PHOTODISSOCIATION DYNAMICS OF 2-BROMOETHYLNITRITE AT 351 NM AND C-C BOND FISSION IN THE β-BROMOETHOXY RADICAL PRODUCT

LEI WANG, *Department of Chemistry, The University of Chicago, Chicago, IL 60637*; RABI CHHANTYAL-PUN, *Department of Chemistry, The Ohio State University, Columbus, OH 43210*; MATT D. BRYNTESON, *Department of Chemistry, The University of Chicago, Chicago, IL 60637*; TERRY A. MILLER, *Department of Chemistry, The Ohio State University, Columbus, OH 43210*; and LAURIE J. BUTLER, *Department of Chemistry, The University of Chicago, Chicago, IL 60637*.

We used a crossed laser-molecular beam scattering experiment to investigate the primary photodissociation channels of bromoethylnitrite at 351 nm. Only the O-NO bond fission channel forming the β-bromoethoxy radical and NO, no HBr photoelimination, was detected upon 351 nm photoexcitation,. The subsequent decomposition of the highly vibrational excited β-bromoethoxy radical to formaldehyde + CH_2Br was also investigated.