^{95}Pd IT decay 2004DoZZ,1982Ku15

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, G. Mukherjee, A. A. Sonzogni	NDS 111, 2555 (2010)	30-Jun-2009

Parent: ^{95}Pd: E=1875.2 *8*; J^{π}=(21/2$^+$); $T_{1/2}$=13.3 s *3*; %IT decay=11 *3*

The 13-s isomeric state decays by γ, β^+ and β^+p. The β^+ and β^+p decays were studied in 1980No05 and 1982Ku15. The IT decay scheme is based on 2004DoZZ, which observed the 1351 γ and 524 γ in coincidence, as well as the latter γ in anti-coincidence with positrons.

The 1261.8 level and the 1261.8, 89.3 gammas were added to the decay scheme of 2004DoZZ to complete the decay scheme.

α: Additional information 1.

^{95}Pd Levels

E(level)	J^{π} †	$T_{1/2}$ †	Comments
0.0	9/2$^+$	5 s *3*	%ε+%β^+=100
1261.80 *8*	(11/2$^+$)		
1351.11 *10*	(13/2$^+$)		
1875.11 *14*	(21/2$^+$)	13.3 s *3*	%ε+%β^+=89 *3*; %β^+p=0.93 *15* %IT from I(524)=10.6 *3*, and I(1351)=100 *3* in 1982Ku15. The intensity of the 1351 γ's has a 10.6x1.0393=11.0 *3* component due to the ^{95}Pd γ, and the I(1351) in ^{95}Rh following ε+β^+ decay is equal to 89 3..

† From the Adopted Levels.

γ(^{95}Pd)

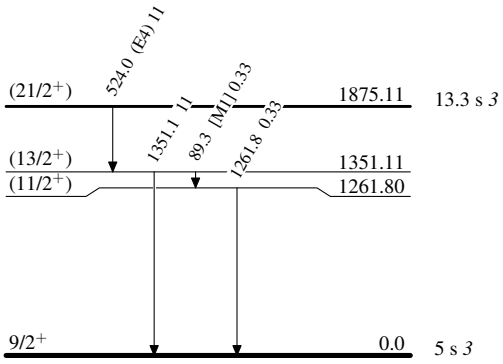
E_γ	E_i(level)	J_i^{π}	E_f	J_f^{π}	Mult.	α	$I_{(\gamma+ce)}$ †	Comments
89.3 *7*	1351.11	(13/2$^+$)	1261.80	(11/2$^+$)	[M1]	0.522 *14*	2 *1*	α(K)=0.454 *12*; α(L)=0.0560 *15*; α(M)=0.0106 *3*; α(N)=0.00177 *5*; α(N+..)=0.00177 *5* I_γ: from Adopted Gammas branching ratios and assuming M1 multipolarity. E_γ: from Adopted Gammas.
524.0 *1*	1875.11	(21/2$^+$)	1351.11	(13/2$^+$)	(E4)	0.0395	100	ce(K)/(γ+ce)=0.0308 *5*; ce(L)/(γ+ce)=0.00588 *9*; ce(M)/(γ+ce)=0.001138 *16*; ce(N)/(γ+ce)=0.000183 *3* E_γ: from 1982Ku15, other: 524.0 *4* (2004DoZZ). Mult.: from B(E4)(W.u.)=0.9 *3* (RUL).
1261.8 *1*	1261.80	(11/2$^+$)	0.0	9/2$^+$			2 *1*	E_γ: from Adopted Gammas. I_γ: by taking it equal to Iγ(89.3).
1351.1 *1*	1351.11	(13/2$^+$)	0.0	9/2$^+$			98 *6*	E_γ: from 1982Ku15, for ^{95}Rh and ^{95}Pd gamma rays. I_γ: from Adopted Gammas branching ratios, because of the high energy of the gamma ray, conversion is expected to be negligible.

† For absolute intensity per 100 decays, multiply by 0.11 *3*.

^{95}Pd IT decay 2004DoZZ,1982Ku15

Decay Scheme

%IT=11 *3*



$^{95}_{46}Pd_{49}$