# $^{122}$In

The discovery of $^{122}$In by Kantele and Karras was reported in the 1963 publication "New Isotope In$^{122}$" (1963Ka02). A 14-15 MeV beam of neutrons bombarded a $^{122}$Sn enriched target at the University of Arkansas 400 kV Cockcroft-Walton accelerator and produced $^{122}$In in the (n,p) charge exchange reaction. $\gamma$- and $\beta$-radiation and $\gamma$-$\gamma$ coincidences were measured. "In connection with a systematic study of the level structure of even tin isotopes resulting from the decay of neutron-excess indium isotopes, a new 7.5-sec activity was found and was assigned to the hitherto unknown isotope In$^{122}$." This half-life corresponds to an isomeric state and the ground state half-life of 1.5(3) s was reported eight years later by Takahashi et al. (1971Ta07).

Adapted from reference (2011Am01)


1963Ka02 J. Kantele and M. Karras, Phys. Rev. **129**, 270 (1963).

1971Ta07 K. Takahashi, D. L. Swindle, and P. K. Kuroda, REPT-ORO-3235-66 **4**, 517 (1971).

2011Am01 S. Amos, J. L. Gross, and M. Thoennessen, At. Data Nucl. Data Tables **97**, 383 (2011).



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