^{164}Ir

The first observation of ^{164}Ir was published by Drummond et al. in the 2014 paper entitled "α decay of the $\pi h_{11/2}$ isomer in ^{164}Ir" (2014Dr02). An isotopically enriched ^{92}Mo target was bombarded with ^{78}Kr beams of 428, 435 and 450 MeV from the K120 cyclotron at Jyväskylä. The recoils from the fusion evaporation reaction ^{92}Mo(^{78}Kr,p5n)^{164}Ir were separated with the gas-filled separator RITU and identified in the GREAT spectrometer. "The yield of approximately 100 ^{164}Ir proton-decay events obtained in the present work allowed the half-life to be determined with improved precision. A half-life of 70$\pm$10 μs was obtained by using the method of maximum likelihood." Drummond et al. did not consider the observation a discovery quoting previous results published in conference proceedings (2001Ke05, 2002Ma61). The measured half-life corresponds to the decay of an isomeric state and the ground state has not been observed yet.

Adapted from reference (2015Th03)

2001Ke05 H. Kettunen, P. T. Greenlees, K. Helariutta, P. Jones *et al.*, Acta Phys. Pol. B **32**, 989 (2001).

2002Ma61 H. Mahmud, C. N. Davids, P. J. Woods, T. Davinson *et al.*, Eur. Phys. J. A **15**, 85 (2002).

2014Dr02 M. C. Drummond, D. O'Donnell, R. D. Page, D. T. Joss *et al.*, Phys. Rev. C **89**, 064309 (2014).

2015Th03 M. Thoennessen, Int. J. Mod. Phys. E **24**, 1530002 (2015).

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