^{92}Mo(^{50}Cr,2p2nγ) 1988Bi03,1985Li13

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 146, 1 (2017)	30-Sep-2017

1988Bi03,1985Li13: E=230 MeV ^{50}Cr beam was produced from the Daresbury Laboratory Van de Graaff accelerator. Target was a 700 μg/cm^2 thick self-supporting ^{92}Mo for lifetime measurements and a 1 mg/cm^2 ^{92}Mo on a 30 mg/cm^2 lead backing for decay-scheme measurements. γ rays were detected with escape-suppressed Ge detectors. Measured Eγ, Iγ, $\gamma\gamma$-coin. Deduced levels, half-lives using recoil-distance method, B(E2), deformation parameters. Systematics of neighboring nuclei. Comparisons with theoretical calculations.

^{138}Gd Levels

E(level)[†]	J$^\pi$[‡]	T$_{1/2}$[#]	Comments
0[@]	0$^+$		
220.90[@] *18*	2$^+$	221 ps *21*	
605.1[@] *3*	4$^+$	2.5 ps *14*	
1093.8[@] *4*	6$^+$	4.9 ps *14*	T$_{1/2}$: Other: 9.5 ps *11* (1988Bi03), deduced with no corrections for feeding.
1649.2[@] *4*	8$^+$		
2265.2[@] *5*	10$^+$		
2946.4[@] *6*	12$^+$		
3678[@]	14$^+$		

[†] From a least-squares fit to γ-ray energies.
[‡] As given in 1988Bi03 based on band structure.
[#] From 1988Bi03, using recoil distance method (RDM) with feeding corrections assuming preceding state in band has the same deformation.
[@] Band(A): g.s. band.

γ(^{138}Gd)

E$_\gamma$[†]	I$_\gamma$[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
220.90 *18*	100 *5*	220.90	2$^+$	0	0$^+$
384.17 *19*	100 *7*	605.1	4$^+$	220.90	2$^+$
488.75 *17*	100 *10*	1093.8	6$^+$	605.1	4$^+$
555.33 *13*	80 *7*	1649.2	8$^+$	1093.8	6$^+$
616.0 *3*	60 *14*	2265.2	10$^+$	1649.2	8$^+$
681.2 *3*	44 *9*	2946.4	12$^+$	2265.2	10$^+$
732		3678	14$^+$	2946.4	12$^+$

[†] From 1988Bi03.

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Level Scheme

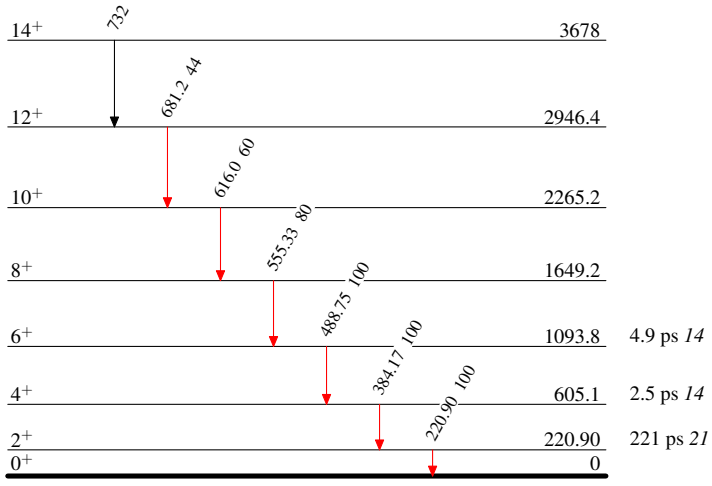
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



$^{138}_{64}Gd_{74}$

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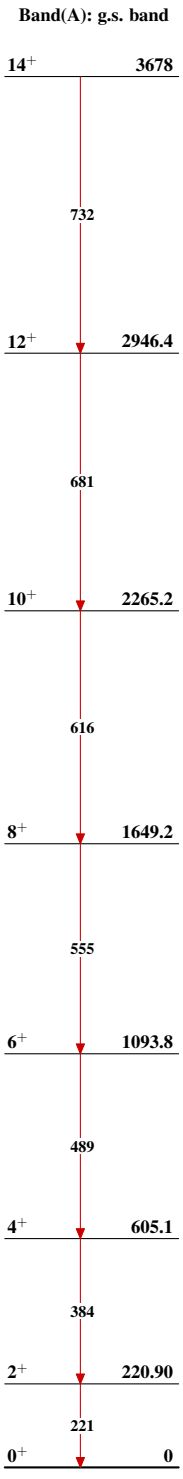

$^{138}_{64}Gd_{74}$