^{128}Te(^{11}B,3nγ) 2001Cy01

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 152, 331 (2018)	1-Apr-2018

E(^{11}B)=48 MeV. Measured Eγ, $\gamma\gamma$ coincidences, DCO ratios (no details given) using 4 Compton-suppressed HPGe detectors plus an 8-element NaI(Tl) multiplicity filter.

2001Cy01 report states built upon the 114-ms isomer; they do not discuss the excitation energy of the isomer itself. Evaluator sets the excitation energy of the isomer as that given in the Adopted Levels, to aid in comparisons between different datasets and the Adopted Levels.

There are differences between the J^π assignments proposed by 2001Cy01 and later studies, which result from differing bandhead assignments. These are noted in the comments.

^{136}La Levels

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	Comments
259.3	8^+	114 ms *5*	E(level),$T_{1/2}$: from the Adopted Levels. Additional information 1.
288.4	(6^+)		
341.2[&]	9^-		J$^\pi$: Bandhead spin of 8^- is adopted.
539.4	7^-		
665.3			
1022.1[&]	11^-		
1124.4[#]	8^+		J$^\pi$: Bandhead spin of 9^+ is adopted.
1280.6[#]	9^+		
1520.7	10^-		
1687.0[#]	10^+		
2111.3[&]	13^-		
2112.3[#]	11^+		
2368.5	11^-		
2370.7[#]	12^+		
2579.6[@]	13^-		J$^\pi$: Bandhead spin of 12^- is adopted.
2611.0[&]	14^-		
2691.3	(12^+)		
2789.9[@]	14^-		
2810.0[#]	13^+		
2967.0[&]	15^-		
2983.0	15^-		
3068.9[@]	15^-		
3121.6			
3159.0	16^-		
3217.0[#a]	14^+		
3313.3	(14^+)		
3389.8			
3404.9[@]	16^-		
3489.3[a]	(15^+)		
3819.8			
3842.9[@]	17^-		
3861.3	(16^+)		
4065.0[#a]	15^+		
4392[@]	18^-		
4662.0[#a]	(16^+)		

Continued on next page (footnotes at end of table)

^{128}Te(^{11}B,3nγ) 2001Cy01 (continued)

^{136}La Levels (continued)

E(level)[†]	J$^{\pi}$[‡]
5074[@]	(19$^-$)
5508[#a]	(17$^+$)

† From a least-squares fit to Eγ, by evaluator, except where noted.
‡ As given by 2001Cy01, based on DCO ratios, systematics of neighboring nuclei and Cranking Shell Model calculations.
# Band(A): Band based on 8$^+$ isomer. Configuration of $\pi h_{11/2}\otimes\nu h_{11/2}$.
@ Band(B): Band based on 13$^-$ level. Configuration of $\pi[413]_{5/2}\otimes(\pi h_{11/2})^2\otimes\nu h_{11/2}$.
& Band(C): Band based on 9$^-$. Configuration of $\pi[411]_{1/2}\otimes\nu h_{11/2}$.
a Placement of transitions in the band based upon the $\pi h_{11/2}\otimes\nu h_{11/2}$ configuration differs here from the later studies in ^{124}Sn(^{17}N,5nγ) and ^{130}Te(^{11}b,5nγ). The main difference comes in the lack of identication in this reaction of a 149γ feeding into the 2372-keV level. For this reason, higher lying states of the band proposed in this dataset are not adopted.

γ(^{136}La)

E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
82	341.2	9$^-$	259.3	8$^+$	498	1520.7	10$^-$	1022.1	11$^-$
156	1280.6	9$^+$	1124.4	8$^+$	500	2611.0	14$^-$	2111.3	13$^-$
176	3159.0	16$^-$	2983.0	15$^-$	503	3313.3	(14$^+$)	2810.0	13$^+$
176	3489.3	(15$^+$)	3313.3	(14$^+$)	549	4392	18$^-$	3842.9	17$^-$
210	2789.9	14$^-$	2579.6	13$^-$	579	2691.3	(12$^+$)	2112.3	11$^+$
258	2368.5	11$^-$	2111.3	13$^-$	585	1124.4	8$^+$	539.4	7$^-$
258	2370.7	12$^+$	2112.3	11$^+$	597	4662.0	(16$^+$)	4065.0	15$^+$
268	3389.8		3121.6		678	2789.9	14$^-$	2111.3	13$^-$
279	3068.9	15$^-$	2789.9	14$^-$	681	1022.1	11$^-$	341.2	9$^-$
280	539.4	7$^-$	259.3	8$^+$	682	5074	(19$^-$)	4392	18$^-$
324	665.3		341.2	9$^-$	684	2370.7	12$^+$	1687.0	10$^+$
336	3404.9	16$^-$	3068.9	15$^-$	779	3389.8		2611.0	14$^-$
356	2967.0	15$^-$	2611.0	14$^-$	832	2112.3	11$^+$	1280.6	9$^+$
372	2983.0	15$^-$	2611.0	14$^-$	836	1124.4	8$^+$	288.4	(6$^+$)
372	3861.3	(16$^+$)	3489.3	(15$^+$)	846	5508	(17$^+$)	4662.0	(16$^+$)
406	1687.0	10$^+$	1280.6	9$^+$	847	2368.5	11$^-$	1520.7	10$^-$
407	3217.0	14$^+$	2810.0	13$^+$	848	4065.0	15$^+$	3217.0	14$^+$
425	2112.3	11$^+$	1687.0	10$^+$	892	2579.6	13$^-$	1687.0	10$^+$
430	3819.8		3389.8		943	3313.3	(14$^+$)	2370.7	12$^+$
438	3842.9	17$^-$	3404.9	16$^-$	1010	3121.6		2111.3	13$^-$
439	2810.0	13$^+$	2370.7	12$^+$	1059	2579.6	13$^-$	1520.7	10$^-$
459	1124.4	8$^+$	665.3		1090	2111.3	13$^-$	1022.1	11$^-$

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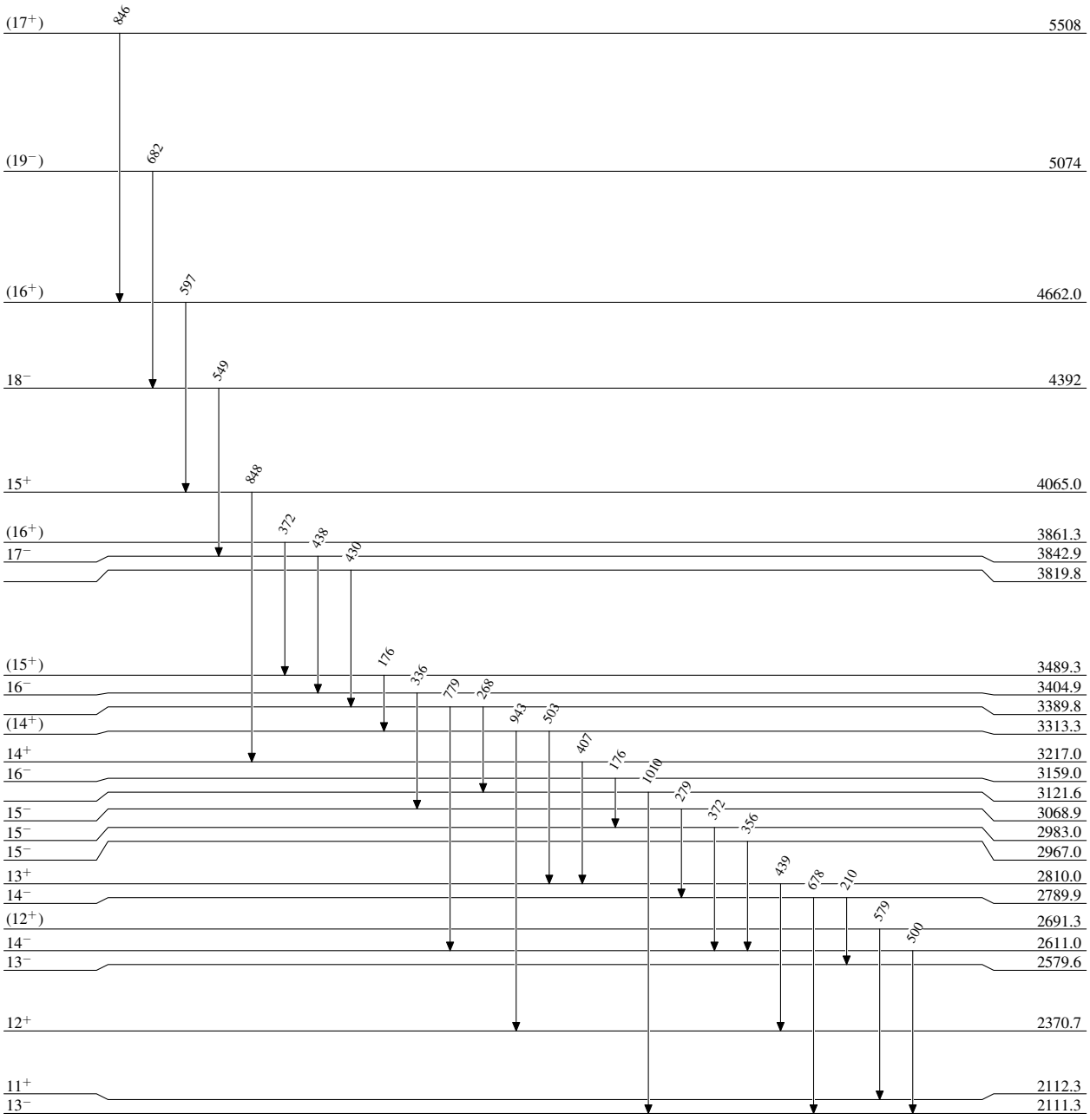
Level Scheme



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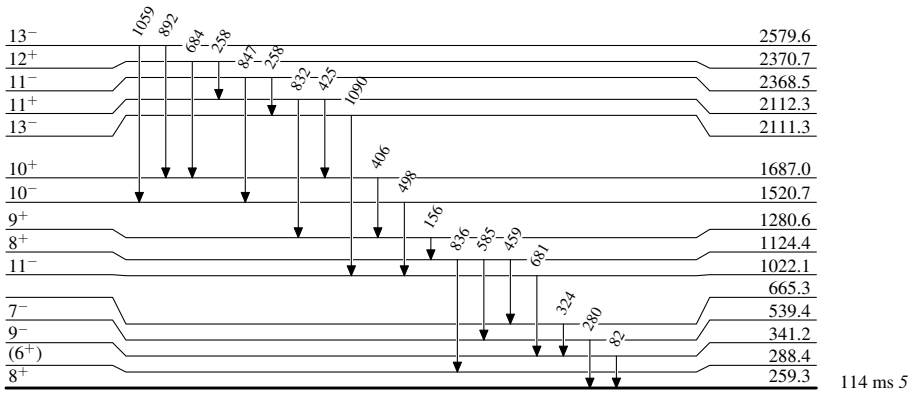
Level Scheme (continued)



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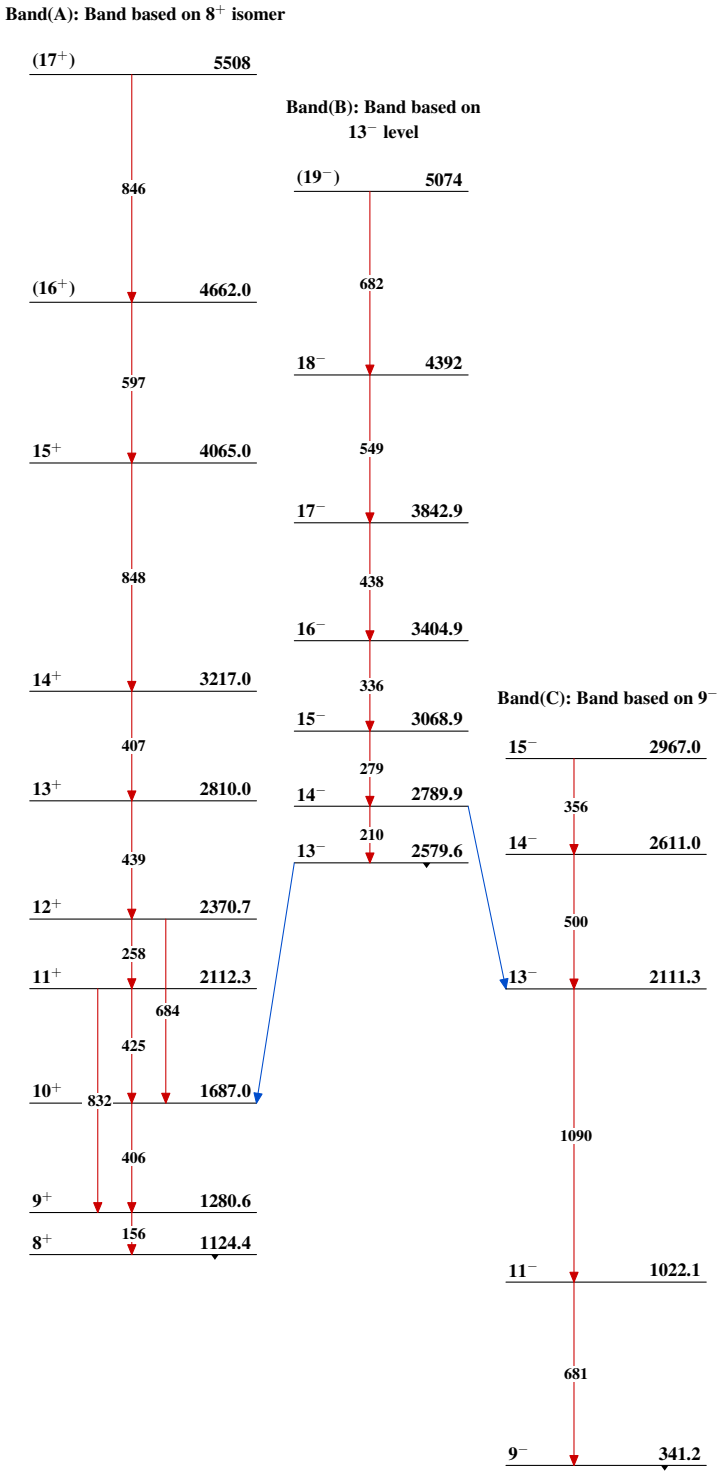

$^{136}_{57}La_{79}$