

THE NEAR-IR HIGH RESOLUTION SPECTRUM OF JET-COOLED ETHYL PEROXY RADICALS

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The jet-cooled high resolution CRDS spectra of the ethyl peroxy radicals, C₂H₅OO and C₂D₅OO have been recently obtained for the $\tilde{A}^2A' \leftarrow \tilde{X}^2A'' 0_0^0$ band. The observation of this weak transition: signal of a few ppm/pass for the most populated *G* conformer has been possible by using a narrow linewidth (Fourier-transform-limited) laser source^a and a hydrogen Raman shifter (resolution: 250 – 300 MHz). The radicals are produced by creating a plasma (by using a DC or a RF discharge) inside a pulsed slit nozzle^b. We will discuss the analysis of these complex spectra.

^aP. Dupré and T.A. Miller, Rev. Sci. Instrum. 78, 033102 (2007)

^bS. Wu, P. Dupré and T.A. Miller, Phys. Chem. Chem. Phys. 8, 1682 (2006)