

Abstract Submitted
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Characterizing attosecond x-ray pulses¹ STEFAN PABST, Harvard-Smithsonian CFA & Stanford University, MARCUS DAHLSTRM, Stockholm University — Attosecond x-ray pulses offer unprecedented opportunities for probing and triggering new types of ultrafast motion. At the same time, their characterization faces new challenges that do not exist in the UV regime. Inner-shell ionization is the dominant ionization mechanism in the x-ray regime and triggers secondary processes like fluorescence, Auger decay, and shake-up. We show that these secondary events create additional delay-dependent modulations. Our recently proposed wavepacket-based characterization scheme can eliminate the impact of these unwanted side effects and is a reliable method for reconstructing attosecond x-ray pulses.

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