

Ephemeride des Winneckeschen Kometen für die Erscheinung 1903-04. II. Teil.

Das Elementensystem ist mit dem des ersten Teiles (A. N. 3907) identisch, nur erhält man für 1904.0

$$\pi = 274^{\circ} 20' 35''.69 \quad \Omega = 104^{\circ} 13' 24''.57 \quad i = 16^{\circ} 59' 54''.55$$

und demgemäß

$$\begin{aligned} x &= [9.981822]r \cdot \sin(4^{\circ} 57' 53''.7 + v) \\ y &= [9.977354]r \cdot \sin(280^{\circ} 35' 13''.6 + v) \\ z &= [9.626837]r \cdot \sin(235^{\circ} 45' 29''.3 + v) \end{aligned}$$

Ephemeride für 12^h M. Z. Berlin.

1904	α app.	δ app.	$\log r$	$\log \Delta$	1904	α app.	δ app.	$\log r$	$\log \Delta$
Jan. 0	17 ^h 30 ^m 51 ^s .40	-17° 46' 46".7	9.988836	0.272241	Febr. 15	21 ^h 22 ^m 36 ^s .23	-19° 10' 3".8		
1	35 47.19	18 0 34.6			16	27 11.76	18 59 55.4		
2	40 44.73	18 13 56.4			17	31 45.02	18 49 25.7	0.004129	0.294662
3	45 43.71	18 26 51.5			18	36 15.98	18 38 35.6		
4	50 44.16	18 39 19.1	9.981012	0.270012	19	40 44.62	18 27 25.9		
5	17 55 46.06	18 51 17.6			20	45 10.94	18 15 57.5		
6	18 0 49.31	19 2 49.2			21	49 34.89	18 4 11.3	0.014739	0.300253
7	5 53.80	19 13 50.2			22	53 56.43	17 52 8.3		
8	10 59.47	19 24 20.8	9.974601	0.268606	23	21 58 15.57	17 39 49.1		
9	16 6.23	19 34 19.9			24	22 2 32.34	17 27 14.7		
10	21 14.02	19 43 47.6			25	6 46.71	17 14 25.9	0.026059	0.306155
11	26 22.67	19 52 43.1			26	10 58.67	17 1 23.2		
12	31 32.15	20 1 5.7	9.969782	0.268027	27	15 8.24	16 48 8.4		
13	36 42.33	20 8 54.7			28	19 15.43	16 34 41.2		
14	41 53.11	20 16 10.0			29	23 20.23	16 21 2.8	0.037913	0.312312
15	47 4.38	20 22 51.3			März 1	27 22.64	16 7 14.1		
16	52 16.03	20 28 58.1	9.966685	0.268248	2	31 22.67	15 53 15.7		
17	18 56 27.91	20 34 29.7			3	35 20.36	15 39 8.3		
18	19 2 40.09	20 39 26.2			4	39 15.70	15 24 52.5	0.050148	0.318669
19	7 52.27	20 43 47.7			5	43 8.73	15 10 29.2		
20	13 4.39	20 47 33.7	9.965417	0.269255	6	46 59.37	14 55 59.0		
21	18 16.37	20 50 43.9			7	50 47.76	14 41 22.6		
22	23 28.07	20 53 18.6			8	54 33.89	14 26 40.6	0.062629	0.325168
23	28 39.41	20 55 18.0			9	22 58 17.76	14 11 53.9		
24	33 50.27	20 56 41.8	9.966004	0.271006	10	23 1 59.41	13 57 2.8		
25	39 0.52	20 57 29.8			11	5 38.85	13 42 7.9		
26	44 10.08	20 57 42.6			12	9 16.11	13 27 9.8	0.075244	0.331755
27	49 18.85	20 57 20.6			13	12 51.22	13 12 9.3		
28	54 26.72	20 56 24.0	9.968430	0.273468	14	16 24.18	12 57 6.7		
29	19 59 33.56	20 54 52.7			15	19 55.02	12 42 2.4		
30	20 4 39.30	20 52 47.4			16	23 23.75	12 26 57.1	0.087896	0.338374
31	9 43.88	20 50 8.8			17	26 50.41	12 11 51.4		
Febr. 1	14 47.17	20 46 57.1	9.972633	0.276601	18	30 15.02	11 56 45.6		
2	19 49.09	20 43 12.5			19	33 37.60	11 41 40.1		
3	24 49.57	20 38 55.9			20	36 58.19	11 26 35.4	0.100509	0.344983
4	29 48.53	20 34 8.0			21	40 16.81	11 11 32.1		
5	34 45.89	20 28 49.3	9.978474	0.280344	22	43 33.48	10 56 30.4		
6	39 41.55	20 23 0.2			23	46 48.24	10 41 30.6		
7	44 35.45	20 16 41.5			24	50 1.11	10 26 33.2	0.113024	0.351541
8	49 27.55	20 9 54.2			25	53 12.08	10 11 38.5		
9	54 17.77	20 2 38.9	9.985794	0.284645	26	56 21.23	9 56 46.7		
10	20 59 6.02	19 54 56.3			27	23 59 28.63	9 41 58.3		
11	21 3 52.26	19 46 47.2			28	0 2 34.25	9 27 13.4	0.125392	0.358013
12	8 36.47	19 38 12.6			29	5 38.09	9 12 32.4		
13	13 18.57	19 29 13.3	9.994414	0.289439	30	8 40.19	8 57 55.6		
14	17 58.50	19 19 50.1			31	11 40.60	8 43 23.1		
15	21 22 36.23	-19 10 3.8			April 1	0 14 39.33	-8 28 55.1	0.137572	0.364369

1904	$1:r^2\Delta^2$	1904	$1:r^2\Delta^2$	1904	$1:r^2\Delta^2$	1904	$1:r^2\Delta^2$
Jan. 0	0.301	Jan. 24	0.336	Febr. 17	0.253	März 12	0.153
4	0.315	28	0.328	21	0.235	16	0.140
8	0.326	Febr. 1	0.317	25	0.217	20	0.129
12	0.334	5	0.304	29	0.199	24	0.118
16	0.339	9	0.288	März 4	0.183	28	0.108
20	0.339	13	0.271	8	0.168	April 1	0.099

Wie man sieht, ist der ganze Verlauf der Erscheinung wegen des beständig sonnennahen Standes des Kometen einer Auffindung sehr ungünstig.

Graz, 1903 Okt. 27.

C. Hillebrand.

On the Instrumentality of Contrast in „Duplicating“ the Spots of Mars.

Some time ago I called attention to the fact that when single, elliptical, dark spots were long examined, under very sharp seeing, they were appearing to double into round dots, exactly as seen on Mars. Since then, the conclusion that „gemination“ is probably a necessity of contrast has been slowly impressed on my mind.

In fact, every one of the well-defined great seas of Mars has repeatedly appeared to Schiaparelli as having a lighter interior, girt by black „canals“; and whenever the fixity of gaze was particularly prolonged, it was noticed that the smaller, or narrower, seas, like Maria Cimmerium, Sirenium, Acidalium, Lacus Niliacus, and Sinus Sabaeus, all manifested the tendency of begetting islands which exactly repeated the outlines of the markings in which they were seen to develop.

I do not hesitate to connect this phenomenon with Paris, 74 Rue Jouffroy, 1903 Oct. 5.

the so-called „gemination in bands“ of the lakes, since a lake so „duplicated“ is generally presenting itself as a trapezium having a bright centre and limited by black „canals“.

The broader dusky streaks, or „canals“ should also „double“ by contrast, and thus manifest all the intricate phenomena with which we are acquainted.

Viewed, therefore, from this standpoint, „gemination“ seems to reduce itself to a contrasted brightening of the interior of dark spots. The greater the ability, zeal, and instrumental power of the observer, the neater, of course, its perception. It appears as an inevitable physiological consequence of that exhausting fixity of gaze to which we are indebted for all our knowledge of Mars; and its visibility, rather than being subordinated to the planet's seasons, should be a function of eye-training during the successive apparitions of the planet.

F. M. Antoniadi.

Recent observations of the Declination of Groombridge 1830.

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At the meeting of the Astr. Ges. held in Göttingen, on Aug. 4-7, 1902, Dr. Ristenpart spoke of the need of continued observations of Groombridge 1830.

That interesting object is in a list of 390 stars, between $+37^\circ$ and $+38^\circ 55'$ declination which I am observing with the Prime Vertical Transit Instrument. Below are given the positions secured, reduced to 1901.0. Proper motion has not been applied to them.

The latitude, $+38^\circ 55' 14''.48$, with which the obser-

Naval Observatory, Washington D. C., 1903 Oct. 17.

ations were reduced, has been secured from standard stars contained in the Fundamental Catalogue adopted by the Paris Conference, and observed with the same instrument.

1901	α 1901.0	δ 1901.0
April 29	$11^h 47^m 16^s$	$+38^\circ 25' 42''.46$
May 13	»	$+38^\circ 25' 42''.15$
14	»	$+38^\circ 25' 42''.23$
15	»	$+38^\circ 25' 42''.30$

Geo. A. Hill.

(53) **Kalypso**. Korr. der Ephemeride (Berl. Jahrb. 1905): 1903 Dez. 10 $+43^\circ 82' +2' 54''.0$. W. Luther.

(374) **Burgundia**. Corr. dell' effemeride Veröff. R. I. 21: 1903 Dic. 7 $-1^\circ 0'.0$. Gr. 12.0. E. Millosevich.

1903 **MV**. Dez. 7 $7^h 3^m 9$ Königst. $\alpha = 2^h 38^m 9$ $\delta = +21^\circ 25'$ Gr. 13.3. Auf derselben Platte steht (64) Angelina in $2^h 42^m 7$ $+17^\circ 53'$ Gr. 11^m.0. M. Wolf.

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