

RECOIL-DECAY TAGGING STUDY OF $^{146}\text{Tm}^*$

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^{146}Tm is an odd-odd proton emitter, lying in the transitional region between predicted deformed and near-spherical shapes. It is potentially a rich source of information regarding the role of the odd neutron in proton decay, since recent work [1] indicates that it emits at least 4 proton groups, with half-lives between 80 and 250 ms. In order to help shed light on the assignment of half-lives to the various groups, we have performed an RDT experiment on ^{146}Tm , using Gammasphere to detect prompt γ -rays tagged by protons observed in a double-sided silicon strip detector located at the focal plane of the FMA recoil mass spectrometer. No previous work on the excited states of ^{146}Tm has been reported. The proton spectrum is shown in the figure. Gamma-ray spectra correlated with proton groups will be presented, and a decay scheme for ^{146}Tm will be discussed.

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