

Abstract Submitted  
for the MAR11 Meeting of  
The American Physical Society

**First measurements of the Low Energy Tail (LET) down to 0 eV using Auger Photoelectron Coincidence Spectroscopy (APECS) in Ag (100) and Cu (100)**<sup>1</sup> K. SHASTRY, S. KALASKAR, Univ of Texas at Arlington, S.L. HULBERT, Brookhaven National Labs, B.R. BARTYNSKI, Rutgers university, A.H. WEISS, Univ of Texas at Arlington — We present the Auger Photoelectron Coincidence Spectroscopy (APECS) measurements of Ag (100) and Cu (100) over a full range of emitted energies from 0 eV to 81eV. The measurements were successful in separating the low energy Auger lines from a large background, due to loss processes unrelated to the Auger transition. The measurements reveal a well formed Auger peak at 60 eV for Cu and an Auger peak at 40 eV for Ag accompanied by a low energy tail (LET). The LET extends to 0 eV with a broad maximum at 6eV and 10 eV in the case of Cu and Ag respectively. The integrated intensity of the LET in Cu (100) and Ag (100) were 6 and 2 times larger than that of the Auger peak itself. The origin of this LET is discussed in terms of extrinsic mechanisms in which electrons from the peak lose energy as they propagate to the sample surface, as well as intrinsic mechanisms in which multi-electron Auger processes distribute the energy gained by the filling of the core-hole to multiple valence electrons.

<sup>1</sup>Welch Y1100, NSF DMR 0907679

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Date submitted: 28 Nov 2010

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