# $^{145}$Tm

In the 1998 paper "Observation of the exotic nucleus $^{145}$Tm via its direct proton decay" Batchelder et al. announced the discovery of $^{145}$Tm (1998Ba13). A 315 MeV $^{58}$Ni beam from the Oak Ridge tandem accelerator bombarded an enriched $^{92}$Mo target and $^{145}$Tm was produced in the $^{92}$Mo($^{58}$Ni,p4n) fusion-evaporation reaction. Reaction products were separated with the Recoil Mass Spectrometer (RMS) and implanted in a double-sided silicon strip detector which also recorded subsequent proton emissions. "In summary, we have observed direct proton emission from the $0h_{11/2}$ ground state of $^{145}$Tm with $E_p$ and $T_{1/2}$ of 1.728(10) MeV and 3.5(10) $\mu$s respectively."

Adapted from reference (2013Fr10)


1998Ba13 J. C. Batchelder, C. R. Bingham, K. Rykaczewski, K. S. Toth *et al.*, Phys. Rev. C **57**, R1042 (1998).

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