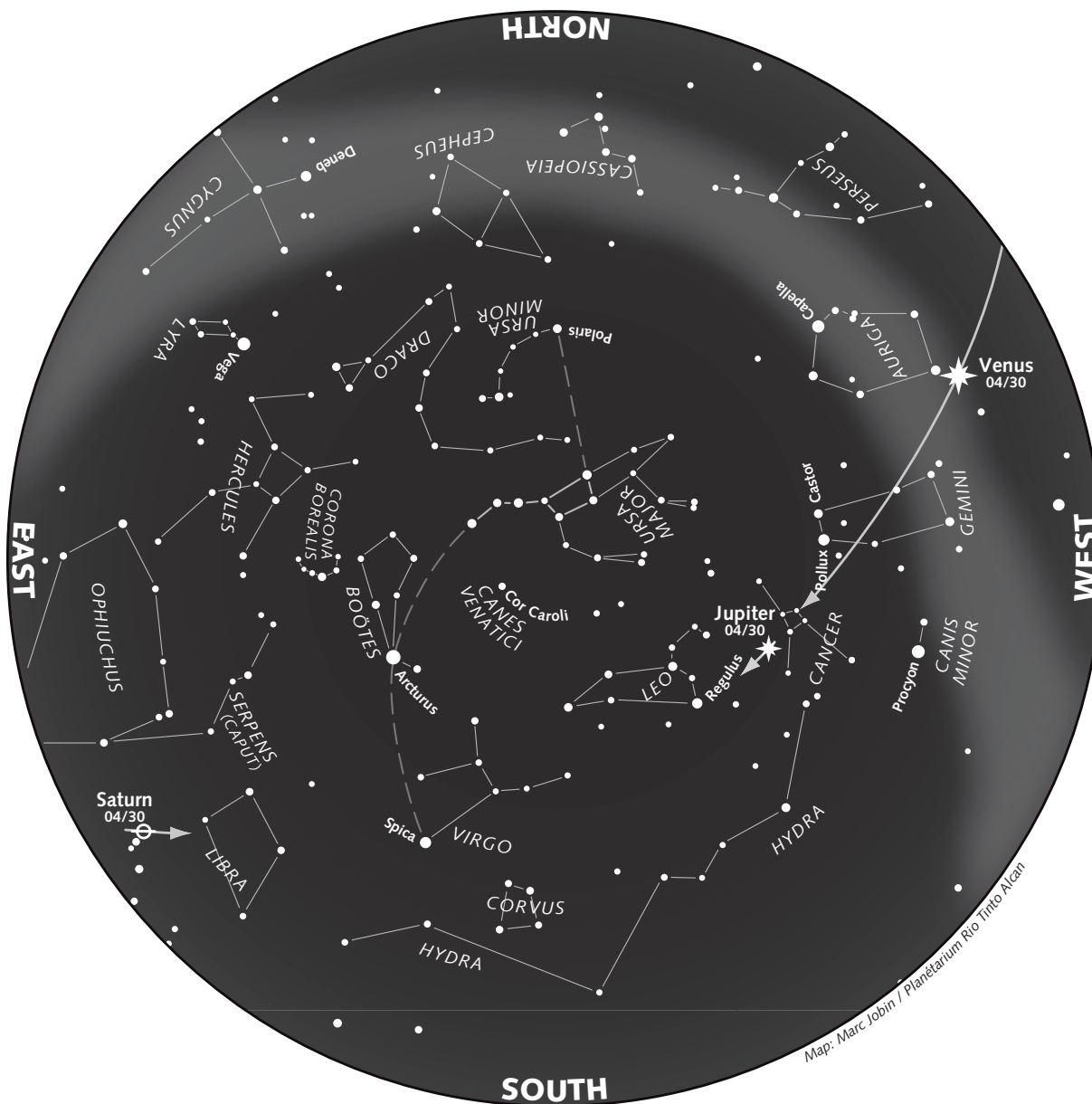


## The Starry Sky — Spring 2015



### 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.



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# The Sky This Spring

*Venus and Jupiter continue to draw our attention in the evening, and Saturn takes their place later at night. Mercury is also visible at dusk, while Mars disappears in the Sun's glare.*

## Venus rules the evening

This spring beautiful **Venus**, the dazzling Evening Star, is simply impossible to miss at twilight! Already quite high as the season begins, the brilliant planet continues to climb until early May. By then, it will be perched thirty degrees above the horizon at the end of civil twilight and will dominate the western sky, setting around midnight — a full three-and-a-half hours after the Sun. Over the weeks that follow, Venus begins to decline even though its greatest separation from the Sun will be on June 6. This decline is gradual at first but it picks up speed in June, and Venus will quickly plunge toward the western horizon in July. Through a telescope, the planet's appearance slowly changes as spring goes by: It evolves from gibbous to an increasingly thin crescent with the passing weeks.

This winter and spring, notice how the gap between Venus and Jupiter gradually diminishes. In fact, **the two brightest planets will meet in the twilight at the end of June**: On the 20<sup>th</sup>, the crescent moon will form a superb triangle together with Venus and Jupiter. On June 30, both planets are only a third-of-a-degree apart, providing the most spectacular conjunction of the year! Also, noteworthy is the close passage of Venus to the left of the Pleiades cluster on the nights surrounding April 12.

## Jupiter co-stars this spring

**Jupiter's** retrograde movement got underway as winter began, and ends on April 8. The giant planet will come to rest 5 degrees from the Beehive cluster (M44), at the heart of Cancer, before resuming its direct eastward motion among the stars, which will take it toward Regulus in Leo.

## Phases of the Moon

(Eastern Daylight Time)

|                   |                      |
|-------------------|----------------------|
| <b>New moon</b>   | <b>First quarter</b> |
| March 20 at 5:36  | March 27 at 3:43     |
| April 18 at 14:57 | April 25 at 19:55    |
| May 18 at 0:13    | May 25 at 13:19      |
| June 16 at 10:05  | June 24 at 7:02      |
| <b>Full moon</b>  | <b>Last quarter</b>  |
| April 4 at 8:05   | April 11 at 23:44    |
| May 3 at 23:42    | May 11 at 6:36       |
| June 2 at 12:19   | June 9 at 11:42      |
| July 1 at 22:20   | July 8 at 16:24      |

Through a telescope, Jupiter is sure to impress with its light and dark cloud bands and Galilean moons. The rule-of-thumb this spring is: Observe the giant planet as soon as the sky gets dark. In fact, Jupiter will have already reached its highest altitude at nightfall, and sets progressively earlier. At the beginning of April, the planet culminates in the south at twilight and sets in the west-northwest around 4:00 A.M. By mid-May, Jupiter is noticeably lower; it shines 45 degrees above the west-southwest horizon at twilight and sets around 2:00 A.M. And by mid-June, the brilliant planet emerges 25 degrees above the western horizon at twilight, and sets at midnight. Throughout this period, notice how Jupiter and Venus converge in the sky as they head toward a planetary rendezvous on June 30. (See **Venus** above.)

The gibbous moon will pass below Jupiter on the night of March 29 to 30, and will be near the giant planet again on the evenings of April 25 and 26. The lunar crescent also appears below Jupiter on the evening of May 23, and to the left of both Jupiter and Venus on June 20.

## Saturn at opposition

On May 22, it's **Saturn's** turn to arrive at opposition, more than three months after Jupiter. The ringed planet is currently in the lower part of the ecliptic, on the border of Libra and Scorpius, and is undergoing its retrograde loop. This celestial region never appears high in the skies of Quebec, and telescopic views of Saturn suffer as a result. But the planet's famed rings are currently tilted some 25 degrees toward Earth, which makes them worth observing despite all.

Saturn rises progressively earlier, and by the beginning of April the planet is technically visible before midnight. During the period surrounding opposition Saturn is visible all night long, rising in the southeast at dusk and setting in the southwest at dawn. Toward the end of spring, the ringed planet culminates in the evening twilight, some 26 degrees above the southern horizon.

The waning gibbous moon appears less than 3 degrees from Saturn toward dawn on April 8. The waxing gibbous moon will appear next to Saturn on June 1, in the southeast at twilight.

## A brief apparition for Mercury

**Mercury** will undergo a favourable twilight apparition during the second half of April and first week of May. The tiny planet shines very brightly at the beginning of this period, and quickly climbs away from the Sun during the third week of April. Look for it above the west-northwest horizon, 30 to 45 minutes after sunset. On April 22, Mercury is in conjunction with Mars, which is much fainter: Using binoculars, you'll find the Red Planet a bit more than a degree to the lower left of Mercury. On the evening of May 1, Mercury sits just 2 degrees to the left of the Pleiades. The elusive planet reaches its greatest separation from the Sun on May 7, though its brightness will have already diminished substantially over the preceding days: Immediately thereafter, Mercury will quickly plunge sunward and be lost in the glare of twilight around May 10.

## Mars behind the Sun

At the beginning of spring, **Mars** is still visible low on the western horizon at twilight. Its long-lived presence in the evening sky has lasted more than a year, but that's coming to an end. In fact, the Red Planet slips lower in the sky with each passing day and becomes lost in the glare of sunset around the beginning of May. Mars passes behind the Sun (conjunction) on June 14 and gradually reappears at dawn toward the end of summer. On the evening of March 21, the crescent moon sits less than a degree-and-a-half to the left of the Red Planet. On April 22 at twilight, Mars will appear to the lower left of the much brighter planet Mercury, above the west-northwest horizon.

*Clear skies!*

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Adaptation: **Louie Bernstein**

## Seasonal Milestones

The spring equinox takes place on March 20, 2015, at 18:45 EDT, and the summer solstice will occur on June 21 at 12:38 P.M. Spring will last exactly 92 d 17 h 53 min.