

## Clouds' scattering property of Venus observed by UV imager on board Akatsuki

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The top altitude of the Venus cloud layer is around 70 km above the surface, at where solar radiation scattering occurs effectively. The scattering follows a phase curve depending on microphysical properties of cloud aerosols. We analyze global mean albedo obtained by the UV Imager (UVI) on board Akatsuki. Data acquired in May 2016 shows clear glory features at 283 and 365 nm at small phase angles. We successfully simulate the observation using a radiative transfer model. We estimate  $r_{\text{eff}}=1.26 \text{ } \mu\text{m}$  and  $v_{\text{eff}}=0.076$  for mode 2 to explain the observation, consisting with a previously suggested low latitudinal aerosol property. We find that  $\text{SO}_2$  and the unknown UV absorber are necessary factors to explain the observed quick decreasing of albedo at phase angles larger than 10 degree. We suggest a range of possible  $\text{SO}_2$  abundance at 70 km from 80 to 400 ppbv, depending on assumed atmospheric conditions.

Keywords: Venus, Akatsuki, UV image, glory