Observations of Comet 1883 Brooks-Swift at Princeton, New Jersey, U. S. A.

The following observations were made by myself with the 9 $\frac{1}{2}$ inch refractor and ringmicrometer at the School of Science observatory. They are corrected for refraction, but not for parallax. The columns C—O give the deviations from the orbit which follows. (Corrections made for parallax and aberration.)

1883	M. t.Princ.	Comp.	α app.	$\log p.A$	δ app.	$\log p.A$	*	C—O	
								$\cos \delta \, d\alpha$	$d\delta$
Mar. 2	7 ^h 17 ^m 15 ^s .0	6	0 ^h 4 ^m 47 ^s .60	9.708	+31° 57' 36".7	0.663	1	+ 2".2	+ 3".1
2	7 34 10.6	5	0 4 53.97	9.721	—	—	2	+ 2.8	—
3	7 21 20.0	3	0 14 26.76	9.721	32 1 9.4	0.673	3	+ 1.5	+ 6.6
4	7 20 6.2	10	0 24 1.43	9.721	32 1 41.6	0.663	4	— 3.5	— 2.5
5	7 30 38.8	8	0 33 35.18	9.721	31 58 51.6	0.670	5	+ 2.0	+ 1.2
7	7 32 30.0	6	0 52 15.67	9.719	31 44 22.2	0.659	6	+ 3.9	+ 0.4
8	7 24 56.0	4	1 1 19.25	9.715	31 33 14.2	0.647	7	+ 7.1	— 5.7
20	8 0 50.7	9	2 34 53.44	9.692	26 51 27.5	0.657	8	— 6.6	— 4.9
24	7 42 6.2	17	2 58 57.04	9.672	24 50 6.1	0.637	9	— 0.5	+ 0.7
28	7 53 31.8	9	3 20 8.58	9.669	22 47 28.0	0.658	10	— 2.8	+ 3.9
April 3	8 7 57.4	6	3 47 15.97	9.665	19 50 55.8	0.685	11	+ 0.2	— 1.8
3	8 7 57.4	6	3 47 16.11	9.665	19 51 3.0	0.685	12	— 1.7	— 8.9
8	8 11 43.1	12	4 6 28.85	9.661	+17 34 19.3	0.700	13	— 0.2	— 0.4

Mean Places of Comparison Stars.

*	α 1883.0	δ 1883.0	Authority
1	0 ^h 4 ^m 44 ^s .36 + 0 ^s .19	+31° 35' 29".5	+ 5".4 W ₂ 0 ^h 51. 52 mean
2	0 4 46.25 + 0.19	32 1 43.8	+ 5.4 W ₂ 0 56. 57 mean
3	0 14 46.80 + 0.23	32 19 52.5	+ 5.5 W ₂ 0 348
4	0 23 28.03 + 0.27	32 20 29.9	+ 5.4 W ₂ 0 556
5	0 33 13.92 + 0.30	31 59 12.0	+ 5.3 W ₂ 0 822
6	0 51 49.93 + 0.34	31 22 56.5	+ 5.0 W ₂ 0 1296. 97 mean
7	0 59 42.25 + 0.39	31 33 19.3	+ 4.9 Gr. 12 Y. Cat. for 1872 Nr. 100
8	2 36 35.19 + 0.71	27 12 30.0	+ 1.6 Gr. 12 Y. Cat. for 1872 Nr. 249
9	2 58 35.09 + 0.71	24 47 56.2	+ 0.1 Wash. Obs. 1878. 52 Arietis
10	3 21 36.20 + 0.75	22 23 58.9	— 1.4 $\frac{1}{3}$ (Gr. 1872 + Radcl. + Yarnall)
11	3 47 55.56 + 0.77	19 45 19.2	— 3.1 W ₂ 3 ^h 1013
12	3 48 12.45 + 0.78	19 45 12.2	— 3.1 W ₂ 3 1019 [motion]
13	4 5 54.45 + 0.83	+17 31 57.5	— 4.4 Yarn. 1801, W ₂ 4 ^h 65 (for proper

From the above positions I have deduced the following parabolic elements, using as first place a position derived from a comparison of the observed places for March 2 to 8 with a preliminary orbit; as second place, a position derived from the observations for March 20 and 24, and the observation of April 8 as third place.

$$\begin{aligned}
 T &= \text{Febr. } 18.95349 \text{ Gr. Mean Time} \\
 \omega &= 110^\circ 54' 42''.89 \\
 \pi &= 29 \quad 2 \quad 48.69 \\
 Q &= 278 \quad 8 \quad 5.80 \\
 i &= 78 \quad 3 \quad 27.71 \\
 \log q &= 9.8808689
 \end{aligned}
 \left. \vphantom{\begin{aligned} T \\ \omega \\ \pi \\ Q \\ i \\ \log q \end{aligned}} \right\} \text{Mean Equin. 1883.0}$$

$$\begin{aligned}
 &\text{Deviation of middle place:} \\
 &\text{Comp.—Obs.} \\
 \cos \beta \, d\lambda' &= 4''.18 \quad d\beta' = 0''.52.
 \end{aligned}$$

Princeton, N. J., 1883 May 11.

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