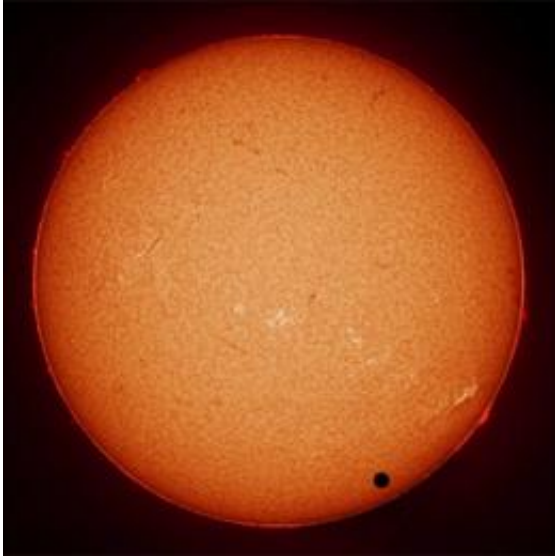


STAR TRAK: June 2012

June 4 2012



In this photo from NASA, Venus can be seen in the lower-right corner as a dark circle moving across the face of the sun.

(Phys.org) -- The last transit of the planet Venus until 2117 will happen June 5 in the Western Hemisphere (June 6 in the Eastern Hemisphere). Venus will cross the face of the sun, appearing as a black dot on the sun's bright disk.

The transit will last more than six hours, but in most of North America the event will be cut short by sunset, as [this map shows](#). A [live webcast](#) of the transit from Mauna Kea Observatories will begin at 5:45 p.m. EST.

The Indiana University Department of Astronomy will have telescopes set up to allow the public to view the transit of Venus safely.

Mercury will have a fine evening appearance from the middle of June to early July. For observers at mid-northern latitudes, the planet will be highest above the west-northwestern horizon during the last week of June, setting more than an hour after the sun. Nearby to the right (north) will be the bright stars Castor and Pollux in the [constellation Gemini](#) the Twins.

As the long evening twilight fades, look about a third of the way up the southwestern sky to find Mars. The planet's red-orange color will make it easy to identify.

To the upper left (south) of [Mars](#) will be yellow Saturn, similar in brightness to its ruddy companion. The gap between the two planets will shrink during June. Saturn will be a fine object for viewing with a telescope until midnight, when it will be getting closer to the western horizon. Its rings will tilt 12 degrees to our line of sight -- the minimum tilt for this year -- but they will begin to open again by month's end. Saturn's largest moon, Titan, will be due south of the planet on June 5 and 21 and due north on June 13 and 29.

Jupiter will rise in the east-northeast only about 45 minutes before the sun at the beginning of June but more than two hours earlier by month's end. Above it will be the Pleiades star cluster, and the bright orange star Aldebaran will appear below it near the end of the month.

Around midmonth, Venus will appear in the morning sky after its transit of the sun. On June 9 it will rise just 15 minutes before the sun and will probably be visible only with binoculars. But by month's end it will rise almost two hours earlier, and the gap between Venus and Jupiter will be shrinking rapidly.

Meteor shower

The [Bootid meteor shower](#) will peak on the night of June 27, when Earth will pass through part of the debris trail of the comet that caused the meteor shower. Meteors will appear to be coming from a point in the constellation Bootes (pronounced bo-OH-teez) the Herdsman, which is visible in the northern sky nearly all night and contains the bright orange star Arcturus. The curved handle of the Big Dipper will serve as a conspicuous marker.

Solstice

The sun will reach the June solstice on June 20 at 7:09 p.m. EDT (23:09 Universal Time), marking the start of summer in the Northern Hemisphere and winter in the Southern Hemisphere. For the next six months in the Northern Hemisphere, the days will be getting shorter.

The word "solstice" is derived from two Latin words that mean "cause the sun to stand still." This is because the summer sun climbs to a higher point in the southern sky each day until the solstice. On the day of the solstice it appears to arrive at about the same maximum height above the horizon as the day before, and each day afterward its maximum point is lower, dropping back toward its lowest point at the winter solstice. In this sense, the [sun](#) "stands still" at the peak of its journey across the summer sky before it starts downward again toward the southern horizon.

Moon phases

The moon will be full on June 4, at third quarter on June 11, new on June 19 and at first quarter on June 26.

Provided by Indiana University

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