

Earth observations from VIRTIS on Venus Express

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The VIRTIS (Visible and InfraRed Spectral Imaging Spectrometer) instrument on board the ESA Venus Express mission has been orbiting around Venus since April 2006, providing from then on billion of spectra of our sister planet. An imaging spectrometer like VIRTIS is very suitable to study from an interdisciplinary point of view a planet in remote sensing, and it provides scientific results spanning from the surface up to the upper atmosphere. The flexibility of the VIRTIS instrument and of the Venus Express spacecraft and their teams, gave us the opportunity from time to time also to point off Venus toward other targets different than the main object of the mission, in particular back to the Earth.

A systematic pointing back to the Earth from Venus Express whenever was possible during the orbit, is providing a quite large data set of the Earth, consisting at today as many as more than 70 observations performed at different absolute time, phase angle and geographical coordinates, mostly in the full VIRTIS range, from 0.4 to 5.1 microns. This dataset is quite unique and it can provide a lot of information about our Earth and an Earth look-like planet in another solar system.

We report here the information about how the dataset has been obtained and related results from the preliminary analysis.