SSEC/CIMSS
Seminar

ERIC VILLARD

Service d'Aeronomie/CNRS
(French Center for Scientific Research)
Verrières-le-Buisson, France

Study of the atmosphere of Venus with SPICAV on Venus Express

SPICAV is one of the seven instruments onboard the European Space Agency's Venus Express mission, in orbit around Venus since April 11, 2006. It is a spectrometer with three channels: the UV channel (110-320 nm), the visible/near-IR channel (0.65-1.7 microns) and the SOIR channel (2.32-4.25 microns). This wide spectral coverage, associated to a high spectral resolution for the SOIR channel and a high sensitivity for the UV channel, makes SPICAV an instrument particularly versatile, able to study the atmosphere of Venus from the surface up to the limits of the hydrogen corona at more than 40000 km, on the day side as well as on the night side.

After a brief description of Venus Express and SPICAV, its principle of operation and its scientific objectives, the characterization of the UV and visible/near-IR channels will be presented. In particular, the preparation and analysis of a number of measurements with the instrument, both on the ground and in flight, will be presented in support to the science data analysis.

In a second part, a description of the scientific results obtained with SPICAV on its most typical observations will be presented: the night-side stellar occultation, the night-side tangential limb, the day-side exospheric limb and the day-side nadir.

Thursday, 3 September 2009
11:00 a.m.
Room AOSS 1039