

Comet Notes

By G. VAN BIESBROECK

The year has started with no less than eight comets under observation. All of them are losing in brightness; several can only be reached by larger instruments and they now gradually fade beyond the reach of even these.

The brightest of all these comets is the most recently found object 1932 *n* (DODWELL-FORBES). While the first announcement concerning this object came from G. F. Dodwell at Adelaide (Australia) who reported the object on December 17, it was soon followed by the information that A. F. I. Forbes at Hermanus (Cape Colony) had discovered the object independently on December 15. Hence the double name given to this object.

It is well situated in the evening sky and had reached nearly eighth magnitude at the end of December; hence it has been abundantly observed. Several improved orbits have been computed. The following elements deduced by A. D. Maxwell (Ann Arbor, Michigan) from observations extending to December 30 are already a good approximation and his ephemeris will allow observers to follow the object.

ELEMENTS AND EPHEMERIS OF COMET 1932 *n*.

| | |
|---------------------|--|
| Time of Perihelion | $T = 1932 \text{ Dec. } 30.38869 \text{ U.T.}$ |
| Node to perihelion | $\omega = 327^\circ 7' 39''.6$ |
| Longitude of node | $\Omega = 77 9 49.8$ |
| Inclination | $i = 24 39 1.2$ |
| Perihelion distance | $q = 1.137895 \text{ A.U.}$ |

| 1933 0 ^h U.T. | α | | | δ | Distance | | M |
|--------------------------|----------|----|----|----------|------------|----------|------|
| | h | m | s | | from Earth | from Sun | |
| Feb. 1 | 1 | 46 | 10 | +12 11.5 | 1.018 | 1.252 | 9.4 |
| 5 | 2 | 1 | 13 | 15 33.7 | | | |
| 9 | 2 | 16 | 21 | 18 43.1 | 1.083 | 1.309 | 9.6 |
| 13 | 2 | 31 | 34 | 21 38.5 | | | |
| 17 | 2 | 46 | 51 | 24 19.3 | 1.165 | 1.374 | 9.8 |
| 21 | 3 | 2 | 10 | 26 45.3 | | | |
| 25 | 3 | 17 | 29 | 28 56.8 | 1.263 | 1.446 | 10.1 |
| March 1 | 3 | 32 | 48 | 30 54.0 | | | |
| 5 | 3 | 48 | 3 | 32 37.6 | 1.374 | 1.523 | 10.4 |
| 9 | 4 | 3 | 12 | 34 8.3 | | | |
| 13 | 4 | 18 | 12 | 35 27.0 | 1.497 | 1.603 | 10.7 |
| 17 | 4 | 33 | 2 | 36 34.4 | | | |
| 21 | 4 | 47 | 40 | 37 31.5 | 1.629 | 1.689 | 11.0 |
| 25 | 5 | 2 | 3 | 38 19.0 | | | |
| 29 | 5 | 6 | 11 | +38 57.8 | 1.769 | 1.775 | 11.3 |

The position of the orbit relatively to that of the earth is shown in the diagram (Fig. 1). I have added the column ^M (magnitude) under the assumption that the brightness corresponded to that of a 9^M.0 star on January 19. That brightness was obtained by the writer from extra-focal comparisons with B.D. stars, the magnitude of which was reduced to the Harvard Scale. The same night a 20 minute exposure with the two-foot reflector brought out the fact that aside from the large round coma there was a long slender tail. Already on previous nights I had noticed visually that the coma was brightest on the west side of the coarse nucleus. The tail is evidently too faint for visual observations but on the original plate from which Figure 2 is enlarged it can be suspected as far as a degree from the nucleus in position-angle 68°, which is exactly opposite to the direction of the

sun. The tail is nearly straight and aside from its nearly thread-like axis a bundle of lateral straight streamers is indicated, the whole making, however, a narrow cone emanating from the nucleus. This fine structure is largely lost in the grain of the fast plate used and still more in the process of trying to reproduce such delicate features on paper.

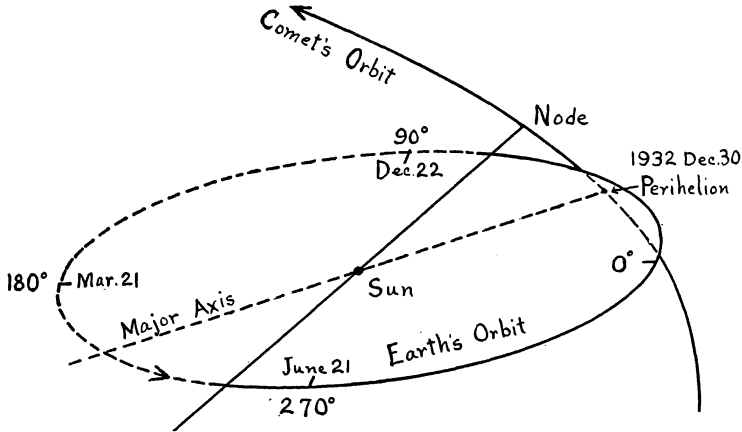


FIGURE 1.
ORBIT OF COMET DODWELL-FORBES.

The ephemeris shows that it will be easy to follow this comet for some time in the evening sky: in February it crosses the constellation of Aries, in March it passes through the southern part of Perseus and at the end of that month it will be found in Auriga but by that time it will have become quite faint.

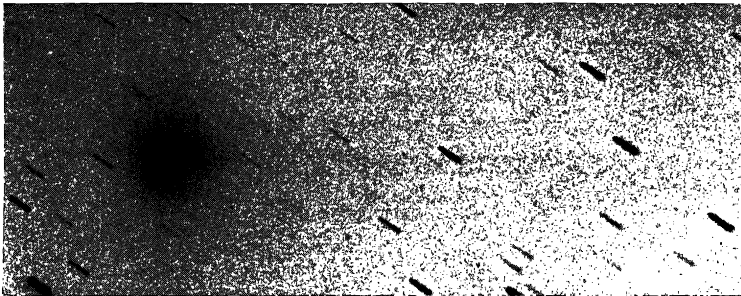


FIGURE 2.
COMET 1932 *n* (DODWELL-FORBES), JANUARY 20, 1933.

This apparition does not seem to be a return of any known comet. The periods obtained by several computers from the short interval of time covered by the measures are still extremely uncertain since there is no large deviation from a purely parabolic motion.

For the other comets that are kept under observation ephemerides were given last month. Little is to be said concerning these since they became very faint and most of them can be followed only by photography. There is, however, a striking exception.