EPSC Abstracts,
Vol. 2, EPSC2007-A-00365, 2007
European Planetary Science Congress 2007

Highlights of the first year of the Venus Express observations

D.V. Titov (1), H. Svedhem(2), F.W. Taylor (3), S. Barabash (4), J.-L. Bertaux (5), P. Drossart (6), V. Formisano(7), B. Häusler (8), W. Markiewicz (1), M. Paetzold (9), G. Piccioni (10), T. Zhang (11), O. Witasse (2)

(1) MPS, Katlenburg-Lindau, Germany, (2) ESA/ESTEC, Noordwijk, The Netherlands,(3) Oxford University, (4) IRF, Kiruna, Sweden, (5) CNRS, Verrieres le Buisson, France, (6) Observatoire de Paris, Meudon, France, (7) IFSI-INAF, Rome, Italy, (8) University of Bundeswehr, München, Germany, (9) University zu Koeln, Germany, (10) IASF-INAF, Rome, Italy, (11) IWF, Graz, Austria

(titov@mps.mpg.de/ Phone: +49-5556-979-212)

In April 2007 the Venus Express mission completed its first year of observations. The mission successfully performs global investigation of the Venus atmosphere, the plasma environment, and some surface properties. Specific science goals include the study of (1) the atmospheric structure by infrared remote sensing and radio and solar occultation techniques; (2) the composition and chemistry by nadir and occultation spectroscopy, including observations of the Venus lower atmosphere on the night side; (3) the atmospheric dynamics by imaging apparent cloud motions at different wavelength; (4) the plasma environment and escape processes by measuring density and fluxes of energetic neutral atoms, ions, and electrons and magnetic field monitoring; (5) the surface investigations by means of bi-static radar sounding. While tackling these problems the mission takes advantage of the versatile spacecraft, the capable payload, the synergy between experiments in covering the main science themes, and flexible orbital operations that include nadir observations in pericentre, off-pericentre and apocentre mosaics, limb observations, solar, stellar and Earth occultation. The paper will present the highlights of the Venus Express observations in the first year of the mission.