KINETICS OF THE ETHYLPEROXY SELF REACTION AND REACTION WITH HO2 USING FREQUENCY MODULATED NEAR IR SPECTROSCOPY

D. ROBICHAUD, M. OKUMURA, *California Institute of Technology*; L. ALCONCEL, S. SANDER, *Jet Propulsion Laboratory*.

Kinetics of the C2H5O2 + C2H5O2 and C2H5O2 + HO2 reactions have been studied using simultaneous FM detection of the 3v1 OH overtone stretch of HO2 and direct UV absorption of C2H5O2 at 250nm. Temperature dependence of the reactions will be discussed. Ab initio calculations have been performed on the reaction path and comparisons will be made to observed rate constants.