Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde	NDS 121, 1 (2014)	20-Jun-2014

Q(β^-)=7042 *15*; S(n)=6113 *15*; S(p)=1.035×10^4 *10*; Q(α)=−7770 *21* 2012Wa38

^{54}V Levels

Cross Reference (XREF) Flags

- A ^{48}Ca(^{9}Be,2npγ)
- B ^{54}Cr(t,^{3}He)
- C ^{54}V IT decay (0.9 μs)
- D ^{54}Ti β^- decay

E(level)†	J$^\pi$#	T$_{1/2}$	XREF	Comments
0.0	3$^+$	49.8 s *5*	ABCD	%β^-=100 J$^\pi$: β branches to 4$^+$ levels are allowed, J$^\pi$=3$^+$, 4$^+$, or 5$^+$; log *ft*=7.0 to 2$^+$ rules out J$^\pi$=4$^+$,5$^+$. T$_{1/2}$: from weighted average of T$_{1/2}$ from six transitions in ^{54}V β^-decay (1977Na17). Other: 43 s *3* (1970Wa14).
108.0 *10*	(5)$^+$	0.9 μs *5*	BC	%IT=100 XREF: B(116). T$_{1/2}$: from 1998Gr14. J$^\pi$: from E2 γ to 3$^+$.
244.65 *11*	(4)		AB	
291 *10*			B	
447 *8*			B	
495 *10*			B	
540 *8*			B	
703 *10*			B	
745 *8*			B	
770 *10*			B	
847 *10*			B	
9.0×10^2 *10*	1$^+$		D	J$^\pi$: logf=5.02 from 0$^+$ In ^{54}Ti β^-decay.
940‡ *15*			B	
968 *15*			B	
1208‡ *20*			B	
1214.61? *19*	(5)		A	
1540‡ *20*			B	
1675 *15*			B	
1752 *15*			B	
1828.9? *3*	(6)		A	
1865 *15*			B	
1934‡ *20*			B	
1987‡ *15*			B	
2123 *15*			B	
2297.9 *3*	(7)	>0.35 ps	A	T$_{1/2}$: deduced from DSAM in (^{9}Be,2pnγ).
2319 *10*			B	
2400 *15*			B	
2435 *15*			B	
2487 *10*			B	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{54}V Levels (continued)

† Energies for states connected by γ-rays from Eγ using least-squares fit. Others from (t,^{3}He), except as noted.
‡ Unresolved states, see (t,^{3}He).
# From γ(θ) in (^{9}Be,2npγ) and shell-model predictions for the yrast spectrum, unless given otherwise.

γ(^{54}V)

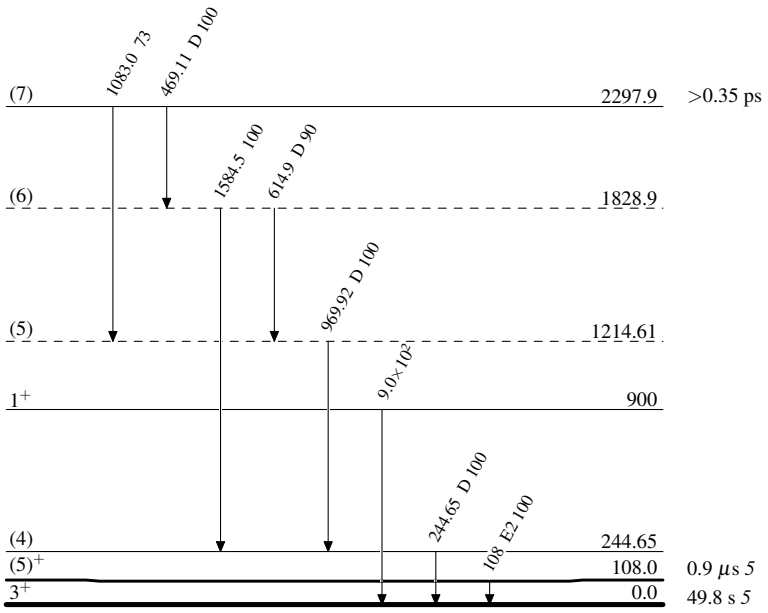
E_i(level)	J_i^π	E_γ †	I_γ #	E_f	J_f^π	Mult.‡	Comments
108.0	(5)$^+$	108	100	0.0	3$^+$	E2	B(E2)(W.u.)=3.5 *20* E_γ,Mult.: from ^{54}V IT decay (0.9 μs).
244.65	(4)	244.65 *11*	100	0.0	3$^+$	D	
9.0×10^2	1$^+$	9.0×10^2 *10*		0.0	3$^+$		E_γ: From ^{54}Ti β^- decay.
1214.61?	(5)	969.92 *15*	100	244.65	(4)	D	
1828.9?	(6)	614.9 *6*	90	1214.61?	(5)	D	
		1584.5 *4*	100	244.65	(4)		
2297.9	(7)	469.11 *20*	100	1828.9?	(6)	D	
		1083.0 *3*	73	1214.61?	(5)		

† From (^{9}Be,2npγ), except As noted.
‡ From angular distributions in (^{9}Be,2npγ).
# Photon branching ratio.

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level



$^{54}_{23}V_{31}$