^{261}Sg

Münzenberg et al. discovered ^{261}Sg in the 1984 paper "The identification of element 108" (1984Mu17). A 5.02 MeV/u ^{58}Fe beam from the GSI heavy ion accelerator UNILAC bombarded an enriched ^{208}Pb target and ^{265}Hs was formed in the (1n) fusion-evaporation reaction. ^{261}Sg was then populated by α-decay. Recoil products were separated with the velocity filter SHIP and implanted in an array of seven position sensitive surface barrier detectors which also measured the subsequent α-decay and spontaneous fission. "In particular, the decay of the daughter was seen with full energy in the second chain. The observed energy of (9.57±0.03) MeV is in excellent agreement with that of the isotope ^{261}106 - which has a prominent transition of (9.56±0.03) MeV - unambiguously identified in 8 events by correlation to the daughter ^{257}104 in a companion experiment using the reaction ^{208}Pb(^{54}Cr,1n)^{261}106. The half-life of the three daughter decays of ($0.11^{+0.14}_{-0.04}$) s overlaps with the $0.26^{+0.11}_{-0.06}$) s half-life obtained for ^{261}105." The results of the companion experiment were published a year later (1985Mu11).

Adapted from reference (2013Th02)

1984Mu17 G. Munzenberg, P. Armbruster, H. Folger, F. P. Hessberger *et al.*, Z. Phys. A **317**, 235 (1984).

1985Mu11 G. Munzenberg, S. Hofmann, H. Folger, F. P. Hessberger *et al.*, Z. Phys. A **322**, 227 (1985).

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

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