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Saturn atmosphere from Cassini/VIMS: distribution of the tropo-stratospheric aerosols

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The Visual and Infrared Mapping Spectrometer (VIMS) on board Cassini spacecraft has collected a discrete amount of data about the atmosphere of Saturn. VIMS data are multispectral images between 0.35 and 5.1 microns, with moderate spectral resolution (6-17 nm) and variable spatial resolution. Inversion tecniques for the retrieval of the vertical distribution of aerosols are applied to the VIMS images, at wavelengths probing the upper troposphere and stratosphere (between about 50 mbar and 2 bars). A two-layers structure has often been obtained with a lower layer between 300 and 500 mbar. Haze microphysics is investigated by using the phase angle variation of the spectral data. Horizontal variation of the aerosol vertical distribution at planetary scale is clearly related to the belt-zone latitudinal distribution, and can be used as a tracer of the atmospheric dynamics.