1851	M. T. Wash.	No. of Comp.	* of Comp.	Egeria — *		Egeria, apparent		A.
				$\Delta \alpha.$	$\Delta \delta.$	$\alpha.$	$\delta.$	
May 1	8 ^h 00 ^m 39 ^s .4	1	B. Z. 397	+5 ^m 49 ^s 22		4 ^h 22 ^m 06 ^s 67		7
2	8 14 57,4	2	e	+2 22,74	+14' 30"92	4 24 11,43	+29°12' 43"09	7

Some of the above observations have already been published in the *Astronomical-Journal*.

The planet was searched for till the 14th May, at which time it was so far in the twilight as to leave no hope of seeing it again.

Adopted mean places 1850,0 of stars of Comparison.

Star.	Mag.	$\alpha.$	$\delta.$	Authority.	No. ob.
Weisse I. 501	6.7	1 ^h 29 ^m 09 ^s 53	+11°22' 19"45	Weisse's Catalogue.	
a	9.10	1 33 09,98	11 20 08,92	Wash. Equat. from Weisse I. 501	7
Weisse I. 539	8.9	1 31 12,98	11 40 27,18	Weisse's Catalogue.	
— 646	8.9	1 35 14,86	12 11 53,41	—	
— 732	9	1 40 34,94	13 18 54,50	—	
b	9.10	1 42 2,23	13 36 06,04	Wash. Equat. from Weisse I. 732	10
Weisse I. 775	9	1 43 11,48	14 00 31,26	Weisse's Catalogue	
— 807	9	1 44 59,53	14 08 11,75	—	
— 896	8.9	1 50 31,10	15 11 48,72	—	
d	11.12	1 51 57,93	15 25 14,97	Wash. Equat. from Weisse I. 896	7
B. Z. 394	8.9	1 58 24,17	16 21 55,73	Bessel's Zones	
B. Z. 394, Rümker 568	9	2 7 9,54	17 12 58,65	Bessel's Zones and Rümker (mean)	
Lal. 4238	7.8	2 9 27,28	17 45 26,47	Lalande's Catalogue	
B. Z. 332, Lal. 4460	8.9	2 17 17,92	18 52 33,86	Bessel's Zones	
— 399, Rümker 654	8.9	2 25 3,74	19 46 27,40	Bessel's Zones and Rümker (mean)	
— 391	9	2 28 16,36	20 02' 38,92	Bessel's Zones	
— 391	8	2 35 11,19	20 30 24,40	—	
— 391, Rümker 695	8	2 36 17,00	20 58 37,27	Bessel's Zones and Rümker (mean)	
Rümker 742	9	2 46 52,34	22 19 16,25	Rümker's Catalogue	
B. Z. 27	7	2 54 47,24	22 28 07,23	Bessel's Zones	
B. Z. 530	9	3 7 20,48	23 48 22,83	—	
Rümker 845	9	3 13 20,18	24 12 33,07	Rümker's Catalogue	
Rümker 849, B. Z. 530, G. 12y. C.	6	3 15 27,45	24 11 20,08	Greenwich 12 year Catalogue	
B. Z. 530	9	3 16 8,62	24 54 13,32	Bessel's Zones	
— 396	8.9	3 33 27,49	26 05 17,60	—	
—	9	3 39 16,36	26 7 13,59	—	
—	9	3 41 43,00	26 37 01,07	—	
— 397	9	3 56 16,65	27 28 02,74	—	
—, Rümker 1104	9	4 3 4,96	28 2 31,13	Rümker's Catalogue	
— 397	9	4 16 15,00	29 10 35,89	Bessel's Zones	
e	10	4 21 46,23	+28 58 09,81	Wash. Equat. from preceding star.	2

Beobachtungen der Irene und der Metis am Fraunhofer Equatoreal der Durhamer Sternwarte.

Irene. (Prof. Chevallier)

Set.	1851	Greenw. M. T.	App. R. A.	Log. $\frac{P}{P}$	App. N. P. D.	Log. $\frac{q}{P}$	No. of Comp.	
							in R. A.	N. P. D.
1	May 22	11 ^h 53 ^m 0 ^s .6	16 ^h 1 ^m 12 ^s .17	—7,373	103°28' 11"7	—9,9662	20	4
2	26	11 8 7,4	15 57 14,92	—7,838	103 35 12,1	—9,9657	14	4
3	31	11 28 43,3	15 52 22,48	+5,—	103 45 39,3	—9,9672	18	6

I r e n e. (Mr. R. C. Carrington).

Set.	1851	Greenw. M. T.	App. R. A.	Log. $\frac{P}{P}$	App. N. P. D.	Log. $\frac{q}{P}$	No. of Comp.	
							R. A.	N. P. D.
1	May 22	10 ^h 40 ^m 22 ^s .7	16 ^h 1 ^m 15 ^s .12	-8,168	103° 28' 54.0	-9,9620	12	4
2	26	11 0 56,8	15 57 15,07	-7,905	35 12,5	9,9654	21	7
3	28	10 22 22,6	55 18,73	-8,810	39 7,8	9,9633	24	8
4	28	11 28 54,9	55 15,39	-7,207	39 10,9	9,9669	18	6
5	29	12 4 13,7	54 15,57	+7,730	41 18,6	9,9664	24	8
6	30	11 32 59,6	53 19,65	+5,—	43 25,8	9,9666	6	2
7	31	10 34 52,6	52 24,54	-7,922	45 35,2	9,9659	21	7
8	June 4	10 38 0,9	48 44,33	-7,644	55 16,5	9,9673	24	8
9	4	11 11 34,3	48 43,14	+5,—	55 20,0	9,9678	15	5
10	5	10 26 11,4	15 47 52,16	-7,751	103 57 52,8	-9,9675	24	8

P is the Equ. Hor. Parallax in seconds of arc: p and q are the required corrections in time and arc respectively.

Mean places of Stars of Comparison.

Set.	Name.	R. A.	1851,0	N. P. D.
1	Weisse 15 ^h 1144	15 ^h 59 ^m 51 ^s .85	103° 32' 24.1	
2 and 3	1118	58 46,01	40 0,3	
4 to 8, and 10	48 Librae	49 51,08	50 41,7	
9	Weisse 15 ^h 910	15 47 53,46	103 57 23,5	

By one transit, the R. A. of W. 15^h 1118 would seem to be more correctly 45° 20'. The Stars used by Prof. Chevalier were the same as Mr. Carrington's, on the same nights.

N o t e s.

May 26. Sky very hazy.

28. Very favourable.

29. Much vapour. Objects furred and unsteady.

30. Two indifferent comparisons. Clouds interrupted.

June 4. A small star, 10th Mag., very near the planet s. p.
Sky more or less foggy on this night also.

5. The planet s. p. of W. 15^h 910 and very close to it. The result of this Set should be good, as all circumstances were particularly favourable.

M e t i s. (Mr. R. C. Carrington).

Set.		Greenw. M. T.	App. R. A.	Exc. of Ephem.	App. N. P. D.	Exc. of Ephem.	No. of Comp.	
							R. A.	N. P. D.
1	1850 Dec. 23	15 ^h 36 ^m 58 ^s .2	10 ^h 2 ^m 50 ^s .44		70° 35' 18.9		18	6
2	27	14 27 30,6	3 17,25		70 19 51,3		24	8
3	1851 Jan. 6	13 29 15,9	1 58,08		69 29 7,3		12	4
4	7	14 38 16,9	10 1 37,80		69 22 53,5		18	6
5	Febr. 8	10 50 11,1	9 36 37,13	-3° 48	65 49 21,8	+ 6"4	18	8
6	8	12 28 50,6	36 32,76	3,42			Meridian	
7	14	13 23 5,1	30 16,16	3,44	65 17 28,4	5,5	24	8
8	16	14 50 39,5	28 10,50	3,03	65 8 15,3	8,6	21	7
9	17	10 45 36,5	27 20,83	3,01	65 4 51,8	5,3	24	8
10	17	11 44 14,8	27 18,68	3,28	65 4 35,4	11,8	Meridian	
11	20	13 31 7,6	24 19,70	3,14	64 53 10,3	8,9	24	8
12	21	12 54 37,3	23 25,03	3,34	64 49 57,3	9,2	16	8
13	23	12 47 50,8	21 36,23	-3,26	64 44 7,1	+ 4,4	11	4
14	March 4	9 11 30,1	14 41,24		64 28 30,3		14	5
15	10	12 19 29,3	9 11 11,42		64 27 38,2		24	8

The above observations are corrected for refraction and parallax, and compared with the ephemeris circulated by Lieut. Stratford, Superintendent of the Naut. Almanac, so far as that Ephemeris extends.

Notes.

1850 Dec. 27. Wind loud, and sky unsettled.
 1851 Jan. 6. Fog prevented further comparisons. γ' , the brighter star of γ Leonis was used.
 Febr. 8. Set 5. R. A. and N. P. D. measures taken separately.

Febr. 8. Set 6. Observed with difficulty on the meridian.
 17. Set 9. Measures very satisfactory, but star indifferent.
 Set 10. Meridian. N. P. D. probably indifferent.
 23. Star in a difficult position. Interrupted by fog.

Mean places of the Stars of comparison used at Durham, and of certain other Stars near the path of Metis during the Opposition of 1850—51, observed on the meridian at Durham. *)

Set.	Name.	Mag.	R. A.	1851,0	N. P. D.	No. of obs.
	(a)	8	9 ^h 4 ^m 53 ^s 57		65° 5' 48" ²	1
14, 15	Lalande 18184	6	5 46,60		64 22 27,9	3
	18259	9	8 5,83		64 44 40,4	3
	18482	8	15 43,66		65 47 4,8	1
	(b)	9	16 36,45		64 37 39,6	3
13	(c)	8	21 30,35		64 40 15,8	3
11, 12	(d)	9	22 55,32		64 55 56,5	2
9	(e)	10	28 9,88		65 2 6,4	**)
	(f)	8	29 2,60		64 56 11,9	3
7, 8	(g)	9	29 24,70		65 15 59,4	2
5	B. A. C. 3327	7	36 47,17		65 50 32,8	2
	Lalande 19329	8	44 27,84		66 40 56,1	5
	19522	7	51 9,92		67 58 10,0	4
	B. A. C. 3423	7	54 30,00		67 20 1,9	1
4	Lalande 19677	9	9 56 55,60		69 21 50,7	2
2	(h)	9	10 0 3,24		70 30 30,5	2
1	B. A. C. 3460	7	0 57,40		70 44 21,4	2
	Lalande 19900	9	6 58,83		70 8 16,8	1
3	γ' Leonis.	2	10 11 45,05		69 24 25,4	4

I should state in reference to the Star-observations, that I find the average error of a single observation of a Naut.-Almanac. Star, with the Durham transit-circle, to be, in R. A. $\pm 0'05$, and in N. P. D. about $\pm 1''0$, the circle

being small. The N. P. Ds. are obtained differentially from Naut. Alm. Stars, the zero of the circle being too unstable for independent measures of Zenith-Distance.

*) Star (d) was kindly observed for me at Cambridge by Mr. James Breen.

**) The place of Star (e) depends on a single Comparison with (f): it was too faint for the transit. The other Stars were observed during last February; circumstances unexpectedly occurred which prevented a greater number of observations of each being secured. The corrections to Naut. Alm. Stars at present in use at Greenwich were applied throughout in finding Clock-error.

R. C. Carrington.

Beobachtungen der Irene, von Herrn W. W. Boreham.

Haverhill 1851. Juni 6.

1851		Greenw. M. T.	AR.	N. P. D.			Observ.	Stars of Comp.
May	21	11 ^h 0 ^m 2 ^s	16 ^h 2 ^m 14 ^s .89	—0,012 p	103°26' 26"62	—0,904 p	6	Weisse XVI. 78.
	22	11 6 00	16 1 14,25	—0,0119 p	28 1,12	—0,903 p	6	—
	23	10 33 51	16 0 16,60	—0,0128 p	29 42,64	—0,903 p	7	Weis. XV. 1118, cloudy, doubtful.
	28	11 15 39	15 55 16,33	—0,0026 p	39 12,24	—0,911 p	5	— good.
	30	11 16 28	15 53 19,59	—0,00 p	43 22,61	—0,912 p	3	Greenw. 12-y. Cat. 1308.
	31	10 21 14	15 52 25,22	—0,009 p	45 31,89	—0,908 p	6	—
June	1	10 31 25	15 51 28,14	—0,006 p	47 52,27	—0,911 p	5	—
	4	10 28 31	15 48 45,00	—0,005 p	103 55 45,97	—0,912 p	6	— pretty good.

p = Horizontal Equatoreal Parallax.