

Abstract Submitted  
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**Experimental system to search for induced depletion of  $^{108m}\text{Ag}$**   
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Youngstown State University — Nuclear isomers may provide high density energy storage media for specialized batteries. The key would be to identify a way to release the stored energy when desired, by depleting the isomer population. Existing nuclear data [1] suggest that an induced depletion of the 418 year isomer  $^{108m}\text{Ag}$  may be possible, caused by providing an input of 255 keV or 413 keV. The result would be production of additional ground state nuclei with a half-life of 2.37 minutes, leading to beta decay. An experiment has been designed to measure beta decay of  $^{108m}\text{Ag}$  after exposure of an isomeric sample to 450 keV bremsstrahlung. Because beta particles are attenuated by air, a clean vacuum chamber was assembled with which to use a Si(Li) detector. The aim of this experiment is to observe an increased rate of beta decay after several minutes of direct exposure to bremsstrahlung radiation.

[1] F. R. Espinoza-Quinones, et al., Phys. Rev. C 52, 104 (1995).

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