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Extracting Molecular Dynamics from Ion Imaging Experiments of Carbonyl Sulfide WEI WEI, COLIN WALLACE, SIMON NORTH, Texas A&M Univ — Photodissociation of carbonyl sulfide at 215nm are studied in details with sliced ion imaging experiments. Energy partitioning as well as vector correlations between carbonyl sulfide transition dipole moments, CO recoil velocity vector and angular momentum will be revealed. They can provide valuable information about symmetry of excited states which are involved in photodissociation process. These results can reveal information about non-adiabatic dynamics in carbonyl sulfide excited states. The results will be compared with both computational chemistry study conducted by G. McBane and coworkers. The result will also be compared with previous study on dynamics from carbonyl sulfide photodissociation at longer wavelength by Bersohn and coworkers.

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