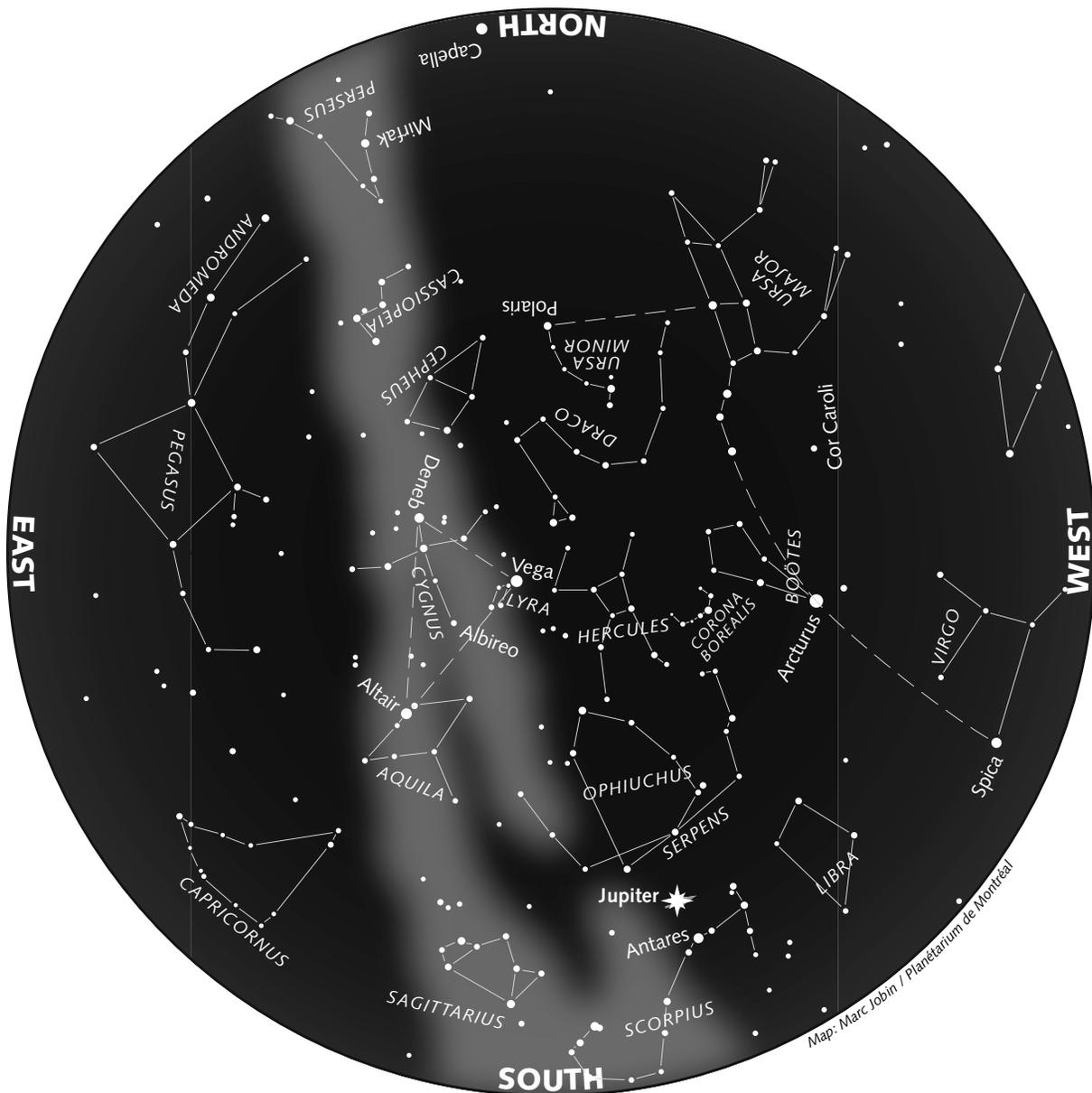


The Starry Sky — Summer 2007



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 Daylight Time)

June 21 at 1 a.m.

July 6 at midnight

July 21 at 11 p.m.

August 6 at 10 p.m.

August 21 at 9 p.m.

September 6 at 8 p.m.

The Sky This Summer

Venus stages a delightful conjunction with Saturn, and dominates the sky with its brilliance. Meanwhile, Mars puts on quite a show while Jupiter spends the summer rambling in the south.

Brilliant Venus

Venus remains a visual treat over the coming months. The season's first showstopper is **on the evening of June 30**, when Venus and Saturn stage a magnificent conjunction. Look for Saturn about $\frac{2}{3}$ of a degree above Venus! Use a telescope at low power to see both planets in the same field of view. Be sure not to miss it!

Throughout the first half of July, brilliant Venus plays tag with Saturn and Regulus, the brightest star in Leo. **On July 12 and 13**, the planet is less than 2° from Regulus! Watch for the changing triangular shapes the trio forms as Venus moves eastward in the sky.

The Evening Star finally disappears in the Sun's glare at the end of July, and re-emerges in the east, as the Morning Star, around the end of August. A thin lunar crescent appears to the upper left of Venus on the evening of July 17, and again at dawn, on the morning of September 8.

Mars puts on a show

As summer begins, Mars can be found rising in the east, at around 02:00, among the stars of Pisces. But the Red

Planet is on the move: It visits several constellations as the season progresses, and rises earlier as well. At the end of June it enters Aries and rises at about 01:30; by the end of July Mars is in Taurus, and rises an hour earlier.

During the early morning hours of August 7, Mars takes part in a spectacular three-way rendezvous with the Pleiades and the waning crescent Moon. Look above the eastern horizon, starting around 01:30, to see the celestial trio form a tight triangle: The show will continue into the pre-dawn hours, and is augmented by the "V"-shaped Hyades, which appear right below. This is arguably the most stunning conjunction of the year — absolutely splendid in binoculars!

Throughout mid-August, Mars skirts the region of sky between the Pleiades and Hyades, and appears above the red giant star, Aldebaran. The Moon appears near Mars during the early morning hours of July 9, August 7 and September 4.

Jupiter rambles in the South

Jupiter remains low in the south, and is best observed when it culminates. Since this occurs earlier and earlier as summer progresses, the planet will eventually be lost in the glow of twilight. As the season starts, the giant planet culminates around 23:30; but by the end of July it peaks at about 21:00 — a scant 30 minutes after sunset.

Since early spring, Jupiter has been in retrograde, moving westward toward Antares, the brightest star in Scorpius. But on August 7, it resumes its direct eastward motion among the stars. The waxing gibbous Moon appears below Jupiter on the evenings of June 27 & 28, July 24 & 25, and again on August 21. Look for a waxing lunar crescent below the giant planet on the evenings of September 17 & 18.

Saturn and its rings

Saturn is always impressive in a small telescope. But on the last evening of June, the ringed planet offers an even more remarkable show: It will be per-

A Great Year for the Perseids

On August 13, at 01:00, the annual Perseid meteor shower will reach its peak. However, the best nights to observe the famed shooting stars will be on August 11, 12 and 13. The good news is: there will be a New Moon on the 12, and no lunar glare to overwhelm the meteors, as in the past several years. This will be an ideal time to observe the Perseids provided there are no clouds — so don't miss this opportunity! Sole disadvantage: August 13 is a Monday...

No special equipment is needed to observe the meteors — though a dark sky is preferred. Recline on a lawn chair or a thick blanket (be sure to dress warmly) and scan the sky from the zenith toward the northeast. Under peak conditions you should be able to see at least one meteor per minute. This year, there might be a slight increase in activity 5 or 6 hours before the predicted maximum: the result of recent dust left in the wake of comet, 109P/Swift-Tuttle.

ched directly above Venus in a spectacular conjunction, not to be missed! (See **Venus** for details.) Although Venus is bright enough to see in twilight, Saturn is another story: being fainter, it will only become visible around 21:30. Look for the duo above the western horizon, but don't delay: both planets set at about 23:00.

By mid-August, Saturn will disappear in the Sun's glare and will re-emerge, early in September, above the eastern horizon at dawn. A thin crescent Moon appears to the left of Saturn on the evening of July 16, and just below the ringed planet on the morning of September 10.

Happy observing!

Research and text:
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Seasonal Milestones

The **summer solstice** arrives on June 21 at 14h06 EDT and the **autumn equinox** will occur on September 23 at 5h51 EDT. Summer 2007 will last exactly 93d 15h 45m, the longest season of the year.

Earth reaches **aphelion**, its farthest point from the Sun, on July 6 at 20:00. The Earth-Sun distance will then be 152,097,053 kilometres.

Phases of the Moon

(Eastern Daylight Time)

Last quarter	New moon
June 8 at 7:43	June 14 at 23:13
July 7 at 12:54	July 14 at 8:04
August 5 at 17:20	August 12 at 19:02
Sept. 3 at 22:32	Sept. 11 at 8:44
First quarter	Full moon
June 22 at 9:15	June 30 at 9:49
July 22 at 2:29	July 29 at 20:48
August 20 at 19:54	August 28 at 6:35
Sept. 19 at 12:48	Sept. 26 at 15:45