

$^{124}\text{Pd}$  IT decay ( $>20\ \mu\text{s}$ ) 2012Ka36

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	ENSDF	15-Jan-2014

Parent:  $^{124}\text{Pd}$ :  $E=62.2+x\ 17$ ;  $T_{1/2}>20\ \mu\text{s}$ ; %IT decay=100.0

$^{124}\text{Pd}$ -%IT decay: %IT decay mode assumed to be 100%.

**2012Ka36:**  $^{238}\text{U}$  beam at  $E=345\ \text{MeV/nucleon}$  provided by the RIBF accelerator complex at RIKEN facility, and incident on a  $^9\text{Be}$  target. Fission fragments were separated and analyzed by BigRIPS separator, transported to focal plane of ZeroDegree spectrometer and finally implanted in an aluminum stopper. Particle identification was achieved by  $\Delta E$ -tof- $B\rho$  method. Delayed gamma rays from microsecond isomer were detected by three clover-type HPGe detectors. Measured  $E_\gamma$ , isomer half-life. Details of the decay scheme are unknown.

 $^{124}\text{Pd}$  Levels

E(level)	$T_{1/2}$	Comments
0+x		
62.2+x 17	$>20\ \mu\text{s}$	Number of implanted fragments= $3.8\times 10^4$ . E(level): energy of 62.2 keV for the isomer stated in 2012Au07 seems too low in view of first $2^+$ state in $^{124}\text{Pd}$ at 590 keV. Absolute energy of this isomer was not measured in 2012Ka36. $T_{1/2}$ : from $\gamma(t)$ method; estimated because $\gamma$ -ray events were equally distributed in the $20\text{--}\mu\text{s}$ range of the time spectrum (2012Ka36).

 $\gamma(^{124}\text{Pd})$ 

$E_\gamma$	$E_i(\text{level})$	$E_f$	Comments
62.2 17	62.2+x	0+x	$E_\gamma$ : statistical uncertainty=1.6 keV and systematic uncertainty=0.5 keV combined in quadrature.

 $^{124}\text{Pd}$  IT decay ( $>20\ \mu\text{s}$ ) 2012Ka36Decay Scheme

%IT=100.0

