The Pocket Planetarium ★

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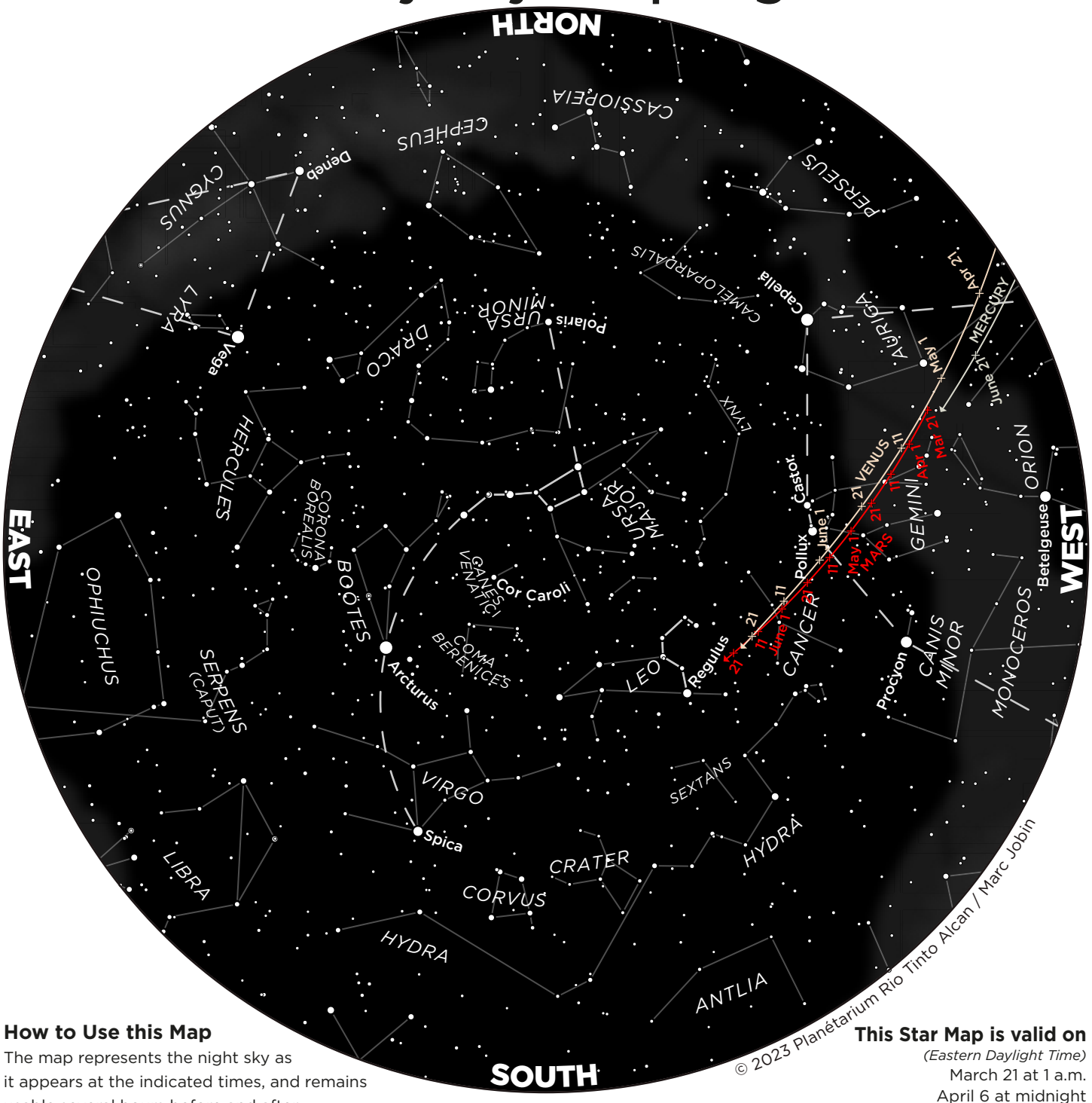
The Starry Sky — Spring 2023



How to Use this Map

The 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 shaded area outlines the Milky Way.

This Star Map is valid 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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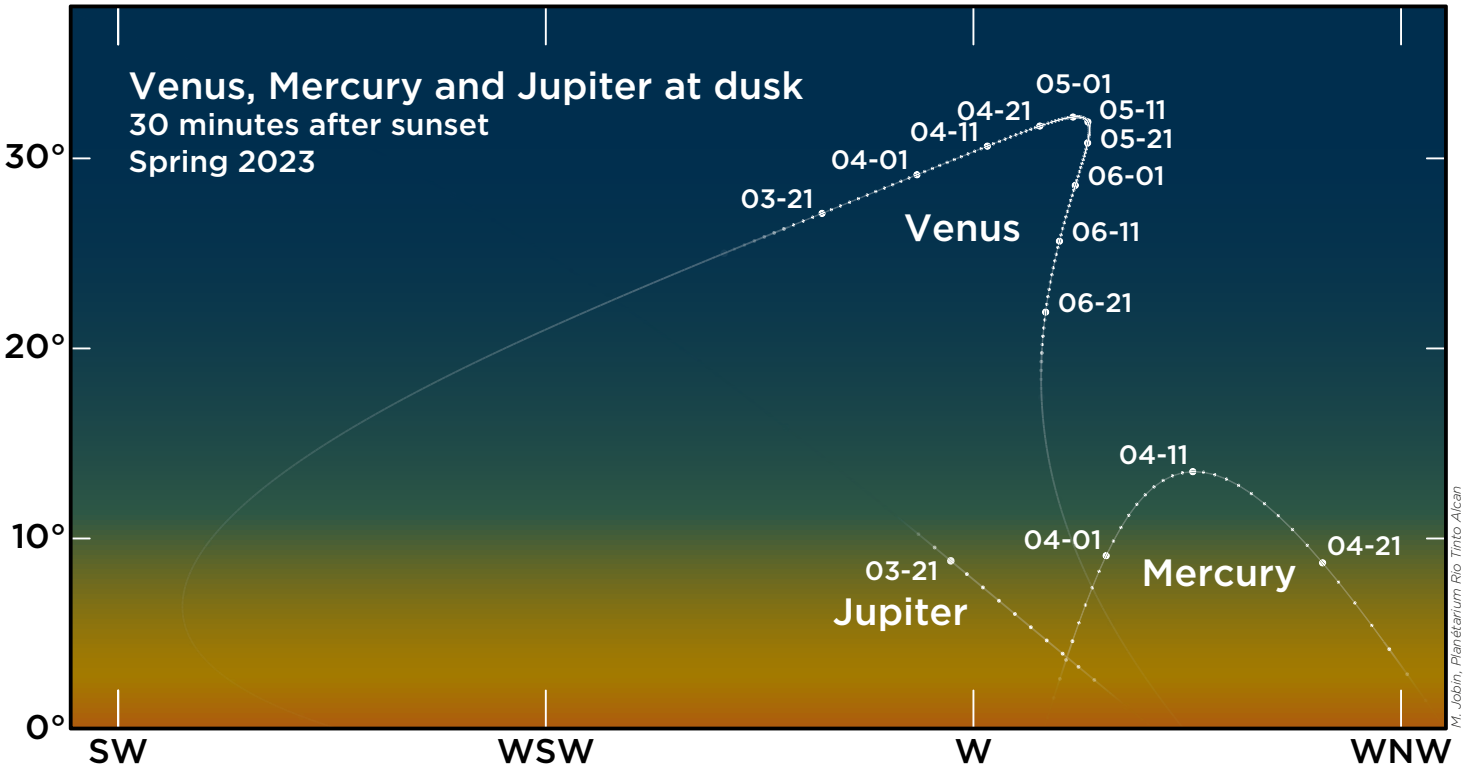
The Sky This Spring

Venus completely dominates our spring evenings, but it's not alone: Mars and Mercury are keeping it company. Saturn and Jupiter, on the other hand, have entered the morning sky.



Venus rules our evening skies

Venus, the beautiful Evening Star, shines like a beacon in the west as darkness falls, capturing our gaze once the Sun dips below the horizon. During the first part of spring, Venus glides to the right along the western horizon, climbing higher from one evening to the next. But it can't keep rising forever: On May 1, Venus reaches its peak for this apparition, 32 degrees above the western horizon, at the end of civil twilight. The dazzling planet then sets around 11 p.m., more than three and a half hours after the Sun. But the brilliant Evening Star has already started sinking back into the glow of sunset, very subtly at first (in May), then more conspicuously (in June), after which it rapidly heads downward in July.

Venus appears as a gibbous disc when viewed through a small telescope during the early spring evenings. As the weeks go by, its phase slowly diminishes as the planet circles the Sun and shows us more of its "night side." On June 4, the lovely planet reaches its greatest elongation, 45.4 degrees east of the Sun, appearing as a "half-Venus" in the days surrounding this date. Over the next few weeks, Venus transforms into a progressively thinner crescent, while increasing in size the closer it draws to Earth. The changes are noticeable almost daily!

Venus is well positioned this spring for several camera-ready encounters with the Moon and other celestial objects. **On the evenings of March 23 and 24,** the crescent Moon lies on either side of the planet, a few degrees away. **On April 10,** the planet comes to within just 2½ degrees south of the beautiful Pleiades star cluster; the two objects will be close to one another for a few days. From April 11 to 14, Venus makes its way between the Pleiades and another group of stars, the Hyades cluster, located in the same region of the sky. On April 22 and 23, and again on May 22 and 23, the crescent Moon repays a visit to the Evening Star. **On the evening of June 13,** Venus brushes by the Beehive cluster (Messier 44), another group of stars located at the centre of the constellation Cancer: Admire the view through binoculars or a small, low-magnification telescope. (See diagram on next page.) Lastly, **on the evening of June 21,** the crescent Moon lies a mere 3 degrees to the upper right of Venus; the much-fainter Mars hangs 4½ degrees to the upper left of Venus, completing the triangle.

Mars attempts to flee the Sun

Several months have passed since the opposition of **Mars** in December 2022: The planet is moving further and further away from Earth and its brightness is dimming. Once a competitor for brightest object in the sky, Mars is now keeping a low profile, but its orange hue remains its most obvious distinguishing feature.

The Red Planet moves quickly in its orbit: From our Earthly viewpoint, it appears to dash eastward through the constellations. It leaves Taurus and enters Gemini on March 26, and then crosses into Cancer on May 17. Even though Mars seems to be fleeing the Sun, our star steadily closes in and catches up with it. In early spring, Mars can be found very high in the southwest at nightfall, but as the weeks go by, the planet appears ever lower in the west in the early evening. Also note how Venus approaches from the right.

The crescent Moon, almost at first quarter, visits the Red Planet on the evenings of March 27 and 28. The crescent moves within 3 degrees of Mars **on the evening of April 28.** The Moon shines between Venus and Mars on the evening of May 23, then above the Red Planet on the evening of the 24th. The crescent forms a pretty triangle with Venus and Mars **on the evening of June 21.**

On the evening of June 2, the Red Planet can be found among the stars of the Beehive cluster (M44), at the centre of the constellation Cancer (see diagram on next page); this is only an illusion, of course, since this group of stars is 590 light-years away from us—20 million times further than Mars!

SEASONAL MILESTONES

The **spring equinox** occurs on March 20, 2023 at 5:25 p.m. EDT, and the **summer solstice** is due on June 21 at 10:58 a.m. Spring will last precisely 92 days 17 hours and 33 minutes.

PHASES OF THE MOON

(Eastern Daylight Time)

New moon	First quarter
March 21 at 13:23	March 28 at 22:32
April 20 at 0:12	April 27 at 17:20
May 19 at 11:53	May 27 at 11:22
June 18 at 0:37	June 26 at 3:50
Full moon	**Last quarter**
April 6 at 0:35	April 13 at 5:11
May 5 at 13:34	May 12 at 10:28
June 3 at 23:42	June 10 at 15:31
July 3 at 7:39	July 9 at 21:48

An excellent apparition of Mercury

This is an excellent opportunity to spot the elusive planet **Mercury,** which makes its best appearance in the evening sky this spring. **Between March 25 and April 22,** about 30 minutes after sunset, look for a small dot of light very low on the western horizon. But Mercury has company until March 28, so don't confuse the tiny planet with the somewhat brighter giant Jupiter; **on the evening of March 27,** Jupiter lies only 1½ degrees to the left of Mercury. Jupiter then sinks ever lower in the glare of the setting Sun, while Mercury continues to rise and becomes easier to see.

Mercury is much brighter at the start of this window of visibility, but it becomes too dim after April 22; the prime viewing period extends from March 27 to April 16. When Mercury reaches its greatest elongation on April 11, 19.5 degrees east of the Sun, it can be spotted for a good hour after sunset.

Saturn in the morning sky

Saturn slipped behind the Sun on February 16 (solar conjunction). Although barely visible, it becomes increasingly apparent by the very end of March, in the glow of dawn, low on the east-southeastern horizon, 45 minutes before sunrise. The ringed planet is much easier to make out as the weeks pass and the gap with our star widens.

On the morning of April 16, Saturn is clearly visible above the horizon, but you'll likely need a pair of binoculars to locate the thin waning crescent Moon hanging 4½ degrees below the planet. The waning Moon moves to within 5½ degrees of Saturn on the morning of May 13: This time, the pair rise more than two and a half hours before the Sun and are easy to see in the southeast at dawn. The waning gibbous Moon again approaches Saturn on the mornings of June 9 and 10: The planet shines about 30 degrees high in the southeast at the crack of dawn.

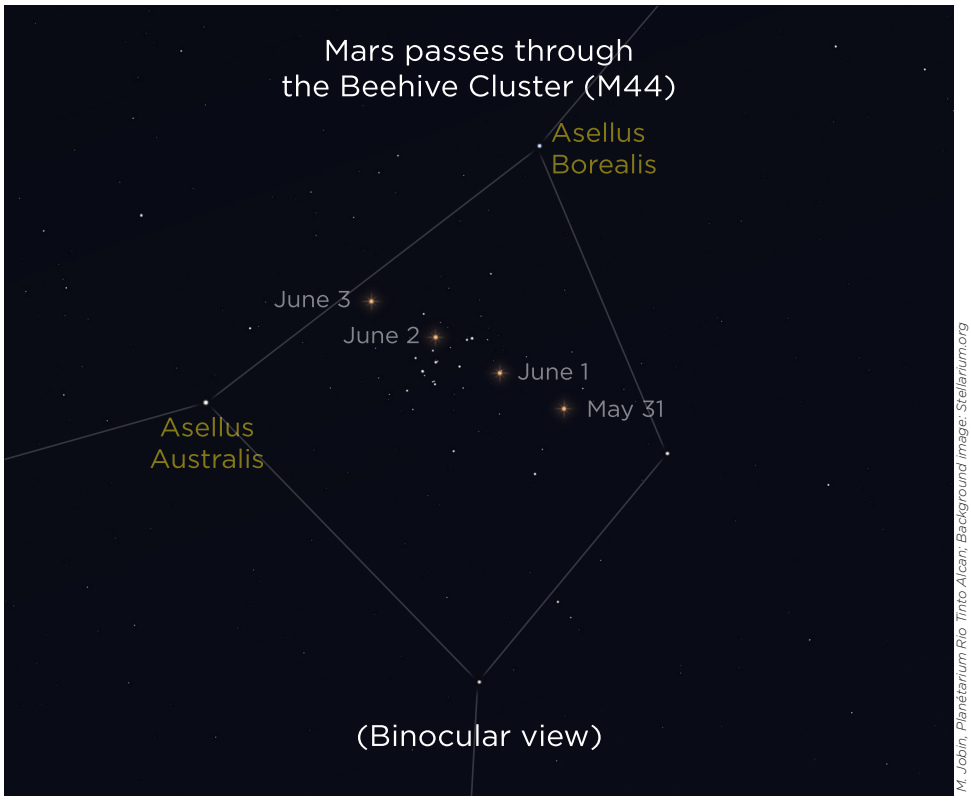
Jupiter returns to the dawn sky

In the early spring evenings, **Jupiter** can be found shining very low in the western twilight sky. The giant planet will put on one last show before it disappears in the glare of the Sun: **On the evening of March 27,** Jupiter lies only 1½ degrees to the left of Mercury. You'll see this duo about 30 minutes after sunset. Jupiter then vanishes over the following evenings: The giant planet is in solar conjunction on April 11.

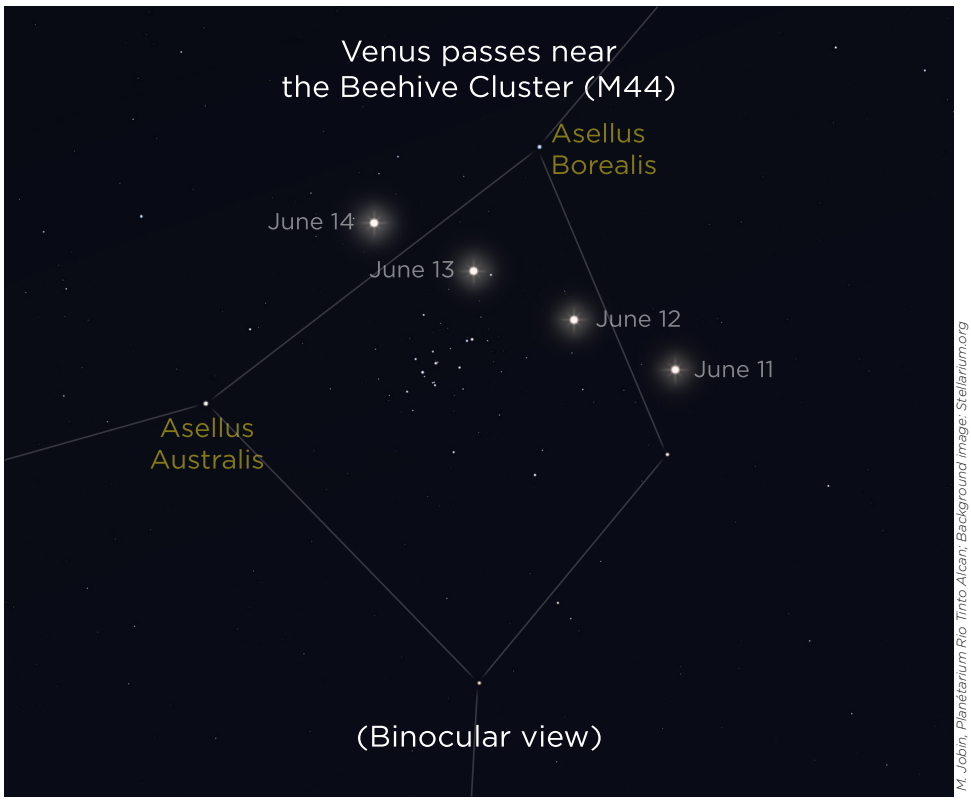
After spending several weeks out of sight, Jupiter slowly returns to the morning sky during the second week of May. Look for it very low on the eastern horizon, a half-hour before sunrise. **On the morning of May 17,** the thin waning Moon lies just 1½ degrees to the right of the giant planet. Jupiter continues to pull away from our star and, **on the morning of June 14,** the giant planet forms another magnificent duo with the thin lunar crescent 2 degrees to its left: Admire them one hour before sunrise, about 15 degrees above the eastern horizon.

Clear skies!

Research and text: **Marc Jobin**



M. Jobin, Planétarium Rio Tinto Alcan; Background image: Stellarium.org



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