

Ground-based observation of Venusian nightside atmosphere in 1-2.5 μ m

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In the Venusian atmosphere, there are some "windows" through the thick cloud layer in near infrared light. We executed spectroscopy and imaging of the Venusian nightside atmosphere in these infrared windows at Okayama Astrophysical Observatory. We detected thermal flux from the sub-cloud layers and established the continuous observations. We tried narrowband imaging (resolution:50-100), low-resolution spectroscopy (50-200), and high-resolution spectroscopy(500-2000). We will report the basic observational feasibility of Venusian nightside atmosphere in the domestic site and the strategy of following observations. We will also report the current status of UV-VIS-IR imaging spectrometer aboard the planning Venusian spacecraft.