^{165}Ir

^{165}Ir was discovered by Davids et al. as reported in the 1997 paper "New proton radioactivities ^{165,166,167}Ir and ^{171}Au" (1997Da07). A 384 MeV ^{78}Kr beam from the ATLAS accelerator at Argonne National Laboratory was used to form ^{165}Ir in the fusion-evaporation reaction ^{92}Mo(^{78}Kr,p4n). Charged particles were detected in double-sided silicon strip detectors at the end of the Fragment Mass Analyzer. "One proton group is seen having an energy of 1707(7) keV and a half-life of 0.29(6) ms. Alpha events with energy 6715(7) keV were also observed, correlated with two generations of known alphas from ^{161}Re and ^{157}Ta. The ^{165}Ir alpha half-life was measured to be 0.39(16) ms. Since one proton and one alpha group with similar half-lives were observed in the decay of ^{165}Ir, both particles most likely come from the same state. The mean half-life is 0.30(6) ms."

This state is probably an isomer and the ground state has not been observed yet.

Adapted from reference (2012Ro36)

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

2012Ro36 R. Robinson and M. Thoennessen, At. Data Nucl. Data Tables **98**, 911 (2012).

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