

Abstract Submitted  
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**Initial search for triggered energy release from  $^{177m}\text{Lu}$**  JAMES CARROLL, Youngstown State University — Nuclear isomers like  $^{178m2}\text{Hf}$  and  $^{180m}\text{Ta}$  store large energy densities for long times and most often release that energy via beta, gamma or electron capture decay. These qualities have led to suggestions that isomers could serve in a wide variety of applications and, of course, such metastable states provide a fertile basis for studies of nuclear structure. The demonstration that real photons could induce, or trigger, the depopulation of  $^{180m}\text{Ta}$  has provided a first step in understanding the underlying physics. Likewise, the failed search for low-energy triggering of  $^{178m2}\text{Hf}$  has emphasized the need to connect the body of level data to investigations of energy-release mechanisms. This talk will discuss, in this context, initial tests of triggering of the 160-day isomer of  $^{177m}\text{Lu}$  by real photons.

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