

^{241}U

The first observation of ^{241}U was reported by Niwase et al. in the 2023 paper “Discovery of New Isotope ^{241}U and Systematic High-Precision Atomic Mass Measurements of Neutron-Rich Pa-Pu Nuclei Produced via Multinucleon Transfer Reactions” (2023Ni04). The RIKEN Ring Cyclotron accelerated ^{238}U ions to 10.75 MeV/nucleon which were then focussed on a rotating 12.5 mg/cm² enriched ^{198}Pt target. ^{241}U was produced in the multinucleon transfer reaction $^{198}\text{Pt}(^{238}\text{U}, ^{241}\text{U})$ and identified with the KEK Isotope Separation System (KISS). The mass of ^{241}U was measured with a multireflection time-of-flight mass spectrograph (MRTOF MS). “The first identification of $^{241}_{92}\text{U}$, produced by an MNT reaction in the $^{238}_{92}\text{U} + ^{198}_{78}\text{Pt}$ system, was made by mass spectrometry.”

Adapted from reference (2024Th02)

2023Ni04 T. Niwase, Y. X. Watanabe, Y. Hirayama, M. Mukai *et al.*, Phys. Rev. Lett. **130**, 132502 (2023).

2024Th02 M. Thoennessen, Int. J. Mod. Phys. E **33**, 2430001 (2024).

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