

Abstract Submitted
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Search for induced depletion of ^{108m}Ag with 6 MeV bremsstrahlung KAATRIN NETHERTON, ARL, Drexel University, STANLEY HENRIQUEZ, NINO PEREIRA, MARC LITZ, JAMES CARROLL, ARL, ALTERNATIVE ENERGY TEAM — The nuclide ^{108}Ag has a complicated and not yet well understood energy structure with numerous excited states. One of these, ^{108m}Ag , is a metastable state with a half-life of 418 years and a significantly higher energy than the ground state. The ground state has a 2.37 min half-life and a large β^- decay branch with $Q_{\beta^-} = 1.649$ MeV. While these traits make the isomer a good candidate for energy storage, the rarity of its natural decays makes it difficult to utilize its stored energy. Through irradiation of a ^{108m}Ag source, it might be possible to bypass the natural decay path and induce an energy release by transferring population from the isomer to the ground state. The poster will describe the implementation of an automated system by which to perform repeated tests of ^{108m}Ag depletion using 6 MeV bremsstrahlung and preliminary results will be given.

Kaatrin Netherton
ARL, Drexel University

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