APPENDIX

TO THE

GREENWICH OBSERVATIONS,

1848;

INCLUDING THE

RESULTS

OF

MAGNETICAL AND METEOROLOGICAL

OBSERVATIONS.

APPENDIX.

ROYAL OBSERVATORY, GREENWICH.

INDICATIONS

OF

MAGNETOMETERS.

1848.

For description of the three Magnetometers, the method of observing by the Telescope, and the method of reducing the observations, the reader is referred to the Greenwich Magnetical and Meteorological Observations for 1847, Introduction, page i to xlii; and to corresponding parts of the preceding Volumes.

During the Year 1848, Telescope-Observations of the Magnetometers have usually been made four times every day (except Sundays); but though these observations are employed in forming the base lines on the Photographic sheets, their immediate results are not necessarily given in the following pages.

Observations were made for the reading of the Horizontal Circle of the Theodolite, by which the DECLINATION MAGNET is observed, corresponding to the Astronomical Meridian, on February 1, 3, 9, 18, 27, March 31, April 1, 27, May 1, 11, June 30, August 4, October 10, 21, and December 22.

Observations of the angle of torsion of the HORIZONTAL FORCE MAGNETOMETER were made on 1847, December 31, 1848, January 1, 3, and 6. The angle used is 42°. 44′. And observations were made for the times of vibration and readings of the scale for different readings of the torsion-circle on 1847, December 31, and on 1848, January 1: and the general conclusion was, that the scale-readings were nearly identical and had nearly the usual value when the reading of the torsion-circle was nearly 144°. 30′ (marked end West), and 230°. 0′ (marked end East). The reading adopted for the adjustment of the torsion-circle throughout the year (marked end West), is 144°. 30′.

The number used for the variation of horizontal force in terms of the whole horizontal force for a disturbance through one division of the scale is 0·0020789.

The correction for temperature is $0\cdot 00009050\ (t - 32°) + 0\cdot 000000626\ (t - 32°)^2$. This is not applied to any of the results of observation.

Observations of the time of vibration of the VERTICAL FORCE MAGNETOMETER in a vertical plane have usually been made three times in a week. The adopted time of vibration before the 18th of April, 1848, (when a new magnet was mounted, carrying the Photographic Mirror,) was $24^s\cdot 4$. Observations for the time of vibration in a horizontal plane were made in 1847, January, and the time adopted was $24^s\cdot 9658$ from 500 vibrations. From these the value, in terms of the whole vertical force, of the disturbing force producing a change of one division, is found to be 0·000643, and this number was used to April 18.

After mounting the new magnet, carrying the Photographic Mirror in addition to the mirror used with the telescope, the adopted time of vibration in the vertical plane was $23^s\cdot 5$ till 1848, December 5, and $35^s\cdot 0$ after December 5 to the end of the year; and that in the horizontal plane (from observations on 1848, July 11), was $24^s\cdot 0164$ from 7000 vibrations; and the corresponding values of the disturbing force, for one division of the scale, are inferred to be 0·000642 and 0·000289. The former of these numbers is used from July to December 5, and the latter from December 5 to the end of the year.

The correction for temperature is $0\cdot 00018979 \times (t - 32°) + 0\cdot 0000007257 \times (t - 32°)^2$. This is not applied to any of the results of observation.

The methods adopted in the use of the Photographic Apparatus, in the determinations of zeros both for time and for magnetic indications, and in the translation into numbers of the indications given by the Photographic Traces, for arbitrary times, are in every respect the same as those described in the Addendum to the Introduction to the Greenwich Magnetical and Meteorological Observations, 1847, pages lxxxiii to xc.

It is proper, however, to mention that, in measuring the ordinates of the Vertical Force Curves, a singular difficulty has presented itself. Frequently, without any apparent cause, the curve is dislocated; one part being raised above or depressed

below the contiguous part, in the direction of the ordinate, by a considerable quantity. In some instances this has been traced to a possible disturbance during the operation of changing the lamps, or shutting the doors: in other cases no obvious cause can be assigned. In all cases this displacement is accompanied with vibration, the original position being at the extremity of the arc of vibration, and the new position being at the center of the arc: shewing that there has been no want of delicacy of the movement, and that the change has been precisely the same as would be caused by the quiet application of a small weight upon one end of the magnet. To combine these dislocated parts, a small machine has been prepared, by means of which a piece of tracing-paper can be slid, parallel to itself, in the direction of the ordinates: and the various portions of the curve are traced on this paper in such a manner that their ends are properly joined. This traced curve is then used for the measure of the ordinates. I conceive that these measures, for a single sheet, are perfectly and accurately comparable: although it is evident that the results on one sheet cannot be compared with those on another.

The selection of days has been determined by the following considerations. 1st. The usual term-days have been taken. 2nd. Of the remaining days those have been taken in which the unsteadiness of the magnets was strongly marked. In both classes of days, the ordinates of the photographic curves have been measured only at well-marked bends of the curve: so that a reader, laying down a succession of points by means of the given times as abscissæ and the given measures of force as ordinates, and connecting these points by straight lines, will very nearly reproduce the original curves.

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Jan. 14		Jan. 14		Jan. 14				
h m	° ′ ″	h m		h m			°	°
8. 20	22. 42. 0	8. 29	·1862	3. 40	·03658*	3	45 ·0	45 ·8
8. 35	47. 0	8. 50	·1845	6. 40	·03582*	6	46 ·8	47 ·3
8. 57	30. 30	9. 13	·1877	12. 40	·03505*	12	46 ·0	46 ·0
9. 7	35. 30	9. 54	·1852	18. 40	·03624*	18	43 ·5	43 ·0
9. 23	29. 30	10. 9	·1871	21. 40	·03640*	21		43 ·0
10. 6	52. 39	10. 30	·1837					
10. 42	44. 30	10. 53	·1854					
11. 5	48. 15	11. 20	·1844					
12. 43	36. 30	11. 32	·1852					
13. 7	47. 30	12. 0	·1836					
		12. 23	·1881					
		12. 45	·1853					
		12. 58	·1869					
		13. 58	·1839					
Jan. 16		Jan. 16		Jan. 16				
0. 42	23. 2. 0	3. 47	·0994	0. 40	·03828*	0	35 ·0	35 ·4
1. 8	22. 58. 30	4. 0	·1028	3. 40	·03916*	3	36 ·0	36 ·0
2. 50	23. 6. 0	4. 30	·0974	12. 40	·03831*	12	35 ·0	35 ·3
2. 57	22. 58. 15	4. 44	·0992	18. 40	·03900*	18	35 ·0	36 ·0
3. 18	23. 12. 0	4. 50	·0974	21. 40	·03897*	21	36 ·0	36 ·3
3. 32	22. 49. 45	5. 9	·1013					
4. 9	23. 13. 30	5. 12	·0967					
5. 0	22. 28. 15	5. 15	·1003					
6. 4	23. 3. 15	5. 27	·0979					
7. 20	22. 44. 30	7. 40	·1003					
7. 30	55. 30	7. 54	·0945					
7. 44	33. 45	8. 7	·0979					
9. 35	49. 45	8. 20	·0966					
10. 12	14. 30	8. 40	·0989					
10. 30	48. 30	10. 17	·0950					
10. 41	41. 15	10. 30	·1025					
11. 2	53. 30	10. 50	·0977					
11. 24	38. 30	11. 7	·1013					
12. 50	41. 30	11. 21	·0954					
13. 0	54. 30	11. 56	·0977					
13. 9	36. 0	13. 22	·0946					
13. 52	51. 30	13. 29	·1009					
14. 18	41. 30	13. 44	·0988					
14. 42	51. 15	13. 49	·1010					
14. 52	45. 30	14. 7	·0979					
Jan. 19		Jan. 19		Jan. 19				
2. 47	22. 56. 0	3. 0	·1023	0. 40	·03794*	0	40 ·0	40 ·0
2. 51	23. 2. 45	3. 4	·1047	3. 40	·03817*	3	38 ·0	40 ·0
3. 3	22. 57. 45	4. 11	·1008	6. 40	·03801*	6	39 ·5	40 ·5
3. 52	23. 4. 0	7. 40	·1012	12. 40	·03717*	12	41 ·0	41 ·5
4. 30	22. 42. 45	8. 13	·0994	18. 40	·03745*	18	39 ·0	39 ·4
6. 3	57. 30	9. 16	·1025	21. 40	·03783*	21	38 ·5	38 ·8
6. 30	50. 45	10. 0	·1000					
6. 37	57. 15	10. 30	·1021					
6. 57	47. 0	12. 50	·1004					

Göttingen Mean Solar Time.	Western Declination	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Jan. 19		Jan. 19						
h m	° ′ ″	h m		h m			°	°
7. 10	22. 51. 30	14. 30	·1014					
8. 45	53. 30	15. 30	·1008					
9. 0	46. 15	19. 0	·1019					
9. 13	52. 45	21. 5	·1006					
9. 53	50. 15	21. 40	·1014					
10. 17	39. 30	23. 48	·0997					
11. 7	49. 15							
12. 55	49. 45							
13. 8	53. 30							
13. 33	50. 0							
14. 2	52. 30							
15. 13	46. 0							
16. 20	51. 30							
18. 8	48. 30							
20. 30	50. 15							
21. 13	47. 30							
23. 36	50. 30							
Jan. 20		Jan. 20		Jan. 20				
0. 8	22. 58. 15	1. 0	·0997	0. 40	·03828*	0	37 ·5	38 ·0
0. 25	50. 15	1. 52	·1007	3. 40	·03863*	3	37 ·5	38 ·0
1. 5	22. 53. 0	2. 30	·1003	6. 40	·03818*	6	38 ·0	38 ·0
1. 28	23. 2. 15	2. 48	·1012	12. 40	·03772*	12	39 ·0	39 ·0
1. 35	22. 57. 0	3. 0	·1006	18. 40	·03780*	18	40 ·0	40 ·7
2. 0	58. 45	3. 30	·1020	21. 40	·03762*	21	40 ·0	40 ·0
3. 8	52. 30	5. 3	·1010					
3. 58	56. 0	5. 45	·1029					
5. 11	43. 15	8. 22	·1013					
6. 30	54. 30	9. 10	·1019					
8. 55	43. 15	10. 0	·1021					
9. 10	45. 45	10. 33	·1013					
9. 28	43. 15							
9. 31	47. 30							
9. 41	38. 45							
10. 40	45. 45							
21. 55	49. 0							
22. 6	54. 0							
22. 30	51. 0							
Jan. 21		Jan. 21		Jan. 21				
3. 20	22. 53. 15	8. 19	·1006	0. 40	·03756*	0	41 ·0	41 ·0
3. 25	59. 0	8. 37	·1032	3. 45	·03749*	3	41 ·0	41 ·3
5. 55	50. 45	10. 30	·0996	6. 40	·03717*	6	41 ·5	42 ·0
8. 17	51. 15	11. 45	·0991	12. 40	·03648*	12	44 ·0	44 ·0
8. 26	44. 30	12. 23	·1028	18. 40	·03688*	18	41 ·8	42 ·0
8. 37	48. 0	13. 12	·0993	21. 40	·03704*	21	41 ·0	41 ·0
Jan. 22		Jan. 22		Jan. 22				
10. 40	22. 44. 0	11. 15	·1016	0. 40	·03736*	0	41 ·0	41 ·0
11. 7	47. 15	11. 44	·1047	3. 40	·03762*	3	42 ·3	42 ·8
11. 22	43. 30	12. 47	·1016	6. 40	·03708*	6	41 ·2	41 ·0
11. 33	47. 0			12. 40	·03730*	12	39 ·0	38 ·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 time of reading the thermometers is the hour specified in Greenwich Time, or the hour increased by 40^{m} in Göttingen Time.

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Jan. 22	° ′ ″	h m		h m			°	°
h m 11. 51	22. 40. 0							
12. 27	45. 0							
Jan. 23		Jan. 23		Jan. 23				
1. 30	22. 58. 30	9. 45	·1010	12. 40	·03871*	12	36 ·0	35 ·6
2. 6	23. 3. 15	10. 2	·1035	18. 40	·03873*	18	35 ·0	35 ·5
6. 50	22. 53. 45	10. 22	·0984	21. 40	·03910*	21	34 ·8	35 ·0
7. 28	40. 15	10. 38	·1004					
7. 52	49. 0							
9. 28	49. 15							
9. 50	38. 45							
10. 7	47. 30							
10. 26	35. 45							
11. 0	44. 0							
15. 15	43. 15							
15. 43	50. 30							
23. 37	53. 30							
Jan. 24		Jan. 24		Jan. 24				
0. 12	23. 5. 15	2. 2	·1014	0. 40	·03878*	0	35 ·5	35 ·8
0. 56	22. 57. 15	2. 22	·1000	3. 40	·03878*	3	36 ·0	36 ·0
1. 42	23. 1. 30	3. 27	·1020	6. 40	·03788*	6	42 ·5	43 ·0
2. 6	22. 56. 15	6. 45	·0995	12. 40	·03762*	12	40 ·0	40 ·0
3. 25	23. 3. 30	7. 13	·1019	18. 40	·03813*	18	36 ·5	38 ·0
5. 56	22. 54. 45	7. 33	·0988	21. 40	·03858*	21	36 ·5	36 ·8
6. 17	57. 0	8. 44	·1003					
6. 45	48. 45	9. 7	·0984					
7. 22	58. 45	9. 22	·0997					
7. 33	51. 45	11. 42	·1000					
8. 33	51. 0	12. 15	·1017					
8. 52	55. 30	12. 43	·0997					
9. 10	47. 30	12. 50	·1006					
11. 50	44. 30							
12. 35	35. 15							
Jan. 25		Jan. 25		Jan. 25				
8. 5	22. 55. 0	8. 29	·1007	0. 40	·03868*	0	35 ·0	36 ·0
9. 13	40. 0	9. 10	·1029	3. 40	·03864*	3	37 ·5	38 ·0
10. 0	50. 0	9. 52	·1009	6. 40	·03796*	6	40 ·0	40 ·2
11. 5	44. 15			12. 40	·03810*	12	37 ·2	37 ·0
				18. 40	·03846*	18	35 ·0	35 ·0
				21. 40	·03892*	21	33 ·5	33 ·7
Jan. 26		Jan. 26		Jan. 26				
3. 42	23. 0. 15	3. 22	·1034	0. 40	·03923*	0	33 ·5	33 ·7
4. 12	22. 50. 30	3. 55	·1011	3. 40	·03945*	3	35 ·0	35 ·0
7. 51	22. 55. 15	8. 15	·1023	6. 40	·03923*	6	34 ·0	36 ·0
8. 18	23. 1. 15	8. 45	·0993	12. 40	·03955*	12	33 ·0	34 ·0
9. 0	22. 48. 45	9. 14	·1019	18. 40	·03987*	18	30 ·5	30 ·5
9. 30	53. 0	9. 44	·0995	21. 40	·04025*	21	30 ·0	30 ·0
9. 53	43. 15	10. 15	·1016					
11. 50	48. 30							

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Jan. 26	° ′ ″	h m		h m			°	°
h m 12. 8	22. 43. 30							
12. 24	46. 15							
14. 22	38. 30							
16 ·55	49. 0							
18. 0	44. 30							
Jan. 27		Jan. 27		Jan. 27				
11. 11	22. 49. 30	5. 9	·1028	0. 40	·04034*	0	30 ·0	30 ·0
11. 53	42. 30	5. 24	·1045	3. 40	·03948*	3	35 ·0	35 ·5
12. 15	47. 0	5. 50	·1035	6. 40	·03876*	6	35 ·0	35 ·5
16. 47	43. 15			12. 40	·03865*	12	34 ·8	35 ·5
17. 7	54. 0			18. 40	·03880*	18	32 ·5	32 ·8
17. 33	42. 0			21. 40	·03958*	21	31 ·0	31 ·0
21. 38	51. 30							
23. 8	49. 30							
23. 50	54. 30							
Jan. 28		Jan. 28		Jan. 28				
9. 40	22. 48. 15	4. 45	·1051	0. 40	·04019*	0	30 ·0	30 ·2
10. 42	37. 15	4. 50	·1099	3. 40	·03948*	3	33 ·8	34 ·0
10. 55	46. 15	5. 15	·1059	6. 40	·03884*	6	34 ·0	34 ·0
11. 22	33. 0	5. 27	·1084	12. 40	·03743*	12	33 ·0	33 ·2
12. 10	43. 30	9. 52	·1055	18. 40	·03653*	18	32 ·3	32 ·5
12. 57	22. 33. 0	10. 20	·1030	21. 40	·03846*	21	32 ·3	32 ·5
14. 13	23. 4. 0	11. 52	·1072					
15. 10	22. 36. 30	12. 45	·0991					
15. 30	48. 45	13. 44	·1021					
15. 53	35. 0	14. 16	·0949					
16. 12	47. 15	15. 15	·1041					
16. 50	22. 45	16. 14	·0959					
17. 8	31. 0	16. 30	·1029					
18. 0	16. 15	16. 45	·1037					
19. 2	51. 0	17. 15	·0999					
20. 58	46. 30	18. 21	·1049					
21. 8	22. 55. 0	19. 6	·1009					
22. 57	23. 4. 0	19. 16	·1037					
23. 12	22. 54. 15	19. 34	·1031					
23. 17	59. 15	20. 52	·0993					
23. 33	22. 52. 0	22. 55	·1024					
23. 42	23. 0. 30	23. 14	·0988					
		23. 51	·1012					
Jan. 30		Jan. 30		Jan. 30				
1. 18	22. 54. 0	1. 54	·1014	0. 40	·03634*	0	43 ·0	43 ·0
1. 30	23. 0. 45	2. 20	·0993	6. 40	·03658*	6	45 ·0	45 ·0
1. 40	22. 54. 30	2. 41	·1009	12. 40	·03538*	12	46 ·0	46 ·3
2. 40	23. 0. 30	11. 6	·1010	18. 40	·03505*	18	46 ·2	47 ·0
3. 8	22. 55. 30	11. 30	·1028	21. 40	·03537*	21	46 ·5	47 ·0
4. 24	59. 0	11. 55	·1006					
4. 47	52. 30							
8. 42	46. 30							
10. 22	37. 30							

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Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H.F.	Thermometers. V. F.
Jan. 30								
h m	° ′ ″	h m		h m			°	°
11. 7	22. 40. 30							
11. 17	36. 0							
12. 45	52. 45							
13. 23	47. 30							
Feb. 6								
3. 33	22. 51. 45							
4. 20	44. 30							
4. 52	52. 30							
6. 5	44. 30							
6. 40	53. 0							
Feb. 7		Feb. 7		Feb. 7				
8. 21	22. 50. 30	6. 8	·0996	0. 40	·03338*	0	51 ·0	51 ·0
8. 48	32. 30	6. 43	·1009	3. 40	·03371*	3	54 ·0	54 ·3
9. 0	41. 30	8. 2	·0982	6. 40	·03282*	6	54 ·5	55 ·5
9. 10	38. 45	8. 15	·0988	12. 40	·03242*	12	52 ·0	52 ·0
9. 33	45. 15	8. 38	·0972	18. 40	·03351*	18	51 ·5	52 ·0
11. 58	45. 15	8. 54	·0994	21. 40	·03390*	21	50 ·5	51 ·0
12. 3	22. 30	9. 0	·0982					
12. 21	44. 0	9. 13	·0993					
14. 33	43. 15	9. 36	·0979					
15. 0	37. 0	10. 10	·0996					
15. 51	46. 30	11. 49	·0977					
		12. 7	·1007					
		12. 30	·0976					
		12. 57	·0988					
Feb. 8		Feb. 8		Feb. 8				
3. 30	23. 1. 15	4. 40	·1006	0. 40	·03415*	0	49 ·0	49 ·5
4. 38	22. 57. 0	5. 15	·0989	3. 40	·03466*	3	50 ·0	50 ·0
5. 47	39. 45	5. 30	·1001	6. 40	·03430*	6	51 ·0	51 ·3
6. 40	57. 0	5. 50	·0989	12. 40	·03332*	12	51 ·0	51 ·3
8. 50	38. 30	6. 20	·0999	18. 40	·03371*	18	49 ·0	49 ·0
10. 3	49. 0	6. 26	·0986	21. 40	·03388*	21	48 ·0	48 ·0
11. 13	39. 45	6. 50	·1001					
11. 40	45. 0	8. 50	·1000					
12. 40	37. 30	9. 11	·1011					
13. 10	41. 30	9. 28	·0995					
13. 30	38. 0	10. 16	·1012					
14. 33	48. 15	10. 45	·0999					
15. 47	40. 0	11. 44	·1020					
16. 8	49. 30	12. 18	·0994					
16. 30	38. 15	13. 27	·1000					
16. 50	44. 15	14. 11	·0983					
17. 10	39. 30	14. 38	·1008					
17. 25	45. 0	16. 23	·1009					
17. 47	39. 30	16. 44	·0990					
18. 40	57. 15	17. 7	·1016					
Feb. 9		Feb. 9						
8. 23	22. 50. 0	8. 27	·1007					

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H.F.	Thermometers. V. F.
Feb. 9		Feb. 9						
h m	° ′ ″	h m		h m			°	°
8. 37	22. 35. 15	8. 37	·0985					
9. 30	46. 45	8. 49	·1015					
		9. 40	·0986					
Feb. 14		Feb. 14		Feb. 14				
10. 12	22. 47. 45	9. 22	·1029	0. 40	·03383*	0	52 ·0	52 ·0
11. 6	26. 0	10. 13	·0991	3. 40	·03388*	3	55 ·0	55 ·0
12. 0	45. 0	11. 15	·0999	6. 40	·03263*	6	55 ·0	55 ·0
15. 10	48. 45	11. 20	·0980	12. 40	·03300*	12	52 ·0	52 ·0
15. 25	45. 0	12. 52	·1018	18. 40	·03296*	18	51 ·0	51 ·0
15. 48	49. 45			21. 40	·03287*	21	51 ·0	51 ·0
Feb. 20		Feb. 20		Feb. 20				
1. 10	23. 6. 0	9. 50	·1013	0. 40	·03550*	0	44 ·0	44 ·0
2. 8	22. 56. 30	10. 4	·0950	12. 40	·03371*	12	44 ·0	45 ·0
3. 47	23. 3. 15	10. 13	·1013	18. 40	·03621*	18	39 ·0	39 ·0
4. 38	22. 48. 30	11. 10	·0934	21. 40	·03677*	21	39 ·0	39 ·0
4. 53	53. 30	11. 40	·0993					
6. 30	46. 15	12. 0	·0937					
6. 37	32. 30	12. 8	·0985					
7. 9	57. 0	12. 20	·0953					
7. 38	43. 30	12. 37	·0987					
7. 52	49. 30	12. 47	·0954					
8. 40	42. 30	13. 0	·0983					
9. 22	59. 45	13. 20	·0944					
9. 40	29. 15	14. 6	·0987					
10. 0	37. 45	16. 6	·0986					
11. 3	31. 30	17. 6	·1018					
11. 20	38. 30	17. 22	·1009					
12. 27	25. 30	18. 23	·1053					
12. 42	37. 0	18. 36	·0995					
12. 50	23. 15	18. 45	·1029					
13. 10	42. 45	18. 53	·1012					
13. 32	28. 15							
14. 10	38. 45							
14. 38	33. 45							
15. 10	42. 0							
15. 45	39. 30							
16. 3	43. 30							
16. 28	41. 0							
16. 50	45. 30							
19. 42	43. 0							
20. 50	58. 30							
21. 20	22. 52. 45							
21. 57	23. 5. 30							
21. 58	22. 43. 15							
22. 0	59. 45							
22. 10	47. 15							
22. 22	59. 0							
23. 10	43. 0							
23. 36	56. 0							
23. 42	45. 0							

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The time of reading the thermometers is the hour specified in Greenwich Time, or the hour increased by 40^m in Göttingen Time.

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Feb. 21		Feb. 21		Feb. 21				
h m	° ′ ″	h m		h m			°	°
0. 30	23. 6. 0	0. 20	·0979	0. 40	·03749*	0	41 ·0	41 ·8
0. 58	22. 49. 45	0. 33	·0994	3. 40	·03716*	3	47 ·0	47 ·0
1. 13	23. 8. 0	0. 40	·0956	6. 40	·03664*	6	48 ·0	49 ·0
1. 22	22. 53. 0	0. 54	·1010	12. 40	·03443*	12	49 ·5	50 ·0
1. 32	23. 8. 15	0. 58	·0961	18. 40	·03486*	18	48 ·5	50 ·0
1. 47	22. 56. 30	1. 18	·1043	21. 40	·03512*	21	49 ·5	50 ·0
1. 50	23. 5. 30	1. 21	·0944					
2. 0	22. 45. 0	1. 33	·0993					
2. 21	23. 10. 0	1. 57	·0951					
2. 53	22. 49. 45	2. 10	·1014					
3. 40	23. 0. 0	2. 23	·0976					
6. 8	23. 8. 0	2. 43	·0995					
6. 12	22. 42. 30	2. 52	·0966					
6. 16	23. 9. 15	10. 44	·1016					
6. 52	22. 49. 30	10. 48	·0886					
7. 20	23. 20. 15	10. 51	·1020					
7. 40	22. 32. 0	13. 28	·0954					
8. 28	23. 2. 30	14. 21	·0874					
9. 37	22. 21. 15	14. 36	·0930					
10. 13	23. 12. 30	14. 45	·0875					
10. 40	22. 25. 15	15. 2	·0997					
10. 48	36. 45	15. 22	·0915					
11. 2	29. 30	15. 41	·0995					
11. 13	54. 30	15. 55	·0876					
11. 25	34. 45	16. 27	·0964					
11. 45	52. 0	16. 30	·0910					
13. 47	45. 45	17. 9	·0971					
14. 10	57. 30	17. 20	·0944					
14. 27	22. 45. 15	17. 42	·1036					
14. 48	23. 13. 45	18. 0	·0980					
15. 0	22. 28. 0	18. 7	·1100					
15. 12	49. 0	18. 10	·0933					
15. 38	20. 0	18. 12	·1082					
15. 43	43. 30	18. 14	·0964					
15. 57	13. 45	18. 28	·1067					
16. 31	53. 15	18. 37	·0992					
16. 47	40. 0	18. 42	·1112					
17. 14	49. 30	18. 52	·1012					
17. 24	40. 30	19. 30	·1210					
		19. 43	·1036					
		20. 0	·1060					
		20. 30	·1018					
		20. 42	·1055					
		20. 58	·1019					
		21. 8	·1047					
		21. 20	·1008					
		21. 28	·1061					
		21. 48	·1006					
		22. 5	·1025					
		22. 22	·0926					
		22. 40	·1003					
		22. 52	·0961					

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
		Feb. 21						
h m	° ′ ″	h m		h m			°	°
		23. 8	·0989					
Feb. 22		Feb. 22		Feb. 22				
8. 48	22. 56. 0	8. 52	·0985	0. 40	·03499*	0	49 ·0	50 ·0
9. 5	26. 15	9. 6	·1029	3. 40	·03480*	3	51 ·0	51 ·0
9. 13	50. 0	9. 30	·0948	6. 40	·03467*	6	52 ·5	53 ·0
9. 48	28. 0	9. 53	·0980	12. 40	·03282*	12	53 ·0	53 ·0
11. 2	48. 15	12. 15	·0957	18. 40	·03435*	18	49 ·0	49 ·5
12. 25	53. 30	12. 28	·0997	21. 40	·03528*	21	47 ·0	47 ·5
12. 40	39. 30	12. 40	·0972					
12. 49	50. 0	12. 47	·1003					
		12. 53	·0984					
Feb. 23		Feb. 23		Feb. 23				
3. 42	22. 55. 30	2. 42	·0998	0. 40	·03550*	0	51 ·0	51 ·0
6. 12	31. 0	3. 28	·0965	3. 40	·03467*	3	51 ·0	51 ·5
7. 13	50. 15	4. 54	·1003	6. 40	·03432*	6	52 ·0	53 ·0
8. 54	39. 0	6. 12	·1034	12. 40	·03358*	12	50 ·0	51 ·0
9. 58	39. 15	6. 15	·0986	18. 40	·03391*	18	47 ·0	47 ·0
10. 13	42. 45	6. 18	·1031	21. 40	·03480*	21	47 ·0	47 ·0
10. 38	38. 0	6. 22	·0980					
13. 28	50. 0	6. 32	·1027					
14. 10	36. 0	6. 44	·0981					
15. 48	47. 30	7. 8	·1035					
16. 22	41. 45	7. 17	·0970					
17. 48	57. 45	8. 37	·1023					
18. 10	22. 46. 30	8. 55	·0996					
19. 8	23. 4. 30	10. 12	·1016					
20. 0	22. 45. 0	10. 32	·0989					
20. 15	59. 30	11. 15	·1013					
21. 6	39. 15							
21. 13	54. 0							
21. 25	42. 30							
21. 40	57. 30							
Feb. 24		Feb. 24		Feb. 24				
3. 7	23. 8. 0	0. 18	·0960	0. 40	·03505*	0	47 ·5	48 ·0
3. 18	22. 55. 30	0. 50	·0924	3. 40	·03658*	3	51 ·0	51 ·0
3. 39	23. 9. 45	1. 6	·0965	6. 40	·03448*	6	53 ·2	53 ·7
3. 50	22. 59. 0	3. 7	·1035	12. 40	·03377*	12	52 ·0	52 ·2
4. 12	23. 6. 15	3. 27	·1003	18. 40	·03255*	18	49 ·0	49 ·5
4. 18	0. 0	3. 36	·1028	21. 40	·03403*	21	50 ·0	50 ·0
4. 25	23. 4. 0	4. 20	·0964					
4. 58	22. 44. 45	5. 25	·1000					
5. 25	58. 30	5. 39	·0966					
5. 35	48. 30	5. 48	·0989					
5. 52	57. 30	6. 7	·0967					
8. 36	50. 45	9. 15	·1027					
8. 51	22. 44. 15	9. 38	·0961					
9. 32	23. 11. 0	10. 28	·0994					
10. 32	22. 33. 45	11. 14	·0972					
11. 0	42. 30	11. 32	·0990					

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Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Feb. 24		Feb. 24						
h m	° ′ ″	h m		h m			°	°
11. 15	22. 38. 0	15. 15	·0992					
11. 36	44. 15	16. 16	·0962					
13. 51	51. 30	16. 38	·1008					
15. 36	43. 45	17. 2	·0975					
16. 37	55. 30	18. 18	·1036					
17. 30	22. 48. 0	19. 28	·0971					
18. 55	23. 1. 15	21. 46	·0914					
20. 14	22. 48. 30	22. 33	·0974					
22. 28	23. 10. 45	23. 5	·0942					
23. 7	22. 52. 0							
23. 52	23. 3. 0							
Feb. 25		Feb. 25		Feb. 25				
9. 48	22. 46. 0	10. 0	·1004	0. 40	·03454*	0	50 ·0	50 ·0
10. 23	45. 0	12. 50	·0994	3. 40	·03435*	3	52 ·0	52 ·0
10. 45	47. 30	14. 45	·1006	6. 40	·03358*	6	55 ·0	55 ·0
12. 8	41. 0	15. 30	·1001	12. 40	·03281*	12	52 ·0	52 ·0
12. 22	50. 0	18. 40	·1016	18. 40	·03403*	18	50 ·5	51 ·0
12. 35	46. 45			21. 40	·03441*	21	49 ·5	50 ·0
12. 42	48. 30							
13. 5	44. 15							
14. 30	44. 0							
15. 19	51. 30							
18. 0	44. 45							
Feb. 26		Feb. 26		Feb. 26				
0. 50	22. 56. 0	0. 25	·0993	0. 40	·03422*			
1. 40	59. 0	4. 20	·1012	3. 40	·03403*			
7. 15	48. 15	5. 0	·0998	6. 40	·03332*			
9. 8	50. 45	5. 54	·1007	12. 40	·03326*			
9. 40	47. 30	6. 35	·0996					
10. 30	48. 30	9. 40	·1015					
		10. 30	·1009					
Feb. 28		Feb. 28		Feb. 28				
7. 13	22. 50. 0	7. 9	·1020	0. 40	·03390*	0	50 ·5	51 ·0
8. 8	37. 45	8. 0	·0982	3. 40	·03345*	3	53 ·0	53 ·3
9. 7	49. 30	8. 28	·1008	6. 40	·03297*	6	54 ·0	54 ·0
				12. 40	·03346*	12	52 ·5	52 ·5
						18	47 ·2	48 ·0
						21	45 ·0	46 ·0
Mar. 15		Mar. 15						
1. 40	23. 7. 0	1. 40	·1015					
2. 40	22. 55. 30	2. 25	·0991					
2. 53	23. 0. 45	3. 16	·1028					
5. 33	22. 55. 0	4. 30	·0996					
6. 10	43. 0	9. 36	·1015					
6. 49	51. 30	9. 54	·1006					
9. 52	47. 45	10. 8	·1017					
10. 7	42. 0	10. 25	·0995					
11. 6	55. 30							

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Mar. 15								
h m	° ′ ″	h m		h m			°	°
11. 36	22. 46. 30							
12. 38	53. 0							
Mar. 16		Mar. 16		Mar. 16				
15. 35	22. 58. 45	12. 57	·1040	0. 40	·03505*	0	44 ·0	45 ·0
16. 13	22. 51. 45	13. 13	·1014	3. 40	·03521*	3	45 ·5	46 ·0
16. 48	23. 2. 45	13. 30	·1033	6. 40	·03467*	6	48 ·0	48 ·0
17. 40	23. 4. 15			12. 40	·03467*	12	44 ·0	44 ·0
17. 55	22. 54. 45			18. 40	·03415*	18	43 ·5	44 ·5
18. 27	59. 45			21. 40	·03541*	21	43 ·0	43 ·5
Mar. 17		Mar. 17		Mar. 17				
3. 45	23. 5. 45	3. 36	·1005	0. 40	·03634*	0	43 ·0	43 ·0
3. 54	23. 16. 0	3. 50	·1056	3. 40	·03756*	3	45 ·0	45 ·5
4. 32	22. 58. 45	4. 0	·1027	6. 40	·03685*	6	46 ·0	46 ·0
5. 55	22. 57. 45	6. 20	·1007	12. 40	·03531*	12	45 ·0	45 ·0
6. 13	23. 2. 0	6. 35	·1024	19. 40	·03582*	19	45 ·0	45 ·0
6. 25	22. 58. 0	7. 50	·0955	21. 40	·03608*	21	45 ·0	45 ·0
6. 52	23. 6. 0	8. 8	·1034					
7. 5	0. 30	8. 16	·0989					
		8. 26	·1019					
		8. 38	·0969					
		8. 48	·0992					
Mar. 20		Mar. 20		Mar. 20				
2. 5	22. 59. 45	4. 51	·1012	0. 40	·03692*	0	43 ·0	43 ·5
2. 28	23. 5. 45	5. 13	·1045	3. 40	·03820*	3	46 ·0	48 ·5
2. 48	22. 58. 0	7. 27	·0980	6. 40	·03656*	6	50 ·5	52 ·0
3. 30	23. 9. 15	7. 45	·1067	12. 40	·03223*	12	46 ·5	47 ·0
3. 52	3. 30	8. 7	·0952	18. 40	·03409*	18	46 ·0	46 ·0
4. 21	23. 7. 0	8. 15	·1006	21. 40	·03492*	21	46 ·5	46 ·5
5. 5	22. 47. 15	8. 23	·0960					
5. 20	59. 30	8. 33	·1000					
5. 30	49. 30	10. 0	·0965					
7. 47	22. 27. 0	10. 8	·1014					
7. 55	23. 8. 45	10. 15	·0995					
8. 13	22. 44. 0	10. 22	·1040					
8. 20	23. 4. 30	10. 30	·1006					
8. 30	22. 44. 0	10. 38	·1033					
8. 45	54. 30	10. 50	·0970					
8. 52	45. 45	11. 0	·1008					
9. 18	49. 0	11. 54	·0950					
9. 43	41. 0	12. 13	·1011					
9. 58	46. 45	12. 50	·0980					
10. 17	30. 30	13. 30	·1014					
10. 24	47. 30	14. 0	·0986					
10. 33	38. 45	15. 0	·1003					
10. 43	58. 0	15. 36	·0966					
10. 50	37. 0	16. 18	·1004					
11. 0	49. 15							
11. 15	40. 0							
12. 20	53. 15							

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Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Mar. 20								
h m	° ′ ″	h m		h m			°	°
13. 5	22. 36. 45							
13. 35	46. 15							
15. 5	45. 0							
15. 53	51. 45							
16. 18	46. 45							
Mar. 22		Mar. 22						
9. 40	22. 53. 15	10. 0	·1010			6	54 ·5	
12. 44	45. 15	11. 12	·1019			12	53 ·5	
14. 10	52. 0	11. 35	·1012			18	53 ·0	
14. 52	46. 0	14. 16	·1019			21	52 ·5	
18. 40	51. 30	15. 0	·1005			24	52 ·0	
20. 35	47. 45	19. 0	·1010					
		23. 0	·0990					
Mar. 23		Mar. 23		Mar. 23				
1. 0	23. 2. 30	0. 40	·0995	0. 40	·03297*	0	52 ·0	53 ·5
2. 30	23. 3. 30	2 42	·1011	3. 40	·03274*	3	55 ·0	55 ·0
10. 30	22. 54. 15	3. 0	·1007	6. 40	·03210*	6	56 ·5	55 ·0
		7. 22	·1020	12. 40	·03234*	12	53 ·0	53 ·0
		7. 36	·1033	18. 40	·03301*	18	51 ·0	51 ·0
		8. 0	·1017	21. 40	·03326*	21	50 ·5	51 ·5
		9. 10	·1009					
		9. 48	·1019					
		10. 20	·1015					
Mar. 24		Mar. 24		Mar. 24				
13. 51	22. 54. 0	13. 45	·1023	0. 40	·03279*	0	51 ·5	52 ·0
15. 35	42. 15	14. 6	·1044	3. 40	·03284*	3	54 ·0	54 ·5
15. 50	47. 45	14. 39	·1024	6. 40	·03268*	6	56 ·0	56 ·5
16. 10	39. 45	16. 10	·1044	12. 40	·03258*	12	54 ·0	54 ·5
16. 22	44. 0	16. 28	·1014	18. 40	·03260*	18	48 ·4	49 ·0
17. 12	38. 45	16. 38	·1052	21. 40	·03361*	21	48 ·0	49 ·0
18. 42	49. 0	17. 14	·1014					
Mar. 25		Mar. 25		Mar. 25				
1. 51	23. 11. 0	1. 30	·1000	0. 40	·03383*	0	48 ·5	49 ·0
2. 50	4. 45	1. 50	·1021	3. 40	·03457*	3	53 ·0	53 ·0
3. 45	23. 15. 45	2. 30	·0983	6. 40	·03377*	6	54 ·0	53 ·5
4. 33	22. 59. 0	3. 22	·1046	12. 40	·03306*	12	52 ·0	52 ·0
4. 52	23. 3. 30	3. 40	·1023					
6. 45	22. 49. 15	3. 45	·1053					
7. 15	57. 30	4. 20	·0983					
7. 25	52. 0	6. 42	·1006					
7. 32	56. 45	6. 52	·1033					
8. 12	40. 0	7. 19	·1009					
9. 6	49. 30	7. 35	·1029					
9. 24	43. 0	8. 7	·1010					
10. 7	51. 30	8. 20	·1033					
10. 26	46. 45	9. 10	·1004					
		9. 30	·1025					
		10. 15	·1003					

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Mar. 26		Mar. 26		Mar. 26				
h m	° ′ ″	h m		h m			°	°
7. 2	22. 54. 0	6. 45	·1027	0. 40	·03422*	0	47 ·5	48 ·0
8. 12	45. 0	7. 39	·1006	6. 40	·03438*	6	48 ·0	49 ·5
8. 30	55. 30	8. 22	·1032	12. 40	·03390*	12	49 ·0	49 ·0
						18	48 ·0	49 ·0
						21	48 ·0	48 ·4
		Mar. 27		Mar. 27				
		9. 45	·1019	0. 40	·03412*	0	49 ·0	49 ·5
		10. 13	·1041	3. 40	·03345*	3	53 ·0	54 ·0
		10. 39	·1020	6. 40	·03250*	6	54 ·5	54 ·8
				12. 40	·03197*	12	54 ·7	54 ·5
						18	49 ·0	49 ·3
						21	50 ·5	51 ·0
Mar. 28		Mar. 28		Mar. 28				
8. 48	22. 52. 15	8. 52	·1015	0. 40	·03265*	0	52 ·0	52 ·0
9. 0	48. 0	9. 7	·1040	3. 40	·03229*	3	55 ·0	57 ·0
9. 19	46. 15	9. 30	·1013	6. 40	·03159*	6	58 ·0	60 ·0
				12. 40	·03210*	12	55 ·5	56 ·0
						18	51 ·0	52 ·0
						21	50 ·0	51 ·5
Mar. 30		Mar. 30		Mar. 30				
10. 0	22. 54. 30	13. 3	·1017	0. 40	·03351*	0	49 ·0	50 ·0
11. 22	44. 45	13. 33	·0989	3. 40	·03293*	3	53 ·5	54 ·0
12. 50	42. 15	14. 6	·1007	6. 40	·03194*	6	57 ·0	57 ·0
13. 15	53. 15			12. 40	·03146*	12	57 ·0	57 ·0
				18. 40	·03210*	18	51 ·0	52 ·0
						21	51 ·0	51 ·5
Mar. 31		Mar. 31		Mar. 31				
7. 20	22. 51. 30	11. 15	·1002	0. 40	·03204*	0	56 ·0	56 ·5
8. 4	44. 45	11. 30	·1032	3. 40	·03072*	3	62 ·5	64 ·0
8. 58	52. 30	12. 28	·0989	6. 40	·02994*	6	67 ·0	67 ·4
10. 58	48. 15			12. 40	·02921*	12	65 ·0	65 ·0
11. 17	53. 0			18. 40	·03082*	18	57 ·0	58 ·0
12. 0	44. 45			21. 40	·03162*	21	55 ·5	55 ·5
14. 12	48. 15							
14. 58	54. 30							
15. 13	44. 45							
Apr. 1		Apr. 1		Apr. 1				
13. 0	22. 56. 30	12. 54	·1022	0. 40	·03146*	0	58 ·5	58 ·5
14. 32	43. 0	13. 16	·1021	3. 40	·03017*	3	63 ·5	65 ·5
15. 12	54. 0	15. 24	·0977	6. 40	·02883*	6	68 ·0	70 ·0
17. 16	39. 0	16. 22	·1031	12. 40	·02921*	12	65 ·0	66 ·0
17. 37	42. 15	18. 40	·0991					
19. 10	50. 15	20. 16	·1009					
20. 32	22. 43. 15	22. 22	·0966					
22. 32	23. 1. 45	23. 45	·0996					
23. 18	22. 55. 30							
23. 42	23. 3. 15							

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 time of reading the thermometers is the hour specified in Greenwich Time, or the hour increased by 40^m in Göttingen Time.

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Apr. 2		Apr. 2		Apr. 2				
h m	° ′ ″	h m		h m			°	°
3. 19	22. 59. 45	0. 15	·0971	0. 40	·03146*	0	58·0	58·0
3. 35	23. 7. 45	3. 10	·0991	6. 40	·03037*	6	67·5	69·0
4. 5	22. 54. 30	3. 27	·1035	12. 40	·02953*	12	64·0	65·0
8. 9	56. 45	4. 1	·0991	18. 40	·03037*	18	54·0	54·0
8. 18	37. 30	8. 12	·0975	21. 40	·03210*	21	52·0	52·0
8. 42	51. 30	8. 30	·1007					
9. 57	43. 0	8. 46	·0980					
11. 35	53. 15							
12. 5	47. 15							
12. 46	54. 45							
14. 4	47. 45							
14. 42	53. 45							
15. 50	42. 45							
17. 17	54. 15							
18. 37	42. 15							
18. 57	47. 15							
19. 10	56. 30							
19. 56	52. 0							
20. 16	57. 30							
Apr. 3		Apr. 3		Apr. 3				
2. 38	23. 6. 0	2. 58	·0979	0. 40	·03141*	0	59·0	59·0
6. 30	22. 45. 45	3. 12	·1005	3. 40	·03082*	3	67·0	67·7
9. 9	49. 30	5. 14	·0996	6. 40	·02960*	6	69·0	69·5
9. 30	58. 0	5. 47	·1015	12. 40	·02889*	12	64·0	64·0
9. 49	47. 45	6. 4	·1000	18. 40	·03017*	18	59·0	59·5
9. 58	49. 45	6. 42	·1018	21. 40	·03104*	21	57·5	58·0
10. 18	39. 30	9. 8	·0975					
10. 35	45. 15	9. 23	·1002					
10. 42	43. 0	10. 7	·0965					
11. 0	50. 30	10. 27	·0993					
12. 12	42. 30							
14. 52	57. 0							
15. 58	45. 0							
16. 22	50. 0							
16. 45	47. 15							
17. 27	55. 45							
Apr. 4		Apr. 4		Apr. 4				
10. 35	22. 50. 0	10. 35	·0986	0. 40	·03107*	0	61·0	61·0
10. 52	23. 1. 0	10. 45	·1021	3. 40	·02992*	3	65·0	65·5
11. 41	22. 46. 0	11. 47	·0985	6. 40	·02934*	6	70·0	70·0
				12. 40	·02878*	12	65·0	65·0
				18. 40	·03050*	18	61·0	61·0
				21. 40	·03094*	21	59·0	59·2
Apr. 5		Apr. 5		Apr. 5				
9. 36	22. 53. 15	16. 25	·1029	0. 40	·03094*	0	57·0	57·0
10. 0	45. 0	16. 58	·0977	3. 40	·03088*	3	60·0	60·7
11. 50	51. 45	17. 45	·1034	6. 40	·03078*	6	62·0	62·5
		18. 56	·1001	12. 40	·03078*	12	59·0	60·0
				18. 40	·03069*	18	53·0	53·3

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
h m	° ′ ″	h m		h m			°	°
Apr. 7		Apr. 7		Apr. 7				
3. 12	23. 5. 30	7. 12	·1006	0. 40	·03419*	0	48·5	49·0
3. 47	22. 56. 30	7. 28	·1111	3. 40	·03531*	3	51·0	51·5
4. 10	23. 2. 15	7. 36	·1009	6. 40	·03431*	6	53·0	53·0
7. 10	22. 56. 15	7. 45	·1045	12. 40	·03287*	12	48·0	48·0
7. 17	22. 32. 15	8. 8	·0969	18. 40	·03287*	18	47·0	47·0
7. 32	23. 13. 30	8. 22	·1016	21. 40	·03403*	21	46·5	47·0
7. 43	22. 52. 30	9. 6	·0981					
7. 50	23. 2. 30	9. 28	·1046					
7. 56	22. 53. 0	9. 41	·0999					
8. 6	59. 0	9. 51	·1036					
8. 13	41. 45	10. 9	·0972					
8. 30	51. 45	10. 24	·1024					
8. 38	45. 45	11. 15	·0994					
8. 51	50. 30							
9. 21	36. 30							
9. 30	51. 45							
9. 45	42. 15							
10. 0	56. 45							
10. 16	37. 0							
10. 53	53. 0							
11. 34	47. 30							
11. 50	50. 30							
12. 33	22. 46. 30							
13. 43	23. 2. 15							
14. 37	22. 51. 15							
Apr. 15		Apr. 15		Apr. 15				
7. 42	22. 52. 30	13. 12	·1031	0. 40	·03356*	0	47·0	48·0
7. 52	41. 30	13. 43	·1009	3. 40	·03306*	3	52·0	52·0
8. 12	50. 0	14. 7	·1017	6. 40	·03306*	6	53·0	52·0
9. 0	45. 30	14. 24	·1009	12. 40	·03231*	12	51·0	51·5
9. 45	48. 45	15. 14	·1025					
10. 18	44. 15	15. 40	·1013					
10. 52	51. 30							
12. 2	43. 0							
12. 12	48. 30							
13. 3	42. 0							
13. 26	44. 30							
14. 2	33. 0							
14. 53	43. 45							
15. 30	40. 15							
17. 47	54. 0							
Apr. 16		Apr. 16		Apr. 16				
10. 0	22. 51. 0	6. 40	·1033*	0. 40	·03312*	0	49·0	49·5
10. 20	47. 30	7. 45	·1030	6. 40	·03268*	6	53·5	54·5
11. 9	51. 0	12. 0	·1019*	12. 40	·03205*	12	53·0	54·0
11. 35	46. 0	12. 10	·1025	18. 40	·03282*	18	49·0	49·4
12. 0	56. 0	12. 27	·1018	21. 40	·03269*	21	49·0	49·4

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Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Apr.16								
h m	° ′ ″	h m		h m			°	°
12. 48	22. 47. 30							
15. 0	52. 15							
15. 30	48. 30							
16. 15	57. 30							
17. 0	51. 0							
Apr.17		Apr.17		Apr.17				
9. 42	22. 48. 30	13. 18	·1009	0. 40	·03227*	0	54 ·0	55 ·0
11. 18	39. 0	13. 47	·1037	3. 40	·03210*	3	58 ·0	58 ·5
11. 41	41. 15	14. 15	·1020	6. 40	·03154*	6	59 ·3	59 ·0
12. 12	38. 0			12. 40	·03133*	12	53 ·0	53 ·0
12. 48	44. 0			18. 40	·03290*	18	52 ·0	52 ·0
13. 16	38. 30			21. 40	·03326*	21	50 ·0	50 ·5
13. 48	59. 0							
14. 24	46. 30							
Apr.19		Apr.19						
10. 0	22. 50. 30	10. 0	·1025			6	60 ·0	
12. 20	46. 0	13. 0	·1042			14	57 ·0	
		15. 0	·1027			18	51 ·0	
		22. 42	·1005			21	50 ·0	
Apr.20		Apr.20						
0. 10	22. 56. 0	0. 10	·1010			0	54 ·0	
6. 30	51. 30	1. 0	·1007			3	56 ·0	
10. 30	49. 0	3. 40	·1025			6	59 ·5	
		4. 8	·1021			12	54 ·0	
		7. 0	·1031					
		9. 30	·1032					
		10. 0	·1028					
		Apr.22						
		2. 19	·0989			0	51 ·5	
		3. 11	·1035			3	53 ·0	
		3. 40	·0991					
Apr.23								
10. 15	22. 49. 15							
10. 58	57. 30							
11. 40	51. 30							
Apr.28		Apr.28						
19. 30	22. 48. 0	19. 45	·1075			18	46 ·0	
19. 48	54. 30	20. 0	·1063			21	46 ·0	
20. 12	47. 0	20. 16	·1071					
20. 17	53. 0	20. 24	·1054					
20. 56	43. 30	21. 0	·1067					
21. 10	52. 15							
Apr.29		Apr.29						
6. 50	22. 50. 30	1. 49	·1041			0	48 ·0	
7. 40	34. 30	2. 19	·1057			3	51 ·0	

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Apr.29		Apr.29						
h m	° ′ ″	h m					°	
8. 21	22. 46. 0	3. 10	·1035			0	48 ·0	
8. 38	43. 45	3. 39	·1059			3	51 ·0	
8. 55	47. 30	4. 5	·1041			6	56 ·0	
10. 15	44. 0	4. 38	·1063			12	54 ·0	
11. 0	49. 45	5. 2	·1040					
11. 26	43. 15	7. 30	·1057					
12. 0	51. 15	7. 45	·1089					
13. 12	39. 0	8. 30	·1044					
13. 21	44. 0	9. 7	·1037					
13. 46	37. 0	11. 37	·1074					
14. 10	44. 0	12. 10	·1043					
		13. 0	·1023					
		13. 16	·1063					
		13. 30	·1044					
		14. 47	·1043					
Apr.30		Apr.30						
7. 42	22. 50. 30	8. 9	·1067			6	57 ·0	
8. 20	35. 0	8. 17	·1039			12	53 ·5	
9. 30	48. 30	8. 28	·1069			18	48 ·0	
10. 43	41. 0	17. 42	·1044					
12. 35	51. 45	18. 34	·1082					
16. 50	22. 44. 30	19. 0	·1065					
17. 52	23. 2. 30							
18. 30	22. 49. 30							
18. 49	50. 0							
18. 53	54. 0							
19. 36	43. 30							
20. 12	49. 0							
May 1		May 1						
8. 55	22. 46. 45	9. 0	·1049			21	51 ·0	
9. 12	43. 30	9. 20	·1068			24	54 ·5	
9. 45	48. 45	9. 55	·1044					
10. 5	45. 30							
11. 10	52. 30							
12. 18	44. 30							
13. 0	49. 30							
14. 0	46. 30							
14. 35	52. 30							
May 2		May 2						
13. 40	22. 47. 30	13. 54	·1053			12	58 ·0	
14. 5	54. 30	14. 24	·1085			18	51 ·2	
14. 40	42. 30	15. 17	·1057					
15. 42	50. 15							
May 3		May 3						
9. 40	22. 49. 15	3. 30	·1055			3	67 ·5	
9. 56	47. 30	4. 11	·1028			6	67 ·0	
10. 30	54. 15	5. 5	·1049			12	63 ·7	
14. 38	49. 45	20. 55	·1056			18	55 ·0	

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Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
May 3		May 3						
h m	° ′ ″	h m		h m			°	°
15. 12	22. 55. 30	21. 40	·1009			21	55 ·0	
16. 38	48. 45	23. 0	·1045					
May 7								
10. 30	22. 50. 45							
11. 14	43. 30							
11. 48	47. 0							
13. 23	22. 49. 0							
13. 50	23. 0. 0							
14. 47	22. 44. 30							
May 8		May 8						
3. 3	23. 1. 30	2. 52	·1037			0	64 ·0	
3. 41	22. 52. 45	3. 40	·1092			3	69 ·0	
4. 21	23. 2. 15	4. 47	·1038			6	72 ·0	
6. 50	22. 49. 45	8. 0	·1062			12	69 ·0	
7. 22	55. 45	8. 13	·1083					
8. 6	36. 30	9. 14	·1043					
8. 20	46. 0							
8. 50	45. 30							
9. 4	48. 30							
9. 15	46. 0							
May 9		May 9						
7. 3	22. 52. 0	7. 22	·1077			6	70 ·5	
7. 41	24. 45	7. 45	·1126			12	67 ·0	
8. 6	46. 15	8. 25	·1057					
8. 20	42. 15							
May 10		May 10						
0. 56	23. 6. 30	1. 15	·1046			0	62 ·5	
1. 42	16. 30	1. 46	·1101			3	68 ·0	
2. 50	4. 0	2. 45	·1017			6	71 ·0	
3. 13	23. 5. 30	3. 16	·1037			12	68 ·0	
4. 47	22. 54. 15	3. 29	·0997					
5. 2	23. 0. 30	4. 20	·1053					
5. 16	22. 55. 30	4. 51	·1029					
5. 36	58. 30	5. 8	·1089					
5. 41	55. 0	5. 21	·1050					
9. 33	53. 0	5. 38	·1077					
10. 0	40. 15	5. 42	·1053					
10. 40	51. 0	5. 51	·1075					
11. 10	44. 30	6. 20	·1036					
12. 17	49. 0	9. 50	·1056					
13. 47	45. 0	10. 21	·1070					
15. 37	55. 15	10. 58	·1045					
17. 15	47. 45	11. 38	·1062					
May 17		May 17		May 17				
16. 14	22. 44. 30	16. 2	·1078	0. 40	·02318*	0	65 ·0	65 ·0
16. 52	54. 15	16. 15	·1094	3. 40	·02847*	3	69 ·5	70 ·0
17. 42	31. 30	16. 23	·1064	6. 40	·02772*	6	72 ·0	73 ·0

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May 17		May 17		May 17				
h m	° ′ ″	h m		h m			°	°
18. 15	22. 42. 15	16. 51	·1101	12. 40	·02421*	12	65 ·0	66 ·0
18. 30	35. 15	17. 40	·1064	18. 40	·02465*	18	63 ·0	63 ·2
19. 2	47. 15	17. 51	·1082	21. 40	·02518*	21	62 ·0	62 ·0
19. 33	42. 0	20. 43	·1030					
19. 54	52. 45							
20. 17	47. 45							
May 18		May 18		May 18				
6. 17	22. 59. 0	6. 14	·1096	0. 40	·02366*	0	63 ·5	63 ·0
6. 22	23. 13. 30	6. 28	·1275	3. 40	·02937*	3	65 ·5	66 ·0
6. 54	22. 52. 30	7. 22	·1063	6. 40	·03046*	6	68 ·0	68 ·5
7. 5	58. 0	7. 40	·1060	12. 40	·02435*	12	63 ·5	63 ·0
7. 9	22. 52. 0	8. 0	·1100	18. 40	·02735*	18	53 ·4	54 ·0
7. 20	23. 4. 0	8. 18	·1046	21. 40	·02636*	21	52 ·0	53 ·0
7. 41	22. 50. 0	8. 59	·1080					
8. 9	56. 30	11. 15	·1070					
8. 17	47. 30	11. 53	·1097					
8. 47	51. 15	12. 7	·1072					
9. 32	50. 30	12. 15	·1091					
10. 0	56. 0	12. 44	·1060					
11. 17	51. 15	13. 8	·1085					
11. 38	54. 30	13. 20	·1021					
11. 51	49. 45	14. 6	·1080					
11. 57	54. 30	14. 48	·1047					
12. 12	49. 30							
12. 50	58. 30							
13. 49	32. 45							
14. 3	40. 45							
14. 21	36. 0							
14. 53	50. 15							
15. 12	45. 30							
15. 20	53. 30							
		May 19		May 19				
		3. 18	·1082	0. 40	·02933*	0	58 ·0	58 ·0
		3. 49	·1049	3. 40	·02958*	3	60 ·0	61 ·0
		4. 3	·1085	6. 40	·03017*	6	61 ·0	62 ·0
		May 20		May 20				
		4. 38	·1084	3. 40	·03258*	3	61 ·0	61 ·5
		5. 11	·1118	6. 40	·03291*	6	62 ·0	63 ·8
		5. 38	·1098					
		5. 50	·1109					
		6. 18	·1081					
May 25								
9. 12	22. 50. 0							
9. 47	42. 15							
10. 23	48. 45							
May 26		May 26		May 26				
10. 0	22. 50. 0	10. 0	·1048	10. 0	·01704	6	73 ·0	74 ·5

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May 26		May 26		May 26				
h m	° ′ ″	h m		h m			°	°
17. 25	22. 47. 45	17. 15	·1064	12. 40	·01628	12	70 ·0	70 ·8
19. 30	55. 15	18. 33	·1045	16. 0	·01610	18	64 ·7	65 ·0
20. 0	53. 30	18. 54	·1055	20. 41	·01698	21	63 ·0	63 ·0
20. 30	56. 15	20. 0	·1042					
20. 50	53. 15	20. 45	·1055					
21. 45	53. 0	23. 22	·1048					
		23. 45	·1028					
May 27		May 27		May 27				
1. 0	23. 4. 0	0. 15	·1041	1. 22	·01540	0	64 ·0	64 ·0
1. 30	4. 45	1. 14	·1052	2. 0	·01550	3	66 ·0	66 3
1. 55	7. 30	1. 38	·1027	5. 0	·01770	6	67 ·0	67 ·0
2. 17	4. 0	2. 11	·1025	11. 0	·01580	12	64 ·0	65 ·8
2. 45	6. 15	2. 42	·1056					
3. 52	3. 15	3. 36	·1045					
4. 7	0. 0	4. 23	·1067					
4. 25	23. 0. 45	5. 5	·1047					
4. 54	22. 56. 30	5. 30	·1057					
5. 32	59. 0	5. 40	·1048					
6. 6	51. 45	6. 7	·1064					
6. 55	52. 30	6. 49	·1059					
9. 40	53. 0	7. 9	·1067					
10. 13	59. 0	9. 25	·1052					
10. 23	22. 57. 30	10. 6	·1073					
10. 33	23. 0. 30							
12. 0	22. 49. 0							
May 28								
6. 39	22. 51. 45							
7. 38	43. 0							
9. 18	52. 45							
10. 30	43. 0							
12. 0	52. 0							
May 31		May 31						
10. 0	22. 52. 45	1. 6	·1061			0	62 ·5	
10. 11	43. 15	1. 41	·1084			3	67 ·5	
10. 30	49. 45	2. 0	·1058			6	67 ·1	
10. 48	47. 30	3. 49	·1098			12	63 ·9	
11. 10	50. 0	5. 0	·1066					
13. 8	47. 15	10. 8	·1086					
13. 30	49. 15	10. 21	·1107					
13. 42	46. 0	10. 44	·1086					
14. 0	48. 0							
14. 12	43. 30							
14. 53	57. 0							
15. 38	34. 15							
15. 40	39. 0							
15. 53	39. 0							
16. 8	34. 15							
16. 15	40. 0							

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June 4		June 4						
h m	° ′ ″	h m					°	
14. 50	22. 55. 30	3. 0	·1073			0	57 ·5	
15. 55	23. 2. 0	3. 46	·1093			6	63 ·0	
16. 42	22. 52. 15	4. 32	·1072					
		5. 18	·1093					
		6. 0	·1081					
June 10								
11. 0	22. 55. 30							
11. 30	46. 30							
12. 10	55. 0							
June 14		June 14						
9. 28	22. 55. 0	3. 15	·1073			3	65 ·0	
10. 27	42. 45	3. 40	·1099			6	67 ·5	
11. 6	57. 15	4. 10	·1077			12	66 ·0	
12. 3	50. 0	4. 51	·1110					
		5. 44	·1077					
		10. 16	·1065					
		10. 44	·1077					
		11. 15	·1058					
		11. 27	·1075					
June 20		June 20						
12. 0	22. 53. 45	12. 52	·1076			12	66 ·0	
13. 10	45. 45	13. 40	·1058			18	61 ·0	
14. 0	58. 0	14. 7	·1083					
15. 30	47. 15							
June 21		June 21						
9. 45	22. 47. 30	9. 53	·1081			6	70 ·0	
10. 0	57. 30	10. 18	·1064			12	71 ·0	
10. 32	50. 30	10. 50	·1079			18	66 ·0	
11. 13	49. 15	11. 13	·1067			21	65 ·0	
13. 38	55. 0	14. 13	·1075					
13. 55	50. 0	17. 58	·1067					
15. 54	53. 30	21. 50	·1017					
17. 52	45. 0	22. 30	·1029					
18. 8	49. 30	23. 27	·1016					
18. 17	47. 15							
18. 23	48. 0							
19. 15	45. 0							
19. 45	53. 0							
20. 15	49. 45							
20. 38	53. 0							
20. 52	50. 45							
21. 15	53. 45							
21. 46	22. 51. 0							
23. 0	23. 2. 30							
23. 53	22. 59. 45							
June 22		June 22						
1. 0	23. 3. 0	0. 35	·1051			0	70 ·0	

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The time of reading the thermometers is the hour specified in Greenwich Time, or the hour increased by 40^m in Göttingen Time.

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
June 22		June 22						
h m	° ′ ″	h m					°	
1. 49	22. 58. 0	1. 45	·1046			3	74·0	
2. 49	56. 0	2. 5	·1070			6	75·0	
3. 15	58. 45	2. 45	·1051			12	71·0	
3. 37	55. 30	3. 12	·1061					
4. 0	57. 15	3. 30	·1044					
5. 0	52. 0	4. 5	·1064					
5. 12	54. 0	4. 25	·1046					
7. 15	47. 30	4. 53	·1050					
9. 0	49. 30	6. 14	·1088					
9. 15	53. 0	6. 44	·1061					
9. 45	46. 0	7. 18	·1087					
10. 15	48. 0	9. 10	·1079					
11. 37	52. 30	9. 37	·1055					
11. 51	48. 0	10. 9	·1067					
12. 12	51. 45	13. 22	·1076					
		13. 44	·1064					
		14. 8	·1079					
June 25								
7. 12	22. 53. 45							
7. 44	47. 0							
9. 30	53. 30							
June 26								
12. 43	22. 51. 30							
13. 13	57. 30							
14. 38	50. 45							
July 3		July 3						
10. 11	22. 54. 0	7. 32	·0946			6	66·5	
10. 24	47. 30	7. 53	·0923			12	66·0	
10. 48	53. 0	8. 42	·0953					
12. 38	53. 30	9. 18	·0933					
13. 22	41. 45	9. 41	·1290					
14. 9	51. 0	10. 19	·0911					
		10. 38	·0931					
		11. 7	·0919					
July 4		July 4						
13. 40	22. 51. 30	2. 52	·0926			0	64·5	
15. 5	23. 2. 0	2. 57	·0901			3	67·0	
16. 21	22. 48. 15	3. 30	·0923			6	69·0	
16. 30	59. 30	4. 15	·0897			12	67·2	
17. 8	46. 45	4. 40	·0921			18	62·5	
17. 12	54. 45	17. 12	·0938			21	63·0	
17. 15	41. 45	17. 14	·0915					
17. 42	57. 45	17. 27	·0943					
17. 58	40. 15	17. 38	·0900					
18. 5	48. 45	17. 40	·0950					
18. 13	41. 0	17. 47	·0903					
18. 17	53. 30	18. 2	·0940					
18. 25	42. 30	18. 23	·0911					

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
July 4		July 4						
h m	° ′ ″	h m					°	
18. 29	22. 59. 0	18. 50	·0959					
18. 35	41. 0	18. 52	·0921					
18. 45	51. 30	19. 8	·0965					
19. 0	45. 15	19. 10	·0910					
19. 7	56. 0	19. 15	·0952					
19. 12	39. 15	19. 45	·0922					
19. 15	54. 30	19. 48	·0954					
19. 30	22. 43. 0	19. 53	·0919					
19. 47	23. 0. 0	20. 40	·0929					
19. 49	22. 41. 45	21. 38	·0870					
20. 6	52. 45	22. 18	·0910					
20. 22	45. 0	23. 53	·0880					
20. 39	53. 30							
20. 44	22. 38. 15							
21. 52	23. 1. 30							
22. 51	22. 53. 45							
July 5		July 5						
2. 22	22. 59. 45	3. 6	·0882			3	71·0	
2. 35	23. 1. 30	3. 42	·0955			6	75·0	
3. 11	22. 57. 30	4. 8	·0913			12	74·0	
3. 43	23. 3. 0	9. 30	·0925					
3. 48	22. 57. 30	9. 57	·0940					
		10. 10	·0907					
July 10		July 10						
13. 22	22. 53. 15	13. 38	·0920			12	69·0	
13. 50	23. 2. 0	13. 42	·0963			18	63·0	
14. 25	22. 47. 45	15. 13	·0922			21	64·0	
14. 43	52. 30	17. 50	·0956					
15. 8	39. 45	20. 0	·0884					
17. 16	47. 0	20. 27	·0902					
17. 43	42. 30	22. 7	·0852					
17. 48	48. 15	22. 32	·0902					
17. 56	41. 45	22. 43	·0831					
18. 9	49. 15	23. 53	·0916					
22. 8	22. 55. 0							
22. 30	23. 8. 45							
22. 43	22. 51. 30							
23. 0	23. 1. 30							
23. 37	22. 46. 45							
23. 47	23. 3. 15							
July 11		July 11						
0. 27	22. 56. 45	1. 30	·0885			0	66·0	
0. 33	23. 4. 45	2. 3	·0953			3	69·0	
0. 36	22. 57. 0	2. 20	·0912			6	72·0	
0. 54	23. 2. 15	2. 30	·0946			12	70·0	
7. 2	23. 6. 15	3. 11	·0903			18	65·0	
7. 20	22. 51. 0	3. 23	·0933			21	65·0	
7. 37	23. 3. 0	4. 17	·0873					
8. 8	22 49. 45	6. 43	·0972					

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Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
July 11	° ′ ″	July 11					°	
h m		h m						
8. 12	23. 4. 30	7. 20	·0928					
8. 28	22. 44. 30	7. 37	·0967					
8. 43	53. 45	8. 7	·0894					
9. 23	37. 15	8. 13	·0958					
10. 0	49. 45	8. 30	·0883					
10. 8	45. 45	8. 39	·0916					
10. 28	56. 0	9. 18	·0875					
10. 52	22. 53. 30	9. 40	·0902					
11. 10	23. 8. 15	9. 52	·0874					
11. 28	22. 34. 30	10. 18	·0906					
12. 0	52. 15	11. 18	·0808					
12. 12	46. 45	11. 41	·0890					
12. 20	53. 15	12. 5	·0856					
12. 48	42. 15	13. 7	·0856					
13. 18	48. 15	13. 38	·0815					
14. 32	26. 30	14. 15	·0881					
14. 48	39. 45	14. 48	·0839					
15. 5	22. 31. 30	15. 13	·0871					
15. 40	23. 3. 30	15. 50	·0835					
15. 53	22. 46. 30	16. 27	·0908					
16. 6	51. 15	20. 54	·0812					
16. 12	48. 0							
16. 19	55. 0							
16. 24	48. 15							
16. 32	56. 30							
16. 40	50. 0							
16. 45	54. 15							
16. 48	51. 30							
16. 52	54. 0							
July 12		July 12						
4. 40	22. 58. 30	1. 47	·0863			0	68 ·0	
5. 0	23. 2. 0	4. 20	·0918			3	72 ·0	
5. 52	22. 52. 30	4. 40	·0898			6	66 ·0	
6. 16	55. 0	4. 56	·0910					
6. 42	52. 0	5. 4	·0895					
6. 53	55. 0	5. 35	·0921					
7. 2	50. 15	5. 44	·0905					
7. 30	57. 30	6. 54	·0938					
8. 7	51. 15	7. 37	·0902					
July 13		July 13						
20. 37	22. 46. 15	1. 15	·0855			0	70 ·5	
20. 58	53. 15	3. 0	·0895			3	75 ·5	
21. 28	50. 0	4. 4	·0863			6	79 ·0	
21. 40	53. 15	6. 22	·0890					
		6. 39	·0893					
		7. 2	·0885					
July 14		July 14						
3. 51	22. 56. 15	2. 3	·0869			0	73 ·0	
4. 21	23. 4. 0	3. 13	·0926			3	77 ·0	

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
July 14	° ′ ″	July 14					°	
h m		h m		h m				
4. 35	22. 58. 0	3. 54	·0914			6	79 ·5	
4. 50	23. 1. 30	4. 15	·0948			12	78 ·0	
5. 10	22. 59. 15	4. 41	·0901					
5. 27	23. 2. 45	5. 7	·0933					
6. 47	22. 48. 0	5. 40	·0909					
		6. 52	·0927					
		7. 15	·0899					
		7. 30	·0913					
July 19		July 19						
9. 43	22. 48. 0	10. 0	·0908			6	70 ·0	
10. 13	51. 15	12. 0	·0900			12	68 ·5	
11. 45	50. 0	15. 40	·0908			18	65 ·0	
15. 51	55. 30	17. 30	·0915			21	65 ·5	
16. 45	52. 30	22. 17	·0883					
17. 20	54. 0	23. 55	·0884					
18. 30	50. 15							
20. 10	48. 0							
22. 0	51. 0							
22. 8	54. 0							
23. 37	59. 15							
July 20		July 20						
2. 10	23. 2. 30	2. 10	·0898			0	68 ·0	
7. 0	22. 53. 30	6. 20	·0907			3	69 ·0	
10. 30	22. 53. 30	8. 0	·0914			6	70 ·0	
		10. 0	·0907			12	66 ·5	
July 23		July 23		July 23				
13. 15	22. 51. 0	16. 11	·0931	14. 20	·01620	12	70 ·0	
14. 16	41. 15	16. 56	·0865	14. 52	·01690	18	64 ·0	64 ·0
14. 54	55. 45	17. 58	·0921	16. 48	·01493	21	64 ·0	63 ·5
15. 20	48. 30	21. 22	·0849	17. 4	·01525			
15. 57	56. 30	23. 52	·0877	17. 42	·01470			
16. 22	42. 0			21. 0	·01645			
16. 37	45. 15			21. 19	·01602			
16. 45	42. 15			21. 50	·01650			
17. 0	53. 45							
17. 10	52. 0							
17. 29	56. 45							
17. 40	53. 45							
18. 10	59. 0							
20. 5	42. 30							
21. 43	58. 0							
22. 26	54. 15							
July 24		July 24						
0. 51	23. 5. 0	0. 17	·0839			0	65 ·0	
10. 33	22. 55. 0	10. 15	·0919			3	69 ·0	
11. 23	50. 0	10. 30	·0936			6	70 ·5	
11. 48	52. 45	11. 17	·0917			12	67 ·0	
12. 27	48. 0	21. 21	·0888			18	62 ·0	

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Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
July 24	° ′ ″	July 24		h m			°	°
h m 13. 40	22. 53. 30	h m 21. 38	·0874			21	62·0	
14. 18	46. 15	22. 52	·0903					
July 26								
15. 12	22. 53. 45							
15. 40	59. 0							
16. 40	52. 0							
July 29		July 29		July 29				
1. 8	23. 5. 30	1. 3	·0905	5. 19	·01792	0	66·5	66·0
1. 23	8. 30	1. 24	·0942	7. 30	·01696	3	69·5	69·5
1. 51	4. 15	1. 49	·0902	8. 10	·01725	6	73·0	73·0
2. 17	23. 8. 30	2. 18	·0941	11. 30	·01605	12	72·5	72·0
3. 45	22. 59. 45	2. 52	·0905	15. 20	·01788			
		3. 20	·0933	18. 40	·01700			
		3. 45	0905					
Aug. 1		Aug. 1		Aug. 1				
13. 15	22. 50. 0	11. 37	·0924	11. 33	·01440	6	68·0	68·5
13. 52	57. 45	11. 45	·0940	13. 15	·01502	12	66·0	66·0
14. 48	50. 15	12. 24	·0934	14. 20	·01450			
				Aug. 3				
				4. 48	·01697	3		64·0
				5. 30	·01638	6		68·5
				6. 40	·01672			
Aug. 8		Aug. 8		Aug. 8				
7. 45	22. 52. 45	4. 3	·0944	8. 10	·01204	3	63·0	63·5
8. 23	57. 0	4. 15	·0925	9. 45	·01090	6	63·0	62·5
9. 20	45. 45	4. 44	·0953	10. 8	·01121	12	62·0	62·0
9. 42	52. 45	5. 27	·0939	10. 25	·01090	18	57·0	58·0
11. 0	45. 15	6. 30	·0967	10. 53	·01127	21	57·0	58·0
12. 0	58. 0	8. 56	·0923	15. 15	·01095			
12. 30	44. 30	9. 40	·0947	15. 28	·01067			
13. 20	47. 30	9. 52	·0916	15. 45	·01100			
13. 55	22. 40. 45	10. 16	·0935	16. 2	·01070			
15. 43	23. 1. 15	10. 38	·0919	16. 40	·01090			
16. 15	22. 49. 0	11. 16	·0936	22. 30	·01164			
17. 30	39. 0	15. 14	·0931	22. 40	·01084			
18. 6	44. 30	15. 32	·0909	23. 40	·01095			
18. 13	41. 30	15. 48	·0946					
18. 32	44. 15							
Aug. 21		Aug. 21		Aug. 21				
8. 2	22. 58. 15	7. 5	·0942	2. 0	·01388	0	57·5	57·0
8. 22	36. 0	7. 38	·0962	4. 36	·01252	3	62·2	62·0
8. 58	51. 15	8. 22	·0940	5. 45	·01314	6	64·0	64·2
10. 8	42. 45	11. 19	·0941	8. 0	·01345	12	62·0	61·9
11. 23	52. 0	11. 43	·0919	8. 15	·01304	18	59·0	59·0
12. 0	42. 30	13. 30	·0910	8. 26	·01372	21	59·0	59·5
12. 50	48. 0			11. 38	·01181			

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Aug. 21	° ′ ″	Aug. 21		Aug. 21			°	°
h m 13. 30	22. 36. 30	h m 14. 13	·0944	h m 13. 42	·01283			
13. 53	44. 15	15. 0	·0927	14. 18	·01250			
14. 17	38. 0	15. 36	·0945	14. 45	·01290			
15. 10	53. 15	16. 30	·0928	15. 17	·01280			
15. 39	40. 15			18. 36	·01560			
17. 7	51. 30							
17. 26	47. 30							
17. 42	50. 30							
20. 32	56. 15							
20. 47	53. 15							
21. 13	57. 15							
Aug. 25		Aug. 25		Aug. 25				
10. 0	22. 48. 0	10. 0	·0973	10. 0	·01575	6	64·0	64·0
12. 30	50. 30	13. 0	·0975	12·0	·01525	12	63·0	63·7
19. 40	46. 0	18. 0	·0974	20·0	·01817	18	61·0	61·0
21. 30	47. 30	21. 0	·0961	23. 15	·01760	21	61·0	61·0
		21. 10	·0954			24	62·5	62·3
		23. 15	·0950					
Aug. 26		Aug. 26		Aug. 26				
0. 30	23. 2. 45	0. 50	·0957	1. 53	·01358	0	62·5	62·3
1. 0	23. 2. 30	1. 15	·0962	5. 20	·01500	3	66·0	65·4
6. 0	22. 49. 15	5. 13	·0978	12. 15	·01425	6	67·5	67·0
6. 55	49. 15	6. 0	·0973			12	68·0	68·0
8. 50	50. 0	10. 0	·0975					
11. 0	51. 30							
Aug. 28		Aug. 28						
9. 52	22. 53. 15	11. 30	·0973			6	72·0	
11. 0	42. 0	11. 53	·0963			12	69·0	
11. 37	47. 0	12. 8	·0974					
13. 2	44. 0							
13. 47	48. 45							
Aug. 31		Aug. 31						
9. 8	22. 52. 45	8. 0	·0981			6	64·0	
9. 55	43. 30	8. 9	·0969			12	60·0	
10. 8	45. 15	9. 10	·0982					
10. 38	40. 45	9. 37	·0966					
11. 55	50. 30	10. 5	·0987					
Sep. 3		Sep. 3						
12. 38	22. 51. 15	16. 22	·0990			12	67·0	
13. 6	46. 0	19. 32	·0946			18	62·0	
15. 18	47. 0	20. 46	·0963			21	60·2	
15. 25	51. 15	23. 16	·0924					
15. 42	46. 30							
16. 8	48. 30							
16. 43	42. 30							
18. 27	56. 0							
19. 35	52. 15							

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Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H.F.	Thermometers. V.F.
Sep. 3	° ′ ″	h m		h m			°	°
19. 58	22. 57. 15							
20. 12	53. 15							
Sep. 4		Sep. 4						
14. 5	22. 46. 45	1. 48	·0936			0	63·0	
14. 40	43. 15	2. 15	·0920			3	72·0	
15. 56	55. 30	3. 6	·0939					
16. 34	48. 0							
				Sep. 5				
				3. 0	·01660	3		74·0
				3. 30	·01713	6		67·5
				4. 7	·01635			
				4. 25	·01700			
Sep. 7								
18. 11	22. 48. 15							
18. 32	42. 45							
18. 56	48. 0							
19. 8	43. 30							
19. 16	48. 30							
Sep. 8		Sep. 8		Sep. 8				
9. 8	22. 51. 30	8. 44	·0983	12. 0	·01354	6	65·7	65·5
9. 23	42. 30	9. 3	·0965	12. 25	·01247	12	64·3	64·0
9. 50	46. 45	9. 30	·0976	12. 33	·01265	18	59·5	60·0
10. 25	33. 0	9. 53	·0957	12. 45	·01275			
11. 32	38. 30	10. 14	·0966	13. 10	·01277			
11. 56	35. 30	11. 7	·0941					
12. 12	52. 30	11. 30	·0950					
12. 58	32. 0	11. 47	·0938					
14. 0	42. 15	13. 5	·0995					
14. 10	39. 30							
15. 45	50. 30							
16. 57	41. 45							
Sep. 9		Sep. 9						
9. 12	22. 50. 45	2. 39	·0946			0	64·0	
9. 32	41. 30	2. 50	·0981			3	66·0	
9. 40	47. 0	4. 0	·0945			6	66·5	
9. 54	44. 45	4. 30	·0962			12	66·2	
10. 38	49. 30	4. 55	·0935					
10. 52	47. 0	9. 0	·0950					
		9. 35	·0985					
		10. 42	·0947					
Sep. 11		Sep. 11						
9. 27	22. 48. 15	9. 30	·0961			6	64·0	
10. 7	40. 30	10. 13	·0993			12	61·5	
10. 58	49. 15	11. 8	·0956					

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H.F.	Thermometers. V.F.
Sep. 17	° ′ ″	Sep. 17		h m			°	°
7. 0	22. 50. 0	6. 5	·0977			6	63·3	
7. 37	29. 45	6. 14	·0963			12	61·0	
8. 11	43. 30	7. 0	·0981					
9. 47	46. 30	7. 23	·0952					
10. 0	42. 15	7. 45	·0983					
10. 20	45. 30	9. 0	·0959					
11. 0	39. 15							
12. 12	48. 30							
13. 42	42. 30							
14. 24	53. 0							
15. 14	44. 45							
16. 15	56. 30							
17. 5	48. 0							
Sep. 18		Sep. 18		Sep. 18				
7. 50	22. 46. 15	8. 39	·0954	2. 42	·01807	12	60·5	61·0
8. 29	53. 0	9. 10	·1001	3. 10	·01766	18	54·0	54·2
8. 50	38. 45	9. 23	·0964	3. 36	·01780	21	52·0	52·0
9. 20	51. 0	9. 36	·0984			24	57·0	58·0
9. 32	42. 0	10. 10	·0949					
9. 47	51. 30	22. 10	·0950					
10. 22	45. 0	22. 45	·0918					
11. 51	53. 0	23. 45	·0940					
Sep. 20		Sep. 20		Sep. 20				
11. 37	22. 48. 0	9. 40	·0960	10. 0	·01505	6	67·5	67·5
12. 41	46. 30	10. 15	·0969	14. 30	·01772	12	63·5	63·5
15. 42	52. 0	10. 50	·0961	20. 13	·01662	18	56·5	56·5
19. 10	46. 30	15. 0	·0955			21	55·0	56·0
20. 54	44. 30	15. 30	·0964					
		21. 40	·0942					
Sep. 21		Sep. 21		Sep. 21				
0. 28	23. 0. 0	0. 27	·0937	0. 34	·01822	0	63·0	63·5
1. 38	23. 3. 0	5. 0	·0955	1. 30	·01738	3	68·0	68·8
3. 0	22. 57. 15	7. 0	·0956	3. 57	·01900	6	69·0	69·0
7. 0	49. 0	10. 0	·0936	10. 12	·01662	12	70·0	71·0
9. 0	49. 0							
11. 0	49. 15							
Sep. 30		Sep. 30						
15. 47	22. 49. 30	15. 30	·0981			12	59·0	
16. 13	58. 15	16. 13	·0964			18	59·0	
17. 13	51. 45	17. 0	·0987					
Oct. 2		Oct. 2						
9. 45	22. 52. 0	10. 20	·0980			6	65·0	
11. 5	39. 45	11. 0	·0954			12	63·0	
11. 35	47. 30	12. 3	·0965					
Oct. 3								
11. 16	22. 51. 30							

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Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Oct. 3								
h m	° ′ ″	h m		h m			°	°
12. 54	22. 41. 0							
13. 38	46. 15							
14. 0	45. 0							
16. 17	55. 45							
				Oct. 6				
				2. 0	·01815	0		66·0
				2. 37	·01950	3		69·0
				4. 30	·01670			
				Oct. 7				
				3. 0	·01710	3		69·5
				3. 40	·01840	6		71·5
				5. 0	·01680			
Oct. 8		Oct. 8		Oct. 8				
15. 10	22. 35. 30	15. 6	·0955	2. 30	·01823	0	64·0	64·5
15. 52	46. 15	15. 54	·0989	3. 9	·01750	8	66·5	66·0
16. 20	41. 30	17. 0	·0948	3. 33	·01783	12	64·0	63·5
16. 52	48. 30	17. 30	·0997	5. 30	·01640	18	60·0	60·0
17. 5	46. 0	18. 33	·0975	15. 38	·01818	21	59·0	59·0
17. 16	51. 15			16. 19	·01768			
				16. 52	·01775			
				17. 0	·01750			
				17. 20	·01774			
				17. 33	·01757			
Oct. 14		Oct. 14						
8. 32	22. 51. 45	11. 17	·0982			6	58·0	
9. 7	44. 45	11. 39	·0997			12	54·5	
10. 16	51. 0	12. 15	·0985					
Oct. 17		Oct. 17		Oct. 17				
13. 38	22. 49. 30	13. 20	·0987	15. 30	·01726	12	52·2	52·0
14. 48	23. 4. 45	14. 44	·1019	18. 38	·01590	18	55·0	54·5
15. 20	22. 50. 30	15. 13	·0974	21. 5	·01680	21	46·0	46·5
15. 56	55. 30	15. 52	·1007					
16. 16	51. 45	16. 8	·0993					
16. 40	57. 45	16. 29	·1004					
16. 50	22. 53. 15	16. 55	·0982					
17. 11	23. 2. 15	17. 20	·1002					
17. 32	22. 56. 15	17. 40	·0965					
17. 41	23. 2. 0	19. 9	·1004					
17. 50	22. 55. 0	20. 40	·0950					
18. 11	23. 2. 45	21. 18	·0988					
18. 43	22. 48. 15							
19. 40	54. 0							
20. 31	42. 15							
21. 16	56. 30							
22. 13	53. 45							
22. 22	55. 30							
23. 0	51. 30							

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Oct. 18		Oct. 18		Oct. 18				
h m	° ′ ″	h m		h m			°	°
1. 52	23. 10. 0	1. 42	·0980	6. 5	·01882	0	47·0	47·5
3. 10	22. 58. 0	3. 3	·0943	6. 30	·02060	3	50·0	50·5
4. 12	23. 12. 0	3. 21	·0972	6. 40	·01970	6	48·0	47·5
5. 16	22. 53. 15	3. 33	·0957	7. 0	·02105	12	47·0	46·5
5. 38	23. 3. 30	3. 45	·0987	7. 11	·01945	18	46·0	45·0
5. 47	22. 54. 30	4. 0	·0957	7. 54	·02030	21	45·8	45·0
6. 47	23. 16. 45	4. 10	·1022	10. 21	·00972			
7. 8	22. 54. 0	4. 35	·0963	10. 30	·01586			
7. 14	23. 1. 0	5. 48	·1025	10. 40	·01343			
7. 45	22. 47. 30	6. 55	·0966	10. 47	·01600			
8. 6	56. 30	8. 15	·1022	11. 1	·01144			
8. 47	43. 15	9. 35	·0940	11. 18	·01318			
9. 39	54. 45	10. 0	·0971	11. 36	·01180			
9. 50	22. 50. 0	10. 14	·0871	11. 45	·01235			
10. 16	23. 33 +	10. 30	·0920	12. 9	·01050			
10. 37	22. 14. 0	10. 35	·0860	12. 50	·01310			
10. 53	56. 45	10. 45	·1029	13. 7	·01050			
11. 10	24. 0	11. 0	·0850	13. 13	·01197			
11. 28	49. 0	11. 19	·0971					
11. 47	6. 45	11. 39	·0868					
12. 10	32. 45	11. 57	·0947					
12. 17	24. 30	12. 15	·0894					
12. 52	36. 0							
13. 8	30. 15							
13. 22	38. 0							
Oct. 19		Oct. 19		Oct. 19				
7. 17	22. 54. 15	2. 49	·0940	2. 0	·01556	0	46·5	46·0
7. 36	59. 0	3. 17	·0972	3. 38	·01870	3	50·0	50·5
7. 45	52. 30	3. 23	·0950	5. 40	·01720	6	57·0	57·5
8. 14	47. 45	3. 40	·0977	9. 24	·01598	12	53·0	53·5
8. 23	53. 15	3. 57	·0955	10. 8	·01507			
9. 33	48. 30	9. 0	·0960	10. 32	·01520			
9. 50	59. 0	9. 40	·1003	10. 55	·01483			
10. 17	51. 45	10. 8	·0960	11. 45	·01513			
10. 41	57. 45	10. 38	·0975					
11. 30	47. 45	11. 23	·0946					
12. 10	56. 15	12. 57	·0964					
13. 5	22. 48. 45							
14. 13	23. 0. 0							
15. 41	22. 47. 45							
Oct. 20		Oct. 20		Oct. 20				
4. 22	22. 55. 15	4. 26	·0951	9. 15	·01632	3	56·0	56·5
4. 52	47. 0	5. 3	·0977	10. 0	·01570	6	56·0	56·5
5. 38	45. 15	5. 18	·0965	10. 30	·01595	12	52·0	52·0
7. 54	54. 0	9. 15	·0957					
8. 42	50. 30	9. 38	·0987					
9. 8	53. 30	10. 7	·0964					
9. 18	49. 15							
9. 42	58. 30							
10. 30	48. 45							

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Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Oct. 20								
h m	° ′ ″	h m		h m			°	°
12. 19	22. 47. 0							
12. 40	52. 15							
13. 40	49. 15							
Oct. 21		Oct. 21						
9. 10	22. 50. 15	9. 20	·0972			6	55·0	
9. 30	57. 45	9. 28	·0992			12	54·0	
9. 42	47. 45	9. 38	·0978					
		9. 45	·0988					
		10. 30	·0972					
Oct. 22		Oct. 22						
19. 12	22. 49. 15	6. 48	·1005			12	53·0	
19. 56	38. 30	6. 51	·1029			18	51·0	
21. 16	49. 0	7. 2	·1018			21	50·5	
		19. 50	·1009					
		20. 16	·1025					
		20. 37	·1002					
Oct. 23		Oct. 23		Oct. 23				
2. 54	23. 1. 15	3. 42	·1002	2. 30	·01788	0	54·0	54·5
3. 54	14. 30	3. 51	·1061	5. 5	·02123	3	55·0	55·5
4. 14	2. 30	4. 9	·0997	6. 26	·01940	6	57·5	57·0
4. 32	12. 45	4. 15	·1029	7. 7	·01980	12	57·0	57·0
4. 42	2. 30	4. 48	·0972	9. 48	·01624	18	55·0	54·5
4. 46	23. 9. 0	5. 18	·1017	10. 0	·01687	21	55·0	54·5
5. 16	22. 32. 45	5. 37	·0976	10. 32	·01582			
5. 39	59. 0	5. 56	·1014	11. 36	·01667			
5. 43	22. 38. 0	6. 33	·0943	11. 57	·01490			
6. 8	23. 4. 30	7. 34	·0967	12. 10	·01717			
6. 17	22. 52. 30	8. 54	·0946	13. 0	·01610			
6. 28	59. 15	9. 13	·0982					
6. 39	52. 15	9. 22	·0938					
6. 53	56. 15	9. 40	·0960					
7. 18	46. 45	9. 49	·0918					
7. 38	53. 30	10. 0	·0956					
8. 15	46. 0	11. 0	·0932					
8. 38	50. 30	11. 37	·0951					
9. 8	33. 45	11. 57	·0905					
9. 17	52. 45	12. 19	·1018					
9. 35	35. 15	12. 44	·0980					
11. 10	35. 0	12. 48	·1015					
11. 42	57. 30	13. 33	·0959					
12. 12	18. 45							
12. 52	44. 15							
13. 11	40. 0							
13. 30	47. 0							
Oct. 25		Oct. 25		Oct. 25				
1. 46	22. 58. 30	1. 40	·0974	2. 15	·02025	0	57·5	58·0
2. 38	23. 14. 15	2. 39	·1010	4. 50	·02165	3	59·5	60·0
2. 56	22. 58. 0	2. 50	·0980	7. 30	·01890	6	63·0	63·5

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Oct. 25		Oct. 25						
h m	° ′ ″	h m		h m			°	°
3. 3	23. 4. 0	3. 0	·1001			12	55·5	56·0
3. 11	22. 58. 0	3. 10	·0982			18	51·5	51·0
3. 26	23. 2. 15	3. 18	·1000			21	49·5	49·0
3. 34	22. 58. 0	3. 28	·0982					
3. 54	23. 8. 0	3. 46	·0995					
4. 14	22. 52. 15	4. 0	·0945					
4. 41	50. 30	4. 28	·0985					
5. 0	58. 30	5. 7	·0950					
5. 10	22. 49. 45	5. 20	·0972					
5. 28	23. 4. 0	5. 38	·0928					
5. 40	22. 49. 0	5. 50	·0970					
5. 53	58. 15	8. 15	·0969					
8. 15	53. 30	9. 10	·0943					
9. 20	32. 30	9. 33	·0986					
9. 47	52. 30	10. 0	·0966					
15. 28	42. 0	12. 26	·0982					
15. 42	46. 30	12. 40	·1010					
17. 42	55. 45	12. 51	·0996					
18. 8	22. 52. 30	14. 12	·0974					
18. 52	23. 3. 0	15. 5	·0992					
19. 14	22. 55. 15	15. 45	·0953					
		18. 9	·1013					
		20. 12	·0945					
Oct. 26		Oct. 26						
9. 46	22. 41. 30	9. 45	·0974			6	60·0	
10. 9	54. 45	9. 56	·0989			12	58·0	
10. 22	46. 15	10. 14	·0971					
10. 42	51. 45	10. 25	·0997					
11. 6	45. 15	10. 50	·0971					
11. 30	50. 30	11. 15	·0986					
12. 24	45. 30	11. 40	·0976					
Oct. 27		Oct. 27		Oct. 27				
4. 13	22. 55. 30	3. 40	·0977	3. 28	·02000	3	58·5	58·5
4. 54	50. 15	4. 9	·0991	5. 27	·01870	6	59·0	59·0
5. 13	53. 30	4. 48	·0971	5. 47	·01910	12	57·0	57·0
6. 6	31. 15	5. 3	·0984	9. 6	·01682			
7. 6	54. 45	5. 41	·0968	9. 47	·01750			
7. 13	49. 0	6. 13	·0997					
8. 35	22. 37. 30	7. 54	·0957					
9. 0	23. 5. 0	8. 40	·1012					
9. 40	22. 34. 0	9. 45	·0939					
14. 20	49. 0	10. 45	·0984					
14. 56	56. 30							
15. 30	48. 45							
Oct. 28		Oct. 28						
11. 46	22. 48. 0	11. 17	·0999			6	57·0	
13. 9	40. 15	11. 46	·1018			12	53·0	
13. 47	46. 15	12. 1	·1010					
14. 26	42. 45	16. 45	·0998					

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Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Oct. 28		Oct. 28						
h m	° ′ ″	h m		h m			°	°
15. 0	22. 46. 45	17. 25	·1018					
17. 6	57. 0	18. 12	·1007					
17. 42	49. 30	23. 0	·0980					
18. 50	54. 30	23. 20	·0990					
		23. 40	·0967					
Oct. 29		Oct. 29		Oct. 29				
1. 25	22. 59. 0	13. 40	·0966	12. 30	·01650	12	52·5	52·0
1. 49	23. 8. 15	14. 50	·0984	14. 6	·01520	18	50·0	50·5
2. 38	22. 59. 15	15. 0	·0965	14. 32	·01550	21	49·0	49·5
3. 12	23. 2. 15	16. 12	·1019	14. 53	·01527			
4. 12	22. 53. 15	18. 5	·0959	15. 41	·01572			
4. 30	59. 30			16. 30	·01510			
4. 53	50. 45			22. 30	·02000			
5. 42	56. 0							
11. 35	49. 45							
12. 12	46. 45							
12. 52	55. 30							
15. 12	25. 15							
16. 10	55. 30							
16. 48	36. 0							
17. 32	49. 15							
Oct. 30		Oct. 30		Oct. 30				
4. 33	22. 57. 30	4. 21	·0989	6. 25	·01275	3	57·0	57·5
4. 48	47. 15	4. 41	·0958	6. 33	·01315	6	56·5	56·5
5. 0	52. 0	6. 24	·0993	6. 53	·01235	12	53. 0	53·0
5. 12	48. 0	6. 32	·1037	11. 17	·01120			
6. 5	54. 30	6. 54	·0981					
6. 23	47. 0	7. 14	·1030					
6. 40	59. 15	7. 25	·0970					
7. 15	36. 0	8. 0	·0998					
7. 25	58. 30	9. 6	·0965					
7. 34	44. 0	10. 50	·0974					
7. 55	44. 30	10. 58	·0997					
9. 0	56. 0	11. 9	·0974					
10. 17	46. 15	11. 45	·1015					
10. 41	35. 0							
11. 8	42. 0							
11. 33	25. 30							
11. 57	46. 15							
12. 20	50. 30							
12. 46	44. 30							
13. 15	47. 45							
Oct. 31		Oct. 31						
4. 34	22. 55. 30	7. 30	·0990			6	57·0	
4. 56	42. 45	7. 50	·1006			12	53·0	
6. 27	54. 30	8. 7	·0993					
6. 44	52. 0	8. 30	·1032					
7. 13	55. 30	9. 10	·0991					
7. 30	44. 45							

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Oct. 31								
h m	° ′ ″	h m		h m			°	°
7. 43	22. 48. 30							
8. 10	29. 30							
9. 30	48. 45							
11. 30	41. 45							
11. 45	46. 15							
12. 38	38. 45							
13. 3	43. 0							
13. 18	39. 0							
14. 22	50. 30							
Nov. 2		Nov. 2		Nov. 2				
8. 19	22. 50. 15	10. 8	·1010	22. 17	·01253	6	55·0	55·5
8. 43	45. 45	10. 20	·1039			12	53·5	53·0
9. 4	49. 0	10. 41	·1029					
9. 41	40. 45							
10. 4	46. 30							
10. 15	41. 45							
10. 40	45. 0							
				Nov. 3				
				0. 30	·01408	0		50·0
				1. 0	·01376	3		54·0
Nov. 5								
10. 11	22. 49. 15							
10. 45	43. 30							
11. 38	49. 30							
12. 24	41. 45							
13. 30	50. 0							
Nov. 10		Nov. 10						
8. 51	22. 48. 15	5. 19	·1010			3	46·0	
9. 13	43. 45	5. 52	·0993			6	48·5	
9. 26	51. 30	6. 35	·1009			12	44·0	
9. 42	41. 45	8. 0	·1007					
9. 58	49. 15	9. 8	·0993					
		9. 20	·1015					
		9. 33	·1008					
		9. 50	·1036					
		10. 22	·1007					
Nov. 16		Nov. 16						
7. 28	22. 52. 45	7. 45	·1014			6	44·0	
7. 51	45. 30	8. 5	·1037			12	46·0	
8. 12	55. 0	8. 26	·0997			18	44·0	
8. 35	46. 0	9. 0	·1011			21	44·0	
		22. 30	·1008					
		23. 16	·0953					
		23. 55	·0991					
Nov. 17		Nov. 17		Nov. 17				
1. 0	23. 2. 45	1. 20	·1001	1. 47	·01670	0	46·0	46·5

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Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Nov.17	° ′ ″	Nov.17		Nov.17			°	°
h m		h m		h m				
1. 40	23. 24. 0	1. 38	·1035	3. 48	·02092	3	49·0	49·5
2. 8	22. 54. 15	1. 50	·0964	6. 17	·01875	6	51·0	51·0
2. 32	23. 12. 0	2. 34	·1013	7. 18	·02182	12	51·0	51·0
2. 51	3. 30	2. 40	·0990	8. 54	·00797	18	50·5	50·5
3. 18	14. 30	3. 26	·1034	9. 10	·01425	21	49·0	49·5
3. 37	5. 15	3. 40	·0990	9. 13	·01120			
3. 47	18. 0	3. 47	·1011	9. 22	·01565			
3. 57	8. 0	4. 0	·0986	9. 27	·01385			
4. 6	23. 17. 0	4. 9	·1021	9. 37	·01540			
4. 21	22. 55. 15	4. 24	·0947	9. 57	·00547			
4. 36	23. 2. 30	5. 14	·0978	10. 8	·02200			
4. 48	22. 54. 0	5. 32	·0966	10. 16	·02200			
6. 24	23. 6. 45	5. 48	·0991	10. 23	·00864			
7. 24	21. 54. 30	5. 53	·0960	10. 43	·01385			
8. 38	22. 48. 0	6. 7	·0994	11. 0	·00975			
9. 0	34. 30	7. 17	·0928	11. 24	·01808			
9. 16	51. 0	7. 24	·0983	12. 0	·01504			
9. 30	22. 28. 30	8. 3	·0898	12. 10	·01830			
9. 45	23. 2. 45	8. 23	·0924	12. 18	·01525			
9. 50	22. 1. 30	8. 45	·0885	12. 25	·01790			
9. 55	23. 23. 30	8. 48	·0909	13. 0	·01600			
10. 0	21. 50. 15	8. 52	·0838	13. 14	·01630			
10. 13	23. 37 +	9. 3	·0838	13. 27	·01428			
11. 0	21. 48 —	9. 6	·0877	13. 35	·01560			
13. 0	22. 53. 45	9. 21	·0838	13. 50	·01108			
14. 5	48. 15	9. 26	·0838	14. 15	·01568			
14. 7	21. 15	9. 32	·0913	14. 24	·01058			
14. 23	55. 15	9. 41	·0838	14. 33	·01600			
14. 28	22. 24. 15	13. 10	·0821*	14. 40	·00904			
14. 39	23. 6. 15	13. 20	·0836	15. 9	·01640			
15. 7	22. 29. 15	13. 29	·0884	15. 16	·01435			
15. 33	23. 10. 45	13. 36	·0836	15. 27	·01670			
15. 52	22. 31. 0	13. 50	·0713*	15. 40	·01330			
16. 21	56. 45	13. 55	·0786*	16. 0	·01696			
16. 38	35. 45	14. 0	·0746*	16. 8	·01560			
16. 50	54. 15	14. 5	·0755*	16. 23	·01792			
16. 56	47. 45	14. 21	·0836	17. 1	·01475			
17. 9	58. 0	14. 30	·0872	17. 18	·01725			
17. 22	22. 50. 0	(14. 35)	·0836	18. 3	·01475			
17. 51	23. 26. 15	14. 40	·0787*	19. 7	·01720			
21. 0	22. 57. 0	(14. 45)	·0836	19. 10	·01568			
		14·56	·0881	19. 52	·01915			
		15. 9	·0836	20. 30	·01808			
		15. 20	·0663*	20. 43	·01965			
		15. 51	·0836					
		15. 56	·0887					
		16. 6	·0866					
		16. 18	·0937					
		16. 30	·0844					
		16. 36	·0883					
		16. 44	·0844					
		16. 49	·0955					

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
h m	° ′ ″	h m		h m			°	°
		Nov.17						
		16. 58	·0857					
		17. 9	·0997					
		17. 21	·0862					
		17. 51	·0963					
		18. 8	·0884					
		18. 12	·0946					
		18. 21	·0847					
		18. 27	·0884					
		18. 39	·0836					
		18. 45	·0807*					
		19. 0	·0875*					
		19. 2	·0811*					
		19. 3	·0908					
		19. 9	·0856					
		19. 15	·0973					
		19. 20	·0876					
		19. 25	·0980					
		19. 32	·0912					
		19. 42	·1000					
		19. 44	·0867					
		19. 54	·0987					
		20. 7	·0936					
		20. 15	·0980					
		20. 17	·0904					
		20. 21	·0963					
		20. 26	·0896					
		20. 37	·0975					
		20. 40	·0933					
Nov.18		Nov.18		Nov.18				
0. 15	22. 55. 30	1. 36	·0971	8. 45	·01664	0	51·0	51·0
0. 23	23. 0. 15	2. 0	·0957	9. 45	·01540	3	54·0	54·0
0. 45	22. 50. 0	2. 21	·0975	11. 0	·01575	6	54·0	54·5
0. 55	59. 45	2. 30	·0961	11. 35	·01497	12	52·0	51·5
1. 12	49. 15	3. 0	·0980	13. 0	·01530			
8. 30	50. 30	3. 45	·0990					
8. 55	17. 30	3. 49	·0957					
9. 4	35. 15	4. 8	·0988					
9. 28	22. 45	4. 10	·0954					
9. 42	39. 15	4. 43	·0986					
9. 50	34. 0	6. 29	·0943					
10. 6	44. 0	8. 10	·0972					
10. 13	39. 0	8. 51	·1081					
10. 24	49. 30	9. 8	·1021					
10. 35	44. 30	9. 24	·1049					
10. 38	49. 30	10. 0	·0964					
11. 23	54. 15	10. 13	·0972					
12. 20	36. 15	10. 38	·0945					
13. 40	47. 30	11. 14	·0972					
13. 53	41. 45	11. 30	·0958					
14. 24	49. 0	11. 54	·0992					

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The time of reading the thermometers is the hour specified in Greenwich Time, or the hour increased by 40m in Göttingen Time.

HORIZONTAL FORCE.—Nov. 17. The photographic trace passed off the edge of the sheet at 8h. 52m and returned at 9h. 3m; passed off at 9h. 21m and returned at 9h. 26m; passed off at 9h. 41m and returned at 13h. 20m; passed off at 13h. 36m and returned at 14h. 21m; passed off at about 14h. 35m (doubtful) and returned at about 14h. 45m (doubtful); and passed off at 15h. 9m and returned at 15h. 51m.

VERTICAL FORCE.—Nov. 17. The photographic trace passed off the edge of the sheet at 10h. 8m and returned at 10h. 16m.

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Nov.19		Nov.19		Nov.19				
h m	° ′ ″	h m		h m			°	°
7. 49	22. 52. 45	7. 50	·0990	8. 0	·01650	10	42·8	42·8
8. 1	40. 30	8. 7	·1045	8. 30	·01558	12	43·0	43·0
		8. 16	·1000	9. 7	·01588			
		8. 20	·1017					
		8. 53	·0976					
		9. 13	·1010					
Nov.21		Nov.21		Nov.21				
6. 10	22. 52. 30	4. 40	·1005	6. 38	·01750	3	54·5	55·5
6. 17	46. 30	6. 15	·0954	6. 57	·01718	6	56·0	56·5
6. 43	55. 45	6. 48	·0980	7. 52	·01822	12	52·0	52·0
6. 54	45. 0	7. 8	·0958	8. 20	·01633			
6. 58	52. 0	7. 30	·1007	8. 25	·01730			
7. 16	39. 30	8. 0	·0942	8. 37	·01583			
7. 34	55. 15	8. 15	·0992	8. 42	·01673			
8. 6	22. 36. 15	8. 22	·0930	8. 53	·01573			
8. 19	23. 7. 0	8. 29	·0973	9. 40	·01678			
8. 27	22. 39. 30	8. 40	·0945					
8. 35	52. 45	8. 46	·1009					
8. 43	22. 36. 30	9. 5	·0928					
8. 51	23. 7. 15	9. 18	·0973					
9. 10	22. 35. 0	9. 31	·0950					
9. 21	47. 15	10. 7	·0983					
9. 30	40. 0	10. 31	·0937					
10. 7	57. 15	11. 12	·0972					
10. 38	39. 0							
11. 0	46. 15							
11. 33	33. 45							
12. 24	46. 30							
13. 48	48. 45							
14. 17	40. 0							
15. 30	47. 0							
Nov.22								
9. 30	22. 43. 15							
10. 9	35. 15							
10. 36	39. 45							
10. 49	33. 0							
11. 30	42. 30							
Nov.23		Nov.23						
4. 24	22. 52. 30	3. 39	·0974			3	55·8	
4. 50	42. 30	4. 19	·1007			6	55·0	
5. 9	48. 30	4. 44	·0984			12	52·5	
6. 49	48. 0	4. 55	·1001					
7. 12	32. 15	5. 42	·0982					
8. 40	48. 45	5. 58	·0992					
9. 58	37. 0	6. 58	·0962					
10. 24	46. 0	7. 45	·1018					
11. 4	37. 0	9. 0	·0980					
12. 22	35. 45	10. 0	·1015					
13. 10	46. 0	10. 53	·0974					

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Nov.24		Nov.24		Nov.24				
h m	° ′ ″	h m		h m			°	°
5. 32	22. 51. 45	3. 45	·1021	6. 35	·01580	3	51·0	51·5
6. 45	57. 15	3. 54	·1049	7. 38	·01714	6	51·5	51·5
7. 26	45. 15	3. 55	·0997	8. 30	·01650	12	47·0	46·5
10. 0	49. 30	4. 4	·1040	10. 0	·01658	18	41·0	41·0
11. 50	50. 30	4. 7	·1003	10. 22	·01674	21	40·0	40·0
12. 15	51. 0	4. 11	·1040	21. 49	·01480			
12. 37	50. 15	4. 30	·1006					
13. 0	52. 0	6. 13	·1044					
19. 30	49. 0	7. 20	·0983					
21. 12	47. 30	7. 54	·1000					
		8. 6	·0973					
		9. 0	·0990					
		10. 0	·0998					
		12. 12	·0997					
		16. 0	·1009					
		20. 5	·1012					
		21. 40	·1021					
Nov.25		Nov.25		Nov.25				
0. 40	22. 57. 0	1. 0	·1005	1. 22	·01705	0	41·0	41·0
2. 0	54. 30	2. 55	·1020	10. 0	·01394	3	44·5	45·0
2. 51	54. 30	3. 10	·1005			6	47·0	47·5
2. 55	57. 30	7. 51	·1017			12	46·5	47·0
4. 30	50. 0	10. 0	·1013					
4. 45	50. 45	12. 18	·1011					
5. 13	49. 30	12. 38	·1038					
10. 10	46. 0	13. 14	·1009					
Nov.26		Nov.26		Nov.26				
10. 27	22. 46. 30	10. 30	·1025	14. 45	·01394	6	53·0	53·5
10. 50	42. 0	11. 34	·1047	16. 38	·01474	12	51·0	51·5
11. 14	45. 15	12. 8	·1023	17. 0	·01438	18	51·0	51·0
11. 48	34. 30	14. 6	·1021	17. 36	·01481	21	51·0	51·0
12. 21	44. 30	14. 38	·1055	17. 42	·01455			
13. 0	42. 0	16. 28	·1016	18. 27	·01505			
14. 26	59. 0	16. 50	·1040	18. 38	·01410			
15. 36	49. 0	17. 19	·1014	21. 0	·01563			
16. 40	58. 0	17. 44	·1025					
17. 3	49. 0	18. 15	·0998					
17. 36	58. 30	18. 30	·1033					
17. 51	22. 53. 45	21. 30	·0940					
18. 25	23. 8. 15	22. 24	·0956					
18. 51	22. 59. 45	23. 34	·0913					
19. 32	23. 4. 15							
20. 5	22. 56. 15							
20. 30	23. 1. 30							
21. 28	22. 57. 0							
Nov.27		Nov.27						
7. 45	22. 51. 30	1. 30	·1002			0	51·0	
8. 15	41. 30	7. 55	·0959			3	52·5	
8. 52	51. 0	9. 9	·1024			6	54·5	
9. 11	36. 15	9. 46	·0975			12	52·0	
9. 42	50. 0							

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The time of reading the thermometers is the hour specified in Greenwich Time, or the hour increased by 40^m in Göttingen Time.

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Nov. 28		Nov. 28						
h m	° ′ ″	h m		h m			°	°
7. 15	22. 48. 0	7. 22	·0987			6	53 ·0	
7. 32	37. 30	7. 38	·1023			12	52 ·0	
8. 0	49. 0	8. 10	·1000					
Nov. 30								
8. 17	22. 55. 45							
9. 32	43. 45							
9. 49	52. 30							
Dec. 2		Dec. 2						
3. 15	22. 53. 45	3. 15	·1010			3	48 ·0	
4. 17	43. 30	3. 46	·0992			6	48 ·0	
5. 22	53. 30	4. 50	·1006					
Dec. 6		Dec. 6						
2. 0	23. 0. 45	1. 53	·1001			0	47 ·0	
2. 13	22. 53. 15	2. 12	·0986			3	48 ·5	
2. 25	59. 0	2. 22	·1003			6	50 ·0	
3. 5	53. 15	2. 35	·0993					
4. 5	59. 0	3. 25	·1007					
4. 38	22. 44. 30	4. 14	·0985					
5. 6	23. 1. 15	4. 45	·1015					
5. 18	22. 58. 0	5. 12	·0985					
5. 42	23. 6. 0	5. 34	·1002					
6. 50	22. 48. 0	5. 52	·0971					
Dec. 7								
14. 58	22. 50. 0							
15. 22	23. 0. 15							
16. 6	22. 48. 30							
Dec. 8		Dec. 8		Dec. 8				
7. 26	22. 53. 45	7. 45	·0994	7. 10	·01747	6	55 ·5	55 ·5
8. 24	40. 0	8. 15	·0977	8. 40	·01837	12	56 ·0	56 ·0
9. 0	48. 30	8. 40	·0992	9. 10	·01808			
9. 32	45. 15	9. 9	·0976	9. 45	·01831			
10. 30	52. 15	9. 50	·0993					
Dec. 9								
11. 12	22. 45. 0							
11. 25	56. 30							
12. 30	44. 0							
Dec. 10		Dec. 10		Dec. 10				
5. 44	22. 57. 0	6. 40	·0985	7. 2	·01658	6	56 ·0	56 ·0
6. 46	36. 15	6. 57	·1029	7. 40	·01603	12	53 ·2	53 ·2
7. 24	54. 0	7. 32	·0979	8. 0	·01634	18	49 ·0	49 ·5
7. 12	43. 30	7. 46	·0999	15. 0	·01548			
7. 50	52. 15			15. 38	·01503			
Dec. 11				Dec. 11				
9. 12	22. 51. 0			2. 0	·01673	0		50 ·5

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Dec. 11				Dec. 11				
h m	° ′ ″	h m		h m			°	°
10. 3	22. 40. 30			3. 7	·01548	3		55 ·5
10. 30	49. 0			4. 45	·01627	6		56 ·0
13. 30	50. 0							
14. 4	55. 30							
15. 0	48. 30							
Dec. 14		Dec. 14		Dec. 14				
5. 30	22. 51. 30	10. 0	·0988	9. 0	·01522	6	55 ·0	55 ·0
6. 5	44. 30	10. 14	·1003	10. 22	·01460	12	53 ·0	53 ·5
6. 24	41. 30	10. 38	·0969	10. 43	·01488			
7. 12	52. 0	10. 50	·0987	11. 0	·01485			
9. 7	43. 45			11. 30	·01514			
9. 39	46. 30							
10. 9	36. 0							
10. 26	45. 0							
10. 43	39. 15							
Dec. 17		Dec. 17		Dec. 17				
3. 7	22. 57. 45	6. 38	·0983	1. 40	·01468	0	43 ·0	43 ·0
4. 3	22. 49. 15	6. 54	·1019	3. 18	·01352	7	47 ·0	47 ·5
5. 0	23. 0. 45	7. 6	·0994	4. 17	·01373	12	45 ·0	45 ·5
5. 52	22. 54. 30	7. 23	·1020	5. 10	·01343	18	46 ·0	46 ·0
6. 5	23. 0. 0	8. 24	·0937	8. 0	·01716	21	45 ·0	45 ·0
6. 19	22. 53. 15	8. 45	·1006	8. 22	·01442			
6. 26	23. 0. 15	9. 7	·0944	8. 28	·01492			
6. 40	22. 52. 15	9. 25	·0979	9. 0	·01318			
6. 53	23. 8. 15	9. 38	·0955	9. 17	·01360			
7. 8	1. 30	9. 45	·0977	9. 28	·01317			
7. 50	23. 8. 15	9. 50	·0960	9. 35	·01362			
8. 34	22. 14. 45	11. 21	·0950	9. 45	·01325			
8. 59	58. 0	11. 27	·0975	9. 58	·01390			
9. 16	39. 15	11. 32	·0954	10. 32	·01341			
9. 30	51. 30	11. 52	·1002	11. 2	·01382			
9. 38	42. 45	12. 10	·0950	11. 33	·01315			
9. 44	49. 30			11. 40	·01370			
10. 0	40. 30			12. 0	·01298			
11. 25	50. 45							
11. 40	31. 30							
12. 5	45. 30							
12. 22	33. 0							
12. 38	43. 45							
				Dec. 18				
				1. 17	·01494	0		46 ·5
				2. 0	·01446	3		51 ·0
				2. 43	·01480			
Dec. 19		Dec. 19						
10. 57	22. 51. 45	11. 24	·1006			6	53 ·3	
11. 18	48. 30	11. 36	·1012			12	51 ·0	
11. 34	50. 30	11. 43	·1006					
11. 48	43. 30	11. 53	·1018					

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The time of reading the thermometers is the hour specified in Greenwich Time, or the hour increased by 40^m in Göttingen Time.

Göttingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Dec. 19		Dec. 19						
h m	° ′ ″	h m		h m			°	°
12. 6	22. 46. 30	12. 30	·1005					
Dec. 20		Dec. 20		Dec. 20				
10. 0	22. 51. 45	13. 4	·1021	6. 47	·01618	6	49 ·0	49 ·0
12. 30	52. 0	21. 0	·1025	10. 30	·01838	12	43 ·0	43 ·0
12. 53	49. 15	21. 22	·1032	19. 30	·01668	18	38 ·0	38 ·0
13. 15	51. 30	23. 55	·0998	21. 20	·01682	21	35 ·0	35 ·0
21. 13	48. 30			21. 45	·01673	24	36 ·0	36 ·0
21. 48	55. 30			23. 30	·01749			
22. 20	22. 52. 30							
23. 25	23. 2. 15							
Dec. 21		Dec. 21		Dec. 21				
0. 37	23. 3. 30	0. 50	·1013	0. 55	·01740	0	36 ·0	36 ·0
1. 20	22. 58. 15	1. 55	·1026	1. 47	·01400	3	40 ·0	40 ·0
1. 42	23. 5. 15	2. 27	·1017	4. 30	·01572	6	43 ·0	43 ·0
1. 50	0. 15	3. 45	·1024	5. 54	·01500	12	44 ·0	44 ·5

Gottingen Mean Solar Time.	Western Declination.	Göttingen Mean Solar Time.	Horizontal Force in parts of the whole H. F. uncorrected for Temperature.	Göttingen Mean Solar Time.	Vertical Force in parts of the whole V. F. uncorrected for Temperature.	Hour.	Thermometers. H. F.	Thermometers. V. F.
Dec. 21		Dec. 21		Dec. 21				
h m	° ′ ″	h m		h m			°	°
1. 55	23. 4. 30	4. 12	·1013	6 ·43	·01514	18	37 ·0	37 ·5
2. 35	22. 55. 15	5. 24	·1030	10. 0	·01466	21	35 ·0	35 ·5
3. 19	59. 0	8. 0	·1007	13. 0	·01500			
10. 0	49. 45	8. 55	·1017	15. 22	·01720			
11. 5	48. 45	9. 15	·1011	19. 0	·01646			
11. 40	39. 0	10. 0	·1013					
12. 16	48. 15	11. 13	·1007					
		11. 51	·1027					
		12. 26	·1006					
Dec. 22								
9. 0	22. 50. 0							
9. 30	44. 0							
10. 5	47. 15							
12. 36	50. 15							
13. 0	43. 0							
14. 0	49. 15							

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The time of reading the thermometers is the hour specified in Greenwich Time, or the hour increased by 40^{m} in Göttingen Time.

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

The Zero for the Horizontal Force is constant throughout the year; but no reliance whatever can be placed on the constancy of the Zero of the Vertical Force beyond a single day; and in the greater number of instances it is known to be different on different days.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

OBSERVATIONS

FOR THE

MAGNETIC DIP.

1848.

The Dipping Needle is described, and the mode of using it is explained, in the Magnetical and Meteorological Observations, 1847, Introduction, page xliii, and in the corresponding parts of several preceding Volumes.

The needle A 2 has been used throughout the Year 1848.

Magnetic Dip, observed at the Royal Observatory, Greenwich, in the Year 1848.

Day and Approximate Hour, 1848.		Magnetic Dip.	Day and Approximate Hour, 1848.		Magnetic Dip.	Day and Approximate Hour, 1848.		Magnetic Dip.
	d h	° ′		d h	° ′		d h	° ′
January	6. 3	68. 53·00	May	4. 3	68. 50·50	August	31. 3	68. 52·50
	9. 21	68. 51·50		7. 21	68. 52·75			
	17. 21	68. 52·75		11. 3	68. 54·75	September	3. 21	68. 54·25
	20. 3	68. 54·00		15. 21	68. 58·75		6. 3	68. 53·00
	23. 21	68. 52·00		18. 3	68. 55·50		10. 21	68. 53·00
	27. 3	68. 54·00		21. 21	68. 57·50		14. 3	68. 55·00
	30. 21	68. 53·75		25. 3	68. 56·50		17. 21	68. 54·75
				28. 21	68. 57·50		21. 3	68. 56·00
February	3. 3	68. 55·25					24. 21	68. 50·50
	6. 21	68. 51·50	June	1. 3	68. 57·75		28. 3	68. 52·50
	10. 3	69. 2·25		4. 21	68. 58·00			
	14. 21	68. 54·25		8. 3	68. 56·25	October	1. 21	68. 54·25
	17. 3	69. 0·50		11. 21	68. 59·75		5. 3	68. 53·00
	20. 21	68. 46·50		15. 3	68. 55·00		8. 21	68. 55·25
	24. 3	68. 55·50		18. 21	68. 56·25		12. 3	68. 55·00
	27. 21	68. 58·25		22. 3	68. 56·75		15. 21	68. 54·75
				25. 21	68. 53·00		19. 3	68. 54·50
March	2. 3	68. 55·50		29. 3	68. 55·00		22. 21	68. 56·25
	5. 21	68. 32·25					26. 3	68. 53·00
	9. 3	68. 35·00	July	1. 21	68. 56·25		29. 21	68. 53·00
	13. 21	68. 15·50		6. 3	68. 56·00			
	16. 3	68. 18·75		9. 21	68. 53·75	November	2. 3	68. 53·50
	20. 21	68. 55·00		13. 3	68. 53·75		5. 21	68. 55·00
	23. 3	68. 21·00		17. 21	68. 55·00		8. 3	68. 55·00
	26. 21	68. 9·00		20. 3	68. 53·75		12. 21	68. 54·25
	30. 3	68. 39·50		23. 21	68. 54·25		16. 3	68. 56·25
				27. 3	68. 54·00		19. 21	68. 55·00
April	3. 21	68. 31·00		31. 21	68. 53·75		23. 3	68. 55·50
	6. 3	68. 50·50					26. 21	68. 54·25
	9. 21	68. 54·00	August	3. 3	69. 2·25		30. 3	68. 55·00
	13. 3	68. 51·00		6. 21	68. 56·75			
	16. 21	68. 53·00		10. 3	68. 55·50	December	3. 21	68. 56·75
	20. 3	68. 53·75		12. 21	68. 55·50		10. 21	68. 56·75
	24. 21	68. 56·00		17. 3	68. 53·00		14. 3	68. 53·00
	27. 3	68. 53·75		20. 21	68. 53·00		17. 21	68. 54·75
	30. 21	68. 52·50		24. 3	68. 53·75		21. 3	68. 55·00
				27. 21	68. 54·25			

The observations on March 5, 9, 13, 16, 23, 26, and April 3, were made by a new observer. No use has been made of the results in forming the Mean Monthly Dip.

Mean Monthly Magnetic Dip, at the Royal Observatory, Greenwich, in the Year 1848.

1848, Month.	Mean Monthly Dip at 21h	Number of Observations.	Mean Monthly Dip at 3h	Number of Observations.
	° ′		° ′	
January	68. 52 ·5	4	68. 53 ·8	3
February	68. 52 ·8	4	68. 58 ·5	4
March	68. 55 ·0	1	68. 55 ·0	1
April	68. 53 ·7	5	68. 52 ·3	4
May	68. 56 ·8	4	68. 54 ·3	4
June	68. 56 ·8	4	68. 56 ·3	5
July	68. 54 ·5	5	68. 54 ·5	4
August	68. 55 ·0	4	68. 55 ·5	5
September	68. 53 ·3	4	68. 54 ·3	4
October	68. 54 ·8	5	68. 54 ·0	4
November	68. 54 ·8	4	68. 55 ·0	5
December	68. 55 ·8	3	68. 54 ·0	2
Mean	68. 54 ·6		68. 54 ·9	

Mean = 68° 54′ ·75

ROYAL OBSERVATORY, GREENWICH.

OBSERVATIONS

OF

DEFLEXION OF A MAGNET

FOR

ABSOLUTE MEASURE

OF

HORIZONTAL FORCE.

1848.

The Apparatus used for observation of the Deflexion of a Magnet is described, and the method of computing the results is explained, in the Greenwich Magnetical and Meteorological Observations, 1847, Introduction, page xlv, and in preceding Volumes. The same magnet, marked $\frac{D}{XX}$, has been employed in the year 1848 as in preceding years, to produce the deflexion of another magnet, marked $\frac{H}{23}$, (of nearly the same dimensions): and the vibrations then observed are those of $\frac{D}{XX}$.

The following is the explanation of the notation used:—

m = the magnetic moment of the deflecting magnet $\frac{D}{XX}$.

X = the absolute measure of horizontal magnetic force.

K = the moment of inertia of $\frac{D}{XX}$ with its stirrup and pulley as suspended for vibration = 3·92866: the unit of length being the English foot, and the unit of weight being the English grain.

T = the time of vibration in seconds of mean solar time.

Then when the natural sine of the observed deflexion is expressed by the formula

$$\frac{a}{(\text{distance})^3} + \frac{b}{(\text{distance})^5},$$

we have for the formulæ of computation

$$\frac{m}{X} = \tfrac{1}{2} a$$

$$m X = \frac{\pi^2 K}{T^2}$$

from which m and X are found.

For the determination of the Absolute Measure of Horizontal Force on those days on which Vibrations, unaccompanied by Deflexions, were observed: it is assumed that the quantity m (which is peculiar to the magnet) changes at a uniform rate from one observation of deflexion to the next; and the comparison of its interpolated value with the value of $m X$ given by the vibration determines the value of X.

Observed Deflexions of a Magnet for Absolute Measure of Horizontal Force.

Year, Month, and Day.	Position of Deflecting Magnet with regard to Suspended Magnet.	Distance of Centers of Magnets.	Temperature.	Observed Deflexion.	Mean of the Times of Vibrations of Deflecting Magnet.	Number of Vibrations.	Temperature.
1848.		ft. in.	°	° ′ ″	s		°
January 18					5·021	72	33·0
	Lateral	1. 0	34·0	12. 25. 2·93			
	Axial			6. 39. 24·79			
	Lateral	1. 6		3. 40. 6·23			
	Axial			1. 58. 35·13			
					5·021	70	37·0
April 15					5·020	102	50·0
	Lateral	1. 0	50·2	12. 13. 50·84			
	Axial			6. 33. 56·42			
	Lateral	1. 6		3. 36. 58·05			
	Axial			1. 50. 46·39			
					5·056	102	51·0
June 22					5·084	98	70·5
	Lateral	1. 0	71·5	12. 12. 44·47			
	Axial			6. 32. 31·98			
	Lateral	1. 6		3. 37. 45·21			
	Axial			1. 50. 0·64			
					5·072	112	68·5
July 28					4·434	112	66·0
	Lateral	1. 0	68·3	12. 7. 13·53			
	Axial			6. 29. 25·28			
	Lateral	1. 6		3. 32. 8·46			
	Axial			2. 4. 32·63			
					4·252	84	71·0
August 23					5·097	96	63·0
	Lateral	1. 0	61·2	12. 12. 55·27			
	Axial			6. 32. 50·52			
	Lateral	1. 6		3. 36. 38·22			
	Axial			1. 50. 37·82			
					5·095	94	61·0
August 31					5·082	100	62·0
	Lateral	1. 0	64·7	12. 11. 18·26			
	Axial			6. 31. 49·94			
	Lateral	1. 6		3. 37. 46·02			
	Axial.....			1. 49. 47·90			
					5·083	114	67·0
October 3					5·080	148	62·0
	Lateral	1. 0	63·4	12. 16. 41·84			
	Axial			6. 4. 27·42			
	Lateral	1. 6		3. 36. 59·72			
	Axial			1. 49. 49·51			
					5·078	128	64·0

July 28. The times of vibration on this day are much smaller than on any other day. It might have been supposed that there is an error of 1^m in each series, and the results would thus be nearly reconciled: but the observation of the individual vibrations does not permit this assumption. Probably the wrong magnet has been used, as the time of vibration of $\frac{H}{23}$ is about $4^s \cdot 4$.

Year, Month, and Day.	Position of Deflecting Magnet with regard to Suspended Magnet.	Distance of Centers of Magnets.	Temperature.	Observed Deflexion.	Mean of the Times of Vibrations of Deflecting Magnet.	Number of Vibrations.	Temperature.
1848.		ft. in.	°	° ′ ″	s		°
October 26					5·088	114	52·0
	Lateral	1. 0		12. 17. 46·60			
	Axial.....		56·3	6. 33. 16·22			
	Lateral	1. 6		3. 37. 12·87			
	Axial.....			1. 49. 56·83			
					5·079	100	58·4
November 8					5·075	110	44·0
	Lateral	1. 0		12. 19. 13·36			
	Axial.....		46·1	6. 35. 19·41			
	Lateral	1. 6		3. 37. 8·50			
	Axial.....			1. 50. 20·26			
					5·077	100	46·9
December 13					5·084	140	56·0
	Lateral	1. 0		12. 16. 49·76			
	Axial.....		58·5	6. 34. 50·22			
	Lateral	1. 6		3. 37. 41·88			
	Axial.....			1. 50. 18·88			
					5·097	100	57·0

Computation of the Values of Absolute Measure of Horizontal Force from Observations of Deflexion of a Magnet.

Month and Day, 1848.	Apparent Value of a.	Apparent Value of b.	Mean Value of b.	Apparent Value of a_1.	Apparent Value of b_1.	Adopted Value of a, assuming the Mean Value of b as applicable to all.	Log. $\frac{1}{2}a$ = Log. $\frac{m}{X}$	Adopted Time of Vibration of Deflecting Magnet.	Log. mX.	Value of X.	Value of m.
January 18	+0·2167	−0·0016	−0·0012	+0·1168	−0·0009	+0·2163	9·03398	5·021	0·18696	3·7713	0·4078
April 15	+0·2137	−0·0018		+0·1043	+0·0101	+0·2131	9·02759	5·038	0·18402	3·7864	0·4035
June 23	+0·2153	−0·0039		+0·1033	+0·0107	+0·2131	9·02745	5·078	0·17716	3·7570	0·4002
July 28	+0·2067	+0·0033		+0·1296	−0·0166	+0·2106	9·02240	4·430	0·29574	4·3318	0·4561
August 24	+0·2133	−0·0017		+0·1043	+0·0097	+0·2129	9·02706	5·096	0·17408	3·7455	0·3986
31	+0·2156	−0·0045		+0·1030	+0·0107	+0·2127	9·02682	5·083	0·17630	3·7561	0·3995
October 3	+0·2131	−0·0004		+0·1094	−0·0036	+0·2138	9·02889	5·080	0·17682	3·7495	0·4007
26	+0·2132	−0·0002		+0·1030	+0·0112	+0·2140	9·02946	5·084	0·17612	3·7440	0·4007
November 8	+0·2128	+0·0006		+0·1032	+0·0116	+0·2143	9·03005	5·076	0·17750	3·7474	0·4016
December 13	+0·2143	−0·0016		+0·1032	+0·0114	+0·2139	9·02926	5·091	0·17494	3·7397	0·4000

July 28. The value of m for this day is not used in deducing the values of m for the reduction of the Observations of Vibration.

Values of Absolute Measure of Horizontal Force, from Observations of Vibration of the Deflecting Magnet $\frac{H}{23}$, unaccompanied by Deflexions.

Month and Day, 1848.		Adopted time of Vibration.	Temperature.	Log. mX.	Value of m interpolated from the Deflexion Observations.	Inferred Value of X.
	d	s	°			
February	1	5·017	37·0	0·18766	0·4071	3·7841
	18	4·990	43·0	0·19234	0·4062	3·8327
March	15	5·049	59·0	0·18212	0·4050	3·7554
	30	5·027	59·0	0·18592	0·4043	3·7951
April	13	5·040	57·0	0·18368	0·4035	3·7830
	26	5·068	52·5	0·17886	0·4030	3·7459
May	16	5·061	79·5	0·18006	0·4020	3·7655
	24	5·075	75·5	0·17766	0·4016	3·7485
June	9	5·066	64·0	0·17920	0·4009	3·7684
July	11	4·979	74·0	0·19426	0·3997	3·9132
August	17	4·705	65·3	0·24342	0·3988	4·3920
September	19	5·056	62·0	0·18092	0·4001	3·7910
October	24	5·087	57·0	0·17562	0·4007	3·7394
	24	5·093	57·5	0·17460	0·4007	3·7306
	25	5·081	56·0	0·17664	0·4007	3·7482
	30	5·080	57·0	0·17682	0·4010	3·7470
November	2	5·003	53·0	0·19008	0·4011	3·8622
	6	5·080	50·0	0·17682	0·4014	3·7432
	7	5·081	48·0	0·17664	0·4016	3·7407
	11	5·062	49·0	0·17990	0·4015	3·7689
	13	5·074	48·0	0·17784	0·4014	3·7520
	16	5·081	40·0	0·17664	0·4013	3·7426
	27	5·086	50·8	0·17578	0·4008	3·7484
	30	5·061	48·0	0·18006	0·4007	3·7778
December	1	5·077	45·0	0·17732	0·4005	3·7560
	11	5·067	52·0	0·17904	0·4001	3·7746
	20	5·057	37·0	0·18076	0·3997	3·7934
	22	5·070	41·0	0·17852	0·3996	3·7748

The number of vibrations in the different determinations varied from 90 to 148.

August 17. The adopted time of vibration is small; the separate results are accordant.

ROYAL OBSERVATORY, GREENWICH.

RESULTS

OF

METEOROLOGICAL OBSERVATIONS.

1848.

The day in the first column of the following tables is to be understood, generally, as defined in civil reckoning.

The barometer is described in the *Greenwich Magnetical and Meteorological Observations*, 1847, Introduction, page xlviii, and in the corresponding parts of several preceding volumes. The barometer has been read at 18^h, 21^h, 0^h, 3^h, 9^h, 12^h (Astronomical), on every day, except Sundays and Good Friday and Christmas Day, on which days a smaller number of observations has 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 11 (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 has been converted into mean daily reading by application of the correction inferred from Mr. Glaisher's paper in the *Philosophical Transactions*, 1848, part I.

The positions of all the thermometers are described in the Introduction, 1847, page lxix.

The thermometers used for determining the "highest and lowest readings of the dry thermometers" are self-registering thermometers, as described in the Introduction, 1847, page lxvii; the index error of which has been found for every month, in the manner there explained. The readings given in these tables are corrected for the index-error.

The dry-bulb and wet-bulb thermometers are described in the Introduction, 1847, page xlix; their scales have been verified from time to time, in the manner there described.

The mean daily reading of the dry thermometer is inferred from observations taken at the same hours as the observations of the barometer; the mean of these is corrected by a quantity given in the *Phil. Trans.*, 1848, part I.

The dew-point has been exclusively inferred from simultaneous observations of the dry-bulb and wet-bulb thermometers. In order to find the difference between the dry-bulb reading and the dew-point, the difference between the dry-bulb and the wet-bulb readings has been multiplied by a factor taken from the following table (deduced by Mr. Glaisher from comparison of all the simultaneous readings of the dry-bulb, wet-bulb, and dew-point thermometers, to the end of the year 1844).

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 the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.	Reading of the Dry-bulb Thermometer.	Factor.
°		°		°		°		°		°	
20	8·5	32	3·1	44	2·3	56	1·9	68	1·6	80	1·5
21	8·5	33	2·8	45	2·3	57	1·9	69	1·5	81	1·5
22	8·5	34	2·6	46	2·3	58	1·9	70	1·5	82	1·5
23	8·5	35	2·6	47	2·2	59	1·8	71	1·5	83	1·5
24	7·3	36	2·6	48	2·2	60	1·8	72	1·5	84	1·5
25	6·4	37	2·5	49	2·2	61	1·8	73	1·5	85	1·5
26	6·1	38	2·5	50	2·1	62	1·7	74	1·5	86	1·5
27	6·1	39	2·5	51	2·1	63	1·7	75	1·5	87	1·5
28	5·7	40	2·4	52	2·0	64	1·7	76	1·5	88	1·5
29	5·0	41	2·4	53	2·0	65	1·6	77	1·5	89	1·5
30	4·6	42	2·4	54	2·0	66	1·6	78	1·5	90	1·5
31	3·7	43	2·4	55	2·0	67	1·6	79	1·5		

Tables nearly equivalent to this have been used in the reduction of the observations with the wet-bulb thermometer in the years following 1844.

The dew-point being thus found for each individual observation, the mean is taken for each day (as defined from midnight to midnight), and this mean is corrected by means of the elements in the *Phil. Trans.*, 1848, Part I.

The thermometers exhibiting the highest temperature in the sunshine, the lowest on the grass, and the highest and lowest temperatures of the water of the Thames, are described in the Introduction, 1847, pages lxix and lxxi. They are occasionally verified.

The mean daily value of the difference between dew-point temperature and air temperature is the difference between the two numbers in the fifth and sixth columns. The Greatest and Least are the greatest and least among the differences corresponding to the times of observation in the civil day, and they probably differ little from the absolute maxima and minima.

The difference between the mean temperature of the day, and the mean on an average of twenty-five years, is found by comparison with a table of results furnished by the kindness of Mr. Henry from his own observations of maximum and minimum thermometers only, made in the neighbourhood of Greenwich Park. The simple mean of the maximum and minimum temperatures was adopted by Mr. Henry as the mean for the day. From June 11, the comparison is made with the results obtained by Mr. Glaisher from seven years' observations, made in the Magnetic and Meteorological Department of the Royal Observatory in nearly the same locality as that in which the present observations are made, which are printed in the *Greenwich Magnetical and Meteorological Observations.* For all ordinary week days, the mean adopted in these results was the mean of the twelve readings made at equidistant intervals of two hours. For Sundays and exceptional days the maximum and minimum readings were taken, and their mean was corrected for a difference exhibited in the Introductions to various volumes of the Magnetical and Meteorological Observations.

Osler's Anemometer is described in the Introduction, 1847, page lxxi. Little explanation of the results deduced from it appears to be necessary. In the columns of directions, the letter C is occasionally used for Calm. It may be understood generally that the greatest pressure occurred in gusts of short duration.

Whewell's Anemometer is described in the Introduction, 1847, page lxxii. The amount of movement of air here exhibited is to be understood as from 22^h to 22^h (10^h A.M. to 10^h A.M.), the numbers being placed opposite to the day preceding the civil day on which the instrument is read.

The register of rain is read at midnight from Crosley's rain-gauge, described in page lxxv of the Introduction, 1847. If, however, there appears to be any doubt as to the correctness of the results, reference is made to the rain-gauge No. 2, described in the same place.

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 Electrical Apparatus is described in page lxxvii of the Introduction, 1847. The following is the explanation of the notation employed, 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*	hl	denotes *hail*	s	denotes *stratus*
ci	.. *cirrus*	l	.. *lightning*	sc	.. *scud*
ci-cu	.. *cirro-cumulus*	li. cl.	.. *light clouds*	sl	.. *sleet*
ci-s	.. *cirro-stratus*	lu. co.	.. *lunar corona*	sn	.. *snow*
cu	.. *cumulus*	lu. ha.	.. *lunar halo*	so. ha.	.. *solar halo*
cu-s	.. *cumulo-stratus*	m	.. *meteor*	sq	.. *squall*
d	.. *dew*	ms	.. *meteors*	sqs	.. *squalls*
f	.. *fog*	n	.. *nimbus*	t	.. *thunder*
h	.. *haze*	r	.. *rain*	w	.. *wind*

Observations of special character are reserved for the pages following the tabular arrangement.

MONTH and DAY, 1848.	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 shewn by a Self-Registering Thermometer read at Midnight.	Lowest on the Grass, as shewn by a Self-registering Thermometer read at Midnight.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometer, read at 9h A. M. next Morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometer, read at 9h A. M. next Morning. 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 25 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.	Amount of Horizontal Movement of the Air on each Day.	Wheewell's Rain in Inches read at Midnight.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Jan. 1	..	29·748	37·2	30·0	34·0	32·3	..	25·0	36·8	36·2	1·7	3·5	..	— 3·3	Calm	SE; Calm	0·0	0·0	0·0	..	0·00
2	..	29·694	46·5	39·8	43·8	41·2	..	25·0	37·2	36·8	2·6	..	..	+ 8·1	Calm; S by E	SSE	2·0	0·0	0·0	..	0·00
3	..	29·787	50·4	45·5	48·8	47·4	..	37·8	38·8	37·2	1·4	2·2	1·3	+13·3	SSE	S	2·0	0·0	0·2	..	0·00
4	..	29·844	49·1	31·3	42·8	39·4	65·0	23·5	39·5	38·0	3·4	7·8	2·0	+ 7·0	SSE	SSE	0·0	0·0	0·0	145	0·00
5	Greatest Declination S.	29·521	45·5	32·0	41·2	39·6	45·7	25·0	40·0	38·2	1·6	2·3	0·9	+ 6·2	S	SW	2·8	0·0	0·1	75	0·00
6	New	29·635	38·2	30·0	34·7	33·5	47·3	27·7	39·2	38·0	1·2	3·5	0·6	— 0·7	Calm; NNW	NNW	0·0	0·0	0·0	90	0·00
7	..	29·459	38·5	27·0	35·6	34·2	38·5	23·0	39·2	38·5	1·4	3·5	0·0	0·0	Calm; SE	S; Calm	0·0	0·0	0·0	40	0·2[illegible]
8	..	29·518	36·2	33·0	35·5	33·7	39·5	29·5	38·8	38·0	1·8	3·5	1·3	+ 0·8	NE	NE	3·0	0·0	0·1	150	0·01
9	..	30·000	34·1	29·9	32·2	30·1	33·5	28·5	38·0	37·0	2·1	..	..	— 2·5	NNE	NNE	[illegible]·0	0·0	0·5	110	0·00
10	..	30·152	35·2	29·3	31·4	29·2	35·0	30·0	37·0	36·0	2·2	6·5	0·7	— 4·4	NNE	NE	[illegible]·0	0·0	0·0	65	0·00
11	In Equator	30·307	34·3	29·1	31·6	29·6	39·1	28·0	36·5	35·2	2·0	3·4	1·0	— 4·5	NNE	NNE	0·1	0·0	0·0	45	0·00
12	..	30·274	42·7	30·5	37·2	34·6	42·0	23·8	36·5	35·0	2·6	4·0	1·8	+ 1·7	WSW; Calm	NNW	0·1	0·0	0·0	135	0·00
13	Perigee First Quarter	30·211	47·1	38·3	42·9	40·7	48·0	32·5	37·0	35·5	2·2	4·0	0·5	+ 7·8	NNW	N	3·5	0·0	0·4	60	0·03
14	..	30·040	39·9	38·6	39·1	38·5	40·1	36·0	36·5	35·0	0·6	0·8	0·5	+ 2·3	N by W; Calm	SSE	0·1	0·0	0·0	35	0·06
15	..	29·865	42·7	31·1	37·8	32·7	51·0	23·0	37·0	36·0	5·1	7·6	0·8	+ 3·3	S; NNW	NNW; WSW	4·0	0·0	0·2	145	0·00
16	..	29·819	35·9	28·1	31·5	29·1	40·8	16·5	36·5	36·0	2·4	3·6	1·0	— 2·9	SW	Calm	0·0	0·0	0·0	125	0·00
17	..	29·395	45·7	28·1	39·9	37·2	45·0	23·0	36·8	36·0	2·7	3·9	1·5	+ 4·4	SSE	SSW	6·0	0·0	1·0	160	0·28
18	Greatest Declination N.	29·326	38·8	31·1	33·7	28·2	46·5	23·0	36·5	36·0	5·5	7·8	4·3	— 1·5	NNW; Calm	SW; SE	0·5	0·0	0·0	152	0·00
19	..	29·400	35·3	32·1	33·2	29·4	36·1	27·5	36·2	35·8	3·8	4·7	3·6	— 1·7	ESE	NNE	1·7	0·0	0·3	130	0·00
20	Full	29·751	33·1	28·6	30·3	25·6	32·0	27·0	36·0	35·0	4·7	7·0	1·4	— 4·6	NNE	N	1·5	0·0	0·1	100	0·00
21	..	29·991	32·1	29·3	30·7	26·5	36·0	27·0	35·0	34·0	4·2	5·8	2·5	— 5·1	NE	NNE	1·0	0·0	0·1	115	0·00
22	..	29·933	32·3	29·6	30·7	27·8	33·2	28·3	34·8	34·0	2·9	4·1	2·2	— 6·4	NNE	NNE	0·0	0·0	0·0	40	0·00
23	..	30·092	32·0	28·8	30·1	27·7	32·0	21·0	34·5	33·8	2·4	..	..	— 7·2	NNE	N by E	1·0	0·0	0·0	150	0·00
24	..	30·256	36·7	30·9	33·1	29·4	42·2	25·0	34·2	33·8	3·7	5·0	3·0	— 4·7	N by E	NE	4·5	0·0	1·1	180	0·00
25	In Equator	30·204	31·8	29·5	30·5	27·7	31·0	27·0	33·5	33·0	2·8	5·8	1·8	— 7·4	NE	ENE	4·5	0·5	0·8	220	0·03
26	..	29·989	30·2	21·5	25·1	19·0	29·8	12·5	33·0	32·2	6·1	10·2	2·3	—12·8	ENE	E	5·5	0·0	1·3	80	0·00
27	Apogee	29·906	32·8	23·8	26·5	22·9	41·5	17·0	32·0	31·5	3·6	5·8	2·2	—10·8	E	ENE	5·0	0·0	1·4	175	0·00 melted snow
28	Last Qr.	29·771	31·0	16·8	21·0	15·3	37·0	18·0	31·5	31·5	5·7	9·4	3·2	—16·0	E	E	1·7	0·0	0·1	65	0·02
29	..	29·795	42·8	29·9	37·1	34·0	55·0	26·0	31·5	31·5	3·1	5·3	2·3	— 0·5	E by S; Calm	SSE	2·5	0·0	0·0	150	0·04
30	..	29·367	47·4	38·9	43·4	41·3	54·0	36·0	32·8	31·5	2·1	3·0	1·6	+ 6·7	S	SSW	4·0	0·1	1·8	220	0·06
31	..	29·153	46·2	33·9	36·2	34·5	45·9	31·0	33·5	33·0	1·7	4·0	0·2	— 1·1	SSW; C; NNE	NE	2·5	0·0	0·2	140	0·21
Feb. 1	Greatest Declination S.	29·756	37·0	30·3	33·1	31·6	44·0	23·0	34·8	33·0	1·5	5·7	0·3	— 4·6	N	WSW; Calm	1·5	0·0	0·2	175	0·00
2	..	30·120	45·9	31·4	38·5	33·9	56·7	25·0	34·8	33·2	4·6	7·4	2·5	+ 1·8	WSW	SSW	1·3	0·0	0·0	145	0·00
3	..	30·226	46·0	35·3	40·[illegible]	34·1	47·7	32·0	34·8	34·0	6·4	9·0	2·3	+ 3·4	SSW; Calm	SSW	4·6	0·0	0·6	265	0·00
4	..	30·056	49·5	37·8	43·7	40·4	49·3	32·0	36·2	34·5	3·3	6·0	1·2	+ 5·7	SSW	SSW	4·3	0·2	1·1	285	0·00
5	New	29·983	52·5	49·2	50·7	48·3	53·0	47·0	38·0	36·0	2·4	3·8	1·6	+12·2	SW	SW	4·5	0·5	1·1	285	0·10
6	..	30·011	53·9	47·5	50·4	49·1	53·5	47·0	40·0	37·2	1·3	..	..	+12·0	WSW	W by S	3·7	0·0	0·5	145	0·04
7	..	29·821	51·4	46·4	49·0	46·8	58·0	43·0	42·0	38·5	2·2	2·7	1·2	+ 9·9	WSW	WSW	4·0	0·0	0·4	310	0·30
8	Perigee In Equator	29·674	49·9	41·7	45·6	42·0	54·0	35·0	43·0	39·5	3·6	6·3	2·3	+ 5·7	NW; WSW	SSW	4·5	0·0	0·3	325	0·00
9	..	28·926	53·0	39·5	4[illegible]·6	42·0	53·0	36·0	44·0	41·0	3·6	8·6	2·1	+ 5·4	SSW	WSW	13·0	0·5	4·5	470	0·00
10	..	28·760	50·2	38·4	42·9	38·5	60·8	33·0	43·5	41·5	4·4	7·8	1·6	+ 3·4	SSW	SSW; N by E	4·5	0·0	0·6	155	0·40
11	First Qr.	29·103	46·2	38·1	41·6	35·9	53·1	29·2	43·0	42·5	5·7	7·8	3·3	+ 2·8	NNW	N by W	1·0	0·0	0·1	95	0·12
12	..	29·793	47·5	35·0	42·4	37·3	58·0	26·0	42·8	42·2	5·1	8·8	2·0	+ 3·3	WNW; SSW	SSW	3·0	0·0	0·3	245	0·00
13	..	29·877	50·0	42·5	48·0	46·7	54·0	41·0	42·8	42·0	1·9	3·6	1·3	+ 9·6	SSW	SSW	4·6	0·2	1·5	370	0·00
14	Greatest Declination N.	29·700	53·0	49·0	50·3	48·5	52·0	46·0	44·0	43·0	1·8	2·4	1·7	+11·8	SSW	S by W	4·4	0·2	1·4	310	0·03
15	..	29·405	50·0	39·3	45·1	42·3	57·0	32·0	44·5	43·5	2·8	5·7	1·3	+ 6·4	S by W	WSW	4·0	0·0	0·6	45	0·04
16	..	29·722	44·8	31·7	37·2	31·1	53·0	23·0	44·0	43·5	6·1	11·0	1·4	— 1·2	W by S; Calm	N by W	0·1	0·0	0·0	125	0·00
17	..	30·223	47·2	32·0	37·6	31·2	62·3	20·5	43·2	42·0	6·4	10·6	2·0	— 0·1	N by W	N	2·0	0·0	0·2	95	0·00
18	..	30·213	42·2	30·2	34·4	26·5	49·0	20·0	42·8	40·8	7·9	10·0	4·2	— 4·0	N by W; Calm	Calm; S by W	0·1	0·0	0·0	160	0·00
19	Full	29·587	49·0	30·9	41·3	39·1	53·2	24·3	41·8	40·5	2·2	3·4	0·5	+ 2·2	SSW	W	3·0	0·0	0·4	130	0·12
20	..	29·426	45·0	35·0	39·7	36·2	50·5	28·0	41·2	39·8	3·5	6·0	0·9	+ 0·9	SSW; Calm; N	N	3·0	0·0	0·0	160	0·10
21	In Equator	29·598	48·0	31·3	39·2	34·2	60·3	24·4	40·5	39·8	5·0	10·4	1·6	— 0·8	WSW	Calm; SSW	0·5	0·0	0·1	130	0·07
22	..	29·178	52·0	38·4	46·3	43·7	55·0	35·0	40·5	39·8	2·6	6·2	0·5	+ 6·4	SSW	WSW	5·0	0·0	1·4	390	0·11
23	..	29·035	52·0	37·5	45·5	38·4	62·0	27·0	40·8	40·0	7·1	14·1	0·7	+ 5·8	WSW	W by S	5·0	0·3	2·0	320	0·00
24	Apogee	29·125	55·0	44·5	48·6	43·9	55·0	36·0	41·8	41·0	4·7	6·8	2·3	+ 8·8	WSW	SSW	6·5	0·5	2·4	430	0·02
25	..	28·940	54·0	44·1	48·3	42·7	56·8	37·0	44·8	42·8	5·6	11·6	1·9	+ 7·7	SSW	SW	6·0	0·0	2·0	345	0·14
26	..	28·658	50·0	44·5	46·8	42·9	50·0	34·5	45·5	43·8	3·9	5·7	2·5	+ 6·8	S	WSW	7·0	0·5	2·1	195	0·30
27	Last Qr.	28·857	54·0	45·0	47·9	41·8	54·0	37·0	46·0	44·8	6·1	..	..	+ 7·8	ESE; SSW	SW	11·0	0·0	2·1	350	0·35
28	..	29·182	54·0	41·5	47·4	39·8	64·2	37·0	45·8	45·0	7·6	12·4	3·7	+ 7·7	SSW	SW	6·0	0·0	1·7	315	0·03

MONTH and DAY, 1848.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Jan. 1	s	s	8, ci.-s,	9 ci.-s
2	ss	ss	5 ci.-s, sc, h	5 ci.-s, sc, h
3	s : w	w : w	10	10
4	0 : s	s : s	10 : 0	0
5	vv	vv	10 : 10 r	10 : 0
6	m : 0	0 : 0	10 : 0	0 : 10
7	0 : w	w : 0	0 : 10 r	10 r : 10
8	0 : s	s : s	10	10r,hl : 10
9	m : m	m : m	10	10
10	v : ss	v : ss	10	10
11	vs	vs	10	10
12	ss : ss	0 : 0	10	9 : 10 r
13	0 : 0	m : m	10	10 r : 10 r
14	m : m, s	s : s	10	10 r : 10
15	w : w	w : ss	10 : 0	0
16	s : s	s, sp : s	0	0 f : 0 a
17	0 : 0	ss, N, sp : 0	10 ci.-s, sc	10 ci.-s, sc, r
18	v	v	10 ci.-s, sc : 0	0 : 10 lu. ha
19	0 : w	ss : ss	10 ci.-s, sc	10 ci.-s, sc
20	v : ss	ss : w	10 ci.-s, sc, sl	10 ci.-s, sc
21	0 : 0	v : v	10 ci.-s, sc, sn	10 ci.-s, sc
22	w : ss	ss : v	10 ci.-s, sc	10 ci.-s, sc : 10 ci.-s, sc, r
23	w	w	10 ci.-s, sc, sn	10 ci.-s, sc, sn
24	w : w	0 : w	10 ci.-s, sc	10 ci.-s, sc
25	w : w	0 : w	10 ci.-s, sc	10 ci.-s, sc : 10 ci.-s, sc, r
26	w : w	s : s	10	10 : 8
27	v	v	0 : 3 cu, cu.-s, ci.-s, sc	7 cu, cu.-s, ci.-s, sc : 10 cu, cu.-s, ci.-s, sc
28	m : ss	ss : v	10 ci.-s, sc, sn : 7, ci.-s, sc, sn	10 ci.-s, sc, sn
29	m, s	m, s	10 ci.-s, sc : v, ci.-s, sc	v, ci.-s, sc : 10 ci.-s, sc, r
30	s : s	ss, N : ss, N	10 ci.-s, sc	10 ci.-s, sc, r
31	0 : 0	ss, N : ss, N	10 ci.-s, sc	10 ci.-s, sc, r, sl
Feb. 1	s : s	s : 0	0	0
2	0 : v	v : v	10 ci.-s, sc : 0	0 : 10 ci.-s, sc
3	v	v	10 ci.-s, sc : 5 ci.-s, sc	v, ci.-s, sc
4	w : w	0 : 0	10 ci.-s, sc	10 ci.-s, sc, r
5	0	0	10 ci.-s, sc, r	10 ci.-s, sc, r
6	s	s	10 ci.-s, sc	10 ci.-s, sc
7	s : 0	0 : w	10 ci.-s, sc	10 ci.-s, sc : 10 ci.-s, sc, r
8	0 : 0	m : m	7 ci.-s, sc	10 ci.-s, sc : 10 ci.-s, sc, r
9	0 : 0	s : 0	8 ci.-s, sc	8 ci.-s, sc
10	0 : 0	w : s, N : m	2	10 r
11	0 : 0	v : v	10 ci.-s, sc, r : 1 ci.-s, sc	4 ci.-s, sc : 10 ci.-s, sc
12	m : m	0 : m : 0	10 ci.-s, sc : v, ci.-s, sc	v, ci.-s, sc : 10 ci.-s, sc
13	m : m	0 : m	10 ci.-s, sc	10 ci.-s, sc
14	s : 0	0 : 0	10 ci.-s, sc	10 ci.-s, sc, r
15	0 : 0	0 : s, N : 0	10 ci.-s, sc, r	10 ci.-s, sc, r : 10 ci.-s, sc, lu. ha
16	0 : v	v : v	5 ci.-s, sc : 0	5 ci.-s, sc, lu. ha
17	s	s	8 cu, cu.-s, ci.-s, sc	8 cu, cu.-s, ci.-s, sc, lu. co
18	s	s	10 ci.-s, sc	10 ci.-s, sc : v, ci
19	0	0	10 ci.-s, sc, sn : 10 ci.-s, sc, r	5 ci.-s, sc : 8 ci.-s, sc
20	0 : s, N	s : 0	10 ci.-s, sc, r	10 ci.-s, sc, r : 0 a
21	0 : w	ss : ss	v, ci.-s, sc	10 ci.-s, sc, r
22	s : s	0 : 0	10 ci.-s, sc, r	10 ci.-s, sc, r : 0 a
23	0 : 0	0 : s : 0	5 cu, cu.-s, sc	5 cu, cu.-s, sc
24	0	0	10 ci.-s, sc	10 ci.-s, sc, r : 10 ci.-s, sc, sqs, w, r
25	0 : s, N	0 : 0	8 cu, cu.-s, sc, sqs, w, r	8 cu, cu.-s, sc : 8 cu, cu.-s, sc, r
26	0 : 0	ss, N, sp, g. cur, : m	10 ci.-s, sc, sqs, w, r	10 ci.-s, sc, sqs, w, r
27	0 : s, N	w : s, N	10 ci.-s, sc : 10 ci.-s, sc, sq, hl, r	10 ci.-s, sc, sq, hl, r : 0 ci.-s, sc
28	0 : 0	0 : w : s, N : w	5 cu, ci.-cu, ci.-s, sc, hl, r	5 cu, ci.-cu, ci.-s, sc

MONTH and DAY, 1848.	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 shewn by a Self-Registering Thermometer read at Midnight.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at Midnight.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometer, read at 9h A. M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometer, read at 9h A. M. next morning. 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 25 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.	Whewell's. Amount of Horizontal Movement of the Air in each Day.	Rain in Inches read at Midnight.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles.	in.
Feb. 29	Greatest Declination S.	29·142	48·0	35·2	43·0	34·8	58·0	31·5	45·2	44·0	8·2	15·1	3·0	+ 2·9	SSW	SSE; SW	4·0	0·5	1·3	355	0·20
Mar. 1	..	28·652	43·2	38·0	40·3	40·2	42·5	30·5	45·0	42·5	0·1	1·6	0·0	— 0·1	WSW	W	3·0	0·0	1·3	195	0·18
2	..	29·151	46·0	37·2	41·2	36·0	49·0	33·3	45·2	..	5·2	10·1	0·5	— 0·3	NW	N by W	2·5	0·0	1·0	435	0·01
3	..	29·830	45·2	36·8	41·2	34·9	61·3	28·0	45·8	..	6·3	11·1	3·2	— 1·1	N; NE	N	3·5	0·0	0·5	55	0·04
4	..	29·974	49·6	28·0	38·8	33·1	63·0	21·0	45·5	..	5·7	11·3	2·0	— 2·2	NW; NE	S	0·1	0·0	0·0	65	0·00
5	New	29·673	44·0	37·0	39·9	36·9	48·8	32·0	..	..	3·0	4·1	2·5	— 0·8	S	S; Calm	0·5	0·0	0·0	115	0·40
6	In Equator	29·721	46·0	36·5	39·9	33·4	48·2	30·0	..	..	6·5	12·2	4·0	— 1·0	Calm; NNW	NW; SW	0·4	0·0	0·0	60	0·01
7	Perigee	29·826	48·6	31·3	38·3	33·2	52·5	22·0	..	..	5·1	8·4	4·3	— 3·0	SW; E	E; Calm	0·5	0·0	0·0	55	0·00
8	..	30·097	47·3	28·3	39·6	35·6	56·8	18·0	..	..	4·0	8·7	1·4	— 1·5	Calm; SSE	SSW	1·0	0·0	0·1	195	0·03
9	..	29·749	54·5	44·0	49·8	46·5	54·8	..	..	..	3·3	5·2	1·7	+ 9·3	WSW	SSW	2·0	0·0	0·3	280	0·00
10	..	29·331	52·0	36·2	43·3	35·5	57·0	30·8	..	..	7·8	11·3	4·6	+ 1·8	SW	WSW	5·0	0·5	1·5	345	0·01
11	..	28·745	45·0	35·0	40·6	35·7	57·5	30·0	..	..	4·9	13·3	0·5	— 1·2	SW	WSW	8·0	0·6	1·8	365	0·37
12	Greatest Declination N. First Quarter	28·679	41·5	37·5	38·7	34·1	45·0	35·0	..	..	4·6	..	..	— 3·3	WSW	WNW	4·0	0·2	1·1	215	0·01
13	..	29·176	44·5	36·1	38·7	32·0	47·5	30·5	..	..	6·7	11·5	2·5	— 3·9	NNW	NNW	3·8	0·0	0·9	210	0·11
14	..	29·651	51·0	32·0	40·8	34·9	63·9	24·0	..	..	5·9	11·1	3·0	— 2·3	N	N; Calm	0·5	0·0	0·0	85	0·00
15	..	29·568	54·3	33·2	42·7	38·6	62·2	25·0	..	..	4·1	6·4	3·0	+ 0·3	SSW	N	0·1	0·0	0·0	65	0·08
16	..	29·372	46·0	37·5	39·5	37·9	48·8	35·3	..	..	1·6	2·8	1·4	— 2·6	N	NNE; W	0·1	0·0	0·0	65	0·20
17	..	29·255	43·0	34·2	37·9	36·7	42·0	32·0	..	..	1·2	3·2	0·9	— 4·4	SSW; SSE	ESE	0·1	0·0	0·0	15	0·40
18	..	29·247	55·1	35·5	43·3	38·1	69·0	25·5	..	..	5·2	13·2	1·0	+ 0·7	ENE	ESE	1·0	0·0	0·0	35	0·01
19	Full In Equator	28·998	53·8	29·4	42·1	37·5	64·0	25·0	..	..	4·6	12·2	0·3	— 0·4	Calm	SSW	3·0	0·0	0·2	140	0·10
20	..	28·863	51·8	34·0	42·3	37·6	62·8	28·0	..	..	4·7	10·5	2·2	— 0·7	SSW; S by E	SSW; E	2·0	0·0	0·1	165	0·20
21	..	28·957	42·4	35·0	39·6	34·4	50·1	28·5	..	..	5·2	12·2	0·3	— 3·3	ESE; WSW	WSW	4·5	0·0	1·5	180	0·29
22	Apogee	29·499	54·2	33·2	45·8	40·2	69·0	24·5	..	..	5·6	12·2	2·3	+ 3·3	SSW	S	3·0	0·0	0·3	300	0·00
23	..	29·621	59·8	47·0	51·3	42·6	65·5	39·0	..	..	8·7	15·2	3·4	+ 9·8	SSW	WSW	4·5	0·0	2·2	240	0·04
24	..	29·912	53·8	46·0	48·4	39·9	59·6	40·2	..	..	8·5	12·0	5·3	+ 6·6	W	NNW	1·0	0·0	0·1	130	0·00
25	..	29·957	52·9	38·2	44·0	39·3	67·0	28·5	..	..	4·7	8·5	3·0	+ 2·5	N by W	NNE; SSE	0·1	0·0	0·0	10	0·00
26	..	29·639	53·2	40·2	46·1	43·0	61·0	30·0	..	..	3·1	6·7	1·1	+ 5·6	SSE	SE	0·0	0·0	0·0	110	0·04
27	Greatest Declination S.	29·558	55·9	43·5	48·7	44·5	57·0	33·0	..	..	4·2	10·6	1·2	+ 6·2	SSE	S	0·0	0·0	0·0	130	0·06
28	Last Qr.	29·665	56·0	42·0	47·6	39·6	..	37·0	..	..	8·0	14·8	1·2	+ 4·2	S	S; E	1·5	0·0	0·4	80	0·25
29	..	29·746	60·4	41·3	49·0	42·9	..	30·0	..	..	6·1	14·8	0·7	+ 5·3	SE; W by S	S; Calm	0·0	0·0	0·0	55	0·16
30	..	29·676	61·6	43·5	51·6	47·4	..	31·3	..	..	4·2	10·1	1·2	+ 7·6	Calm; ESE	S; Calm	0·0	0·0	0·0	65	0·00
31	..	29·826	71·5	48·6	57·7	50·0	..	39·0	..	..	7·7	15·3	2·1	+14·9	ESE	SE; Calm	0·0	0·0	0·0	20	0·00
Apr. 1	..	29·898	73·0	42·0	57·0	51·0	89·5	41·0	..	..	6·0	16·5	0·6	+13·6	Calm; NNE	NE; Calm	0·0	0·0	0·0	10	0·00
2	In Equator	29·811	72·5	43·2	61·8	51·4	88·5	38·5	..	..	10·4	18·2	1·8	+17·3	E	E; ENE	0·0	0·0	0·0	..	0·00
3	New	29·853	74·6	45·4	60·7	49·4	96·7	41·0	..	..	11·3	23·0	0·4	+15·6	E; SE; NE	S; E; Calm	0·0	0·0	0·0	..	0·00
4	Perigee	29·925	74·3	45·7	61·3	49·3	91·0	40·0	..	..	12·0	22·1	2·9	+16·7	S; SSW	W; WSW	0·5	0·0	0·0	..	0·00
5	..	29·779	62·5	47·9	52·4	46·4	75·1	40·0	..	..	6·0	11·5	3·0	+ 7·8	SW	WSW	2·0	0·0	0·0	..	0·00
6	..	29·545	54·0	35·5	43·9	36·0	69·0	37·7	..	..	7·9	16·2	2·5	— 2·3	N	N; Calm	0·3	0·0	0·1	..	0·04
7	..	29·393	48·9	34·7	42·0	36·9	56·5	31·0	..	..	5·1	10·9	1·3	— 3·7	N	ENE	0·2	0·0	0·0	..	0·07
8	..	29·246	43·3	37·7	39·5	36·5	44·6	37·5	..	..	3·0	7·6	2·0	— 6·8	N	NNE	3·5	0·0	0·7	245	0·09
9	Greatest Declination N.	29·393	46·0	36·2	38·0	34·0	50·0	32·4	..	..	5·0	7·6	2·0	— 7·3	N	NNE	2·4	0·0	0·3	130	0·14
10	First Qr.	29·272	50·6	36·8	39·6	33·1	62·0	29·2	..	..	6·5	18·3	2·5	— 6·2	N by W; SW	SE; SW; S	2·5	0·0	0·2	160	0·17
11	..	29·536	52·2	36·0	43·4	35·5	63·2	36·5	..	..	7·9	13·9	2·3	— 2·5	NNW	SW; SE	1·2	0·0	0·1	205	0·01
12	..	29·354	60·8	49·0	50·4	45·0	67·8	39·5	..	..	5·4	11·2	0·0	+ 4·7	SW	SW	5·0	0·0	0·8	210	0·19
13	..	29·501	59·0	45·0	48·6	45·8	72·5	38·0	..	..	2·8	9·2	0·0	— 1·6	WSW	WNW; WSW; S	4·0	0·0	0·2	160	0·44
14	..	29·796	54·0	39·0	44·5	34·7	68·8	27·0	..	..	9·8	19·4	2·3	+ 1·8	NNW	NNW; Calm	4·6	0·0	0·6	70	0·06
15	..	29·799	51·5	34·5	43·3	37·9	56·2	39·5	..	..	5·4	16·2	1·2	— 3·4	Calm; E	SE; ENE	1·0	0·0	0·1	65	0·28
16	In Equator	29·725	55·4	41·6	48·3	44·8	67·2	40·0	..	..	3·5	8·4	1·5	+ 2·4	N; Calm	SSE	0·0	0·0	0·0	180	0·03
17	..	29·541	60·2	43·8	49·7	44·1	72·0	31·0	..	..	5·6	12·4	1·8	+ 4·0	WSW	SW; S	3·0	0·0	0·6	190	0·40
18	Full Apogee	29·362	56·2	39·0	48·9	44·9	65·9	35·3	..	..	4·0	9·5	1·6	+ 3·7	SSE	SSE	2·3	0·0	0·5	200	0·24
19	..	29·196	58·2	42·9	50·2	43·7	71·0	32·0	53·0	51·5	6·5	13·0	0·4	+ 4·3	S	S; E	3·0	0·0	0·2	60	0·01
20	..	29·185	59·1	40·2	49·8	48·3	73·3	45·0	52·0	51·5	1·5	5·8	0·5	+ 2·9	NE	NE	1·8	0·0	0·3	125	0·50
21	..	29·360	53·9	45·6	49·2	47·4	54·2	46·0	52·5	51·5	1·8	3·5	0·0	+ 1·8	N	NNW	0·3	0·0	0·1	150	0·05
22	..	29·363	51·2	45·9	47·4	45·2	53·6	45·5	51·8	51·2	2·2	4·8	2·3	— 0·7	NW	N by W	2·4	0·0	0·8	190	0·07
23	Greatest Declination S.	29·555	58·9	45·0	49·9	44·9	71·8	43·0	51·8	51·2	5·0	8·0	2·7	+ 1·1	N by W	N by W	1·5	0·0	0·3	160	0·00
24	..	29·573	50·0	40·6	44·6	42·8	51·0	38·5	51·0	50·5	1·8	5·3	0·8	— 3·7	N by W; NNE	NNE; N	2·0	0·0	0·5	175	0·10
25	..	29·706	44·9	38·6	41·1	36·5	49·3	26·0	51·0	49·5	4·6	6·7	2·4	— 6·3	N	N by W	2·0	0·0	0·3	115	0·02
26	Last Qr.	29·758	56·2	33·6	41·9	35·4	70·8	25·0	50·2	49·2	6·5	9·8	2·3	— 6·2	N by W	N; NE	0·0	0·0	0·0	40	0·05
27	..	29·733	55·1	30·3	43·7	35·6	76·7	30·7	49·8	49·2	8·1	15·0	2·2	— 4·5	N by W; ESE; S	SW; S	0·3	0·0	0·0	125	0·00

MONTH and DAY, 1848.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Feb.29	0 : 0	0 : ss, N : 0	0, ci, cu, ci.-s, sc : 5, ci.-cu, ci.-s, sc	10, ci.-cu, ci.-s, sc, r
Mar. 1	0 : w, N	v : v	10, ci.-s, sc, r	10, ci.-s, sc
2	0	0	10, ci.-s, sc	10, ci.-s, sc
3	0 : 0	v : v	5, cu, ci.-s, sc	5, cu, ci.-s, sc, sq, hl, r : 5, cu, ci.-s, sc
4	v	v	5, cu, ci.-cu, ci.-s, sc	5, cu, ci.-cu, ci.-s, sc
5	s, N, sp, g. cur	s, N, sp, g. cur	10, r	10, r
6	0 : 0	v : v	10, ci.-s, sc	10, ci.-s, sc : 0
7	v : 0	v : v	10, ci.-s, sc	10, ci.-s, sc : 0
8	0 : m	0 : m	10, ci.-s : 9, ci.-s	10, ci.-s : 10, ci.-s, r
9	0 : m	m : 0	10, ci.-s, sc	10, ci.-s, sc, r : 8, ci.-s, sc
10	0 : s	0 : s, N : w	0 : 8, cu, n, ci.-s, sc	8, cu, n, ci.-s, sc, r
11	0 : ss, N, sp, g. cur	w : w	10, ci.-cu, ci.-s, sc : 10 ci.-cu, ci.-s, sc, sqs, hl, r	v, ci.-cu, ci.-s, sc
12	0 : 0	0 : w	10, r	10, r
13	v : v	v : s, N : 0	10, ci.-s : 9, ci.-s	10, ci.-s, r
14	0 : 0	s : s	10, cu, ci.-cu, ci.-s, sc	5, cu, ci.-cu, ci.-s, sc : 0
15	0 : 0	s : s, N : s	10, ci.-s	10, ci.-s, r
16	0 : 0	s, N : m	10, r	10, r
17	0 : v, N	v, N : w : 0	10, ci.-s, r, sl	10, ci.-s, r, sl
18	v : v	v : 0	10, cu, ci.-cu, ci.-s, sc : v, cu, ci.-cu, ci.-s, sc	v, cu, ci.-cu, ci.-s, sc : 0
19	s	s	0, f	5, cu, cu.-s, ci.-s, sc, r
20	0 : m, N : 0	m, N : 0 : m, N	8, ci.-s, r	8, ci.-s : 8, ci.-s, r, a
21	w : s, N	0 : 0	10, ci.-s, r	v, ci.-s
22	0	0	0	10, ci.-s : 10, ci.-s, r
23	0	0	10, ci.-s	5, ci.-s : 10, ci.-s
24	0	0	10 : 8	10
25	0	0 : w : 0	9 : 10	10
26	0	0	10, ci.-s, sc	10, ci.-s, sc : 7, ci.-s, sc, r
27	w : 0	0 : w : 0	10, ci.-s, sc	10, ci.-s, sc : 10, ci.-s, sc, r
28	0 : 0	m : s, N	10, cu, ci.-s, sc, r : 3, cu, ci.-s, sc, r	3, cu, ci.-s, sc, r : 10, cu, ci.-s, sc, r
29	0 : 0	w : w	10, cu, ci.-s, sc, r : v, cu, ci.-s, sc	v, cu, ci.-s, sc, so. ha : 10, cu, ci.-s, sc
30	0 : 0	w : w	8 : 10	10 : v
31	0 : 0	m : 0	10, cu, ci.-cu, ci.-s, sc	v, cu, ci.-cu, ci.s, sc : 0
Apr. 1	0 : 0	m : m	0	0, t
2	m	m	0	0
3	v	v	8, ci.-s, cu.-s, sc : 1, ci	1, cu
4	0 : s	0 : 0	3, ci.-s, sc, so. ha	2, ci.-s, sc : 0
5	v	v	10, ci.-s	10, ci.-s
6	0 : 0	w : 0	10, cu, cu.-s, sc, r : 10, cu, cu.-s, sc	8, cu, cu.-s, sc : 0
7	0 : m	0 : m : s, N	10, ci.-s, sc	10, ci.-s, sc, r, hl : 10, ci.-s, sc, r
8	0 : v, N	0 : v, N	10, ci.-s, sc, r	10, ci.-s, sc, r
9	v : s, N	v : s, N	10, ci.-s, sc, r	10, ci.-s, sc : 10, ci.-s, sc, r
10	0 : v	w, N : v	10, ci.-s, sc, sn : 5, ci.-s, sc, so. ha	v, ci.-s, sc, r
11	0 : w : 0	w : 0	10, ci.-s, sc : 5, ci.-s, sc	5, ci.-s, sc : 5, ci.-s, sc, r
12	0 : 0	s, N, sp, g. cur : 0	10, cu, ci.-cu, ci.-s, sc, r : 10, cu, ci.-cu, ci.-s, sc	5, cu, ci.-cu, ci.-s, sc
13	0 : 0	s, N : s, N	10, ci.-s, sc	10, ci.-s, sc, r
14	0 : 0	0 : w : 0	5, cu, cu.-s, ci.-s, sc	5, cu, cu.-s, ci.-s, sc : 0, lu. ha, lu. co
15	w : w	0 : s, N : w	10, ci.-s, sc	10, ci.-s, sc, r
16	0 : 0	0 : w : 0	8, ci.-s, cu.-s, sc	8, ci.-s, cu.-s, sc : 10, ci.-s, cu.-s, sc, r
17	0 : s	s, N : s	10, ci.-s, sc	10, ci.-s, sc, r : 0 a
18	0 : 0	v, N : v, N	5, ci.-s, sc : 10, ci.-s, sc, r	10, ci.-s, sc, r
19	0 : 0	w : w	v, ci.-s, sc	v, ci.-s, sc
20	0 : 0	s, N : 0	3, ci.-s, sc : 10, ci.-s, sc, r	10, ci.-s, sc, r
21	0 : 0	w : w	10, ci.-s, sc	10, ci.-s, sc, r
22	0 : 0	0 : w	10, ci.-s, r	10, ci.-s
23	m : m	m : m	10 : 9	10 : 10, r
24	0	0	10, ci.-s, sc, r	10, ci.-s, sc, r
25	0	0	10, ci.-s, sc	10, ci.-s, sc, r : 10, ci.-s, sc
26	0 : w, N	m : 0	3, cu.-s, ci.-s, sc : 10, cu.-s, ci.-s, sc	10, cu.-s, ci.-s, sc : 1, cu.-s, ci.-s, sc
27	0 : 0	v : 0	8, cu, ci.-s, sc	8, cu, ci.-s, sc, r : 8, cu, ci.-s, sc

MONTH and DAY, 1848.	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 shewn by a Self-Registering Thermometer read at Midnight.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at Midnight.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometer, read at 9h A. M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometer, read at 9h A. M. next morning. 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 25 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.	Whewell's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at Midnight.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	in.
April 28	..	29·622	52·1	37·8	42·3	35·7	60·0	25·0	49·5	48·8	6·6	17·0	3·0	— 6·1	S; NNW	SW; S	0·3	0·0	0·0	50	0·19
29	..	29·887	54·4	32·9	44·4	34·6	66·8	26·5	49·8	49·0	9·8	14·6	4·3	— 4·8	S; NNW	ENE	0·0	0·0	0·0	5	0·00
30	In Equator	30·005	60·8	33·7	49·2	36·1	78·0	29·0	50·5	49·2	13·1	19·4	5·8	— 0·8	SE; NW; N	Calm; SSE	0·0	0·0	0·0	90	0·00
May 1	..	29·963	58·0	34·5	48·4	39·1	74·2	30·5	52·0	50·0	9·3	16·9	2·5	— 3·7	Calm; E	ENE	3·7	0·0	0·7	180	0·00
2	Perigee	29·948	63·2	39·4	51·1	41·4	81·8	29·8	52·5	51·0	9·7	18·4	1·6	— 0·9	ENE	ENE	1·7	0·0	0·2	70	0·00
3	New	29·965	69·0	38·0	54·7	43·5	87·7	30·0	54·0	52·2	11·2	21·3	0·5	+ 1·6	ENE	E	0·4	0·0	0·0	95	0·00
4	..	30·021	70·1	39·3	57·3	43·6	87·8	33·0	55·0	53·5	13·7	23·3	2·7	+ 4·3	E	E	2·3	0·0	0·3	145	0·00
5	..	30·042	71·0	43·7	57·6	46·1	89·6	32·0	57·0	55·0	11·5	21·1	2·3	+ 4·4	ENE	E; Calm	0·5	0·0	0·1	90	0·00
6	Greatest Declination N.	29·975	75·2	41·5	60·4	46·2	99·0	40·0	58·0	56·2	14·2	24·6	2·5	+ 7·4	Calm; SSW	S by W; S by E	0·0	0·0	0·0	110	0·00
7	..	29·898	77·1	47·0	63·3	44·9	..	36·0	60·0	58·0	18·4	23·5	11·2	+ 9·8	SE; Calm	S by W; S by E	0·0	0·0	0·0	110	0·00
8	..	29·913	75·7	45·7	61·4	43·6	..	32·5	62·5	59·2	17·8	25·2	8·2	+ 7·6	Calm; SW	Variable	0·0	0·0	0·0	55	0·00
9	..	30·060	74·8	43·4	59·4	47·5	..	34·0	..	60·0	11·9	19·8	1·8	+ 7·3	Calm; ENE	E; ENE	0·5	0·0	0·1	80	0·00
10	First Qr.	30·157	75·3	43·8	61·1	49·1	..	32·0	..	60·2	12·0	23·5	0·2	+ 9·4	Calm; NE	ESE	0·3	0·0	0·0	65	0·00
11	..	30·182	79·5	43·1	63·7	50·3	100·5	36·0	..	62·0	13·4	23·5	2·9	+12·1	ESE; SSE	E; Calm	0·5	0·0	0·0	70	0·00
12	..	30·091	79·2	48·0	65·1	48·7	..	38·0	..	63·0	16·4	27·7	5·0	+12·6	Calm	ENE; Calm	0·0	0·0	0·0	15	0·00
13	In Equator	30·035	80·0	45·2	64·9	50·0	95·0	31·0	65·0	64·2	14·9	30·1	2·3	+13·6	Calm; E	E	0·5	0·0	0·0	70	0·00
14	..	29·981	81·0	46·0	66·1	52·0	102·5	38·0	65·8	64·5	14·1	24·5	4·6	+16·0	E by N	E	1·0	0·0	0·1	85	0·00
15	..	29·770	83·0	48·0	66·2	53·7	98·6	42·0	66·3	65·0	12·5	28·8	1·2	+14·5	NE; ESE	SW	1·0	0·0	0·0	135	0·00
16	Apogee	29·446	79·8	53·2	67·7	51·2	103·0	34·0	66·8	65·2	16·5	28·0	6·2	+14·7	SSE	S	3·0	0·0	0·2	120	0·00
17	..	29·216	76·8	46·5	60·8	51·1	102·5	41·8	67·5	65·2	9·7	19·2	2·1	+ 6·5	WSW	S	0·0	0·0	0·0	150	0·00
18	Full	29·364	67·3	46·7	54·6	41·5	83·8	34·0	66·5	64·2	13·1	24·7	3·2	— 0·1	SW	SSW; S	6·2	0·0	1·3	230	0·00
19	..	29·573	63·5	43·1	54·2	46·7	74·5	38·0	66·4	63·5	7·5	13·3	2·2	— 0·6	SSE	SSE	5·0	0·0	1·3	130	0·00
20	Greatest Declination S.	29·854	67·0	46·8	55·3	47·5	80·8	29·0	64·5	63·0	7·8	13·7	4·0	— 0·5	SSE	N by W	2·4	0·0	0·2	120	0·00
21	..	30·113	67·8	41·1	57·8	49·6	87·9	53·0	63·4	62·0	8·2	19·9	0·9	+ 3·2	WSW; W	SW	0·1	0·0	0·0	65	0·03
22	..	30·144	73·0	54·5	60·7	54·9	90·7	40·0	64·4	62·8	5·8	11·1	1·4	+ 7·1	N; NW	N by E; E	0·1	0·0	0·0	40	0·02
23	..	30·165	71·7	44·8	57·9	47·9	91·0	32·5	63·4	62·2	10·0	19·1	1·5	+ 3·4	NNE	NE; E by S	0·1	0·0	0·0	85	0·00
24	..	30·155	74·9	41·2	60·3	50·3	94·5	31·0	63·5	62·8	10·0	17·4	1·3	+ 5·2	ENE; N	N; E	1·0	0·0	0·0	65	0·00
25	Last Qr.	30·090	77·7	42·5	62·1	52·4	97·1	38·5	64·0	63.2	9·7	20·0	0·2	+ 7·5	E; NE	E	0·5	0·0	0·0	45	0·00
26	..	29·923	76·4	45·3	62·9	55·2	91·6	41·5	64·2	63·5	7·7	17·3	0·8	+ 8·5	ESE	ENE	0·0	0·0	0·0	55	0·00
27	In Equator	30·042	68·8	43·4	56·1	48·8	82·8	31·0	64·5	63·8	7·3	13·4	3·5	+ 2·4	ENE	E	0·1	0·0	0·0	65	0·00
28	..	29·929	72·3	39·3	59·1	49·3	91·4	28·4	64·8	63·8	9·8	16·8	1·6	+ 6·4	E	E	0·0	0·0	0·0	55	0·00
29	..	29·950	78·2	40·6	64·3	58·0	96·6	42·5	65·2	64·0	6·3	14·9	1·5	+ 9·3	Calm	SW	0·0	0·0	0·0	90	0·00
30	..	29·955	73·3	50·7	59·9	51·8	89·5	35·0	65·5	64·2	8·1	15·8	2·3	+ 5·5	NNW	N by W	0·6	0·0	0·0	130	0·00
31	Perigee	29·791	70·6	42·9	55·3	49·8	88·0	30·0	65·0	64·0	5·5	13·7	1·6	— 0·5	Calm; WSW	SSW	3·3	0·0	0·4	145	0·17
June 1	New	29·641	61·6	44·0	51·2	43·3	73·0	44·0	64·0	62·5	7·9	14·4	4·2	— 5·0	W by S; Calm	WSW	2·0	0·0	0·2	200	0·00
2	Greatest Declination N.	29·216	65·2	46·4	53·8	48·4	76·2	34·0	62·8	62·0	5·4	11·2	2·0	— 4·4	S; SW	SSW	3·6	0·0	0·3	135	0·07
3	..	29·160	63·0	39·7	51·6	45·2	71·6	35·0	62·4	61·5	6·4	11·4	1·8	— 7·1	S; SSW	S by W	2·8	0·0	0·3	210	0·14
4	..	29·415	66·2	43·3	53·5	48·2	78·0	40·5	62·0	61·5	5·3	11·3	3·6	— 4·4	SSW	S	3·0	0·0	0·4	175	0·10
5	..	29·589	68·8	49·1	58·1	49·2	82·2	39·2	62·4	61·5	8·9	16·0	2·4	+ 1·4	S	SSW	2·6	0·0	0·7	310	0·06
6	..	29·682	72·6	46·9	59·4	49·5	89·0	40·0	62·5	61·8	9·9	16·8	2·7	+ 2·7	SW; W	SSW	3·5	0·0	0·6	220	0·00
7	..	29·750	70·4	46·9	59·4	49·7	84·8	39·8	62·8	62·0	9·7	15·5	3·8	+ 1·8	SSW	SSW	3·0	0·0	0·8	225	0·00
8	First Qr.	29·641	66·2	48·0	56·6	48·6	78·5	31·5	62·4	61·8	8·0	12·1	5·8	— 1·3	SSW	SSW	3·0	0·0	0·3	190	0·04
9	In Equator	29·641	67·0	45·2	56·9	46·9	80·6	52·0	63·0	61·8	10·0	16·7	3·0	— 1·7	SW	S	2·8	0·0	0·5	250	0·12
10	..	29·477	62·0	54·2	55·9	54·1	61·8	52·0	62·0	61·5	1·8	5·4	1·1	— 2·8	S by W	S by W; SSE	4·0	0·0	0·8	125	0·50
														Difference between the Mean Temperature of the Day and the Mean Temperature of the same day on an Average of 7 years.							
11	..	29·669	71·0	52·2	58·1	50·0	86·7	40·5	62·2	61·8	8·1	15·1	2·6	— 1·6	SSW	SSW; S by E	0·0	0·0	0·0	105	0·01
12	Apogee	29·553	67·8	52·2	58·7	54·2	76·0	48·0	62·0	61·5	4·5	12·2	0·0	— 2·0	S by E; ENE	NE; E	0·5	0·0	0·0	115	1·43
13	..	29·517	65·6	49·0	54·6	49·0	68·0	38·8	61·8	61·0	5·6	12·0	2·4	— 6·4	SE; SW	SSW	13·0	0·0	0·7	230	0·16
14	..	29·833	67·3	45·5	59·2	48·0	81·0	47·5	62·0	61·0	11·2	15·3	7·0	— 1·9	S	S; SE	3·0	0·0	0·5	165	0·00
15	..	29·699	79·0	52·8	66·5	55·6	98·0	40·0	63·0	61·8	10·9	18·8	1·9	+ 5·3	ESE; ENE	ENE	2·0	0·0	0·1	85	0·00

MONTH and DAY, 1848.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
April 28	0 : s, N	m : m	10, cu, ci.-cu, ci.-s, sc, r	8, cu, ci.-cu, ci.-s, sc : v, cu, ci.-cu, ci.-s, sc
29	m : 0	0 : 0	10, cu, ci.-s, sc	7, cu, ci.-s, sc : 0
30	v : v	v : v	3, cu, ci.-s : 4, cu, ci.-s	0
May 1	0 : 0	0 : w : 0	1, ci	0
2	0 : 0	m : m	0	0
3	0 : 0	s : s	0	1
4	m : 0	m : 0	0	0
5	v : v	0 : v	0	0
6	m : 0 : m	0 : m	0	2, cu : 0
7	0	0	0 : 0, h	0
8	s : 0	0 : m	0	3, ci, h : 0
9	s : 0	0 : m	1, li. cl, h	1, li. cl, h
10	0 : v	0 : v : 0	0, d : 0	0
11	w : 0	0 : w : 0	0, h	0, h
12	0 : 0	0 : w	0	3, ci.-cu, h : 0 h
13	0 : 0	0 : m	1, li. cl, h : 0, h	0, h
14	0 : 0	0 : w : s	1, l.-c, h	0, h
15	s : s	0 : s : s	10, ci.-cu, ci.-s : v, ci.-cu, ci.-s	v, ci.-cu, ci.-s, t : 0
16	0 : 0	v : v	0	1, cu, ci
17	s : s	s : s	10 : 3	3 : 5, l
18	w : 0	0 : 0	10 : 7, r	5, t : 0
19	0 : 0	v : 0	10, ci.-s, sc, r	10, ci.-s, sc, r
20	0	0	8, n, ci.-s, sc : 8, n, ci.-s, sc, r	8, n, ci.-s, sc : 2, n, ci.-s, sc
21	m : m	0 : 0	10, ci.-s, sc	10, ci.-s, sc, r
22	0 : 0	s : 0	10, cu.-s, ci.-s, sc, r : 10, cu.-s, ci.-s, sc	10, cu.-s, ci.-s, sc
23	0 : 0	s : w : 0	8, ci.-s, sc	8, ci.-s, sc : 2, ci.-s, sc
24	v : v	v : v	0 : 2, cu, cu.-s	2, cu, cu.-s : 0
25	v : v	v : 0	0	v : 0
26	0 : 0	0 : w : 0	v	8 : 0
27	0 : 0	m : 0	10, cu, ci.-cu, ci.-s, sc	3, cu, ci.-cu, ci.-s, sc : 0
28	s : s	0 : s	3, ci, li. cl	3, ci, li. cl : 0
29	0	0	0	v, cu, ci.-s, sc
30	0 : m	0 : 0	1, cu, ci.-s, sc : 9, cu, ci.-s, sc	8, cu, ci.-s, sc : 0
31	0 : m	0 : 0	0 : 10, n, cu, ci.-s, sc	10, n, cu, ci.-s, sc, r : 7, n, cu, ci.-s, sc
June 1	0 : m	m : 0	9, ci.-s, sc	9, ci.-s, sc, r : 9, ci.-s, sc
2	0 : s, N	0 : m : 0	8, n, cu, ci.-s, sc, r	8, n, cu, ci.-s, sc : 2, n, cu, ci.-s, sc
3	0 : s, N	0 : 0	10, n, cu, ci.-s, sc, r : 10, n, cu, ci.-s, sc	10, n, cu, ci.-s, sc : 0
4	0 : s, N	0 : m : 0	5, ci.-s, sc, r	5, ci.-s, sc : 5, ci.-s, sc, r
5	m : s, N	0 : 0	7, cu, cu.-s, ci.-s, sc, r : 3, cu, cu.-s, ci.-s, sc	3, cu, cu.-s, ci.-s, sc : 0
6	0 : v	v : v	0 : v, cu, ci.-s, sc	v, cu, ci.-s, sc : 0
7	0	0	0 : 8, cu, cu.-s, ci.-s, sc	10, cu, cu.-s, ci.-s, sc
8	w : 0	w : 0	10, ci.-s, sc, r : 10, ci.-s, sc	10, ci.-s, sc : v, ci.-s, sc
9	0 : s	0 : m : w	0 : 10, cu, cu.-s, ci.-s, sc, so. ha	10, cu, cu.-s, ci.-s, sc : 10, cu, cu.-s, ci.-s, sc, r
10	0 : m	s, N : m : m	10, ci.-s, sc, r	10, ci.-s, sc, r
11	s	s	5, cu, sc	5, cu, sc : 7, cu, sc
12	0 : 0	s, N, sp, g. cur, : 0	10, ci.-s, sc	10, ci.-s, sc, l, t, r : 10, ci.-s, sc
13	0 : 0	s, N : 0	10, r	10, r, sq : 0
14	0 : 0	m : 0	0 : 5, cu.-s, ci.-s, sc	5, cu.-s, ci.-s, sc
15	0 : v	0 : v	3, ci.-s, sc	3, ci.-s, li. sc : v, ci.-s, sc, l, lu. ha

MONTH and DAY, 1848.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers. Dry. Highest.	Lowest.	Mean Daily Value.	Dew Point. Mean Daily Value.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at Midnight.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at Midnight.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometer, read at 9h A.M. next morning. 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 7 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.	Whewell's. Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at Midnight.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	in.
June 16	Full	29·692	74·2	55·2	65·1	57·1	92·2	47·3	64·8	63·0	8·0	13·7	2·5	+ 3·9	NE; SSW	S	0·4	0·0	0·0	70	0·00
17	Greatest Declination S.	29·668	72·2	57·8	63·2	58·1	84·8	52·0	65·2	64·0	5·1	12·0	2·7	+ 2·2	ENE; S	S by W	0·0	0·0	0·0	75	0·12
18	..	29·807	69·3	56·1	58·7	55·0	78·3	54·0	65·5	64·0	3·7	9·1	1·8	— 2·1	SW	WSW	1·7	0·0	0·1	140	0·05
19	..	29·965	65·8	52·2	55·2	50·7	69·0	49·0	65·0	63·2	4·5	9·0	2·6	— 5·5	N; NE	N	0·8	0·0	0·1	135	0·10
20	..	29·810	65·5	50·7	56·9	51·4	78·8	41·0	64·0	63·2	5·5	9·7	1·2	— 3·6	N	NNE	0·0	0·0	0·0	25	0·01
21	..	29·940	71·1	51·2	62·8	55·7	87·0	45·0	64·2	63·2	7·1	12·3	3·2	+ 2·3	NNE	ENE	0·0	0·0	0·0	30	0·00
22	..	29·832	77·6	53·9	65·4	53·6	97·5	42·8	65·2	64·5	11·8	22·2	1·3	+ 5·0	ENE	ENE	0·3	0·0	0·0	125	0·00
23	..	29·572	73·8	53·7	63·9	58·7	91·0	51·0	65·5	64·8	5·2	9·8	1·8	+ 3·6	NE	ENE; SSE	3·3	0·0	0·7	185	0·50
24	In Equator Last Quarter	29·472	68·3	56·0	60·0	51·8	80·3	52·0	66·0	64·5	8·2	14·6	2·6	+ 0·2	SSW	SW	4·6	0·2	1·5	315	0·06
25	..	29·642	66·7	51·5	56·1	54·9	73·2	48·0	65·0	64·0	1·2	6·5	2·9	— 3·9	SW; WSW	WSW; NNW; NE	3·8	0·0	0·8	65	0·15
26	..	29·903	69·6	53·7	57·9	53·3	76·0	53·0	64·8	64·2	4·6	8·5	2·1	— 1·8	E; ESE	SSE; SSW	0·0	0·0	0·0	105	0·14
27	..	29·740	68·1	53·9	59·8	54·8	78·4	54·0	64·6	63·5	5·0	8·8	4·1	+ 0·3	SW	SW	4·6	0·0	0·7	305	0·01
28	Perigee	29·705	69·5	53·3	59·8	51·9	82·6	47·0	64·0	63 0	7·9	13·3	4·2	+ 0·2	WSW	WSW	4·3	0·0	1·2	270	0·03
29	..	29·577	72·1	51·7	59·1	52·6	87·6	42·8	63·2	62·5	6·5	14·7	3·0	— 0·6	SW	WSW	11·5	0·0	1·5	570	0·06
30	New Greatest Dec. N.	29·463	66·3	50·5	57·1	47·9	79·7	37·5	63·0	62·0	9·2	15·8	3·1	— 3·1	SW	W by S	4·0	0·0	0·3	170	0·06
July 1	..	29·501	65·9	42·7	52·3	46·7	80·0	33·0	62·6	61·8	5·6	14·6	2·2	— 8·4	WSW; NW	N; NNW	3·0	0·0	0·4	70	0·01
2	..	29·726	67·0	44·2	55·6	49·0	84·8	33·0	62·0	61·5	6·6	16·3	1·0	— 5·5	W	SW	1·0	0·0	0·0	125	0·00
3	..	29·639	69·0	51·0	59·3	56·3	75·5	33·0	62·5	61·8	3·0	8·5	0·9	— 2·3	SSE	WSW	2·5	0·0	0·4	150	0·11
4	..	29·915	67·7	54·0	60·0	49·9	78·7	49·0	63·0	62·0	10·1	16·0	3·4	— 1·8	N	N	0·0	0·0	0·0	20	0·02
5	..	30·052	78·6	52·3	66·1	56·7	97·8	43·0	64·0	62·8	9·4	16·4	3·6	+ 4·2	ESE	S	0·0	0·0	0·0	15	0·00
6	..	29·943	84·3	52·5	74·0	60·1	100·9	43·8	66·5	64·0	13·9	23·0	4·9	+12·2	S	S; SSE	1·5	0·0	0·1	25	0·00
7	In Equator	29·759	76·2	58·2	66·2	57·8	86·0	53·5	67·2	65·0	8·4	11·6	5·3	+ 4·8	SE; SSW	SW	7·5	0·0	0·9	275	0·02
8	First Qr.	29·909	70·2	51·5	59·5	52·1	82·8	44·5	67·0	64·8	7·4	14·1	3·8	— 1·4	SW	WSW	6·0	0·0	0·8	230	0·01
9	..	29·720	60·7	53·5	57·7	55·6	62·8	50·0	65·5	64·2	2·1	3·2	0·0	— 2·9	WSW; SW	SW	4·8	0·0	1·0	210	0·38
10	Apogee	29·998	72·7	52·5	61·5	52·1	89·5	40·0	65·5	64·0	9·4	15·8	2·8	+ 0·8	N by E	N by E; NNE	0·0	0·0	0·0	75	0·01
11	..	30·293	73·9	48·3	61·0	52·3	91·7	36·2	65·5	64·5	8·7	15·9	1·5	0·0	N	NE; ESE	0·0	0·0	0·0	52	0·00
12	..	30·333	77·1	48·2	64·7	54·8	95·5	38·5	66·2	65·2	9·9	19·8	2·6	+ 3·4	ESE; ENE	E	0·0	0·0	0·0	65	0·00
13	..	30·288	81·4	49·6	68·8	58·0	100·2	34·5	67·0	66·0	10·8	19·2	0·9	+ 7·2	NE	NE; ESE	0·0	0·0	0·0	60	0·00
14	Greatest Declination S.	30·156	84·5	56·0	69·7	59·7	103·8	53·1	68·4	66·8	10·0	21·9	0·4	+ 7·9	ENE	NE	0·0	0·0	0·0	65	0·01
15	..	30·122	73·6	50·2	61·5	53·9	92·5	33·5	68·4	67·2	7·6	14·1	2·0	— 0·3	NE	NE; E by S; Calm	0·0	0·0	0·0	40	0·00
16	Full	30·110	75·4	43·8	61·6	53·7	94·8	29·5	68·2	67·5	7·9	19·1	2·9	+ 0·1	Calm; NE	N	0·0	0·0	0 0	50	0·00
17	..	30·028	77·5	52·8	65·3	54·0	94·3	40·0	68·4	67·5	11·3	18·8	3·4	+ 4·3	SSW; N by W	N by W; N by E	0·0	0·0	0·0	75	0·00
18	..	29·889	77·3	50·8	65·8	53·4	96·0	38·0	68·5	68·2	12·4	21·6	4·0	+ 5·1	Calm; N by W	WSW; Calm	0·0	0·0	0·0	145	0·00
19	..	29·568	68·7	52·8	61·1	54·6	79·3	44·0	68·4	67·5	6·5	12·1	2·3	+ 0·6	SSW; WSW	WSW; SSW	4·0	0·0	1·3	315	0·00
20	..	29·264	72·2	53·0	60·4	55·8	80·0	43·0	67·5	66·2	4·6	13·1	3·0	+ 0·1	SSW	SW; WSW	9·0	0·0	2·4	280	0·25
21	In Equator	29·615	70·2	47·1	60·6	51·2	85·2	39·5	67·2	65·8	9·4	18·3	1·1	+ 0·3	SW	SSW	6·0	0·0	0·9	240	0·16
22	..	29·706	71·4	54·0	62·6	53·9	85·0	48·5	66·8	66·0	8·7	14·4	3·8	+ 2·2	WSW	S by W; SSE	2·7	0·0	0·5	215	0·00
23	Last Qr.	29·730	75·2	54·5	63·2	57·3	90·5	50·0	66·2	65·8	5·9	13·2	1·2	+ 2·6	S	SSW	3·2	0·0	0·5	140	0·30
24	..	29·768	70·5	52·8	59·4	52·5	86·0	50·5	66·4	65·2	6·9	17·0	0·8	— 1·5	S; WSW	SSW	3·5	0·0	0·2	195	0·20
25	Perigee	29·593	66·2	52·5	58·7	55·0	66·8	46·0	65·5	65·0	3·7	7·8	1·8	— 2·6	SSW	SW	4·6	0·0	0·8	305	0·17
26	..	29·594	69·2	57·1	62·7	59·8	71·4	55·0	65·2	64·5	2·9	6·2	1·8	+ 1·2	SW	SW	5·2	0·0	1·5	205	0·05
27	Greatest Declination N.	29·752	70·0	54·5	60·3	53·9	84·0	49·0	65·0	64·2	6·4	12·0	2·1	— 1·4	W	SW	3·0	0·0	0·3	210	0·03
28	..	29·932	73·6	55·0	63·1	54·0	93·8	48·5	64·8	64·2	9·1	16·8	2·7	+ 1·4	WSW	WSW; Calm	0·6	0·0	0·0	85	0·00
29	..	29·972	75·2	56·3	63·6	56·8	101·3	50·0	65·2	64·5	6·8	13·1	2·0	+ 1·9	Calm	NW; Calm; SSW	0·0	0·0	0·0	45	0·00
30	New	29·679	71·2	52·6	62·8	55·7	87·0	50·0	65·5	65·0	7·1	12·8	1·0	+ 1·2	SSW	SW	0·0	0·0	0·0	115	0·03
31	..	29·366	72·8	57·2	62·6	56·9	91·0	53·2	66·2	65·0	5·7	16·7	1·7	+ 1·1	S; W	SW; S	3·0	0·0	0·3	305	0·32
Aug. 1	..	29·360	68·4	53·4	58·3	52·9	87·0	47·0	65·2	64·5	5·4	8·3	4·0	— 2·9	WSW	WSW	5·5	0·0	1·0	200	0·42
2	..	29·785	69·9	52·4	59·6	49·8	91·7	44·0	65·5	64·5	9·8	17·3	4·2	— 1·6	WSW	SSW	0·6	0·0	0·1	225	0·08
3	In Equator	29·675	74·7	50·4	56·8	52·1	65·8	47·2	66·0	64·2	4·7	7·8	3·2	— 4·5	SSW	WSW	0·0	0·0	0·0	75	0·38
4	..	29·530	69·8	46·9	59·4	51·3	91·8	42·0	64·6	63·8	8·1	15·8	1·5	— 2·2	WSW	SSW	3·0	0·0	0·1	170	0·04
5	..	29·384	68·9	51·4	60·5	54·9	78·0	42·5	64·4	63·5	5·6	7·8	3·4	— 1·1	S	SSW	5·0	0·0	1·1	280	0·07
6	Apogee	29·591	71·2	51·6	60·0	52·2	89·0	45·5	64·0	62·8	7·8	13·6	3·2	— 1·7	WSW	SW	4·0	0·0	1·2	260	0·12
7	First Qr.	29·801	70·2	48·8	58·9	49·3	90·5	42·0	63·6	63·0	9·6	15·7	3·8	— 2·8	SW	SSW	0·0	0·0	0·0	85	0·01
8	..	29·733	63·6	46·4	55·4	52·9	82·0	50·5	65·0	62·5	2·5	7·0	1·2	— 6·2	SSW	Calm	0·0	0·0	0·0	95	0·40
9	..	29·618	68·2	43·1	56·4	48·8	89·5	37·0	63·2	62·2	7·6	11·9	2·5	— 5·0	W by S	SW; Calm	2·0	0·0	0·2	145	0·04
10	..	29·866	71·3	45·0	58·2	49·5	95·0	41·0	63·2	62·5	8·7	18·0	1·5	— 3·0	Calm; W	WSW	1·5	0·0	0·1	135	0·40
11	Greatest Declination S.	29·919	69·6	48·8	58·6	52·8	86·0	48·0	63·0	62·5	5·8	14·6	1·3	— 2·5	Calm; WSW	S by W; SSE	0·0	0·0	0·0	30	0·12
12	..	29·883	68·4	55·6	60·2	56·1	75·5	50·5	63·2	62·5	4·1	10·1	0·8	— 0·9	SE; SW	Calm	0·0	0·0	0·0	70	0·03
13	..	29·855	65·6	55·5	58·3	52·4	73·6	54·0	63·0	62·2	5·9	11·1	1·2	— 2·9	Calm	Calm; ENE	0·0	0·0	0·0	90	0·10

MONTH and DAY, 1848.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
June 16	0 : 0	m : m	10, ci.-s, sc : 8, ci.-s, sc, r	5, ci.-s, sc : v, ci.-s, sc
17	0 : 0	s : 0	10, ci.-s, sc, r : 9, ci.-s, sc	10, ci.-s, sc
18	0 : 0	s : s, N	10, ci.-s, sc	10, ci.-s, sc, r
19	0 : 0	0 : w	10, ci.-s, sc, r	10, ci.-s, sc
20	0 : 0	m : m	10, ci.-s, sc : 10, ci.-s, sc, r	10, ci.-s, sc : 8, ci.-s, sc
21	s	s	10, cu, sc	v, cu, sc
22	s : s	s : 0	0	10, ci.-s
23	0	0	10, ci.-s, sc	10, ci.-s, sc : 10, ci.-s, sc, r
24	0 : 0	v : 0	10, cu, ci.-s, sc : 7, cu, ci.-s, sc	3, cu, ci.-s, sc : 10, cu, ci.-s, sc, r
25	0 : 0	0 : m : 0	10, ci.-s, sc, r	10, ci.-s, sc : 9, ci.-s, sc
26	0 : 0	0 : w	10, ci.-s, sc : 10, ci.-s, sc, r	10, ci.-s, sc
27	0	0	10, ci.-s, sc	10, ci.-s, sc, r : 10, ci.-s, sc
28	0 : 0	0 : 0	10	10 : 8
29	0 : w	0 : w : 0	10, cu, ci.-s, sc : 8, cu, ci.-s, sc, r	5, cu, ci.-s, sc : 3, cu, ci.-s, sc
30	0 : 0	PNv : v	10, cu, ci.-s, sc	v, cu, ci.-s, sc, r : 0
July 1	0 : 0	s : s	0, cu, ci.-s, sc : 6, cu, ci.-s, sc, r	2, cu, ci.-s, sc, r : 2, cu, ci.-s, sc
2	0 : v	v : 0	4, cu.-s, ci.-s, sc, r	4, cu.-s, ci.-s, sc
3	0 : m	0 : m : 0	10, r	10, r
4	0 : 0	v : v	v, ci.-s, sc, r : v, ci.-s, sc	10, ci.-s, sc
5	0 : 0	v : v	3, cu.-s, ci.-s, sc	3, cu.-s, ci.-s, sc
6	m : m : 0	v : v	0	1, cu : 0
7	0 : m	m : 0	2 : 10, r	v
8	0 : w	m, N : 0	1, ci.-s : 10, ci.-s, sc	10, ci.-s, sc, r
9	0	0	10, ci.-s, sc, r : 10, ci.-s, sc, r	10, ci.-s, sc, r : 9, ci.-s, sc
10	m : m	s : w	7, ci.-s, sc : 6, ci.-s, sc	7, ci.-s, sc
11	0 : s	0 : 0	9	5
12	0 : 0	0 : w : 0	0	1, li. c, h
13	0 : 0	0 : w : 0	0	0 : 7, ci.-s, h
14	0 : 0	0 : ssPNvv	10, f	0 : 8, l, t, r
15	0 : 0	m : s : s	9, l, t : 9	9 : 5
16	0 : 0	s : 0	v, ci.-s, h	v, ci.-s, h
17	0 : 0	s : 0	0 : v, ci.-s	v, ci.-s
18	w : w	s : w	0 : 1, li. cl	0 : 1, li. cl
19	0 : m	m : 0	10	10 : 10, r
20	w : 0	0 : s	10, r	v, r, sqs, w, r : v
21	s : s	0 : m	v, ci.-s, cu, sc	v, ci.-s, cu, sc : 10, ci.-s, cu, sc, r
22	s : 0	s : s	4 : 0	v
23	0 : 0	m : m	10	8 : 10, r
24	w : m	0 : 0	10, cu, ci.-s, sc, r : 10, cu, ci.-s, sc	v, cu, ci.-s, sc
25	0 : 0	0 : w	9, ci.-s, sc : 9, ci.-s, sc, r	10, ci.-s, sc, r
26	0	0	10, ci.-s, sc, r	10, ci.-s, sc, r
27	0 : 0	w : w	0 : 10, ci.-s, sc	10, ci.-s, sc : 2, ci.-s, sc, r
28	0 : 0	m : 0	8, cu, cu.-s, ci.-s, sc	9, cu, cu.-s, ci.-s, sc
29	0 : 0	s : 0	10, cu, cu.-s, ci.-s, sc : 9, cu, cu.-s, ci.-s, sc	8, cu, cu.-s, ci.-s, sc : 7, cu, cu.-s, ci.-s, sc, ms
30	m	m	10, cu.-s, ci.-s, sc	10, cu.-s, ci.-s, sc, r
31	0 : 0	0 : w	10, ci.-s, sc : 10, ci.-s, sc, r	v, ci.-s, sc : 10, ci.-s, sc
Aug. 1	0 : 0	sPNv, sp, g. cur : 0	10, cu, ci.-s, sc, r, t	8, cu, ci.-s, sc : 5, cu, ci.-s, sc, m
2	m : 0	m : m	8, cu, ci.-s, sc	9, cu, ci.-s, sc : 10, cu, ci.-s, sc, r
3	0 : ss	0 : ss	10, ci.-s, sc	10, ci.-s, sc : 10, ci.-s, sc, r, t
4	v	v	0 : v, cu, ci.-s, sc	v, cu, ci.-s, sc
5	w : 0	m : 0	10, ci.-s, sc, r	9, ci.-s, sc, r : 9, ci.-s, sc, r, l, t
6	s	s	3, cu, ci.-s, sc	10, cu, ci.-s, sc : 7, cu, ci.-s, sc, r
7	0 : m	m : m	0 : 3, cu, ci.-s, sc	5, cu, ci.-s, sc : 2, cu, ci.-s, sc, ms
8	s : s : s, N	s, N : w : w	10, ci.-s, sc	10, ci.-s, sc, r : 9, ci.-s, sc, r
9	0 : 0	s, N : 0	0 : v	v, r : 0, ms
10	0 : w	w : s, N, sp, g. cur,	0	v : v, t, l, ms
11	0 : 0	v : 0	9	10 : 10, r
12	0 : 0	0 : s : 0	10, ci.-s, sc	10, ci.-s, sc
13	v	v	10, ci.-s, sc	10, ci.-s, sc : 10, ci.-s, sc, r

MONTH and DAY, 1848.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers.								Difference between the Dew Point Temperature and Air Temperature.			Difference between the Mean Temperature of the Day and the Mean Temperature of the same day on an Average of 7 years.	Wind as deduced from Anemometers.					Rain in Inches read at Midnight.
			Dry.			Dew Point.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at Midnight.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at Midnight.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometer, read at 9h A. M. next morning.						Osler's.				Wheewell's.	
															General Direction.		Pressure in lbs. on the square foot.			
			Highest.	Lowest.	Mean Daily Value.	Mean Daily Value.			Highest.	Lowest.	Mean Daily Value.	Greatest.	Least.		A.M.	P.M.	Greatest.	Least.	Mean of 24 Obs.	Amount of Horizontal Movement of the Air on each Day.	
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	in.
Aug. 14	Full	29·695	57·8	53·4	54·8	54·1	59·0	53·0	62·5	61·8	0·7	2·2	0·6	— 6·5	ENE	NE	1·8	0·0	0·1	60	0·70
15	..	29·756	64·4	53·7	57·4	54·1	70·5	50·0	63·0	61·5	3·3	6·3	1·1	— 4·1	NNE	Calm; ENE	0·0	0·0	0·0	70	0·01
16	..	29·682	72·0	53·2	61·9	58·0	85·5	46·0	62·5	61·8	3·9	8·0	0·6	+ 0·2	Calm; ENE	Calm	0·0	0·0	0·0	60	0·01
17	In Equator	29·778	68·1	54·2	59·7	54·7	80·9	46·0	62·4	61·0	5·0	11·2	0·2	— 2·1	Calm; W	SW	1·0	0·0	0·1	110	0·04
18	..	29·867	70·4	49·5	60·2	53·3	91·0	39·0	63·0	62·0	6·9	14·2	2·3	— 1·5	Calm; SE	S	0·0	0·0	0·0	200	0·00
19	Perigee	29·643	67·9	53·2	60·4	56·9	74·8	42·0	62·6	62·0	3·5	7·5	2·0	— 1·2	SSW	SW; W by S	2·0	0·0	0·2	135	0·05
20	..	29·798	68·9	47·8	58·2	48·3	88·7	37·5	62·6	61·8	9·9	16·3	2·6	— 3·0	SSW; Calm	SSW	0·0	0·0	0·0	180	0·00
21	Last Qr.	29·488	67·1	47·7	57·8	50·6	75·7	43·0	62·4	61·0	7·2	14·6	3·6	— 2·7	S; SSE; SSW	WSW	8·5	0·0	2·6	300	0·38
22	..	29·467	64·6	50·2	56·0	47·6	76·8	45·0	61·5	60·2	8·4	13·5	6·2	— 3·7	W by S	SW	5·0	0·0	0·5	..	0·15
23	..	29·573	68·9	48·0	58·7	49·3	88·2	43·0	61·0	60·2	9·4	14·6	4·8	— 0·8	SSW; WSW	WSW; WNW; Calm	1·3	0·0	0·0	..	0·01
24	Greatest Declination N.	29·814	65·4	46·0	55·0	47·9	80·7	35·0	60·6	60·0	7·1	13·2	1·8	— 4·8	Calm; W by S	WSW	3·0	0·0	0·0	..	0·03
25	..	29·919	66·8	44·8	56·3	51·6	85·0	33·5	60·5	59·8	4·7	9·1	2·8	— 3·9	Calm	Calm; SW	0·0	0·0	0·0	..	0·01
26	..	29·722	69·6	54·8	61·8	57·7	82·2	54·5	61·0	60·0	4·1	5·9	1·6	+ 1·5	S by W	SSW	1·0	0·0	0·0	..	0·08
27	..	29·734	70·8	62·8	63·7	62·3	79·3	58·4	62·0	60·0	1·4	4·7	1·6	+ 3·2	SW	SSW	2·5	0·0	0·5	..	0·02
28	New	29·775	74·5	59·4	65·2	59·4	91·5	55·5	63·0	61·5	5·8	12·3	2·9	+ 4·6	SSW	SSW; Calm	4·0	0·0	0·9	..	0·01
29	..	29·864	68·2	54·8	60·5	55·7	80·1	47·0	63·4	61·8	4·8	9·8	1·2	— 0·1	Calm	SSW; WSW	2·0	0·0	0·0	..	0·02
30	In Equator	29·919	65·0	50·6	59·1	49·9	92·5	38·0	63·4	61·8	9·2	17·9	1·4	— 1·4	Calm; W	WSW; Calm	0·0	0·0	0·0	..	0·01
31	..	29·933	65·0	48·8	54·9	49·5	84·0	50·0	62·8	61·5	5·4	12·8	1·9	— 5·3	Calm	NNW; NNE; W	0·0	0·0	0·0	..	0·85
Sept. 1	..	30·084	64·3	45·4	56·6	47·4	86·3	37·8	62·5	61·4	9·2	17·8	2·5	— 3·1	N by W	N; Calm	0·0	0·0	0·0	..	0·00
2	..	30·245	72·0	45·6	58·2	51·7	88·3	39·0	62·5	61·5	6·5	11·4	0·6	— 1·1	WSW	WSW; Calm	0·0	0·0	0·0	..	0·00
3	Apogee	30·195	73·3	48·7	61·1	54·3	89·5	41·5	62·5	61·5	6·8	12·8	5·4	+ 2·3	Calm	Calm	0·0	0·0	0·0	..	0·00
4	..	29·986	77·0	46·3	62·5	55·1	92·3	38·5	63·0	62·0	7·4	15·5	0·2	+ 4·0	Calm; SW	SSW; S; SSE	0·0	0·0	0·0	..	0·00
5	First Qr.	29·691	79·6	54·6	68·1	58·0	96·4	54·0	63·5	62·8	10·1	18·7	2·6	+ 9·6	SSE	SSW; Calm	0·0	0·0	0·0	..	0·00
6	..	29·762	70·3	52·8	60·8	53·7	86·0	38·2	63·5	63·0	7·1	12·0	2·6	+ 2·3	WSW	WSW	0·0	0·0	0·0	..	0·07
7	Greatest Declination S.	29·931	64·1	47·8	57·3	51·1	71·2	53·5	62·8	62·4	6·2	10·0	2·9	— 1·4	Calm; SW	WSW; Calm	0·0	0·0	0·0	..	0·00
8	..	29·818	65·1	55·8	58·0	50·2	83·0	46·0	63·0	62·5	7·8	13·1	5·7	— 1·2	Calm; SSW	SW	2·5	0·0	0·4	210	0·00
9	..	29·782	68·1	51·3	59·7	52·6	87·0	41·0	62·8	62·4	7·1	11·2	2·2	+ 0·2	SSW	SSW	1·7	0·0	0·1	255	0·00
10	..	29·569	67·0	50·2	57·5	52·7	73·5	47·0	..	61·5	4·8	9·4	2·3	— 2·3	SSW	SW; NNE	3·5	0·0	0·8	255	0·28
11	..	29·926	60·5	52·1	51·6	42·3	79·7	35·0	..	60·5	9·3	17·6	2·3	— 8·3	NNE	N by E	1·3	0·0	0·1	70	0·05
12	..	30·178	59·0	38·7	47·3	40·7	75·4	26·5	..	55·8	6·6	12·8	0·7	—12·6	W by S; NNE	N	0·0	0·0	0·0	40	0·00
13	Full	30·176	58·5	33·2	49·9	40·5	81·8	23·0	..	57·5	9·4	17·3	1·0	— 9·9	N	N	0·0	0·0	0·0	55	0·00
14	In Equator	30·137	64·0	42·4	52·3	45·2	74·0	28·0	..	57·0	7·1	12·8	2·9	— 7·4	N; SW	NNW; N by E	0·8	0·0	0·1	50	0·00
15	Perigee	30·281	65·5	39·2	52·5	43·8	86·8	27·0	..	57·2	8·7	17·2	0·7	— 6·8	NNE	NNE; S	0·0	0·0	0·0	15	0·00
16	..	30·307	68·5	38·9	54·7	46·4	90·8	27·0	..	56·8	8·3	16·2	1·4	— 4·0	S	Calm	0·0	0·0	0·0	5	0·00
17	..	30·208	68·5	35·9	55·9	49·8	84·0	26·5	..	56·5	6·1	13·8	0·9	— 2·4	Calm	Calm; WNW	0·0	0·0	0·0	65	0·00
18	..	30·101	65·5	35·6	51·4	47·2	88·0	25·0	..	56·8	4·2	11·1	0·5	— 6·3	WNW	N; Calm	0·0	0·0	0·0	10	0·00
19	Last Qr.	29·791	66·0	36·6	52·4	47·3	83·1	24·5	..	56·2	5·1	12·4	0·7	— 4·6	Calm	Calm	0·0	0·0	0·0	60	0·01
20	Greatest Declination N.	29·635	70·5	39·4	58·0	51·1	88·0	31·5	..	57·2	6·9	15·0	0·4	+ 1·7	Calm; S	SSE; Calm	0·0	0·0	0·0	75	0·01
21	..	29·682	73·5	39·2	57·9	51·8	92·0	28·9	..	57·5	6·1	15·9	0·0	+ 2·4	Calm	Calm	0·0	0·0	0·0	75	0·01
22	..	29·678	80·5	47·6	61·7	55·6	99·1	38·0	..	57·8	6·1	15·5	0·4	+ 6·9	Calm	ENE; Calm	0·0	0·0	0·0	100	0·00
23	..	29·502	67·5	52·6	59·7	57·8	78·8	40·0	..	58·5	1·9	4·8	0·0	+ 5·4	Calm; ENE	S by E	0·0	0·0	0·0	55	0·12
24	..	29·227	66·0	53·4	58·2	53·4	73·3	46·0	..	58·2	2·8	4·7	1·9	+ 2·5	Calm; N by E	E by S; ENE	0·0	0·0	0·0	60	0·30
25	..	29·303	69·5	53·4	60·6	55·6	86·4	48·0	..	58·5	5·0	11·4	1·6	+ 7·4	ENE	NE	0·3	0·0	0·0	160	0·01
26	..	29·464	62·0	55·4	57·1	56·1	67·0	52·0	..	58·0	1·0	3·2	0·2	+ 4·3	NE	NE	0·9	0·0	0·1	105	0·47
27	In Equator New	29·566	65·5	53·4	57·4	55·0	76·1	44·5	..	58·0	2·4	4·9	0·8	+ 5·1	NE	NE	0·0	0·0	0·0	87	0·00
28	..	29·620	57·0	52·9	55·3	54·6	58·9	51·0	..	57·8	0·7	1·9	0·6	+ 3·0	NE	ENE	0·0	0·0	0·0	105	0·75
29	..	29·558	56·5	52·4	54·2	53·5	58·3	45·5	..	57·2	0·7	2·3	0·8	+ 1·7	N	N by W; SW	0·0	0·0	0·0	160	0·35
30	..	29·592	65·0	51·2	56·2	52·0	70·2	47·0	..	57·0	4·2	7·8	2·6	+ 3·1	SW	SSW	0·9	0·0	0·1	160	0·01
Oct. 1	Apogee	29·564	65·9	49·2	56·0	50·3	82·2	39·0	..	56·8	5·7	9·0	3·2	+ 2·4	SSW	Calm; SW	0·0	0·0	0·0	80	0·00
2	..	29·551	65·9	44·2	57·0	51·3	79·6	34·0	..	56·8	5·7	13·6	1·5	+ 3·3	SW; SE	SSE	0·0	0·0	0·0	135	0·03
3	..	29·646	65·6	51·1	57·3	49·7	84·0	48·0	..	56·8	7·6	14·6	2·0	+ 3·7	S by E; WSW	S by W; SSE	0·0	0·0	0·0	175	0·12
4	Greatest Declination S.	29·778	65·6	55·4	62·3	59·9	68·8	50·0	..	56·8	2·4	4·3	0·9	+ 9·0	S; SSW	SSW	2·9	0·0	0·8	255	0·11
5	First Qr.	30·018	69·4	55·6	62·5	58·6	79·8	48·5	59·0	57·2	3·9	5·4	2·7	+10·0	SSW	S	0·6	0·0	0·0	145	0·00
6	..	30·044	73·6	55·8	63·2	57·5	90·8	48·5	60·0	57·5	5·7	11·6	1·1	+11·5	SSE	S	0·0	0·0	0·0	80	0·00
7	..	29·986	73·2	50·4	63·7	57·9	91·8	45·0	60·8	58·0	5·8	11·1	0·2	+12·3	S by E	S by W	0·0	0·0	0·0	115	0·00
8	..	29·941	69·2	53·3	59·1	52·7	87·0	47·0	61·0	59·0	6·4	12·0	4·6	+ 7·7	SSW	SW	0·5	0·0	0·0	180	0·00
9	..	29·754	60·6	49·4	55·9	52·6	64·8	46·0	60·4	58·2	3·3	6·3	2·2	+ 4·5	SSW	SSW	4·0	0·0	0·9	300	0·13
10	..	29·603	59·2	47·6	52·7	45·9	71·0	40·0	59·5	56·4	6·8	9·7	3·5	+ 1·3	SW	W by S; WNW	4·0	0·0	0·6	155	0·01
11	In Equator	29·795	58·7	42·6	50·4	44·2	74·5	35·8	58·4	55·2	6·2	11·8	2·1	— 1·0	W; NNW	N	0·0	0·0	0·0	75	0·00

MONTH and DAY, 1848.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Aug. 14	0	0	10, ci.-s, sc, r	10, ci.-s, sc, r : 10, ci.-s, sc
15	0 : 0	v : v	10, ci.-s, sc	9, ci.-s, sc
16	m	m	10, ci.-s, sc	10, ci.-s, sc, so. ha : 10, ci.-s, sc, f
17	0 : 0	0 : w	10, f : 7	10 : 7, r
18	0 : s	0 : 0	10 : 6	7 : 9
19	0 : 0	0 : m : 0	10, ci.-s, sc, r	10, ci.-s, sc : 2, ci.-s, sc
20	0 : 0	m : 0	3, cu	3, cu
21	0 : 0	m : 0	10, cu, ci.-s : 9, cu, ci.-s, r	5, cu, ci.-s, r : 2, cu, ci.-s, r
22	0 : 0	s : 0	10, cu, ci.-s, sc : 9, cu, ci.-s, sc, hl, r	5, cu, ci.-s, sc, hl, r : 0
23	0 : m	m : 0	5, cu, ci.-s, sc	5, cu, ci.-s, sc : 5, cu, ci.-s, sc, r, l
24	0	0	v, cu, ci.-s, sc, r	v, cu, ci.-s, sc : 2, cu, ci.-s, sc, l
25	0 : 0	m : m	10, ci.-s, sc, r	9, ci.-s, sc
26	0 : 0	0 : m	10, ci.-s, sc, r	9, ci.-s, sc
27	0	0	10, ci.-s, sc, r	10, ci.-s, sc, r
28	0 : 0	0 : s : 0	10, cu, cu.-s, ci.-s, sc	9, cu, cu.-s, ci.-s, sc : 10, cu, cu.-s, ci.-s, sc, r
29	0	0	8, ci.-s, sc : 9, ci.-s, sc	10, ci.-s, sc, r : 5, ci.-s, sc
30	0	0	10, cu, cu.-s, ci.-s, sc : 5, cu, cu.-s, ci.-s, sc	2, cu, cu.-s, ci.-s, sc : 0
31	0 : 0	0 : ss, N, sp, g. cur : 0	5, cu, ci.-s, sc : 2, cu, ci.-s, sc	10, cu, ci.-s, sc : 10, cu, ci.-s, sc, l, t, r
Sept. 1	0 : m	m : m	10, cu, ci.-s, h : 6, cu, ci.-s, h	5, cu, ci.-s, h : 1, cu, ci.-s, h
2	0 : 0	s : 0	0 : v, ci.-s, sc, h	v, ci.-s, sc, h : 0
3	s	s	0, h	0, h
4	0 : s	0 : 0	0, f : 0	0
5	0 : 0	m : 0	0	7, cu, ci.-s, sc : 10, cu, ci.-s, sc, r, l
6	0 : 0	m : m	8, cu, ci.-s, sc, r	5, cu, ci.-s, sc : 0
7	0 : 0	0 : m : 0	2, ci.-s : 10, ci.-s, sc	10, ci.-s, sc
8	w : 0	0 : 0	10, ci.-s, sc	10, ci.-s, sc
9	0	0	3, ci.-s, sc : 9, ci.-s, sc	5, ci.-s, sc : 10, ci.-s, sc
10	0	0	10, ci.-s, sc	10, ci.-s, sc : 10, ci.-s, sc, r
11	0	0	0	9, ci.-s, sc : 7, ci.-s, sc, lu. ha
12	0 : 0	v : 0	3, ci.-s, sc : 9, ci.-s, sc	6, ci.-s, sc : 3, ci.-s, sc
13	0 : v	v : v	0	v, ci.-s, h : 10, ci.-s, h
14	s : s	0 : 0	10, ci.-s, sc	v, ci.-s, sc : v, ci.-s, sc, lu. ha
15	0 : 0	s : s	1, li. cl	1, li. cl
16	0 : 0	s : 0	0	0
17	0	0	0, h	0, h
18	0	0	10, cu, h : 2, cu, h	5, cu, h : 1, cu, h
19	0	0	8, cu.-s, h	5, cu.-s, : 0
20	0	0	0	0
21	0 : 0	0 : s, N : 0	0 : v, ci.-s, sc	v, ci.-s, sc
22	0 : 0	0 : m : 0	0, h : v, ci.-s, sc, h	v, ci.-s, sc, h : 0, l
23	0	0	8, ci.-s, sc : 10, ci.-s, sc	10, ci.-s, sc, r
24	0	0	10, ci.-s, sc, r	7, ci.-s, sc
25	0 : s	0 : 0	10, ci.-s, sc : v, ci.-s, sc	v, ci.-s, sc : 10, ci.-s, sc
26	0	0	10, ci.-s, sc, r	10, ci.-s, sc, r
27	0	0	10, ci.-s, sc, r : 10, ci.-s, sc	9, ci.-s, sc : 10, ci.-s, sc
28	0	0	10, ci.-s, sc : 10, ci.-s, sc, r	10, ci.-s, sc, r
29	0	0	10, ci.-s, sc, r	10, ci.-s, sc, r
30	0 : w	0 : v	10, ci.-s, sc : 8, ci.-s, sc	8, ci.-s, sc : 10, ci.-s, sc, r
Oct. 1	m : m	m : 0	10, ci.-s, sc	10, ci.-s, sc : 0
2	0	0	10, ci.-s, sc : 5, ci.-s, sc	10, ci.-s, sc : 10, ci.-s, sc, r
3	0 : 0	s : 0	10, cu, ci.-s, sc, r : 4, cu, ci.-s, sc	8, cu, ci.-s, sc : 10, cu, ci.-s, sc
4	0	0	10, ci.-s, sc, r	10, ci.-s, sc
5	0	0	10, ci.-s, sc	v, ci.-s, sc, h
6	0	0	0	0
7	0	0	10, ci.-s, sc : 7, ci.-s, sc	6, ci.-s, sc : 10, ci.-s, sc
8	0	0	10, ci.-s, sc : 9, ci.-s, sc	4, ci.-s, sc : 7, ci.-s, sc
9	0 : s, N, sp, g. cur,	0 : 0	9, ci.-s, sc	9, ci.-s, sc, r : 0
10	0	0	5, ci.-s, sc	5, ci.-s, sc, r
11	0 : s	0 : s	8, ci.-s, sc : 10, ci.-s, sc	7, ci.-s, sc : 3, ci.-s, sc

MONTH and DAY, 1848.	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 shewn by a Self-Registering Thermometer read at Midnight.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at Midnight.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometer, read at 9h A.M. next morning. Highest.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometer, read at 9h A.M. next morning. 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 7 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.	Whewell's Amount of Horizontal Movement of the Air on each Day.	Rain in Inches read at Midnight.
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	in.
Oct. 12	Full	29·840	57·5	41·6	48·8	43·6	69·5	33·2	57·5	54·2	5·2	10·2	1·6	— 2·5	N; NW	N by W	0·0	0·0	0·0	105	0·01
13	Perigee	29·907	58·4	40·5	50·0	44·8	70·3	46·0	57·0	53·0	5·2	10·4	1·7	— 1·0	N	NNE	1·0	0·0	0·1	135	0·02
14	..	29·925	55·3	41·0	48·0	45·7	64·1	33·5	56·2	52·5	2·3	6·8	0·9	— 2·7	NNE	NNE; N	1·8	0·0	0·1	60	0·25
15	..	29·702	51·4	42·0	45·8	44·3	54·4	36·0	55·0	51·5	1·5	5·5	0·5	— 4·5	N; NNW	NW; NNE	0·0	0·0	0·0	30	0·09
16	..	29·613	55·1	42·2	49·2	47·1	59·0	37·5	54·0	50·5	2·1	5·4	0·0	— 0·3	NNE; N	N; NNW	0·0	0·0	0·0	140	0·03
17	Greatest Declination N.	29·712	50·9	36·0	45·7	40·0	56·1	33·0	54·0	49·8	5·7	9·2	3·1	— 3·1	N by W	N; NNW	3·0	0·0	0·3	205	0·01
18	..	29·476	41·3	33·8	38·0	33·7	43·9	34·0	52·0	47·5	4·3	7·8	2·3	—10·2	NNW	N	4·5	0·0	1·3	265	0·01
19	Last Qr.	29·552	52·0	37·6	44·7	40·1	64·4	35·0	50·5	47·0	4·6	6·8	2·8	— 2·9	N	N	3·0	0·0	0·5	210	0·00
20	..	29·653	50·8	43·3	45·9	44·0	52·0	41·5	49·5	46·0	1·9	4·6	1·0	— 1·1	N by E	N; NE	3·2	0.0	0·5	75	0·56
21	..	29·717	47·0	37·6	43·4	41·5	51·0	31·0	48·8	45·8	1·9	4·2	0·5	— 3·1	N; ENE; SW	SW	0·7	0·0	0·0	150	0·11
22	..	29·528	56·6	36·6	50·2	47·5	58·5	30·0	48·4	45·8	2·7	6·0	0·2	+ 4·2	S; SSE	S by E	3·6	0·0	0·5	160	0·17
23	..	29·452	56·6	44·9	53·3	49·3	57·5	41·2	49·5	46·0	4·0	9·8	1·5	+ 7·8	S by E	S by E	4·0	0·0	0·9	245	0·23
24	In Equator	29·413	60·2	49·1	52·8	46·5	73·5	44·0	50·0	46·0	6·3	11·2	1·1	+ 7·7	SSW	SSW	3·5	0·0	0·6	225	0·16
25	..	29·350	56·9	44·9	51·1	45·6	68·0	38·0	50·0	47·5	5·5	11·2	3·2	+ 6·4	NE; S; WSW	SSW	10·0	0·0	1·5	205	0·12
26	..	29·724	59·5	38·8	50·3	46·6	75·1	33·0	(49·5)	48·0	3·7	10·3	1·3	+ 5·6	SSW; S	S by E	0·1	0·0	0·0	65	0·01
27	New	29·326	58·0	49·4	52·6	50·2	55·0	43·8	50·2	48·2	2·4	4·6	1·4	+ 7·7	SE	SW	3·8	0·0	0·6	205	0·42
28	Apogee	29·408	55·0	42·8	49·6	43·8	59·8	37·5	51·0	48·2	5·8	9·4	2·4	+ 4·2	S; SSW	S by W	8·0	0·0	0·9	185	0·24
29	..	29·165	54·5	43·7	48·0	44·9	57·0	36·8	49·2	47·2	3·1	7·2	1·7	+ 1·9	S by E	SSW; S by E	1·8	0·0	0·0	85	0·35
30	..	29·408	56·8	40·9	48·1	46·2	60·5	32·0	49·2	46·8	1·9	5·2	0·0	+ 1·5	SE	SSW	0·0	0·0	0·0	40	0·17
31	..	29·447	57·3	33·1	44·5	42·7	73·0	29·8	48·2	46·2	1·8	7·6	0·0	— 2·2	SSW	SSE	0·0	0·0	0·0	10	0·09
Nov. 1	Greatest Declination S.	29·426	51·1	41·8	46·2	45·2	53·5	42·0	48·0	46·2	1·0	2·4	0·2	— 0·4	SE	NW	0·0	0·0	0·0	60	0·08
2	..	29·621	52·7	38·2	45·1	40·3	59·5	33·5	48·0	46·2	4·8	6·7	0·5	— 1·1	NNW; WSW	SW	0·0	0·0	0·0	160	0·17
3	..	29·436	55·0	39·2	46·2	41·3	63·0	31·0	47·5	45·5	4·9	9·0	1·7	+ 0·2	SW; S	SSW	1·9	0·0	0·1	150	0·02
4	First Qr.	29·457	42·0	30·7	35·9	30·1	40·0	25·5	46·5	43·5	5·8	7·8	2·8	—10·2	NNW	NNW	3·6	0·0	1·0	160	0·01
5	..	29·565	46·8	25·9	40·6	36·4	47·5	39·0	44·8	41·5	4·2	6·8	3·1	— 5·7	SW	WSW	2·0	0·0	0·5	240	0·01
6	..	29·500	56·9	43·8	47·1	39·3	54·0	37·8	43·8	40·2	7·8	9·5	6·7	+ 0·8	WSW	SW	2·0	0·0	0·3	245	0·00
7	In Equator	29·546	48·5	32·9	41·0	33·2	56·2	29·0	..	40·2	7·8	12·7	1·0	— 5·3	SW	WNW	1·8	0·0	0·6	75	0·01
8	..	29·922	46·0	28·7	37·1	31·3	56·6	25·0	..	39·5	5·8	9·0	0·0	— 9·1	WNW	N by W	0·0	0·0	0·0	50	0·00
9	..	30·125	45·4	28·5	35·2	30·8	55·0	24·0	..	39·0	4·4	7·7	1·2	—10·8	N	N	1·9	0·0	0·3	140	0·00
10	..	30·231	46·8	30·1	38·3	34·5	57·4	28·5	..	38·8	3·8	8·2	0·5	— 7·4	N	N	0·0	0·0	0·0	120	0·01
11	Full Perigee	30·209	48·2	33·0	42·8	39·7	57·5	29·0	..	39·0	3·1	7·0	0·0	— 2·5	N by W	NNE	2·7	0·0	0·3	200	0·08
12	..	30·294	47·7	39·6	42·8	40·3	48·0	36·0	..	39·0	2·5	3·7	2·1	— 2·0	NNE	NNW	2·0	0·0	0·0	90	0·04
13	Greatest Declination N.	30·298	47·3	36·2	41·8	38·3	49·2	30·0	..	39·8	3·5	7·1	0·7	— 2·5	N by W	WNW; Calm	0·0	0·0	0·0	95	0·00
14	..	30·207	54·2	36·3	42·7	35·2	58·8	28·0	..	39·5	7·5	11·4	4·1	— 1·3	NW	NNW	1·0	0·0	0·1	100	0·00
15	..	30·326	43·5	28·8	36·5	28·7	53·0	25·0	..	..	7·8	10·6	6·5	— 7·3	NNW	N	0·0	0·0	0·0	80	0·00
16	..	30·189	45·7	27·9	38·5	33·0	56·8	23·5	..	..	5·5	9·5	2·9	— 5·2	SW	SW	0·0	0·0	0·0	205	0·00
17	Last Qr.	29·840	47·8	42·1	46·9	43·8	48·6	30·5	..	..	3·1	5·1	1·3	+ 3·3	SW	SW	3·5	0·0	0·9	250	0·03
18	..	29·514	49·8	43·3	45·2	39·5	52·0	36·5	..	..	5·7	7·9	4·1	+ 1·7	SSW	SW	1·7	0·0	0·2	185	0·01
19	..	29·857	44·7	34·3	40·3	33·5	54·5	35·5	..	..	6·8	11·5	3·0	— 3·2	S; WSW; NNW	NW; SSW	0·5	0·0	0·1	185	0·01
20	In Equator	29·635	57·0	38·0	51·4	46·9	57·0	30·0	..	..	4·5	7·2	2·0	+ 7·0	S	SSW	9·0	0·0	3·0	495	0·06
21	..	29·639	57·3	39·1	47·0	41·7	62·0	31·5	..	..	5·3	9·5	2·5	+ 3·6	SSW	S; SE	2·0	0·0	0·5	195	0·08
22	..	29·136	54·7	43·1	50·1	43·7	62·0	40·0	..	..	6·4	10 2	2·2	+ 6·7	S; SSE	SE	4·0	0·0	1·0	195	0·07
23	..	29·064	53·9	42·3	47·4	43·3	64·7	34·0	..	..	4·1	8·6	1·0	+ 3·9	SE	SSE; ESE	0·0	0·0	0·0	110	0·04
24	Apogee	29·663	46·7	31·3	40·6	33·9	54·1	25·5	..	..	6·7	15·4	0·5	— 2·9	NNW	NNW	0·7	0·0	0·2	15	0·00
25	New	29·928	47·8	28·4	41·1	36·4	50·0	24·5	..	..	4·7	7·6	0·0	— 2·4	SW; S	SSE; S	3·0	0·0	0·5	255	0·03
26	..	29·760	56·3	46·7	51·6	46·5	66·0	44·0	..	..	5·1	8·2	2·4	+ 8·0	S	WSW	2·1	0·0	0·3	70	0·01
27	..	29·802	51·3	44·2	47·4	43·9	57·6	40·5	..	..	3·5	7·1	1·3	+ 3·8	SW	WSW	0·5	0·0	0·0	215	0·50
28	Greatest Declination S.	29·924	53·5	42·9	49·2	44·6	54·4	42·0	..	..	4·6	6·9	2·8	+ 5·6	WSW; SW	SW	5·7	0·0	1·8	305	0·00
29	..	29·766	56.8	51·2	53·6	50·5	55·8	48·5	..	..	3·1	4·0	2·2	+10·0	SW	SW	6·0	0·2	2·5	300	0·00
30	..	29·758	53·5	40·3	43·5	39·1	54·8	37·5	..	..	4·4	8·6	0·7	0·0	SW; WSW	WSW; SW	7·0	0·0	0·3	205	0·10
Dec. 1	..	29·484	49·2	35·5	42·3	39·1	..	31·0	..	..	3·2	6·2	1·5	— 1·0	S; S by E	WSW; S	8·0	0·0	0·7	295	0·24
2	..	29·321	45·2	33·3	39·6	34·6	52·6	30·5	..	..	5·0	9·4	2·0	— 3·4	S	SW; WSW	4·0	0·2	1·1	295	0·01
3	First Qr.	29·635	49·3	33·0	42·8	37·8	48·0	29·5	44·8	41·2	5·0	6·4	3·8	+ 0·5	WSW	SSW; S	3·8	0·0	0·7	215	0·01
4	..	29·080	53·3	43·5	48·4	43·6	55·0	37·0	44·2	41·5	4·8	6·8	2·9	+ 7·2	S	SW; SSW	12·0	0·0	2·8	280	0·21
5	In Equator	29·009	46·8	40·5	44·9	39·3	57·2	39·0	43·8	41·5	5·6	9·2	2·6	+ 4·4	SW	SW; SSW	4·7	0·0	1·4	295	0·21
6	..	29·185	51·8	39·0	46·6	41·4	56·3	38·5	43·5	41·0	5·2	6·6	3·2	+ 6·9	SW	SW	7·5	0·0	1·7	335	0·12
7	..	29·488	57·3	40·7	51·8	49·3	61·3	38·5	44·5	41·5	2·5	4·1	1·1	+12·4	SW	SSW	7·0	0·0	1·1	395	0·14
8	..	29·794	56·7	51·2	54·9	51·8	56·8	51·0	47·0	42·5	3·1	3·8	2·0	+15·7	SSW	SSW	3·3	0·0	0·9	320	0·05
9	Perigee	30·079	58·5	49·7	53·4	47·8	63·2	45·0	48·0	44·0	5·6	7·8	1·8	+14·4	SSW	SSW	4·0	0·0	1·1	200	0·00

MONTH and DAY, 1848.	ELECTRICITY. A.M.	ELECTRICITY. P.M.	CLOUDS AND WEATHER. A.M.	CLOUDS AND WEATHER. P.M.
Oct. 12	0	0	5, ci.-s, sc : 10, ci.-s, sc	10, ci.-s, sc : 0
13	0	0	3, ci.-s, sc	7, ci.-s, sc : 10, ci.-s, sc, r
14	0 : 0	m : 0	10, ci.-s, sc, r	9, ci.-s, sc, r : v, ci.-s, sc
15	0 : m, N	0 : 0	10, ci.-s, sc : 10, ci.-s, sc, r	10, ci.-s, sc, r : 10, ci.-s, sc
16	0	0	10, ci.-s, sc : 10, ci.-s, sc, r	9, ci.-s, sc
17	0	0	9, ci.-s, sc	10, ci.-s, sc, r : 10, ci.-s, sc
18	0	0	10, ci.-s, sc : 10, ci.-s, sc, sn	10, ci.-s, sc, r : 10, ci.-s, sc, a
19	0	0	8, cu, ci.-s, sc : v, cu, ci.-s, sc	10, cu, ci.-s : v, cu, ci.-s, sc
20	0 : 0	0 : m, N	10, ci.-s, sc, r	10, ci.-s, sc, r
21	0 : s	0 : w	10, ci.-s, sc, r	10, ci.-s, sc : 3, ci.-s, sc
22	0	0	10, ci.-s, sc	v, ci.-s, sc, r : v, ci.-s, sc, a
23	0	0	10, ci.-s, sc, r	10, ci.-s, sc, r
24	0	0	9, cu, ci.-s, sc : 5, cu, ci.-s, sc	10, cu, ci.-s, sc, so. ha : 10, cu, ci.-s, sc, r
25	0	0	10, cu, n, ci.-s, sc, r : v, cu, n, ci.-s, sc	v, cu, n, ci.-s, sc : 0, a, l
26	0	0	0	v, cu, sc
27	0	0	10, ci.-s, sc : 10, ci.-s, sc, r	v, ci.-s, sc, r
28	0	0	0 : v, ci.-s, sc, r	v, ci.-s, sc, r
29	0 : 0	s : s	8, ci.-s, sc : 8, ci.-s, sc, r	10, ci.-s, sc : 5, ci.-s, sc, r
30	0	0	0 : 5, ci.-s, sc, r	5, ci.-s, sc : 0
31	0	0	0, f : 2, ci.-s, sc, f	7, ci.-s, sc, r : 10, ci.-s, sc
Nov. 1	0	0	10, ci.-s, sc, f	10, ci.-s, sc : 10, ci.-s, sc, r
2	0	0	2, ci.-s, sc : 7, ci.-s, sc	10, ci.-s, sc : 3, ci.-s, sc
3	0	0	8, ci.-s, sc : 10, ci.-s, sc	10, ci.-s, sc
4	0	0	10, ci.-s, sc	10, ci.-s, sc, sn : 0
5	0	0	0 : 5, ci.-s, sc	10, ci.-s, sc, r
6	0	0	10, ci.-s, sc	10, ci.-s, sc
7	0	0	0	2 : 0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0 : 3, ci.-s, sc
11	0	0	10, ci.-s, sc : 10, ci.-s, sc, r	10, ci.-s, sc
12	0	0	10, ci.-s, sc, r	9, ci.-s, sc
13	0	0	6, ci.-s, sc : 10, ci.-s, sc	v, ci.-s, sc
14	0	0	10 : 0	0
15	0	0	10, ci.-s	5, ci.-s, : 0
16	0	0	0 : 8, ci.-s, sc	9, ci.-s, sc : 10, ci.-s, sc, r
17	0	0	10, ci.-s, sc	10, ci.-s, sc, r : 9, ci.-s, sc, a
18	0	0	5, ci.-s, sc : 10, ci.-s, sc	10, ci.-s, sc
19	0	0	0	0
20	0	0	10, ci.-s, sc	10, ci.-s, sc
21	0	0	0	0 : 3, a, r
22	0	0	10, ci.-s, sc : 9, ci.-s, sc	10, ci.-s, sc : 10, ci.-s, sc, r
23	0	0	10, ci.-s, sc : 5, ci.-s, sc	2, ci.-s, sc : 2, ci.-s, sc, r
24	0	0	8, ci.-s, sc	0, h
25	0	0	1, ci.-s, sc	10, ci.-s, sc : 10, ci.-s, sc, r
26	0	0	3, ci.-s, sc	3, ci.-s, sc : 10, ci.-s, sc, r
27	0	0	10, ci.-s, sc, r : 10, ci.-s, sc	9, ci.-s, sc : 10, ci.-s, sc
28	0	0	10, ci.-s, sc	8, ci.-s, sc : 10, ci.-s, sc
29	0	0	10, ci.-s, sc	10, ci.-s, sc : 10, ci.-s, sc, r
30	0	0	10, r : 0	10
Dec. 1	0	0	9, ci.-s, sc : 10, ci.-s, sc	9, ci.-s, sc : 10, ci.-s, sc, r, sq, w, h
2	0	0	2, li. cl	3, li. cl
3	0	0	10, ci.-s, sc : 10, ci.-s, sc, so. ha	9, ci.-s, sc : 10, ci.-s, sc
4	0	0	10, ci.-s, sc	9, ci.-s, sc, sqs, w, r, lu. ha
5	0 : 0	0 : s, N	v, sqs, w, r : v	v : v, sqs, w, r
6	0 : 0	s, N : 0	9, r	9, r
7	0	0	6 : 8, ci.-s, sc, r	10, ci.-s, sc, r
8	0	0	10, ci.-s, sc, r	10, ci.-s, sc, r
9	0	0	2	4, li. cl

MONTH and DAY, 1848.	Phases of the Moon.	Mean Daily Reading of the Barometer (corrected and reduced to 32° Fahrenheit).	Readings of Thermometers.								Difference between the Dew Point Temperature and Air Temperature.			Difference between the Mean Temperature of the Day and the Mean Temperature of the same day on an Average of 7 Years.	Wind as deduced from Anemometers.					Rain in Inches read at Midnight.
			Dry.			Dew Point.	Highest in the Sun, as shewn by a Self-Registering Thermometer read at Midnight.	Lowest on the Grass, as shewn by a Self-Registering Thermometer read at Midnight.	In the Water of the Thames, at Greenwich, by Self-Registering Thermometer, read at 9h A. M. next morning.						Osler's.				Wherwell's	
															General Direction.		Pressure in lbs. on the square foot.			
			Highest.	Lowest.	Mean Daily Value.	Mean Daily Value.			Highest.	Lowest.	Mean Daily Value.	Greatest.	Least.		A. M.	P. M.	Greatest.	Least.	Mean of 24 Obs.	Amount of Horizontal Movement of the Air in each Day.	
		in.	°	°	°	°	°	°	°	°	°	°	°	°			lbs.	lbs.	lbs.	miles	in.
Dec. 10	Full	30·120	62·4	46·6	54·3	49·1	75·0	34·0	47·8	45·0	5·2	13·8	4·2	+10·1	SSW	S; S by E	0·0	0·0	0·0	120	0·00
11	Greatest Declination N.	30·058	56·8	44·4	50·8	45·6	64·6	36·0	47·6	45·2	5·2	8·0	1·8	+ 6·5	S by W; S by E	S; S by W	0·8	0·0	0·0	185	0·00
12	..	30·059	54·9	48·0	51·9	48·6	56·0	42·0	48·0	45·5	3·3	6·2	1·1	+ 9·2	S	SSW; SW	2·0	0·0	0·3	185	0·00
13	..	29·913	58·6	48·0	53·3	45·3	67·7	40·0	47·8	45·5	8·0	13·3	2·9	+ 5·5	S by W	S by W; SSE	1·0	0·0	0·0	165	0·00
14	..	29·689	52·0	43·8	47·7	43·8	59·0	35·0	47·4	45·0	3·9	7·7	2·3	+ 3·6	SSE	SSE	2·5	0·0	0·5	175	0·16
15	..	29·643	51·3	42·5	50·8	47·4	53·8	39·0	47·2	44·8	3·4	5·3	1·8	+ 7·0	SSE; ESE	S; S by W	5·0	0·0	1·1	205	0·08
16	..	29·677	50·5	37·8	42·3	41·7	49·0	38·0	47·0	44·8	0·6	1·3	0·0	+ 1·7	SSW; NNE	NNE; N by E	0·0	0·0	0·0	105	0·68
17	Last Qr.	29·823	45·0	35·9	41·4	38·4	56·0	33·0	46·7	45·1	3·0	15·3	2·4	+ 0·8	NNW	Calm	0·0	0·0	0·0	5	0·05
18	In Equator	29·714	52·0	37·4	45·8	43·0	62·8	30·0	45·8	44·4	2·8	5·7	1·0	+ 5·1	ESE	SE	0·5	0·0	0·0	80	0·02
19	..	29·798	48·0	43·1	45·9	43·8	51·2	40·0	44·8	44·4	2·1	3·3	0·6	+ 5·9	SE	ESE	0·3	0·0	0·0	65	0·00
20	..	30·136	45·7	27·8	37·3	31·5	44·9	24·0	44·7	42·4	5·8	6·8	2·9	− 2·2	NE	NE	2·3	0·0	0·4	160	0·00
21	..	30·238	35·3	25·0	29·9	23·5	44·6	20·5	43·3	38·8	6·4	9·1	1·6	− 9·1	ENE	ENE	1·0	0·0	0·2	90	0·00
22	Apogee	30·241	39·8	26·6	32·9	27·0	51·0	18·5	41·3	36·4	5·9	12·7	1·8	− 5·6	NE	NE	2·0	0·0	0·3	80	0·00
23	..	30·176	32·4	22·4	29·6	25·2	34·0	18·0	41·3	34·0	4·4	5·9	2·3	− 8·8	ENE	E	0·4	0·0	0·0	60	0·00
24	..	29·851	36·1	25·6	33·0	29·5	45·5	22·0	36·5	31·8	3·5	7·5	1·5	− 5·3	ENE	E	2·0	0·0	0·1	140	0·00
25	New Greatest Declination S.	29·839	46·8	34·8	44·0	41·5	55·7	31·5	36·5	31·8	2·5	4·0	1·0	+ 6·0	E; SE	SE	0·0	0·0	0·0	170	0·00
26	..	29·912	52·2	42·6	48·4	45·9	52·0	36·0	38·2	33·0	2·5	3·7	1·2	+10·5	SSE	SSE; S	2·6	0·0	0·6	190	0·01
27	..	29·988	52·0	41·5	45·8	41·6	57·5	37·5	39·5	34·5	4·2	5·7	1·4	+ 7·9	S	Calm; NNE	0·6	0·0	0·2	170	0·20
28	..	29·957	44·0	37·7	41·3	38·5	50·9	31·0	41·0	35·8	2·8	4·3	1·9	+ 3·3	NNE; N	N	1·0	0·0	0·3	85	0·23
29	..	30·074	41·9	37·3	39·9	37·6	43·6	30·0	41·4	36·8	2·3	3·1	1·3	+ 1·4	NNW	NNW; Calm	0·0	0·0	0·0	5	0·00
30	..	29·990	41·4	32·6	36·3	34·3	54·4	28·8	41·8	38·8	2·0	5·0	0·7	− 2·4	Calm	N; Calm	0·0	0·0	0·0	5	0·00
31	..	30·020	39·8	35·2	36·7	35·0	40·0	34·0	41·5	39·0	1·7	2·0	1·3	− 2·3	Calm	Calm	0·0	0·0	0·0	40	0·00

MONTH and DAY, 1848.	ELECTRICITY.		CLOUDS AND WEATHER.	
	A. M.	P. M.	A. M.	P. M.
Dec. 10	0 : 0	s : s	5, li. cl, h	3, li. cl, h
11	0	0	10, ci.-s : 1, ci.-s	5, ci.-s, sc : 10, ci.-s, sc, lu. co
12	0	0	10, ci.-s, sc	9, ci.-s, sc : 1, li. cl
13	0	0	3, li. cl	3, li. cl
14	0 : 0	w, N : 0	1	10, ci.-s, sc, r
15	0	0	10, sqs, w, r	9, sqs, w, r
16	0	0	10, ci.-s, sc, r	10, ci.-s, sc, r
17	0 : 0	s : 0	0	2, ci.-s : 10, ci.-s, r
18	0 : s	0 : 0	10, ci.-s, sc : 5, ci.-s, sc	3, ci.-s, sc : 10, ci.-s, sc, r
19	0 : 0	s : 0	10, ci.-s, sc	10, ci.-s, sc
20	0	0	10, ci.-s, sc	10, ci.-s, sc : 5, ci.-s, sc
21	0 : 0	w : 0	0	0
22	0	0	0	0 : v
23	w	w	v, ci.-s, sc	v, ci.-s, sc
24	0 : 0	v : 0	8, ci.-s, sc	8, ci.-s, sc : 10, ci.-s, sc
25	0 : m	0 : 0	10, ci.-s : 9, ci.-s	9, ci.-s
26	0	0	10, ci.-s, sc	10, ci.-s, sc
27	0 : 0	0 : s : s, N	5	10 : 10, r
28	0 : m	m : m	10, ci.-s, sc, r : 8, ci.-s, sc	7, ci.-s, sc : 10, ci.-s, sc
29	m	m	10, ci.-s, sc	10, ci.-s, sc
30	0 : 0	m : 0	10, ci.-s, sc : 8, ci.-s, sc	10, ci.-s, sc, r : 5, ci.-s, sc, r
31	0	0	10, ci.-s, sc	10, ci.-s, sc

MAXIMA AND MINIMA READINGS OF THE BAROMETER IN THE YEAR 1848.

The following table contains the highest and lowest readings of the Barometer, reduced to 32° of Fahrenheit, as taken by the eye. From comparison with the Photographic Records, and from general observation, there is good reason to think that these readings do not sensibly differ from the true maxima and minima, although the times may sometimes be sensibly erroneous. The photographic apparatus for the barometer was not in 1848 sufficiently perfect to allow absolute measures to be taken from the records.

Maxima.			Minima.		
Approximate Mean Solar Time, 1848.		Reading.	Approximate Mean Solar Time, 1848.		Reading.
	d h m	in.		d h m	in.
January	11. 12. 0	30·374	January	7. 3. 0	29·386
	24. 21. 0	30·278		18. 12. 0	29·223
February	2. 21. 0	30·274		31. 3. 0	29·106
	13. 0. 0	29·944	February	10. 12. 0	28·598
	17. 21. 0	30·333		15. 3. 0	29·373
	23. 12. 0	29·229		22. 18. 0	28·888
	27. 21. 0	29·343		25. 21. 45	28·299
March	3. 18. 0	30·070		28. 21. 0	28·530
	7. 21. 0	30·147	March	6. 18. 0	29·620
	13. 12. 0	29·716		11. 22. 50	28·582
	24. 21. 0	30·000		20. 18. 0	28·630
April	4. 0. 0	29·946		27. 12. 0	29·540
	14. 12. 0	29·928	April	10. 12. 0	29·183
	26. 12. 0	29·799		20. 6. 0	29·146
May	10. 18. 0	30·217		27. 21. 0	29·566
	22. 18. 0	30·189	May	17. 6. 0	29·155
June	7. 0. 0	29·787	June	2. 18. 0	29·138
	20. 0. 0	30·015		12. 18. 0	29·347
	26. 0. 0	29·937		23. 21. 0	29·442
July	4. 21. 0	30·072		29. 6. 0	29·400
	12. 0. 0	30·344	July	7. 3. 0	29·745

Maxima.			Minima.		
Approximate Mean Solar Time, 1848.		Reading.	Approximate Mean Solar Time, 1848.		Reading.
	d h m	in.		d h m	in.
July	24. 6. 0	29·793	July	20. 3. 0	29·146
	28. 21. 0	30·000		26. 6. 0	29·545
August	2. 12. 0	29·817		31. 18. 0	29·244
	10. 21. 0	29·954	August	5. 12. 0	29·335
	17. 21. 0	29·937		14. 6. 0	29·631
	25. 0. 0	29·947		21. 3. 0	29·383
September	2. 0. 0	30·262		26. 12. 0	29·702
	6. 21. 0	29·954	September	5. 18. 0	29·631
	15. 21. 0	30·345		10. 6. 20	29·496
October	5. 21. 0	30·064		24. 12. 0	29·223
	13. 21. 0	29·944	October	10. 0. 0	29·545
	21. 6. 0	29·777		18. 3. 0	29·429
	26. 3. 0 26. 6. 0	29·749		24. 18. 0	29·111
November	2. 6. 0	29·650		27. 0. 0	29·221
	4. 22. 50	29·657	November	3. 12. 0 3. 18. 0	29·319
	15. 0. 0	30·348		6. 18. 0	29·398
	19. 10. 0	29·952		18. 12. 0	29·417
	27. 21. 0	29·990		23. 12. 0	29·048
December	9. 22. 50	30·184	December	4. 18. 0	28·834
	22. 12. 0	30·266		15. 3. 0	29·548
	28. 21. 0	30·113		24. 12. 0	29·709

READINGS OF THE THERMOMETERS SUNK IN THE GROUND.

(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.

Day of the Month, 1848.	Reject 51. January.	Reject 50 February.	Reject 49 March.	Reject 49 April.	Reject 49 May.	Reject 49 June.	Reject 49 July.	Reject 50 August.	Reject 50 September.	Reject 51 October.	Reject 52 November.	Reject 51 December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	51·65	51·20	50·46	49·74	49·12	49·03	49·34	50·03	50·87	S	52·12	52·14
2	S	51·20	50·42	S	49·11	49·03	S	50·06	50·90	51·59	52·12	52·16
3	51·71	51·19	50·43	49·69	49·08	49·00	49·42	50·06	S	51·59	52·14	S
4	51·66	51·18	50·40	49·69	49·12	S	49·40	50·11	50·95	51·62	52·11	52·16
5	51·64	51·17	S	49·64	49·12	40·04	49·47	50·13	50·98	51·67	S	52·12
6	51·63	S	50·34	49·59	49·12	49·08	49·49	S	50·98	51·69	52·14	52·16
7	51·61	51·12	50·30	49·58	S	49·07	49·49	50·18	51·00	51·77	52·14	52·18
8	51·58	51·10	50·27	49·55	49·11	49·07	49·51	50·19	51·02	S	52·10	52·18
9	S	51·05	50·28	S	49·10	49·04	S	50·20	51·04	51·69	52·13	52·18
10	51·56	51·04	50·24	49·53	49·09	49·08	49·55	50·25	S	51·69	52·14	S
11	51·54	51·03	50·26	49·51	49·10	S	49·56	50·28	51·07	51·73	52·13	52·12
12	51·55	51·00	S	49·51	49·09	49·08	49·59	50·28	51·09	51·71	S	52·10
13	51·56	S	50·16	49·47	49·09	49·10	49·63	S	51·11	51·74	52·17	52·11
14	51·52	50·96	50·14	49·46	S	49·09	49·65	50·34	51·14	51·77	52·15	52·07
15	51·51	50·90	50·13	49·40	49·08	49·12	49·67	50·35	51·16	S	52·17	52·06
16	S	50·88	50·07	S	49·04	49·16	S	50·43	51·20	51·77	52·16	52·08
17	51·48	50·86	50·05	49·35	49·06	49·17	49·71	50·44	S	51·82	52·16	S
18	51·44	50·88	50·04	49·34	49·04	S	49·73	50·45	51·25	51·75	52·18	52·06
19	51·44	50·82	S	49·29	49·00	49·17	49·74	50·51	51·26	51·83	S	52·05
20	51·40	S	49·94	49·25	49·08	49·19	49·75	S	51·30	51·85	52·19	51·98
21	51·40	50·76	49·90	49·18	S	49·19	49·78	50·53	51·33	51·85	52·20	51·98
22	51·39	50·74	49·90	49·17	49·00	49·24	49·82	50·54	51·34	S	52·18	51·95
23	S	50·72	49·88	S	49·04	49·23	S	50·60	51·35	51·90	52·18	51·92
24	51·37	50·70	49·86	49·15	49·04	49·26	49·83	50·60	S	51·94	52·15	S
25	51·33	50·67	49·84	49·13	49·03	S	49·84	50·65	51·39	51·98	52·16	51·94
26	51·28	50·64	S	49·13	49·05	49·27	49·89	50·68	51·43	52·00	S	51·93
27	51·29	S	49·81	49·10	49·03	49·28	49·88	S	51·45	52·00	52·16	51·91
28	51·24	50·56	49·80	49·11	S	49·33	49·94	50·76	51·43	52·04	52·20	51·88
29	51·20	50·52	49·78	49·12	49·05	49·33	49·98	50·76	51·48	S	52·18	51·88
30	S		49·76	S	49·04	49·34	S	50·77	51·53	51·99	52·18	51·83
31	51·25		49·74		49·01		49·98	50·80		52·08		S
	12·29	22·89	29·20	9·68	1·84	3·99	15·64	10·98	31·05	21·06	4·84	27·13

The letter *S* denotes that the day was Sunday.

From 1846, April, to 1847, December, this thermometer was read every two hours, night and day (excepting Sundays and a few other days). During that interval of time, the monthly mean of the readings at noon was found in twelve instances to be greater by 0°·01 than the monthly mean of all the observations; in one instance the excess was 0°·02, and in another case it amounted to 0°·03. In all the remaining cases the means of the noon observations agreed precisely with the means of all the observations.

(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 Noon on every Day, except Sundays.

Day of the Month, 1848.	Reject 48 January.	Reject 46 February.	Reject 46 March.	Reject 46 April.	Reject 47 May.	Reject 49 June.	Reject 52 July.	Reject 54 August.	Reject 55 September.	Reject 54 October.	Reject 52 November.	Reject 50 December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	50·82	48·28	46·50	46·52	47·51	49·68	51·97	54·08	55·18	S	54·52	52·05
2	S	48·28	46·64	S	47·54	49·76	S	54·16	55·20	55·33	54·45	52·03
3	50·80	48·18	46·72	46·42	47·52	49·84	52·18	54·18	S	55·28	54·42	S
4	50·66	48·10	46·74	46·56	47·62	S	52·20	54·27	55·25	55·28	54·28	51·87
5	50·55	47·97	S	46·50	47·64	50·05	52·33	54·30	55·29	55·31	S	51·72
6	50·48	S	46·68	46·50	47·68	50·17	52·45	S	55·23	55·34	54·32	51·76
7	50·39	47·80	46·66	46·58	S	50·32	52·44	54·42	55·20	55·33	54·13	51·73
8	50·25	47·74	46·68	46·62	47·73	50·38	52·48	54·45	55·20	S	54·02	51·66
9	S	47·57	46·70	S	47·75	50·43	S	54·46	55·24	55·20	53·97	51·58
10	50·12	47·50	46·68	46·71	47·77	50·54	52·61	54·55	S	55·15	53·93	S
11	49·99	47·44	46·70	46·76	47·83	S	52·66	54·60	55·21	55·18	53·83	51·40
12	50·00	47·31	S	46·84	47·86	50·69	52·76	54·58	55·23	55·12	S	51·34
13	49·94	S	46·66	46·84	47·93	50·77	52·84	S	55·24	55·13	53·72	51·33
14	49·80	47·23	46·66	46·94	S	50·82	52·92	54·62	55·26	55·14	53·61	51·23
15	49·74	47·14	46·66	46·82	48·03	50·92	52·93	54·74	55·30	S	53·54	51·17
		3·68	2·48	0·82	1·96	8·74	0·93	1·94		1·14	6·70	

(II.)—Reading of a Thermometer whose bulb is sunk to the depth of 12 French feet—*continued.*

Day of the Month, 1848.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
16	S	47·15	46·65	S	48·00	51·04	S	54·88	55·34	55·10	53·45	51·20
17	49·56	47·09	46·62	46·98	48·18	51·10	53·08	54·85	S	55·12	53·35	S
18	49·50	47·12	46·55	47·07	48·25	S	53·13	54·84	55·36	55·00	53·31	51·00
19	49·40	47·08	S	47·10	48·28	51·17	53·18	54·90	55·35	55·06	S	50·96
20	49·25	S	46·50	47·09	48·43	51·26	53·22	S	55·38	55·06	53·10	50·84
21	49·22	47·06	46·43	47·13	S	51·31	53·32	54·90	55·39	55·02	53·03	50·83
22	49·15	47·06	46·45	47·15	48·56	51·44	53·39	54·90	55·40	S	52·90	50·78
23	S	47·04	46·44	S	48·77	51·45	S	54·98	55·38	55·00	52·80	50·74
24	49·02	47·05	46·44	47·23	48·89	51·47	53·49	54·95	S	55·00	52·65	S
25	48·91	47·02	46·44	47·25	48·95	S	53·56	55·00	55·13	54·96	52·60	50·77
26	48·76	47·00	S	47·31	49·11	51·63	53·70	55·05	55·33	54·93	S	50·71
27	48·74	S	46·47	47·30	49·19	51·70	53·73	S	55·31	54·86	52·41	50·70
28	48·63	46·80	46·47	47·37	S	51·80	53·86	55·12	55·25	54·80	52·38	50·64
29	48·49	46·77	46·47	47·42	49·43	51·85	53·95	55·07	55·26	S	52·27	50·57
30	S		46·47	S	49·52	51·90	S	55·06	55·30	54·64	52·20	50·44
31	48·44		46·44		49·56		54·00	55·07		54·54		S
	42·61	32·78	25·52	23·01	36·53	49·47	24·38	18·98	7·11	27·88	37·39	31·05

The letter S denotes that the day was Sunday.

From 1846, April, to 1847, December, this thermometer was read at every two hours, night and day (excepting Sundays and a few other days). During that interval of time, the monthly mean reading at noon was found to be of the same value in three cases as the monthly mean of all the readings; in five cases it was in excess by 0° ·01; in seven cases the excess amounted to 0° ·02; in four cases to 0° ·03; and in one case to 0° ·04.

(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 Noon on every Day, except Sundays.

Day of the Month, 1848.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	47·56	43·70	44·88	45·79	48·08	54·34	56·48	59·25	58·55	54·85	53·38	49·38
2	S	43·68	44·88	S	48·08	54·49	S	59·25	58·45	57·03	53·28	49·46
3	47·32	43·64	45·00	46·10	48·03	54·58	56·58	59·25	S	56·98	53·22	S
4	47·15	43·65	45·03	46·40	48·16	S	56·57	59·30	58·45	56·93	53·02	49·40
5	46·98	43·48	S	46·57	48·27	54·70	56·62	59·25	58·20	56·94	S	49·20
6	47·00	S	44·92	46·79	48·44	54·69	56·73	S	58·35	56·98	52·78	49·20
7	46·98	43·48	44·88	47·10	S	54·68	56·67	59·30	58·25	56·96	52·65	49·13
8	46·81	43·64	44·88	47·30	48·89	54·66	56·74	59·25	58·25	S	52·38	49·03
9	S	43·70	44·88	S	49·17	54·70	S	59·30	58·25	56·88	52·22	48·95
10	46·61	43·98	44·83	47·58	49·48	54·76	57·12	59·20	S	56·88	52·02	S
11	46·41	44·10	44·82	47·57	49·80	S	57·20	59·20	58·25	56·90	51·74	48·93
12	46·36	44·22	S	47·57	50·12	54·88	57·55	59·30	58·30	56·80	S	49·00
13	46·21	S	44·88	47·48	50·45	54·92	57·48	S	58·15	56·76	51·28	49·08
14	45·90	44·42	44·90	47·44	S	54·98	57·60	58·70	58·20	56·63	51·00	49·07
15	45·90	44·40	44·90	47·40	51·07	55·10	57·70	58·65	58·10	S	50·85	49·00
16	S	44·56	44·88	S	51·34	55·11	S	58·75	58·20	56·28	50·68	49·10
17	45·70	44·68	44·88	47·51	51·68	55·15	58·20	58·80	S	56·13	50·49	S
18	45·61	44·78	44·75	47·58	51·94	S	58·60	58·80	57·75	55·81	50·35	48·98
19	45·51	44·85	S	47·64	52·19	55·30	58·90	58·80	57·60	55·75	S	48·98
20	45·33	S	44·74	47·69	52·53	55·50	58·80	S	57·42	55·58	49·98	48·83
21	45·28	44·77	44·70	47·92	S	55·68	58·90	58·65	57·31	55·28	49·92	48·82
22	45·16	44·72	44·75	47·97	52·90	55·82	59·05	58·75	57·21	S	49·78	48·66
23	S	44·75	44·78	S	53·04	55·84	S	58·80	57·09	54·81	49·68	48·63
24	44·88	44·60	44·80	48·08	53·19	55·89	59·10	58·70	S	54·52	49·57	S
25	44·72	44·62	44·88	48·10	53·30	S	59·15	58·50	56·98	54·35	49·59	48·32
26	44·51	44·62	S	48·17	53·47	56·10	59·15	58·50	56·98	54·22	S	48·00
27	44·45	S	45·12	48·12	53·54	56·30	59·15	S	56·98	54·11	49·50	47·78
28	44·29	44·70	45·22	48·14	S	56·39	59·20	58·40	56·95	53·88	49·51	47·55
29	44·12	44·82	45·33	48·13	53·98	56·41	59·20	58·20	57·00	S	49·42	47·37
30	S		45·46	S	54·10	56·39	S	58·30	57·05	53·50	49·45	47·18
31	43·93		45·19		54·21		59·40	58·30		53·38		S
	72·18	31·56	25·16	61·14	63·45	33·36	51·54	23·45	46·27	72·27	53·54	45·03

The letter S denotes that the day was Sunday.

From 1846, April, to 1847, December, this thermometer was read at every two hours, night and day (excepting on Sundays and a few other days). During that interval of time, the monthly mean reading at noon was found to be higher than the monthly mean reading, as found from all the observations, by 0° ·03.

(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 Noon on every Day, except Sundays.

Day of the Month, 1848.	Repeat 38 January.	Repeat 38 February.	Repeat 42 March.	Repeat 46 April.	Repeat 47 May.	Repeat 57 June.	Repeat 58 July.	Repeat 59 August.	Repeat 57 September.	Repeat 51 October.	Repeat 45 November.	Repeat 43 December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	42·90	39·08	43·62	46·23	47·28	58·45	59·27	61·82	59·91	S	50·80	47·33
2	S	39·09	43·39	S	47·50	58·03	S	61·79	59·64	57·40	50·72	47·18
3	42·90	39·10	43·22	47·50	47·90	57·60	58·87	61·42	S	57·26	50·70	S
4	43·30	39·20	43·10	48·18	48·62	S	58·85	61·22	59·59	57·22	50·36	46·29
5	43·60	39·44	S	48·51	49·33	57·08	59·11	60·96	59·80	57·41	S	46·08
6	43·62	S	42·70	48·96	50·12	57·08	59·66	S	59·98	57·80	49·18	46·12
7	43·31	41·19	42·60	48·95	S	57·27	60·27	60·72	60·22	57·95	48·92	46·08
8	42·88	42·01	42·52	48·48	51·67	57·41	60·91	60·51	60·10	S	48·66	46·25
9	S	42·39	42·40	S	52·36	57·58	S	60·32	60·00	58·00	48·23	46·88
10	42·28	42·69	42·75	47·41	52·93	57·57	60·69	60·18	S	57·77	47·65	S
11	41·80	42·68	43·03	46·85	53·52	S	60·41	60·00	59·73	57·32	47·00	47·39
12	41·58	42·57	S	46·62	54·09	57·50	60·60	59·90	59·40	56·61	S	47·30
13	41·43	S	42·95	46·76	54·70	57·50	61·04	S	58·88	56·10	46·80	47·40
14	41·58	42·65	42·78	47·14	S	57·48	61·60	60·00	58·26	55·68	46·70	47·42
15	41·84	43·10	42·75	47·19	55·70	57·47	62·23	59·90	58·00	S	46·63	47·35
16	S	43·55	42·40	S	56·20	57·88	S	59·89	57·73	54·89	46·25	47·40
17	41·59	43·30	42·75	47·10	56·79	58·56	62·80	59·88	S	54·55	45·72	S
18	41·24	42·92	42·62	47·55	57·07	S	62·82	60·00	57·39	54·04	45·85	46·88
19	41·14	42·48	S	47·76	57·12	59·08	62·86	60·07	57·18	53·50	S	46·67
20	40·78	S	42·82	47·92	56·97	59·01	62·88	S	57·00	52·92	45·92	46·64
21	40·52	42·05	42·82	48·35	S	58·84	62·75	59·98	56·95	52·49	46·05	46·38
22	40·25	41·90	42·88	48·45	56·40	58·93	62·30	59·68	56·98	S	46·28	45·49
23	S	42·08	42·88	S	56·55	59·30	S	59·42	57·18	51·92	46·50	44·50
24	39·82	42·15	43·50	48·42	56·87	59·84	62·00	59·08	S	51·88	46·69	S
25	39·69	42·65	43·91	48·30	57·19	S	61·84	59·00	57·53	52·06	46·70	43·18
26	39·41	43·10	S	47·97	57·52	59·75	61·69	58·88	57·61	52·26	S	42·80
27	39·30	S	44·35	47·69	57·70	59·68	61·40	S	57·71	52·10	46·41	43·19
28	39·00	44·77	44·60	47·47	S	59·58	61·34	59·43	57·73	52·11	46·80	43·57
29	38·70	43·88	44·93	47·35	58·10	59·43	61·40	59·81	57·71	S	46·90	43·68
30	S		45·32	S	58·27	59·40	S	60·06	57·61	51·28	47·35	43·54
31	38·71		45·58		58·59		61·76	60·05		51·00		S
	85·17	100·62	35·17	43·41	1706	35·39	85·35	30·77	37·82	9·52	65·77	76·9
	3·28	4·00	1·30									

The letter S denotes that the day was Sunday.

From 1846, April, to 1847, December, this thermometer was read at every two hours, night and day (excepting on Sundays, and a few other days). During that interval of time, the monthly mean reading at noon, in the Months from April to September, was found to be 0° ·08 higher than the mean of the same months from all the observations, and in the remaining months the excess was 0° ·03.

(V.)—Reading of a Thermometer whose bulb is sunk to the depth of one inch below the surface of the soil, within the box which covers the tops of the deep-sunk Thermometers, at Noon on every Day, except Sundays.

Day of the Month, 1848.	Repeat 30 January.	30 February.	40 March.	40 April.	50 May.	60 June.	60 July.	50 August.	50 September.	40 October.	40 November.	40 December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	37·0	36·0	42·5	54·5	50·0	57·5	58·8	63·0	58·5	S	48·5	45·0
2	S	39·0	43·0	S	52·5	58·5	S	62·0	60·0	57·0	47·0	43·0
3	48·0	40·5	43·0	57·0	54·8	57·5	61·5	59·5	S	58·6	48·5	S
4	45·0	41·0	41·0	58·0	57·0	S	62·4	61·5	63·0	60·8	43·0	49·0
5	44·0	48·2	S	55·0	58·5	60·8	65·0	62·0	66·6	62·5	S	44·0
6	38·5	S	41·0	50·0	60·0	61·0	70·5	S	64·0	63·5	47·0	46·0
7	38·5	48·3	41·5	48·0	S	62·0	69·0	61·0	60·4	62·0	45·0	49·5
8	38·8	46·0	40·0	45·0	62·5	60·5	64·5	60·0	60·7	S	40·5	52·0
9	S	50·0	47·5	S	62·0	61·0	S	59·0	61·4	58·4	40·5	52·0
10	36·5	44·0	43·5	43·5	62·5	60·0	63·0	59·5	S	55·0	41·5	S
11	35·0	42·0	43·7	44·5	63·5	S	62·5	61·5	56·0	53·0	43·0	49·4
	20·3	78·4	31·7	13·0	60·5	0·0	10·0	19·5	17·4	68·4	3·6	

(V.)—Reading of a Thermometer whose bulb is sunk to the depth of one inch—*continued.*

Day of the Month, 1848.	January.	February.	March	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
12	37·0	42·0	*S*	50·0	65·0	62·5	66·0	61·4	55·0	52·0	*S*	50·8
13	43·0	*S*	41·2	52·0	66·5	59·5	69·0	*S*	53·6	52·6	44·0	52·5
14	41·3	49·5	43·0	47·0	*S*	58·8	70·0	58·5	55·0	53·0	44·8	48·0
15	41·0	47·5	44·5	47·7	66·0	65·5	69·0	59·5	56·3	*S*	41·0	48·0
16	*S*	40·5	41·5	*S*	68·0	66·0	*S*	63·0	56·3	51·6	39·0	48·0
17	40·3	40·0	41·0	52·0	63·5	66·0	67·0	62·0	*S*	51·0	45·0	*S*
18	36·5	38·9	44·5	50·0	61·0	*S*	66·5	60·7	56·5	48·8	45·0	45·5
19	36·0	40·5	*S*	50·5	59·0	59·0	66·0	63·5	56·0	47·0	*S*	47·0
20	34·0	*S*	42·5	53·0	59·5	59·5	65·5	*S*	58·8	49·5	50·0	44·0
21	34·0	44·0	41·0	49·0	*S*	63·5	63·5	58·6	57·7	47·5	47·5	37·5
22	34·5	45·0	44·0	49·8	62·0	67·0	64·0	58·8	60·0	*S*	49·0	38·0
23	*S*	45·0	49·5	*S*	61·8	68·4	*S*	59·0	62·0	51·8	48·0	35·0
24	36·0	47·0	48·5	49·5	63·5	63·5	63·6	58·4	*S*	53·5	45·0	*S*
25	34·0	47·5	46·0	46·0	64·8	*S*	62·0	57·0	60·0	52·0	45·0	41·0
26	27·0	47·5	*S*	47·0	65·0	59·5	64·0	61·0	60·5	50·0	*S*	45·8
27	31·5	*S*	48·5	48·5	62·5	62·6	62·4	*S*	59·0	53·5	48·0	45·5
28	28·0	48·0	48·0	44·5	*S*	62·0	63·5	66·0	58·0	51·0	48·0	44·5
29	36·0	44·5	49·0	46·5	64·0	60·5	65·0	63·0	57·5	*S*	51·8	42·0
30	*S*		50·0		64·5	61·8	*S*	61·3	57·0	50·0	47·0	40·0
31	40·0		55·0		63·0		65·5	60·0		45·8		*S*

The letter *S* denotes that the day was Sunday.

(VI.)—Reading of a Thermometer within the case covering the deep sunk Thermometers, whose bulb is placed on a level with the scales of the other Thermometers, at Noon on every Day, except Sundays.

Days of the Month, 1848.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.
d	°	°	°	°	°	°	°	°	°	°	°	°
1	34·8	35·0	38·5	65·0	54·0	57·5	61·0	62·5	61·5	*S*	48·0	43·7
2	*S*	43·0	42·5	*S*	58·0	60·0	*S*	66·0	64·6	62·0	48·5	44·0
3	50·0	43·0	45·0	67·7	63·0	58·0	65·0	60·0	*S*	62·4	52·0	*S*
4	46·5	43·0	44·0	68·0	66·0	*S*	65·5	66·0	72·0	64·0	38·0	51·6
5	44·3	51·7	*S*	58·0	65·5	65·5	71·0	63·5	76·0	65·0	*S*	46·5
6	37·5	*S*	40·8	49·0	70·0	65·5	80·0	*S*	66·2	70·0	48·0	48·5
7	39·5	49·6	44·0	48·5	*S*	65·0	69·0	64·0	61·8	69·0	45·5	53·5
8	36·7	48·0	42·3	43·5	71·0	59·5	66·5	62·0	62·0	*S*	43·0	54·5
9	*S*	48·4	50·5	*S*	71·0	63·5	*S*	58·0	65·0	60·0	41·5	55·5
10	33·0	46·0	44·8	47·0	71·5	59·5	68·5	66·0	*S*	54·8	44·9	*S*
11	32·4	44·0	42·0	46·5	74·0	*S*	67·5	66·0	57·8	56·0	44·8	53·6
12	37·0	45·0	*S*	54·5	73·5	66·6	73·0	63·0	57·6	53·8	*S*	53·0
13	45·0	*S*	41·0	55·8	70·0	58·0	76·0	*S*	58·8	56·0	45·5	56·0
14	40·0	52·0	46·0	48·5	*S*	63·0	78·5	56·5	59·0	53·0	47·0	49·5
15	41·6	46·0	48·0	48·0	73·5	75·0	72·0	61·0	63·0	*S*	40·5	47·0
16	*S*	39·5	39·5	*S*	77·0	70·5	*S*	67·0	64·0	52·0	40·5	46·5
17	43·0	43·4	39·5	56·8	70·0	67·5	72·5	66·5	*S*	50·0	48·8	*S*
18	33·0	38·7	48·0	53·5	62·0	*S*	72·0	65·0	64·0	40·0	46·0	48·0
19	33·5	43·2	*S*	53·5	58·8	55·0	67·0	62·0	63·8	47·0	*S*	48·0
20	30·0	*S*	43·5	56·4	60·5	61·0	63·5	*S*	66·4	49·0	54·0	40·7
21	32·0	43·8	38·5	50·0	*S*	68·6	67·0	61·8	69·0	46·0	50·5	31·0
22	32·5	48·0	50·0	49·0	67·0	73·5	67·5	59·0	69·4	*S*	51·8	43·0
23	*S*	48·0	52·0	*S*	68·2	72·0	*S*	63·5	65·8	54·6	51·5	32·8
24	36·0	51·0	50·5	49·0	72·0	65·0	65·0	61·0	*S*	56·0	43·0	*S*
25	31·5	48·5	48·5	44·5	73·0	*S*	61·0	59·0	64·8	53·5	42·0	44·5
26	24·0	48·0	*S*	48·5	73·0	58·0	66·0	63·0	61·5	56·0	*S*	48·0
27	30·0	*S*	50·0	50·0	64·0	65·0	65·0	*S*	60·5	56·0	47·5	48·0
28	22·0	51·5	51·0	41·0	*S*	63·5	67·5	68·0	57·0	51·0	50·0	42·5
29	39·8	46·5	52·5	49·5	73·0	61·5	71·0	64·0	57·0	*S*	54·0	41·0
30	*S*		53·5	*S*	68·5	64·6	*S*	64·8	58·5	53·8	47·0	38·8
31	38·0		62·0		68·5		66·6	63·2		47·0		*S*

The letter *S* denotes that the day was Sunday.

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.

		d	h	
1847.	Dec.	31.	12.	The direction of the wind was N.
1848.	Jan.	31.	12.	,, ,, N., which implies no apparent change.
	Jan.	2.	22.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	Jan.	9.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore in the month of January there was on the whole no change.

		d	h	
1848.	Jan.	31.	12.	The direction of the wind was N.
	Feb.	29.	12.	,, ,, S.W., which implies apparent retrograde motion 135°.
	Feb.	10.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	Feb.	18.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of retrograde motion in the month of February was 135°.

		d	h	
1848.	Feb.	29.	12.	The direction of the wind was S.W.
	March	31.	12.	,, ,, E.N.E., which implies apparent retrograde motion 157½°.
	March	5.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	March	14.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	March	25.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of direct motion in the month of March was 922½°.

		d	h	
1848.	March	31.	12.	The direction of the wind was E.N.E.
	April	30.	12.	,, ,, E.S.E., having passed upwards over one set of lines, which implies apparent direct motion 405°.
	April	0.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	April	7.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	April	13.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	April	14.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	April	19.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	April	26.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of retrograde motion in the month of April was 315°.

		d	h	
1848.	April	30.	12.	The direction of the wind was E.S.E.
	May	31.	12.	,, ,, W.S.W., which implies apparent retrograde motion 225°.
	May	5.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	May	10.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	May	11.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	May	14.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	May	15.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	May	19.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	May	26.	8.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	May	28.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of direct motion in the month of May was 1215°.

		d	h	
1848.	May	31.	12.	The direction of the wind was W.S.W.
	June	30.	12.	,, ,, W.S.W., which implies no apparent change.
	June	11.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

CHANGES IN THE DIRECTION OF THE WIND, *continued.*

		d	h	
1848.	June	12.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	June	14.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	June	15.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	June	21.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	June	25.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of direct motion in the month of June was 720°.

		d	h	
1848.	June	30.	12.	The direction of the wind was W.S.W.
	July	31.	12.	,, ,, S.S.E., which implies apparent retrograde motion 90°.
	July	4.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	July	14.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	July	16.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of direct motion in the month of July was 990°.

		d	h	
1848.	July	31.	12.	The direction of the wind was S.S.E.
	August	31.	12.	,, ,, N., having passed upwards over one set of lines, which implies apparent direct motion 562½°.
	August	15.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	August	17.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.

Therefore the whole excess of direct motion in the month of August was 1282½°.

		d	h	
1848.	August	31.	12.	The direction of the wind was N.
	Sep.	30.	12.	,, ,, S., having passed downwards over one set of lines, which implies apparent retrograde motion 540°.
	Sep.	0.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	Sep.	15.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	Sep.	18.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	Sep.	20.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of direct motion in the month of September was 180°.

		d	h	
1848.	Sep.	30.	12.	The direction of the wind was S.
	Oct.	31.	12.	,, ,, S.E., which implies apparent retrograde motion 45°.

Therefore the whole excess of retrograde motion in the month of October was 45°.

		d	h	
1848.	Oct.	31.	12.	The direction of the wind was S.E.
	Nov.	30.	12.	,, ,, S.S.W., which implies apparent direct motion 67½°.
	Nov.	1.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	Nov.	23.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of retrograde motion in the month of November was 652½°.

		d	h	
1848.	Nov.	30.	12.	The direction of the wind was S.S.W.
	Dec.	31.	12.	,, ,, N.N.E., which implies apparent direct motion 180°.
	Dec.	17.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	Dec.	19.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.
	Dec.	25.	23.	The trace was shifted to the next set of lines downwards, which implies apparent direct motion 360°.
	Dec.	27.	23.	The trace was shifted to the next set of lines upwards, which implies apparent retrograde motion 360°.

Therefore the whole excess of direct motion in the month of December was 180°.

The whole excess of direct motion to the end of the year was 4342½°.

AMOUNT OF RAIN COLLECTED IN EACH MONTH OF THE YEAR 1848.

1848, Month.	Monthly Amount of Rain collected in the Gauge.			
	On the Roof of the Library.	Crosley's.	Cylinder partly sunk in the Ground.	Cylinder partly sunk in the Ground at the Royal Naval Schools.
	in.	in.	in.	in.
January	0·6	1·0	1·2	1·1
February	2·4	2·5	2·6	2·7
March	2·7	2·6	3·1	3·0
April	3·2	3·0	3·4	3·1
May	0·2	0·2	0·4	0·0
June	3·1	3·5	3·5	3·8
July	1·8	2·1	2·0	1·7
August	4·3	4·2	4·3	3·7
September	2·4	2·2	2·4	3·2
October	3·4	3·3	3·5	2·2
November	1·1	1·0	1·2	1·0
December	2·3	2·5	2·6	2·4
Sums	27·5	28·1	30·2	27·9

The gauges at the Royal Observatory were read at midnight, and the monthly records for the Royal Observatory terminate at the midnight of the last day of each month. The gauge at the Royal Naval Schools was read at noon on the last day of every month, except in two instances, to be spoken of presently; the results, therefore, are not strictly comparable in those instances in which rain has fallen after noon on the last day of the month. This circumstance occurred on May 31, when about $0^{in.}2$ of rain fell in the afternoon; and this fall is attributed to the month of May in the record of the Royal Observatory, and to the month of June in the record of the Royal Naval Schools.

At the Royal Naval Schools the reading was not taken for July; but, at the end of August, the amount accumulated in both months was found to be $5^{in.}41$. Similarly, the reading for the month of December was not taken; but at the end of January, 1849, the amount measured was $3^{in.}77$ for two months. These numbers, when divided in proportion to the monthly falls at the Observatory, give the separate numbers inserted in the table above.

Greenwich Mean Solar Time, or Limits of Time, 1848.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	RONALDS' SPARK-MEASURER.		GALVANOMETER.	
		Single Gold Leaf of Dry Pile Appa-ratus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.		Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.	The Head of the Needle towards A.	The Head of the Needle towards B.
d h m s d h m s				div. div.	div. div.	° °		in.	sp. sec.	° °	° °
Feb. 29. 1. 20. 0 to 29. 1. 23. 0	Neg.	out of range	out of range	out of range	out of range	20 to 30	Instantly	0·12	Several	6	..
Mar. 1. 0. 0. 0 to 1. 0. 8. 0	Neg.	out of range	out of range	..	230	8	..	..	...	1	..
0. 15. 0 to 0. 25. 0	Neg.	out of range	out of range	out of range	out of range	11	..	0·09	A spark	..	..
Mar. 5. 3. 35. 0 to 5. 3. 40. 0	Neg.	out of range	out of range	100 to out of range	130 to out of range	10 to 15	Instantly	..	...	2	..
Mar. 10. 21. 38. 0 to 10. 21. 41. 0	Pos.	out of range	out of range	out of range	out of range	10	..	0·10	...	..	..
23. 48. 0 to 23. 50. 0	Neg.	out of range	out of range	out of range	out of range	10 to 40	Instantly	0·16 0·15 0·15 0·15	6 in 1 7 in 1 4 in 1 8 in 1	10 14 15 23	
23. 51. 0 to 23. 54. 0	Neg.	out of range	out of range	out of range	out of range	40	Instantly	0·15 0·15	Plentiful A stream	25	..
23. 55. 0 to 11. 0. 0. 0	Neg.	out of range	out of range	out of range	out of range	5 to 70	Instantly	0·15	A volley	40	..
11. 0. 0. 0 to 11. 0. 5. 0	Pos.	out of range	out of range	out of range	out of range	0 to 20	Instantly	0·10	...	..	2
0. 34. 0 to 0. 40. 0	Pos.	out of range	out of range	out of range	out of range	0 to 90	Instantly	0·10	3 in 1	..	0 to 15
Mar. 19. 21. 0. 0 to 19. 22. 50. 0	Neg. & Pos.	out of range	out of range	out of range	out of range	10 to 30	..	..	...	..	..
April 11. 23. 57. 0 to 12. 0. 14. 0	Neg.	out of range	out of range	out of range	100 to out of range	2 to 70	Instantly	0·04 to 0·21	Several	1 to 10	..
12. 0. 16. 0 to 0. 21. 0	Pos.	out of range	out of range	out of range	40 to out of range	0 to 10	Instantly	0·01 to 0·05	A few	..	1 to 2
1. 40. 0 to 1. 45. 0	Neg.	out of range	out of range	out of range	out of range	10 to 70	Instantly	0·08 to 0·15	Several	4 to 15	..
1. 46. 0	Pos.	out of range	out of range	out of range	out of range	30	Instantly	0·13	1 in 4	..	2
1. 47. 0 to 1. 50. 0	Neg.	out of range	out of range	out of range	out of range	18 to 35	Instantly	0·12	A spark	1	..
April 27. 21. 50. 0 to 27. 22. 20. 0	Neg.	out of range	out of range	90 to out of range	100 to out of range	..	..	..	...	..	..
May 15. 2. 6. 0 to 15. 2. 14. 0	Pos.	out of range	out of range	40 to out of range	60 to out of range	12	..	0·07	A few sparks	..	1
June 5. 20. 55. 0 to 5. 21. 0. 0	Neg.	out of range	out of range	out of range	out of range	30	Instantly	0·10	1 in 1	..	..
June 12. 3. 50. 0 to 12. 4. 2. 0	Pos.	out of range	out of range	out of range	out of range	10 to 20	..	0·08	1 in 2	..	..
6. 3. 0 to 6. 12. 0	Neg.	out of range	out of range	out of range	out of range	5 to 30	..	0·02 to 0·08	A few	7 to 12	..
23. 25. 0	Pos.	out of range	out of range	out of range	out of range	25	..	0·09	1 in 1	..	..
23. 28. 0	Neg.	out of range	out of range	out of range	out of range	20	..	0·09	1 in 2	..	..
June 30. 1. 26. 0	Neg.	out of range	out of range	out of range	out of range	8	..	0·05	...	..	..
1. 29. 0 to 30. 1. 32. 0	Pos.	out of range	out of range	out of range	out of range	10 to 25	..	0·11	A volley	..	6 to 8

WIND. From Osler's Anemometer. Direction.	Pressure in lbs. per square foot. (from lbs. to lbs.)	REMARKS.
SSW	2 to 4	A squall of wind and rain. During the preceding week there were several squalls, and during their continuance the electricity was negative and active.
WSW	1 to 3	A sudden squall of hail and rain. At 0^h, the reading of the dry thermometer was 46° ·6, and that of the wet was 41° ·3; and at $0^h.\ 30^m$ the reading of the dry thermometer was 39° ·5, and that of the wet was 37° ·5.
WSW	1 to 3	
S	..	
SW	0 to 2	A few drops of rain falling, followed by a squall.
SW	2 to 5	A squall of wind and rain.
SW	2 to 5	A squall of wind and rain.
SW	1 to 3	A violent squall: very dark.
SW	2	At $0^h.\ 0^m$ the instruments were all suddenly at zero: the clouds became much lighter, and there was much blue sky at $0^h.\ 5^m$.
SW	2 to 5	
SSE to WNW	..	Heavy rain: frequent change of kind of electricity.
WSW	0 to 5	A heavy squall of wind and rain: between $0^h.\ 7^m$ and $0^h.\ 10^m$ hail was falling: rain ceased to fall at $0^h.\ 12^m$.
WSW	1	
WSW	1 to 4	A flash of lightning was seen at $1^h.\ 40^m$: heavy rain was falling till $1^h.\ 45^m$.
WSW	0 to 4	
WSW	0 to 4	
NNW	..	Rain falling.
SSW and SW	..	A clap of thunder was heard in the S. E.
WNW		
NE	..	Distant thunder in the S. E.
NNW		
SW	1 to 4	
SW	1 to 4	
SW	0 to 4	Thunder was heard in the N.W.: heavy rain commenced falling.
SW	0 to 2	

Greenwich Mean Solar Time, or Limits of Time, 1848.	Sign of Electricity, as shewn by Dry Pile Apparatus.	READINGS OF ELECTROMETERS.					Time of Recovery after Discharge.	RONALDS' SPARK-MEASURER.		GALVANOMETER.	
		Single Gold Leaf of Dry Pile Apparatus.	Double Gold Leaf.	Volta (1).	Volta (2).	Henley.		Opening of Spark-measurer, or Length of Spark.	Corresponding Frequency.	The Head of the Needle towards A.	The Head of the Needle towards B.
d h m s d h m s				div. div.	div. div.	° °		in.	sp. sec.	° °	° °
June 30. 1. 33. 0	Neg.	out of range	out of range	out of range	out of range	16	..	0·09	3 in 1	6	..
1. 34. 0 to 1. 36. 0	Pos.	out of range	out of range	out of range	out of range	21	..	0·11	5 in 1	..	5 to 10
1. 37. 0	Neg.	out of range	out of range	out of range	out of range	22	..	0·09	3 in 1	1	..
1. 40. 0	...	0	0	0	0	0	..	..	...	..	..
July 14. 10. 45. 0	Pos.	out of range	out of range	70	..	0	..	..	...	..	1
Aug. 0. 23. 25. 0	Neg.	out of range	out of range	out of range	out of range	10	..	..	...	10	..
23. 26. 0	Neg.	out of range	out of range	out of range	out of range	15	..	..	...	..	5
1. 0. 16. 0	Neg.	out of range	out of range	out of range	out of range	20	..	..	...	10	..
2. 0. 0	Pos.	out of range	out of range	out of range	out of range	..	..	..	...	5	..
Aug. 9. 1. 53. 0	Neg.	out of range	out of range	..	70	1	..	..	...	..	..
1. 55. 0	...	0	0	0	0	0	..	..	...	..	..
1. 58. 0 to 2. 25. 0	Neg.	out of range	out of range	..	0 to 300	0 to 4	..	0·01	A few	..	..
2. 30. 0	Pos.	out of range	out of range	..	70	1	..	..	...	..	..
Aug. 11. 6. 5. 0 to 11. 6. 11. 0	Neg.	out of range	out of range	out of range	out of range	15 to 25	..	0·08	1 in 1	10 to 12	..
6. 16. 0 to 6. 18. 0	...	0	0	0	0	0	..	..	...	..	..
6. 23. 0 to 6. 33. 0	Neg.	out of range	out of range	out of range	out of range	5 to 10	Instantly	0·10	1 in 1	3 to 10	..
6. 34. 0 to 6. 54. 0	...	0	0	0	0	0	..	..	...	..	..
6. 55. 0 to 7. 0. 0	Neg.	out of range	out of range	out of range	out of range	5 to 20	Instantly	0·06	...	12 to 15	..
7. 1. 0 to 7. 3. 0	...	0	0	0	0	0	..	..	...	..	..
7. 4. 0 to 7. 10. 0	Neg.	out of range	out of range	out of range	out of range	5 to 20	Instantly	0·07	A volley	12	..
7. 11. 0 to 7. 15. 0	...	0	0	0	0	0	..	..	...	..	..
Aug. 31. 5. 55. 0	Neg.	out of range	out of range	out of range	out of range	7	..	0·04	2 in 1	..	..
5. 57. 0	...	0	0	0	0	0	..	..	...	..	..
5. 58. 0	Neg.	out of range	out of range	90	110	5	..	..	...	..	..
5. 59. 0	...	0	0	0	0	0	..	..	...	..	..
6. 0. 0 to 6. 8. 0	Neg.	out of range	out of range	60 to 70	90	6 to 12	Instantly	0·04	In volleys	3 to 5	..
6. 9. 0	...	0	0	0	0	0	..	..	...	..	..
6. 15. 0 to 6. 18. 0	Neg.	out of range	out of range	50 to out of range	70 to out of range	7	..	0·03	3 in 1	..	..
6. 21. 0 to 6. 33. 0	...	0	0	0	0	0	..	..	...	..	..
6. 36. 0 to 6. 39. 0	Neg.	out of range	out of range	50	70	3 to 6	..	0·03	2 in 1	..	..
6. 50. 0	...	0	0	0	0	0	..	..	...	..	..
7. 40. 0	...	..	..	..	..	..	..	..	...	..	..
Oct. 8. 23. 49. 0 to 8. 23. 55. 0	Pos.	out of range	out of range	out of range	out of range	2 to 4	..	0·04	...	..	1 to 3
23. 59. 0 to 9. 0. 2. 0	Neg.	out of range	out of range	20 to 65	10 to 65	..	..	..	...	..	..
9. 0. 3. 0	...	0	0	0	0	0	..	..	...	..	..

WIND. From Osler's Anemometer.		REMARKS.
Direction.	Pressure in lbs. per square foot.	
	from lbs. to lbs.	
SW	0 to 2	
SW		
SW		
SW	..	Rain still continues falling.
SW	0 to 5	Rain falling heavily.
SW	0 to 5	,,
WSW	0 to 1	Thunder heard.
SW	0 to $1\frac{1}{2}$	At $2^h.\ 30^m$ a heavy roll of thunder was heard: at $2^h.\ 32^m$ thunder was again heard.
SW	0 to 1	Distant thunder in the N.W.
SW	..	,,
SW to W	0 to 2	,,
W	..	Heavy rain falling.
SSW	..	Two vivid flashes of lightning were seen between these times, and thunder was heard afterwards at intervals of four seconds and six seconds respectively: rain was falling heavily.
SSW	..	Distant thunder was heard in E. N. E.
SSW	..	At $6^h.\ 23^m$ a flash of lightning was seen; thunder was heard several times between $6^h.\ 23^m$ and $6^h.\ 33^m$: heavy rain was falling.
SSW	..	Distant thunder E. N. E.: the rain has ceased to fall.
SSW	..	Between these times there were several vivid flashes of lightning, which were followed by thunder almost instantly: heavy rain.
S	..	Between these times there were two flashes of lightning, with thunder following at an interval of about ten seconds.
S	..	Between these times there were several vivid flashes of lightning, with thunder almost instantly afterwards.
S	..	Between these times there were two flashes of lightning, with thunder following at an interval of four seconds: the rain has nearly ceased.
S	..	A flash of lightning, with thunder in three seconds: rain falling in torrents.
S		
S	..	A prolonged flash of lightning, followed by thunder in three seconds: rain still falling heavily.
S		
S	..	Between these times there were several flashes of lightning, with thunder about two seconds afterwards: rain not so violent.
S	..	A faint flash of lightning, followed by distant thunder in the N. in twelve seconds.
S	..	Between these times there were two flashes of lightning, with thunder at intervals of five seconds and eleven seconds respectively.
S to SSW	..	Between these times there were several flashes of lightning, followed by thunder, at intervals varying from three seconds to ten seconds.
SSW	..	Three flashes of lightning were seen between these times, which were followed by thunder, at intervals from five seconds to seven seconds: rain falling heavily.
SSW	..	A faint flash of lightning, followed by thunder in six seconds: rain falling steadily.
SSW	..	A very bright flash of lightning, followed by a loud and prolonged peal of thunder: this was the last heard.
SW	0 to $\frac{1}{2}$	
SW	0 to 1	
SW	0 to 1	

OBSERVATIONS OF METEORS IN THE YEAR 1848.

April 30.—(The following account is by Mr. John Williams, Assistant Secretary of the Royal Astronomical Society.)

At about half-past seven o'clock in the evening, as I was walking over Blackheath, towards Crooms-hill, my son called my attention to a body passing through the air; its form was that of a wedge, rounded at the end, and it shone with a brilliant white light; it was followed by a train of fainter light, and passed, as nearly as I can judge, from the S.E. towards the N.W., and its height above the horizon appeared to be from 40° to 50°. After traversing a very considerable space, it burst like the head of a rocket, and was dissipated in a number of sparks; no explosion was heard, and the whole time of its appearance might be about 4ˢ. The daylight was very strong, not a star of any kind being visible. Its apparent size at the thicker end seemed to me to be rather larger than Jupiter appears to the naked eye, and it gradually tapered off to a fine point. I have no doubt, had this meteor been seen later in the evening, it would have attracted considerable notice, as from its extreme brilliancy, even in daylight, its light must have been very intense. It appeared to rise over Lee, and to burst over the houses situated west of Greenwich Park.

(*The following Observations were made at the Royal Observatory.*)

July 29.—Three meteors were observed at 11ʰ. 30ᵐ, two in the zenith and one near the N.W. horizon.

Aug. 1.—At 11ʰ. 53ᵐ a brilliant meteor passed over Polaris in a horizontal direction towards the West. Its light lasted about 2ˢ, and was seen through an arc of 20° or 25°.

	d	h	m	
Aug.	7.	9.	25.	—A small meteor was observed to pass across from Arcturus towards the Moon.
		9.	30.	—A larger meteor than the preceding passed from α Draconis towards the Moon.
Aug.	9.	10.	30.	—A faint meteor passing from Polaris to Cassiopeia.
		11.	0.	—A very brilliant meteor with a purple tinge passing from the zenith to within a short distance of the Moon, leaving a train of light which continued 7 seconds.
		11.	17.	—A faint meteor of short duration passing close under Saturn from E to W.
		11.	19.	—A meteor passing from α Cassiopeiæ to β Lyræ.
		11.	33.	—A very faint meteor of short duration passed from E. to W. in Pegasus.
		11.	42.	—A faint meteor passed from α Aquilæ towards the Moon.
		11.	55.	—A very bright meteor passing from E. to W. through Lyra, leaving a train of light of 4 seconds' duration.
		12.	12.	—A faint meteor passing from α Arietis to γ Pegasi.
		12.	20.	—A very bright meteor passing from Cassiopeia to γ Pegasi, leaving a train of light of 3 seconds' duration.
		12.	26.	—A very bright meteor of short duration passing from α Aquilæ downwards.
		12.	29.	—A very faint meteor passing N. to S. near α Pegasi.
		12.	30.	—Another very faint meteor passing N. to S. near α Pegasi.
		12.	32.	—A very faint meteor passed from γ Pegasi to Saturn.
		12.	34.	—A very faint meteor of short duration passing N. to S. near α Lyræ.
		12.	45.	—A bright meteor passed from Saturn to near the S.W. horizon, leaving a train of light of 2 seconds' duration.
		12.	51.	—A very faint meteor of short duration passing E. and W. through Ursa Major.
		12.	52.	—A very faint meteor of short duration passing E. and W. near α Arietis.
		13.	3.	—A bright meteor passed from α Lyræ to α Ursæ Majoris.
		13.	5.	—A faint meteor of short duration passing N. to S. through Aquila.
		13.	7.	—A bright meteor passed from β Pegasi to Aquarius, leaving a train of light of 2 seconds' duration.
		13.	10.	—A bright meteor of short duration passed from β Draconis to γ Aquilæ.
		13.	11.	—A very faint meteor of short duration, passing E. and W. through Aquila.
		13.	12 to 14ᵐ.	—Several very faint meteors towards the N.W.
		13.	15.	—A very bright meteor of short duration passed from Polaris to β Ursæ Minoris, leaving a train of 4 seconds' duration.
		13.	17.	—Several very faint meteors towards the S.E. during the last 2 minutes.
		13.	20.	—A bright meteor passed from Cassiopeia to α Pegasi, leaving a train of 2 seconds' duration.
		13.	21.	—Another bright meteor passed from Cassiopeia to α Pegasi, leaving a train of 2 seconds' duration.
		13.	26.	—A very brilliant meteor with a purple tinge, proceeding from the zenith, passed from α Lyræ to near the N.W. horizon, leaving a train of light of 8 seconds' duration.

d h m

Aug. 9. 13. 27.—A very bright meteor passed from α Pegasi to α Lyræ.

13. 30.—A very bright meteor passed from Cassiopeia to Capella, leaving a train of light of 4 seconds' duration.

13. 33.—A faint meteor near Capella.

13. 37.—A bright meteor passed from Capella to β Ursæ Majoris.

13. 45.—A very bright meteor of short duration passing N. to S. near Cassiopeia, leaving a train of light of 4 seconds' duration.

13. 55.—A meteor passing from W. to E. a little above ζ Ursæ Majoris.

14. 1.—A meteor passing from W. to E. a little beneath ζ Ursæ Majoris.

14. 5.—A meteor passing from W. to E. close under Saturn.

Aug. 10. 9. 55.—A bright meteor passing from the Zenith to Polaris.

10. 12. } —Two faint meteors seen through clouds in the N.
10. 14. }

10. 36.—A bright meteor passing from β Lyræ to Cassiopeia.

10. 50.—A faint meteor in the Zenith passing from E. to W.

11. 3.—A bright meteor passed from Saturn to the W., leaving a faint train of purple sparks.

11. 17.—Three faint meteors immediately following each other in the W. near Pegasus.

11. 30.—A bright meteor passing from the Zenith to N.E. below Capella.

11. 44.—A bright meteor seen through thin clouds passing below Polaris from E. to W.

11. 50.—A faint meteor in the same direction.

12. 17.—Two faint meteors in the N.E. seen through thin cirro-stratus.

12. 35.—A faint meteor passing from the S. below α Aquilæ.

OBSERVATIONS OF AURORA BOREALIS IN THE YEAR 1848.

d h m

Feb. 20. 11. 35.—There are several broad red streamers situated between the W. and N.N.W., reaching to altitudes of about 30°.

11. 40 to $11^h.55^m$.—Between these times many faint red streamers occurred in quick succession, between the W. and N.W.; at $11^h.50^m$ they began to extend more nearly to the N., and continued thus till $11^h.55^m$.

12. 0.—There are no red streamers visible; there is a faint white auroral light near the horizon in the N.W. After this time the light gradually approached the North, and became still more faint, till $12^h.30^m$, when none was visible.

Feb. 22. 6. 20.—There is an unusual white light in the N.W.

6. 50.—The light has increased in brilliancy, and is unsteady and wavering.

7. 20.—There are three white streamers in the N.W., at an altitude of 50° nearly.

7. 35.—There are several red streamers in the W. Shortly afterwards several appeared in the E.

7. 40.—The red streamers have extended from the W., and the space between the W. and N. is fully occupied by them.

8. 0.—There have been several white streamers to within 10° of Polaris.

8. 20.—The red streamers have decreased, both in number and brilliancy. The white light first noticed has been visible till this time.

March $20^d.7^h.40^m.$ to $8^h.30^m.$—Between these times several bright streamers of an Aurora were seen in the N. and N.N.E.

May $11^d.12^h.$—There is a faint light in the N. extending from a point situated at an altitude of 20°, to a point near the Moon: it has the appearance of an auroral streamer.

d h m

Oct. 22. 11. 5.—There are some red auroral streamers in the N.W. They continued visible with occasional flashes till $11^h.16^m$.

11. 20.—Ill-defined red auroral light is visible in N.W.

11. 25.—The auroral light has the same appearance as at $11^h.20^m$, excepting that it is less bright.

11. 30.—The auroral light is very faint in the N.

11. 35.—The auroral light is not visible.

12. 4.—Diffused red auroral light is again visible. It continued visible till 14^h, with slight variations in its brightness.

d h m

Oct. 25. 6. 40.—There is a strong auroral light near the horizon in N.N.E. and N.E.

7. 0.—The auroral light is of a red colour, and it has increased in brightness.

7. 23.—There are two faint streamers in the N.E.

7. 30.—The auroral light is faint.

7. 40.—The light is brighter; there is a faint streamer in the N.E.

8. 5.—The light is again faint, and of a pale yellow colour.

8. 30.—The light has almost disappeared.

Nov. 17. 9. 20.—With the exception of a portion in the N., the sky is covered with cirro-stratus, haze, and a few patches of scud. There is a bright white light in the N. Shortly afterwards a red light appeared in the E.N.E., as seen through the clouds and haze; these appearances continued with flickering variation till $9^h. 40^m$, when a faint red glare in E.N.E. and a white light in the N. were alone visible.

9. 45.—The white light in the N. is still visible, and there is a faint pink streamer in N.W.

9. 50.—There are bright red streamers in the E.N.E., and a clear white streamer springing up from the N., and passing between Capella and Perseus, till it meets the red streamers at a point near the Zenith. At this time two meteors were observed passing from a little above Castor; they moved towards the horizon in the N.E.

9. 54.—Nothing is visible.

10. 0.—There is a white light near the horizon extending from the N.W. to the N: there are no streamers.

10. 20.—There is a patch of red light situated N.E. of Zenith; in the N.W. there are faint pink streamers. These appearances ceased at about $10^h. 25^m$.

10. 30.—The white light in the N. is still visible: no streamers are seen.

10. 35.—There are bright white streamers in the E.N.E., passing between Castor and Capella, and nearly reaching the Zenith.

10. 38.—No streamers are visible; the white light in the N. still visible: clouds collecting about the Northern parts of the sky.

11. 0.—Since $10^h\ 38^m$ the clouds have been increasing, and at present the sky is overcast.

13. 55.—There are bright red streamers in the W., seen through thin cloud.

14. 5.—A patch of red light situated at about 60° above the W. horizon.

14. 55.—The sky near the horizon in the N.W. is partially clear, and the light is visible.

15. 10.—The white light still visible in the N.W. and N.

15. 35.—The white light still visible in the N.W. and N. After this the sky became nearly cloudless, and the white light continued visible till day break.

(*The following Observations of the Aurora of Nov.* 17 *made at the Observatory of Stonyhurst, near Blackburn, Lancashire, are extracted from a private communication to Mr. Glaisher.*)

On the evening of Nov. 17th, there was rather a remarkable Aurora Borealis. It was first observed at $6^h. 30^m$, between which time and $9^h.$ the sky was densely overcast; a few minutes after $9^h.$ I was noting the self-registering thermometers, when I suddenly perceived that from being quite dark it had become so light that I could read manuscript without the aid of my lamp (there being no Moon). On looking up I saw that the clouds were broken, and perceived through the opening what appeared like a brilliant crimson cloud, in which I soon saw the usual streamers of Aurora Borealis. I also observed that the clouds in S.E. and S. which a few minutes before had been lowering black, were tinged with crimson as at a fine sunset. The clouds were moving rapidly from W.S.W., and I thought that the whole mass of light beyond them partook of the same motion. In the N. the clouds were dense and nothing was seen. About $11^h.$ the clouds had for the most part cleared off, and I saw the usual phenomena of Aurora Borealis; the rays met so as to form a very undefined crown: they were at this time perfectly white. A heavy shower was falling from the scud which drifted along at the same time.

(*The following Observations of the Aurora of Nov.* 17 *made at Nottingham, are extracted from a private communication to Mr. Glaisher.*)

Nov. 17.—At 7^h the sky was generally bright, a dense black cloud was near the East horizon, and the constellation Ursa Major was dimmed by a silvery light, and objects on the earth were thrown out in bold relief. At $9^h.$ some faint flashes of pink light were seen in different directions, but more particularly in the N.W. Presently an auroral arch was formed, extending from the S.E. to the S.W., with its apex situated near the zenith; this arch was of the most roseate hue. From its highest point, rays emanated on all sides, and the whole sky was lighted up with the varied changes from pink to deep red, and the effect was beautiful. At about $9^h. 30^m$ some clouds collected, and the glare of red light upon them had the appearance of the reflection from a large fire. At $10^h. 30^m$, a large mass of white cloud arched the S. horizon, when suddenly a light arose, and moved undulating towards the Zenith, till it just reached the Pleiades; then it changed to a luminous arc with light flashing from its center; this arc eventually formed into a kind of cone with its base parallel to the before-mentioned white cloud, leaving a space of clear sky between them.

(*The remaining Observations were made at the Royal Observatory.*)

d h m s

Nov. 21. 6. 0. 0.—There was a remarkable patch of light covering the constellation Draco, and extending some little distance above it. This light continued motionless till near 7^h, and it was remarkable and unusual.

6. 15. 0.—There was a bright blood-red patch in the N.E., which also was motionless for some time.

6. 20. 0.—There was a bright arch formed, which afterwards became dull, and several bright red streamers burst from its Eastern extremity.

7. 0. 0.—The arch was well formed, and extended from the N.N.W. to the E.N.E.; its apex being under η Ursæ Majoris.

7. 12. 32.—A bright streamer appeared under γ Ursæ Majoris.

7. 16. 0.—The arch increased considerably in brightness.

7. 19. 27.—A bright red streamer extending to γ Ursæ Majoris.

7. 21. 32.—A bright red streamer extending to η Ursæ Majoris.

7. 22. 14.—A bright red streamer extending to ζ Ursæ Majoris.

7. 23. 2.—Three streamers rose at the same instant to η, θ, and ι Draconis.

7. 23. 52.—A bright streamer to the left of ζ Ursæ Majoris, and much higher.

7. 24. 47.—The arch to the left of ζ Ursæ Majoris became suddenly dull.

7. 25. 41.—Several simultaneous streamers, almost forming one continuous sheet, rose from the left extremity of the arch passing over the three stars in Draco forming the triangle (η, θ, and ι).

7. 26. 49.—Several small streamers rose at the left extremity of the arch.

7. 27. 12 to $7^h.27^m.22^s$.—These were several red streamers at the left extremity of the arch.

7. 28. 32 to $7^h.33^m$.—There were several red streamers at the left extremity of the arch.

7. 37. 0.—Parts of the arch only are visible. After this time the sky was deeply coloured till about 13^h, at which time observations were discontinued. Some rain fell at 11^h, and again at midnight.

SUPPOSED AURORAL APPEARANCES.

Dec. $10^d.12^h$.—There have been lines of light haze exactly similar to auroral streamers during the last half hour; they start from about 30° above the S.E. horizon, passing under and about the Moon, and over Orion. They have been stationary for some time, and the observer thinks that they are variable in brightness.