ON THE HYPERFINE STRUCTURE OF NO_2 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 NO_2 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.