^{224}Np

Huang et al. reported the discovery of ^{224}Np in the 2018 paper "Identification of the new isotope ^{224}Np" (2018Hu13). The Sector-Focusing Cyclotron (SFC) of the Heavy Ion Research Facility in Lanzhou (HIRFL) accelerated a ^{40}Ar beam to 188 MeV which then bombarded a 460 μg/cm^2 thick ^{187}Re target. The gas-filled recoil separator, Spectrometer for Heavy Atoms and Nuclear Structure (SHANS) selected ^{224}Np residues from the fusion-evaporation reaction ^{187}Re(^{40}Ar,3n). The isotopes were implanted into a double-sided silicon strip detector which also recorded subsequent α-decays. "Two α-decay branches of ^{224}Np were identified through spatial and temporal correlation measurements, populating two low-lying isomeric states in ^{220}Pa. Their energies and half-life were determined to be $E_{\alpha 1}$ = 8868(62) keV, E_{α_2} = 9137(20) keV, and $T_{1/2}$ = 38^{+26}_{-11} μs respectively."

Adapted from reference (2019Th02)

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