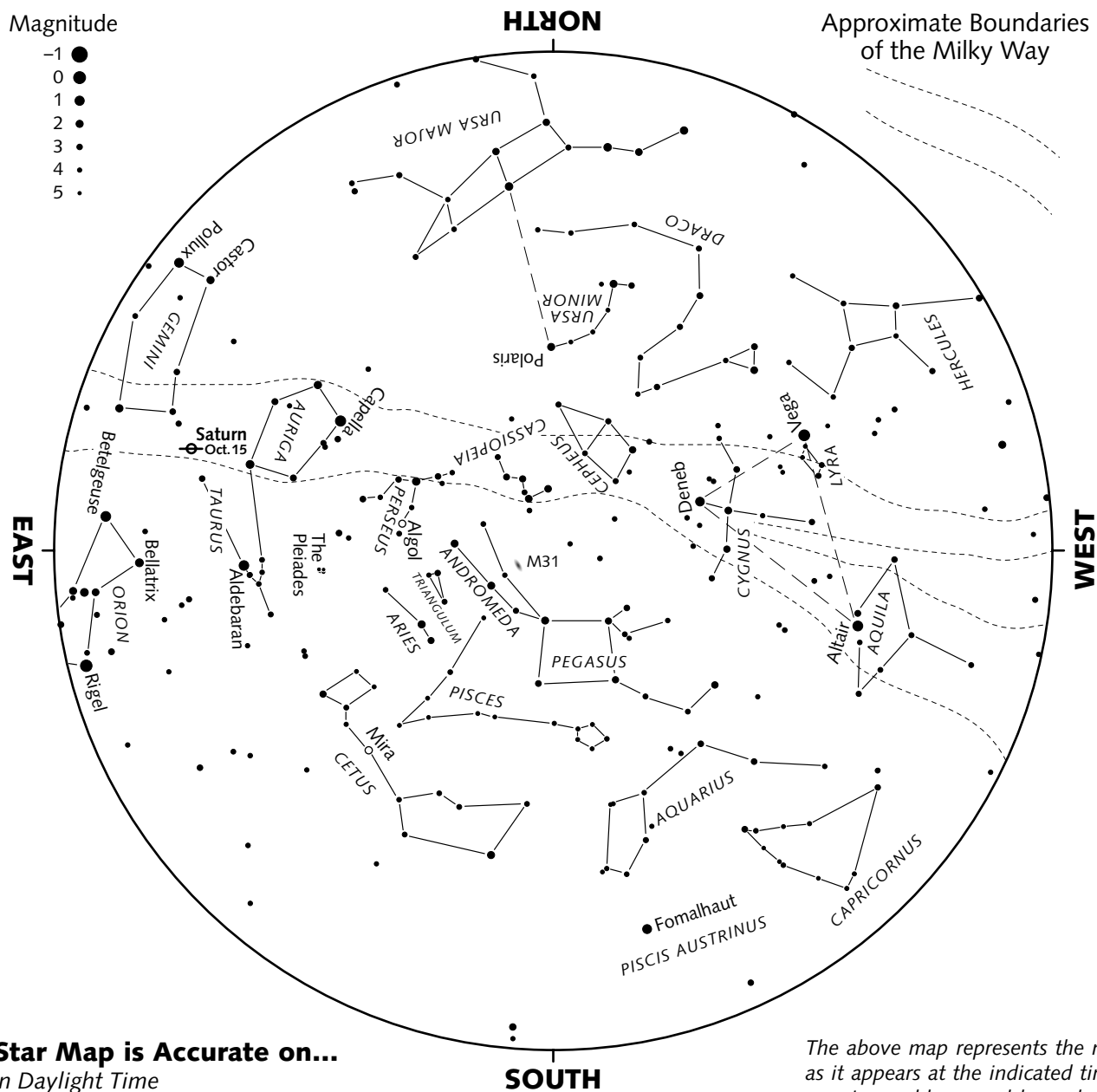


The Starry Sky — Autumn 2002



Marc Jobin / Planétarium de Montréal

This Star Map is Accurate on...

(Eastern Daylight Time
except where mentioned otherwise)

September 21 at 1 a.m.

October 6 at midnight

October 21 at 11 p.m.

November 6 at 9 p.m. EST

November 21 at 8 p.m. EST

December 6 at 7 p.m. EST

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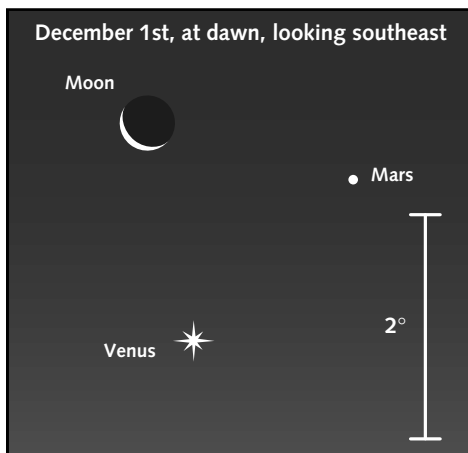
The above map represents the night sky as it appears at the indicated times, and remains usable several hours before and after. Hold the map up to the sky in front of you and turn it so the direction you are facing appears at the bottom. By comparing the map with the sky you can acquaint yourself with the constellations, an ancient legacy of Greek mythology.

The Sky This Autumn...

As September ends, Venus disappears in the glow of twilight, leaving the autumn evenings devoid of planets. But Saturn and Jupiter soon fill the void: A few hours' wait, and these captivating, giant worlds grace the sky.

Venus moves from evening to morning

At the end of September, Venus is very low on the western horizon after sunset and becomes increasingly difficult to see despite its great brilliance. A few days later, the radiant planet is completely enveloped by twilight and disappears from view. Yet the gap between the Sun and Venus remains considerable: On October 31, the gap finally closes as Venus passes between the Earth and Sun. Early in November, Venus reappears low in the east-southeast at dawn, and rapidly gains altitude over the following weeks. Over the coming months, it will complement the sunrise as the "morning star."



A sight not to be missed: **On the morning of December 1, around 6:00**, a thin lunar crescent appears two degrees to the upper left of Venus. Mars, which is much less brilliant, will be to the upper right, completing a resplendent celestial triangle (see figure above). Binoculars will certainly enhance this conjunction — the nicest one this Fall. For the next few weeks,

both Venus and Mars will remain in close proximity to one another.

Enter Saturn...

The ringed planet appears in the northeast during mid-evening at the beginning of fall, and rises earlier and earlier as the season progresses. As Saturn reaches opposition on December 17, it rises at sunset and attains its highest point in the sky around midnight. This is the ideal period to observe the ringed world. Through even a small telescope, Saturn's magnificent rings are breathtaking: More so this year, since their angle of tilt is nearly maximum.

Saturn is positioned between the feet of Gemini and the southern-most horn of Taurus. For the next few months, the planet is in retrograde movement — that is, it moves westward against the backdrop of stars — and gradually approaches the star marking the tip of Taurus's horn. From week to week, you can witness Saturn's movement using this star as a reference.

Finally, the Moon appears near Saturn on the evenings of September 28, October 25, November 21 and December 18 & 19.

...and Jupiter

Jupiter is east of Saturn and is visible late at night this fall; however, it will gradually appear earlier and earlier. For example, in October, the giant planet rises at about 2:00 in the morning, but by November it rises before midnight. This winter Jupiter is exceptionally well placed for observing. But now is a good time to begin observing this magnificent world: Its atmospheric cloud bands and four brightest Moons are easy to see though any telescope.

Jupiter is a very bright planet and is easy to spot, especially against the faint background of Cancer, between Gemini and Leo.

Like Saturn, Jupiter also receives a monthly lunar visit — early on the mornings of October 2 & 30, and November 26, and again on the night of December 22 to 23.

Happy observing!

Research, text, and illustrations:
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Translation: **Louie Bernstein**

Phases of the Moon

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

New moon	First quarter	Full moon	Last quarter
Sept. 6 at 23:10*	Sept. 13 at 14:08*	Sept. 21 at 9:59*	Sept. 29 at 13:03*
Oct. 6 at 7:18*	Oct. 13 at 1:33*	Oct. 21 at 3:20*	Oct. 29 at 0:28
Nov. 4 at 15:34	Nov. 11 at 15:52	Nov. 19 at 20:34	Nov. 27 at 10:46
Dec. 4 at 2:34	Dec. 11 at 10:49	Dec. 19 at 14:10	Dec. 26 at 19:31

Noteworthy Events

The **autumn equinox** occurs on September 23 at 00:55 EDT; and the **winter solstice** will take place on December 21 at 20:14 EST. In 2002, the autumn season lasts 89d 20h 19min.

Eastern standard time begins on the night of Sunday, October 27: Clocks move back one hour.