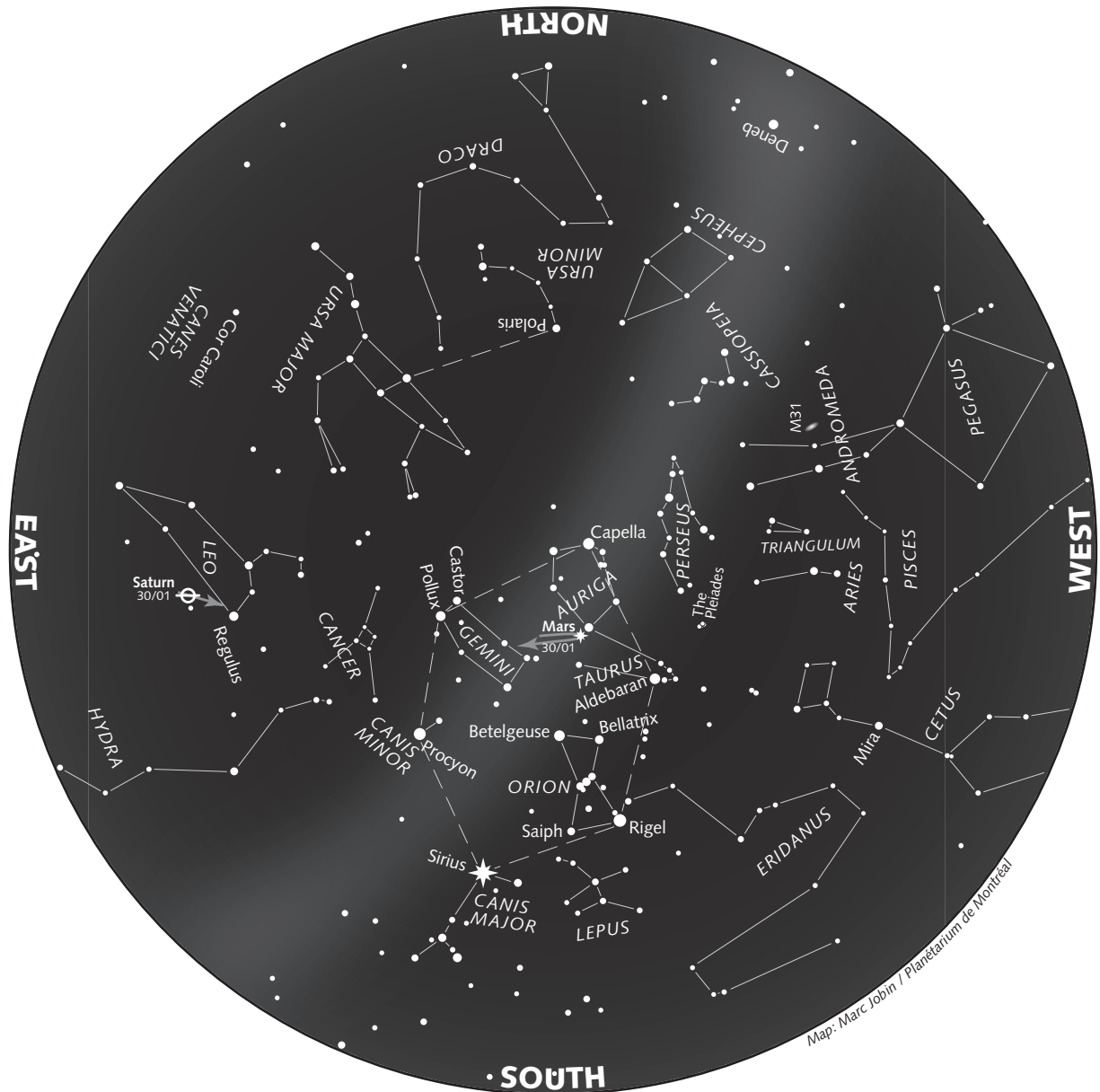


The Starry Sky — Winter 2007-08



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.

Visit our Website: www.planetarium.montreal.qc.ca

This Star Map is Accurate on...

(Eastern Standard Time)

- December 21 at midnight
- January 6 at 11 p.m.
- January 21 at 10 p.m.
- February 6 at 9 p.m.
- February 21 at 8 p.m.
- March 6 at 7 p.m.

The Sky This Winter

Mars and Saturn star in the evening sky while Venus and Jupiter become visible at the end of the night. Mercury first appears at dusk and then at dawn later on in the season.

Mars: Nice Christmas present!

Winter begins on a spectacular note: Mars and the full Moon rise together at sunset on **December 23**. The Moon gets even closer to Mars as the evening wears on; at 21:00, it is only a quarter of a degree from the red planet.

Mars lies in opposition in Gemini on December 24. At first brighter than the star Sirius, its brightness decreases over the winter. It is as bright as Sirius when it enters Taurus the Bull on January 1. At winter's end, it will be 6 times dimmer than it was at the beginning of the season.

Mars and the Moon get on well together with very close encounters early on the evening of January 19, early on the morning of February 16 and during the night of March 14 to 15.

Saturn: the year of the Lion

Saturn begins its retrograde motion on the Winter Solstice and winds up 3 degrees from the star Regulus in Leo the Lion at the end of the season. In the New Year, Saturn rises at around 21:00 and

then earlier and earlier as winter wears on. **The ringed planet is in opposition on February 24** and will be visible all night. It will also be the best time to observe its beautiful rings in a telescope.

The Moon forms a triangle with Saturn and Regulus during the nights of December 27 to 28, January 24 to 25, February 20 to 21, and March 19 to 20.

Venus meets Jupiter and Mercury

Venus is the Morning Star, easy to spot before dawn. However, it gradually gets closer to the Sun throughout the winter and appears lower and lower above the southeastern horizon. Still, its spectacular conjunction with Jupiter from January 30 to February 3 is a must see: the two brightest planets will be nestled close to one another in the coloured glow of the morning sky, around 6:30. **The peak will be on the morning of February 1** when they will be only half a degree apart. A clear eastern horizon is essential and you should also hurry: the Sun rises only 45 minutes later. On February 4, a thin crescent Moon will add to this beautiful sight.

Venus and Mercury begin a long minuet on February 23. The two planets will remain less than 3 degrees from one another for a few weeks. Use binoculars to spot Mercury near Venus: the two are barely above the southeast horizon at dawn, about 30 minutes before sunrise.

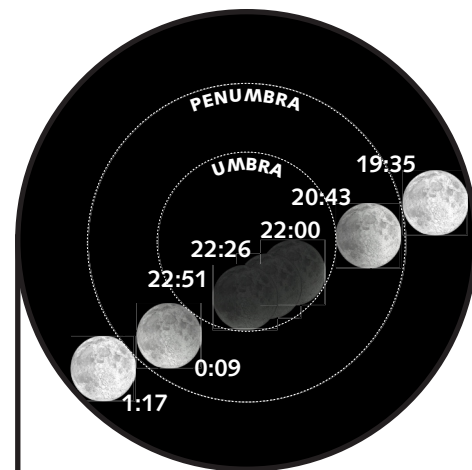
Jupiter: return of the giant

The giant planet begins winter hidden in the Sun's glare. Jupiter reappears at dawn in the New Year toward the southeast. It then becomes visible earlier and earlier throughout the season. In early spring, Jupiter will rise about 3 hours before the Sun. Sole accomplishment for Jupiter: its spectacular conjunction with Venus on the morning of February 1 (See Venus).

A crescent Moon will be visible near Jupiter on January 6, February 4, and March 2 and 3.

Two visits from Mercury

Mercury will appear about 30 minutes after sunset near the southwestern horizon during the second week of January. On January 9, a thin crescent Moon will be to the left of Mercury. The little planet is easier to spot in mid-January before it disappears in the glare of twilight at



Total eclipse of the moon

A total lunar eclipse, the first visible from beginning to end in Quebec since October 28, 2004, will take place on **the evening of February 20, 2008**. The Moon will enter the Earth's shadow at 20:43 EST. You can follow its progress with a telescope over the next 77 minutes as it gradually sweeps over the lunar surface. A fascinating sight!

The beautiful show of totality will begin around 22:00 when the Moon will be completely engulfed in the Earth's shadow, filtered by the Earth's atmosphere, will shine faintly on the surface of the Moon, giving it a more or less dim red or orange glow. The exact colour of the Moon varies from one eclipse to another and always remains a nice surprise...

Maximum eclipse will occur at 22:26 and totality will end at 22:51. After totality, the partial phases occur in reverse order until 00:09.

As a bonus, this eclipse takes place in the head of Leo the Lion, very near the star Regulus and about 5 degrees from Saturn. Binoculars will bring out the entire scene for your viewing pleasure.

month's end. It reappears in the morning sky near Venus in February (See Venus).

Happy observing!

Research and text:
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Seasonal Milestones

The **winter solstice** will occur on December 22 at 1:08 EST and the **spring equinox** will arrive on March 20 at 1:49 EDT. Winter 2007-2008 will last exactly 88 days 23 hours 41 minutes.

On January 2, at 18:00 EST, the Earth will be at **perihelion**, 147,096,448 km from the Sun.

The switch to **Eastern Daylight Time** takes place in the early morning hours of Sunday, March 9: Clocks move forward one hour.

Phases of the Moon

(Eastern Standard Time, except * = Eastern Daylight Time)

First quarter	Full moon
Dec. 17 at 5:18	Dec. 23 at 20:16
Jan. 15 at 14:46	Jan. 22 at 8:35
Feb. 13 at 22:33	Feb. 20 at 22:30
March 14 at 6:46*	March 21 at 14:40*
Last quarter	New moon
Dec. 31 at 2:51	Jan. 8 at 6:37
Jan. 30 at 0:03	Feb. 6 at 22:44
Feb. 28 at 21:18	March 7 at 12:14
March 29 at 17:47*	April 5 at 23:55*