

Elemente und Ephemeride des Cometen ϵ 1880.

(Dun Echt Circular.)

From the three Dun Echt observations of the new Comet

Dun Echt M. T.		α	δ
Nov. 7	15 ^h 30 ^m 19 ^s 2	22 ^h 45 ^m 53 ^s 83	+42° 33' 43" 3
9	7 27 0.6	22 58 6.47	44 30 41.4
10	6 10 29.2	23 5 47.33	45 35 51.2

we have computed the Elements and Ephemeris:

$$\begin{aligned}
 T &= 1880 \text{ Nov. } 6.94994 \text{ Berl. M. T.} \\
 \pi &= 40^{\circ} 24' 10'' 6 \\
 \Omega &= 300 49 41.1 \\
 i &= 7 22 13.1 \\
 \lg q &= 0.043314
 \end{aligned}
 \left. \begin{array}{l} \\ \\ \\ \end{array} \right\} \begin{array}{l} \text{Mean Equinox} \\ 1880.0 \end{array}$$

Direct.

Ephemeris for Berlin Midnight:

1880	α	δ	$\log r$	$\log \Delta$	Brightness
November 7	22 ^h 44 ^m 5	+42° 20'	0.0433	9.2915	2.46
8	22 51.7	43 30			
9	22 59.3	44 40			
10	23 7.4	45 49			
11	23 16.2	46 56	0.0443	9.2789	2.59
12	23 25.4	48 1			
13	23 35.3	49 3			
14	23 45.8	50 1			
15	23 56.9	50 56	0.0468	9.2738	2.62
16	0 8.7	51 47			
17	0 20.9	52 32			
18	0 33.6	53 11			
19	0 46.6	53 45	0.0507	9.2778	2.53
20	1 0.1	54 12			
21	1 13.7	54 32			
22	1 27.4	54 46			
23	1 41.2	54 53	0.0559	9.2910	2.32
24	1 54.8	54 54			
25	2 8.1	54 49			
26	2 21.1	54 37			
27	2 33.7	54 18	0.0524	9.3129	2.04

The computed place for Berlin midnight on October 11. is

$$\alpha = 21^{\text{h}}29^{\text{m}}4^{\text{s}} \quad \delta = +16^{\circ}47'0.$$

The comet is therefore identical with the one discovered by Mr. Lewis Swift as telegraphed from America.

Nothing seems to have been seen of the comet in Europe prior to November 7th^{*)}, nor was anything further heard from America before the above computations were completed. To-day, however, a letter was received from Mr. Edward E. Barnard of Nashville, Tennessee, dated 1880 Octbr. 30. in which that gentleman says respecting the comet:

„I determined its position on the 21 und 22 with ring-micrometer.

Position Oct. 21 at 12^h17^m G. M. T. R. A 21^h42^m, Dec. + 25° 1'

„ „ 22 „ 15 27 „ „ 21 44 3^s „ + 26 2

moving in a north-easterly direction. It is large, diffused and perfectly transparent. On 24 it was visible in my 1 $\frac{1}{2}$ in. finder.

^{*)} S. dagegen die Odessaer Beobachtungen auf S. 329.

The following was also received to-day:

„Smithsonian telegram Swift telegraphs Lohse's comet discovered by me October 10 identical with comet third eighteen hundred sixty nine.“

A comparison of the above approximate elements with those computed by Professor Bruhns for Comet III 1869 renders an identity in the highest degree probable, especially as the descriptions of that object accord with what is now visible.

Ralph Copeland.

J. G. Lohse.

Lord Lindsay's Observatory, Dun Echt, 1880 November 13.

Elemente und Ephemeride des Cometen Swift (*e* 1880).

Von *K. Zelbr* und Dr. *J. v. Hepperger*.

Circular der K. Akademie d. W. in Wien.

Bis zum Schlusse der Rechnung waren folgende Beobachtungen eingelaufen:

	O r t	1880	mittl. Ortsz.	app. α	app. δ	Beobachter
1	Rochester (U.S.)	Octbr. 10	?	21 ^h 30 ^m	+18 ^o	Swift
2	Jersey City	21	7 ^h 30 ^m	21 42 15 ^s	+25 1'	Barnard
3	Boston	25	8 13.7	21 50 15.1	+28 29 24''6	Chandler
4	Boston	28	7 3.3	21 58 4.0	+31 18 50.0	Chandler
5	Dunecht	Novbr. 7	15 30	22 45 54	+42 33.7	J. G. Lohse
6	Paris	9	11 3 51 ^s	22 59 8.33	+44 40 7.0	G. Bigourdan
7	Strassburg	9	12 24 25	22 59 28.02	+44 42 37.9	A. Winnecke

Durch die Beobachtung 3, sowie durch das Mittel der Beobachtungen 6 und 7 wurde eine Parabel gelegt, so dass 4 und 5 möglichst nahe dargestellt wurden; die Elemente dieser Parabel sind die folgenden:

$T = 1880$ November 8.32198 m. Zt. Berl.

$\pi = 42^{\circ} 7' 4''4$
 $\delta = 295 36 54.1$
 $i = 7 22 5.3$

mittl. Aeq. 1880.0

$\log q = 0.042122$.

Darstellung der mittleren Orte:

$$\Delta \lambda \cos \beta = -28''6 + 19''9$$

$$\Delta \beta = +25.0 + 7.9$$

Diese Elemente zeigen eine grosse Aehnlichkeit mit jenen des Kometen III. 1869, wie dies telegraphisch am 10. November auch von Professor Swift hervorgehoben wurde.

Ephemeride für 12^h Berliner Zeit.

1880	α	δ	$\log \Delta$	$\log r$	Lichtstärke
Novbr. 20	1 ^h 4 ^m 7 ^s	+ 54 ^o 25' 8"	9.2561	0.0491	1.01
„ 24	2 2 21	55 2.0	9.2690	0.0543	0.99
„ 28	2 56 38	53 46.4	9.2916	0.0607	0.87
Decbr. 2	3 41 29	51 13.0	9.3222	0.0683	0.73
„ 6	4 16 5	+ 48 1.1	9.3587	0.0768	0.37

Der Lichtstärke liegt als Einheit jene vom 7. November zu Grunde.

Swift's Comet (*e*) 1880, and its identity with Comet III. 1869.

I desire to communicate elements of the Comet discovered by Prof. Swift on Oct. 11th, which will in all probability prove to be periodic, the resemblance of the elements to those of Comet III. 1869 appearing remarkable.

Below I place my elements of Swift's Comet by the side of Dr. Bruhns' elements (A. N. 1788) of Comet III. 1869.