

Brightest Comet in Years Discovered

Astronomy

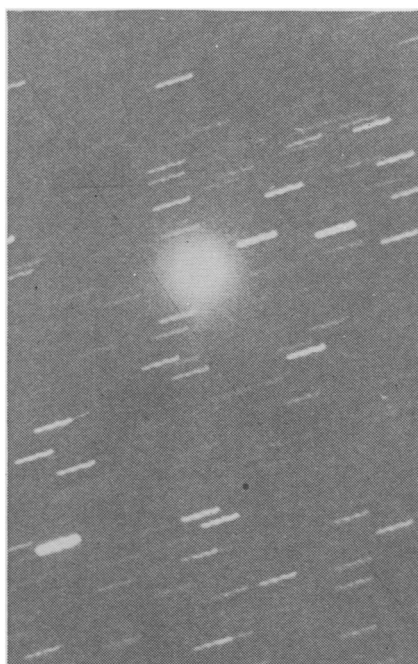
But Will Not Be Visible to Naked Eye

WILK'S comet, which was discovered on Dec. 20, by an astronomer in Poland, will not become conspicuous to the naked eye, even though it is brighter than any comet discovered for several years. This announcement was made to Science Service by Dr. A. O. Leuschner, director of the Students' Observatory of the University of California, following a preliminary calculation of the comet's path by E. C. Bower and F. L. Whipple.

These figures show that when the comet was discovered, it was 85,000,000 miles from the earth, and that it is now moving away from us. However, it is moving towards the sun, and on that account will brighten. This counteracts the greater distance from the earth, and so it will continue about the same brilliance for a few weeks. It is now about the eighth magnitude, too faint to be seen with the unaided eye even under best conditions, but a small telescope will reveal it. After January 8, it will be so close to the sun as to be lost in its glare. On January 22, it will reach perihelion, when it will be closest to the sun, at a distance of about 60,000,000 miles. After that it will probably appear to astronomers in the southern hemisphere for a few weeks.

When discovered, the comet was near the bright star Vega, seen low in the northwestern sky for a few hours after sunset, or low in the northeast for a few hours before sunrise. Since then it has been moving south and eastward, passing near Albireo, the bottom star of the northern cross, on Dec. 28. On Jan. 5 it will pass the constellation of Delphinus, or "Job's coffin", a diamond shaped group of faint stars seen in the west above the bright star Altair, in the eagle, just after sunset.

The calculation of the path was made with the aid of observations at Heidelberg, Germany; Yerkes Observatory, Wisconsin, and the University of California's Lick Observatory at Mt. Hamilton. In order to compute a comet's orbit, three positions are required, somewhat similarly to the way in which three points determine a circle. Any number of circles can be drawn to include a single point. Any number of circles, with a diameter at least as large as the distance



Wilk's Comet

between them, may be drawn so as to include two points. But only a single circle can be drawn so as to include three given points not on a straight line.

Since the laws of a comet's motion around the sun are pretty well known

the three observations of its position permit the calculation of its path. But the farther apart the observations are, the more accurately can the path be determined. The orbit calculated at Berkeley was from some of the earliest observations, over a period of less than two days. They gave figures accurate enough to enable the comet to be followed with the astronomers' telescopes without trouble, but a later, and more accurate determination will be made after observations have extended over several weeks.

The final orbit will tell whether the comet is really a new one, or an old one that has returned. Dr. Leuschner said that its orbit seems to show some resemblance to several others in the past, but that this cannot be settled definitely until a more accurate orbit is calculated.

This is the fifth comet discovered during 1929. It was not the first comet to be discovered by Prof. Wilk, for in November, 1925, he found one which was discovered independently by L. C. Peltier, an amateur astronomer of Delphos, Ohio. Consequently, it was named the Wilk-Peltier comet.

Science News-Letter, January 4, 1930

Sticks and Stones—Continued

souri valley to the Pacific Northwest, so far as present records show, said Mr. Greening.

This famous thermometer, which was unfortunately broken a little later, was carried by a man with the appropriate name of Meriwether. He was Captain Meriwether Lewis, who, with Captain William Clark, led the famous Lewis and Clark expedition which first opened up the Northwest to civilization. Their records contain the first weather diary of this part of the country, said Mr. Greening, and are still preserved at the hall of the American Philosophical Society in Philadelphia. In addition to the weather records, which show the weather in 1804 and 1805 to have been similar to that of the present, many other valuable data about the territory were first set down.

Seen on any clear moonless evening after twilight as a faint beam of light in the western sky, the zodia-

cal light has long been an object of study by astronomers and physicists. Dr. E. O. Hulburt, of the U. S. Navy's research laboratory, suggested its connection with magnetic storms that sometimes affect the earth.

Recalling observations made 75 years ago by a navy chaplain, Rev. George Jones, Dr. Hulburt pointed out that most abnormalities of the zodiacal light, such as fluctuations, unusual brilliance or distribution over the heavens, followed magnetic storms. This, he thinks, indicates some connection, and suggests that the particles which cause the zodiacal light, by scattering light from the sun in some manner, originate in the atmosphere of the earth. The partly broken atoms high in the atmosphere may cause the phenomenon under the combined effect of the pressure of sunlight, the gravitation and magnetism of the earth.

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