

Stratospheric and Tropospheric Images of Jupiter in the 7-40 Micron Spectral Range.

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We constructed images of the stratosphere and troposphere of Jupiter in the 7 - 40 micron spectral range using Voyager 1 and 2 spectral data. The stratospheric images were taken at the emission bands of hydrocarbons: methane, ethane, and acetylene. Since the emissions of these hydrocarbons arise from the stratosphere, the images represent the stratospheric images of Jupiter. The tropospheric images were taken near 30 microns, where tropospheric hydrogen pressure-induced absorption occurs. We compared the stratospheric and tropospheric images in order to find any connection between tropospheric convections and stratospheric thermal activities. We also investigated the time-variation of stratospheric thermal structures.