

## An uppermost haze layer above 100 km found over Venus by the SOIR onboard Venus Express

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The Venus cloud consists of a main cloud deck at 47 –70 km, with thinner hazes above and below. The upper haze on Venus lies above the main cloud surrounding the planet, ranging from the cloud top (70 km) up to as high as 90 km.

The Solar Occultation in the InfraRed (SOIR) instrument onboard Venus Express (ESA) was designed to measure the Venusian atmospheric transmission at high altitudes (65 –220 km) in the infrared wavelength range (2.2 –4.3  $\mu\text{m}$ ) with a high spectral resolution. We investigate the optical properties of Venus' s haze layer above 90 km using SOIR observations. Vertical and latitudinal profiles of the extinction coefficient, optical thickness, and mixing ratio of aerosols are retrieved. One of the most remarkable results is that the aerosol mixing ratio tends to increase with altitude above 90 km at both high and low latitude. It is speculated that sources of haze are transported upward from under altitude 90 km and haze is produced at high altitude. In this presentation, we will report the results and speculate how aerosols could be produced at such high altitudes.

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