Geophysical Research Abstracts,
Vol. 10, EGU2008-A-08349, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-08349
EGU General Assembly 2008


# Observations by VIRTIS on Venus Express

**G. Piccioni** (1), P. Drossart (2) and the VIRTIS-Venus Express team
(1) IASF-INAF Rome, Italy, (2) LESIA Paris, France

After about two years since the orbit insertion, VIRTIS aboard the Venus Express spacecraft has addressed a significant amount of the planned scientific objectives, from the surface up to the lower thermosphere, in terms of mapping, composition, structure and dynamics. The VIRTIS instrument consists of two channels: VIRTIS-M, an imaging spectrometer with moderate spectral resolution in the range from 0.25um to 5um and VIRTIS-H, a high spectral resolution spectrometer in the range from 2 to 5um coaligned with the field of view of -M. The resolution of VIRTIS-M is 2nm from 0.25 to 1um and 10 nm from 1 to 5um. The resolution of VIRTIS-H is about 2nm. The atmosphere above the clouds is regularly observed both on day and night sides, in solar reflection and thermal emission in nadir geometry. Limb observations provide O2, CO2 and CO emissions, through nightglow and fluorescence observations. Spectroscopy of the 4-5 micron range gives access to the cloud structure in the 60-95 km altitude levels. The deeper atmospheric windows, limited by CO2 and H2O bands are accessible only in thermal emission on the night side. The sounded levels at 1.7 and 2.3 microns are limited respectively to 30-20 km altitude, while at shorter wavelengths (1.18, 1.10, 1.01, 0.9 and 0.85 microns), the hot surface of Venus is seen through the scattering clouds. A review of the main results achieved by VIRTIS is given in this talk with more emphasis on the dynamics and structure, while a more detailed description is demanded to the specific papers in the relevant field.