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One year of Observations of SPICAV/SOIR on Board Venus Express

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The SOIR extension to SPICAV is a new concept combining an échelle spectrometer and an AOTF (Acousto-Optical Tunable Filter) for the order selection. This instrument performs solar occultation measurements in the IR region (2.2-4.3 micron) at a spectral resolution of 0.1 cm-1, which is better than all previously flown planetary spectrometers. A detailed description of the instrument and its performances will be presented.

The wavelength range probed by SOIR allows a detailed chemical inventory of the Venus atmosphere above the cloud layer with an emphasis on vertical distribution of the gases. In particular, measurements of HDO, H2O, HCl, HF, CO and CO2 vertical profiles have been routinely performed. Those observations should allow deriving the escape of D atoms from the upper atmosphere and give more insight about the evolution of water on Venus.

These first results look promising and will be qualitatively presented.