^{56}Fe(^{13}C,2npγ), ^{52}Cr(^{16}O,npγ) 1978Fi03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 111, 1093 (2010)	3-Mar-2009

1978Fi03: ^{56}Fe(^{13}C,2npγ), E(^{13}C)=35-60 MeV, mainly E=55 MeV; measured $\gamma(\theta$,H,t), γ excitation functions, $T_{1/2}$ by delayed coincidence with the beam burst.
1985Ra33: ^{55}Mn(^{16}O,αnγ), ^{56}Fe(^{13}C,2pnγ), ^{52}Cr(^{16}O,pnγ); measured g, Q.
1987Ba45: ^{56}Fe(^{12}C,pnγ), E(^{12}C)=45 MeV; g-factor by perturbed angular distribution.
The level and γ-decay scheme has been reconstructed from the γ-ray data of 1978Fi03 using the results of ^{63}Cu(α,nγ) and ^{64}Zn(α,npγ) studies (1978Mo21).

^{66}Ga Levels

E(level)†	J$^\pi$‡	$T_{1/2}$	Comments
0.0	0^+		
43.8	1^+		
66.3	$(2)^+$		
162.5	$(3)^+$		
415.3	$(4)^+$		
516.0	$(4)^+$		
863.5	(5)		
1350.0	(5)		
1463.6	(7)	57.3 ns *14*	g=0.129 *7* (1978Fi03); Q=0.78 *4* (1985Ra33). Other: +0.127 *3* (1985Ra33). $T_{1/2}$: from pulsed-beam delayed-γ coincidences (1978Fi03). g-factor: from $\gamma(\theta$,H,t) (1978Fi03); from time differential perturbed angular distributions (TDPAD) (1985Ra33). Q: from TDPAD (1985Ra33).
2652.89 *24*	(9^+)		E(level): from Adopted Levels.
3043.34 *21*	(9^+)	0.208 ns *8*	g=0.47 *10* E(level): from Adopted Levels. $T_{1/2}$: value quoted by 1987Ba45 without giving any details. g-factor from perturbed angular distribution of an implanted source (1987Ba45). E(level): given as 3034 by 1987Ba45; must be a misprint.

† From least-squares fit to Eγ data, unless indicated otherwise; uncertainties not given for Eγ (1978Fi03).
‡ From Adopted Levels.

γ(^{66}Ga)

E$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Comments
22.4	66.3	$(2)^+$	43.8	1^+	E$_\gamma$: from Adopted Gammas.
43.8	43.8	1^+	0.0	0^+	E$_\gamma$: from Adopted Gammas.
96.2	162.5	$(3)^+$	66.3	$(2)^+$	E$_\gamma$: from E(^{13}C)=60 MeV γ-ray spectrum, 1978Fi03.
113.5	1463.6	(7)	1350.0	(5)	
252.8	415.3	$(4)^+$	162.5	$(3)^+$	
353.3	516.0	$(4)^+$	162.5	$(3)^+$	
390.4	3043.34	(9^+)	2652.89	(9^+)	E$_\gamma$: from Adopted Gammas.
448.1	863.5	(5)	415.3	$(4)^+$	
486.4	1350.0	(5)	863.5	(5)	
600.3	1463.6	(7)	863.5	(5)	
701.1	863.5	(5)	162.5	$(3)^+$	
833.8	1350.0	(5)	516.0	$(4)^+$	

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γ(^{66}Ga) (continued)

E_γ [†]	E_i(level)	J_i^π	E_f	J_f^π	Comments
934.8	1350.0	(5)	415.3	$(4)^+$	
1188.6	2652.89	(9^+)	1463.6	(7)	E_γ: from Adopted Gammas.

[†] From γ spectrum at E(^{13}C)=55 MeV, except as noted (1978Fi03), uncertainties not given.

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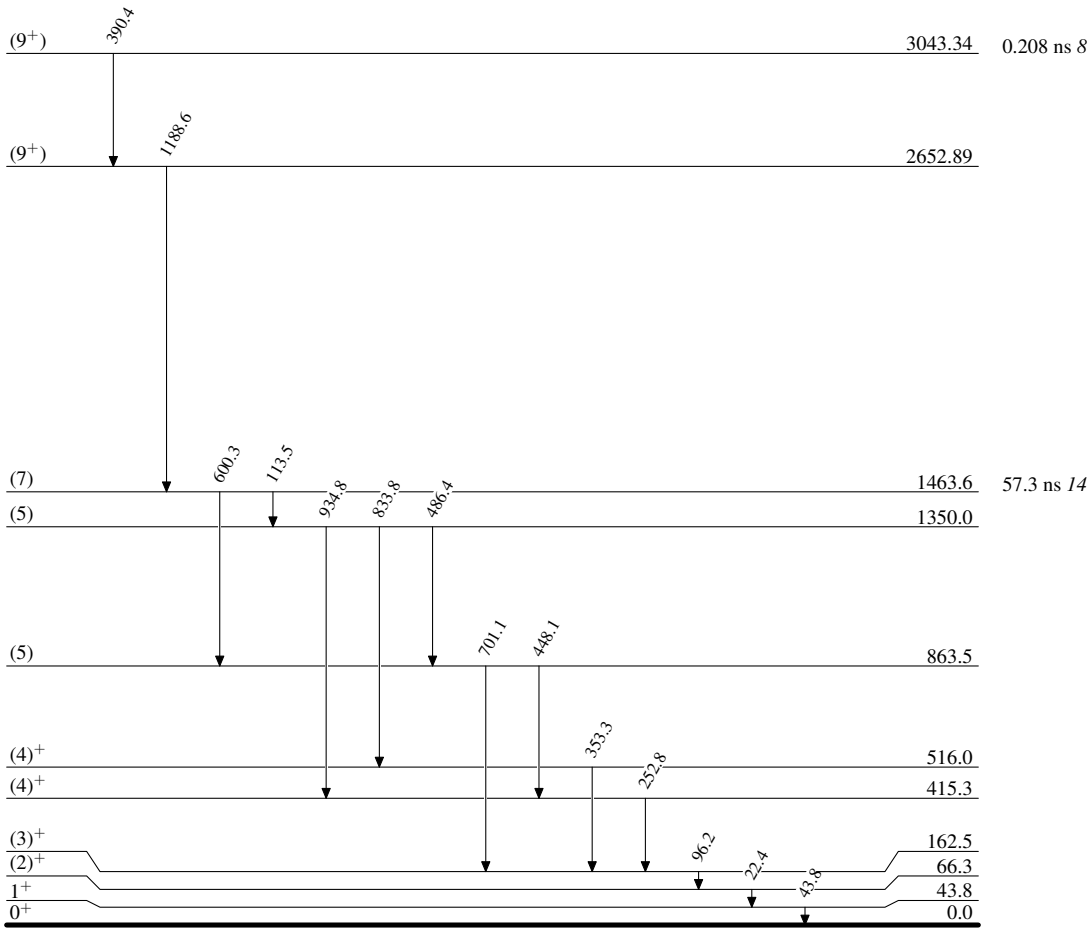
Level Scheme



$^{66}_{31}Ga_{35}$