

$^{124}\text{Sn}(^{11}\text{B},3\text{n}\gamma)$ 1997Ha29

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov, A. A. Rodionov and S. Sakharov, Balraj Singh		NDS 104, 497 (2005)	10-Feb-2005

1997Ha29: E=42 MeV. Measured $E\gamma$, $I\gamma$, and $\gamma\gamma$ using an array of 10 HPGe detectors with BGO Compton suppressors and a LEPS.

Other: 1979GaZW: $^{130}\text{Te}(^6\text{Li},4\text{n}\gamma)$. Measured $E\gamma$, $I\gamma$, $\gamma\gamma$, $\gamma(\theta)$, $\gamma(t)$. All γ rays found to be delayed from an isomer of $T_{1/2} > 1 \mu\text{s}$. Details of this study are not available.

1966Mo04: $^{133}\text{Cs}(^{14}\text{N},^{15}\text{N})$ E=140 MeV. Measured $\sigma(\theta)$.

The level scheme is constructed on the basis of $\gamma\gamma$ coin and relative intensities of γ rays.

 ^{132}Cs Levels

E(level) [†]	J ^π #	E(level) [†]	J ^π #	E(level) [†]	J ^π #	E(level) [†]	J ^π #
0	2 ⁺	980.0 [@] 8	(9 ⁻)	1981.6 ^a 10	(12 ⁺)	2988.6 ^b 12	(14 ⁻)
86.2 4	(3 ⁺)	1081.7 ^{&} 9	(10 ⁻)	1987.5 10	(12 ⁺)	3165.3? [@] 14	
108.3 4	(4 ⁺)	1131.3 ^a 9	(9 ⁺) [‡]	2089.3 [@] 10	(12 ⁻)	3232.0 ^{&} 11	(15 ⁻)
183.6 6	(4 ⁺)	1214.8 [@] 9	(10 ⁻)	2316.3 ^{&} 10	(13 ⁻)	3270.6 ^b 16	(15 ⁻)
185.9 6	(5)	1281.7 ^a 10	(10 ⁺)	2395.2 10		3310.1 ^a 11	(15 ⁺)
240.1 5	(5 ⁻)	1474.6 ^{&} 10	(11 ⁻)	2409.5 ^a 10	(13 ⁺)	3389.3 12	
311.7 [@] 8	(7 ⁻)	1683.4 ^a 10	(11 ⁺)	2636.2 ^b 11	(12 ⁻)	3665.9 ^b 16	
379.3 ^{&} 9	(8 ⁻)	1826.2 [@] 9	(11 ⁻)	2772.7 ^b 11	(13 ⁻)	3788.8? ^a 15	
537.5 [@] 8	(8 ⁻)	1835.0 10	(11 ⁺)	2864.8 ^a 11	(14 ⁺)	3985.7 ^b 12	
787.8 ^{&} 9	(9 ⁻)	1934.1 ^{&} 10	(12 ⁻)	2868.8 ^{&} 10	(14 ⁻)	4385.9 13	

[†] From least-squares fit to $E\gamma$'s, assuming $\Delta(E\gamma)=0.5$ keV for $E\gamma$'s quoted to tenth of a keV and 1 keV for others.

[‡] Configuration= $\pi h_{11/2} \nu h_{11/2}$ as suggested by 1998Li36 from smooth systematic trends of energy levels in even-A Cs nuclei.

As proposed by 1997Ha29, based on band assignments and comparison with systematics and calculations (see also 1998Li36).

@ Band(A): $\pi h_{11/2} \nu d_{5/2}$ (1997Ha29).

& Band(B): $\pi h_{11/2} \nu g_{7/2}$ (1997Ha29).

^a Band(C): $\pi h_{11/2} \nu h_{11/2}$ (1997Ha29).

^b Band(D): Band based on (12⁻).

 $\gamma(^{132}\text{Cs})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
22.1	108.3	(4 ⁺)	86.2	(3 ⁺)	234.8	1214.8	(10 ⁻)	980.0	(9 ⁻)
54.1	240.1	(5 ⁻)	185.9	(5)	282	3270.6	(15 ⁻)	2988.6	(14 ⁻)
56.4	240.1	(5 ⁻)	183.6	(4 ⁺)	293.9	1081.7	(10 ⁻)	787.8	(9 ⁻)
67.6	379.3	(8 ⁻)	311.7	(7 ⁻)	297.8	1981.6	(12 ⁺)	1683.4	(11 ⁺)
71.6	311.7	(7 ⁻)	240.1	(5 ⁻)	304.2	1987.5	(12 ⁺)	1683.4	(11 ⁺)
77.6	185.9	(5)	108.3	(4 ⁺)	343.5	1131.3	(9 ⁺)	787.8	(9 ⁻)
86.2	86.2	(3 ⁺)	0	2 ⁺	363.2	3232.0	(15 ⁻)	2868.8	(14 ⁻)
97.3	183.6	(4 ⁺)	86.2	(3 ⁺)	382.3	2316.3	(13 ⁻)	1934.1	(12 ⁻)
108.3	108.3	(4 ⁺)	0	2 ⁺	393	1474.6	(11 ⁻)	1081.7	(10 ⁻)
131.9	240.1	(5 ⁻)	108.3	(4 ⁺)	395.3	3665.9		3270.6	(15 ⁻)
136.5	2772.7	(13 ⁻)	2636.2	(12 ⁻)	401.6	1683.4	(11 ⁺)	1281.7	(10 ⁺)
146.7	1981.6	(12 ⁺)	1835.0	(11 ⁺)	407.8	2395.2		1987.5	(12 ⁺)
150.4	1281.7	(10 ⁺)	1131.3	(9 ⁺)	408.5	787.8	(9 ⁻)	379.3	(8 ⁻)
152.4	1987.5	(12 ⁺)	1835.0	(11 ⁺)	413.6	2395.2		1981.6	(12 ⁺)
215.9	2988.6	(14 ⁻)	2772.7	(13 ⁻)	427.8	2409.5	(13 ⁺)	1981.6	(12 ⁺)
225.8	537.5	(8 ⁻)	311.7	(7 ⁻)	442.5	980.0	(9 ⁻)	537.5	(8 ⁻)

Continued on next page (footnotes at end of table)

$^{124}\text{Sn}(^{11}\text{B}, 3n\gamma)$ **1997Ha29** (continued) $\gamma(^{132}\text{Cs})$ (continued)

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
445.2	3310.1	(15 ⁺)	2864.8	(14 ⁺)	726.2	2409.5	(13 ⁺)	1683.4	(11 ⁺)
459.6	1934.1	(12 ⁻)	1474.6	(11 ⁻)	753.7	3985.7		3232.0	(15 ⁻)
494	1281.7	(10 ⁺)	787.8	(9 ⁻)	785.3	2772.7	(13 ⁻)	1987.5	(12 ⁺)
552.5	2868.8	(14 ⁻)	2316.3	(13 ⁻)	841.6	2316.3	(13 ⁻)	1474.6	(11 ⁻)
553.3	1835.0	(11 ⁺)	1281.7	(10 ⁺)	846.3	1826.2	(11 ⁻)	980.0	(9 ⁻)
593.8	1131.3	(9 ⁺)	537.5	(8 ⁻)	852.4	1934.1	(12 ⁻)	1081.7	(10 ⁻)
611.4	1826.2	(11 ⁻)	1214.8	(10 ⁻)	874.5	2089.3	(12 ⁻)	1214.8	(10 ⁻)
668.3	980.0	(9 ⁻)	311.7	(7 ⁻)	883.2	2864.8	(14 ⁺)	1981.6	(12 ⁺)
677.3 [†]	1214.8	(10 ⁻)	537.5	(8 ⁻)	900.6 [‡]	3310.1	(15 ⁺)	2409.5	(13 ⁺)
686.9	1474.6	(11 ⁻)	787.8	(9 ⁻)	915.6	3232.0	(15 ⁻)	2316.3	(13 ⁻)
700.1	1981.6	(12 ⁺)	1281.7	(10 ⁺)	924 [‡]	3788.8?		2864.8	(14 ⁺)
702 [‡]	2636.2	(12 ⁻)	1934.1	(12 ⁻)	934.6	2868.8	(14 ⁻)	1934.1	(12 ⁻)
702.4	1081.7	(10 ⁻)	379.3	(8 ⁻)	994.1	3389.3		2395.2	
703.7	1835.0	(11 ⁺)	1131.3	(9 ⁺)	996.6	4385.9		3389.3	
705.8	1987.5	(12 ⁺)	1281.7	(10 ⁺)	1076 [‡]	3165.3?		2089.3	(12 ⁻)

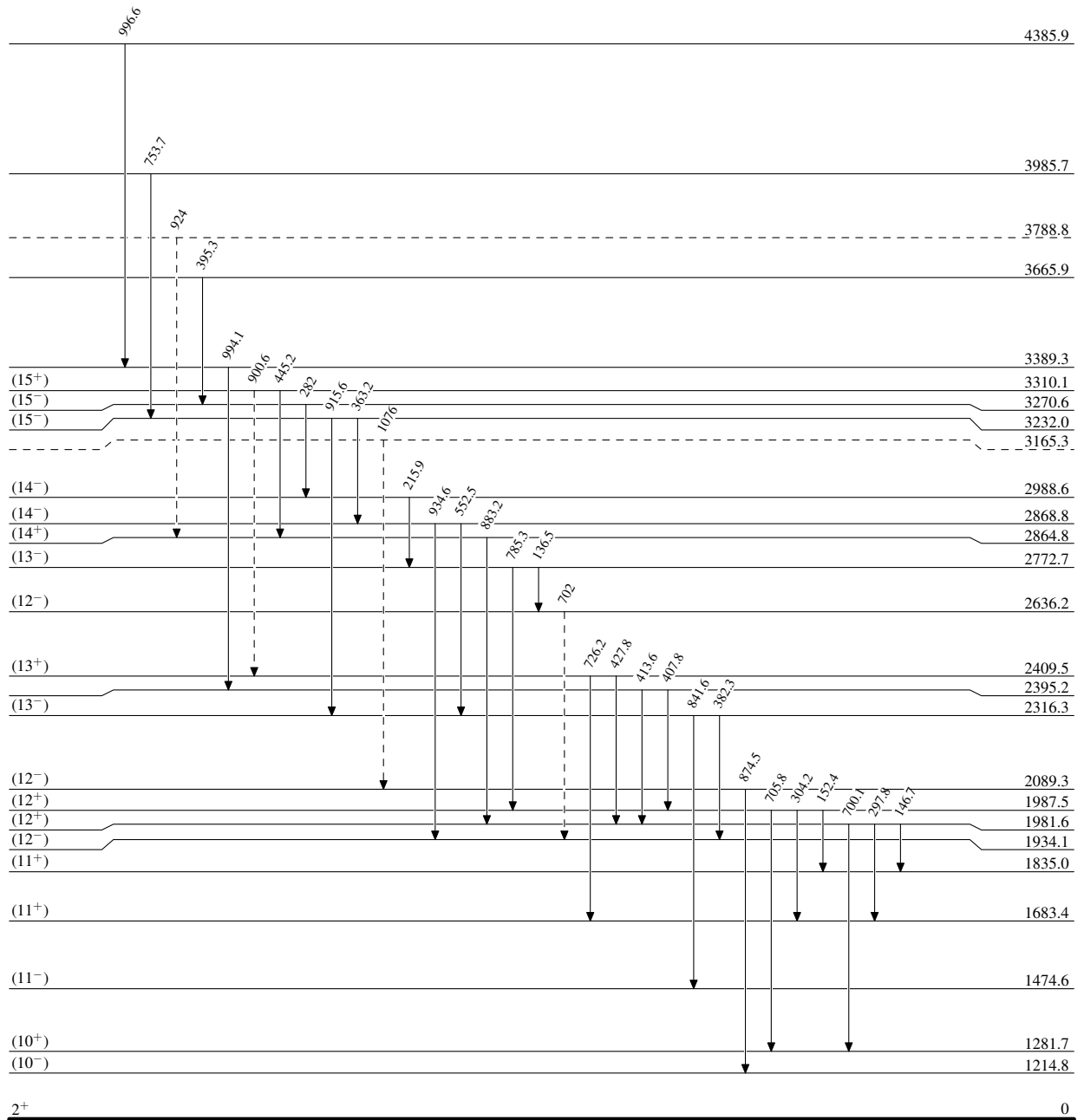
[†] From level-energy difference. $E_\gamma=668.3$ quoted in figure 1 of **1997Ha29** seems a misprint.

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

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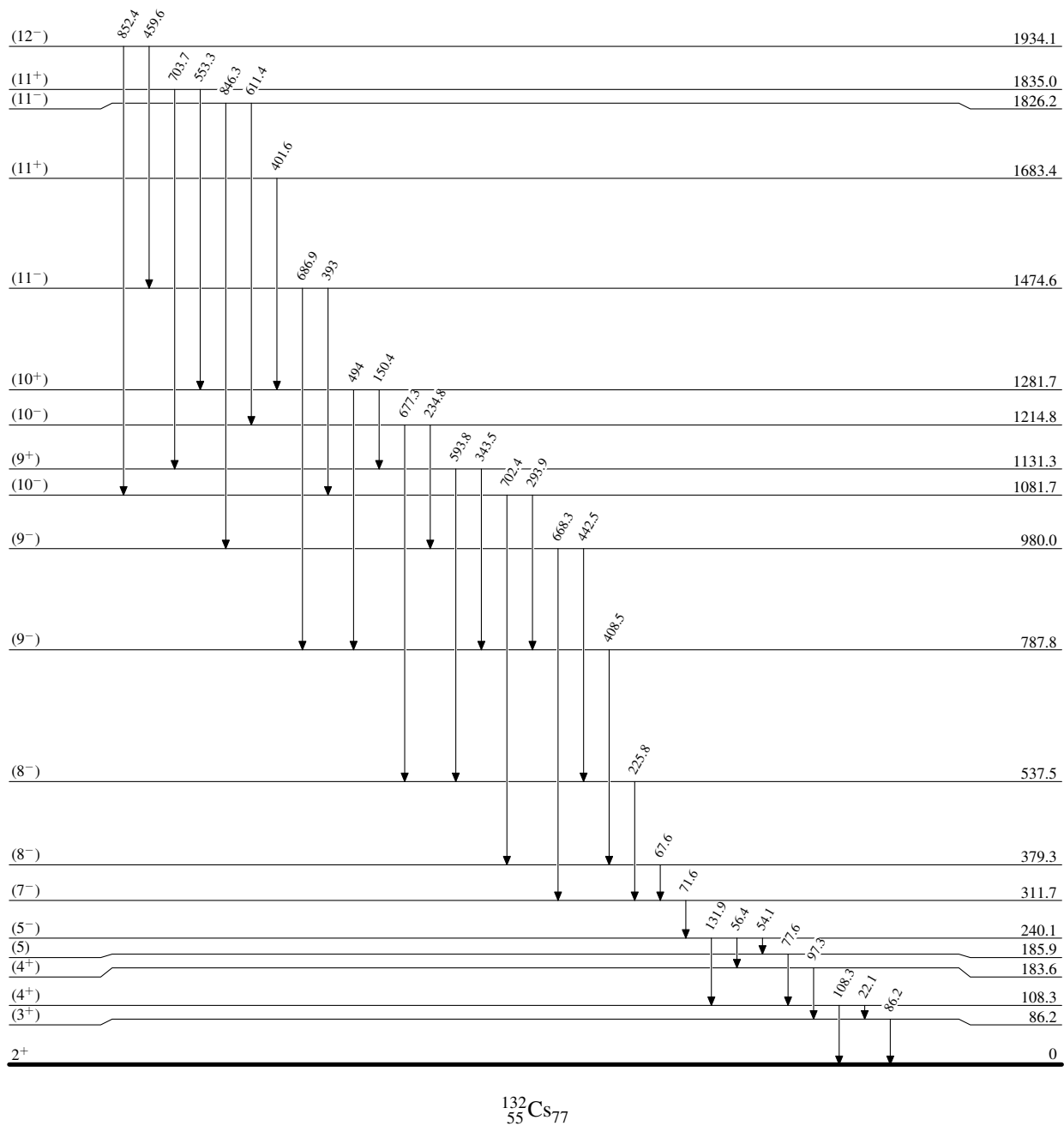
Legend

Level Scheme

-----► γ Decay (Uncertain) $^{132}_{55}\text{Cs}_{77}$

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Level Scheme (continued)

 $^{132}_{55}\text{Cs}_{77}$

