^{121}Pr

^{121}Pr was first observed in 2005 by Robinson et al. with the results published in their paper "Ground state proton radioactivity from ^{121}Pr: When was this exotic nuclear decay mode first discovered?" (2005Ro19). A ^{92}Mo target was bombarded with a 240 MeV ^{36}Ar beam from the ATLAS accelerator facility at Argonne. ^{121}Pr was formed in the fusion-evaporation reaction ^{92}Mo(^{36}Ar,1p6n) and identified at the end of the Argonne Fragment Mass Analyzer. "Ground-state proton radioactivity has been identified from ^{121}Pr. A transition with a proton energy of E_p = 882(10) keV [Q_p = 900(10) keV] and half-life $t_{1/2} = 10^{+6}_{-3}$ ms has been observed and is assigned to the decay of a highly prolate deformed $3/2^+$ or $3/2^-$ Nilsson state." A previously reported half-life of 1 s (1972Bo28) was incorrect.

Adapted from reference (2012Ma48)

1972Bo28 D. D. Bogdanov, V. P. Bochin, V. A. Karnaukhov, and L. A. Petrov, Sov. J. Nucl. Phys. **16**, 491 (1973).

2005Ro19 A. P. Robinson, P. J. Woods, D. Seweryniak, C. N. Davids *et al.*, Phys. Rev. Lett. **95**, 032502 (2005).

2012Ma48 E. May and M. Thoennessen, At. Data Nucl. Data Tables **98**, 960 (2012).

Please cite this abstract as: "FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152"