Abstract Submitted
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Resonant Anisotropic Emission in Two-Photon Interferometric Spectroscopy[1] NICOLAS DOUGUET, BEJAN GHOMASHI, University of Central Florida, LUCA ARGENTI, Dep. Physics and CREOL at the University of Central Florida — A variant of RABBITT spectroscopy, in which the attosecond-pulse train comprises just two consecutive harmonics of the fundamental infrared probe frequency, is explored to measure time-resolved photoelectron emission in systems that exhibit autoionizing states [1]. In this scheme, one-photon and two-photon amplitudes interfere giving rise to asymmetric photoemission. It is shown that the group delay of both one-photon and two-photon resonant transitions is directly encoded in the energy-resolved photoelectron anisotropy as a function of the pump-probe time-delay. This principle is illustrated using a one-dimensional model with a symmetric zero-range potential that supports bound states and shape-resonances. The asymmetric photoelectron emission near a resonance is computed using perturbation theory and by solving the time-dependent Schoedinger equation. [1] Bejan Ghomashi, Nicolas Douguet, and Luca Argenti arXiv:1811.10160 (2019)

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Nicolas Douguet
Drake University

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