

Abstract Submitted  
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**Space and Time Resolved Continuum Correlation in  
the Post-Collision Interaction of Core-Photoionized Neon<sup>1</sup>**

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COCKE, Kansas State University, T. JAHNKE, M. SCHOFFLER, J.  
TITZE, R. DORNER, University of Frankfurt — We have used the  
COLTRIMS\* technique to measure the momentum distribution of the  
photoelectron and the recoil ion produced by the core-photoionization  
of neon. Conservation of momentum allows us to determine the subse-  
quent auger electron's momentum that is emitted when the Ne<sup>+</sup> relaxes  
to the Ne<sup>2+</sup> state. Momentum space plots of the electrons and the re-  
coil ion are then used to resolve the three-body correlated post-collision  
interactions in space and time. Finally, classical calculations have been  
performed which corroborate our interpretation of the experimental re-  
sults.

\*R. Dorner, V. Mergel, O. Jagutzki, L. Spielberger, J. Ullrich, R.  
Moshammer, and H. Schmidt-Böcking. Physics Reports, 330:96-192,  
2000.

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