

Summer solstice

by James Stokley

Shining brilliantly in the southwest, the planet Jupiter is conspicuous on June evenings. It is in the constellation of Leo, the lion, close to the star Regulus, passing directly north of it the night of June 8. One of the brightest stars, Regulus ranks as first magnitude, but it is only about a fourteenth as bright as the planet.

The accompanying maps show the sky as it looks about 11:00 p.m., local daylight saving time, June 1, and 10:00 p.m. on the 15th. It would look about the same at 9:00 at the month's end. However, at that time, over the Northern Hemisphere, the sky will be too bright to see the stars.

Eight of those shown are first magnitude but some, including Regulus, are dimmed because they are low in the sky. This causes increased absorption of their light by the atmosphere.

Leo is a constellation of the zodiac the band across the sky in which the sun, moon and planets seem to move. So is Virgo, the virgin, next-door to the left. Here you see the bright star Spica.

Next come Libra, the scales, with no first magnitude star. Low in the southeast stands the next one: Scorpius, the scorpion, with red Antares, another star that is considerably dimmed because it

is so near the horizon.

Toward the east you can see the "summer triangle" that will be overhead on evenings of late summer. Brightest of the three stars that form it is Vega, in Lyra, the lyre. Lower, toward the northeast, stands Deneb, in Cygnus, the swan. The third star, on the southern map, is Altair, in Aquila, the eagle.

Overhead stands Bootes, the herdsman, with Arcturus, fourth brightest star visible from the United States. Toward the northwest is the Big Dipper, in Ursa Major, the great bear. A line through the "pointers," Merak and Dubhe, followed to the right, takes you to Polaris.

This is in Ursa Minor, the little bear. Some of the stars form the Little Dipper, which is harder to identify than its larger counterpart. Frequently you can see no more of it than Polaris and the two stars at the top, called "the guardians of the pole."

The maps show two more first magnitude stars but both are quite low and faint. These are just above the northwestern horizon: Pollux, in Gemini, and Capella, in Auriga.

The planet Saturn appears late on June nights. It rises in the east about

three hours ahead of the sun, in Pisces, the fishes. Mercury, Venus and Mars are now in the same direction as the sun, and we cannot see them.

A welcome astronomical event occurs Friday, June 21, at 4:13 a.m., EDT. The sun reaches its farthest north position in the sky, which marks the beginning of summer in the Northern Hemisphere. The sun will then be directly over a point on the Tropic of Cancer near the shore of the Persian Gulf.



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CELESTIAL TIMETABLE FOR JUNE

| June | EDT | |
|------|------------|---------------------------------------|
| 2 | 7:00 p.m. | Moon passes north of Jupiter |
| 4 | 12:47 a.m. | Moon in first quarter |
| 9 | 11:00 p.m. | Moon nearest, distance 222,400 miles |
| 10 | 4:14 p.m. | Full moon |
| 17 | 2:14 p.m. | Moon in last quarter |
| 18 | noon | Mercury between sun and earth |
| 19 | 10:00 p.m. | Moon passes north of Saturn |
| 20 | 6:00 a.m. | Venus behind sun |
| 21 | 4:13 a.m. | Sun farthest north—summer commences |
| | noon | Mars behind sun |
| 22 | 3:00 p.m. | Moon farthest, distance 252,300 miles |
| 25 | 6:25 p.m. | New moon |
| 30 | 8:00 a.m. | Moon passes north of Jupiter |

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