

STAR TRAK for December

December 1 2011

Venus will be at its dazzling brightest as December begins, appearing in the southwestern sky after sunset. This beautiful "evening star" will set two hours after the sun on Dec. 1 and an hour later at month's end.

Jupiter will come into view almost halfway up the southeastern [sky](#) as evening falls. It will be highest in the south around 8 p.m. local time and set in the early morning hours.

Mars will rise above the eastern horizon shortly before midnight on Dec. 1 and an hour earlier by month's end. The red-orange planet will contrast sharply with the rather colorless stars around it. The best telescopic views of Mars will be when it is highest in the south before dawn.

Saturn will rise with the bright white star Spica to its right (south) a few hours after midnight in December. The planet's steady yellow glow will be slightly brighter than the twinkling star. The pair will be halfway up the southeastern sky as [morning twilight](#) begins. Saturn's rings will be tilted 15 degrees to our line of sight by the end of the month, their maximum for 2011.

Mercury will pass between Earth and the sun on Dec. 4 and then quickly climb into the morning sky. By midmonth it will be 6 degrees above the southeastern horizon an hour before sunrise.

Meteor showers

The annual [Geminid meteor shower](#), which will reach its maximum on

the night of Dec. 13-14, usually offers the best show of the year, outperforming even the [Perseid shower](#) of August. This year, unfortunately, the [Geminids](#) will peak when the moon is just four days past full and in the same part of the sky as the shower's radiant, the point from which the [meteors](#) will appear to come. The bright moonlight will wash out many of the meteors that would otherwise be visible. In a clear sky with no interference from moonlight, observers might see more than 100 meteors per hour. The nights before and after the peak should also provide good viewing opportunities.

These "shooting stars" will seem to come from a point near the [bright stars](#) Castor and Pollux in the constellation Gemini the Twins, which gives the shower its name. The radiant will be well above the eastern horizon a few hours after sundown and will remain high in the sky for the rest of the night. The higher the radiant is above the horizon, the more meteors there will be. Try facing southeast if you have a clear view in that direction, though meteors will be visible in all parts of the sky. For details about the Geminid shower, visit www.amsmeteors.org/showers.html#geminids.

The Ursid meteor shower will peak on the night of Dec. 22-23, with no interference from the new moon. The Ursid radiant is near the bright star Polaris, the North Star, which is above the northern horizon and visible all night. The usual rate is about 10 meteors per hour.

Lunar eclipse

The moon will pass through Earth's shadow on the night of Dec. 10-11, producing a total lunar eclipse. Weather permitting, people across western North America, Australia and Asia will be able to see totality. For those in the Midwestern United States, the moon will set as the eclipse is beginning, and observers east of a line from Ohio to Mississippi won't see any of the eclipse. Details and a map are available

at www.skyandtelescope.com/observ...ights/112572744.html.

Solstice

The sun will be farthest south in Earth's sky at 12:30 a.m. EST (5:30 Universal Time) Dec. 22, marking the start of winter in the Northern Hemisphere and summer in the Southern Hemisphere. For the next six months in the Northern Hemisphere, the days will be getting longer.

Moon phases

The moon will be at first quarter on Dec. 2, full on Dec. 10, at third quarter on Dec. 17 and new on Dec. 24.

Provided by Indiana University

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