

^{176}Tl

^{176}Tl was discovered by Kettunen et al. in 2004, and published in “Decay studies of $^{170,171}\text{Au}$, $^{171-173}\text{Hg}$, and ^{176}Tl ” (2004Ke06). The Jyväskylä K130 cyclotron was used to bombard an enriched ^{102}Pd target with 380–389 MeV ^{78}Kr beam to produce ^{176}Tl in the (p3n) fusion-evaporation reaction. ^{176}Tl was separated with the gas-filled recoil separator RITU, and implanted into a position sensitive silicon strip detector. The identification was based on correlations between the implantation and the subsequent proton emission. “Based on the properties of eight ER- p_m - α_d correlated decay chains in [the figure], the daughter activity of group $^{176}\text{Tl}^g$ was identified to originate from the α decay of ^{175}Hg ... Based on the properties of the decay chains the mother activity is concluded to originate from the proton emission of ^{176}Tl to the ground state of ^{175}Hg .”

Adapted from reference (2013Fr04)

2004Ke06 H. Kettunen, T. Enqvist, T. Grahn, P. T. Greenlees *et al.*, Phys. Rev. C **69**, 054323 (2004).

2013Fr04 C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 365 (2013).

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