^{216}U

Ma et al. described the first observation of ^{216}U in the 2015 paper entitled "α-decay properties of the new isotope ^{216}U" (2015Ma37). ^{216}U was formed in the fusion evaporation reaction ^{180}W(^{40}Ar,4n)^{216}U with an 189.5 MeV ^{40}Ar beam delivered from the Sector-Focusing Cyclotron of the Heavy Ion Research Facility in Lanzhou, China. The gas-filled recoil separator for Heavy Atoms and Nuclear Structure (SHANS) was used to separate evaporation residues which were implanted in a position-sensitive silicon strip detector (PSSD). ^{216}U was identified by detecting correlated α particles in the PSSD or in a box of eight silicon detectors surrounding the PSSD in the backward direction. "Two α-decaying states with E_α = 8384(30) keV, $T_{1/2} = 4.72^{+4.72}_{-1.57}$ ms for the ground state and E_α = 10582(30) keV, $T_{1/2} = 0.74^{+1.34}_{-0.29}$ ms for an isomeric state were identified in ^{216}U." Less than a month later, Devajara et al. reported their observation of ^{216}U independently (2015De22).

Adapted from reference (2016Th03)

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