ASTRONOMY

Comet Holds Records

Comet Ikeya-Seki, the first to be photographed from a jet plane and also from a man-made satellite, was the most brilliant visible thus far in the 20th Century—By Ann Ewing

➤ THE BRIGHT COMET Ikeya-Seki will have at least three "firsts" to its credit, besides being the most brilliant visible so far in the 20th Century, more luminous than Halley's Comet in 1910.

Although the comet was a delight to astronomers since it followed very closely the pattern of one in 1882, it was a disappointment to the public on Oct. 20 and Oct. 21. Not only did Ikeya-Seki not develop the predicted long tail, it was much too close to the sun to be easily seen. Moreover, cloud layers over much of the country, particularly the Northeast, precluded any viewing.

However, a few daytime observations were made by professional astronomers. Its magnitude was estimated as minus six.

Among the records Comet Ikeya-Seki made are:

1. It was the first to be photographed and otherwise examined scientifically from a jet aircraft. The National Aeronautics and Space Administration flew a jet plane at some 30,000 feet over the Pacific Ocean, high above the earth's dimming, dancing atmosphere.

2. It was the first to have its picture taken, and other scientific measurements made, from rockets, four of which were flung high into the sky when the comet made its closest approach to the sun on the night of Oct. 20.

3. It was the first to be photographed from an earth-circling, man-made satellite. Astronauts Walter M. Schirra and Thomas P. Stafford carried a hand-held Hasselbad camera aboard the Gemini 6 spacecraft scheduled for launch on Oct. 25. Although the comet was not then visible from earth's surface without official aid, the astronauts were expected to take its picture every hour and a half, each time the horizon came into view.

The use of space techniques to study comets is expected to yield much useful information concerning the structure and, hopefully, the origin of comets.

Comet Ikeya-Seki was being photographed at observatories around the world, including every 15 minutes when it was visible from the 12 planet-spanning Baker-Nunn tracking stations of the Smithsonian Astrophysical Observatory, with headquarters in Cambridge, Mass.

It was predicted to be visible with optical aid until about Nov. 10.

The comet is named after its Japanese discoverers, Kaoru Ikeya and T. Seki. It is a member of the "sun-grazing" family of comets, a famous group that have passed extremely close to the sun. Seven members of this family, most notably the great comets of 1882 and 1843, have produced spectacular displays.

Comet Ikeya-Seki made its closest approach to the sun (perihelion) at 4:13 Universal Time on Oct. 21, which is 12:13 a.m. EDT. It then started on a 300 mile per second race away from the sun toward space.

Comet Ikeya-Seki is considered to be a one-time visitor, one that moves in an orbit bringing it within sight of earth only once to man's knowledge. If the new comet does return again to the sun and earth's vicinity, its orbit is such that it is not likely to do so within the lifetime of anyone now living.

Comet Ikeya-Seki passed within 300,000 miles of the solar surface.

• Science News Letter, 88:286 October 30, 1965

PHYSICS

Electroforming Process Smoothes Aluminum

➤ ALUMINUM COATINGS with mirror-like smoothness and reflecting properties can be made using an aluminum electroforming process.

General Electric researchers in a program sponsored by the National Aeronautics and Space Administration in Washington, D.C., have made aluminum solar concentrators up to seven inches in diameter by the process. One of the most important aspects of the program was repeated demonstration that alumiunm electroforming is not only feasible and practical but that it can be carried out in a safe manner.

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