

Mars prominent in evening sky

by James Stokley

During late spring Mars appears in the eastern evening sky and will be more prominent than it has been for a number of years. This occurs as it makes a relatively close approach to earth. At the beginning of May, Mars rises about 11:00 p.m. (local daylight saving time) in the constellation of Ophiuchus. As the month ends it will be directly opposite the sun, rising at sunset. Its great brilliance and red color make it easy to identify.

Mars, however, is not the brightest planet of the May evening. That distinction belongs to Jupiter, which is in the south in Virgo and about a third brighter than Mars. When it first appears, Mars is close to the horizon. Absorption of its light by the earth's atmosphere dims it considerably. This

has much less effect with Jupiter, at greater altitude.

The accompanying maps show both planets. They depict the sky as it appears about 11:00 p.m. (DST) on May 1 and at 10:00 on the 15th. The sky would look about the same at 9:00 p.m. at the end of the month were it not for the fact that at that hour the sky will not be dark.

During the first part of May, soon after sunset, Mercury will be visible low in the west. On May 5, when farthest east of the sun, it will set nearly two hours after sunset. By mid-month, setting about an hour and a half later, it may still be seen near the western horizon at dusk. Then it will be about a quarter as bright as it was on the first. On May 29 Mercury is at in-

ferior conjunction, which means that its orbit carries it between the earth and sun.

Of the stars visible in May, the

CELESTIAL TIMETABLE FOR MAY

May	EDT	
2	1:14 a.m.	Full moon
4	7:00 a.m.	Moon nearest, distance 225,600 miles
	11:00 a.m.	Moon passes south of Mars
5	7:00 p.m.	Mercury farthest east of sun; visible for a week or two around this date low in west just after sunset
8	4:12 p.m.	Moon in last quarter
12	9:00 p.m.	Moon passes north of Venus
14	5:00 a.m.	Venus at greatest brightness
	11:00 a.m.	Moon passes north of Saturn
16	4:27 a.m.	New moon
20	1:00 a.m.	Moon farthest, distance 252,100 miles
24	8:16 a.m.	Moon in first quarter
26	5:00 a.m.	Moon passes south of Jupiter
29	6:00 a.m.	Mercury between earth and sun
31	9:19 a.m.	Full moon
	10:00 a.m.	Moon passes south of Mars
	noon	Mars opposite sun



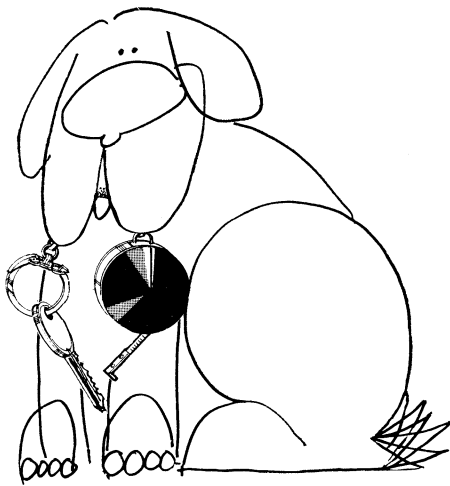
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... May skies

brightest is Vega. It stands in the northeast, in Lyra. Second brightest is Capella, in Auriga, in the northwest. Then comes Arcturus in Boötes in the southeast. Because it is higher Arcturus will seem brighter than Capella.

To the left of Auriga are Gemini with first magnitude Pollux. And in the southwest in Canis Minor is brilliant Procyon, which ranks fourth.

Close to Mars, in Scorpius is red Antares, another star dimmed by its low altitude. This also is true of Deneb in Cygnus. Only part of the figure is shown.

Spica, in Virgo, left of Jupiter in the south, is another prominent star. Above and to the right of Jupiter is Leo. Six stars in this constellation form a smaller group, or asterism, called the Sickle. In its handle is Regulus, another bright star.

In the east an hour or so before sunrise Venus is visible. About nine times brighter than Jupiter, Venus may be seen even after sunrise. About 10:30 a.m. (DST), in mid-month, Venus will be directly south and (from 40 degrees north latitude) about 55 degrees above the horizon. From the southern part of the U.S. it will be higher, but it will be seen lower from the northern states and Canada.

Even though Jupiter is a little brighter than Mars, it is the latter planet that is now attracting attention. Every year Jupiter becomes about as prominent as at present. It is closest when the earth and Jupiter are in the same direction from the sun. This is called opposition: Jupiter and the sun are in opposite directions from earth. At such a time, the mean distance of Jupiter is about 390 million miles—the difference between the distances of each planet from the sun. For the earth this is 93 million miles and for Jupiter it is 483 million miles.

The orbits of earth and of Jupiter are not exactly circular so the actual opposition distance of Jupiter can be as much as 415 million miles or as little as 366 million. But Mars' is much more eccentric than Jupiter's—that is, it departs considerably more from a true circle. Its mean distance from the sun is nearly 142 million miles, but it may be about 13 millions miles more or less than that figure.

This summer Mars will be closer to earth than at any time since 1956. (44.6 million miles on June 8) and the National Aeronautics and Space Administration is taking advantage of the event. It has already dispatched two Mariner spacecraft that are scheduled to reach the planet in August and telemeter back new views and analysis of the red planet's environment. ◇

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