

^{130}Eu

The 2004 paper “Proton decay of the highly deformed odd-odd nucleus ^{130}Eu ” by Davids et al. reported the discovery of ^{130}Eu (2004Da04). A ^{58}Ni target was bombarded with a 432 MeV ^{78}Kr beam from the Argonne ATLAS accelerator system and ^{130}Eu was formed in the fusion evaporation reaction $^{58}\text{Ni}(^{78}\text{Kr},p5n)$. Reaction products were separated with the Fragment Mass Analyzer and implanted in a double-sided silicon strip detector where subsequent protons were recorded. “A peak is clearly visible around ~ 1 MeV containing six events, with no background. The events are too short lived to be β related, and are too low in energy to be from an α decay. The peak is assigned to the new proton emitter ^{130}Eu .” The observed half-life was 900_{-290}^{+490} μs . Preliminary results had been published in a conference proceeding (2002Ma61).

Adapted from reference (2013Ma01)

- 2002Ma61 H. Mahmud, C. N. Davids, P. J. Woods, T. Davinson *et al.*, Eur. Phys. J. A **15**, 85 (2002).
2004Da04 C. N. Davids, P. J. Woods, H. Mahmud, T. Davinson *et al.*, Phys. Rev. C **69**, 011302 (2004).
2013Ma01 E. May and M. Thoennessen, At. Data Nucl. Data Tables **99**, 1 (2013).

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