

On the detectability of Jovian global oscillations by ground-based infrared spectroscopy

Takuo Okuchi[1], Naoki Kobayashi[2]

[1] Dept. of Earth and Planetary Sci., Nagoya Univ./PRESTO, JST, [2] Earth and Planetary Sci, TiTech

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The detectability of Jovian global oscillations by ground-based infrared spectroscopy is discussed. First we estimate the oscillation amplitude along with their possible excitation mechanisms. Then preferable infrared detection systems are proposed in two useful absorption or emission bands of common molecules in Jovian atmosphere, one is near 1 micro-meter and another is near 30 micro-meter. Finally the required specifications of infrared telescope and data acquisition times are estimated from the amplitude of the oscillation and consideration for infrared detection systems.

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