

The planets in 1971

by James Stokley

With the coming of the New Year Saturn is the only planet visible in the early part of the evening. It appears high in the southwest in Aries.

Early in the morning three more planets appear. At the beginning of the month, Mars rises about 3 a.m. in Libra; Jupiter, about 4 a.m., shining many times brighter; Venus, about 5 a.m., some 12 times brighter than Jupiter. Both Venus and Jupiter are in Scorpio, where the bright star Antares is located. The two planets and the star will form a brilliant trio in the southeast. The crescent moon will join them on Jan. 22.

The accompanying maps depict the sky as it looks about 10 p.m., local standard time, on the 1st of January (9 p.m. on the 15th, 8 p.m. on the 31st). They show the skies as they appear from middle latitudes in the United States, about 40 degrees north. From more northerly locations the pole is higher and the circle of circumpolar constellations—those that revolve around the pole but never go below the horizon—is larger. At more southerly locations it is smaller, since the pole is lower in the sky. The best known circumpolar constellations are Ursa Major, which contains the Big Dipper, and Cassiopeia. Others are Camelopardalis, Cepheus, Draco and Ursa Minor. Ursa Minor contains Polaris, the polestar.

Polaris is so close to the celestial pole that it moves with the earth's daily turning in a very small circle and can be used to tell which direction is north.

You can see the circumpolar constellations in the north at any time of year, but they won't be entirely the same. Six months from now Draco will be above Polaris in the evening; Ursa Major will be to the left and Cassiopeia to the right.

Looking ahead to the astronomical program for 1971, we start with the visibility of the various planets:

- Mercury, nearest the sun, will appear low in the west at dusk for a week or so around April 1.

- Venus will appear in the morning sky until August, when it passes behind the sun.

- Mars will brighten rapidly as it approaches earth during the summer and it will shine brighter than any other object, except Venus.

- Jupiter will be opposite the sun by the end of May and visible all night.

- Saturn will be visible in the evening until May, when it will pass behind the sun. After that it will be a "morning star," in the east before sunrise.

This will be a good year for eclipses, with five. (It is possible to have seven.) Three will be of the sun and two of the moon. All the solar eclipses, however, will be partial and none will be visible generally in North America. One on July 22 will be barely visible in northern Alaska. Both lunar eclipses will be total, with the moon completely entering the earth's shadow. The first, on Feb. 10, will be the only one visible in United States and Canada. □

CELESTIAL TIMETABLE		
Jan.	EST	
3	11:55 p.m. midnight	Moon in first quarter Venus passes north of Jupiter
6	1:00 p.m.	Moon passes north of Saturn
11	8:20 a.m.	Full moon
16	6:00 a.m.	Moon farthest, distance 252,000 miles
18	11:00 p.m.	Mercury farthest west of sun
19	1:08 p.m.	Moon in last quarter
20	11:00 a.m.	Venus farthest west of sun
22	2:00 a.m.	Moon passes south of Mars
	5:00 a.m.	Moon passes south of Jupiter
25	11:00 p.m.	Mars passes south of Jupiter
26	5:55 p.m.	New moon
28	5:00 a.m.	Moon nearest, distance 224,000 miles

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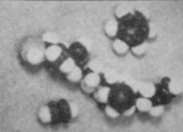
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