

Venus Express equipment test successful

November 28 2005



A recent check of the VIRTIS imaging spectrometer during the Venus Express commissioning phase has allowed its first remote-sensing data to be acquired, using Earth and the Moon as a reference.

Image: Just two weeks after launch, during the commissioning phase of Venus Express, the VIRTIS imaging spectrometer has been able to acquire its first remote-sensing data. This image, acquired on 23 November, shows Earth at about 3.5 million km as seen by VIRTIS-M visible channel in true

colour format. The angular separation is about 1.6 degrees. The phase angle is 65 degrees, which means that 65% of Earth's disk is illuminated by the Sun. Credits: ESA/VIRTIS team

After a successful in-flight checkout of the spacecraft's systems in the first ten days of flight, the ESOC operations team is now verifying the health and functioning of all the Venus Express instruments. These observations were made as part of this checkout.

Of course the very large distance that Venus Express has travelled since its launch makes these images of limited interest to the general public, but to the scientific team it confirms the excellent operation of their instrument.

This gives them confidence of spectacular results when the spacecraft reaches Venus where similar measurements will be made hundreds times closer.

VIRTIS sees the Earth-Moon system

Only two weeks after the launch, VIRTIS, the Ultraviolet/Visible/Near-Infrared mapping spectrometer, has been able to make its first planetary observations, capturing the Earth-Moon system.

”The observations were made from 3.5 million kilometres away, with a phase angle of 65 degrees, meaning that 65% of Earth’s disk was illuminated by the Sun, providing observations of both the day and night sides of Earth,” explains Guisepppe Piccioni, one of the two Principal Investigators (PI).

These Earth observations will be used to test the instrument on a real planetary case, before Venus approach.

“A comparison of Venus spectra with Earth spectra with the same

instrument will also be of interest for textbook illustration of the comparison between the two planets,” explained Pierre Drossart, the other PI.

The Moon has also been observed, providing additional observations of particular interest for calibrating the instrument.

The VIRTIS instrument on Venus Express is a twin of the same instrument on Rosetta, and similar observations were sent back by Rosetta in March 2005, so comparisons of the two sets of observations will be very useful for calibration purposes.

The VIRTIS instrument is led jointly by INAF-IASF, Rome, Italy, and Observatoire de Paris, France.

Source: ESA

Citation: Venus Express equipment test successful (2005, November 28) retrieved 26 April 2024 from <https://phys.org/news/2005-11-venus-equipment-successful.html>

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