 30	17. 55
4. 50	13. 0
4. 59	13. 50
5. 5	13. 10
5. 30	15. 55
5. 38	15. 0
5. 49	17. 5
5. 58	17. 10
6. 10	18. 40
6. 28	18. 0
6. 36	13. 50
6. 57	5. 25
6. 59	20. 5. 0
7. 11	19. 58. 5
7. 29	20. 1. 20
8. 4	11. 50
8. 20	13. 20
8. 38	10. 25
8. 53	12. 0
9. 20	13. 30
9. 29	12. 50
9. 36	13. 0
9. 50	13. 5
9. 59	17. 0
10. 7	19. 55
10. 20	16. 10
10. 26	15. 55
10. 38	9. 5
10. 50	20. 13. 55
11. 10	11. 0
11. 18	11. 10
12. 15	14. 10
12. 37	19. 30
12. 53	21. 0
13. 15	18. 25
13. 30	21. 45
13. 45	19. 30
14. 8	21. 0
14. 36	17. 0
14. 55	18. 30
15. 3	17. 30
15. 28	23. 0
15. 35	24. 30
15. 49	23. 0
15. 59	23. 20
16. 8	22. 35
16. 16	22. 40
16. 27	21. 20
16. 40	23. 0
16. 46	22. 0
17. 20	22. 0
17. 27	22. 40
17. 44	22. 50
17. 55	21. 0
18. 3	20. 0
18. 16	20. 30
18. 30	20. 20
18. 40	19. 10
18. 54	20. 55
19. 3	19. 55
19. 55	20. 45
20. 0	20. 0
20. 18	21. 0
20. 22	22. 20
20. 30	20. 50
20. 40	19. 0
20. 48	17. 5
21. 5	17. 30
21. 10	18. 30
21. 18	17. 10
21. 25	18. 35
21. 33	17. 0
21. 52	20. 0
22. 9	18. 40
22. 12	20. 0
22. 59	19. 0
23. 3	18. 10
23. 7	19. 30
23. 15	19. 0
23. 18	21. 0
23. 28	19. 55
23. 42	22. 0
23. 55	21. 10
23. 59	21. 55

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 26	
h m	
0. 0	·1400
0. 11	·1398
0. 19	·1404
0. 50	·1379
1. 22	·1393
3. 17	·1410
3. 42	·1404
4. 13	·1413
4. 40	·1397
5. 12	·1410
5. 42	·1413
5. 49	·1409
6. 0	·1410
6. 10	·1402
6. 18	·1406
6. 34	·1390
6. 57	·1408
7. 12	·1426
7. 40	·1428
8. 33	·1402
8. 58	·1396
9. 24	·1402
9. 44	·1428
9. 50	·1422
10. 0	·1426
10. 11	·1418
10. 16	·1427
10. 25	·1418
10. 44	·1430
11. 0	·1412
11. 13	·1406
11. 20	·1413
11. 30	·1407
11. 38	·1406
12. 5	·1402
12. 37	·1420
12. 59	·1410
13. 26	·1416
13. 39	·1413
14. 15	·1419
14. 35	·1424
14. 59	·1418
15. 24	·1425
15. 50	·1417
16. 18	·1410
	***
17. 37	·1424
18. 7	·1410
18. 29	·1406
18. 56	·1414
19. 18	·1415
20. 0	·1413
20. 26	·1392
20. 40	·1392
21. 9	·1408
21. 15	·1404
21. 26	·1412
21. 32	·1404
21. 52	·1412
	***
22. 54	·1403
	***
23. 20	·1414
23. 28	·1409
23. 35	·1415
23. 59	·1399

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Nov. 26	
h m	
1. 0	·01925*
3. 0	·01519*
9. 0	·01510*
21. 0	·01465*

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 26		
h m	°	°
0. 0	59·3	60·0
1. 0	59·6	60·2
2. 0	59·0	59·9
3. 0	59·2	59·7
5. 0	59·0	59·8
6. 0	58·9	59·8
7. 0	58·8	59·6
8. 0	58·9	59·7
9. 0	58·9	60·0
21. 0	58·8	58·8
22. 0	58·8	58·8
23. 0	58·8	58·8

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.
Nov. 27 h m	° ′ ″
0. 0	20. 21. 55
0. 5	22. 45
0. 21	21. 0
0. 27	22. 0
0. 39	21. 40
1. 2	23. 30
1. 10	23. 0
1. 16	25. 0
1. 33	24. 50
1. 45	17. 30
1. 50	18. 0
2. 2	14. 0
2. 22	23. 0
2. 49	17. 30
2. 55	17. 30
2. 58	18. 30
3. 15	18. 30
3. 30	19. 50
3. 41	18. 45
3. 48	19. 0
3. 59	17. 0
4. 7	18. 50
4. 25	18. 0
4. 38	14. 30
4. 50	15. 30
5. 7	19. 30
5. 31	19. 0
5. 35	17. 30
5. 43	19. 35
6. 29	18. 0
6. 49	15. 30
7. 1	15. 0
7. 9	15. 50
7. 20	14. 30
7. 34	5. 0
7. 54	14. 55
8. 0	11. 50
8. 5	11. 50
8. 20	5. 30
8. 35	10. 10
8. 48	13. 40
9. 3	12. 30
9. 39	15. 50
10. 25	16. 0
10. 40	15. 30
11. 6	16. 30
11. 55	16. 30
12. 13	14. 0
12. 34	18. 0
12. 58	15. 0
13. 18	18. 40
13. 30	18. 0
13. 39	19. 50
14. 30	22. 35
15. 8	16. 50
15. 55	17. 0
16. 7	18. 0
16. 20	17. 0
16. 42	20. 18. 0
16. 50	17. 40
17. 21	18. 0
17. 30	18. 30
17. 57	18. 0
18. 33	19. 0
18. 40	18. 30
18. 55	19. 10
19. 5	19. 0
19. 31	20. 35
19. 52	18. 0
20. 3	19. 15
20. 25	20. 0
	***
21. 0	19. 0
21. 3	18. 20
21. 11	20. 20
21. 32	17. 30
22. 19	19. 30
22. 55	18. 55
23. 59	19. 30
Nov. 28	
0. 0	20. 19. 30
1. 15	20. 5
2. 28	19. 5
2. 34	20. 10
3. 21	18. 0
3. 31	18. 30
3. 42	17. 0
4. 16	17. 20
4. 27	16. 35
4. 50	18. 0
5. 59	18. 20
6. 10	17. 0
7. 9	16. 0
7. 21	16. 50
7. 59	15. 0
8. 16	9. 15
8. 29	10. 10
9. 5	16. 50
9. 51	15. 40
10. 28	17. 0
11. 32	17. 0
11. 40	18. 20
12. 8	17. 0
12. 28	20. 0
12. 46	18. 0
13. 38	17. 30
13. 55	18. 0
14. 10	17. 45
14. 21	18. 5
14. 37	18. 0
14. 51	18. 40
15. 32	18. 0
16. 20	18. 30
16. 37	19. 10
16. 49	18. 40

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
Nov. 27 h m	
0. 0	·1399
0. 16	·1390
0. 47	·1398
1. 0	·1396
1. 16	·1402
1. 38	·1383
1. 58	·1397
2. 3	·1393
2. 17	·1406
2. 23	·1387
2. 40	·1384
2. 58	·1390
3. 6	·1386
3. 25	·1394
3. 32	·1390
4. 6	·1398
4. 13	·1391
4. 21	·1393
4. 30	·1392
5. 0	·1408
5. 11	·1400
5. 30	·1403
5. 45	·1414
6. 3	·1410
6. 15	·1414
6. 30	·1408
7. 3	·1403
7. 22	·1406
7. 50	·1449
8. 0	·1424
8. 9	·1426
8. 20	·1414
8. 35	·1424
8. 40	·1416
8. 47	·1418
9. 7	·1403
10. 10	·1407
10. 50	·1404
11. 58	·1410
12. 10	·1418
12. 34	·1422
12. 57	·1412
13. 13	·1408
13. 37	·1415
13. 41	·1414
14. 3	·1416
14. 18	·1412
14. 48	·1416
15. 10	·1410
15. 35	·1412
16. 11	·1408
16. 29	·1410
16. 40	·1406
17. 59	·1414
18. 23	·1410
18. 31	·1412
18. 51	·1404
19. 20	·1406
19. 28	·1402
20. 7	·1410
	***
20. 55	·1406
20. 58	·1412
21. 20	·1402
21. 45	·1410
22. 12	·1404
23. 0	·1406
23. 10	·1410
23. 59	·1406
Nov. 28	
0. 0	·1406
0. 16	·1404
1. 10	·1414
2. 16	·1410
2. 42	·1418
3. 16	·1412
3. 46	·1402
4. 14	·1410
5. 12	·1414
5. 26	·1409
6. 18	·1415
7. 40	·1410
8. 18	·1414
8. 30	·1426
9. 3	·1414
9. 55	·1419
10. 10	·1413
11. 46	·1412
12. 5	·1416
12. 27	·1413
12. 45	·1419
13. 15	·1415
14. 40	·1416
14. 59	·1420
15. 9	·1417
16. 29	·1416
17. 28	·1422
17. 43	·1420
20. 0	·1425
22. 8	·1410
23. 59	·1418

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
Nov. 27 h m	
0. 0	·03490
1. 38	·03508
2. 8	·03560
2. 29	·03540
3. 34	·03565
4. 30	·03546
5. 6	·03550
6. 45	·03510
7. 25	·03515
7. 32	·03495
7. 45	·03512
8. 0	·03485
8. 18	·03475
8. 40	·03482
12. 27	·03453
12. 49	·03440
13. 23	·03440
15. 0	·03395
15. 15	·03408
23. 5	·03329
23. 59	·03330
Nov. 28	
0. 0	·03330
5. 35	·03400
9. 5	·03408
9. 58	·03399
12. 9	·03397
17. 2	·03388
21. 30	·03350
23. 59	·03330

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov. 27 h m	°	°
0. 0	58·9	58·9
1. 0	59·0	59·2
2. 0	58·9	59·4
3. 0	58·8	59·2
6. 0	59·0	59·6
9. 0	58·7	59·2
21. 0	56·8	55·8
22. 0	56·8	55·9
23. 0	57·3	56·4
Nov. 28		
0. 0	57·3	56·4
1. 0	57·4	56·7
2. 0	57·8	57·4
3. 0	57·8	57·6
6. 0	58·3	58·6
9. 0	58·4	58·7
10. 30	58·3	58·6
21. 0	57·4	56·7
22. 0	57·4	56·6
23. 0	56·6	55·5

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov.28								
h m	° ′ ″	h m		h m		h m	°	°
17. 16	20. 20. 0							
17. 33	18. 50							
17. 51	19. 0							
18. 8	17. 10							
18. 35	18. 0							
18. 58	17. 30							
19. 11	18. 0							
19. 35	17. 30							
19. 39	17. 25							
19. 49	18. 0							
20. 25	17. 55							
21. 0	18. 50							
22. 3	19. 0							
23. 59	19. 10							
Nov.29		Nov.29		Nov.29		Nov.29		
0. 0	20. 19. 10	0. 0	·1418	0. 0	·03330	0. 0	57 ·9	58 ·1
0. 59	19. 10	1. 14	·1420	1. 18	·03380	1. 0	58 ·4	59 ·1
1. 5	20. 25	3. 21	·1412	3. 31	·03430	2. 0	58 ·5	59 ·5
3. 20	18. 30	4. 43	·1413	6. 38	·03453	3. 0	58 ·8	59 ·8
3. 22	19. 5	5. 20	·1420	10. 12	·03455	5. 30	58 ·2	59 ·5
4. 45	18. 15	5. 38	·1416	13. 8	·03475	6. 0	58 ·3	59 ·6
4. 55	17. 30	6. 0	·1418	17. 4	·03475	9. 0	58 ·3	59 ·6
5. 15	17. 0	6. 52	·1414	21. 18	·03440	21. 0	58 ·2	58 ·7
5. 32	18. 10	9. 35	·1415	21. 55	·03445	22. 0	58 ·2	58 ·8
6. 0	18. 0	9. 54	·1417	23. 30	·03450	23. 0	58 ·2	58 ·8
6. 28	19. 0	10. 40	·1411	23. 59	·03455			
6. 56	18. 0	11. 17	·1414					
7. 30	18. 5	11. 46	·1410					
8. 16	16. 30	12. 0	·1414					
9. 48	16. 30	12. 58	·1413					
10. 30	15. 25	13. 10	·1418					
10. 55	16. 35	14. 0	·1413					
11. 42	15. 55	16. 10	·1415					
12. 8	17. 30	16. 24	·1418					
12. 37	16. 25	17. 48	·1420					
12. 52	16. 50	18. 22	·1417					
13. 6	18. 30	20. 10	·1420					
13. 36	17. 0	20. 27	·1425					
13. 59	17. 30	21. 26	·1409					
14. 28	19. 0	22. 25	·1405					
15. 27	17. 45	23. 59	·1409					
	***							
17. 40	18. 0							
	***							
21. 22	17. 30							
21. 59	18. 0							
22. 6	19. 40							
23. 45	19. 55							
23. 59	20. 0							
Nov.30		Nov.30		Nov.30		Nov.30		
0. 0	20. 20. 0	0. 0	·1409	0. 0	·03455	0. 0	58 ·4	59 ·2
0. 32	19. 50	0. 41	·1410	2. 0	·03460	1. 0	58 ·4	59 ·3
0. 43	20. 10	1. 47	·1415	6. 59	·03455	2. 0	58 ·4	58 ·9
1. 37	19. 45	2. 47	·1416	14. 44	·03480	3. 0	58 ·2	58 ·9
2. 10	20. 0	3. 53	·1420	15. 32	·03470	3. 45	58 ·2	58 ·9
2. 59	18. 30	4. 21	·1418	21. 59	·03490	6. 0	58 ·1	58 ·7

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Nov.30		Nov.30		Nov.30		Nov.30		
h m	° ′ ″	h m		h m		h m	°	°
4. 59	20. 17. 55	6. 11	·1422	23. 0	·03500	9. 0	58 ·2	59 ·1
5. 14	18. 10	7. 37	·1413	23. 59	·03498	12. 0	58 ·6	59 ·7
6. 10	17. 35	7. 38	·1418			21. 45	59 ·0	60 ·6
6. 25	18. 0	8. 0	·1416					
7. 6	14. 30	8. 40	·1420					
7. 23	15. 55	8. 59	·1415					
7. 39	15. 0	9. 33	·1421					
8. 12	15. 55	10. 21	·1414					
8. 29	15. 15	11. 48	·1420					
8. 52	15. 40	12. 10	·1417					
9. 41	14. 30	12. 25	·1419					
9. 52	15. 30	13. 0	·1416					
10. 3	14. 30	14. 17	·1421					
12. 28	16. 10	14. 48	·1428					
12. 45	16. 0	15. 38	·1428					
13. 13	17. 15	16. 22	·1420					
13. 25	16. 50	16. 58	·1426					
13. 37	17. 20	17. 22	·1427					
14. 2	15. 0	18. 2	·1422					
14. 15	16. 0	18. 11	·1426					
14. 37	19. 0	18. 39	·1422					
14. 56	17. 40	19. 30	·1426					
15. 7	18. 55	19. 41	·1421					
15. 39	16. 0	19. 49	·1425					
16. 0	16. 15	20. 30	·1418					
16. 22	17. 40	20. 48	·1419					
16. 29	17. 10	21. 20	·1413					
16. 38	17. 30	21. 30	·1417					
17. 9	15. 30	21. 51	·1413					
	***	22. 7	·1415					
18. 14	17. 0	22. 14	·1413					
18. 46	15. 50	22. 24	·1416					
19. 32	16. 10	22. 47	·1413					
19. 44	15. 50		(†)					
19. 52	17. 0							
20. 31	16. 0							
20. 40	16. 5							
21. 7	15. 55							
21. 14	16. 25							
21. 29	15. 35							
22. 13	17. 10							
22. 22	16. 0							
22. 32	18. 55							
22. 47	17. 25							
23. 22	19. 55							
23. 47	18. 30							
23. 59	20. 50							
Dec. 1		Dec. 1		Dec. 1		Dec. 1		
0. 0	20. 20. 50		(†)	0. 0	·03498	1. 0	59 ·0	60 ·7
0. 14	22. 25	1. 16	·1412	2. 36	·03532	8. 0	58 ·7	60 ·2
0. 35	20. 0	1. 50	·1419	9. 32	·03532	21. 0	54 ·7	54 ·4
0. 58	20. 25	2. 5	·1418	12. 53	·03495	22. 0	56 ·4	55 ·6
1. 10	18. 50	2. 34	·1414	18. 50	·03368	23. 0	56 ·4	55 ·8
1. 43	19. 50	2. 47	·1425	22. 32	·03273			
2. 26	18. 30	3. 0	·1421	23. 59	·03280			
2. 43	19. 30	4. 25	·1427					
3. 6	18. 35		***					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

November 27^{d}. 0^{h}. VERTICAL FORCE.—The adjustments were altered, so that the readings were increased by 25^{div}·00 or by 0·020457 parts of the whole Vertical Force.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 1		Dec. 1						
h m	° ′ ″	h m		h m		h m	°	°
3. 22	20. 17. 40	8. 45	·1419					
3. 47	17. 55	9. 6	·1434					
4. 15	16. 35	9. 12	·1429					
4. 30	17. 0	9. 32	·1429					
5. 49	16. 55	10. 14	·1418					
6. 7	17. 0	10. 29	·1421					
6. 22	16. 10	10. 50	·1413					
6. 46	16. 10	11. 20	·1416					
8. 29	14. 5	11. 40	·1422					
8. 40	14. 55	12. 11	·1416					
8. 59	8. 5	12. 21	·1419					
9. 5	10. 0	12. 29	.1415					
9. 14	9. 0	12. 47	·1419					
10. 14	13. 10	13. 18	·1416					
10. 52	12. 30	13. 44	·1428					
11. 10	14. 15	14. 0	·1428					
11. 45	14. 0	14. 13	·1425					
11. 57	14. 30	14. 55	·1422					
12. 9	13. 30	15. 50	·1418					
12. 20	14. 20	16. 6	·1423					
12. 31	13. 50	16. 20	·1418					
12. 59	15. 25	16. 33	·1425					
13. 8	17. 10	20. 0	·1419					
13. 14	17. 55	20. 16	·1422					
13. 22	16. 55	23. 20	·1414					
13. 42	17. 50	23. 29	·1417					
13. 51	17. 0	23. 37	·1414					
14. 7	18. 25	23. 59	·1416					
14. 40	16. 50							
14. 47	17. 10							
14. 57	16. 30							
15. 46	17. 5							
15. 51	16. 10							
16. 13	17. 10							
16. 28	16. 0							
17. 30	17. 20							
18. 4	16. 40							
18. 32	17. 15							
18. 52	16. 40							
19. 58	17. 0							
20. 5	16. 0							
20. 14	16. 55							
20. 35	16. 30							
21. 14	16. 50							
21. 22	17. 45							
21. 29	16. 30							
21. 44	17. 50							
21. 57	17. 0							
22. 7	18. 30							
22. 30	18. 0							
22. 55	18. 30							
23. 5	19. 30							
	(†)							
Dec. 2		Dec. 2		Dec. 2		Dec. 2		
	(†)	0. 0	·1416	0. 0	·03280	0. 0	56 ·2	55 ·8
0. 7	20. 19. 0	0. 57	·1420	2. 0	·03291	1. 0	56 ·4	55 ·8
1. 37	20. 0	2. 35	·1424	2. 59	·03310	2. 0	56 ·8	56 ·8

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 2		Dec. 2		Dec. 2		Dec. 2		
h m	° ′ ″	h m		h m		h m	°	°
3. 45	20. 18. 0	3. 7	·1418	3. 57	·03332	3. 0	57 ·7	58 ·0
4. 18	18. 50	3. 24	·1423	9. 12	·03299	6. 0	56 ·4	56 ·9
4. 39	18. 0	4. 47	·1421	15. 32	·03300	7. 0	56 ·5	56 ·8
5. 9	18. 45	5. 12	·1415	21. 3	·03319	9. 0	56 ·5	56 ·3
5. 21	17. 55	5. 37	·1418	23. 13	·03310	21. 0	57 ·1	57 ·7
5. 55	18. 30	6. 48	·1410	23. 59	·03320	22. 0	57 ·1	57 ·8
6. 32	18. 0	7. 8	·1414			23. 0	57 ·0	57 ·5
6. 42	17. 30	7. 36	·1408					
7. 2	17. 20	8. 3	·1416					
7. 16	18. 0	8. 13	·1410					
7. 52	15. 0	8. 40	·1422					
8. 5	15. 55	9. 7	·1406					
8. 22	12. 0	9. 27	·1410					
8. 35	13. 55	9. 50	·1404					
8. 44	14. 5	10. 9	·1408					
8. 52	15. 55	11. 0	·1404					
9. 20	13. 40	12. 7	·1409					
9. 38	13. 0	15. 0	·1409					
10. 10	14. 0	19. 10	·1419					
10. 23	13. 0	21. 49	·1410					
10. 38	12. 30	23. 33	·1412					
10. 58	13. 30	23. 59	·1413					
11. 5	13. 30							
11. 23	15. 40							
11. 57	15. 10							
12. 5	15. 50							
12. 38	15. 50							
13. 16	17. 0							
13. 37	17. 30							
15. 22	17. 55							
15. 44	17. 20							
16. 28	18. 30							
20. 38	17. 40							
23. 35	19. 30							
23. 59	20. 0							
Dec. 3		Dec. 3		Dec. 3		Dec. 3		
0. 0	20. 20. 0	0. 0	·1413	0. 0	·03320	0. 0	57 ·2	58 ·4
0. 50	19. 10	1. 4	·1416	2. 23	·03373	1. 0	57 ·7	58 ·6
1. 2	19. 55	4. 12	·1412	6. 17	·03405	2. 0	58 ·3	59 ·6
1. 30	18. 50	5. 54	·1414	14. 18	·03496	3. 0	57 ·9	59 ·0
4. 49	17. 55	6. 12	·1406	20. 30	·03545	6. 0	58 ·0	59 ·0
5. 28	19. 0	7. 11	·1413	23. 23	·03533	7. 15	58 ·3	59 ·4
5. 51	19. 10	7. 23	·1408	23. 59	·03520	9. 0	58 ·7	59 ·8
6. 14	14. 10	8. 9	·1414			21. 0	60 ·4	61 ·3
6. 21	15. 10	8. 20	·1410			22. 0	59 ·9	61 ·0
6. 29	14. 10	8. 50	·1413			23. 0	59 ·6	60 ·4
6. 47	15. 5	11. 30	·1404					
7. 13	18. 30	11. 42	·1408					
7. 28	18. 0	14. 32	·1402					
7. 48	18. 0	15. 43	·1407					
7. 58	17. 15	16. 40	·1404					
10. 8	16. 0	20. 6	·1403					
10. 29	16. 50	23. 0	·1397					
11. 17	16. 0	23. 59	·1400					
11. 40	15. 10							
12. 50	17. 30							
13. 16	17. 0							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 3								
h m	° ′ ″	h m		h m		h m	°	°
13. 35	20. 17. 30							
13. 47	17. 0							
14. 27	17. 50							
14. 37	18. 30							
15. 15	19. 0							
15. 23	20. 5							
15. 59	17. 50							
16. 35	18. 0							
17. 5	17. 30							
17. 36	18. 30							
18. 29	17. 55							
18. 38	17. 15							
18. 50	17. 50							
19. 37	17. 40							
20. 27	17. 30							
21. 33	18. 30							
21. 44	18. 0							
21. 57	19. 0							
22. 18	19. 0							
23. 44	20. 50							
23. 59	20. 50							
Dec. 4		Dec. 4		Dec. 4		Dec. 4		
0. 0	20. 20. 50	0. 0	·1400	0. 0	·03520	0. 0	59 ·4	60 ·0
0. 22	21. 0	2. 33	·1408	3. 13	·03496	1. 0	58 ·8	59 ·5
2. 16	18. 30	4. 54	·1411	9. 5	·03517	2. 0	59 ·4	59 ·9
4. 21	18. 0	5. 12	·1408	15. 0	·03503	3. 0	59 ·2	59 ·8
5. 1	18. 45	6. 47	·1408	20. 38	.03518	6. 0	59 ·1	59 ·5
5. 44	18. 0	7. 11	·1402	23. 16	·03496	9. 0	59 ·4	59 ·7
7. 16	19. 50	7. 28	·1404	23. 59	·03500	21. 0	60 ·1	61 ·0
7. 35	18. 50	7. 55	·1400			22. 0	59 ·7	60 ·3
7. 56	18. 30	8. 11	·1400			23. 0	59 ·6	60 ·1
8. 17	16. 0	8. 20	·1405					
8. 28	17. 0	8. 44	·1401					
8. 36	14. 50	9. 0	·1404					
8. 50	13. 30	9. 15	·1399					
9. 14	14. 30	9. 49	·1404					
9. 23	14. 10	10. 5	·1400					
9. 55	16. 10	10. 56	·1404					
10. 9	15. 40	15. 32	·1402					
10. 56	17. 0	19. 57	·1410					
11. 56	16. 50	21. 10	·1405					
12. 10	16. 55	21. 27	·1410					
12. 22	16. 10	22. 6	·1404					
13. 0	17. 0	23. 59	·1408					
14. 16	17. 30							
15. 29	17. 15							
17. 31	18. 0							
18. 59	17. 15							
20. 33	17. 40							
20. 42	18. 0							
20. 51	17. 20							
22. 13	19. 30							
23. 29	20. 15							
23. 59	20. 30							

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 5		Dec. 5		Dec. 5		Dec. 5		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 20. 30	0. 0	·1408	0. 0	·03500	0. 0	59 ·6	60 ·0
1. 29	20. 25	0. 28	·1408	7. 57	·03502	1. 0	59 ·8	60 ·5
3. 54	18. 5	1. 6	·1414	11. 59	·03538	2. 0	59 ·6	60 ·3
6. 31	17. 10	3. 43	·1410	16. 42	·03554	3. 0	59 ·3	59 ·9
8. 8	17. 20	5. 45	·1414	21. 5	·03576	6. 0	59 ·6	60 ·4
9. 16	15. 30	8. 57	·1408	23. 59	·03550	9. 0	59 ·5	60 ·2
9. 30	17. 0	9. 18	·1412			21. 0	60 ·9	61 ·6
9. 44	15. 30	9. 56	·1404			22. 0	60 ·4	60 ·9
11. 17	16. 50	11. 26	·1406			23. 0	60 ·3	60 ·7
12. 4	16. 0	12. 24	·1402					
12. 18	17. 0	12. 48	·1397					
12. 35	15. 55	13. 28	·1398					
12. 46	16. 0	14. 5	·1401					
12. 55	15. 30	15. 15	·1397					
13. 16	17. 20	15. 51	·1401					
13. 27	16. 10	16. 9	·1397					
13. 38	17. 0	16. 58	·1399					
15. 3	16. 40	17. 12	·1402					
15. 42	17. 55	22. 59	·1398					
16. 0	17. 0	23. 59	·1401					
16. 29	17. 40							
16. 58	15. 55							
17. 5	16. 30							
19. 50	17. 50							
20. 45	17. 50							
22. 32	19. 30							
23. 16	19. 55							
23. 59	20. 0							
Dec. 6		Dec. 6		Dec. 6		Dec. 6		
0. 0	20. 20. 0	0. 0	·1401	0. 0	·03550	0. 0	59 ·8	60 ·2
0. 42	20. 0	0. 58	·1406	6. 12	·03529	1. 0	60 ·2	60 ·4
0. 50	20. 55	1. 30	·1407	9. 52	·03500	2. 0	59 ·5	59 ·9
3. 45	18. 0	2. 0	·1410	11. 58	·03538	3. 0	59 ·9	60 ·2
6. 29	16. 55	3. 20	·1410	18. 58	·03548	6. 0	59 ·6	59 ·7
7. 12	17. 0	4. 24	·1411	21. 53	·03500	7. 0	59 ·5	59 ·5
10. 20	15. 45	8. 12	·1410	23. 21	·03505	8. 0	59 ·5	59 ·5
10. 58	17. 0	9. 32	·1404	23. 59	·03511	9. 0	59 ·5	59 ·4
11. 3	15. 30	10. 10	·1408			21. 0	60 ·2	60 ·4
11. 16	15. 50	10. 42	·1404			22. 0	58 ·8	58 ·8
11. 25	15. 25	11. 10	·1406			23. 0	60 ·1	60 ·3
12. 7	17. 20	11. 16	·1401					
12. 20	17. 0	16. 30	·1402					
13. 16	17. 50	19. 30	·1406					
13. 33	17. 20	20. 12	·1409					
14. 12	18. 0	20. 30	·1405					
14. 32	17. 25	20. 44	·1409					
14. 51	18. 0	23. 59	·1404					
15. 40	17. 10							
16. 9	17. 50							
17. 5	18. 0							
17. 13	18. 15							
17. 29	17. 20							
19. 29	17. 55							
20. 22	17. 55							
20. 35	17. 10							
21. 4	18. 50							
21. 42	18. 40							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 6								
h m	° ′ ″	h m		h m		h m	°	°
21. 58	20. 19. 0							
	(†)							
23. 10	20. 0							
23. 59	20. 0							
Dec. 7		Dec. 7		Dec. 7		Dec. 7		
0. 0	20. 20. 0	0. 0	·1404	0. 0	·03511	0. 0	59·8	60·0
0. 44	20. 0	0. 30	·1405	3. 3	·03517	1. 0	60·0	60·0
1. 3	21. 25	0. 42	·1404	6. 25	·03540	2. 0	60·0	60·0
1. 22	21. 20	1. 1	·1409	12. 25	·03539	3. 0	60·0	60·0
2. 22	19. 55	2. 57	·1404	19. 29	·03514	6. 0	60·0	60·4
4. 10	18. 50	3. 12	·1400	21. 55	·03520	9. 0	60·0	60·2
4. 29	19. 0	4. 58	·1408	22. 38	·03515	21. 30	60·3	60·7
6. 10	18. 40	7. 16	·1404		(†)	23. 0	60·3	60·7
6. 21	18. 0	7. 46	·1400					
6. 50	17. 30	8. 57	·1403					
7. 19	18. 10	9. 16	·1400					
8. 12	14. 25	11. 50	·1403					
8. 29	14. 30	12. 25	·1400					
8. 39	15. 45	15. 36	·1403					
8. 57	14. 30	17. 55	·1406					
9. 25	16. 40	23. 59	·1404					
10. 3	16. 50							
10. 16	16. 30							
11. 13	16. 40							
11. 57	16. 0							
13. 0	17. 40							
13. 37	17. 30							
14. 16	18. 5							
15. 19	17. 55							
16. 0	18. 20							
17. 5	17. 30							
21. 25	17. 20							
22. 56	19. 25							
23. 59	20. 0							
Dec. 8		Dec. 8		Dec. 8		Dec. 8		
0. 0	20. 20. 0	0. 0	·1404		(†)	0. 0	60·2	60·9
0. 48	20. 0	0. 29	·1404	0. 50	·03520	1. 0	60·0	60·6
0. 57	19. 30	0. 55	·1406	9. 59	·03520	1. 20	..	60·4
2. 42	18. 5	3. 26	·1410	12. 55	·03532	9. 0	59·6	60·4
6. 15	18. 0	3. 36	·1414	23. 20	·03502	10. 0	59·6	60·4
6. 36	17. 30	5. 13	·1410	23. 59	·03500	21. 0	60·4	60·5
7. 5	17. 30	5. 28	·1416			22. 0	60·1	60·1
9. 34	16. 30	5. 34	·1411			23. 0	60·5	60·6
10. 15	17. 0	5. 50	·1415					
10. 32	16. 20	6. 36	·1407					
10. 40	17. 0	6. 55	·1410					
11. 8	17. 55	7. 59	·1407					
11. 33	18. 0	8. 5	·1405					
11. 40	17. 0	9. 55	·1407					
11. 45	17. 30	10. 4	·1413					
12. 0	17. 30	10. 22	·1403					
12. 18	13. 10	10. 54	·1405					
12. 45	16. 0	11. 18	·1403					
13. 7	15. 30	11. 27	·1409					
13. 34	16. 0	11. 32	·1400					
14. 7	16. 0	11. 50	·1400					
14. 23	20. 17. 10	11. 58	·1406					
14. 30	17. 0	12. 33	·1398					
14. 36	17. 25	13. 12	·1406					
15. 21	15. 30	14. 6	·1399					
16. 10	18. 0	14. 44	·1404					
16. 25	17. 0	15. 14	·1399					
17. 58	17. 10	18. 6	·1402					
18. 3	16. 50	18. 48	·1403					
18. 14	17. 20	20. 40	·1396					
18. 38	16. 55	22. 18	·1395					
19. 39	17. 30	23. 33	·1399					
22. 30	18. 30	23. 59	·1393					
22. 35	19. 40							
22. 46	20. 0							
23. 3	19. 10							
23. 59	19. 55							
Dec. 9		Dec. 9		Dec. 9		Dec. 9		
0. 0	20. 19. 55	0. 0	·1393	0. 0	·03500	0. 0	60·1	60·0
1. 7	20. 30	1. 7	·1400	8. 5	·03530	1. 0	60·2	60·0
2. 5	19. 30	6. 1	·1402	13. 20	·03502	2. 0	60·3	60·2
3. 10	19. 45	7. 0	·1394	16. 40	·03500	3. 0	60·5	60·4
6. 23	17. 0	7. 40	·1396	21. 20	·03515	3. 45	60·5	60·6
6. 38	17. 50	8. 8	·1391	23. 59	·03500	6. 0	60·4	60·6
6. 52	16. 30	8. 19	·1392			9. 0	60·3	60·3
7. 33	18. 0	8. 26	·1389			21. 0	60·5	60·3
8. 13	17. 0	9. 16	·1395			22. 0	60·5	60·2
8. 39	13. 40	10. 38	·1397			23. 0 :	60·6	60·4
9. 14	16. 50	11. 3	·1393					
9. 55	17. 0	11. 22	·1399					
10. 15	17. 30	11. 40	·1393					
10. 44	17. 5	12. 17	·1403					
11. 20	16. 10	13. 0	·1394					
11. 40	15. 0	14. 22	·1399					
11. 50	14. 50	14. 46	·1396					
12. 0	13. 20	16. 33	·1398					
12. 52	14. 50	17. 36	·1402					
13. 3	16. 0	18. 58	·1401					
13. 43	15. 55	19. 37	·1405					
13. 50	16. 55	19. 48	·1401					
14. 5	16. 30	21. 9	·1401					
14. 16	17. 30	21. 58	·1394					
15. 14	17. 30	23. 59	·1390					
15. 32	16. 50							
	***							
19. 21	17. 10							
19. 46	18. 10							
20. 5	17. 30							
20. 37	18. 35							
20. 47	18. 0							
20. 52	18. 20							
21. 29	17. 50							
22. 15	17. 55							
22. 31	19. 0							
22. 45	18. 40							
23. 59	19. 20							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 10		Dec. 10		Dec. 10		Dec. 10		
h m	° ′ ″	h m		h m		h m	°	°
0. 0	20. 19. 20	0. 0	·1390	0. 0	·03500	0. 0	60·8	60·6
0. 32	19. 0	0. 18	·1388	2. 45	·03532	1. 0	60·8	60·7
0. 39	19. 55	1. 20	·1401	3. 10	·03525	2. 0	60·9	60·9
1. 2	19. 30	2. 10	·1394	5. 30	·03528	3. 0	60·2	60·1
1. 16	21. 0	4. 37	·1394	9. 23	·03540	6. 0	60·4	60·4
1. 34	21. 20	6. 16	·1389	21. 33	·03530	7. 0	60·0	60·2
2. 36	20. 0	6. 47	·1382	23. 59	·03525	8. 0	60·2	60·5
3. 13	20. 0	7. 4	·1389			9. 0	60·4	60·6
3. 19	19. 15	7. 30	·1382			21. 0	60·5	61·2
3. 37	19. 15	7. 47	·1388			22. 0	60·1	60·6
3. 47	19. 55	8. 6	·1384			23. 0	60·2	60·7
3. 59	18. 45	8. 24	·1390					
4. 16	18. 30	9. 1	·1388					
4. 29	19. 5	9. 40	·1397					
4. 55	18. 40	9. 57	·1396					
5. 5	19. 0	10. 46	·1402					
5. 40	16. 0	13. 26	·1403					
5. 59	16. 0	15. 34	·1408					
6. 8	15. 15	15. 42	·1405					
6. 30	17. 20	15. 56	·1409					
6. 42	17. 0	16. 4	·1407					
6. 50	17. 25	16. 12	·1409					
6. 59	16. 20	20. 26	·1406					
7. 9	17. 5	21. 51	·1399					
7. 34	14. 50	22. 3	·1403					
7. 44	12. 0	23. 59	·1403					
8. 15	10. 30							
8. 27	11. 40							
8. 32	11. 20							
8. 50	12. 40							
9. 8	12. 25							
9. 23	13. 50							
9. 33	13. 40							
9. 46	14. 30							
10. 7	14. 0							
11. 3	15. 55							
11. 17	15. 55							
15. 19	18. 0							
15. 52	17. 25							
16. 4	18. 0							
16. 14	17. 0							
17. 10	17. 30							
20. 37	16. 5							
20. 52	15. 40							
22. 6	16. 0							
22. 13	17. 0							
22. 19	16. 10							
22. 28	16. 55							
22. 42	16. 0							
22. 53	17. 15							
23. 8	16. 40							
23. 20	17. 50							
23. 46	17. 20							
23. 59	18. 30							
Dec. 11		Dec. 11		Dec. 11		Dec. 11		
0. 0	20. 18. 30	0. 0	·1403	0. 0	·03525	0. 0	60·6	61·3
0. 14	18. 30	1. 2	·1406	1. 30	·03540	1. 0	60·1	61·1

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Readings of Thermometers. Of V.F. Magnet.
Dec. 11		Dec. 11		Dec. 11		Dec. 11		
h m	° ′ ″	h m		h m		h m	°	°
0. 43	20. 18. 20	1. 12	·1409	3. 40	·03536	2. 0	60·1	61·0
1. 7	19. 10	2. 16	·1410	7. 15	·03480	3. 0	60·1	61·0
1. 36	19. 10	2. 36	·1408	9. 23	·03488	6. 0	59·1	58·9
2. 40	17. 30	3. 12	·1411	17. 45	·03473	7. 0	59·5	59·0
3. 33	16. 0	3. 28	·1408	22. 1	·03450	8. 0	59·6	59·9
3. 50	16. 40	4. 15	·1412	23. 59	·03440	9. 0	59·8	59·8
5. 10	16. 40	5. 10	·1415			21. 0	59·8	59·8
5. 31	14. 30	5. 23	·1410			22. 0	59·8	59·8
5. 56	15. 55	6. 2	·1416			23. 0	59·8	59·8
6. 15	15. 55	8. 10	·1411					
6. 30	15. 0	8. 30	·1413					
7. 3	15. 40	8. 50	·1409					
7. 30	14. 40	9. 21	·1414					
7. 56	15. 25	14. 34	·1415					
8. 35	15. 0	16. 56	·1418					
8. 52	14. 30	20. 17	·1416					
10. 24	15. 10	23. 59	·1410					
15. 27	16. 50							
20. 56	15. 30							
22. 10	17. 0							
22. 29	17. 50							
23. 23	18. 0							
23. 59	17. 50							
Dec. 12		Dec. 12		Dec. 12		Dec. 12		
0. 0	20. 17. 50	0. 0	·1410	0. 0	·03440	0. 0	60·0	60·1
0. 30	17. 55	0. 59	·1415	2. 33	·03485	1. 0	60·2	60·3
1. 20	18. 20	1. 12	·1412	6. 12	·03481	2. 0	60·2	60·3
1. 27	19. 55	1. 33	·1414	9. 15	·03465	3. 0	60·0	60·2
1. 33	18. 25	2. 12	·1409	14. 10	·03468	5. 0	59·9	60·2
2. 14	17. 20	3. 36	·1414	22. 1	·03400	6. 0	59·8	60·0
2. 37	17. 50	12. 26	·1411	23. 59	·03418	7. 0	59·7	59·7
3. 10	17. 10	19. 42	·1417			8. 0	59·7	59·8
5. 0	17. 0	20. 48	·1422			9. 0	59·8	60·0
5. 45	16. 0	21. 52	·1422			21. 0	59·5	59·1
6. 22	16. 15	23. 59	·1424			22. 0	59·5	59·1
6. 44	15. 30					23. 0	59·7	59·5
7. 45	15. 5							
9. 45	14. 55							
10. 12	15. 0							
10. 23	15. 0							
16. 15	17. 45							
21. 22	17. 0							
21. 44	17. 45							
23. 29	17. 50							
23. 59	19. 0							
Dec. 13		Dec. 13		Dec. 13		Dec. 13		
0. 0	20. 19. 0	0. 0	·1424	0. 0	·03418	0. 0	59·8	59·8
0. 40	19. 30	0. 38	·1425	4. 3	·03450	1. 0	59·7	59·5
3. 12	17. 10	3. 55	·1423	5. 39	·03480	3. 0	59·8	59·9
4. 32	17. 0	4. 0	·1418	8. 42	·03475	6. 0	60·2	60·5
4. 52	18. 30	4. 36	·1420	10. 19	·03482	7. 0	60·0	60·3
5. 6	18. 0	4. 57	·1412	12. 29	·03475	8. 0	60·2	60·6
5. 31	18. 0	6. 7	·1416	16. 29	·03465	9. 0	60·3	60·6
6. 50	15. 55	6. 32	·1414	18. 31	·03442	21. 0	60·1	60·1
9. 16	14. 40	7. 22	·1420	22. 0	·03455	21. 45	60·1	60·0
9. 24	13. 0	7. 33	·1414	23. 59	·03435	22. 0	59·7	59·1

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 13		Dec. 13				Dec. 13		
h m	° ′ ″	h m		h m		h m	°	°
9. 40	20. 13. 40	8. 6	·1414			22. 50	59 ·1	58 ·4
9. 50	13. 20	8. 20	·1420			23. 20	59 ·9	59 ·6
9. 59	13. 20	9. 7	·1412					
10. 25	11. 0	9. 12	·1406					
10. 46	13. 0	9. 33	·1405					
10. 56	13. 40	9. 57	·1411					
12. 29	16. 30	12. 26	·1410					
12. 49	15. 10	12. 59	·1415					
13. 30	16. 0	13. 30	·1414					
13. 42	15. 55	16. 22	·1414					
14. 20	16. 5	17. 4	·1423					
14. 31	17. 0	17. 22	·1421					
14. 44	16. 45	17. 28	·1427					
14. 50	17. 0	17. 30	·1420					
15. 1	16. 55	17. 49	·1425					
15. 42	18. 0	19. 24	·1419					
15. 55	17. 5	20. 6	·1421					
16. 32	19. 30	21. 44	·1402					
16. 59	16. 0	23. 59	·1401					
17. 15	15. 50							
17. 22	17. 0							
17. 33	15. 0							
17. 44	16. 15							
18. 2	16. 5							
18. 11	15. 30							
18. 16	17. 0							
18. 43	15. 50							
19. 7	16. 10							
19. 20	15. 30							
19. 30	15. 50							
20. 2	16. 0							
20. 7	16. 50							
20. 15	15. 20							
20. 21	16. 35							
20. 30	16. 0							
21. 50	18. 25							
	(†)							
23. 6	18. 50							
23. 23	20. 0							
23. 40	20. 0							
23. 50	19. 55							
23. 59	21. 0							
Dec. 14		Dec. 14		Dec. 14		Dec. 14		
0. 0	20. 21. 0	0. 0	·1401	0. 0	·03435	0. 0	60 ·2	60 ·1
0. 35	18. 40	0. 29	·1392	3. 38	·03495	1. 0	60 ·1	60 ·1
1. 17	21. 40	1. 12	·1403	6. 43	·03485	2. 0	60 ·2	60 ·3
1. 45	20. 40	1. 34	·1397	10. 31	·03500	3. 0	60 ·1	60 ·1
1. 52	21. 20	2. 27	·1399	11. 8	·03490	6. 0	60 ·2	60 ·4
2. 10	20. 20	2. 42	·1394	12. 58	·03465	9. 0	60 ·4	60 ·6
2. 27	20. 50		***	20. 1	·03455	21. 45	60 ·0	60 ·0
2. 52	18. 0	3. 15	·1395	22. 8	·03434			
3. 3	16. 0	3. 37	·1407	23. 59	·03465			
3. 26	15. 10	3. 58	·1410					
3. 59	17. 45	4. 27	·1407					
4. 10	17. 25	5. 18	·1411					
4. 25	17. 30	6. 48	·1412					
5. 11	16. 0	7. 17	·1404					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 14		Dec. 14						
h m	° ′ ″	h m		h m		h m	°	°
6. 34	20. 15. 30	8. 19	·1392					
7. 0	16. 0	8. 45	·1401					
7. 15	15. 0	9. 16	·1402					
7. 30	16. 0	9. 42	·1403					
8. 10	15. 40	10. 6	·1400					
8. 22	13. 0	10. 40	·1404					
8. 37	12. 10	10. 58	·1411					
8. 44	13. 0	11. 10	·1410					
8. 52	12. 30	11. 22	·1412					
9. 10	14. 35	11. 49	·1409					
9. 31	13. 20	12. 34	·1415					
10. 10	13. 25	13. 9	·1409					
10. 21	13. 0	15. 35	·1414					
10. 30	13. 55	18. 59	·1423					
10. 55	15. 0	19. 38	·1419					
11. 11	13. 45	19. 57	·1421					
11. 52	12. 50	21. 22	·1416					
12. 5	14. 0	22. 22	·1409					
12. 29	14. 30	23. 59	·1412					
12. 42	13. 30							
12. 58	14. 50							
13. 32	14. 30							
14. 32	15. 50							
18. 50	16. 30							
19. 29	18. 25							
19. 52	18. 30							
20. 15	19. 30							
20. 40	19. 0							
21. 2	17. 55							
21. 51	18. 20							
22. 44	17. 0							
23. 2	18. 0							
23. 59	17. 30							
Dec. 15		Dec. 15		Dec. 15		Dec. 15		
0. 0	20. 17. 30	0. 0	·1412	0. 0	·03465	0. 0	60 ·0	60 ·0
0. 16	17. 50	1. 4	·1416	6. 2	·03495	8. 0	60 ·0	60 ·3
3. 2	15. 35	4. 6	·1414	11. 30	·03488	21. 0	59 ·9	59 ·9
3. 13	16. 0	4. 36	·1416	21. 7	·03460	22. 0	59 ·8	59 ·9
3. 30	15. 30	6. 11	·1411	23. 59	·03450	23. 0	59 ·8	60 ·1
4. 35	15. 0	6. 48	·1414					
5. 59	15. 30	9. 14	·1409					
6. 14	14. 35	9. 42	·1415					
6. 42	15. 30	10. 6	·1410					
9. 5	14. 0	10. 34	·1415					
9. 29	11. 0	11. 20	·1411					
10. 13	13. 25	14. 34	·1419					
10. 29	13. 0	15. 0	·1418					
10. 40	13. 15	17. 37	·1420					
11. 1	12. 30	20. 41	·1420					
11. 15	13. 0	21. 30	·1416					
11. 50	13. 55	23. 59	·1416					
14. 3	15. 0							
14. 28	18. 0							
14. 39	18. 0							
15. 1	15. 30							
15. 31	15. 0							
16. 51	16. 0							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 15								
h m	° ′ ″	h m		h m		h m	°	°
16. 54	20. 16. 0							
17. 7	15. 20							
17. 22	15. 0							
17. 31	14. 50							
20. 27	15. 0							
20. 39	15. 40							
20. 56	15. 0							
23. 5	17. 0							
23. 59	17. 30							
Dec. 16		Dec. 16		Dec. 16		Dec. 16		
0. 0	20. 17. 30	0. 0	·1416	0. 0	·03450	0. 0	59 ·9	60 ·2
0. 59	17. 15	2. 55	·1415	5. 4	·03485	1. 0	60 ·0	60 ·1
1. 14	16. 50	3. 34	·1416	7. 20	·03488	2. 0	60 ·0	60 ·0
1. 27	17. 15	3. 50	·1413	9. 58	·03480	3. 0	60 ·0	60 ·2
1. 31	18. 30	5. 12	·1418	11. 14	·03465	6. 0	60 ·1	60 ·2
3. 3	18. 0	6. 3	·1414	19. 31	·03405	8. 0	60 ·1	60 ·4
3. 18	17. 30	11. 8	·1412	23. 22	·03415	9. 0	60 ·1	60 ·3
3. 35	17. 30	11. 35	·1415	23. 59	·03420	21. 0	59 ·2	58 ·8
3. 50	16. 30	12. 23	·1413			22. 0	59 ·5	59 ·3
5. 12	16. 0	15. 36	·1420			23. 0	59 ·7	59 ·7
5. 25	16. 40	15. 48	·1418					
6. 59	15. 30	16. 3	·1422					
8. 51	15. 30	16. 15	·1420					
9. 22	14. 0	18. 17	·1427					
9. 43	14. 10	19. 36	·1422					
9. 59	15. 20	20. 1	·1425					
11. 3	15. 30	21. 9	·1418					
11. 30	16. 0	21. 35	·1420					
11. 40	15. 30	22. 34	·1416					
13. 15	16. 0	23. 59	·1416					
14. 36	17. 0							
15. 36	18. 0							
15. 57	17. 10							
16. 10	18. 5							
16. 22	17. 40							
16. 32	18. 40							
16. 46	17. 25							
17. 47	16. 30							
19. 18	17. 55							
19. 42	17. 10							
20. 15	18. 0							
20. 27	17. 20							
20. 40	17. 30							
20. 47	17. 0							
21. 16	16. 45							
22. 3	17. 0							
23. 39	18. 25							
23. 59	18. 0							
Dec. 17		Dec. 17		Dec. 17		Dec. 17		
0. 0	20. 18. 0	0. 0	·1416	0. 0	·03420	0. 0	59 ·9	60 ·0
2. 44	17. 0	1. 59	·1423	7. 0	·03450	1. 0	59 ·7	59 ·8
5. 3	15. 50	5. 10	·1424	14. 10	·03419	2. 0	59 ·8	60 ·0
6. 30	16. 30	6. 12	·1418	14. 35	·03400	3. 0	59 ·9	60 ·2
8. 0	15. 45	8. 13	·1423	19. 45	·03379	6. 0	59 ·8	59 ·9
8. 14	13. 0	9. 10	·1418	23. 1	·03370	9. 0	59 ·6	59 ·7
8. 23	15. 20	9. 34	·1422	23. 59	·03376	21. 0	59 ·0	58 ·2

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 17		Dec. 17				Dec. 17		
h m	° ′ ″	h m		h m		h m	°	°
8. 37	20. 15. 0	10. 6	·1418			22. 0	59 ·2	58 ·6
8. 53	15. 50	10. 22	·1420			23. 0	59 ·9	59 ·2
9. 25	12. 45	10. 52	·1417					
10. 6	15. 40	11. 11	·1424					
10. 53	14. 25	11. 45	·1410					
10. 58	12. 50	12. 10	·1416					
11. 13	12. 55	12. 30	·1407					
11. 30	11. 0	12. 38	·1416					
12. 3	15. 30	12. 50	·1414					
12. 27	14. 30	13. 2	·1409					
12. 43	14. 30		***					
12. 59	15. 30	14. 16	·1428					
13. 30	15. 30	15. 0	·1418					
13. 49	17. 30	16. 12	·1417					
13. 51	17. 20	18. 24	·1425					
14. 15	20. 0	18. 45	·1421					
14. 55	15. 0	19. 5	·1424					
15. 8	16. 40	21. 12	·1414					
15. 59	16. 30	23. 12	·1413					
16. 12	17. 0	23. 59	·1413					
16. 23	16. 0							
17. 45	16. 50							
18. 21	16. 20							
18. 43	17. 0							
18. 51	16. 20							
19. 13	16. 55							
20. 40	16. 30							
21. 36	17. 5							
22. 16	18. 50							
23. 14	18. 30							
23. 59	18. 55							
Dec. 18		Dec. 18		Dec. 18		Dec. 18		
0. 0	20. 18. 55	0. 0	·1413	0. 0	·03376	0. 0	59 ·6	59 ·3
0. 35	19. 0	0. 34	·1414	6. 25	·03454	1. 0	..	59 ·6
3. 15	16. 55	2. 24	·1415	9. 50	·03445	2. 0	60 ·0	60 ·1
3. 36	17. 30	3. 12	·1411	11. 40	·03481	3. 0	59 ·8	59 ·9
5. 50	16. 30	4. 13	·1412	20. 13	·03494	6. 0	60 ·2	60 ·4
6. 16	16. 50	5. 48	·1405	23. 0	·03468	8. 0	60 ·0	60 ·4
6. 55	14. 30	6. 9	·1410	23. 59	·03465	9. 0	60 ·3	60 ·4
7. 36	17. 0	6. 40	·1404			21. 0	61 ·0	61 ·0
8. 0	16. 20	7. 0	·1408			22. 0	60 ·2	60 ·2
8. 14	16. 40	7. 56	·1408			23. 0	60 ·2	60 ·0
10. 23	15. 40	8. 22	·1404					
12. 15	17. 0	8. 58	·1404					
12. 45	17. 0	9. 12	·1400					
12. 57	17. 30	10. 12	·1401					
13. 7	17. 0	10. 25	·1404					
13. 38	16. 55	11. 10	·1402					
14. 43	18. 0	11. 23	·1404					
15. 7	17. 10	11. 54	·1400					
15. 30	18. 0	12. 40	·1400					
16. 43	17. 30	12. 52	·1402					
16. 59	18. 0	16. 59	·1402					
20. 15	17. 0	19. 0	·1407					
22. 30	17. 50	20. 55	·1407					
23. 9	18. 50	21. 19	·1399					
23. 59	19. 0	21. 26	·1406					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
		Dec. 18						
h m	° ′ ″	h m		h m		h m	°	°
		22. 6	·1399					
		23. 16	·1398					
		23. 59	·1399					
Dec. 19		Dec. 19		Dec. 19		Dec. 19		
0. 0	20. 19. 0	0. 0	·1399	0. 0	·03465	0. 0	60·2	60·2
0. 37	18. 30	1. 3	·1402	1. 35	·03465	1. 0	60·0	60·0
0. 46	19. 0	1. 11	·1399	4. 5	·03480	2. 0	60·2	60·2
4. 29	17. 20	2. 17	·1401	6. 31	·03509	3. 0	60·2	60·2
5. 6	16. 0	2. 34	·1404	9. 26	·03490	6. 0	60·4	60·4
5. 25	17. 0	5. 35	·1398	14. 5	·03498	9. 0	60·4	60·4
5. 50	15. 0	6. 10	·1404	19. 56	·03438	21. 0	59·7	58·7
6. 15	17. 0	7. 34	·1404	23. 0	·03420	22. 0	59·7	59·0
6. 40	16. 30	10. 10	·1401	23. 59	·03425	23. 0	60·1	59·5
6. 51	16. 30	11. 39	·1402					
7. 0	16. 0	12. 45	·1402					
7. 40	17. 10	13. 5	·1404					
9. 22	16. 55	13. 30	·1402					
9. 36	16. 30	16. 48	·1408					
9. 59	16. 55	16. 58	·1405					
12. 44	16. 30	20. 48	·1406					
12. 57	17. 25	21. 40	·1409					
13. 21	16. 30	23. 4	·1407					
13. 51	16. 55	23. 59	·1416					
14. 48	17. 0							
15. 25	17. 50							
19. 4	17. 20							
20. 1	17. 0							
21. 21	17. 30							
23. 5	17. 5							
23. 59	17. 0							
Dec. 20		Dec. 20		Dec. 20		Dec. 20		
0. 0	20. 17. 0	0. 0	·1416	0. 0	·03425	0. 0	60·1	59·3
0. 51	17. 20	5. 12	·1412	4. 2	·03465	1. 0	60·1	59·9
4. 44	16. 0	5. 44	·1407	6. 45	·03510	2. 0	60·6	59·9
5. 20	16. 50	7. 59	·1409	9. 38	·03520	3. 0	60·3	60·3
5. 57	15. 55	8. 58	·1406	12. 40	·03572	6. 0	61·3	62·0
8. 45	16. 0	9. 14	·1412	20. 3	·03636	8. 0	60·9	61·8
9. 31	15. 30	9. 27	·1406	23. 0	·03600	9. 0	60·9	61·9
10. 0	14. 0	9. 44	·1409	23. 59	·03580	21. 0	62·6	63·0
10. 17	14. 55	10. 9	·1406			22. 0	61·8	61·8
10. 32	14. 55	11. 5	·1408			23. 0	61·5	61·2
10. 43	14. 0	11. 20	·1405					
11. 0	14. 0	11. 43	·1408					
11. 10	14. 30	12. 2	·1406					
11. 23	14. 0	15. 33	·1410					
12. 5	15. 10	16. 59	·1417					
15. 34	16. 0	17. 10	·1413					
16. 58	17. 0	17. 22	·1416					
17. 10	16. 15	17. 40	·1414					
17. 21	16. 40	18. 28	·1416					
17. 36	15. 30	18. 47	·1411					
18. 48	15. 50	18. 52	·1415					
18. 52	17. 0	18. 58	·1409					
18. 58	15. 30	19. 3	·1415					
19. 11	16. 20	19. 37	·1409					
20. 8	18. 30	20. 10	·1408					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H.F. Magnet.	Of V.F. Magnet.
Dec. 20		Dec. 20						
h m	° ′ ″	h m		h m		h m	°	°
20. 30	20. 21. 20	20. 30	·1400					
21. 29	19. 50	20. 54	·1405					
22. 3	17. 15	21. 20	·1406					
22. 41	17. 30	21. 46	·1398					
23. 35	19. 25	22. 19	·1398					
23. 59	19. 30	22. 47	·1394					
		23. 59	·1394					
Dec. 21		Dec. 21		Dec. 21		Dec. 21		
0. 0	20. 19. 30	0. 0	·1394	0. 0	·03580	0. 0	61·2	60·8
0. 20	18. 20	0. 32	·1397	2. 10	·03550	1. 0	61·0	60·5
0. 32	18. 35	0. 49	·1394	8. 38	·03536	2. 0	60·7	60·2
1. 22	17. 0	1. 27	·1406	9. 10	·03512	3. 0	60·8	60·3
1. 30	18. 0	2. 7	·1402	12. 42	·03531	6. 0	60·8	60·2
2. 36	17. 10	2. 46	·1403	13. 10	·03502	7. 0	60·7	60·1
2. 46	18. 0	3. 12	·1399	14. 10	·03529	9. 0	60·9	60·5
3. 18	17. 10	3. 27	·1401	22. 10	·03570	21. 30	61·8	62·2
3. 37	18. 50	3. 40	·1396	23. 3	·03560			
3. 45	19. 0	3. 54	·1398	23. 59	·03559			
3. 59	20. 55	4. 22	·1384					
4. 30	20. 0	4. 37	·1390					
4. 44	20. 25	5. 42	·1404					
5. 0	18. 20	5. 59	·1400					
5. 20	17. 0	6. 44	·1405					
5. 35	17. 0	7. 12	·1398					
6. 17	18. 20	7. 28	·1406					
6. 39	17. 10	7. 59	·1403					
7. 14	16. 15	8. 14	·1398					
7. 30	13. 40	8. 46	·1425					
7. 41	14. 50	9. 8	·1411					
8. 14	14. 30	9. 59	·1403					
8. 25	14. 55	10. 18	·1408					
8. 45	8. 55	10. 58	·1404					
9. 0	9. 50	11. 19	·1407					
9. 15	8. 55	11. 59	·1404					
9. 30	9. 15	12. 24	·1409					
9. 58	13. 50	12. 57	·1425					
10. 7	13. 0	13. 27	·1403					
10. 20	13. 55	15. 22	·1405					
10. 45	13. 30	15. 43	·1401					
11. 22	15. 30	16. 20	·1407					
11. 33	14. 40	16. 56	·1402					
11. 48	15. 0	17. 34	·1412					
12. 9	13. 50	18. 22	·1416					
12. 52	15. 50	19. 24	·1410					
13. 21	11. 0	20. 57	·1410					
13. 51	15. 0	23. 12	·1404					
14. 59	15. 50	23. 59	·1406					
15. 14	14. 0							
15. 30	15. 0							
15. 39	17. 15							
16. 1	17. 15							
16. 14	16. 30							
16. 32	18. 0							
17. 8	18. 30							
17. 50	17. 0							
18. 50	17. 0							

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.
Dec. 21	
h m	° ′ ″
19. 6	20. 16. 30
19. 21	16. 55
21. 9	17. 0
21. 37	16. 45
22. 1	17. 30
23. 27	17. 50
23. 59	17. 20
Dec. 22	
0. 0	20. 17. 20
1. 52	17. 20
3. 16	15. 50
3. 29	16. 15
3. 50	15. 0
4. 8	16. 0
4. 23	15. 50
4. 40	16. 0
6. 29	15. 30
7. 3	16. 5
7. 26	15. 0
7. 40	10. 30
7. 48	10. 0
7. 51	9. 5
8. 5	8. 30
8. 25	12. 5
8. 49	12. 10
8. 59	14. 40
9. 19	14. 0
9. 36	15. 0
9. 59	13. 30
10. 28	13. 40
10. 35	14. 15
10. 59	13. 10
11. 20	14. 50
11. 29	14. 0
11. 56	15. 0
12. 14	14. 0
13. 5	16. 0
13. 48	17. 0
14. 1	16. 10
14. 52	16. 40
15. 5	15. 50
16. 30	15. 50
16. 44	16. 0
16. 48	15. 20
18. 24:	15. 50
20. 39	15. 10
21. 5	16. 55
21. 21	16. 0
21. 51	16. 5
22. 2	17. 0
22. 10	17. 0
22. 31	18. 20
22. 47	17. 30
23. 13	17. 15
23. 59	17. 0
Dec. 23	
0. 0	20. 17. 0
1. 12	18. 20
3. 21	17. 0
3. 34	14. 30
4. 11	16. 30
4. 46	15. 55
5. 0	16. 0
5. 11	15. 30
5. 25	16. 0
6. 35	15. 30
7. 39	16. 0
8. 4	14. 30
8. 48	14. 5
9. 8	15. 0
11. 22	15. 30
11. 40	15. 0
12. 49	16. 0
13. 4	15. 25
13. 37	18. 0
14. 15	14. 0
14. 33	15. 10
14. 45	15. 0
15. 46	16. 30
15. 58	16. 0
16. 10	16. 55
16. 19	16. 0
16. 36	15. 55
17. 10	15. 30
17. 29	17. 50
17. 51	17. 40
18. 26	16. 0
18. 46	16. 30
20. 39	16. 20
20. 59	15. 50
21. 20	16. 50
21. 41	16. 30
23. 19	21. 0
23. 59	18. 30
Dec. 24	
0. 0	20. 18. 30
1. 3	19. 0
2. 14	17. 10
4. 4	17. 5
	(†)
5. 57	16. 0
6. 19	15. 30
6. 51	16. 10
8. 16	16. 0
8. 36	12. 55
8. 56	11. 30
9. 17	11. 30
9. 47	14. 55
10. 2	13. 50
10. 15	13. 20
10. 25	12. 10
10. 44	12. 0
10. 48	11. 0

Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.
h m	
Dec. 22	
0. 0	·1406
0. 35	·1411
3. 15	·1414
3. 55	·1410
4. 37	·1416
5. 33	·1415
6. 41	·1412
7. 29	·1406
7. 55	·1409
8. 10	·1414
8. 40	·1400
10. 25	·1413
11. 16	·1408
11. 43	·1421
12. 10	·1414
12. 42	·1412
19. 47	·1418
21. 6	·1410
23. 8	·1408
23. 59	·1412
Dec. 23	
0. 0	·1412
3. 11	·1409
3. 34	·1403
5. 11	·1415
5. 26	·1412
5. 48	·1416
6. 5	·1413
6. 22	·1417
7. 17	·1414
8. 7	·1406
10. 28	·1413
11. 50	·1413
13. 24	·1417
13. 40	·1425
14. 18	·1424
14. 34	·1419
15. 13	·1415
17. 0	·1420
17. 21	·1416
18. 2	·1419
21. 18	·1414
22. 50	·1400
23. 54	·1410
	(†)
Dec. 24	
	(†)
5. 58	·1447
6. 41	·1446
7. 11	·1441
8. 12	·1439
8. 33	·1440
9. 14	·1444
9. 30	·1437
9. 47	·1443
10. 10	·1453
10. 30	·1446
10. 52	·1442
11. 20	·1441
11. 49	·1433
12. 18	·1434
12. 40	·1440
13. 20	·1440
13. 48	·1443

Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.
h m	
Dec. 22	
0. 0	·03559
6. 45	·03490
9. 25	·03490
11. 49	·03460
14. 55	·03440
21. 49	·03360
23. 59	·03390
Dec. 23	
0. 0	·03390
3. 3	·03440
	(†)

Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
h m	°	°
Dec. 22		
0. 0	60·4	60·5
0. 45	60·0	60·1
4. 30	59·8	59·9
6. 15	60·1	59·7
8. 30	60·2	59·5
10. 10	59·9	59·5
21. 0	58·8	57·9
22. 0	59·2	58·5
23. 0	59·4	59·0
Dec. 23		
0. 0	59·7	59·8
1. 0	59·8	60·5
2. 0	60·1	60·6
3. 0	59·9	60·5
6. 0	59·9	60·1
8. 15	59·8	60·3
9. 0	59·9	60·2
21. 0	60·0	60·5
22. 0	59·7	59·8
23. 0	59·7	59·8
Dec. 24		
0. 0	59·8	60·0
1. 0	60·3	60·4
3. 0	..	61·0
4. 0	..	61·0
5. 0	..	61·0
6. 0	60·8	60·8
9. 0	60·2	60·5
21. 45	60·0	60·1

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

December 23d. 23h. 54m. After this time the Horizontal Force Magnet was under its annual adjustments till 24d. 5h. 58m.

December 23d. 3h. The Vertical Force Magnet was examined by Mr. Simms; he found that the knife edge needed some attention, and therefore took the magnet away for thorough examination and repair.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 24		Dec. 24						
h m	° ′ ″	h m		h m		h m	°	°
11.11	20. 9.30	14. 0	·1442					
11.40	11.45	14.49	·1442					
11.50	11.20	15.41	·1444					
12.13	14. 0	17. 4	·1451					
12.49	14.55	17.27	·1450					
13. 0	14. 0	19.10	·1449					
13.45	17.55	19.16	·1446					
14. 5	17.30	19.23	·1449					
14.21	18.10	19.31	·1446					
14.45	18. 0	19.39	·1447					
16.50	17.30	19.49	·1445					
17. 7	17. 0	20.29	·1448					
17.40	17.40	20.42	·1445					
19.16	16.50	21.35	·1445					
19.25	17.30	22. 2	·1441					
19.30	16. 0	22.20	·1441					
19.48	17. 5	22.28	·1446					
20.46	15.50	23. 0	·1445					
21.40	17. 0	23.59	·1441					
22.28	17.40							
23.49	18.20							
23.56	19. 0							
23.59	19. 0							
Dec. 25		Dec. 25				Dec. 25		
0. 0	20. 19. 0	0. 0	·1441			0. 0	59·8	59·6
0.44	19. 0	0.22	·1441			8. 0	59·6	59·9
0.51	19.30	1.39	·1448			21. 0	59·8	59·8
1.15	19.20	2.51	·1450			22. 0	59·8	59·8
1.25	18.35	4.54	·1450			23. 0	59·9	59·9
2. 0	18.30	5. 4	·1447					
5.35	15.45	5.13	·1451					
6.38	16.20	5.30	·1448					
8.30	15.30	5.49	·1451					
8.50	13.55	5.55	·1449					
9.10	15.30	6. 0	·1451					
10.19	15. 0	6. 5	·1448					
12. 8	16. 0	6.12	·1451					
12.29	15.55	6.20	·1447					
13.10	17. 0	7.14	·1449					
13.27	16.30	7.32	·1447					
14. 3	17.40	7.48	·1449					
14.24	17.20	8.50	·1449					
15.26	18. 0	9. 8	·1446					
16.20	17.30	9.32	·1449					
20. 8	16.45	9.51	·1447					
20.25	16. 0	10. 8	·1451					
20.33	16.50	11.19	·1447					
20.54	16.10	11.31	·1449					
21.24	17. 0	12.27	·1448					
22.41	18.40	12.38	·1451					
22.50	18.30	12.50	·1447					
23.21	19. 0	14. 1	·1450					
23.59	18.55	14.18	·1447					
		15. 5	·1447					
		16.40	·1451					
		19.58	·1449					
		20.19	·1445					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
		Dec. 25						
h m	° ′ ″	h m		h m		h m	°	°
		20.32	·1449					
		23.10	·1441					
		23.25	·1444					
		23.59	·1446					
Dec. 26		Dec. 26				Dec. 26		
0. 0	20. 18.55	0. 0	·1446			0. 0	59·9	60·0
0.20	18.25	1.27	·1452			1. 0	59·9	59·9
2.27	17.55	1.32	·1450			2. 0	59·8	59·8
3. 4	18. 0	1.40	·1452			3. 0	60·0	60·2
3.30	15.40	3.17	·1452			6. 0	60·0	60·0
4.31	15.30	3.33	·1473			9. 0	60·3	60·4
4.59	14. 0	4.17	·1472			21. 0	60·9	60·7
5.25	15. 5	4.31	·1473			22. 0	60·6	60·4
5.59	15.25	4.46	·1467			23. 0	60·6	60·4
6.26	14.30	5. 7	·1472					
6.51	14.55	6.37	·1470					
10.21	14.15	6.43	·1472					
10.36	13.50	7.57	·1472					
12.45	14.10	9.20	·1468					
13. 4	14.50	10.12	·1469					
14.21	16. 5	10.23	·1466					
20.21	15. 0	10.44	·1466					
21.28	14. 5	13.11	·1469					
22. 3	15.30	13.56	·1468					
22.43	15.30	14.21	·1471					
	(†)	14.42	·1468					
		16. 2	·1470					
		18.18	·1473					
		19.30	·1475					
		20.40	·1473					
		21.47	·1475					
		21.53	·1464					
		23.14	·1466					
		23.59	·1476					
Dec. 27		Dec. 27				Dec. 27		
	(†)	0. 0	·1476			0. 0	60·6	60·4
1. 0	20. 12.38*	0.50	·1485			1. 0	60·6	60·4
3. 0	12.42*	1.30	·1486			2. 0	60·7	60·7
5.35	17.25	1.42	·1481			3. 0	60·8	60·8
5.50	18.10	2.22	·1469			5.30	61·0	60·9
6.20	15.15	2.43	·1470			6. 0	60·9	60·6
6.50	13. 0	3.28	·1475			9. 0	60·5	60·0
6.55	13.25	3.38	·1472			21. 0	60·1	59·4
7. 9	12.45	4. 6	·1479			22.30	60·9	60·7
7.25	13.40	4.29	·1475			23. 0	59·6	59·0
7.32	15.25	4.50	·1487			23.30	60·0	59·5
7.42	15. 0	5.22	·1485					
7.49	15.40	5.40	·1473					
8.25	14. 0	6.13	·1474					
8.31	13. 0	6.47	·1470					
8.39	13.20	7.21	·1477					
8.51	12.40	7.52	·1462					
8.59	13. 0	8.40	·1477					
9.14	12. 0	9.23	·1474					
10. 7	11.10	9.32	·1479					
10.14	11.40	9.42	·1476					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol : attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

December 26. Between $3^h. 17^m.$ and $3^h. 33^m.$, the Upper Declination Magnet was removed for cleaning, &c., and exercised an influence upon the Horizontal Force Magnet, so as to cause it to change its place by about 0·002, and to continue afterwards in this position; therefore the series beginning this day at $3^h. 33^m.$ is about 0·002 greater than that ending $3^h. 17^m.$

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 27		Dec. 27						
h m	° ′ ″	h m		h m		h m	°	°
10. 21	20. 11. 0	9. 51	·1479					
10. 36	11. 50	10. 3	·1475					
10. 46	10. 20	10. 22	·1480					
11. 1	14. 55	10. 30	·1477					
11. 28	11. 30	10. 49	·1477					
11. 40	11. 0	11. 0	·1488					
12. 11	12. 50	11. 30	·1474					
12. 20	12. 30	12. 9	·1480					
12. 30	12. 55	12. 20	·1476					
12. 40	10. 55	12. 33	·1481					
12. 58	11. 0	13. 12	·1474					
13. 13	12. 40	13. 27	·1480					
13. 44	11. 20	13. 41	·1477					
13. 58	13. 0	13. 52	·1477					
14. 18	10. 50	14. 18	·1473					
14. 27	11. 30	14. 52	·1473					
14. 43	11. 40	14. 57	·1476					
14. 47	10. 30	15. 18	·1475					
15. 20	10. 0	15. 28	·1478					
15. 29	13. 10	15. 40	·1474					
15. 42	11. 0	16. 8	·1483					
15. 58	9. 20	16. 19	·1480					
16. 14	11. 30	16. 33	·1484					
17. 14	10. 50	18. 30	·1487					
17. 43	10. 55	18. 41	·1477					
18. 6	10. 5	18. 50	·1481					
18. 17	11. 0	19. 20	·1464					
18. 31	10. 15	19. 52	·1486					
18. 39	11. 50	20. 0	·1483					
8. 50	10. 10	20. 12	·1487					
9. 5	14. 50		***					
9. 14	14. 40	20. 36	·1487					
9. 25	16. 45	20. 50	·1494					
19. 41	14. 30	21. 0	·1493					
19. 51	17. 0	21. 9	·1484					
19. 57	16. 0	21. 22	·1489					
20. 24	15. 50	21. 43	·1485					
20. 31	14. 10	21. 50	·1476					
20. 42	14. 40	22. 0	·1484					
20. 56	12. 10	22. 6	·1477					
21. 3	12. 10	22. 32	·1481					
21. 14	13. 0		(†)					
21. 27	13. 0	23. 19	·1473					
21. 42	14. 0	23. 40	·1465					
21. 48	12. 0		(†)					
21. 56	14. 0							
22. 0	13. 25							
22. 20	16. 0							
22. 32	15. 50							
	(†)							
23. 20	17. 30							
23. 42	17. 20							
23. 59	17. 0							
Dec. 28		Dec. 28				Dec. 28		
0. 0	20. 17. 0		(†)			0. 0	60·5	60·2
0. 9	16. 5	0. 10	·1464			1. 0	60·2	60·3
0. 24	18. 40	0. 20	·1470			2. 0	60·2	60·3

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 28		Dec. 28				Dec. 28		
h m	° ′ ″	h m		h m		h m	°	°
0. 30	20. 17. 0	0. 25	·1466			3. 0	60·2	60·3
0. 43	16. 40	0. 43	·1476			6. 0	60·5	60·9
0. 51	17. 30	1. 17	·1476			9. 0	60·8	61·4
1. 10	15. 10	1. 50	·1484			22. 0	59·6	59·8
1. 25	16. 0	2. 13	·1477					
1. 35	15. 30	2. 32	·1486					
1. 57	17. 10	2. 58	·1482					
2. 1	16. 0	3. 40	·1468					
2. 9	17. 30	3. 52	·1475					
2. 31	17. 0	4. 5	·1470					
2. 44	18. 50	4. 22	·1485					
3. 0	19. 30	4. 49	·1474					
3. 15	18. 30	5. 4	·1472					
3. 35	18. 40	5. 22	·1464					
3. 47	16. 10	5. 41	·1471					
4. 0	15. 20	5. 57	·1463					
4. 15	8. 50	6. 12	·1496					
4. 25	8. 0	6. 24	·1494					
4. 50	15. 45	6. 34	·1468					
5. 0	12. 50	6. 58	·1503					
5. 10	15. 0	7. 23	·1475					
5. 20	15. 0	7. 39	·1461					
5. 25	16. 55	7. 52	·1472					
5. 30	16. 5	8. 32	·1460					
5. 35	17. 0	9. 0	·1458					
5. 40	16. 20	9. 18	·1506					
5. 46	17. 10	10. 0	·1473					
5. 57	15. 45	10. 18	·1471					
6. 16	0. 0	10. 28	·1473					
6. 22	4. 40	10. 42	·1462					
6. 29	6. 30	10. 57	·1465					
6. 42	12. 35	11. 30	·1456					
6. 55	0. 50	12. 2	·1476					
7. 9	8. 15	12. 21	·1468					
7. 14	18. 10	12. 33	·1470					
7. 22	10. 40	12. 49	·1465					
7. 38	12. 40	13. 9	·1465					
7. 56	8. 50	13. 13	·1468					
8. 4	11. 0	13. 25	·1466					
8. 25	9. 30	13. 37	·1471					
8. 35	10. 30	14. 0	·1472					
8. 45	10. 0	14. 11	·1480					
8. 57	10. 40	14. 36	·1474					
9. 3	9. 30	15. 5	·1475					
9. 26	5. 0	16. 2	·1468					
9. 36	9. 15	16. 30	·1474					
9. 44	9. 0	16. 44	·1473					
9. 50	11. 50	17. 18	·1476					
10. 2	11. 50	17. 58	·1473					
10. 12	9. 20	18. 6	·1481					
10. 32	4. 5	18. 57	·1474					
10. 46	6. 25	20. 1	·1478					
10. 56	5. 30	20. 23	·1474					
11. 27	12. 30	20. 39	·1474					
11. 48	11. 30	21. 52	·1470					
11. 52	11. 45	22. 28	·1464					
12. 3	11. 0	22. 52	·1454					
12. 7	10. 20	23. 21	·1455					

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 28		Dec. 28						
h m	° ′ ″	h m		h m		h m	°	°
12. 59	20. 10. 0	23. 42	·1457					
13. 28	14. 0	23. 59	·1452					
13. 58	11. 0							
14. 27	15. 45							
14. 51	13. 0							
15. 0	13. 20							
15. 4	11. 50							
15. 9	11. 30							
15. 14	13. 20							
15. 26	12. 30							
15. 32	12. 50							
15. 46	12. 0							
16. 13	12. 30							
16. 20	13. 40							
	***							
17. 49	13. 45							
17. 59	14. 30							
18. 7	13. 0							
18. 25	13. 55							
20. 5	15. 0							
20. 21	14. 0							
20. 36	14. 0							
21. 8	13. 30							
21. 17	13. 55							
21. 25	13. 30							
21. 59	15. 0							
22. 23	14. 0							
22. 55	16. 20							
23. 7	15. 10							
23. 21	15. 10							
23. 29	17. 15							
23. 32	15. 55							
23. 44	17. 5							
23. 51	15. 45							
23. 59	17. 20							
Dec. 29		Dec. 29				Dec. 29		
0. 0	20. 17. 20	0. 0	·1452			0. 0	59·9	60·2
0. 13	16. 55	0. 17	·1465			1. 0	. .	60·2
0. 21	18. 0	0. 32	·1465			8. 0	60·2	60·4
0. 35	16. 30	0. 43	·1462			21. 0	59·8	60·3
0. 42	18. 0	0. 57	·1470			22. 0	59·8	60·0
1. 4	14. 0	1. 16	·1463			23. 0	59·8	60·0
1. 37	16. 0	1. 31	·1470					
1. 51	15. 0	2. 30	·1475					
2. 4	16. 0	3. 1	·1471					
2. 35	16. 10	3. 12	·1474					
3. 15	15. 0	3. 50	·1473					
3. 29	13. 40	4. 1	·1476					
4. 30	14. 0	4. 40	·1474					
5. 2	13. 45	4. 50	·1476					
5. 29	11. 25	5. 23	·1471					
5. 49	13. 50	6. 0	·1474					
6. 20	13. 45	6. 38	·1472					
6. 36	13. 0	7. 11	·1474					
7. 7	13. 45	7. 41	·1468					
7. 30	13. 0	8. 17	·1466					
8. 0	10. 0	8. 31	·1470					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Readings of Thermometers. Of V. F. Magnet.
Dec. 29		Dec. 29						
h m	° ′ ″	h m		h m		h m	°	°
8. 22	20. 9. 20	8. 52	·1468					
8. 30	10. 50	9. 10	·1470					
8. 40	10. 20	9. 53	·1472					
8. 59	10. 50	10. 51	·1466					
9. 39	11. 0	11. 27	·1475					
10. 46	12. 20	11. 58	·1472					
11. 15	9. 50	12. 11	·1475					
11. 30	11. 50	12. 26	·1473					
12. 7	10. 20	13. 11	·1466					
12. 30	11. 30	13. 24	·1471					
12. 46	10. 10	14. 0	·1468					
13. 59	10. 55	14. 32	·1472					
14. 17	11. 50	14. 52	·1469					
14. 36	13. 0	16. 20	·1470					
14. 46	12. 30	16. 59	·1477					
15. 31	14. 0	17. 21	·1474					
16. 5	13. 0	18. 10	·1474					
16. 59	17. 0	19. 9	·1475					
17. 8	17. 0	19. 46	·1476					
17. 30	14. 10	23. 10	·1473					
20. 2	14. 10	23. 32	·1478					
20. 16	14. 50	23. 59	·1476					
20. 35	13. 50							
20. 51	14. 10							
20. 57	13. 0							
21. 2	14. 20							
22. 35	15. 45							
23. 0	15. 0							
23. 59	15. 30							
Dec. 30		Dec. 30				Dec. 30		
0. 0	20. 15. 30	0. 0	·1476			0.⁏ 0	59·8	60·0
0. 29	17. 0	1. 21	·1479			1. 0	59·9	60·0
0. 43	16. 0	1. 38	·1476			2. 0	60·2	60·8
1. 2	17. 0	2. 0	·1479			3. 0	60·2	61·0
1. 50	15. 55	2. 58	·1460			4. 0	59·5	60·4
2. 8	16. 30	3. 13	·1471			6. 0	59·8	59·9
2. 29	15. 55	3. 51	·1472			9. 0	60·0	60·0
2. 37	16. 0	4. 2	·1478			21. 0	59·2	58·7
2. 57	13. 50	4. 40	·1470			22. 0	59·8	59·8
3. 6	11. 45	5. 29	·1476			23. 0	59·8	59·8
3. 18	11. 30	7. 3	·1473					
3. 46	15. 0	7. 23	·1477					
3. 50	14. 0	7. 49	·1472					
4. 6	15. 50	8. 18	·1489					
4. 13	14. 0	8. 50	·1478					
4. 20	15. 0	9. 38	·1474					
5. 29	13. 55	10. 39	·1476					
5. 51	14. 40	11. 12	·1473					
6. 17	14. 0	11. 54	·1475					
6. 30	14. 50	12. 35	·1473					
7. 28	12. 50	12. 59	·1476					
7. 50	14. 0	14. 2	·1474					
8. 20	8. 30	14. 14	·1478					
8. 33	10. 0	14. 40	·1474					
8. 51	9. 30	15. 0	·1476					
9. 35	13. 0	15. 17	·1474					
10. 0	13. 20	15. 32	·1478					

The indications are taken from the sheets of the Photographic Record, except where an asterisk is attached to the number, in which instances they are inferred from observations made with the telescope in the ancient manner. The Symbol *** denotes that the magnet has been generally in a state of agitation. The Symbol (†) denotes that the register has failed between the preceding and following readings. The Symbol ⁏ attached to a time denotes that the reading will apply equally well to a considerable range of time near that which is recorded. A brace denotes that at this time the curve of the Vertical Force was dislocated, and the difference of the numbers included by the brace shows the amount of the displacement.

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 30		Dec. 30						
h m	° ′ ″	h m		h m		h m	°	°
11. 20	20. 12. 0	15. 50	·1476					
11. 40	12. 30	16. 22	·1481					
11. 56	12. 0	18. 5	·1480					
13. 13	13. 30	18. 59	·1477					
13. 40	13. 30	19. 22	·1482					
14. 1	15. 0	20. 15	·1475					
14. 21	13. 30	20. 28	·1479					
14. 40	15. 0	21. 31	·1475					
14. 59	14. 0	22. 1	·1477					
15. 13	15. 5		(†)					
15. 32	14. 0							
16. 3	14. 0							
16. 25	12. 30							
17. 22	11. 55							
17. 37	12. 50							
18. 25	12. 50							
18. 35	13. 55							
18. 42	13. 20							
20. 10	13. 55							
20. 20	13. 0							
20. 45	13. 5							
20. 52	13. 40							
21. 21	12. 30							
21. 30	13. 5							
21. 40	13. 0							
23. 10	14. 30							
23. 30	15. 50							
23. 45	15. 0							
23. 52	15. 30							
23. 59	15. 0							
Dec. 31		Dec. 31				Dec. 31		
0. 0	20. 15. 0		(†)			1. 0	49·6	49·0
0. 22	14. 0	9. 47	·1472			2. 0	51·3	50·9
1. 52	16. 40	9. 58	·1470			3. 0	55·5	54·6
2. 6	15. 10	10. 6	·1473			6. 0	57·2	57·7
2. 17	16. 20	10. 21	·1464			9. 0	58·8	59·2
2. 22	14. 30	10. 41	·1474			9. 30	58·7	59·2
2. 45	15. 0	11. 2	·1467			21. 0	58·7	58·3
3. 12	14. 0	12. 12	·1470			22. 0	58·7	58·3
3. 27	14. 55	12. 20	·1474					

Greenwich Mean Solar Time.	Western Declination.	Greenwich Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Greenwich Mean Solar Time.	Readings of Thermometers. Of H. F. Magnet.	Of V. F. Magnet.
Dec. 31		Dec. 31						
h m	° ′ ″	h m		h m		h m	°	°
3. 40	20. 14. 30	12. 40	·1469					
3. 47	15. 0	13. 10	·1487					
4. 5	14. 0	14. 1	·1475					
7. 0	13. 50	14. 52	·1472					
7. 15	14. 0	15. 28	·1476					
7. 41	13. 20	16 43	·1479					
9. 17	12. 0	18. 5	·1477					
9. 28	12. 20	18. 57	·1482					
9. 35	11. 30	19. 34	·1477					
9. 50	11. 0	19. 47	·1480					
10. 8	9. 30	20. 49	·1468					
10. 15	10. 0	22. 11	·1475					
10. 34	10. 0		(†)					
10. 41	9. 30							
10. 51	11. 30							
11. 9	10. 30							
11. 37	11. 30							
11. 58	11. 0							
12. 18	11. 30							
12. 25	12. 0							
12. 36	11. 0							
12. 49	11. 50							
13 3	11. 50							
13. 26	12. 0							
13. 38	10. 0							
13. 57	11. 0							
14. 28	8. 30							
15. 44	13. 10							
16. 20	11. 40							
16. 51	12. 40							
17. 10	12. 10							
17. 25	13. 20							
18. 42	15. 30							
18. 55	15. 0							
20. 30	15. 20							
20. 55	14. 30							
21. 48	16. 0							
22. 15	15. 30							
22. 30	14. 30							
23. 5	14. 0							
23. 59	14. 45							

For the Horizontal and Vertical Forces, increasing readings denote increasing forces.

December 31. Experiments for ascertaining the effect of temperature on the position of the Horizontal Force Magnet were began on this day.

TABLE showing the APPROXIMATE MEAN MONTHLY DECLINATION, at the ROYAL OBSERVATORY, GREENWICH, in the Year 1867.

MONTH.	1867.
	° ′ ″
January	20. 22. 0
February	21. 20
March	23. 26
April	23. 8
May	21. 57
June	20. 27
July	19. 54
August	19. 36
September	18. 57
October	18. 50
November	17. 50
December	16. 3
Mean	20. 20. 17

ROYAL OBSERVATORY, GREENWICH.

INDICATIONS OF THE GALVANOMETERS

MEASURING SPONTANEOUS GALVANIC CURRENTS

THROUGH WIRES

CONNECTING GREENWICH WITH DARTFORD

AND GREENWICH WITH CROYDON,

ON SEVENTEEN DAYS,

IN THE YEARS

1865, 1866, 1867.

INDICATIONS of the GALVANOMETERS measuring SPONTANEOUS GALVANIC CURRENTS at the Royal Observatory, Greenwich, in the Year 1865.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.	Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1865, Oct. 5			1865, Oct. 5		
h m			h m		
0. 0	0·00635	0·00185	8. 24	0·00636	0·00501
0. 15	635	200	8. 29	630	455
0. 22	628	304	8. 35	622	551
0. 36	620	239	8. 40	630	390
0. 43	620	140	9. 1	610	370
0. 56	626	325	9. 6	612	325
1. 5	635	039	9. 10	610	429
1. 11	618	265	9. 15	618	330
1. 27 Z	628	296	9. 22	615	437
2. 42 Z	628	296	9. 24	618	385
2. 43	628	100	9. 27	625	226
2. 48	590	381	9. 28	620	721
3. 12	625	116	9. 34	630	527
3. 16	625	188	9. 37	565	593
3. 18	625	113	9. 54	680	121
3. 21	625	204	9. 58	700	+ 306
3. 23	625	139	10. 7	640	− 139
3. 29	625	211	10. 24	562	+ 1195
3. 33	625	169	10. 46	785	− 511
3. 38	625	266	11. 5	600	+ 388
3. 45	627	131	11. 10	625	308
3. 51	626	185	11. 15	605	380
3. 57	620	110	11. 24	623	298
3. 59	620	195	11. 27	623	381
4. 10	620	197	11. 31	628	308
4. 12	620	319	11. 38	618	370
4. 16	610	214	11. 39	618	282
4. 25	580	691	11. 45	628	375
4. 33	706	296	12. 5	668	099
4. 35	662	+ 440	12. 9	646	235
4. 43	705	− 107	12. 18	628	215
4. 45	600	+ 305	12. 19	628	266
4. 52	616	213	12. 30	627	184
4. 58	590	+ 740	13. 2	628	226
5. 11	686	− 093	13. 7	634	150
5. 32	580	+ 622	13. 12	628	185
5. 48	665	185	13. 14	628	160
5. 56	616	279	13. 16	628	225
6. 1	610	240	13. 22	618	151
6. 5	600	282	13. 27	618	255
6. 11	598	254	13. 36	618	110
6. 14	595	435	13. 47	629	238
6. 20	630	300	13. 54	640	195
6. 27	575	701	14. 4	640	162
6. 35	770	042	14. 9	630	215
6. 44	605	+ 528	14. 13	632	165
6. 57	730	− 029	14. 21	645	221
7. 5	658	− 149	14. 32	635	026
7. 15	580	+ 236	14. 37	630	131
7. 24	590	382	14. 42	630	079
7. 35	620	307	14. 45	632	130
7. 43	620	561	14. 48	638	070
7. 52	630	346	14. 59	636	240
7. 57	650	378	15. 32	616	310
8. 0	640	345	15. 38	619	288
8. 9	620	449	15. 46	620	350
8. 16	620	300	15. 58	634	168

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1865, Oct. 5		
h m		
16. 10	0·00644	0·00310
16. 24	620	669
16. 26	670	226
16. 29	625	390
16. 31	625	128
16. 37	625	265
16. 41	626	188
16. 48	625	257
16. 54	628	222
17. 0	625	310
17. 4	626	230
17. 10	635	270
17. 17	629	164
17. 23	623	230
17. 28	616	179
17. 45	608	+ 320
18. 8	602	− 145
18. 21	615	+ 242
18. 27	631	117
18. 36	620	430
18. 44	625	265
19. 7	638	310
19. 14	638	235
19. 20	635	413
19. 25	630	265
19. 28	654	503
19. 30	655	328
19. 33	650	620
19. 44	626	270
19. 50	615	235
20. 2	618	355
20. 6	620	313
20. 8	624	370
20. 16	632	210
20. 17	632	362
20. 24	634	300
20. 32	630	525
20. 39	630	329
20. 44	624	376
20. 52	620	215
20. 57	620	323
21. 15	630	452
21. 27 Z	628	300
21. 39 Z	628	300
21. 41	630	270
21. 46	630	430
21. 57	616	165
22. 3	606	327
22. 8	615	212
22. 18	625	333
22. 25	625	250
22. 35	605	390
22. 48	610	255
22. 57	613	398
23. 6	619	241
23. 13	619	424
23. 26	615	225

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1865, Oct. 5		
h m		
23. 30	0·00620	0·00519
23. 44	655	085
23. 46	630	260
23. 51	635	090
23. 57	640	210
23. 59	636	118
Oct. 31		
0. 3	0·00610	0·00400
0. 5	612	650
0. 9	620	405
0. 12	620	545
0. 22	630	202
0. 28	630	360
0. 36	630	069
0. 40	630	325
0. 50	630	145
0. 52	630	075
0. 54	630	291
0. 58	620	166
1. 1	620	295
1. 5	630	061
1. 11	610	280
1. 13	600	165
1. 23	580	351
1. 33 Z	638	339
2. 3 Z	638	339
2. 5	640	266
2. 20	625	443
2. 23	625	180
2. 29	590	505
2. 39	650	079
2. 48	590	390
2. 59	586	150
3. 14	555	465
3. 24	630	287
3. 38	636	483
3. 48	630	201
4. 5	600	465
4. 19	625	279
4. 29	620	360
4. 42	620	228
4. 47	620	260
4. 53	615	235
4. 57	616	270
5. 7	621	401
5. 16	640	290
5. 28	610	371
5. 39	626	343
5. 44	625	425
5. 50	620	372
5. 59	610	546
6. 4	660	320
6. 11	630	401
6. 15	640	251
6. 37	615	419

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.	Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1865, Oct. 31			1865, Oct. 31		
h m			h m		
6. 44	0·00650	0·00350	15. 6	00·0585	0·00401
6. 49	630	395	15. 29	605	323
6. 56	625	301	15. 37	615	213
7. 15	620	513	15. 49	625	290
7. 18	665	445	15. 55	620	270
7. 25	790	785	15. 59	620	305
7. 43	710	+ 174	16. 5	620	269
7. 48	655	− 617	16. 10	620	311
7. 53	625	+ 174	16. 15	625	269
8. 11	635	604	16. 19	630	310
8. 15	655	350	16. 33	630	206
8. 25	660	511	16. 35	635	233
8. 43	596	272	16. 47	635	187
8. 46	618	439	16. 50	635	208
8. 54	620	370	16. 55	622	186
8. 58	622	389	17. 3	620	255
9. 2	620	322	17. 14	620	198
9. 8	618	365	17. 18	610	215
9. 19	618	265	17. 30	596	296
9. 28	590	365	17. 39	600	415
9. 41	630	218	17. 47	605	464
9. 44	625	285	17. 54	596	405
9. 53	640	255	18. 2	610	406
10. 6	610	363	18. 7	600	344
10. 15	640	295	18. 12	590	303
10. 25	627	355	18. 30	618	475
10. 34	630	291	18. 36	625	303
10. 36	625	312	18. 44	630	525
10. 46	630	230	18. 54	610	326
10. 55	622	284	19. 3	656	473
11. 3	618	250	19. 13	570	191
11. 6	620	290	19. 18	590	298
11. 17	620	222	19. 28	630	341
11. 30	600	289	19. 34	636	230
11. 41	655	123	19. 37	630	300
11. 57	620	315	19. 45	620	190
12. 5	620	280	19. 51	610	287
12. 10	620	296	20. 19	620	402
12. 20	620	265	20. 24	620	320
12. 30	625	315	20. 30	625	386
12. 37	623	225	20. 35	620	322
12. 41	618	250	20. 37	620	421
12. 44	620	205	20. 41	620	319
12. 45	621	245	20. 48	623	360
12. 51	620	215	20. 53	620	290
13. 6	610	326	21. 10	625	370
13. 20	625	286	21. 35	628	203
13. 23	625	307	21. 37	630	345
13. 29	625	262	21. 40	630	235
13. 35	616	290	21. 45	640	345
14. 5	625	306	21. 48	640	172
14. 11	620	275	21. 51	640	350
14. 19	620	310	21. 52	640	126
14. 29	620	287	21. 59	630	375
14. 44	620	330	22. 2	630	205
14. 48	625	311	22. 5	630	364

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1865, Oct. 31		
h m		
22. 8	0·00630	0·00270
22. 12 Z	650	338
22. 35 Z	650	338
22. 37	608	268
22. 42	600	405
22. 56	595	360
22. 59	595	478
23. 1	590	386
23. 9	590	465
23. 15	580	365
23. 21	565	633
23. 27	600	375
23. 30	600	602
23. 45	620	180
23. 50	625	453
23. 52	625	204
23. 59	625	333
1866, Oct. 4		
0. 0	0·00645	0·00445
0. 4	645	155
0. 15	645	566
0. 19	645	500
0. 23	645	568
0. 30	634	450
0. 39	643	500
0. 43	643	477
0. 47	643	500
0. 50	643	453
0. 54	643	476
1. 18	645	152
1. 30	633	588
1. 37	642	346
1. 47	626	656
1. 56	654	451
2. 0 Z	664	679
2. 18 Z	664	679
2. 18	654	235
2. 26	640	533
2. 31	650	444
2. 40	636	580
2. 43	628	446
2. 47	628	580
2. 54	620	473
3. 0	625	637
3. 2	624	416
3. 4	622	462
3. 6	620	417
3. 8	619	522
3. 15	620	668
3. 22	640	732
3. 30	630	524
3. 33	630	650
3. 37	624	549
3. 42	645	549
3. 47	645	292

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1866, Oct. 4		
h m		
3. 54	0·00640	0·00530
3. 57	615	435
4. 12	706	754
4. 14	695	312
4. 17	675	390
4. 20	600	080
4. 30	660	673
4. 35	645	596
4. 40	655	620
4. 42	649	506
4. 57	670	755
4. 58	664	558
5. 3	680	667
5. 6	760	500
5. 8	760	655
5. 10	756	504
5. 13	740	+ 638
5. 36	535	− 138
5. 52	650	+ 994
5. 57	633	480
6. 8	650	627
6. 16	650	603
6. 26	656	453
6. 33	640	540
6. 40	626	483
6. 52	657	726
6. 57	668	714
7. 6	660	512
7. 8	655	528
7. 14	630	394
7. 21	650	498
7. 30	665	589
7. 34	665	509
7. 40	643	634
7. 45	630	453
7. 48	630	480
7. 50	645	442
7. 57	656	544
7. 59	660	475
8. 6	660	673
8. 11	655	499
8. 16	660	515
8. 25	670	575
8. 40	630	438
8. 56	670	770
9. 0 Z	670	673
9. 7 Z	670	673
9. 10	730	585
9. 15	760	+ 653
9. 26	707	− 074
9. 36	642	− 750
9. 46	600	− 074
10. 14	730	+ 1438
10. 34	625	116
10. 38	625	424
10. 44	620	366
11. 0	625	730

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted, and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.	Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1866, Oct 4			1866, Oct. 4		
h m			h m		
11. 3	0·00630	0·00680	16. 54	0·00635	0·00588
11. 12	650	749	17. 0	638	416
11. 26	638	500	17. 6	635	457
11. 30	645	462	17. 11	635	416
11. 40	635	651	17. 15	635	492
11. 50	640	590	17. 17	635	417
11. 54	638	605	17. 22	640	507
12. 0	640	530	17. 31	646	514
12. 3	610	463	17. 43	640	591
12. 10	610	541	17. 47	640	555
12. 11	610	300	17. 57	640	657
12. 16	616	390	18. 11	640	540
12. 19	630	355	18. 16	640	586
12. 23	650	425	18. 24	630	466
12. 31	650	405	18. 31	650	666
12. 36	652	325	18. 35	658	570
12. 41	650	400	18. 38	660	655
12. 48	652	450	18. 41	665	530
12. 51	655	437	18. 46	665	605
13. 4	648	555	18. 59	655	358
13. 7	648	520	19. 7	655	480
13. 22	650	635	19. 10	650	319
13. 25	653	573	19. 26	620	530
13. 30	653	620	19. 28	620	386
13. 43	650	314	19. 37	620	579
13. 46	645	423	19. 57	628	630
13. 50	640	412	20. 12	630	492
13. 57	638	520	20. 18	630	629
14. 1	638	414	20. 25	635	525
14. 4	638	498	20. 30	640	552
14. 6	635	414	20. 35	640	492
14. 14	625	520	20. 37	640	540
14. 18	632	457	20. 44	640	407
14. 23	625	550	20. 48	645	473
14. 26	630	409	20. 55	635	444
14. 33	640	559	21. 5	640	530
14. 40	636	421	21. 16 Z	665	670
14. 43	640	452	21. 27 Z	665	670
14. 45	643	432	21. 30	640	412
14. 47	643	468	21. 48	640	595
14. 49	650	410	21. 53	635	470
14. 56	653	513	21. 58	625	635
15. 2	660	477	22. 1	625	444
15. 7	655	530	22. 14	620	611
15. 12	640	428	22. 17	630	440
15. 16	650	512	22. 25	645	580
15. 18	670	487	22. 40	640	305
15. 26	648	600	22. 50	630	586
15. 30	635	486	22. 52	640	405
15. 43	650	623	22. 57	640	570
15. 58	623	445	23. 4	638	466
16. 6	630	557	23. 12	650	575
16. 31	635	573	23. 14	650	429
16. 36	625	476	23. 21	640	493
16. 43	630	558	23. 37	650	425
16. 51	635	455	23. 43	636	500

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, April 4		
h m		
0. 0	0·00816	0·00278
0. 1	816	381
0. 19	818	342
0. 26	815	449
0. 33	816	080
0. 47	818	115
0. 53	819	180
0. 55	815	495
0. 57	815	419
1. 1	810	706
1. 30	822	089
1. 39	820	309
1. 51	816	355
2. 1	815	191
2. 14	815	450
2. 31	814	427
2. 39	816	358
2. 45 Z	820	566
2. 58 Z	820	566
3. 0	820	590
3. 15	812	548
3. 18	810	560
3. 22	810	520
3. 27	815	525
3. 31	818	510
3. 39	820	540
3. 50	820	346
4. 0	825	321
4. 10	816	358
4. 14	812	376
4. 20	812	360
4. 37	815	376
4. 42	815	363
4. 45	816	394
4. 59	815	405
5. 19	815	385
5. 29	812	423
5. 36	815	389
5. 54	820	485
5. 57	816	450
6. 4	826	476
6. 10	830	444
6. 13	836	465
6. 24	865	186
6. 30	840	196
6. 36	835	180
6. 50	805	589
7. 1	820	532
7. 6	820	535
7. 12	815	512
7. 25	806	560
7. 33	814	528
7. 40	810	531
8. 5	822	500
8. 24	820	516
8. 30	820	460
9. 1	820	485

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, April 4		
h m		
9. 9	0·00820	0·00519
9. 19 Z	830	565
9. 25 Z	830	565
9. 28	830	365
9. 45	830	221
9. 58	822	425
10. 3	824	420
10. 7	820	390
10. 11	820	470
10. 15	820	432
10. 23	818	470
10. 29	818	436
10. 37	820	408
10. 42	820	426
11. 11	822	436
11. 16	820	400
11. 28	820	456
11. 52	831	349
12. 13	824	450
12. 22	822	476
12. 32	814	440
12. 41	815	434
12. 59	822	317
13. 18	822	416
13. 31	823	461
13. 50	824	418
13. 59	820	424
14. 2	822	365
14. 13	820	369
14. 31	820	439
14. 40	822	439
15. 2	825	346
15. 28	820	401
20. 38	825	417
20. 48	824	405
21. 8	825	425
21. 23 Z	825	563
21. 34 Z	825	563
21. 37	823	428
21. 49	820	360
21. 53	820	435
22. 0	823	378
22. 4	824	428
22. 8	825	426
22. 12	825	380
22. 18	825	366
22. 25	824	399
22. 28	820	378
22. 37	822	388
22. 51	825	385
22. 56	825	380
23. 9	825	371
23. 12	825	404
23. 21	825	359
23. 39	824	345

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.	Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, April 5			1867, April 5		
h m			h m		
0. 0	0·00816	0·00250	10. 18	0·00820	0·00269
0. 14	816	240	10. 29	820	299
0. 20	816	254	10. 39	823	284
0. 52	815	236	10. 55	820	308
1. 22	818	253	11. 5	826	275
2. 0	820	251	11. 17	823	340
2. 8	820	276	11. 37	821	315
2. 29	820	220	11. 43	818	285
2. 37	820	255	11. 48	820	286
2. 42	820	255	12. 8	821	335
2. 43 Z	822	468	12. 14	820	245
2. 55 Z	822	468	12. 20	821	293
2. 57	820	259	12. 28	825	278
3. 43	819	250	12. 32	819	280
3. 49	816	295	12. 38	820	245
4. 7	820	270	12. 44	822	255
4. 13	820	233	12. 47	822	283
4. 36	820	233	12. 55	819	283
4. 43	816	249	12. 59	820	253
4. 52	815	246	13. 6	822	313
5. 5	818	251	13. 10	823	265
5. 18	815	253	13. 16	822	265
5. 25	816	240	13. 18	822	295
5. 31	815	312	13. 28	818	295
5. 41	815	350	13. 29	820	320
5. 46	816	443	13. 44	816	150
5. 53	820	402	13. 47	816	165
6. 0	815	430	13. 57	820	105
6. 8	816	385	14. 2	820	134
6. 10	818	396	14. 12	822	137
6. 14	818	382	14. 15	820	340
6. 16	818	390	14. 33	816	363
6. 20	817	275	14. 46	819	344
6. 32	818	270	14. 55	820	278
6. 40	816	215	14. 59	821	353
6. 50	820	274	15. 7	821	343
7. 4	823	201	15. 15	822	357
7. 17	822	262	15. 26	820	343
7. 33	816	330	15. 45	818	350
7. 38	815	315	15. 50	817	322
7. 51	870	880	15. 57	817	324
8. 0	846	376	16. 7	818	304
8. 7	840	375	16. 12	818	304
8. 13	832	256	16. 27	819	320
8. 19	820	230	16. 36	813	250
8. 23	820	278	16. 39	817	303
8. 30	820	270	17. 5	814	296
8. 39	815	290	17. 30	818	310
8. 51 Z	833	473	17. 36	816	293
8. 59 Z	833	473	17. 47	816	315
9. 0	816	332	17. 52	816	290
9. 8	816	350	17. 59	815	303
9. 15	815	350	18. 45	818	315
9. 21	819	310	19. 2	815	290
9. 30	818	262	19. 13	820	310
9. 39	819	300	19. 28	811	278
10. 4	820	264	19. 38	815	311

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, April 5		
h m		
19. 47	0·00815	0·00317
19. 56	816	300
20. 0	814	325
20. 4	814	304
20. 11	820	330
20. 13	820	296
20. 36	820	316
20. 51	820	303
21. 5	820	332
21. 18 Z	826	474
21. 27 Z	826	474
21. 29	820	343
21. 57	815	341
22. 4	815	321
22. 39	821	335
22. 49	820	283
22. 58	820	295
23. 7	820	243
23. 15	820	265
23. 35	820	251
23. 46	820	224
April 7		
0. 0	0·00815	0·00348
0. 16 Z	820	561
0. 21 Z	820	561
0. 24	818	281
0. 38	816	305
0. 45	817	422
0. 49	810	345
0. 51	806	300
0. 53	806	460
1. 6	828	413
1. 12	825	305
1. 18	820	350
2. 14	820	349
2. 18	823	299
2. 22	817	350
2. 28	812	361
2. 34	815	311
2. 44	817	530
2. 49	827	500
2. 55	826	342
3. 15	825	350
3. 19	821	315
3. 27	820	311
3. 40	815	331
3. 43	819	293
3. 51	809	345
4. 2	825	480
4. 7	830	480
4. 15	845	430
4. 17	838	473
4. 23	821	241
4. 37	810	244
4. 42	800	239
4. 54	812	613

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, April 7		
h m		
5. 16	0·00829	0·00514
5. 18	826	415
5. 29	823	409
5. 36	821	384
5. 45	820	389
5. 47	820	250
6. 16	817	315
6. 17	815	418
7. 13	825	415
7. 16	830	405
7. 34	850	458
7. 50	810	015
8. 12	810	545
8. 22	821	570
8. 33	824	664
8. 41	820	585
8. 52	817	380
9. 5	827	390
9. 11	825	428
9. 13 Z	815	580
9. 20 Z	815	580
9. 21	816	440
9. 33	820	430
9. 41	820	353
9. 59	814	380
10. 20	813	366
10. 27	820	295
10. 57	819	385
11. 2	820	468
11. 20	820	465
11. 38	825	485
11. 54	821	455
12. 9	820	470
12. 33	817	470
14. 44	821	432
14. 56	820	450
15. 51	820	443
17. 47	819	434
18. 16	811	440
18. 25	815	457
18. 49	815	431
20. 10	815	442
20. 54	815	445
21. 9	815	464
21. 22 Z	825	574
21. 40 Z	825	574
21. 41	820	395
22. 27	820	413
22. 54	815	407
22. 58	815	385
23. 6	810	405
23. 13	815	393
23. 29	813	410
23. 35	813	377
23. 42	810	407

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.	Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, April 8			1867, April 8		
h m			h m		
0. 6	0·00810	0·00300	8.46 Z	0·00820	0·00470
0.16	810	262	8.48	818	430
0.18	810	305	8.56	815	435
0.22	811	248	8.59	815	395
0.37	810	322	9. 4	820	422
0.50	810	335	9. 9	820	410
0.53	810	306	9.14	820	435
1 1	810	369	9.17	816	419
1. 7	810	305	9.25	816	428
1.15	810	248	9.32	820	370
1.35	810	300	9.48	816	380
1.44	813	295	10.10	820	370
1.50	815	284	10.14	820	325
1.58	814	273	10.17	821	352
2. 2	814	297	10.21	820	341
2. 5	813	280	10.26	820	355
2.32	813	270	10.38	820	338
2.34 Z	815	474	10.47	820	385
2.45 Z	815	474	10.51	821	391
2.50	815	247	10.59	822	377
2.53	815	257	11.13	815	449
3. 0	814	240	11.30	820	295
3. 5	815	262	11.43	819	374
3.12	815	243	11.56	820	405
3.24	815	255	12.22	810	353
3.31	815	230	12.36	820	429
3.38	814	255	12.50	820	418
3.45	813	242	12.55	819	310
3.56	810	263	13.18	821	340
4. 1	810	254	13.25	820	374
4. 8	810	262	13.43	820	399
4.42	815	250	13.48	819	450
4.46	816	200	14.12	818	409
4.52	815	252	14.14	816	370
5. 2	814	260	14.29	819	370
5. 9	815	232	14.37	820	315
5.17	815	255	15.11	822	366
5.32	815	258	15.55	820	360
5.36	820	385	16.11	820	304
5.43	830	466	16.34	820	305
6. 0	816	109	16.43	820	320
6.29	814	385	17. 6	820	285
6.39	816	364	17.17	819	304
6.41	816	375	17.28	819	303
6.57	815	260	17.40	819	320
7. 5	820	280	17.46	816	311
7.11	818	262	18. 1	815	370
7.23	815	340	18. 8	811	345
7.34	815	341	18.18	815	415
7.43	819	368	18.25	817	345
7.49	821	382	18.50	815	384
7.57	815	357	19. 0	814	372
8. 0	818	375	19.13	820	417
8.14	820	373	19.20	816	313
8.22	820	290	19.32	818	362
8.28	820	378	19.39	816	341
8.40 Z	820	470	19.50	814	350

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, April 8 h m		
20. 11	0·00814	0·00395
20. 24	810	366
20. 36	815	392
21. 11	818	394
21. 25 Z	824	469
21. 35 Z	824	469
21. 36	814	400
21. 57	810	383
22. 39	810	399
22. 41	811	344
22. 50	810	360
23. 1	810	355
23. 18	812	392
23. 26	813	356
23. 31	810	365
23. 54	810	360
April 9		
0. 1	0·00815	0·00414
0. 2	815	355
0. 14	810	395
0. 18	809	425
0. 21	808	427
0. 28	809	370
0. 33	810	429
0. 47	812	300
0. 54	812	419
1. 1	813	377
1. 19	814	386
1. 30	814	328
1. 45	814	436
1. 53	813	404
1. 58	813	436
2. 1	813	387
2. 3	815	404
2. 11	818	385
2. 13	818	403
2. 14	817	361
2. 29	813	320
2. 38	816	370
2. 45	820	375
2. 48 Z	821	518
2. 57 Z	821	518
3. 1	813	455
3. 12	819	530
3. 13	818	490
3. 20	820	530
3. 27	820	344
3. 42	819	267
3. 46	818	310
3. 55	817	310
3. 59	818	360
4. 7	814	360
4. 10	814	400
4. 13	814	381
4. 20	813	414
4. 25	813	380

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, April 9 h m		
4. 35	0·00820	0·00510
4. 43	818	395
4. 50	816	345
5. 6	816	470
5. 10	812	428
5. 22	818	495
5. 27	822	402
5. 31	822	420
5. 37	825	419
5. 42	823	400
5. 55	820	312
6. 3	817	341
6. 9	814	320
6. 14	818	356
6. 20	817	450
6. 28	815	412
6. 38	830	435
6. 43	833	532
6. 57	813	205
7. 9	815	480
7. 15	815	420
7. 49	815	424
8. 10	820	456
8. 32	815	435
8. 38	815	435
8. 50 Z	820	519
9. 4 Z	820	519
9. 9	816	449
10. 4	815	470
11. 6	816	474
11. 7	816	490
12. 5	815	494
13. 20	816	475
13. 35	816	454
13. 51	816	485
14. 15	817	440
14. 56	816	449
16. 20	820	430
17. 20	819	419
18. 14	820	445
18. 17	819	427
18. 37	815	454
18. 40	814	433
18. 54	814	405
19. 7	816	433
19. 42	816	423
19. 51	818	455
19. 55	818	430
20. 25	818	453
20. 38	817	430
20. 42	816	446
20. 51	815	438
21. 6	814	463
21. 15 Z	825	515
21. 28 Z	825	515
21. 29	816	445
21. 45	810	465

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, April 9		
h m		
21. 47	0·00810	0·00440
21. 51	810	455
21. 55	812	515
22. 14	814	515
22. 19	815	488
22. 22	816	375
22. 33	814	474
22. 36	814	429
22. 45	816	465
22. 54	815	475
23. 5	813	444
23. 10	813	469
23. 20	814	481
23. 27	814	455
April 11		
0. 4	0·00810	0·00305
0. 13	810	335
0. 18	810	331
0. 28	810	260
0. 39	810	349
0. 47	810	270
0. 54	812	324
1. 1	811	283
1. 8	810	320
1. 59	815	315
2. 5	815	274
2. 12	815	319
2. 27	815	270
2. 42	820	322
2. 43 Z	820	472
2. 51 Z	820	472
2. 52	814	331
2. 58	816	344
3. 8	820	303
3. 12	819	326
3. 22	815	275
3. 28	816	325
3. 36	815	275
3. 41	816	325
3. 52	818	341
3. 57	819	374
4. 15	820	300
4. 22	821	342
4. 28	820	295
4. 47	820	357
4. 52	820	380
5. 6	822	293
5. 16	824	265
6. 9	820	259
6. 20	820	269
6. 57	820	270
7. 10	820	290
7. 41	816	300
7. 51	823	309
8. 6	823	269

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, April 11		
h m		
8. 30	0·00820	0·00271
8. 40	820	370
8. 44	820	355
8. 45	820	424
8. 49	820	404
9. 2	820	455
9. 8	820	538
9. 12	820	465
9. 23 Z	830	472
9. 32 Z	830	472
9. 33	820	238
9. 50	817	405
10. 1	808	360
10. 16	815	420
10. 35	812	288
10. 43	814	315
10. 56	817	325
11. 10	820	309
11. 25	819	309
11. 30	819	294
11. 42	818	320
12. 34	816	317
12. 52	820	341
13. 44	820	332
14. 0	820	355
14. 8	821	384
14. 53	819	380
14. 54	820	357
15. 9	820	380
15. 16	820	355
15. 31	812	368
15. 56	820	299
16. 1	815	300
16. 8	820	285
16. 36	820	291
16. 42	820	322
17. 0	820	330
17. 39	820	330
17. 42	820	313
17. 55	820	330
18. 23	821	330
18. 31	821	315
20. 15	816	325
20. 17	815	304
20. 41	814	343
20. 45	815	316
21. 12	825	320
21. 21 Z	825	468
21. 31 Z	825	468
21. 32	814	315
21. 57	815	296
22. 15	815	310
22. 27	815	309
22. 35	814	294
22. 54	812	304
23. 1	812	262
23. 13	812	325

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, April 11		
h m		
23. 19	0·00811	0·00284
23. 31	811	310
May 4		
0. 1	0·00813	0·00220
0. 12	813	170
0. 14	814	205
0. 20	814	179
0 27	812	180
0. 32	812	213
0. 40	812	174
0. 43	813	222
0. 45	815	179
0. 51	815	223
1. 6	815	150
1. 17	815	198
1. 21	815	188
1. 30	816	210
1. 32	816	175
1. 42	815	208
1. 53	816	150
2. 1	815	162
2. 8	818	203
2. 16	818	162
2. 21	815	212
2. 28	820	178
2. 33	821	250
2. 37 Z	822	370
2. 47 Z	822	370
2. 47	813	250
2. 54	820	154
2. 57	820	203
3. 2	821	134
3. 10	819	220
3. 14	817	153
3. 18	817	292
3. 25	815	195
3. 32	813	184
3. 42	810	189
3. 48	810	210
4. 17	811	185
4. 24	812	199
4. 42	812	180
4. 58	813	193
5. 7	813	179
5. 21	814	190
5. 27	817	170
5. 38	812	175
5. 41	810	195
5. 49	810	186
5. 53	810	200
6. 12	810	188
6. 35	810	210
6. 41	810	294
6. 56	812	294
7. 20	812	270
7. 29	815	290

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, May 4		
h m		
7. 38	0·00814	0·00266
7. 54	813	273
8. 16	813	250
8. 22	812	265
8. 33	810	265
8. 44 Z	820	370
8. 53 Z	820	370
8. 55	810	292
9. 7	811	308
9. 18	812	277
9. 20	811	240
9. 45	811	260
10. 18	815	229
10. 27	820	245
10. 31	820	223
10. 44	815	258
10. 48	815	240
10. 58	815	256
11. 24	820	242
11. 49	812	269
12. 2	815	350
12. 21	821	303
12. 22	821	240
12. 37	820	230
13. 0	820	274
13. 6	819	257
13. 27	822	236
14. 8	810	255
14. 29	815	219
14. 43	812	238
14. 55	815	219
14. 56	815	172
15. 7	820	199
16. 4	818	210
16. 11	817	269
16. 26	815	270
16. 30	813	250
16. 42	815	265
16. 58	814	244
17. 25	811	240
17. 33	812	269
17. 41	810	245
17. 56	814	259
18. 2	813	244
18. 15	815	285
18. 18	810	236
18. 29	816	260
18. 58	810	252
19. 4	820	278
19. 14	816	246
19. 20	820	288
19. 27	814	247
19. 34	815	255
19. 40	815	242
19. 48	816	335
19. 55	811	255
20. 5	819	323

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, May 4		
h m		
20. 27	0·00810	0·00260
21. 8	805	289
21. 13	800	350
21. 21	802	368
21. 22	802	356
21. 32	804	395
21. 41	805	299
21. 55	810	330
22. 10	820	286
22. 20	822	139
22. 22 Z	825	370
22. 30 Z	825	370
22. 31	815	150
22. 37	811	200
22. 42	810	179
May 14		
0. 5	0·00783	0·00236
0. 16	784	263
0. 24	784	234
0. 30	784	263
0. 43	784	255
0. 55	784	268
1. 7	784	260
1. 19	784	274
1. 27	784	263
1. 31	783	295
1. 56	784	276
2. 3	783	298
2. 23	784	209
2. 24 Z	816	409
2. 31 Z	816	409
2. 39	782	247
2. 48	782	339
3. 2	784	320
3. 15	784	361
3. 18	784	305
3. 24	784	365
3. 30	785	304
3. 59	786	309
4. 5	786	245
4. 12	786	280
4. 26	785	268
4. 31	785	235
4. 34	786	290
4. 47	788	190
5. 10	783	327
5. 12	783	316
5. 20	789	379
5. 34	790	183
5. 40	785	216
5. 42	785	160
5. 47	784	330
5. 53	782	299
5. 59	784	360
6. 30	787	354
6. 35	787	318
1867, May 14		
h m		
6. 39	0·00787	0·00326
6. 43	787	290
6. 49	786	307
6. 56	786	290
7. 5	786	309
7. 21	788	321
7. 29	788	307
7. 35	789	323
7. 40	788	299
7. 44	788	315
7. 52	788	284
8. 6	788	297
8. 27	789	291
8. 39 Z	820	410
8. 48 Z	820	410
8. 54	790	280
9. 22	790	304
9. 35	791	295
9. 40	792	310
9. 45	794	269
10. 3	820	324
10. 10	820	322
10. 19	820	170
10. 37	822	387
10. 48	823	346
11. 14	822	256
11. 21	822	338
11. 25	823	356
11. 37	824	289
11. 44	824	310
12. 12	824	266
12. 20	824	324
12. 30	824	265
12. 35	824	296
12. 46	824	263
12. 55	824	325
13. 0	824	308
13. 4	824	328
13. 9	824	303
13. 19	824	330
13. 27	824	300
13. 32	824	341
13. 40	824	284
13. 45	824	329
13. 52	824	340
14. 3	824	279
14. 13	824	310
14. 21	824	236
14. 25	824	309
14. 27	824	273
14. 33	824	305
14. 42	824	267
14. 49	824	305
14. 58	824	290
15. 9	824	300
15. 18	824	273
15. 44	824	299

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, May 14		
h m		
17. 16	0·00824	0·00328
17. 22	824	314
19. 2	824	323
20. 50	824	310
20. 57	824	290
21. 4	824	304
21. 16 Z	824	410
21. 28 Z	824	410
21. 29	824	270
21. 40	824	299
22. 35	824	246
22. 39	824	273
22. 44	824	272
May 28		
0. 5	0·00765	0·00384
0. 8	765	243
0. 14	765	300
0. 15	765	393
0. 22	765	370
0. 28	768	539
0. 31	768	367
0. 33	768	425
0. 43	765	355
0. 46	765	415
0. 51	765	340
0. 55	765	405
1. 0	765	346
1. 8	764	526
1. 17	755	390
1. 22	761	547
1. 24	761	495
1. 31	762	658
1. 43	770	350
1. 52	770	590
2. 0	760	340
2. 15	770	606
2. 21	770	461
2. 30	770	634
2. 37	770	464
2. 39	775	500
2. 44	775	280
2. 45 Z	775	591
2. 57 Z	775	591
2. 57	765	260
3. 0	765	423
3. 2	770	287
3. 8	770	376
3. 14	770	329
3. 16	770	365
3. 17	770	246
3. 24	770	433
3. 30	770	200
3. 32	770	285
3. 39	765	226
3. 46	765	450
3. 51	765	419
1867, May 28		
h m		
4. 8	0·00767	0·00465
4. 13	770	428
4. 15	770	440
4. 17	770	390
4. 25	770	413
4. 29	770	312
4. 36	770	395
4. 41	770	418
4. 43	770	403
4. 45	770	450
4. 53	770	400
5. 17	770	454
5. 39	770	404
5. 48	770	470
6. 5	770	425
6. 11	770	445
6. 17	770	402
6. 40	770	461
6. 55	866	440
7. 10	810	+ 735
7. 23	770	− 055
7. 37	770	+ 360
7. 52	770	419
8. 0	770	377
8. 10	765	619
8. 35	764	565
8. 41	764	460
8. 59	770	515
9. 12	770	464
9. 21 Z	780	599
9. 34 Z	780	599
9. 35	780	420
9. 40	783	453
9. 48	780	320
10. 5	769	394
10. 27	770	458
10. 32	770	548
10. 41	743	382
10. 45	750	438
11. 37	765	390
11. 50	765	427
11. 53	768	392
11. 58	770	440
12. 8	773	418
12. 45	762	475
12. 47	760	692
13. 29	760	586
13. 32	760	305
14. 14	776	324
14. 51	770	305
15. 15	764	373
15. 25	763	373
15. 47	763	313
15. 51	767	342
15. 58	768	341
16. 19	772	406
16. 30	770	383

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, May 28		
h m		
16.45	0·00765	0·00725
16.54	770	530
17. 0	770	545
17. 7	770	500
17.55	770	540
18.14	770	524
18.15	770	465
18.34	772	520
18.46	775	440
19.14	770	468
19.23	773	515
19.38	773	480
19.53	770	499
19.57	770	445
19.59	770	475
20.15	770	475
20.22	770	450
20.28	770	520
20.30	770	462
20.57	770	490
21. 0	770	465
21. 7	770	510
21.18 Z	780	595
21.30 Z	780	595
21.31	770	491
21.39	770	428
22.11	765	450
22.55	765	455
23. 4	765	393
23.25	765	470
May 31		
0. 8	0·00794	0·00280
0.15	795	275
0.28	799	304
0.37	799	285
0.47	799	282
1. 0	799	320
1.13	790	292
1.41	795	328
1.44	795	270
1.51	795	320
1.57	795	252
2. 6	795	265
2.17	790	309
2.28	790	274
2.42	799	320
2.44 Z	799	450
2.56 Z	799	450
2.57	795	316
3.12	795	395
3.14	795	300
3.20	795	331
3.26	790	320
3.32	790	360
3.46	795	316
4.30	790	335
1867, May 31		
h m		
5. 0	0·00795	0·00300
5.10	795	333
5.32	795	315
5.42	799	340
5.49	799	302
6.10	799	333
6.30	799	300
6.39	799	340
6.54	799	306
7.33	799	340
7.56	799	315
8.12	788	335
8.27	830	705
8.38	825	350
8.44	799	400
8.54	799	308
9. 7	799	330
9.17 Z	810	436
9.24 Z	810	436
9.27	810	415
9.43	810	460
9.51	810	395
10. 7	804	380
10.20	820	333
10.43	815	386
11.21	805	345
11.27	809	280
11.44	810	360
12. 8	820	278
12.42	808	260
13. 3	800	360
13.16	801	370
13.32	814	315
13.54	816	305
14.15	810	437
14.36	800	360
15. 4	810	385
15.18	805	356
15.29	804	405
15.48	801	348
15.58	809	220
16.28	791	290
16.33	790	355
17.41	804	335
18. 3	805	350
18.21	805	335
19.14	798	340
19.28	803	315
19.50	800	347
20.34	800	340
20.51 Z	807	430
22.17 Z	807	430
June 1		
6. 0	0·00768	0·00335
6.29	768	353
6.44	768	335

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, June 1		
h m		
7. 16	0·00768	0·00350
7. 30	768	389
7. 57	768	363
8. 21	768	394
8. 28	768	372
8. 43	768	360
8. 47	768	410
8. 51	768	375
9. 6	768	415
9. 14	768	380
9. 28 Z	765	465
9. 38 Z	765	465
9. 44	765	375
9. 50	768	410
9. 55	768	380
10. 8	768	430
10. 24	768	385
10. 29	768	+ 452
10. 48	780	− 188
11. 9	792	+ 412
11. 13	788	330
11. 17	782	371
11. 19	777	273
11. 48	773	580
11. 55	773	475
12. 15	750	907
12. 30	770	581
12. 47	770	478
12. 58	764	596
13. 0	750	500
13. 12	750	615
13. 25	770	213
13. 33	773	315
13. 40	776	250
13. 43	776	314
13. 53	770	184
13. 56	770	245
14. 1	769	183
14. 14	765	355
14. 16	760	282
14. 19	761	410
14. 20	753	355
14. 23	753	402
14. 35	770	142
14. 55	775	549
15. 13	772	410
15. 18	772	503
15. 20	765	355
15. 22	770	435
15. 34	770	265
15. 38	750	380
15. 52	760	220
16. 3	720	448
16. 17	765	250
16. 31	765	445
16. 34	770	313
16. 45	772	445

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, June 1		
h m		
16. 48	0·00772	0·00215
16. 53	772	520
17. 0	772	220
17. 19	772	445
17. 40	772	425
17. 53	772	475
18. 5	772	421
18. 9	772	559
18. 14	772	323
18. 20	772	430
18. 28	760	302
18. 42	772	408
18. 47	772	514
18. 53	772	372
18. 56	772	445
19. 4	772	280
19. 10	772	369
19. 20	772	203
19. 25	772	365
19. 27	765	317
19. 30	770	387
19. 39	772	335
19. 41	772	375
19. 43	772	335
19. 48	772	402
19. 53	772	326
19. 58	772	396
20. 0	772	329
20. 12	772	447
20. 42	772	305
20. 52	772	379
21. 40	765	383
21. 50 Z	772	470
22. 0 Z	772	470
22. 2	760	339
22. 15	760	385
22. 28	760	345
22. 34	760	373
22. 42	760	338
22. 59	765	356
23. 1	759	343
23. 5	758	357
23. 15	760	306
23. 29	770	385
23. 36	770	272
23. 46	769	331
23. 50	768	283
23. 52	767	336
June 2		
0. 6	0·00811	0·00359
0. 27	807	380
0. 42	815	250
0. 55 Z	812	513
1. 2 Z	812	513
1. 3	810	250
1. 16	808	399

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, June 2		
h m		
1. 19	0·00808	0·00323
1. 26	808	361
1. 51	802	360
2. 8	804	418
2. 15	801	386
2. 22	810	400
2. 31	810	253
2. 51	810	370
2. 56	814	346
3. 5	762	388
3. 15	816	765
3. 35	823	364
3. 44	820	330
3. 50	818	356
3. 57	818	332
4. 9	824	348
4. 19	808	156
4. 32	810	349
4. 48	810	348
5. 13	811	420
5. 25	806	401
5. 37	818	434
5. 50	814	399
6. 31	812	424
6. 37	814	490
6. 45	811	458
6. 56	810	482
8. 8	816	470
8. 18 Z	816	515
8. 25 Z	816	515
8. 27	814	450
8. 30	812	460
8. 41	810	439
9. 11	811	475
9. 35	811	456
10. 35	812	458
11. 0	815	443
11. 4	817	424
13. 42	815	415
13. 55	814	383
17. 32	814	433
17. 42	814	460
18. 7	814	436
18. 16	814	463
18. 33	812	438
18. 43	812	458
18. 48	814	426
18. 57	806	522
19. 1	809	393
19. 7	812	435
19. 32	810	452
19. 38	810	500
19. 46	810	449
21. 10	811	477
21. 22 Z	816	525
21. 34 Z	816	525
21. 39	812	450

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, June 2		
h m		
21. 53	0·00810	0·00460
22. 4	810	444
23. 10	808	427
June 7		
0. 3	0·00805	0·00365
0. 29	805	294
0. 32	805	317
0. 43	805	250
0. 47	805	260
0. 53	805	225
1. 5	803	313
1. 15	805	315
1. 22	800	350
1. 29	802	331
1. 31	802	367
1. 45	807	299
1. 50	810	320
1. 54	811	260
1. 58	813	285
2. 19	815	145
2. 25	810	270
2. 30	805	213
2. 38	815	410
2. 41 Z	815	375
2. 49 Z	815	375
2. 55	820	+ 410
3. 2	790	− 235
3. 11	805	+ 445
3. 16	805	382
3. 21	803	420
3. 29	807	424
3. 33	810	370
3. 37	811	380
3. 42	815	340
3. 44	816	350
3. 45	818	310
3. 51	814	340
3. 59	815	043
4. 10	810	278
4. 14	805	249
4. 16	807	309
4. 25	810	235
4. 33	810	255
4. 40	814	180
4. 54	810	242
4. 55	810	215
5. 0	810	250
5. 3	811	220
5. 4	811	240
5. 10	812	210
5. 27	811	250
5. 32	811	220
5. 36	813	252
5. 41	814	212
5. 44	810	222
5. 45	810	201

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, June 7		
h m		
5. 53	0·00814	0·00249
5. 56	814	201
5. 58	814	217
6. 10	814	161
6. 15	810	193
6. 20	810	180
6. 24	809	232
6. 27	809	229
6. 30	811	267
6. 38	810	197
6. 54	805	325
7. 11	805	255
7. 20	809	340
7. 27	810	327
7. 29	810	342
7. 39	818	296
7. 42	815	309
7. 51	810	249
7. 56	810	299
8. 1	810	276
8. 9	810	315
8. 15	815	292
8. 17	814	325
8. 26	812	250
8. 30	810	265
8. 36	812	220
8. 47 Z	820	377
8. 59 Z	820	377
8. 59	810	330
9. 5	806	250
9. 16	810	313
9. 20	810	275
9. 31	810	290
9. 37	810	270
9. 43	810	300
9. 48	810	262
9. 53	810	291
10. 7	810	276
10. 15	810	297
10. 43	810	300
10. 48	810	255
11. 1	810	295
11. 23	811	342
11. 48	811	285
12. 20	814	315
12. 33	814	294
12. 38	814	310
12. 44	814	279
12. 51	814	309
13. 3	814	302
13. 10	813	318
13. 12	813	298
13. 17	813	310
13. 23	813	285
13. 27	813	303
13. 41	813	274
13. 50	814	297

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, June 7		
h m		
14. 25	0·00815	0·00303
14. 32	816	269
14. 41	816	315
14. 51	814	275
14. 59	814	297
15. 10	816	245
15. 11	816	253
15. 13	816	248
15. 22	816	322
15. 35	816	277
15. 40	816	265
15. 45	816	300
16. 3	816	238
16. 12	816	300
16. 19	816	277
16. 22	816	300
16. 27	816	252
16. 37	816	265
16. 40	816	253
16. 45	816	290
16. 47	816	263
16. 52	816	285
16. 57	816	253
17. 8	816	297
17. 15	816	238
17. 23	816	290
17. 26	816	240
17. 30	816	334
17. 40	816	241
17. 45	816	282
17. 50	816	249
19. 40	810	288
20. 29	806	260
20. 39	810	307
20. 47	810	265
20. 53	810	291
20. 55	810	222
21. 10	806	290
21. 25 Z	820	374
21. 38 Z	820	374
21. 43	811	270
22. 17	811	270
22. 23	811	228
22. 41	805	290
23. 2	805	241
23. 10	805	280
June 24		
0. 0	0·00807	0·00226
0. 4	806	240
0. 7	806	197
0. 14	808	234
0. 17	807	224
0. 25	810	262
0. 30	810	184
0. 47	810	268
1. 5	810	138

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.	Greenwich Mean Solar Time.	Measure of Ordinate of Dartford Curve by Scale G.	Measure of Ordinate of Croydon Curve by Scale H.
1867, June 24			1867, June 24		
h m			h m		
1. 8	0·00810	0·00219	7.38	0·00818	0·00183
1.23	798	305	7.45	823	+ 252
1.29	804	334	7.55	815	− 184
1.34	810	318	8. 0	812	+ 113
1.35	810	334	8.15	816	244
1.40	808	242	8.30	815	215
1.43	808	304	8.54	816	248
1.47	810	253	9. 2	822	315
1.54	816	300	9. 8	821	285
2. 1	818	123	9.13	816	310
2. 7	820	205	9.25 Z	825	333
2. 9	820	050	9.36 Z	825	333
2.14	816	173	9.37	817	220
2.19	807	161	9.46	814	244
2.20	805	210	9.54	810	166
2.24	802	194	10. 3	814	250
2.30	819	359	10.16	818	254
2.36 Z	820	330	10.29	818	245
2.46 Z	820	330	10.45	817	212
2.47	820	166	10.53	818	079
3. 1	797	055	11.20	820	244
3. 6	796	177	11.25	821	208
3.12	804	283	11.37	820	218
3.15	807	265	11.49	818	254
3.19	810	288	12.24	819	252
3.23	809	264	12.28	819	222
3.27	809	295	12.41	817	296
3.30	809	195	12.52	819	250
3.31	809	286	13. 5	819	254
3.38	810	166	13.12	820	243
3.46	813	268	13.30	820	262
3.54	816	223	13.38	821	300
3.56	817	242	14. 5	821	290
3.58	817	136	14.34	820	239
4. 1	815	221	14.38	818	284
4. 7	815	134	14.46	816	246
4. 8	815	235	15. 8	816	280
4.12	815	205	15.27	822	260
4.18	816	221	15.35	822	216
4.24	814	204	16. 5	822	232
4.38	819	227	16.13	822	199
4.58	813	199	16.36	820	213
5.20	825	226	16.48	819	180
5.30	830	276	16.52	819	235
5.43	820	207	18.11	818	237
5.47	820	123	19.37	818	200
5.53	822	160	21. 7	811	220
6.10	811	078	21.22 Z	825	325
6.22	811	174	21.34 Z	825	325
6.36	816	216	21.37	806	240
6.52	819	204	21.56	809	250
7. 4	817	146	22.32	811	189
7.13	817	176	22.42	811	240

The ordinates of the Dartford Curve are measured with Scale G, in which 0·01000 = 5·47 inch. Those of the Croydon Curve are measured with Scale H, in which 0·01000 = 4·90 inch. The letter Z (for zero) denotes that ordinates have been measured when the galvanic circuit was interrupted and the galvanometer took its quiescent position.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

OBSERVATIONS

OF THE

MAGNETIC DIP.

1867.

RESULTS of OBSERVATIONS of MAGNETIC DIP, on each Day of Observation.

Day and Approximate Hour, 1867.	Needle.	Length of Needle.	Magnetic Dip.	Observer.
d h			° ′ ″	
January 11. 2	D 1	3 inches	68. 0. 10	N
19. 3	B 1	9 „	67. 56. 59	N
26. 3	D 2	3 „	67. 57. 26	N
29. 2	C 1	6 „	67. 56. 29	N
30. 2	C 2	6 „	67. 59. 11	N
30. 22	B 2	9 „	67. 57. 25	N
31. 0	B 1	9 „	67. 54. 51	N
31. 1	C 1	6 „	67. 59. 8	N
31. 2	D 1	3 „	67. 54. 47	N
February 8. 2	C 1	6 „	67. 54. 55	N
12. 0	C 2	6 „	67. 59. 26	N
12. 2	D 1	3 „	68. 1. 1	N
15. 2	D 2	3 „	68. 0. 24	N
23. 2	C 1	6 „	67. 58. 5	N
27. 2	B 1	9 „	67. 55. 55	N
27. 22	B 2	9 „	68. 0. 24	N
27. 23	C 2	6 „	68. 1. 31	N
28. 1	D 2	3 „	68. 2. 4	N
March 5. 2	D 1	3 „	67. 57. 9	N
16. 3	D 2	3 „	67. 59. 45	N
26. 0	C 1	6 „	67. 56. 38	N
26. 1	D 1	3 „	67. 56. 38	N
28. 0	D 2	3 „	67. 59. 17	N
29. 2	B 1	9 „	67. 55. 18	N
30. 2	B 2	9 „	67. 57. 44	N
30. 3	C 2	6 „	67. 57. 16	N
April 5. 2	B 1	9 „	67. 56. 8	N
9. 1	C 1	6 „	67. 57. 39	N
17. 22	B 2	9 „	67. 55. 59	N
17. 23	D 1	3 „	67. 59. 24	N
27. 2	B 1	9 „	67. 56. 5	N
27. 2	D 2	3 „	67. 56. 59	N
30. 2	C 2	6 „	67. 58. 19	N
May 4. 2	C 1	6 „	67. 56. 13	N
8. 2	C 2	6 „	67. 55. 42	N
14. 2	D 1	3 „	67. 54. 32	N
17. 1	D 2	3 „	67. 54. 24	N
17. 2	C 1	6 „	67. 56. 51	N
24. 2	C 2	6 „	67. 59. 51	N
30. 0	B 1	9 „	68. 0. 2	N
30. 1	B 2	9 „	68. 0. 11	N
June 6. 2	D 1	3 „	68. 1. 34	N
11. 2	D 2	3 „	67. 54. 21	N
11. 23	D 1	3 „	67. 58. 6	N
12. 0	C 1	6 „	67. 58. 35	N
20. 1	C 2	6 „	67. 58. 39	N
20. 2	B 1	9 „	67. 55. 18	N
25. 1	B 2	9 „	68. 0. 38	N
27. 1	D 2	3 „	67. 58. 9	N

Day and Approximate Hour, 1867.	Needle.	Length of Needle.	Magnetic Dip.	Observer.
d h			° ′ ″	
July 6. 2	D 1	3 inches	67. 57. 57	N
11. 2	D 2	3 „	67. 55. 20	N
17. 1	B 1	9 „	67. 52. 25	N
23. 0	C 1	6 „	67. 56. 55	N
23. 2	C 2	6 „	67. 51. 4	N
24. 2	C 2	6 „	67. 59. 53	N
24. 2	D 2	3 „	67. 56. 48	N
31. 1	B 2	9 „	67. 57. 57	N
31. 2	B 1	9 „	67. 55. 35	N
August 9. 2	C 1	6 „	68. 2. 10	N
12. 2	C 2	6 „	67. 55. 33	N
12. 22	D 1	3 „	67. 58. 22	N
13. 0	B 1	9 „	67. 57. 45	N
21. 2	C 1	6 „	67. 57. 43	N
28. 2	B 2	9 „	67. 53. 32	N
29. 23	C 1	6 „	67. 55. 54	N
30. 1	B 2	9 „	67. 56. 27	N
31. 2	C 2	6 „	67. 54. 25	N
September 4. 2	D 1	3 „	67. 58. 21	N
9. 22	D 2	3 „	68. 0. 3	N
9. 23	D 1	3 „	67. 59. 30	N
10. 0	C 1	6 „	68. 2. 47	N
11. 22	C 1	6 „	67. 56. 51	N
26. 2	D 2	3 „	67. 58. 16	N
26. 3	B 1	9 „	68. 0. 36	N
30. 2	B 2	9 „	67. 57. 15	N
30. 3	C 2	6 „	67. 57. 16	N
October 4. 1	B 1	9 „	67. 55. 36	N
16. 2	C 1	6 „	67. 56. 42	N
19. 2	C 2	6 „	67. 57. 56	N
23. 2	B 2	9 „	67. 56. 44	N
26. 2	D 1	3 „	68. 1. 8	N
31. 2	D 2	3 „	67. 59. 48	N
November 8. 1	C 1	6 „	67. 56. 27	N
8. 2	D 1	3 „	67. 58. 37	N
19. 2	C 2	6 „	67. 54. 22	N
23. 2	C 1	6 „	67. 54. 29	N
28. 2	D 2	3 „	67. 58. 47	N
29. 5	B 1	9 „	67. 55. 12	N
30. 1	B 2	9 „	67. 54. 2	N
December 9. 2	D 1	3 „	67. 54. 2	N
12. 2	D 2	3 „	67. 56. 13	N
13. 0	B 1	9 „	67. 49. 55	N
13. 1	C 1	6 „	67. 55. 26	N
13. 2	C 2	6 „	67. 54. 3	N
28. 2	D 1	3 „	67. 57. 22	N
30. 22	B 2	9 „	67. 50. 43	N
31. 2	D 2	3 „	67. 58. 2	N
31. 3	B 1	9 „	67. 52. 37	N

The initial N is that of Mr. W. C. Nash.

From July 31 to September 9, Needle D 2 was in the hands of Mr. Simms, for the purpose of having a new axle applied.

MONTHLY MEANS of MAGNETIC DIPS.

Month, 1867.	B 1, 9-inch Needle.	Number of Observations.	B 2, 9-inch Needle.	Number of Observations.	C 1, 6-inch Needle.	Number of Observations.
	° ′ ″		° ′ ″		° ′ ″	
January	67. 55. 55	2	67. 57. 25	1	67. 57. 48	2
February	67. 55. 55	1	68. 0. 24	1	67. 56. 30	2
March	67. 55. 18	1	67. 57. 44	1	67. 56. 38	1
April	67. 56. 7	2	67. 55. 59	1	67. 57. 39	1
May	68. 0. 2	1	68. 0. 11	1	67. 56. 32	2
June	67. 55. 18	1	68. 0. 38	1	67. 58. 35	1
July	67. 54. 0	2	67. 57. 57	1	67. 56. 55	1
August	67. 57. 45	1	67. 54. 59	2	67. 58. 36	3
September	68. 0. 36	1	67. 57. 15	1	67. 59. 49	2
October	67. 55. 36	1	67. 56. 44	1	67. 56. 42	1
November	67. 55. 12	1	67. 54. 2	1	67. 55. 28	2
December	67. 51. 16	2	67. 50. 43	1	67. 55. 26	1
Means	67. 55. 39	Sum 16	67. 56. 51	Sum 13	67. 57. 22	Sum 19

Month, 1867.	C 2, 6-inch Needle.	Number of Observations.	D 1, 3-inch Needle.	Number of Observations.	D 2, 3-inch Needle.	Number of Observations.
	° ′ ″		° ′ ″		° ′ ″	
January	67. 59. 11	1	67. 57. 29	2	67. 57. 26	1
February	68. 0. 29	2	68. 1. 1	1	68. 1. 14	2
March	67. 57. 16	1	67. 56. 54	2	67. 59. 31	2
April	67. 58. 19	1	67. 59. 24	1	67. 56. 59	1
May	67. 57. 47	2	67. 54. 32	1	67. 54. 24	1
June	67. 58. 39	1	67. 59. 50	2	67. 56. 15	2
July	67. 55. 28	2	67. 57. 57	1	67. 56. 4	2
August	67. 54. 59	2	67. 58. 22	1	..	..
September	67. 57. 16	1	67. 58. 55	2	67. 59. 10	2
October	67. 57. 56	1	68. 1. 8	1	67. 59. 48	1
November	67. 54. 22	1	67. 58. 37	1	67. 58. 47	1
December	67. 54. 3	1	67. 55. 42	2	67. 57. 8	2
Means	67. 57. 9	Sum 16	67. 58. 9	Sum 17	67. 58. 0	Sum 17

For this table the monthly means have been formed without reference to the hour at which the observation was made on each day, as in preceding years no certain difference was found between observations taken at 21^h and at 3^h.

In combining the monthly results, to form the annual means, weights have been given proportional to the number of observations.

YEARLY MEANS of MAGNETIC DIPS for each of the NEEDLES, and GENERAL MEAN for the Year 1867.

Lengths of the several Sets of Needles.	Needles.	Number of Observations with each Needle.	Mean Yearly Dip from Observations with each Needle.	Mean Yearly Dip from each Set of Needles.	Mean Yearly Dip from all the Sets of Needles.
			° ′ ″	° ′ ″	° ′ ″
9-inch Needles	B 1	16	67. 55. 39	67. 56. 15	67. 57. 12
	B 2	13	67. 56. 51		
6-inch Needles	C 1	19	67. 57. 22	67. 57. 16	
	C 2	16	67. 57. 9		
3-inch Needles	D 1	17	67. 58. 9	67. 58. 4	
	D 2	17	67. 58. 0		

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

OF

DEFLEXION OF A MAGNET

FOR

ABSOLUTE MEASURE

OF

HORIZONTAL FORCE.

1867.

ABSTRACT of the OBSERVATIONS of DEFLEXION of a MAGNET for ABSOLUTE MEASURE of HORIZONTAL FORCE.

Month and Day, 1867.		Distances of Centers of Magnets.	Temperature.	Observed Deflexion.	Mean of the Times of Vibration of Deflecting Magnet.	Number of Vibrations.	Temperature.	Observer.
		ft.	°	° ′ ″	s		°	
January	25	1·0 1·3	46·9	12. 31. 53 5. 40. 42	5·321 5·315	100 100	51·2 51·7	N
February	15	1·0 1·3	54·1	12. 31. 5 5. 39. 58	5·323 5·328	100 100	48·0 54·5	N
March	13	1·0 1·3	34·9	12. 32. 29 5. 40. 49	5·317 5·321	100 100	34·7 36·2	N
March	29	1·0 1·3	47·8	12. 31. 41 5. 40. 26	5·330 5·330	100 100	49·6 51·3	N
April	17	1·0 1·3	54·4	12. 28. 58 5. 39. 17	5·330 5·325	100 100	54·5 57·5	N
May	2	1·0 1·3	63·4	12. 27. 19 5. 38. 18	5·328 5·331	100 100	64·4 66·5	N
May	28	1·0 1·3	65·3	12. 28. 57 5. 39. 50	5·339 5·332	100 100	66·0 66·4	N
June	14	1·0 1·3	63·8	12. 26. 40 5. 38. 11	5·340 5·340	100 100	65·0 64·4	N
June	26	1·0 1·3	70·9	12. 25. 16 5. 37. 18	5·328 5·330	100 100	72·5 75·8	N
July	19	1·0 1·3	65·3	12. 24. 50 5. 37. 26	5·337 5·346	100 100	66·0 67·0	N
August	22	1·0 1·3	71·7	12. 24. 25 5. 37. 8	5·350 5·342	100 100	71·9 76·4	N
September	12	1·0 1·3	71·7	12. 21. 35 5. 35. 51	5·348 5·352	100 100	74·9 77·8	N
October	31	1·0 1·3	59·0	12. 22. 28 5. 36. 21	5·363 5·358	100 100	60·8 63·5	N
November	29	1·0 1·3	45·2	12. 22. 35 5. 36. 22	5·349 5·346	100 100	52·5 48·9	N

The position of the Deflecting Magnet with regard to the suspended Magnet is always that which was formerly termed "Lateral." The Deflecting Magnet is placed on the East side of the suspended Magnet, with its marked pole alternately E. and W., and it is placed on the West side with its pole alternately E. and W.; and the deflexion in the table above is the mean of the four deflexions observed in those positions of the magnets.

The lengths of 1 foot and 1·3 foot answer to 304·8 and 396·2 millimètres respectively.

The initial N is that of Mr. W. C. Nash.

In the following calculations every observation is reduced to the temperature 35°.

COMPUTATION of the VALUES of ABSOLUTE MEASURE of HORIZONTAL FORCE in the Year 1867.

Month and Day, 1867.		In English Measure.										Value of X in French Measure.
		Apparent Value of A^1.	Apparent Value of A^2.	Apparent Value of P.	Mean Value of P.	Log. A corrected by the Application of Mean Value of P. = Log. $\frac{m}{X}$	Adopted Time of Vibration of Deflecting Magnet.	Log. m X.	Value of X.	Value of m.		
January	25	+0·10869	0·10888	−0·00429	−0·00289	9·03757	5·3180	0·20907	3·853	0·4201		1·776
February	15	+0·10871	0·10878	−0·00158		9·03740	5·3255	0·20781	3·848	0·4194		1·774
March	13	+0·10856	0·10871	−0·00339		9·03696	5·3190	0·20784	3·850	0·4192		1·775
	29	+0·10868	0·10882	−0·00316		9·03741	5·3300	0·20704	3·844	0·4190		1·773
April	17	+0·10841	0·10857	−0·00362		9·03637	5·3275	0·20784	3·852	0·4189		1·776
May	2	+0·10835	0·10843	−0·00181		9·03597	5·3295	0·20814	3·856	0·4189		1·778
	28	+0·10862	0·10895	−0·00747		9·03755	5·3355	0·20720	3·844	0·4192		1·773
June	14	+0·10826	0·10840	−0·00317		9·03574	5·3400	0·20639	3·849	0·4179		1·775
	26	+0·10820	0·10825	−0·00113		9·03531	5·3290	0·20883	3·861	0·4189		1·780
July	19	+0·10803	0·10818	−0·00341		9·03484	5·3415	0·20626	3·852	0·4174		1·776
August	22	+0·10809	0·10821	−0·00272		9·03502	5·3460	0·20603	3·850	0·4174		1·775
September	12	+0·10768	0·10780	−0·00273		9·03338	5·3500	0·20555	3·856	0·4164		1·778
October	31	+0·10757	0·10772	−0·00342		9·03299	5·3605	0·20288	3·846	0·4149		1·773
November	29	+0·10733	0·10747	−0·00320		9·03202	5·3475	0·20413	3·855	0·4150		1·778

In forming the mean value of P the value for May 28 has been omitted.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

METEOROLOGICAL OBSERVATIONS.

1867.

MONTH and DAY, 1867.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference. Greatest.	Difference. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 50 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Osler's. General Direction. P.M.	Osler's. Pressure in lbs. on the square foot. Greatest.	Pressure. Least.	Pressure. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Jan. 1	..	29·207	31·5	21·8	26·5	21·2	43·2	19·0	41·4	37·7	5·3	8·9	2·8	−10·8	N	NNW : SW	1·3	0·0	0·1	285	0·01
2	Apogee	29·044	30·9	15·0	23·9	22·9	33·6	11·1	38·8	35·7	1·0	7·6	0·0	−13·1	SE : E	NNE:NNW:SW	23·0	0·0	1·3	261	0·62
3	..	29·636	29·9	10·4	22·1	19·8	39·9	6·4	37·8	34·7	2·3	4·7	0·0	−14·6	SW	N : WSW	0·0	0·0	0·0	120	0·00
4	Greatest Declination S.	29·824	21·2	7·7	13·2	11·1	51·1	6·0	36·1	34·7	2·1	5·9	0·0	−23·2	WSW	WSW	0·0	0·0	0·0	99	0·00
5	..	29·798	32·5	6·6	23·3	19·0	42·5	5·2	35·4	30·9	4·3	8·3	0·0	−12·9	SE	ESE	7·0	0·0	0·6	376	0·00
6	New	29·254	43·7	27·8	37·8	37·8	43·7	26·3	34·8	32·9	0·0	0·0	0·0	+ 1·8	SE : SSE	SE : SSW	17·5	0·0	1·0	368	0·29
7	..	29·003	54·4	42·3	49·2	47·8	58·0	39·2	35·8	31·2	1·4	3·8	0·0	+13·4	SSW	SSW	23·0	0·3	3·1	755	0·18
8	..	28·791	52·9	40·5	45·6	40·6	56·2	37·0	34·8	33·5	5·0	9·0	1·1	+ 9·9	SSW : SW	SW : SSW	35·0	0·1	4·1	490	0·13
9	..	28·816	46·1	39·2	43·2	39·2	47·2	34·8	36·8	32·2	4·0	6·2	1·8	+ 7·4	SSW	SSW : SW	11·0	0·0	1·7	589	0·57
10	..	29·120	43·4	37·2	39·3	33·0	47·5	34·5	37·3	33·2	6·3	7·6	4·4	+ 3·4	WSW : NW	NW	6·0	0·0	1·4	348	0·05
11	In Equator.	29·531	38·0	28·2	32·4	26·3	55·2	24·1	37·8	34·2	6·1	10·6	3·6	− 3·6	NW : N	N	2·2	0·0	0·4	268	0·00
12	..	29·448	32·8	22·5	27·5	21·6	51·8	20·8	38·8	36·2	5·9	8·6	0·7	− 8·6	NW : WSW	SW : NW	2·2	0·0	0·3	334	0·06
13	First Qr.	29·549	31·0	18·0	24·0	16·3	42·0	17·0	34·3	32·5	7·7	10·8	6·2	−12·2	NW:W:NNW	NW : WSW	1·5	0·0	0·2	139	0·00
14	..	29·726	24·9	13·9	19·3	11·9	47·7	11·8	33·0	31·5	7·4	10·9	0·9	−17·0	SW	NW : W	0·0	0·0	0·0	159	0·00
15	..	29·753	32·0	18·0	25·9	22·1	63·0	15·8	31·8	..	3·8	7·0	1·7	−10·5	WNW : NNE	N : N by E	1·5	0·0	0·2	335	0·00
16	..	29·579	34·9	27·7	30·6	22·4	42·1	23·0	32·3	30·9	8·2	13·3	4·6	− 5·9	NNE	N	23·0	0·0	2·0	498	0·01
17	..	29·343	29·9	25·7	27·7	19·6	37·0	20·8	32·8	30·7	8·1	10·1	4·5	− 8·9	NNW	NNW	6·7	0·0	1·1	275	0·01
18	Greatest Declination N. Perigee.	29·401	31·8	24·9	27·6	24·4	45·6	22·5	32·3	30·7	3·2	4·7	2·2	− 9·1	NW : W	N : NNE	0·5	0·0	0·0	97	0·08
19	..	29·709	31·9	22·1	26·9	22·7	64·0	17·2	32·3	30·9	4·2	7·7	1·4	−10·0	Variable	ENE : ESE	1·0	0·0	0·0	279	0·00
20	Full	29·728	30·5	25·9	28·5	22·6	39·4	23·2	31·8	30·2	5·9	8·7	1·9	− 8·5	ESE : E	E by N	17·5	0·1	1·8	439	0·00
21	..	29·722	29·4	27·4	28·1	17·4	33·1	27·3	31·8	29·7	10·7	11·3	9·3	− 9·1	ENE	ENE : E	10·0	0·0	1·2	281	0·00
22	..	29·853	33·0	22·0	24·1	18·1	33·0	22·0	32·3	29·7	6·0	8·7	0·6	−13·3	SE	SE : E	0·7	0·0	0·0	233	0·02
23	..	29·540	49·7	33·0	44·1	42·8	49·7	33·0	30·5	30·5	1·3	4·6	0·0	+ 6·4	SSE : S	S	7·0	0·0	0·6	470	0·08
24	In Equator.	29·327	54·5	43·1	49·5	48·3	64·8	42·5	33·8	31·1	1·2	5·2	0·0	+11·6	SSW : SW	SW : S	9·2	0·0	1·3	246	0·01
25	..	29·457	50·4	39·4	43·9	39·6	58·9	33·7	33·8	31·7	4·3	8·8	1·1	+ 5·8	Calm : SW	NW : W	3·6	0·0	0·4	336	0·02
26	..	29·895	46·0	38·6	42·0	38·1	50·1	33·1	35·8	32·7	3·9	6·4	1·0	+ 3·7	WSW : W : N	SSW	3·7	0·0	0·4	380	0·21
27	Last Qr.	29·795	55·0	45·5	51·5	50·0	59·0	44·0	39·8	36·7	1·5	3·4	0·0	+13·1	SW	WSW : SW	4·1	0·0	1·1	396	0·00
28	..	29·715	53·0	42·0	47·6	44·9	59·0	39·2	40·8	37·7	2·7	5·7	1·3	+ 9·2	SW	SW : WSW	12·0	0·1	1·6	459	0·01
29	..	29·798	50·4	38·9	45·8	42·9	68·0	34·1	42·3	38·7	2·9	7·1	0·0	+ 7·5	SW	SW	8·6	0·0	1·5	599	0·00
30	Apogee.	29·584	51·7	42·3	46·8	42·7	60·6	42·1	43·8	41·1	4·1	7·8	0·0	+ 8·7	SW	SW:SSW:NW:WSW	20·0	0·0	2·4	472	0·43
31	..	30·002	46·9	36·3	41·3	34·3	71·7	32·0	44·3	41·7	7·0	10·7	4·8	+ 3·4	W : WSW	W : SW : S	11·2	0·0	0·7	338	0·00
Means	..	29·514	39·5	28·5	34·2	29·7	50·3	25·8	36·0	33·5	4·4	7·6	1·8	− 2·8	...	...	..	..	..	Sum 10724	Sum 2·79

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was $29^{in}\cdot910$ on the 5th; the first minimum in the month was $28^{in}\cdot912$ on the 2nd.
The second maximum ,, was $28^{in}\cdot979$ on the 8th; the absolute minimum ,, was $28^{in}\cdot579$ on the 8th.
The third maximum ,, was $29^{in}\cdot601$ on the 11th; the third minimum ,, was $28^{in}\cdot715$ on the 9th.
The fourth maximum ,, was $29^{in}\cdot782$ on the 15th; the fourth minimum ,, was $29^{in}\cdot389$ on the 12th.
The fifth maximum ,, was $29^{in}\cdot759$ on the 20th; the fifth minimum ,, was $29^{in}\cdot311$ on the 17th.
The sixth maximum ,, was $29^{in}\cdot910$ on the 22nd; the sixth minimum ,, was $29^{in}\cdot707$ on the 21st.
The seventh maximum ,, was $29^{in}\cdot967$ on the 26th; the seventh minimum ,, was $29^{in}\cdot302$ on the 24th.
The eighth maximum ,, was $29^{in}\cdot864$ on the 27th; the eighth minimum ,, was $29^{in}\cdot755$ on the 27th.
The ninth maximum ,, was $29^{in}\cdot881$ on the 29th; the ninth minimum ,, was $29^{in}\cdot664$ on the 28th.
The absolute maximum ,, was $30^{in}\cdot061$ on the 31st; the tenth minimum ,, was $29^{in}\cdot420$ on the 30th.
The range in the month was $1^{in}\cdot482$.
The mean for the month was $29^{in}\cdot514$, being $0^{in}\cdot241$ *lower* than the average of the preceding 26 years.

TEMPERATURE OF THE AIR.

The highest in the month was 55°·0 on the 27th; the lowest was 6°·6 on the 5th.
The range ,, was 48°·4.
The mean ,, of all the highest daily readings was 39°·5, being 3°·8 *lower* than the average of the preceding 26 years.
The mean ,, of all the lowest daily readings was 28°·5, being 5°·1 *lower* than the average of the preceding 26 years.
The mean daily range was 11°·0, being 1°·3 *greater* than the average of the preceding 26 years.
The mean for the month was 34°·2, being 4°·1 *lower* than the average of the preceding 26 years.

MONTH and DAY, 1867.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Jan. 1	w	m	sl.-sn : 7, ci, ci.-cu, sc, sl.-sn	4, ci.-s, cu.-s, sc, h : o, sl.-f
2	w : s, g.-cur	ss N,P, sp,g.-cur: m	10, sl.-sn : 10, sn	6, li.-cl, sn : v
3	o	o	10, h.-fr, sl.-f	10, sl.-f : 10, f
4	w	w : m	o, h.-fr, sl.-f	o, f : o, f, h.-fr
5	o	o : w	10, f	7, h, ci.-s : 10, sn
6	o	w : o	10, sl.-r, sl, w : 10, m.-r	10, r : v, f, r
7			10, r : 10, sc	6, ci, ci.-cu, ci.-s : ci, ci.-s, oc.-r, v
8			10, ci.-cu, ci.-s, sc, f.-sqs	10, sqs, r : ci, ci.-cu, ci.-s, v, r : o
9			7, ci, ci.-s, cu.-s, s, r	10, cu.-s, sc, r : cu.-s, h.-r, vv
10			10, r : 10, ci.-cu	10, ci.-s, cu.-s : 10
11			10, ci.-cu, ci	10, ci, ci.-cu, ci.-s, li.-cl, v : o
12			5, ci, ci.-cu, cu.-s, sn : 10, oc.-sn	10, sn : sn, v
13			o, h.-fr	o : o, h.-fr
14			o, h, sl.-f, h.-fr : o, gt.-glm, h	1, h, sl.-f, li.-cl : o, h, h.-fr
15			8, li.-cl : o	o : sc, sn, v
16			9, ci.-cu, cu.-s, h, sn : 10	10, sn : 10, sn : 10, sc, sn, st.-w
17			10, h.-fr, sn : 10	10 : v : ci, ci.-s, v
18			10, sn : 10	10, vv : 4, v
19			ci, ci.-cu, h.-fr, h, v	8, ci.-cu, sn, h : cu.-s, ci.-cu, v
20			10, ci.-s, cu.-s	10 : ci, ci.-cu, cu.-s, sc, v, st.-w
21			10, ci.-s, cu.-s : 10, sn	10 : 10
22			10, : 10	10 : 10, r, fr.-r
23			10, r : 10	10, r : v, st.-w
24			10, th.-r, sc : 9, ci.-s, ci.-cu, sc	10 : 10, r
25			10, f, m.-r : 10, cu.-s	9, cu.-s : d, v
26			10, sl.-f : v	10 : 10, r
27	o	o	10 : 10	10, r
28			10, sc : 10, sc, th.-r	10, th.-r : v
29			8, ci, ci.-cu : 10, ci, ci.-s	10, fr.-sqs : 10, r, sqs
30			8, ci, ci.-cu, ci.-s, cu.-s, sc : 10, ci, ci.-s, sc	10, r, sc : 10, sc, h.-r, sqs
31			o, h.-fr, d : 2, ci, ci.-cu, ci.-s, h	3, ci, ci.-cu, ci.-s, h : 10

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 50°·7 on the 27th; and the lowest, as read by eye January 4.d 21h., was 7°·2. The dew-point-temperature had, however, been lower, the lowest air-temperature recorded by the self-registering thermometer being 6°·6.

The mean ,, was 29°·7, being 5°·4 *lower* than the average of the preceding 26 years.

Elastic Force of Vapour.—The mean for the month was 0in·165, being 0in·038 *less* than the average of the preceding 26 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2grs·0, being 0gr·4 *less* than the average of the preceding 26 years.

Degree of Humidity—The mean for the month was 83 (that of Saturation being represented by 100), being 5 *less* than the average of the preceding 26 years.

Weight of a Cubic Foot of Air.—The mean for the month was 554 grains, being *the same as* the average of the preceding 26 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·3.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 0·8.

WIND.

The proportions were of N. 7, S. 9, W. 10, E. 4, and Calm 1. The greatest pressure in the month was 35lbs·0 on the square foot, on the 8th.

RAIN.

Fell on 18 days in the month, amounting to 2in·79, as measured in the simple cylinder gauge partly sunk below the ground; being 1in·00 *greater* than the average fall of the preceding 52 years.

ELECTRICITY.—The electrical apparatus was not in action from January 7 to 26, and January 28 to 31.

MONTH and DAY, 1867.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference. Greatest.	Difference. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 50 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure. Least.	Pressure. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Feb. 1	Greatest Declinations.	29.959	50.4	40.0	46.1	45.1	53.2	37.0	44.8	42.7	1.0	3.3	0.0	+ 8.3	S by E : S	SW	2.9	0.0	0.6	393	0.09
2	..	30.215	51.7	35.0	43.1	36.3	82.2	31.7	44.5	42.7	6.8	13.7	3.5	+ 5.4	WSW	W by S	4.7	0.0	0.7	340	0.00
3	..	30.274	47.5	32.9	39.7	34.8	69.0	32.5	43.8	42.9	4.9	10.9	1.2	+ 1.9	SW	SW : SSW	1.0	0.0	0.1	336	0.00
4	New	29.425	48.7	38.9	43.3	40.5	53.5	35.3	43.3	41.5	2.8	4.6	2.0	+ 5.3	SSW	SSW : SW	10.0	0.0	1.2	483	0.08
5	..	29.143	47.2	35.2	42.2	39.9	61.5	30.7	42.8	39.2	2.3	4.6	0.0	+ 3.9	SW : SSW	SSW : SW	11.5	0.1	1.6	664	0.07
6	..	28.774	50.5	37.1	43.1	36.4	88.0	33.7	42.7	39.0	6.7	12.4	0.0	+ 4.5	SW : WSW	WSW	33.0	0.7	5.2	642	0.08
7	..	29.485	43.7	35.1	39.7	30.5	76.2	30.9	42.8	39.2	9.2	13.4	5.2	+ 0.9	W	WSW : SSW	15.5	0.1	1.5	646	0.18
8	In Equator.	29.251	54.4	40.0	48.5	45.3	64.6	37.5	42.8	38.7	3.2	7.6	0.0	+ 9.6	SW	SW : WSW	41.0	0.3	4.3	697	0.01
9	..	29.811	54.8	42.8	47.1	40.0	95.9	40.0	42.6	38.4	7.1	13.2	1.1	+ 8.2	WSW	WSW : SW : S	15.5	0.0	1.3	310	0.06
10	..	29.786	52.3	44.0	48.6	43.9	57.8	43.9	43.5	40.7	4.7	6.2	1.3	+ 9.8	SSW	SSW	13.0	0.0	1.2	509	0.00
11	..	29.977	50.1	37.9	42.3	34.1	80.2	34.1	43.8	41.7	8.2	11.0	4.8	+ 3.7	W : W by S	WSW	13.0	0.0	1.1	479	0.24
12	First Qr.	30.104	52.0	41.8	47.7	45.1	60.6	29.1	44.8	42.7	2.6	5.6	0.8	+ 9.3	SW	WSW	2.1	0.0	0.4	247	0.00
13	..	30.213	48.3	44.8	46.1	43.4	53.0	44.7	45.3	43.4	2.7	3.4	0.4	+ 7.8	WSW : SW	SW : N : NE	0.0	0.0	0.0	134	0.00
14	Greatest Declination N.	30.152	50.1	39.3	43.6	41.1	74.6	35.0	45.5	43.7	2.5	5.9	0.9	+ 5.4	NE : ENE	E : ESE	1.1	0.0	0.0	200	0.00
15	Perigee	29.748	56.9	38.4	47.5	40.4	97.8	34.7	45.8	43.7	7.1	15.0	1.0	+ 9.4	E	SE : SSE	3.2	0.0	0.3	329	0.02
16	..	29.652	57.1	47.1	51.4	46.5	101.0	44.4	45.9	43.7	4.9	7.4	1.5	+ 13.3	S	SSW : SW	1.8	0.0	0.3	147	0.12
17	..	29.875	55.1	43.0	48.0	45.8	79.0	40.6	46.8	44.7	2.2	4.2	0.0	+ 9.8	Calm : SW	N : Calm	0.0	0.0	0.0	99	0.22
18	Full	30.291	46.0	39.9	41.9	41.6	50.7	39.3	47.8	45.7	0.3	0.7	0.0	+ 3.6	N : ENE	E	0.1	0.0	0.0	146	0.00
19	..	30.194	53.0	40.4	46.5	44.9	82.5	40.0	47.8	44.7	1.6	4.8	0.0	+ 8.0	NE : SE	S	0.0	0.0	0.0	143	0.01
20	..	30.336	56.9	44.6	48.6	43.9	93.0	39.2	48.3	45.2	4.7	9.3	1.3	+ 9.9	SW : WSW	WSW : SW	0.2	0.0	0.0	254	0.00
21	In Equator.	30.366	52.0	42.2	47.5	43.2	63.8	38.5	48.8	45.7	4.3	6.6	1.8	+ 8.7	SW	SW : WSW	3.5	0.0	0.2	348	0.00
22	..	30.272	50.3	45.4	47.4	43.3	56.8	43.1	48.1	45.7	4.1	5.0	2.7	+ 8.4	SW	WSW	3.7	0.0	0.4	382	0.00
23	..	30.322	52.9	39.0	45.3	37.6	81.2	33.4	47.3	45.6	7.7	13.8	1.6	+ 6.1	WSW	NW : W : SW	0.7	0.0	0.0	292	0.00
24	..	30.074	52.3	38.0	46.1	43.7	60.4	32.4	47.8	45.7	2.4	9.0	0.0	+ 6.7	SW	WSW : W	8.5	0.0	0.8	438	0.00
25	..	30.000	50.1	37.0	44.3	38.7	93.0	36.0	46.8	44.7	5.6	10.5	2.4	+ 4.7	W : WSW	WSW	10.4	0.0	0.4	449	0.00
26	Last Qr.	29.862	48.7	37.8	39.9	35.7	51.5	36.3	46.8	44.7	4.2	5.9	1.4	+ 0.1	WSW : N	NW : SW	23.0	0.0	0.5	142	0.04
27	Apogee	29.932	41.6	35.4	37.4	28.0	59.1	34.5	46.3	44.6	9.4	11.7	7.0	− 2.5	Calm : E by N	E	0.6	0.0	0.0	191	0.00
28	Greatest Declination S.	30.008	43.7	33.1	37.4	30.8	84.1	29.1	45.3	43.8	6.6	13.2	4.1	− 2.7	ENE	E : NE	1.2	0.0	0.0	200	0.00
Means	..	29.911	50.7	39.5	44.7	40.0	72.3	36.3	45.5	43.0	4.6	8.3	1.6	+ 6.0	...	...	..	..	..	Sum 9640	Sum 1.22

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first minimum in the month was $29^{in}\cdot951$ on the 1st.

The first maximum in the month was $30^{in}\cdot360$ on the 3rd; the absolute minimum ,, was $28^{in}\cdot701$ on the 6th.
The second maximum ,, was $29^{in}\cdot575$ on the 7th; the third minimum ,, was $29^{in}\cdot208$ on the 8th.
The third maximum ,, was $29^{in}\cdot905$ on the 9th; the fourth minimum ,, was $29^{in}\cdot683$ on the 10th.
The fourth maximum ,, was $30^{in}\cdot230$ on the 13th; the fifth minimum ,, was $29^{in}\cdot619$ on the 15th.
The fifth maximum ,, was $30^{in}\cdot338$ on the 18th; the sixth minimum ,, was $30^{in}\cdot176$ on the 19th.
The absolute maximum ,, was $30^{in}\cdot390$ on the 21st; the seventh minimum ,, was $30^{in}\cdot241$ on the 22nd.
The seventh maximum ,, was $30^{in}\cdot337$ on the 23rd; the eighth minimum ,, was $29^{in}\cdot996$ on the 24th.
The eighth maximum ,, was $30^{in}\cdot078$ on the 25th; the ninth minimum ,, was $29^{in}\cdot856$ on the 26th.
The range in the month was $1^{in}\cdot689$.
The mean for the month was $29^{in}\cdot911$, being $0^{in}\cdot123$ *higher* than the average of the preceding 26 years.

TEMPERATURE OF THE AIR.

The highest in the month was $57^{\circ}\cdot1$ on the 16th; the lowest was $32^{\circ}\cdot9$ on the 3rd.
The range ,, was $24^{\circ}\cdot2$.
The mean ,, of all the highest daily readings was $50^{\circ}\cdot7$, being $5^{\circ}\cdot8$ *higher* than the average of the preceding 26 years.
The mean ,, of all the lowest daily readings was $39^{\circ}\cdot5$, being $6^{\circ}\cdot0$ *higher* than the average of the preceding 26 years.
The mean daily range was $11^{\circ}\cdot2$, being $0^{\circ}\cdot2$ *less* than the average of the preceding 26 years.
The mean for the month was $44^{\circ}\cdot7$, being $6^{\circ}\cdot0$ *higher* than the average of the preceding 26 years.

MONTH and DAY, 1867.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Feb. 1			10, ci.-s, r : 10	10 : 10, oc.-r
2			o : 3, ci, ci.-cu	7, ci, ci.-cu : o
3			o, h, h.-fr : 5, ci, ci.-s	9, th.-cl, cu.-s
4			10, sc, th.-r : 10, sc, th.-r	10, sc, oc.-r : v, oc.-r : o, ms
5			7, ci, ci.-cu, ci.-s, d : 10, sc	10, sc, r : 10, oc.-r
6			vv, sc, r, h.-sqs : 6, ci, ci.-cu, ci.-s, fr.-sqs	5, ci, ci.-cu., ci.-s, h.-sqs, r : v, r, l : o
7			1, ci, h.-fr, d : 7, cu, cu.-s, w	1, ci.-cu, ci : v, r : 10, r, l
8			10, sc, fr.-sqs, r : 8, ci, ci.-cu, ci.-s	10, sqs, glm : ci.-cu, ci.-s, v, sqs, w, l : o
9		o	o : ci, cu, cu.-s	8, ci, ci.-cu, ci.-s, cu.-s : 10, r
10	o	o : w	10, ci.-s	10, ci.-s : ci, ci.-s, lu.-ha, vv, r
11	o	o	1, ci, r : ci, ci.-cu, ci.-s	7, ci, ci.-cu, ci.-s : ci, ci.-s, v
12	o	o	10, th.-cl : 10, ci.-s	10 : 10, sl.-f, sl.-r
13	w	w	10, m.-r : 10	10 : 10
14	o : w	m : w	10, th.-cl : 10, m.-r	h, v : o, h.-d
15	w	o	1, ci : 3, ci	9, ci, ci.-s, cu.-s, th.-cl : 10, r, th.-cl, lu.-ha
16	o	o : w	9, ci.-s, ci, ci.-cu, sl.-r : 6, ci.-cu, ci, ci.-s, cu.-s	6, ci, ci.-s : 10, th.-cl, h.-r
17	w	w	7, ci, ci.-cu, f, r : 9, ci, ci.-cu, f	10, glm
18	w	w	10, sl.-f : 10, f	10, f : 10, f
19	o	o : w	10, m.-r : ci, ci.-cu, cu.-s, v	10 : 10
20	w o	o : m	10, d : 1, ci.-cu, h	4, ci, ci.-cu, ci.-s, h : o, ci.-s, li.-cl, lu.-co
21	m w	o	10 : 10	10 : 10
22	o	o	10, th.-r : 10, cu.-s	10, th.-cl : 10
23	m o	w : o	3, ci, ci.-cu, h, d : 4, ci, h	4, ci, ci.-cu, h : o, h, sl.-f, h.-d
24	o	o	10, sc, glm, oc.-r : 10, sc	v
25	o	o	10, ci.-s, ci.-cu : 9, ci, ci.-cu	10, th.-cl : 10
26			10, th.-r : 10, th.-r	10, r : 10
27	o	o	10, ci.-cu, ci.-s : 10, ci.-s, ci.-cu	10, ci.-s : 10
28	w : o	o	10, sn : 10	7, ci.-cu, ci, cu.-s, li.-cl, d, v : o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 49°·0 on the 17th; and the lowest was 27°·4 on the 27th.

The mean „ was 40°·0, being 5°·4 *higher* than the average of the preceding 26 years.

Elastic Force of Vapour.—The mean for the month was 0in·247, being 0in·044 *greater* than the average of the preceding 26 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2grs·8, being 0gr·4 *greater* than the average of the preceding 26 years.

Degree of Humidity.—The mean for the month was 84 (that of Saturation being represented by 100), being 1 *less* than the average of the preceding 26 years.

Weight of a Cubic Foot of Air.—The mean for the month was 549 grains, being 4 grains *less* than the average of the preceding 26 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·7.

WIND.

The proportions were of N. 2, S. 9, W. 12, E. 4, and Calm 1. The greatest pressure in the month was 41lbs·0 on the square foot on the 8th.

RAIN.

Fell on 13 days in the month, amounting to 1in·22, as measured in the simple cylinder gauge partly sunk below the ground; being 0in·35 *less* than the average fall of the preceding 52 years.

ELECTRICITY.—The insulating lamp was not burning from February 1 to 8, and on February 26.

MONTH and DAY, 1867.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer, with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference. Greatest.	Difference. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 50 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Osler's. General Direction. P.M.	Osler's. Pressure in lbs. on the square foot. Greatest.	Pressure. Least.	Pressure. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Mar. 1	..	30·412	40·9	28·2	34·7	28·5	58·4	21·4	44·0	43·2	6·2	10·8	4·0	− 5·5	NE : N	NE	0·8	0·0	0·0	231	0·00
2	..	30·582	39·8	29·8	33·5	24·9	85·4	27·8	43·3	41·7	8·6	11·5	7·4	− 6·7	NE : ENE	ENE : NE	2·7	0·0	0·2	361	0·00
3	..	30·471	43·5	27·6	35·4	30·1	90·1	25·0	41·8	40·7	5·3	13·4	3·2	− 4·8	NE	ENE	20·6	0·0	1·0	419	0·00
4	..	30·257	45·6	33·9	38·2	32·4	95·8	31·1	40·8	37·7	5·8	9·9	2·2	− 1·9	ENE	NE : NNE	8·2	0·0	0·6	377	0·00
5	..	29·930	48·7	33·3	38·9	32·6	78·2	29·6	39·8	36·7	6·3	12·0	3·8	− 1·2	NNE	NNE : N by W	3·0	0·0	0·4	297	0·00
6	New	29·591	40·9	31·2	33·7	29·9	63·9	20·4	39·8	36·7	3·8	9·2	1·1	− 6·4	N : N by E	NE : NNE	3·8	0·0	0·3	341	0·04
7	In Equator.	29·468	39·2	29·5	33·2	29·8	81·0	26·5	40·5	37·3	3·4	7·4	0·0	− 7·0	NE	NE	5·0	0·0	0·1	216	0·11
8	..	29·388	38·7	29·2	32·9	29·6	88·0	26·6	40·8	37·7	3·3	6·3	1·7	− 7·4	NE	NE	0·5	0·0	0·0	225	0·04
9	..	29·316	40·8	29·4	34·8	31·7	70·9	25·0	40·9	38·9	3·1	8·3	0·2	− 5·6	NE	E : ENE	12·0	0·0	0·8	388	0·34
10	..	29·123	44·8	36·1	40·4	40·2	47·0	35·2	41·1	39·0	0·2	2·2	0·0	− 0·2	ENE	N : NNE	14·9	0·0	1·1	240	0·18
11	..	29·507	40·5	34·6	36·2	32·4	57·6	34·0	40·3	38·6	3·8	6·0	1·5	− 4·7	NNE : NE	NE : E	0·1	0·0	0·0	253	0·05
12	Perigee.	29·650	38·3	31·6	33·4	27·6	56·2	31·0	39·8	38·2	5·8	10·2	0·0	− 7·8	NE	ENE	40·0	0·0	4·2	553	0·17
13	First Qr.	29·699	33·8	29·0	30·3	22·2	51·0	28·2	39·5	37·7	8·1	10·8	1·0	−11·1	ENE	ENE	31·0	0·2	2·1	425	0·04
14	Greatest Declination N.	29·404	33·7	30·9	31·8	30·5	39·0	29·6	39·3	37·4	1·3	3·3	0·0	− 9·7	ENE	NE	4·6	0·0	0·6	229	0·49
15	..	29·617	40·7	29·5	34·1	28·9	82·0	25·5	38·8	36·2	5·2	9·5	4·0	− 7·6	NE	NNE : N	0·6	0·0	0·0	151	0·01
16	..	29·794	42·0	24·5	32·2	27·0	88·1	18·5	37·8	34·7	5·2	12·5	1·3	− 9·7	NNW	NNE : ENE	4·2	0·0	0·1	260	0·01
17	..	29·726	38·1	26·1	32·1	22·2	93·3	21·9	37·5	34·4	9·9	12·8	4·8	− 9·9	ENE	E	25·0	0·0	1·9	578	0·00
18	..	29·345	33·6	26·3	29·7	27·7	44·0	25·1	37·3	34·2	2·0	4·0	1·3	−12·4	E	E	28·0	0·0	2·7	303	0·08
19	..	29·175	36·3	31·8	33·8	32·5	36·3	31·1	36·9	34·2	1·3	3·1	0·0	− 8·4	NE	ENE : NE	3·9	0·0	0·4	270	0·22
20	Full; In Equator.	29·394	39·2	32·6	34·6	30·9	53·2	31·8	36·8	33·7	3·7	6·0	1·9	− 7·6	N by E	N : N by W	1·6	0·0	0·2	244	0·00
21	..	29·693	40·9	28·7	34·1	26·4	89·6	25·0	36·1	33·7	7·7	12·4	2·4	− 8·2	N : NE	ESE	8·5	0·0	0·4	325	0·00
22	..	29·546	46·5	30·5	36·9	36·1	64·0	29·6	36·8	34·7	0·8	4·6	0·0	− 5·3	ESE	Calm	3·3	0·0	0·3	135	0·18
23	..	29·489	55·1	39·3	47·6	45·2	75·8	37·0	37·8	34·7	2·4	9·0	1·4	+ 5·4	SSW : SSE	SSE	3·3	0·0	0·6	334	0·03
24	..	29·443	59·1	48·1	51·4	44·4	110·2	44·2	40·3	35·4	7·0	9·7	4·0	+ 9·2	SW	SSW	2·9	0·0	0·4	395	0·04
25	..	29·501	54·9	45·3	48·8	44·2	79·6	40·6	..	..	4·6	8·6	2·5	+ 6·5	SW : SSW	SSE : SSW	3·8	0·0	0·7	515	0·13
26	..	29·246	58·0	44·0	49·9	30·9	107·3	40·2	40·8	39·7	10·0	16·2	4·0	+ 7·4	SSW	SW	22·5	0·0	2·9	457	0·00
27	Apogee; Greatest Dec. S.	29·187	57·1	41·2	46·8	42·0	108·1	37·0	44·8	43·7	4·8	9·3	1·1	+ 3·9	SW : SSW	SSW : SW	2·1	0·0	0·2	277	0·02
28	Last Qr.	29·279	53·8	34·4	42·9	34·9	111·2	29·5	47·1	44·7	8·0	15·6	0·0	− 0·3	WSW	WSW : SW	1·7	0·0	0·1	299	0·01
29	..	29·476	50·1	35·8	43·0	35·3	74·2	30·0	47·8	45·7	7·7	13·0	4·0	− 0·6	SW	W : WSW	1·5	0·0	0·2	330	0·00
30	..	29·595	55·1	35·7	43·1	36·3	109·6	32·0	47·0	45·2	6·8	13·4	2·2	− 0·9	WSW	WSW : NW	25·2	0·0	1·3	548	0·09
31	..	30·046	49·7	34·4	41·5	29·8	107·0	30·6	47·8	44·7	11·7	17·4	4·6	− 2·9	NW : NNW	NNW : NW	6·6	0·0	0·8	235	0·00
Means	..	29·624	44·5	33·0	37·7	32·5	77·3	29·7	40·8	38·4	5·3	9·6	2·1	− 3·9	...	...	..	..	..	Sum 10211	Sum 2·28

Barometer Readings from Eye-Observations.

The absolute maximum in the month was $30^{in}\cdot608$ on the 2nd; the absolute minimum in the month was $29^{in}\cdot016$ on the 10th.
The second maximum ,, was $29^{in}\cdot799$ on the 13th; the second minimum ,, was $29^{in}\cdot382$ on the 14th.
The third maximum ,, was $29^{in}\cdot874$ on the 16th; the third minimum ,, was $29^{in}\cdot148$ on the 19th.
The fourth maximum ,, was $29^{in}\cdot711$ on the 21st; the fourth minimum ,, was $29^{in}\cdot520$ on the 22nd.
The fifth maximum ,, was $29^{in}\cdot628$ on the 23rd; the fifth minimum ,, was $29^{in}\cdot324$ on the 23rd.
The sixth maximum ,, was $29^{in}\cdot602$ on the 25th; the sixth minimum ,, was $29^{in}\cdot172$ on the 27th.
The seventh maximum ,, was $29^{in}\cdot639$ on the 30th; the seventh minimum ,, was $29^{in}\cdot546$ on the 30th.
The range in the month was $1^{in}\cdot592$.
The mean for the month was $29^{in}\cdot624$, being $0^{in}\cdot123$ *less* than the average of the preceding 26 years.

Temperature of the Air

The highest in the month was $59°\cdot1$ on the 24th; the lowest was $24°\cdot5$ on the 16th.
The range ,, was $34°\cdot6$.
The mean ,, of all the highest daily readings was $44°\cdot5$, being $5°\cdot4$ *lower* than the average of the preceding 26 years.
The mean ,, of all the lowest daily readings was $33°\cdot0$, being $2°\cdot2$ *lower* than the average of the preceding 26 years.
The mean daily range was $11°\cdot5$, being $3°\cdot1$ *less* than the average of the preceding 26 years.
The mean for the month was $37°\cdot7$, being $4°\cdot0$ *lower* than the average of the preceding 26 years.

MONTH and DAY, 1867.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
March 1	o	o	8, ci.-s, cu.-s, ci.-cu : 10, ci.-s, cu.-s, sn	10, ci.-s, cu.-s, ci.-cu : ci.-cu, v
2	o	o	10 : 10	ci, ci.-cu, v : ci.-s, v
3	o	o	2, ci, ci.-s, h.-fr : 1, ci	ci, ci.-s, v
4	o	o	10 : 9, cu.-s, ci.-cu	4, ci.-cu : ci.-s, vv
5	o	o	10, oc.-r : 10	3, ci : o, d
6	o	ssN,sp,g.-cur : o	10, ci.-s, cu.-s : 10, sl	sn, h, v : v, th.-cl, oc.-sn : 10
7	o : ss N, ss P, sp, g.-cur	ssN,ssP,sp,g.-cur: o	10, sn : ci, ci.-s, v, sn	ci, ci.-cu, ci.-s, cu.-s, v, sn: 10, oc.-sn
8			v, ci, ci.-cu, sn	10, hl : 10
9			10, ci.-cu, ci.-s, h	10, ci.-s, glm : 10, r, st.-w
10			10, h.-r, st.-w : 10, m.-r, f	10, th.-r
11			10, ci.-s, cu.-s, r : 10	10, oc.-r : 10, m.-r
12			10, ci.-s, sn : 10, sc, sn	10, sc, oc.-sn : 10, st.-w
13			10, h, st.-w : 10	10 : 10, sn
14			10, sn : 10, fr.-r, r, sl	10, sn : 6, cu.-s, ci.-cu, sc
15			10, ci.-s, cu.-s, sn : 10, ci, ci.-cu, sn	10 : ci, ci.-cu, v : o
16			3, ci, ci.-s, h	7, ci.-cu, cu, cu.-s: ci.-cu, ci.-s, v, hl, sn : o
17			cu, ci.-cu, v : vv, st.-w	10, st.-w
18			10, sn, st.-w	10, sn : 10
19			10 : 10, fr.-r, sn, r	10, r : 10, th.-r, fr.-r : 10, oc.-r
20			10 : 10	10, m.-r
21			9, ci, ci.-cu, cu, ci.-s	10, ci.-cu : 3, ci, ci.-s
22			10, sn : 10, th.-r	o, h, mt : 10, th.-r, f
23			10, th.-cl	10, r, ci.-s : 10, ci.-s, r
24			6, ci, ci.-cu, r	7, ci, ci.-cu, ci.-s : ci, v
25			10, cu.-s, ci.-s	10, r : ci.-cu, ci.-s, r, v : o
26			ci, ci.-cu, cu.-s, ci.-s, sc, vv, st.-w	ci, ci.-cu, cu, v : ci, ci.-cu, v : o
27			6, li.-cl : ci.-s, cu.-s, r, v : ci, ci.-s, r, v	v, r, ci.-s, cu.-s : 4, ci.-s, cu.-s : v
28			o : ci, ci.-cu, ci.-s, v	8, r, hl, ci, ci.-cu, ci.-s : o
29			9, li.-cl, h : 10, ci.-cu, cu.-s, mt	10 : 2, cu.-s, ci.-cu: o
30			3, ci, ci.-cu, ci.-s, cu.-s, h: ci, ci.-cu, v, r	ci, ci.-cu, cu.-s, v, r: sqs, w, r, v, l, t : o
31			6, ci, ci.-cu, st.-w : 8, ci, ci.-cu, cu, cu.-s, w	4, h

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 47°·4 on the 25th; and the lowest was 20°·5 on the 13th.

The mean „ was 32°·5, being 3°·9 *lower* than the average of the preceding 26 years.

Elastic Force of Vapour.—The mean for the month was $0^{\text{in}}\cdot184$, being $0^{\text{in}}\cdot033$ *less* than the average of the preceding 26 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $2^{\text{grs}}\cdot1$, being $0^{\text{gr}}\cdot4$ *less* than the average of the preceding 26 years.

Degree of Humidity.—The mean for the month was 82 (that of Saturation being represented by 100), being *the same as* the average of the preceding 26 years.

Weight of a Cubic Foot of Air.—The mean for the month was 552 grains, being 2 grains *greater* than the average of the preceding 26 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·9.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 1·1.

WIND.

The proportions were of N. 11, S. 4, W. 4, E. 12, and Calm 0. The greatest pressure in the month was $40^{\text{lbs}}\cdot0$ on the square foot on the 12th.

RAIN.

Fell on 20 days in the month, amounting to $2^{\text{in}}\cdot28$, as measured in the simple cylinder gauge partly sunk below the ground; being $0^{\text{in}}\cdot69$ *greater* than the average fall of the preceding 52 years.

ELECTRICITY.—The insulating lamp was not burning from March 8 to 31.

MONTH and DAY, 1867.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference. Greatest.	Difference. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 50 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Osler's. General Direction. P.M.	Osler's. Pressure in lbs. on the square foot. Greatest.	Pressure. Least.	Pressure. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
April 1	..	30.257	58.3	30.5	44.9	38.4	117.0	25.1	46.8	43.7	6.5	16.5	0.4	+ 0.3	WSW	W : WSW	2.0	0.0	0.3	366	0.00
2	..	29.992	59.9	47.8	52.8	48.8	81.0	46.1	47.3	42.7	4.0	7.8	2.4	+ 8.0	SW : WSW	W:WNW:NW	6.0	0.0	0.4	373	0.01
3	In Equator	30.048	62.1	41.9	50.4	42.3	104.0	34.1	47.8	43.7	8.1	18.2	4.6	+ 5.4	NW	NNW : WSW	2.5	0.0	0.2	392	0.00
4	New	29.690	60.8	46.5	50.5	43.4	115.0	45.0	47.8	44.7	7.1	14.4	3.2	+ 5.3	SW	W : WNW	11.0	0.0	1.2	379	0.01
5	..	29.879	61.6	41.8	49.5	42.2	117.3	41.0	49.3	45.7	7.3	16.2	3.7	+ 4.1	NW : Calm : SW	WSW	3.8	0.0	0.7	428	0.00
6	..	29.865	61.3	44.1	50.9	46.8	76.0	39.7	49.8	46.9	4.1	10.8	1.5	+ 5.5	WSW	WSW	2.2	0.0	0.3	348	0.01
7	..	29.724	58.9	46.8	50.0	44.6	82.1	42.0	49.8	46.7	5.4	10.3	3.4	+ 4.6	WSW	SW	7.6	0.0	0.7	501	0.00
8	..	29.264	54.9	42.2	47.1	43.0	64.9	38.2	50.8	47.7	4.1	7.1	1.7	+ 1.7	WSW	W by S : WNW	25.0	0.2	4.0	790	0.15
9	..	29.569	57.1	42.3	47.7	35.4	101.9	36.0	50.8	47.7	12.3	17.6	6.2	+ 2.4	WNW	WNW : W	26.0	0.4	3.2	511	0.02
10	Greatest Declination N.	29.630	57.4	37.1	46.4	40.3	102.2	30.5	50.3	47.7	6.1	16.0	2.6	+ 1.2	W WSW	SW	8.0	0.0	1.3	690	0.07
11	..	29.566	54.2	38.9	44.6	36.2	105.9	34.0	48.8	46.7	8.4	15.8	2.1	− 0.5	W : NW	NNW : N by E : W	25.0	0.0	3.5	359	0.04
12	Perigee	30.025	58.4	34.5	45.1	36.8	118.2	29.0	47.8	46.2	8.3	18.4	0.3	+ 0.1	W : NNE	WSW : SSW	1.5	0.0	0.1	340	0.00
13	First Qr.	29.784	53.4	40.3	45.9	44.7	73.8	35.5	48.4	46.8	1.2	4.8	0.0	+ 1.0	SW	SW	3.6	0.0	1.0	552	0.18
14	..	29.283	54.2	45.3	47.7	42.6	69.0	44.5	48.8	46.7	5.1	11.1	1.3	+ 2.7	SW	SW : WSW	25.0	1.3	5.9	788	0.30
15	..	29.419	58.0	43.0	48.8	39.2	122.0	38.3	48.9	46.8	9.6	14.6	4.2	+ 3.5	WSW : W	W : WSW	23.0	0.0	2.0	466	0.08
16	In Equator	29.526	55.4	43.1	47.5	46.2	68.0	38.3	49.0	46.9	1.3	4.8	0.0	+ 2.0	SW	WSW	3.2	0.0	0.4	382	0.05
17	..	29.719	60.8	47.0	51.2	47.1	83.6	47.0	49.3	47.2	4.1	11.2	1.1	+ 5.5	W by S : N	NW : N	2.5	0.0	0.2	162	0.04
18	Full	29.678	64.7	46.2	54.8	49.5	111.0	40.3	49.8	47.9	5.3	11.6	1.7	+ 8.8	SW : SSW	S : SE	0.8	0.0	0.1	252	0.00
19	..	29.423	64.8	51.4	56.9	47.5	127.3	49.2	51.3	48.4	9.4	15.6	3.8	+10.5	S : SW	SW	10.0	0.0	0.8	466	0.00
20	..	29.052	59.4	42.5	49.6	47.7	85.1	42.0	51.8	49.7	1.9	7.6	0.0	+ 2.9	SSW	SSW	25.0	0.0	1.1	609	0.21
21	..	29.276	52.0	39.0	42.8	35.6	122.1	37.4	53.8	50.7	7.2	14.9	1.5	− 4.2	WSW	WSW	20.0	0.2	2.9	512	0.34
22	..	29.641	59.9	41.0	49.2	42.3	121.4	36.0	53.9	50.8	6.9	15.4	0.6	+ 2.0	WSW : W	SW : SSW	2.9	0.0	0.3	342	0.04
23	Apogee	29.615	64.8	49.9	55.7	48.5	105.0	47.6	54.3	52.2	7.2	14.4	1.5	+ 8.3	SW	SW : SSW	2.4	0.0	0.4	376	0.04
24	Greatest Dec. S.	29.494	62.8	47.8	53.7	47.1	123.0	45.8	53.8	51.2	6.6	10.8	2.3	+ 6.1	S by W : SW	SW	6.0	0.0	0.7	348	0.35
25	..	29.653	50.7	42.9	45.6	42.9	76.0	42.0	52.8	49.7	2.7	5.3	0.4	− 2.1	WSW : N	NE : E by N	0.8	0.0	0.1	232	0.01
26	..	29.616	50.9	40.4	45.2	41.7	71.7	40.0	52.2	48.7	3.5	6.5	1.8	− 2.7	E : ESE	ESE	1.0	0.0	0.1	229	0.00
27	Last Qr.	29.365	59.8	40.0	48.5	43.2	103.7	34.0	51.8	48.3	5.3	12.7	0.0	+ 0.4	SE : S	SSW	2.0	0.0	0.3	247	0.02
28	..	29.540	60.6	35.3	48.6	39.5	101.0	27.2	51.8	47.7	9.1	16.9	0.0	+ 0.2	Calm : NE	ENE : NNE	1.1	0.0	0.1	231	0.00
29	..	29.717	59.6	40.5	49.1	40.6	115.3	34.4	51.8	47.7	8.5	18.8	3.4	+ 0.3	N	NNE: SE:SSW	0.6	0.0	0.0	184	0.00
30	..	29.565	64.2	39.7	49.2	44.8	123.5	35.1	51.5	48.7	4.4	19.2	1.2	− 0.1	S by E	SW	16.0	0.0	0.2	342	0.19
Means	..	29.629	58.7	42.3	49.0	43.0	99.6	38.5	50.4	47.5	6.0	12.8	1.9	+ 2.8	...	...	..	..	..	Sum 12197	Sum 2.16

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute maximum in the month was $30^{in}\cdot304$ on the 1st; the first minimum in the month was $29^{in}\cdot976$ on the 2nd.
The second maximum ,, was $30^{in}\cdot091$ on the 3rd; the second minimum ,, was $29^{in}\cdot653$ on the 4th.
The third maximum ,, was $29^{in}\cdot922$ on the 5th; the third minimum ,, was $29^{in}\cdot203$ on the 8th.
The fourth maximum ,, was $29^{in}\cdot783$ on the 10th; the fourth minimum ,, was $29^{in}\cdot360$ on the 11th.
The fifth maximum ,, was $30^{in}\cdot049$ on the 12th; the fifth minimum ,, was $29^{in}\cdot164$ on the 14th.
The sixth maximum ,, was $29^{in}\cdot588$ on the 16th; the sixth minimum ,, was $29^{in}\cdot487$ on the 16th.
The seventh maximum ,, was $29^{in}\cdot794$ on the 17th; the absolute minimum ,, was $28^{in}\cdot895$ on the 20th.
The eighth maximum ,, was $29^{in}\cdot663$ on the 22nd; the eighth minimum ,, was $29^{in}\cdot463$ on the 24th.
The ninth maximum ,, was $29^{in}\cdot716$ on the 25th; the ninth minimum ,, was $29^{in}\cdot346$ on the 27th.
The tenth maximum ,, was $29^{in}\cdot734$ on the 29th; the tenth minimum ,, was $29^{in}\cdot543$ on the 30th.
The range in the month was $1^{in}\cdot409$.
The mean for the month was $29^{in}\cdot629$, being $0^{in}\cdot139$ *less* than the average of the preceding 26 years.

TEMPERATURE OF THE AIR.

The highest in the month was 64°·8 on the 19th and 23rd; the lowest was 30°·5 on the 1st.
The range ,, was 34°·3.
The mean ,, of all the highest daily readings was 58°·7, being 1°·3 *higher* than the average of the preceding 26 years.
The mean ,, of all the lowest daily readings was 42°·3, being 3°·3 *higher* than the average of the preceding 26 years.
The mean daily range was 16°·4, being 2°·1 *less* than the average of the preceding 26 years.
The mean for the month was 49°·0, being 2°·2 *higher* than the average of the preceding 26 years.

MONTH and DAY, 1867.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
April 1			0, h.-fr : 2, ci.-cu, h	1, ci, h : 10, li.-cl
2			10, r : 10	10 : li.-cl, v : 0
3			3, ci.-s, h : 1, ci, h	2, ci : th.-cl, v
4			10 : 10, r, w	10, oc.-shs, r : 4, ci.-cu, r, w
5			10 : ci, ci.-cu, h, v	v : v
6			10, oc.-r : 10, oc.-r	10 : th.-cl, v
7			10 : 10	10, w
8			10, shs.-r, sc, w : 10, r	10, ci.-s, cu.-s, sc : ci.-s, h.-g, shs.-r, v
9			2, ci, ci.-cu : 10, ci, ci.-cu, w	7, cu.-s, ci.-cu, w, r, n, l, t : 0, w
10	0	0	4, ci, h : 10, th.-cl	th.-r, v : oc.-r, v
11	0 : w	0 : w	10, r, th.-cl, h.-g : ci.-s, cu.-s, v, r	ci.-cu, ci.-s, cu.-s, vv : v, r
12	0	0 : w	5, ci, ci.-cu, h	7, ci, ci.-cu, ci.-s : 3, ci, lu.-co, lu.-ha
13	0	0	10, r, sc : 10, ci.-cu, th.-cl, r	10, sc, r : 10, th.-cl
14	0	0	10, sc, th.-cl, r, w : 10, h.-r, sc, ci.-cu, cu.-s, sqs	9, cu.-s, ci.-cu, li.-cl, h.-r : 8, th.-cl, sqs
15	0	0	7, ci, ci.-s, cu.-s, sc, r : sc, v, oc.-shs	ci, ci.-cu, vv, oc.-shs : ci, ci.-cu, ci.-s, r, v
16	0	w : 0	10, th.-r : 10, th.-r	10, oc.-r : 10, th.-cl, oc.-r
17	0	0	10, th.-r : 10, li.-cl, h	4, ci.-cu, h : 10, ci.-cu, cu.-s
18	0	0	ci, ci.-cu, h.-d, v	10 : 10
19	0	0	ci, ci.-cu, cu.-s. v	ci, ci.-cu, v, oc.-shs : 7, ci, ci.-cu, ci.-s, sc
20	0	0	9, th.-cl, ci.-s, oc.-r, sc : 10, r	v, r : 10, s, st.-w, r
21	0	0	10, st.-w, c.-r : ci, ci.-cu, ci.-s, r, v	v, oc.-shs : ci, ci.-s, oc.-shs, v, w
22	0	0	ci, ci.-cu, cu, cu.-s, v	v, sl.-r : 10, th.-cl, th.-r : 10, m.-r
23			10, ci.-s, r : 9, ci.-cu, cu.-s	10, ci.-cu, cu.-s, sl.-r : 4, ci.-s
24			6, ci.-cu, cu.-s, r : 8, ci, ci.-cu, ci.-s, oc.-r	ci.-cu, cu.-s, v : r, v : 10, h.-r
25			10, gt.-glm : 10, glm	10, glm : 10, th.-r
26			10, ci.-s, cu.-s : 10, r	10 : 7, li.-cl
27	0	0	10, r : 9, ci, ci.-cu, ci.-s	7, ci, ci.-cu, ci.-s : d, v
28	0	0	5, ci, h : 7, li.-cl	li.-cl, v
29	0	0	6, ci, ci.-cu, h : 0	ci.-s : 0
30	0	0 : ssN, ssP, sp, g.-cur : 0	0 : 10, r : 10, th.-cl, oc.-shs	4, ci, ci.-cu, cu, cu.-s, n, t, h.-r, hl : 0

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was $52^{\circ}\cdot2$ on the 2nd; and the lowest was $33^{\circ}\cdot4$ on the 21st.

The mean ,, was $43^{\circ}\cdot0$, being $2^{\circ}\cdot6$ *higher* than the average of the preceding 26 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}\cdot277$, being $0^{in}\cdot026$ *greater* than the average of the preceding 26 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $3^{grs}\cdot1$, being $0^{gr}\cdot2$ *greater* than the average of the preceding 26 years.

Degree of Humidity.—The mean for the month was 80 (that of Saturation being represented by 100), being 1 *greater* than the average of the preceding 26 years.

Weight of a Cubic Foot of Air.—The mean for the month was 539 grains, being 4 grains *less* than the average of the preceding 26 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was $7\cdot4$.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was $0\cdot4$.

WIND.

The proportions were of N. 3, S. 9, W. 15, E. 2, and Calm 1. The greatest pressure in the month was $26^{lbs}\cdot0$ on the square foot on the 9th.

RAIN.

Fell on 20 days in the month, amounting to $2^{in}\cdot16$, as measured in the simple cylinder gauge partly sunk below the ground; being $0^{in}\cdot43$ *greater* than the average fall of the preceding 52 years.

ELECTRICITY.

The insulating lamp was not burning from April 1 to 9 and 23 to 26.

MONTH and DAY, 1867.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	READINGS OF THERMOMETERS. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer, with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h AM. Highest.	In the Water of the Thames. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference. Greatest.	Difference. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 50 Years.	WIND AS DEDUCED FROM ANEMOMETERS. OSLER'S. General Direction. A.M.	General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure. Least.	Pressure. Mean of 24 Obs.	ROBINSON'S. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
May 1	In Equator	29·801	61·3	42·5	49·7	41·6	99·6	37·5	51·8	49·7	8·1	15·4	2·2	− 0·1	WSW : W	WNW : ESE	1·9	0·0	0·3	178	0·03
2	..	29·926	60·9	40·5	50·9	44·5	124·0	35·0	51·8	48·7	6·4	12·9	1·1	+ 0·6	SE	NE : S	0·1	0·0	0·0	160	0·00
3	..	29·971	68·4	45·0	56·3	44·4	129·0	41·0	53·8	51·7	11·9	20·3	4·2	+ 5·5	S : SW	SSW : S by E	0·3	0·0	0·0	173	0·00
4	New	29·936	68·0	46·0	56·8	43·9	127·0	38·0	54·8	53·2	12·9	22·3	3·8	+ 5·6	S by E	SSE : SE : E	1·5	0·0	0·2	212	0·00
5	Perigee	29·825	71·5	43·7	57·2	47·4	131·3	35·5	55·8	53·7	9·8	20·2	2·0	+ 5·7	ESE : SE	SSE : E	1·2	0·0	0·2	157	0·00
6	..	29·780	83·3	49·2	66·9	54·9	135·9	47·8	56·3	54·7	12·0	24·1	1·9	+15·2	Calm	S : SSE	0·8	0·0	0·0	185	0·00
7	Greatest Declination N.	29·831	83·6	57·5	68·7	55·9	139·1	49·3	58·8	56·7	12·8	23·1	6·8	+17·0	S : SW	NNE : E	2·3	0·0	0·1	219	0·00
8	..	29·727	79·9	50·5	64·2	51·6	139·0	46·8	59·8	56·7	12·6	28·9	4·0	+12·5	E	SSW	1·2	0·0	0·1	213	0·00
9	..	29·771	75·6	50·6	62·7	51·8	139·6	48·2	60·8	58·7	10·9	19·4	2·4	+11·2	SW	SW : NE : SE	0·3	0·0	0·0	125	0·00
10	First Qr.	29·580	79·6	53·4	64·9	54·2	132·0	48·0	63·8	61·7	10·7	22·6	2·9	+13·6	SE	SSE : E	5·7	0·0	0·2	231	0·06
11	..	29·404	68·9	53·4	59·3	51·1	132·3	47·1	63·8	59·7	8·2	15·1	1·6	+ 8·1	SE : WSW	WSW : SW	8·5	0·0	0·7	276	0·31
12	..	29·285	57·5	48·0	51·7	49·5	70·8	41·5	61·8	59·7	2·2	4·9	0·9	+ 0·5	E	E : NE	2·3	0·0	0·2	248	0·11
13	..	29·477	50·4	45·2	46·3	40·0	68·0	45·0	61·8	59·7	6·3	8·4	3·7	− 5·1	NE	ENE	1·7	0·0	0·2	321	0·01
14	In Equator	29·655	51·3	43·1	45·2	34·1	88·6	42·4	58·8	58·2	11·1	15·0	5·5	− 6·5	NE	ENE	12·5	0·0	1·4	414	0·00
15	..	29·740	49·3	41·3	43·3	34·3	69·0	39·7	56·3	55·1	9·0	10·5	7·0	− 8·7	NE	NE : NNE	3·9	0·0	1·0	382	0·00
16	..	29·890	53·3	41·3	45·2	37·0	93·9	40·2	54·3	51·7	8·2	10·6	6·0	− 7·1	NNE	NNE	3·3	0·0	0·7	170	0·00
17	..	29·965	57·8	38·0	46·0	37·7	105·0	34·2	51·8	49·7	8·3	13·6	4·3	− 6·6	E : SE	SW : S	0·3	0·0	0·0	130	0·00
18	Full	29·864	63·0	34·9	49·9	42·2	130·0	31·3	53·8	50·7	7·7	18·1	1·3	− 3·0	S : SE	E : ENE	1·1	0·0	0·1	213	0·00
19	..	29·651	68·0	43·0	54·3	47·3	123·0	36·4	53·8	51·7	7·0	16·4	1·5	+ 1·1	ENE : E	E	1·2	0·0	0·1	140	0·00
20	..	29·446	65·4	49·8	54·6	52·2	98·7	45·0	54·3	52·2	2·4	8·3	0·0	+ 1·1	Calm	WSW : S	0·0	0·0	0·0	157	0·73
21	Apogee, Greatest Declination S.	29·535	53·7	38·0	43·6	41·4	58·5	35·0	54·8	52·7	2·2	6·4	0·0	−10·2	S : N	NNE : N	4·7	0·0	0·6	346	0·30
22	..	29·836	50·6	34·2	40·4	34·6	110·4	28·2	53·8	51·7	5·8	14·3	0·8	−13·7	N : NNW	NNE : N	8·4	0·0	0·4	348	0·10
23	..	29·902	52·2	32·3	40·7	33·2	107·0	28·0	53·3	51·2	7·5	12·6	2·2	−13·6	NNW : N	N : NNE	20·0	0·0	1·7	343	0·00
24	..	30·000	53·7	31·9	41·7	33·5	112·3	25·7	52·8	50·7	8·2	17·8	3·0	−12·9	N by W : NE	ENE : SE : E	0·6	0·0	0·0	154	0·00
25	..	29·845	54·0	32·6	44·3	36·9	107·0	25·9	51·8	49·7	7·4	13·9	1·5	−10·6	ENE	ENE	4·0	0·0	0·5	297	0·00
26	Last Qr.	29·487	67·8	46·5	54·9	51·2	122·8	41·7	52·8	50·7	3·7	8·6	1·0	− 0·3	E : ESE	SSW : SE	1·7	0·0	0·1	215	0·29
27	..	29·472	65·0	50·6	55·6	49·3	113·8	46·6	52·5	49·7	6·3	13·9	1·2	+ 0·2	SSW	SSW	3·3	0·0	0·6	355	0·31
28	In Equator	29·674	71·0	48·0	57·7	50·4	120·0	43·8	52·8	50·6	7·3	15·3	2·7	+ 2·0	S by W	S by W	7·3	0·0	0·6	291	0·00
29	..	29·769	72·6	50·9	61·1	54·9	127·4	46·0	53·8	50·7	6·2	13·5	1·7	+ 5·1	S : SSE	E	1·7	0·0	0·1	193	0·02
30	..	29·872	74·7	55·3	62·5	55·6	136·2	50·0	54·3	51·7	6·9	15·3	1·9	+ 6·2	SW	SW	0·9	0·0	0·0	204	0·07
31	..	29·959	73·0	48·4	58·3	51·8	139·8	..	58·8	56·7	6·5	18·0	2·1	+ 1·7	SW	SW	0·6	0·0	0·0	194	0·00
Means	..	29·738	64·7	44·7	53·4	45·4	113·9	40·0	55·8	53·5	8·0	15·5	2·6	+ 0·5	...	...	..	..	..	Sum 7244	Sum 2·34

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·996 on the 3rd; the first minimum in the month was 29in·769 on the 6th.
The second maximum ,, was 29in·869 on the 7th; the second minimum ,, was 29in·695 on the 8th.
The third maximum ,, was 29in·803 on the 9th; the third minimum ,, was 29in·333 on the 11th.
The fourth maximum ,, was 29in·479 on the 11th; the absolute minimum ,, was 29in·225 on the 12th.
The fifth maximum ,, was 29in·983 on the 17th; the fifth minimum ,, was 29in·408 on the 20th.
The sixth maximum ,, was 29in·902 on the 22nd; the sixth minimum ,, was 29in·846 on the 23rd.
The absolute maximum ,, was 30in·003 on the 24th; the seventh minimum ,, was 29in·444 on the 27th.
The eighth maximum ,, was 29in·798 on the 29th; the eighth minimum ,, was 29in·735 on the 29th.
The ninth maximum ,, was 29in·968 on the 31st.
The range in the month was 0in·778.
The mean for the month was 29in·738, being 0in·037 *less* than the average of the preceding 26 years.

TEMPERATURE OF THE AIR.

The highest in the month was 83°·6 on the 7th; the lowest was 31°·9 on the 24th.
The range ,, was 51°·7.
The mean ,, of all the highest daily readings was 64°·7, being 0°·2 *higher* than the average of the preceding 26 years.
The mean ,, of all the lowest daily readings was 44°·7, being 0°·5 *higher* than the average of the preceding 26 years.
The mean daily range was 20°·0, being 0°·3 *less* than the average of the preceding 26 years.
The mean for the month was 53°·4, being 0°·5 *higher* than the average of the preceding 26 years.

MONTH and DAY, 1867.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
May 1	0	0	10, glm, r : 10	9, ci.-cu, ci.-s, h : ci, ci.-cu, ci.-s, v
2	0	0	li.-cl, d, h : 2, ci, ci.-cu, ci.-s, h	7, th.-cl, cu.-s : 6, cu.-s, n : 0
3	0	0 : w	7, ci, ci.-cu : ci, h, v	3, ci, ci.-cu : 0 : 6, ci.-s, th.-cl, h
4	0	0	0 : 1, ci	3, ci, ci.-cu : 0 : 0
5	0	0	1, ci	0 : 0
6	0	0	0 : 2, ci	1, ci, h : 1, ci, ci.-s
7	0	0	0, h.-d : 2, ci, h	2, ci, ci.-s : 1, ci, d, lu.-co
8	0	0	li.-cl : 0	4, ci, ci.-cu : ci, ci.-s, v : 0
9	0	0	0, ci : 4, ci, ci.-s	5, ci, ci.-cu, ci.-s : ci, v, d
10	0	0 : wN	3, li.-cl : 7, ci, ci.-s, h : 9, cu.-s	ci, ci.-cu, ci.-s, v : t.-s, r, vv : 8, th.-cl, l
11	0	0	h.-r, t, s : 4, ci, ci.-cu, cu.-s	6, ci.-cu, ci.-s : ci.-s, ci, v
12	0	0	10, r	10 : 10, oc.-r
13	0	0	10, r : 10	10, r : 10
14	0	0	10, r : 10	10, r : 10
15	0	0	10, ci.-s, cu.-s	10 : 10
16	0	0	10, oc.-r : 10, ci.-s, cu.-s	10, oc.-r : 10
17	0	0	5, ci, ci.-cu, h	10, v : 0
18	0	0	6, ci, ci.-cu	2, ci : 2, ci
19	0	0	0 : 8, ci, ci.-cu, ci.-s	10, sl.-r : ci, ci.-cu, ci.-s, v
20	0	0	10, li.-cl, h, r : 10	10, h.-r : 10, h.-r, sc
21	0	0	10, r : 10, oc.-r	10, r : 7, ci.-s, cu.-s, oc.-r
22	0 : w	0 : ssN, ssP, sp, g.-cur : 0	5, ci.-cu, cu, r, sn	vv, f.-shs, fr.-r, sn, hl, sqs : vv, sqs, shs, fr.-r : 1, ci, ci.-s
23	0	0	10, st.-w : 10, h.-g	10, v : 0
24	0	0	0 : 10	10 : 1, ci.-cu : 0, fr
25	0	0	6, ci.-cu, ci, ci.-s	10, ci.-s, ci.-cu : 10 : 0
26	0	0	10, h.-r : 10, ci, ci.-cu, oc.-r	v : 10, r
27	0	0 : w	v, cu.-s, h.-shs.-r : vv, oc.-shs	ci, ci.-cu, ci.-s, cu.-s, v : 0
28	0	0	ci, ci.-cu, ci.-s, v	8, ci, ci.-cu, ci.-s : ci, ci.-s, ci.-cu, v, r
29	0	0	2, ci, ci.-cu	10, ci.-s, oc.-r : 7, ci.-s, cu.-s, oc.-r : 0, d
30	0	0 : w : 0	4, ci, h	10, ci.-s, r : 9, oc.-r, ci.-s, ci.-cu
31	0	0	10, mt : 10	5, ci, ci.-s : ci, ci.-cu, ci.-s, v : 0

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 61°·6 on the 7th; and the lowest was 31°·7 on the 23rd.

The mean ,, was 45°·4, being 0°·1 *lower* than the average of the preceding 26 years.

Elastic Force of Vapour.—The mean for the month was 0in·304, being 0in·002 *greater* than the average of the preceding 26 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3grs·4, being *the same as* the average of the preceding 26 years.

Degree of Humidity.—The mean for the month was 74 (that of Saturation being represented by 100), being 2 *less* than the average of the preceding 26 years.

Weight of a Cubic Foot of Air.—The mean for the month was 537 grains, being 5 grains *less* than the average of the preceding 26 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·6.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 1·7.

WIND.

The proportions were of N. 6, S. 9, W. 5, E. 10, and Calm 1. The greatest pressure in the month was 20lbs·0 on the square foot on the 23rd.

RAIN.

Fell on 12 days in the month, amounting to 2in·34, as measured in the simple cylinder gauge partly sunk below the ground; being 0in·18 *greater* than the average fall of the preceding 52 years.

MONTH and DAY, 1867.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	Thames. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference. Greatest.	Difference. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 50 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure. Least.	Pressure. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
June 1	..	29·959	77·5	48·2	63·2	51·9	137·0	41·8	58·9	55·7	11·3	27·2	1·9	+ 6·2	SSW	SW	1·9	0·0	0·2	198	0·00
2	New	29·794	79·7	51·0	65·0	57·1	135·0	45·0	59·8	56·7	7·9	16·5	0·6	+ 7·7	SSW : NE : E	E : S : NE	0·5	0·0	0·1	163	0·00
3	Perigee	29·591	61·8	50·7	55·1	53·9	77·4	45·0	..	..	1·2	3·0	0·8	− 2·3	NNE : N	NW : W by N : WSW	3·7	0·0	0·3	270	0·76
4	Greatest Declination N.	29·813	68·1	46·9	55·6	49·9	139·6	40·7	62·3	59·7	5·7	14·1	1·9	− 1·7	WSW	W : WSW	4·0	0·0	0·3	354	0·03
5	..	29·681	62·0	46·0	53·5	53·2	107·3	41·0	61·6	59·4	0·3	3·4	0·0	− 3·7	SW : SSW	SSW	15·0	0·0	1·0	399	0·25
6	..	29·572	65·9	53·3	57·5	49·4	125·9	51·8	60·8	58·7	8·1	12·7	3·6	+ 0·5	SW	SW	7·0	0·0	1·0	385	0·00
7	..	29·592	68·3	51·1	56·4	50·2	130·8	47·1	61·3	58·7	6·2	12·1	2·8	− 0·6	SW	SW : WNW	8·0	0·0	0·6	298	0·65
8	..	29·930	65·2	47·8	54·2	44·9	125·2	47·5	60·3	58·4	9·3	17·9	4·0	− 3·1	NNW : WSW	WSW : SW	2·4	0·0	0·4	329	0·00
9	First Qr.	30·035	70·0	51·2	58·5	47·1	129·6	47·6	60·5	58·7	11·4	17·5	2·4	+ 0·8	WSW : W : NW	WNW : W : SW	1·5	0·0	0·2	211	0·00
10	In Equator	30·127	78·2	51·1	64·1	53·7	141·0	45·0	60·8	59·7	10·4	19·6	4·2	+ 6·1	SW	WSW : S	1·1	0·0	0·1	159	0·00
11	..	30·098	79·3	52·4	65·8	55·5	142·5	46·1	61·8	61·7	10·3	24·1	0·2	+ 7·5	E : SE	SE	0·8	0·0	0·0	175	0·00
12	..	29·905	82·1	56·4	68·4	59·5	135·0	52·6	64·0	61·7	8·9	17·7	0·6	+ 9·8	S : SW	W : NW : N	1·1	0·0	0·1	214	0·00
13	..	29·869	66·5	54·2	57·7	51·3	121·6	50·0	63·8	61·7	6·4	9·5	3·8	− 1·1	NW : SW	WSW	0·8	0·0	0·1	206	0·06
14	..	29·693	63·3	47·6	54·0	44·8	94·0	42·0	63·4	62·7	9·2	14·3	4·6	− 5·0	NNW : W	NW : N by W	2·8	0·0	0·3	311	0·00
15	..	29·858	60·0	44·4	50·9	40·8	108·5	38·0	62·8	60·7	10·1	17·3	2·9	− 8·1	N by W	N by W : N	2·5	0·0	0·5	242	0·00
16	..	29·939	62·5	48·2	52·6	46·0	91·1	45·0	62·5	61·7	6·6	12·2	2·1	− 6·4	NNW	N	1·9	0·0	0·1	172	0·01
17	Full : Apogee.	29·989	60·7	44·5	51·0	47·6	98·0	38·0	61·8	59·7	3·4	8·9	0·6	− 8·0	WSW : W : NNW	ENE : ESE : S	0·0	0·0	0·0	131	0·01
18	Greatest Declination S.	29·926	72·1	45·8	58·4	53·4	109·3	40·0	..	..	5·0	12·8	0·8	− 0·7	SW : WSW	NNW : NNE	0·8	0·0	0·1	146	0·00
19	..	29·847	69·3	54·6	59·3	53·9	104·6	54·2	62·9	59·7	5·4	11·3	1·7	+ 0·1	NE	E : ENE	0·7	0·0	0·0	205	0·00
20	..	29·888	66·0	52·6	56·6	52·2	104·0	52·2	63·3	60·2	4·4	9·0	1·8	− 2·9	NE : N	NE	0·4	0·0	0·0	208	0·00
21	..	29·972	65·4	49·1	54·6	49·1	99·5	48·2	62·8	60·7	5·5	10·3	1·9	− 5·3	NNE	N : NE	0·5	0·0	0·0	147	0·00
22	..	29·979	69·4	44·6	54·5	48·4	133·5	39·1	61·8	59·7	6·1	19·6	0·2	− 5·8	NE	NE : ESE	0·0	0·0	0·0	125	0·00
23	..	29·846	71·7	49·0	59·1	48·8	135·5	43·7	62·8	62·7	10·3	21·1	0·6	− 1·6	N	N	1·8	0·0	0·2	247	0·00
24	..	29·857	67·3	53·8	58·6	51·8	121·0	44·2	62·3	61·7	6·8	12·4	2·0	− 2·6	N by W	N	2·0	0·0	0·4	285	0·00
25	Last Quarter ; In Equator.	30·106	73·2	48·0	59·3	49·4	138·0	41·8	61·8	60·7	9·9	21·4	1·3	− 2·3	N	N : NNE	2·5	0·0	0·5	328	0·00
26	..	30·370	72·9	47·2	58·4	47·1	140·6	40·6	62·8	61·7	11·3	23·9	1·5	− 3·3	NNE	N	2·2	0·0	0·6	295	0·00
27	..	30·391	80·9	44·8	62·2	42·2	150·4	33·0	63·8	62·7	20·0	36·9	1·9	+ 0·6	N	N	1·8	0·0	0·2	231	0·00
28	..	30·388	69·4	51·2	57·7	47·6	137·1	43·4	63·8	62·7	10·1	17·8	4·9	− 3·8	N	N	4·5	0·0	0·7	250	0·00
29	..	30·191	76·1	40·5	58·7	48·7	138·0	30·0	63·5	62·0	10·0	22·9	1·1	− 2·7	NNE : SW	SW	0·4	0·0	0·0	146	0·00
30	..	29·839	81·1	46·8	63·3	51·9	140·5	38·0	64·8	62·7	11·4	24·5	4·6	+ 2·2	SW : NW	SW	0·5	0·0	0·0	123	0·00
Means	..	29·935	70·2	49·1	58·1	50·0	123·0	43·8	62·2	60·5	8·1	16·4	2·0	− 1·0	...	...	..	..	..	Sum 6953	Sum 1·77

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29$^{\text{in}}$·853 on the 4th; the first minimum in the month was 29$^{\text{in}}$·551 on the 3rd.
The second maximum ,, was 30$^{\text{in}}$·144 on the 11th; the absolute minimum ,, was 29$^{\text{in}}$·551 on the 6th.
The third maximum ,, was 30$^{\text{in}}$·013 on the 17th; the third minimum ,, was 29$^{\text{in}}$·659 on the 14th.
The fourth maximum ,, was 30$^{\text{in}}$·023 on the 22nd; the fourth minimum ,, was 29$^{\text{in}}$·838 on the 19th.
The absolute maximum ,, was 30$^{\text{in}}$·411 on the 27th; the fifth minimum ,, was 29$^{\text{in}}$·814 on the 23rd.
The range in the month was 0$^{\text{in}}$·860.
The mean for the month was 29$^{\text{in}}$·935, being 0$^{\text{in}}$·139 *higher* than the average of the preceding 26 years.

TEMPERATURE OF THE AIR.

The highest in the month was 82°·1 on the 12th; the lowest was 44°·4 on the 15th.
The range ,, was 37°·7.
The mean ,, of all the highest daily readings was 70°·2, being 0°·9 *lower* than the average of the preceding 26 years.
The mean ,, of all the lowest daily readings was 49°·1, being 1°·1 *lower* than the average of the preceding 26 years.
The mean daily range was 21°·1, being 0°·2 *greater* than the average of the preceding 26 years.
The mean for the month was 58°·1, being 1°·0 *lower* than the average of the preceding 26 years.

MONTH and DAY, 1867.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
June 1	o	o	1, ci : 2, ci	1, ci : o
2	o	o	o	ci, ci.-s, ci.-cu : ci, ci.-s, v
3	o	o	10, h.-r, t, l, sqs : 10, th.-r	10, r : ci, ci.-cu, ci.-s, r
4	o : sN,sP,sp,g.-cur	o	7, ci, ci.-cu, ci.-s, cu.-s: cu.-s, sl.-r, t	ci.-cu, ci.-s, r, vv : ci.-s, ci.-cu
5	o	o	10, r, st.-w : 10, r	10, r : 10, oc.-r
6	o	o	10, ci.-s : 10	ci, ci.-cu, cu, v : ci, ci.-s, vv
7	o	s : o	6, ci, ci.-cu, ci.-s : 10, h.-r	ci,ci.-cu,cu.-s,h.-r,t, vv : 10, ci.-s, cu.-s, h.-r, t, l
8	w	o	6, ci.-cu, ci.-s, cu.-s, glm	ci, ci.-cu, ci.-s, v : ci, ci.-s, v
9			8, ci, ci.-cu, cu, h	v, ci, ci.-cu, h : 2, ci, ci.-s
10			o : o	o : o
11			o : o	o : o, d
12			2, ci : li.-cl, v	5, ci : 8, ci.-s
13			7, ci, ci.-cu, r : 10, v	10 : 10, cu.-s, ci.-s
14			9, ci, ci.-cu : 10, r	10 : ci, ci.-s, r, v : o
15			8, ci, ci.-cu, cu.-s	8, ci, ci.-s, cu.-s, ci.-cu : 10, th.-r
16			10, r	10 : 7, ci, ci.-s, oc.-r
17			10, ci.-s, ci.-cu, h	10, glm : 10, glm, oc.-r :6,ci.-cu,ci.-s,oc.-r
18			10, ci.-s	10, ci.-cu, ci.-s, cu.-s, h : ci, ci.-s, v
19			10, cu.-s, ci.-s	10 : 10, sc, v
20			10	10 : 10 : 10
21			10, ci.-s, cu.-s	10 : 10 : 10, th.-r
22			10, ci.-s, ci.-cu : li.-cl	1, ci : 2, ci, ci.-cu : ci.-s, h, d, vv
23			o	o : o, d : 10
24			10 : th.-cl	10, th.-cl : 10, ci.-s
25			2, ci	4, ci : 4, ci, v
26			4, ci, ci.-cu, v	ci, ci.-cu, v : o : o, d
27			o	o : 1, ci, ci.-s
28			10	5, ci,ci.-s,ci.-cu : 3, ci : o
29			o, h : h, v	ci, ci.-cu, h, v : ci, ci.-s, v
30			10, li.-cl	6, ci, ci.-s, ci.-cu : 9, ci, ci.-s, ci.-cu, cu.-s

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 63°·6 on the 12th; and the lowest was 40°·5 on the 15th.

The mean ,, was 50°·0, being 0°·8 *lower* than the average of the preceding 26 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}\cdot361$, being $0^{in}\cdot012$ *less* than the average of the preceding 26 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $4^{grs}\cdot0$, being $0^{gr}\cdot2$ *less* than the average of the preceding 26 years.

Degree of Humidity.—The mean for the month was 75 (that of Saturation being represented by 100), being 1 *greater* than the average of the preceding 26 years.

Weight of a Cubic Foot of Air.—The mean for the month was 535 grains, being 4 grains *greater* than the average of the preceding 26 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·1.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 1·2.

WIND.

The proportions were of N. 12, S. 5, W. 9, E. 4, and Calm 0. The greatest pressure in the month was $15^{lbs}\cdot0$ on the square foot on the 5th.

RAIN.

Fell on 7 days in the month, amounting to $1^{in}\cdot77$, as measured in the simple cylinder gauge partly sunk below the ground; being $0^{in}\cdot22$ *less* than the average fall of the preceding 52 years.

ELECTRICITY.—The insulating lamp was not burning from June 9 to 30.

MONTH and DAY, 1867.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference. Greatest.	Difference. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 50 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Osler's. General Direction. P.M.	Osler's. Pressure in lbs. on the square foot. Greatest.	Pressure. Least.	Pressure. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	in.
July 1	Greatest Dec. N. Perigee. New.	29·663	81·5	50·8	66·0	55·7	148·2	42·2	65·3	63·7	10·3	23·1	0·6	+ 5·1	NE	ESE : SSW : SSE	1·0	0·0	0·0	142	0·00
2	..	29·557	71·8	57·3	61·9	59·1	117·0	56·5	..	..	2·8	7·9	0·0	+ 0·8	SSE : E : WSW	WSW : W	2·2	0·0	0·2	250	0·25
3	..	29·858	71·3	55·2	60·5	53·2	121·2	54·3	66·8	63·8	7·3	14·8	3·8	− 0·8	NW	SW : SSE	1·8	0·0	0·2	226	0·00
4	..	29·726	71·8	56·9	61·6	57·0	100·8	54·9	65·8	63·7	4·6	10·9	2·1	+ 0·1	S by W	S by W : SW	1·5	0·0	0·2	212	0·06
5	..	29·910	71·7	54·3	60·4	48·9	141·8	50·0	64·8	62·7	11·5	21·2	2·7	− 1·3	W : NW	WNW : NW	2·5	0·0	0·2	274	0·00
6	..	30·018	73·3	45·9	59·4	47·2	142·0	37·8	65·8	63·7	12·2	22·4	1·9	− 2·4	WSW	W by N : NNE	1·9	0·0	0·2	200	0·00
7	In Equator	30·118	71·6	48·1	59·0	49·2	136·2	..	..	..	9·8	20·0	0·0	− 2·9	N	NE : SE	0·5	0·0	0·0	109	0·00
8	First Quarter.	30·137	74·0	46·7	58·3	50·1	141·0	43·8	..	..	8·2	19·0	1·9	− 3·4	SE : NE	NNE : SE	0·6	0·0	0·0	123	0·00
9	..	30·121	73·6	45·0	59·3	52·7	124·8	37·8	65·3	63·7	6·6	18·0	2·0	− 2·4	Calm : SW : NE	NE : ESE	0·2	0·0	0·0	111	0·00
10	..	30·062	74·8	47·9	60·6	47·5	144·2	41·0	64·8	62·7	13·1	21·1	0·6	− 1·2	SE : NE	NE : E	0·2	0·0	0·0	115	0·00
11	..	29·945	74·1	45·4	59·8	51·6	148·0	44·5	65·1	62·9	8·2	21·4	1·1	− 2·0	E : ENE	E	0·7	0·0	0·1	173	0·00
12	..	29·684	73·6	53·4	62·5	54·3	120·0	53·2	65·8	63·7	8·2	18·2	1·0	+ 0·5	ENE	E by N : E	2·0	0·0	0·1	160	0·00
13	..	29·590	75·3	53·2	60·4	56·7	113·0	45·4	66·0	63·7	3·7	12·8	0·0	− 1·9	N : SW	WSW : SSW	1·4	0·0	0·0	198	0·03
14	Apogee	29·604	73·6	54·4	62·0	48·5	151·6	48·4	65·3	62·7	13·5	24·1	0·5	− 0·5	SSW : SW	SW : S	5·6	0·0	0·7	312	0·19
15	Greatest Declination S.	29·373	64·0	52·7	56·7	54·7	89·0	45·1	64·5	63·7	2·0	8·4	0·0	− 5·8	SE	S : SSW	16·0	0·0	1·4	529	0·22
16	Full	29·384	68·4	54·1	57·3	52·9	129·8	48·5	63·8	62·7	4·4	13·9	1·0	− 5·1	SW	SW	18·7	0·0	1·8	472	0·74
17	..	29·559	71·0	53·0	59·7	50·1	137·8	47·3	62·8	58·9	9·6	17·3	3·4	− 2·5	SW	WSW : SW	16·2	0·0	2·0	419	0·00
18	..	29·423	69·0	55·7	58·6	55·2	107·0	52·9	62·5	59·7	3·4	12·6	0·0	− 3·3	SW	WSW : SW	7·5	0·0	0·8	416	0·51
19	..	29·536	67·3	51·2	58·1	51·8	125·5	47·0	61·8	59·7	6·3	10·8	2·2	− 3·5	WSW	WSW	10·3	0·0	1·2	357	0·04
20	..	29·649	74·3	54·0	60·3	52·6	129·6	52·6	63·8	61·7	7·7	15·1	0·2	− 1·1	W	SW : S	2·7	0·0	0·2	320	0·05
21	..	29·520	74·1	57·5	64·0	56·3	139·0	57·2	62·8	60·7	7·7	16·6	1·5	+ 2·5	SW	SSW	3·4	0·0	0·5	290	0·01
22	In Equator	29·551	74·0	53·8	62·7	54·1	134·8	53·4	63·8	61·7	8·6	18·4	0·8	+ 1·2	SSW	SW	6·8	0·0	0·7	327	0·04
23	..	29·485	71·3	54·4	61·4	55·6	136·5	54·2	63·8	61·7	5·8	13·7	2·6	− 0·2	SW	SSW	15·0	0·0	0·6	303	0·00
24	Last Quarter.	29·566	72·9	51·8	61·2	49·0	151·1	51·0	64·8	62·7	12·2	20·2	0·4	− 0·5	SW	SW	2·0	0·0	0·2	215	0·00
25	..	29·628	73·0	45·8	59·5	47·7	144·9	..	65·3	63·0	11·8	22·0	1·3	− 2·3	SSW : S	E : ENE	1·0	0·0	0·1	262	0·00
26	..	29·517	57·9	51·3	53·4	53·1	87·0	50·0	63·8	63·7	0·3	2·3	0·0	− 8·5	NE : N	N : NNW	17·5	0·0	1·5	405	3·67
27	..	29·874	60·4	46·0	52·2	46·3	98·0	40·5	62·2	59·8	5·9	11·2	1·5	− 9·8	WNW	NNW : SW	0·8	0·0	0·1	168	0·00
28	Greatest Declination N.	29·952	67·7	45·2	55·3	46·8	125·1	40·0	61·1	59·2	8·5	16·5	1·1	− 6·9	SW : W	W : NW	4·2	0·0	0·2	210	0·00
29	..	29·901	68·2	45·2	55·4	46·6	133·0	38·7	62·0	59·7	8·8	20·9	1·1	− 6·9	WSW : NNW	NNW : N : E	1·1	0·0	0·1	164	0·00
30	Perigee	29·875	68·2	43·3	55·1	47·9	124·5	40·0	62·2	60·7	7·2	19·6	0·9	− 7·3	WSW : NW	NW : N : SE	0·4	0·0	0·0	120	0·00
31	New	29·847	70·2	45·2	58·6	51·6	131·8	37·4	62·3	61·1	7·0	18·2	0·4	− 3·8	SE	SE : E	0·4	0·0	0·0	159	0·00
Means	..	29·730	71·1	50·8	59·4	51·7	128·2	47·1	64·1	62·1	7·7	16·5	1·2	− 2·5	...	...	..	..	..	Sum 7741	Sum 5·81

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was $29^{in}\cdot882$ on the 3rd; the first minimum in the month was $29^{in}\cdot525$ on the 2nd.
The absolute maximum ,, was $30^{in}\cdot156$ on the 8th; the second minimum ,, was $29^{in}\cdot712$ on the 4th.
The third maximum ,, was $29^{in}\cdot656$ on the 14th; the third minimum ,, was $29^{in}\cdot575$ on the 13th.
The fourth maximum ,, was $29^{in}\cdot619$ on the 17th; the absolute minimum ,, was $29^{in}\cdot256$ on the 15th.
The fifth maximum ,, was $29^{in}\cdot693$ on the 20th; the fifth minimum ,, was $29^{in}\cdot381$ on the 18th.
The sixth maximum ,, was $29^{in}\cdot563$ on the 22nd; the sixth minimum ,, was $29^{in}\cdot508$ on the 21st.
The seventh maximum ,, was $29^{in}\cdot655$ on the 25th; the seventh minimum ,, was $29^{in}\cdot478$ on the 23rd.
The eighth maximum ,, was $29^{in}\cdot965$ on the 28th; the eighth minimum ,, was $29^{in}\cdot422$ on the 26th.
The range in the month was $0^{in}\cdot900$.
The mean for the month was $29^{in}\cdot730$, being $0^{in}\cdot072$ *less* than the average of the preceding 26 years.

TEMPERATURE OF THE AIR.

The highest in the month was 81°·5 on the 1st; the lowest was 43°·3 on the 30th.
The range ,, was 38°·2.
The mean ,, of all the highest daily readings was 71°·1, being 2°·6 *lower* than the average of the preceding 26 years.
The mean ,, of all the lowest daily readings was 50°·8, being 2°·1 *lower* than the average of the preceding 26 years.
The mean daily range was 20°·3, being 0°·6 *less* than the average of the preceding 26 years.
The mean for the month was 59°·4, being 2°·3 *lower* than the average of the preceding 26 years.

MONTH and DAY, 1867.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
July 1			1, ci, h : 8, ci, ci.-cu, cu.-s, h	ci, ci.-cu, cu.-s, v : ci.-s, vv, r, l
2		o	10 : 10, h.-r	9, ci, ci.-cu, ci.-s, oc.-r: 10, r, glm
3	o	o : w	10	10, ci, ci.-cu, ci.-s, h : 10
4	o	w : o : m	10, r : 10, ci.-s, cu.-s	9, ci, ci.-cu, ci.-s, cu.-s, shs.-r: 4, ci, ci.-s
5	w	w	8, ci.-cu, cu.-s : 5, ci.-cu, cu, ci, h	7, ci, ci.-cu, cu, cu.-s, h: ci.-s, v
6	o	o	5, ci, ci.-cu	8, ci, ci.-cu : 10, cu.-s, ci.-cu, ci.-s, r
7	o	o	6, ci, ci.-cu, ci.-s	ci, ci.-cu, ci.-s, v : ci, ci.-cu, v
8	o	o : m	1, ci	ci, ci.-cu, ci.-s, v : o
9	o	w : o	2, li.-cl, h : li.-cl	8, ci, ci.-cu, ci.-s, cu.-s : v
10	w	w : o	o : o	o : o
11	w	o : w	7, th.-cl, ci	2, ci : li.-cl, ci.-s, v
12	o	o	10, ci, ci.-s	9, ci, ci.-cu, ci.-s : ci, v
13	o	o :ssN,ssP,sp,g.-cur: w	10, r : 10, oc.-r	10,ci.-cu,ci.-s,cu.-s,t,l,h-r: 3, ci, ci.-s, oc.-r
14	o	o	5, ci, ci.-cu, cu.-s, cu	ci, ci.-cu, cu.-s, vv,t,r,hl: v
15	o	o	10, r, w : 10, sqs, w, r	10, w, sqs, oc.-r : 10, sc, oc.-r
16	o	o	vv, r : vv, r, st.-w	10, oc.-h.-r : ci.-s, vv, oc.-r : o
17			ci, ci.-cu, ci.-s, cu.-s, vv, st.-w	9, shs.-r, ci, ci.-cu,ci.-s,cu.-s: vv
18			10, r : 10, r	ci,ci.-cu,ci.-s,oc.-r,v: 3,cu.-s,ci,ci.-s,oc.-shs.-r: li.-cl
19			10, r : v : 10	ci,ci.-cu,ci.-s,cu.-s,v,oc.-r: 10, oc.-r
20			5, ci, ci.-cu : ci, ci.-s, cu.-s, v	9, ci, ci.-cu, cu.-s, h : 10, r
21			10, ci.-cu, cu.-s	v, r : 10, r
22			10, r : 3, ci, ci.-s, ci.-cu, oc.-r	2, ci, ci.-cu, r : 10, ci.-s, cu.-s, glm, sc, r
23			9, ci, ci.-cu, ci.-s	ci, ci.-cu, ci.-s, v : 7, cu.-s, ci, ci.-cu, v
24			2, ci, ci.-cu	ci.-cu, cu.-s, ci, v : ci, ci.-s, vv, r
25	o	o	5, ci, ci.-cu, cu.-s	7, li.-cl, ci.-s, ci.-cu : 10, r
26	o	o	10, c.-h.-r : 10, c.-h.-r	10, r : 10, r : 10, h.-g
27			10	10, ci.-cu : 10,ci.-s,ci.-cu,s,f: v
28			5, ci, ci.-cu, ci.-s, cu	ci, ci.-cu, ci.-s, v : ci.-s, ci.-cu, s, v
29			6, ci, ci.-cu, h	ci, ci.-cu, cu.-s, h, v : 1, ci.-cu, ci.-s, d
30			7, li.-cl, h, h.-d	8, li.-cl, h : 9, ci, cu.-s, d
31			1, ci	4, ci, ci.-cu, ci.-s, cu.-s: o

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was $62^{\circ}\cdot7$ on the 2nd; and the lowest was $44^{\circ}\cdot2$ on the 10th.

The mean „ was $51^{\circ}\cdot7$, being $2^{\circ}\cdot0$ *lower* than the average of the preceding 26 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}\cdot384$, being $0^{in}\cdot029$ *less* than the average of the preceding 26 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $4^{grs}\cdot3$, being $0^{gr}\cdot3$ *less* than the average of the preceding 26 years.

Degree of Humidity.—The mean for the month was 76 (that of Saturation being represented by 100), being *the same as* the average of the preceding 26 years.

Weight of a Cubic Foot of Air.—The mean for the month was 530 grains, being 2 grains *greater* than the average of the preceding 26 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·0.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 1·7.

WIND.

The proportions were of N. 5, S. 10, W. 10, E. 6, and Calm 0. The greatest pressure in the month was $18^{lbs}\cdot7$ on the square foot on the 16th.

RAIN.

Fell on 12 days in the month, amounting to $5^{in}\cdot81$, as measured in the simple cylinder gauge partly sunk below the ground; being $3^{in}\cdot24$ *greater* than the average fall of the preceding 52 years.

ELECTRICITY.—The insulating lamp was not burning on July 1, from 17 to 24, and 27 to 31.

MONTH and DAY, 1867.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer with a blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Greatest.	Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 50 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	P.M.	Pressure in lbs. on the square foot. Greatest.	Least.	Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	in.
Aug. 1	..	29·838	59·6	51·1	54·6	46·9	86·8	..	62·8	61·0	7·7	10·8	2·2	− 7·8	NE : NNE	NNE	2·0	0·0	0·3	316	0·00
2	..	29·861	59·6	47·7	51·1	46·0	79·0	41·7	61·8	60·2	5·1	9·9	3·4	−11·3	N by W	N	1·6	0·0	0·2	158	0·00
3	..	29·903	68·4	40·9	55·0	51·1	100·4	34·1	62·3	59·9	3·9	16·7	0·0	− 7·4	WSW : W : NW	NNW : SW	0·3	0·0	0·0	121	0·00
4	In Equator	29·905	69·1	51·5	59·7	55·4	106·0	51·5	61·5	60·7	4·3	10·4	0·8	− 2·6	WSW : NE	NE : SW	0·3	0·0	0·0	139	0·00
5	..	29·837	73·0	50·3	60·9	52·9	130·3	42·0	..	..	8·0	15·8	1·0	− 1·3	SW	SW	1·4	0·0	0·1	236	0·01
6	..	29·616	64·8	53·0	55·9	54·9	101·5	53·0	61·8	59·7	1·0	4·5	0·0	− 6·2	S : SW	SW	1·0	0·0	0·1	225	0·84
7	First Qr.	29·610	66·2	49·1	55·7	54·0	121·5	40·1	60·8	58·7	1·7	9·9	0·0	− 6·3	SW	SW : SSW	0·8	0·0	0·1	226	0·11
8	..	29·582	74·5	55·7	63·1	56·3	140·2	51·8	61·3	59·2	6·8	15·8	1·9	+ 1·1	SW	WSW : SW	3·3	0·0	0·5	338	0·11
9	..	29·714	74·2	57·6	63·3	52·9	140·1	..	62·8	61·7	10·4	15·8	3·8	+ 1·2	SW	WSW	2·9	0·0	0·3	245	0·02
10	..	29·967	75·9	49·4	62·3	54·8	105·8	41·2	63·8	62·7	7·5	17·3	0·0	+ 0·2	SW	SW	0·3	0·0	0·0	145	0·00
11	Apogee: Greatest Dec. S.	30·012	76·2	50·2	63·5	55·5	134·4	46·0	63·0	60·9	8·0	15·3	1·0	+ 1·4	SW : W	SW : SE	0·2	0·0	0·0	106	0·00
12	..	29·949	82·1	61·6	70·9	57·0	140·9	56·5	62·8	60·7	13·9	24·0	3·6	+ 8·9	SE	SSE : ESE	1·0	0·0	0·1	160	0·00
13	..	29·873	85·3	56·5	71·2	59·2	147·1	48·2	64·3	62·9	12·0	26·7	3·0	+ 9·3	E	SE : E	1·1	0·0	0·1	156	0·00
14	..	29·781	89·0	61·2	75·5	65·3	141·0	57·0	64·8	63·7	10·2	21·9	1·1	+13·8	SE : SW	SSE : S	0·3	0·0	0·0	138	0·00
15	Full	29·547	70·0	59·3	60·6	59·2	94·3	58·6	66·0	63·8	1·4	3·6	0·0	− 0·9	SW	SSW	0·7	0·0	0·1	211	0·76
16	..	29·608	72·6	54·2	59·8	52·6	123·0	48·0	65·8	63·7	7·2	14·2	0·8	− 1·5	SW	W : SW	2·2	0·0	0·2	307	0·01
17	..	29·750	71·1	53·7	61·4	55·3	114·2	47·4	..	..	6·1	11·0	5·1	+ 0·3	SW	SW	13·8	0·0	1·0	383	0·00
18	In Equator	29·917	74·5	60·1	64·9	60·1	129·2	55·2	..	..	4·8	9·4	2·7	+ 3·9	SW	SW	1·2	0·0	0·1	152	0·00
19	..	29·871	79·6	55·7	67·6	60·1	135·6	55·0	65·8	64·7	7·5	16·5	1·3	+ 6·7	SE	SSW : SE	0·3	0·0	0·0	181	0·01
20	..	29·745	74·7	56·0	63·0	57·5	131·5	53·0	67·8	65·7	5·5	14·0	1·3	+ 2·2	SE : SW	SW	3·8	0·0	0·5	312	0·58
21	..	29·857	73·3	53·8	61·5	54·9	120·9	47·7	65·8	63·7	6·6	13·0	0·6	+ 0·8	SW	SW	0·6	0·0	0·1	163	0·00
22	Last Qr.	29·884	74·9	50·2	62·1	54·3	136·0	43·7	65·8	64·2	7·8	17·5	0·8	+ 1·4	SW	SW	0·4	0·0	0·0	155	0·00
23	..	29·895	77·2	49·5	63·3	53·8	139·2	43·1	66·8	64·7	9·5	21·4	2·1	+ 2·7	SW	SW	0·2	0·0	0·0	157	0·00
24	..	29·925	78·1	50·9	63·3	60·0	136·0	44·6	67·0	64·2	3·3	13·9	0·8	+ 2·8	SW	SW	0·5	0·0	0·0	169	0·00
25	Greatest Declination N.	29·869	77·4	54·8	65·1	58·4	136·2	47·0	66·8	65·7	6·7	12·6	0·0	+ 4·6	SW	SSW	0·7	0·0	0·1	203	0·00
26	..	29·817	69·2	55·0	59·9	56·6	91·4	54·1	67·8	64·7	3·3	8·3	0·0	− 0·4	S : SSW	NNW : SW	0·6	0·0	0·0	142	0·14
27	Perigee	29·904	69·5	48·6	55·6	48·9	111·7	41·5	64·8	62·7	6·7	16·6	1·5	− 4·5	WSW : NW	NW : W : SW	0·1	0·0	0·0	162	0·00
28	..	30·023	68·9	46·3	57·8	52·9	100·5	41·8	64·8	62·7	4·9	13·5	1·0	− 2·1	SW	SW	1·0	0·0	0·1	241	0·00
29	New	30·023	73·4	56·5	63·4	60·7	118·0	50·8	65·0	63·7	2·7	9·5	0·6	+ 3·7	SSW : SW	SW	0·5	0·0	0·0	193	0·05
30	..	29·901	71·9	56·9	62·3	55·1	117·6	55·0	65·2	62·7	7·2	12·4	0·2	+ 2·9	SSW : SW	SW : S	1·1	0·0	0·0	147	0·00
31	In Equator	29·718	77·6	58·8	67·6	57·8	135·7	56·1	65·8	63·2	9·8	17·3	2·1	+ 8·4	E	E	1·6	0·0	0·1	168	0·00
Means	..	29·829	73·3	53·4	62·0	55·5	120·8	48·5	64·5	62·6	6·5	14·2	1·4	+ 0·8	...	...	..	..	..	Sum 6155	Sum 2·64

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was $29^{in}\cdot926$ on the 3rd; the first minimum in the month was $29^{in}\cdot820$ on the 1st.
The second maximum ,, was $30^{in}\cdot022$ on the 11th; the second minimum ,, was $29^{in}\cdot566$ on the 8th.
The third maximum ,, was $29^{in}\cdot967$ on the 18th; the absolute minimum ,, was $29^{in}\cdot501$ on the 15th.
The fourth maximum ,, was $29^{in}\cdot953$ on the 24th; the fourth minimum ,, was $29^{in}\cdot733$ on the 20th.
The absolute maximum ,, was $30^{in}\cdot041$ on the 29th; the fifth minimum ,, was $29^{in}\cdot809$ on the 26th.
the sixth minimum ,, was $29^{in}.696$ on the 31st.
The range in the month was $0^{in}\cdot540$.
The mean for the month was $29^{in}\cdot829$, being $0^{in}\cdot044$ *higher* than the average of the preceding 26 years.

TEMPERATURE OF THE AIR.

The highest in the month was 89°·0 on the 14th; the lowest was 40°·9 on the 3rd.
The range ,, was 48°·1.
The mean ,, of all the highest daily readings was 73°·3, being 0°·7 *higher* than the average of the preceding 26 years.
The mean ,, of all the lowest daily readings was 53°·4, being 0°·4 *higher* than the average of the preceding 26 years.
The mean daily range was 19°9, being 0°·3 *greater* than the average of the preceding 26 years.
The mean for the month was 62°0, being 0°·8 *higher* than the average of the preceding 26 years.

MONTH and DAY, 1867.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Aug. 1			10	10 : 10
2			10	10 : 0, d, h
3			10, th.-cl, h, f	10, ci.-s, h, f : 10, f : 0, h
4			10, th.-cl, h	10, th.-cl, h : 4, ci.-cu, ci.-s, h
5			0 : v	ci, ci.-cu, ci.-s, v, r : 10, r
6			10, r : 10, r	10, r : 2, ci.-s, oc.-r
7			9, ci, ci.-cu, ci.-s, cu.-s : 10, r	10, th.-r : oc.-r, v : 9, ci.-s
8			8, ci, ci.-cu, ci.-s, r : vv, h.-shs	ci, ci.-cu, cu, cu.-s, v : ci, ci.-s, vv
9			4, ci, ci.-cu, r	7, ci, ci.-cu, ci.-s : 0
10	0	0 : m	0, h	2, ci, ci.-cu : 0, h.-d : 0, d, ms
11	m : w	0 : w	0, ms : 3, ci, ci.-cu, h	ci, ci.-cu, ci.-s, v : 10
12	0	0	5, li.-cl, d	1, ci : 0, d : 0, h.-d, ms
13	0	0	0	0 : 0, ms
14	0	0	2, ci : 0	7, ci, ci.-cu : ci.-s, ci.-cu, cu.-s, v
15	0 : ssN, ssP, sp, g. cur : ssN, sp, g. cur	0	10, l, h.-r, t : 10, h.-r	10, oc.-shs, r : 7, ci, ci.-cu, ci.-s, r
16	0	0	10, oc.-r : oc.-r, v	ci.-cu, cu.-s, v : 2, ci, d
17	0	0	10	10, ci.-s, ci.-cu, w : 10, w, sl.-r
18	0	0	10, r	10 : v, th.-r
19	0	0 : 0 : w	li.-cl, h, d	3, ci, ci.-cu : v, t.-s, l
20	0	0	t.-s, l, h.-r : 10, oc.-r	6, ci, ci.-cu, ci.-s, cu.-s : v, h, d
21	0	0 : w	9, ci.-cu	9, ci.-cu, cu.-s : 10 : th.-cl, d, v
22	0	0	0, h, d : 0, ci	1, ci : 0, h.-d
23	0	0	0	1, ci : 0
24	0	0 : w	10, li.-cl	4, ci.-cu : 0, d
25	0	0	0	3, ci, ci.-s : ci.-s, v, r
26	0	0	10	10 : 10, oc.-r
27	0	0	10, sl.-f	6, ci.-cu : 7, li.-cl : 0, d
28	0	0	10	10 : ci, ci.-cu, v
29	0	0	10	9, th.-cl, th.-r : 10, ci.-s, th.-r : 10, th.-r
30	0	0	7, ci, ci.-cu, ci.-s, cu.-s	ci, ci.-cu, cu.-s, v : ci, ci.-cu, v
31	0	0	3, ci	4, ci, ci.-s : 10, ci.-s, sl.-f, sl.-r

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 67°·6 on the 14th; and the lowest was 45°·1 on the 2nd.

The mean ,, was 55°·5, being 1°·8 *higher* than the average of the preceding 26 years.

Elastic Force of Vapour.—The mean for the month was 0in·441, being 0in·024 *greater* than the average of the preceding 26 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 4grs·9, being 0gr·3 *greater* than the average of the preceding 26 years.

Degree of Humidity.—The mean for the month was 80 (that of Saturation being represented by 100), being 3 *greater* than the average of the preceding 26 years.

Weight of a Cubic Foot of Air.—The mean for the month was 528 grains, being 1 grain *less* than the average of the preceding 26 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·2.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 1·3.

WIND.

The proportions were of N. 2, S. 14, W. 12, E. 3, and Calm 0. The greatest pressure in the month was 13lbs·8 on the square foot on the 17th.

RAIN.

Fell on 11 days in the month, amounting to 2in·64, as measured in the simple cylinder gauge partly sunk below the ground; being 0in·24 *greater* than the average fall of the preceding 52 years.

ELECTRICITY.—The insulating lamp was not burning from August 1 to 9.

MONTH and DAY, 1867.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference. Greatest.	Difference. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 50 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Osler's. General Direction. P.M.	Osler's. Pressure in lbs. on the square foot. Greatest.	Pressure. Least.	Pressure. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Sept. 1	..	29·751	79·9	59·0	67·9	59·2	142·4	51·8	66·0	63·7	8·7	15·1	1·1	+ 8·9	ENE : SW	SW	1·2	0·0	0·1	165	0·00
2	..	29·959	79·1	54·4	65·6	56·1	114·4	46·8	66·8	64·7	9·5	22·6	0·2	+ 6·9	SW : NE	E : ENE	1·9	0·0	0·1	209	0·00
3	..	29·829	71·7	61·6	64·8	63·1	95·0	60·0	..	..	1·7	5·8	0·0	+ 6·4	ENE : E	E	2·2	0·0	0·1	130	0·72
4	..	29·686	71·7	57·4	62·7	57·1	105·0	54·3	65·8	64·7	5·6	9·9	0·2	+ 4·5	SSE : SSW	SW : SSW	4·7	0·0	0·3	294	0·00
5	First Qr.	29·709	70·7	55·4	60·5	55·4	125·0	55·0	64·8	63·8	5·1	11·7	0·6	+ 2·5	SSW : W : SW	SW : SSW	2·6	0·0	0·3	269	0·60
6	..	29·628	69·1	52·4	59·6	52·8	116·0	47·1	64·5	63·5	6·8	12·4	2·8	+ 1·7	S : SSW	SSW	6·1	0·0	0·8	442	0·14
7	Greatest Dec. S: Apogee.	29·822	71·2	54·6	61·5	52·2	132·8	47·3	63·8	62·0	9·3	14·8	3·8	+ 3·7	SSW	SW	5·1	0·0	0·8	277	0·00
8	..	29·844	72·0	51·1	61·0	53·5	133·7	45·0	65·0	62·7	7·5	13·8	1·6	+ 3·2	S : SSW	S : SSE	1·0	0·0	0·1	167	0·00
9	..	29·708	72·8	53·8	61·7	54·4	136·0	50·8	..	..	7·3	14·9	0·6	+ 4·0	SSW : SW	SW : SE	1·1	0·0	0·1	260	0·47
10	..	29·747	71·0	51·4	58·9	51·5	135·8	44·6	63·8	61·7	7·4	15·7	0·0	+ 1·2	SW	WSW : SW : SSW	2·1	0·0	0·4	234	0·15
11	..	29·784	67·5	49·6	58·8	54·4	103·9	44·5	63·7	61·8	4·4	9·7	0·0	+ 1·2	S : SE	SSE : ESE	1·0	0·0	0·0	237	0·04
12	..	29·662	73·2	57·9	62·9	56·8	120·8	56·2	62·8	61·7	6·1	12·6	1·3	+ 5·4	SE : SSE	SW : SSW	1·6	0·0	0·3	195	0·46
13	..	29·796	71·4	53·4	59·0	52·1	103·0	49·7	62·3	61·7	6·9	15·3	0·8	+ 1·7	SW	SW	0·5	0·0	0·0	228	0·00
14	Full	29·842	68·8	49·1	58·1	50·6	106·0	45·7	61·8	59·7	7·5	13·7	0·4	+ 0·9	SW	SSW	6·3	0·0	0·7	380	0·05
15	In Equator	29·867	66·3	51·8	56·7	50·0	110·2	49·0	62·8	60·7	6·7	13·3	2·6	− 0·4	SW : WNW	NW : W	2·3	0·0	0·2	272	0·00
16	..	30·060	64·1	45·2	53·0	46·5	117·2	44·1	61·8	59·2	6·5	14·8	1·3	− 3·9	WSW : NW	N : NNW	1·4	0·0	0·2	290	0·00
17	..	30·188	61·2	44·2	52·0	44·8	105·7	36·3	59·8	57·7	7·2	13·3	3·1	− 4·7	NNW	NNE	4·6	0·0	0·6	375	0·14
18	..	30·149	65·8	50·1	56·6	50·6	111·8	45·0	60·0	58·7	6·0	12·4	2·7	+ 0·1	NNE	NE	16·7	0·0	0·9	339	0·02
19	..	29·993	68·3	49·7	57·5	52·7	111·1	47·0	59·8	58·7	4·8	13·9	1·7	+ 1·3	NE	ENE : N	1·0	0·0	0·1	219	0·00
20	..	30·012	66·1	46·5	53·7	48·6	124·2	..	59·8	58·7	5·1	12·9	2·5	− 2·3	N	N : NNE	1·4	0·0	0·2	173	0·00
21	Last Quarter; Greatest Dec N.	29·975	66·0	45·5	53·9	48·3	100·0	37·7	59·8	58·7	5·6	14·4	0·0	− 1·9	N	SW	1·6	0·0	0·1	272	0·00
22	..	29·797	66·5	51·3	56·7	52·4	86·8	41·5	60·3	59·2	4·3	8·8	1·0	+ 1·2	SW	WNW : WSW	1·6	0·0	0·3	318	0·10
23	Perigee	29·814	67·6	46·8	55·7	54·2	88·3	38·8	60·0	57·7	1·5	7·4	0·0	+ 0·5	SW	WSW	4·9	0·0	0·7	399	0·03
24	..	30·051	61·0	42·0	50·3	41·5	112·2	38·0	59·8	57·7	8·8	14·6	0·0	− 4·7	WSW : NW	N: NNE: N by W	6·5	0·0	0·3	248	0·00
25	..	30·307	62·1	35·5	48·0	44·5	96·0	35·1	57·8	55·7	3·5	13·1	1·0	− 6·8	WSW	NNW : WSW	0·4	0·0	0·0	123	0·00
26	..	30·293	58·5	39·6	49·3	48·5	73·7	33·1	57·2	54·7	0·8	8·0	0·0	− 5·3	SW	Calm : S	0·0	0·0	0·0	110	0·00
27	In Eq: New	30·176	62.5	49·5	54·8	48·8	104·0	44·7	56·8	54·7	6·0	10·6	3·1	+ 0·4	SW	SW	0·5	0·0	0·0	210	0·00
28	..	30·080	64·7	49·8	56·3	49·4	94·0	41·9	57·8	55·2	6·9	13·3	1·6	+ 2·1	WSW	WSW : SW	1·6	0·0	0·2	347	0·00
29	..	30·032	62·6	49·4	54·9	49·7	78·0	47·2	56·8	54·7	5·2	9·2	0·8	+ 0·8	SW	WSW	4·8	0·1	0·8	417	0·00
30	..	29·898	66·7	49·6	56·1	48·5	128·2	42·3	55·8	53·7	7·6	12·6	2·7	+ 2·1	WSW	WSW : WNW : W	6·4	0·1	1·4	411	0·00
Means	..	29·915	68·0	50·3	57·6	51·6	110·4	45·5	61·3	59·6	6·0	12·7	1·3	+ 1·0	...	...	..	..	..	Sum. 8010	Sum 2·92

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 29in·972 on the 2nd; the first minimum in the month was 29in·672 on the 4th.
The second maximum ,, was 29in·731 on the 5th; the absolute minimum ,, was 29in·605 on the 6th.
The third maximum ,, was 29in·923 on the 7th; the third minimum ,, was 29in·630 on the 9th.
The fourth maximum ,, was 29in·829 on the 11th; the fourth minimum ,, was 29in·631 on the 12th.
The fifth maximum ,, was 29in·907 on the 14th; the fifth minimum ,, was 29in·758 on the 14th.
The sixth maximum ,, was 30in·211 on the 18th; the sixth minimum ,, was 29in·974 on the 19th.
The seventh maximum ,, was 30in·045 on the 20th; the seventh minimum ,, was 29in·747 on the 22nd.
The eighth maximum ,, was 29in·914 on the 22nd; the eighth minimum ,, was 29in·766 on the 23rd.
The absolute maximum ,, was 30in·332 on the 25th; the ninth minimum ,, was 29in·862 on the 30th.
The range in the month was 0in·727.
The mean for the month was 29in·915, being 0in·097 *higher* than the average of the preceding 26 years.

TEMPERATURE OF THE AIR.

The highest in the month was 79°·9 on the 1st; the lowest was 35°·5 on the 25th.
The range ,, was 44°·4.
The mean ,, of all the highest daily readings was 68°·0, being 0°·4 *higher* than the average of the preceding 26 years.
The mean ,, of all the lowest daily readings was 50°·3, being 1°·2 *higher* than the average of the preceding 26 years.
The mean daily range was 17°·7, being 0°·8 *less* than the average of the preceding 26 years.
The mean for the month was 57°·6, being 0°·5 *higher* than the average of the preceding 26 years.

MONTH and DAY, 1867.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Sept. 1	o	o	6, ci, ci.-cu	ci, ci.-cu, ci.-s, v : ci.-s, v
2	o	o	3, ci	10, th.-cl : ci, v : 8, th.-cl, w
3	o : ss N, ss P, sp, g.-cur	o	10, h.-r, t, l : 10, h.-r	8, ci, ci.-s, cu.-s, r: 10, li.-cl, oc.-shs.-r: 1, l
4	o	o	10	10 : 8, ci, ci.-cu, ci.-s: 6, li.-cl
5	o	o	10, r : r, ci.-cu	7, ci.-cu : 3, ci, ci.-cu, l : o, d
6	wN : sp, g.-cur	o	6, li.-cl, oc.-shs.-r : vv, h.-shs	3, ci.-cu, ci.-s, oc-shs, r : 6, ci.-cu, w, d
7	o	o	1, ci.-cu	4, ci.-cu, ci.-s, cu : v, h.-r, ci.-s, ci
8	o	o	5, cu.-s, ci.-cu	5, ci.-cu, w : 10, ci.-cu, ci.-s
9	o	o	6, ci, ci.-cu, ci.-s	2, ci, ci.-cu : 10, th.-cl : 10, cu.-s, l, h.-r
10			10, h.-r, l : 5, ci, ci.-cu, cu.-s	ci.-cu, cu.-s, v : ci.-cu, ci.-s, r, v : o, d
11			10 : 10, th.-r	10, ci.-s, cu.-s, r : 10, sl.-r
12			10, r : 10, r	3, ci, ci.-s, ci.-cu : 2, li.-cl
13			10, f : v, f	ci, ci.-cu, v : 10, ci.-s : o, d
14	o	o	2, ci	ci.-cu, ci.-s, cu.-s, vv : ci.-s, v, oc.-shs, r
15	o	o	8, ci, ci.-s, cu.-s	10, ci.-s, cu.-s : o
16	o	o	3, ci, ci.-cu, h.-d : ci, ci.-cu, v	ci.-cu, ci.-s, v : o, d
17	w	o : w	10, ci.-cu, ci.-s	ci, ci.-cu, cu.-s, vv : ci.-s, th.-cl, vv, h.-r
18	o	o	10, th.-cl, r : 10, sl.-r	10, glm, w : 9, cu.-s, ci.-cu, w : 10, ci.-cu
19	o	o	10 : 7, ci, ci.-s, ci.-cu, cu.-s	v : th.-cl, v
20	o	o	10	5, ci.-cu : mt, v
21	o	wN : o	4, th.-cl, h, m	10, th.-cl, h, sl.-f: 2, ci : o, d
22	o	o	10, r : 10, th.-r, mt, glm	li.-cl : d, h, v, a
23	o	o	10, th.-r : 10, w	10, glm : ci, ci.-cu, ci.-s, v, r, w: ci.-s, v
24			9, ci.-cu, ci, cu.-s, w	ci, ci.-cu, ci.-s, v : v : o
25			7, li.-cl, d, f : 10	10 : 8, ci.-cu : o, f, d
26			o, f, h, d	9, f, h : 10, h : 10, sl.-f
27			10	10 : 6, ci, ci.-cu, ci.-s : v
28			6, ci.-cu, ci, h	li.-cl, vv : v : o
29			10	10 : ci.-s, v
30			o, d, w : ci, st.-w	6, ci, ci.-cu, ci.-s : r, v : o, d

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 66°·4 on the 3rd; and the lowest was 37°·8 on the 24th.
The mean ,, was 51°·6, being 0°·5 *higher* than the average of the preceding 26 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}\cdot382$, being $0^{in}\cdot001$ *greater* than the average of the preceding 26 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $4^{grs}\cdot3$, being $0^{gr}\cdot1$ *greater* than the average of the preceding 26 years.

Degree of Humidity.—The mean for the month was 81 (that of Saturation being represented by 100), being *the same as* the average of the preceding 26 years.

Weight of a Cubic Foot of Air.—The mean for the month was 535 grains, being 1 grain *less* than the average of the preceding 26 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·3.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 1·2.

WIND.

The proportions were of N. 5, S. 11, W. 10, E. 4, and Calm 0. The greatest pressure in the month was $16^{lbs}\cdot7$ on the square foot on the 18th.

RAIN.

Fell on 12 days in the month, amounting to $2^{in}\cdot92$, as measured in the simple cylinder gauge partly sunk below the ground; being $0^{in}\cdot49$ *greater* than the average fall of the preceding 52 years.

ELECTRICITY.—The insulating lamp was not burning from September 10 to 13 and 24 to 30.

MONTH and DAY, 1867.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference. Greatest.	Difference. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 50 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	General Direction. P.M.	Pressure in lbs. on the square foot. Greatest.	Pressure. Least.	Pressure. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Oct. 1	..	30.260	57.2	42.7	49.1	39.9	113.1	40.4	56.2	55.0	9.2	14.1	5.5	− 4.8	N	NNW : SW	2.7	0.0	0.3	271	0.00
2	..	29.803	59.2	42.1	50.0	45.6	88.9	33.6	55.8	54.7	4.4	10.3	0.8	− 3.8	SW	WSW	6.9	0.0	1.0	378	0.05
3	..	29.754	54.0	37.8	44.6	36.9	99.6	29.5	54.8	52.7	7.7	15.0	1.9	− 9.1	W : WSW : NW	N	2.3	0.0	0.3	370	0.00
4	..	29.971	50.9	33.2	41.2	33.2	103.3	24.0	52.8	49.7	8.0	14.1	6.0	−12.3	N	NNW	2.9	0.1	0.8	284	0.00
5	Greatest Dec. S. Apogee: Fst Qr.	29.909	52.3	30.8	41.3	34.5	106.0	21.6	52.3	49.7	6.8	13.6	1.5	−12.0	WSW : NNW	N by W	1.9	0.0	0.2	239	0.00
6	..	29.777	50.8	31.2	41.8	39.2	64.0	23.8	52.8	50.7	2.6	5.5	0.2	−11.1	SW : SSW	SW : N by W : WSW	0.0	0.0	0.0	210	0.01
7	..	29.449	58.4	40.2	47.2	45.4	78.0	37.2	51.8	49.7	1.8	9.6	0.0	− 5.3	SW	NW : W : WSW	10.0	0.0	0.5	356	0.25
8	..	29.446	53.4	38.9	43.5	37.4	99.3	31.7	51.8	48.7	6.1	12.0	2.5	− 8.6	W : WNW	NW : WNW	5.4	0.0	0.6	287	0.02
9	..	29.640	49.6	32.6	41.5	40.2	75.8	23.5	49.8	48.1	1.3	7.4	0.0	−10.3	W : WSW	SW : SSE	0.6	0.0	0.0	234	0.36
10	..	29.769	54.1	36.0	43.8	39.7	99.1	30.0	48.8	47.7	4.1	11.2	1.0	− 7.8	NE : N	N : N by E	3.7	0.0	0.4	211	0.00
11	..	30.005	48.9	31.2	41.3	40.6	61.2	24.7	48.8	46.7	0.7	4.6	0.0	−10.1	SW	SW	0.0	0.0	0.0	114	0.04
12	In Equator	29.661	55.7	42.5	46.9	45.7	78.6	33.2	48.3	45.2	1.2	5.2	0.0	− 4.3	S : SSE : NE	NE	0.0	0.0	0.0	92	0.04
13	Full	29.437	48.7	39.6	42.9	42.6	48.7	33.0	47.8	43.7	0.3	0.9	0.0	− 8.0	Calm : SW	SW : SE	0.0	0.0	0.0	128	0.02
14	..	29.604	64.8	45.2	54.0	51.9	106.7	38.7	47.8	42.7	2.1	9.7	1.0	+ 3.4	SE	S : SE	0.7	0.0	0.0	156	0.02
15	..	29.657	64.7	52.8	57.9	55.8	80.7	43.6	48.8	45.7	2.1	6.8	0.0	+ 7.6	SE : SSE	S : SE	1.7	0.0	0.1	157	0.32
16	..	29.739	63.0	52.2	55.2	50.0	111.0	50.3	49.8	47.7	5.2	9.7	0.4	+ 5.2	WSW	SW : SSW	2.7	0.0	0.2	305	0.26
17	..	29.602	63.8	49.1	56.0	51.9	93.3	46.2	49.8	47.7	4.1	10.1	1.7	+ 6.2	SSW	SSW	7.5	0.0	1.0	353	0.03
18	Perigee: Greatest Dec. N.	29.605	61.5	46.3	52.8	47.2	99.2	41.6	..	..	5.6	13.5	0.6	+ 3.2	SSW : SW	SSW	0.9	0.0	0.1	232	0.06
19	..	29.547	58.0	41.3	48.4	44.9	99.7	37.0	50.5	49.4	3.5	9.6	0.4	− 0.9	SW : WSW	SW	0.7	0.0	0.0	160	0.01
20	Last Qr.	29.788	55.0	35.8	43.9	42.6	95.7	31.0	51.8	49.7	1.3	8.0	0.0	− 5.2	SW	W : SW	0.0	0.0	0.0	194	0.00
21	..	29.982	58.2	41.9	51.1	48.5	82.0	35.1	51.8	49.7	2.6	6.8	0.0	+ 2.2	S	SSW	8.3	0.0	0.5	346	0.01
22	..	30.076	63.9	56.2	59.0	57.1	75.0	53.2	52.3	50.2	1.9	4.4	0.4	+10.3	SSW	SW : S	1.0	0.0	0.1	159	0.00
23	..	29.844	61.5	48.8	53.9	51.3	108.3	45.8	52.8	50.7	2.6	9.3	0.0	+ 5.4	SE	E : SE	0.3	0.0	0.0	126	0.01
24	..	29.746	58.8	49.3	53.4	50.3	73.3	44.7	..	..	3.1	6.1	0.6	+ 5.2	SE	ESE : E	0.0	0.0	0.0	127	0.00
25	In Equator	30.021	59.8	46.9	51.2	50.1	79.1	40.7	51.8	49.7	1.1	5.3	0.0	+ 3.3	NE	NE : E : S	0.5	0.0	0.0	198	0.00
26	..	29.971	62.1	43.1	51.9	47.0	102.4	37.8	52.3	50.7	4.9	14.1	1.5	+ 4.3	S by W : S	SSW	1.3	0.0	0.1	366	0.00
27	New	29.323	54.6	37.0	45.8	42.6	57.7	32.5	..	..	3.2	8.4	0.7	− 1.5	SSW	SW : WSW	30.0	0.0	1.1	314	0.49
28	..	29.808	49.7	34.1	41.1	35.8	74.8	27.8	52.9	49.8	5.3	12.0	1.7	− 5.9	WSW : WNW	WNW : SW	1.5	0.0	0.1	379	0.02
29	..	29.680	60.8	38.4	51.3	49.5	68.6	32.1	51.8	49.7	1.8	5.3	0.0	+ 4.5	SW	SW	8.0	0.1	1.7	479	0.05
30	..	29.842	57.5	51.5	53.6	52.6	72.0	50.8	51.9	50.7	1.0	3.0	0.4	+ 7.0	WSW	SW	9.0	0.0	0.4	312	0.05
31	..	29.791	60.9	52.9	55.4	50.5	95.6	52.2	52.8	51.2	4.9	9.1	1.9	+ 8.9	SW	SW	3.0	0.0	0.5	357	0.02
Means	..	29.758	57.2	42.0	48.7	45.2	86.8	36.4	51.5	49.2	3.6	8.9	1.0	− 1.4	...	...	..	..	..	Sum 7894	Sum 2.14

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The absolute maximum in the month was $30^{in}\cdot306$ on the 1st; the first minimum in the month was $29^{in}\cdot687$ on the 2nd.
The second maximum ,, was $29^{in}\cdot989$ on the 4th; the second minimum ,, was $29^{in}\cdot398$ on the 8th.
The third maximum ,, was $29^{in}\cdot737$ on the 9th; the third minimum ,, was $29^{in}\cdot454$ on the 9th.
The fourth maximum ,, was $30^{in}\cdot081$ on the 11th; the fourth minimum ,, was $29^{in}\cdot432$ on the 13th.
The fifth maximum ,, was $29^{in}\cdot768$ on the 16th; the fifth minimum ,, was $29^{in}\cdot590$ on the 17th.
The sixth maximum ,, was $29^{in}\cdot652$ on the 18th; the sixth minimum ,, was $29^{in}\cdot536$ on the 19th.
The seventh maximum ,, was $30^{in}\cdot092$ on the 22nd; the seventh minimum ,, was $29^{in}\cdot702$ on the 24th.
The eighth maximum ,, was $30^{in}\cdot060$ on the 26th; the absolute minimum ,, was $29^{in}\cdot275$ on the 27th.
The ninth maximum ,, was $29^{in}\cdot893$ on the 28th; the ninth minimum ,, was $29^{in}\cdot678$ on the 29th.
The tenth maximum ,, was $29^{in}\cdot858$ on the 30th.
The range in the month was $1^{in}\cdot031$.
The mean for the month was $29^{in}\cdot758$, being $0^{in}\cdot063$ *higher* than the average of the preceding 26 years.

TEMPERATURE OF THE AIR.

The highest in the month was 64°·8 on the 14th; the lowest was 30°·8 on the 5th.
The range ,, was 34°·0.
The mean ,, of all the highest daily readings was 57°·2, being 1°·5 *lower* than the average of the preceding 26 years.
The mean ,, of all the lowest daily readings was 42°·0, being 2°·1 *lower* than the average of the preceding 26 years.
The mean daily range was 15°·2, being 0°·6 *greater* than the average of the preceding 26 years.
The mean for the month was 48°·7, being 1°·9 *lower* than the average of the preceding 26 years.

MONTH and DAY, 1867.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Oct. 1			0	0, h : 0
2			8, ci, ci.-s, ci.-cu, sc, w	10, ci, ci.-s, st.-w : 10, r
3			4, ci, ci.-s, ci.-cu, d	3,ci,ci.-cu,ci.-s: 8, ci.-cu, cu.-s,r: 3, li.-cl, l
4			1, ci, d	ci, ci.-cu, ci.-s, cu.-s, vv: 7, ci.-s, cu.-s, ci.-cu
5			1, ci, d, h : v	ci, ci.-cu, ci.-s, cu.-s, v : th.-cl, v, lu.-ha, d
6			10, ci.-s, glm, sl.-f, th.-r : 10, th.-r	10 : 10, th.-cl, gt.-glm, f
7			10, th.-r : ci, ci.-s, ci.-cu, cu.-s, v, r	ci.-cu, ci.-s, vv : 0, d
8			4, ci.-cu, d : ci, ci.-cu, cu.-s, h, v	th.-cl, r, vv : 0
9			9, li.-cl, h, d : 10, li.-cl	10, li.-cl, h : 10, h.-r : 10, ci.-s, glm
10			6, ci, cu.-s, h, sc	ci, ci.-cu, ci.-s, cu.-s, vv: 0, d
11			10, f	10, r : 10, glm, sl.-f, oc.-r
12			10, sl.-f, r	10 : 4, ci.-cu, cu.-s : f, v
13			10, th.-r, f	10, th.-r, f : 10, f, th.-r
14			7, ci, ci.-cu, ci.-s	ci, ci.-cu, cu, ci.-s, cu.-s, vv: 10, ci.-s, cu.-s, r
15			10, r : 10	9,ci.-cu,ci.-s,cu.-s: v : 10, th.-cl, oc.-r
16	0	0	8, ci, ci.-s, h.-r	6, ci, ci.-cu, cu.-s : 10
17	0	0	3, ci, d, r : vv	li.-cl, v, st.-w : 2, ci, ci.-cu, w : 0, w
18	0	0	0, ci	ci,ci.-cu,cu,cu.-s,vv: v, oc.-r : 0
19	0	0	3, ci	7, ci, ci.-cu, cu.-s : 0
20			4, ci, f, h, h.-d	ci, h, v, cu, cu.-s : 0, d
21			10, ci, ci.-s	10 : 10, oc.-r
22			10 : 10, th.-r	10, th.-r, glm : 10
23			10, sl.-r : ci.-cu, cu.-s, ci.-s, v	2, ci.-cu : 0 : 0, f
24			2, ci, ci.-cu, ci.-s, d	9, th.-cl, h : 10, ci.-cu, ci.-s : th.-cl, vv, l
25			10, f	8,ci,ci.-cu,ci.-s,cu.-s: 10, glm : 1, ci.-s, th.-r
26	0	0	0, h, d	4, ci, ci.-cu, ci.-s : 0
27	0	0	10, glm, st.-w : 10, th.-r	10, h.-r, gt.-glm, st.-w : 0
28	0	0	2, li.-cl, h, h.-fr, r	1, ci, ci.-cu, h : 5, ci.-cu, cu.-s, ci: 0, d
29	0	0	10, sc, r, st.-w : 10, shs.-r, st.-w	10,oc.-r,ci,ci.-cu,cu.-s,sc,v: ci.-s, cu.-s, vv, st.-w
30	0	0	10, ci.-s, r : 10, m.-r	10, r : 10, th.-r, glm
31	0	0	10, r, ci.-s	10, th.-cl : 10 : 10, th.-r

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 58°·0 on the 22nd; and the lowest was 32°·8 on the 5th.

The mean ,, was 45°·2, being 1°·2 *lower* than the average of the preceding 26 years.

Elastic Force of Vapour.—The mean for the month was 0in·302, being 0in·015 *less* than the average of the preceding 26 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 3grs·4, being 0gr·3 *less* the average of the preceding 26 years.

Degree of Humidity.—The mean for the month was 88 (that of Saturation being represented by 100), being 1 *greater* than the average of the preceding 26 years.

Weight of a Cubic Foot of Air.—The mean for the month was 542 grains, being 3 grains *greater* than the average of the preceding 26 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·5.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 0·7.

WIND.

The proportions were of N. 5, S. 12, W. 10, E. 4, and Calm 0. The greatest pressure in the month was 30lbs·0 on the square foot on the 27th.

RAIN.

Fell on 21 days in the month, amounting to 2in·14, as measured in the simple cylinder gauge partly sunk below the ground; being 0in·67 *less* than the average fall of the preceding 52 years.

ELECTRICITY.—The insulating lamp was not burning from October 1 to 15 and 20 to 25.

MONTH and DAY, 1867.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Readings of Thermometers. Dry. Lowest.	Readings of Thermometers. Dry. Mean Daily Value.	Readings of Thermometers. Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference between the Dew Point Temperature and Air Temperature. Greatest.	Difference between the Dew Point Temperature and Air Temperature. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 50 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Wind as deduced from Anemometers. Osler's. General Direction. P.M.	Osler's. Pressure in lbs. on the square foot. Greatest.	Osler's. Pressure in lbs. on the square foot. Least.	Osler's. Pressure in lbs. on the square foot. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Nov. 1	Greatest Declination S.	29·775	64·0	40·0	50·3	46·7	104·2	38·0	51·3	49·7	3·6	12·5	0·8	+ 3·9	SW	WSW : NNW : WNW	6·0	0·0	0·6	394	0·04
2	Apogee	30·282	50·7	33·0	41·7	36·6	88·2	27·5	50·2	49·4	5·1	10·2	0·0	− 4·6	WSW : NW	N by W	2·0	0·0	0·2	243	0·00
3	..	30·362	49·8	30·2	40·7	36·1	68·2	24·7	49·3	47·0	4·6	10·5	2·0	− 5·4	SW	WSW	0·7	0·0	0·0	214	0·00
4	First Qr.	30·123	53·5	41·0	47·2	42·6	63·2	35·3	..	..	4·6	9·8	0·0	+ 1·3	WSW	W : WNW : NE	1·9	0·0	0·3	307	0·00
5	..	30·166	48·6	36·0	41·4	35·9	87·0	29·0	48·8	46·7	5·5	8·4	2·2	− 4·3	N	N : N by E	0·8	0·0	0·1	214	0·00
6	..	30·311	48·4	32·2	39·8	37·1	83·7	25·2	47·8	44·7	2·7	7·8	0·3	− 5·7	N	NE : ENE	0·3	0·0	0·0	124	0·00
7	..	30·411	49·7	33·4	40·7	37·5	86·7	27·7	47·8	44·7	3·2	8·8	0·0	− 4·6	SW	WSW : SW	0·0	0·0	0·0	138	0·00
8	In Equator	30·433	50·0	32·6	41·4	39·8	67·0	28·0	46·8	44·7	1·6	6·1	0·0	− 3·6	SW	WSW	0·0	0·0	0·0	218	0·00
9	..	30·441	46·0	36·8	42·3	42·3	48·0	29·8	45·8	44·7	0·0	0·0	0·0	− 2·4	WSW	Calm	0·0	0·0	0·0	90	0·00
10	..	30·350	49·9	39·7	44·7	42·2	55·5	38·7	45·9	43·8	2·5	5·3	0·0	+ 0·3	Calm	NNE : ENE	0·0	0·0	0·0	88	0·00
11	..	30·147	51·5	33·3	42·4	38·9	80·0	32·2	45·8	43·7	3·5	10·2	0·2	− 1·7	Calm	NE : Calm	0·0	0·0	0·0	86	0·00
12	Full	30·022	44·8	33·5	39·6	39·1	65·8	26·2	44·8	43·2	0·5	2·9	0·0	− 4·2	N : NNE	NE	0·0	0·0	0·0	98	0·00
13	..	29·811	48·2	36·2	42·4	37·0	58·7	30·6	45·3	42·7	5·4	10·1	0·0	− 1·1	Calm	SW : ESE	0·0	0·0	0·0	85	0·00
14	Perigee	29·471	54·8	36·8	48·9	47·1	68·0	28·3	45·8	43·7	1·8	3·8	0·0	+ 5·7	SE	SSE	2·7	0·0	0·4	267	0·08
15	Greatest Declination N.	29·511	59·8	48·6	53·5	50·1	86·2	48·0	..	..	3·4	8·4	0·0	+10·6	SE	SE : E : Calm	0·0	0·0	0·0	139	0·00
16	..	29·534	49·0	40·0	43·7	39·5	49·8	39·5	45·3	43·4	4·2	6·4	2·9	+ 1·1	NNE	NE	15·1	0·0	1·7	536	0·02
17	..	29·794	42·3	38·1	39·9	33·6	49·0	34·5	43·8	41·4	6·3	7·8	4·6	− 2·4	NE	NE	27·0	0·6	3·3	664	0·00
18	Last Qr.	30·139	43·0	32·8	39·2	36·5	52·2	27·2	43·8	41·7	2·7	4·4	0·3	− 2·8	NNE	N : N by W	1·7	0·0	0·1	223	0·00
19	..	30·161	46·8	37·6	41·9	37·7	52·2	28·9	43·8	41·7	4·2	5·7	1·0	+ 0·1	NW	NW : WSW : NNW	0·6	0·0	0·0	192	0·00
20	..	30·266	41·7	34·0	37·7	29·4	50·2	25·2	43·7	41·4	8·3	10·1	6·7	− 3·9	NNW	N	4·0	0·0	0·8	367	0·00
21	In Equator	30·348	43·2	35·4	38·5	34·3	57·0	30·0	..	..	4·2	7·0	1·7	− 2·9	N by E	N by W	4·0	0·0	0·7	345	0·00
22	..	30·349	44·7	33·1	39·3	34·6	50·2	27·4	43·4	40·7	4·7	8·6	2·8	− 1·9	NNW	NW	1·3	0·0	0·1	260	0·00
23	..	30·336	46·2	36·3	40·8	36·8	55·4	30·3	43·3	39·8	4·0	7·6	0·7	− 0·3	NNW	N	1·4	0·0	0·2	255	0·00
24	..	30·468	42·3	34·9	38·3	35·6	53·5	29·6	42·8	39·7	2·7	7·1	0·2	− 2·7	N	W : NW	0·0	0·0	0·0	98	0·00
25	..	30·319	40·0	33·6	37·3	33·5	43·0	25·6	41·8	39·7	3·8	4·8	1·5	− 3·6	SW	WSW	0·1	0·0	0·0	202	0·00
26	New	30·017	45·9	39·1	42·6	37·7	55·0	36·7	41·1	39·7	4·9	7·0	3·2	+ 1·7	SW	SW	1·9	0·0	0·2	330	0·01
27	..	30·120	44·7	29·2	34·7	29·1	54·0	22·1	40·8	38·7	5·6	9·0	1·8	− 6·4	NNW	NNW : SW	1·4	0·0	0·1	204	0·00
28	Greatest Declination S.	30·217	41·9	27·5	34·2	29·3	43·0	21·8	40·7	38·7	4·9	8·3	1·0	− 7·1	SW	WSW	0·2	0·0	0·0	203	0·00
29	..	30·163	43·7	29·0	36·6	33·5	46·5	21·9	40·4	38·7	3·1	7·7	1·6	− 5·0	SW	SW : SSW : S	0·0	0·0	0·0	208	0·00
30	Apogee	29·724	47·7	35·6	40·4	36·1	49·9	31·0	..	..	4·3	7·3	0·0	− 1·5	SSE	S : SSW	16·2	0·0	1·0	381	0·27
Means	..	30·119	47·8	35·3	41·4	37·5	62·4	30·0	45·0	42·8	3·9	7·5	1·2	− 1·8	...	...	..	..	..	Sum 7173	Sum 0·42

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was 30in·411 on the 3rd; the first minimum in the month was 29in·714 on the 1st.
The second maximum ,, was 30in·469 on the 9th; the second minimum ,, was 30in·097 on the 4th.
The third maximum ,, was 30in·197 on the 19th; the third minimum ,, was 29in·448 on the 14th.
The fourth maximum ,, was 30in·406 on the 21st; the fourth minimum ,, was 30in·133 on the 19th.
The absolute maximum ,, was 30in·493 on the 24th; the fifth minimum ,, was 30in·314 on the 23rd.
The sixth maximum ,, was 30in·232 on the 28th; the sixth minimum ,, was 29in·900 on the 26th.

The lowest reading took place on the 30th at midnight, and was 29in·394, the barometer still decreasing.

The range in the month was 1in·099.

The mean for the month was 30in·119, being 0in·370 *higher* than the average of the preceding 26 years.

TEMPERATURE OF THE AIR.

The highest in the month was 64°·0 on the 1st; the lowest was 27°·5 on the 28th.

The range ,, was 36°·5.

The mean ,, of all the highest daily readings was 47°·8, being 1°·4 *lower* than the average of the preceding 26 years.

The mean ,, of all the lowest daily readings was 35°·3, being 2°·2 *lower* than the average of the preceding 26 years.

The mean daily range was 12°·5, being 0°·8 *greater* than the average of the preceding 26 years.

The mean for the month was 41°·4, being 2°·6 *lower* than the average of the preceding 26 years.

MONTH and DAY, 1867.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Nov. 1	w	o	3, ci, ci.-cu, ci.-s : vv	8,ci,ci.-cu,ci.-s,cu.-s: 10, th.-r, gt.-glm : v
2			o, d	1, ci, ci.-cu : 7, li.-cl : o, sl.-f, h.-fr
3			o, h.-fr, h, sl.-f : ci, sl.-f	5, ci, sl.-f : 10, h
4	o	o	10	10 : 10, f, th.-r, l
5	m	w : o : w	o, d, h.-fr : v	ci, ci.-cu, ci.-s, cu.-s, v: o
6	o	o	8, li.-cl, h, sl.-f	6, ci.-cu, cu.-s : o, d
7	w	m : w	o, f, h	2, ci, f, h : o, h : o, d, f
8	w	m : w	o, h, f, h.-fr	o, h, sl.-f : 1, ci, h, sl.-f : 1, ci, sl.-f, h.-d, lu.-co
9			10, f	10, f : 10, f
10			10, f	10 : 10, ci.-s, cu.-s
11			10, f	8, ci, ci.-cu, ci.-s : ci, v, f, h.-fr
12			10, sl.-f, h.-fr	10 : 10
13			10, f	10 : 10, ci.-cu : o, h.-fr, ms
14			v, sc, f, r, lu.-ha, ms: 10, ci.-s, oc.-r	10 : 10, th.-r : ci.-s, cu.-s, v, r
15			o : 10	9, ci, ci.-cu, ci.-s : 10, ci.-cu, ci.-s
16			10, glm, w, sc, r : 10, r, st.-w	10, st.-w : st.-w, v
17			10	10, oc.-r : 10
18	o	o	10, ci.-s, cu.-s, h.-fr	10 : 10
19	o	o	10, glm	10 : 5, ci.-s, cu.-s, h : o, f, h.-fr
20	o	o	10, ci.-s, w, h.-fr	10, r : 10, glm, w
21	o	o	10, ci.-cu	8, ci, ci.-cu, ci.-s : o
22	o	o	1, ci, ci.-s, h.-fr	9, ci.-s, cu.-s : 10, f : 10, th.-r
23	o	o	10, ci.-s	9, ci.-s : 10, sc, r, glm : v, d, h.-fr.
24	o	o	10, sl.-f, th.-r, f	10, f : 10 : o
25	o	o	10	10 : 10, sl.-f
26	o	o	10, oc.-r	10 : 10, glm, r
27	o	o	o, h, h.-fr	3, ci, h, fr : o, f
28	o	o : w	o, h.-fr	o : 9, ci, ci.-cu : o, h.-fr
29			o, h.-fr	o : 10 : o
30			10, th.-cl, h.-fr	10, ci.-s, oc.-h.-r: 10, oc.-sqs, w, r: 10, h.-sqs, h.-r

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 53°·9 on the 1st; and the lowest was 26°·6 on the 28th.

The mean „ was 37°·5, being 2°·4 *lower* than the average of the preceding 26 years.

Elastic Force of Vapour.—The mean for the month was $0^{in}\cdot225$, being $0^{in}\cdot027$ *less* than the average of the preceding 26 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was $2^{grs}\cdot6$, being $0^{gr}\cdot2$ *less* than the average of the preceding 26 years.

Degree of Humidity.—The mean for the month was 87 (that of Saturation being represented by 100), being 1 *less* than the average of the preceding 26 years.

Weight of a Cubic Foot of Air.—The mean for the month was 557 grains, being 10 grains *greater* than the average of the preceding 26 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 6·9.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 0·2.

WIND.

The proportions were of N. 11, S. 5, W. 8, E. 4, and Calm 2. The greatest pressure in the month was $16^{lbs}\cdot2$ on the square foot on the 30th.

RAIN.

Fell on 5 days in the month, amounting to $0^{in}\cdot42$, as measured in the simple cylinder gauge partly sunk below the ground; being $2^{in}\cdot00$ *less* than the average fall of the preceding 52 years.

ELECTRICITY.—The insulating lamp was not burning on November 2 and 3, from 9 to 17, and on 29 and 30.

MONTH and DAY, 1867.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Dry. Lowest.	Dry. Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shown by a Self-Registering Thermometer, with blackened bulb in vacuo, placed on the Grass.	Lowest on the Grass, as shown by a Self-Registering Minimum Thermometer.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometers, read at 9h A.M. Highest.	In the Water of the Thames. Lowest.	Difference between the Dew Point Temperature and Air Temperature. Mean Daily Value.	Difference. Greatest.	Difference. Least.	Difference between the Mean Temperature of the Day and the Mean Temperature of the same Day on an Average of 50 Years.	Wind as deduced from Anemometers. Osler's. General Direction. A.M.	Osler's. General Direction. P.M.	Osler's. Pressure in lbs. on the square foot. Greatest.	Pressure. Least.	Pressure. Mean of 24 Obs.	Robinson's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches, collected in a Gauge whose receiving surface is 5 inches above the Ground.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Dec. 1	..	28·953	55·2	39·0	49·9	49·3	59·0	39·0	42·9	42·0	0·6	2·5	0·0	+ 7·8	SSW : SW	SSW : WNW	30·0	0·2	2·6	569	0·67
2	..	29·513	39·0	26·1	29·6	15·4	49·2	22·5	39·8	38·7	14·2	17·0	6·5	−12·6	NNW	NNW : N by W	30·0	0·1	3·8	581	0·18
3	..	30·015	37·8	26·8	33·4	30·3	44·0	21·0	38·8	37·7	3·1	5·3	2·7	− 8·9	N by E	N by W	19·5	0·0	1·3	413	0·00
4	First Qr.	30·144	35·1	29·2	32·6	28·9	39·0	22·1	38·3	35·7	3·7	5·9	1·9	− 9·6	NNW : Calm	SW : SSW	0·0	0·0	0·0	146	0·00
5	..	29·664	41·3	29·8	36·4	35·0	49·5	24·6	38·8	36·2	1·4	4·1	0·0	− 5·8	SSW : W	WNW : WSW : NW	1·0	0·0	0·1	262	0·23
6	In Equator	29·694	38·7	32·5	35·4	32·2	44·6	27·0	38·3	35·7	3·2	4·1	2·5	− 6·7	NW : N by W	N	11·5	0·0	1·3	390	0·03
7	..	29·953	35·7	29·3	33·0	28·3	39·0	23·3	37·8	34·7	4·7	6·3	1·8	− 9·0	N	N : N by W	30·0	0·1	2·6	477	0·03
8	..	29·888	35·1	29·5	32·6	30·6	37·9	24·6	35·3	35·2	2·0	4·9	0·0	− 9·1	NNW	SW : SE : E	1·3	0·0	0·1	201	0·20
9	..	30·116	30·8	21·2	25·8	21·1	41·0	15·0	35·8	34·7	4·7	7·0	1·5	−15·5	NE	NNE : SW	0·8	0·0	0·0	49	0·00
10	..	29·885	38·9	22·0	33·2	32·9	39·0	19·7	35·5	34·7	0·3	3·7	0·0	− 7·8	WSW	WSW	1·5	0·0	0·1	264	0·00
11	Full	29·891	48·6	35·3	43·6	42·3	48·6	28·2	37·8	35·7	1·3	5·9	0·0	+ 2·9	W	WNW	1·6	0·0	0·3	288	0·02
12	Greatest Declination N. Perigee.	29·995	50·8	40·5	46·7	41·0	52·0	33·0	37·2	36·6	5·7	7·5	4·6	+ 6·1	NW	WNW : NW	4·3	0·0	0·8	406	0·00
13	..	30·063	46·0	38·9	42·5	38·0	48·0	31·3	36·8	34·7	4·5	6·4	2·3	+ 2·0	W : WNW	WNW : W : WSW	2·3	0·0	0·4	360	0·00
14	..	29·794	49·0	36·7	44·2	43·6	50·2	32·0	37·8	35·2	0·6	3·4	0·0	+ 3·8	WSW : SW	SW	7·3	0·0	1·3	455	0·10
15	..	29·642	53·9	47·6	50·6	49·9	53·9	46·0	36·8	34·7	0·7	1·0	0·2	+10·4	WSW : W	Variable.	20·0	0·0	1·9	457	0·26
16	..	29·650	52·9	48·7	50·9	46·9	58·9	46·2	36·8	33·7	4·0	5·8	2·4	+10·9	WSW	WSW : SW	23·0	0·0	1·3	571	0·00
17	..	29·465	52·2	41·7	47·9	45·3	57·0	41·0	37·8	34·7	2·6	4·4	1·8	+ 8·1	WSW : SW	SW : W : WNW	22·5	0·1	1·5	482	0·00
18	Last Quarter In Equator.	29·361	41·7	31·7	36·5	32·7	47·0	27·3	..	..	3·8	7·4	2·4	− 3·1	WSW : WNW	WNW : NW : WSW	1·7	0·0	0·2	273	0·00
19	..	29·618	39·7	29·8	35·3	31·5	51·0	21·7	35·8	33·7	3·8	8·1	2·5	− 4·1	NNW : W : NW	NW : W : NNW	1·0	0·0	0·1	182	0·06
20	..	29·850	32·9	24·6	27·9	26·4	32·9	18·4	37·8	33·7	1·5	4·1	0·0	−11·2	NNW : Calm	SW : Calm	0·0	0·0	0·0	106	0·00
21	..	29·719	45·7	29·3	38·0	37·0	45·7	27·1	40·8	38·7	1·0	2·3	0·0	− 0·8	SSE	S by E : SW	10·5	0·0	0·9	343	0·18
22	..	29·779	49·9	34·0	43·5	42·6	50·0	30·2	41·2	38·4	0·9	3·8	0·0	+ 5·0	SW	NNW : WSW	2·5	0·0	0·2	268	0·01
23	..	30·053	44·8	29·4	38·4	35·8	49·1	23·8	41·8	38·7	2·6	6·4	0·0	+ 0·3	Calm	SSW : S	1·6	0·0	0·1	216	0·00
24	..	29·988	47·9	33·5	41·4	37·2	57·3	29·5	42·8	39·2	4·2	6·9	3·1	+ 3·6	SSW : S	S : Calm	1·9	0·0	0·2	220	0·00
25	New	30·073	41·6	31·4	37·9	37·2	41·6	26·0	..	..	0·7	1·6	0·0	+ 0·3	Calm	Calm	0·0	0·0	0·0	89	0·00
26	Greatest Declination S.	30·143	39·5	29·7	32·1	32·1	39·5	28·2	..	..	0·0	0·4	0·0	− 5·3	Calm	Calm	0·0	0·0	0·0	66	0·00
27	Apogee	30·218	38·5	29·6	34·2	32·6	49·0	..	..	..	1·6	3·0	1·0	− 3·1	Calm	ENE	1·3	0·0	0·1	176	0·00
28	..	30·098	36·5	30·0	32·6	30·6	39·1	30·0	..	..	2·0	3·7	0·8	− 4·6	ENE : NE	NE : N	0·6	0·0	0·0	158	0·00
29	..	29·978	40·7	27·9	34·2	32·8	44·0	27·4	..	..	1·4	5·5	0·0	− 3·1	N : NW : W	N by E : NNE	0·7	0·0	0·0	162	0·00
30	..	30·182	35·9	31·0	34·0	24·8	44·0	28·5	..	..	9·2	9·9	8·8	− 3·4	NE	NE	4·0	0·0	0·5	363	0·00
31	..	30·086	32·0	27·0	28·9	20·6	41·0	22·7	..	..	8·3	9·9	5·6	− 8·6	NE	E : NNE	1·5	0·0	0·1	199	0·00
Means	..	29·854	42·2	32·1	37·5	34·4	46·5	27·9	38·4	36·2	3·2	5·4	1·7	− 2·3	...	...	..	..	..	Sum 9192	Sum 1·97

BAROMETER READINGS FROM EYE-OBSERVATIONS.

The first maximum in the month was $30^{\text{in}}\cdot 211$ on the 4th; the absolute minimum in the month was $28^{\text{in}}\cdot 746$ on the 1st.
The second maximum ,, was $30^{\text{in}}\cdot 050$ on the 7th; the second minimum ,, was $29^{\text{in}}\cdot 564$ on the 5th.
The third maximum ,, was $30^{\text{in}}\cdot 154$ on the 9th; the third minimum ,, was $29^{\text{in}}\cdot 788$ on the 8th.
The fourth maximum ,, was $30^{\text{in}}\cdot 077$ on the 13th; the fourth minimum ,, was $29^{\text{in}}\cdot 857$ on the 10th.
The fifth maximum ,, was $29^{\text{in}}\cdot 709$ on the 15th; the fifth minimum ,, was $29^{\text{in}}\cdot 619$ on the 15th.
The sixth maximum ,, was $29^{\text{in}}\cdot 885$ on the 20th; the sixth minimum ,, was $29^{\text{in}}\cdot 346$ on the 18th.
The seventh maximum ,, was $30^{\text{in}}\cdot 095$ on the 23rd; the seventh minimum ,, was $29^{\text{in}}\cdot 660$ on the 22nd.
The absolute maximum ,, was $30^{\text{in}}\cdot 225$ on the 27th; the eighth minimum ,, was $29^{\text{in}}\cdot 975$ on the 24th.
The ninth maximum ,, was $30^{\text{in}}\cdot 193$ on the 30th; the ninth minimum ,, was $29^{\text{in}}\cdot 978$ on the 29th.
The range in the month was $1^{\text{in}}\cdot 479$.
The mean for the month was $29^{\text{in}}\cdot 854$, being $0^{\text{in}}\cdot 024$ *higher* than the average of the preceding 26 years.

TEMPERATURE OF THE AIR.

The highest in the month was $55^{\circ}\cdot 2$ on the 1st; the lowest was $21^{\circ}\cdot 2$ on the 9th.
The range ,, was $34^{\circ}\cdot 0$.
The mean ,, of all the highest daily readings was $42^{\circ}\cdot 2$, being $3^{\circ}\cdot 1$ *lower* than the average of the preceding 26 years.
The mean ,, of all the lowest daily readings was $32^{\circ}\cdot 1$, being $3^{\circ}\cdot 5$ *lower* than the average of the preceding 26 years.
The mean daily range was $10^{\circ}\cdot 1$, being $0^{\circ}\cdot 5$ *greater* than the average of the preceding 26 years.
The mean for the month was $37^{\circ}\cdot 5$, being $3^{\circ}\cdot 0$ *lower* than the average of the preceding 26 years.

MONTH and DAY, 1867.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A.M.	P.M.	A.M.	P.M.
Dec. 1			10, h.-r, st.-w : 10, sc, st.-w, th.-r	10, sc, th.-r : 10, sc, h.-r, st.-w
2			2, ci, h, ci.-cu, r, h.-g	10, sn, w : 7, li.-cl, w, sn : 3, ci.-cu, w
3			6, ci, ci.-cu, ci.-s, sc, sn : vv, li.-sc	ci.-s, sc, vv, sn, sl : 2, li.-cl
4	o	o	10. h.-fr, f	10 : 10,ci,ci.-cu,ci.-s,f: o
5	o	o	10, r, f : v, ci.-s, ci.-cu, sl.-r	v : o, h : li.-cl, sc, sl.-f, fr, th.-r,v
6	o	w : o : w	10, sn	oc.-r, sn, v : ci.-cu,ci.-s,sc,r,sl.-sn,vv,st.-w
7			8, ci, ci.-cu, sn, st.-w : 10, sn, st.-w	10, sn : 6,ci,ci.-cu,ci.-s,sc,sn :ci, ci.-cu, v, lu.-co
8			10, m.-r	10, sl, sl.-sn, glm : 10, sn
9			8, ci, ci.-s, cu.-s, h.-fr	ci,ci.-cu,ci.-s,v: o, lu.-co, lu.-ha: ci, ci.-s, v : o
10	o	w : o : w	10, sl.-f, m.-r : 10	2, ci, h, f :8,ci.-s,cu.-s,sc,th.-r,f:10,lu.-co,h
11	o	w : o	7, ci.-cu, sc, f, h	10, ci.-s, cu.-s, sl.-f : 10
12	o	o	10, sc : v	ci, ci.-cu, v : o, lu.-co
13	o	o	4, ci	ci,ci.-cu,ci.-s, cu.-s,v, f: 10, ci.-cu, cu.-s, r
14	o	o	10, oc.-m.-r	10, sc, r : 10, oc.-r, w
15	o	o	10, th.-r, sc, st.-w	10, th.-r, sc : 10, th.-r
16	o	o	8, ci.-s, sc, glm	9, ci, ci.-s : 10, sc, glm : 10, glm, sc, w
17	o	o : w	10, sc, glm : 10, th.-r	7, ci, ci.-s, cu.-s, sc, th.-r: 10, oc.-th.-r
18	o	o	3, li.-cl, h	4, ci, ci.-s, h : h, v, h.-fr
19	o	o	10, sl.-f, glm	10, li.-cl, f : 10, r, sn : 10, f, glm
20	o	o	3, li.-cl, h, f, h.-fr	5, ci, ci.-s, h : o, h, f
21	o	o	10, sc, r : 10, h.-r	10, h.-r, w : 10, sc, w : 10, sc.-r
22			10, sc, glm, th.-r, f	10, sc, sl.-f : o, h.-fr
23			4, h.-fr	5, ci, ci.-cu, ci.-s, h: 10, ci.-s : 10, th.-cl
24			10, ci.-s, cu.-s, ci.-cu	8, ci.-cu, ci.-s, cu.-s : o
25			10, th.-f	10, f, m.-r : 10, th.-f, oc.-th.-r
26			10, th.-f, h.-fr	10, th.-f : 10, f
27			10, sl.-f	ci, ci.-cu, ci.-s, v, : 10
28	o	o	10	10 : 10
29	o	o	10, f	10, ci, ci.-cu : 10 : o
30	o	o	10, ci, ci.-s	10 : 10
31	o	o	2, ci	ci, ci.-cu, v : 7, ci, ci.-s, sn : 10

HUMIDITY OF THE AIR.

Temperature of the Dew Point.

The highest in the month was 50°·8 on the 15th; and the lowest was 10°·8 on the 2nd.

The mean ,, was 34°·4, being 2°·8 *lower* than the average of the preceding 26 years.

Elastic Force of Vapour.—The mean for the month was 0in·199, being 0in·025 *less* than the average of the preceding 26 years.

Weight of Vapour in a Cubic Foot of Air.—The mean for the month was 2grs·3, being 0gr·3 *less* than the average of the preceding 26 years.

Degree of Humidity.—The mean for the month was 89 (that of Saturation being represented by 100), being 1 *greater* than the average of the preceding 26 years.

Weight of a Cubic Foot of Air.—The mean for the month was 556 grains, being 4 grains *greater* than the average of the preceding 26 years.

CLOUDS.

The mean amount for the month, a clear sky being represented by 0 and a cloudy sky by 10, was 7·9.

OZONE.

The mean amount for the month, on a scale ranging from 0 to 10, was 0·3.

WIND.

The proportions were of N. 9, S. 6, W. 10, E. 3, and Calm 3. The greatest pressure in the month was 30lbs·0 on the square foot on the 1st, 2nd, and 7th.

RAIN.

Fell on 12 days in the month, amounting to 1in·97, as measured in the simple cylinder gauge partly sunk below the ground; being 0in·10 *greater* than the average fall of the preceding 52 years.

ELECTRICITY.—The insulating lamp was not burning from December 1 to 3, 7 to 9, and 22 to 27.

The following table contains the highest and lowest readings of the Barometer, reduced to 32° Fahrenheit, extracted from the photographic records. The readings are accurate; but the times are liable to great uncertainty, as the barometer frequently remains at its highest or lowest point through several hours. The time given is the middle of the stationary period. Where the symbol : follows the time, it denotes that the quicksilver has been sensibly stationary through a period of more than one hour.

MAXIMA.			MINIMA.			MAXIMA.			MINIMA.		
Approximate Mean Solar Time, 1867.		Reading.	Approximate Mean Solar Time, 1867.		Reading.	Approximate Mean Solar Time, 1867.		Reading.	Approximate Mean Solar Time, 1867.		Reading.
	d h m	in.		d h m	in.		d h m	in.		d h m	in.
January	4. 14. 40	29·935	January	1. 19. 29	28·889	April	0. 22. 13:	30·328	March	30. 6. 0:	29·546
	8. 10. 45:	28·986		7. 19. 21	28·535		2. 19. 58:	30·104	April	2. 2. 45	29·961
	11. 15. 31	29·621		9. 13. 30:	28·694		4. 22. 34:	29·954		4. 2. 16	29·644
	14. 13. 10:	29·789		12. 3. 45:	29·380		9. 21. 9	29·806		8. 6. 37	29·142
	19. 12. 30:	29·769		17. 16. 0:	29·310		11. 23. 28	30·058		10. 16. 30	29·285
	21. 23. 4	29·935		21. 2. 58	29·704		15. 21. 0	29·588		14. 3. 59	29·149
	22. 23. 38	29·596		22. 17. 47:	29·532		17. 12. 15	29·812		16. 3. 0	29·487
	26. 0. 10	29·991		24. 17. 34	29·252		18. 21. 41	29·488		18. 16. 28	29·422
	27. 6. 38	29·880		26. 17. 40	29·709		22. 0. 30	29·671		20. 9. 0	28·895
	28. 19. 25:	29·904		28. 3. 41	29·668		25. 12. 41	29·730		24. 9. 0	29·463
	29. 21. 35	29·729		29. 15. 10	29·620		28. 22. 52	29·742		27. 3. 20	29·345
	31. 6. 39:	30·078		30. 7. 39	29·253	May	2. 20. 0	30·000		29. 23. 30	29·532
February	2. 18. 10:	30·360		31. 19. 0	29·920		7. 9. 12	29·871	May	6. 4. 11	29·760
	4. 13. 5:	29·419	February	4. 5. 23:	29·310		8. 21. 0	29·803		8. 3. 0	29·695
	7. 7. 25:	29·629		5. 15. 18	28·640		11. 8. 50	29·483		10. 18. 23	29·262
	9. 9. 10	29·914		7. 19. 20	29·196		16. 23. 0	29·983		12. 5. 59	29·211
	12. 23. 20	30·258		10. 13. 19	29·570		22. 12. 33	29·920		20. 16. 12	29·379
	18. 10. 4:	30·347		15. 14. 54:	29·620		24. 9. 21	30·003		22. 21. 0	29·846
	20. 16. 10:	30·397		19. 4. 27:	30·180		28. 19. 33:	29·806		26. 15. 54:	29·421
	22. 23. 30	30·360		22. 3. 47	30·240		30. 22. 35	29·973		29. 4. 55	29·703
	24. 22. 0	30·085		24. 5. 9	29·983	June	4. 11. 5	29·860	June	2. 18. 12	29·524
March	1. 23. 50	30·618		25. 17. 33:	29·805		10. 20. 29	30·150		6. 17. 33	29·541
	12. 19. 19:	29·810	March	9. 20. 10:	29·010		17. 10. 39:	30·011		14. 3. 50	29·659
	16. 16. 30:	29·879		14. 2. 50:	29·380		21. 20. 30:	30·023		19. 5. 20	29·820
	21. 0. 59	29·727		19. 4. 28	29·144		26. 21. 30:	30·411		23. 6. 30	29·800
	22. 18. 33:	29·663		21. 23. 15	29·500	July	2. 23. 45	29·885	July	2. 0. 0	29·525
	24. 21. 23:	29·621		23. 14. 27:	29·299		7. 11. 13	30·156		4. 5. 29	29·711
	29. 21. 10	29·652		27. 5. 49:	29·170		14. 9. 0	29·656		13. 18. 31	29·550

MAXIMA.			MINIMA.			MAXIMA.			MINIMA.		
Approximate Mean Solar Time, 1867.		Reading.	Approximate Mean Solar Time, 1867.		Reading.	Approximate Mean Solar Time, 1867.		Reading.	Approximate Mean Solar Time, 1867.		Reading.
	d h m	in.		d h m	in.		d h m	in.		d h m	in.
July	17. 8. 28	29·622	July	15. 9. 0	29·256	October	10. 18. 40:	30·081	October	9. 12. 58	29·382
	19. 22. 58	29·693		18. 14. 48	29·363		15. 22. 48	29·780		13. 3. 39	29·403
	22. 3. 47	29·575		21. 7. 28	29·505		17. 21. 40	29·660		16. 14. 30	29·581
	24. 21. 0	29·655		23. 6. 36	29·466		21. 23. 45	30·102		18. 19. 0	29·536
	27. 22. 55	29·965		25. 21. 19	29·420		25. 13. 37	30·067		23. 16. 30:	29·682
August	3. 22. 18	29·933	August	1. 6. 0	29·801		28. 7. 48	29·904		27. 1. 9	29·213
	10. 23. 30:	30·022		7. 21. 0	29·566		30. 9. 19	29·870		29. 1. 41	29·653
	18. 10. 30:	29·972		15. 13. 25	29·472	November	2. 20. 30	30·428	November	1. 1. 45	29·685
	23. 21. 0	29·953		19. 18. 43	29·708		8. 22. 20	30·469		4. 3. 47	30·080
	28. 21. 0:	30·041		26. 5. 55	29·802		18. 21. 0	30·197		14. 6. 50	29·423
September	2. 10. 21	29·985		31. 17. 6	29·655		21. 13. 45:	30·410		19. 2. 50	30·132
	5. 8. 0	29·733	September	4. 5. 0	29·662		23. 23. 0	30·500		22. 21. 0	30·314
	7. 12. 12:	29·925		6. 9. 9	29·605		27. 23. 30	30·245		26. 11. 20:	29·888
	10. 13. 20:	29·838		9. 12. 44	29·579	December	3. 22. 48	30·219	December	1. 7. 9	28·685
	13. 21. 0	29·907		11. 17. 0	29·593		7. 9. 0	30·050		5. 16. 20:	29·540
	17. 21. 0	30·211		14. 16. 0	29·690		9. 9. 5	30·158		8. 8. 30	29·788
	20. 11. 48	30·054		19. 16. 48	29·962		13. 8. 10	30·088		10. 8. 40:	29·857
	22. 8. 0	29·914		21. 20. 33	29·744		15. 13. 3	29·730		14. 15. 30	29·475
	24. 21. 0	30·332		23. 5. 27	29·754		20. 7. 30	29·900		17. 20. 22	29·346
October	1. 0. 0	30·306		30. 5. 30	29·844		22. 22. 5:	30·130		21. 19. 30:	29·647
	4. 0. 4	29·989	October	2. 9. 0	29·687		26. 22. 35	30·248		24. 3. 48	29·968
	8. 21. 57	29·760		7. 16. 15	29·358		29. 23. 36	30·220		29. 4. 0:	29·953

ABSOLUTE MAXIMA AND MINIMA READINGS OF THE BAROMETER for each Month.
[Extracted from the preceding Table.]

1867, MONTH.	Readings of the Barometer.		Range of Reading in each Month.
	Maxima.	Minima.	
	in.	in.	in.
January	30·078	28·535	1·543
February	30·397	28·640	1·757
March	30·618	29·010	1·608
April	30·328	28·895	1·433
May	30·003	29·211	0·792
June	30·411	29·524	0·887
July	30·156	29·256	0·900
August	30·041	29·472	0·569
September	30·332	29·579	0·753
October	30·306	29·213	1·093
November	30·500	29·423	1·077
December	30·248	28·685	1·563

The highest reading in the year was $30^{in}\cdot618$ in the month of March. The lowest reading in the year was $28^{in}\cdot535$ in the month of January.
The range of reading in the year was $2^{in}\cdot083$.

MONTHLY MEANS of RESULTS for METEOROLOGICAL ELEMENTS.

1867, Month.	Mean Reading of the Barometer.	Temperature of the Air. Highest.	Lowest.	Range in the Month.	Mean of all the Highest.	Mean of all the Lowest.	Mean Daily Range.	Mean Temperature.	Mean Temperature of Dew Point.	Mean Elastic Force of Vapour.	Mean Weight of Vapour in a Cubic Foot of Air.	Mean additional Weight required to saturate a Cubic Foot of Air.
	in.	°	°	°	°	°	°	°	°	in.	grs.	grs.
January ..	29·514	55·0	6·6	48·4	39·5	28·5	11·0	34·2	29·7	0·165	2·0	0·3
February..	29·911	57·1	32·9	24·2	50·7	39·5	11·2	44·7	40·0	0·247	2·8	0·5
March	29·624	59·1	24·5	34·6	44·5	33·0	11·5	37·7	32·5	0·184	2·1	0·5
April	29·629	64·8	30·5	34·3	58·7	42·3	16·4	49·0	43·0	0·277	3·1	0·9
May......	29·738	83·6	31·9	51·7	64·7	44·7	20·0	53·4	45·4	0·304	3·4	1·1
June	29·935	82·1	44·4	37·7	70·2	49·1	21·1	58·1	50·0	0·361	4·0	1·4
July......	29·730	81·5	43·3	38·2	71·1	50·8	20·3	59·4	51·7	0·384	4·3	1·4
August ...	29·829	89·0	40·9	48·1	73·3	53·4	19·9	62·0	55·5	0·441	4·9	1·3
September.	29·915	79·9	35·5	44·4	68·0	50·3	17·7	57·6	51·6	0·382	4·3	1·0
October...	29·758	64·8	30·8	34·0	57·2	42·0	15·2	48·7	45·2	0·302	3·4	0·5
November .	30·119	64·0	27·5	36·5	47·8	35·3	12·5	41·4	37·5	0·225	2·6	0·4
December .	29·854	55·2	21·2	34·0	42·2	32·1	10·1	37·5	34·4	0·199	2·3	0·3
Means	29·796	69·7	30·8	38·8	57·3	41·7	15·6	48·6	43·0	0·289	3·3	0·8

1867, Month.	Mean Degree of Humidity. (Sat. = 100.)	Mean Weight of a Cubic Foot of Air.	Mean Amount of Cloud. 0—10	Rain. Number of Rainy Days.	Amount collected on the Ground. Gauge read Daily.	Gauge read Monthly.	Wind. From Osler's Anemometer. Number of Days for Mean Direction of the Wind referred to different Points of Azimuth. N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Number of Calm Days and Days on which the Pressure of the Wind was less than ½ lb. on the Sq. Foot.	Mean Daily Pressure in lbs. on the Square Foot.	From Robinson's Anemometer. Mean Daily Horizontal Movement of Air in Miles.
		grs.			in.	in.											
January........	83	554	7·3	18	2·79	2·80	4	2	2	2	4	9	3	4	1	0·99	346
February.......	84	549	7·7	13	1·22	1·21	1	1	3	1	3	12	5	1	1	0·79	344
March	82	552	7·9	20	2·28	2·30	4	11	6	1	2	5	1	1	0	0·79	329
April..........	80	539	7·4	20	2·16	2·10	1	1	1	1	3	12	8	2	1	1·08	407
May............	74	537	6·6	12	2·34	2·20	3	5	6	3	5	6	1	1	1	0·33	234
June...........	75	535	6·1	7	1·77	1·51	9	4	1	1	1	8	3	3	0	0·27	232
July...........	76	530	7·0	12	5·81	5·30	2	3	3	3	3	11	4	2	0	0·43	250
August	80	528	6·2	11	2·64	2·50	1	1	2	2	3	19	2	1	0	0·13	199
September......	81	535	6·3	12	2·92	2·61	3	3	2	2	4	12	3	1	0	0·34	267
October........	88	542	6·5	21	2·14	1·93	3	2	1	3	5	12	3	2	0	0·32	255
November.......	87	557	6·9	5	0·42	0·42	7	4	1	1	1	7	3	4	2	0·33	239
December	89	556	7·9	12	1·97	1·70	5	3	1	1	3	6	5	4	3	0·70	297
Means	82	543	7·0	Sum 163	Sum 28·46	Sum 26·58	Sum 43	Sum 40	Sum 29	Sum 21	Sum 37	Sum 119	Sum 41	Sum 26	Sum 9	..	..

(I.)—Reading of a Thermometer whose bulb is sunk to the depth of 25·6 feet (24 French feet) below the surface of the soil, at Noon on every Day, except Sundays, Good Friday, and Christmas Day.

Days of the Month, 1867.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	52·42	51·84	51·02	50·29	49·69	49·48	49·75	50·35	S	51·95	52·59	S
2	52·43	51·84	50·98	50·28	49·68	S	49·74	50·37	51·26	51·98	52·56	52·61
3	52·36	S	S	50·21	49·67	49·47	49·76	50·42	51·26	51·99	S	52·63
4	52·33	51·76	50·95	50·22	49·66	49·47	49·78	S	51·30	52·02	52·58	52·60
5	52·36	51·75	50·90	50·22	S	49·47	49·80	50·47	51·31	52·03	52·58	52·63
6	S	51·70	50·87	50·18	49·67	49·48	49·82	50·47	51·33	S	52·58	52·61
7	52·38	51·68	50·83	S	49·62	49·50	S	50·50	51·36	52·09	52·61	52·60
8	52·36	51·67	50·78	50·15	49·63	49·48	49·84	50·55	S	52·11	52·62	S
9	52·35	51·64	50·78	50·15	49·63	S	49·87	50·58	51·43	52·13	52·64	52·57
10	52·30	S	S	50·10	49·62	49·53	49·90	50·63	51·43	52·15	S	52·58
11	52·28	51·56	50·73	50·15	49·58	49·55	49·92	S	51·43	52·17	52·63	52·61
12	52·24	51·57	50·71	50·05	S	49·56	49·92	50·70	51·50	52·21	52·63	52·62
13	S	51·51	50·66	50·05	49·52	49·53	49·94	50·73	51·52	S	52·64	52·59
14	52·17	51·48	50·72	S	49·53	49·53	S	50·76	51·56	52·23	52·65	52·52
15	52·18	51·46	50·68	50·00	49·53	49·54	49·93	50·78	S	52·28	52·68	S
16	52·16	51·46	50·62	49·97	49·52	S	49·99	50·78	51·58	52·32	52·64	52·58
17	52·12	S	S	49·96	49·49	49·56	50·03	50·81	51·62	52·34	S	52·58
18	52·09	51·35	50·54	49·97	49·52	49·57	50·04	S	51·64	52·36	52·64	52·53
19	52·10	51·34	50·55	Good Friday.	S	49·58	50·05	50·88	51·67	52·36	52·66	52·50
20	S	51·32	50·52	49·89	49·48	49·58	50·08	50·90	51·70	S	52·64	52·55
21	52·04	51·28	50·50	S	49·46	49·60	S	50·93	51·71	52·40	52·67	52·49
22	52·00	51·26	50·47	49·87	49·46	49·61	50·13	50·96	S	52·45	52·66	S
23	52·05	51·23	50·50	49·86	49·44	S	50·14	51·00	51·77	52·47	52·67	52·46
24	52·07	S	S	49·82	49·47	49·64	50·18	51·02	51·79	52·47	S	52·50
25	52·04	51·15	50·44	49·79	49·45	49·64	50·20	S	51·78	52·47	52·62	Christmas Day
26	51·97	51·10	50·43	49·78	S	49·67	50·18	51·05	51·82	52·50	52·66	52·58
27	S	51·07	50·40	49·76	49·46	49·69	50·23	51·06	51·87	S	52·64	52·40
28	51·97	51·04	50·34	S	49·46	49·70	S	51·11	51·91	52·47	52·63	52·40
29	51·92		50·35	49·74	49·48	49·70	50·28	51·14	S	52·48	52·65	S
30	51·91		50·33	49·71	49·50	S	50·32	51·16	51·95	52·54	52·66	52·34
31	51·87		S		49·47		50·35	51·26		52·57		52·30
Means.	52·17	51·46	50·64	50·01	49·54	49·57	50·01	50·79	51·58	52·28	52·63	52·54

(II.)—Reading of a Thermometer whose bulb is sunk to the depth of 12·8 feet (12 French feet) below the surface of the soil, at the same times.

Days of the Month, 1867.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	51·03	48·41	47·75	46·85	47·42	49·54	51·81	54·07	S	56·30	55·00	S
2	50·95	48·32	47·74	46·81	47·48	S	51·82	54·12	55·61	56·28	54·85	52·86
3	50·83	S	S	46·85	47·54	49·60	51·90	54·20	55·60	56·24	S	52·80
4	50·77	48·15	47·80	46·76	47·60	49·64	52·01	S	55·68	56·20	54·80	52·67
5	50·80	48·14	47·78	46·76	S	49·67	52·08	54·30	55·70	56·20	54·72	52·65
6	S	48·05	47·79	46·74	47·75	49·76	52·17	54·28	55·73	S	54·68	52·53
7	50·73	48·02	47·78	S	47·81	49·81	S	54·33	55·80	56·16	54·66	52·45
8	50·65	47·98	47·77	46·75	47·81	49·87	52·35	54·41	S	56·11	54·58	S
9	50·56	47·97	47·76	46·77	47·90	S	52·45	54·45	55·90	56·09	54·53	52·22
10	50·38	S	S	46·74	47·97	50·04	52·55	54·51	55·93	56·07	S	52·17
11	50·27	47·86	47·74	46·77	48·01	50·15	52·62	S	55·93	56·00	54·45	52·09
12	50·16	47·91	47·72	46·75	S	50·22	52·68	54·62	56·05	55·98	54·37	52·04

(II.)—**Reading** of a Thermometer whose bulb is sunk to the depth of 12·8 feet (12 French feet) below the surface of the soil, at the same times—*concluded.*

Days of the Month, 1867.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
13	S	47·83	47·65	46·81	48·07	50·25	52·76	54·67	56·07	S	54·33	51·90
14	49·92	47·80	47·65	S	48·17	50·30	S	54·72	56·12	55·94	54·28	51·79
15	49·91	47·81	47·60	46·87	48·27	50·40	52·90	54·59	S	55·88	54·25	S
16	49·83	47·81	47·60	46·87	48·35	S	53·00	54·65	56·14	55·84	54·12	51·56
17	49·72	S	S	46·75	48·44	50·57	53·10	54·71	56·17	55·77	S	51·51
18	49·63	47·74	47·50	46·98	48·58	50·69	53·10	S	56·24	55·70	53·96	51·31
19	49·60	47·76	47·47	Good Friday.	S	50·77	53·23	54·83	56·27	55·61	53·92	51·18
20	S	47·74	47·40	47·00	48·75	50·83	53·32	54·83	56·28	S	53·80	51·08
21	49·40	47·73	47·38	S	48·81	50·93	S	54·91	56·30	55·48	53·76	51·05
22	49·28	47·75	47·33	47·06	48·90	51·02	53·47	54·94	S	55·47	53·69	S
23	49·30	47·73	47·33	47·15	48·96	S	53·52	55·05	56·32	55·41	53·65	50·89
24	49·22	S	S	47·12	49·11	51·22	53·61	55·10	56·32	55·32	S	50·84
25	49·13	47·74	47·18	47·15	49·13	51·28	53·67	S	56·29	55·44	53·45	Christmas Day
26	48·97	47·70	47·14	47·20	S	51·37	53·65	55·16	56·29	55·24	53·40	50·57
27	S	47·75	47·15	47·24	49·28	51·51	53·82	55·18	56·35	S	53·32	50·50
28	48·85	47·74	47·00	S	49·35	51·55	S	55·37	56·38	55·04	53·20	50·50
29	48·69		46·95	47·35	49·43	51·61	53·93	55·35	S	55·04	53·18	S
30	48·60		46·91	47·42	49·52	S	54·03	55·38	56·47	55·07	53·11	50·30
31	48·51		S		49·50		54·10	55·51		55·00		50·20
Means.	49·84	47·89	47·50	46·94	48·44	50·50	52·95	54·75	56·08	55·74	54·08	51·59

(III.)—Reading of a Thermometer whose bulb is sunk to the depth of 6·4 feet (6 French feet) below the surface of the soil, at the same times.

Days of the Month, 1867.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	48·75	45·03	47·18	45·38	48·92	51·93	56·38	58·26	S	58·28	54·96	S
2	48·64	45·20	47·10	45·39	49·00	S	56·44	58·18	60·03	58·23	54·82	50·32
3	48·42	S	S	45·50	49·08	52·33	56·57	58·20	60·00	58·10	S	50·09
4	48·27	45·46	47·00	45·56	49·20	52·62	56·77	S	60·05	57·97	54·76	49·94
5	48·12	45·62	46·80	45·70	S	52·82	56·93	58·10	60·15	57·84	54·62	49·89
6	S	45·62	46·72	45·82	49·51	53·11	57·08	58·02	60·20	S	54·48	49·65
7	47·55	45·70	46·61	S	49·72	53·27	S	58·04	60·29	57·50	54·33	49·45
8	47·00	45·70	46·47	46·20	49·80	53·44	57·26	58·08	S	57·18	54·13	S
9	46·75	45·77	46·36	46·40	50·22	S	57·40	58·08	60·31	56·95	53·96	49·00
10	46·54	S	S	46·54	50·42	53·76	57·49	58·12	60·27	56·76	S	48·80
11	46·31	45·78	46·13	46·71	50·70	53·94	57·54	S	60·22	56·51	53·50	48·57
12	46·46	45·90	46·05	46·70	S	54·11	57·57	58·28	60·21	56·32	53·31	48·40
13	S	45·94	45·88	46·90	51·22	54·18	57·64	58·35	60·22	S	53·17	48·19
14	46·44	46·04	45·85	S	51·55	54·38	S	58·50	60·18	55·95	53·02	48·03
15	46·40	46·19	45·71	47·03	51·72	54·61	57·78	58·42	S	55·77	52·88	S
16	46·27	46·30	45·60	47·10	51·84	S	57·90	58·62	60·03	55·65	52·70	47·60
17	46·06	S	S	47·20	51·92	55·01	58·00	58·86	59·93	55·54	S	47·87
18	45·91	46·39	45·22	47·29	51·95	55·12	57·94	S	59·91	55·50	52·57	47·70
19	45·73	46·53	45·15	Good Friday.	S	55·16	58·00	59·20	59·80	55·47	52·52	47·90
20	S	46·65	44·88	47·46	51·86	55·15	58·04	59·22	59·67	S	52·34	48·04
21	45·39	46·71	44·78	S	51·80	55·18	S	59·39	59·52	55·40	52·28	48·05
22	45·18	46·85	44·68	47·81	51·86	55·24	58·10	59·49	S	55·43	52·10	S
23	45·10	46·94	44·60	48·03	51·86	S	58·07	59·60	59·36	55·40	51·95	47·91
24	44·87	S	S	48·10	52·00	55·40	58·16	59·68	59·23	55·27	S	47·81
25	44·75	47·09	44·38	48·25	51·89	55·47	58·21	S	59·08	55·23	51·50	Christmas Day
26	44·58	47·10	44·46	48·36	S	55·61	58·72	59·73	58·99	55·31	51·34	47·58

(III.)—Reading of a Thermometer whose bulb is sunk to the depth of 6·4 feet (6 French feet) below the surface of the soil, at the same times—*concluded.*

Days of the Month, 1867.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
27	S	47·15	44·62	48·52	51·72	55·80	58·96	59·78	58·92	S	51·18	47·50
28	44·60	47·16	44·76	S	51·62	55·90	S	59·88	58·81	55·21	51·00	47·47
29	44·64		45·00	48·77	51·67	56·00	58·26	59·99	S	55·22	50·90	S
30	44·79		45·14	48·85	51·74	S	58·48	59·98	58·48	55·17	50·75	47·12
31	44·91		S		51·80		58·42	60·03		55·07		47·04
Means .	46·24	46·20	45·66	47·02	50·98	54·38	57·71	58·89	59·75	56·23	52·89	48·40

(IV.)—Reading of a Thermometer whose bulb is sunk to the depth of 3·2 feet (3 French feet) below the surface of the soil, at the same times.

Days of the Month, 1867.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	44·81	43·18	44·98	43·60	49·37	54·04	59·87	59·17	S	57·42	53·28	S
2	44·09	43·23	44·50	43·58	49·54	S	60·10	59·27	62·60	57·24	53·40	45·67
3	43·32	S	S	44·20	49·66	55·39	60·43	59·19	62·71	56·85	S	45·64
4	42·72	43·39	43·60	44·65	50·00	55·87	60·47	S	62·90	56·37	52·38	45·00
5	42·37	43·30	43·41	45·14	S	55·75	60·42	59·00	62·88	55·72	51·82	44·55
6	S	43·18	43·41	45·55	51·10	55·78	60·51	59·05	62·71	S	51·52	44·10
7	41·34	43·40	43·25	S	51·86	55·83	S	59·18	62·43	54·51	51·07	43·84
8	41·39	43·16	42·90	46·30	52·67	56·03	60·38	59·13	S	54·24	50·53	S
9	42·20	43·36	42·57	46·50	53·45	S	60·45	59·33	61·90	53·95	50·08	43·12
10	42·33	S	S	46·41	54·07	56·32	60·48	59·71	61·78	53·45	S	42·82
11	42·57	43·95	42·41	46·31	54·55	56·77	60·46	S	61·71	53·15	49·65	42·50
12	42·40	44·25	42·50	46·27	S	57·52	60·58	60·31	61·57	52·84	49·60	42·55
13	S	44·20	42·36	46·20	54·77	58·06	60·80	60·74	61·49	S	49·45	42·95
14	41·37	44·58	41·90	S	54·37	58·43	S	61·35	61·45	52·73	49·35	42·16
15	40·99	44·78	41·46	46·42	53·84	58·35	60·79	61·69	S	52·80	49·30	S
16	40·52	44·36	41·15	46·54	53·23	S	60·64	62·22	60·87	53·23	49·55	43·95
17	40·18	S	S	46·71	52·74	57·60	60·40	62·21	60·39	53·77	S	44·69
18	39·95	45·40	40·67	47·08	52·52	57·24	60·08	S	60·00	54·03	49·43	45·07
19	39·72	45·53	40·42	Good Friday.	S	57·02	60·11	62·11	59·71	54·09	48·96	45·08
20	S	45·60	40·18	48·00	52·57	57·23	60·12	62·20	59·59	S	48·60	44·65
21	39·32	45·75	40·22	S	52·76	57·30	S	62·50	59·52	53·58	48·21	44·04
22	39·16	45·90	40·26	48·46	52·82	57·45	60·32	62·50	S	53·49	47·80	S
23	..	45·97	40·20	48·41	52·77	S	60·51	62·64	59·20	53·78	47·46	43·70
24	..	S	S	48·63	51·76	57·95	60·80	62·50	59·02	54·12	S	43·62
25	39·60	45·83	41·65	48·98	51·15	58·34	60·87	S	58·66	54·29	47·05	Christmas Day
26	40·27	45·78	42·58	49·13	S	58·54	61·10	62·70	58·06	54·40	46·82	43·40
27	S	45·70	43·19	49·04	51·12	58·93	60·31	62·77	57·63	S	46·70	43·18
28	41·41	45·36	43·54	S	51·70	59·17	S	62·49	57·51	53·85	46·50	43·01
29	42·20		43·70	49·09	52·30	59·48	59·54	62·15	S	53·19	46·05	S
30	42·53		43·66	49·25	52·96	S	59·44	61·98	57·55	52·83	45·56	42·48
31	43·06		S		53·51		59·36	62·12		53·00		42·23
Means .	41·59	44·55	42·33	46·82	52·34	57·22	60·35	61·12	60·55	54·18	49·24	43·76

At temperatures below 39°·70 the fluid of this thermometer descends below the scale; the readings were below this value on January 23 and 24. The readings less than this value which appear in the above table are estimated readings only, and therefore liable to some uncertainty.

(V.)—Reading of a Thermometer whose bulb is sunk to the depth of 1 inch below the surface of the soil, within the case which covers the tops of the deep-sunk Thermometers, at the same times.

Days of the Month, 1867.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	36·0	45·1	41·2	43·8	51·1	61·8	67·7	59·7	S	55·1	56·8	S
2	35·9	46·6	39·5	50·0	53·8	S	66·7	58·2	67·1	54·0	49·5	37·8
3	31·4	S	S	49·0	55·6	61·2	63·8	58·2	66·1	51·3	S	38·3
4	29·0	44·9	41·2	50·4	57·2	59·4	63·8	S	65·9	49·1	48·0	37·6
5	31·2	43·2	42·0	49·8	S	57·5	64·4	61·6	64·6	48·4	47·6	39·0
6	S	45·6	40·4	50·4	61·0	59·5	62·4	60·1	63·0	S	45·2	38·5
7	44·8	41·9	38·3	S	65·0	60·4	S	59·7	63·0	52·5	45·6	37·0
8	46·8	48·1	38·5	49·4	62·4	58·2	63·3	62·1	S	48·8	44·6	S
9	43·2	46·1	39·3	48·9	61·5	S	63·1	63·8	63·9	47·3	45·7	34·3
10	42·4	S	S	47·8	64·7	62·7	63·6	63·0	63·2	49·5	S	36·8
11	39·0	44·7	40·8	47·9	62·0	65·0	64·3	S	63·1	46·7	48·0	40·4
12	35·2	47·5	38·4	46·3	S	68·5	66·4	67·2	63·9	50·2	44·5	44·1
13	S	47·2	36·4	47·5	53·3	64·0	63·2	68·6	62·0	S	46·3	42·1
14	30·6	46·6	37·5	S	52·3	61·5	S	70·6	61·3	53·0	48·1	43·5
15	33·5	46·0	37·3	49·2	50·8	58·0	63·2	66·6	S	55·6	51·3	S
16	34·8	49·1	36·2	47·9	51·9	S	62·2	64·4	58·4	56·2	48·7	49·0
17	33·5	S	S	50·0	51·5	58·7	61·5	64·7	57·3	56·0	S	48·6
18	33·2	46·6	36·2	53·0	52·9	59·7	62·2	S	59·7	55·2	43·3	42·5
19	33·5	50·7	37·1	Good Friday.	S	62·9	61·2	66·7	59·8	53·0	45·0	40·5
20	S	48·0	37·5	54·6	57·6	61·2	62·3	66·5	58·9	S	42·3	35·9
21	33·1	48·0	38·0	S	53·1	59·2	S	66·2	57·9	52·7	42·5	39·2
22	31·2	48·0	37·2	50·0	49·2	58·6	60·4	64·1	S	56·8	41·6	S
23	39·8	47·3	44·9	54·0	47·1	S	64·4	65·3	57·2	57·0	44·0	39·0
24	45·2	S	S	54·0	48·9	62·8	63·8	66·1	56·8	56·3	S	43·3
25	43·9	45·1	47·7	51·0	49·8	62·3	63·0	S	53·4	54·2	41·6	Christmas Day
26	41·3	45·2	48·9	49·6	S	61·9	58·9	66·3	52·1	54·8	43·6	38·2
27	S	43·5	47·5	51·4	56·0	62·8	56·8	61·8	56·3	S	41·7	38·3
28	48·2	42·2	45·5	S	56·5	64·1	S	62·1	57·8	46·6	39·0	38·5
29	45·3		45·0	50·2	60·5	62·0	58·4	65·1	S	51·7	39·0	S
30	47·4		45·3	52·0	63·6	S	58·7	64·4	58·4	53·7	41·0	38·0
31	43·5		S		59·1		60·1	66·8		54·9		36·0
Means.	38·3	46·1	40·7	49·9	55·9	61·4	62·6	64·1	60·5	52·6	45·2	39·9

(VI.)—Reading of a Thermometer within the case covering the deep-sunk Thermometers, whose bulb is placed on a level with their scales, at the same times.

Days of the Month, 1867.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	30·9	47·8	41·5	53·1	52·0	72·8	77·0	60·1	S	57·6	63·0	S
2	30·8	49·0	37·4	57·6	61·3	S	70·5	56·1	75·2	55·9	52·0	31·0
3	25·0	S	S	55·5	64·8	62·0	68·0	63·5	69·0	51·5	S	36·8
4	20·0	48·0	42·2	55·0	66·4	63·0	67·2	S	69·3	50·4	49·8	34·0
5	28·5	45·4	42·4	56·3	S	59·6	68·4	70·0	67·0	52·0	49·0	39·2
6	S	48·4	38·9	55·3	77·4	63·0	68·5	58·9	66·0	S	46·4	36·7
7	51·8	42·5	38·2	S	81·6	65·0	S	61·1	68·0	55·1	48·7	34·9
8	48·1	52·3	38·4	50·1	74·1	62·6	70·1	67·3	S	49·3	48·0	S
9	44·5	51·1	41·1	52·5	72·2	S	70·8	70·1	70·4	48·9	44·8	29·8
10	41·0	S	S	52·6	75·8	73·2	72·2	71·7	65·6	52·2	S	35·8
11	37·0	44·4	39·6	51·2	66·4	75·3	72·9	S	62·2	46·4	50·2	44·5
12	32·5	51·5	36·8	50·7	S	81·7	72·7	79·5	69·4	52·2	43·3	48·0
13	S	47·4	33·1	49·0	50·5	66·0	66·2	82·0	65·9	S	46·7	44·1
14	23·7	45·9	35·0	S	50·6	62·6	S	84·7	66·2	60·3	53·0	45·6
15	30·9	51·9	39·8	55·5	50·0	58·2	61·8	65·0	S	61·2	57·1	S

(VI.)—Reading of a Thermometer within the case covering the deep-sunk Thermometers, whose bulb is placed on a level with their scales, at the same times—*concluded.*

Days of the Month, 1867.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
16	34·0	55·2	38·5	49·0	54·0	*S*	65·6	66·2	61·0	60·9	46·4	52·0
17	30·5	*S*	*S*	53·5	55·4	60·6	67·4	69·3	58·9	60·8	*S*	51·4
18	29·3	45·6	33·8	61·5	62·5	67·3	62·5	*S*	64·1	59·8	42·7	40·0
19	32·5	47·6	35·0	Good Friday.	*S*	69·0	63·3	76·5	64·7	56·9	44·1	38·3
20	*S*	51·8	37·2	56·3	64·0	66·3	68·5	69·5	62·4	*S*	40·0	28·7
21	29·0	49·8	40·5	*S*	49·0	60·2	*S*	72·1	60·8	56·7	41·4	37·6
22	24·7	48·6	37·6	55·4	48·6	64·0	69·7	72·4	*S*	62·0	41·2	*S*
23	47·3	49·2	52·0	62·1	49·4	*S*	67·6	73·1	60·4	62·2	44·8	41·0
24	52·1	*S*	*S*	59·1	53·3	67·3	70·6	73·7	58·7	59·4	*S*	45·4
25	46·0	48·2	51·8	50·5	55·0	70·3	68·7	*S*	55·0	54·6	39·0	Christmas Day
26	41·0	42·4	55·4	50·8	*S*	68·1	59·2	68·9	52·5	60·5	45·0	33·3
27	*S*	40·5	51·8	56·1	59·1	74·3	57·0	63·3	61·1	*S*	41·0	36·6
28	50·8	42·3	50·0	*S*	62·2	69·9	*S*	65·2	64·7	46·1	39·5	35·3
29	48·0		47·6	56·3	72·2	70·3	62·0	71·5	*S*	56·0	41·3	*S*
30	50·0		46·8	55·5	76·7	*S*	64·1	69·5	65·7	56·2	41·2	35·7
31	44·5		*S*		67·0		68·3	75·7		58·1		33·2
Means.	37·2	47·8	41·6	54·4	61·9	66·9	67·4	69·5	64·2	55·7	46·1	38·8

WEEKLY MEANS of READINGS of THERMOMETERS.

1867. Period.	Thermometers sunk in the ground. Bulb 24 French Feet deep.	Bulb 12 French Feet deep.	Bulb 6 French Feet deep.	Bulb 3 French Feet deep.	Bulb 1 Inch deep.	Thermometer inclosed in the box which covers the scales of the deep-sunk Thermometers, and placed on a level with their scales.
d d	°	°	°	°	°	°
January 1 to January 7	52·38	50·85	48·29	43·11	34·7	31·2
8 to 14	52·28	50·32	46·58	42·04	39·5	37·8
15 to 21	52·11	49·68	45·96	40·11	33·6	31·0
22 to 28	52·02	49·12	44·85	(40·11)	41·6	43·6
29 to February 4	51·86	48·45	45·00	42·93	45·5	47·9
February 5 to 11	51·67	48·00	45·70	43·39	44·9	47·3
12 to 18	51·47	47·82	46·13	44·59	47·2	49·6
19 to 25	51·26	47·74	46·79	45·76	47·8	49·2
26 to March 4	51·03	47·75	47·12	44·99	42·1	41·1
March 5 to 11	50·82	47·77	46·51	42·99	39·9	39·8
12 to 18	50·65	47·62	45·72	41·67	37·0	36·2
19 to 25	50·50	47·35	44·74	40·49	40·4	42·3
26 to April 1	50·36	47·00	44·89	43·38	46·0	50·8
April 2 to 8	50·21	46·78	45·70	44·90	49·8	55·0
9 to 15	50·08	46·78	46·71	46·35	47·9	51·9
16 to 22	49·93	46·93	47·37	47·36	51·1	55·1
23 to 29	49·79	47·20	48·34	48·88	51·7	55·8
30 to May 6	49·68	47·54	49·09	49·82	55·1	62·9
May 7 to 13	49·60	47·93	50·35	53·56	61·5	70·1
14 to 20	49·51	48·43	51·81	53·21	52·8	56·1
21 to 27	49·46	49·03	51·85	52·06	50·7	52·4
28 to June 3	49·48	49·49	51·85	53·32	60·5	68·8
June 4 to 10	49·49	49·80	53·17	55·93	59·6	64·4
11 to 17	49·54	50·31	54·37	57·79	62·6	67·4
18 to 24	49·60	50·91	55·21	57·36	60·7	65·7
25 to July 1	49·69	51·52	55·86	59·06	63·5	71·6
July 2 to 8	49·79	52·06	56·84	60·38	64·1	68·8
9 to 15	49·91	52·66	57·57	60·59	64·0	69·4
16 to 22	50·05	53·20	58·00	60·28	61·6	66·2
23 to 29	50·20	53·70	58·40	60·52	60·9	64·2
30 to August 5	50·38	54·14	58·27	59·24	59·4	63·7
August 6 to 12	50·57	54·43	58·10	59·45	62·6	68·1
13 to 19	50·79	54·69	58·66	61·72	66·9	73·9
20 to 26	50·98	55·00	59·52	62·51	65·8	71·6
27 to September 2	51·16	55·40	59·95	62·35	64·5	70·1
September 3 to 9	51·33	55·74	60·17	62·59	64·4	68·3
10 to 16	51·50	56·04	60·19	61·48	62·1	65·1
17 to 23	51·68	56·26	59·70	59·73	58·5	61·9
24 to 30	51·85	56·35	58·92	58·07	55·8	59·6
October 1 to October 7	52·01	56·23	57·99	56·35	51·7	53·7
8 to 14	52·17	56·03	56·61	53·39	49·3	51·6
15 to 21	52·34	55·71	55·55	53·58	54·8	59·4
22 to 28	52·47	55·32	55·31	53·99	54·3	57·5
29 to November 4	52·55	54·96	55·00	53·01	52·4	55·8
November 5 to 11	52·61	54·60	54·17	50·78	46·1	47·8
12 to 18	52·65	54·22	52·94	49·45	47·0	48·2
19 to 25	52·65	53·71	52·12	48·01	42·8	41·8
26 to December 2	52·64	53·18	50·91	46·22	40·4	39·8
December 3 to 9	52·61	52·55	49·67	44·37	37·5	35·2
10 to 16	52·58	51·93	48·27	42·82	42·7	45·0
17 to 23	52·52	51·17	47·91	44·54	41·0	39·5
24 to 31	52·42	50·49	47·42	42·99	38·7	36·6

ABSTRACT OF THE CHANGES OF THE DIRECTION OF THE WIND, AS DERIVED FROM OSLER'S ANEMOMETER.

By *direct* motion, in the following statements, is meant that the change of the direction of the wind was in the order N., E., S., W., N., &c.; by *retrograde* is meant in the order N., W., S., E., N., &c.

1866. Dec. $31^{d}. 12^{h}$. The direction of the wind was W.S.W.
1867. Jan. 31. 12. ,, ,, S.S.E., which implies a retrograde motion of 90°.
On Jan. 2. 1. 45^{m}, the trace was shifted to the next set of lines upwards; on Jan. $6^{d}. 9^{h}. 20^{m}$, $26^{d}. 9^{h}. 15^{m}$, the trace was shifted to the next set of lines downwards, implying retrograde motion of 360°, and direct motion of 720°.
Therefore the whole excess of direct motion in the month of January was 270°.

1867. Jan. $31^{d}. 12^{h}$. The direction of the wind was S.S.E.
Feb. 28. 12. ,, ,, N.E., which implies a direct motion of $247\frac{1}{2}$°.
On Feb. 13. 8. 45^{m}, the trace was shifted to the next set of lines upwards; on Feb. $27^{d}. 3^{h}. 30^{m}$, to the second set of lines upwards; on Feb. $15^{d}. 8^{h}\ 45^{m}$, $16^{d}. 22^{h}$, $19^{d}. 22^{h}$, the trace was shifted to the next set of lines downwards, implying retrograde motion of 1080°, and direct motion of 1080°.
Therefore the whole excess of direct motion in the month of February was $247\frac{1}{2}$°.

1867. Feb. $28^{d}. 12^{h}$. The direction of the wind was N.E.
March 31. 12. ,, ,, N., which implies a retrograde motion of 45°.
On March 22. 2. 40^{m}, $23^{d}. 22^{h}$., the trace was shifted to the next set of lines downwards, implying direct motion of 720°.
Therefore the whole excess of direct motion in the month of March was 675°.

1867. March $31^{d}. 12^{h}$. The direction of the wind was N.
April 30. 12. ,, ,, S.W., which implies a retrograde motion of 135°.
On April 17. 22, $27^{d}. 3^{h}$, $29^{d}. 22^{h}$, the trace was shifted to the next set of lines downwards; on April $27^{d}. 22^{h}$, the trace was shifted to the next set of lines upwards, implying direct motion of 1080°, and retrograde motion of 360°.
Therefore the whole excess of direct motion in the month of April was 585°.

1867. April $30^{d}. 12^{h}$. The direction of the wind was S.W.
May 31. 12. ,, ,, S.W., which implies no change.
On May 1. 22, $2^{d}. 9^{h}. 30^{m}$, $10^{d}. 8^{h}. 30^{m}$, $14^{d}. 2^{h}. 45^{m}$, $18^{d}. 2^{h}. 40^{m}$, $19^{d}. 22^{h}$, $22^{d}. 2^{h}. 40^{m}$, $24^{d}. 2^{h}. 45^{m}$, $25^{d}. 22^{h}$, the trace was shifted to the next set of lines downwards, and on May $8^{d}. 2^{h}. 40^{m}$, $17^{d}. 2^{h}. 40^{m}$, to the second set of lines downwards; on May $3^{d}. 22^{h}$, $5^{d}. 22^{h}$, $7^{d}. 1^{h}. 40^{m}$, $9^{d}. 2^{h}. 45^{m}$, $11^{d}. 22^{h}$, $16^{d}. 2^{h}. 40^{m}$, $25^{d}. 2^{h}. 40^{m}$, the trace was shifted to the next set of lines upwards, implying direct motion of 4680°, and retrograde motion of 2520°.
Therefore the whole excess of direct motion in the month of May was 2160°.

1867. May $31^{d}. 12^{h}$. The direction of the wind was S.W.
June 30. 12. ,, ,, N.E., which implies a direct motion of 180°.
On June 2. 22, $18^{d}. 2^{h}. 40^{m}$, the trace was shifted to the next set of lines upwards; on June $10^{d}. 22^{h}$, $11^{d}. 2^{h}. 40^{m}$, $11^{d}. 22^{h}$, $17^{d}. 8^{h}. 30^{m}$, $27^{d}. 9^{h}. 20^{m}$, $29^{d}. 9^{h}. 10^{m}$, the trace was shifted to the next set of lines downwards, and on June $22^{d}. 2^{h}. 40^{m}$, $30^{d}. 7^{h}. 30^{m}$, to the second set of lines downwards, implying retrograde motion of 720°, and direct motion of 3600°.
Therefore the whole excess of direct motion in the month of June was 3060°.

1867. June $30^{d}. 12^{h}$. The direction of the wind was N.E.
July 31. 12. ,, ,, S.E., which implies a retrograde motion of 270°.
On July 25. 2. 40^{m}, the trace was shifted to the third set of lines downwards; on July $1^{d}. 0^{h}. 30^{m}$, to the second set of lines downwards, and on July $0^{d}. 23^{h}. 30^{m}$, $3^{d}. 2^{h}. 40^{m}$, $9^{d}. 22^{h}$, $10^{d}. 9^{h}. 20^{m}$, $10^{d}. 20^{h}. 45^{m}$, $12^{d}. 22^{h}$, $25^{d}. 8^{h}. 20^{m}$, $29^{d}. 22^{h}$, $30^{d}. 9^{h}$, $31^{d}. 2^{h}. 40^{m}$, to the next set of lines downwards; on July $30^{d}. 22^{h}. 20^{m}$, the trace was shifted to the second set of lines upwards; and on July $5^{d}. 2^{h}. 40^{m}$, $9^{d}. 8^{h}. 30^{m}$, $10^{d}. 2^{h}. 40^{m}$, $10^{d}. 23^{h}. 30^{m}$, $11^{d}. 2^{h}. 45^{m}$, $25^{d}. 22^{h}$, $28^{d}. 22^{h}$, to the next set of lines upwards, implying direct motion of 5400°, and retrograde motion of 3240°.
Therefore the whole excess of direct motion in the month of July was 1890°.

1867. July $31^{d}. 12^{h}$. The direction of the wind was S.E.
Aug. 31. 12. ,, ,, E., which implies a direct motion of 315°.
On Aug. 4. 8. 40^{m}, $11^{d}. 22^{h}$, $13^{d}. 22^{h}$, $14^{d}. 22^{h}$, $19^{d}. 18^{h}. 45^{m}$, $26^{d}. 8^{h}. 30^{m}$, the trace was shifted to the next set of lines downwards; on Aug. $0^{d}. 22^{h}$, $10^{d}. 22^{h}$, $12^{d}. 22^{h}$, $13^{d}. 9^{h}$, $30^{d}. 22^{h}$, the trace was shifted to the next set of lines upwards, implying direct motion of 2160°, and retrograde motion of 1800°.
Therefore the whole excess of direct motion in the month of August was 675°.

1867. Aug. $31^{d}. 12^{h}$. The direction of the wind was E.
Sept. 30. 12. ,, ,, W.N.W., which implies a retrograde motion of 157½°.
On Sept. 1. 22, $19^{d}. 22^{h}$, the trace was shifted to the next set of lines upwards; on Sept. $0^{d}. 22^{h}$, $3^{d}. 22^{h}$, the trace was shifted to the next set of lines downwards, implying retrograde motion of 720°, and direct motion of 720°.
Therefore the whole excess of retrograde motion in the month of September was 157½°.

1867. Sept. $30^{d}. 12^{h}$. The direction of the wind was W.N.W.
Oct. 31. 12. ,, ,, S.W., which implies a retrograde motion of 67½°.
On Oct. 9. 22, $11^{d}. 22^{h}$, $24^{d}. 22^{h}$, the trace was shifted to the next set of lines upwards; on Oct. $15^{d}. 2^{h}. 40^{m}$, $25^{d}. 8^{h}. 30^{m}$, the trace was shifted to the next set of lines downwards, implying retrograde motion of 1080°, and direct motion of 720°.
Therefore the whole excess of retrograde motion in the month of October was 427½°.

1867. Oct. $31^{d}. 12^{h}$. The direction of the wind was S.W.
Nov. 30. 12. ,, ,, S.W., which implies no change.
On Nov. 2. 9. 10^{m}, $6^{d}. 22^{h}$, the trace was shifted to the next set of lines downwards; on Nov. $15^{d}. 2^{h}. 40^{m}$, $16^{d}. 2^{h}. 50^{m}$, $17^{d}. 7^{h}. 40^{m}$, the trace was shifted to the next set of lines upwards, implying direct motion of 720°, and retrograde motion of 1080°.
Therefore the whole excess of retrograde motion in the month of November was 360°.

1867. Nov. $30^{d}. 12^{h}$. The direction of the wind was S.W.
Dec. 31. 12. ,, ,, N.N.E., which implies a direct motion of 157½°.
On Dec. 8. 9. 15^{m}, $24^{d}. 9^{h}. 30^{m}$, $26^{d}. 22^{h}$., the trace was shifted to the next set of lines upwards; on Dec. $15^{d}. 7^{h}. 30^{m}$, $19^{d}. 22^{h}$, the trace was shifted to the next set of lines downwards, implying retrograde motion of 1080°, and direct motion of 720°.
Therefore the whole excess of retrograde motion in the month of December was 202½°.

The whole excess of direct motion to the end of the year was 8415°.

The revolution-counter which is attached to the vertical spindle of the vane, whose readings increase with change of direction of the wind in the order N., E., S., W., &c., or in *direct* motion, and decrease with change of direction in the order N., W., S., E., &c., or in *retrograde* motion, gave the following readings:—

	revs.
On 1866, December $31^{d}. 12^{h}$	59·70
On 1867, December $31^{d}. 12^{h}$	83·00

Implying an excess of direct motion, during the year, of 23·30 revolutions, or 8388°.

AMOUNT OF RAIN COLLECTED IN EACH MONTH OF THE YEAR 1867.

1867, MONTH.	Monthly Amount of Rain collected in each Gauge.							
	Self-registering Gauge of Osler's Anemometer.	Second Gauge at Osler's Anemometer.	On the Roof of the Octagon Room.	On the Roof of the Library.	On the Roof of the Photographic Thermometer Shed.	Crosley's.	Cylinder partly sunk in the Ground read daily.	Cylinder partly sunk in the Ground read Monthly.
	in.	in.	in.	in.	in.	in.	in.	in.
January	1·33	1·37	1·70	1·54	2·34	2·40	2·79	2·80
February	0·72	0·69	0·94	0·86	1·14	1·20	1·22	1·21
March	1·41	1·46	1·63	2·17	2·16	2·08	2·28	2·30
April	0·99	0·90	1·51	1·34	1·98	2·11	2·16	2·10
May	1·78	1·79	2·03	2·06	2·16	2·09	2·34	2·20
June	1·20	1·23	1·42	1·45	1·60	1·62	1·77	1·51
July	3·39	3·45	4·35	4·58	5·28	5·24	5·81	5·30
August	1·98	1·94	2·20	2·04	2·40	2·41	2·64	2·50
September	2·09	2·15	2·38	2·26	2·57	2·55	2·92	2·61
October	1·21	1·19	1·46	1·47	1·68	1·69	2·14	1·93
November	0·21	0·23	0·29	0·23	0·41	0·40	0·42	0·42
December	0·72	0·75	1·13	1·09	1·43	1·42	1·97	1·70
Sums	17·03	17·15	21·04	21·09	25·15	25·21	28·46	26·58

The heights of the receiving surfaces are as follows:

	Above the Mean Level of the Sea. Ft.	In.	Above the Ground. Ft.	In.
The Two Gauges at Osler's Anemometer	205	6	50	8
Gauge on the Roof of the Octagon Room	193	2½	38	4½
Gauge on the Roof of the Library	177	2	22	4
Gauge on the Roof of the Photographic Thermometer Shed	164	10	10	0
Crosley's Gauge	156	6	1	8
The Two Cylinder Gauges partly sunk in the Ground	155	3	0	5

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

OF

LUMINOUS METEORS.

1867.

Month and Day, 1867.		Greenwich Mean Solar Time.	Observer.	Apparent Size of Meteor in Star-Magnitudes.	Colour of Meteor.	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	Number for Reference.
		h m s						°	
February	4	8. 33. 0	H.	1	Bluish	> 1	Faint	15	1
"		10. 52. 0	N.	4	Blue	0·5	None	5	2
"		10. 53. 0	N.	2	Blue	0·9	Faint	6	3
"		11. 3. 30	N.	3	Blue	0·7	. . .	5	4
March	27	8. 53. 0	N.	1	Blue	1	. . .	12	5
March	29	8. 0. 0	H., J.	Venus	Yellow	7	Slight	15	6
"		11. 9. 0	N.	> 1	Bluish-white	> 1	Fine	15	7
March	31	10. 49. 0	N.	1	Blue	0·8	Train	..	8
April	2	10. 56. 0	N.	2	Blue	0·7	Train	10	9
June	14	12. 0. 0	N.	> Jupiter	Reddish-yellow	> 2	Dusky red	25	10
August	9	9. 10. 0	G.	Sma	Yellow	. . .	. . .	..	11
"		10. 55. 0	N.	Jupiter	Yellow	1	. . .	15	12
August	10	9. 37. 37	W.	3	Bluish-white	0·5	None	12	13
"		9. 44. 23	W.	3	Green	0·5	. . .	15	14
"		9. 47. 57	G.	3	Bluish-white	1	. . .	5	15
"		9. 49. 32	W.	3	Green	1	. . .	10	16
"		9. 56. 57	G.	3	Green	0·5	. . .	20	17
"		9. 58. 7	G.	2	Green	1	Train	20	18
"		10. 1. 38	G.	2	Green	0·5	. . .	30	19
"		10. 4. 49	W.	2	Bluish-white	0·5	. . .	10	20
"		10. 8. 44	G., W.	2	Bluish-white	0·5	. . .	10	21
"		10. 10. 35	G.	2	Bluish-white	1	. . .	25	22
"		10. 15. 51	G., W.	3	Bluish-white	0·5	. . .	10	23
"		10. 20. 24	G., W.	1	Bluish-white	1	. . .	20	24
"		10. 27. 14	G., H., W.	2	Bluish-white	1	. . .	20	25
"		10. 42. 13	N.	2	Blue	. . .	Train	15	26
"		10. 43. 7	W.	1	Bluish-white	1	Fine	30	27
"		10. 47. 45	W.	1	Bluish-white	1	Fine	10	28
"		10. 54. 46	W.	3	Bluish-white	0·5	None	..	29
"		11. 9. 17	W.	3	Bluish-white	1	None	8	30
"		11. 20. 14	W.	3	Bluish-white	. . .	None	10	31
"		11. 24. 4	H., W.	2	Bluish-white	0·5	None	5	32
"		11. 30. 17	N., W.	3	Blue	0·5	. . .	3	33
"		11. 39. 50	N., W.	1	Bluish-white	1	Fine	..	34
"		11. 42. 19	H., W.	1	Bluish-white	. . .	Fine	20	35
"		12. 7. 24	N.	3	Blue	0·5	None	..	36
"		12. 10. 16	W.	2	Bluish-white	0·5	None	15	37
"		12. 10. 32	W.	1	Bluish-white	1	Fine	8	38
"		12. 29. 32	N., H.	> 1	Blue	1	Fine	..	39
"		12. 38. 15	N., H., W.	1	Blue	1	Fine	15	40
"		12. 43. 1	W.	1	Bluish-white	1	Train	20	41
"		12. 51. 15	W.	1	Bluish-white	1	Fine	..	42
"		12. 51. 58	N.	2	Blue	0·7	Slight	20	43
"		12. 54. 16	N.	2	Blue	0·5	. . .	2	44
"		12. 55. 45	N., H., W.	1	Bluish-white	0·5	None	..	45
"		13. 1. 32	N. H.	3	Blue	0·6	None	..	46
"		13. 9. 26	N.	2	Bluish-white	. . .	Slight	..	47
"		13. 13. 47	N.	1	Bluish-white	1	Fine, 1 s.	20	48
"		13. 13. 49	N., H.	1	Bluish-white	1	. . .	..	49
"		13. 19. 9	N., H.	2	Blue	0·7	Slight	12	50

Number for Reference.	Path of Meteor through the Stars.
1	From direction of γ Tauri towards ι Orionis.
2	Passed across ϵ Leonis, from direction of r Lyncis.
3	From a point nearly midway between β Leonis and Coma Berenices, passed across ρ Virginis.
4	Directed from ζ Ursæ Majoris, passed midway between λ and μ Ursæ Majoris.
5	Passed across ϵ Virginis.
6	From direction of β Leonis, fell with slight inclination from vertical towards horizon.
7	Directed from ζ Leonis, passed across ϵ Hydræ. Sparks seen at end of path.
8	From direction of r Lyncis, disappeared 10° above Procyon.
9	From r Lyncis to a point just above α Geminorum.
10	Directed from 12 Canum Venaticorum, disappeared near ν Ursæ Majoris.
11	Started midway between α Cygni and α Aquilæ, passed across α Aquilæ.
12	Directed from α Trianguli, commenced near Musca, and fell with inclination of 5° from perpendicular to left.
13	From ϵ Cephei, passed almost directly across α Cygni.
14	Passed about 2° above α Andromedæ, on a line parallel to joining line of δ and ϵ Cassiopeiæ.
15	Passed a little below β Andromedæ.
16	From β Cassiopeiæ towards γ Cassiopeiæ.
17	From Polaris towards γ Ursæ Minoris.
18	From midway between Cassiopeia and Perseus to a point 20° below Polaris.
19	From a point midway between α and γ Cassiopeiæ, moved towards π Pegasi.
20	From direction of ϵ Cassiopeiæ towards β Ursæ Majoris.
21	Passed midway between β and η Pegasi towards ϵ Pegasi.
22	From about 10° to the right of α Ursæ Majoris, passed about midway between α and β Ursæ Majoris.
23	Passed midway between α and η Cephei towards Polaris.
24	Passed midway between α and β Cassiopeiæ towards α Cygni.
25	From α Cephei, passed midway between α Cygni and α Cassiopeiæ towards α Pegasi.
26	Directed from γ Cassiopeiæ, moved towards ζ Ursæ Majoris.
27	Passed midway between ι and θ Draconis towards α Coronæ.
28	Passed about 3° above η Ursæ Majoris from direction of Polaris.
29	From direction of ζ Ursæ Majoris towards Arcturus.
30	From direction of β Cassiopeiæ, passed about 3° East of α Cephei.
31	Passed about 6° below Polaris towards ζ Ursæ Majoris, moving from the direction of β Cassiopeiæ.
32	Fell nearly perpendicularly past α Ursæ Majoris, from direction of Polaris.
33	Directed from Custos, passed very near p Camelopardali.
34	Directed from β Andromedæ, passed about 15° below γ Pegasi.
35	From a point just below Polaris towards α Draconis.
36	From ι Draconis to β Boötis.
37	From δ Andromedæ towards a point 2° below γ Pegasi.
38	From direction of γ Cassiopeiæ towards o Honorum.
39	From γ Lyræ to ϵ Aquilæ.
40	From a point 10° below δ Cygni, passed between α and ζ Lyræ.
41	From o Honorum, past β Pegasi, towards α Pegasi.
42	Passed across ϵ Aurigæ, from direction of ϵ Cassiopeiæ.
43	From o Honorum, passed midway between α Pegasi and α Andromedæ.
44	Appeared midway between γ and η Cassiopeiæ, moving towards β Cassiopeiæ.
45	Passed acrosss c Muscæ, from direction of β Persei.
46	Passed midway between γ Arietis and η Piscium, from direction of δ Andromedæ.
47	From β Pegasi to ϵ Aquarii.
48	From near ζ Cygni, passed across Delphinus.
49	Path parallel to that of preceding meteor, passing 7° to left of Delphinus.
50	From 1° South of ζ Cygni, passed to a point 3° South and above γ Delphini.

Month and Day, 1867.		Greenwich Mean Solar Time.	Observer.	Apparent Size of Meteor in Star-Magnitudes.	Colour of Meteor.	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	Number for Reference.
		h m s						°	
August	10	13. 24. 42	N., H.	1	Blue	1	Fine, 2s	..	1
,,		13. 28. 53	N.	2	Blue	0·6	Train	..	2
,,		13. 29. 44	N.	2	Blue	0·6	Faint	..	3
,,		13. 35. 58	N.	1	Blue	1	Train	..	4
,,		13. 42. 47	N., H.	2	Blue	0·6	Slight	7	5
August	12	9. 3. 0	N.	1	Blue	1	Train	..	6
,,		10. 56. 46	W.	3	Bluish-white	1	None	10	7
,,		10. 58. 4	J., W.	1	Yellowish	0·5	Fine	5	8
,,		11. 4. 41	J., W.	2	Bluish-white	1	Fine	..	9
,,		11. 12. 30	W.	2	Bluish-white	0·5	None	7	10
,,		11. 28. 9	N.	2	Blue	0·6	Train	7	11
,,		11. 32. 1	W.	2	Bluish-white	0·5	None	12	12
,,		11. 54. 16	N.	1	Bluish-white	. . .	. . .	3	13
August	13	10. 7. 52	W.	1	Bluish-white	1	Train	25	14
,,		10. 16. 13	W.	1	Yellowish	1	Fine	15	15
,,		10. 28. 28	W.	2	Bluish-white	Momentary	None	10	16
August	20	9. 18. 42	W.	1	Bluish-white	1	Fine	45	17
September	10	10. 52. 30	N.	2	Blue	0·5	None	..	18
November	13	8. 55. 19	F.	1	Bluish-white	0·3	Short	8	19
,,		11. 43. 40	W.	1	Blue	1	None	20	20
,,		11. 46. 27	H.	1	Blue	1	None	13	21
,,		11. 58. 10	H.	2	Bluish	1	. . .	10	22
,,		12. 11. 7	N.	1	Bluish-white	2	Fine, 1s	..	23
,,		12. 14. 47	H., J., W.	Jupiter	Yellowish	1·5	Fine	25	24
,,		12. 30. 11	J., W.	Jupiter	Yellowish	1	Fine	10	25
,,		16. 11. 59	H.	2	Bluish	1	Faint	16	26
,,		16. 19. 47	H., W.	1	Yellowish	1	Train	15	27
,,		16. 25. 9	N., W.	Jupiter	Reddish	1	Train	12	28
November	14	13. 54. 41	H., W.	1	Bluish-white	1	None	20	29
,,		14. 7. 50	H.	1	Bluish	1	. . .	15	30
,,		14. 11. 16	H., W.	1	Bluish-white	1	Train	20	31
,,		14. 17. 57	W.	Jupiter	Yellowish	1	Fine	15	32
,,		14. 50. 5	W.	Jupiter	Yellowish	1	Fine	10	33
,,		15. 4. 6	H.	> 1	Bluish	1	Fine	20	34
,,		15. 8. 37	W.	1	Bluish-white	0·5	None	15	35
,,		15. 23. 4	H.	2	Blue	0·5	Faint	10	36
,,		15. 29. 16	H., W.	5 × Jupiter	Bluish	4	Fine, 25s	10	37
,,		15. 35. 14	H., W.	1	Bluish	1	Train	20	38
,,		15. 37. 53	H., W.	1	Blue	> 1	Train	12	39
,,		15. 40. 23	W.	2 × Jupiter	Yellowish	2	Fine	15	40
,,		15. 42. 24	H.	1	Blue	1	Train	10	41
,,		15. 48. 18	H., W.	1	Bluish-white	1	Slight	20	42
,,		15. 52. 43	H.	1	Bluish	1	. . .	10	43
,,		15. 57. 15	W.	1	Bluish-white	1	Fine	>20	44
,,		15. 57. 16	H., W.	1	White	< 1	Train	15	45
,,		16. 2. 44	H.	2 × Jupiter	Bright blue	2	Fine, 5s	20	46
,,		16. 15. 32	H.	2	White	1	Faint	10	47
,,		16. 19. 14	H.	Jupiter	Bluish	2	Fine	20	48
,,		16. 24. 17	H.	> 1	Yellow	1	Train	6	49
,,		16. 59. 1	N.	1	Bluish-white	1·5	Fine, 1s·5	5	50
,,		17. 7. 41	H.	Jupiter	Blue	1	Train	12	51
,,		17. 12. 44	N., H.	3	Blue	1	. . .	12	52

Number for Reference.	Path of Meteor through the Stars.
1	From midway between γ and δ Cygni to a point between β Cygni and β Lyræ.
2	Directed from γ Cassiopeæ, passed across κ Draconis.
3	From direction of γ Cassiopeiæ, passed 2° above α Andromedæ towards α Pegasi.
4	Passed across β Aquarii from between θ and ϵ Aquarii.
5	From γ Pegasi towards λ Piscium.
6	From near α Lyræ almost to α Ophiuchi.
7	From direction of β Pegasi, passed a little above λ Honorum towards β Cassiopeiæ.
8	Passed across γ Andromedæ from the direction of ϵ Cassiopeiæ.
9	From a point about 2° above γ Cephei towards γ Draconis.
10	Fell from near o Pegasi towards horizon. Line of flight parallel to joining line of o and β Pegasi.
11	From direction of λ Draconis, passed midway between α Draconis and ζ Ursæ Majoris.
12	From a little above γ Cephei, moved towards β Ursæ Minoris.
13	Passed across o Ursæ Majoris from direction of b Lyncis.
14	From direction of Polaris, passed between ϵ and ζ Ursæ Majoris towards η Boötis.
15	From direction of ι Draconis, across θ Boötis and passing η Ursæ Majoris.
16	From ι Cassiopeiæ towards γ Cephei.
17	Passed across π Pegasi towards ϵ Pegasi.
18	Directed from γ Pegasi, passed about 3° above α Arietis
19	Passed about midway between α and β Aquilæ, falling vertically towards West horizon.
20	Passed from Pollux towards horizon ; path forming continuation of a line joining Pollux and β Tauri.
21	From direction of φ Cephei, passed between δ and σ Draconis.
22	Passed just below ζ Ursæ Majoris towards ζ Draconis.
23	From direction of α Ursæ Majoris, passed across β Ursæ Minoris.
24	From δ Ursæ Majoris towards ζ Draconis.
25	From a point 3° above ζ Leonis, moved towards ζ Ursæ Majoris.
26	From a point 3° below and North of α Ursæ Majoris, passed midway between β and γ Ursæ Minoris.
27	Directed from η Ursæ Majoris to a point about 12° below η Draconis.
28	Passed across zenith from direction of Leo ; disappeared near β Geminorum.
29	From α Leporis, passed 3° above ϵ Leporis towards horizon.
30	Directed from η Ursæ Majoris, passed towards a point 1° above η Draconis.
31	Directed from ω Cephei, towards ζ Draconis.
32	Passed almost directly across α Cygni from direction of η Draconis.
33	From direction of α Leporis, moved in line of continuation of line joining α Leporis and a point 5° above Sirius.
34	Started just below α Cephei, and moved on line of continuation of line joining δ Ursæ Minoris and α Cephei.
35	Fell perpendicularly from direction of Polaris, about 2° on the right of ϵ Draconis.
36	From direction of Capella, disappeared about 2° above λ Ursæ Majoris.
37	From direction of α Leonis, passed across λ Hydræ. Center of path at λ Hydræ.
38	From direction of ϵ Leonis, passed below γ Cancri towards α Orionis.
39	From direction of a point midway between Procyon and α Hydræ, disappeared about 1° below Sirius.
40	From direction of β Leonis towards horizon. Track a continuation of line passing from β Leonis to 3° above θ Leonis.
41	Fell almost perpendicularly from direction of γ Leonis, in continuation of line joining m and γ Leonis.
42	From a point about 10° South of 12 Canum Venaticorum towards Arcturus.
43	Fell vertically from a point midway between η Ursæ Majoris and 12 Can. Venat. ; fell parallel to line joining β and γ Ursæ Majoris.
44	From ϵ Leonis, passed immediately below γ Cancri towards α Orionis.
45	From direction of ϵ Leonis, passed across ϵ Hydræ.
46	From direction of Procyon, passed 1° below κ Orionis.
47	Passed between κ and ι Ursæ Majoris from direction of υ Ursæ Majoris.
48	Directed from Leo, passed 2° above a Ursæ Majoris and 1° degree above λ Draconis.
49	Passed midway between γ and δ Virginis from direction of θ Leonis.
50	From a point midway between γ and δ Leonis to δ Leonis.
51	Passed 5° West of Procyon, from direction of ϵ Leonis.
52	Directed from δ Leonis, towards Arcturus.

Month and Day, 1867.		Greenwich Mean Solar Time.	Observer.	Apparent Size of Meteor in Star-Magnitudes.	Colour of Meteor.	Duration of Meteor in Seconds of Time.	Appearance and Duration of Train.	Length of Meteor's Path in Degrees.	Number for Reference.
		h m s						°	
November	14	17. 18. 5	N., H.	1	Blue	..	. . .	7	1
	„	17. 30. 1	N.	2	Blue	1	None	5	2
	„	17. 30. 4	H.	2	Blue	1	. . .	10	3
	„	17. 32. 33	H.	3	Blue	1	Train	12	4
	„	17. 32. 58	W.	1	Bluish-white	1	None	5	5
	„	17. 38. 33	W.	1	Bluish-white	0·5	None	5	6
November	28	12. 31. 0	N.	1	Blue	0·8	Train	6	7

Number for Reference.	Path of Meteor through the Stars.
1	From δ across γ Ursæ Majoris.
2	From direction of γ Leonis, passed 5° above μ Leonis towards r Lyncis.
3	Passed midway between γ and β Böotis towards δ Böotis.
4	Fell vertically from just below β Böotis; line of flight a production of line joining η Ursæ Majoris and β Böotis.
5	From ζ Ursæ Majoris towards α Draconis.
6	From direction of ψ Ursæ Majoris towards β Ursæ Minoris.
7	From direction of α Persei, disappeared near ι Cassiopeiæ.

ROYAL OBSERVATORY, GREENWICH.

REDUCTION

WITH REFERENCE TO THE POSITIONS OF THE SUN AND MOON

OF

THE MAGNETIC OBSERVATIONS

FROM 1858 TO 1863

(EXCLUDING THE DAYS OF GREAT MAGNETIC DISTURBANCE).

REDUCTION

OF

THE MAGNETIC OBSERVATIONS

FROM **1858** TO **1863.**

METHODS OF INTERPRETING THE PHOTOGRAPHIC REGISTERS.

THE Magnetic Registers, upon which the following Reductions are founded, are entirely those given by photographic self-registration. For the description of the photographic self-registering apparatus, and the method of determining the zeros of measure and time, I refer to the Volumes of Greenwich Magnetical and Meteorological Observations, 1862 and 1863, Introduction.

The first necessary step was, to decide on the rejection of those photographic traces, made in times of great magnetic disturbance, which seem to defy ordinary treatment. The following is a list of the days rejected for this reason:—

1858.		1859.		1860.		1861.		1862.		1863.	
January	8	February	9	April	9 13	January	24 25 26	July	5	January	24
March	14	April	21 29	June	29 30			August	4	February	25
April	9	June	8	July	1 4			October	3 6		
June	23	July	11	August	8 9 10 11 12 16			December	14		
October	27	August	28 29	September	6 7						
December	4	September	1 2 3 4								
		October	12 17 18								
		December	13								

Besides these, which are omitted merely on account of the evident magnetical disturbance, a few days are omitted on account of examination of adjustments, loss of photographic trace, &c., on some of which there may have been magnetical disturbance.

The next process was, to draw by hand a curve, passing, as well as could be judged, through the mean of proximate points of each photographic curve, without taking all its rapid inequalities. The general rule was, to suppress entirely all the irregularities whose period from maximum to minimum amounted to only a few minutes of time, but to respect entirely the curvatures whose period was as great as two or three hours; the curvatures whose period had an intermediate value being treated with an intermediate degree of respect. The numerical measures which are subsequently used are in all cases the ordinates of the hand-curve thus traced.

Sheets, properly printed and ruled, were prepared for the entry of the measures of the ordinates. The days of the month, or days of the lunation (as the case might be), followed in vertical columns: the homonymous hours of each day, solar or lunar (as the case might be), being arranged on the same horizontal line. One computer, holding a scale graduated to minutes of arc, or to fractional parts of the Horizontal or Vertical Force, read off the measures of the ordinates; while another computer entered the measures in the sheets.

The means were then to be taken, with reference to days and with reference to hours; and it became important to decide on the course to be adopted in instances where the record was imperfect. It was certain, however, that the change of Declination from hour to hour is greater than that from day to day, and it seemed likely that the same law would apply to Horizontal Force and Vertical Force. This consideration determined the rule—that no mean should be taken for a day, unless the series of 24 readings were complete; but that the means of the successive hours should in all instances be taken.

This, which is common to all, being premised, I have now to explain the further processes adopted for each section of the work.

I. Reductions referred to the Sun's Place.

1. Observations of Magnetic Western Declination, referred to the Sun's Place.

It will be seen, in the description of the Photographic Apparatus and Methods (Greenwich Magnetical and Meteorological Observations, 1862 and 1863, Introduction) that each photographic sheet is furnished with a scale of time, whose zeros have been determined by comparison of arbitrary interruptions of the beam of light with the clock-times of making the interruptions as recorded by the observer. The clock was adjusted to Greenwich Mean Solar Time (the former system of reference to Göttingen time having been discontinued); and the time-scales therefore represent Greenwich mean solar time: and the measures of ordinates, made at every hour of the scale, therefore, give the magnetic declination for every hour of Greenwich Mean Solar Time.

From 1859, December 2 to December 9, and again from 1860, February 19 to March 21, and March 27 to 29, the timepiece which gives motion to the barrel was away for repair. Other interruptions arise only from the causes already mentioned.

The zeros of measure of declination were determined by comparing the measures of the photographic ordinates at certain times with the declinations observed by theodolite at the same times, and the photographic measures are therefore liable to the same errors as eye-observations. The following occurrences in the adjustment of the declination-magnet must therefore be taken into account, as affecting the photographic ordinates.

The magnet is suspended by a skein of silk, through the intermediation of an adjustable circle, called the "torsion-circle." The circle ought to be so adjusted that, in ordinary positions of the magnet, the tension of the suspending skein exerts no appreciable force disturbing the position of the magnet. This adjustment is ascertained by inserting, in the place of the magnet, a brass bar, and remarking whether it takes spontaneously a position corresponding nearly with that of the magnet. If there is sensible discordance, it shows that the magnet has been subject to an angular strain, turning it from its proper position by a certain multiple of that discordance. The multiple has been found by experiment to be $\frac{1}{100}$ nearly.

The examination above described is made at the end of every year, and at all other times when necessary.

From 1858, January 1, to 1860, January 19, the reading of the torsion-circle at every examination was 266°. On the last-mentioned day the suspension-skein broke at its attachment to the leather strap. In every subsequent examination to the end of 1862 the reading was 265°. After the usual examination of adjustments at the end of 1862 the reading of the torsion-circle was 287°. 30'.; and it continued to maintain this value steadily through the year 1863. It would seem probable that some unusual bearing had been given to the silk skein; for, after the adjustments at the end of 1863, the reading of the torsion-circle returned to the value 264°. 15'. There is not the slightest doubt upon the accuracy of the daily indications.

I now proceed with the Printed Tables of this Section.

Table I. contains the Mean Westerly Declination of the Magnet, as derived from the mean of 24 hourly measures on each Astronomical Day. On many of the days omitted, the number of measures is not far deficient from 24; but it has been thought best to adhere rigorously to the simple rule stated above.

Table II. gives the Mean Westerly Declination in each month, the numbers being the simple means, for each month, of the numbers in Table IV. The continued secular diminution of Westerly Declination, from month to month, is shown generally in every year, but more clearly in the column of "Mean of Years."

On comparing the mean of the three first annual means with the mean of the three last, it appears that the annual diminution is $9'{\cdot}2$. The proportional parts of this, for the separate months, being applied with sign changed to the numbers of "Mean of Years," form the "Mean corrected for Secular Change." If the secular change were perfectly uniform, and the observations complete and free from error, these numbers would be equal. And, in fact, there is no change which we can consider to be certainly established.

Table III. gives the Monthly Means of the actual diurnal range of the magnet in the hourly measures, or the mean of the differences between the greatest and least measures on each day, at whatever hours they may occur. The actual ranges in observation would be greater than these, because they would be obtained from the salient points of the photographic curve.

Table IV. gives the Mean Monthly Determination of the Western Declination at every hour of the day, showing the diurnal course of declination.

By comparing, for each month, the number in Table II. (which is for the mean of hours) with the numbers in Table IV. for each hour of the day, a Monthly Table of Diurnal Inequality was formed. This table is not printed here; but from it the two following tables are derived.

To form Table V., the corresponding numbers of the last-mentioned table, for each month and each hour in the different years, were collected, and their means taken separately for each month. It exhibits the varying character of Diurnal Inequality through the months of the year. The hours refer to Greenwich Mean Solar Time.

To form Table VI., the corresponding numbers of the same table, for the different months of each year, were collected, and their means taken separately for each year. It exhibits the Mean Diurnal Inequality in each year, and the varying character of Diurnal Inequality from year to year. The Mean Diurnal Inequality for all the years is also exhibited. The Double Diurnal Fluctuation is clearly shown. The hours are still those of Greenwich Mean Solar Time.

As a westerly deviation through the angle θ implies that a westerly force has been impressed on the North End of the magnet (and an equal easterly force on the South End) represented by Horizontal Force $\times \sin \theta$, the numerical value of "sine of deviation" is given in the last column as representing the westerly force in terms of Horizontal Force.

2. Observations of Magnetic Horizontal Force referred to the Sun's Place.

The time used in interpreting the measures of the photographic ordinates of the Bifilar Magnet Curve is Greenwich Mean Solar Time. The zeros of measure of Horizontal Force were determined by comparing the measures of the photographic ordinates at certain times with the results of eye-observation at the same times; and the zero tacitly adopted for the photographic ordinates is therefore the same as that for the eye-observation. The zero for eye-observations is arbitrary (depending on the length of scale, &c.); and the only circumstance which determines the real or natural zero is, that the evaluation of the divisions of the scale has been made by a process which implies that the fluctuations of Horizontal Force are fluctuations about the magnitude $1{\cdot}0000$. It is therefore necessary to conceive such a constant to be added to the numbers derived from the photographic measures as will make their magnitude nearly $1{\cdot}0000 \pm$ fluctuations.

The magnet is suspended by the two branches of a skein of silk, forming practically two suspending cords, through the intermediation of a torsion-circle. The state of this circle is examined at the end of every year, and thus the results of one year are absolutely divided (by reason of the change of adjustments) from the results of another year. But, as a general rule, the state of adjustments through each year is unaltered.

In addition, however, to the causes which interrupted the observations of the declination-magnet, the following affected the horizontal-force-magnet.

On 1860, May 10 and 11, workmen deranged the adjustments of the magnet, and interrupted the series of records.

On 1861, June 22, a portion of the brass suspension-piece gave way, and was not restored till July 12. It is possible that the suspension was gradually yielding in the month of May, the indications having sensibly changed on May 9, 10, 14, 16, and 21.

From 1862, January 1 to January 9, many changes were made in the adjustment; the observations during these days are rejected.

The following changes are made in the printed Indications for different parts of the year 1862, for reasons stated in the annual Volume :—

1862, January 10 to April 23	+0·018
May 1 to May 5	−0·012
May 6 to September 24	unaltered.
September 25 to October 19	−0·016
October 20 to December 31...............	−0·006

The next point to be arranged was the Correction for Temperature. The coefficients of thermometer-reading were investigated by a process described in the Greenwich Magnetical and Meteorological Observations for 1847, Introduction, page xxxiv; and their values are given in each of the "Results of Magnetical and Meteorological Observations" following that year. It was only necessary therefore to determine the temperatures. The thermometers within the boxes of the magnets were read, in ordinary routine, at the hours 1, 3, 9, 21, of Greenwich Mean Solar Time. From 1860, on one day in each week, additional readings were taken at 6^h, 12^h, 18^h. From 1861 the additional weekly readings included 0^h, 2^h, 4^h, 6^h, 12^h, 18^h, 20^h, 22^h, and 23^h. From 1863, June, a reading was taken at 18^h every day except Sunday. There were, therefore, sufficient means for estimating the temperature at any hour with considerable precision, provided that means of interpolating the temperature between these hours of observation could be supplied. The system of closing the rooms, of lighting the fires, and of personal attendance, has been so perfectly uniform during the whole period that the experience of a single year would be ample for this purpose.

It was remarked that during the year 1848 the magnet-thermometers were read at the hours 0, 3, 6, 12, 18, 21, with sufficient frequency to give good information on the slow changes of the thermometers during the longer intervals; and upon these was founded the following method of correction.

Each month was treated separately. Thus on the observations of January 1848 was founded the system of corrections for the month of January in each of the years 1858, 1859, &c. to 1863; and so for other months.

A graphical projection was prepared, in which the abscissæ represented hours of the day, and the ordinates represented the mean of readings for January 1848 at the hour 0, at the hour 3, at the hour 6, and so for 12, 18, 21. The same was done for February, for March, &c. Through or nearly through the summits of these ordinates for each month a curve for that month was drawn by hand. These curves presented no doubt or difficulty whatever.

From each of these curves, temperatures were read for every hour. The mean of these 24 readings of the January curve was used as the mean temperature of a mean day of January 1848 (confining ourselves, for clearness, to that month).

Then two different processes were used for correcting the mean of observations collected on the sheets; (1) for the mean of all the observations on one day in January of any year, (2) for the mean of all the observations at one hour through all the days of January in any year.

(1.) For any day of January, the mean of all the thermometer-readings, at whatever hours, on that day was taken. To find the correction proper to change this into the mean of the 24 readings at the 24 hours, the mean for the same hours in 1848, January, as taken from the curve, was subtracted from the mean temperature of the 1848 January mean day; the remainder was the correction to be used.

(2.) For any hour of the mean of days in January. It was considered that the thermometer-readings at 1^h, 3^h, 9^h, 21^h, were abundantly sufficient in number to give the average character of the daily temperature-changes through the month; the means of interpolation between them being alone required. Therefore, in 1848, the readings at 1^h, 3^h, 9^h, 21^h, were taken; and between these were interpolated, in simple arithmetical progression between the reading for 1^h and that for 3^h, between the reading for 3^h and that for 9^h, and so on, the fictitious readings for 2^h, for 4^h, 5^h, 6^h, 7^h, 8^h, for 10^h, 11^h, 12^h, 13^h, 14^h, 15^h, 16^h, 17^h, 18^h, 19^h, 20^h, and for 22^h, 23^h, 0^h. These fictitious interpolated readings were subtracted from the curve-readings for the same hours, and the remainders gave corrections applicable to interpolated readings in order to form curve-readings. It was then held that these same corrections would apply to interpolated readings for the same month in other years. Therefore, for other years, the mean readings for January at the hours 1, 3, 9, 21, for all the years were collected on one sheet; between the readings for 1^h and 3^h, between those for 3^h and 9^h, &c., in each year, thermometer-readings were interpolated in arithmetical progression; and to these were applied the corrections found in 1848. In this manner temperatures were found for every hour, possessing all desirable accuracy.

The correction to mean horizontal-force-reading was then made with the tables in ordinary use.

I now proceed with the explanation of the tables which follow.

Table VII. gives the Mean Horizontal Force on every day in which the 24 hourly readings can be taken from the photographic sheet, corrected for temperature by the process (1) described above.

Table VIII. gives the mean for each month. It will be remembered that the annual change of adjustments separates the results of one year from those of another year; but that the results through each year ought to form a continuous series, subject, however, to the interruptions mentioned above.

In order to make the several monthly results strictly comparable, it is necessary to correct them for the secular increase of Horizontal Force. This is investigated from the annual results for Absolute Measure in the following manner:—

ANNUAL MEANS OF DETERMINATIONS OF ABSOLUTE MEASURE OF HORIZONTAL FORCE.

1858	3·822	Old Instrument.
1859	3·819	„ „
1860	3·897	„ „
1861	3·846	„ „
1861	3·810	New Instrument.
1862	3·819	„ „
1863	3·824	„ „

To compare the results obtained by the Old Instrument with those obtained by the use of the New Instrument, it is necessary to diminish the results by the former by $\frac{1}{117}$th part (See Magnetical and Meteorological Observations, 1861, p. (cxxiv.)

The series would then be—

	Old.		Correction to New Inst.		Reduced to New Inst.	
1858	3·822	−	0·033	=	3·789	
1859	3·819	−	0·033	=	3·786	
1860	3·897	−	0·033	=	3·864	
1861	3·846	−	0·033	=	3·813	3·812
1861					3·810	
1862					3·819	
1863					3·824	

For inferring the progressive annual change of absolute measure of Horizontal Force from the six years observations, we have,—

1858	3·789	(rejecting the integer 3)	×	(−5)	=	− 3·945
1859	3·786	„ „	×	(−3)	=	− 2·358
1860	3·864	„ „	×	(−1)	=	− ·864
1861	3·812	„ „	×	(+1)	=	+ ·812
1862	3·819	„ „	×	(+3)	=	+ 2·457
1863	3·824	„ „	×	(+5)	=	+ 4·120
					35)	+ 0·222
Increase in one Year						+ 0·0063

This, estimated in the same manner as the Horizontal Force in the Tables of Reductions 1858–1863, will be represented by $\frac{0·0063}{3·8}$ or 0·0017 for the secular increase in one year.

Applying now the proportional parts of the annual increase 0·0017 with sign changed to the separate months, the column "Mean corrected for Secular Variation" is formed. It would appear that there is an increase for the spring months of the year; a result differing from that found in the Reductions 1848–1857. (Appendix to Greenwich Observations, 1859). We are justified in stating for the Horizontal Force, as we have stated for the Declination, that there is no certain evidence for Annual Inequality.

Table IX. gives, for every month, the mean of the Horizontal Forces at each hour through all the days of the month, corrected for temperature in the manner described above, process (2).

For each month separately, in Table IX., the mean for the month in Table VIII. was subtracted from every number in the same month in Table IX., and thus was formed the Mean Diurnal Inequality of Horizontal Force in each month. It has not been thought necessary to print this table, but the means for each year are taken to form the two next tables.

Table X. gives the Diurnal Inequality of Horizontal Force for each month; the quantities for the same month in different years being grouped, and the means taken.

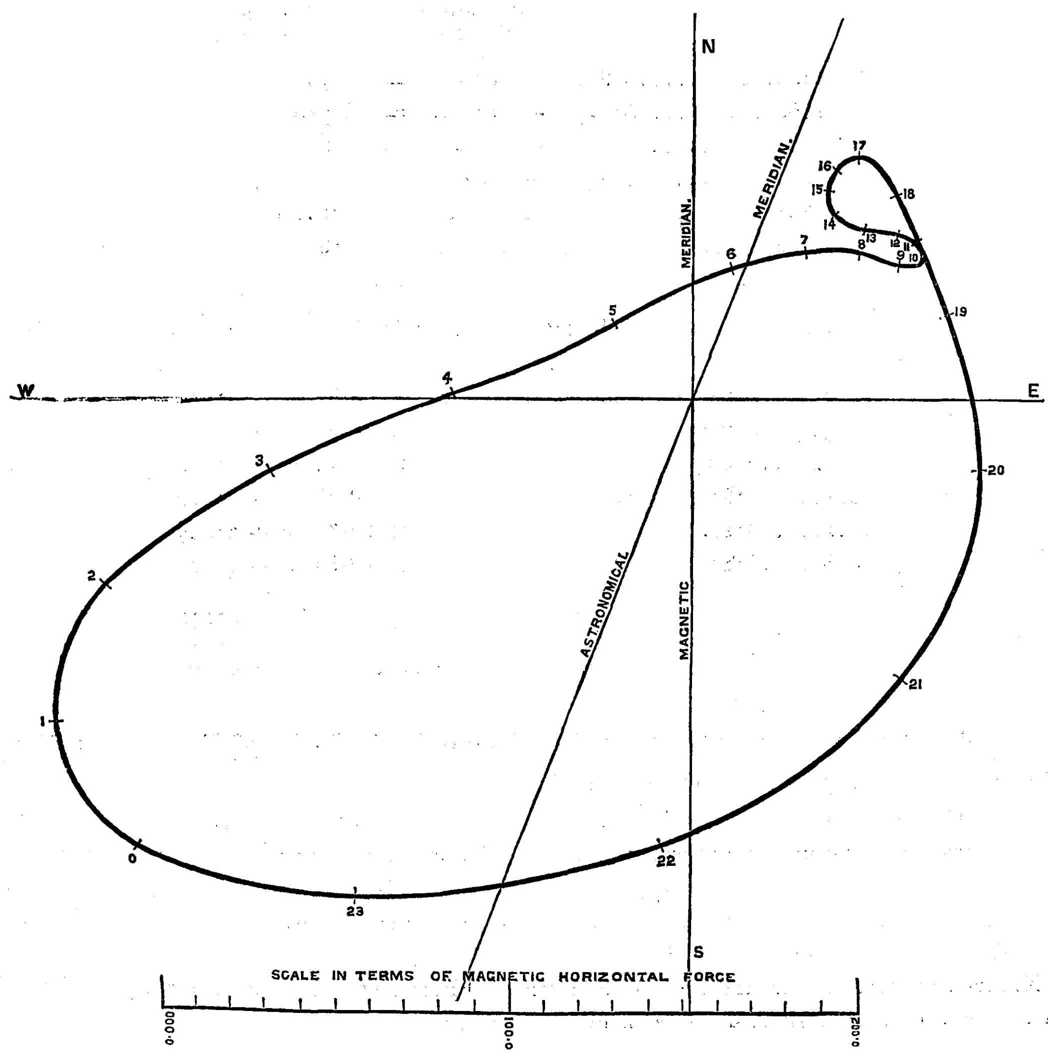
Table XI. gives the Diurnal Inequality of Horizontal Force for each year; the quantities for different months in the same year being grouped, and the means taken. The law of Diurnal Inequality is seen most clearly in the column of Mean of Years. There is a well-marked diminution of force in the day, with an increase in the night. The Horizontal Force is smallest a little after 23^h Greenwich Mean Solar Time. This, it will be remarked, is not the hottest part of the day. The reading of the thermometers in the magnet-boxes is highest at 5^h or 6^h Greenwich time in the summer, and at 4^h in the winter. The Diurnal Inequality therefore is not produced by error of temperature-correction, and the general order of these numbers tends to give confidence in the correction.

3. REMARKS ON THE COMBINATION OF THE DIURNAL INEQUALITIES OF DECLINATION AND OF HORIZONTAL FORCE.

If we trace a curve whose ordinate in the west direction represents the numbers in the last column of Table VI., and whose ordinate in the north direction represents the numbers in the last column of Table XI., we have the following:—

DIAGRAM explanatory of the MAGNITUDE and DIRECTION of the FORCES acting on the NORTH END of the MAGNET at GREENWICH at different HOURS of the SOLAR DAY, from the Mean of Observations 1858–1863.

The Arabic numerals refer to Greenwich Time.



If the Mean Declination and Horizontal Force are the same thing as the Undisturbed Declination and Horizontal Force, the force of Diurnal Inequality at any time will be represented in magnitude and direction by a line drawn from the origin of co-ordinates to the point of the curve corresponding to that time. If the mean and the undisturbed are not the same, a different origin must be taken, in such a position that the preponderant measures to the curve will correspond to the preponderant forces. It would seem most probable that the undisturbed measures are represented by the ordinates of some point in the line joining 7^h and 18^h, or in the line joining 8^h and 17^h, or perhaps their intersection.

The curves formed from the numbers in Tables V. and X. for each month differ very remarkably in the forms given by the summer months and by the winter months. The same difference was found in the discussion of the Observations 1841–1847 and 1848–1857. *See the Philosophical Transactions*, 1863, page 309, &c. The curves of the summer months are far the larger.

In the Reduction of the Observations 1848–1857 (Greenwich Observations, 1859), I have stated my idea that the Diurnal Inequality may depend principally upon Solar Radiation on the Atlantic Ocean.

4. Observations of Magnetic Vertical Force referred to the Sun's Place.

As in the instance of the Horizontal Force Magnet, the time used is Greenwich Mean Solar Time, and the zero to which the photographic measures of Vertical Force are referred requires such an addition that their magnitudes shall be nearly 1·0000 ± fluctuations.

The adjustments of a Vertical Force Magnet are much more liable to change than those of the other instruments. In consequence of this, the periods of continuity of adjustment have been too much broken up to permit any important comparisons of the results at different times.

During the year 1858 the knife-edges appeared to be in very good order. They had received no important change since their mounting in 1848.

In the beginning of 1859, during the annual adjustments, their action was less satisfactory than usual. On examining their prismatic surfaces, I thought I could perceive that they had not been ground with sufficient attention to flatness. The instrument was placed in the hands of Mr. Simms on 1859, January 31, with request that he would give the same care as to the most accurate knife-edges of pendulum. Since the return of the instrument on 1859, April 19, its delicacy has left nothing to desire.

At the end of 1862 the knife-edges were again ground by Mr. Simms.

In addition to these interruptions and to those stated at the beginning of this Introduction, the following have occurred:

The timepiece (for giving motion to the photographic barrel) was away, 1858, September 11 to 24, and 1862, September 30 to October 8.

After an examination of the magnet on 1861, April 15, a change of position took place, and the photographic records of 1861, April 15 and 16, were rejected.

The correction for temperature was treated in the same manner as that for the temperature of the Horizontal Force Magnet.

Table XII. gives the mean of the Vertical Force Readings on every day, corrected for temperature. The interruptions by a double line ══════ denote that the adjustments have been changed, so that the readings above and below it are not comparable. The interruptions by a single line ——— denote that there has been merely a change in one of the constants of reduction (the time of vibration in the vertical plane), which produces a comparatively small change in the reading.

Table XIII. contains the monthly means; the interrupting lines being placed at the divisions nearest to the exact days.

Table XIV. gives, for every month, the mean of the Vertical Forces at each hour through all the days of the month, corrected for temperature.

For each month separately, in Table XIV., the mean for the month in Table XIII. was subtracted from every number in the same month in Table XIV., and thus was formed the Mean Diurnal Inequality of Vertical Force in each month. The table so formed is not printed, but the means for each year are taken to form the two next tables.

Table XV. gives the Diurnal Inequality of Vertical Force for each month; the quantities for the same month in different years being grouped, and the means taken. To express the inequality in terms of Horizontal Force, the numbers are multiplied by tangent of Mean Dip, or tangent 68°. 16′.

Table XVI. gives the Diurnal Inequality of Vertical Force for each year, the quantities for different months in the same year being grouped, and the means taken. As in the last table, these values are converted into expressions in terms of Horizontal Force by multiplying by tangent 68°. 16′.

5. Remarks on the Relation of the Vertical Disturbing Force to the Disturbing Forces in the Horizontal Plane.

The examination of the Vertical Force, as exhibited in Tables XIII., XV., XVI., and its comparison with the Horizontal Western Force in Tables II., V., VI., and the Horizontal Northern Force in Tables VIII., X., XI., suggest the following remarks:

(1.) From 1848 to 1855 the Diurnal Inequality in Vertical Force gradually increased, and from that year to 1862 it has gradually diminished. This is almost exactly opposite to the change for the forces in the Horizontal Plane. The hour of day at which the True Vertical Force is the same as the Mean Vertical Force, after undergoing continual acceleration from 1842 to 1858, is again retarded from 1858 to 1863.

(2.) The magnitude of Diurnal Inequality is (though with much irregularity) somewhat greatest in the hot months of each year. This is true also for the forces in the Horizontal Plane. The hour at which the True Vertical Force is the same as the Mean Vertical Force is earliest in the hot months.

II. Reductions referred to the Moon's Place.

6. Observations of Magnetic Western Declination referred to the Moon's Place.

The first step in the reductions was, to mark the Lunar Days and Lunar Hours in a satisfactory way upon the Photographic Sheets. The Greenwich Mean Solar Times of Moon's Transit on each day were marked in coloured chalk upon the time-scales of the sheets. The intervals from transit to transit were taken numerically, and by use of these numbers different graduated scales were prepared, exhibiting multiples of Lunar Hours (fitted for the photographic sheets) for different lengths of the Lunar Day. In this way every Lunar Hour was marked down on the photographic sheet with great precision. After this the process was exactly the same as for Solar Hours. The readings of the curve-ordinates were collected upon sheets of the same kind as those used for the Solar observations; the lines containing Lunar Hours, the columns containing Lunar Days, and the sheets containing Lunar Months.

The character of the means for Lunar Days and Lunar Months necessarily agrees so closely with that of the means for Solar Days and Calendar Months that it does not appear necessary to print them. The subsequent reference to divisions of the Lunar Month can be made nearly as well by use of the numbers for Solar Days as by those for Lunar Days. The really valuable results are limited to those for Luno-Diurnal Inequalities.

Table XVII. was drawn up for the purpose of examining into the possibility of any inequality of Westerly Declination depending on the Moon's age. It would appear to be somewhat greater in the first quarter of the Lunation; but this, which is not supported by the reductions from 1848 to 1857, is very doubtful.

Table XVIII. contains the Lunation-Means of Magnetic Westerly Declination at every Lunar Hour of the Lunar Day.

By comparing, for each Lunation, the mean for the Lunation with each of the numbers in Table XVIII., a Lunation-Table of Luno-Diurnal Inequality was formed. This table is not printed here, but from it the following table is derived.

Table XIX. gives the Diurnal Inequality of Western Declination, as referred to the Lunar Hours of the Lunar Day. The existence of two maxima and two minima in each Lunar Day appears to be distinctly marked.

7. Observations of Magnetic Horizontal Force referred to the Moon's Place.

The values of Horizontal Force at the Lunar Hours were measured and entered into the sheets in the same way as those for Solar Hours. But no correction for temperature was introduced. It is evident that, while the commencement of the Lunar Day passes through all the Solar Hours, every Lunar Hour will in its turn pass through every circumstance of temperature: and thus in taking means, which for the first elements used here extend over a Lunation, and in final results extend over one year or several years, the corrections for temperature on all the different days of Lunation and at all the different Lunar Hours will be sensibly equal.

For the same reasons which apply to Declinations, it has appeared unnecessary to exhibit the Mean Horizontal Force for every Lunar Day or every Lunation. These means, however, having been arranged so as to admit of the grouping of the corresponding days of different Lunations, and the yearly mean for each Lunation-Day being compared with all, the following table was formed.

Table XX. gives the mean Lunation-Inequality of Horizontal Force in each year and in the mean of years. The correction for the proportional part of secular increase of Horizontal Force, 0·00014 for a Lunation, is applied. The numbers, in part, appear to follow some law, though accompanied with great irregularities. The numbers have the largest negative value in the first quarter of the Lunation.

Table XXI. gives for each Lunation the mean of the Horizontal Forces at the same Lunar Hour through all the Lunar Days of each Lunation. By the comparison of these numbers for each Lunation with the mean for that Lunation, a Lunation-Table of Luno-Diurnal Inequality is prepared, which is not printed.

Table XXII. contains, for each year, the mean for each Lunar Hour of the numbers in the last table; exhibiting the Luno-Diurnal Inequality of Horizontal Force. There are in the Lunar Day two very well-marked maxima and two minima.

8. Remarks on the Combination of the Luno-Diurnal Inequalities in Declination and in Horizontal Force.

On comparing the last column of Table XIX. with the last column of Table XXII., it is at once seen that the laws of the two inequalities (in Declination and in Horizontal Force) are similar; that their epochs of maxima sensibly correspond; that their signs are the same; and that their magnitudes are not very different; that in the direction of North Horizontal Force being somewhat the smaller.

It appears from this that the forces which are exhibited in these two inequalities are resolved parts of one force, which is alternately + and −; which goes through its changes twice in the Lunar Day. On combining these results with those obtained from the Reductions of Observations 1848 to 1857, it appears that the direction of this one force is nearly 45° west of the North Magnetic Meridian, or nearly 65° west of the North Astronomical Meridian.

9. Observations of Magnetic Vertical Force referred to the Moon's Place.

For the same reasons which apply to Declination and to Horizontal Force, I have thought it unnecessary to print the table of Mean Luno-Diurnal values of the Vertical Force, or their Lunation-Means. By comparing each of the Luno-Diurnal values with its Lunation-Mean, and taking the yearly means of numbers corresponding to the same day of Lunation, the following table is formed:

Table XXIII. shows the fluctuation in the mean Luno-Diurnal values of Vertical Force in the course of a Lunation. It does not appear to follow distinctly any laws.

Table XXIV. gives the Lunation-Means of Vertical Force at every Lunar Hour of the Lunar Day.

A Lunation-Table of Luno-Diurnal Inequality of Vertical Force was formed, by comparing, for each Lunation, the mean for the Lunation with each of the numbers in Table XXIV. This table is not printed, but by taking the means of the numbers for each year the following table is formed:

Table XXV. gives the Diurnal Inequality of Vertical Force, as referred to the Lunar Hours of the Lunar Day. The numbers, whether taken alone or combined with those found in the Reductions 1848 to 1857, may be represented by the combination of a Diurnal and a Semi-Diurnal term, but not without considerable irregularity.

Royal Observatory, Greenwich,
1869, *April* 1.

G. B. AIRY.

REDUCTIONS OF MAGNETIC DECLINATION REFERRED TO THE SUN'S PLACE.

TABLE I.—MEAN WESTERLY DECLINATION of the MAGNET on each ASTRONOMICAL DAY, as DEDUCED from the MEAN of TWENTY-FOUR HOURLY MEASURES of ORDINATES of the PHOTOGRAPHIC REGISTER on that DAY.

Days of the Month.	1858.												1859.											
	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°
	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′	′
1	..	33·5	..	34·5	31·6	28·2	..	28·2	31·1	27·0	..	28·7	23·7	25·8	24·8	25·1	26·0	24·4	25·1	23·7	..	21·1	17·9	..
2	..	33·6	35·0	33·3	32·0	29·2	26·4	28·9	28·7	27·3	30·8	30·5	..	26·4	29·8	25·5	25·1	23·0	23·9	25·4	..	19·7	18·0	..
3	33·0	34·2	33·8	..	31·3	29·9	28·3	27·8	27·8	26·5	29·8	29·8	..	26·4	28·8	..	25·3	23·2	24·5	23·7	..	21·3	17·2	..
4	34·0	..	32·7	32·3	32·3	28·7	28·7	28·7	27·5	27·2	30·3	..	25·3	26·5	30·9	..	25·7	..	23·2	24·3	..	20·2	18·2	..
5	..	33·5	..	..	32·0	..	26·3	28·1	28·4	28·0	30·4	32·3	23·9	26·5	29·9	25·9	23·2	24·0	22·5	24·2	25·5	21·2	..	..
6	34·0	34·5	34·0	32·6	..	29·4	..	28·4	28·0	28·1	29·4	29·7	..	27·1	30·5	..	22·5	23·2	..	22·7	23·9	19·1	18·7	..
7	..	34·3	33·2	32·8	30·6	29·6	27·6	28·7	27·0	28·0	29·1	29·6	27·4	27·9	31·2	..	22·1	24·8	22·8	21·9	22·2	22·3	..	..
8	..	33·3	34·0	31·1	33·0	29·6	26·9	29·2	29·4	26·6	30·4	28·9	27·5	27·8	30·7	28·9	21·7	..	23·1	22·9	22·0	22·4	20·7	..
9	..	..	33·5	..	31·8	..	26·7	28·7	28·5	26·5	30·0	29·4	28·2	..	28·5	26·6	21·3	25·1	..	22·9	22·8	22·2	20·6	..
10	..	32·9	33·7	34·3	31·7	28·5	26·6	28·5	28·9	26·9	29·7	28·8	26·7	27·5	25·0	27·7	..	23·6	25·2	22·2	22·2	21·0	20·9	..
11	36·2	33·8	..	32·2	..	29·6	..	27·7	..	28·2	30·7	29·7	27·2	27·5	26·8	27·8	20·0	24·2	..	20·5	22·0	..	21·2	..
12	34·2	32·7	..	33·2	..	30·3	27·7	29·1	28·3	26·9	30·6	30·0	26·8	26·6	26·1	27·2	21·8	23·7	..	22·7	..	..	..	20·3
13	35·8	33·3	33·5	33·8	28·4	28·8	28·2	28·9	27·9	26·2	29·7	30·8	27·7	27·6	26·0	27·8	22·8	24·1	23·6	22·4	24·6	..	20·4	..
14	32·8	33·0	..	34·6	28·8	..	29·8	28·4	28·5	26·5	30·4	30·0	27·8	27·6	27·5	28·1	22·8	..	24·1	21·9	24·2	20·2	20·4	..
15	..	33·2	..	32·3	29·7	28·6	29·6	27·7	..	27·1	30·1	..	27·3	26·5	27·8	27·4	22·6	23·5	24·7	23·6	22·7	..	20·4	..
16	..	34·0	33·5	32·8	28·9	28·7	28·9	26·9	27·7	26·1	29·6	29·2	26·3	27·6	27·0	..	20·9	25·0	24·9	25·0	24·1	19·4	19·7	..
17	34·0	33·6	32·8	34·5	28·5	..	..	28·8	27·5	..	..	29·2	27·7	27·0	26·7	27·9	19·5	23·4	..	22·3	21·4	..	19·8	16·7
18	34·5	33·4	32·8	32·5	28·8	29·0	29·1	28·6	28·5	25·0	30·9	29·6	27·4	26·6	26·2	..	17·0	22·9	..	21·6	..	..	..	..
19	33·5	32·6	32·6	32·5	29·2	..	29·2	27·9	28·0	21·1	30·0	29·8	27·8	26·5	25·6	..	20·1	24·3	25·4	22·8	..	19·9	..	18·6
20	33·3	32·8	32·9	32·3	28·6	29·7	29·8	28·4	27·6	22·3	30·6	29·5	26·1	27·1	26·7	26·1	19·8	..	..	22·2	..	20·6	19·6	..
21	33·8	32·9	..	32·1	28·3	28·9	28·8	..	28·0	26·4	30·4	29·2	26·7	25·8	25·6	..	..	23·9	24·3	22·5	23·0	21·0	..	18·2
22	33·7	34·6	32·7	32·4	28·3	30·7	..	28·8	25·4	26·6	30·8	30·1	26·5	..	25·6	..	20·4	24·4	25·3	..	22·5	19·6	18·4	18·3
23	34·5	33·0	33·3	..	..	..	..	30·0	28·2	25·8	30·6	29·2	27·4	..	27·9	..	..	23·7	..	21·4	..	19·4	19·3	17·5
24	34·2	33·9	31·3	32·4	30·6	30·2	..	27·7	26·7	26·5	28·8	30·5	26·9	..	26·0	26·0	21·5	25·2	..	22·5	20·6	19·0	19·4	18·2
25	..	32·4	33·0	..	30·0	30·1	29·7	30·0	26·8	25·7	..	29·0	26·7	29·7	26·4	25·5	..	26·5	..	23·0	21·8	18·6	19·5	17·3
26	32·6	32·5	33·1	34·2	29·7	28·2	30·0	28·1	25·7	26·7	..	29·7	26·5	29·3	26·2	24·6	..	26·0	24·1	21·9	21·6	19·2	19·2	19·0
27	33·2	33·4	..	34·7	29·2	29·7	27·8	..	26·1	..	..	29·2	27·1	28·8	26·4	26·0	..	24·9	..	20·8	20·1	18·7	19·0	..
28	32·9	33·7	..	34·8	29·3	29·4	29·8	29·3	25·7	25·5	30·4	..	26·4	26·4	27·3	23·5	..	27·0	..	..	19·8	..	19·6	..
29	32·4		..	34·6	29·4	26·8	30·0	28·9	25·5	..	30·6	..	26·4		25·4	..	25·6	25·5	26·1	..	20·5	18·4	18·9	..
30	33·4		35·1	33·8	..	27·7	29·0	28·5	26·8	..	29·7	..	27·4		28·1	25·1	24·1	25·0	24·1	23·5	..	18·1	19·2	..
31	34·0		34·5		..		..	29·3		32·3		26·5	26·4		28·0		24·2		25·2	22·8		17·5		..

TABLE I.—MEAN WESTERLY DECLINATION of the MAGNET on each ASTRONOMICAL DAY—*concluded.*

1860.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°
	′	′	′	′	′	′	′	′	′	′	′	′
1	..	13.6	..	13.7	..	16.5	..	15.6	12.7	..	13.5	..
2	..	13.8	..	15.2	..	..	14.7	14.4	14.7	12.7	15.1	..
3	..	13.6	..	14.0	..	17.9	14.6	..	13.1	14.7	13.2	12.3
4	..	..	..	13.1	19.3	17.5	..	14.3	12.9	10.8	9.5	..
5	..	14.8	..	..	..	16.8	15.7	14.2	13.5	12.3	11.5	12.8
6	..	13.9	..	14.3	..	..	14.4	..	..	11.5	12.4	11.5
7	..	..	..	13.1	..	..	..	15.3	..	13.3	11.6	13.0
8	..	13.7	..	14.4	..	14.2	..	..	13.4	11.9	..	12.6
9	..	13.7	..	..	..	16.2	..	..	13.1	12.9	..	12.4
10	..	12.3	..	12.9	..	16.8	15.9	..	..	11.7	11.2	12.3
11	..	14.6	..	11.1	..	..	15.6	..	..	13.1	..	12.9
12	..	15.1	..	11.8	..	..	16.7	..	..	12.0	11.6	13.2
13	15.5	14.7	..	..	18.3	..	15.9	14.4	11.1	12.4	12.2	12.1
14	..	13.6	..	..	18.0	14.4	16.1	15.8	12.4	13.1	12.0	..
15	..	13.6	..	13.2	15.5	14.3	..	16.1	12.9	13.0	12.7	10.3
16	..	13.6	..	13.7	16.6	13.0	..	..	12.5	..	13.0	..
17	19.0	14.5	..	11.5	17.3	15.9	13.5	15.9	12.7	14.2	12.2	12.9
18	15.5	..	..	11.9	18.1	14.4	14.9	16.1	13.5	14.0	12.8	..
19	..	..	..	..	..	15.2	..	16.2	12.0	14.3	13.8	..
20	..	..	..	..	..	15.3	16.2	15.8	12.4	13.4	13.0	..
21	..	..	..	14.1	..	15.0	16.5	14.1	12.5	..	11.9	..
22	..	..	..	14.1	..	13.8	15.6	17.8	13.2	14.0	12.1	..
23	..	..	13.9	14.9	..	14.4	15.3	14.2	13.3	14.4	10.8	11.0
24	..	..	13.7	15.3	14.5	16.6	15.2	14.7	12.4	15.1	12.2	11.8
25	14.9	..	14.0	..	17.4	15.1	14.9	..	11.0	14.7	11.9	..
26	12.9	..	..	23.4	..	..	14.8	..	12.6	15.6	13.0	..
27	15.1	..	..	21.4	17.3	..	14.3	..	13.4	..	12.3	..
28	14.2	..	..	..	..	..	..	14.0	14.2	15.4	12.0	..
29	14.1	..	..	..	16.2	..	15.1	13.6	..	15.0	..	..
30	13.8		..	..	16.0	..	15.0	13.2	..	15.0	11.9	..
31	13.4		13.7		19.3		17.0	14.6		15.0		..

1861.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°
	′	′	′	′	′	′	′	′	′	′	′	′
1	..	70.5	71.1	68.9	67.8	..	..	63.9	..	..	61.8	62.2
2	..	69.4	69.8	..	68.2	60.7	64.0	65.3	..	..	61.8	..
3	70.8	70.7	71.0	..	67.7	59.8	66.0	..	..	..	..	62.0
4	..	70.0	..	67.9	..	60.4	66.9	..	..	61.5	..	61.6
5	..	70.3	..	..	68.8	60.0	..	..	..	61.7	..	61.7
6	71.9	69.8	70.4	67.4	67.2	60.7	65.7	..	..	..	62.6	..
7	71.7	70.2	69.7	67.3	68.5	60.1	65.9	..	..	..	63.3	..
8	71.7	70.2	71.0	67.1	67.2	60.6	..	..	..	..	..	60.2
9	71.1	70.5	..	66.4	67.9	..	..	..	..	..	..	60.8
10	71.3	70.1	77.1	67.0	67.6	56.7	63.9	..	..	..	..	61.2
11	69.8	70.2	..	66.1	66.8	56.5	..	..	..	..	..	61.6
12	70.4	68.3	75.4	68.8	67.2	..	..	..	..	62.0	62.0	60.3
13	70.4	69.6	77.6	68.6	66.3	..	..	..	..	59.9	61.7	60.7
14	69.8	69.5	..	69.0	66.4	..	..	..	..	61.2	63.0	60.8
15	70.3	70.0	80.8	68.7	..	63.0	..	..	..	60.6	63.4	..
16	69.4	70.3	76.0	70.4	..	..	..	..	..	62.1	..	..
17	69.6	70.7	75.2	70.2	..	..	..	..	62.2	61.3	..	60.2
18	69.7	69.3	79.5	68.9	..	..	65.7	..	..	61.8	62.1	62.5
19	70.5	70.2	77.1	69.2	67.2	..	..	..	..	61.8	61.8	..
20	70.5	69.9	76.8	68.7	65.9	..	..	..	..	62.3	60.5	..
21	71.3	69.4	82.1	69.2	64.5	..	..	..	..	61.1	60.3	..
22	69.9	69.8	79.6	68.2	61.3	..	..	..	62.2	..	62.2	60.0
23	70.4	70.6	..	69.9	60.7	58.7	..	..	62.5	..	..	60.9
24	..	69.3	78.0	69.1	60.0	..	..	65.9	..	62.1	60.7	..
25	..	70.7	75.5	..	60.5	..	..	..	62.0	..	..	61.1
26	..	69.5	70.3	67.8	60.9	67.4	..	..	61.3	..	..	..
27	69.2	68.0	67.5	67.5	62.8	68.3	..	65.2	61.3	..	61.4	59.7
28	70.9	68.9	69.3	..	62.3	..	..	..	..	61.5	59.4	60.4
29	69.2		69.3	68.3	..	..	..	..	61.4	61.1	59.6	..
30	70.7		..	66.6	..	..	..	..	..	60.8	61.3	..
31	..		70.1		..		..	..		60.6		..

1862.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°
1	..	..	..	..	..	..	46.4	54.0	..	50.2	51.9	49.6
2	..	59.6	58.5	..	..	45.2	52.2	53.0	..	49.4	50.9	50.8
3	..	59.2	..	52.6	..	47.2	51.2	55.8	..	..	48.6	50.2
4	..	60.1	58.7	51.9	..	..	53.0	..	..	48.1	51.3	49.5
5	58.7	59.6	58.5	51.5	..	..	..	53.5	50.5	51.3	50.5	49.5
6	59.3	..	..	52.2	..	..	52.3	..	..	..	49.6	48.7
7	58.1	58.2	..	..	..	..	49.5	52.3	..	49.9	..	51.7
8	..	57.9	56.6	52.1	..	..	51.3	52.2	49.5	49.4	..	..
9	..	57.2	56.4	52.8	..	51.6	48.0	49.2	53.9	50.6	49.8	51.4
10	..	..	56.4	..	..	..	49.9	..	50.8	52.0	48.1	..
11	57.7	57.4	..	..	..	..	51.3	50.0	49.0	..	48.2	..
12	58.8	59.5	56.2	..	..	51.6	..	52.6	51.6	45.5	..	..
13	59.1	57.4	58.1	48.5	..	53.2	..	49.5	51.6	..	48.7	..
14	57.5	57.3	57.1	..	..	53.9	..	..	52.6	52.6	48.7	..
15	56.7	57.2	..	..	..	..	54.5	52.0	52.7	54.0	48.9	..
16	58.7	56.9	..	..	49.8	53.3	54.1	..	51.7	54.8	50.1	..
17	58.9	58.5	59.9	..	..	52.0	49.3	51.7	50.5	54.8	51.0	46.0
18	58.2	58.4	58.7	..	..	52.0	49.4	..	51.7	53.8	48.6	47.9
19	58.4	58.3	..	47.1	..	56.2	47.8	..	52.4	52.6	49.0	53.6
20	58.1	..	..	47.9	..	56.3	51.4	..	52.6	..	49.9	52.3
21	55.3	..	..	..	..	54.4	..	50.6	51.5	..	49.5	49.6
22	61.8	59.0	..	..	..	53.6	46.9	50.6	51.8	49.9	..	49.6
23	58.9	59.3	..	..	..	53.1	46.8	53.9	52.1	50.2	50.0	48.7
24	58.5	58.9	..	..	..	54.0	42.0	..	50.9	51.7	..	42.3
25	59.9	58.3	..	..	..	54.4	45.1	54.4	50.7	49.5	50.0	49.3
26	59.8	58.1	..	52.3	..	52.5	52.9	53.4	50.4	49.3	48.8	..
27	58.7	58.0	..	50.1	47.2	53.0	51.6	..	..	..	50.4	..
28	59.1	57.5	..	..	..	51.9	50.5	54.2	50.2	49.2	51.3	..
29	59.2		..	..	..	47.8	53.8	52.1	51.4	47.3	50.8	..
30	59.6		..	..	..	..	52.6	53.3	49.8	48.7	49.2	..
31	59.9		..		..		53.2	53.0		49.7		..

1863.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°
1	54.6	48.3	48.4	46.2	..	..	46.5	46.2	..	44.1	42.9	..
2	52.9	48.0	49.7	45.5	..	45.1	..	46.7	45.3	44.3	42.5	..
3	52.7	47.7	47.6	46.5	45.7	44.1	46.4	45.4	45.3	43.5	42.8	42.0
4	52.5	47.7	47.7	..	45.3	45.8	..	..	45.4	42.9	42.1	42.5
5	..	47.6	49.0	46.5	45.0	..	..	..	..	43.3	44.7	41.2
6	..	49.8	49.5	46.5	45.3	..	..	44.2	45.6	44.6	42.1	41.5
7	49.7	48.4	..	47.1	46.4	..	45.7	..	45.5	46.4	42.5	42.3
8	49.0	45.4	49.5	47.4	45.1	46.7	..	..	46.8	46.0	44.3	42.1
9	50.1	48.5	49.6	48.2	45.3	..	46.4	45.7	45.5	..	43.4	42.4
10	50.0	50.1	49.9	47.1	45.3	45.9	45.8	45.6	46.6	..	42.9	42.4
11	50.9	49.6	48.8	..	45.3	..	..	45.7	46.5	43.9	43.4	42.8
12	48.9	48.2	48.6	47.4	46.1	..	47.0	46.1	45.1	43.5	43.0	43.6
13	49.8	49.7	48.5	47.5	44.4	..	47.4	..	45.1	41.9	42.8	42.4
14	49.0	49.6	49.2	47.3	..	..	46.9	46.8	45.6	42.7	45.5	..
15	..	49.2	49.1	46.6	46.2	45.2	47.5	..	44.3	..	42.6	41.8
16	48.8	49.0	49.4	45.8	45.9	47.9	..	47.2	45.5	42.0	42.1	41.9
17	48.7	49.1	48.7	46.4	44.7	..	46.2	46.4	..	44.7	43.1	..
18	48.9	47.3	48.4	..	46.0	..	..	45.8	..	43.6	42.3	41.7
19	48.1	49.6	48.9	46.4	45.6	..	48.0	..	..	43.5	42.6	..
20	48.8	49.5	47.9	46.6	46.1	..	47.6	46.2	43.7	..	42.1	40.3
21	48.8	47.6	..	45.8	..	47.2	47.8	46.4	44.7	43.9	41.1	41.6
22	..	47.3	47.1	..	44.4	47.7	47.1	46.6	44.6	42.6	41.7	41.5
23	48.2	47.6	46.3	46.0	44.6	47.8	47.1	..	40.6	43.7	39.5	41.3
24	..	48.0	47.3	..	44.2	46.2	47.4	46.8	43.4	43.5	42.6	42.3
25	49.3	..	47.4	..	45.8	46.7	..	46.0	44.9	42.9	41.9	41.6
26	50.7	47.0	46.9	..	46.5	46.5	46.8	45.9	..	43.3	42.7	43.1
27	48.8	47.5	46.1	45.9	46.0	46.9	47.3	45.5	..	44.0	43.0	43.8
28	48.4	48.6	46.8	45.5	45.2	46.3	..	..	..	..	42.1	41.3
29	48.7		45.9	50.1	47.4	..	..	46.3	43.6	..	42.1	41.1
30	49.4		..	..	47.2	46.2	47.0	45.9	42.5	..	42.9	41.7
31	..		46.2		..		46.3	45.9		43.3		40.9

TABLE II.—MEAN WESTERLY DECLINATION of the MAGNET in each MONTH, as deduced from the Mean of the MEAN HOURLY DETERMINATIONS in each MONTH (Table IV); and MEAN WESTERLY DECLINATION in each YEAR, as deduced from the Mean of the MEAN MONTHLY DETERMINATIONS: showing the MONTHLY and ANNUAL PROGRESS of SECULAR VARIATION.

Month.	1858.	1859.	1860.	1861.	1862.	1863.	Mean of Years.	Mean corrected for progressive Annual Change, viz., 9′·2.
	° ′	° ′	° ′	° ′	° ′	° ′	° ′	° ′
January......	21. 33·9	21. 26·7	21. 15·0	21. 10·6	20. 58·8	20. 49·9	21. 12·5	21. 12·5
February.....	21. 33·4	21. 27·1	21. 13·8	21. 9·9	20. 58·4	20. 48·4	21. 11·8	12·6
March	21. 33·5	21. 27·4	21. 14·1	21. 14·0	20. 57·8	20. 48·1	21. 12·5	14·0
April	21. 33·3	21. 26·4	21. 14·7	21. 8·2	20. 50·4	20. 46·5	21. 9·9	12·2
May..........	21. 30·1	21. 22·3	21. 17·2	21. 5·1	20. 49·7	20. 45·7	21. 8·4	11·5
June	21. 29·2	21. 24·3	21. 15·5	21. 1·5	20. 52·5	20. 46·2	21. 8·2	12·0
July..........	21. 28·5	21. 24·5	21. 15·5	21. 5·3	20. 50·4	20. 46·7	21. 8·5	13·1
August	21. 28·5	21. 22·7	21. 14·9	21. 5·1	20. 52·3	20. 46·0	21. 8·2	13·6
September....	21. 27·6	21. 22·3	21. 12·9	21. 2·5	20. 51·1	20. 44·8	21. 6·9	13·0
October......	21. 26·4	21. 20·0	21. 13·5	21. 1·7	20. 50·4	20. 43·7	21. 6·0	12·9
November....	21. 30·1	21. 19·5	21. 12·2	21. 1·5	20. 49·9	20. 42·7	21. 6·0	13·7
December	21. 29·3	21. 18·8	21. 11·9	21. 0·8	20. 50·0	20. 42·0	21. 5·5	13·9
Means	21. 30·3	21. 23·5	21. 14·3	21. 5·5	20. 52·6	20. 45·9	..	..

TABLE III.—MONTHLY MEANS of all the actual DIURNAL RANGES of the WESTERN DECLINATION, as deduced from the Twenty-four Hourly Measures of each day (the Hours of extreme Readings not being in all cases the same): showing the MONTHLY and ANNUAL CHANGES of ACTUAL DIURNAL RANGE.

Month.	1858.	1859.	1860.	1861.	1862.	1863.	Mean for each Month through the whole Period of Years.
	′	′	′	′	′	′	′
January	8·1	8·9	8·9	10·1	11·0	13·6	10·1
February	10·6	11·4	10·4	12·6	9·8	12·4	11·2
March	12·8	15·8	16·5	15·8	11·7	14·7	14·5
April	14·1	17·2	15·3	16·4	13·4	14·9	15·2
May	12·4	17·0	14·3	13·4	13·3	13·1	13·9
June	11·9	14·8	15·9	13·8	14·1	12·1	14·1
July	13·2	13·4	16·2	12·4	11·2	12·3	13·1
August	12·7	15·8	16·3	16·8	12·1	13·1	14·5
September	15·9	17·3	15·5	13·3	12·3	15·5	15·0
October	15·2	15·1	13·2	12·3	13·6	13·5	13·8
November	9·3	9·8	10·8	10·0	10·7	12·1	10·5
December	9·7	8·3	10·0	10·6	11·3	11·4	10·2
Means	12·2	13·7	13·6	13·1	12·0	13·2	13·0

TABLE IV.—MEAN MONTHLY DETERMINATION of the WESTERN DECLINATION of the MAGNET at every HOUR of the DAY; obtained by taking the MEAN of all the DETERMINATIONS at the same HOUR of the DAY through the MONTH.

Hour. Greenwich Mean Solar Time.	1858. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°
	′	′	′	′	′	′	′	′	′	′	′	′
0	36·9	37·3	39·5	39·9	35·9	33·8	33·2	34·6	35·4	33·1	34·3	33·0
1	37·5	38·0	40·4	41·3	36·3	34·2	34·7	35·3	35·7	33·8	34·5	32·8
2	36·8	37·7	39·8	40·4	35·8	34·4	35·4	35·0	34·7	33·5	33·7	32·7
3	35·3	36·1	37·8	38·2	34·5	33·1	34·7	33·5	32·5	31·3	32·2	31·6
4	34·0	34·2	35·2	36·1	32·8	31·9	32·8	31·2	30·0	29·1	30·8	30·4
5	33·6	33·2	33·4	33·9	31·4	30·3	31·2	29·2	28·2	26·8	29·6	29·7
6	33·5	32·5	31·9	32·6	30·0	29·0	29·3	27·8	26·6	25·6	29·2	29·1
7	33·2	31·9	30·4	32·0	29·1	28·6	28·4	27·0	26·2	25·0	29·2	28·2
8	32·5	31·3	30·1	31·4	28·8	27·9	27·8	27·2	25·8	23·5	28·4	27·2
9	32·0	30·6	30·7	31·5	28·9	27·9	27·6	27·4	25·2	22·6	28·0	26·8
10	31·9	30·6	31·3	31·1	28·9	28·0	27·3	26·9	24·4	22·3	28·1	26·8
11	32·3	31·0	31·1	30·4	28·3	28·1	26·8	26·6	24·6	22·7	27·7	27·3
12	32·9	31·5	32·1	30·6	28·5	28·3	26·7	27·0	25·4	23·0	28·0	27·4
13	33·6	32·5	32·3	31·4	28·9	27·9	26·8	27·6	25·7	23·1	28·7	28·0
14	33·6	32·8	32·3	31·9	28·5	27·9	26·9	27·2	25·7	24·8	29·4	28·2
15	33·6	33·0	32·4	31·8	28·4	27·9	27·6	26·5	25·5	25·1	29·9	29·0
16	33·7	33·3	32·6	31·7	28·0	27·7	26·3	26·2	25·3	25·6	30·1	28·8
17	33·6	33·4	32·8	31·2	27·4	27·1	25·0	25·7	25·6	26·5	29·8	29·1
18	33·5	33·2	32·7	30·8	26·7	26·8	24·3	24·7	25·3	26·5	29·6	29·2
19	33·4	33·0	32·0	30·1	26·0	26·2	24·2	24·2	24·3	25·2	29·6	29·2
20	33·0	32·4	31·0	29·5	26·3	25·9	24·5	24·8	23·9	23·7	29·3	29·0
21	33·1	32·4	31·5	30·6	28·0	26·7	25·5	26·8	25·4	24·2	29·4	28·6
22	34·4	34·1	33·7	33·6	30·7	28·6	27·5	29·8	29·2	26·1	30·5	29·8
23	36·1	36·0	36·6	36·7	34·0	32·0	30·3	32·9	33·0	30·4	33·0	31·9

Hour. Greenwich Mean Solar Time.	1859. January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°
	′	′	′	′	′	′	′	′	′	′	′	′
0	30·8	31·9	34·2	33·9	29·7	30·3	28·9	29·5	29·9	25·9	23·7	20·9
1	30·9	33·2	35·6	35·9	30·7	31·1	30·8	31·1	31·3	27·5	24·0	21·8
2	30·4	33·0	35·0	35·5	29·9	31·2	30·8	30·8	29·9	27·3	23·7	21·8
3	28·9	31·7	33·6	32·9	28·3	29·9	29·3	28·5	28·3	25·7	22·2	21·2
4	27·6	29·8	31·0	30·2	26·1	27·8	27·5	26·0	26·1	23·1	20·9	20·4
5	27·0	28·8	28·6	27·6	24·0	25·8	25·7	23·3	23·2	21·6	19·8	19·4
6	26·5	26·9	26·4	25·6	22·6	24·5	24·5	21·2	21·5	20·2	19·1	19·0
7	26·0	26·1	25·6	24·7	21·9	23·7	23·7	21·2	20·8	19·5	18·4	18·6
8	25·0	25·2	25·2	24·7	21·7	23·7	23·4	21·2	20·2	18·3	18·0	17·9
9	24·9	24·3	25·1	24·8	21·4	23·7	23·7	21·5	19·6	17·3	17·3	15·9
10	24·8	24·1	24·5	24·3	21·4	24·1	23·7	21·3	18·6	17·1	17·1	15·7
11	24·7	23·7	24·6	24·7	20·9	24·1	24·3	21·4	19·0	16·4	17·1	15·8
12	25·1	24·5	24·3	24·8	20·8	23·9	24·4	21·3	19·9	16·3	17·3	16·6
13	25·4	25·0	24·7	25·5	21·1	23·7	24·2	21·7	19·6	17·6	18·8	17·9
14	25·6	25·3	25·7	25·0	20·8	23·3	23·9	21·6	19·6	17·8	18·9	17·6
15	25·8	26·4	25·6	24·9	20·1	22·6	23·3	21·2	19·8	18·3	19·0	18·6
16	25·9	26·7	25·2	25·0	19·4	22·1	22·7	21·3	20·5	19·0	19·2	19·1
17	25·8	26·4	25·2	24·9	18·3	20·4	21·3	19·9	20·5	18·6	19·7	19·3
18	25·9	26·0	25·6	23·4	17·1	18·8	20·3	18·9	19·9	18·6	19·4	19·3
19	25·9	26·0	25·3	20·9	16·1	17·7	19·3	17·5	19·3	17·7	19·4	18·2
20	25·8	25·3	24·0	19·5	16·0	18·6	19·4	16·7	18·6	16·6	18·4	18·1
21	26·2	24·8	24·2	21·2	18·1	20·5	21·2	19·0	20·0	17·2	17·1	17·9
22	27·3	26·4	27·1	25·2	21·9	23·9	23·6	22·4	23·0	19·7	18·5	19·0
23	29·2	28·7	31·0	29·7	26·2	28·3	27·0	26·4	26·7	23·7	22·1	20·7

TABLE IV.—MEAN MONTHLY DETERMINATION of the WESTERN DECLINATION of the MAGNET at every HOUR of the DAY—*concluded.*

1860.

Hour. Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°
	′	′	′	′	′	′	′	′	′	′	′	′
0	18.6	17.5	22.9	21.2	24.4	22.6	22.4	23.4	20.1	20.0	16.5	15.7
1	18.5	18.2	24.3	23.0	24.2	23.7	23.6	24.7	20.5	20.8	17.6	15.9
2	18.5	18.7	23.0	21.8	23.5	23.2	23.3	23.5	19.3	20.4	17.7	16.2
3	17.5	17.1	20.1	19.6	21.6	21.6	21.7	20.7	16.9	18.4	16.8	14.9
4	16.3	15.7	16.5	17.0	19.3	19.1	19.0	17.8	14.1	16.2	15.0	14.3
5	15.7	15.0	14.7	14.6	17.4	16.8	16.7	14.7	12.8	14.5	14.0	13.1
6	15.3	14.0	13.6	13.4	16.1	15.3	14.9	13.3	12.1	13.2	12.5	12.6
7	15.7	13.5	12.7	13.1	15.4	14.5	14.7	13.0	11.1	12.3	11.7	11.3
8	13.8	12.9	11.3	13.0	15.8	14.6	14.5	13.0	11.6	11.9	11.1	10.2
9	12.9	11.9	11.4	13.0	16.1	14.4	14.4	13.4	11.0	11.1	10.7	9.8
10	12.9	11.3	11.4	13.7	16.2	14.6	14.3	12.8	11.0	11.0	10.2	9.2
11	12.9	11.4	11.4	12.6	15.8	14.7	13.7	12.7	10.8	11.3	9.8	9.5
12	13.2	12.1	12.8	12.6	15.5	14.2	13.3	12.8	11.3	11.5	9.6	9.9
13	14.1	12.0	12.7	13.0	15.9	14.5	13.5	12.5	10.7	11.4	10.1	9.6
14	13.8	13.2	12.1	13.6	16.0	14.2	13.9	12.6	10.9	11.5	10.7	9.9
15	13.8	13.1	13.4	13.9	15.8	13.7	13.3	12.5	10.8	11.9	10.6	10.5
16	14.2	13.0	11.6	14.0	15.5	12.6	12.6	11.7	10.4	12.0	10.4	10.5
17	14.2	13.2	11.4	13.4	14.4	11.2	11.5	11.0	10.3	12.0	10.7	10.8
18	14.3	13.3	11.3	12.3	12.9	10.2	10.5	10.4	10.4	11.8	10.5	10.8
19	14.7	13.0	10.1	10.9	12.2	9.2	10.2	9.8	10.2	11.1	10.2	10.9
20	14.1	12.4	9.6	10.0	12.6	10.2	11.2	10.7	9.1	10.0	9.9	10.8
21	13.5	11.8	8.8	11.0	14.7	12.4	12.8	13.0	11.0	10.4	9.7	11.3
22	14.5	12.8	12.7	13.9	18.2	15.5	15.6	16.4	14.3	12.6	11.4	13.1
23	16.2	14.8	17.7	18.1	22.4	19.6	19.5	21.1	17.7	16.7	14.5	15.1

1861.

Hour. Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°
	′	′	′	′	′	′	′	′	′	′	′	′
0	74.7	74.6	80.2	75.2	71.4	65.9	70.0	73.4	69.5	66.7	65.8	64.3
1	74.4	76.3	81.5	76.8	72.1	67.8	70.7	73.6	69.8	67.5	65.9	64.7
2	73.6	75.9	81.3	76.5	71.8	68.3	71.4	72.3	68.4	66.8	65.2	63.9
3	72.4	74.7	80.4	74.3	70.4	67.6	70.5	69.4	66.3	64.7	64.2	63.1
4	71.3	72.7	78.6	72.0	68.6	65.8	68.9	66.7	64.0	63.2	62.5	61.8
5	70.6	71.0	76.2	69.8	67.0	64.3	67.0	64.7	62.5	61.8	61.6	60.3
6	70.4	69.9	74.7	67.3	65.3	62.2	65.6	63.1	61.6	60.6	61.0	60.4
7	69.1	69.1	73.6	66.2	64.2	60.7	64.6	62.3	60.4	60.3	60.0	60.3
8	68.5	67.7	72.8	66.1	63.5	60.3	64.6	62.5	59.9	59.8	59.4	59.3
9	68.3	66.9	72.2	66.4	63.7	60.7	64.5	63.3	59.7	58.7	58.5	57.8
10	67.2	66.8	71.9	66.1	63.3	60.1	64.7	63.3	59.4	59.0	58.8	57.0
11	68.2	66.4	71.9	66.1	63.2	60.0	64.1	63.6	59.5	58.8	59.4	57.6
12	69.0	66.4	71.3	66.6	64.0	60.0	64.4	62.7	60.1	59.3	59.7	58.5
13	68.9	67.7	72.1	66.5	64.1	60.7	64.4	63.1	60.6	59.8	60.5	59.7
14	69.8	68.5	72.1	66.7	64.1	60.8	64.3	63.5	60.6	60.4	60.7	60.5
15	70.5	68.7	71.3	67.3	63.6	60.3	64.3	63.6	60.2	60.4	61.3	60.8
16	70.2	68.5	71.8	66.9	63.4	59.4	63.4	62.5	60.3	61.3	61.5	61.4
17	70.1	69.2	71.5	66.8	62.8	58.5	62.3	62.0	60.5	61.4	61.4	61.2
18	70.2	69.4	71.0	66.2	62.0	57.1	61.1	61.7	60.1	61.5	61.2	61.0
19	70.5	69.1	69.8	64.2	60.6	56.0	60.5	61.0	59.7	61.1	61.4	60.7
20	70.4	68.3	68.9	62.2	60.2	56.5	60.6	61.7	59.8	59.7	60.8	60.6
21	70.8	67.5	70.4	63.1	61.5	58.1	62.4	64.1	62.5	60.0	60.2	60.1
22	71.8	69.0	73.7	66.5	64.4	60.7	65.0	67.8	65.7	61.9	61.4	60.9
23	73.7	72.2	77.1	71.1	68.2	63.6	68.2	71.1	68.2	65.2	64.2	63.4

1862.

	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°
0	62.3	63.0	63.7	56.9	55.9	57.8	52.4	56.8	56.8	55.8	52.8	52.6
1	63.1	63.4	63.9	58.0	56.1	59.5	53.6	57.5	56.7	55.6	52.6	52.6
2	62.8	62.8	62.7	57.3	54.8	59.2	54.2	56.8	55.4	54.7	52.1	52.3
3	61.7	61.2	61.1	54.9	53.7	58.1	53.7	54.8	53.9	53.1	51.2	51.9
4	60.3	60.0	59.2	52.7	52.2	56.7	53.3	53.8	52.5	52.0	50.7	50.5
5	59.8	59.8	57.8	50.9	50.6	54.6	52.2	52.3	51.1	51.0	50.0	50.0
6	59.3	59.5	57.2	49.4	49.2	53.0	51.7	51.2	50.3	49.7	49.3	49.8
7	58.6	58.5	56.3	48.2	47.9	51.9	51.5	51.6	49.8	48.7	48.6	49.1
8	57.8	57.3	56.1	48.4	47.5	51.7	51.5	51.7	49.3	48.4	47.4	48.4
9	56.8	56.4	55.5	47.9	47.6	51.8	51.9	51.5	49.4	47.8	47.0	48.3
10	56.4	55.7	55.5	48.0	47.3	51.6	51.7	51.6	49.2	47.2	47.6	48.3
11	55.9	55.5	56.2	47.8	48.1	51.6	51.0	51.2	50.1	47.1	48.0	48.5
12	55.6	55.4	55.5	47.7	48.4	51.7	49.9	51.0	49.7	48.0	47.7	48.4
13	56.0	56.1	55.4	48.4	48.9	51.6	49.8	50.9	50.1	49.4	49.4	48.3
14	57.1	56.3	56.1	49.1	48.7	51.2	50.7	50.9	49.9	49.7	49.8	49.2
15	57.1	56.5	55.9	48.9	47.2	50.7	50.0	51.4	49.7	49.2	49.9	49.9
16	57.8	56.9	56.2	48.4	47.0	49.6	49.4	50.6	49.8	49.5	49.7	50.2
17	58.4	57.0	56.1	48.3	46.2	48.8	48.2	50.3	49.6	50.4	50.2	49.9
18	58.7	57.2	56.0	47.5	46.5	48.2	46.9	50.3	49.0	50.5	50.1	50.0
19	59.1	57.3	55.9	46.8	46.5	47.4	46.3	49.9	47.9	49.4	50.4	50.5
20	58.6	57.2	55.1	46.7	47.3	47.6	46.0	49.7	47.6	48.4	50.3	50.2
21	57.8	58.0	56.7	48.7	49.3	49.1	46.4	50.5	49.7	49.2	49.8	49.5
22	59.4	59.8	59.6	52.5	51.3	52.2	47.5	52.6	52.5	51.6	50.5	49.9
23	61.5	61.7	62.8	55.2	54.0	55.2	50.3	55.2	55.5	54.3	51.3	51.2

1863.

	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°
0	54.1	53.1	55.2	53.2	51.6	51.0	51.5	51.9	51.6	49.3	46.7	45.4
1	54.6	53.5	55.4	54.1	52.3	52.2	52.3	52.9	51.7	49.7	46.9	45.7
2	54.0	53.1	54.7	53.1	52.0	52.3	52.4	51.9	50.7	48.6	46.1	44.8
3	51.9	51.9	52.9	51.1	50.8	51.3	50.8	50.3	48.8	46.4	45.3	43.7
4	49.9	50.2	50.7	49.5	49.1	49.8	49.5	48.1	46.7	44.6	44.3	42.4
5	49.6	48.8	48.9	47.7	47.4	48.0	47.8	45.8	44.5	43.5	41.7	41.9
6	49.2	46.9	47.0	46.2	46.0	46.6	46.7	44.5	43.6	41.8	42.6	41.1
7	48.6	46.9	46.3	45.9	45.3	45.8	45.5	44.2	41.9	41.5	41.6	40.3
8	47.6	47.0	46.7	45.0	44.7	45.6	45.9	43.9	41.8	41.2	39.2	39.3
9	46.8	46.2	45.8	44.8	44.4	45.3	45.8	43.3	41.3	40.2	38.8	38.5
10	45.5	45.2	46.0	43.9	44.3	45.2	45.3	43.6	41.8	40.3	38.9	38.1
11	46.9	45.2	45.6	43.8	44.1	45.2	45.2	43.8	41.7	40.5	39.5	38.8
12	47.1	45.2	45.3	44.0	44.0	44.5	44.9	44.1	41.6	41.5	40.2	39.7
13	48.9	45.7	45.4	43.1	43.4	44.9	44.9	45.0	41.6	42.2	40.4	40.2
14	49.8	46.9	45.6	43.2	43.9	45.0	44.8	45.0	43.7	42.4	41.2	41.1
15	49.3	47.2	45.6	43.7	44.0	45.3	46.0	44.6	43.4	43.2	42.5	42.0
16	49.8	48.0	45.8	44.5	43.1	44.5	45.6	44.6	43.3	43.4	42.7	42.1
17	50.0	48.0	45.8	44.8	42.0	43.1	44.4	44.5	43.3	44.1	43.0	42.8
18	50.5	48.3	45.9	44.9	41.6	42.3	43.7	44.0	43.5	44.2	43.0	43.0
19	50.2	48.0	45.7	43.7	41.5	41.8	43.4	44.1	43.8	43.2	43.4	43.5
20	49.7	47.7	45.2	43.3	41.7	42.0	43.1	43.6	43.8	42.3	42.9	43.2
21	50.3	47.5	46.3	44.7	43.1	43.2	44.5	44.4	44.4	42.3	42.8	42.7
22	51.1	49.0	49.2	48.0	46.4	46.0	47.0	47.3	47.1	44.8	43.9	43.2
23	52.8	51.1	53.0	50.8	49.9	49.0	49.5	49.4	50.1	47.7	46.0	44.7

TABLE V.—MEAN, through the RANGE of YEARS, of the MONTHLY MEAN DETERMINATIONS of the DIURNAL INEQUALITY of DECLINATION; exhibited separately for the DIFFERENT MONTHS.

1858 to 1863.

Hour. Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
	′	′	′	′	′	′	′	′	′	′	′	′
0	+ 3·8	+ 4·4	+ 6·8	+ 6·8	+ 6·5	+ 5·4	+ 4·6	+ 6·7	+ 7·0	+ 5·9	+ 4·0	+ 3·2
1	+ 4·0	+ 5·3	+ 7·7	+ 8·3	+ 6·9	+ 6·6	+ 5·8	+ 7·6	+ 7·4	+ 6·5	+ 4·3	+ 3·5
2	+ 3·5	+ 5·0	+ 6·9	+ 7·5	+ 6·3	+ 6·6	+ 6·1	+ 6·8	+ 6·2	+ 5·9	+ 3·8	+ 3·2
3	+ 2·1	+ 3·6	+ 5·2	+ 5·3	+ 4·9	+ 5·4	+ 5·0	+ 4·6	+ 4·3	+ 4·0	+ 2·7	+ 2·3
4	+ 0·8	+ 1·9	+ 2·7	+ 3·0	+ 3·0	+ 3·7	+ 3·4	+ 2·4	+ 2·0	+ 2·1	+ 1·4	+ 1·2
5	+ 0·2	+ 0·9	+ 0·8	+ 0·8	+ 1·3	+ 1·8	+ 1·6	+ 0·1	+ 0·2	+ 0·6	+ 0·1	+ 0·3
6	− 0·1	− 0·2	− 0·7	− 0·8	− 0·2	+ 0·2	+ 0·3	− 1·4	− 0·9	− 0·8	− 0·4	− 0·1
7	− 0·6	− 0·8	− 1·7	− 1·6	− 1·1	− 0·7	− 0·4	− 1·7	− 1·8	− 1·4	− 1·1	− 0·8
8	− 1·6	− 1·6	− 2·1	− 1·8	− 1·4	− 0·9	− 0·5	− 1·7	− 2·1	− 2·1	− 2·1	− 1·8
9	− 2·2	− 2·5	− 2·4	− 1·9	− 1·3	− 0·9	− 0·5	− 1·5	− 2·5	− 3·0	− 2·6	− 2·6
10	− 2·7	− 2·9	− 2·4	− 2·1	− 1·5	− 0·9	− 0·7	− 1·7	− 2·8	− 3·1	− 2·5	− 3·0
11	− 2·3	− 3·0	− 2·4	− 2·4	− 1·6	− 0·9	− 1·0	− 1·7	− 2·6	− 3·2	− 2·4	− 2·6
12	− 2·0	− 2·7	− 2·3	− 2·2	− 1·5	− 1·1	− 1·2	− 1·8	− 2·2	− 2·7	− 2·2	− 2·1
13	− 1·3	− 2·0	− 2·1	− 1·9	− 1·3	− 1·0	− 1·2	− 1·5	− 2·2	− 2·0	− 1·3	− 1·5
14	− 0·9	− 1·3	− 1·8	− 1·7	− 1·4	− 1·1	− 1·1	− 1·5	− 1·8	− 1·5	− 0·9	− 1·1
15	− 0·8	− 1·0	− 1·8	− 1·5	− 1·8	− 1·5	− 1·1	− 1·6	− 2·0	− 1·3	− 0·5	− 0·3
16	− 0·6	− 0·8	− 2·0	− 1·5	− 2·3	− 2·2	− 1·8	− 2·1	− 1·9	− 0·8	− 0·4	− 0·1
17	− 0·5	− 0·6	− 2·0	− 1·7	− 3·2	− 3·4	− 3·0	− 2·7	− 1·9	− 0·5	− 0·2	+ 0·1
18	− 0·3	− 0·6	− 2·1	− 2·4	− 3·9	− 4·3	− 4·0	− 3·3	− 2·2	− 0·4	− 0·4	+ 0·1
19	− 0·2	− 0·8	− 2·7	− 3·8	− 4·5	− 5·2	− 4·5	− 3·8	− 2·7	− 1·3	− 0·3	0·0
20	− 0·6	− 1·3	− 3·5	− 4·7	− 4·3	− 4·7	− 4·4	− 3·7	− 3·1	− 2·5	− 0·7	− 0·2
21	− 0·5	− 1·5	− 2·8	− 3·4	− 2·6	− 3·2	− 3·0	− 2·0	− 1·4	− 2·1	− 1·2	− 0·5
22	+ 0·6	0·0	+ 0·2	0·0	+ 0·5	− 0·4	− 0·8	+ 1·1	+ 1·8	+ 0·2	+ 0·1	+ 0·5
23	+ 2·4	+ 2·3	+ 3·9	+ 3·7	+ 4·1	+ 3·1	+ 2·3	+ 4·4	+ 5·0	+ 3·7	+ 2·5	+ 2·4

TABLE VI.—MEAN, through the RANGE of MONTHS, of the MONTHLY MEAN DETERMINATIONS of the DIURNAL INEQUALITY of DECLINATION; exhibited separately for the DIFFERENT YEARS.

January to December.

Hour. Greenwich Mean Solar Time.	1858.	1859.	1860.	1861.	1862.	1863.	Mean of Years.	Equivalent in Terms of Horizontal Force.
	′	′	′	′	′	′	′	
0	+ 5·3	+ 5·6	+ 6·2	+ 5·5	+ 4·6	+ 5·3	+ 5·42	+ 0·00157
1	+ 5·9	+ 6·8	+ 7·0	+ 6·2	+ 5·1	+ 5·9	+ 6·15	+ 178
2	+ 5·5	+ 6·4	+ 6·5	+ 5·8	+ 4·5	+ 5·3	+ 5·67	+ 164
3	+ 3·9	+ 4·9	+ 4·6	+ 4·3	+ 3·1	+ 3·7	+ 4·08	+ 118
4	+ 2·1	+ 2·9	+ 2·4	+ 2·5	+ 1·9	+ 2·0	+ 2·30	+ 67
5	+ 0·6	+ 1·1	+ 0·7	+ 0·9	+ 0·7	+ 0·4	+ 0·73	+ 21
6	− 0·6	− 0·3	− 0·4	− 0·3	− 0·2	− 0·7	− 0·42	− 12
7	− 1·2	− 1·0	− 1·0	− 1·3	− 0·9	− 1·4	− 1·13	− 33
8	− 1·8	− 1·5	− 1·5	− 1·8	− 1·4	− 1·9	− 1·65	− 48
9	− 2·1	− 1·9	− 1·8	− 2·1	− 1·7	− 2·5	− 2·02	− 59
10	− 2·2	− 2·1	− 1·9	− 2·4	− 1·8	− 2·7	− 2·18	− 63
11	− 2·2	− 2·1	− 2·1	− 2·3	− 1·7	− 2·5	− 2·15	− 62
12	− 1·9	− 1·9	− 1·9	− 2·0	− 1·9	− 2·4	− 2·00	− 58
13	− 1·4	− 1·4	− 1·8	− 1·5	− 1·5	− 2·1	− 1·62	− 47
14	− 1·2	− 1·4	− 1·6	− 1·2	− 1·1	− 1·5	− 1·33	− 39
15	− 1·1	− 1·4	− 1·5	− 1·2	− 1·3	− 1·2	− 1·28	− 37
16	− 1·2	− 1·3	− 1·9	− 1·3	− 1·4	− 1·1	− 1·37	− 40
17	− 1·4	− 1·8	− 2·3	− 1·5	− 1·5	− 1·2	− 1·62	− 47
18	− 1·7	− 2·4	− 2·7	− 2·0	− 1·7	− 1·3	− 1·97	− 57
19	− 2·2	− 3·2	− 3·2	− 2·6	− 2·0	− 1·5	− 2·45	− 71
20	− 2·5	− 3·7	− 3·4	− 3·0	− 2·3	− 1·9	− 2·80	− 81
21	− 1·8	− 2·9	− 2·6	− 2·1	− 1·4	− 1·2	− 2·00	− 58
22	+ 0·3	− 0·3	0·0	+ 0·2	+ 0·6	+ 1·0	+ 0·30	+ 9
23	+ 3·3	+ 3·1	+ 3·5	+ 3·3	+ 3·0	+ 3·6	+ 3·30	+ 96

REDUCTIONS OF MAGNETIC HORIZONTAL FORCE REFERRED TO THE SUN'S PLACE.

TABLE VII.—MEAN HORIZONTAL MAGNETIC FORCE (diminished by a Constant of 0·8850 nearly) on each ASTRONOMICAL DAY, as deduced from the Mean of Twenty-four Hourly Measures of Ordinates of the Photographic Register on that Day, each corrected for Temperature.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
						1858.						
1	..	0·1247	..	0·1253	0·1276	0·1305	..	0·1212	0·1228	0·1243	0·1253	0·1241
2	..	·1240	0·1222	·1262	·1274	·1293	..	·1217	·1233	·1245	·1264	·1246
3	0·1225	·1233	·1226	..	·1265	..	..	·1216	·1233	·1246	·1255	·1247
4	..	..	·1226	·1239	·1268	·1285	0·1207	·1217	·1234	·1254	·1257	..
5	..	·1232	·1223	·1238	·1261	..	·1209	·1211	·1227	·1256	·1262	·1220
6	..	·1225	·1229	·1239	..	·1248	·1207	..	·1227	·1246	·1252	·1236
7	..	·1232	·1240	·1239	·1273	·1250	·1212	·1212	·1232	·1245	·1252	·1239
8	..	·1224	·1240	·1250	·1276	..	·1214	·1217	·1224	·1248	·1250	·1240
9	·1219	..	·1234	..	·1279	..	·1214	·1223	·1224	·1244	·1252	·1245
10	..	·1223	·1231	·1207	·1286	·1228	·1211	·1227	·1226	·1250	·1253	·1238
11	..	·1218	..	·1218	·1293	·1234	..	·1225	..	·1248	·1250	·1235
12	·1224	·1223	·1227	·1223	..	..	·1213	·1215	·1217	·1250	..	·1237
13	..	·1224	·1208	·1226	·1243	..	·1213	·1218	·1226	·1246	·1241	·1227
14	·1232	·1228	..	·1230	·1248	..	·1196	·1242	·1222	·1245	·1243	·1235
15	..	·1211	·1215	·1250	·1225	·1264	·1180	·1232	·1225	·1247	·1229	·1241
16	..	·1204	·1216	·1263	·1236	·1288	·1227	·1225	·1227	·1236	·1230	·1249
17	·1231	·1202	·1221	·1262	·1241	..	·1200	·1215	·1234	·1237	..	·1259
18	·1226	·1223	·1228	·1252	·1250	·1271	·1201	·1229	·1235	·1240	·1227	·1250
19	·1226	·1228	·1225	·1258	·1275	·1254	·1205	·1227	..	·1229	·1223	·1251
20	..	·1228	·1231	·1273	·1279	·1263	·1204	·1226	·1229	·1236	·1232	·1252
21	..	·1235	·1240	·1265	·1299	·1263	·1212	..	·1227	·1234	·1239	·1249
22	·1247	·1235	·1239	·1291	·1306	·1287	·1217	·1223	·1226	·1239	·1237	·1241
23	·1254	·1231	·1250	·1304	..	..	..	·1225	·1226	·1238	·1244	..
24	·1262	·1235	·1254	·1315	·1276	·1261	·1219	·1222	·1241	·1247	·1238	·1233
25	..	·1243	·1278	·1313	·1263	·1279	·1217	·1219	..	·1252	·1236	·1249
26	·1250	·1243	·1280	·1292	·1277	·1289	·1209	·1213	·1244	·1255	·1226	·1251
27	·1248	·1245	·1271	·1275	·1265	·1324	·1219	·1218	·1246	..	·1237	·1246
28	·1246	·1247	·1256	·1262	·1271	·1329	·1213	·1216	·1251	·1246	·1247	·1246
29	·1239		·1252	·1259	·1264	·1319	·1202	·1226	·1246	·1249	·1241	·1248
30	·1239		·1271	·1274	..	·1309	·1204	·1222	·1235	..	·1244	·1248
31	·1240		·1269		..		..	..		·1254		·1246
						1859.						
1	..	0·1030	0·1015	0·1029	0·1015	0·1036	0·1073	0·1023	..	0·1022	0·1031	..
2	..	·1031	·1020	·1034	·1008	·1040	·1064	·1033	..	·1014	·1042	..
3	..	·1038	·1020	..	·1012	..	·1060	·1029	..	·1025	·1043	..
4	..	·1035	·1018	..	·1016	..	·1042	·1045	..	..	·1046	..
5	..	..	·1020	·1039	·1015	..	..	·1044	0·0989	·1026	·1047	..
6	..	·1037	·1027	..	·1029	..	..	·1042	·1013	·1030	·1046	..
7	..	·1042	·1026	·1016	·1033	·1030	·1059	·1036	·1015	·1038	·1047	..
8	0·1028	·1037	·1022	·1038	·1030	..	·1068	·1032	·1024	·1042	·1048	..
9	·1038	..	·1024	..	..	·1019	..	·1043	·1017	·1042	·1050	..
10	·1015	·1014	·1023	·1021	·1047	·1030	·1052	..	·1018	·1043	·1043	..
11	·1019	·1018	·1036	..	..	·1029	..	·1026	·1022	..	·1039	..
12	·1027	·1022	·1039	·1026	·1029	·1037	·1028	·1024	..	..	·1018	..
13	·1035	·1027	·1035	·1022	·1043	·1025	..	·1023	·1015	..	·1027	..
14	..	·1029	·1033	..	·1049	·1036	·1043	·1030	·1019	..	·1040	..
15	..	·1021	·1030	·1021	·1055	·1031	·1027	·1030	·1023	..	·1048	..
16	·1023	·1024	·1020	..	·1056	·1035	·1037	·1023	·1020	·1024	..	0·1032
17	·1028	·1023	·1021	·1032	·1049	·1036	·1025	..	·1014	..	..	..
18	·1024	·1029	·1009	·1023	·1041	·1035	..	·1031	·1022	..	·1036	..
19	·1031	..	·1016	·1013	..	·1047	·1035	..	..	·1011	·1034	..
20	·1035	·1041	·1031	·1021	..	..	..	·1021	..	·1004	·1043	·1036
21	·1031	·1034	·1020	..	..	·1053	..	·1029	·1038	·1005	..	·1034
22	..	..	·1020	..	·1030	·1042	·1029	·1033	·1042	·1027	·1030	·1041
23	·1051	..	·1030	..	..	·1050	·1027	·1033	·1046	·1044	·1032	·1038
24	·1034	·1025	·1016	·1029	..	·1067	..	..	·1021	·1051	·1035	·1038
25	·1030	·1030	·1016	·1030	·1039	·1066	..	·1034	·1030	·1048	·1037	·1039
26	·1031	·1028	·1010	·1021	..	·1059	·1020	·1039	..	·1044	·1036	..
27	·1032	·1030	·1020	·1017	..	·1056	·1029	·1032	·1026	·1054	·1038	..
28	·1033	·1022	·1021	·1008	..	·1066	..	..	·1017	..	·1036	·1034
29	·1032		·1023	..	·1031	·1053	·1018	..	..	·1033	·1033	·1037
30	·1040		·1027	·1009	·1026	·1069	·1017	·1010	..	·1046	·1032	·1027
31	·1035		·1027		..		..	·1015		..		·1034

TABLE VII.—MEAN HORIZONTAL MAGNETIC FORCE on each ASTRONOMICAL DAY, &c.—*continued.*

1860.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	..	..	..	0·0999	..	0·1103	..	0·1099	..	..	0·1103	0·1123
2	..	0·1019	..	..	..	..	..	..	..	0·1085	·1097	·1118
3	..	·1022	..	..	..	·1109	..	..	..	·1071	·1105	·1120
4	..	..	..	..	0·1015	·1100	..	..	0·1083	·1070	·1104	·1123
5	..	·1025	..	..	..	·1097	..	·1092	..	·1082	·1101	·1121
6	0·0996	·1032	..	·0999	..	..	0·1070	..	..	·1086	..	·1128
7	·1010	·1036	..	·0994	..	·1095	·1074	..	..	·1089	·1096	·1125
8	·1012	·1030	..	·1004	..	·1105	..	..	..	·1089	..	·1126
9	·1011	·1033	..	..	..	·1108	·1079	..	·1066	·1089	..	·1133
10	..	·1031	..	·0999	..	·1104	·1094	..	·1073	·1096	·1106	..
11	..	..	..	..	..	..	·1090	..	·1073	·1094	..	..
12	·1002	·1016	..	..	..	..	·1079	..	..	·1093	·1109	·1114
13	..	..	..	..	·1072	..	·1083	..	·1074	·1097	·1104	..
14	·1007	..	..	..	·1073	·1088	·1090	·1088	·1076	·1098	·1110	..
15	..	..	..	·1002	·1072	·1102	..	·1087	·1064	·1100	·1102	..
16	..	..	..	·0995	·1074	·1099	..	..	·1062	·1103	..	..
17	·1008	..	..	·0998	·1080	·1107	..	·1082	·1082	·1092	·1104	·1110
18	·1011	..	..	·1003	·1078	·1098	..	·1090	·1084	·1101	·1108	..
19	·1013	..	..	..	..	·1102	·1094	·1083	·1075	·1098	·1097	..
20	·1010	..	..	..	..	·1101	·1094	·1084	..	·1098	·1098	..
21	·1012	..	..	..	..	·1098	·1092	·1086	..	..	·1108	..
22	·1012	..	..	..	·1064	..	·1094	·1087	·1086	·1098	·1114	·1113
23	·1011	..	·1005	·1002	·1063	..	·1098	·1086	·1090	·1098	·1102	..
24	·1015	..	0·1006	·1008	·1066	·1103	·1092	·1086	..	·1097	..	..
25	·1010	..	·1006	..	·1066	·1097	·1088	·1085	·1087	..	·1113	..
26	..	..	·1009	·1003	·1067	·1093	·1092	·1080	·1079	·1103	·1108	..
27	·1011	..	..	..	..	·1104	·1098	·1083	·1080	..	·1106	..
28	·1003	..	..	..	·1075	·1102	..	·1090	·1089	·1096	·1103	..
29	·1011		..	..	·1077	..	·1098	·1086	·1089	..	..	..
30	·1006		..	..	..	..	·1093	·1081	..	·1100	·1108	·1120
31	·1011		..		..		·1087	·1081		·1109		..

1861.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	..	0·1050	..	0·1073	0·1076	..	..	..	..	..	0·1220	0·1206
2	..	·1055	0·1052	·1068	·1077	0·1284	..	0·1194	..	..	..	..
3	..	·1067	·1046	..	..	·1285	..	..	..	..	·1227	·1218
4	..	·1060	..	·1074	..	..	..	·1194	..	0·1211	..	..
5	..	·1066	..	..	·1070	·1297	..	·1190	..	..	..	..
6	0·1095	·1061	·1051	·1076	·1067	..	..	..	..	..	..	..
7	·1087	·1064	·1057	·1078	·1078	·1295	..	..	..	..	·1195	..
8	..	·1062	·1058	..	..	..	..	..	..	..	..	·1220
9	·1092	·1072	..	·1069	..	·1298	..	..	0·1187	..	..	..
10	·1102	·1061	·1042	..	..	·1301	..	..	..	..	..	..
11	·1076	..	..	..	..	..	..	..	..	..	..	·1216
12	·1075	..	·1057	..	·1131	..	..	..	..	·1206	..	..
13	·1068	..	..	..	..	..	..	..	·1209	..	..	·1219
14	..	·1071	..	..	..	..	..	..	·1200	·1208	..	..
15	..	·1065	·1051	·1049	..	..	..	..	·1183	..	·1222	..
16	..	..	·1065	..	..	..	..	..	·1191	·1215	..	..
17	·1074	·1061	..	..	..	..	..	..	..	·1216	..	..
18	·1070	·1064	..	·1059	..	..	..	..	..	..	..	·1228
19	..	·1057	..	..	..	..	..	..	..	·1222	..	..
20	·1070	·1069	..	·1064	..	..	..	..	..	..	·1218	..
21	..	·1054	·1053	..	..	..	..	..	..	·1221	·1217	..
22	·1053	·1045	·1059	..	..	..	..	·1189	·1205	..	..	..
23	·1053	·1055	..	·1069	..	..	..	·1189	..	..	..	..
24	..	·1059	·1063	..	·1279	..	..	..	..	·1199	..	..
25	..	·1056	·1063	..	·1277	..	..	..	·1195	..	..	..
26	..	..	..	..	·1282	..	..	..	·1198	·1212	..	..
27	·1044	·1035	·1059	..	·1276	..	..	..	·1199	·1221	·1220	..
28	·1054	·1037	·1061	..	·1278	..	..	..	·1202	..	·1222	..
29	·1053		..	·1069	·1274	..	..	..	·1201	·1218	..	·1226
30	·1059		..	·1072	..	..	..	..	·	·1219	·1211	..
31	..		·1072		·1276		..	..		·1226		..

TABLE VII.—MEAN HORIZONTAL MAGNETIC FORCE on each ASTRONOMICAL DAY, &c.—*concluded.*

1862.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	..	..	..	..	..	0·1220	..	..	..	0·1216	..	..
2	..	..	0·1232	..	..	·1220	0·1240	0·1234	..	·1198	..	0·1207
3	..	..	..	0·1285	..	·1224	·1245	·1231	..	..	..	·1213
4	..	..	..	..	..	..	·1239	..	..	..	..	·1208
5	..	0·1237	·1234	·1270	0·1265	..	..	·1209	..	·1218	0·1193	·1210
6	..	..	·1232	·1272	..	..	·1230	·1221	..	..	·1204	·1210
7	..	·1236	·1239	·1270	..	..	·1242	..	0·1238	..	·1211	·1209
8	..	..	..	·1272	..	·1251	·1242	·1231	·1238	·1215	..	..
9	..	..	·1246	..	..	..	·1243	·1233	·1233	..	·1204	·1211
10	..	..	..	..	..	..	·1255	..	·1242	·1217	·1208	..
11	..	·1234	·1254	·1261	..	·1264	..	·1233	·1235	..	..	..
12	..	·1228	·1246	..	..	·1254	..	·1233	·1246	·1215	..	..
13	..	·1226	·1257	·1262	..	·1255	..	·1226	·1250	·1224	·1215	..
14	0·1207	·1233	·1261	·1263	..	..	..	..	·1249	·1216	·1213	..
15	·1192	..	·1257	·1257	..	..	..	·1232	..	·1222	·1207	..
16	..	·1243	·1261	·1261	·1255	·1257	·1254	..	·1252	·1212	·1212	..
17	·1216	·1241	·1263	..	..	·1262	·1255	..	·1255	·1201	..	·1207
18	..	·1238	·1256	..	..	·1264	·1233	..	..	..	·1196	..
19	·1224	·1237	..	..	..	·1270	..	·1241	·1243	..	·1202	·1205
20	..	..	..	·1295	..	..	..	..	·1232	..	..	..
21	..	..	..	·1292	·1242	·1262	..	·1250	·1232	..	·1204	..
22	..	..	..	..	..	·1271	·1245	·1246	·1232	..	·1203	..
23	·1213	·1236	..	..	..	·1257	·1250	..	·1240	·1195	·1206	·1253
24	·1215	·1243	..	..	·1234	..	·1245	..	..	·1195	·1209	..
25	·1219	·1243	..	..	..	·1255	..	·1233	·1232	..	·1215	..
26	·1219	·1248	..	..	..	·1257	·1226	..	·1225	·1198	·1211	·1244
27	·1221	·1255	..	..	·1231	..	·1219	..	..	..	·1197	·1255
28	·1227	·1232	·1326	..	·1235	·1269	·1233	·1233	..	..	..	..
29	·1227		·1326	..	..	..	·1224	..	·1229	·1198	..	..
30	..		..	..	·1231	..	·1235	..	·1231	·1188	·1209	·1275
31	..		..		·1231		·1240	..		·1200		..

1863.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	..	0·1177	0·1222	0·1243	0·1251	..	0·1213	0·1225	..	0·1235	0·1244	0·1228
2	..	·1177	·1218	..	..	..	·1223	·1225	0·1241	·1236	·1241	·1224
3	..	·1216	·1231	·1242	·1259	..	..	·1225	·1239	·1236	·1240	..
4	0·1217	·1217	·1225	·1243	·1253	..	..	..	·1241	·1236	·1239	..
5	..	·1217	..	·1240	·1257	..	..	..	..	·1238	·1224	..
6	·1210	·1213	·1227	·1245	·1258	..	..	·1230	·1234	·1241	·1230	·1229
7	·1213	·1205	·1227	·1245	..	..	·1208	..	·1243	·1233	·1234	·1226
8	·1210	·1203	·1226	·1236	·1257	0·1212	..	..	·1244	·1221	·1234	·1228
9	·1218	..	..	·1221	..	..	..	·1229	·1227	..	..	·1227
10	·1213	·1218	·1234	·1230	..	..	..	·1232	·1227	..	..	·1228
11	·1213	·1217	·1236	..	·1264	..	..	·1235	..	·1227	..	·1232
12	·1215	·1220	·1238	·1234	·1253	·1214	..	·1252	·1232	·1233	..	..
13	·1219	·1223	·1235	·1247	·1246	..	..	..	·1233	..	..	..
14	·1224	·1224	·1240	·1246	·1246	..	·1251	..	..	·1236	..	..
15	..	..	·1234	·1233	·1247	..	..	..	·1232	..	..	..
16	·1230	..	·1242	·1231	·1247	..	..	·1224	..	·1241	·1233	·1237
17	·1236	·1215	·1234	·1233	·1246	..	..	·1229	..	·1238	·1238	..
18	·1227	·1203	·1239	..	·1246	..	..	..	·1234	·1240	·1241	·1236
19	·1215	·1212	·1241	·1236	·1248	..	·1245	..	·1236	·1241	·1238	·1236
20	·1210	·1209	·1232	·1236	·1250	..	..	·1242	·1236	..	·1240	..
21	·1207	·1211	..	..	·1242	·1193	..	·1241	·1240	·1237	·1239	..
22	·1202	·1193	..	..	·1249	·1194	..	..	·1240	·1240	·1243	·1231
23	·1212	·1215	·1229	·1242	·1259	..	·1233	·1240	·1218	..	..	·1230
24	..	·1214	·1220	..	·1261	·1214	·1235	·1255	..	..	·1239	..
25	·1198	..	·1221	·1238	·1264	..	·1236	·1256	·1232	·1244	·1229	·1237
26	·1183	·1207	·1230	..	·1252	..	·1236	·1248	..	·1245	..	..
27	·1183	·1222	·1232	·1243	·1252	..	..	·1245	..	·1240	·1243	..
28	·1181	·1220	·1233	·1250	·1255	·1205	..	..	..	·1242	..	..
29	·1165		·1225	·1255	·1255	..	..	·1234	..	..	·1243	..
30	·1175		·1227	·1246	·1258	..	·1231	..	·1239	..	·1230	..
31	..		·1238		..		·1225	..		·1249		..

TABLE VIII.—MEAN HORIZONTAL MAGNETIC FORCE (diminished by a Constant 0·8850 nearly) IN EACH MONTH, as deduced from the Mean of the MEAN HOURLY DETERMINATIONS in each Month (Table IX); and MEAN HORIZONTAL MAGNETIC FORCE in each Year, as deduced from the Mean of the MEAN MONTHLY DETERMINATIONS; all corrected for Temperature: showing the apparent Monthly Change of Horizontal Force in each Year.

Month.	1858.	1859.	1860.	1861.	1862.	1863.	Mean for the Four Years 1858, 1859, 1862, and 1863.	Mean, corrected for Secular Variation, 0·0017 annually.
January	0·1236	0·1031	0·1008	0·1074	0·1215	0·1207	0·1172	0·1172
February	·1229	·1029	·1023	·1058	·1235	·1211	·1176	·1175
March	·1239	·1023	·1000	·1057	·1261	·1230	·1188	·1185
April	·1258	·1024	·1001	·1071	·1279	·1240	·1200	·1196
May	·1269	·1033	·1064	·1175	·1248	·1253	·1201	·1195
June	·1274	·1043	·1100	·1291	·1250	·1216	·1196	·1189
July	·1212	·1038	·1088	..	·1241	·1231	·1181	·1172
August	·1222	·1031	·1085	·1193	·1235	·1235	·1181	·1171
September	·1232	·1024	·1079	·1197	·1239	·1236	·1183	·1172
October	·1245	·1031	·1094	·1215	·1205	·1237	·1180	·1167
November	·1244	·1039	·1105	·1218	·1206	·1236	·1181	·1167
December	·1243	·1038	·1117	·1220	·1220	·1231	·1183	·1167
Means	0·1242	0·1032	..	..	0·1236	0·1230	..	..

TABLE IX.—MEAN MONTHLY DETERMINATION of the HORIZONTAL MAGNETIC FORCE (diminished by a Constant 0·8850 nearly), corrected for Temperature, at every HOUR of the DAY; obtained by taking the MEAN of all the DETERMINATIONS at the same HOUR of the DAY through each MONTH.

1858.

Hour. Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	0·1227	0·1216	0·1223	0·1242	0·1259	0·1254	0·1199	0·1211	0·1217	0·1229	0·1232	0·1233
1	·1226	·1218	·1227	·1244	·1260	·1258	·1200	·1213	·1222	·1230	·1232	·1236
2	·1226	·1219	·1231	·1251	·1263	·1262	·1204	·1215	·1224	·1234	·1233	·1237
3	·1228	·1220	·1233	·1254	·1267	·1265	·1208	·1216	·1225	·1237	·1234	·1237
4	·1231	·1222	·1235	·1258	·1270	·1272	·1210	·1217	·1229	·1240	·1236	·1238
5	·1234	·1224	·1237	·1259	·1275	·1279	·1214	·1220	·1230	·1241	·1238	·1239
6	·1234	·1226	·1237	·1260	·1277	·1282	·1218	·1223	·1234	·1246	·1241	·1239
7	·1234	·1229	·1238	·1262	·1279	·1284	·1218	·1224	·1235	·1247	·1243	·1240
8	·1235	·1228	·1240	·1263	·1276	·1282	·1216	·1225	·1236	·1249	·1243	·1242
9	·1235	·1230	·1241	·1263	·1275	·1282	·1215	·1226	·1237	·1248	·1244	·1244
10	·1236	·1232	·1243	·1265	·1276	·1284	·1214	·1226	·1237	·1248	·1247	·1244
11	·1238	·1233	·1246	·1265	·1275	·1282	·1216	·1227	·1237	·1251	·1247	·1246
12	·1240	·1232	·1247	·1264	·1274	·1282	·1216	·1228	·1239	·1252	·1249	·1246
13	·1240	·1233	·1245	·1264	·1273	·1284	·1218	·1229	·1240	·1251	·1248	·1247
14	·1239	·1236	·1246	·1263	·1275	·1285	·1219	·1229	·1240	·1252	·1250	·1247
15	·1242	·1237	·1248	·1264	·1274	·1285	·1220	·1229	·1242	·1253	·1251	·1249
16	·1243	·1237	·1250	·1265	·1275	·1286	·1223	·1229	·1242	·1254	·1253	·1250
17	·1244	·1239	·1249	·1267	·1275	·1285	·1222	·1228	·1241	·1256	·1254	·1252
18	·1247	·1240	·1248	·1266	·1272	·1278	·1219	·1226	·1239	·1256	·1255	·1253
19	·1246	·1242	·1244	·1263	·1267	·1272	·1213	·1223	·1237	·1253	·1252	·1251
20	·1246	·1239	·1241	·1259	·1263	·1267	·1208	·1218	·1232	·1247	·1250	·1249
21	·1240	·1232	·1232	·1251	·1258	·1260	·1205	·1214	·1224	·1239	·1245	·1246
22	·1235	·1224	·1227	·1244	·1254	·1254	·1196	·1211	·1217	·1233	·1238	·1240
23	·1226	·1218	·1222	·1241	·1255	·1252	·1193	·1211	·1216	·1230	·1233	·1236

TABLE IX.—MEAN MONTHLY DETERMINATION of the HORIZONTAL MAGNETIC FORCE at EVERY HOUR of the DAY—*continued.*

1859.

Hour, Greenwich Mean Solar Time	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	0·1017	0·1012	0·1004	0·1001	0·1019	0·1028	0·1024	0·1017	0·1004	0·1013	0·1024	0·1026
1	·1022	·1016	·1008	·1007	·1025	·1032	·1025	·1021	·1011	·1018	·1024	·1031
2	·1025	·1021	·1012	·1017	·1027	·1036	·1033	·1023	·1014	·1020	·1026	·1030
3	·1025	·1023	·1017	·1023	·1033	·1042	·1038	·1027	·1018	·1024	·1029	·1031
4	·1025	·1025	·1019	·1028	·1037	·1045	·1039	·1030	·1022	·1028	·1032	·1033
5	·1026	·1026	·1021	·1029	·1039	·1050	·1041	·1030	·1023	·1031	·1036	·1034
6	·1028	·1027	·1023	·1029	·1039	·1050	·1043	·1033	·1027	·1034	·1037	·1037
7	·1031	·1031	·1025	·1032	·1039	·1052	·1045	·1035	·1029	·1034	·1036	·1036
8	·1031	·1029	·1026	·1031	·1038	·1052	·1045	·1036	·1031	·1035	·1039	·1036
9	·1031	·1030	·1027	·1030	·1036	·1050	·1045	·1037	·1031	·1037	·1042	·1037
10	·1033	·1030	·1027	·1029	·1038	·1049	·1044	·1037	·1032	·1039	·1042	·1037
11	·1034	·1031	·1027	·1030	·1038	·1049	·1044	·1038	·1032	·1038	·1043	·1037
12	·1036	·1033	·1029	·1032	·1038	·1049	·1044	·1037	·1032	·1037	·1043	·1038
13	·1036	·1034	·1029	·1030	·1039	·1050	·1045	·1038	·1032	·1038	·1045	·1041
14	·1037	·1035	·1029	·1031	·1039	·1051	·1046	·1039	·1032	·1038	·1047	·1041
15	·1038	·1038	·1032	·1033	·1039	·1051	·1046	·1039	·1034	·1038	·1048	·1045
16	·1039	·1040	·1032	·1033	·1040	·1050	·1049	·1039	·1034	·1039	·1049	·1045
17	·1041	·1041	·1033	·1033	·1038	·1051	·1046	·1039	·1037	·1040	·1050	·1048
18	·1041	·1041	·1033	·1034	·1037	·1047	·1045	·1036	·1032	·1040	·1050	·1048
19	·1039	·1041	·1031	·1029	·1032	·1040	·1037	·1032	·1027	·1039	·1049	·1046
20	·1037	·1036	·1027	·1023	·1027	·1033	·1031	·1024	·1020	·1034	·1046	·1045
21	·1031	·1028	·1019	·1013	·1022	·1028	·1025	·1017	·1012	·1024	·1038	·1039
22	·1025	·1020	·1009	·1003	·1016	·1027	·1021	·1014	·1003	·1016	·1029	·1033
23	·1022	·1016	·1005	·0999	·1017	·1028	·1021	·1014	·0999	·1013	·1025	·1028

1860.

Hour, Greenwich Mean Solar Time	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	0·0996	0·1011	0·0983	0·0977	0·1054	0·1088	0·1069	0·1074	0·1063	0·1078	0·1094	0·1109
1	·0994	·1012	·0991	·0983	·1055	·1092	·1079	·1079	·1072	·1083	·1096	·1112
2	·0997	·1015	·0989	·0992	·1066	·1099	·1086	·1085	·1076	·1086	·1096	·1113
3	·0998	·1016	·1000	·0999	·1064	·1103	·1092	·1089	·1078	·1086	·1097	·1111
4	·1000	·1016	·1002	·1003	·1069	·1107	·1094	·1091	·1079	·1090	·1100	·1113
5	·1003	·1018	·1001	·1010	·1075	·1111	·1095	·1092	·1082	·1093	·1103	·1115
6	·1005	·1019	·1003	·1009	·1076	·1114	·1096	·1095	·1083	·1096	·1104	·1114
7	·1007	·1021	·1003	·1009	·1072	·1113	·1097	·1096	·1085	·1097	·1105	·1116
8	·1008	·1023	·1006	·1009	·1070	·1111	·1097	·1095	·1086	·1098	·1104	·1116
9	·1007	·1023	·1004	·1008	·1069	·1106	·1097	·1093	·1088	·1097	·1107	·1116
10	·1009	·1023	·1004	·1009	·1069	·1105	·1095	·1094	·1087	·1097	·1107	·1117
11	·1011	·1024	·1005	·1008	·1067	·1105	·1095	·1095	·1087	·1099	·1109	·1118
12	·1011	·1027	·1006	·1007	·1066	·1105	·1095	·1092	·1088	·1101	·1108	·1117
13	·1013	·1028	·1008	·1008	·1066	·1105	·1096	·1091	·1089	·1100	·1109	·1118
14	·1013	·1027	·1007	·1007	·1068	·1104	·1095	·1091	·1087	·1101	·1110	·1119
15	·1015	·1029	·1009	·1009	·1068	·1104	·1094	·1091	·1085	·1101	·1110	·1119
16	·1016	·1029	·1009	·1009	·1068	·1105	·1093	·1091	·1086	·1102	·1112	·1123
17	·1019	·1031	·1009	·1009	·1067	·1104	·1092	·1089	·1086	·1103	·1114	·1125
18	·1019	·1034	·1009	·1010	·1063	·1100	·1087	·1086	·1081	·1102	·1114	·1124
19	·1019	·1035	·1006	·1007	·1057	·1094	·1079	·1079	·1078	·1100	·1113	·1124
20	·1018	·1033	·1001	·1000	·1052	·1086	·1077	·1073	·1070	·1095	·1111	·1123
21	·1011	·1026	·0991	·0991	·1048	·1083	·1071	·1066	·1062	·1088	·1106	·1119
22	·1002	·1019	·0981	·0981	·1045	·1079	·1065	·1062	·1058	·1082	·1101	·1115
23	·0997	·1013	·0979	·0979	·1050	·1083	·1066	·1062	·1058	·1079	·1095	·1112

TABLE IX.—MEAN MONTHLY DETERMINATION of the HORIZONTAL MAGNETIC FORCE at EVERY HOUR of the DAY—*continued.*

1861.

Hour. Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	0·1060	0·1045	0·1038	0·1049	0·1163	0·1280	..	0·1185	0·1187	0·1203	0·1210	0·1209
1	·1063	·1045	·1041	·1056	·1162	·1283	..	·1182	·1190	·1207	·1211	·1215
2	·1065	·1048	·1046	·1056	·1168	·1286	..	·1188	·1191	·1208	·1213	·1219
3	·1066	·1050	·1048	·1060	·1177	·1291	..	·1193	·1190	·1208	·1212	·1221
4	·1068	·1051	·1053	·1067	·1178	·1291	..	·1193	·1192	·1212	·1213	·1221
5	·1069	·1054	·1054	·1072	·1177	·1301	..	·1193	·1195	·1213	·1215	·1223
6	·1071	·1056	·1056	·1075	·1178	·1300	..	·1193	·1197	·1215	·1215	·1223
7	·1072	·1057	·1057	·1074	·1180	·1301	..	·1194	·1198	·1216	·1214	·1219
8	·1073	·1057	·1060	·1074	·1178	·1298	..	·1196	·1199	·1215	·1216	·1216
9	·1074	·1058	·1059	·1075	·1174	·1299	..	·1195	·1199	·1216	·1216	·1219
10	·1076	·1060	·1059	·1074	·1175	·1296	..	·1197	·1201	·1217	·1218	·1220
11	·1075	·1060	·1062	·1074	·1179	·1295	..	·1198	·1200	·1217	·1219	·1219
12	·1076	·1061	·1062	·1077	·1179	·1291	..	·1197	·1203	·1219	·1223	·1221
13	·1077	·1065	·1062	·1079	·1181	·1292	..	·1198	·1204	·1219	·1222	·1221
14	·1079	·1064	·1064	·1080	·1181	·1292	..	·1200	·1205	·1218	·1222	·1223
15	·1081	·1066	·1065	·1080	·1182	·1293	..	·1202	·1205	·1219	·1224	·1224
16	·1083	·1068	·1069	·1082	·1181	·1294	..	·1203	·1207	·1222	·1225	·1224
17	·1086	·1070	·1071	·1084	·1181	·1295	..	·1203	·1206	·1223	·1227	·1227
18	·1088	·1071	·1070	·1084	·1181	·1292	..	·1200	·1205	·1223	·1228	·1228
19	·1086	·1070	·1068	·1081	·1178	·1286	..	·1192	·1200	·1222	·1226	·1226
20	·1083	·1068	·1063	·1076	·1174	·1282	..	·1185	·1195	·1216	·1224	·1225
21	·1075	·1060	·1052	·1066	·1167	·1282	..	·1181	·1189	·1211	·1219	·1219
22	·1066	·1052	·1043	·1056	·1159	·1279	..	·1180	·1185	·1207	·1216	·1214
23	·1060	·1046	·1040	·1049	·1160	·1282	..	·1183	·1183	·1205	·1213	·1210

1862.

Hour. Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	0·1209	0·1228	0·1248	0·1263	0·1242	0·1240	0·1233	0·1227	0·1227	0·1196	0·1200	0·1213
1	·1210	·1229	·1255	·1272	·1245	·1245	·1239	·1236	·1238	·1202	·1199	·1217
2	·1215	·1234	·1263	·1274	·1250	·1252	·1243	·1242	·1239	·1205	·1205	·1219
3	·1217	·1237	·1264	·1281	·1253	·1255	·1247	·1245	·1243	·1209	·1207	·1221
4	·1218	·1236	·1263	·1283	·1254	·1256	·1250	·1247	·1246	·1209	·1208	·1221
5	·1218	·1235	·1264	·1284	·1256	·1258	·1253	·1245	·1244	·1210	·1208	·1223
6	·1217	·1236	·1260	·1287	·1259	·1260	·1254	·1247	·1243	·1210	·1208	·1220
7	·1217	·1236	·1262	·1285	·1258	·1259	·1253	·1247	·1245	·1209	·1207	·1222
8	·1215	·1237	·1264	·1284	·1256	·1261	·1252	·1245	·1244	·1208	·1206	·1220
9	·1214	·1237	·1263	·1284	·1253	·1257	·1250	·1244	·1245	·1210	·1207	·1221
10	·1215	·1236	·1263	·1284	·1254	·1256	·1249	·1242	·1244	·1210	·1206	·1220
11	·1216	·1235	·1264	·1286	·1253	·1255	·1247	·1239	·1246	·1208	·1207	·1222
12	·1214	·1235	·1265	·1287	·1253	·1256	·1248	·1239	·1246	·1209	·1207	·1220
13	·1214	·1236	·1265	·1285	·1250	·1256	·1244	·1236	·1243	·1209	·1206	·1219
14	·1214	·1236	·1264	·1283	·1250	·1255	·1243	·1235	·1243	·1209	·1207	·1220
15	·1217	·1237	·1267	·1284	·1251	·1253	·1243	·1236	·1242	·1208	·1208	·1220
16	·1218	·1238	·1266	·1284	·1250	·1252	·1242	·1236	·1241	·1208	·1210	·1220
17	·1220	·1240	·1268	·1284	·1248	·1249	·1239	·1233	·1242	·1208	·1211	·1224
18	·1220	·1241	·1267	·1283	·1246	·1246	·1234	·1227	·1240	·1207	·1211	·1225
19	·1220	·1239	·1266	·1279	·1242	·1241	·1226	·1223	·1233	·1205	·1209	·1222
20	·1217	·1237	·1261	·1274	·1236	·1237	·1222	·1217	·1228	·1197	·1205	·1221
21	·1213	·1233	·1254	·1268	·1233	·1234	·1223	·1212	·1221	·1191	·1201	·1217
22	·1210	·1229	·1249	·1261	·1231	·1232	·1224	·1213	·1220	·1188	·1199	·1218
23	·1208	·1230	·1249	·1258	·1233	·1235	·1230	·1222	·1221	·1188	·1199	·1216

TABLE IX.—MEAN MONTHLY DETERMINATION of the HORIZONTAL MAGNETIC FORCE at EVERY HOUR of the DAY—*concluded.*

1863.

Hour. Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	0·1203	0·1203	0·1218	0·1228	0·1239	0·1200	0·1222	0·1226	0·1230	0·1229	0·1232	0·1225
1	·1207	·1207	·1225	·1231	·1247	·1205	·1224	·1230	·1234	·1229	·1233	·1229
2	·1206	·1211	·1232	·1239	·1253	·1217	·1231	·1233	·1238	·1234	·1233	·1228
3	·1209	·1212	·1237	·1246	·1260	·1223	·1234	·1237	·1239	·1234	·1235	·1229
4	·1208	·1213	·1236	·1250	·1263	·1225	·1237	·1240	·1237	·1237	·1234	·1228
5	·1209	·1213	·1239	·1253	·1268	·1227	·1239	·1242	·1239	·1237	·1235	·1230
6	·1210	·1213	·1238	·1255	·1270	·1229	·1242	·1243	·1241	·1239	·1237	·1231
7	·1207	·1214	·1238	·1253	·1270	·1227	·1243	·1244	·1240	·1241	·1237	·1230
8	·1208	·1211	·1235	·1250	·1265	·1225	·1243	·1245	·1240	·1241	·1237	·1230
9	·1205	·1212	·1235	·1248	·1261	·1223	·1241	·1244	·1242	·1241	·1238	·1230
10	·1204	·1212	·1234	·1245	·1259	·1222	·1242	·1244	·1242	·1241	·1238	·1231
11	·1208	·1213	·1236	·1242	·1258	·1223	·1240	·1240	·1240	·1243	·1238	·1232
12	·1208	·1213	·1233	·1242	·1257	·1222	·1237	·1239	·1240	·1241	·1239	·1231
13	·1208	·1212	·1232	·1242	·1255	·1221	·1234	·1240	·1239	·1241	·1237	·1232
14	·1208	·1212	·1231	·1243	·1254	·1220	·1234	·1239	·1238	·1241	·1238	·1233
15	·1209	·1213	·1232	·1240	·1255	·1218	·1231	·1238	·1239	·1241	·1238	·1231
16	·1211	·1214	·1232	·1242	·1254	·1219	·1231	·1236	·1240	·1242	·1241	·1234
17	·1212	·1216	·1233	·1241	·1252	·1217	·1230	·1234	·1240	·1243	·1241	·1236
18	·1212	·1216	·1232	·1241	·1247	·1213	·1225	·1231	·1235	·1244	·1241	·1235
19	·1212	·1215	·1229	·1236	·1244	·1207	·1221	·1228	·1233	·1242	·1239	·1234
20	·1208	·1212	·1223	·1229	·1239	·1204	·1218	·1224	·1230	·1236	·1236	·1232
21	·1202	·1208	·1218	·1223	·1236	·1200	·1217	·1219	·1226	·1229	·1232	·1230
22	·1201	·1205	·1215	·1217	·1232	·1199	·1216	·1220	·1224	·1220	·1231	·1228
23	·1200	·1203	·1214	·1221	·1235	·1196	·1218	·1221	·1225	·1222	·1232	·1228

TABLE X.—MEAN, through the Range of Years, of the MONTHLY MEAN DETERMINATIONS of the DIURNAL INEQUALITY of HORIZONTAL FORCE; exhibited separately for THE DIFFERENT MONTHS.

1858 to 1863.

Hour. Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	−0·00098	−0·00117	−0·00160	−0·00188	−0·00110	−0·00140	−0·00126	−0·00102	−0·00132	−0·00132	−0·00093	−0·00090
1	− 82	− 97	− 105	− 133	− 80	− 98	− 86	− 67	− 67	− 97	− 88	− 48
2	− 62	− 62	− 62	− 73	− 25	− 37	− 26	− 25	− 42	− 67	− 70	− 38
3	− 47	− 45	− 18	− 17	+ 20	+ 8	+ 18	+ 10	− 23	− 48	− 57	− 32
4	− 35	− 37	− 3	+ 27	+ 48	+ 37	+ 40	+ 28	− 3	− 18	− 42	− 25
5	− 20	− 25	+ 10	+ 57	+ 80	+ 87	+ 64	+ 35	+ 10	− 3	− 22	− 8
6	− 10	− 13	+ 12	+ 70	+ 95	+ 102	+ 86	+ 55	+ 30	+ 22	− 10	− 8
7	− 5	+ 5	+ 22	+ 70	+ 93	+ 103	+ 92	+ 65	+ 42	+ 28	− 10	− 10
8	− 2	0	+ 35	+ 63	+ 68	+ 92	+ 86	+ 68	+ 48	+ 32	− 5	− 15
9	− 8	+ 8	+ 32	+ 58	+ 43	+ 72	+ 76	+ 63	+ 58	+ 37	+ 10	− 3
10	+ 3	+ 13	+ 33	+ 55	+ 48	+ 63	+ 68	+ 65	+ 60	+ 42	+ 17	0
11	+ 18	+ 18	+ 50	+ 53	+ 47	+ 58	+ 64	+ 60	+ 58	+ 48	+ 25	+ 8
12	+ 23	+ 27	+ 53	+ 60	+ 42	+ 52	+ 60	+ 52	+ 68	+ 53	+ 35	+ 7
13	+ 28	+ 38	+ 52	+ 58	+ 37	+ 57	+ 54	+ 52	+ 67	+ 52	+ 32	+ 15
14	+ 32	+ 42	+ 52	+ 57	+ 42	+ 55	+ 54	+ 53	+ 63	+ 53	+ 43	+ 23
15	+ 52	+ 58	+ 72	+ 62	+ 45	+ 50	+ 48	+ 57	+ 67	+ 55	+ 52	+ 32
16	+ 65	+ 68	+ 80	+ 70	+ 43	+ 53	+ 56	+ 55	+ 72	+ 67	+ 70	+ 45
17	+ 85	+ 87	+ 88	+ 75	+ 32	+ 45	+ 38	+ 42	+ 75	+ 77	+ 82	+ 72
18	+ 93	+ 97	+ 82	+ 75	+ 7	+ 3	0	+ 8	+ 42	+ 75	+ 85	+ 73
19	+ 85	+ 95	+ 57	+ 37	− 37	− 57	− 68	− 40	+ 2	+ 57	+ 67	+ 57
20	+ 63	+ 67	+ 10	− 20	− 85	− 108	− 108	− 100	− 53	− 3	+ 40	+ 43
21	+ 2	+ 3	− 73	− 102	− 130	− 145	− 138	− 153	− 122	− 75	− 12	+ 2
22	− 53	− 60	− 143	− 185	− 175	− 173	− 176	− 168	− 167	− 135	− 57	− 35
23	97	− 98	− 168	− 210	− 153	− 163	− 164	− 147	− 175	150	− 85	− 65

TABLE XI.—MEAN, through the Range of Months, of the MONTHLY MEAN DETERMINATIONS of the DIURNAL INEQUALITY of HORIZONTAL FORCE; exhibited separately for THE DIFFERENT YEARS.

January to December.

Hour. Greenwich Mean Solar Time.	1858.	1859.	1860.	1861.	1862.	1863.	Mean, 1858 to 1863.
0	− 0·00134	− 0·00162	− 0·00140	− 0·00127	− 0·00090	− 0·00090	− 0·00124
1	− 114	− 120	− 97	− 104	− 39	− 52	− 88
2	− 87	− 83	− 53	− 74	+ 6	− 7	− 50
3	− 66	− 45	− 26	− 48	+ 37	+ 27	− 20
4	− 37	− 17	0	− 27	+ 48	+ 37	+ 1
5	− 11	+ 2	+ 28	− 3	+ 53	+ 57	+ 21
6	+ 12	+ 19	+ 42	+ 9	+ 56	+ 71	+ 35
7	+ 25	+ 34	+ 47	+ 12	+ 55	+ 67	+ 40
8	+ 27	+ 38	+ 49	+ 12	+ 48	+ 56	+ 38
9	+ 31	+ 41	+ 42	+ 14	+ 43	+ 47	+ 36
10	+ 41	+ 44	+ 43	+ 22	+ 38	− 42	+ 38
11	+ 50	+ 47	+ 49	+ 26	+ 37	+ 42	+ 42
12	+ 55	+ 53	+ 49	+ 36	+ 37	+ 33	+ 44
13	+ 58	+ 61	+ 56	+ 46	+ 24	+ 25	+ 45
14	+ 65	+ 68	+ 54	+ 54	+ 21	+ 23	+ 48
15	+ 76	+ 81	+ 58	+ 65	+ 27	+ 18	+ 54
16	+ 87	+ 88	+ 66	+ 81	+ 26	+ 28	+ 63
17	+ 91	+ 94	+ 70	+ 95	+ 27	+ 27	+ 67
18	+ 80	+ 83	+ 54	+ 92	+ 11	+ 8	+ 55
19	+ 50	+ 48	+ 22	+ 60	− 24	− 19	+ 23
20	+ 13	− 1	− 21	+ 20	− 68	− 60	− 19
21	− 47	− 73	− 85	− 44	− 112	− 103	− 77
22	− 108	− 140	− 145	− 102	− 133	− 129	− 126
23	− 142	− 164	− 159	− 125	− 121	− 123	− 139

REDUCTIONS OF MAGNETIC VERTICAL FORCE REFERRED TO THE SUN'S PLACE.

TABLE XII.—MEAN VERTICAL MAGNETIC FORCE (diminished by a Constant 0·9600 nearly) on each ASTRONOMICAL DAY, as deduced from the Mean of Twenty-four Hourly Measures of Ordinates of the Photographic Register on that Day; each corrected for Temperature.

1858.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	..	..	..	0·0452	0·0424	0·0583	..	0·0530	0·0492	0·0476	0·0427	0·0487
2	..	0·0387	0·0399	..	·0444	·0558	0·0479	..	·0460	·0499	·0465	·0482
3	0·0366	·0405	·0400	..	·0456	·0567	..	·0527	·0518	·0482	·0455	·0449
4	·0337	·0453	..	·0469	·0448	·0541	·0492	·0538	·0542	..	·0461	..
5	..	·0455	·0424	·0441	·0457	..	·0510	·0550	..	·0482	·0482	·0435
6	..	·0454	..	·0432	..	·0507	·0498	..	·0458	·0452	·0495	·0510
7	..	·0433	·0397	·0427	·0459	..	·0506	·0520	..	·0479	·0478	·0466
8	..	·0418	·0411	·0441	·0462	·0535	·0477	·0524	·0498	·0484	·0442	·0434
9	·0445	·0412	·0413	..	·0465	..	·0473	·0533	·0455	..	·0466	·0433
10	·0422	·0424	·0427	·0446	·0479	..	·0464	·0548	·0462	·0464	·0432	·0477
11	·0443	·0430	..	·0439	..	·0542	..	·0552	..	·0473	..	..
12	·0408	·0425	·0395	·0453	..	..	..	..	..	·0433	·0457	·0460
13	·0430	·0437	·0433	·0451	..	·0559	·0547	·0542	..	·0499	·0428	..
14	·0402	·0455	..	·0456	..	..	·0538	·0524	..	·0487	·0444	·0488
15	..	·0436	·0434	·0500	·0505	..	·0573	·0519	..	·0505	·0483	·0454
16	..	·0439	·0481	·0512	·0511	·0579	..	..	..	·0502	·0439	·0443
17	·0441	·0447	·0487	·0469	·0500	..	..	..	..	·0526	·0456	·0447
18	·0413	..	·0483	·0459	·0524	·0476	·0528	·0542	..	·0488	·0453	·0468
19	·0436	·0412	·0482	·0475	·0518	..	·0523	·0541	..	·0446	·0460	·0477
20	..	·0428	·0488	·0482	·0523	·0503	·0519	·0538	..	·0486	·0417	·0470
21	·0421	·0403	·0465	·0499	·0529	..	·0526	·0473	..	·0473	·0445	·0483
22	·0419	..	·0482	·0502	·0533	·0552	..	·0495	..	·0489	·0439	·0509
23	·0417	·0407	..	·0489	..	..	..	·0520	..	..	·0456	·0494
24	·0402	·0442	..	·0484	·0503	..	·0506	·0513	..	·0477	·0407	·0502
25	·0397	·0412	·0460	·0463	·0513	·0513	·0509	·0529	..	·0476	·0428	·0473
26	·0411	·0401	..	·0461	·0510	·0538	·0512	·0465	·0477	·0496	·0487	..
27	·0423	..	·0442	·0456	·0524	·0535	·0515	·0474	·0490	..	·0495	..
28	·0433	·0417	·0457	·0477	·0533	·0509	..	·0482	·0491	·0474	·0512	..
29	·0425		·0476	·0466	·0553	·0508	..	·0480	·0500	·0463	·0487	..
30	·0432		·0462	·0460	..	·0515	·0508	·0492	·0531	·0441	·0502	..
31	·0462		·0469		..		..	·0482		·0455		..

TABLE XII.—MEAN VERTICAL MAGNETIC FORCE on each ASTRONOMICAL DAY—*continued.*

1859.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	..	..	..	..	0·0321	..	0·0443	0·0389	..	0·0540	0·0380	0·0389
2	..	..	..	..	·0292	..	·0436	·0368	..	·0581	·0387	·0387
3	..	..	..	..	·0326	..	·0444	·0376	..	..	·0398	..
4	..	..	..	..	·0381	..	·0447	·0409	..	·0424	·0392	·0380
5	..	..	..	..	·0383	..	·0444	·0347	0·0349	·0399	..	·0350
6	0·0438	..	..	..	·0389	..	·0489	·0337	·0375	·0402	·0388	·0376
7	·0434	..	..	..	·0392	0·0272	·0511	·0354	·0332	..	·0392	·0360
8	·0424	..	..	..	·0432	..	..	·0378	·0349	·0420	..	·0356
9	·0414	..	..	..	..	..	·0463	·0392	·0375	·0383	·0415	·0378
10	..	..	..	..	..	..	·0450	·0390	·0340	·0374	·0370	·0365
11	·0455	..	..	..	·0265	·0244	..	·0361	·0331	..	·0353	·0404
12	·0472	..	..	..	·0302	·0265	·0491	·0417	..	..	·0396	·0334
13	·0456	..	..	..	·0310	·0272	·0462	·0447	·0367	..	·0409	..
14	·0434	..	..	..	·0311	·0260	·0369	·0461	·0323	·0386	·0357	·0369
15	·0423	..	..	..	·0263	·0322	·0362	·0464	·0318	·0380	..	·0352
16	·0414	..	..	..	·0247	·0343	·0381	·0392	·0317	·0395	..	·0329
17	·0419	..	..	..	·0239	·0315	·0344	·0409	·0337	..	..	..
18	·0454	..	..	..	·0232	..	·0369	·0429	·0331	..	·0351	..
19	·0471	..	..	..	..	..	·0363	·0500	..	·0398	..	·0347
20	·0440	..	..	0·0405	..	·0303	·0330	..	..	·0417	·0409	..
21	·0428	..	..	..	..	..	..	·0569	·0371	·0416	..	..
22	·0454	..	..	·0412	·0254	..	..	·0521	·0332	·0364	·0350	·0361
23	·0408	..	..	·0408	..	..	..	·0565	·0348	·0401	..	·0357
24	·0412	..	..	·0457	·0369	·0519	·0367	..	·0462	·0375	..	·0371
25	·0450	..	..	·0443	·0409	·0536	·0373	..	·0513	·0349	..	·0387
26	·0464	..	..	..	..	·0622	..	·0483	·0523	·0370	·0415	·0396
27	·0454	..	..	·0371	..	..	..	·0412	·0445	·0406	·0431	..
28	·0470	..	..	·0327	·0328	·0558	·0486	..	..	..	·0400	·0401
29	·0424		..	..	·0322	·0431	·0487	..	..	·0392	·0374	·0389
30	..		..	·0350	..	·0458	·0424	·0345	·0459	..	·0385	·0380
31	..		..		..		·0397	·0311		..		..

1860.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	..	0·0402	0·0364	0·0303	..	0·0287	..	..	0·0575	0·0303	0·0381	0·0376
2	..	·0396	·0389	·0288	..	..	..	..	·0573	·0353	·0367	·0403
3	..	·0377	·0339	·0309	..	·0255	0·0418	..	·0561	..	·0365	·0383
4	0·0410	·0365	·0362	·0355	..	..	..	..	..	·0372	·0374	·0363
5	·0421	·0376	·0331	·0360	..	·0267	·0429	0·0537	·0397	·0362	..	·0357
6	·0414	·0403	·0323	·0377	..	..	·0464	..	..	·0375	·0336	..
7	..	·0390	·0349	·0393	..	·0283	·0407	·0504	..	·0387	·0354	·0350
8	·0373	..	·0337	·0345	..	·0284	·0389	..	·0389	..	..	·0350
9	·0367	·0423	·0311	..	..	·0326	·0372	..	·0394	·0374	..	·0387
10	·0374	·0395	·0298	·0254	..	·0322	·0403	..	·0326	..	·0382	·0361
11	·0385	·0361	..	·0225	..	..	·0385	..	..	·0343	·0394	·0368
12	·0411	·0366	·0323	·0259	..	·0320	·0395	..	·0331	·0330	·0355	·0354
13	·0406	·0361	·0342	..	0·0477	·0289	·0406	·0515	·0366	·0313	·0319	..
14	·0385	·0350	·0359	·0292	·0484	·0309	·0426	·0543	·0403	·0333	·0333	·0367
15	·0421	·0348	·0344	·0255	·0493	·0321	..	·0523	·0364	·0345	·0349	·0382
16	·0415	·0379	·0344	·0292	..	·0342	..	..	·0397	·0361	·0368	·0388
17	·0418	·0378	·0352	·0317	·0492	·0389	·0394	·0503	·0385	·0362	..	·0381
18	·0403	..	·0361	..	..	·0337	·0387	·0500	..	·0358	·0397	·0386
19	·0387	·0393	·0369	..	·0540	·0387	·0396	·0486	..	·0340	..	·0358
20	·0395	·0342	·0363	·0244	..	·0386	·0384	·0530	·0289	·0354	·0318	·0357
21	·0435	·0352	·0363	·0230	..	·0388	·0368	·0556	·0339	..	·0331	·0343
22	..	·0375	·0369	·0237	·0475	·0367	·0345	·0564	·0343	·0366	·0346	·0333
23	·0384	·0373	·0377	·0206	·0476	·0370	·0371	·0512	·0316	·0349	·0377	·0357
24	·0384	·0360	·0297	·0238	·0462	·0370	..	·0526	·0239	·0368	·0364	·0376
25	·0406	·0356	·0296	·0232	·0406	·0372	·0332	..	..	·0380	·0399	..
26	·0412	·0356	·0310	·0256	..	·0355	·0367	·0597	·0235	·0393	·0378	·0325
27	·0399	·0374	·0317	·0260	..	·0383	·0448	..	·0278	·0396	·0340	·0324
28	·0419	·0386	..	..	·0330	·0372	·0488	·0568	·0303	·0387	·0330	·0352
29	·0442	·0368	..	·0297	·0279	..	·0493	·0595	·0313	·0409	·0325	·0392
30	·0389		·0365	..	·0287	..	·0497	·0588	·0320	·0401	·0356	·0370
31	·0386		·0329		·0326		·0520	·0562		·0419		·0341

TABLE XII.—MEAN VERTICAL MAGNETIC FORCE on each ASTRONOMICAL DAY—*continued.*

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
						1861.						
1	0·0351	0·0338	0·0403	..	0·0368	..	0·0500	..	..	0·0424	..	..
2	·0404	..	·0391	..	·0379	0·0368	·0496	0·0450	..	·0448	..	..
3	·0356	..	·0352	..	..	·0364	·0435	..	..	..	..	0·0515
4	·0352	·0332	·0380	0·0308	..	..	·0430	·0430	..	..	..	·0512
5	·0331	·0352	·0381	..	..	·0352	..	..	..	·0436	..	·0523
6	..	·0352	·0363	·0288	·0365	·0364	·0383	..	..	..	0·0527	..
7	·0311	·0360	·0382	·0297	..	·0357	·0398	·0428	0·0296	·0438	·0527	..
8	·0306	·0364	·0387	·0278	..	·0365	..	..	..	..	..	..
9	·0304	..	..	·0275	..	·0381	·0413	·0376	..	..	..	..
10	..	..	·0374	·0308	·0324	·0366	..	·0415	·0315	..	..	·0397
11	·0305	..	·0379	·0312	..	..	..	..	..	·0483	..	..
12	·0313	·0331	·0354	·0333	·0348	..	·0407	·0478	·0292	·0462	·0518	·0422
13	·0321	·0310	·0344	·0299	·0380	·0501	·0427	..	..	·0449	·0539	..
14	..	..	·0315	·0317	·0388	..	·0443	..	·0293	·0512	..	·0390
15	..	..	·0331	..	..	·0566	·0451	..	·0321	·0542	..	·0384
16	·0333	·0334	..	..	·0412	..	·0412	·0369	·0316	·0554	..	·0392
17	..	·0343	..	..	..	·0461	..	..	..	·0510	·0427	·0410
18	..	·0355	·0275	·0401	..	·0471	·0430	..	..	·0493	·0387	..
19	..	·0357	·0267	·0389	·0352	·0515	·0442	..	..	·0487	·0426	·0425
20	·0367	·0410	·0296	·0374	·0375	·0477	..	..	·0363	·0485	·0508	·0403
21	..	·0405	·0296	·0358	..	·0496	·0399	..	·0378	·0470	·0498	..
22	·0378	·0352	·0290	·0359	..	·0454	·0398	..	·0386	..	·0501	·0408
23	·0370	·0360	·0299	·0382	·0392	..	·0388	..	·0364	·0480	..	·0386
24	..	·0408	·0316	·0382	·0373	..	..	·0361	·0330	·0476	·0441	..
25	..	..	·0366	..	..	·0448	..	·0313	..	·0542	..	..
26	..	..	..	·0405	..	·0420	..	·0303	·0302	..	..	·0372
27	·0404	·0358	·0342	·0407	..	·0447	..	·0330	..	·0554	·0535	..
28	·0404	·0372	·0340	..	·0379	·0492	..	..	·0335	·0545	·0475	·0364
29	..		·0363	·0366	..	·0530	..	..	·0357	·0544	·0493	..
30	·0354		·0358	·0357	..	·0440	..	..	·0391	·0532	..	·0363
31	·0333		·0364		·0398		..	·0291		·0529		·0350
						1862.						
1	0·0352	..	0·0324	0·0403	0·0409	..	0·0289	..	0·0439	..	0·0445	0·0393
2	·0354	..	·0337	·0400	·0395	..	·0285	..	..	..	·0479	·0394
3	·0368	0·0403	..	·0421	·0370	0·0411	·0250	..	..	..	·0451	·0397
4	·0380	·0406	·0322	·0413	..	..	..	..	..	..	·0420	·0417
5	·0382	·0417	..	·0397	..	..	..	0·0471	..	..	·0419	·0433
6	·0382	..	·0378	·0390	·0415	·0389	·0329	·0439	..	..	·0374	·0437
7	·0378	·0398	·0387	·0408	..	..	·0346	·0447	·0432	..	·0358	·0454
8	·0380	·0355	·0400	·0438	..	..	·0345	·0441	..	..	..	·0465
9	..	·0334	·0441	..	..	..	·0309	·0440	..	..	·0362	·0453
10	·0398	·0345	·0378	..	..	·0335	..	·0438	..	..	..	..
11	·0414	·0369	·0361	·0424	..	·0344	..	·0449	..	..	..	·0378
12	·0415	·0357	·0346	·0376	..	·0374	..	·0462	..	0·0486	·0330	·0385
13	·0397	·0381	·0354	·0377	·0316	·0356	..	·0448	·0503	·0435	·0345	·0373
14	·0386	·0378	·0371	·0376	..	·0364	..	·0474	·0526	·0483	·0345	..
15	·0398	·0373	·0377	·0384	..	..	..	..	..	..	·0383	·0387
16	·0382	·0403	·0389	·0393	·0337	..	..	..	·0522	·0471	·0391	..
17	·0369	·0378	·0354	..	..	·0311	·0305	·0493	·0470	..	·0405	·0439
18	·0348	·0376	·0278	..	..	·0327	·0351	·0497	·0429	..	·0382	..
19	·0372	·0384	..	·0393	..	·0327	·0371	..	·0518	..	·0393	..
20	..	·0393	..	·0404	..	·0338	·0354	..	..	..	·0404	..
21	·0349	·0387	..	..	..	·0333	..	..	·0554	·0451	·0436	..
22	·0370	..	..	·0435	..	·0332	·0262	..	..	·0493	·0399	..
23	·0400	·0395	..	..	..	..	·0279	..	·0463	·0461	·0378	..
24	·0384	·0406	..	..	..	..	·0255	·0532	..	·0416	·0320	..
25	·0397	·0368	..	..	·0383	..	·0324	·0532	..	·0386	·0356	..
26	·0390	·0361	..	·0418	..	..	..	..	·0526	·0445	·0424	..
27	·0371	·0344	·0409	·0394	·0401	..	·0284	..	..	·0390	·0414	..
28	..	..	·0438	·0404	·0391	·0317	·0234	·0471	·0546	·0410	·0394	..
29	·0379		·0425	·0403	..	·0309	·0244	·0465	·0549	·0415	·0397	..
30	·0408		..	·0403	..	·0308	·0244	·0436	..	·0336	·0408	..
31	·0425		..		·0405		·0215	·0475		·0402		..

TABLE XII.—MEAN VERTICAL MAGNETIC FORCE on each ASTRONOMICAL DAY—*concluded.*

1863.

Days of the Month.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
1	..	..	0·0292	0·0239	0·0307	..	0·0483	0·0471	..	0·0477	0·0531	0·0494
2	..	..	·0286	..	·0316	..	·0508	·0476	0·0515	·0484	·0511	·0506
3	..	0·0265	·0282	·0260	·0346	0·0366	·0490	·0494	·0480	·0452	·0501	..
4	..	·0263	·0281	·0254	·0355	..	·0493	·0484	·0504	·0472	·0489	..
5	..	·0265	·0289	·0257	·0343	..	·0494	..	..	·0516	..	·0482
6	..	·0263	·0298	·0245	·0328	..	·0494	·0476	·0490	·0507	·0542	·0522
7	..	·0269	·0294	..	..	·0285	·0486	·0457	·0482	·0463	..	·0499
8	..	·0268	·0297	..	·0306	·0295	·0504	·0480	·0495	·0465	·0494	·0516
9	0·0307	·0243	·0279	..	·0322	·0293	·0491	·0477	·0477	..	..	·0504
10	·0312	·0248	·0281	..	·0335	·0303	·0491	·0479	·0518	·0467	..	·0534
11	·0307	·0264	·0281	·0334	·0320	·0298	·0493	·0482	·0491	·0484	·0523	·0493
12	·0281	·0268	·0283	·0330	·0305	·0313	·0490	·0475	·0483	·0509	..	·0490
13	·0279	·0265	·0286	·0324	·0313	..	..	·0470	·0481	·0513	·0505	·0552
14	..	..	·0288	·0322	·0322	..	·0494	·0479	·0503	·0490	·0491	·0503
15	..	·0254	·0302	·0329	·0322	..	·0473	·0496	·0481	·0494	·0505	·0496
16	·0271	·0257	·0286	·0334	·0312	..	·0509	..	·0478	·0514	·0497	·0520
17	·0272	·0255	·0286	·0334	·0317	·0402	·0473	·0511	·0492	·0516	·0515	·0523
18	·0268	·0254	·0288	·0340	·0316	·0409	·0493	·0515	·0486	·0505	·0532	·0536
19	·0270	·0258	·0285	·0328	·0325	·0417	·0476	·0495	·0478	·0500	·0524	·0493
20	·0275	·0265	·0288	·0332	·0309	·0421	·0487	·0493	·0527	·0513	·0527	·0522
21	·0270	·0261	..	·0341	·0327	..	..	·0493	·0497	·0510	·0517	·0485
22	·0272	·0273	..	·0338	·0315	..	·0475	·0483	·0491	·0508	·0526	..
23	·0283	·0262	..	·0326	·0317	..	·0473	·0487	·0490	·0526	·0495	..
24	..	·0268	..	..	·0331	·0498	·0478	·0516	·0510	·0499	·0498	·0484
25	·0282	..	..	·0329	·0329	·0507	·0481	·0505	·0494	·0504	·0508	·0504
26	·0272	·0273	..	·0343	·0330	·0504	·0479	·0516	·0494	·0506	·0521	·0478
27	..	·0279	..	·0343	..	..	·0477	·0483	·0495	·0502	·0528	..
28	·0267	..	·0251	·0344	·0357	·0498	·0472	·0485	..	·0495	·0533	..
29	·0271		·0262	·0316	·0360	..	·0472	·0496	..	·0517	..	·0484
30	·0273		·0260	·0307	·0364	·0493	·0477	·0491	..	..	..	..
31	..		..		·0339		·0479	·0521		·0517		..

TABLE XIII.—MEAN VERTICAL MAGNETIC FORCE (diminished by a Constant 0·9600 nearly) IN EACH MONTH, as deduced from the Mean of the MEAN HOURLY DETERMINATIONS in each Month (Table XIV), corrected for Temperature; showing the apparent Monthly Change of Vertical Force.

Month.	1858.	1859.	1860.	1861.	1862.	1863.
January	0·0406	0·0440	0·0401	0·0349	0·0383	0·0282
February	·0428	..	·0374	·0360	·0383	·0264
March	·0444	..	·0341	·0346	·0368	·0274
April	·0464	·0400	·0286	·0344	·0403	·0308
May	·0497	·0324	·0428	·0375	·0367	·0326
June	·0538	·0373	·0333	·0441	·0349	·0389
July	·0513	·0422	·0410	·0418	·0304	·0487
August	·0519	·0432	·0540	·0388	·0483	·0489
September	·0488	·0380	·0359	·0325	·0484	·0492
October	·0478	·0405	·0366	·0495	·0442	·0499
November	·0458	·0385	·0360	·0497	·0386	·0513
December	·0472	·0368	·0364	·0424	·0416	·0505

TABLE XIV.—MEAN MONTHLY DETERMINATION of the VERTICAL MAGNETIC FORCE (diminished by a Constant 0·9600 nearly) corrected for Temperature, at every HOUR of the DAY; obtained by taking the Mean of all the Determinations at the same Hour of the Day through each Month.

1858.

Hour. Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	0·0429	0·0437	0·0442	0·0461	0·0497	0·0533	0·0522	0·0535	0·0503	0·0494	0·0476	0·0478
1	·0424	·0437	·0441	·0461	·0496	·0529	·0511	·0526	·0495	·0493	·0476	·0477
2	·0418	·0433	·0441	·0459	·0490	·0525	·0503	·0513	·0491	·0485	·0474	·0478
3	·0410	·0428	·0440	·0462	·0486	·0527	·0499	·0505	·0488	·0478	·0466	·0476
4	·0402	·0422	·0439	·0463	·0487	·0529	·0500	·0503	·0486	·0474	·0457	·0477
5	·0399	·0420	·0438	·0463	·0488	·0528	·0501	·0501	·0483	·0469	·0450	·0474
6	·0397	·0420	·0438	·0464	·0491	·0528	·0501	·0499	·0479	·0467	·0445	·0470
7	·0397	·0419	·0437	·0463	·0488	·0526	·0499	·0497	·0477	·0464	·0441	·0469
8	·0397	·0419	·0436	·0460	·0486	·0526	·0495	·0494	·0475	·0461	·0441	·0468
9	·0397	·0419	·0437	·0459	·0486	·0528	·0491	·0493	·0476	·0459	·0440	·0467
10	·0396	·0420	·0437	·0461	·0485	·0531	·0491	·0494	·0477	·0460	·0441	·0466
11	·0397	·0419	·0438	·0462	·0486	·0537	·0495	·0500	·0479	·0461	·0442	·0466
12	·0398	·0421	·0442	·0465	·0490	·0544	·0499	·0507	·0481	·0462	·0444	·0466
13	·0400	·0423	·0444	·0469	·0494	·0550	·0508	·0516	·0483	·0466	·0447	·0467
14	·0401	·0426	·0447	·0469	·0501	·0554	·0517	·0526	·0487	·0471	·0451	·0468
15	·0404	·0429	·0450	·0470	·0509	·0555	·0523	·0533	·0489	·0477	·0455	·0470
16	·0407	·0432	·0452	·0469	·0513	·0553	·0529	·0537	·0491	·0483	·0459	·0471
17	·0408	·0434	·0453	·0468	·0513	·0549	·0532	·0540	·0494	·0487	·0463	·0472
18	·0409	·0436	·0454	·0468	·0512	·0546	·0533	·0540	·0495	·0490	·0467	·0473
19	·0410	·0436	·0454	·0466	·0511	·0545	·0532	·0541	·0496	·0493	·0469	·0474
20	·0410	·0435	·0453	·0465	·0509	·0545	·0532	·0541	·0497	·0494	·0471	·0475
21	·0411	·0435	·0452	·0462	·0508	·0544	·0532	·0539	·0497	·0493	·0473	·0476
22	·0413	·0434	·0449	·0462	·0507	·0542	·0534	·0540	·0496	·0493	·0472	·0476
23	·0417	·0435	·0447	·0463	·0504	·0536	·0531	·0540	·0498	·0496	·0475	·0476

1859.

Hour. Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	0·0441	..	..	0·0418	0·0329	0·0387	0·0433	0·0430	0·0387	0·0424	0·0403	0·0391
1	·0439	..	..	·0414	·0332	·0386	·0427	·0434	·0392	·0418	·0405	·0388
2	·0439	..	..	·0415	·0333	·0385	·0422	·0431	·0391	·0419	·0404	·0387
3	·0442	..	..	·0411	·0323	·0380	·0415	·0424	·0385	·0413	·0400	·0385
4	·0441	..	..	·0409	·0313	·0373	·0410	·0418	·0381	·0411	·0393	·0380
5	·0439	..	..	·0404	·0308	·0369	·0409	·0419	·0375	·0408	·0384	·0372
6	·0439	..	..	·0402	·0311	·0363	·0410	·0422	·0372	·0404	·0380	·0365
7	·0438	..	..	·0398	·0311	·0365	·0409	·0422	·0370	·0399	·0377	·0362
8	·0440	..	..	·0393	·0312	·0362	·0409	·0423	·0367	·0396	·0375	·0358
9	·0440	..	..	·0386	·0312	·0364	·0406	·0424	·0367	·0393	·0374	·0356
10	·0441	..	..	·0384	·0310	·0363	·0406	·0424	·0367	·0394	·0372	·0354
11	·0442	..	..	·0383	·0310	·0364	·0407	·0425	·0369	·0392	·0372	·0353
12	·0442	..	..	·0382	·0313	·0365	·0410	·0427	·0369	·0393	·0371	·0351
13	·0441	..	..	·0382	·0316	·0365	·0416	·0430	·0370	·0393	·0372	·0353
14	·0441	..	..	·0383	·0321	·0367	·0422	·0434	·0375	·0395	·0374	·0354
15	·0440	..	..	·0387	·0328	·0371	·0429	·0438	·0378	·0397	·0376	·0357
16	·0440	..	..	·0392	·0336	·0367	·0436	·0444	·0381	·0400	·0377	·0361
17	·0438	..	..	·0399	·0343	·0372	·0439	·0439	·0384	·0403	·0380	·0364
18	·0438	..	..	·0405	·0346	·0377	·0440	·0441	·0386	·0406	·0382	·0367
19	·0438	..	..	·0408	·0344	·0378	·0439	·0449	·0388	·0409	·0385	·0370
20	·0438	..	..	·0410	·0340	·0378	·0436	·0448	·0390	·0411	·0388	·0373
21	·0439	..	..	·0409	·0335	·0375	·0434	·0445	·0391	·0412	·0392	·0375
22	·0441	..	..	·0408	·0329	·0380	·0431	·0437	·0392	·0416	·0395	·0379
23	·0442	..	..	·0408	·0329	·0385	·0427	·0438	·0390	·0419	·0399	·0385

TABLE XIV.—MEAN MONTHLY DETERMINATION of the VERTICAL MAGNETIC FORCE at every HOUR of the DAY—*continued.*

1860.

Hour, Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	0·0422	0·0396	0·0358	0·0299	0·0427	0·0341	0·0423	0·0547	0·0378	0·0381	0·0375	0·0381
1	·0419	·0398	·0359	·0298	·0422	·0348	·0429	·0545	·0369	·0382	·0378	·0384
2	·0418	·0397	·0361	·0297	·0431	·0344	·0425	·0545	·0368	·0380	·0382	·0383
3	·0414	·0389	·0355	·0293	·0430	·0341	·0422	·0541	·0363	·0376	·0376	·0379
4	·0404	·0381	·0349	·0288	·0428	·0338	·0414	·0536	·0360	·0370	·0371	·0373
5	·0396	·0372	·0341	·0282	·0428	·0333	·0410	·0535	·0356	·0366	·0364	·0366
6	·0392	·0366	·0334	·0280	·0430	·0329	·0407	·0537	·0354	·0363	·0360	·0361
7	·0388	·0362	·0329	·0276	·0428	·0327	·0403	·0536	·0353	·0359	·0355	·0357
8	·0386	·0359	·0327	·0273	·0427	·0325	·0399	·0536	·0352	·0357	·0351	·0354
9	·0386	·0357	·0325	·0271	·0426	·0323	·0396	·0534	·0352	·0355	·0349	·0353
10	·0385	·0357	·0324	·0270	·0426	·0321	·0395	·0533	·0351	·0354	·0348	·0351
11	·0385	·0355	·0324	·0269	·0426	·0320	·0394	·0531	·0351	·0353	·0347	·0350
12	·0386	·0357	·0326	·0269	·0429	·0319	·0394	·0529	·0351	·0353	·0347	·0350
13	·0387	·0359	·0327	·0271	·0421	·0320	·0394	·0529	·0351	·0354	·0347	·0351
14	·0390	·0362	·0328	·0274	·0424	·0321	·0395	·0531	·0352	·0356	·0349	·0352
15	·0393	·0366	·0332	·0279	·0426	·0323	·0397	·0536	·0353	·0358	·0351	·0354
16	·0396	·0369	·0335	·0284	·0430	·0327	·0401	·0541	·0355	·0360	·0353	·0357
17	·0400	·0372	·0339	·0289	·0433	·0331	·0406	·0544	·0356	·0363	·0355	·0360
18	·0404	·0376	·0343	·0295	·0434	·0336	·0412	·0548	·0358	·0367	·0357	·0363
19	·0407	·0380	·0348	·0300	·0433	·0340	·0417	·0551	·0359	·0370	·0361	·0366
20	·0412	·0384	·0352	·0304	·0431	·0344	·0420	·0553	·0361	·0373	·0364	·0369
21	·0416	·0388	·0356	·0305	·0429	·0345	·0423	·0550	·0365	·0377	·0367	·0371
22	·0421	·0391	·0357	·0305	·0432	·0345	·0425	·0550	·0369	·0380	·0371	·0375
23	·0424	·0393	·0359	·0303	·0430	·0348	·0428	·0549	·0372	·0384	·0372	·0379

1861.

Hour, Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	0·0373	0·0372	0·0366	0·0368	0·0386	0·0435	0·0427	0·0398	0·0346	0·0509	0·0510	0·0432
1	·0369	·0375	·0367	·0365	·0386	·0438	·0427	·0399	·0334	·0507	·0502	·0431
2	·0367	·0375	·0367	·0363	·0383	·0439	·0422	·0397	·0328	·0509	·0504	·0439
3	·0362	·0370	·0361	·0353	·0377	·0435	·0418	·0389	·0322	·0506	·0503	·0441
4	·0353	·0366	·0353	·0341	·0371	·0440	·0418	·0383	·0318	·0501	·0500	·0432
5	·0346	·0359	·0345	·0335	·0366	·0440	·0417	·0378	·0312	·0495	·0495	·0427
6	·0340	·0355	·0338	·0334	·0366	·0441	·0417	·0377	·0310	·0491	·0494	·0423
7	·0337	·0351	·0334	·0332	·0364	·0441	·0414	·0375	·0310	·0488	·0492	·0420
8	·0334	·0348	·0331	·0327	·0362	·0441	·0409	·0373	·0310	·0486	·0490	·0420
9	·0333	·0347	·0328	·0324	·0361	·0442	·0405	·0373	·0311	·0484	·0489	·0418
10	·0332	·0346	·0327	·0323	·0359	·0441	·0404	·0373	·0314	·0483	·0488	·0419
11	·0333	·0345	·0326	·0322	·0359	·0440	·0404	·0374	·0316	·0483	·0488	·0411
12	·0333	·0346	·0327	·0324	·0361	·0441	·0404	·0380	·0318	·0484	·0488	·0416
13	·0334	·0347	·0329	·0326	·0363	·0441	·0405	·0379	·0319	·0483	·0489	·0413
14	·0338	·0349	·0331	·0330	·0367	·0442	·0407	·0384	·0321	·0485	·0492	·0412
15	·0341	·0352	·0333	·0336	·0372	·0443	·0411	·0388	·0324	·0488	·0493	·0414
16	·0344	·0355	·0340	·0342	·0378	·0446	·0416	·0389	·0326	·0490	·0495	·0418
17	·0348	·0358	·0345	·0348	·0383	·0449	·0421	·0394	·0330	·0495	·0498	·0419
18	·0351	·0361	·0351	·0353	·0386	·0449	·0425	·0400	·0331	·0499	·0500	·0418
19	·0356	·0366	·0355	·0359	·0390	·0448	·0428	·0402	·0332	·0498	·0502	·0419
20	·0359	·0369	·0359	·0361	·0391	·0445	·0431	·0402	·0338	·0501	·0505	·0426
21	·0363	·0372	·0362	·0361	·0391	·0443	·0432	·0401	·0342	·0501	·0502	·0431
22	·0368	·0376	·0364	·0365	·0391	·0434	·0433	·0402	·0345	·0501	·0506	·0434
23	·0372	·0379	·0363	·0366	·0390	·0440	·0429	·0397	·0351	·0506	·0511	·0432

TABLE XIV.—MEAN MONTHLY DETERMINATION of the VERTICAL MAGNETIC FORCE at every HOUR of the DAY—*concluded.*

1862.

Hour, Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	0·0398	0·0396	0·0376	0·0412	0·0382	0·0365	0·0311	0·0471	0·0490	0·0442	0·0396	0·0420
1	·0399	·0397	·0376	·0412	·0378	·0369	·0304	·0467	·0479	·0435	·0397	·0419
2	·0395	·0397	·0378	·0414	·0371	·0363	·0300	·0469	·0476	·0438	·0394	·0421
3	·0392	·0394	·0373	·0412	·0367	·0356	·0298	·0470	·0473	·0444	·0391	·0422
4	·0385	·0388	·0369	·0408	·0363	·0353	·0296	·0475	·0472	·0442	·0388	·0421
5	·0379	·0383	·0365	·0406	·0364	·0346	·0295	·0482	·0470	·0439	·0385	·0417
6	·0376	·0380	·0362	·0405	·0361	·0339	·0296	·0487	·0474	·0439	·0380	·0415
7	·0374	·0377	·0358	·0401	·0356	·0335	·0297	·0489	·0478	·0440	·0380	·0414
8	·0372	·0374	·0361	·0397	·0353	·0331	·0295	·0484	·0479	·0439	·0380	·0414
9	·0370	·0371	·0358	·0394	·0351	·0330	·0292	·0485	·0482	·0438	·0380	·0414
10	·0369	·0370	·0358	·0391	·0349	·0330	·0291	·0485	·0482	·0438	·0381	·0413
11	·0368	·0372	·0357	·0390	·0349	·0330	·0292	·0482	·0483	·0439	·0380	·0412
12	·0369	·0372	·0359	·0391	·0352	·0333	·0294	·0483	·0483	·0440	·0379	·0411
13	·0370	·0372	·0360	·0390	·0354	·0335	·0296	·0485	·0484	·0441	·0380	·0413
14	·0375	·0375	·0371	·0392	·0359	·0338	·0301	·0485	·0486	·0443	·0381	·0413
15	·0377	·0378	·0364	·0395	·0363	·0343	·0307	·0486	·0487	·0446	·0383	·0414
16	·0380	·0381	·0367	·0398	·0368	·0350	·0312	·0491	·0490	·0448	·0385	·0416
17	·0382	·0381	·0371	·0403	·0377	·0354	·0318	·0496	·0492	·0451	·0387	·0418
18	·0386	·0385	·0373	·0406	·0382	·0358	·0321	·0495	·0493	·0452	·0388	·0419
19	·0388	·0387	·0377	·0409	·0384	·0363	·0320	·0492	·0494	·0448	·0390	·0419
20	·0390	·0388	·0378	·0411	·0384	·0366	·0321	·0489	·0493	·0444	·0391	·0419
21	·0394	·0390	·0379	·0412	·0386	·0366	·0316	·0484	·0492	·0441	·0391	·0418
22	·0396	·0391	·0377	·0411	·0382	·0364	·0312	·0480	·0491	·0437	·0391	·0416
23	·0397	·0392	·0376	·0412	·0375	·0365	·0309	·0481	·0497	·0439	·0395	·0416

1863.

Hour, Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	0·0288	0·0272	0·0286	0·0319	0·0330	0·0399	0·0514	0·0513	0·0518	0·0512	0·0522	0·0511
1	·0290	·0276	·0288	·0320	·0333	·0407	·0511	·0514	·0517	·0510	·0524	·0511
2	·0291	·0280	·0291	·0322	·0335	·0406	·0506	·0511	·0514	·0508	·0525	·0516
3	·0295	·0282	·0291	·0324	·0334	·0404	·0498	·0503	·0507	·0503	·0519	·0513
4	·0291	·0279	·0286	·0320	·0332	·0404	·0491	·0496	·0497	·0497	·0514	·0506
5	·0287	·0272	·0280	·0316	·0332	·0397	·0485	·0487	·0487	·0491	·0509	·0500
6	·0284	·0268	·0275	·0314	·0331	·0389	·0481	·0479	·0480	·0490	·0507	·0497
7	·0282	·0265	·0270	·0310	·0328	·0385	·0474	·0472	·0476	·0487	·0506	·0496
8	·0279	·0261	·0266	·0304	·0326	·0382	·0469	·0469	·0472	·0486	·0505	·0497
9	·0278	·0258	·0264	·0300	·0323	·0375	·0464	·0465	·0472	·0485	·0504	·0498
10	·0277	·0256	·0261	·0297	·0321	·0372	·0462	·0465	·0471	·0484	·0504	·0499
11	·0276	·0254	·0259	·0295	·0319	·0372	·0462	·0465	·0470	·0486	·0504	·0499
12	·0275	·0253	·0258	·0295	·0320	·0372	·0462	·0466	·0470	·0487	·0505	·0499
13	·0276	·0252	·0257	·0293	·0319	·0372	·0463	·0468	·0473	·0489	·0507	·0500
14	·0276	·0253	·0261	·0296	·0320	·0371	·0467	·0471	·0476	·0493	·0510	·0502
15	·0277	·0256	·0262	·0299	·0322	·0377	·0473	·0476	·0480	·0495	·0512	·0502
16	·0278	·0257	·0266	·0300	·0324	·0378	·0481	·0482	·0486	·0498	·0516	·0503
17	·0279	·0259	·0269	·0302	·0326	·0381	·0488	·0488	·0491	·0500	·0513	·0506
18	·0280	·0260	·0275	·0305	·0327	·0385	·0495	·0494	·0496	·0504	·0515	·0508
19	·0280	·0261	·0277	·0306	·0327	·0394	·0500	·0502	·0501	·0508	·0517	·0509
20	·0281	·0263	·0280	·0312	·0326	·0398	·0505	·0506	·0508	·0512	·0520	·0508
21	·0282	·0264	·0282	·0312	·0327	·0400	·0509	·0511	·0514	·0512	·0520	·0509
22	·0284	·0266	·0283	·0315	·0326	·0401	·0512	·0514	·0515	·0514	·0521	·0511
23	·0286	·0270	·0286	·0319	·0327	·0408	·0515	·0516	·0515	·0519	·0522	·0510

TABLE XV.—MEAN, through the RANGE of YEARS, of the MONTHLY MEAN DETERMINATIONS of the DIURNAL INEQUALITY of VERTICAL FORCE, exhibited separately for the DIFFERENT MONTHS.

1858 to 1863.

Hour. Greenwich Mean Solar Time.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
0	+0·00150	+0·00128	+0·00110	+0·00120	+0·00057	+0·00062	+0·00127	+0·00072	+0·00157	+0·00128	+0·00138	+0·00107
1	+ 132	+ 148	+ 116	+ 108	+ 50	+ 90	+ 92	+ 57	+ 97	+ 100	+ 138	+ 102
2	+ 112	+ 146	+ 130	+ 108	+ 43	+ 65	+ 40	+ 25	+ 67	+ 90	+ 140	+ 125
3	+ 90	+ 108	+ 94	+ 83	0	+ 33	− 7	− 32	+ 17	+ 58	+ 93	+ 112
4	+ 25	+ 54	+ 46	+ 40	− 38	+ 23	− 42	− 67	− 23	+ 17	+ 40	+ 67
5	− 25	− 6	− 8	+ 2	− 52	− 17	− 62	− 82	− 75	− 28	− 20	+ 12
6	− 55	− 40	− 52	− 10	− 45	− 57	− 70	− 83	− 98	− 52	− 55	− 30
7	− 75	− 70	− 90	− 42	− 70	− 73	− 97	− 100	− 107	− 80	− 80	− 52
8	− 88	− 96	− 104	− 85	− 85	− 93	− 130	− 120	− 122	− 100	− 95	− 63
9	− 95	− 114	− 122	− 118	− 97	− 102	− 167	− 128	− 113	− 118	− 105	− 72
10	− 102	− 120	− 132	− 132	− 112	− 108	− 175	− 128	− 110	− 120	− 108	− 78
11	− 100	− 128	− 138	− 140	− 113	− 100	− 167	− 123	− 100	− 118	− 110	− 97
12	− 97	− 120	− 122	− 132	− 87	− 82	− 152	− 98	− 93	− 110	− 108	− 93
13	− 88	− 112	− 112	− 123	− 83	− 67	− 120	− 73	− 80	− 98	− 95	− 87
14	− 67	− 88	− 90	− 102	− 42	− 50	− 75	− 33	− 52	− 70	− 70	− 80
15	− 48	− 56	− 64	− 65	+ 5	− 18	− 23	+ 10	− 28	− 40	− 48	− 63
16	− 27	− 30	− 26	− 33	+ 53	− 3	+ 35	+ 55	+ 2	− 10	− 23	− 38
17	− 10	− 10	+ 8	+ 7	+ 97	+ 22	+ 83	+ 83	+ 32	+ 23	− 5	− 17
18	+ 12	+ 18	+ 46	+ 45	+ 117	+ 47	+ 120	+ 112	+ 52	+ 55	+ 17	− 2
19	+ 30	+ 42	+ 76	+ 72	+ 120	+ 75	+ 137	+ 143	+ 70	+ 68	+ 42	+ 13
20	+ 48	+ 60	+ 98	+ 97	+ 107	+ 88	+ 152	+ 147	+ 98	+ 83	+ 67	+ 35
21	+ 73	+ 80	+ 116	+ 93	+ 98	+ 83	+ 153	+ 132	+ 122	+ 85	+ 77	+ 52
22	+ 103	+ 98	+ 114	+ 102	+ 83	+ 72	+ 155	+ 120	+ 133	+ 93	+ 95	+ 70
23	+ 128	+ 120	+ 116	+ 110	+ 63	+ 98	+ 142	+ 117	+ 158	+ 130	+ 125	+ 82

TABLE XVI.—MEAN, through the RANGE of MONTHS, of the MONTHLY MEAN DETERMINATIONS of the DIURNAL INEQUALITY of VERTICAL FORCE, exhibited separately for the DIFFERENT YEARS.

Hour. Greenwich Mean Solar Time.	January to December.						Mean 1858 to 1863.	Mean in Terms of Horizontal Force.
	1858.	1859.	1860.	1861.	1862.	1863.		
0	+ 0·00085	+ 0·00114	+ 0·00138	+ 0·00133	+ 0·00076	+ 0·00130	+ 0·00113	+ 0·00284
1	+ 51	+ 106	+ 141	+ 115	+ 53	+ 144	+ 102	+ 256
2	+ 4	+ 97	+ 141	+ 109	+ 40	+ 147	+ 90	+ 226
3	− 33	+ 49	+ 97	+ 63	+ 20	+ 121	+ 53	+ 133
4	− 55	0	+ 42	+ 12	− 7	+ 71	+ 10	+ 25
5	− 76	− 42	− 11	− 39	− 31	+ 12	− 31	− 78
6	− 88	− 61	− 41	− 63	− 45	− 27	− 54	− 135
7	− 107	− 78	− 74	− 87	− 57	− 64	− 78	− 196
8	− 122	− 94	− 97	− 109	− 74	− 93	− 98	− 246
9	− 128	− 107	− 112	− 123	− 86	− 118	− 112	− 281
10	− 122	− 114	− 123	− 127	− 92	− 133	− 118	− 296
11	− 103	− 112	− 131	− 134	− 95	− 139	− 119	− 299
12	− 72	− 106	− 127	− 117	− 85	− 138	− 108	− 271
13	− 32	− 91	− 126	− 112	− 73	− 132	− 94	− 236
14	+ 11	− 63	− 107	− 87	− 49	− 110	− 68	− 171
15	+ 49	− 28	− 78	− 56	− 21	− 81	− 36	− 90
16	+ 76	+ 5	− 45	− 19	+ 15	− 49	− 3	− 8
17	+ 90	+ 32	− 12	+ 22	+ 52	− 22	+ 27	+ 68
18	+ 98	+ 59	+ 26	+ 52	+ 75	+ 13	+ 54	+ 135
19	+ 102	+ 79	+ 58	+ 77	+ 86	+ 45	+ 74	+ 186
20	+ 102	+ 83	+ 88	+ 104	+ 88	+ 76	+ 90	+ 226
21	+ 97	+ 78	+ 108	+ 116	+ 84	+ 95	+ 96	+ 241
22	+ 94	+ 79	+ 132	+ 131	+ 67	+ 112	+ 103	+ 259
23	+ 94	+ 93	+ 149	+ 145	+ 72	+ 138	+ 115	+ 289

REDUCTIONS OF MAGNETIC DECLINATION REFERRED TO THE MOON'S PLACE.

TABLE XVII.—MEAN LUNATION INEQUALITY of the WESTERN DECLINATION of the MAGNET, exhibited separately for the DIFFERENT YEARS; with the Mean of all the Years, corrected for the Daily Proportion of Secular Change of Western Declination.

Day of the Lunation.	1858.	1859.	1860.	1861.	1862.	1863.	Mean 1858 to 1863.	Mean corrected by Secular Variation −9′·2 annually.
	′	′	′	′	′	′	′	′
1	+ 0·4	− 0·6	+ 0·5	+ 1·0	− 0·2	+ 0·5	+ 0·27	− 0·10
2	+ 0·3	− 0·1	+ 0·6	+ 1·0	− 1·4	+ 0·4	+ 0·13	− 0·21
3	+ 0·6	+ 0·6	− 0·1	+ 0·4	+ 1·7	+ 0·5	+ 0·62	+ 0·30
4	+ 0·4	− 0·1	0·0	+ 3·4	− 0·2	− 0·4	+ 0·52	+ 0·23
5	− 0·1	− 0·3	+ 1·7	+ 4·2	+ 0·3	− 0·1	+ 0·95	+ 0·69
6	+ 0·6	− 1·4	+ 0·4	+ 3·1	+ 0·1	+ 0·4	+ 0·53	+ 0·30
7	− 0·1	+ 0·3	− 0·1	+ 2·0	+ 0·4	− 0·1	+ 0·40	+ 0·20
8	+ 0·7	+ 0·7	+ 0·3	+ 1·3	+ 0·1	0·0	+ 0·52	+ 0·35
9	− 0·4	+ 0·1	− 0·6	+ 1·6	− 0·3	− 0·1	+ 0·05	− 0·09
10	+ 0·7	+ 0·4	− 0·1	+ 2·7	− 1·3	− 0·8	+ 0·27	+ 0·16
11	− 0·5	+ 0·6	− 0·3	+ 0·9	− 0·3	− 0·2	+ 0·03	− 0·05
12	− 0·3	− 0·3	+ 0·8	+ 0·1	+ 0·5	− 0·5	+ 0·05	0·00
13	− 0·1	+ 0·2	+ 1·4	+ 0·1	− 0·4	− 0·5	+ 0·12	+ 0·09
14	+ 0·2	+ 0·2	+ 0·7	− 1·6	+ 0·4	+ 0·1	0·00	0·00
15	+ 0·3	+ 0·8	− 0·4	− 1·5	+ 0·6	− 0·1	− 0·05	− 0·05
16	+ 0·5	+ 0·1	− 0·3	− 1·3	+ 0·4	− 0·3	− 0·15	− 0·12
17	+ 0·6	+ 0·8	− 0·1	− 0·2	+ 0·6	− 0·4	+ 0·22	+ 0·27
18	− 0·6	+ 0·4	− 0·2	− 1·1	+ 0·4	− 0·4	− 0·25	− 0·17
19	+ 0·6	− 1·4	− 0·4	− 0·4	− 0·3	− 0·8	− 0·45	− 0·35
20	− 0·1	+ 0·5	− 0·8	− 2·0	− 0·5	− 0·3	− 0·53	− 0·40
21	− 0·6	− 0·2	− 0·2	− 0·6	− 0·6	+ 0·7	− 0·25	− 0·09
22	+ 0·2	+ 1·4	− 0·7	− 1·8	+ 1·0	+ 0·3	+ 0·07	+ 0·25
23	+ 0·1	+ 0·3	− 0·3	− 1·3	+ 0·9	+ 0·2	− 0·02	+ 0·19
24	− 0·8	− 1·5	− 0·3	− 1·2	− 0·1	+ 0·2	− 0·62	− 0·38
25	− 1·5	− 0·3	− 0·4	− 2·4	+ 0·1	0·0	− 0·75	− 0·48
26	− 0·9	− 1·3	− 0·3	− 1·5	− 1·3	+ 0·4	− 0·82	− 0·53
27	− 0·4	− 0·6	− 0·7	− 1·7	− 1·0	+ 0·6	− 0·63	− 0·31
28	− 0·1	+ 0·5	− 0·5	− 1·9	0·0	+ 0·2	− 0·30	+ 0·04
29	+ 0·6	− 1·0	+ 0·7	....	+ 1·0	− 0·3	+ 0·20	+ 0·57

TABLE XVIII.—MEAN LUNATION DETERMINATION of the WESTERN DECLINATION of the MAGNET at every LUNAR HOUR of the LUNAR DAY; obtained by taking the Means of all the Determinations at the same Lunar Hour through the Lunation.

1858.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 15. 0. 27	February. d h m 14. 0. 44	March. d h m 15. 0. 8	April. d h m 14. 0. 23	May. d h m 13. 0. 1	June. d h m 12. 0. 58	July. d h m 11. 0. 46	August. d h m 9. 0. 24	September. d h m 8. 0. 39	October. d h m 7. 0. 1	November. d h m 6. 0. 16	December. d h m 6. 0. 43	Mean.
	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°
	′	′	′	′	′	′	′	′	′	′	′	′	′
0	33·8	33·7	33·9	33·1	28·8	28·4	29·2	28·6	27·4	26·4	30·3	28·4	30·2
1	34·4	33·2	34·0	32·9	28·8	28·3	29·2	28·2	27·0	26·4	30·0	28·5	30·1
2	34·5	33·8	33·8	33·0	28·6	28·0	29·0	28·4	27·3	26·9	29·8	28·5	30·1
3	34·2	33·9	33·3	32·7	28·3	28·0	28·7	28·8	27·1	26·9	29·8	28·9	30·0
4	33·9	33·8	32·6	32·2	28·5	27·7	28·4	28·6	27·5	26·9	30·2	28·4	29·9
5	33·8	33·8	32·9	31·5	28·8	28·3	28·5	28·1	27·2	26·6	30·4	28·4	29·9
6	34·0	33·0	33·3	31·7	29·1	28·0	28·1	28·1	27·0	27·0	30·5	28·4	29·9
7	34·0	33·7	33·0	32·0	28·9	29·1	28·2	28·3	26·8	26·8	30·6	28·7	30·0
8	33·5	33·5	33·6	31·5	29·0	29·2	28·5	28·2	26·7	26·1	30·3	28·9	29·9
9	33·4	33·7	34·1	31·4	29·1	30·1	28·7	28·1	27·6	25·9	30·3	28·9	30·1
10	34·0	33·3	34·1	31·7	29·4	29·8	28·9	28·6	27·6	26·2	30·4	29·0	30·2
11	33·6	33·5	33·9	32·2	28·7	29·7	29·0	28·4	27·3	25·7	29·8	29·5	30·1
12	33·2	33·8	34·1	32·6	28·7	29·5	29·4	28·3	26·9	25·4	30·2	29·2	30·1
13	32·7	33·6	33·8	33·5	29·1	28·9	29·4	28·8	27·7	26·0	30·1	29·4	30·2
14	33·0	32·5	33·3	32·6	29·1	28·6	29·3	29·0	27·2	25·9	30·2	29·2	30·0
15	32·9	31·9	33·5	33·0	29·7	28·3	29·1	28·8	27·7	27·1	30·3	28·8	30·1
16	33·0	32·1	32·9	32·8	29·8	28·2	29·1	28·3	27·9	27·8	30·1	28·3	30·0
17	33·1	32·8	32·2	32·3	29·8	27·8	28·3	28·4	27·9	27·4	29·9	28·4	29·9
18	33·1	33·3	32·7	32·1	29·7	28·4	28·5	28·0	27·8	27·5	29·4	28·7	29·9
19	33·4	33·8	32·8	32·1	29·7	28·4	29·1	28·0	27·7	27·4	29·8	28·2	30·0
20	33·4	33·8	32·5	32·4	29·5	28·7	29·2	28·3	28·0	27·9	30·0	28·1	30·1
21	33·5	33·8	32·9	32·5	29·1	28·7	29·0	28·7	28·0	28·3	29·9	28·4	30·2
22	33·8	33·4	33·4	33·2	28·9	28·0	29·0	28·8	27·8	28·1	30·0	28·0	30·2
23	33·4	33·8	34·1	33·9	28·7	28·2	29·5	28·8	27·2	27·3	30·0	28·0	30·2

TABLE XVIII.—MEAN LUNATION DETERMINATION of the WESTERN DECLINATION of the MAGNET at every LUNAR HOUR—*continued.*

1859.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 4. 0. 21	February. d h m 3. 0. 36	March. d h m 5. 0. 39	April. d h m 3. 0. 1	May d h m 3. 0. 22	June. d h m 1. 0. 7	July. d h m 1. 1. 2	July. d h m 30. 0. 43	August. d h m 28. 0. 14	September. d h m 27. 0. 32	October. d h m 26. 0. 1	November. d h m 25. 0. 34	December. d h m 24. 0. 14	Mean.
	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°
	′	′	′	′	′	′	′	′	′	′	′	′	′	′
0	26.5	27.0	27.3	26.7	22.6	23.8	25.1	23.4	22.4	22.3	18.5	19.9	17.5	23.3
1	26.4	28.1	28.3	26.6	22.3	24.2	24.7	23.0	22.0	21.9	19.2	19.9	17.5	23.4
2	26.7	28.4	28.3	27.0	21.6	24.3	25.0	22.9	21.6	21.5	19.7	20.3	17.3	23.4
3	27.0	28.6	28.6	26.5	21.4	24.2	24.3	23.2	22.5	20.4	20.6	20.2	17.8	23.5
4	27.1	28.8	28.8	26.9	21.0	24.3	23.9	22.7	22.9	20.2	20.4	19.9	18.0	23.5
5	27.2	28.9	27.6	26.5	20.9	24.2	24.0	22.7	23.1	19.7	19.9	20.1	17.3	23.2
6	27.2	28.8	27.8	26.3	20.8	23.9	24.2	22.7	24.0	20.2	19.5	20.0	17.1	23.3
7	27.2	28.3	27.0	26.4	20.8	24.3	24.0	22.8	23.5	19.7	19.2	19.5	17.5	23.1
8	26.8	27.8	26.8	26.3	20.6	24.0	24.5	22.7	23.6	20.6	19.0	19.6	16.1	23.0
9	26.9	28.2	27.1	26.2	21.0	24.3	24.1	23.1	23.1	19.8	19.0	20.0	15.6	23.0
10	26.8	27.7	27.2	25.3	20.9	24.8	25.5	23.1	23.6	19.5	19.3	19.3	16.2	23.0
11	27.0	27.2	27.7	25.6	22.0	24.8	25.9	23.2	23.5	20.3	19.3	18.8	15.5	23.1
12	26.8	26.7	28.2	27.1	23.1	25.0	25.3	23.0	23.9	20.9	19.7	18.6	15.4	23.4
13	26.9	26.8	27.8	27.0	23.4	24.5	24.7	23.0	24.5	20.2	20.0	18.9	14.6	23.3
14	27.1	26.8	27.3	27.4	23.9	24.8	24.1	23.0	23.9	20.1	20.1	17.7	14.4	23.1
15	27.3	27.2	26.6	27.5	23.9	25.0	23.6	22.6	23.7	20.6	20.0	18.0	15.1	23.2
16	27.1	26.7	26.6	26.3	23.4	25.2	23.5	22.5	23.2	20.5	19.5	17.6	15.5	22.9
17	27.0	26.0	26.0	26.0	23.1	25.0	23.6	22.8	22.4	20.1	19.6	17.7	15.7	22.7
18	26.9	26.4	25.5	25.6	22.3	24.1	24.1	22.6	22.3	20.2	19.7	17.8	15.5	22.5
19	27.0	26.7	25.6	25.5	21.6	23.9	23.7	22.3	22.1	20.2	19.3	18.4	16.1	22.5
20	26.5	26.5	25.4	25.9	21.4	24.1	24.1	21.9	22.2	20.6	18.7	17.7	15.6	22.4
21	26.4	26.9	26.0	26.2	21.6	23.6	24.7	22.2	21.5	20.9	18.8	18.3	16.0	22.5
22	26.7	27.1	26.1	26.1	21.9	23.7	25.1	22.9	19.8	20.4	18.9	19.2	16.6	22.7
23	26.6	27.4	26.3	26.2	22.5	23.9	25.4	23.5	20.9	21.4	19.2	19.8	16.8	23.1

1860.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 23. 0. 35	February. d h m 22. 0. 39	March. d h m 23. 0. 38	April. d h m 21. 0. 3	May. d h m 21. 0. 32	June. d h m 19. 0. 17	July. d h m 18. 0. 1	August. d h m 17. 0. 32	September. d h m 15. 0. 1	October. d h m 15. 0. 28	November. d h m 13. 0. 7	December. d h m 13. 0. 50	Mean.
	21°	...	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°	21°
	′	′	′	′	′	′	′	′	′	′	′	′	′
0	14.1	..	14.4	18.0	16.8	15.8	16.4	14.6	13.1	13.3	12.5	12.6	14.7
1	14.0	..	15.0	18.9	16.8	15.6	15.4	14.6	13.1	13.6	12.4	11.9	14.7
2	14.1	..	14.6	19.5	16.3	15.6	14.9	13.9	13.0	13.2	12.4	12.0	14.5
3	14.1	..	14.7	20.0	16.4	14.8	14.4	13.4	12.9	13.3	12.5	11.4	14.4
4	14.5	..	14.5	20.4	16.0	14.9	14.1	12.9	12.7	13.9	13.0	11.3	14.4
5	14.3	..	14.8	19.9	15.4	15.0	14.0	12.0	12.4	13.6	13.0	11.3	14.2
6	14.1	..	13.3	19.1	15.8	15.2	14.2	11.9	12.3	13.4	12.8	10.4	13.9
7	14.1	..	12.7	18.8	15.6	15.7	14.5	11.9	11.9	13.4	12.5	10.4	13.8
8	14.3	..	12.9	18.2	15.4	16.4	13.3	12.4	12.4	13.1	12.2	10.2	13.7
9	14.3	..	13.7	17.2	15.9	16.3	14.7	13.3	12.7	13.3	12.0	11.0	14.0
10	14.4	..	13.2	17.4	16.5	16.0	15.1	13.9	12.8	13.3	11.3	10.5	14.0
11	13.8	..	13.1	18.2	15.4	15.9	15.9	14.4	12.5	13.6	11.3	10.6	14.1
12	13.9	..	13.3	19.2	16.5	15.3	16.4	14.7	13.4	13.5	12.1	11.0	14.5
13	14.0	..	14.0	18.5	15.9	14.4	16.7	14.6	13.3	13.8	12.1	11.3	14.4
14	13.4	..	14.0	19.2	16.4	14.4	16.5	14.5	13.3	13.8	12.0	11.5	14.5
15	13.6	..	13.5	18.2	16.0	14.4	16.5	14.2	13.1	13.8	12.1	11.4	14.3
16	13.3	..	14.1	17.2	15.7	13.6	16.1	13.1	12.7	13.6	12.4	11.3	13.9
17	13.7	..	13.2	17.4	15.4	13.5	15.5	13.7	13.0	13.2	12.3	11.3	13.8
18	13.7	..	11.7	16.9	15.4	13.9	15.5	13.9	12.6	13.4	12.6	10.9	13.7
19	13.4	..	12.2	17.0	15.0	14.7	15.8	13.9	12.4	13.5	12.6	11.6	13.8
20	13.6	..	12.0	16.7	14.9	15.8	15.7	14.0	12.4	12.8	12.8	12.0	13.9
21	13.9	..	12.5	16.3	15.6	15.9	15.9	14.7	11.9	12.1	12.9	11.9	14.0
22	14.3	..	13.1	16.5	15.4	16.2	16.1	15.3	12.5	13.0	12.8	12.2	14.3
23	14.2	..	13.5	17.2	15.9	16.0	16.2	14.0	12.2	13.5	12.7	12.3	14.3

TABLE XVIII.—MEAN LUNATION DETERMINATION of the WESTERN DECLINATION of the MAGNET at every LUNAR HOUR—*continued.*

1861.

Lunar Hour.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mean.
	Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.												
	d h m 11. 0. 27	d h m 10. 0. 40	d h m 11. 0. 1	d h m 10. 0. 2	d h m 10. 0. 17	d h m 9. 0. 47	d h m 8. 0. 26	d h m 6. 0. 1	d h m 5. 0. 21	d h m 5. 0. 48	d h m 3. 0. 29	d h m 2. 0. 14	
	21°	21°	21°	21°	21°	21°	21°	21°	21°	20°	20°	20°	21°
	′	′	′	′	′	′	′	′	′	′	′	′	′
0	9·6	10·3	12·9	8·0	2·4	3·6	6·1	5·9	2·7	61·5	61·4	60·9	5·4
1	10·1	10·9	12·4	8·2	2·8	3·8	7·1	5·7	1·8	61·1	61·3	60·6	5·5
2	9·9	11·1	12·6	8·6	3·1	4·0	7·5	5·0	1·8	61·7	60·8	59·7	5·5
3	10·1	11·6	12·9	8·5	3·2	3·4	7·9	5·1	1·7	61·9	61·0	60·4	5·6
4	10·3	10·8	13·3	8·4	3·0	2·8	7·1	5·1	1·3	61·6	61·3	59·9	5·4
5	10·0	10·8	13·2	8·6	3·1	3·2	6·1	5·8	1·7	62·1	61·3	59·7	5·5
6	10·2	10·4	12·9	8·1	3·0	3·2	5·8	5·7	1·6	61·5	61·9	59·5	5·3
7	10·0	10·2	12·3	7·9	3·0	3·3	4·1	4·6	1·7	61·6	62·0	59·7	5·0
8	10·6	10·3	12·4	8·3	2·7	4·2	3·7	5·5	2·5	62·3	61·8	60·5	5·4
9	10·7	10·6	12·7	8·6	3·3	3·9	5·1	5·9	3·2	62·0	62·0	60·4	5·7
10	10·3	10·6	12·8	8·2	3·2	3·8	5·4	5·4	3·1	62·4	61·5	61·0	5·6
11	10·7	10·9	13·0	8·5	3·5	3·9	4·7	5·1	3·6	62·4	61·5	61·1	5·7
12	10·4	10·9	12·4	8·2	3·5	4·3	4·4	5·4	3·2	63·1	61·8	60·7	5·7
13	10·3	10·4	12·0	8·9	3·2	3·4	4·4	4·4	3·9	62·9	62·2	61·1	5·6
14	10·2	10·8	12·7	8·6	3·1	3·1	3·8	5·0	3·3	62·8	62·2	61·3	5·6
15	9·7	10·3	12·4	8·8	3·1	3·1	4·0	4·2	2·3	62·7	62·0	61·7	5·4
16	9·9	10·1	12·2	8·7	2·5	2·4	4·6	3·9	2·1	61·4	61·6	61·7	5·1
17	10·4	11·2	12·0	8·9	2·6	2·3	5·0	3·0	1·5	61·3	60·9	62·0	5·1
18	10·5	9·6	12·5	8·2	2·9	2·2	4·8	3·1	2·3	61·1	61·0	61·9	5·0
19	9·5	9·9	12·5	8·5	2·6	2·5	5·3	3·5	1·8	60·9	62·0	60·7	5·0
20	10·0	9·4	12·9	8·3	2·3	3·3	5·5	3·7	1·7	60·5	60·8	60·8	4·9
21	9·9	9·8	12·8	8·2	2·3	3·8	5·8	4·4	1·6	60·4	60·5	59·7	4·9
22	9·9	9·8	12·6	7·9	1·9	4·3	6·2	4·8	2·5	59·9	60·8	59·7	5·0
23	9·6	10·0	13·3	7·7	2·0	4·1	6·5	4·9	2·2	60·6	61·4	60·4	5·2

1862.

Lunar Hour.	January.	January.	March.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Mean.
	Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.													
	d h m 1. 0. 58	d h m 30. 0. 30	d h m 1. 0. 42	d h m 30. 0. 4	d h m 29. 0. 16	d h m 29. 0. 38	d h m 27. 0. 13	d h m 27. 0. 32	d h m 26. 0. 46	d h m 24. 0. 15	d h m 24. 0. 47	d h m 22. 0. 31	d h m 21. 0. 17	
	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°
	′	′	′	′	′	′	′	′	′	′	′	′	′	′
0	57·7	58·6	58·2	51·7	50·7	52·6	50·7	52·6	51·3	50·6	49·6	49·4	50·2	52·6
1	57·8	58·3	57·2	51·1	51·3	53·0	50·6	52·8	51·7	50·0	49·8	49·4	49·9	52·5
2	58·6	58·0	56·9	50·6	52·0	53·3	50·4	53·1	51·9	49·9	50·0	50·3	50·6	52·7
3	58·3	58·1	56·9	51·5	52·3	53·4	49·7	52·7	52·0	50·5	49·4	50·0	50·5	52·7
4	58·8	58·4	56·4	51·0	51·9	53·0	49·7	53·1	51·5	50·9	49·2	49·7	50·9	52·7
5	58·8	58·0	56·1	51·5	51·2	53·0	49·9	52·9	51·1	50·0	49·2	49·5	50·2	52·4
6	58·9	58·1	55·7	50·0	50·6	52·8	50·0	52·1	51·8	51·2	49·0	49·6	50·7	52·3
7	59·1	58·1	56·0	49·3	50·2	52·7	50·2	52·1	51·5	51·3	49·4	49·3	50·3	52·3
8	58·9	58·1	56·4	49·0	49·0	51·9	50·3	52·4	52·0	52·0	48·5	49·9	50·3	52·2
9	58·5	58·1	56·7	49·5	48·8	52·0	50·0	52·0	52·2	52·4	49·3	50·3	48·8	52·2
10	58·9	58·6	57·3	49·5	49·0	52·2	50·7	52·4	52·3	51·7	49·7	50·7	48·8	52·4
11	58·9	58·8	57·9	49·8	49·1	51·9	50·8	52·9	52·9	52·0	49·5	50·7	48·9	52·6
12	59·0	59·1	58·5	49·6	50·6	51·8	50·4	53·8	52·9	51·2	49·9	51·2	49·6	52·9
13	59·0	59·0	58·9	49·4	51·0	51·9	49·8	53·1	52·2	51·5	49·3	51·2	50·2	52·8
14	59·1	59·2	59·3	49·6	50·5	52·4	48·8	52·2	51·7	50·9	49·5	51·5	50·3	52·7
15	59·0	58·9	59·2	50·6	50·5	52·4	49·5	50·5	51·5	51·0	49·1	51·4	50·8	52·6
16	59·7	58·8	59·1	50·4	50·0	51·9	49·3	50·9	51·4	50·5	50·0	51·7	49·8	52·6
17	59·9	58·6	59·4	50·8	49·7	51·7	49·4	51·2	50·8	50·6	50·2	50·7	48·7	52·4
18	58·9	58·1	59·6	50·1	48·9	51·1	49·8	50·6	50·8	50·6	50·0	50·2	49·6	52·2
19	58·3	58·2	60·0	50·5	48·3	51·6	49·8	50·7	50·6	50·2	50·3	50·1	49·7	52·2
20	58·2	57·9	58·9	49·8	49·0	51·7	49·8	50·7	50·8	50·1	49·1	49·0	50·8	52·0
21	58·3	58·0	58·7	51·5	49·0	51·5	50·1	50·8	50·4	50·0	49·3	50·0	50·8	52·2
22	57·8	58·2	58·5	51·4	50·2	51·5	50·1	51·7	50·8	50·5	49·6	50·2	50·8	52·4
23	57·8	58·7	59·0	52·2	50·6	52·4	50·3	52·7	51·3	50·3	49·7	49·3	50·6	52·7

TABLE XVIII.—MEAN LUNATION DETERMINATION of the WESTERN DECLINATION of the MAGNET at every LUNAR HOUR—*concluded.*

1863.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 20. 0. 56	February. d h m 18. 0. 27	March. d h m 20. 0. 44	April. d h m 18. 0. 13	May. d h m 18. 0. 35	June. d h m 16. 0. 10	July. d h m 16. 0. 28	August. d h m 15. 0. 37	September. d h m 13. 0. 2	October. d h m 13. 0. 16	November. d h m 12. 0. 49	December. d h m 11. 0. 34	Mean.
	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°	20°
	′	′	′	′	′	′	′	′	′	′	′	′	′
0	48·7	48·7	47·7	46·3	47·0	46·9	46·8	46·7	44·1	44·6	42·4	40·9	45·9
1	48·7	48·2	48·1	46·3	46·7	46·9	46·8	46·3	44·3	44·2	42·5	41·9	45·9
2	48·9	48·5	48·7	46·2	46·8	46·8	46·5	45·9	43·7	43·5	42·1	42·2	45·8
3	48·3	48·4	48·2	46·1	45·9	46·3	46·3	46·0	43·6	43·4	42·9	41·8	45·6
4	48·4	48·5	47·5	45·9	45·6	46·7	46·4	45·7	42·8	43·0	42·5	42·3	45·4
5	48·4	48·5	47·2	45·8	45·5	47·0	45·8	45·8	43·3	42·7	42·3	41·8	45·3
6	48·6	48·1	46·7	45·4	45·8	46·5	45·9	45·0	42·9	42·5	42·6	41·8	45·2
7	48·7	47·7	45·7	44·9	45·4	46·7	46·5	45·0	43·3	42·7	41·7	41·5	45·0
8	49·1	47·9	45·0	45·5	45·0	46·6	46·1	46·1	43·2	42·3	41·5	41·0	44·9
9	48·6	48·7	45·3	45·5	44·8	46·5	46·1	45·9	43·6	42·9	41·7	41·1	45·1
10	48·9	49·2	45·4	45·6	44·6	46·7	46·3	46·1	44·3	43·4	41·4	41·7	45·3
11	48·3	48·7	46·1	45·5	45·0	46·4	46·0	46·3	44·2	42·9	41·6	42·5	45·3
12	49·0	49·6	45·7	45·7	45·7	46·3	47·5	46·0	44·4	43·2	42·2	42·1	45·6
13	48·4	49·6	46·3	45·5	45·9	46·1	46·6	45·9	44·3	43·7	42·4	42·6	45·6
14	48·3	49·5	46·8	45·7	46·0	46·1	45·9	46·2	43·9	43·6	42·3	42·9	45·6
15	48·5	49·2	47·0	46·0	45·4	45·6	45·8	46·0	44·7	43·2	42·1	42·7	45·5
16	49·9	49·0	46·9	45·7	45·6	46·4	46·4	46·1	45·0	43·5	41·9	42·7	45·8
17	48·8	48·9	46·9	46·0	45·2	46·5	46·2	45·9	44·3	43·2	42·2	42·7	45·6
18	48·7	48·6	47·0	45·6	45·2	46·5	46·2	44·9	44·8	42·6	42·9	42·1	45·4
19	48·7	48·0	46·0	45·4	45·3	46·2	46·6	45·1	44·3	43·1	42·5	41·9	45·3
20	48·4	47·6	46·5	45·2	45·9	46·1	46·5	45·7	44·2	42·9	42·3	41·8	45·3
21	47·9	47·0	47·1	45·4	45·8	46·4	45·9	46·2	44·3	43·7	42·5	41·5	45·3
22	48·8	47·4	47·1	46·0	46·4	46·7	46·2	46·4	44·3	44·0	42·9	41·5	45·6
23	49·2	48·3	47·5	46·0	46·7	47·2	46·4	46·5	44·1	43·7	42·6	41·6	45·8

TABLE XIX.—MEAN, through the RANGE of LUNATIONS, of the LUNATION MEAN DETERMINATIONS of the LUNO-DIURNAL INEQUALITY of DECLINATION, exhibited separately for the DIFFERENT YEARS, with the MEAN of all the YEARS.

Lunar Hour.	1858.	1859.	1860.	1861.	1862.	1863.	Mean 1858 to 1863.	Equivalent in Terms of Horizontal Force.
	′	′	′	′	′	′	′	
0	+ 0·1	+ 0·3	+ 0·5	+ 0·1	+ 0·1	+ 0·4	+ 0·25	+ 0·000073
1	0·0	+ 0·3	+ 0·5	+ 0·1	+ 0·1	+ 0·4	+ 0·23	+ 67
2	+ 0·1	+ 0·4	+ 0·4	+ 0·1	+ 0·3	+ 0·3	+ 0·27	+ 79
3	0·0	+ 0·4	+ 0·2	+ 0·3	+ 0·2	+ 0·1	+ 0·20	+ 58
4	− 0·2	+ 0·4	+ 0·2	+ 0·1	+ 0·2	0·0	+ 0·12	+ 35
5	− 0·2	+ 0·2	0·0	+ 0·1	− 0·1	− 0·1	− 0·02	− 6
6	− 0·2	+ 0·2	− 0·3	0·0	− 0·1	− 0·3	− 0·12	− 35
7	− 0·1	0·0	− 0·4	− 0·3	− 0·2	− 0·5	− 0·25	− 73
8	− 0·1	− 0·1	− 0·4	0·0	− 0·3	− 0·5	− 0·23	− 67
9	+ 0·1	− 0·1	− 0·1	+ 0·4	− 0·3	− 0·4	− 0·07	− 20
10	+ 0·2	0·0	− 0·1	+ 0·3	0·0	− 0·2	+ 0·03	+ 9
11	+ 0·1	+ 0·1	− 0·1	+ 0·4	+ 0·2	− 0·2	+ 0·08	+ 23
12	+ 0·1	+ 0·3	+ 0·3	+ 0·3	+ 0·4	+ 0·2	+ 0·27	+ 79
13	+ 0·2	+ 0·2	+ 0·3	+ 0·2	+ 0·3	+ 0·1	+ 0·22	+ 64
14	− 0·1	+ 0·1	+ 0·3	+ 0·2	+ 0·2	+ 0·1	+ 0·13	+ 38
15	0·0	+ 0·1	+ 0·1	0·0	+ 0·2	+ 0·1	+ 0·08	+ 23
16	0·0	− 0·2	− 0·2	− 0·3	+ 0·1	+ 0·3	− 0·05	− 15
17	− 0·2	− 0·3	− 0·3	− 0·3	0·0	+ 0·1	− 0·17	− 49
18	− 0·1	− 0·5	− 0·5	− 0·3	− 0·3	0·0	− 0·28	− 81
19	0·0	− 0·6	− 0·3	− 0·5	− 0·3	− 0·2	− 0·32	− 93
20	+ 0·1	− 0·7	− 0·3	− 0·4	− 0·5	− 0·2	− 0·33	− 96
21	+ 0·2	− 0·5	− 0·2	− 0·4	− 0·3	− 0·2	− 0·23	− 67
22	+ 0·1	− 0·4	+ 0·2	− 0·3	− 0·1	+ 0·2	− 0·05	− 15
23	+ 0·1	0·0	+ 0·2	− 0·1	+ 0·2	+ 0·3	+ 0·12	+ 35

REDUCTIONS OF MAGNETIC HORIZONTAL FORCE REFERRED TO THE MOON'S PLACE.

TABLE XX.—MEAN LUNATION INEQUALITY of the MAGNETIC HORIZONTAL FORCE, exhibited separately for the DIFFERENT YEARS, with the MEAN for all the YEARS, corrected for the Daily Proportion of Secular Change of Horizontal Force.

Day of the Lunation.	1858.	1859.	1860.	1861.	1862.	1863.	Mean 1858 to 1863.	Mean corrected for Secular Change.
1	− 0·0009	+ 0·0007	− 0·0008	..	0·0000	0·0000	− 0·00020	− 0·00013
2	− 11	− 3	− 26	..	− 10	− 7	− 114	− 107
3	− 13	+ 8	− 7	..	− 15	− 7	− 68	− 62
4	− 8	+ 3	− 7	..	+ 7	+ 2	− 6	0
5	− 4	+ 2	+ 3	..	− 6	− 4	− 18	− 13
6	+ 5	− 3	− 5	..	+ 3	− 1	− 2	+ 3
7	+ 4	+ 5	+ 9	..	− 19	− 6	− 14	− 10
8	− 2	− 8	− 3	..	+ 22	+ 1	+ 20	+ 24
9	+ 13	− 5	+ 9	..	− 4	− 5	+ 16	+ 19
10	+ 7	+ 2	− 6	..	− 9	− 3	− 18	− 15
11	+ 11	0	− 10	..	− 11	+ 9	− 2	0
12	+ 11	− 3	− 5	..	+ 1	0	+ 8	+ 10
13	+ 1	− 1	+ 14	..	− 18	+ 9	+ 10	+ 11
14	0	− 1	− 15	..	− 5	− 8	− 58	− 58
15	0	− 1	− 6	..	+ 6	+ 2	+ 2	+ 2
16	− 1	− 2	− 36	..	+ 9	+ 6	− 48	− 49
17	+ 5	0	+ 10	..	+ 1	+ 2	+ 36	+ 34
18	+ 2	+ 3	+ 3	..	− 2	+ 7	+ 26	+ 24
19	+ 7	− 1	+ 13	..	+ 2	+ 6	+ 54	+ 51
20	+ 7	− 5	+ 8	..	+ 6	− 2	+ 28	+ 25
21	− 5	− 5	+ 14	..	+ 16	− 12	+ 16	+ 12
22	+ 4	+ 1	+ 6	..	− 2	+ 8	+ 34	+ 30
23	− 1	+ 4	− 7	..	+ 5	− 2	− 2	− 7
24	− 2	+ 4	+ 1	..	+ 4	− 1	+ 12	+ 7
25	+ 2	+ 2	+ 3	..	+ 3	+ 2	+ 24	+ 18
26	+ 2	0	+ 1	..	+ 3	− 2	+ 8	+ 2
27	− 7	+ 4	+ 13	..	+ 9	+ 2	+ 42	+ 36
28	− 10	+ 2	+ 23	..	+ 2	+ 5	+ 44	+ 37
29	− 3	− 5	+ 23	..	..	− 1	+ 35	+ 28

TABLE XXI.—MEAN LUNAR-MONTHLY DETERMINATION of the HORIZONTAL MAGNETIC FORCE, uncorrected for TEMPERATURE, at every LUNAR HOUR of the LUNAR DAY, obtained by taking the MEAN of all the DETERMINATIONS at the same LUNAR HOUR through each LUNATION.

1858.

Lunar Hour.	Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.											
	January. d h m 15. 0. 27	February. d h m 14. 0. 44	March. d h m 15. 0. 8	April. d h m 14. 0. 23	May. d h m 13. 0. 1	June. d h m 12. 0. 58	July. d h m 11. 0. 46	August. d h m 9. 0. 24	September. d h m 8. 0. 39	October. d h m 7. 0. 1	November. d h m 6. 0. 16	December. d h m 6. 0. 43
0	0·1124	0·1118	0·1122	0·1149	0·1129	0·1117	0·1072	0·1086	0·1099	0·1123	0·1125	0·1128
1	·1125	·1119	·1123	·1148	·1130	·1118	·1072	·1086	·1099	·1121	·1126	·1129
2	·1125	·1120	·1123	·1148	·1130	·1121	·1071	·1086	·1099	·1121	·1126	·1127
3	·1125	·1120	·1124	·1148	·1131	·1121	·1070	·1086	·1101	·1120	·1127	·1128
4	·1126	·1120	·1125	·1149	·1128	·1121	·1069	·1087	·1099	·1122	·1126	·1129
5	·1124	·1118	·1125	·1148	·1129	·1122	·1069	·1087	·1100	·1122	·1126	·1129
6	·1123	·1119	·1123	·1148	·1126	·1120	·1068	·1086	·1101	·1121	·1127	·1128
7	·1122	·1118	·1121	·1150	·1126	·1120	·1068	·1087	·1103	·1119	·1128	·1129
8	·1121	·1117	·1121	·1150	·1126	·1116	·1069	·1089	·1100	·1121	·1127	·1130
9	·1122	·1114	·1121	·1151	·1128	·1121	·1069	·1090	·1100	·1122	·1127	·1130
10	·1121	·1115	·1121	·1150	·1129	·1121	·1071	·1090	·1102	·1123	·1127	·1130
11	·1121	·1117	·1122	·1150	·1130	·1121	·1072	·1090	·1104	·1122	·1126	·1131
12	·1122	·1118	·1122	·1150	·1131	·1124	·1072	·1091	·1104	·1123	·1125	·1132
13	·1122	·1119	·1122	·1149	·1132	·1119	·1070	·1092	·1104	·1123	·1126	·1128
14	·1122	·1117	·1125	·1149	·1130	·1118	·1071	·1091	·1105	·1122	·1127	·1128
15	·1122	·1118	·1125	·1147	·1129	·1116	·1071	·1089	·1107	·1124	·1126	·1127
16	·1122	·1119	·1126	·1147	·1130	·1114	·1070	·1090	·1106	·1123	·1125	·1128
17	·1123	·1118	·1125	·1145	·1131	·1116	·1070	·1089	·1105	·1123	·1124	·1127
18	·1124	·1118	·1124	·1144	·1131	·1117	·1069	·1088	·1106	·1122	·1123	·1129
19	·1124	·1115	·1125	·1145	·1131	·1114	·1070	·1088	·1105	·1123	·1123	·1127
20	·1123	·1115	·1124	·1147	·1131	·1115	·1070	·1088	·1103	·1124	·1122	·1127
21	·1123	·1116	·1123	·1147	·1132	·1117	·1070	·1086	·1101	·1123	·1122	·1128
22	·1123	·1116	·1121	·1147	·1131	·1118	·1072	·1086	·1102	·1122	·1122	·1129
23	·1123	·1116	·1122	·1148	·1129	·1120	·1072	·1086	·1101	·1122	·1124	·1129

TABLE XXI.—MEAN LUNAR-MONTHLY DETERMINATION of the HORIZONTAL MAGNETIC FORCE at every LUNAR HOUR—*continued.*

1859.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 4. 0. 21	February. d h m 3. 0. 36	March. d h m 5. 0. 39	April. d h m 3. 0. 1	May. d h m 3. 0. 22	June. d h m 1. 0. 7	July. d h m 1. 1. 2	July. d h m 30. 0. 43	August. d h m 28. 0. 14	September. d h m 27. 0. 32	October. d h m 26. 0. 1	November. d h m 25. 0. 34	December. d h m 24. 0. 14
0	0·0913	0·0910	0·0901	0·0899	0·0904	0·0904	0·0894	0·0895	0·0893	0·0900	0·0924	0·0926	0·0901
1	·0912	·0908	·0901	·0898	·0904	·0904	·0894	·0894	·0896	·0899	·0927	·0928	·0901
2	·0912	·0908	·0902	·0896	·0907	·0902	·0894	·0895	·0893	·0899	·0926	·0930	·0901
3	·0913	·0909	·0902	·0898	·0904	·0902	·0894	·0894	·0891	·0900	·0925	·0926	·0902
4	·0913	·0908	·0904	·0899	·0903	·0902	·0894	·0893	·0891	·0903	·0927	·0923	·0900
5	·0914	·0909	·0905	·0900	·0904	·0902	·0893	·0891	·0888	·0903	·0927	·0920	·0900
6	·0916	·0909	·0905	·0900	·0903	·0901	·0893	·0890	·0889	·0903	·0925	·0922	·0898
7	·0916	·0908	·0907	·0900	·0902	·0901	·0891	·0888	·0891	·0901	·0923	·0924	·0897
8	·0916	·0911	·0906	·0900	·0902	·0902	·0892	·0885	·0888	·0901	·0923	·0925	·0896
9	·0915	·0909	·0906	·0900	·0903	·0903	·0888	·0886	·0887	·0901	·0923	·0924	·0895
10	·0916	·0907	·0905	·0900	·0905	·0905	·0888	·0887	·0887	·0900	·0922	·0922	·0897
11	·0915	·0907	·0905	·0897	·0904	·0906	·0888	·0889	·0884	·0901	·0921	·0922	·0898
12	·0915	·0908	·0906	·0899	·0903	·0906	·0890	·0888	·0885	·0899	·0921	·0926	·0898
13	·0914	·0905	·0906	·0899	·0906	·0905	·0892	·0888	·0885	·0900	·0921	·0926	·0899
14	·0913	·0905	·0904	·0901	·0903	·0907	·0891	·0889	·0887	·0900	·0920	·0926	·0900
15	·0914	·0906	·0904	·0901	·0905	·0907	·0892	·0890	·0886	·0899	·0919	·0927	·0900
16	·0915	·0908	·0904	·0898	·0905	·0908	·0892	·0891	·0889	·0900	·0919	·0928	·0899
17	·0915	·0909	·0904	·0898	·0904	·0907	·0890	·0890	·0893	·0899	·0920	·0929	·0899
18	·0915	·0909	·0904	·0897	·0903	·0906	·0888	·0890	·0893	·0898	·0921	·0930	·0899
19	·0915	·0909	·0903	·0897	·0906	·0906	·0886	·0891	·0892	·0898	·0920	·0928	·0900
20	·0914	·0908	·0903	·0897	·0903	·0907	·0887	·0888	·0895	·0898	·0921	·0927	·0898
21	·0914	·0909	·0903	·0895	·0902	·0907	·0889	·0889	·0893	·0900	·0921	·0927	·0898
22	·0915	·0911	·0903	·0897	·0903	·0906	·0890	·0892	·0892	·0901	·0922	·0926	·0898
23	·0914	·0910	·0902	·0898	·0903	·0906	·0891	·0893	·0893	·0900	·0924	·0925	·0899

1860.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 23. 0. 35	February. d h m 22. 0. 39	March. d h m 23. 0. 38	April. d h m 21. 0. 3	May. d h m 21. 0. 32	June. d h m 19. 0. 17	July. d h m 18. 0. 1	August. d h m 17. 0. 32	September. d h m 15. 0. 1	October. d h m 15. 0. 28	November. d h m 13. 0. 7	December. d h m 13. 0. 50
0	0·0908	. .	0·0880	0·0909	0·0960	0·0960	0·0959	0·0951	0·0961	0·0978	0·0993	0·1005
1	·0908	. .	·0880	·0909	·0961	·0954	·0962	·0951	·0962	·0980	·0995	·1005
2	·0910	. .	·0881	·0911	·0959	·0957	·0963	·0954	·0961	·0981	·0994	·1005
3	·0912	. .	·0881	·0913	·0960	·0953	·0964	·0953	·0961	·0981	·0995	·1005
4	·0911	. .	·0881	·0912	·0959	·0951	·0965	·0954	·0961	·0982	·0994	·1005
5	·0910	. .	·0883	·0912	·0960	·0949	·0964	·0952	·0960	·0982	·0994	·1001
6	·0911	. .	·0882	·0915	·0959	·0946	·0960	·0952	·0959	·0982	·0994	·1002
7	·0910	. .	·0880	·0915	·0961	·0949	·0962	·0948	·0958	·0982	·0995	·1003
8	·0907	. .	·0882	·0916	·0958	·0954	·0959	·0947	·0959	·0982	·0995	·1004
9	·0908	. .	·0882	·0919	·0959	·0954	·0961	·0949	·0960	·0981	·0994	·1002
10	·0907	. .	·0882	·0920	·0957	·0954	·0960	·0948	·0958	·0980	·0997	·0999
11	·0907	. .	·0884	·0920	·0957	·0956	·0962	·0949	·0957	·0981	·0996	·1001
12	·0907	. .	·0882	·0922	·0957	·0959	·0961	·0948	·0958	·0980	·0996	·1002
13	·0907	. .	·0882	·0922	·0958	·0956	·0959	·0950	·0957	·0981	·0995	·1002
14	·0908	. .	·0881	·0918	·0961	·0955	·0959	·0949	·0957	·0980	·0995	·1003
15	·0908	. .	·0882	·0917	·0961	·0953	·0958	·0949	·0959	·0979	·0993	·1003
16	·0907	. .	·0883	·0916	·0962	·0952	·0958	·0946	·0959	·0978	·0994	·1004
17	·0908	. .	·0885	·0914	·0961	·0953	·0956	·0944	·0960	·0978	·0993	·1005
18	·0905	. .	·0884	·0915	·0959	·0951	·0953	·0944	·0960	·0978	·0994	·1005
19	·0906	. .	·0883	·0914	·0960	·0952	·0954	·0944	·0960	·0976	·0994	·1006
20	·0908	. .	·0881	·0915	·0960	·0952	·0954	·0944	·0960	·0977	·0992	·1005
21	·0904	. .	·0882	·0909	·0958	·0953	·0954	·0947	·0962	·0976	·0992	·1005
22	·0906	. .	·0882	·0912	·0958	·0954	·0955	·0948	·0962	·0978	·0993	·1003
23	·0907	. .	·0882	·0909	·0960	·0958	·0958	·0951	·0963	·0979	·0993	·1004

TABLE XXI.—MEAN LUNAR-MONTHLY DETERMINATION of the HORIZONTAL MAGNETIC FORCE at every LUNAR HOUR—*continued.*

1861.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 11. 0. 27	February. d h m 10. 0. 40	March. d h m 11. 0. 1	April. d h m 10. 0. 2	May. d h m 10. 0. 17	June. d h m 9. 0. 47	July. d h m 8. 0. 26	August. d h m 6. 0. 1	September. d h m 5. 0. 21	October. d h m 5. 0. 48	November. d h m 3. 0. 29	December. d h m 2. 0. 14
0	0·0951	0·0938	0·0948	0·0955	0·1153	..	..	0·1057	0·1070	0·1093	0·1103	0·1106
1	·0948	·0940	·0948	·0954	·1153	..	..	·1058	·1068	·1090	·1103	·1106
2	·0950	·0938	·0947	·0954	·1151	..	..	·1058	·1067	·1090	·1102	·1106
3	·0950	·0937	·0944	·0954	·1150	..	..	·1058	·1068	·1091	·1102	·1107
4	·0951	·0936	·0946	·0954	·1152	..	..	·1053	·1068	·1091	·1102	·1106
5	·0951	·0939	·0946	·0954	·1151	..	..	·1054	·1067	·1089	·1103	·1105
6	·0949	·0939	·0947	·0955	·1150	..	..	·1053	·1066	·1087	·1103	·1106
7	·0949	·0938	·0947	·0953	·1149	..	..	·1054	·1065	·1086	·1102	·1106
8	·0950	·0937	·0947	·0952	·1151	..	..	·1054	·1064	·1086	·1103	·1107
9	·0952	·0937	·0948	·0953	·1149	..	..	·1055	·1065	·1088	·1102	·1109
10	·0950	·0939	·0950	·0953	·1149	..	..	·1054	·1065	·1087	·1101	·1109
11	·0950	·0939	·0950	·0954	·1149	..	..	·1056	·1066	·1085	·1101	·1109
12	·0948	·0940	·0951	·0955	·1148	..	..	·1054	·1068	·1085	·1099	·1109
13	·0948	·0940	·0953	·0955	·1150	..	..	·1053	·1071	·1084	·1099	·1108
14	·0951	·0938	·0952	·0957	·1155	..	..	·1054	·1071	·1083	·1099	·1107
15	·0951	·0937	·0954	·0956	·1155	..	..	·1055	·1068	·1085	·1099	·1108
16	·0949	·0941	·0953	·0954	·1155	..	..	·1052	·1067	·1084	·1100	·1106
17	·0952	·0939	·0953	·0954	·1156	..	..	·1054	·1067	·1084	·1100	·1106
18	·0950	·0940	·0951	·0954	·1157	..	..	·1055	·1066	·1085	·1101	·1106
19	·0951	·0939	·0951	·0956	·1157	..	..	·1055	·1067	·1087	·1099	·1105
20	·0951	·0937	·0948	·0957	·1158	..	..	·1054	·1067	·1090	·1101	·1105
21	·0951	·0935	·0946	·0955	·1156	..	..	·1052	·1067	·1091	·1101	·1107
22	·0951	·0936	·0947	·0955	·1155	..	..	·1053	·1071	·1093	·1102	·1106
23	·0950	·0937	·0948	·0955	·1152	..	..	·1054	·1071	·1093	·1103	·1108

1862.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 1. 0. 58	January. d h m 30. 0. 30	March. d h m 1. 0. 42	March. d h m 30. 0. 4	April. d h m 29. 0. 16	May. d h m 29. 0. 38	June. d h m 27. 0. 13	July. d h m 27. 0. 32	August. d h m 26. 0. 46	September. d h m 24. 0. 15	October. d h m 24. 0. 47	November. d h m 22. 0. 31	December. d h m 21. 0. 17
0	0·1101	0·1120	0·1138	0·1161	0·1118	0·1115	0·1112	0·1102	0·1110	0·1088	0·1087	0·1091	0·1116
1	·1098	·1121	·1140	·1161	·1120	·1114	·1112	·1101	·1113	·1088	·1089	·1091	·1113
2	·1099	·1122	·1139	·1163	·1120	·1116	·1111	·1099	·1112	·1087	·1088	·1091	·1112
3	·1100	·1121	·1143	·1160	·1118	·1117	·1109	·1100	·1111	·1086	·1087	·1093	·1112
4	·1101	·1120	·1145	·1157	·1119	·1117	·1111	·1100	·1111	·1084	·1088	·1092	·1112
5	·1100	·1119	·1146	·1162	·1114	·1116	·1110	·1098	·1108	·1086	·1087	·1091	·1111
6	·1100	·1119	·1144	·1160	·1110	·1116	·1109	·1097	·1103	·1086	·1085	·1092	·1112
7	·1101	·1119	·1144	·1159	·1114	·1116	·1112	·1097	·1101	·1083	·1090	·1091	·1114
8	·1098	·1118	·1144	·1157	·1117	·1116	·1112	·1097	·1102	·1084	·1089	·1091	·1113
9	·1100	·1118	·1145	·1159	·1114	·1117	·1110	·1095	·1105	·1082	·1087	·1094	·1115
10	·1099	·1118	·1145	·1161	·1114	·1115	·1108	·1094	·1105	·1082	·1086	·1093	·1114
11	·1100	·1119	·1145	·1163	·1114	·1116	·1110	·1097	·1107	·1083	·1088	·1093	·1118
12	·1101	·1120	·1146	·1162	·1115	·1117	·1108	·1100	·1107	·1084	·1089	·1093	·1115
13	·1104	·1122	·1146	·1161	·1117	·1117	·1110	·1102	·1109	·1084	·1089	·1092	·1117
14	·1104	·1120	·1145	·1161	·1119	·1118	·1111	·1105	·1107	·1085	·1090	·1092	·1116
15	·1106	·1123	·1146	·1160	·1119	·1118	·1109	·1104	·1109	·1084	·1086	·1093	·1116
16	·1104	·1122	·1145	·1161	·1120	·1116	·1110	·1102	·1108	·1089	·1088	·1092	·1114
17	·1106	·1120	·1145	·1161	·1121	·1118	·1111	·1099	·1107	·1086	·1085	·1092	·1112
18	·1106	·1120	·1143	·1162	·1122	·1118	·1108	·1101	·1106	·1084	·1085	·1092	·1110
19	·1105	·1120	·1142	·1158	·1121	·1115	·1109	·1101	·1108	·1083	·1086	·1090	·1110
20	·1104	·1119	·1142	·1158	·1119	·1117	·1109	·1102	·1109	·1083	·1084	·1093	·1114
21	·1103	·1120	·1142	·1158	·1119	·1114	·1111	·1097	·1109	·1084	·1085	·1089	·1113
22	·1103	·1119	·1141	·1159	·1115	·1114	·1111	·1100	·1110	·1087	·1087	·1090	·1113
23	·1102	·1121	·1137	·1159	·1116	·1116	·1112	·1100	·1111	·1089	·1087	·1091	·1116

TABLE XXI.—MEAN LUNAR-MONTHLY DETERMINATION of the HORIZONTAL MAGNETIC FORCE at every LUNAR HOUR—*concluded.*

1863.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 20. 0. 56	February. d h m 18. 0. 27	March. d h m 20. 0. 44	April. d h m 18. 0. 13	May. d h m 18. 0. 35	June. d h m 16. 0. 10	July. d h m 16. 0. 28	August. d h m 15. 0. 37	September. d h m 13. 0. 2	October. d h m 13. 0. 16	November. d h m 12. 0. 49	December. d h m 11. 0. 34
0	0·1086	0·1109	0·1113	0·1124	0·1109	0·1081	0·1093	0·1105	0·1107	0·1117	0·1117	0·1123
1	·1086	·1108	·1113	·1125	·1108	·1083	·1093	·1104	·1103	·1115	·1116	·1123
2	·1087	·1109	·1114	·1125	·1109	·1083	·1096	·1104	·1103	·1115	·1115	·1122
3	·1087	·1110	·1113	·1124	·1109	·1085	·1097	·1105	·1103	·1115	·1114	·1122
4	·1084	·1110	·1113	·1124	·1107	·1083	·1097	·1105	·1102	·1115	·1115	·1121
5	·1086	·1110	·1114	·1123	·1105	·1083	·1095	·1106	·1105	·1113	·1116	·1121
6	·1086	·1111	·1111	·1122	·1105	·1081	·1094	·1107	·1105	·1114	·1116	·1121
7	·1085	·1109	·1111	·1122	·1109	·1080	·1097	·1104	·1106	·1115	·1114	·1122
8	·1084	·1108	·1112	·1123	·1111	·1079	·1096	·1105	·1108	·1115	·1114	·1122
9	·1085	·1109	·1110	·1124	·1109	·1080	·1097	·1107	·1107	·1115	·1114	·1123
10	·1085	·1108	·1109	·1124	·1110	·1084	·1097	·1108	·1108	·1117	·1115	·1123
11	·1085	·1108	·1109	·1123	·1110	·1084	·1097	·1107	·1111	·1118	·1113	·1124
12	·1085	·1110	·1109	·1124	·1108	·1085	·1095	·1108	·1112	·1117	·1114	·1122
13	·1087	·1110	·1109	·1124	·1109	·1084	·1095	·1106	·1112	·1117	·1115	·1124
14	·1087	·1112	·1111	·1124	·1109	·1082	·1095	·1105	·1111	·1118	·1115	·1123
15	·1089	·1112	·1110	·1125	·1109	·1081	·1093	·1106	·1111	·1116	·1113	·1123
16	·1087	·1113	·1112	·1125	·1105	·1077	·1091	·1104	·1111	·1119	·1111	·1123
17	·1088	·1112	·1112	·1125	·1103	·1077	·1094	·1104	·1109	·1117	·1113	·1123
18	·1089	·1109	·1113	·1123	·1102	·1077	·1093	·1104	·1109	·1118	·1112	·1123
19	·1088	·1111	·1113	·1123	·1103	·1076	·1091	·1106	·1107	·1117	·1117	·1122
20	·1086	·1110	·1110	·1122	·1102	·1073	·1092	·1106	·1111	·1118	·1115	·1125
21	·1085	·1111	·1111	·1123	·1104	·1074	·1091	·1103	·1108	·1118	·1113	·1123
22	·1086	·1111	·1112	·1122	·1106	·1076	·1089	·1102	·1108	·1117	·1113	·1124
23	·1088	·1109	·1113	·1123	·1105	·1081	·1092	·1104	·1107	·1118	·1115	·1124

TABLE XXII.—MEAN, through the RANGE of LUNATIONS, of the LUNATION MEAN DETERMINATIONS of the LUNO-DIURNAL INEQUALITY of HORIZONTAL FORCE; exhibited separately for the DIFFERENT YEARS, with the MEAN of all the YEARS.

Hour of the Lunation.	1858.	1859.	1860.	1861.	1862.	1863.	Mean 1858 to 1863.
0	− 0·00004	+ 0·00009	+ 0·00002	+ 0·00012	+ 0·00003	+ 0·00004	+ 0·000043
1	− 1	+ 11	+ 4	+ 6	+ 5	− 2	+ 38
2	0	+ 10	+ 13	+ 1	+ 3	+ 2	+ 48
3	+ 4	+ 6	+ 14	− 1	+ 2	+ 4	+ 48
4	+ 4	+ 6	+ 12	− 3	+ 2	− 3	+ 30
5	+ 2	+ 3	+ 4	− 3	− 5	− 2	− 2
6	− 6	+ 2	0	− 7	− 17	− 5	− 55
7	− 5	− 2	+ 1	− 13	− 11	− 4	− 57
8	− 8	− 4	+ 1	− 11	− 13	− 2	− 62
9	− 2	− 9	+ 6	− 4	− 11	+ 1	− 32
10	+ 3	− 8	0	− 5	− 16	+ 7	− 32
11	+ 8	− 12	+ 7	− 3	− 1	+ 8	+ 12
12	+ 14	− 6	+ 9	− 5	+ 2	+ 8	+ 37
13	+ 8	− 5	+ 6	− 1	+ 12	+ 11	+ 52
14	+ 7	− 5	+ 4	+ 5	+ 14	+ 11	+ 60
15	+ 4	− 2	0	+ 6	+ 14	+ 7	+ 48
16	+ 3	+ 3	− 3	− 1	+ 13	− 1	+ 23
17	− 1	+ 4	− 5	+ 3	+ 6	− 2	+ 8
18	− 2	+ 1	− 13	+ 3	+ 2	− 6	− 25
19	− 6	− 1	− 12	+ 5	− 5	− 4	− 38
20	− 7	− 5	− 13	+ 6	− 1	− 8	− 47
21	− 7	− 4	− 18	− 1	− 8	− 13	− 85
22	− 7	+ 3	− 10	+ 7	− 4	− 11	− 37
23	− 4	+ 5	+ 2	+ 9	+ 2	0	+ 23

REDUCTIONS OF MAGNETIC VERTICAL FORCE REFERRED TO THE MOON'S PLACE.

TABLE XXIII.—MEAN LUNATION INEQUALITY of the MAGNETIC VERTICAL FORCE, exhibited separately for the DIFFERENT YEARS, with the Mean of all the Years.

Day of the Lunation.	1858.	1859.	1860.	1861.	1862.	1863.	Mean, 1858 to 1863.
1	+ 0·0016	+ 0·0019	+ 0·0007	− 0·0028	+ 0·0008	+ 0·0002	+ 0·00040
2	+ 5	− 3	+ 11	− 20	− 9	− 2	− 30
3	− 2	+ 17	+ 12	− 20	− 4	+ 16	+ 32
4	+ 1	+ 13	− 5	+ 23	− 5	+ 22	+ 82
5	+ 4	+ 19	+ 1	− 38	+ 15	+ 8	+ 15
6	+ 6	+ 31	− 11	− 20	− 1	+ 38	+ 72
7	+ 8	− 6	− 3	+ 17	+ 4	+ 23	+ 72
8	− 1	− 21	− 9	− 25	+ 26	+ 5	− 42
9	+ 5	− 23	− 11	− 2	+ 6	+ 15	− 17
10	+ 7	− 26	− 6	+ 16	− 27	− 2	− 63
11	− 8	− 14	− 7	+ 28	+ 1	− 1	− 2
12	− 12	− 18	+ 14	+ 36	− 19	+ 7	+ 13
13	+ 4	− 29	− 11	− 5	0	+ 3	− 63
14	0	− 15	− 18	+ 9	+ 6	+ 14	− 7
15	+ 8	− 25	− 22	+ 6	+ 7	− 11	− 62
16	− 5	− 8	+ 26	+ 2	− 2	− 7	+ 10
17	− 7	+ 12	+ 47	+ 1	+ 12	− 23	+ 70
18	+ 1	− 22	− 3	+ 1	+ 13	− 23	− 55
19	− 4	− 10	− 16	+ 7	− 2	+ 23	− 3
20	+ 1	− 1	− 6	+ 6	− 21	− 14	− 58
21	+ 4	+ 40	+ 11	+ 15	− 16	− 21	+ 55
22	− 1	+ 23	+ 9	− 8	− 6	− 37	− 33
23	− 4	+ 16	− 19	+ 16	− 11	− 20	− 37
24	− 2	+ 12	− 3	+ 8	− 16	− 8	− 15
25	+ 3	− 13	− 13	− 5	+ 3	+ 2	− 38
26	− 5	+ 16	+ 17	+ 17	+ 4	− 3	+ 77
27	− 10	+ 17	+ 17	− 3	− 4	− 12	+ 8
28	− 8	+ 17	− 4	+ 1	+ 29	+ 6	+ 68
29	+ 4	− 11	− 12	− 37	..	+ 14	− 84

TABLE XXIV.—MEAN LUNAR-MONTHLY DETERMINATION of the VERTICAL MAGNETIC FORCE, uncorrected for TEMPERATURE, at every LUNAR HOUR of the LUNAR DAY, obtained by taking the MEAN of all the DETERMINATIONS at the same LUNAR HOUR through each LUNATION.

1858.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 15. 0. 27	February. d h m 14. 0. 44	March. d h m 15. 0. 8	April. d h m 14. 0. 23	May. d h m 13. 0. 1	June. d h m 12. 0. 58	July. d h m 11. 0. 46	August. d h m 9. 0. 24	September. d h m 8. 0. 39	October. d h m 7. 0. 1	November. d h m 6. 0. 16	December. d h m 6. 0. 43
0	0·0298	0·0296	0·0310	0·0306	0·0331	0·0311	0·0314	0·0299	0·0306	0·0311	0·0323	0·0333
1	·0298	·0295	·0310	·0308	·0330	·0312	·0316	·0297	·0306	·0310	·0325	·0333
2	·0298	·0294	·0310	·0311	·0332	·0311	·0315	·0300	·0305	·0311	·0324	·0333
3	·0298	·0296	·0311	·0314	·0333	·0312	·0315	·0303	·0303	·0310	·0324	·0332
4	·0298	·0297	·0312	·0314	·0335	·0313	·0315	·0305	·0298	·0310	·0323	·0331
5	·0298	·0298	·0312	·0312	·0335	·0312	·0317	·0307	·0293	·0310	·0323	·0331
6	·0298	·0295	·0313	·0309	·0334	·0313	·0318	·0309	·0289	·0312	·0323	·0332
7	·0298	·0294	·0313	·0307	·0334	·0314	·0320	·0310	·0284	·0314	·0323	·0332
8	·0298	·0295	·0313	·0305	·0334	·0315	·0318	·0311	·0282	·0312	·0324	·0332
9	·0300	·0295	·0314	·0304	·0334	·0315	·0316	·0312	·0284	·0312	·0325	·0333
10	·0300	·0294	·0313	·0304	·0334	·0314	·0314	·0314	·0285	·0312	·0326	·0334
11	·0301	·0292	·0313	·0304	·0332	·0311	·0313	·0315	·0287	·0311	·0327	·0334
12	·0300	·0293	·0312	·0302	·0335	·0313	·0314	·0316	·0288	·0311	·0328	·0335
13	·0300	·0294	·0313	·0300	·0336	·0310	·0316	·0314	·0290	·0310	·0328	·0335
14	·0299	·0294	·0312	·0299	·0337	·0310	·0316	·0308	·0294	·0311	·0327	·0337
15	·0298	·0293	·0312	·0298	·0337	·0308	·0314	·0308	·0298	·0310	·0328	·0337
16	·0298	·0293	·0312	·0298	·0338	·0306	·0313	·0307	·0302	·0308	·0328	·0337
17	·0298	·0293	·0311	·0297	·0336	·0309	·0311	·0303	·0306	·0307	·0328	·0337
18	·0299	·0293	·0310	·0298	·0335	·0307	·0311	·0301	·0309	·0309	·0327	·0335
19	·0300	·0295	·0311	·0299	·0333	·0307	·0308	·0299	·0311	·0308	·0327	·0335
20	·0301	·0297	·0311	·0300	·0332	·0305	·0308	·0299	·0314	·0308	·0326	·0333
21	·0302	·0298	·0311	·0301	·0333	·0307	·0309	·0298	·0312	·0309	·0326	·0331
22	·0301	·0299	·0310	·0303	·0332	·0307	·0310	·0294	·0316	·0310	·0324	·0330
23	·0300	·0298	·0309	·0303	·0332	·0307	·0313	·0293	·0315	·0310	·0323	·0330

TABLE XXIV.—MEAN LUNAR-MONTHLY DETERMINATION of the VERTICAL MAGNETIC FORCE AT EVERY LUNAR HOUR—*continued.*

1859.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 4. 0. 21	February. d h m 3. 0. 36	March. d h m 5. 0. 39	April. d h m 3. 0. 1	May. d h m 3. 0. 22	June. d h m 1. 0. 7	July. d h m 1. 1. 2	July. d h m 30. 0. 43	August. d h m 28. 0. 14	September. d h m 27. 0. 32	October. d h m 26. 0. 1	November. d h m 25. 0. 34	December. d h m 24. 0. 14
0	0·0296	..	..	0·0237	0·0142	0·0164	0·0194	0·0215	0·0172	0·0234	0·0234	0·0239	0·0263
1	·0297	..	..	·0238	·0141	·0163	·0198	·0217	·0173	·0236	·0236	·0239	·0263
2	·0299	..	..	·0238	·0140	·0163	·0199	·0216	·0174	·0237	·0239	·0237	·0263
3	·0300	..	..	·0241	·0143	·0160	·0198	·0217	·0176	·0239	·0241	·0238	·0263
4	·0301	..	..	·0238	·0139	·0161	·0196	·0219	·0178	·0239	·0242	·0237	·0262
5	·0302	..	..	·0234	·0141	·0163	·0193	·0220	·0180	·0241	·0242	·0238	·0260
6	·0301	..	..	·0231	·0141	·0163	·0193	·0222	·0181	·0242	·0242	·0239	·0259
7	·0300	..	..	·0233	·0140	·0165	·0190	·0224	·0186	·0241	·0241	·0240	·0260
8	·0300	..	..	·0222	·0141	·0166	·0186	·0225	·0187	·0239	·0241	·0242	·0260
9	·0300	..	..	·0216	·0141	·0166	·0190	·0227	·0189	·0239	·0242	·0242	·0260
10	·0300	..	..	·0212	·0138	·0168	·0186	·0228	·0189	·0239	·0242	·0244	·0260
11	·0300	..	..	·0207	·0143	·0169	·0185	·0228	·0188	·0238	·0242	·0245	·0259
12	·0299	..	..	·0204	·0144	·0169	·0185	·0229	·0186	·0238	·0242	·0245	·0258
13	·0299	..	..	·0204	·0147	·0169	·0186	·0232	·0183	·0238	·0241	·0247	·0256
14	·0300	..	..	·0204	·0150	·0168	·0184	·0233	·0181	·0239	·0240	·0247	·0257
15	·0301	..	..	·0205	·0150	·0166	·0181	·0232	·0180	·0240	·0239	·0246	·0257
16	·0301	..	..	·0205	·0148	·0164	·0179	·0231	·0179	·0240	·0238	·0245	·0258
17	·0301	..	..	·0205	·0146	·0163	·0177	·0230	·0178	·0242	·0238	·0243	·0258
18	·0301	..	..	·0210	·0137	·0169	·0178	·0230	·0176	·0242	·0237	·0240	·0259
19	·0300	..	..	·0215	·0138	·0167	·0179	·0230	·0175	·0241	·0235	·0240	·0260
20	·0299	..	..	·0220	·0141	·0168	·0180	·0228	·0172	·0240	·0234	·0241	·0259
21	·0298	..	..	·0224	·0141	·0164	·0181	·0226	·0175	·0239	·0235	·0238	·0259
22	·0297	..	..	·0229	·0141	·0162	·0184	·0225	·0176	·0240	·0235	·0238	·0258
23	·0296	..	..	·0233	·0141	·0160	·0187	·0223	·0178	·0241	·0234	·0240	·0260

1860.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 23. 0. 35	February. d h m 22. 0. 39	March. d h m 23. 0. 38	April. d h m 21. 0. 3	May. d h m 21. 0. 32	June. d h m 19. 0. 17	July. d h m 18. 0. 1	August. d h m 17. 0. 32	September. d h m 15. 0. 1	October. d h m 15. 0. 28	November. d h m 13. 0. 7	December. d h m 13. 0. 50
0	0·0259	0·0220	0·0175	0·0215	0·0153	0·0204	0·0277	0·0308	0·0161	0·0215	0·0218	0·0242
1	·0258	·0220	·0172	·0205	·0154	·0205	·0276	·0309	·0162	·0217	·0218	·0242
2	·0258	·0220	·0172	·0201	·0153	·0205	·0277	·0309	·0162	·0218	·0218	·0241
3	·0259	·0221	·0173	·0183	·0153	·0205	·0277	·0315	·0164	·0218	·0218	·0240
4	·0259	·0221	·0173	·0185	·0154	·0206	·0278	·0311	·0165	·0219	·0219	·0239
5	·0260	·0222	·0171	·0187	·0155	·0206	·0282	·0313	·0165	·0219	·0220	·0238
6	·0259	·0221	·0169	·0187	·0157	·0206	·0281	·0311	·0167	·0221	·0220	·0237
7	·0259	·0220	·0167	·0189	·0156	·0205	·0277	·0310	·0168	·0222	·0220	·0235
8	·0259	·0218	·0164	·0194	·0158	·0205	·0277	·0312	·0168	·0222	·0220	·0234
9	·0259	·0216	·0163	·0195	·0159	·0206	·0273	·0311	·0169	·0222	·0220	·0234
10	·0259	·0215	·0164	·0201	·0159	·0207	·0276	·0311	·0169	·0222	·0220	·0234
11	·0258	·0215	·0164	·0198	·0159	·0204	·0274	·0310	·0167	·0222	·0221	·0234
12	·0260	·0216	·0165	·0200	·0159	·0203	·0271	·0309	·0167	·0223	·0221	·0235
13	·0258	·0217	·0164	·0202	·0160	·0201	·0272	·0307	·0168	·0222	·0221	·0236
14	·0259	·0218	·0165	·0198	·0162	·0198	·0282	·0306	·0168	·0221	·0221	·0234
15	·0259	·0220	·0165	·0197	·0161	·0198	·0285	·0303	·0167	·0219	·0222	·0236
16	·0259	·0221	·0165	·0197	·0160	·0196	·0286	·0296	·0164	·0218	·0223	·0237
17	·0259	·0221	·0162	·0211	·0157	·0197	·0286	·0299	·0164	·0217	·0223	·0238
18	·0260	·0221	·0162	·0214	·0156	·0199	·0285	·0300	·0164	·0215	·0222	·0239
19	·0260	·0222	·0163	·0217	·0154	·0201	·0286	·0303	·0164	·0214	·0222	·0240
20	·0258	·0222	·0166	·0218	·0152	·0202	·0278	·0306	·0163	·0214	·0221	·0240
21	·0260	·0222	·0167	·0217	·0152	·0203	·0273	·0307	·0163	·0211	·0221	·0241
22	·0260	·0222	·0169	·0218	·0152	·0205	·0276	·0308	·0164	·0211	·0221	·0241
23	·0259	·0220	·0170	·0219	·0156	·0205	·0276	·0309	·0164	·0211	·0221	·0240

TABLE XXIV.—MEAN LUNAR-MONTHLY DETERMINATION of the VERTICAL MAGNETIC FORCE AT EVERY LUNAR HOUR—*continued.*

1861.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 11. 0. 27	February. d h m 10. 0. 40	March. d h m 11. 0. 1	April. d h m 10. 0. 2	May. d h m 10. 0. 17	June. d h m 9. 0. 47	July. d h m 8. 0. 26	August. d h m 6. 0. 1	September. d h m 5. 0. 21	October. d h m 5. 0. 48	November. d h m 3. 0. 29	December. d h m 2. 0. 14
0	0·0226	0·0232	0·0184	0·0222	0·0200	0·0257	0·0219	0·0154	0·0154	0·0326	0·0354	0·0273
1	·0227	·0232	·0183	·0220	·0199	·0258	·0219	·0155	·0159	·0322	·0354	·0279
2	·0228	·0231	·0183	·0219	·0198	·0259	·0218	·0156	·0161	·0323	·0354	·0278
3	·0228	·0232	·0181	·0215	·0198	·0260	·0216	·0158	·0161	·0324	·0357	·0278
4	·0229	·0231	·0179	·0214	·0198	·0261	·0215	·0160	·0161	·0328	·0356	·0278
5	·0229	·0230	·0178	·0216	·0197	·0264	·0213	·0158	·0160	·0328	·0354	·0281
6	·0229	·0228	·0176	·0219	·0197	·0263	·0212	·0157	·0159	·0328	·0350	·0281
7	·0229	·0228	·0174	·0216	·0197	·0262	·0212	·0155	·0163	·0328	·0349	·0281
8	·0229	·0229	·0175	·0219	·0199	·0258	·0212	·0150	·0162	·0328	·0350	·0282
9	·0226	·0229	·0175	·0217	·0201	·0260	·0211	·0149	·0163	·0329	·0351	·0282
10	·0228	·0229	·0176	·0215	·0202	·0261	·0212	·0148	·0165	·0329	·0351	·0279
11	·0229	·0229	·0178	·0214	·0204	·0261	·0212	·0143	·0166	·0330	·0352	·0279
12	·0230	·0229	·0179	·0211	·0207	·0263	·0213	·0144	·0163	·0330	·0354	·0280
13	·0230	·0231	·0180	·0211	·0211	·0259	·0215	·0140	·0164	·0332	·0355	·0280
14	·0228	·0231	·0182	·0211	·0213	·0257	·0216	·0141	·0163	·0331	·0357	·0279
15	·0228	·0230	·0182	·0211	·0214	·0255	·0220	·0141	·0162	·0334	·0355	·0279
16	·0228	·0231	·0183	·0212	·0214	·0249	·0217	·0144	·0159	·0338	·0358	·0284
17	·0229	·0232	·0183	·0212	·0212	·0251	·0219	·0141	·0159	·0335	·0360	·0285
18	·0229	·0233	·0183	·0213	·0212	·0256	·0218	·0136	·0158	·0329	·0363	·0287
19	·0229	·0234	·0184	·0215	·0207	·0256	·0219	·0144	·0156	·0330	·0361	·0280
20	·0228	·0235	·0182	·0216	·0208	·0254	·0219	·0146	·0158	·0328	·0366	·0271
21	·0231	·0234	·0183	·0217	·0207	·0253	·0219	·0152	·0157	·0326	·0365	·0277
22	·0231	·0234	·0182	·0222	·0205	·0255	·0219	·0150	·0155	·0328	·0365	·0282
23	·0231	·0233	·0181	·0222	·0202	·0255	·0218	·0153	·0154	·0330	·0359	·0282

1862.

Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.

Lunar Hour.	January. d h m 1. 0. 58	January. d h m 30. 0. 30	March. d h m 1. 0. 42	March. d h m 30. 0. 4	April. d h m 29. 0. 16	May. d h m 29. 0. 38	June. d h m 27. 0. 13	July. d h m 27. 0. 32	August. d h m 26. 0. 46	September. d h m 24. 0. 15	October. d h m 24. 0. 47	November. d h m 22. 0. 31	December. d h m 21. 0. 17
0	0·0248	0·0247	0·0226	0·0259	0·0194	0·0176	0·0138	0·0235	0·0299	0·0313	0·0244	0·0267	0·0162
1	·0248	·0246	·0225	·0256	·0194	·0177	·0138	·0228	·0296	·0308	·0245	·0265	·0164
2	·0249	·0244	·0227	·0255	·0193	·0178	·0135	·0230	·0293	·0311	·0246	·0265	·0164
3	·0250	·0245	·0226	·0253	·0195	·0181	·0133	·0220	·0290	·0299	·0247	·0265	·0165
4	·0250	·0245	·0224	·0251	·0192	·0180	·0130	·0227	·0292	·0297	·0250	·0265	·0165
5	·0251	·0245	·0223	·0248	·0187	·0181	·0120	·0229	·0293	·0300	·0253	·0268	·0163
6	·0252	·0245	·0220	·0246	·0185	·0180	·0121	·0233	·0291	·0300	·0254	·0267	·0162
7	·0253	·0246	·0221	·0244	·0183	·0179	·0124	·0238	·0292	·0299	·0254	·0266	·0161
8	·0253	·0247	·0222	·0245	·0184	·0178	·0123	·0238	·0293	·0297	·0253	·0266	·0160
9	·0252	·0248	·0224	·0245	·0188	·0178	·0123	·0241	·0296	·0299	·0254	·0267	·0158
10	·0251	·0251	·0226	·0243	·0191	·0178	·0124	·0244	·0293	·0298	·0255	·0266	·0157
11	·0250	·0251	·0230	·0244	·0191	·0179	·0126	·0247	·0292	·0298	·0257	·0266	·0154
12	·0250	·0248	·0232	·0245	·0191	·0181	·0128	·0250	·0292	·0301	·0255	·0266	·0156
13	·0250	·0248	·0233	·0245	·0192	·0182	·0130	·0244	·0292	·0305	·0250	·0266	·0155
14	·0250	·0250	·0233	·0248	·0191	·0182	·0131	·0246	·0294	·0308	·0248	·0266	·0154
15	·0251	·0248	·0233	·0250	·0192	·0181	·0134	·0241	·0299	·0312	·0246	·0265	·0154
16	·0249	·0248	·0239	·0252	·0193	·0179	·0134	·0234	·0301	·0314	·0248	·0265	·0154
17	·0248	·0247	·0239	·0254	·0191	·0180	·0132	·0235	·0297	·0310	·0246	·0266	·0154
18	·0248	·0247	·0238	·0255	·0190	·0183	·0132	·0227	·0297	·0314	·0246	·0266	·0154
19	·0248	·0246	·0238	·0256	·0192	·0183	·0135	·0232	·0299	·0314	·0247	·0267	·0155
20	·0248	·0246	·0234	·0258	·0191	·0178	·0134	·0230	·0301	·0315	·0248	·0267	·0156
21	·0248	·0247	·0233	·0258	·0192	·0178	·0135	·0227	·0300	·0313	·0248	·0267	·0156
22	·0248	·0246	·0232	·0259	·0192	·0176	·0136	·0234	·0298	·0313	·0248	·0268	·0157
23	·0248	·0246	·0230	·0258	·0193	·0176	·0136	·0232	·0299	·0311	·0248	·0266	·0159

TABLE XXIV.—MEAN LUNAR-MONTHLY DETERMINATION of the VERTICAL MAGNETIC FORCE AT EVERY LUNAR HOUR—*concluded.*

1863.

Lunar Hour.	Greenwich Mean Solar Time of the beginning of the First Lunar Day of each Lunation.											
	January. d h m 20. 0. 56	February. d h m 18. 0. 27	March. d h m 20. 0. 44	April. d h m 18. 0. 13	May. d h m 18. 0. 35	June. d h m 16. 0. 10	July. d h m 16. 0. 28	August. d h m 15. 0. 37	September. d h m 13. 0. 2	October. d h m 13. 0. 16	November. d h m 12. 0. 49	December. d h m 11. 0. 34
0	0·0131	0·0144	0·0120	0·0169	0·0149	0·0275	0·0275	0·0308	0·0316	0·0350	0·0369	0·0365
1	·0131	·0145	·0119	·0168	·0153	·0278	·0277	·0308	·0316	·0352	·0370	·0364
2	·0132	·0145	·0119	·0167	·0153	·0280	·0279	·0309	·0319	·0353	·0365	·0367
3	·0131	·0145	·0118	·0167	·0156	·0280	·0280	·0311	·0319	·0354	·0365	·0360
4	·0131	·0146	·0118	·0167	·0155	·0279	·0280	·0309	·0319	·0354	·0366	·0366
5	·0131	·0146	·0120	·0167	·0154	·0277	·0280	·0308	·0317	·0355	·0366	·0368
6	·0129	·0145	·0119	·0167	·0154	·0274	·0277	·0307	·0318	·0351	·0365	·0368
7	·0128	·0145	·0119	·0167	·0155	·0272	·0276	·0305	·0323	·0351	·0365	·0366
8	·0128	·0146	·0119	·0167	·0156	·0272	·0275	·0308	·0322	·0356	·0368	·0368
9	·0127	·0146	·0120	·0166	·0157	·0272	·0273	·0308	·0320	·0356	·0367	·0368
10	·0127	·0146	·0120	·0167	·0157	·0271	·0273	·0307	·0322	·0353	·0369	·0371
11	·0126	·0146	·0122	·0167	·0156	·0270	·0274	·0307	·0323	·0352	·0368	·0374
12	·0126	·0146	·0122	·0168	·0157	·0269	·0273	·0306	·0324	·0352	·0367	·0375
13	·0125	·0145	·0126	·0167	·0158	·0268	·0273	·0305	·0325	·0353	·0367	·0375
14	·0126	·0145	·0129	·0168	·0157	·0268	·0272	·0304	·0325	·0354	·0367	·0375
15	·0126	·0145	·0128	·0168	·0157	·0265	·0272	·0303	·0324	·0355	·0366	·0377
16	·0126	·0143	·0128	·0168	·0157	·0266	·0271	·0303	·0324	·0355	·0366	·0373
17	·0126	·0142	·0129	·0168	·0157	·0271	·0270	·0303	·0323	·0354	·0365	·0373
18	·0126	·0142	·0128	·0169	·0155	·0272	·0268	·0304	·0320	·0354	·0364	·0370
19	·0128	·0142	·0129	·0169	·0156	·0274	·0269	·0303	·0318	·0351	·0364	·0372
20	·0130	·0143	·0125	·0169	·0154	·0275	·0269	·0305	·0316	·0351	·0362	·0371
21	·0131	·0143	·0122	·0170	·0153	·0277	·0270	·0307	·0316	·0352	·0363	·0367
22	·0131	·0143	·0122	·0170	·0153	·0278	·0272	·0308	·0316	·0352	·0367	·0367
23	·0131	·0144	·0121	·0169	·0154	·0278	·0274	·0309	·0317	·0353	·0369	·0365

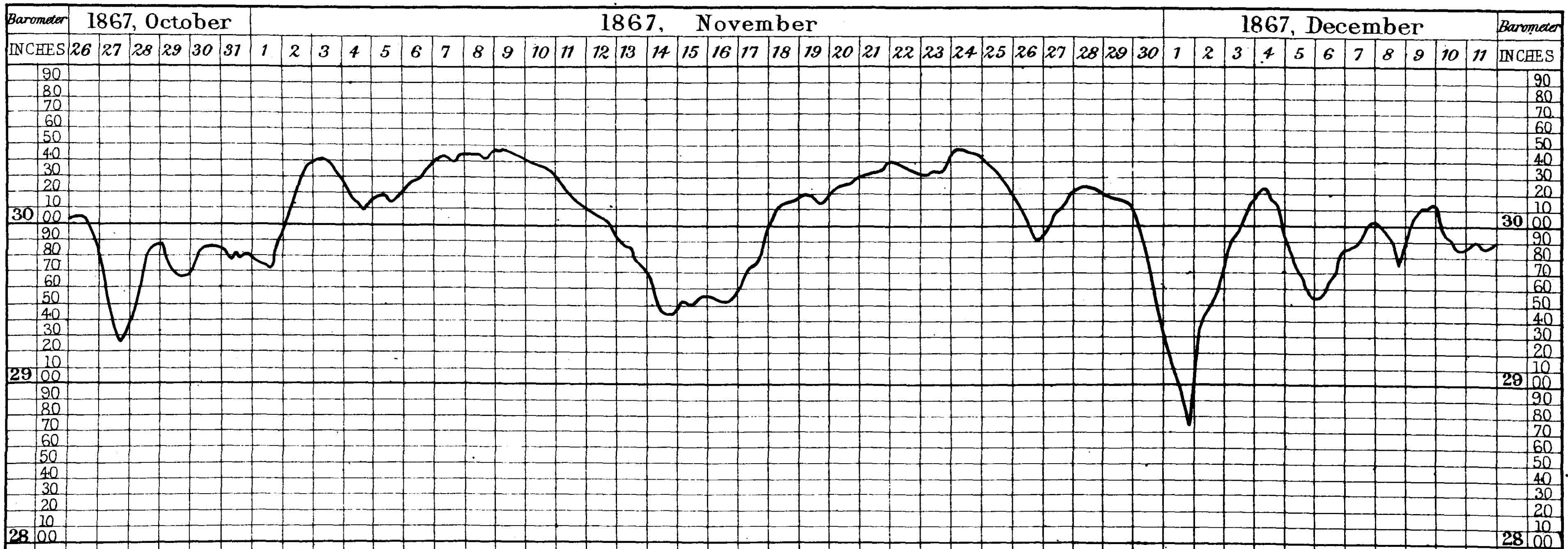
TABLE XXV.—MEAN, through the RANGE of LUNATIONS, of the LUNATION-MEAN DETERMINATIONS of the LUNO-DIURNAL INEQUALITY of VERTICAL FORCE; exhibited separately for the DIFFERENT YEARS; with the Mean of all the YEARS.

Lunar Hour.	1858.	1859.	1860.	1861.	1862.	1863.	Mean 1858 to 1863.	Equivalent in Terms of Horizontal Force.
0	− 0·00002	− 0·00009	+ 0·00011	− 0·00006	+ 0·00015	− 0·00008	+ 0·000002	+ 0·000005
1	0	+ 1	+ 3	− 1	+ 1	0	+ 7	+ 18
2	+ 3	+ 5	0	0	+ 1	+ 6	+ 25	+ 63
3	+ 9	+ 15	− 7	0	− 15	+ 4	+ 10	+ 25
4	+ 9	+ 11	− 4	+ 2	− 16	+ 8	+ 17	+ 43
5	+ 7	+ 13	+ 3	0	− 22	+ 7	+ 13	+ 33
6	+ 4	+ 13	+ 2	− 8	− 25	− 6	− 33	− 83
7	+ 3	+ 18	− 5	− 12	− 22	− 8	− 43	− 108
8	− 1	+ 8	− 3	− 12	− 23	+ 3	− 47	− 118
9	+ 3	+ 11	− 6	− 13	− 12	− 1	− 30	− 75
10	+ 3	+ 5	+ 2	− 11	− 9	+ 2	− 13	− 33
11	0	+ 4	− 7	− 9	− 3	+ 3	− 20	− 50
12	+ 6	− 1	− 4	− 4	+ 5	+ 3	+ 8	+ 20
13	+ 5	+ 2	− 5	0	+ 2	+ 5	+ 15	+ 38
14	+ 3	+ 3	− 2	+ 1	+ 9	+ 8	+ 37	+ 93
15	+ 1	− 3	− 2	+ 3	+ 13	+ 4	+ 27	+ 68
16	0	− 11	− 10	+ 8	+ 16	− 1	+ 3	+ 8
17	− 3	− 17	0	+ 8	+ 8	0	− 7	− 18
18	− 5	− 19	+ 3	+ 7	+ 6	− 7	− 25	− 63
19	− 6	− 18	+ 10	+ 6	+ 18	− 5	+ 8	+ 20
20	− 5	− 16	+ 5	+ 3	+ 13	− 9	− 15	− 38
21	− 3	− 18	+ 2	+ 11	+ 10	− 8	− 10	− 25
22	− 3	− 14	+ 11	+ 17	+ 14	− 2	+ 38	+ 95
23	− 6	− 6	+ 13	+ 10	+ 10	+ 3	+ 40	+ 100

ROYAL OBSERVATORY, GREENWICH.

DIAGRAM EXHIBITING THE VARIATIONS OF THE BAROMETER (159 FEET ABOVE SEA LEVEL,) FROM 1867, OCTOBER 26, TO 1867, DECEMBER 11; & SHOWING ALSO THE GENERAL DIRECTION OF THE WIND, AND DAILY HORIZONTAL MOVEMENT OF THE AIR, FOR THE SAME DATES.

THE DAYS ARE DIVIDED ACCORDING TO CIVIL RECKONING.



Date (1867)	General Direction of the Wind	Horizontal Movement of the Air in Miles
October 26	S. : S.S.W.	274
27	S.S.W. : S.W. : W.S.W.	390
28	W.S.W. : W.N.W. : S.W.	274
29	S.W.	536
30	W.S.W. : S.W.	299
31	S.W.	368
November 1	S.W. : N.N.W. : W.N.W.	394
2	W.S.W. : N.W. : N.by W.	243
3	S.W. : W.S.W.	214
4	W.S.W. : W.N.W. : N.E.	307
5	N.	274
6	N. : N.E. : E.N.E.	124
7	S.W.	138
8	S.W. : W.S.W.	218
9	W.S.W. : Calm	90
10	Calm : N.E.	88
11	Calm : N.E.	86
12	N. : N.E.	98
13	Calm : S.W. : E.S.E.	85
14	S.E. : S.S.E.	267
15	S.E. : E.	139
16	N.N.E. : N.E.	536
17	N.E.	664
18	N.N.E. : N.	223
19	N.W. : W.S.W. : N.N.W.	192
20	N.N.W. : N.	367
21	N. by E. : N. by W.	345
22	N.N.W. : N.W.	260
23	N.N.W. : N.	255
24	N. : W. : N.W.	98
25	S.W. : W.S.W.	202
26	S.W.	330
27	N.N.W. : S.W.	204
28	S.W. : W.S.W.	203
29	S.W. : S.	208
30	S.S.E. : S. S.S.W.	381
December 1	S.S.W. : W.N.W.	569
2	N.N.W.	681
3	N. by E. : N. by W.	413
4	N.N.W. Calm : S.W.	146
5	S.S.W. : W. : N.W.	262
6	N.W. : N.	390
7	N.	477
8	N.N.W. : S.W. : S.E.	201
9	N.E. : N.N.E. S.W.	49
10	W.S.W.	264
11	W. : W.N.W.	288