

ASTRONOMY

Predict New Comet Will Become Visible in July

Early Risers, Though They Have No Telescope May See Peltier Comet, Brightest Since Visit of Halley's

THE new Peltier comet, discovered on the night of May 14, by an amateur, will in all probability be the brightest since the last appearance of Halley's famous comet in 1910, Harvard astronomers have predicted. It will be easily visible to the naked eye during the latter part of July when it will flash into sight just before dawn each morning. It will be the first comet visible without telescopes since 1927.

The new comet was found near the North Star by Leslie C. Peltier, garage employee of Delphos, Ohio, who has become one of the world's outstanding amateur astronomers.

According to calculations made at the Harvard College Observatory, the comet is now approximately 120,000,000 miles from the earth, but since its discovery its brightness has increased from the ninth to the eighth magnitude. When first sighted it was visible only through telescopes, although low-powered ones picked it up easily, but by the end of July the comet is expected to be brighter than the sixth magnitude and within 20,000,000 miles of the earth. At that time, the Harvard computations indicate, it will begin to recede, slowly fading from sight.

Look This Year

Drs. Fred L. Whipple and Leland E. Cunningham of the Harvard Observatory staff, who made the calculations from photographs taken with the Observatory's cameras, warn that anyone wishing to see the unusual astronomical display had better do so this year for the comet is not expected to return to the vicinity of the earth for several centuries.

The comet is now located in the northern constellation Cepheus. Its position is given by Dr. Harlow Shapley, director of the Observatory, as declination plus 73 degrees, right ascension 23 hours, 45 minutes.

Although it is moving in a south and east direction, it is moving so slowly that it is expected to be in substantially the same position two months from now when it becomes visible to the naked

eye. The course of the comet has been tentatively determined as in the shape of an open parabola about the sun. Apparently it never approaches that body any closer than the earth does, about 93,000,000 miles.

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GEOGRAPHY

Transport in Arctic Sea Now a Commonplace Affair

EPICS of action have been written in the Arctic and Antarctic until we stay-at-homes grow a little blasé. But when 30 freighters plow water and ice of the Arctic Sea north of Russia and Siberia this summer, it will be the large-scale opening of the Northeast Passage,

tapping the great natural resources of the white arctic continent of the Soviets.

For three centuries explorers attempted to make the Northeast Passage in a single voyage. First to succeed was the Swede, Nordenskiöld, who in 1878-9 navigated the ship *Vega* from west to east and finally through Bering Strait.

First to negotiate the entire Northeast Passage in one navigating season (1932) was the ice-breaker *Sibiryakov*, and another ice-breaker, *Lidtike*, repeated in 1934. Last year through voyages were accomplished by ordinary freight vessels, two going from Vladivostok on the Pacific to Murmansk, the western gateway to the Soviet arctic, and two making the reverse passage.

This year, in addition to 30 freight ships plying the Arctic Ocean, four ice-breakers, including the famous *Krassin*, which rescued Nobile in 1928, will patrol the new sea route.

Thus sea transport and regular airline schedules have brought civilization to the Soviet arctic. Cities and farms have appeared where only nomad natives once roamed. To temperate U.S.S.R. are being sent coal, lumber, oil, minerals, fish, furs and other riches of the North.

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GIANT EQUIPMENT

Staggering in its proportions is this large electrical frequency changer which converts electric power from Boulder Dam at 60 cycles per second to 50-cycle current used by the city of Los Angeles. The photograph was taken while the unit was under construction in the East Pittsburgh shops of the Westinghouse Electric Co. It will soon be ready for shipment.