^{152}Pm

^{152}Pm was discovered by Wille and Fink in the 1958 paper "Two new promethium isotopes; cross sections of some samarium isotopes for 14.8-MeV neutrons" (1958Wi42). Enriched $^{152}Sm_2O_3$ was bombarded with 14.8-MeV neutrons produced in the reaction ^{3}H(d,n)^{4}He from the Arkansas Cockroft-Walton accelerator. Decay and absorption curves were measured. "When highly enriched samples of Sm^{152} and Sm^{154} are irradiated with 14.8-MeV neutrons, activities having half-lives of 6.5±0.5 min and 2.5 ±0.5 min are observed. On the basis of yields and cross bombardments, these are assigned to new isotopes Pm^{152} and Pm^{154}, respectively." The 6.5(5) min half-life for ^{152}Pm corresponds to an isomeric state. The ground state was first observed eleven years later by Wakat and Griffin (1969Wa25).

Adapted from reference (2012Ma48)

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