ASTRONOMISCHE NACHRICHTEN.

Band 193.

Nr. 4613.

5.

Mikrometer-Beobachtungen von kleinen Planeten auf der Königstuhl-Sternwarte.

Von E. Ernst.

1911	M. Z. Kgst.	$\Delta\alpha$	$\Delta\delta$	Vgl.	Gr.	α app.	$\log p\Delta$	δ app.	$\log p\Delta$	Red. ad l. app.	*
5 Astraea											
Nov. 3	11 ^h 2 ^m 1 ^s	-1 ^m 30 ^s 08	+ 7' 19".5	8	9 ^m 5	2 ^h 53 ^m 49 ^s 01	9.029 _n	+ 7° 31' 23".0	0.769	+3 ^s 31 +21".0	1
8 Flora											
April 22	14 50 0	+0 19.29	- 2 19.9	20,6	-	13 50 28.74	9.432	- 1 6 27.5	0.828	+1.47 -11.5	2
11 Parthenope											
März 21	11 36 53	+0 59.79	-12 16.3	10,6	-	11 57 55.65	8.656 _n	+ 6 47 40.9	0.773	+1.30 - 7.8	3
17 Thetis											
Juli 20	11 16 51	-0 9.20	+ 6 34.9	20,10	-	19 50 6.56	8.878 _n	-19 25 0.7	0.911	+2.80 + 0.9	4
21	11 20 19	-1 4.17	+ 0 32.3	20,8	-	19 49 11.60	8.786 _n	-19 31 3.3	0.912	+2.81 + 0.9	4
18 Melpomene											
Juni 21	11 37 58	-2 31.28	+ 1 19.6	20,7	-	16 53 31.21	8.830	- 6 24 57.5	0.860	+2.16 - 8.7	5
29 Amphitrite											
März 10	12 33 31	-0 43.83	- 0 51.2	6,6	-	12 1 55.43	8.477 _n	- 0 9 2.9	0.824	+1.14 - 7.5	6
21	9 23 49	+0 37.86	+ 4 58.8	10,10	-	11 51 44.47	9.379 _n	+ 0 29 55.5	0.820	+1.24 - 7.8	7
22	11 57 25	+3 1.03	-10 27.5	8,8	-	11 50 44.17	7.825	+ 0 33 55.9	0.819	+1.24 - 7.8	8
33 Polyhymnia											
Mai 3	12 12 20	+1 17.17	- 5 36.8	20,4	11.7	13 25 54.92	9.170	-10 0 49.2	0.873	+1.43 -11.7	9
39 Laetitia											
Febr. 27	11 54 11	-1 6.56	+ 1 7.8	8,8	-	9 22 37.01	8.991	+12 2 26.8	0.728	+1.15 - 1.0	10
März 1	12 2 19	-2 30.31	+14 31.8	10,8	-	9 21 13.26	9.103	+12 15 50.9	0.728	+1.15 - 0.9	10
8	12 1 10	-0 31.89	+ 4 15.5	12,8	-	9 18 58.63	9.237	+12 58 25.2	0.726	+1.13 - 0.7	11
64 Angelina											
Aug. 26	12 16 34	+3 28.99	- 2 14.4	20,8	11.0	22 25 37.92	8.089	- 8 59 52.6	0.873	+2.89 +12.9	12
27	11 1 3	-1 8.47	+ 5 15.0	20,8	-	22 24 49.85	9.027 _n	- 9 4 9.9	0.871	+2.89 +13.1	a
28	12 5 56	+0 40.67	+ 4 20.1	10,4	-	22 23 56.41	8.022	- 9 8 54.4	0.874	+2.90 +13.1	13
105 Artemis											
April 22	14 6 16	+3 24.16	- 5 17.2	20,4	-	13 29 5.57	9.384	- 1 31 35.4	0.830	+1.45 -10.9	14
106 Dione											
April 25	14 13 54	+1 34.35	- 0 41.0	20,6	-	13 50 52.79	9.383	- 7 44 10.2	0.857	+1.46 -11.7	b
107 Camilla											
Mai 26	13 56 51	+0 40.00	+ 2 15.4	20,8	-	16 11 15.39	9.285	- 8 21 7.4	0.863	+1.88 -11.3	c
28	12 59 13	-0 41.56	+ 7 6.1	22,8	-	16 9 53.85	9.071	- 8 16 16.6	0.867	+1.90 -11.2	c
29	13 8 18	+1 52.32	+ 5 23.4	20,5	-	16 9 11.99	9.145	- 8 13 53.6	0.866	+1.91 -11.2	15
110 Lydia											
Mai 3	13 47 49	+2 10.33	+ 5 41.8	18,4	-	14 1 50.42	9.370	- 8 44 18.6	0.861	+1.52 -12.0	16
114 Cassandra											
Okt. 17	12 36 22	+1 48.80	+10 24.6	6	-	0 13 54.38	9.295	- 1 50 15.7	0.833	+3.03 +19.6	17
18	11 37 32	+1 9.39	+ 5 17.3	4	-	0 13 14.97	9.051	- 1 55 23.0	0.834	+3.03 +19.6	17

1911	M. Z. Kgst.	$\Delta\alpha$	$\Delta\delta$	Vgl.	Gr.	α app.	$\log p\Delta$	δ app.	$\log p\Delta$	Red. ad l. app.	*
122 Gerda											
Mai	3	13 ^h 7 ^m 0 ^s	— 1 ^m 32 ^s 77	+ 5' 10 ^{''} 2	20,6	— 14 ^h 7 ^m 24 ^s 81	9.228	— 11° 20' 18 ^{''} 6	0.877	+ 1 ^s 53 — 12 ^{''} 2	18
124 Alkeste											
Nov.	1	13 39 27	— 1 34.97	— 3 20.5	6	— 2 14 56.69	9.307	+ 11 16 9.8	0.745	+ 3.28 + 21.8	19
139 Juewa											
Okt.	18	13 7 19	— 2 17.10	+ 2 48.6	4	11 ^m 8 0 19 38.64	9.377	+ 5 1 9.1	0.795	+ 3.00 + 20.7	20
	19	9 48 1	— 2 57.93	+ 0 29.3	4	— 0 18 57.81	8.846 _n	+ 4 58 49.9	0.788	+ 3.00 + 20.8	20
148 Gallia											
Juli	3	11 22 26	— 1 2.24	+ 3 55.9	20,10	11.7 16 31 33.15	9.192	+ 10 57 54.3	0.743	+ 2.09 — 5.1	21
	4	11 43 31	— 1 37.48	— 3 4.0	20,6	— 16 30 57.91	9.289	+ 10 50 54.5	0.748	+ 2.09 — 5.0	21
	4	12 54 6	— 1 39.13	— 3 25.4	20,8	— 16 30 56.26	9.459	+ 10 50 33.1	0.764	+ 2.09 — 5.0	21
	5	11 2 6	— 1 23.08	— 0 43.3	20,6	— 16 30 25.36	9.139	+ 10 44 3.5	0.745	+ 2.08 — 4.9	22
	5	13 52 58	— 1 27.08	— 1 35.2	20,8	— 16 30 21.36	9.543	+ 10 43 11.6	0.782	+ 2.08 — 4.9	22
	6	10 38 1	+ 0 30.76	+ 3 39.3	16,8	— 16 29 53.58	9.018	+ 10 36 57.4	0.742	+ 2.08 — 4.8	23
	7	11 17 44	— 0 23.65	+ 0 48.4	24,8	— 16 29 21.45	9.245	+ 10 29 21.1	0.749	+ 2.07 — 4.7	d
	10	10 8 12	+ 0 23.66	+ 6 43.1	16,9	— 16 27 55.85	8.933	+ 10 6 31.3	0.746	+ 2.06 — 4.4	e
158 Koronis											
April	21	10 40 15	— 1 53.18	+ 8 24.5	20,8	— 12 54 4.22	8.501 _n	— 7 22 38.7	0.865	+ 1.36 — 10.8	f
	22	9 44 18	+ 2 49.18	— 1 5.6	20,6	— 12 53 23.02	9.064 _n	— 7 18 6.7	0.863	+ 1.35 — 10.7	g
	24	12 5 16	— 1 42.42	+ 1 53.3	20,8	— 12 51 55.26	9.125	— 7 8 26.9	0.861	+ 1.36 — 10.7	h
	25	12 29 53	+ 1 22.81	+ 3 55.0	20,6	— 12 51 13.90	9.251	— 7 3 52.7	0.859	+ 1.36 — 10.7	24
	29	11 21 31	+ 1 54.31	+ 2 48.8	18,6	12.2 12 48 41.82	8.999	— 6 46 46.2	0.861	+ 1.35 — 10.6	i
Mai	2	9 39 9	+ 1 38.56	— 0 16.8	20,8	— 12 46 58.87	8.686 _n	— 6 34 55.1	0.861	+ 1.34 — 10.5	k
	3	10 53 39	+ 1 3.68	+ 3 42.9	40,8	— 12 46 23.99	8.922	— 6 30 55.4	0.860	+ 1.34 — 10.5	k
	18	10 18 32	— 2 29.47	+ 1 43.0	20,6	— 12 40 29.17	9.119	— 5 47 20.0	0.855	+ 1.29 — 10.1	25
	19	10 19 6	— 2 43.50	+ 3 41.6	16,8	— 12 40 15.13	9.142	— 5 45 21.3	0.855	+ 1.28 — 10.0	25
	21	11 42 11	+ 1 57.28	— 2 44.2	18,6	— 12 39 51.28	9.427	— 5 41 51.7	0.847	+ 1.25 — 9.8	l
171 Ophelia											
April	18	11 17 7	+ 1 44.19	+ 12 38.6	18,6	— 12 11 8.75	8.916	+ 2 57 51.3	0.803	+ 1.33 — 8.2	26
	21	12 30 54	+ 2 32.13	— 0 21.8	18,8	— 12 9 32.97	9.334	+ 3 5 41.9	0.805	+ 1.32 — 8.0	27
	22	13 23 18	+ 2 1.83	+ 2 0.1	20,6	— 12 9 2.67	9.458	+ 3 8 3.9	0.808	+ 1.32 — 7.9	27
	25	11 28 7	— 0 18.88	+ 3 28.0	20,4	— 12 7 44.22	9.174	+ 3 13 54.2	0.802	+ 1.31 — 7.8	m
174 Phaedra											
Sept.	18	9 12 10	+ 1 56.61	+ 9 44.8	4	— 23 48 48.19	9.418 _n	+ 8 59 16.1	0.771	+ 2.81 + 18.1	28
176 Iduna											
Okt.	18	13 35 32	— 3 14.74	+ 3 25.6	6	— 0 17 54.76	9.442	+ 7 15 44.9	0.785	+ 2.98 + 21.0	29
	19	9 18 51	+ 1 53.25	+ 3 51.9	4	— 0 17 31.19	9.064 _n	+ 7 4 23.3	0.773	+ 2.97 + 20.8	30
187 Lamberta											
Okt.	17	11 57 44	+ 2 50.19	— 3 17.5	4	— 0 22 0.24	9.102	— 1 5 2.9	0.829	+ 3.04 + 20.0	31
	18	12 4 10	+ 2 3.25	— 5 25.4	4	12.0 0 21 13.30	9.162	— 1 7 10.8	0.829	+ 3.04 + 20.0	31
205 Martha											
Sept.	1	10 2 8	+ 1 17.18	+ 3 29.2	4	12.2 23 5 23.69	9.355 _n	+ 7 26 36.2	0.778	+ 2.70 + 14.8	32
	2	8 45 49	+ 0 35.96	— 2 38.6	4	— 23 4 42.47	9.493 _n	+ 7 20 28.5	0.790	+ 2.70 + 14.9	32
206 Hersilia											
Nov.	2	9 41 27	+ 3 11.22	— 0 1.5	6	— 2 43 21.56	9.342 _n	+ 9 44 40.7	0.760	+ 3.31 + 21.3	33
230 Athamantis											
Juli	7	10 42 28	+ 2 4.12	+ 4 45.6	20,6	— 18 36 34.24	8.969 _n	— 12 14 57.7	0.885	+ 2.49 — 4.2	34
	7	13 36 14	+ 1 56.62	+ 4 59.7	20,10	— 18 36 26.74	9.289	— 12 14 43.6	0.878	+ 2.49 — 4.2	34

1911	M. Z. Kgst.	$\Delta\alpha$	$\Delta\delta$	Vgl.	Gr.	α app.	$\log p\Delta$	δ app.	$\log p\Delta$	Red. ad l. app.	*	
Juli	8	12 ^h 14 ^m 15 ^s	+1 ^m 0 ^s 16	+ 6' 48.7	16,8	—	18 ^h 35 ^m 30 ^s 29	8.852	— 12° 12' 54.5	0.886	+2.50 — 4.7	34
	10	10 48 52	— 0 13.99	— 1 34.6	16,10	—	18 33 34.82	8.761 _n	— 12 9 23.4	0.886	+2.52 — 4.1	35
	12	12 9 55	— 2 13.57	+ 1 36.9	20,6	10 ^m 5	18 31 35.25	8.986	— 12 6 11.7	0.885	+2.53 — 3.9	35
261 Prymno												
Nov.	1	14 7 4	+0 16.40	— 6 38.5	6	12.0	2 26 29.23	9.351 _r	+ 8 58 0.0	0.766	+3.28 +21.6	n
273 Atropos												
Juli	12	10 57 50	— 0 56.88	— 4 10.9	18,8	11.8	19 7 33.49	8.931 _n	+ 8 23 23.9	0.761	+2.34 — 1.9	36
	14	12 33 58	— 0 49.08	+ 0 47.4	28,8	—	19 5 53.16	8.963	+ 7 59 18.0	0.764	+2.36 — 1.6	37
	18	11 15 27	+1 4.08	— 2 35.6	18,6	—	19 2 46.53	7.905 _n	+ 7 8 34.4	0.770	+2.39 — 1.1	38
	18	11 53 31	+1 2.86	— 2 55.2	16,6	—	19 2 45.31	8.747	+ 7 8 14.8	0.770	+2.39 — 1.1	38
	19	10 0 36	— 1 18.33	+ 4 55.6	20,10	—	19 2 3.22	9.094 _n	+ 6 55 33.5	0.774	+2.40 — 0.9	39
	20	9 47 42	— 0 57.46	— 3 36.3	16,10	—	19 1 18.58	9.138 _n	+ 6 41 34.3	0.777	+2.40 — 0.8	40
	21	10 11 4	— 0 55.86	+ 2 8.8	16,10	—	19 0 33.65	8.965 _n	+ 6 26 55.3	0.777	+2.41 — 0.7	41
	26	10 54 14	— 1 26.42	— 3 20.4	20,8	12.2	18 57 6.63	8.170	+ 5 9 26.4	0.786	+2.43 — 0.1	42
	27	10 6 5	— 0 58.60	— 8 50.5	16,10	—	18 56 30.15	8.736 _n	+ 4 53 43.3	0.788	+2.43 — 0.1	43
276 Adelheid												
Juli	5	12 51 56	+1 11.91	— 1 13.8	20,6	12.2	18 55 1.19	8.907	+ 6 41 49.0	0.775	+2.28 — 3.5	44
	6	12 21 16	+0 27.21	— 0 45.5	16,10	—	18 54 16.50	8.573	+ 6 42 17.5	0.774	+2.29 — 3.3	44
	6	14 7 35	+0 23.84	— 0 45.1	24,8	—	18 54 13.14	9.313	+ 6 42 17.9	0.781	+2.30 — 3.3	44
284 Amalia												
Juli	19	10 55 25	— 0 42.37	— 6 59.3	12,8	11.5	19 13 6.49	8.721 _n	— 6 57 59.8	0.863	+2.57 — 1.1	45
	20	10 32 15	+0 43.50	+ 3 14.2	12,8	—	19 12 20.15	8.920 _n	— 6 56 55.2	0.862	+2.56 — 1.1	46
	21	10 50 6	— 1 11.53	+ 5 57.0	20,6	—	19 11 33.40	8.660 _n	— 6 56 2.9	0.863	+2.57 — 1.0	47
	26	9 46 28	+1 38.81	+ 7 18.2	20,6	—	19 8 0.14	9.052 _n	— 6 55 10.0	0.866	+2.59 — 0.9	48
	27	10 59 45	+0 57.66	+ 6 48.3	16,6	—	19 7 18.99	8.213	— 6 55 39.8	0.868	+2.59 — 0.8	48
317 Roxane												
April	24	14 9 44	+1 28.55	— 7 0.0	18,6	—	13 40 34.64	9.388	— 7 41 13.7	0.856	+1.44 — 11.6	49
	25	13 25 37	+1 13.65	— 1 12.7	16,6	—	13 39 39.32	9.278	— 7 35 36.8	0.860	+1.45 — 11.6	50
328 Gudrun												
Sept.	2	13 7 22	+1 7.24	+ 6 39.9	4	—	23 49 46.87	7.524	— 1 57 0.6	0.835	+2.75 +17.4	51
352 Gisela												
Okt.	18	12 44 37	— 1 30.35	— 1 53.2	4	11.2	0 11 39.37	9.340	+ 7 14 23.0	0.778	+2.96 +20.8	52
	19	8 50 26	+0 43.35	— 5 1.5	4	—	0 11 7.98	9.178 _n	+ 7 8 9.3	0.773	+2.95 +20.8	53
360 Carlova												
Aug.	5	13 39 28	+1 25.18	+ 4 26.5	20,8	—	21 52 25.45	8.848	— 15 20 38.4	0.898	+2.80 +10.1	0
	6	12 56 35	— 1 14.52	+ 4 44.3	20,10	—	21 51 45.25	7.617	— 15 27 53.5	0.900	+2.81 +10.3	54
	7	11 43 27	— 1 54.47	— 2 22.2	24,8	—	21 51 5.32	9.054 _n	— 15 35 0.0	0.897	+2.83 +10.3	54
367 Amicitia												
Dez.	17	11 9 13	— 0 29.82	+ 1 23.3	26,10	12.1	5 27 43.86	8.823 _n	+23 18 20.7	0.587	+4.36 +10.8	55
371 Bohemia												
Juli	20	11 56 21	+1 49.49	+ 4 36.1	20,10	—	19 58 37.48	8.315 _n	— 17 43 16.7	0.907	+2.76 + 1.4	56
	21	11 58 11	+0 52.43	+ 4 55.3	16,8	—	19 57 40.43	7.943 _n	— 17 42 57.5	0.907	+2.77 + 1.4	56
	29	12 22 7	+1 6.87	— 2 3.9	18,8	11.3	19 50 11.24	9.002	— 17 40 45.0	0.904	+2.84 + 1.1	57
Aug.	2	10 49 26	— 2 25.34	— 1 1.9	20,6	—	19 46 39.06	8.439 _n	— 17 39 43.0	0.907	+2.87 + 1.1	57
374 Burgundia												
Juli	19	12 14 13	— 1 22.40	+ 6 19.3	20,10	11.7	21 1 45.04	9.003 _n	— 2 18 15.8	0.837	+2.41 + 4.2	58
	20	12 38 43	+0 45.47	— 0 29.9	12,6	—	21 1 0.50	8.723 _n	— 2 19 31.0	0.837	+2.43 + 4.2	p
	29	10 6 47	+1 2.57	— 2 37.6	18,8	—	20 54 4.51	9.346 _n	— 2 37 59.6	0.836	+2.57 + 5.1	59

1911	M. Z. Kgst.	$\Delta\alpha$	$\Delta\delta$	Vgl.	Gr.	α app.	$\log p\Delta$	δ app.	$\log p\Delta$	Red. ad l. app.	*
Aug. 19	11 ^h 11 ^m 7 ^s	+1 ^m 36.14	+ 2' 55.2	20,6	—	20 ^h 37 ^m 28.57	8.572	— 4° 5' 9.4	0.848	+2.73 + 6.2	60
24	11 11 7	+2 11.63	+ 1 48.4	20,6	—	20 34 10.39	8.877	— 4 31 27.1	0.850	+2.73 + 6.2	61
26	9 58 34	—0 30.02	— 0 28.3	16,8	—	20 33 0.32	8.488 _n	— 4 41 56.8	0.851	+2.73 + 6.4	62
27	10 20 3	—1 17.26	+ 1 51.2	20,8	—	20 32 25.49	8.106	— 4 47 27.6	0.852	+2.73 + 6.4	63
28	10 0 19	+1 24.22	+ 1 2.3	20,6	—	20 31 52.94	8.107 _n	— 4 52 48.1	0.852	+2.73 + 6.3	64
378 Holmia											
Sept. 18	8 40 33	—1 35.80	— 9 47.1	4	—	23 38 1.89	9.457 _n	+ 8 17 27.5	0.780	+2.82 +17.9	65
386 Siegena											
Aug. 26	11 0 26	—1 37.73	— 4 37.1	20,8	—	22 26 7.61	9.061 _n	— 2 14 24.5	0.836	+2.78 +13.1	66
27	9 47 48	—1 4.11	— 1 13.9	20,8	—	22 25 29.50	9.336 _n	— 2 26 39.5	0.836	+2.79 +13.1	67
409 Aspasia											
Okt. 15	9 59 29	+0 30.57	— 5 8.5	4	—	0 41 30.32	9.081 _n	+17 52 46.0	0.667	+2.99 +21.7	67
16	10 44 20	—1 20.37	— 0 12.3	6	10 ^m 2	0 40 40.66	8.538 _n	+17 43 39.8	0.662	+3.00 +21.8	68
17	13 47 6	+0 16.15	+ 6 41.1	6	—	0 39 46.63	9.431	+17 33 36.3	0.704	+2.99 +21.9	69
18	14 49 4	—0 32.84	— 2 43.2	5	—	0 38 57.65	9.536	+17 24 12.1	0.737	+3.00 +22.0	69
19	8 31 17	+1 34.48	+ 4 37.8	4	—	0 38 24.26	9.357 _n	+17 17 31.8	0.694	+2.99 +22.0	70
412 Elisabetha											
Juni 29	10 33 48	+1 56.33	+ 3 23.5	20,6	12.1	15 24 23.91	9.198	— 5 27 10.6	0.852	+1.86 — 9.5	71
Juli 3	10 22 47	—0 48.13	+ 4 5.2	24,10	—	15 23 28.19	9.221	— 5 53 47.1	0.854	+1.86 — 9.3	72
416 Vaticana											
Sept. 1	14 15 31	+1 58.08	+ 1 46.0	6	—	0 57 52.43	7.533 _n	—11 59 20.0	0.886	+2.63 +21.4	r
2	14 27 7	—2 6.72	+ 4 12.5	4	11.8	0 57 15.55	8.384	—12 4 20.2	0.886	+2.64 +21.6	73
431 Nephele											
April 17	11 21 27	—0 3.51	— 6 33.3	20,8	—	12 12 41.04	8.905	+ 1 12 19.3	0.815	+1.33 — 8.6	s
18	10 12 25	+2 45.19	— 3 44.5	20,5	—	12 12 6.35	8.432 _n	+ 1 15 52.0	0.814	+1.32 — 8.4	74
20	10 31 37	+1 34.35	+ 3 28.9	20,8	—	12 10 55.50	8.306	+ 1 23 5.4	0.813	+1.31 — 8.4	74
23	9 32 7	+2 6.90	— 4 5.5	20,6	—	12 9 17.12	8.753 _n	+ 1 32 58.1	0.812	+1.30 — 8.2	t
25	10 49 16	+1 33.95	— 0 15.8	20,8	—	12 8 12.95	8.937	+ 1 39 14.6	0.812	+1.30 — 8.1	u
442 Eichsfeldia											
Sept. 2	11 22 27	+2 5.84	— 1 34.3	4	11.8	22 40 22.55	8.765 _n	—12 50 15.2	0.889	+3.00 +14.1	75
466 Tisiphone											
Okt. 17	14 46 24	—0 47.36	+ 8 12.0	10	13.0	1 44 29.43	9.503	+38 0 23.6	0.410	+3.34 +20.1	76
18	14 34 12	—1 39.08	+ 4 58.7	8	—	1 43 37.72	9.486	+37 57 10.5	0.399	+3.35 +20.3	76
19	7 55 57	—2 13.65	+ 2 41.5	5	—	1 43 3.16	9.624 _n	+37 54 53.5	0.541	+3.36 +20.5	76
24	10 15 3	+2 39.74	— 3 18.1	6	—	1 38 45.87	9.192 _n	+37 35 9.3	0.287	+3.37 +21.9	77
487 Venetia											
Aug. 31	12 22 58	—2 59.13	— 1 30.8	20,8	—	22 24 37.59	8.789	—21 11 19.5	0.916	+3.17 +13.1	78
506 Marion											
Sept. 1	9 38 6	—1 26.50	— 6 35.8	6	12.8	22 58 50.05	9.398 _n	+ 7 58 41.9	0.777	+2.69 +14.6	v
2	8 25 14	+2 31.63	+ 1 21.4	4	—	22 58 0.30	9.512 _n	+ 7 58 17.9	0.789	+2.70 +14.6	w
508 Princetonia											
Nov. 1	12 50 2	+1 22.45	— 4 21.3	7	11.8	2 22 10.90	9.060	+11 22 13.2	0.735	+3.29 +21.7	x
554 Peraga											
Nov. 2	8 44 22	+2 38.12	— 4 0.5	6	9.8	4 2 53.90	9.598 _n	+25 47 1.8	0.706	+3.56 +16.4	79
3	10 27 9	+1 50.23	— 5 52.4	6	—	4 2 6.04	9.449 _n	+25 45 9.9	0.615	+3.59 +16.4	79
558 Carmen											
Mai 28	12 15 15	—1 3.16	— 4 44.2	8,8	12.3	15 48 49.38	8.904	— 7 17 53.0	0.864	+1.87 —11.4	80
29	12 27 27	—0 47.25	— 3 49.2	24,7	—	15 48 1.31	9.033	— 7 16 20.9	0.863	+1.88 —11.3	81

1911	M. Z. Kgst.	$\Delta\alpha$	$\Delta\delta$	Vgl.	Gr.	α app.	$\log p\Delta$	δ app.	$\log p\Delta$	Red. ad l. app.	*
559 Nanon											
Sept. 2	14 ^h 6 ^m 35 ^s	+2 ^m 9 ^s 65	+ 3' 4".3	4	—	0 ^h 53 ^m 54 ^s 61	7.686 _n	— 7° 59' 59".8	0.868	+2 ^s 63 +20".6	82
609 [1906 VF]											
Aug. 27	11 50 29	—1 36.21	— 2 3.7	18,6	12 ^m 9	22 27 15.35	8.444 _n	— 8 21 48.1	0.870	+2.88 +13.4	y
28	10 47 7	+0 46.61	+ 0 44.6	8,8	—	22 26 33.68	9.097 _n	— 8 27 2.7	0.868	+2.89 +13.2	z
656 [1908 BU]											
Sept. 2	12 28 44	+3 10.20	+ 3 36.4	4	13.0	23 34 37.36	8.562 _n	— 2 33 12.2	0.839	+2.78 +16.8	α
676 [1909 FN]											
Sept. 1	9 2 24	+2 25.40	+ 3 19.3	20,4	12.5	21 15 55.49	9.196 _n	—13 38 20.7	0.887	+2.97 + 8.0	83
1	12 54 14	+2 20.40	+ 2 6.8	6	—	21 15 50.49	9.291	—13 39 33.2	0.883	+2.97 + 8.0	83
2	10 31 54	+1 50.44	— 5 12.0	4	—	21 15 20.53	7.536	—13 46 52.0	0.894	+2.97 + 8.0	83
109 Felicitas											
Mai 21	10 19 23	+2 2.79	— 5 15.9	20,10	12.7	12 22 56.05	9.250	— 5 48 52.3	0.853	+1.17 — 9.5	84
26	10 38 9	+1 18.83	— 3 49.2	28,12	—	12 22 12.05	9.368	— 5 47 25.4	0.850	+1.13 — 9.3	84
714 [1911 LW]											
Mai 21	13 2 2	+3 55.20	— 0 2.1	20,6	—	13 26 38.96	9.498	—15 31 0.5	0.866	+1.41 —12.8	85
22	10 44 58	—0 31.15	+ 8 28.6	18,12	—	13 26 20.18	9.113	—15 22 43.8	0.895	+1.43 —12.8	86
26	12 15 54	+1 20.18	— 4 13.6	20,10	—	13 25 11.40	9.455	—14 47 0.6	0.872	+1.41 —12.7	β
28	10 2 19	—0 19.60	+ 6 40.0	36,10	12.0	13 24 47.79	9.000	—14 31 11.6	0.894	+1.41 —12.7	87
717 [1911 MJ]											
Aug. 27	12 45 53	—0 19.80	— 1 42.2	24,8	12.5	22 34 59.96	8.723	— 9 33 55.2	0.875	+2.89 +13.8	γ
28	11 23 36	—1 2.44	— 4 58.2	16,6	—	22 34 17.33	8.894 _n	— 9 37 11.2	0.875	+2.90 +13.8	γ
608 [1906 VD] = 1911 ML											
Aug. 28	13 17 24	+1 45.04	— 0 4.9	18,8	13.0	22 30 40.59	9.068	+ 1 39 14.1	0.812	+2.74 +13.2	88
530 Turandot = 1911 MN											
Sept. 1	11 36 10	—1 50.33	— 4 59.7	4	12.5	21 11 45.70	9.051	—19 24 38.0	0.909	+3.10 + 7.3	δ
2	9 50 14	+3 32.25	+ 3 49.2	4	—	21 11 16.98	8.820 _n	—19 29 23.0	0.912	+3.09 + 6.7	ϵ
20	10 3 10	+1 14.59	— 3 13.0	6	—	21 5 28.77	8.966	—20 36 20.6	0.913	+3.01 + 5.4	89
26	9 0 31	+0 44.62	+ 6 49.7	5	12.8	21 5 15.17	8.388	—20 47 54.1	0.916	+2.96 + 4.9	90
1911 MO											
Sept. 1	12 1 53	—0 46.90	— 2 55.2	4	—	21 14 3.23	9.178	—18 3 28.9	0.902	+3.07 + 7.6	91
2	10 13 13	+0 43.77	+ 8 51.5	4	12.0	21 13 44.64	8.472 _n	—18 12 31.5	0.909	+3.07 + 7.3	92
1911 MQ											
Sept. 1	10 36 16	—1 12.93	— 6 53.7	6	—	23 3 27.81	9.247 _n	+12 2 51.6	0.735	+2.66 +14.5	93
2	9 14 2	—0 35.64	+ 6 30.2	6	13.2	23 2 28.79	9.451 _n	+12 1 53.4	0.754	+2.67 +14.6	94
1911 MU											
Okt. 17	13 8 40	+1 12.63	— 4 1.0	10	12.8	0 42 4.45	9.309	— 5 33 27.7	0.789	+3.11 +20.2	95
18	11 3 22	—1 57.88	+ 0 14.3	8	—	0 41 30.85	8.065	— 5 39 43.4	0.782	+3.12 +20.2	ζ
29	9 26 39	—3 11.45	+ 6 14.9	10	13.3	0 35 39.17	8.833 _n	— 6 42 53.5	0.861	+3.13 +19.3	96

Mittlere Örter der Vergleichsterne.

*	α 1911.0	δ 1911.0	Autorität	*	α 1911.0	δ 1911.0	Autorität
1	2 ^h 55 ^m 15 ^s 78	+ 7° 23' 42".5	AG Lpz II 1119	5	16 ^h 56 ^m 0 ^s 33	— 6° 26' 8".4	AG Ott 5827
2	13 50 7.98	— 1 3 56.1	AG Nic 3651	6	12 2 38.12	— 0 8 4.2	AG Nic 3357
3	11 56 54.56	+ 7 0 5.0	AG Lpz II 5995	7	11 51 5.37	+ 0 25 4.5	Kü 5274
4	19 50 12.96	—19 31 36.5	RC ₉₀ 5324	8	11 47 41.90	+ 0 44 31.2	AG Alb 4364

*	α 1911.0	δ 1911.0	Autorität
9	13 ^h 24 ^m 36 ^s .32	— 9° 55' 0 ^s .7	AG Ott 4811
10	9 23 42.42	+12 1 20.0	AG Lpz I 3761
11	9 19 29.39	+12 54 10.4	» 3736
12	22 22 6.04	— 8 57 51.1	AG Ott 8021
13	22 23 12.84	— 9 13 27.6	» 8026
14	13 25 39.96	— 1 26 7.3	AG Nic 3588
15	16 7 17.76	— 8 19 5.8	AG Ott 5629
16	13 59 38.57	— 8 49 48.4	» 4993
17	0 12 2.55	— 2 0 59.9	AG Strb 48
18	14 8 56.05	— 11 25 16.6	RC ₉₀ 3678
19	2 16 28.38	+11 19 8.5	AG Lpz I 682
20	0 21 52.74	+ 4 57 59.8	BD +4° 53, A.N. 126.59
21	16 32 33.30	+10 54 3.5	AG Lpz I 5793
22	16 31 46.36	+10 44 51.7	» 5788
23	16 29 20.74	+10 33 22.9	» 5781
24	12 49 49.73	— 7 7 37.0	AG Ott 4672
25	12 42 57.35	— 5 48 52.9	AG Strb 4679
26	12 9 23.23	+ 2 45 20.9	AG Alb 4451
27	12 6 59.52	+ 3 6 11.7	» 4444
28	23 46 48.77	+ 8 49 13.2	AG Lpz II 11791
29	0 21 6.52	+ 7 11 58.3	» 1118
30	0 15 34.97	+ 7 0 10.6	Bo VI +6° 23
31	0 19 7.01	— 1 2 5.4	AG Nic 54
32	23 4 3.81	+ 7 22 52.2	AG Lpz II 11538
33	2 40 7.03	+ 9 44 20.9	» 1007
34	18 34 27.63	— 12 19 39.1	Mü ₁ 16917
35	18 33 46.29	— 12 7 44.7	» 16877
36	19 8 28.03	+ 8 27 36.7	AG Lpz II 9096
37	19 6 39.88	+ 7 58 32.2	» 9075
38	19 1 40.06	+ 7 11 11.1	» 9018
39	19 3 19.15	+ 6 50 38.8	» 9042
40	19 2 13.64	+ 6 45 11.4	» 9025
41	19 1 27.10	+ 6 24 47.2	» 9015
42	18 58 30.62	+ 5 12 46.9	» 8983
43	18 57 26.32	+ 5 2 33.9	AG Alb 6483
44	18 53 47.00	+ 6 43 6.3	AG Lpz II 8929
45	19 13 46.29	— 6 50 59.4	AG Ott 6672
46	19 11 34.09	— 7 0 8.3	» 6656
47	19 12 42.36	— 7 1 58.9	» 6662
48	19 6 18.74	— 7 2 27.3	» 6605
49	13 39 4.65	— 7 34 2.1	» 4897
50	13 38 24.22	— 7 34 12.5	» 4891
51	23 48 36.88	— 2 3 57.9	War 5988
52	0 13 6.76	+ 7 15 55.4	AG Lpz II 71
53	0 10 21.68	+ 7 12 50.0	Kü 60
54	21 52 56.96	— 15 32 48.1	AG Wa 8230
55	5 28 9.32	+23 16 46.6	AG Berl B 1788
56	19 56 45.23	— 17 47 54.2	AG Wa 7523
57	19 49 1.53	— 17 38 42.2	» 7479
58	21 3 5.03	— 2 24 39.3	AG Strb 7370
59	20 52 59.37	— 2 35 27.1	» 7306
60	20 35 49.70	— 4 8 10.8	» 7175
61	20 31 56.03	— 4 33 21.7	» 7154
62	20 33 27.61	— 4 41 34.9	» 7162
63	20 33 40.02	— 4 49 25.2	» 7165

*	α 1911.0	δ 1911.0	Autorität
64	20 ^h 30 ^m 25 ^s .99	— 4° 53' 56 ^s .7	AG Strb 7143
65	23 39 34.87	+ 8 26 56.7	AG Lpz II 11752
66	22 27 42.56	— 2 10 0.5	AG Strb 7823
67	0 40 56.76	+17 57 32.8	AG Berl A 203
68	0 41 58.03	+17 43 30.3	» 206
69	0 39 27.49	+17 26 33.3	» 200
70	0 36 46.79	+17 12 32.0	» 186
71	15 22 25.72	— 5 30 24.6	AG Strb 5392
72	15 24 14.46	— 5 57 43.0	» 5401
73	0 59 19.63	— 12 8 54.3	San ₃ 81
74	12 9 19.84	+ 1 19 44.9	Kü 5413
75	22 38 13.71	— 12 48 55.0	Sj 9290
76	1 45 13.45	+37 51 51.5	AG Lu 807
77	1 36 2.76	+37 38 5.5	» 742
78	22 27 33.55	— 21 10 1.8	CiZ 3794
79	4 0 12.22	+25 50 45.9	AG Cbr E. 1982
80	15 49 50.67	— 7 12 57.4	AG Ott 5537
81	15 48 46.68	— 7 12 20.4	» 5533
82	0 51 42.33	— 8 3 24.7	» 191
83	21 13 27.12	— 13 41 48.0	Sj 8602
84	12 20 52.09	— 5 43 26.9	AG Strb 4582
85	13 22 42.35	— 15 30 45.6	AG Wa 5090
86	13 26 49.90	— 15 30 59.6	» 5102
87	13 25 5.98	— 14 37 38.9	» 5098
88	22 28 52.81	+ 1 39 5.8	Mü ₁ 31169
89	21 4 11.17	— 20 33 13.0	RC ₉₀ 5697
90	21 4 27.59	— 20 54 48.7	» 5699
91	21 14 47.06	— 18 0 41.3	Kam 5467
92	21 12 57.80	— 18 21 30.3	Bord ₉₀ 6361
93	23 4 38.08	+12 9 30.8	AG Lpz I 9225
94	23 3 1.76	+11 55 8.6	» 9216
95	0 40 48.71	— 5 29 46.9	AG Strb 158
96	0 38 47.49	— 6 49 27.7	AG Ott 143
97	13 48 34.83	— 7 39 30.1	» 4941
98	13 51 51.03	— 8 7 19.6	» 4952
99	16 8 5.57	— 8 22 20.6	» 5632
100	16 26 23.60	+ 9 55 28.3	AG Lpz I 5762
101	12 58 26.28	— 7 26 50.6	AG Ott 4705
102	12 48 59.63	— 7 21 22.0	» 4666
103	12 45 24.75	— 6 42 31.0	» 4646
104	12 40 9.09	— 5 41 0.0	AG Strb 4668
105	2 24 50.19	+ 9 10 7.2	AG Lpz II 926
106	22 22 30.68	— 2 32 5.6	AG Strb 7804
107	0 54 16.49	— 11 51 35.7	RC ₉₀ 210
108	12 11 9.31	+ 1 20 39.6	AG Alb 4454
109	12 7 34.78	+ 1 39 54.4	» 4446
110	22 58 43.90	+ 8 10 57.1	AG Lpz II 11503
111	22 52 11.77	+ 7 52 9.5	Kü 10163
112	2 21 11.25	+11 31 44.8	AG Lpz I 709
113	22 33 41.92	— 8 21 37.3	AG Ott 8074
114	22 25 52.01	— 8 34 15.2	» 8038
115	23 29 7.27	— 2 44 7.8	AG Strb 8088
116	22 38 19.61	— 9 37 10.8	AG Ott 8095
117	21 15 17.64	— 19 18 36.9	CiZ 3585
118	21 2 27.16	— 19 26 40.3	RC ₉₀ 5683
119	0 45 51.78	— 5 36 43.0	AG Strb 180

Vergleichsternanschlüsse.

*	BD	α 1911.0	δ 1911.0	Epoche	Ansch.-Stern
<i>a</i>	— 9° 59' 89	22 ^h 25 ^m 55 ^s .43	— 9° 9' 38".0	1911.7	13
<i>b</i>	— 7 3725	13 49 16.98	— 7 43 17.5	1904.3	97,98 (phot.)
<i>c</i>	Anon. 9 ^m 5	16 10 33.51	— 8 23 11.5	1911.4	99
<i>d</i>	+10 3027	16 29 43.03	+10 28 37.4	1911.5	23
<i>e</i>	+10 3019	16 27 30.13	+ 9 59 52.6	1911.7	100
<i>f</i>	— 7 3523	12 55 56.04	— 7 30 52.4	1911.4	101
<i>g</i>	— 6 3687	12 50 32.49	— 7 16 50.4	1911.4	102
<i>h</i>	— 6 3702	12 53 36.32	— 7 10 9.5	1911.4	24
<i>i</i>	— 6 3667	12 46 46.16	— 6 49 24.4	1911.4	103
<i>k</i>	— 6 3657	12 45 18.97	— 6 34 27.8	1911.4	103
<i>l</i>	— 5 3552	12 37 52.75	— 5 38 57.7	1911.4	104
<i>m</i>	+ 3 2614	12 8 1.79	+ 3 10 34.0	1911.4	27
<i>n</i>	+ 8 389	2 26 9.55	+ 9 4 16.9	1911.8	105
<i>o</i>	Anon. 10 ^m	21 50 57.47	—15 25 15.0	1911.7	54
<i>p</i>	— 2 5442	21 0 12.60	— 2 19 5.3	1911.7	58
<i>q</i>	— 2 5771	22 26 30.82	— 2 25 38.7	1911.9	106
<i>r</i>	—12 182	0 55 51.72	—12 1 27.4	1911.8	107
<i>s</i>	+ 1 2677	12 12 43.22	+ 1 19 1.2	1911.4	108
<i>t</i>	Anon. 9 ^m 5	12 7 8.92	+ 1 37 11.8	1911.4	109

Königstuhl-Sternwarte, 1912 Juli.

*	BD	α 1911.0	δ 1911.0	Epoche	Ansch.-Stern
<i>u</i>	+ 1° 26' 64	12 ^h 6 ^m 37 ^s .70	+ 1° 39' 38".5	1911.4	109
<i>v</i>	+ 7 4970	23 0 13.86	+ 8 5 3.1	1911.9	110
<i>w</i>	+ 7 4955	22 55 25.97	+ 7 56 41.9	1911.9	111
<i>x</i>	Anon. 10 ^m	2 20 45.16	+11 26 12.8	1911.8	112
<i>y</i>	— 8 5893	22 28 48.68	— 8 19 57.8	1911.7	113
<i>z</i>	— 8 5887	22 25 44.18	— 8 28 0.5	1911.8	114
α	— 2 5995	23 31 24.38	— 2 37 5.4	1911.8	115
β	—14 3725	13 23 49.81	—14 42 34.3	1911.4	87
γ	— 9 6026	22 35 16.87	— 9 32 26.8	1911.7	116
δ	—19 6067	21 13 32.93	—19 19 45.6	1911.8	117
ϵ	—19 6048	21 7 41.64	—19 33 18.9	1911.8	118
ζ	— 5 130	0 43 25.61	— 5 40 17.9	1911.8	119

Die Beobachtungen von (11), (29), (39) wurden am Steinheil-Sechszöller ausgeführt, alle andern Beobachtungen mit dem Repsold-Fadenmikrometer des 12-zölligen Kreßmann-Refraktors bei 150-facher Vergrößerung. Die Beobachtungen sind für Refraktion korrigiert. Eine einzelne Zahl in der Rubrik »Vgl.« zeigt an, daß $\Delta\alpha$ und $\Delta\delta$ gleichzeitig gemessen wurden, während sonst die α - und δ -Bestimmungen getrennt ausgeführt wurden. Die Reduktion von $\Delta\delta$ auf die Beobachtungszeit von $\Delta\alpha$ war dabei immer sehr gering.

E. Ernst.

Beobachtungen von kleinen Planeten.

Photographic Observations at Johannesburg.

Planet	1912 Berl. t.	Position 1912.0	Mgn.
237 Coelestina	Aug. 6.3642	20 ^h 40 ^m 10 ^s .0 — 29° 52' 14"	11 ^m 8
	10.3857	20 36 41.9 — 30 11.26	
404 Arsinoë	Aug. 6.3642	20 50 51.5 — 32 11.26	11.2
	10.3857	20 46 58.2 — 32 36.85	
519 Sylvania	Oct. 4.3437	23 24 59.3 — 19 13.87	11.0
	5.3348	23 24 17.9 — 19 10.50	
674 Rachele	Aug. 6.3642	20 47 1.6 — 36 32.48	11.0
	10.3857	20 43 18.3 — 36 44.38	
1912 PJ (new)	Oct. 4.3437	23 38 9.4 — 13 40.36	11.5
	5.3348	23 37 31.0 — 13 40.21	

Union-Observatory, Johannesburg, 1912 Oct. 21. H. E. Wood.

Observations at Winchester.

Planet	1912 Gr. m. t.	Position 1912.0	Mgn.
131 Vala	Oct. 15 15 ^h 35 ^m 0	1 ^h 42 ^m 48 ^s + 4° 58'	12 ^m 8
260 Huberta	15 15 35.0	1 43 22 + 4 40	12.8

Winchester, Mass., 1912 Oct. 29.

J. H. Metcalf.

408 Fama.

Korrektion der Ephem. (B. J. 1914) 1912 Nov. 4 — 4^m7 — 18'.

J. Rheden.

Aufnahmen auf der Königstuhl-Sternwarte.

Planet	Position 1912.0	Tägl. Bew.	Gr.	Platte
1912 Nov. 1				
408 Fama	2 ^h 3 ^m 0 + 27° 35' — 0 ^m 8 — 6'	12 ^m 6	B 3055	
550 Senta	2 7.5 + 27 14 — 0.9 — 9	11.7	B 3055	
1912 Nov. 6				
91 Aegina	3 31.1 + 21 29 — 1.0 — 2	10.5	A 6740	
478 Tergeste	3 45.0 + 20 14 — 0.8 — 7	10.7	A 6740	
24 Themis	3 56.0 + 20 47 — 0.9 — 4	10.6	A 6740	
441 Bathilde	3 59.7 + 24 41 — 0.9 — 5	12.2	A 6740	
1912 PL (neu)	2 35.1 + 25 17 — 1.0 — 4	13.1	B 3059	
56 Melete	4 4.4 + 12 31 — 1.0 — 5	11.8	A 6743	
17 Thetis	4 12.4 + 13 4 — 1.0 — 2	10.8	A 6743	
28 Bellona	1 8.7 — 5 35 — 0.6 — 4	10.2	B 3061	
1912 Nov. 7				
6 Hebe	3 41.4 — 9 45 — 1.0 — 2	7.4	B 3065	
1912 PM (neu)	3 42.9 — 9 4 — 0.8 — 1	13.3	B 3065	
1906 UT	3 43.7 — 9 8 — 0.8 — 9	12.7	B 3065	

Platte m. Z. Kgst. Beob.

A 6740 7^h 28^m 1 H. Vogt

A 6743 11 25.2 »

B 3055 8 16.0 F. Kaiser

Platte m. Z. Kgst. Beob.

B 3059 7^h 39^m 9 F. Kaiser

B 3061 10 41.0 »

B 3065 11 36.9 »

Heidelberg, Königstuhl-Sternw., 1912 Nov. 10. M. Wolf.

Komet 1912a (Gale).

Elements.

An approximate system of orbit elements of this comet were deduced from three observations obtained by Mr. J. W. Baldwin, using a filar micrometer in combination with the eight inch equatorial of the Melbourne observatory. The

observations used were secured between the dates 1912 Sept. 10 and Sept. 16. These elements (A. N. 192.323) were cabled to Kiel during the afternoon of Sept. 19., and have since been corrected by including an observation dated 1912 Sept. 22 with the following results.