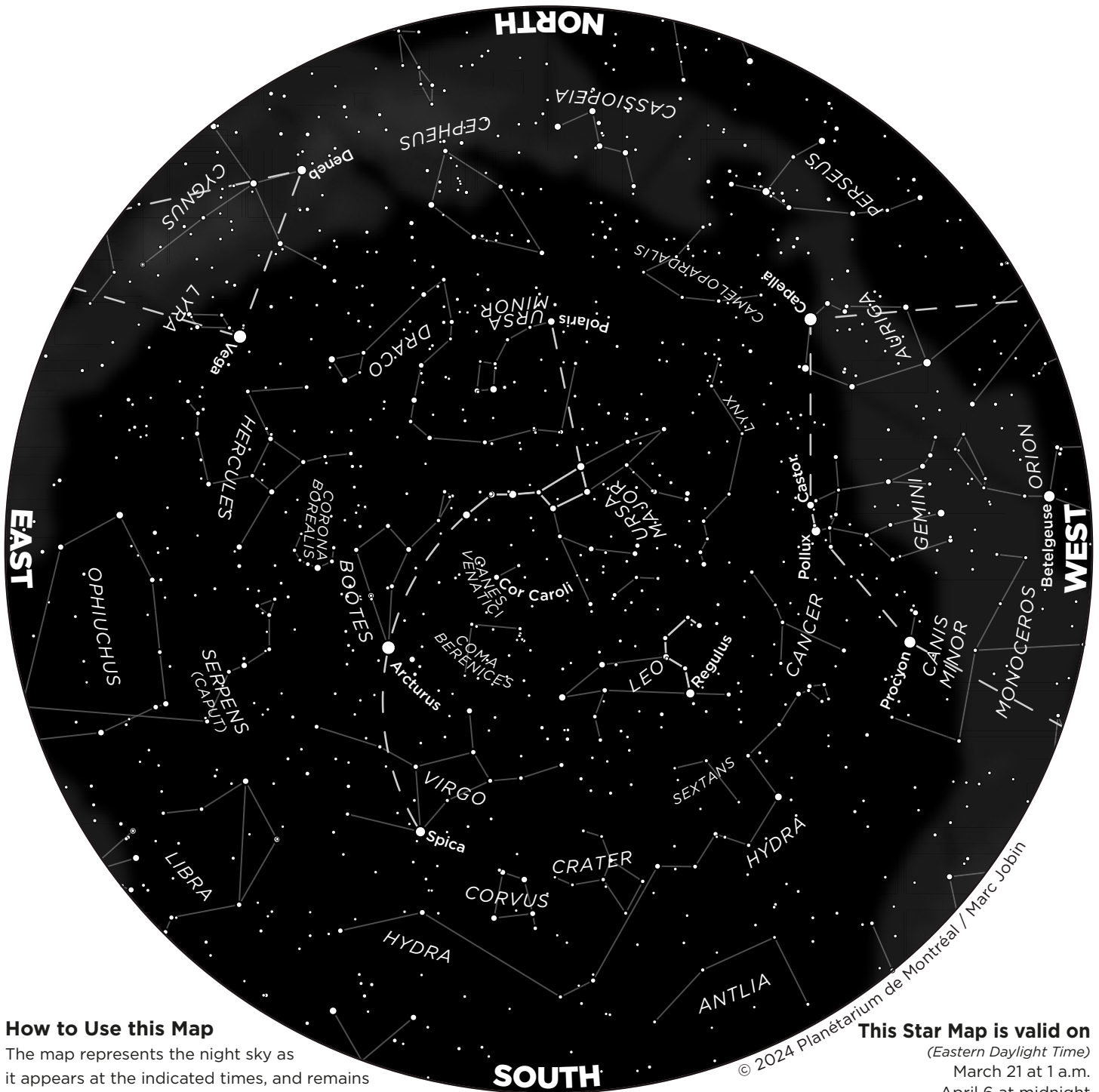


## The Starry Sky – Spring 2024



### 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

*The planets are keeping a low profile as winter ends and spring begins: Jupiter bows out in the evening, Venus spends the season washed out by the Sun's brilliance, while Mars and Saturn reappear at dawn.*

### Jupiter disappears at twilight

In early spring, **Jupiter** still shines like a beacon above the western horizon at nightfall. It will be fairly easy to spot until mid-April, but you'll notice that the giant planet is sinking ever lower in the glare of the setting Sun. It then vanishes in the twilight glow toward the end of April. The planet is in solar conjunction on May 18, then slowly pulls away from the Sun once again. Jupiter gradually reappears at dawn around mid-June: It becomes increasingly visible low on the east-northeastern horizon 30 minutes before sunrise.

**On April 10 at twilight**, the waxing crescent Moon lies 4 degrees to the upper right of Jupiter. Also worth noting is the discreet presence of the Pleiades cluster, a dozen or so degrees above this remarkable duo.

### Mercury in the evening sky

As the planet closest to the Sun, **Mercury** has brief periods of visibility: It is only ever observable for a few weeks at a time, before sunrise or just after sunset.

As spring begins, Mercury is in the midst of **an excellent appearance in the evening sky**. Until early April, you'll be able to spot the tiny planet very low on the western horizon, about 45 minutes after sunset. Mercury reaches its greatest angular dis-

tance from the Sun on March 24, about 19 degrees east of our daytime star. However, its brightness fades from one evening to the next, and it becomes harder to spot in the twilight glow after April 1.

The tiny planet passes between Earth and the Sun (inferior conjunction) on April 11, then reappears in the dawn sky, where it makes a very poor apparition from May 1 to June 1. It will be barely visible very low on the eastern horizon, 30 minutes before sunrise: Your best chances of catching a glimpse will be around May 21.

### Mars and Saturn meet at dawn

Since its passage behind the Sun last December, **Mars** becomes easier to spot at dawn this spring. At the start of the season, look for the Red Planet low on the east-southeastern horizon, a half-hour before sunrise. But you'll see that it has company in this section of sky: **Saturn**, which also reached solar conjunction in February, emerges at dawn in early April. The ringed planet can be found a little lower and to the left of Mars. Both planets are of similar brightness and rather faint at the moment, and you may need binoculars to find them in an already bright sky.

**On April 6 at dawn**, 30 minutes before sunrise, see if you can spot the very thin waning Moon hanging 2 degrees below

Saturn and 4 degrees to the lower left of Mars.

As Mars dashes eastward through the constellations, the Red Planet catches up with Saturn in just a few days: **On the morning of April 10**, Saturn and Mars are only half a degree apart, still very low in the east-southeast, 30 minutes before sunrise.

As the weeks go by, note how the two planets pull away from each other. They are also moving further away from the Sun and becoming easier to see against an increasingly darker sky. In early May, the two planets can be found shining very low on the eastern horizon, one hour before daybreak. In June, they are visible well before dawn. **On the morning of May 5**, the thin waning Moon hovers 4 degrees to the lower left of Mars. The waning crescent Moon again approaches the Red Planet **on the mornings of June 2 and 3**.

### Venus hidden behind the Sun

**Venus** is the only planet not visible at all this spring. After being a dazzling Morning Star since late summer 2023, it sank back into the glow of dawn in mid-March. Venus passes behind the Sun (superior conjunction) on June 4 and will gradually reappear in the evening sky this summer.

*Clear skies!*

Research and text: **Marc Jobin**

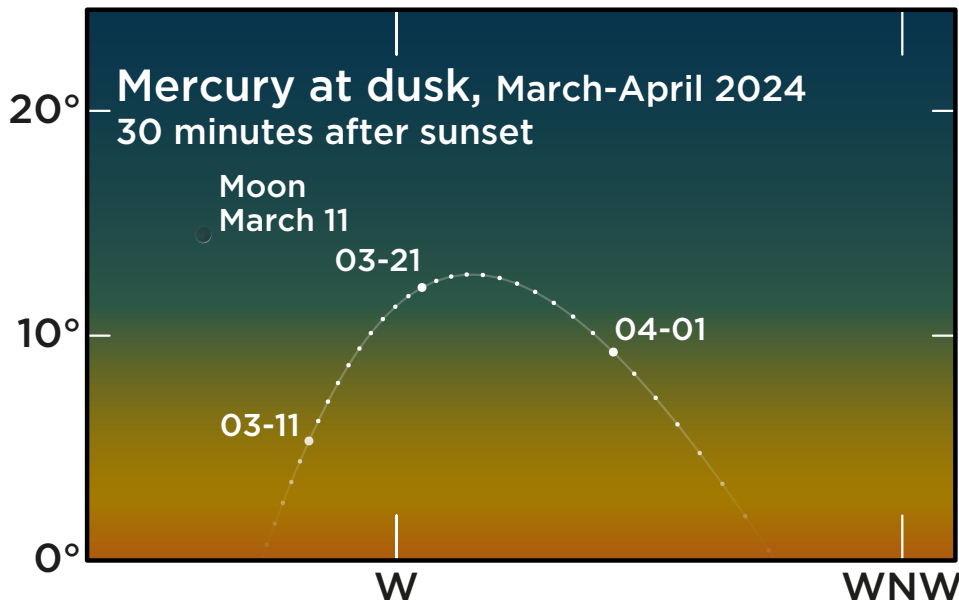
### SEASONAL MILESTONES

The **spring equinox** occurs on March 19, 2024 at 11:06 p.m. EDT, and the **summer solstice** is due on June 20 at 4:51 p.m. Astronomical spring will last precisely 92 days 17 hours and 34 minutes

### PHASES OF THE MOON

(Eastern Daylight Time)

<b>New moon</b>	<b>First quarter</b>
March 10 at 5:00	March 17 at 0:11
April 8 at 14:21	April 15 at 15:13
May 7 at 23:22	May 15 at 7:48
June 6 at 8:38	June 14 at 1:18
<b>Full moon</b>	<b>Last quarter</b>
March 25 at 3:00	April 1 at 23:15
April 23 at 19:49	May 1 at 7:27
May 23 at 9:53	May 30 at 13:13
June 21 at 21:08	June 28 at 17:53



# Don't miss the total solar eclipse on April 8, 2024!

The most eagerly awaited astronomical event of the last 30 years in Quebec is about to take place: The total solar eclipse on April 8, 2024. There are many websites dedicated to the phenomenon, such as [espacepourlavie.ca/en/eclipse2024](http://espacepourlavie.ca/en/eclipse2024), where you can get the full details. There are, however, a few key points worth highlighting.

### Geographic challenges

In Quebec, this eclipse presents a number of geographic and meteorological challenges. The greater Montreal area, with its 4 million inhabitants, will be literally cut in two by the northern limit of the path of totality: Laval, the North Shore and the east end of the island of Montreal, for example, are completely outside the zone of total eclipse. If this applies to you, for goodness' sake, find a way to move to the "right" side of this boundary, INSIDE the path of totality! If you don't, you'll only see a partial eclipse of the Sun and will miss the highlight of the show: A 99.99% partial eclipse may be interesting, but it's in NO WAY equivalent to 99.99% of the experience of a total eclipse—far from it! It would be a shame to deprive yourself of such a glorious phenomenon, when it's happening only a few kilometres away. In the words of a seasoned eclipse chaser, "It's well worth the effort. You can thank me later!"

### Weather

The precise time of the eclipse's key moments and its duration for each location where the event is visible can be calculated in advance. It's extremely useful for knowing where to go, or for planning gathering spots for the general public, such as Parc Jean-Drapeau, near the Biosphère. However, the uncertain early April weather in Quebec may require you to be flexible. Mobility will be your trump card: Monitor the weather forecasts for astronomical observations (cloud cover patterns, sky transparency) over the preceding days, and with a few hours' notice, don't hesitate to change locations to find a site where conditions at the time of the eclipse appear to be more favourable.



### Safety

Lastly, but perhaps most importantly, is safety. The only safe way to gaze directly at the Sun and avoid damaging your eyesight, whether during an eclipse or not, is by using proven techniques. During the partial phases of a solar eclipse, you'll need filters approved for direct Sun viewing (the famous "eclipse glasses") or specialized filters **placed over the lens** of your instrument (binoculars, telescope, telephoto

lens). The evolution of the eclipse can also be tracked using a variety of projection techniques, such as with a thin cardboard in which you poke a series of pinholes that trace a shape, design or personalized message. Filters are not necessary **during totality**, but only during this short period! In fact, you **should** remove them to be able to admire the phenomenon in all its splendour. Then, put the filters back in place once the bright photosphere begins to reappear. Check out [espacepourlavie.ca/en/eclipse2024](http://espacepourlavie.ca/en/eclipse2024) for suggestions on how to safely observe the Sun.

The total solar eclipse on April 8 will be the first of its kind to grace the skies of Quebec since July 10, 1972 (North Shore and Gaspé Peninsula), and it won't happen again until May 1, 2079 (Anticosti and lower North Shore) and then May 3, 2106 (Charlevoix, Bas-Saint-Laurent, Gaspé Peninsula)! Don't miss this unique opportunity to witness the most amazing natural phenomenon from your own backyard, without having to spend a small fortune or cross oceans and continents.

*Enjoy the eclipse on April 8!*

