



Imaging spectroscopy of the Venus 1.27- μm O₂ airglow with IRTF/CSHELL

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We conducted near-infrared imaging spectroscopy of the nightside of Venus at NASA's Infrared Telescope Facility in December, 2005 and February, 2006. The cryogenic echelle spectrograph (CSHELL) was used to acquire high-resolution spatially resolved spectra of O₂ airglow. The brightest feature is found at around the anti-solar point, which agrees with the previous studies. The 0.5" slit provided a spectral resolution of $\lambda/\Delta\lambda \sim 40,000$. The spectra contain several rotational lines of R-branch of the airglow and we can derive the rotational temperature distributions on the nightside hemisphere. In this presentation, we will show preliminary report of the observations.