

Abstract Submitted
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In-beam and α -decay studies of ^{180}Tl ¹ F.G. KONDEV, M.P. CARPENTER, S. ZHU, R.V.F. JANSSENS, B.B. BACK, P.F. BERTONE, J. CHEN, C.A. CHIARA, C.J. COPOS, J.P. GREENE, G. HENNING, C.R. HOFFMAN, B.P. KAY, T.L. KHOO, T. LAURITSEN, E.A. MCCUTCHAN, C. NAIR, A. ROGERS, G. SAVARD, D. SEWERYNIAK, Argonne National Laboratory, D.J. HARTLEY, US Naval Academy — We have carried out new spectroscopy studies of the ^{180}Tl nuclide, in which a large electron-capture delayed fission branch was recently observed [1], by utilizing the $^{89}\text{Y} + ^{92}\text{Mo}$ symmetric reaction and the Argonne Fragment Mass Analyzer (FMA), in conjunction with the recoil-decay tagging technique. Prompt γ rays were detected at the target position by Gammasphere and these were subsequently correlated with α decays measured using a Double-sided Silicon Strip Detector (DSSD) at the focal plane of FMA. In addition, an array of four Ge clover detectors surrounded the DSSD, thus allowing $\alpha - \gamma$ coincidences to be recorded. The obtained new results for ^{180}Tl will be presented, together with those for the daughter nuclide ^{176}Au .

[1] A.N. Andreyev et al., Phys. Rev. Lett. 105, 252502 (2010).

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