

QUESTAR PHOTOGRAPHS CLAVIUS

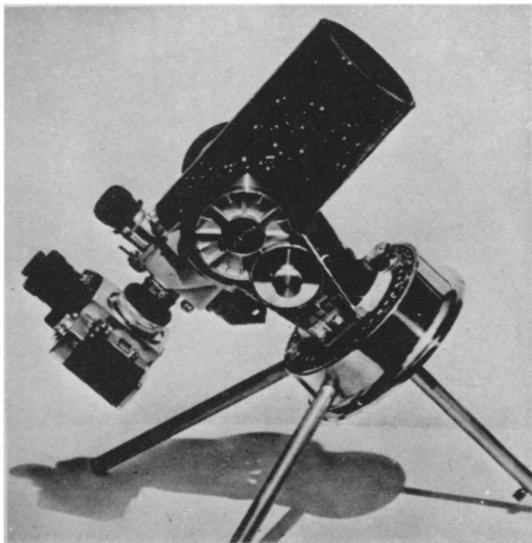
This portion of the moon showing the crater Clavius is part of a 35 mm. enlargement which is longer than the telescope that took the picture. It demonstrates the incredible resolution of Questar, the optical giant that weighs only 7 pounds and travels in a leather case less than a cubic foot in size.

There are more than 150 photographs, both astronomical and terrestrial, taken by Questar owners, in the Questar booklet, which describes the world's finest, most versatile telescope. To obtain your copy, send \$1 to cover mailing and handling costs on this continent. By air to South America, \$2.50; Europe and North Africa, \$3; elsewhere, \$3.50.

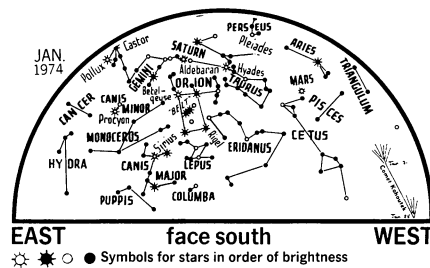
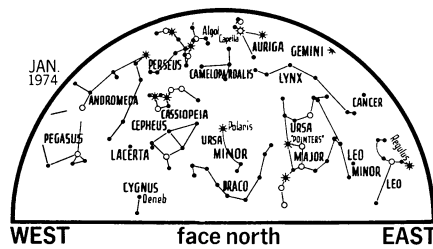
QUESTAR

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KOHOUTEK COMET NOW VISIBLE

By James Stokley

Comet Kohoutek, which in December was visible low in the east before sunrise, passed within 13 million miles of the sun Dec. 28. Now it will be visible in the early evening, a little north of the southwest point of the horizon.

On Jan. 1, an hour after sunset, you'll probably be able to see the comet's tail extending upward from behind the horizon. It may be as long as 30 degrees, i.e., a third the distance from horizon to zenith.

Each evening Kohoutek will be higher. About Jan. 6-9 the comet's head will pass to the right of the two bright planets also visible in the west. The lower of these is Venus; above and to the left is Jupiter, about a tenth as bright. A few months ago astronomers thought that Kohoutek might become even brighter than Venus, but its later development makes this unlikely. It may, however, become as bright as Jupiter.

The comet will be nearest to earth on Jan. 15—about 75 million miles away—and will then fade rapidly, as the brightness of a comet depends on its proximity to both the sun and the earth. By the end of January it is likely to be about third magnitude. Then, as the sky darkens, Kohoutek will be 50 degrees above the southwestern horizon.

The accompanying maps show the sky's appearance at about 10 p.m., local standard time, on Jan. 1; 9 p.m. on the 15th and 8 p.m. on the 31st. The comet's approximate path is shown only for the closing days of the month.

The Czech astronomer Lubos Kohoutek discovered the comet on a photograph taken last March through a telescope at the Hamburg Observatory in Germany. A preliminary orbit has been computed which indicates a return after 75 thousand years (some comets have return periods as short as three or four years; Halley's comes back every 75 years).

Every time a comet approaches the sun it loses some material until finally the supply is depleted. Then it may continue as a stream of meteors, following the same orbit. If the earth passes through the stream, as it does every

August through one from a comet last seen in 1862, we may see a shower of falling stars.

In addition to the comet, of course, the January sky brings its more usual features. Saturn and Mars, as well as Venus and Jupiter, are visible and appear in the southern sky map. Mars is in the southwest in Pisces, while Saturn, slightly brighter, is high in the south in Gemini. Below it is the brilliant constellation Orion, with two first-magnitude stars. These are Betelgeuse, above, and Rigel, below.

Still lower, and a little to the left, is Canis Major, with Sirius, brightest star of the nighttime sky. It's about four times as bright as Saturn. Above and to the right of Orion is Taurus, where red Aldebaran is the brightest star. Gemini, where Saturn now stands, is just to the left of this group. Here the brightest star is Pollux. And lower is Canis Minor, with Procyon.

High in the northern sky is Auriga, with Capella. Regulus is in Leo, toward the east. It is so low that atmospheric absorption dims it somewhat; later in the night it climbs up into the southern sky and is more prominent. □

CELESTIAL TIME TABLE

Jan.	EST	
1	1:50 am	Algol (variable star in Perseus) at minimum brightness
	1:00 pm	Moon in first quarter
3	8:00 am	Moon passes north of Mars
	10:40 pm	Algol at minimum
4	5:00 am	Earth nearest sun, distance 91,345,000 miles
6	7:30 pm	Algol at minimum
7	4:00 am	Moon passes north of Saturn
8	6:00 am	Moon nearest, distance 221,545 miles
	8:00 am	Full Moon
15	2:00 am	Moon in last quarter
21	10:00 pm	Moon farthest, distance 251,075 miles
23	6:00 am	New Moon
	4:00 pm	Venus between earth and sun
24	12:20 am	Algol at minimum
	7:00 pm	Moon passes north of Jupiter
26	9:10 pm	Algol at minimum
29	6:00 pm	Algol at minimum
31	3:00 am	Moon in first quarter
	noon	Moon passes north of Mars