

Beobachtungen,

angestellt am Kreismicrometer des Refractors der K. K. Krakauer Sternwarte,
von Herrn Director Professor Karlinski und Adjunkten Herrn Dr. Wierzbicki.

(Fortsetzung.)

(21) Lutetia. (Ephem. im Berl. Jahrb. für 1872.)

		Z. d.				Beob.		
1869	M. Zt. Kr.	Planet — ☼	Vgl. Scheinb. α	Par. Scheinb. δ	Par. ☼	Beob-Rechn.	acht.	
Mai 5	11 ^h 48 ^m 44 ^s 0	—0 ^m 17 ^s 70+13' 23'' 4	8 14 ^h 59 ^m 57 ^s 33	—0 ^s 02	—13° 57' 16'' 8	+5'' 5	(1) — 1 ^s 13— 6'' 4	W
19	11. 1.52.8	—0.35.18+ 2.15.8	9 14.46.12.89	+0.01	—13.14.39.2	+5.5	(2) — 0.70— 2.2	W

Mittlere Oerter der Vergleichsterne für 1870.0.

(1) α = 15 ^h 0 ^m 13 ^s 55	δ = — 14° 10' 35'' 2	Weisse 1116, Lal. 27495
(2) 14.46.46.50	— 13.16.51.0	Weisse 861, Sant. 1344.

☿ Winnecke I. 1870.

		l. f. p.		l. f. p.			
Juni 23	13 ^h 16 ^m 33 ^s 8	+1 ^m 58 ^s 44—12' 23'' 5	5 1 ^h 27 ^m 45 ^s 44	9.6020 _n	+18° 25' 9'' 1	0.8084	(1) — — K
24	13.21.30.7	—0. 9.42+ 3.21.0	6 1.30.10.57	9.6001 _n	+17.36.20.2	0.8071	(2) — — K
30	13.41.13.9	—0.50.70+ 7.53.4	6 1.47.52.89	9.5843 _n	+11.17 48.6	0.8117	(3) — — K

Mittlere Oerter der Vergleichsterne für 1870.0.

(1) α = 1 ^h 25 ^m 46 ^s 90	δ = + 18° 37' 37'' 9	Bonn VI, N. 202
(2) 1.30.19.89	+ 17.33. 3.0	Rümker 781
(3) 1.48.43.43	+ 11. 9.56.1	Weisse 859.

(71) Niobe. (Ephem. im Berl. Jahrb. für 1872.)

Aug. 20	10 ^h 59 ^m 49 ^s 0	+0 ^m 16 ^s 95—12' 37'' 1	8 21 ^h 22 ^m 36 ^s 80	—0 ^s 07	—12° 2' 23'' 0	+4'' 4	(1) — 1 ^s 06— 8'' 7	W
---------	---	---	--	--------------------	----------------	--------	----------------------------------	---

Mittlerer Ort des Vergleichsternes für 1870.0.

(1) α = 21 ^h 22 ^m 17 ^s 50	δ = — 11° 49' 59'' 1	Weisse 493, Rümk. 9194.
--	----------------------	-------------------------

(32) Pomona. (Ephem. im Berl. Jahrb. für 1872.)

Aug. 20	11 ^h 23 ^m 29 ^s 1	+1 ^m 10 ^s 46— 1' 53'' 1	8 22 ^h 31 ^m 50 ^s 31	—0 ^s 07	— 0° 48' 39'' 5	+3'' 9	(1) — 0 ^s 95— 2'' 4	W
---------	---	---	--	--------------------	-----------------	--------	----------------------------------	---

Mittlerer Ort des Vergleichsternes für 1872.)

(1) α = 22 ^h 30 ^m 37 ^s 60	δ = — 0° 47' 1'' 0	Weisse 624.
--	--------------------	-------------

☿ Coggia II 1870.

		l. f. p.		l. f. p.			
Sept. 5	12 ^h 49 ^m 6 ^s 4	+0 ^m 28 ^s 27+13' 25'' 6	6 2 ^h 43 ^m 54 ^s 15	9.4268 _n	+10° 19' 0'' 1	0.7715	(1) — — W
5	13. 5. 4.8	+0.26.35+14. 0.6	6 2.43.52.23	9.3928 _n	+10.19.35.1	0.7679	(1) — — K
27	12. 8.55.1	+0.48.30— 4.53.4	6 0 40.56.37	8.0361 _n	+25.17.27.8	0.5653	(2) — — K
27	12.28.28.6	+0.42.11— 4.11.5	6 0.40.50.18	8.4014 _n	+25.18. 9.7	0.5655	(2) — — W
Oct. 5	12.47.49.0	—0.29.29+11.38.2	7 23.42.40.55	9.3476	+28.42.48.2	0.5536	(3) — — K

Mittlere Oerter der Vergleichsterne für 1870.0

(1) α = 2 ^h 43 ^m 24 ^s 05	δ = + 10° 5' 25'' 5	Bonn VI N. 374
(2) 0.40. 5.36	+ 25.22. 7.0	Weisse 1018/9
(3) 23.42. 7.17	+ 28.30.51.8	Weisse 906.

(63) Ausonia. (Ephem. im Berl. Jahrb. für 1872.)

Nov. 20	11 ^h 16 ^m 31 ^s 6	+0 ^m 8 ^s 41 +16' 48'' 5	6 2 ^h 38 ^m 10 ^s 62	+0 ^s 04	+24° 37' 34'' 2	+2'' 9	(1) — 0 ^s 06— 5'' 8	W
---------	---	---	---	--------------------	-----------------	--------	----------------------------------	---

Mittlerer Ort des Vergleichsternes für 1870.0.

(1) α = 2 ^h 38 ^m 15 ^s 73	δ = + 24° 20' 31'' 4	Weisse 904.
---	----------------------	-------------

Circular der Königlichen Sternwarte bei Kiel.

Entdeckung eines Planeten.

Herr Direktor Palisa meldet telegraphisch die Entdeckung des $\text{\textcircled{184}}$ Planeten:

1878 Februar 28 $12^{\text{h}}53^{\text{m}}$ mittlere Zeit Pola $11^{\text{h}} 2^{\text{m}}56^{\text{s}}$ $+ 5^{\circ}52'$
Bewegung $-- 52^{\text{s}}$ $+ 8'$
Grösse 11.

Berlin 1878 März 2.

V. Knorre.

(44) Nysa. (Ephem. im Berl. Jahrb. für 1872.)

1869	M. Zt. Kr.	Planet	—	☉	Z. d.	Vgl.	Scheinb. α	Par.	Scheinb. δ	Par.	☉	Beob-Rechn.	acht.	
Nov. 20	11 ^h 31 ^m 26 ^s 0	—	0 ^m 14 ^s 31	+	4' 11'' 5	8	3 ^h 25 ^m 33 ^s 37	+0 ^s 01	+11 ^o 59' 34'' 4	+4'' 5	(1)	—	6 ^s 85—23'' 9	W

Mittlerer Ort des Vergleichsterne für 1870.0.

$$(1) \alpha = 3^h 25^m 15^s 97 \quad \delta = + 11^o 55' 12'' 7 \quad \text{Weisse 430.}$$

☉ Winnecke III. 1870.

Nov. 25	16 ^h 39 ^m 12 ^s 6	—	1 ^m 4 ^s 16	—	7' 9'' 5	10	13 ^h 14 ^m 24 ^s 25.9	5337 _n	—	4 ^o 6' 10'' 4	0.8398	(1)	—	—	W
26	17. 7.12.5	+0.23.92	+ 7.39.7	10	13.34. 4.35	9.5217 _n	—	4.27.34.6	0.8418	(2)	—	—	—	K	
26	17.36.53.6	+0.49.07	+ 7.24.0	10	13.34.29.50	9.4853 _n	—	4.27.50.3	0.8449	(2)	—	—	—	W	

Mittlere Oerter der Vergleichsterne für 1870.0.

$$(1) \alpha = 13^h 15^m 27^s 64 \quad \delta = - 3^o 58' 55'' 9 \quad \text{A. N. Bd. 53 pag. 93. (Auwers).}$$

$$(2) \quad 13.33.39.70 \quad - 4.35. 9.6 \quad \text{Weisse 563.}$$

1871

(92) Undina. (Eph. im Berl. Jahrb. für 1873)

März 20	10 ^h 23 ^m 42 ^s 8	+0 ^m 2 ^s 63	+16' 1'' 5	7	12 ^h 17 ^m 13 ^s 18	—0 ^s 08	+12 ^o 54' 3'' 0	+2' 2'' (1)	—	7 ^s 65+44'' 9	W
23	10.37.36.8	+0. 1.70	— 1.51.0	10	12.15. 3.78	—0.06	+13. 9.24.2	+2.2'' (2)	—	7.33+42.0	W

Mittlere Oerter der Vergleichsterne für 1871.0.

$$(1) \alpha = 12^h 17^m 9^s 63 \quad \delta = + 12^o 38' 6'' 9 \quad \text{Weisse 261.}$$

$$(2) \quad 12.15. 1.15 \quad + 13.11.20.0 \quad \text{Rümker 3925.}$$

☉ Winnecke I 1871.

April 4	10 ^h 59 ^m 38 ^s 4	+0 ^m 12 ^s 27	+ 4' 15'' 7	1	2 ^h 32 ^m 16 ^s 45	9.578 _n	+53 ^o 25' 1'' 0	0.8861	(1)	—	—	—	—	K
9	11.56.30.9	+3.26.25	— 4.41.8	4	2.37.18.72	9.3811	+52.53.41.7	0.9174	(2)	—	—	—	—	K
11	10.58. 5.2	—1.34.89	— 3.27.7	8	2.46.35.24	9.5732	+51.55.12.9	0.8876	(3)	—	—	—	—	K
12	11.23.35.7	+0.30.55	— 2.30.4	8	2.51.18.48	9.4993	+51.23.56.0	0.9039	(4)	—	—	—	—	K
14	10.26.16.2	—1. 4.80	— 4.41.7	8	3. 0. 8.86	9.6304	+50.21.31.0	0.8668	(5)	—	—	—	—	K
18	10.31.18.7	+2.39.69	— 0.19.9	6	3.17.20.33	9.6043	+48. 8. 6.00	0.8753	(6)	—	—	—	—	K
19	9.53.33.6	+0.36.87	+ 2.37.1	8	3.21.19.62	9.6605	+47.34.19.2	0.8450	(7)	—	—	—	—	K
19	12.16.47.5	+1. 1.27	— 0.45.1	8	3.21.44.02	9.0839	+47.30.57.0	0.9314	(7)	—	—	—	—	W
22	10.48. 8.4	—1.15.37	— 3.54.5	2	3.51.51.25	9.6352	+42.39.30.6	0.8500	(8)	—	—	—	—	K
27	10.16.32.2	—3.21.49	— 1.51.8	6	3.51.56.15	9.5867	+42.38.52.5	0.8764	(9)	—	—	—	—	W
29	9.35. 0.6	—3.28.54	— 3.14.1	2	3.58.51.41	9.6351	+41.21.40.4	0.8467	(10)	—	—	—	—	W

Mittlere Oerter der Vergleichsterne für 1871.0

$$(1) \alpha = 2^h 32^m 6^s 54 \quad \delta = + 53^o 20' 46'' 9 \quad \text{Oeltz. 3013}$$

$$(2) \quad 2.33.54.81 \quad + 52.58.25.0 \quad \text{Radel. 1, 766}$$

$$(3) \quad 2.48.12.40 \quad + 51.58.41.8 \quad \text{Radel I, 837}$$

$$(4) \quad 2.50.50.17 \quad + 51.26.27.9 \quad \text{bestimmt durch Vergleichung mit Oeltz. 3249.}$$

$$(5) \quad 3. 1.15.84 \quad + 50.26.14.8 \quad \text{Bonn VI N. 710}$$

$$(6) \quad 3.14.42.72 \quad + 48. 8.27.3 \quad \text{Oeltz. 3727}$$

$$(7) \quad 3.20.44.79 \quad + 47.31.43.4 \quad \text{Rümker 859}$$

$$(8) \quad 3.35.39.10 \quad + 45.41.18.9 \quad \text{Oeltz. 4062}$$

$$(9) \quad 3.55.19.47 \quad + 42.40.45.5 \quad \text{bestimmt durch Vergleichung mit Bonn VI N. 879}$$

$$(10) \quad 4. 2.21.80 \quad + 41.24.35.6 \quad \text{Weisse 1318.}$$

☞ Tempel II 1871.
Z. d.

1871	M. Zt. Kr.	Planet — *	Vgl.	Scheinb. α	Par.	Scheinb. δ	Par.	* Beob.-Rechn.	Beob. acht.
Juni 21	12 ^h 39 ^m 27 ^s .9	+0 ^m 40 ^s 92	+9' 32".2	5	10 ^h 8 ^m 51 ^s .24	9.7517	+57° 42' 42".6	0.8148 (1)	— — K
Juli 9	10.59.34.2	+3.32.18	+3.53.1	6	9.31.20.78	9.7520	+58.44.26.1	0.8190 (2)	— — K
9	11.50.47	+3.27.67	+3.45.4	6	9.31.16.27	9.6476	+58.44.18.4	0.8674 (2)	— — W
11	11.46.7.7	+3.0.17	+1.53.9	6	9.27.36.95	9.6342	+58.49.27.6	0.8715 (3)	— — K
15	11.48.49.0	-4.12.20	+12.20.6	5	9.20.24.56	9.5579	+58.59.53.3	0.8876 (3)	— — W
22	11.40.3.5	+1 50.41	+2.10.9	6	9.8.3.23	9.4405	+49.17.4.1	0.9026 (4)	— — W

Mittlere Oerter der Vergleichsterne für 1871.0.

(1) $\alpha =$	10 ^h 8 ^m 11 ^s .05	$\delta =$	+ 57° 32' 57".7	Arg.-Oeltz. 10682
(2)	9.27.49.84		+ 58.40.24.8	Bonn VI N. 1200
(3)	9.24.38.06		+ 58.47.25.9	Arg.-Oeltz. 9983
(4)	9.6.14.15		+ 59.14.48.0	Rümker 2781

(Fortsetzung folgt.)

Observations of Stars around the Ring Nebula in Lyra.

[Communicated by Rear-Admiral John Rodgers, Superintendent U. S. Naval Observatory, Washington.]

The remarks of Mr. Tempel in the *Astronomische Nachrichten*, Nr. 2139, on the great number of stars visible around and within the well known Ring Nebula in Lyra, led me to examine this interesting object. This nebula is surrounded by a ring of faint stars; and in order to avoid, as far as possible, indefinite statements, I have measured the angles of position and the distances of these stars. The brightest star of the group, and the one which is near the following end of the nebula, was taken as the origin of these coordinates. This star I have designated by the letter α , and the other stars by the following letters in the order of the angles of position. The star f is a triple star, and my measures of its two companions are referred to f_1 , and not to α . Each measure is the result of two settings of the position circle for the angle, and of two measures of the double distance. My estimated magnitudes are probably too bright, but I give them as they were made.

1877		p	s	magn.
July 30	α to b	225 ^o .6	93".93	14
31	" "	225.4	93.87	
30	α " c	268.2	115.85	13.14
31	" "	267.8	115.82	
Aug. 3	α " d	287.0	138.68	12.13
4	" "	286.8	138.49	
3	α " e	292.6	123.15	12
4	" "	292.6	122.66	
July 30	α " f	313.7	101.43	13.14
31	" "	313.7	102.16	
Aug. 3	α " g	351.1	77.18	13
4	" "	350.1	77.18	
3	f_1 " f_2	255.1	3.73	13.14

1877		p	s	magn.
Aug. 4	" "	251 ^o .5	4".19	
3	f to f_2	5.9	17.81	14.15
4	" "	3.7	16.82	

The magnitudes given are those of the star b , c , d , & e . I estimated the magnitude of the star a as the 10th, but probably it is about the 13th. On the night of Aug. 3, when the sky was unusually clear, I could see no star inside the above ring of stars, nor any star within the nebula itself.

The following estimates were made to connect the nebula with the stars.

- α The right line a to b is 11" outside of the nebula.
- β " " " a to c very nearly bisects the darker, interior part of the nebula.
- γ " " " a to f is very nearly tangent of the nebula.
- δ " " " b to c is nearly tangent to the nebula.

The result is that I have been able to see only nine stars near this nebula, although of course an indefinite number may be counted by going outside the ring of faint stars.

In December, 1876, I examined Polaris with our large refractor, and could not see either of the close companions reported to have been found by a Belgian nobleman. The condition of the atmosphere was fair. The power of seeing faint objects near bright stars seems to be a peculiar one, and in this case it will be interesting to learn the results of the observations made with the large telescopes soon to be mounted in Europe.

1878 Jan. 16.

A. Hall.