

Abstract Submitted
for the DAMOP20 Meeting of
The American Physical Society

Ab initio - calculated direct and shakeup streaked photoemission spectra for helium¹ HONGYU SHI, UWE THUMM, Kansas State University — Understanding the correlated ionization dynamics in atoms has remained an important and challenging task [1]. By implementing an adaptive FE-DVR method to efficiently solve the two-electron time-dependent Schroedinger equation, we calculated attosecond time-resolved spectra for streaked XUV photoemission from helium. From the angle-differential calculated spectra we derived (directional) photoemission time delays between direct and $1s^2 \rightarrow np\ell$ shake-up ionization. [1] M. Ossiander et al., Attosecond correlation dynamics Nat. Phys. 13, 280 (2017). [2] A. Liu and U. Thumm, Laser-assisted XUV double ionization of helium: Energy-sharing dependence of joint angular distributions, Phys. Rev A 91, 043416 (2015).

¹Supported by the NSF and the U.S. Department of Energy, Office of Science.

Uwe Thumm
Kansas State Univ

Date submitted: 30 Jan 2020

Electronic form version 1.4