

# Mars' closest approach

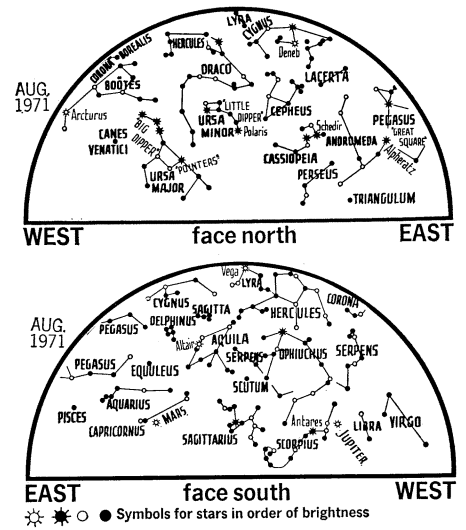
by James Stokley

Mars is now making its closest approach to earth as it appears in the southern sky. On Aug. 11 it will be only 34,931,000 miles away.

All this year it has been coming closer to earth and increasing in brightness. On Jan. 1 it rose about four hours ahead of the sun. Its magnitude, which is the astronomer's measure of brightness, was 1.7, equal to a second-magnitude star. In August, when it comes closest, its magnitude will be minus 2.6. This is about 50 times its January brightness.

Of all the principal planets Venus comes closest, to a distance of less than 25 million miles. But at this time we cannot see it, for it's in the same direction as the sun. Mars, which moves in an orbit outside that of earth, is opposite the sun when closest and visible all night.

The diameter of Mars is difficult to measure, and the figure is uncertain over a range of about 100 miles. It seems to lie between 4,175 and 4,240 miles, measured at the equator. As with earth the equatorial diameter is larger



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than that measured from pole to pole. On both planets the centrifugal force produced by the rotation (once in 24 hours 37 minutes for Mars) throws the equatorial material farther from the center than material at the poles. The polar diameter of Mars seems to be about 4,160 miles, but it may be as much as 12 miles larger or smaller.

Jupiter, in the constellation of Scorpius, shines in the southwest and somewhat less than one-fourth as bright as Mars. And soon after midnight, as August begins, Saturn rises in the east. During the first of the month Venus is also visible very low in the east.

The maps show the sky at 11 p.m., local daylight saving time on the 1st. They appear similar at 10 on the 15th and 9 on the 31st. □

## CELESTIAL TIMETABLE

Aug.	EDT	
1	11:00 p.m.	Moon passes south of Antares (star in Scorpius); seen from South America and the South Pacific, the moon will pass in front of the star
6	3:42 p.m.	Full moon, total lunar eclipse not visible in North America
8	9:00 p.m.	Moon nearest earth; distance 225,500 miles
10	3:00 a.m.	Mars opposite sun
11	11:00 p.m.	Mars nearest earth; distance 34,931,000 miles
12		Meteors of Perseid shower (apparently radiating from constellation Perseus) visible about now, especially in early morning hours
13	6:55 a.m.	Moon in last quarter
20	6:53 p.m.	New moon; partial eclipse of sun, not visible from North America
24	4:00 p.m.	Moon farthest; distance 252,100 miles
26	11:00 a.m.	Mercury between earth and sun
27	3:00 p.m.	Venus behind sun
28	10:56 p.m.	Moon in first quarter
29	7:00 a.m.	Moon passes south of Antares (as seen from east Africa, Australasia and the South Pacific, the moon will pass in front of the star)