1850.	r	x	y	z	Log. △
April 15	29.96788	+27.11584	—11.54450	—5.434227	1.4859821
23	.96767	.12637	.52317	.425740	.4844612
May 1	.96747	.13690	.50184	.417244	.4827933
9	.96727	.14741	.48048	.408739	.4810050
17	.96706	.15791	.45909	.400223	.4791266
25	.96686	.16841	.43767	.391697	.4771922
June 2	.96666	.17889	.41624	.383162	.4752353
10	.96645	.18935	.39480	.374623	.4732881
18	.96625	.19980	.37335	.366081	.4713911
26	.96605	.21023	.35190	.357537	.4695771
July 4	.96585	.22063	.33044	.348994	.4678793
12	.96565	.23101	.30898	.340454	.4663326
20	.96546	.24137	.28750	.331913	.4649689
28	.96526	.25171	.26603	.323375	.4638154
August 5	.96506	.26203	.24453	.314838	.4628966
13	.96486	.27233	.22304	.306300	.4622325
21	.96466	.28260	.20156	.297762	.4618404
29	.96446	.29284	.18009	.289223	.4617277
September 6	.96426	.30306	.15862	.280683	.4618990
14	.96407	.31326	.13715	.272138	.4623539
22	.96388	.32344	.11568	.263587	.4630824
30	.96368	.33360	.09420	.255032	.4640698
October 8	.96349	.34374	.07271	.246471	.4652965
16	.96330	.35387	.05120	.237904	.4667382
24	.96310	.36399	.02969	.229329	.4683635
November 1	.96291	.37409	11.00817	.220744	.4701396
9	.96272	.38418	10.98663	.212148	.4720315
17	.96253	.39425	.96504	.203542	.4739974
25	.96234	.40430	.94343	.194931	.4760012
December 3	.96215	.41434	.92181	.186315	.4780031
11	.96196	.42437	.90019	.177693	.4799638
19	.96178	.43439	.87855	.169067	.4818449
27	.96159	.44440	.85690	.160442	.4836138
35	29.96141	+27.45439	—10.83525	—5.151819	1.4852387

OBSERVATIONS OF ASTRÆA AND HYGEA,

MADE WITH THE FILAR-MICROMETER OF THE WASHINGTON EQUATORIAL.

By Mr. JAMES FERGUSON.

Communicated by Lieutenant Maury, Director of the Observatory.

[Corrected for refraction.]

ASTRÆA.

Date. M. T. Washington.	No. of Obs.	Star of Comparison.	☥ — ✳		☥'s apparent	
			Δα	Δδ	α	δ
1850. h. m. s.			m. s.		h. m. s.	° ′ ″
Jan. 5 10 24 51.1	3	790, Weisse II.	+0 56.94	+ 1′ 26″.29	2 40 46.41	+ 8 44 31.68
14 9 49 22.4	3	880, "	—0 33.78	— 8 18.78	2 49 45.39	+ 9 27 35.62
	3	893, "	—1 27.75	— 8 45.82	2 49 44.71	+ 9 27 36.82
Feb. 4 10 20 31.6	2	114, Weisse III.	—1 34.71	—14 8.33	3 5 8.49	+11 37 58.61
5 10 8 19.6	10	114, "	—0 35.64	— 7 19.77	3 6 7.54	+11 44 47.11

Date. M. T. Washington.	No. of Obs.	Star of Comparison.	☿ — ✳		☿'s apparent	
			$\Delta\alpha$	$\Delta\delta$	α	δ
1850. h. m. s.			m. s.	′ ″	h. m. s.	° ′ ″
Feb. 11 9 10 51.3	8	172, Weisse III.	+2 31.19	+11 33.49	3 12 31.90	+12 27 39.63
14 7 9 18.0	6	205, "	+4 17.84	— 0 52.68	15 53.64	12 48 41.85
16 8 48 28.0	5	306, "	+0 58.41	— 1 26.29	18 22.61	13 3 44.36
10 13 31.0	5	306, "	+1 3.39	— 0 54.40	18 27.58	4 16.25
17 8 56 40.0	6	306, "	+2 12.13	+ 5 55.82	19 36.31	11 6.44
19 7 59 35.3	5	447, "	—2 57.35	+ 9 18.02	22 3.26	25 28.27
9 59 48.5	3	447, "	—2 51.25	+ 9 53.50	22 9.36	26 3.76
22 7 17 13.6	6	474, "	—0 17.82	+ 7 22.70	25 55.86	47 22.94
9 33 21.3	6	474, "	—0 10.70	+ 8 2.61	26 3.00	48 2.85
23 7 41 16.1	7	474, "	+1 3.42	+14 48.26	27 16.98	13 54 48.47
25 7 44 26.5	10	*k*	+1 52.05	+12 20.27	29 58.49	14 9 29.94
26 9 23 51.1	6	940, Rümker	—2 20.09	— 0 55.84	31 28.35	14 17 16.69
March 4 9 18 35.5	6	774, Weisse III.	—0 20.35	— 6 0.37	40 5.56	15 1 8.73
9 38 17.3	5	774, "	. . . .	— 5 53.53	. . . .	1 15.56
5 7 51 44.6	3	774, "	+1 3.39	+ 0 48.28	41 29.30	7 57.34
10 8 12 33.9	6	*n*	+1 10.64	+ 0 46.52	48.6	42.8
8 45 26.3	3	*n*	+1 12.93	+ 0 55.56	. . . .	. . . . .
11 7 51 18.5	3	*m*	+2 50.59	+ 2 18.52	3 50.2	+15 50.5
8 19 2.0	4	*m*	+2 53.32	+ 2 26.15	. . . .	. . . . .

Adopted Mean Places for 1850.0 *of Comparison-Stars.*

✳	Mag.	α	Ann. Prec.	δ	Ann. Prec.	Authority.	No. of Obs.
		h. m. s.		° ′ ″			
790, Weisse II.	8	2 45 43.33	+3.206	+ 8 43 12.78	+15.036	Weisse's Catalogue.	
880, "	8.9	2 50 19.11	3.224	9 36 0.29	14.786	" "	
893, "	8.9	2 51 12.45	3.224	9 36 28.55	14.714	" "	
114, Weisse III.	9	3 6 43.33	3.275	11 52 15.26	13.758	" "	
172, "	8	3 10 0.93	3.285	12 16 14.71	13.550	" "	
205, "	8	3 11 36.07	3.296	12 49 43.07	13.551	" "	
306, "	9	3 17 24.46	3.306	13 5 19.26	13.064	" "	
447, "	8	3 25 0.86	3.316	13 16 19.05	12.551	" "	
474, "	9	3 26 13.90	3.325	13 40 9.05	12.468	" "	
k	9	3 28 6.79	3.332	13 57 18.52	12.339	Wash'n Equatorial, from 474, Weisse III.	5
940, Rümker	9	3 33 48.83	3.343	14 18 21.38	11.942	Rümker's Catalogue.	
774, Weisse III.	9	3 40 26.23	+3.367	15 7 17.94	+11.472	Weisse's Catalogue.	
n	9	3 47.6		15 43.6			
m	9	3 47.4		+15 48.2			

HYGEA.

Date. M. T. Washington.	No. of Obs.	Star of Comparison.	Hygea — Star.		Hygea's apparent	
			$\Delta\alpha$	$\Delta\delta$	α	δ
			m. s.	′ ″	h. m. s.	° ′ ″
May 18 14 49 34.81	2	*a*	+1 21.76	+25 02.97	19 44 48.608	—22 9 47.334
(1) 20 14 36 37.58	3	*c*	—0 51.76	— 0 42.15	44 51.275	8 9.975
21 14 22 2.01	5	*e*	—2 12.31	+13 53.66	44 49.374	7 28.066
(1) 23 13 6 21.68	2	*e*	—2 19.80	+15 11.44	44 42.017	6 10.116
	2	*c*	—1 0.85	+ 1 20.48	19 44 42.377	—22 6 7.866

(1) Bright moonlight, with light floating clouds.

Adopted Mean Places, 1850.0, *of Comparison-Stars.*

*	Mag.	α	δ	Authority.	No. Obs.
		h. m. s.	° ′ ″		
a	9.10	19 43 25.69	−22 35 0.17	Washington Equatorial, from 6850, B. A. C.	2
e	9.10	19 47 0.45	−22 21 31.86	" " " " "	6
c	10	19 45 41.87	−22 7 37.74	" " from *e*.	5

Comparison with an ephemeris computed from HENSEL's Elements IV., *Astr. Nachr.*, No. 702.

	Calc. − Obs. α	Calc. − Obs. δ		Calc. − Obs. α	Calc. − Obs. δ
	m. s.	′ ″		m. s.	′ ″
May 18	−1 12.83	+4 44.2	May 21	−1 15.00	+4 57.27
20	−1 14.27	+4 52.53	23	−1 16.87	+4 59.01

FROM LETTERS OF PROFESSOR SCHUMACHER TO THE EDITOR.

Altona, May 10, 1850.

DR. PETERSEN has made an accurate reduction of his observations. They are as follows: —

M. T. Altona.	α	δ	Obs.
h. m. s.	h. m. s.	° ′ ″	
May 2 9 48 22.4	19 24 10.56	+71 19 4.8	2
12 12 8.3	24 1.32::	19 55.8	2*
13 37 7.8	24 2.32	. . . . .	2
3 9 52 25.3	. . . . .	71 28 50.7	3
10 15 47.3	19 23 6.78		

SONNTAG has observed here, —

h. m. s.	h. m. s.	° ′ ″	
May 4	12 54 43	19 21 45.23	71 40 4.0	5

Mr. RÜMKER has also observed the comet in Hamburg.

M. T. Hamburg.	α	δ
h. m. s.	° ′ ″	° ′ ″
May 2 10 20 36.0	291 2 15.0	71 18 55.8
3 10 37 3.7	290 47 30.5	29 13.9
4 12 15 48.9	290 28 25.2	40 13.6

The following approximate elements have been computed by my son, RICHARD SCHUMACHER, from PETERSEN's observations of May 2 and 3, and a mean of the two above mentioned for May 4.

T 1850, June 8.2032 Berlin.

π 250° 21′ 13″

Ω 75 22 52

i 57 46 50

Log. q 9.999264

Motion direct.

These elements represent each of the three fundamental places within 1″ in longitude, and 2″ in latitude. . . . . .

* This observation was made for the declination alone, which is therefore very reliable.

SONNTAG has computed elements, and the following ephemeris, for mean Berlin midnight: —

	α	δ	Log. r	Log. Δ	Δ
	° ′	° ′			
May 0	291 14	+71 1	0.0776	9.9121	0.817
4	290 27	71 40	.0647	.8744	.749
8	288 47	72 23	.0523	.8315	.678
12	286 9	73 12	.0408	.7822	.606
16	282 7	74 7	.0302	.7252	.531
20	275 47	75 8	.0208	.6578	.455
24	265 24	76 10	.0129	.5767	.377
28	247 34	76 43	.0065	.4763	.299
June 1	219 16	74 48	0.0021	.3483	.233
5	188 57	+64 53	9.9995	9.1832	0.152

WEYER has, from GEORGE RÜMKER's elements, which are based upon his father's three observations, computed an ephemeris not very different. . . . . .

Professor ENCKE has sent me, from Berlin, an observation by Dr. GALLE.

M. T. Berlin.	α	δ	Obs.
h. m. s.	° ′ ″	° ′ ″	
May 5 10 42 56.4	290 9 44.4	+71 49 12.2	5

I add another observation of Dr. PETERSEN's, which was made only an hour ago, but has been reduced with all rigor.

		α	δ	
	h. m. s.	h. m. s.	° ′ ″	Obs.
May 8	10 26 43.0	19 15 39.64	+72 18 42.2	4

This is all I have to communicate on the subject, and you have now all the data for computing very accurate elements immediately, and for deciding whether this very inconvenient proximity is confirmed.