

Saturn Now Shines All Night

by James Stokley

For the first time in many months the planet Saturn is now visible all evening. As soon as twilight ends, you can see it low in the eastern sky.

The accompanying maps show the sky as it appears about 11:00 p.m., your own kind of daylight saving time Sept. 1; about 10:00 p.m. at mid-month; and 9 p.m. at the end. By these times Saturn is well up, in Pisces.

Mars also is visible, but sets before the time of the maps. In early evening Scorpius is in the south. Libra is to the right of Scorpius. Mars is moving from Libra into Scorpius.

Mars is very slightly brighter than Saturn. It looks fainter because it is so low that the earth's atmosphere absorbs much of its light.

Vega, in Lyra, is the brightest star visible. East of it—nearly overhead—stands Cygnus with Deneb, a first magnitude star. Below and southwest, is Altair, in Aquila.

Low in the west-northwest, stands Arcturus, in Bootes, another star dimmed because of its low altitude. This also is true for Capella, in Auriga.

Toward the east, about 45 degrees above the horizon, is the "Great Square" of Pegasus. Three of the stars

that form it are in Pegasus; the fourth is in Andromeda.

In the east an hour or so before sunrise Jupiter shines more brightly than any of the stars around it. After mid-month, it will soon be followed by Venus, even more brilliant.

On Sept. 23, at 1:38 p.m., EDT, the sun will be directly over a point on the equator, in the Indian Ocean. This is the equinox. It marks the beginning of autumn for us and of spring in the Southern Hemisphere.

On Monday, Sept. 18, the moon will be full. Check the time of its rising on successive nights around this date. On Sunday evening, over much of the U.S., it will rise about 7:00 p.m., daylight time. On Monday it will rise 21 minutes later (at 40 degrees north latitude), and on Tuesday 19 minutes later.

Compare these with the rising times six months ago. The moon was full on March 25. Then it rose about 5:55 p.m., 1 hour and 18 minutes later than on March 24.

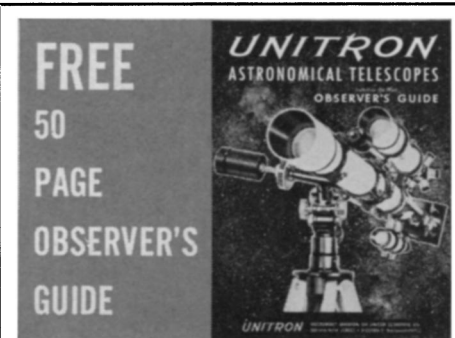
September is the time when farmers are bringing in their harvest, and they have lots of moonlight to help them work at night. The September full moon is the Harvest Moon.

The reason is that the moon, like the sun, moves northward and then southward in the sky, and then toward the north again. It follows a line around the sky called the ecliptic, going around it monthly.

In September the ecliptic extends low across the southern sky in early evening, and makes a small angle with the eastern horizon. But in March it goes high into the sky and makes a large angle with the eastern horizon.

CELESTIAL TIMETABLE FOR SEPTEMBER

Sept.	EDT	
2	8:00 p.m.	Moon passes north of Jupiter
4	7:38 a.m.	New moon
6	4:00 a.m.	Moon nearest, distance 224,800 miles
9	5:00 p.m.	Moon passes south of Mars
10	11:06 p.m.	Moon in first quarter
18	1:00 p.m.	Full moon
19	8:00 p.m.	Moon passes north of Saturn
21	8:00 p.m.	Moon farthest, distance of 252,200 miles
23	1:38 p.m.	Sun over equator, autumn begins in the Northern Hemisphere
26	5:44 p.m.	Moon in last quarter
30	4:00 p.m.	Moon passes north of Jupiter
	5:00 p.m.	Moon passes north of Venus



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