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ELEMENTS AND EPHEMERIS OF COMET *a* 1916 (NEUJMIN)

The results given below were obtained from the following observations:

1916 Gr.M. T.	Comet's Apparent				Observer
	α	δ			
Feb. 29.6120	8h 58m 46s.28	+13° 35' 18".2			Van Biesbroeck, Yerkes
Mar. 3.4877	8 59 22.9	12 04 05			Hartwig, Bamberg
Mar. 7.6585	9 01 03.5	+ 9 53 20			Aitken

ELEMENTS

$$\begin{aligned}
 T &= \text{March 11.2195 Gr. M. T.} \\
 \omega &= 193^\circ 44'.1 \\
 \Omega &= 327 \quad 38.8 \\
 i &= 10 \quad 29.6 \\
 e &= 0.55465 \\
 \log q &= 0.12528 \\
 \log a &= 0.47658 \\
 \mu &= 684''.14 \\
 P &= 5.186 \text{ years}
 \end{aligned}$$

CONSTANTS FOR THE EQUATOR 1916.0

$$\begin{aligned}
 x &= r [9.99793] \sin (251^\circ 49'.1 + v) \\
 y &= r [9.92761] \sin (158 \quad 17.2 + v) \\
 z &= r [9.73342] \sin (170 \quad 34.0 + v)
 \end{aligned}$$

EPHEMERIS FOR GREENWICH MEAN MIDNIGHT

1916	True α	True δ	Log Δ	Br.
Mar. 16.5	9h 07m 46s	+ 5° 26'.4	9.6112	1.03
18.5	09 46	4 29.7		
20.5	11 56	3 34.3		
22.5	14 17	2 40.4	9.6312	0.93
24.5	16 48	1 48.0		
26.5	19 29	0 57.1		
28.5	22 19	+ 0 07.8		
Mar. 30.5	25 19	— 0 40.0	9.6625	0.79
Apr. 1.5	28 27	1 26.3		
3.5	31 44	2 11.2		
5.5	35 08	2 54.6		
7.5	38 39	3 36.6	9.6977	0.66
9.5	42 17	4 17.2		
Apr. 11.5	9 46 02	— 4 56.5		

1916	True α	True δ	Log Δ	Br.
Apr. 13.5	9h 49m 52s	— 5° 34'.5		
15.5	53 48	6 11.3	9.7356	0.53
17.5	9 57 49	6 46.8		
19.5	10 01 54	7 21.2		
21.5	06 03	7 54.5		
23.5	10 16	8 26.7	9.7750	0.43
25.5	14 32	8 57.8		
27.5	18 52	9 28.0		
Apr. 29.5	23 15	9 57.2		
May 1.5	10 27 40	—10 25.6	9.8156	0.34

Brightness March 3 = 1.00

The last observation available is one by Van Biesbroeck at the Yerkes Observatory. This was sent by mail by Director Frost. The observation and its representation are:

1916 Gr.M.T.	Comet's Apparent	(O — C)	$\cos \delta \Delta \alpha$	$\Delta \delta$
Mar. 8.5666	9h 01m 32s.26	+9° 25' 08".2	+2"	—2"

The comet is receding from both the Sun and the Earth. The nearest approach to the Earth occurred near the time of discovery, February 24. It was then estimated to be of magnitude 10.5.

Observations for the computation of an orbit from a shorter arc were not available. A parabolic orbit computed from the observations given above gave a residual of 4' in the first declination, which could not be removed by a differential correction.

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BERKELEY ASTRONOMICAL DEPARTMENT,
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