# $^{171}$Au

Davids et al. first observed $^{171}$Au at Argonne National Laboratory in 1997 reported in "New proton radioactivities $^{165,166,167}$Ir and $^{171}$Au" (1997Da07). The fusion-evaporation reaction $^{96}$Ru($^{78}$Kr,p2n) at a beam energy of 397 MeV was used. "The proton emitters were each identified by position, time, and energy correlations between the implantation of a residual nucleus into a double-sided silicon strip detector, the observation of a decay proton, and the subsequent observation of a decay alpha particle from the daughter nucleus." The half-life was determined to be 1.02(15) ms and corresponds to an isomeric state. The ground state half-life ($17^{+9}_{-7}\mu$s) was measured for the first time two years later by Poli et al. (1999Po09).

Adapted from reference (2010Sc35)


1997Da07 C. N. Davids, P. J. Woods, J. C. Batchelder, C. R. Bingham *et al.*, Phys. Rev. C **55**, 2255 (1997).

1999Po09 G. L. Poli, C. N. Davids, P. J. Woods, D. Seweryniak *et al.*, Phys. Rev. C **59**, R2979 (1999).

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