

RESONANT TWO-PHOTON DISSOCIATION SPECTROSCOPY OF FeO^+ : CHARACTERIZATION OF THE ${}^6\Sigma$ GROUND STATE

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We have measured several bands in a ${}^6\Pi - {}^6\Sigma$ transition in FeO^+ with rotational resolution. In this one-color, two-photon resonant dissociation experiment, one photon excites molecules to the ${}^6\Pi$ state, while the second photon dissociates the excited molecules. The spectrum is measured by monitoring the yield of Fe^+ fragments. Results of the rotational analysis of the $({}^6\Pi_{7/2}, v=8, 9) - ({}^6\Sigma, v=0)$ bands will be presented.