

$^{168}\text{Er}({}^{30}\text{Si},\text{X}\gamma)$ 2014La15

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. Lalkovski, J. Timar and Z. Elekes		NDS 161, 1 (2019)	1-Apr-2019

2014La15: Facility: LNL, Italy; Beam: E(^{30}Si)=142 MeV; Target: 1.15 mg/cm² ^{168}Er on 9 mg/cm² Au backing; Detectors: EUROBALL III, comprising 15 Cluster, 26 Clover and 30 single HPGe detectors; Measured: γ - γ coinc., E γ , I γ ; Deduced: ^{105}Ru level scheme, band structure.

 ^{105}Ru Levels

E(level) [†]	J π [‡]	Comments
0	3/2 ⁺	
20.9 11	5/2 ⁺	
108.4 @ 8	5/2 ⁺	
208.8 & 10	(7/2 ⁻)	E(level): from the Adopted Levels.
229.8 # 8	7/2 ⁺	
465.7 @ 10	(9/2 ⁺)	
575.4 & 17	(11/2 ⁻)	
670.1 # 11	(11/2 ⁺)	
977.4 @ 14	(13/2 ⁺)	
1144.4 & 19	(15/2 ⁻)	
1220.2 # 15	(15/2 ⁺)	
1575.6 @ 17	(17/2 ⁺)	
1845.1 # 18	(19/2 ⁺)	
1869.4 & 22	(19/2 ⁻)	
2529.3 # 21	(23/2 ⁺)	
2712.4 & 24	(23/2 ⁻)	
3285.4 # 23	(27/2 ⁺)	

[†] From E γ .

[‡] From the Adopted Levels.

Band(A): $\Delta J=2$ band, based on 7/2⁺ state.

@ Band(B): $\Delta J=2$ band, based on 5/2⁺ state.

& Band(C): $\Delta J=2$ band, based on 7/2⁻.

 $\gamma(^{105}\text{Ru})$

E γ [†]	I γ [†]	E _i (level)	J π _i	E _f	J π _f
108.4 10		108.4	5/2 ⁺	0	3/2 ⁺
121.2 10	16 [‡] 4	229.8	7/2 ⁺	108.4	5/2 ⁺
204.3 10	28 3	670.1	(11/2 ⁺)	465.7	(9/2 ⁺)
208.6 10	76 8	229.8	7/2 ⁺	20.9	5/2 ⁺
229.8 10	18 [‡] 9	229.8	7/2 ⁺	0	3/2 ⁺
235.4 10	68 6	465.7	(9/2 ⁺)	229.8	7/2 ⁺
357.3 10	76 8	465.7	(9/2 ⁺)	108.4	5/2 ⁺
365 1		575.4	(11/2 ⁻)	208.8	(7/2 ⁻)
440.4 10	104 9	670.1	(11/2 ⁺)	229.8	7/2 ⁺
445.1 10	<12	465.7	(9/2 ⁺)	20.9	5/2 ⁺
511.7 10	42 5	977.4	(13/2 ⁺)	465.7	(9/2 ⁺)

Continued on next page (footnotes at end of table)

$^{168}\text{Er}(^{30}\text{Si},\text{X}\gamma)$ 2014La15 (continued) $\gamma(^{105}\text{Ru})$ (continued)

E_γ^\dagger	I_γ^\dagger	$E_i(\text{level})$	J_i^π	E_f	J_f^π
550.1 <i>10</i>	100	1220.2	(15/2 ⁺)	670.1	(11/2 ⁺)
569 <i>1</i>		1144.4	(15/2 ⁻)	575.4	(11/2 ⁻)
598.2 <i>10</i>	<40	1575.6	(17/2 ⁺)	977.4	(13/2 ⁺)
624.9 <i>10</i>	68 <i>3</i>	1845.1	(19/2 ⁺)	1220.2	(15/2 ⁺)
684.2 <i>10</i>	29.6 <i>15</i>	2529.3	(23/2 ⁺)	1845.1	(19/2 ⁺)
725 <i>1</i>		1869.4	(19/2 ⁻)	1144.4	(15/2 ⁻)
756.1 <i>10</i>	13.8 <i>11</i>	3285.4	(27/2 ⁺)	2529.3	(23/2 ⁺)
843		2712.4	(23/2 ⁻)	1869.4	(19/2 ⁻)

[†] From 2014La15, unless otherwise noted.

[‡] From the adopted gammas.

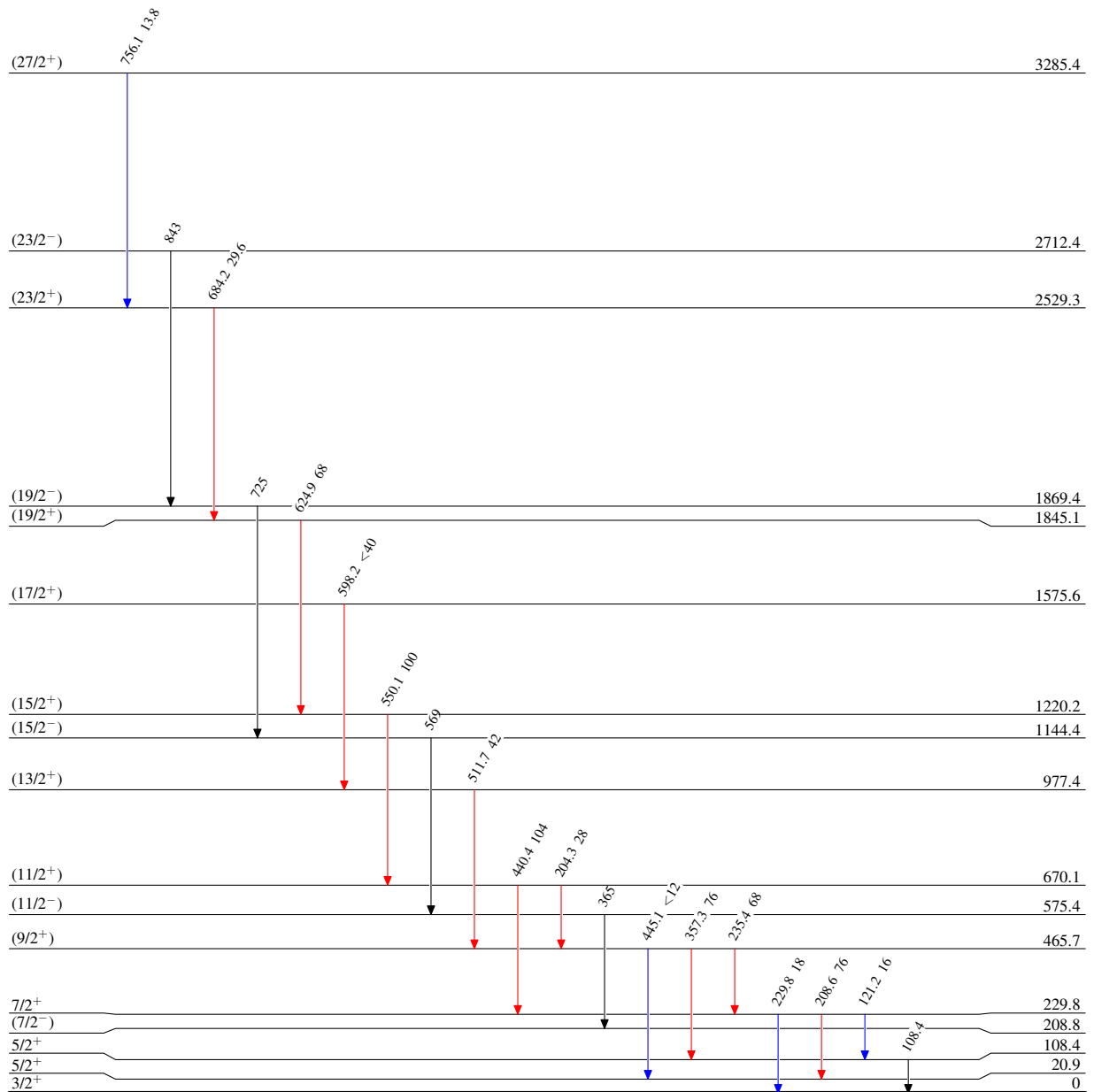
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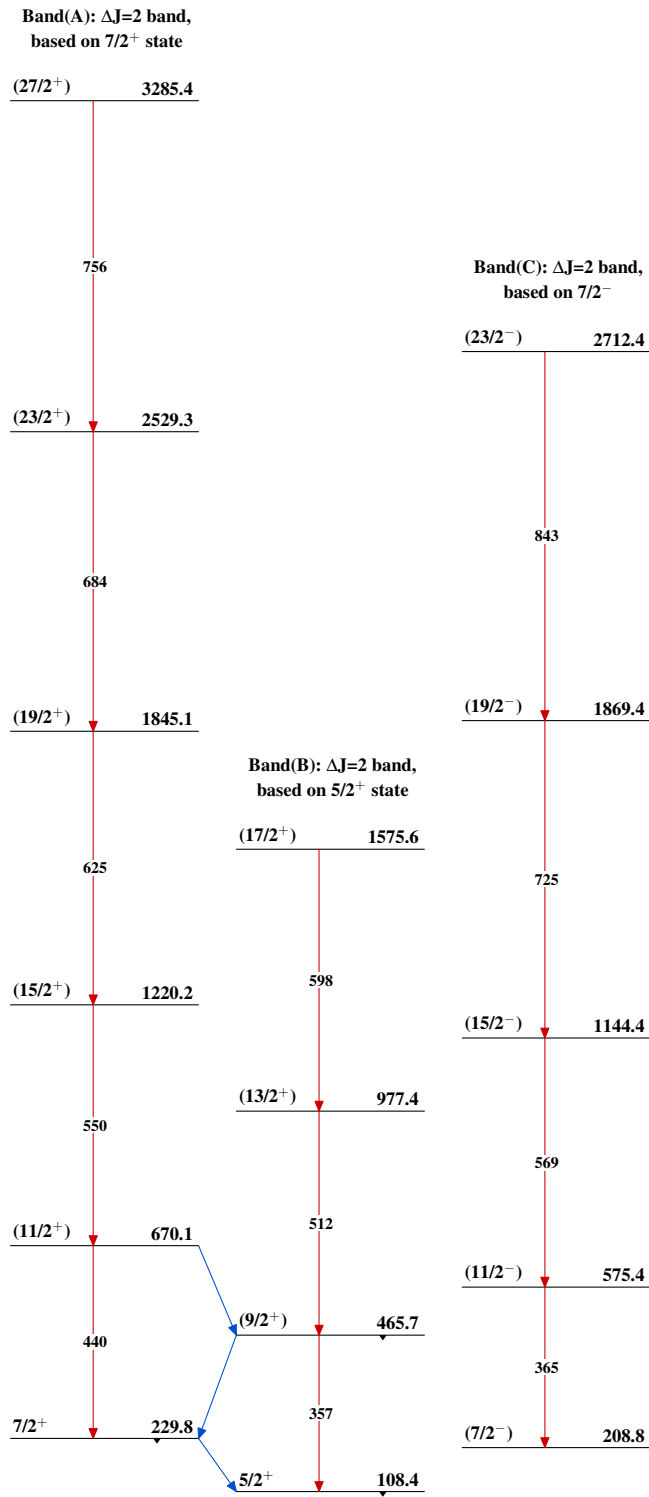
Level Scheme

Intensities: Type not specified

Legend

- \longrightarrow $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- \longrightarrow $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- \longrightarrow $I_\gamma > 10\% \times I_\gamma^{\text{max}}$

 $^{105}_{44}\text{Ru}_{61}$

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