

Factfile on Venus

June 3 2012

Following is a factfile on Venus, which will align with Earth and the Sun from the evening of next Tuesday, a "transit" that will next occur 105 years from now.

NAME: Dubbed after the Romans' Goddess of Love. Also known as the Evening Star or Morning Star, thanks to the bright light it reflects from the Sun early and late in the day. Virtually all the features on Venus are named after women of legend.

ORBIT: Second planet from the Sun. No moon. Orbits at a mean distance from the Sun of 108.2 million kilometers (67.2 million miles). The Venusian "year" is 224 [Earth](#) days, while its rotational period (the time it takes to complete one revolution on its axis) is 243 days. In other words, its year is longer than its day.

DIAMETER: 12,100 kms (7,520 miles).

GRAVITY: Nine-tenths that of Earth. Atmospheric pressure is 90 times that of Earth's at the surface.

TOPOGRAPHY: No oceans, no sign of water and a surface that is apparently more arid than the driest desert on Earth. Landscape comprises 70 percent rolling uplands, 10 percent highlands and 20 percent lowland plains. Few signs of asteroid impacts, mainly because [space rocks](#) burn up in the dense atmosphere before they can reach the surface.

CLIMATE: Mean surface temperature of 457 C (855 F) -- hot enough to melt lead and even hotter than Mercury, the closest planet to the Sun. Atmosphere is 96 percent carbon dioxide. Venus is blanketed by thick yellowish clouds comprising sulphur and sulphuric acid droplets, driven by hurricane-force winds.

ENIGMAS: Venus rotates in the opposite direction to other planets: there, Sun rises in the West and sets in the East. One theory is that in its infancy it revolved in the same direction as Earth, but was hit by a huge piece of [space debris](#), which caused it to spin the other way. Another puzzle is why Venus is so hot. It may have been caused by a runaway greenhouse effect, something that is relevant to climate change on Earth.

[VENUS TRANSIT:](#) One of the rarest predictable viewing phenomena, in which Venus slides between Earth and the [Sun](#), appearing through the lens as a black dot traversing the solar face.

Only six transits have ever been observed (in 1639, 1761, 1769, 1874, 1882 and 2004) because the transit is invisible without magnification. The next will not take place until 2117.

Further information and tips for safe viewing:

- www.transit-of-venus.org.uk
- venustransit.nasa.gov/transitofvenus/
- eclipse.gsfc.nasa.gov/OH/transit12.html
- blogs.esa.int/venustransit/
- [www.ras.org.uk/education-and-c ... ers/for-everyone/125](http://www.ras.org.uk/education-and-c...ers/for-everyone/125)

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