^{205}Ac

In 2014, Zhang et al. published the first observation of ^{205}Ac in "α decay of the new neutron-deficient isotope ^{205}Ac" (2014Zh03). A ^{169}Tm target was bombarded with a 198 MeV ^{40}Ca beam from the Sector-Focusing Cyclotron of the Heavy Ion Research Facility in Lanzhou and ^{205}Ac in the 4n fusion evaporation reaction. ^{205}Ac were separated with the gas-filled recoil separator SHANS (Spectrometer for Heavy Atoms and Nuclear Structure) and implanted in a position sensitive silicon detector which also detected the subsequently emitted α particles. "The α decay energy and half-life of ^{205}Ac were determined to be 7.935(30) MeV and 20^{+97}_{-9} ms, respectively."

Adapted from reference (2015Th03)

2014Zh03 Z. Y. Zhang, Z. G. Gan, L. Ma, L. Yu *et al.*, Phys. Rev. C **89**, 014308 (2014).

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Please cite this abstract as: "FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152"