^{191}At

Kettunen et al. reported the discovery of ^{191}At in the 2003 paper "Alpha-decay studies of the new isotopes ^{191}At and ^{193}At" (2003Ke08). A ^{141}Pr target was bombarded with 248−266 MeV ^{54}Fe beams from the Jyväskylä K-130 cyclotron forming ^{191}At in (4n) fusion-evaporation reactions. Recoil products were separated with the gas filled recoil separator RITU and implanted into a position sensitive Si detector which also measured subsequent α decay. "The corresponding mother activity with an alpha-decay energy E_α = 7552(11) keV and half-life $T_{1/2} = (1.7^{+1.1}_{-0.5})$ ms was assigned to originate from the equivalent $1/2^+$ state in ^{191}At..." In addition, Kettunen et al. measured the half-life of an isomeric state ($2.1^{+0.4}_{-0.3}$ s).

Adapted from reference (2013Fr09)

2003Ke08 H. Kettunen, T. Enqvist, T. Grahn, P. T. Greenlees *et al.*, Eur. Phys. J. A **17**, 537 (2003).

2013Fr09 C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 497 (2013).

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