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Levels in $^{124,125}\text{Cd}$ populated by the β and β -n decay of ^{125m}Ag and ^{125}Ag

The β -decay of $^{125m,125}\text{Ag}$ into levels in ^{125}Cd was investigated at the Holifield Radioactive Ion Beam Facility (HRIBF). Uranium-238 targets were bombarded with 50-MeV protons with an intensity of $15 \mu\text{A}$, and the induced fission products were mass separated and deposited on a moving tape in the center of the VANDLE array consisting of γ -detectors and plastic scintillators.

A partial decay scheme has been assigned for both β -decay of the $(9/2^+)$ ground state of ^{125}Ag (consisting of 72 γ 's from 47 levels) and its low-lying $(1/2^-)$ isomer (consisting of 16 γ 's from 14 levels). The energy of the low-lying $(11/2^-)$ isomeric state in ^{125}Cd is assigned as 188.5 keV. In both the isomer and ground state, evidence for β -delayed neutron emission was observed, with the resulting branching ratios of 4.6(12)% for the isomer, and 1.2(2)% for the ground state.

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