^{95}Pd β^+p decay (13.3 s) 1982No06,1982Ku15

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	D. Abriola(a), A. A. Sonzogni	NDS 107, 2423 (2006)	1-Jan-2006

Parent: ^{95}Pd: E≈2000; J^π=(21/2$^+$); $T_{1/2}$=13.3 s *3*; Q(β^+p)=5.13×10^3 *SY*; %β^+p decay=0.90 *16*

All information is from 1982No06, except as noted. See ^{58}Ni(^{40}Ca,n2p) in (HI,xnγ) for experimental details.

The singles proton spectrum and delayed pγ-coincidence spectrum are the same within statistics indicating that the contamination of the proton spectrum by other β-delayed proton emitters is small and the final state in ^{94}Ru populated after proton emission is the 2645. Feeding of other states in ^{94}Ru was not observed by 1982No06.

From the prompt pγ-coincidence spectrum, feeding of higher excited states is <20% for each of them compared to the feeding of the (8$^+$) state.

^{94}Ru Levels

E(level)	J^π[†]	$T_{1/2}$[†]
0	0$^+$	51.8 min *6*
1430.7	2$^+$	
2187	4$^+$	
2498	6$^+$	65 ns *2*
2645	8$^+$	71 μs *4*

[†] From Adopted Levels.

γ(^{94}Ru)

E_γ[†]	I_γ[‡@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[#]	α[&]	Comments
146.3	74.91	2645	8$^+$	2498	6$^+$	E2	0.335	α=0.335; α(K)=0.277; α(L)=0.0471; α(M)=0.00873; α(N+..)=0.00155
311.6	97.68	2498	6$^+$	2187	4$^+$	E2	0.0237	α=0.0237; α(K)=0.02039; α(L)=0.00270; α(M)=0.00050
756	100	2187	4$^+$	1430.7	2$^+$	(E2)		
1430.7	100	1430.7	2$^+$	0	0$^+$	(E2)		

[†] From pγ-coincidence spectrum. No other γ's were observed by 1982No06.
[‡] From the adopted branching ratios and I(p)=100 to (8$^+$) state.
[#] From adopted gammas.
[@] For absolute intensity per 100 decays, multiply by 0.0090 *16*.
[&] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

Delayed Protons (^{94}Ru)

E(p)	E(^{94}Ru)	I(p)[†]
4.5×10^3	2645	100

[†] For absolute intensity per 100 decays, multiply by 0.0090 *16*.

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Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays