^{95}Rh ε decay (1.96 min) 1981Gr20,1979Zy03,1975We03

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}Rh: E=543.3 *3*; $J^\pi=(1/2)^-$; $T_{1/2}$=1.96 min *4*; Q(ε)=5112 *12*; %ε+%$β^+$ decay=12 *5*

^{95}Rh-%ε+%$β^+$ decay: %ε+%$β^+$=12 *5* was determined by comparing Iγ(^{95}Rh 543γ) to intensities of γ's following ε decay assuming mult(^{95}Rh 543γ)=M4 (1975We03). Other: 15 from %Iγ(^{95}Rh 543γ)=77 (1981Gr20) and α(^{95}Rh 543γ)=0.102.

1975We03: Measured γ's, $β^+$'s, γγ-coin, βγ-coin, γ(t); Ge(Li), scin.

1981Gr20 and 1979Zy03 measured γ's; Ge(Li).

^{95}Ru Levels

E(level)	J^π[†]	$T_{1/2}$[†]
0.0	$5/2^+$	1.643 h *13*
787.7 *4*	$1/2^+$	
3186.3 *8*	$(3/2)^-$	
3407.2 *5*	$(3/2)^-$	
3824.5? *7*	$(3/2)^-$	

[†] From the Adopted Levels.

ε,$β^+$ radiations

See 1981Gr20 for the deduced β-strength functions.

E(decay)	E(level)	Iβ+ [†]	Iε[†]	Log *ft*	I(ε+β+)[†]	Comments
(1831[‡] *12*)	3824.5?	1.14 *6*	9.56 *19*	4.75 *19*	10.7 *2*	av Eβ=359.2 *53*; εK=0.775 *5*; εL=0.0959 *6*; εM+=0.02259 *13*
(2248 *12*)	3407.2	5.5 *4*	11.3 *9*	4.86 *19*	16.8 *13*	av Eβ=543.0 *54*; εK=0.583 *7*; εL=0.0719 *8*; εM+=0.01693 *18*
(2469 *12*)	3186.3	3.4 *6*	4.0 *7*	5.39 *20*	7.4 *13*	av Eβ=641.7 *54*; εK=0.473 *6*; εL=0.0582 *8*; εM+=0.01369 *17*
(4868 *12*)	787.7	61 *5*	3.6 *3*	6.03 *19*	65 *5*	av Eβ=1757.7 *58*; εK=0.0486 *5*; εL=0.00593 *6*; εM+=0.001395 *13*

[†] For absolute intensity per 100 decays, multiply by 0.12 *5*.

[‡] Existence of this branch is questionable.

γ(^{95}Ru)

Iγ normalization: From ΣIγ(to g.s.)=100. ΔJ^π=(2),yes.

E_γ[†]	I_γ[†#]	E_i(level)	J_i^π	E_f	J_f^π	Comments
787.7 *4*	9.7[‡] *7*	787.7	$1/2^+$	0.0	$5/2^+$	E_γ: other: 783 (1981Gr20).
[x]2821.0	1.0 *1*					
3186.2 *8*	1.1 *2*	3186.3	$(3/2)^-$	0.0	$5/2^+$	
3407.1 *5*	2.5 *2*	3407.2	$(3/2)^-$	0.0	$5/2^+$	
[x]3757.4 *20*	1.0 *2*					
3824.4[@] *7*	1.6 *3*	3824.5?	$(3/2)^-$	0.0	$5/2^+$	

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^{95}Rh ε decay (1.96 min) 1981Gr20,1979Zy03,1975We03 (continued)

γ(^{95}Ru) (continued)

E_γ [†]	I_γ [†#]	E_i(level)
[x]4207.8 *20*	0.71 *15*	
[x]4242.0 *20*	0.84 *15*	
[x]4336.5 *20*	1.2 *2*	

[†] From 1975We03, except as noted. Iγ relative to Iγ(^{95}Rh 543γ)=100.
[‡] %Iγ(783γ)=3.8 and %Iγ(2821γ)=3.4 (1981Gr20) are discrepant with %Iγ(787γ)=8.1 *35* and %Iγ(2821γ)=0.8 *4* derived from the present normalization and the Iγ′s of 1975We03.
[#] For absolute intensity per 100 decays, multiply by 0.8 *3*.
[@] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

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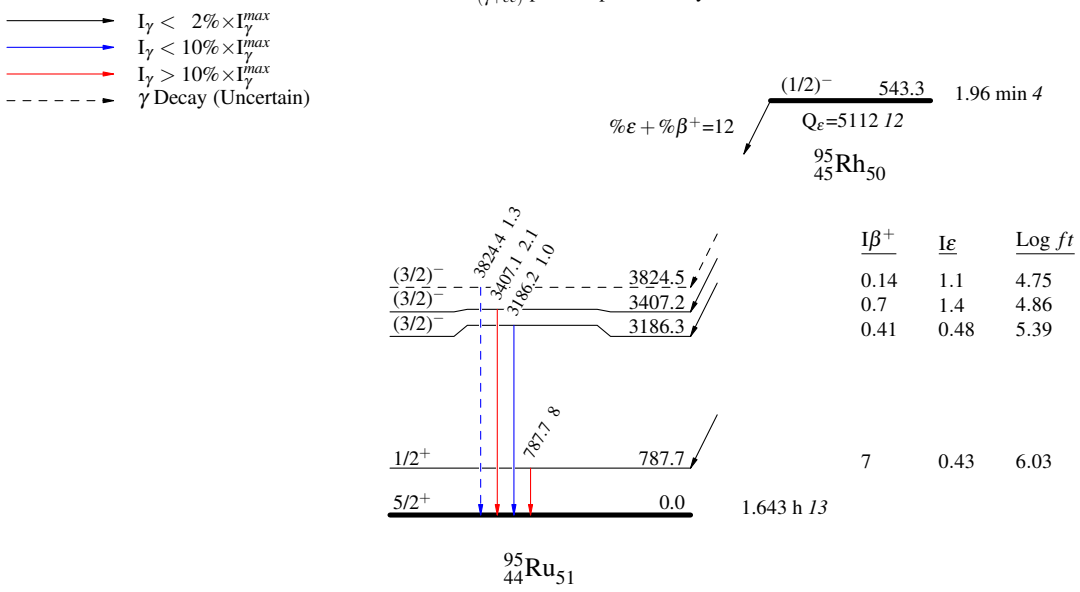
Decay Scheme

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



	Iβ+	Iε	Log *ft*
3824.5	0.14	1.1	4.75
3407.2	0.7	1.4	4.86
3186.3	0.41	0.48	5.39
787.7	7	0.43	6.03