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**Double Auger Decay following K-Shell Photoionization of Neon**<sup>1</sup> M.P. JONES, Auburn University, M. SCHOFFLER, T. JAHNKE, K. KREIDI, J. TITZE, R. DORNER, University of Frankfurt, C. STUCK, TH. WEBER, A. BELKACEM, Lawrence Berkeley National Lab, A. LANDERS, Auburn University — Using a COLTRIMS setup at LBNL-ASL, our group photoionized Neon just above the K-ionization threshold. The measurement allows us to investigate a simultaneous angular and energy correlation between the three continuum electrons of the subsequent double Auger decay pathway:

$$Ne(1s^{-1})^+ + e_{photo}^- \rightarrow Ne^{3+} + e_{photo}^- + e_{Auger}^- + e_{Auger}^-,$$

where we measure two of the electrons directly and infer the momentum of the third through momentum conservation of the four-particle final state. Analysis is underway to better understand the k-hole relaxation process following photo-ionization and successive Auger decay(s).

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