Ground-based observation of the Venus O2 nightglow

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We will consider the dynamics and chemistry of Venus' thermosphere using O2 1.27-um emission.

Characteristics of our 1.27-um data obtained from OAO are almost consistent with data from previous observations. But the spectrum contain thermal emission from the lower atmosphere and contamination of the dayside component besides the O2 nightglow. Therefore we model Venus atmosphere and synthesize spectrum around 1.27-um to extract the nigthglow component.

In this presentation, we will discuss how observed spectrum are explained by synthetic spectrum and what informations are contained in the spectrum.