^{98}Mo(^{6}Li,3nγ) 1982Ka15

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	ENSDF	1-Jul-2006

E=18– 34 MeV.
Additional information 1.
Measured: γ, nγ, $\gamma\gamma$, $\gamma(\theta)$, enriched target (97%).
A_2 and A_4 can be found in 1982Ka15.

^{101}Rh Levels

E(level)	J^{π}‡	$T_{1/2}$†	Comments
0.0#	1/2$^-$	3.3 y *3*	
157.3@	9/2$^+$	4.34 d *1*	
181.8			
305.0#	3/2$^-$		
354.8#	5/2$^-$		J^{π}: $\gamma(\theta)$ for the 355γ to 1/2$^-$ gives 5/2$^-$.
478.1	5/2$^+$		
747.4 *10*	7/2$^+$		
747.7@	11/2$^+$		J^{π}: $\gamma(\theta)$ for the 146γ from the 893 level give J=11/2.
850.4#	7/2$^-$,9/2$^-$		J^{π}: see Adopted Levels.
893.3@	13/2$^+$		J^{π}: excit and $\gamma(\theta)$ for the 736γ give 13/2$^+$.
898.9#	9/2$^-$		J^{π}: excit and $\gamma(\theta)$ for the 544γ to the 355 level give 9/2$^-$.
977.8	(9/2$^+$)		
1576.5			
1604.1#	13/2$^-$		J^{π}: excit and $\gamma(\theta)$ for the 705γ to the 899 level give 13/2$^-$.
1607.3			
1609.1@	15/2$^+$		J^{π}: $\gamma(\theta)$ for the 170γ from 17/2$^+$ and for the 716γ to 13/2$^+$ give 15/2$^+$.
1778.6@	17/2$^+$		J^{π}: excit and $\gamma(\theta)$ for the 885γ to the 893 level give 17/2$^+$.
2386.3#	17/2$^-$		J^{π}: excit and $\gamma(\theta)$ for the 782γ to the 1604 level give 17/2$^-$.
2586.1			
2653.6			
2671.5	17/2$^-$		J^{π}: excit and $\gamma(\theta)$ for the 1067γ suggest J=15/2 or 17/2. π=– from nearly pure Q for this G.
2780.8@	21/2$^+$		J^{π}: excit and $\gamma(\theta)$ for the 1002γ to the 1779 level give 21/2$^+$.
2784.6			
2930.9			
3236.9?			E(level): The order of the 189-306 cascade from the 3425.9 is not established.
3247.3			
3425.9?			
3874.0@	25/2$^+$		J^{π}: excit and $\gamma(\theta)$ for the 1093γ to the 2781 level give 25/2$^+$.

† From Adopted Levels.
‡ From Adopted Levels, Values from this data set are given in comments.
# Band(A): Negative parity sequence.
@ Band(B): Positive parity sequence.

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$\gamma(^{101}Rh)$

ΔE: Uncertainty not given by the authors. Assumed to be 0.3 keV.

E_γ	I_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	Comments
145.9[&] *3*	17.5[&] *8*	893.3	13/2$^+$	747.7	11/2$^+$	D		
145.9[&] *3*	17.5[&] *8*	2930.9		2784.6				
169.9 *3*	3.1 *5*	1778.6	17/2$^+$	1609.1	15/2$^+$	D		
189 *1*	10.7 *5*	3425.9?		3236.9?				E_γ: coincidence with all members of the 1/2$^-$ g.s. cascade.
230.1 *3*	2.0[‡] *5*	977.8	(9/2$^+$)	747.7	11/2$^+$			
259.4 *3*	4.6 *5*	2930.9		2671.5	17/2$^-$			
270.0 *3*	3.0[‡] *5*	747.7	11/2$^+$	478.1	5/2$^+$			
285.2 *3*	2.5 *2*	2671.5	17/2$^-$	2386.3	17/2$^-$			
296.0 *3*	10.3 *5*	478.1	5/2$^+$	181.8		D+Q	+0.06 *+3−2*	
305.0 *3*	14 *2*	305.0	3/2$^-$	0.0	1/2$^-$			I_γ: for doublet with intense 306.8γ from ^{101}Ru.
306 *1*		3236.9?		2930.9				E_γ: coincidence with all members of the 1/2$^-$ g.s. cascade.
354.8 *3*	75.6 *10*	354.8	5/2$^-$	0.0	1/2$^-$	Q		
398.3 *3*	3.2 *5*	2784.6		2386.3	17/2$^-$			
495.6 *3*	8.4 *5*	850.4	7/2$^-$,9/2$^-$	354.8	5/2$^-$	D		
544.1 *3*	<82[#]	898.9	9/2$^-$	354.8	5/2$^-$	Q		
544.6 *3*	<82[#]	2930.9		2386.3	17/2$^-$			
590.4 *3*	50.2 *10*	747.4	7/2$^+$	157.3	9/2$^+$	D+Q	−0.68 *+12−14*	
677.6 *3*		1576.5		898.9	9/2$^-$			Very weak transition, seen only in $\gamma\gamma$.
705.2 *3*	49.2 *10*	1604.1	13/2$^-$	898.9	9/2$^-$	Q		
715.8 *3*	19.4 *8*	1609.1	15/2$^+$	893.3	13/2$^+$	D+Q	−0.59 *+17−14*	
736.0 *3*	100	893.3	13/2$^+$	157.3	9/2$^+$	Q		
782.2 *3*	31.1 *10*	2386.3	17/2$^-$	1604.1	13/2$^-$	Q		
807.5 *3*	6.5 *5*	2586.1		1778.6	17/2$^+$			
859.6 *3*	<29.5[@]	1607.3		747.7	11/2$^+$			
861.0 *3*	<29.5[@]	3247.3		2386.3	17/2$^-$			
861.1 *3*	<29.5[@]	1609.1	15/2$^+$	747.7	11/2$^+$			
875.0 *3*	5.0[‡] *5*	2653.6		1778.6	17/2$^+$			
885.3 *3*	50.8 *10*	1778.6	17/2$^+$	893.3	13/2$^+$	Q		
1002.2 *3*	16.3 *8*	2780.8	21/2$^+$	1778.6	17/2$^+$	Q		
1067.2 *3*	8.4 *3*	2671.5	17/2$^-$	1604.1	13/2$^-$	Q		
1093.2 *3*	2.5 *15*	3874.0	25/2$^+$	2780.8	21/2$^+$	Q		

[†] Uncertainty not given by the authors. Assumed to be 0.3 keV.
[‡] Upper limit.
[#] Iγ=78 3 for the 544.1+544.6 γ's.
[@] Iγ=27.5 20 for the 859.6+861.0+861.1 γ's.
[&] Multiply placed with undivided intensity.

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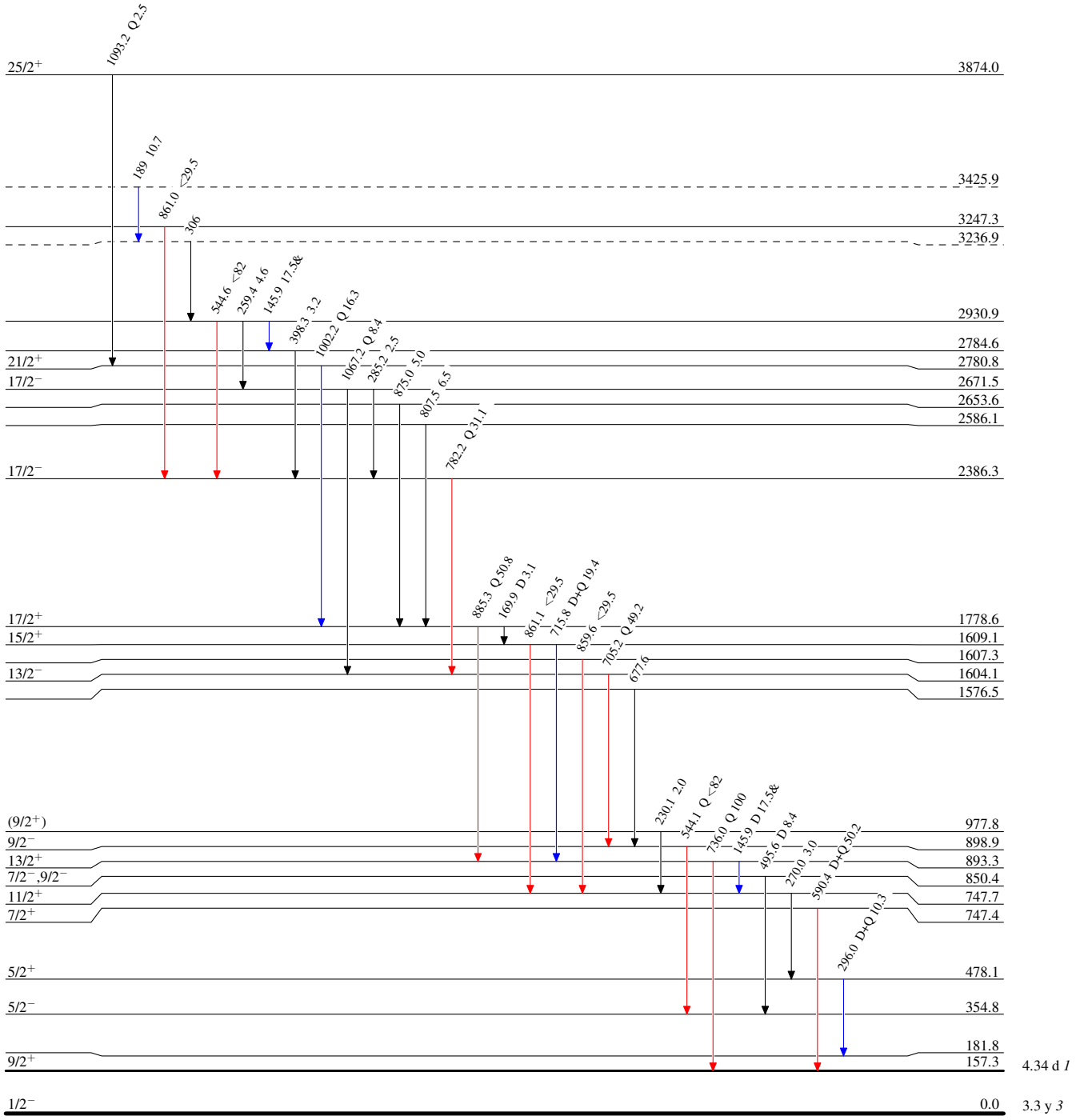
Level Scheme

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

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



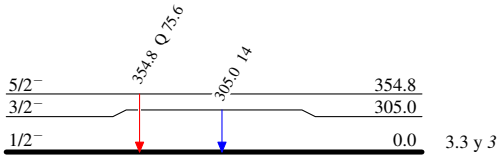
$^{101}_{45}Rh_{56}$

^{98}Mo(^{6}Li,3nγ) 1982Ka15

Level Scheme (continued)

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

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



$^{101}_{45}Rh_{56}$

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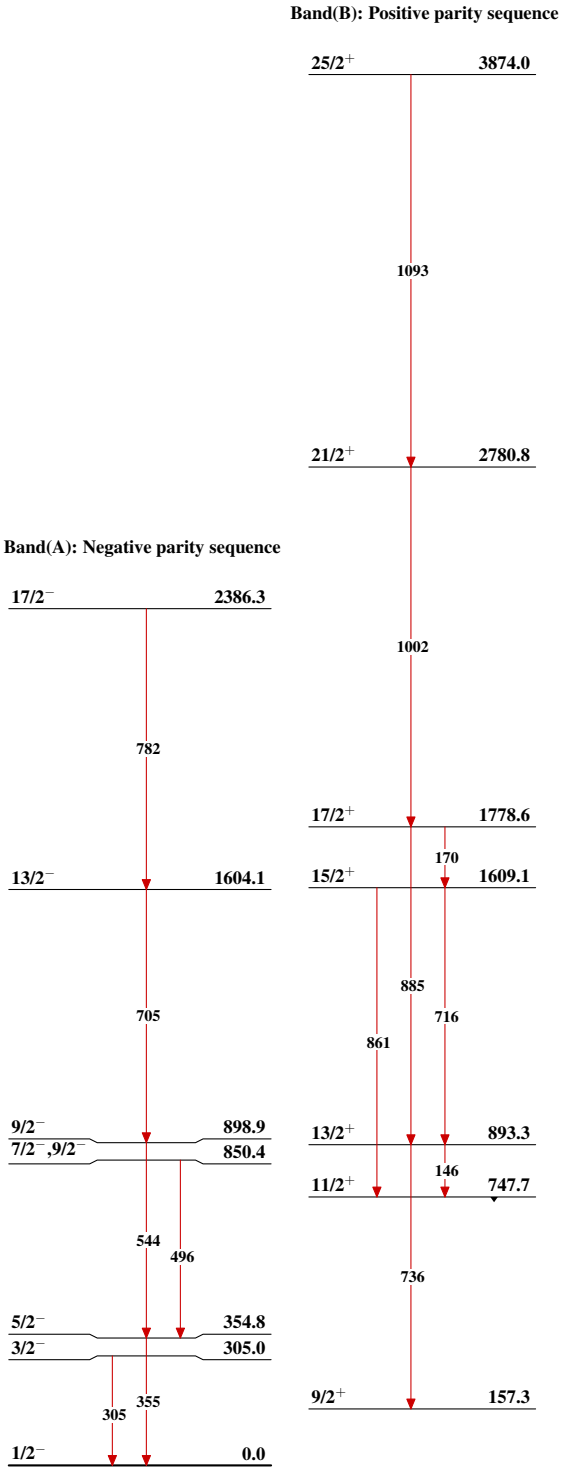

$^{101}_{45}Rh_{56}$