^{285}Fl

Ellison et al. described the discovery of ^{285}Fl in 2010 in "New superheavy element isotopes: ^{242}Pu(^{48}Ca, 5n)^{285}114" (2010El06). $^{242}PuO_2$ targets were bombarded with a 247 MeV ^{48}Ca beams from the Berkeley 88-in. cyclotron and ^{285}Fl was produced in (5n) fusion-evaporation reactions. Residues were separated with the Berkeley Gas-Filled Separator BGS and detected in multiwire proportional counters and silicon strip detectors. Subsequent radioactive decay events were recorded in the strip detectors and additional silicon chips forming a five-sided box. "Element-114 atoms were identified by detecting time- and position-correlated events corresponding to their implantation and subsequent radioactive decay chain, terminating with the detection of a SF event. [The table] contains the times, energies, and positions of the two correlated decay chains observed in the experiment. Based on a comparison with predicted decay properties, the first event was assigned to the decay of ^{285}114 and its daughters." A single decay chain was observed. A previously reported observation of ^{285}Fl (1999Ni03) was later retracted (2002Ni10).

Adapted from reference (2013Th02)

1999Ni03 V. Ninov, K. E. Gregorich, W. Loveland, A. Ghiorso *et al.*, Phys. Rev. Lett. **83**, 1104 (1999).

2002Ni10 V. Ninov, K. E. Gregorich, W. Loveland, A. Ghiorso *et al.*, Phys. Rev. Lett. **89**, 039901 (2002).

2010El06 P. A. Ellison, K. E. Gregorich, J. S. Berryman, D. L. Bleuel *et al.*, Phys. Rev. Lett. **105**, 182701 (2010).

2013Th02 M. Thoennessen, At. Data Nucl. Data Tables **99**, 312 (2013).

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