

POLARIZATION QUANTUM BEAT SPECTROSCOPY OF NO₂: HYPERFINE LEVEL STRUCTURE IN THE YELLOW REGION(16000-19250 CM⁻¹)

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We report on the application of fluorescence-based polarization quantum beat spectroscopy to probe the excited hyperfine level structure of NO₂ vibronic bands in the yellow region (16000-19250 cm⁻¹). Two general trends are observed when comparing our results with spectroscopic studies at lower energy. First, fluctuations in the Fermi-contact interaction dampen with increasing energy. Second, the magnitude of this interaction decreases with increasing energy. We will discuss possible explanations for and implications of these trends.