^{210}Pa

Nature Communications published the discovery of ^{210}Pa in 2025 by Zhang et al. in "Discovery of the α-emitting isotope ^{210}Pa" (2025Zh34). A 212 MeV ^{40}Ca beam accelerated at the China Accelerator Facility for Superheavy Elements (CAFE2) in Lanzhou was used to populate ^{210}Pa with the fusion evaporation reaction ^{175}Lu(^{40}Ca,5n). The residues were separated and identified with the gas-filled recoil separator SHANS2 and then implanted in a double-sided silicon strip detector (DSSD). Subsequent α decays were measured in coincidence in the DDSD and six surrounding single-sided strip detectors. "The measured α-particle energy of E_α = 8284(15) keV and half-life of $T_{1/2}6.0^{+1.5}_{-1.1}$ ms of ^{210}Pa allow us to extend the α-decay systematics and test the predictive power of theoretical models for heavy nuclei near the proton drip line." The cross section for this reaction had been published a year earlier without any details about the ^{210}Pa properties (2024Zh04).

2024Zh04 M. M. Zhang, Z. Y. Zhang, Z. G. Gan, N. Wang *et al.*, Phys. Rev. C **109**, 014608 (2024).

2025Zh34 M. M. Zhang, J. G. Wang, L. Ma, Z. G. Gan *et al.*, Nat. Commun. **16**, 5003 (2025).

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