

Comet May Have Broken in Two

Astronomy

Discovery of a strange object in the sky close to Neujmin's comet by two astronomers of the Lick Observatory may show that this comet is breaking into pieces. The new object, as it is announced, since its cometary character is not yet established, is moving in the same direction as the comet, and is no farther away from it than the apparent diameter of the moon. However, it may be an asteroid, or tiny planet.

Dr. Charles J. Krieger and Dr. Nicholas T. Bobrovnikoff first located the new object. On Sunday evening, August 11, they observed the sky in the constellation of Aquarius to locate Neujmin's comet, which was found early in August. Their search revealed not only the comet, but a strange spot of light slightly to the south. Its position was then 21 hours 13 minutes 18.6 seconds right ascension and 13 degrees 37 minutes and 51 seconds south declination. A later observation the same evening showed it to be moving to the southwest, while on Monday night it was observed again, still farther to the southwest. In the meantime, Neujmin's comet was traveling along a similar direction a short distance to the north.

However, on the night of discovery the strange object was of the fifteenth magnitude, while the next night it had faded to the sixteenth magnitude. Neujmin's comet was about a full magnitude brighter.

Should it turn out that the comet has broken into two parts, it will not be the first time that such a thing has happened. The most famous case was Biela's comet, first seen in 1772. This comet came back every six and a half years, though it was not observed on every return, until 1846, when it was found to have divided into two comets. In 1852 both parts were again seen, somewhat farther apart, but since then they have vanished entirely. However, meteor showers moving in the same path as the comet were observed on several occasions, the most notable of which occurred in 1872. These showed that the comet had broken up into a meteoric swarm. Perhaps something similar may be going on in Neujmin's comet.

Unfortunately, Neujmin's comet is far too faint to be seen except with a large telescope. The constellation of Aquarius, through which it is moving, is low in the southeast in August evenings.

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Old Comet Still Seen

Astronomy

With the discovery, in Russia and in South Africa, of two new comets in the early days of August, there are three comets now in the sky within view of large telescopes. In addition to the new visitors, Stearns' Comet, discovered by Prof. C. L. Stearns, of Wesleyan University, Middletown, Conn., on March 10, 1927, can still be seen.

According to Prof. George Van Biesbroeck, of the Yerkes Observatory, this is probably the longest continuous observation ever made of a comet. A comet discovered in 1889 by the late Prof. E. E. Barnard, then at the Lick Observatory, was observed two years and seven months after its discovery. This, however, was a single isolated observation, and the comet had not been observed continuously.

Dr. Van Biesbroeck will report in the forthcoming issue of *Popular Astronomy* that he saw Stearns' Comet in July with the 40-inch telescope.

Then it was of the 15th magnitude, extremely faint. It is now about 700 million miles away from the sun, or nearly as far from the sun as Saturn.

Despite its faintness, the comet can be located without great difficulty because it is keeping very close to the path predicted for it. The orbit of a comet can be calculated from three positions, but the farther apart the separate observations are, the more accurate is the orbit. As Stearns' Comet has been observed over such a long period, it is possible to use widely separated observations. The comet is also curious, because when it approached closest to the sun on March 22, 1927, it was more than 336 million miles away, or over three times as far as the earth. Only once in recent years has a comet that has been discovered at all kept so far away from the sun. That was Neujmin's Comet, discovered in 1914, which was about 342 million miles away from the sun when closest.

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