

$^{226}\text{Ra}(\alpha, \alpha' 2n\gamma)$ 1990Ma20

Type	Author	Citation	Literature Cutoff Date
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1990Ma20: $E_\alpha=55$ MeV; measured (ce(L))(ce)- and (ce) γ -coin using iron-free double-orange magnetic spectrometer for electrons and four Compton-suppressed Ge detectors for γ rays. Target $\approx 200 \mu\text{g}/\text{cm}^2$ RaBr_2 placed between $\approx 40 \mu\text{g}/\text{cm}^2$ carbon and Be. Deduced high-spin levels, J, π , band structures.

 ^{224}Ra Levels

E(level) [†]	J π [‡]	Comments
0.0 [#]	0 ⁺	
84.4 [#]	2 ⁺	
215.0 [@]	1 ⁻	
250.8 [#]	4 ⁺	
290.4 [@]	3 ⁻	B(E1)(205.9)/B(E2)(74.4)= 1.3×10^{-9} b ₁ 4.
433.1 [@]	5 ⁻	B(E1)(182.3)/B(E2)(142.7)= 3.0×10^{-9} b ₁ 14.
479.3 [#]	6 ⁺	
640.9 [@]	7 ⁻	
754.9 [#]	8 ⁺	
906.2 [@]	9 ⁻	
1068.5 [#]	10 ⁺	
1220.8 [@]	11 ⁻	
1413.6? [#]	(12 ⁺)	

[†] From least-squares fit to E_γ data.

[‡] Assignments for levels up to 6⁺ are from Adopted Levels. Assignments for higher levels are from energy systematics of rotational bands (1990Ma20).

[#] Band(A): $K^\pi=0^+$ g.s. band.

[@] Band(B): $K^\pi=0^-$, octupole band.

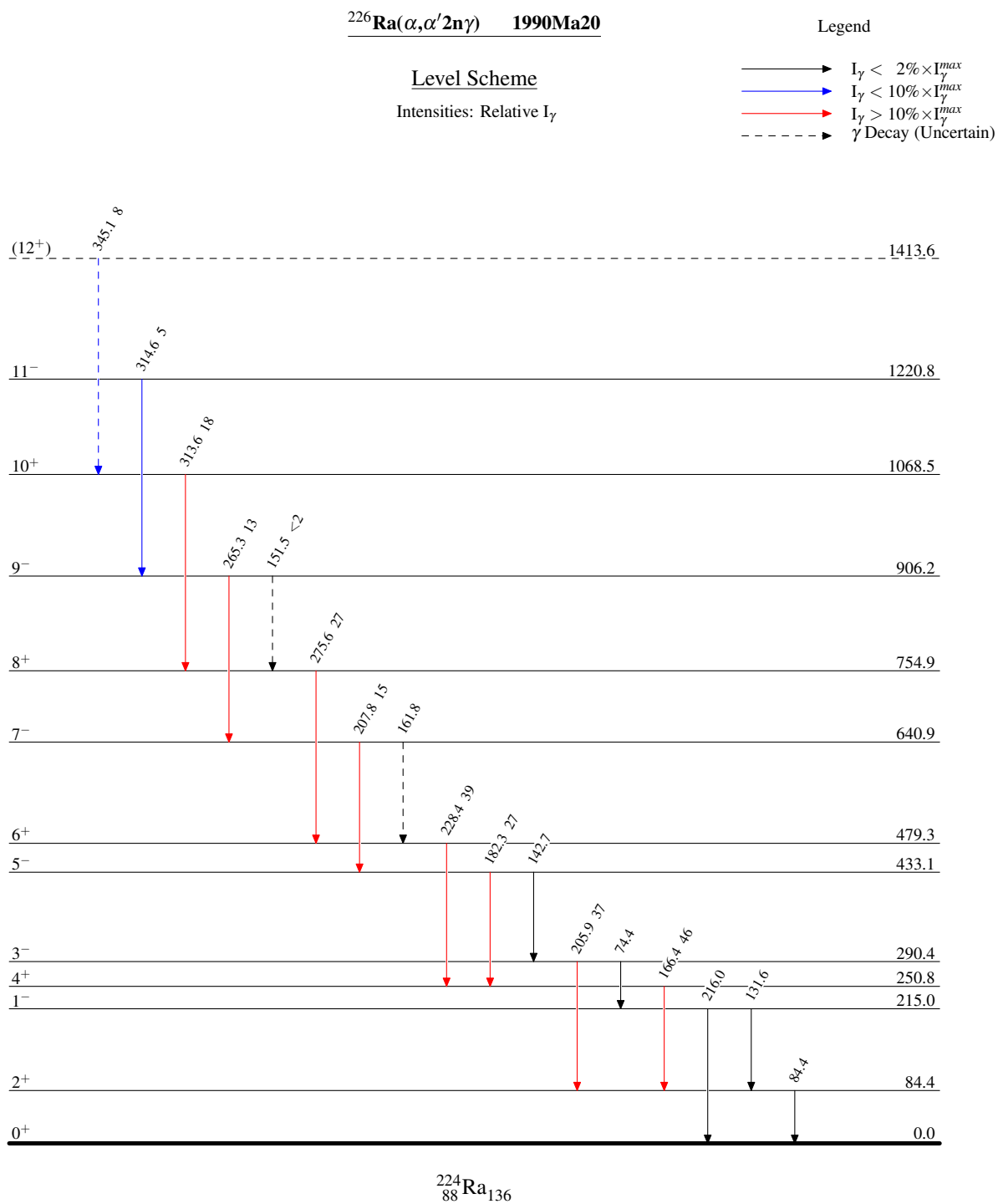
 $\gamma(^{224}\text{Ra})$

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
74.4 [‡]		290.4	3 ⁻	215.0	1 ⁻	207.8	2	640.9	7 ⁻	433.1	5 ⁻
84.4 [‡]		84.4	2 ⁺	0.0	0 ⁺	216.0 [‡]		215.0	1 ⁻	0.0	0 ⁺
131.6 [‡]		215.0	1 ⁻	84.4	2 ⁺	228.4	39	479.3	6 ⁺	250.8	4 ⁺
142.7 [‡]		433.1	5 ⁻	290.4	3 ⁻	265.3	2	906.2	9 ⁻	640.9	7 ⁻
151.5 [#]	<2	906.2	9 ⁻	754.9	8 ⁺	275.6	2	754.9	8 ⁺	479.3	6 ⁺
161.8 ^{†#}		640.9	7 ⁻	479.3	6 ⁺	313.6	2	1068.5	10 ⁺	754.9	8 ⁺
166.4 [‡]	46	250.8	4 ⁺	84.4	2 ⁺	314.6	2	1220.8	11 ⁻	906.2	9 ⁻
182.3 [‡]	27	433.1	5 ⁻	250.8	4 ⁺	345.1 [#]	2	1413.6?	(12 ⁺)	1068.5	10 ⁺
205.9 [‡]	37	290.4	3 ⁻	84.4	2 ⁺						

[†] No intensity obtained since line is masked by a strong γ in ^{225}Th .

[‡] From Adopted Gammas.

[#] Placement of transition in the level scheme is uncertain.



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