^{48}Ar

In 2004, Grévy et al. identified ^{48}Ar in "Beta-decay half-lives at the N = 28 shell closure" (2004Gr20). A 60 MeV/u ^{48}Ca beam was fragmented on a beryllium target at GANIL and the projectile-like fragments were separated by the zero degree doubly achromatic LISE3 spectrometer. Beta-particles were measured with two plastic scintillators correlated with the implantation of the fragments in a double-sided Si-strip detector. "We report here on the measurements of the β-decay half-lives of nuclei between ^{36}Mg (N = 24) and ^{48}Ar (N = 30)." The observed half-life value was 475(40) ms. Guillemaud-Mueller et al. reported the observation of even more neutron-rich argon isotopes ($^{49-51}$Ar) earlier (1989Gu03), but did not mention or show any evidence for ^{48}Ar referring to an internal report (1988Zh19).

Adapted from reference (2012Th10)

1988Zh19 W. Zhan, G. Audi, L. Bianchi, A. Cunsolo *et al.*, Nouvelles de GANIL **25**, 22 (1988).

1989Gu03 D. Guillemaud-Mueller, Yu. E. Penionzhkevich, R. Anne, A. G. Artukh *et al.*, Z. Phys. A **332**, 189 (1989).

2004Gr20 S. Grevy, J. C. Angelique, P. Baumann, C. Borcea *et al.*, Phys. Lett. B **594**, 252 (2004).

2012Th10 M. Thoennessen, At. Data Nucl. Data Tables **98**, 933 (2012).

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