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The Venus upper haze from SPICAV/SOIR infrared experiments on Venus-Express

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SPICAV IR instrument is a part of SPICAV/SOIR experiment on the board of Venus-Express mission. It works in the range of 0.6-1.7 μm with a spectral resolution of 5 cm-1 in the LWL channel (1-1.7 μm) and 8 cm-1 in the SWL channel (0.6-1.05 μm). The FOV is 4 arc min for solar occultation observation that corresponds to a vertical resolution of 1-15km on the limb of Venus. The wide spectral range of SPICAV IR spectrometer allows to investigate upper haze (>65 km) of Venus atmosphere using solar occultation mode. Aerosol particle sizes and vertical distributions at the altitude range of 65-90 km were analysed for the first year of VEX observations. A bimodal distribution (corresponding to aerosol modes 1 and 2 of as detected by Pioneer Venus) was identified for most of occultations at lower altitudes. A simultaneous use of SOIR solar occultation data allows to extend the employed spectral range up to 4 microns, and to specify the nature and the particle size distribution of the Venus upper haze.