^{52}Cr(α,2nγ) 1979St13,1978BoZT

History

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

1979St13: E=24-33 MeV, measured Eγ, σ(E,$\theta\gamma$), p(Eγ), σ($\theta\gamma$,t) prompt and delayed $\gamma\gamma$- and nγ-coincidence.
1978BoZT: E=33 MeV, measured Eγ, σ(E,$\theta\gamma$), p(Eγ), σ($\theta\gamma$,t) prompt and delayed $\gamma\gamma$- and nγ-coincidence.
All data are from 1979St13, except as noted.

^{54}Fe Levels

E(level)‡	J$^\pi$†	$T_{1/2}$	Comments
0.0	0^+		
1408.7 *12*	2^+		
2539.1 *17*	4^+		
2950.8 *21*	6^+		
6383 *3*	(8^+)		
6529 *3*	(10^+)	358 ns *31*	$T_{1/2}$: from 1978BoZT.
6726 *4*			
7507 *5*			
8023 *5*			

† From simultaneous fits to angular distribution coefficients, the linear polarization data and DCO triple angular correlation ratios. No definite J$^\pi$ above 6^+, except from excitation functions.
‡ From least-squares fits to Eγ's.

γ(^{54}Fe)

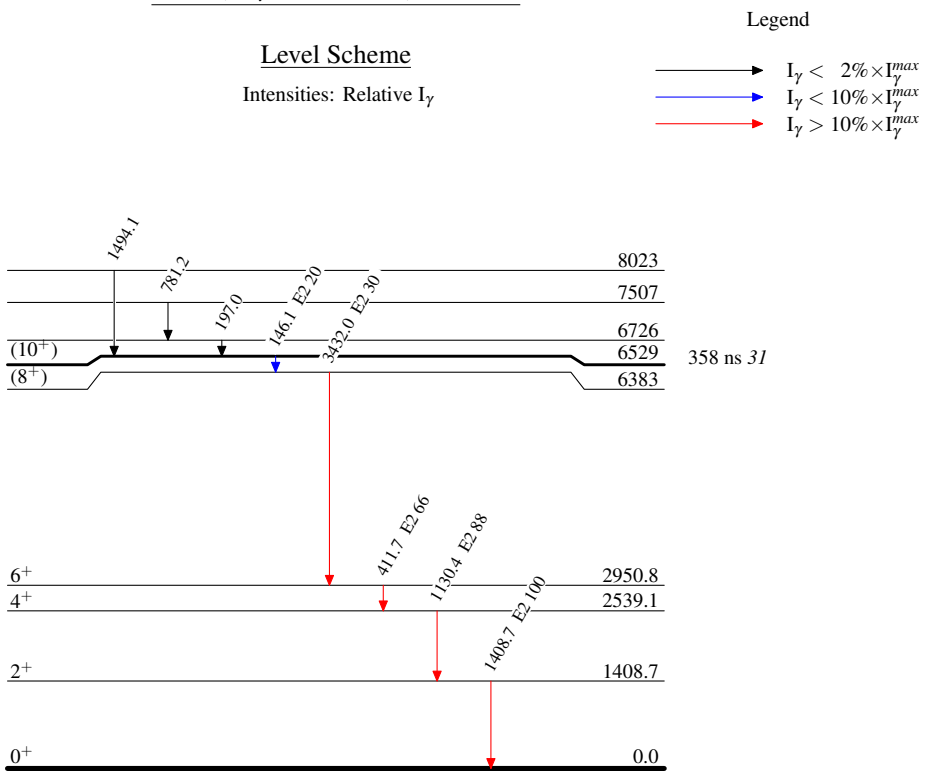
E$_\gamma$	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.‡	Comments
146.1 *12*	20 *2*	6529	(10^+)	6383	(8^+)	E2	A_2/A_0=0.03 *1* (1979St13).
197.0 *21*		6726		6529	(10^+)		I$_\gamma$: obscured by an intense contaminant line from ^{19}F.
411.7 *12*	66 *4*	2950.8	6^+	2539.1	4^+	E2	A_2/A_0=0.18 *1* (1979St13).
781.2 *23*		7507		6726			I$_\gamma$: seen as a weak transition in a time-delayed coincidence spectrum.
1130.4 *12*	88 *6*	2539.1	4^+	1408.7	2^+	E2	A_2/A_0=0.17 *1* (1979St13).
1408.7 *12*	100	1408.7	2^+	0.0	0^+	E2	A_2/A_0=0.12 *1* (1979St13).
1494.1 *31*		8023		6529	(10^+)		E$_\gamma$,I$_\gamma$: observed and corrected assuming full Doppler shift for this G.
3432.0 *18*	30 *3*	6383	(8^+)	2950.8	6^+	E2	A_2/A_0=0.10 *3* (1979St13).

† Normalized, given by A0 coefficient and corrected for the relative efficiency of Ge(Li).
‡ From γ-ray linear polarization and angular correlations.

^{52}Cr(α,2nγ) 1979St13,1978BoZT

Level Scheme

Intensities: Relative I_γ



$^{54}_{26}Fe_{28}$