

# ASTRONOMISCHE NACHRICHTEN.

*N<sub>o</sub>* 1336.

Results of Meridian-Observations of the Minor Planets made at the Cambridge Observatory in the years 1855, 1856, 1857 and 1858. Communicated by Prof. *J. Challis*.

H e b e (6).						
	Greenw. M. T.	AR.	Numb. of wires	C.—O.	N. P. D.	C.—O.
1855 Aug. 17	12 <sup>h</sup> 26 <sup>m</sup> 48 <sup>s</sup> .9	22 <sup>h</sup> 10 <sup>m</sup> 26 <sup>s</sup> .43	4	—3 <sup>s</sup> .73	105° 47' 50 <sup>''</sup> .4	—1 <sup>''</sup> .3
28	11 35 39,2	22 2 30,42	4	—4,36	108 37 34,8	+0,2
29	11 31 0,3	22 1 47,33	7	—4,53	108 52 22,4	—3,7
30	11 26 21,5	22 1 4,26	2	—4,32		
31	11 21 43,2	22 0 21,74	7	—4,20	109 21 20,0	—4,8
Sept. 3	11 7 52,1	21 58 18,09	7	—4,18		
7	10 49 35,5	21 55 44,67	4	—4,13		
8	10 45 4,0	21 55 8,95	7	—4,18	111 8 17,8	—2,7
10	10 36 4,6	21 54 1,19	8	—4,27	111 32 22,7	—1,0
26	9 27 59,6	21 48 49,86	5	—3,76	113 58 34,4	—1,0

I r i s (7).						
1855 Dec. 12	12 32 4,0				67 31 24,4	+6,7
13	12 27 3,5	5 55 54,54	7	—1,74	67 36 3,6	+3,8
18	12 1 57,8	5 50 27,58	7	—1,72	67 59 19,4	+4,8
19	11 56 56,9	5 49 22,41	5	—1,71	68 2 56,8	+5,3
20	11 51 56,5	5 48 17,69	5	—1,78	68 8 36,3	+2,6

F l o r a (8).						
1855 March 2	11 35 34,1	10 16 41,73	4	+9,75	71 42 44,9	+39,1
3	11 30 40,1	10 15 43,48	2	+9,30	71 36 24,5	+34,4
6	11 16 2,6				71 18 13,4	+41,1
8	11 6 21,4	10 11 3,61	2	+9,28	71 7 11,6	+41,8

H y g e i a (10).						
1855 May 14	11 32 37,4	15 1 33,03	4	—0,18	112 17 58,7	—1,1

P a r t h e n o p e (11).						
1855 Nov. 16	11 29 52,0	3 12 6,66	3	—2,38	79 49 50,3	+8,0

The observations of Hebe, Iris and Flora are compared with the Ephemerides in the *Berliner Jahrbuch* for 1857, and those of Hygeia and Parthenope with the respective Ephemerides in the *Astr. Nachr.* vol. 39, col. 347 and vol. 41, col. 285.

F l o r a (8).						
1856 June 2	13 10 30,9	17 57 36,77	3	+0,13		
10	12 30 48,5				108 56 54,0	+0,6
16	12 0 32,8	17 42 39,04	4	—0,03	109 7 38,9	+3,3
25	11 15 2,2				109 25 39,9	+2,8
26	11 10 0,3	17 31 23,73	2	—0,13	109 27 49,3	+3,2
28	10 59 58,6	17 29 13,55	4	0,00	109 32 8,2	—0,9
July 2	10 40 5,5	17 25 3,37	4	+0,34	109 40 58,8	+0,7

		Greenw. M. T.	AR.	Metis <sup>(9)</sup> Numb. of wires	C.—O.	N. P. D.	C.—O.
1856 June	25	13 <sup>h</sup> 7 <sup>m</sup> 51 <sup>s</sup> 5	19 <sup>h</sup> 25 <sup>m</sup> 37,75	1	—0 <sup>s</sup> 87	117° 14' 3'' 2	—0 <sup>s</sup> 8
	28	12 53 8,5				117 26 39,4	+ 3,3
July	2	12 33 15,3	19 18 31,75	3	+0,03	117 42 43,3	+13,0
	9	11 58 13,5				118 8 34,9	+ 7,4

		Hygeia <sup>(10)</sup>					
1856 Aug.	2	12 57 59,7	21 45 33,57	4	—1,06	100 18 53,3	+4,7
	4	12 48 39,0				100 24 16,4	+2,1
	6	12 39 18,2	21 42 35,21	2	—1,59	100 29 46,6	+4,3
	7	12 34 36,7	21 41 49,55	2	—1,56	100 32 37,6	+3,7
	9	12 25 12,7	21 40 17,04	4	—1,06		
	12	12 11 5,8	21 37 57,49	6	—0,73	100 47 19,5	+3,7
	13	12 6 23,2	21 37 10,72	2	—0,53	100 50 23,3	+1,0
	14	12 1 40,9	21 36 24,16	6	—0,51	100 53 24,1	+2,3
	25	11 10 8,6	21 28 5,50	2	—0,85		
	29	10 41 38,3	21 25 16,76	8	—0,26	101 38 43,9	+2,8

		Thetis <sup>(17)</sup>					
1856 March	26	13 15 25,0				90 4 36,5	+52,2
	27	13 10 46,6				89 57 34,7	+58,4
	28	13 6 6,3	13 32 58,72	1	+11,09	89 50 8,6	+60,8
	31	12 52 1,7	13 30 41,54	4	+10,82	89 29 21,7	+61,6
April	4	12 33 3,8	13 27 26,74	4	+10,71	89 1 42,3	+54,7
	7	12 18 44,2	13 24 54,40	2	+10,71	88 41 29,6	+55,2
	9	12 9 9,2	13 23 10,95	2	+10,76		
	12	11 54 45,4	13 20 34,49	4	+10,93	88 9 39,7	+60,8

		Melpomene <sup>(18)</sup>					
1856 Oct.	27	12 6 20,6	2 32 49,63	4	+4,57	95 58 10,6	—19,1
	28	12 1 37,3	2 32 2,12	5	+4,92	96 5 17,0	—16,2
	30	11 52 12,8	2 30 29,19	2	+3,21		
Nov.	5	11 23 57,5	2 25 48,63	7	+4,70		
	8	11 9 58,3	2 23 36,81	7	+4,67	96 57 55,6	—14,0
	11	10 56 7,4	2 21 33,25	2	+4,84		
	14	10 42 27,4	2 19 40,65	3	+4,56	97 5 28,9	—16,2
	24	9 58 28,8	2 15 0,45	7	+4,26		

Probably there was an error of 1<sup>s</sup> in the Transit observation of Oct. 30.

		Massalia <sup>(20)</sup>					
1856 Oct.	21	12 46 17,8	2 49 14,14	2	+9,07	73 57 27,9	—28,8
	27	12 17 19,9	2 43 50,73	5	+9,30	74 24 23,2	—28,5
	28	12 12 27,2	2 42 53,83	4	+9,43	74 29 11,5	—30,7
Nov.	5	11 33 13,1	2 35 5,71	7	+9,59		
	8	11 18 30,4	2 32 10,24	7	+9,38	75 24 2,2	—26,5
	14	10 49 18,1	2 26 32,55	5	+9,15		

		Urania <sup>(30)</sup>			
1856 Jan.	30	11 56 33,5	8 34 34,36	7	—40,18
	31	11 51 33,0	8 33 29,62	2	—40,15

		Euphrosyne <sup>(31)</sup>					
1856 March	27	9 50 11,4				35 52 38,1	—1,6
April	1	9 28 5,2	10 10 8,04	4	—0,87		
	4	9 15 13,4	10 9 3,84	2	—0,98		
	10	8 50 22,1	10 7 47,79	3	—0,82		
	12	8 42 20,0	10 7 37,44	1	—0,77	40 21 26,4	—3,0

L a e t i t i a (39).						
	Greenw. M. T.	AR.	Numb. of wires	C.—O.	N. P. D.	C.—O.
1856 March 31	10 <sup>h</sup> 8 <sup>m</sup> 15 <sup>s</sup> 7				78° 59' 43" 0	+ 6" 9
April 1	10 3 49,9	10 <sup>h</sup> 45 <sup>m</sup> 58 <sup>s</sup> 67	4	+0 <sup>s</sup> 63	78 54 33,3	+10,9
4	9 50 39,1	10 44 35,35	4	+0,82	78 40 19,0	+ 2,4
5	9 46 18,2	10 44 10,28	4	+0,48		
7	9 37 39,3	10 43 23,03	4	+0,47		
9	9 29 5,2	10 42 40,62	4	+0,49		
12	9 16 23,0	10 41 46,08	1	+0,76		
21	8 39 25,9	10 40 11,84	2	+0,76	77 45 40,3	+ 6,6

The observations made in 1856 are all compared with Ephemerides in the Berl. Jahrbuch for 1858, with the following exceptions. The observation of Melpomene are compared with the Ephemeris in the Astronomical Journal vol. IV., pag. 189; those of Euphrosyne with the Ephemeris in the Astr. Nachr. vol. 42, col. 252; and those of Laetitia with places computed from the Elements in the Berl. Jahrbuch for 1860, pag. 408.

H e b e (6).						
1857 Febr. 3	13 0 37,3	9 57 34,50	2	+1,30	75 51 2,6	+5,1
11	12 21 52,6	9 50 15,85	4	+1,37	74 28 36,4	+7,3
20	11 38 12,4				72 59 43,8	+8,1

I r i s (7).						
1857 April 20	11 34 37,4	13 30 58,62	4	—0,04	106 31 50,5	—7,1
23	11 20 6,6	13 28 15,10	4	—0,73		
28	10 56 4,6	13 23 51,96	2	—0,48		
May 1	10 41 48,3	13 21 22,96	2	—0,37		
4	10 27 40,1	13 19 2,09	2	—0,34		

M e t i s (9).						
1857 Nov. 17	13 16 4,6	5 4 35,81	6	—0,98	67 22 50,2	+0,8
27	12 26 55,6	4 54 44,37	6	—0,89		
30	12 11 51,2				66 52 54,5	+4,0
Dec. 2	12 1 45,7	4 49 13,08	7	—0,81	66 48 55,6	+2,9
4	11 51 39,2	4 46 58,10	7	—0,95	66 45 7,3	+1,8
7	11 36 29,3	4 43 35,38	7	—0,97	66 39 41,2	+3,6
10	11 21 21,4	4 40 14,59	1	—0,42	66 34 37,7	+5,3
11	11 16 20,5	4 39 9,51	7	—1,01	66 33 4,9	+2,1
16	10 51 26,0	4 33 53,76	4	—0,57	66 25 33,5	+2,9
19	10 36 44,2	4 30 59,09	7	—0,98	66 21 21,0	+2,6
23	10 17 29,0	4 27 26,97	2	—0,70	66 15 55,0	+2,4

P a r t h e n o p e (11).						
1857 Febr. 20	12 28 40,5	10 32 33,91	3	—0,19	77 0 11,6	+9,1
23	12 14 8,8	10 29 49,46	4	—0,51	76 39 26,9	+9,0
24	12 9 17,8	10 28 54,25	4	—0,48		
26	11 59 35,7				76 19 12,9	+2,2

V i c t o r i a (12).						
1857 July 23	13 39 17,9	21 46 36,00	7	—1,36		
25	13 30 23,4	21 45 33,16	3	—1,56	85 17 4,6	+6,9
31	13 3 6,8	21 41 51,44	7	—0,88	85 5 24,5	+5,3
Aug. 3	12 49 13,4	21 39 45,44	7	—0,97	85 4 22,2	+6,6
14	11 57 29,1	21 31 14,69	7	—0,56		
17	11 43 20,1	21 28 53,07	7	—0,49	85 40 36,4	+3,5
22	11 19 55,1	21 25 6,89	5	—0,28	86 7 57,1	+3,8
24	11 10 38,9				86 20 32,9	+4,5

## Victoria (12).

	Greenw. M. T.	AR.	Numb. of wires	C.—O.	N. P. D.	C.—O.
1857 Aug. 25	11 <sup>h</sup> 6 <sup>m</sup> 2 <sup>s</sup> 3	21 <sup>h</sup> 23 <sup>m</sup> 1 <sup>s</sup> 55	7	—0 <sup>s</sup> 38	86 <sup>o</sup> 27' 8" 9	+5 <sup>s</sup> 2
26	11 1 27,0	21 22 22,12	5	—0,53	86 33 57,0	+ 5,3
27	10 56 52,7	21 21 43,60	6	—0,35	86 40 56,1	+ 4,9
28	10 52 19,0	21 21 6,65	4	—0,45	86 48 3,7	+ 5,7
Sept. 5	10 16 51,0				87 49 31,0	+10,9
12	9 47 20,8	21 15 5,12	3	—1,14	88 46 32,9	+ 9,8
16	9 31 12,3				89 18 49,0	+14,1
17	9 27 15,2	21 14 38,95	2	—1,63	89 26 43,0	+17,4
18	9 23 19,9	21 14 39,62	5	—1,46	89 34 37,7	+15,7
23	9 4 15,8	21 15 15,20	5	—1,79	90 12 35,8	+21,6
24	9 0 33,3	21 15 28,61	7	—1,95	90 19 53,2	+21,5
28	8 46 3,3	21 16 42,41	2	—2,48	90 47 39,6	+25,8
29	8 42 30,5				90 54 17,0	+24,9
Oct. 1	8 35 32,5	21 17 58,52	4	—2,90	91 7 0,0	+27,8

## Irene (14).

1857 Oct. 30	12 53 9,5	3 30 38,92	3	—0,52
Nov. 11	11 54 40,9	8 19 19,39	2	—0,20

## Thetis (17).

1857 Sept. 23	12 2 18,9	0 13 47,47	2	—3,06	96 52 1,8	+11,1
28	11 38 19,2				97 24 52,9	+14,8
29	11 33 32,1	0 8 35,34	1	—2,88	97 31 7,3	+12,2
30	11 28 45,3	0 7 44,30	2	—2,73	97 37 6,4	+16,1
Oct. 1	11 23 58,7	0 6 53,42	3	—2,66	97 42 56,5?	+20,9

The observation of N.P.D. on Oct. 1 was very uncertain.

## Calliope (22).

1857 Nov. 17	13 48 31,2	5 37 7,79	2	—12,20		
Dec. 7	12 11 24,1	5 18 35,86	6	—12,55	62 3 39,3	+53,6
11	11 51 23,3	5 14 18,03	4	—12,57	61 46 18,0	+56,1

## Proserpine (26).

1857 March 16	11 48 52,5	11 27 16,66	4	+2,73
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## Bellona (28).

1857 Dec. 19	11 43 45,4	5 38 11,32	4	+0,17		
23	11 24 20,6	5 34 29,59	4	+0,04	79 53 36,1	+1,63
1858 Jan. 1	10 41 12,5	5 26 43,48	2	—0,18		

The observations of 1857 all compared with Ephemerides in the Berl. Jahrb. for 1859, excepting as follows. For Metis the Ephemeris in the Astr. Nachr. vol. 44, col. 153 is used; the computed places for Calliope were obtained from the Elements in the Naut. Alm. for 1860, p. 577, and those of Bellona from the Elements in the Berl. Jahrb. for 1861, p. 506. For Victoria, the Ephemeris in the Astr. Nachr. vol. 45, col. 326 was used as far as it applied, and for the remaining observations places were first computed from the Elements in the

Naut. Alm. for 1860, p. 576, and were then corrected for deviations from the Ephemeris. The deviations were calculated for Aug. 1,5 and Sept. 2,5, the epochs of the beginning and end of the Ephemeris, and for previous and subsequent epochs were supposed to vary proportionally to the time. It is to be remarked that the comparisons made in this instance, as well as in all the others, were intended only to identify the object observed as the planet, and to give the means of judging of the values of individual observations,

## H e b e (6).

		Greenw. M. T.	AR.	Numb. of wires	C.—O.	N. P. D.	C.—O.
1858 April	27	13 <sup>h</sup> 12 <sup>m</sup> 30 <sup>s</sup> 1	15 <sup>h</sup> 35 <sup>m</sup> 46 <sup>s</sup> 33	4	—0 <sup>s</sup> 30	86° 9' 29'' 0	+3'' 3
	30	12 58 14,9	15 33 18,46	7	—0,17	85 51 53,7	+2,9
May	4	12 39 5,0				85 30 29,4	+4,1
	6	12 29 26,8	15 28 4,97	7	—0,33	85 20 51,9	—0,8
	7	12 24 37,2	15 27 11,11	7	—0,53		
	10	12 10 5,3	15 24 26,48	5	+0,03	85 3 40,6	—1,7
	12	12 0 23,6	15 22 36,27	5	—0,22	84 56 12,4	+1,3
	19	11 26 27,7	15 16 10,73	7	—0,34	84 36 54,8	+1,7

## I r i s (7).

1858 July	14	12 20 8,6	19 50 47,68	5	—12,76	105 30 35,7	—10,9
	17	12 5 11,0	19 47 37,32	6	—13,08	105 31 46,6	—5,7
	19	11 55 11,3	19 45 29,10	7	—13,15	105 32 48,5	—3,3
	28	11 10 17,4				105 39 24,3	—3,0
	29	11 5 20,7				105 40 15,5	—1,6
Aug.	3	10 40 46,8	19 30 0,75	1	—11,59		

## F l o r a (8).

1857 Dec.	31	13 3 4,8	7 45 2,45	4	+0,70		
1858 Jan.	4	12 42 57,7	7 40 38,29	7	+0,45		
	21	11 16 53,7	7 21 21,69	7	+0,35	67 0 23,2	+0,2
	23	11 6 58,9	7 19 18,40	5	+0,48	66 49 21,1	+0,1
	26	10 52 17,8	7 16 24,53	7	+0,22	66 33 36,7	+2,6
	27	10 47 27,4	7 15 29,83	7	+0,04	66 28 36,7	+2,7
	28	10 42 38,3	7 14 36,53	7	+0,19	66 23 43,9	+2,8
Febr.	1	10 23 40,4	7 11 21,79	5	+0,28		
	4	10 9 47,6	7 9 16,34	7	+0,26	65 53 4,2	+2,3
	6	10 0 42,8	7 8 3,15	4	+0,24		
	9	9 47 22,0	7 6 29,84	4	+0,07	65 34 51,9	+1,2
	16	9 17 31,1	7 4 9,96	7	+1,01		
	18	9 9 21,6	7 3 52,22	4	+0,54		
	19	9 5 19,5				65 7 13,8	+4,1
	20	9 1 19,7	7 3 42,10	6	+0,19	65 5 8,6	+0,5
	22	8 53 27,4	7 3 41,55	11	—0,01	65 1 4,4	+5,8
	24	8 45 43,8	7 3 49,85	5	—0,15		
	25	8 41 55,0	7 3 56,97	7	0,00	64 56 2,7	—4,3
	26	8 38 8,7	7 4 6,60	7	—0,05	64 54 26,4	+0,2
	27	8 34 24,4	7 4 18,22	5	+0,09	64 52 57,7	+2,7
March	6	8 9 11,8	7 6 37,37	8	—0,35		
	8	8 2 17,1	7 7 34,64	9	—0,28	64 44 19,9	+1,3

Probably there was an error of 1<sup>s</sup> in the observation of Febr. 16.

## M e t i s (9).

1858 Jan.	28	7 49 42,5	4 21 12,31	3	—0,70	65 11 44,9	+2,4
Febr.	1	7 36 13,6	4 23 27,41	5	—0,52	65 1 48,2?	—5,5
	6	7 20 6,3	4 27 0,25	3	—0,76		
	9	7 10 47,4	4 29 29,52	7	—0,47	64 40 14,5	+2,2
	18	6 44 23,0	4 38 29,73	9	—0,61	64 15 0,7	+3,0
	20	6 38 48,0	4 40 46,98	4	—1,29		

The observation of N.P.D. on Febr. 1 was very uncertain.

## E g e r i a (13).

1858 Oct.	5	11 33 21,9	0 31 7,47	2	+0,34		
	11	11 3 41,1	0 25 1,07	2	+0,39		

## E u n o m i a (15).

	Greenw. M. T.	AR.	Numb. of wires	C.—O.	N. P. D.	C.—O.
1858 Febr. 9	13 <sup>h</sup> 5 <sup>m</sup> 29 <sup>s</sup> 3	10 <sup>h</sup> 25 <sup>m</sup> 9 <sup>s</sup> 68	5	+2 <sup>s</sup> 72	92° 1' 18" 1	+36,4
16	12 31 27,4	10 18 38,04	5	+3,04	91 50 28,6	+30,8
18	12 21 41,2	10 16 43,37	7	+3,34	91 46 10,8	+28,9
19	12 16 48,1	10 15 46,08	7	+3,28	91 43 49,5	+29,4
20	12 11 55,2	10 14 48,89	7	+3,15	91 41 25,6	+25,3
22	12 2 9,4	10 12 54,56	7	+3,01	91 36 10,9	+24,1
24	11 52 24,1	10 11 0,78	7	+2,42	91 30 26,2	+26,8
25	11 47 31,8	10 10 4,26	6	+3,10	91 27 26,0	+30,5
26	11 42 39,9	10 9 8,14	6	+3,09	91 24 25,4	+23,5
March 6	11 4 3,7	10 1 57,96	5	+3,01		
8	10 54 31,7	10 0 17,60	9	+2,91	90 50 10,4	+24,3
9	10 49 46,8				90 46 21,1	+32,2
10	10 45 2,7	9 58 40,14	7	+3,49	90 42 39,1	+31,2
11	10 40 20,6				90 38 59,0	+27,1

## M e l p o m e n e (18).

1858 March 9	13 7 35,0	12 17 39,27	9	+0,50	84 2 30,3	+0,0
10	13 2 49,5	12 16 49,50	2	+0,28	83 53 17,7	—0,4
22	12 5 5,7	12 6 14,85	4	+0,53		
23	12 0 16,2	12 5 21,10	2	+0,39	81 56 50,6	—1,6

## F o r t u n a (19).

1858 Febr. 18	13 11 4,2	11 6 14,50	7	+0,57		
19	13 6 16,8	11 5 22,85	6	+0,71	86 11 50,0	+3,7
24	12 42 11,6	11 0 56,45	7	+0,72	85 43 3,9	+2,1
March 8	11 44 1,7	10 49 55,69	2	+0,35	84 30 16,3	—1,3
9	11 39 11,7	10 49 1,40	6	+0,61		
11	11 29 33,8	10 47 15,10	2	+0,32		

## M a s s a l i a (20).

1858 April 10	12 49 42,6	14 5 53,60	5	—0,42	102 43 41,1	—3,4
13	12 35 9,9	14 3 8,18	4	—0,69	102 28 5,8	—4,4
17	12 15 39,8	13 59 21,10	2	+0,04	102 6 37,8	—5,8
19	12 5 54,7	13 57 27,50	7	—0,51	101 55 43,5	—6,8
22	11 51 16,5	13 54 36,64	7	—0,47	101 39 16,2	—6,4
26	11 31 49,7	13 50 52,81	4	—0,71		
28	11 22 8,8	13 49 3,46	2	—0,58	101 6 46,9	—5,2
May 6	10 43 55,3	13 42 16,13	9	—0,52	100 26 24,0	—6,7

## T h a l i a (23).

1858 April 9	12 17 35,9	13 29 45,15	6	+0,27	85 3 27,3	+0,6
10	12 12 41,2	13 28 46,12	10	+0,22	85 1 48,5	+1,5
13	11 57 57,7	13 25 49,85	9	—0,07	84 57 54,9	+1,4
17	11 38 23,5	13 21 58,69	6	+0,20	84 55 12,4	+2,5
19	11 28 39,8	13 20 6,51	10	+0,23	84 55 2,5	—0,5
22	11 14 10,2	13 17 24,18	6	+0,02	84 56 9,3	+0,2
23	12 9 21,6	13 16 31,32	9	+0,42	84 56 54,6	+0,8

## P r o s e r p i n e (26).

1858 July 14	13 3 42,4	20 34 28,65	2	+1,14		
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E u t e r p e (27).						
	Greenw. M. T.	AR.	Numb. of wires	C.—O.	N. P. D.	O.—O.
1858 Febr. 9	12 <sup>h</sup> 19 <sup>m</sup> 35 <sup>s</sup> .2	9 <sup>h</sup> 39 <sup>m</sup> 8 <sup>s</sup> .05	7	+9 <sup>s</sup> .30	73° 34' 3" 9	+42" 3
16	11 45 10.2	9 32 13.29	7	+9.57	72 56 10.1	+42.8
18	11 35 25.2	9 30 19.74	7	+9.56	72 46 15.8	+43.4
19	11 30 33.9	9 29 24.28	7	+9.53		
22	11 16 6.8	9 26 44.44	5	+9.11		
24	11 6 34.4	9 25 3.60	4	+9.13	72 19 52.4	+41.8
25	11 1 50.4	9 24 15.35	11	+9.01	72 16 1.2	+40.3
26	10 57 7.7	9 23 28.42	7	+9.01	72 12 22.8	+35.6

A m p h i t r i t e (29).						
1858 March 10	13 22 1.9	12 36 5.06	5	+10.54	95 4 26.6	+67.1
22	12 24 15.2	12 25 27.52	7	+10.11	94 26 52.9	+75.7
23	12 19 23.5	12 24 31.55	2	+ 9.93	94 23 9.7?	+87.1
April 1	11 35 36.8	12 16 6.70	4	+ 9.80		
9	10 57 7.4	12 9 3.38	6	+ 9.69	93 22 7.0	+74.3

It is doubtful whether the object taken with the Circle on March 23 was the Planet, the recorded N. P. D., which was 1° greater, having been altered conjecturally.

U r a n i a (30).						
1858 Sept. 22	13 0 55.5	1 7 40.18	5	—11.77	79 2 42.3	+67.4
27	12 37 18.0	1 3 41.57	2	—12.07	79 20 1.4	+73.5
30	12 22 54.9	1 1 5.83	4	—11.38		
Oct. 5	11 58 45.8	0 56 35.54	7	—12.12	79 55 25.3	+75.9
8	11 44 11.5	0 53 48.49	7	—11.24		
11	11 29 38.5	0 51 2.73	7	—11.13	80 26 5.4	+78.0
16	11 5 32.3	0 46 35.34	6	—11.87	80 52 48.8	+75.3

L a e t i t i a (39).						
1858 Sept. 27	11 32 3.3				97 29 42.6	+111.9
30	11 18 12.0	23 56 12.24	5	—34.16	97 55 36.4	+107.7

E u r o p a (52).						
1858 Febr. 19	12 37 41.9	10 36 43.29	11	—0.01	76 15 4.1	+ 3.9
20	12 33 1.9	10 35 59.02	9	—0.24	76 8 12.1	+ 4.1
22	12 23 40.5	10 34 29.21	11	—0.04	75 54 27.9?	+11.9

The observations of Hebe, Flora, Egeria, Massalia, Euterpe, Amphitrite, Urania and Laetitia are compared with the Ephemerides in the Berliner Jahrbuch for 1860. For those of Flora which were not embraced by the Ephemeris, places were calculated from Dr. *Brünnow's* Tables of that Planet. The observations of Iris, Melpomene and Thalia are compared with the Ephemerides in pages 82, 43 and 84 respectively of vol. V. of the Astronomical Journal. For Eunomia the comparison is made with the Ephemeris in the Astr. Nachr. vol. 47, col. 103, for Fortuna with that in vol. 46, col. 250, and for Proserpine with that in vol. 48, col. 174. For Metis, places were computed from the Elements in the Astr. Nachr. vol. 44, col. 154, and for Europa, places were computed from the Elements in the Berl. Jahrbuch for 1863, p. 427.

The foregoing communication, which is a continuation of similar preceding ones, contains with few exceptions all

the meridian observations of Minor Planets taken at the Cambridge Observatory in the four years ending with 1858. The deficiencies and irregularities in these series are attributable to the same causes as those which were alluded to in my communication to *Nº* 1263 to the Astr. Nachr. (col. 239). At the end of 1858 meridian observations of the Minor Planets were discontinued, and the Transit and Mural Circle have since been chiefly employed in the determination of the places of stars used for comparison in Equatorial observations of Planets and Comets.

I beg to take this opportunity for stating that Professor *Adams* recently succeeded me in the direction of the Cambridge Observatory, and that I have now no other responsibility connected with it than that of completing the publication of the Meridian and Equatorial observations which have been taken during my superintendence.

Cambridge 1861 Nov. 5.

*J. Challis.*