^{140}Dy

Krolas et al. observed ^{140}Dy as reported in the 2002 article, "First observation of the drip line nucleus ^{140}Dy: Identification of a 7 μs K isomer populating the ground state band" (2002Kr04). A 315 MeV ^{54}Fe beam, accelerated by the Oak Ridge tandem accelerator, bombarded an enriched ^{92}Mo target. Fusion-evaporation products were separated with the RMS (Recoil Mass Spectrometer) and detected in a microchannel plate detector in coincidence with γ-rays in the Clover Germanium Detector Array for Recoil Decay Spectroscopy CARDS. "A new 7 μs isomer in the drip line nucleus ^{140}Dy was selected from the products of the ^{54}Fe (315 MeV)+^{192}Mo reaction by a recoil mass spectrometer and studied with recoil-delayed $\gamma-\gamma$ coincidences." The subsequent γ-ray cascade populating the ground state was measured. Less than a month later Cullen et al. independently reported a half-life of 7.3$\pm$1.5 μs (2002Cu01). The half-life of the ^{140}Dy ground state have been observed yet.

Adapted from reference (2013Fr10)

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