^{207}Th

^{207}Th was discovered in the 2022 paper "New isotope ^{207}Th and odd-even staggering in alpha-decay energies for nuclei with Z $>$ 82 and N $<$ 126" by Yang et al. (2022Ya15) Isotopically enriched ^{176}Hf (116−360μg/cm^2) were irradiated with 197−199 MeV ^{36}Ar beams accelerated by the Sector Focusing Cyclotron of the Heavy Ion Research Facility in Lanzhou (HIRFL), China. Reaction products were separated by the Spectrometer for Heavy Atoms and Nuclear Structure (SHANS) and implanted in three 300-μm-thick position-sensitive silicon strip detectors (PSSDs). Subsequent correlated α decays were recorded in these and eight additional non-position-sensitive silicon detectors surrounding the implantation detectors. "The α decay of ^{207}Th, measured with an α-particle energy of 8167(21) keV and a half-life of $9.7^{+46.6}_{-4.4}$ ms, is assigned to originate from the ground state."

Adapted from reference (2023Th03)

2022Ya15 H. B. Yang, Z. G. Gan, Z. Y. Zhang, M. H. Huang *et al.*, Phys. Rev. C **105**, L051302 (2022).

2023Th03 M. Thoennessen, Int. J. Mod. Phys. E **32**, 2330001 (2023).

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