^{92}Mo(^{50}Cr,n3pγ) 1988Li29

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

1988Li29: E=230 MeV ^{50}Cr beam was produced from the Stony Brook superconducting LINAC injected by the tandem Van de Graaff accelerator. Target was about 10 mg/cm^2 thick ^{92}Mo. γ rays were detected with an array of five Compton-suppressed Ge detectors and neutrons were detected with a large-volume cylindrical liquid scintillator. Measured Eγ, Iγ, nγ-coin, $\gamma\gamma$-coin, γ(DCO). Deduced levels, J, π, band structures. Systematics of neighbouring nuclei. Comparisons with shell-model calculations.

^{138}Eu Levels

E(level)†	J$^\pi$‡	Comments
0+x	(8$^+$)	Additional information 1.
105.2+x@ *3*	(9$^+$)	
272.3+x# *4*	(10$^+$)	
545.5+x@ *4*	(11$^+$)	
807.6+x# *5*	(12$^+$)	
1169.9+x@ *5*	(13$^+$)	
1490.1+x# *5*	(14$^+$)	
1917.3+x@ *5*	(15$^+$)	
2299.4+x# *5*	(16$^+$)	

† From a least-squares fit to γ-ray energies.
‡ From Adopted Levels. Note that the values reported in 1988Li29 are lower by one unit than those in 2001He15 in ^{106}Cd(^{35}Cl,2pnγ) by the same group, which are adopted in Adopted Levels.
# Band(A): $\pi h_{11/2}\otimes\nu h_{11/2}$, α=0.
@ Band(a): $\pi h_{11/2}\otimes\nu h_{11/2}$, α=1.

γ(^{138}Eu)

E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Comments
105.2 *3*	>114	105.2+x	(9$^+$)	0+x	(8$^+$)	R(DCO)<0.4 (1988Li29).
167.1 *3*	100	272.3+x	(10$^+$)	105.2+x	(9$^+$)	R(DCO)=0.4 *1* (1988Li29).
262.1 *3*	28 *2*	807.6+x	(12$^+$)	545.5+x	(11$^+$)	R(DCO)=0.3 *1* (1988Li29).
273.2 *3*	58 *4*	545.5+x	(11$^+$)	272.3+x	(10$^+$)	R(DCO)=0.5 *1* (1988Li29).
320.2 *3*	10 *5*	1490.1+x	(14$^+$)	1169.9+x	(13$^+$)	R(DCO)<0.5 (1988Li29).
362.3 *3*	20 *1*	1169.9+x	(13$^+$)	807.6+x	(12$^+$)	R(DCO)=0.9 *2* (1988Li29).
382.1 *3*	<5	2299.4+x	(16$^+$)	1917.3+x	(15$^+$)	
427.2 *3*	11 *1*	1917.3+x	(15$^+$)	1490.1+x	(14$^+$)	R(DCO)=0.3 *1* (1988Li29).
440.3‡ *3*	14‡ *1*	545.5+x	(11$^+$)	105.2+x	(9$^+$)	R(DCO)=1.2 *4* (1988Li29).
535.3 *3*	24 *2*	807.6+x	(12$^+$)	272.3+x	(10$^+$)	R(DCO)=1.0 *1* (1988Li29).
624.4 *3*	10 *1*	1169.9+x	(13$^+$)	545.5+x	(11$^+$)	R(DCO)>1.0 (1988Li29).
682.5 *3*	12 *1*	1490.1+x	(14$^+$)	807.6+x	(12$^+$)	R(DCO)=1.7 *2* (1988Li29).
747.4 *3*	10 *5*	1917.3+x	(15$^+$)	1169.9+x	(13$^+$)	R(DCO)=1.2 *3* (1988Li29).
809.3 *3*	11 *1*	2299.4+x	(16$^+$)	1490.1+x	(14$^+$)	

† From 1988Li29.
‡ Multiply placed with intensity suitably divided.

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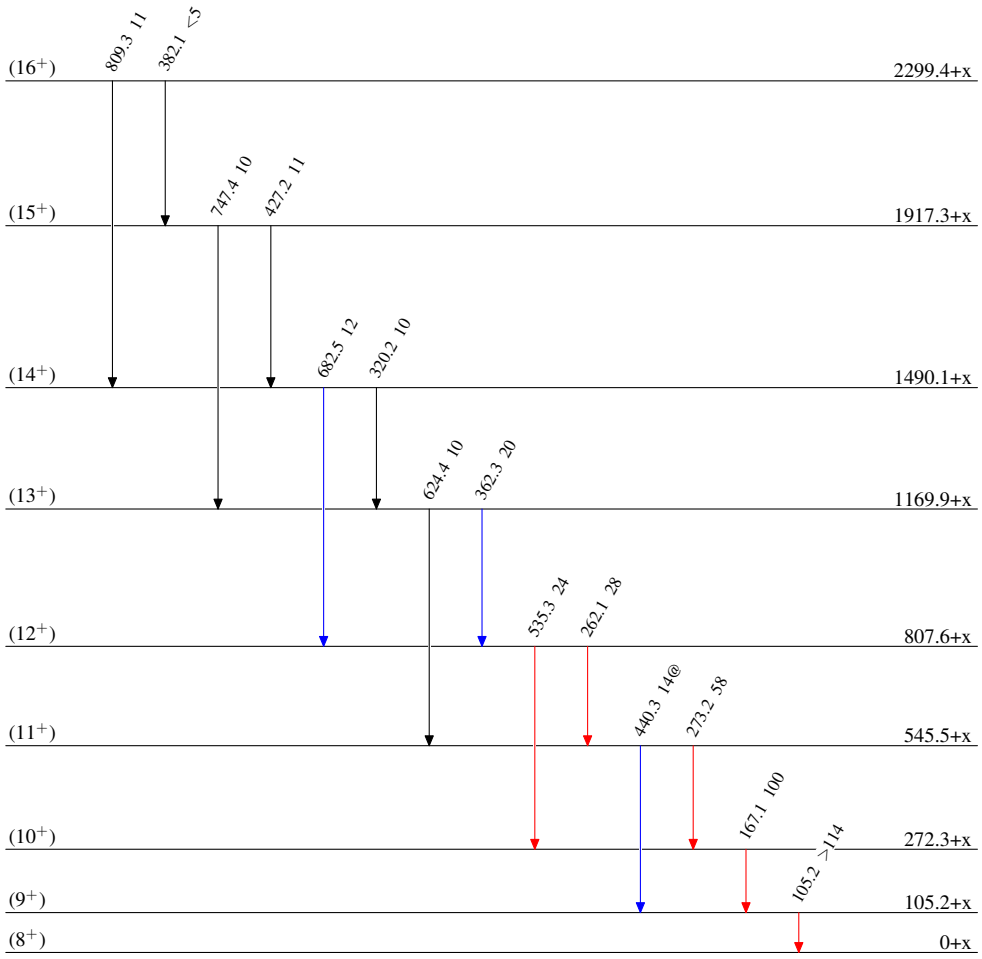
Level Scheme

Intensities: Relative I_γ
@ Multiply placed: intensity suitably divided

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



$^{138}_{63}Eu_{75}$

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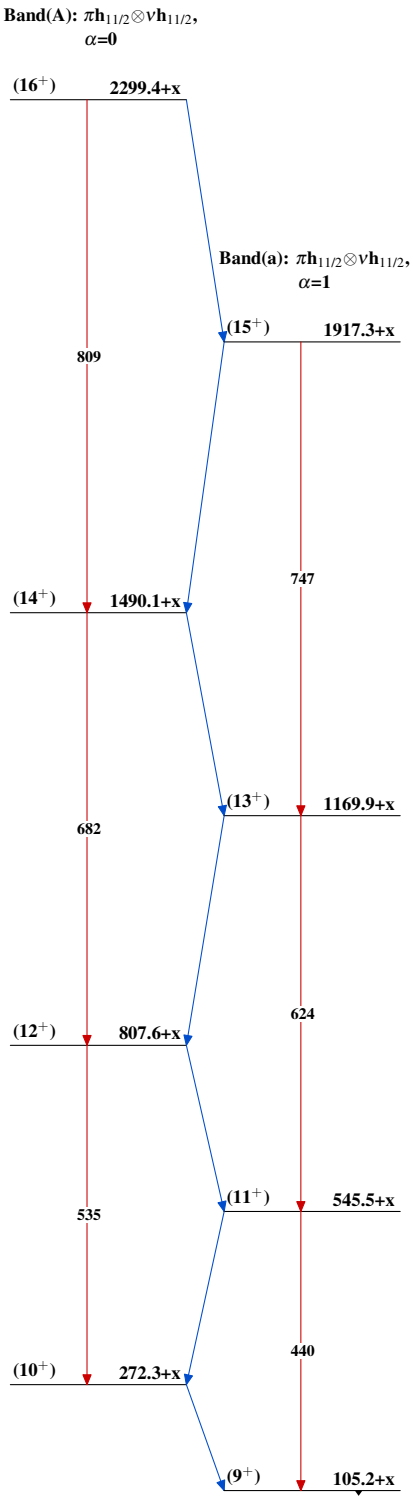

$^{138}_{63}Eu_{75}$