^{219}Pa

Liu et al. reported the observation of ^{219}Pa in the 2005 paper "Decay spectroscopy of suburanium isotopes following projectile fragmentation of ^{238}U at 1 GeV/u" (2005Li17). A beam of 1 GeV/u ^{238}U impinged on a beryllium target at GSI, Darmstadt. Reaction products were separated by the FRS fragment separator and implanted into a Si telescope for decay measurement. "The implantation decay correlations and yield measurements were performed starting with the FRS setting for ^{224}Pa near the stability line, and moving towards the proton drip-line. Particle identification for heavy suburanium isotopes was achieved unambiguously for FRS settings down to ^{214}Pa... [Figure:] Yields for fully stripped protactinium, thorium and actinium isotopes observed at the final focus... The dips at ^{219}Pa($T_{1/2}$ = 53 ns),... are due to the fact that their half-lives are shorter than their time of flight from target to S4." The quoted half-life was from a conference proceeding (1987FaZS).

Adapted from reference (2013Fr03)

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