

Abstract Submitted
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Multi-detector coincidence techniques to test induced depletion of $^{178m2}\text{Hf}$ at 331 keV¹ GEOFFREY TREES, TREVOR BALINT, ISAAC MILLS, THOMAS HARLE, Youngstown State University, SARKIS KARAMIAN, Joint Institute for Nuclear Research (Dubna), JAMES CARROLL, Youngstown State University — Recent experiments have suggested a possible transition at 331 keV in ^{178}Hf that may allow induced depletion of its 31 year isomer. The probability of detecting events in experimental conditions is expected to be relatively low and will require techniques to distinguish between background radiation and induced events. The use of a PXI DSP system and two 4-fold HPGe Clover detectors will allow coincidence techniques to be applied. This talk will discuss the development and design of an experiment to test depletion of this isomer using 331 keV photons from bremsstrahlung at Youngstown State University's X-ray Effects Laboratory as part of the Isomer Physics Project.

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