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Determining accurate laser intensity dependence despite the intensity-volume effect with z-scanning intensity-difference spectra¹ A. MAX SAYLER, PENGQIAN WANG, NORA G. JOHNSON, BISWANATH GAIRE, KEVIN D. CARNES, ITZIK BEN-ITZHAK, J.R. Macdonald Laboratory, Department of Physics, Kansas State University — A focal spot or z-scanning intensity-difference spectrum method is developed to allow the determination of the intensity dependence of laser-produced features while improving experimental statistics. This method is applicable to a focused Gaussian beam interacting with an approximately uniform planar target. We apply this method to the angularly resolved kinetic energy release spectra of laser-induced dissociation of O_2^+ and H_2^+ so as to keep the exact contribution from a predetermined intensity range and eliminate the contributions from outside this range.

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Prefer Oral Session

Prefer Poster Session

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