

# The multi-bands imaging of Venus atmosphere on the meridian plane

\*Miho Kanao<sup>1</sup>

1. Department of Earth and Planetary Science of the Graduate School of Science, The University of Tokyo

The atmosphere heating due to UV absorption at cloud top is suggested to keep the zonal wind velocity together with radiative transform from infrared absorption. The UV absorption as thermal tide also could yield meridian circulation from cellular equatorial zone to wrinkled pattern zone in mid-high latitude around polar collar. The number density distributions of UV absorber and SO<sub>2</sub>, responsible for the heating, and the zonal and meridian wind circulations are studied. The solar radiation on the transit of Venus in 2012 is occulted by Venus atmosphere. The refraction is scattered by CO<sub>2</sub> molecules and cloud particles on the images taken by SOT. Using the solar surface radiation function, the atmospheric refraction angle and the extinction are defined to altitude. At 388.35 nm and 396.85 nm bands, absorption by SO<sub>2</sub> and unknown UV marker are effective to observed radiation. The possibility of SO<sub>2</sub> and UV absorber detections is studied to show the number densities. The wind velocity to transform these cloud-related compounds on local time should be discussed using refraction angles.

Keywords: Venus, atmosphere, observation