

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. Morse	NDS 189,111 (2023)	23-Sep-2022

$Q(\beta^-) = -3882$ syst; $S(n) = 7.50 \times 10^3$ 9; $S(p) = 2394$ 20; $Q(\alpha) = 7963$ 4 [2021Wa16](#)

$\Delta Q(\beta^-) = 182$ ([2021Wa16](#)).

$S(2n) = 1.436\text{E}+4$ 17, $S(2p) = 6786$ SY 36 ([2021Wa16](#)).

[2018It04](#): Mass measurement.

 ^{251}Md LevelsCross Reference (XREF) Flags

- A** ^{255}Lr α decay (31.1 s)
B ^{255}Lr α decay (2.54 s)
C ^{251}Md IT decay (1.4 s)
D $^{205}\text{Tl}(^{48}\text{Ca}, 2n\gamma)$

E(level)	J^π	$T_{1/2}$	XREF	Comments
0 [‡]	7/2 ⁻	4.27 min 11	ABCD	$\% \alpha = 10$ 1 $\% \varepsilon + \beta^+ = 90$ 1; configuration = $\pi 7/2^-$ [514] $\% \alpha$: From 2006Ch52 . $T_{1/2}$: Weighted average of 4.28 min 12 (2021Go26), 4.27 min 26 (2006Ch52), and 4.0 min 5 (1973Es01). J^π : Favored α decay from the state assigned 7/2 ⁻ [514] in ^{255}Lr and the g-factor determined from the rotational band built on this state support the 7/2 ⁻ assignment.
54 [#] 10	1/2 ⁻		A D	configuration = $\pi 1/2^-$ [521] J^π : Favored α decay from the 1/2 ⁻ [521] configuration in ^{255}Lr and the lack of observed signature partner in the rotational band support the 1/2 ⁻ assignment.
61.0 [‡] 10	9/2 ⁻		D	
94 [#] 10	5/2 ⁻		D	
133.0 [‡] 10	11/2 ⁻		AB D	
181 [#] 10	9/2 ⁻		D	
222.8 [‡] 10	13/2 ⁻		D	
322.0 [‡] 12	15/2 ⁻		D	
325 [#] 10	13/2 ⁻		D	
437.6 [‡] 12	17/2 ⁻		D	
520 [#] 10	17/2 ⁻		D	
560.8 [‡] 13	19/2 ⁻		D	
701.4 [‡] 12	21/2 ⁻		D	
765 [#] 10	21/2 ⁻		D	
≥ 844	(23/2 ⁺)	1.4 s 3	C	$\% \text{IT} \approx 100$ $J^\pi, T_{1/2}$: From ^{251}Md IT decay (2021Go26). $\% \text{IT}$: No other decay mode has been observed.
849.8 [‡] 16	23/2 ⁻		D	
1012.6 [‡] 13	25/2 ⁻		D	
1057 [#] 10	25/2 ⁻		D	
1183.8 [‡] 19	27/2 ⁻		D	
1370.6 [‡] 17	29/2 ⁻		D	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{251}Md Levels (continued)

E(level)	$J^{\pi\dagger}$	XREF	E(level)	$J^{\pi\dagger}$	XREF
1393 [#] 10	29/2 ⁻	D	2185 [#] 10	37/2 ⁻	D
1559.8 [‡] 22	31/2 ⁻	D	2634 [#] 11	41/2 ⁻	D
1770 [#] 10	33/2 ⁻	D	3117 [#] 11	45/2 ⁻	D
			3630 [#] 11	49/2 ⁻	D

[†] Based on identification of band-head configurations deduced from favored α decay from ^{255}Lr and identification of the rotational bands built on top of them in $^{205}\text{Tl}(^{48}\text{Ca}, 2n\gamma)$, unless noted otherwise.

[‡] Band(A): $\pi 7/2^{-}[514]$.

[#] Band(B): $\pi 1/2^{-}[521]$.

 $\gamma(^{251}\text{Md})$

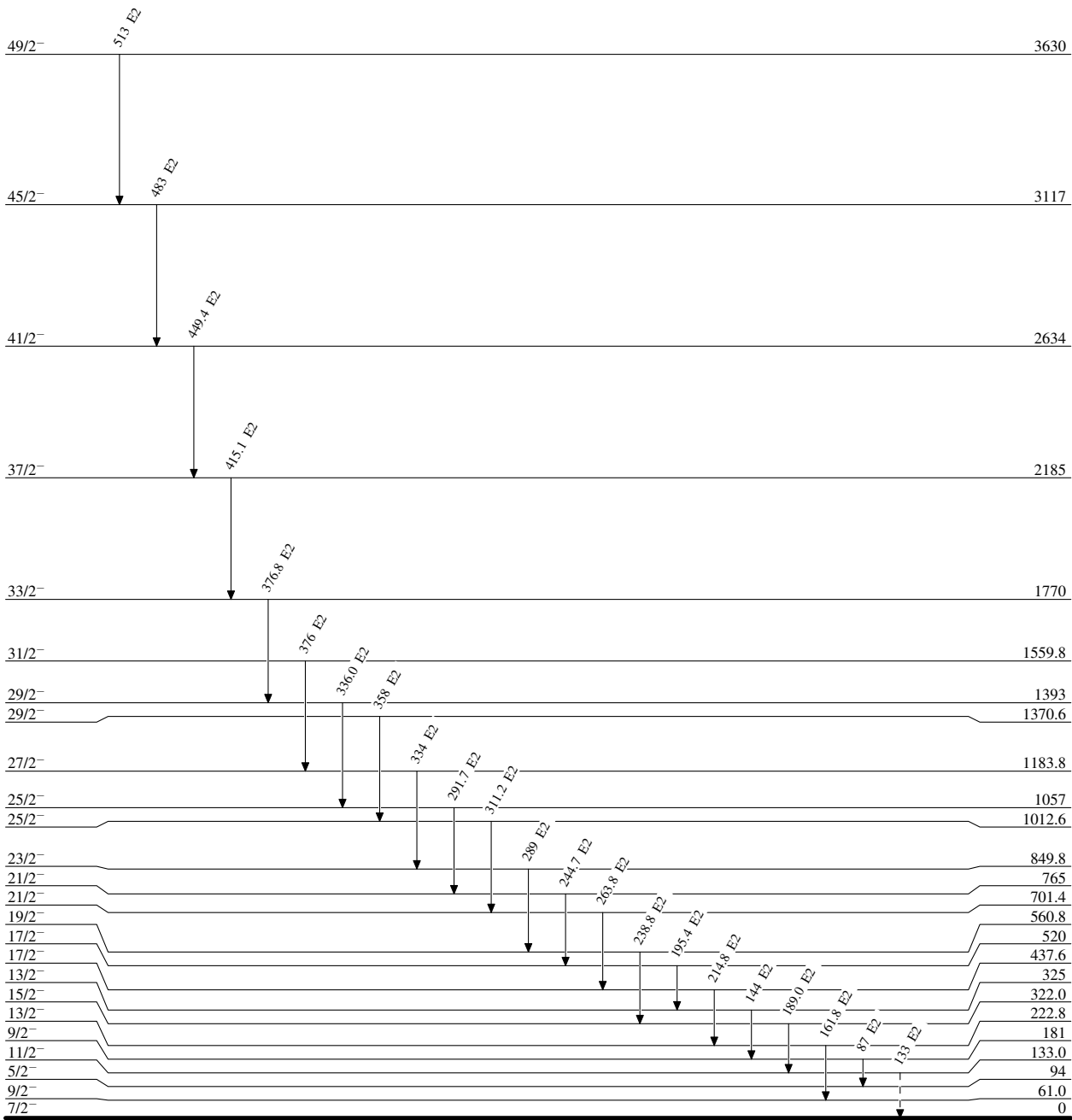
$E_i(\text{level})$	J_i^{π}	E_{γ}	E_f	J_f^{π}	Mult.	$E_i(\text{level})$	J_i^{π}	E_{γ}	E_f	J_f^{π}	Mult.
61.0	9/2 ⁻	(61)	0	7/2 ⁻	M1(+E2)	849.8	23/2 ⁻	289 1	560.8	19/2 ⁻	E2
94	5/2 ⁻	(40)	54	1/2 ⁻	E2	1012.6	25/2 ⁻	311.2 6	701.4	21/2 ⁻	E2
133.0	11/2 ⁻	(133)	0	7/2 ⁻	E2	1057	25/2 ⁻	291.7 2	765	21/2 ⁻	E2
181	9/2 ⁻	87 2	94	5/2 ⁻	E2	1183.8	27/2 ⁻	334 1	849.8	23/2 ⁻	E2
222.8	13/2 ⁻	161.8 3	61.0	9/2 ⁻	E2	1370.6	29/2 ⁻	358 1	1012.6	25/2 ⁻	E2
322.0	15/2 ⁻	189.0 7	133.0	11/2 ⁻	E2	1393	29/2 ⁻	336.0 2	1057	25/2 ⁻	E2
325	13/2 ⁻	144 2	181	9/2 ⁻	E2	1559.8	31/2 ⁻	376 1	1183.8	27/2 ⁻	E2
437.6	17/2 ⁻	214.8 5	222.8	13/2 ⁻	E2	1770	33/2 ⁻	376.8 2	1393	29/2 ⁻	E2
520	17/2 ⁻	195.4 2	325	13/2 ⁻	E2	2185	37/2 ⁻	415.1 4	1770	33/2 ⁻	E2
560.8	19/2 ⁻	238.8 4	322.0	15/2 ⁻	E2	2634	41/2 ⁻	449.4 10	2185	37/2 ⁻	E2
701.4	21/2 ⁻	263.8 3	437.6	17/2 ⁻	E2	3117	45/2 ⁻	483 1	2634	41/2 ⁻	E2
765	21/2 ⁻	244.7 3	520	17/2 ⁻	E2	3630	49/2 ⁻	513 1	3117	45/2 ⁻	E2

Adopted Levels, Gammas

Legend

Level Scheme

-----► γ Decay (Uncertain)



4.27 min 11

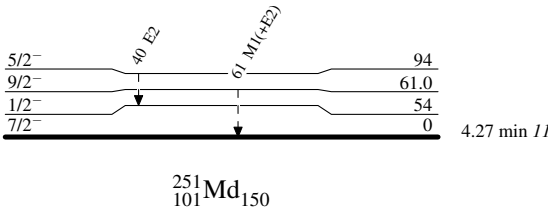
$^{251}_{101}\text{Md}_{150}$

Adopted Levels, Gammas

Legend

Level Scheme (continued)

-----► γ Decay (Uncertain)



Adopted Levels, Gammas

