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## Evaluation of Gamma Beam Energies to Create $^{111}\text{mCd}$ , $^{113\text{m}}\text{In}$ , and $^{115\text{m}}\text{In}$ Metastable

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NASA Glenn Research Center (GRC) is investigating electron screened, enhanced nuclear reactions in deuterated materials exposed to bremsstrahlung photons with kinetic energies above and below the deuteron photodissociation energy. Recent experiments used a continuous beam Dynamitron<sup>®</sup> electron accelerator with a braking target. Previously published research shows gamma spin-up evidence of  $^{111}\text{Cd}$  to  $^{111\text{m}}\text{Cd}$  with a minimum 1200 keV photon beam and  $^{115}\text{In}$  to  $^{115\text{m}}\text{In}$  with a minimum 1078 keV photon beam. Instead, these experiments show that  $^{111}\text{Cd}$  spin-up occurs with a minimum 1020 keV photon beam and  $^{115}\text{In}$  spin-up occurs with a minimum 941 keV photon beam. These lower thresholds are consistent with Brookhaven National Laboratories data.

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