

Abstract Submitted
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Isolated Attosecond Pulses Generated Directly from a Femtosecond Chirped Pulse Amplifier¹ YI WU, STEVE GILBERTSON, SABIH KHAN, MICHAEL CHINI, KUN ZHAO, XIMAO FENG, ZENGHU CHANG, Kansas State University — Using a generalized version of double optical gating, we produced single isolated attosecond pulses with 2 mJ, 25 fs driving lasers directly from a multi-pass Chirped Pulse Amplifier. Through attosecond streaking, we characterized isolated 160 attosecond pulses with 170 pJ pulse energy. By varying the CE phase of the 25 fs driving lasers, the XUV spectrum exhibited a unique 2π periodicity indicating the robustness of the sub-cycle gating. Spectral shaping inside the amplifier is implemented to reduce the laser pulse duration for improving the conversion efficiency from NIR to XUV photons. The GDOG technique will allow many labs to generate single attosecond pulses of XUV photons directly from an amplifier which should help further expand the field of attosecond science.

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