^{73}Ge(^{11}B,p2nγ),^{74}Ge(^{10}B,p2nγ) 1980Cl04

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 199,271 (2025)	1-Sep-2024

See also 1981ClZZ.

1980Cl04: 78.4% ^{73}Ge and 94.5% ^{74}Ge targets, E=31 MeV to 40 MeV. Measured Eγ, Iγ with Ge(Li) for Eγ>70 (FWHM=2.5 keV to 3.5 keV at 1.33 MeV) and with Si(Li) for Eγ<100 (FWHM=0.5 keV). Also measured $\gamma(\theta)$ (40° to 90°), excit, $\gamma\gamma$ coin (timing FWHM≈15 ns).

^{81}Kr Levels

E(level)[†]	J$^\pi$[‡]
0	7/2$^+$
49.6 *10*	9/2$^+$
976.2 *12*	13/2$^+$
2134.7 *14*	17/2$^+$
3391.7? *17*	(21/2$^+$)

[†] From Eγ.
[‡] As proposed in 1980Cl04, based on mult and excitation in (^{11}B,p2nγ), assuming J^π(g.s.)=7/2$^+$.

$\gamma(^{81}Kr)$

E$_\gamma$[†]	I$_\gamma$[#]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[@]	Comments
49.6		49.6	9/2$^+$	0	7/2$^+$		E$_\gamma$: from 1981ClZZ.
[x]191.2[‡] *5*							
[x]457.7[‡] *5*							
[x]537.7[‡] *5*							
[x]636.3[‡] *5*							
[x]802.3[‡] *5*							
[x]917.1[‡] *5*							
926.6 *5*	20	976.2	13/2$^+$	49.6	9/2$^+$	Q	A$_2$=+0.30 *17*; A$_4$=−0.21 *10*
[x]975.1[‡] *5*							
1158.5 *8*	11	2134.7	17/2$^+$	976.2	13/2$^+$	Q	A$_2$=+0.29 *7*; A$_4$=−0.12 *9*
1257[&] *1*	6	3391.7?	(21/2$^+$)	2134.7	17/2$^+$		

[†] From 1980Cl04, except noted otherwise.
[‡] From 1981ClZZ.
[#] Relative intensities for E(^{11}B)=37 MeV (1980Cl04).
[@] From $\gamma(\theta)$. 1980Cl04 propose that the 927γ and 1159γ (and possibly the 1257γ) form an E2 cascade, based on $\gamma(\theta)$, excit and Iγ.
[&] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

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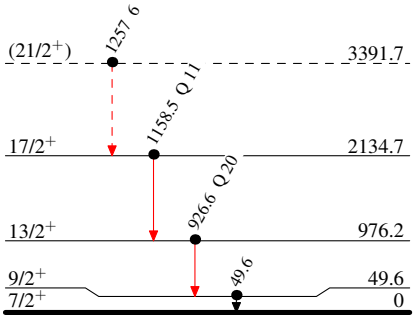
Level Scheme

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



$^{81}_{36}Kr_{45}$