

ON THE HYPERFINE STRUCTURE OF NO₂ LEVELS NEAR DISSOCIATION THRESHOLD

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We report the application of polarization quantum beat spectroscopy (QBS) to probe the hyperfine structure of single NO₂ molecular eigenstates in the region 2.5 cm⁻¹ below dissociation threshold ($D_0=25128.57$ cm⁻¹). The hyperfine interaction is substantially weaker than that found at energies below 22 000 cm⁻¹, but is similar on average to that observed 50-100 cm⁻¹ below threshold. The ratio of J=3/2 to J=1/2 levels is much larger than that expected on the basis of complete rovibronic mixing, but is consistent with a previous study.