

Abstract Submitted
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Strong field DC slice imaging LU YAN, Department of Chemistry, Wayne State University, Detroit, MI, 48202, MICHAEL DOYLE, YUNFEI LIN, WEN LI, ARTHUR SUITS — A new, “universal” variation of the DC slice ion imaging method is reported. This approach allows the central slice of the photofragment ion cloud to be recorded and the relevant speed and angular distributions for a molecular photodissociation to be obtained without any inversion methods, but does so using femtosecond non-resonant strong-field ionization. The probe laser is also implemented in a “raster imaging” approach that records only the central section of an expanded photofragment distribution and avoids interaction with the molecular beam itself. This is achieved by using the probe laser displaced off-axis from the molecular beam with application a narrow time gate to a multichannel plate detector. To avoid high background level and space charge effect, the detection region is in ultrahigh vacuum and we utilize a second differential stage to the molecular beam. Several examples will be presented illustrating the method.

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