

Abstract Submitted
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Probing molecular dynamics by Time-resolved Ionization Spectroscopy¹ YUSONG LIU, SPENCER HORTON, CHUAN CHENG, SAMUEL MCCLUNG, THOMAS WEINACHT, Stony Brook University — Ionization can serve as a universal probe of excited state molecular dynamics, such as internal conversion, dissociation, and isomerization. We conduct UV pump VUV probe spectroscopy measurements measuring both ions and electrons with Velocity Map Imaging (VMI) resolution. We have developed a delay-stamped configuration of pump-probe experiments based on a time stamping camera (Timepix3). The camera allows to measure the 3D vector momentum of all species of ions produced by photoionization without gating the detector or performing an inverse Abel transform. Furthermore, by switching the voltages on the VMI plates, we collect both electrons and ions for each delay.

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