

¹⁴¹Sm

¹⁴¹Sm was discovered in 1967 by Herrmann et al. as reported in the paper “Neue Isotope ¹⁴¹Sm und ¹⁴⁰Sm” (1967He23). The Dubna synchrocyclotron was used to bombard metallic erbium with 660 MeV protons. Resulting activities were measured with MST-17 end-window counters following chemical separation. “The new isotopes of samarium ¹⁴¹Sm and ¹⁴⁰Sm with the half-life-times of (22.5±1.4) minutes and (13.7±0.8) minutes respectively have been obtained by bombarding metallic erbium with 660 MeV protons.” The half-life for ¹⁴¹Sm corresponds to an isomeric state and the ground state with a half-life of 11(1) min was observed three years later by Arlt et al. (1970Ar17). Previous half-life measurement for ¹⁴¹Sm of 17.5–22 d (1956Pa62) and 40–70 min (1959LaZZ) were incorrect. A specific search for the former half-life was unsuccessful (1966La23).

Adapted from reference (2013Ma01)

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