

Abstract Submitted  
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**Search for correlated two electron emission in Auger transition processes**<sup>1</sup> SUSHANT KALASKAR, University of Texas at Arlington, S.L. HULBERT, Brookhaven National Laboratory, R.A. BARTYNSKI, Rutgers University, A.H. WEISS, University of Texas at Arlington, BROOKHAVEN NATIONAL LABORATORY COLLABORATION — Measurements were performed at the National Synchrotron Light Source Brookhaven National Lab, Upton New York, using Auger Photoelectron Coincidence Spectroscopy (APECS) to investigate the physics of Low Energy region of the Auger spectrum. The measurements were carried out on Ag(100) sample, and the spectrum shows a NVV transition related to Ag 4p excitation consisting of a Auger peak accompanied by a substantial low energy region. We selected photon energy of 465eV, energy slightly above the Ag 4p threshold, in order to emphasize the 4p core production compared to all other energy levels. If the Auger transition energy was shared between two and only two electrons we would expect to observe a peak in the I(E) spectrum of the scanned analyzer at an energy of E<sub>Auger</sub>-E<sub>fixed</sub>. We performed electron-electron coincidence measurements with one analyzer fixed at 175 eV (half the NVV KE) and the other scanned over the energy range 150 to 200 eV. A possible explanation is that the resulting NVV Auger transition is not shared by 2 but, n number of electrons. This reveals why the LET is smeared into a smooth spectrum as in a single channel photoemission.

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