

Abstract Submitted  
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**Characterization of a UV prism compressor for UV-IR pump-probe experiments**<sup>1</sup> KURTIS BORNE, Kansas State Univ, FARZANEH ZIAEE, KANAKA RAJU PANDIRI, BALRAM KADERIYA, YUBARAJ MALAKAR, TRAVIS SEVERT, ITZIK BEN-ITZHAK, ARTEM RUDENKO, DANIEL ROLLES, J.R. Macdonald Laboratory, Department of Physics, Kansas State University, Manhattan KS, USA, RUARIDH FORBES, Department of Physics, University of Ottawa, Ottawa, Canada — We report on the characterization of a setup for UV-IR pump-probe experiments on gas-phase molecules using third-harmonic generation (THG) of a Ti:Sapphire laser. Using a Calcium Fluoride prism compressor, we have been able to reduce the UV (266 nm) pulse duration in the interaction region from 100 fs to <50 fs. We measure these pulse durations via cross-correlation of the UV pulse with the fundamental IR using a difference-frequency generation (DFG) crystal, as well as a cross-correlation in Ar gas using a cold target recoil ion momentum spectrometer (COLTRIMS). Results of the pulse characterization will be presented along with data on the time-dependent UV-induced photodissociation of CH<sub>3</sub>I.

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