Geophysical Research Abstracts,
Vol. 11, EGU2009-3111, 2009
EGU General Assembly 2009

Detection of SO_2 above the clouds of Venus using SPICAV/Venus Express

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Sulphur dioxide (SO_2) is an important trace species in the atmosphere of Venus, especially since it may be related to a possible geological activity on the surface within the last 10^6 to 10^7 years. We used spectra from the UV spectrometer SPICAV ($R \sim 200$) aboard the space probe *Venus Express* in nadir mode: the sunlight diffused and reflected by the top of the atmosphere was analysed in a search for SO_2 spectral bands. The comparison between radiative transfer models (Monte-Carlo and SHDOM) and actual spectra confirms unambiguously the presence of SO_2, and we are able to measure both SO_2 column abundance and scale height. Horizontal variability will also be discussed, as well as possible variations with the local time (solar zenith angle).