

The Starry Sky — Spring 2010



How to Use this Map

The above map represents the night sky as it appears at the indicated times, and remains usable several hours before and after.

Hold the map up to the sky in front of you and turn it so the direction you are facing appears at the bottom. Lines identify the constellations. The light-coloured area outlines the Milky Way.

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This Star Map is Accurate on...

(Eastern Daylight Time)

- March 21 at 1 a.m.
- April 6 at midnight
- April 21 at 11 p.m.
- May 6 at 10 p.m.
- May 21 at 9 p.m.

The Sky This Spring

From dusk to dawn this spring, the planets will be visible throughout the night.

Mercury, Venus and Mars capture our attention early in the evening,

Saturn dominates the middle of the night, and Jupiter appears on the horizon at dawn.

Saturn in opposition

Saturn arrives at opposition on March 21 and will be at its best this spring. The ringed planet is currently shining in Virgo, and is located between Spica, the constellation's brightest star, and Regulus in Leo. At nightfall, the planet is in the southeast in April; high in the south in May; and in the southwest in June.

Saturn always offers a fascinating show through a telescope, despite the fact that its famous rings are somewhat difficult to see right now. They appear nearly edge-on: Their inclination is barely 3 degrees at the beginning of the season, and less than 2 degrees in June. To get the most through a telescope, it's best to observe the planet when it's as high as possible in the sky, that is, when it culminates in the south.

The Moon will be in Saturn's vicinity on March 28 and 29; on April 25, May 22 and June 18.

Venus, the Evening Star

Venus has been shining as the Evening Star since mid-February. It blazes in the western sky at twilight, and conditions for observing it continue to improve until May: As the separation increases between Venus and the Sun, the planet climbs higher and higher in the evening sky. At the beginning of spring, Venus sets

one-and-a-half hours after the Sun; at the end of May, the gap lengthens to two-and-a-half hours. Things deteriorate after that. Though Venus continues to move away from the Sun, the plane of its orbit descends closer to the western horizon: Instead of climbing higher, the brilliant planet loses altitude and sets before the end of twilight. This spring, through a telescope, Venus' tiny disk has a gibbous appearance, but the most spectacular changes in its phase will occur this summer.

On the evening of April 15 and 16, and on May 15 and 16, the lunar crescent will be about 7 degrees from Venus. On June 14, the crescent Moon will be 5 degrees below the planet.

A favourable apparition for Mercury

During the first evenings of spring, **Mercury** charges over the western horizon, auguring an excellent apparition. If you have never seen the furtive planet this is an excellent occasion, because Venus is on hand to help you spot it: Look to the lower right of the Evening Star and you'll see Mercury. Starting on March 28, and for a good two weeks, the gap between the two planets will be less than 5 degrees.

On April 8, Mercury reaches its greatest eastern elongation from the Sun (to the Sun's left). On that evening, the tiny planet is less than 4 degrees to the right of brilliant Venus, and sets nearly two hours after the Sun.

Following this period, Mercury gradually gets fainter, and its separation from the Sun diminishes. Fortunately, Venus continues to serve as a guide, with Mercury less than 5 degrees to the right until April 12. **At twilight on April 15**, 45 minutes after sunset, you'll see a thin crescent Moon just one degree above Mercury. Binoculars will add to the enjoyment of this scene: The sight of earthshine reflecting on the Moon is breathtaking. The tiny planet gradually descends toward the horizon and disappears in the glow of twilight around April 20. Mercury passes between the Earth and Sun (inferior conjunction) on April 28

and reappears in the morning sky in May, however, observing conditions will be less favourable then.

Mars gets farther

The red planet is still visible in the evening sky, but no longer dominates the night as it did this winter. Since its opposition at the end of January, **Mars** has been getting farther from the Earth. As a result, its brightness has decreased and it continues to wane. The best period for observing Mars through a telescope has passed: Its diameter is less than 10 arc seconds — too small to see surface details.

As springtime begins, Mars has already resumed its direct, eastward movement among the stars. **From April 14 to 18**, the red planet passes just north of the Beehive cluster (M44) at the heart of Cancer: Here's another chance to admire the colour contrast between the planet and the cluster's blue stars. **On the evening of April 21**, the first quarter Moon is just below Mars and the Beehive. The Moon is in Mars' vicinity, as well, on March 24 and 25, May 19 and 20, and June 16 and 17.

As Mars continues its journey among the constellations it heads toward Leo: On the evening of June 6, the red planet passes less than a degree from the star Regulus. To its left is the planet Saturn; to its right, Venus approaches. Mars is caught in between, as the three planets prepare for a summer rendezvous.

Jupiter visible at dawn

Jupiter gradually reappears at dawn starting in April. The giant planet remains low on the east-southeast horizon though it gains some altitude as the season progresses, becoming visible even before dawn toward the end of May. The lunar crescent will be in Jupiter's vicinity on April 11 and May 9; **On June 6**, Jupiter and the Moon form a particularly remarkable pair at dawn and in the preceding hours.

Happy observing!

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Seasonal Milestones

The **spring equinox** takes place on March 20, at 13:32 EDT, and the **summer solstice** occurs on June 21 at 7:28; Spring will last exactly 92 d 17 h 56 min.

Phases of the Moon

(Eastern Daylight Time)

| First quarter | Full moon |
|-------------------|-------------------|
| March 23 at 7:00 | March 29 at 22:25 |
| April 21 at 14:20 | April 28 at 8:18 |
| May 20 at 19:43 | May 27 at 19:07 |
| June 19 at 0:29 | June 26 at 7:30 |
| Last quarter | New moon |
| April 6 at 5:37 | April 14 at 8:29 |
| May 6 at 0:15 | May 13 at 21:04 |
| June 4 at 18:13 | June 12 at 7:15 |
| July 4 at 10:35 | July 11 at 15:40 |