^{149}Er

^{149}Er was observed by Toth et al. and the results were published in the 1984 paper "Beta-delayed proton activities: ^{147}Dy and ^{149}Er" (1984To07). A 162 MeV ^{12}C beam from the Berkeley 88-in. cyclotron bombarded a samarium oxide target enriched in ^{144}Sm and ^{149}Er was produced in the (7n) fusion-evaporation reaction. A helium gas-jet apparatus was used to transport the recoil products to a collection box where γ-rays, X-rays and delayed protons were measured. "Therefore, we assign the 9-sec activity to the β decay of the hitherto unidentified isotope ^{149}Er. Further, we assume that the 9-sec half-life is due primarily (though not exclusively) to the $h_{11/2}$ isomer rather than the $s_{1/2}$ ground state, since the high-spin species should be the predominant product in a heavy-ion induced compound nuclear reaction." The internal transition γ-rays of 630.5(3) keV and 111.0(1) keV populating the ground state were measured a year later by Toth et al. (1985To11). The half-life of the ground state (4(2) s) was measured five years later by Firestone et al. (1989Fi09).

Adapted from reference (2013Fr10)

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