^{51}V(t,p), (t,pγ) 1981Ma12,1976Pr01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huo Junde	NDS 110,2689 (2009)	31-Mar-2007

J^π (^{51}V)=7/2$^-$.

1981Ma12: (t,p) E=15 MeV, FWHM=25 keV, θ=3.75° − 86.25°. Measured: σ(E,θ), DWBA analysis.

1967Hi02: (t,p) E=12.09 MeV, θ=50°, measured: σ(E,θ). DWBA analysis.

1976Pr01: (t,pγ) E=2.9 MeV, measured σ(E), γ, γ(θ), DSAM.

1984Ca33: fitted data of 1981Ma12 for all observed states with arbitrary admixtures of DWBA curves of different L value varying the admixture to give best fit to the data.

^{53}V Levels

E(level)[†]	J$^\pi$[&]	T$_{1/2}$[a]	L[#]	Comments
0.0	7/2$^-$		0	
127.2[‡] *11*	(5/2)$^-$	≤0.7[b] ns	2	
227.8[‡] *16*	(3/2)$^-$	4.0[b] ns *3*	2	
1090.5[‡] *14*	11/2$^-$		2	T$_{1/2}$: >1.4 ps from DSAM, 0.7 ns from electronic timing.
1265.6[‡] *11*	(7/2,9/2)$^-$		2	T$_{1/2}$: ≥1.1 ps from DSAM, to 0.7 ns from electronic timing.
1550[‡] *3*	(3/2)$^-$	0.08 ps *+9−5*	2	
1653[‡] *4*	(9/2,11/2)$^-$	>0.45 ps	2	
1852[‡] *4*	$^-$	<0.03 ps	0+2	T$_{1/2}$: ≤0.7 ns from electronic timing.
1901 *4*			2	
2079 *8*			2	
2332 *8*			2+4	
2357 *8*			2	
2421 *8*			(0+2)	
2524 *8*			0+2	
2550 *8*			0+4	
2576 *8*			2	
2636 *8*			1+3	
2706 *8*			(0+4)	
2772 *8*			2	
2831 *8*			2	
2888 *8*			1+3	
2967 *8*			(2)+4	
3062 *8*				
3107 *8*				
3158 *8*			2[@]	
3263 *8*				
3320 *8*				
3348 *8*				
3411 *8*				
3492 *8*			(3,4)[@]	
3520 *8*			(1)[@]	
3573 *8*			(3)[@]	
3661 *8*				
3692 *8*				
3738 *8*				
3784 *8*				
3841 *8*				
3947 *8*				
3999 *8*				
4042 *8*				

Continued on next page (footnotes at end of table)

^{51}V(t,p), (t,pγ) 1981Ma12,1976Pr01 (continued)

^{53}V Levels (continued)

E(level)[†]	E(level)[†]	E(level)[†]	E(level)[†]
4097 *8*	4218 *8*	4345 *8*	4497 *8*
4143 *8*	4263 *8*	4392 *8*	4593 *8*
4187 *8*	4306 *8*	4428 *8*	4669 *8*

† From 1981Ma12, except as noted.
‡ From a least-squares fit to the γ data of 1976Pr01.
# From 1984Ca33, except as noted otherwise.
@ From 1967Hi02.
& Adopted values.
a From 1976Pr01 by DSAM, except as noted.
b From 1976Pr01 by electronic timing.

$\gamma(^{53}V)$

E_γ[†]	I_γ[†‡]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†#]
100.3 *18*	50 *5*	227.8	$(3/2)^-$	127.2	$(5/2)^-$	M1
127.0 *14*	100	127.2	$(5/2)^-$	0.0	$7/2^-$	M1
175.0 *14*	9 *2*	1265.6	$(7/2,9/2)^-$	1090.5	$11/2^-$	
228.2 *22*	50 *5*	227.8	$(3/2)^-$	0.0	$7/2^-$	M1,E2
1090.3 *20*	100	1090.5	$11/2^-$	0.0	$7/2^-$	
1138.3 *16*	28 *8*	1265.6	$(7/2,9/2)^-$	127.2	$(5/2)^-$	
1265.7 *14*	63 *8*	1265.6	$(7/2,9/2)^-$	0.0	$7/2^-$	
1422.6 *26*	100	1550	$(3/2)^-$	127.2	$(5/2)^-$	M1,E2
1652.5 *34*	100	1653	$(9/2,11/2)^-$	0.0	$7/2^-$	
1729.2 *20*	100	1852	$^-$	127.2	$(5/2)^-$	M1,E2

† From 1976Pr01.
‡ % photon branching from each level.
# Based on a comparison of the expermental results with the level strucure predicted by shell-model calculations, see 1976Pr01.

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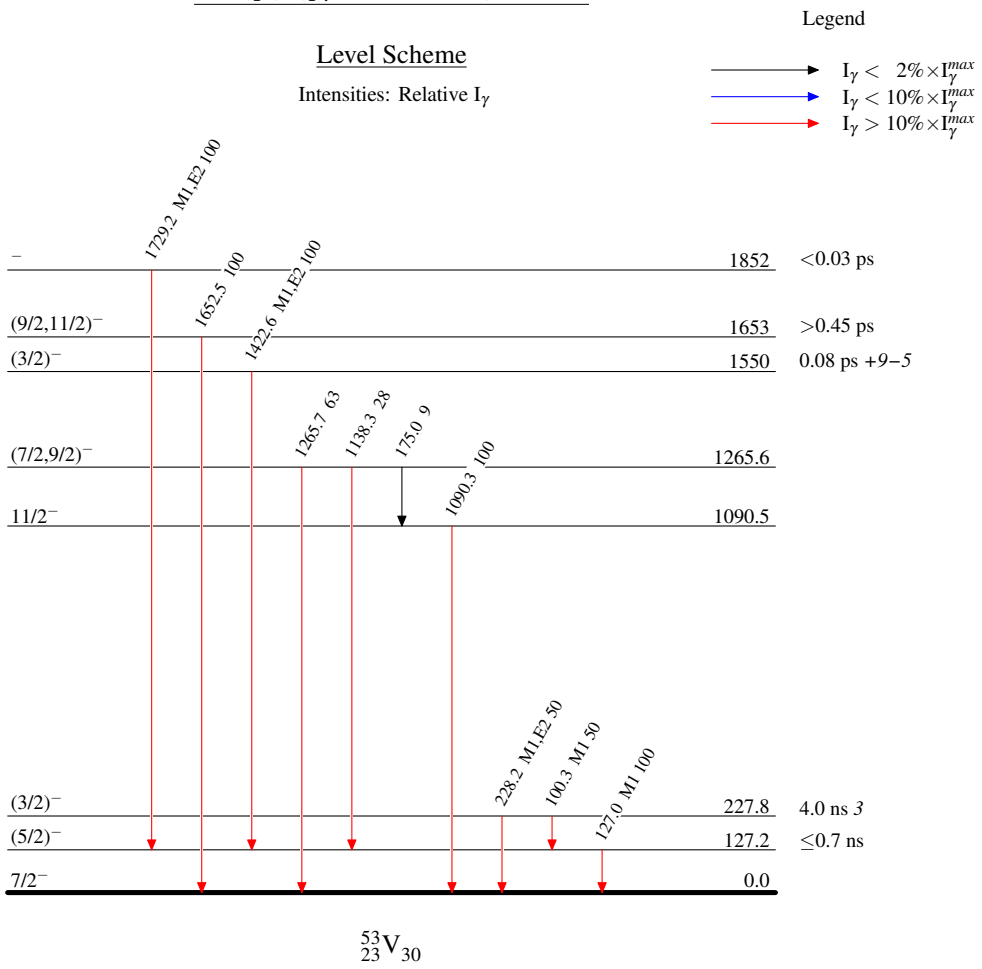

$^{53}_{23}V_{30}$