POLARIZATION QUAMTUM BEAT SPECTROSCOPY OF NO_2: 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 NO_2 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 enegy. We will dscuss possible explanations for and implication of these trends.