

Saturn's rings

by James Stokley

November might well be called the "month of the planets." All five of those visible to the naked eye are in the sky some time in the evening. Mercury, however, will be difficult to locate.

Two—Mars and Saturn—are shown on the accompanying maps. The maps indicate the sky's appearance at about 10 p.m., local standard time on Nov. 1. It looks about the same an hour earlier at midmonth; and two hours earlier at the end.

Mars, slightly brighter than Saturn, is in the constellation of Aquarius in the southwestern sky. It sets about midnight. Saturn is high in the east in Taurus above the star Aldebaran, which is about a third as bright as the planet.

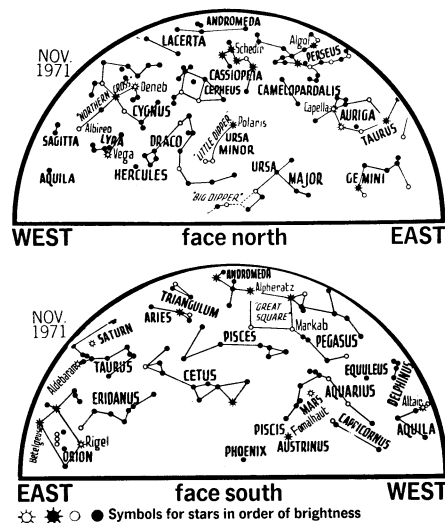
On Nov. 25 Saturn and the sun are in opposite directions viewed from the earth. Thus, earth is on the same side of the sun as Saturn and the two planets are closest. However, Saturn is still about 752 million miles away. It will be visible all night. This fact, and its relative proximity, allows an especially good observing opportunity.

Saturn's most remarkable feature is, of course, its system of rings. To see them you need a telescope of at least moderate size; a large one shows them very clearly. Many college and university observatories offer public viewing. If one is nearby you should visit it to see Saturn.

The outside diameter of the ring system is 171,000 miles and the width is 41,500 miles. This leaves about 7,000 miles between the inner edge and the planet's surface. The ball is about 75,000 miles in diameter, nearly 11 times that of earth.

The ring system is not more than 10 miles thick, and every 15 years it appears edgewise to us. Even powerful telescopes will not show it at such a time. That situation occurred in 1966. Now the rings are spread out and can be well seen.

Saturn also has 10 moons. (The largest, Titan, is bigger than our moon and bigger than all but one of the moons of Jupiter.) The last was found in 1966 by Audouin Dollfus, a Frenchman, who named it Janus. It is less than 300 miles in diameter and about 100,000 miles from the center of the planet. This puts it close to the outer edge of the ring system which is why it escaped discovery so long. The rings didn't interfere in 1966 because they were on edge. □



CELESTIAL TIMETABLE

Nov.	EST	
1	9:00 p.m.	Moon nearest, distance 222,700 miles
2	4:20 p.m.	Full moon
9	3:51 p.m.	Moon in last quarter
14	8:00 a.m.	Venus passes south of Jupiter
	10:00 a.m.	Moon farthest, distance 251,800 miles
	8:00 p.m.	Mercury passes south of Jupiter
17	early a.m.	Leonid meteors
	8:46 p.m.	New moon
19	9:00 a.m.	Moon passes south of Jupiter
	7:00 p.m.	Moon passes south of Mercury and Venus
23	1:00 p.m.	Mercury farthest east of sun
25	11:37 a.m.	Moon in first quarter
	6:00 p.m.	Saturn opposite sun
30	6:00 a.m.	Moon nearest, distance 224,800 miles

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