^{50}Cr(α,pnγ),^{51}V(α,3nγ) 1977Ev03,1987Ba72

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yang Dong, Huo Junde	NDS 128, 185 (2015)	10-Jul-2015

1977Ev03: ^{50}Cr(α,pnγ) E=23.5, 27.2 MeV, $\gamma\gamma$ coin, nγ coin. two 60 cm^3 Ge(Li) counter, two conical ≠ 213/RCA 8854 counters.
1987Ba72: ^{51}V(α,3nγ) E=30-45 MeV, RDM, DSAM, $\gamma(\theta)$, $\gamma\gamma$-coin. Ge(Li) detector: 2.7 keV at 1333.6 keV (FWHM), HPGE detector: 2.4 keV at 1333.6 keV (FWHM).
All data are from 1977Ev03, except as noted.

^{52}Mn Levels

E(level)	J$^\pi$[†]	T$_{1/2}$[‡]	Comments
0	6$^+$		
378.0 *10*	2$^+$		
732.0 *10*	4$^+$		
825.4 *11*	3$^+$		
869.61 *20*	7$^+$	0.05 ps *+6−3*	
1279.0 *12*	5$^+$		
1683.6 *3*	5$^+$		
2285.6 *3*	8$^+$	<0.069 ps	
2907.2 *3*	9$^+$	0.08 ps *6*	
3836.9 *5*	11$^+$	15.0 ps *14*	T$_{1/2}$: RDM.
4163.7 *5*	10$^+$	0.14 ps *+24−11*	

[†] From 1976St19, based on $\gamma(\theta)$ in (^{33}S,3pnγ), evaporation-model analysis of two-point excitation function and shell-model calculations.
[‡] From 1987Ba72, DSAM, except as noted.

γ(^{52}Mn)

E$_\gamma$	I$_\gamma$[‡]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[†]	δ[†]	Comments
(378)		378.0	2$^+$	0	6$^+$	E4		Mult.: From Adopted Levels, gammas.
447.4 *4*		825.4	3$^+$	378.0	2$^+$			
453.6 *4*		1279.0	5$^+$	825.4	3$^+$			
621.6 *2*	100	2907.2	9$^+$	2285.6	8$^+$	D+Q	+0.03 *+3−5*	
732		732.0	4$^+$	0	6$^+$			
869.6 *2*	591 *73*	869.61	7$^+$	0	6$^+$	D+Q	+0.04 *+2−3*	
929.7 *3*	55 *12*	3836.9	11$^+$	2907.2	9$^+$			
1256.5 *3*	31 *9*	4163.7	10$^+$	2907.2	9$^+$			
1416.0 *2*	188 *35*	2285.6	8$^+$	869.61	7$^+$	D+Q	+0.13 *+5−3*	
1683.6 *3*		1683.6	5$^+$	0	6$^+$			
2037.5 *3*	40 *11*	2907.2	9$^+$	869.61	7$^+$	Q		
2285.6	5	2285.6	8$^+$	0	6$^+$	Q		I$_\gamma$: from 1987Ba72.

[†] From $\gamma(\theta)$, 1987Ba72, except as noted.
[‡] Iγ relative to Iγ(622)=100. Only intensities of yrast cascade gammas are given. Intensities are from singles for E(α)=23.5 MeV.

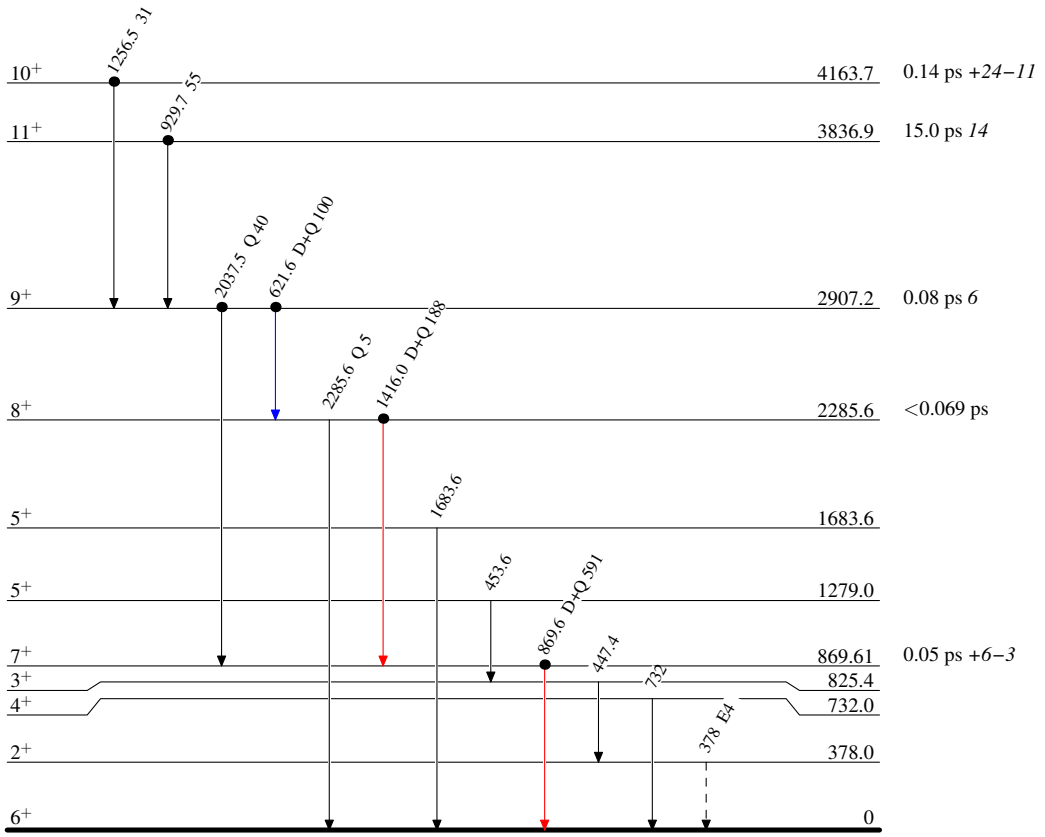
^{50}Cr(α,pnγ),^{51}V(α,3nγ) 1977Ev03,1987Ba72

Level Scheme

Intensities: Relative I_γ

Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)
- Coincidence



$^{52}_{25}Mn_{27}$