

Abstract Submitted  
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**Strong-field photoemission from metal nanospheres.**<sup>1</sup> ERFAN SAYDANZAD, JIANXIONG LI, UWE THUMM, Kansas State University — We simulated velocity-map-image (VMI) photoelectron spectra for strong-field-ionization of metal nanospheres by extending our classical trajectory –sampling model for streaked photoemission [1]. Our numerical model accounts for (i) photoelectron emission on the surface of the nanoparticle by an intense IR laser pulse and (ii) photoelectron propagation outside the nanosphere in the presence of incident and induced plasmonic fields. From the simulated photoelectron-final-velocity distribution we derive VMI spectra for gold nanospheres with diameters between 10 and 100 nm. In analyzing our numerical results, we study the effects of electron-electron and electron-hole interactions and of rescattered photoelectrons on VMI spectra. [1] E. Saydanzad, J. Li, and U. Thumm, Phys. Rev. A 95, 053406 (2017).

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