

$^{168}\text{Er}(^{30}\text{Si},\text{X}\gamma)$ 2007La03

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 172,1 (2021)	31-Jan-2021

2007La03: E=142 MeV ^{30}Si beam. Measured $E\gamma$, $I\gamma$, $\gamma\gamma$ using EUROBALL III array of 30 single HPGe detectors, 26 Clover and 15 Cluster composite Compton-shielded detectors. Measured $E\gamma$, $I\gamma$, $\gamma\gamma$ -coin. Deduced levels, J, π , band structures.

^{100}Mo Levels

E(level) [†]	J ^π [‡]	Comments
0.0 [#]	0 ⁺	
535.7 [#] 5	2 ⁺	
1063.7 6	2 ⁺	
1135.8 [#] 7	4 ⁺	
1607.7 6	(3 ⁺)	
1846.7 [#] 8	6 ⁺	
1907.7 [@] 6	3 ⁻	
2290.2 8	(5 ⁺)	J ^π : (4,5 ⁺) in the Adopted Levels.
2339.4 [@] 7	(5 ⁻)	
2626.8 [#] 9	8 ⁺	
2790.8 9		
2842.8 [@] 7	(7 ⁻)	
2928.3 8		
3142.5 10		
3298.8 [@] 8	(9 ⁻)	
3366.3 [#] 10	(10 ⁺)	
3783.0 12		
4032.3 [@] 10	(11 ⁻)	
4061.8 [#] 12	(12 ⁺)	
4874.3 [#] 13	(14 ⁺)	
4939.4 [@] 11	(13 ⁻)	
5839.3 [#] 16	(16 ⁺)	

[†] From least-squares fit to $E\gamma$ data.

[‡] The assignments are as proposed by 2007La03 based on previous assignments in the literature and from band associations. The assignments are the same in the Adopted Levels, unless otherwise stated.

[#] Band(A): Yrast band.

[@] Band(B): 3⁻ Octupole band.

$\gamma(^{100}\text{Mo})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
351.7 5	10.1 24	3142.5		2790.8		544.1 5	13 4	1607.7	(3 ⁺)	1063.7	2 ⁺
370.5 5	9.1 18	3298.8	(9 ⁻)	2928.3		588.8 5	14.2 25	2928.3		2339.4	(5 ⁻)
431.5 5	17.6 24	2339.4	(5 ⁻)	1907.7 3 ⁻		600.3 5	100	1135.8	4 ⁺	535.7	2 ⁺
452 [†]		2790.8		2339.4 (5 ⁻)		640.5 5	7.0 15	3783.0		3142.5	
456.1 5	13.7 23	3298.8	(9 ⁻)	2842.8 (7 ⁻)		682.5 5	14 3	2290.2	(5 ⁺)	1607.7	(3 ⁺)
503.2 5	16.8 23	2842.8	(7 ⁻)	2339.4 (5 ⁻)		695.5 5	17.0 16	4061.8	(12 ⁺)	3366.3	(10 ⁺)
528.4 5	12 5	1063.7	2 ⁺	535.7 2 ⁺		711.1 5	69 4	1846.7	6 ⁺	1135.8	4 ⁺
535.6 5		535.7	2 ⁺	0.0 0 ⁺		733.5 5	15.8 21	4032.3	(11 ⁻)	3298.8	(9 ⁻)

Continued on next page (footnotes at end of table)

$^{168}\text{Er}(^{30}\text{Si},\text{X}\gamma)$ **2007La03 (continued)** $\gamma(^{100}\text{Mo})$ (continued)

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
739.5 5	30.4 22	3366.3	(10 ⁺)	2626.8	8 ⁺	965 1	6.9 23	5839.3	(16 ⁺)	4874.3	(14 ⁺)
780.1 5	39.9 25	2626.8	8 ⁺	1846.7	6 ⁺	996.3 5	14.8 14	2842.8	(7 ⁻)	1846.7	6 ⁺
812.5 5	17.9 15	4874.3	(14 ⁺)	4061.8	(12 ⁺)	1064 1	7 3	1063.7	2 ⁺	0.0	0 ⁺
844.5 5	21 3	1907.7	3 ⁻	1063.7	2 ⁺	1071.9 5	6.7 21	1607.7	(3 ⁺)	535.7	2 ⁺
907.1 5	7.9 7	4939.4	(13 ⁻)	4032.3	(11 ⁻)	1203.6 5	14.4 15	2339.4	(5 ⁻)	1135.8	4 ⁺
944.1 5	10.0 15	2790.8		1846.7	6 ⁺	1371.4 5	4.1 11	1907.7	3 ⁻	535.7	2 ⁺

† Placement of transition in the level scheme is uncertain.

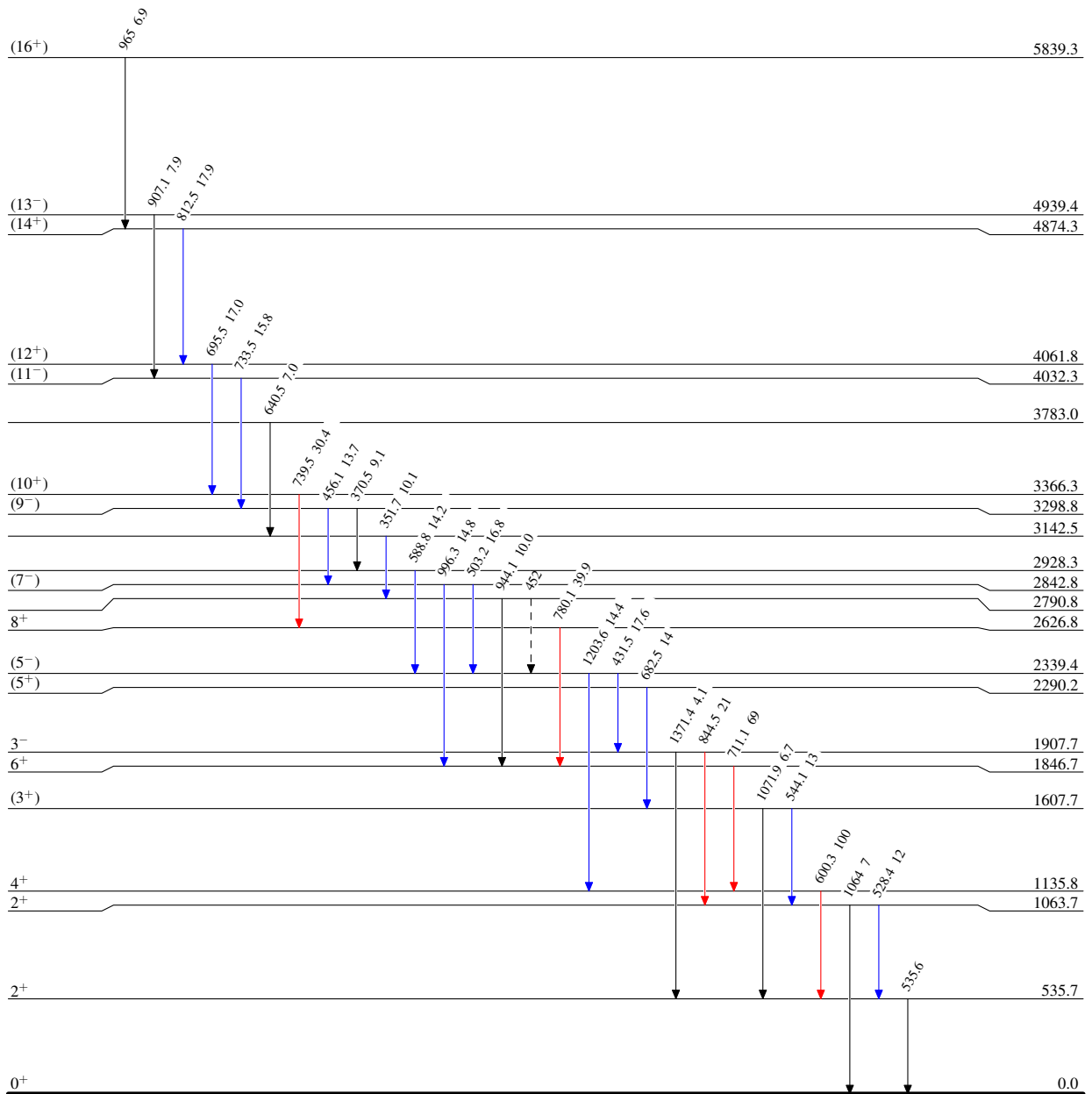
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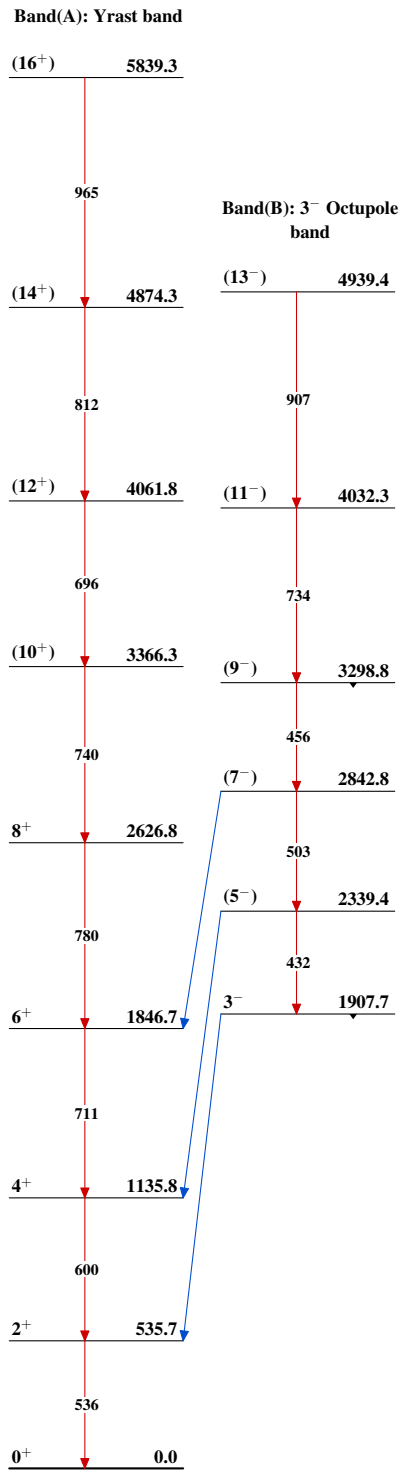
Legend

Level Scheme

Intensities: Relative I_γ

- \longrightarrow $I_\gamma < 2\% \times I_\gamma^{\max}$
- \longrightarrow $I_\gamma < 10\% \times I_\gamma^{\max}$
- \longrightarrow $I_\gamma > 10\% \times I_\gamma^{\max}$
- \dashrightarrow γ Decay (Uncertain)

 $^{100}\text{Mo}_{58}$

$^{168}\text{Er}^{(30}\text{Si},\text{X}\gamma)$ 2007La03 $^{100}_{42}\text{Mo}_{58}$