



On the vertical profiles of CO, OCS and water vapor in the lower atmosphere of Venus using near IR spectro-imagery

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The expected beginning of the *Venus Express* mission highlights the importance of ground-based observations as a valuable complement. We present here an analysis of near-IR spectra acquired at the NASA/IRTF (Hawaii, USA) around $2.3 \mu\text{m}$ with a resolving power $R \sim 2000$. In this spectral window, the thermal emission from the deep and hot layers of the atmosphere (altitude between 25 and 40 km) can escape through the overlying H_2SO_4 clouds, allowing a compositional mapping of Venus' lower atmosphere using spectro-imagery.

We present results on the latitudinal variations of CO, OCS and H_2O abundances, the CO and OCS vertical gradients and their possible latitudinal variations. New constraints on the D/H ratio are also found, with no evidence for spatial variations.