

A bad day on Venus gets even worse

February 29 2012



Venus. Photo courtesy of NASA

Contrary to its alluring name, Venus is the planet from hell, with an atmosphere so hot, toxic and heavy that any visitor would risk being simultaneously melted, suffocated and crushed.

But not just that: the second planet from the Sun turns on its axis so slowly that, for any survivor, a Venusian day would seem interminable, for it is the equivalent of 243 days on Earth.

To make things worse, a day on Venus is getting even longer, French astronomers have discovered.

A team from the [Paris Observatory](#) analysed data from a [spectrometer](#) aboard a European orbiter, the Venus Express.

Called VIRTIS, the gadget measures infrared and [visible light](#) and is used to scan the planet's surface beneath the thick, roiling atmosphere.

The astronomers were stunned when they checked landmarks against the last mapping of Venus, carried out between 1990 and 1994 by the US probe Magellan.

At a given point in the Venusian day, landmarks were a full 20 kilometers (12 miles) behind where they should have been.

The team, publishing in the journal *Icarus*, say they have been over the observations again and again.

"After eliminating possible sources of error, we believe that the duration of the Venusian day must have changed over the 16 years," they said in a press release.

Their calculation is that an extra six and a half terrestrial minutes have been added to the Venusian day during this time.

"On the astronomical scale, this is a major change," said investigator Pierre Drossart.

The astronomers' [hypothesis](#) is that friction by Venus' atmosphere is braking the movement of the terrain below.

That sounds bizarre until one realises that the atmosphere is 100 kms (60 miles) thick, with extremely [dense clouds](#) of 96 percent [carbon dioxide](#), driven by superwinds reaching some 350 kilometres (210 miles) per hour.

Atmospheric pressure at the surface is 92 times that of Earth -- the equivalent of being more than 900 metres (3,000 feet) below the ocean.

"A braking effect from the atmosphere also occurs erratically on Earth, but the discrepancy is only a matter of a few tenths of a second and it is imperceptible," Drossart told AFP.

So will Venus eventually stop spinning -- or even go into reverse rotation?

"It's difficult to say, given that we only have two points of measurement," said Drossart.

"But theoretical models suggest that this is probably just a cyclical phenomenon. If the atmosphere speeds up, the planet slows. Then the energy goes into reverse, in a pendulum effect."

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Citation: A bad day on Venus gets even worse (2012, February 29) retrieved 26 April 2024 from <https://phys.org/news/2012-02-bad-day-venus-worse.html>

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