

Abstract Submitted  
for the DNP13 Meeting of  
The American Physical Society

**Spectroscopy of Mirror Nuclei in the Upper-fp Shell Using GRETINA**<sup>1</sup> RODERICK CLARK, Lawrence Berkeley National Laboratory, THOMAS HENRY, MICHAEL BENTLEY, University of York, E11025 GRETINA@MSU COLLABORATION — Isospin symmetry breaking in nuclei of the upper-fp shell has been investigated in a recent experiment at the National Superconducting Cyclotron Laboratory (NSCL) at Michigan State University (MSU). A  $^{78}\text{Kr}$  primary beam (with energy 150 MeV.A) was fragmented on a Be target to produce a cocktail of secondary beams, including  $^{66}\text{As}$ ,  $^{65}\text{Ge}$ , and  $^{64}\text{Ga}$ , which were selected with the A1900 separator. These secondary beams were in turn fragmented at the target position of S800 magnetic spectrograph, which was used to identify neutron-deficient reaction products including  $^{62,63}\text{Ga}$ ,  $^{63}\text{Ge}$ , and  $^{65}\text{As}$ . Gamma-rays emitted from excited states in these nuclei were detected with GRETINA, which comprises 28 highly-segmented, tapered hexagonal, close-packed HPGe and is a first generation gamma-ray tracking array. Many new states and transitions have been identified in these nuclei of the upper-fp shell, including a candidate for the T=1  $2^+$  state in  $^{62}\text{Ga}$ . Preliminary results from the analysis of this data will be presented and the implications for our understanding of isospin-symmetry breaking effects will be discussed.

<sup>1</sup>This work supported in part by the United States Department of Energy under grant no. DE-AC02-05CH11231 (LBNL).

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Date submitted: 28 Jun 2013

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