

Thank you, we have received your abstract.

Abstract for Padmavati A Yanamandra-Fisher

Mid-IR Spectroscopy of the Great Red Spot (GRS) During May and June 1997

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Spectroscopic observations of Jupiter's Great Red Spot (GRS) were acquired with Spectrocam-10 (SC10) from Mt. Palomar in support of Galileo orbits G8 (May 1997) and C9 (June 1997). High-resolution scans of the GRS were recorded with SC-10 slit parallel to the E/W and N/S axes at several thermal wavelengths (8.57, 10.74, 12.5, 13.0 and 13.4 microns) that serve as diagnostics of various species in the atmosphere such as methane, ammonia, ethane; and provide a measure of tropospheric temperatures. During the G8 encounter period (May 1997), we observed a gradient in ammonia from the exterior edge of the GRS, with a minimum at the core or center of the GRS at 10.74 μm . This asymmetry is also observed along the N/S axis, indicating more ammonia at the northeast exterior edge than the southwest exterior edge. At 13.0 μm , diagnostic of tropospheric temperature, we detected a gradient in temperature from the northeast exterior edge to the center of the GRS. These observations are in agreement to measurements by Galileo/PPR observations at 18- and 27-microns acquired in G1 (June 1996) and G7 (April 1997) orbits and ground-based observations 18 microns by JPL/MIRLIN, a 10-microns camera.