Adopted Levels, Gammas

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

Q(β^-)=5120 *14*; S(n)=4768 *3*; S(p)=12024 *3*; Q(α)=−304 *3* 2017Wa10
S(2n)=8034 *4*; S(2p)=22569 *4*; Q(β^-n)=1283 *3* (2017Wa10).
α: Additional information 1.

^{136}Te Levels

Cross Reference (XREF) Flags

A ^{136}Sb β^- decay
B ^{248}Cm SF decay
C ^{252}Cf SF decay
D Coulomb excitation
E ^{9}Be(^{132}Sn,αnγ)

E(level)†	J$^\pi$	$T_{1/2}$	XREF	Comments
0.0‡	0$^+$	17.63 s *9*	ABCDE	%β^-=100; %β^-n=1.31 *5* $T_{1/2}$: weighted average of 17.66 s *9* (1993Ru01), 17.5 s *2* (1978Cr03), and 17.5 s *4* (1976Lu02). Others: 18.1 s *3* (1978Ze08), 25 s *5* (1977Ru04), 24 s *2* (1974Gr29). %β^-n: weighted average of 1.31 *5* (1993Ru01) and 1.34 *13* (2012Ma63). Others: 1.7 *8* (updated value of 2.0 *10* from 1978Cr03 by 1993Ru01 based on new measurement of ^{136}Sb %β^-n value), 0.7 *4* (1977Ru04). δ<r^2>=0.389 fm^2 *19* (2013An02,2006Si40).
606.64‡ *5*	2$^+$	21.6 ps *41*	ABCDE	Q=−0.45 *23*; μ=(+)0.68 *+32−24*; B(E2)↑=0.16 *3* J$^\pi$: E2 607γ to 0$^+$. $T_{1/2}$: from B(E2) and adopted γ-ray properties. Other: 42 ps *8* (preliminary result from centroid shift technique in ^{136}Sb β^- decay). B(E2)↑: weighted average of 0.181 *15* (2017Al06) and 0.122 *18* (2011Da21), both from Coulomb Excitation. Value from 2011Da21 supersedes value of 0.103 *15* from 2002Ra21 which was calculated using an incorrect value for the target thickness. μ: from recoil-in-vacuum (2017Al06). Sign is not measured and from systematics. Q: from reorientation method (2017Al06).
1030.0‡ *10*	4$^+$	70 ps *10*	ABCD	B(E2)↑=0.108 *16* J$^\pi$: E2 423γ to 2$^+$; band assignment. B(E2)↑: from B(E2)↓=0.060 *9* in Coulomb Excitation (2017Al06).
1382.6‡ *14*	6$^+$		BC	J$^\pi$: E2 353γ to 4$^+$; band assignment.
1568.36 *7*	(2$^+$)		A D	B(E2)↑<0.02 J$^\pi$: 962γ to 2$^+$, systematics of N=84 isotones. B(E2)(607 to 1568) < 0.09 in Coulomb Excitation (2017Al07). B(E2)↑: from Coulomb Excitation (2017Al07).
1904.62 *20*	(1,2$^+$)		A	J$^\pi$: 1095γ to 0$^+$, feeding from ^{136}Sb, J^π=(1$^-$) parent.
2033.27 *10*	(1,2$^+$)		A	J$^\pi$: 2033.5γ to 0$^+$, feeding from ^{136}Sb, J^π=(1$^-$) parent.
2044.02 *11*	(0$^+$,1,2)		A	J$^\pi$: 1437γ to 2$^+$, feeding from ^{136}Sb, J^π=(1$^-$) parent.
2060.82 *20*	(1,2$^+$)		A	J$^\pi$: 2061γ to 0$^+$, feeding from ^{136}Sb, J^π=(1$^-$) parent.
2132.1‡ *17*	8$^+$		BC	J$^\pi$: E2 749.5γ to 6$^+$; band assignment.
2211.57 *11*	(0$^+$,1,2)		A	J$^\pi$: 1605γ to 2$^+$, feeding from ^{136}Sb, J^π=(1$^-$) parent.
2573.15 *9*	(0$^+$,1,2)		A	J$^\pi$: 1005γ to (2$^+$), feeding from ^{136}Sb, J^π=(1$^-$) parent.
2633.05 *21*	(0$^+$,1,2)		A	J$^\pi$: 2026γ to 2$^+$, feeding from ^{136}Sb, J^π=(1$^-$) parent.
2792.3‡ *20*	10$^+$		BC	J$^\pi$: E2 660γ to 8$^+$; band assignment.
2801.1 *3*	(0$^+$,1,2)		A	J$^\pi$: 2194γ to 2$^+$, feeding from ^{136}Sb, J^π=(1$^-$) parent.
2821.0 *10*	(0,1,2)		A	J$^\pi$: feeding from ^{136}Sb, J^π=(1$^-$) parent.

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Adopted Levels, Gammas (continued)

^{136}Te Levels (continued)

E(level)[†]	J^π	XREF	Comments
3187.1[‡] *22*	(12^+)	B	J^π: (E2) 395γ to 10^+; band assignment.
3340.1 *20*	$(8,9,10^+)$	B	J^π: 1208γ to 8^+.
3583.3 *4*	$(0^+,1,2)$	A	J^π: 2977γ to 2^+, feeding from ^{136}Sb, $J^\pi=(1^-)$ parent.
3714.5 *4*	$(0^+,1,2)$	A	J^π: 3108γ to 2^+, feeding from ^{136}Sb, $J^\pi=(1^-)$ parent.
3720.5[‡] *24*	(14^+)	B	J^π: 533γ to (12^+); band assignment.
4794 *3*	$(14,15,16^+)$	B	J^π: 1074γ to 14^+.
5160 *3*		B	

[†] From least-squares fit to Eγ, by evaluator. ΔEγ=1 keV was assumed when not explicitly stated.
[‡] Band(A): g.s. yrast band.

$\gamma(^{136}Te)$

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.[‡]	α	Comments
606.64	2^+	606.62 *5*	100	0.0	0^+	E2	0.00482	α(K)=0.00413 *6*; α(L)=0.000556 *8*; α(M)=0.0001112 *16*; α(N)=2.18×10^{-5} *3*; α(O)=2.29×10^{-6} *4* B(E2)(W.u.)=7.6 *15*
1030.0	4^+	423.4[#]	100	606.64	2^+	E2	0.01320	α(K)=0.01118 *16*; α(L)=0.001628 *23*; α(M)=0.000328 *5*; α(N)=6.39×10^{-5} *9*; α(O)=6.53×10^{-6} *10* B(E2)(W.u.)=14.1 *21*
1382.6	6^+	352.6[#]	100[#]	1030.0	4^+	E2	0.0231	α(K)=0.0194 *3*; α(L)=0.00297 *5*; α(M)=0.000600 *9*; α(N)=0.0001165 *17*; α(O)=1.171×10^{-5} *17*
1568.36	(2^+)	961.72 *5*	100	606.64	2^+			
1904.62	$(1,2^+)$	1298.0 *10*	100 *25*	606.64	2^+			
		1904.6 *2*	73 *8*	0.0	0^+			
2033.27	$(1,2^+)$	465.0 *10*	18 *4*	1568.36	(2^+)			
		1426.56 *10*	44 *6*	606.64	2^+			
		2033.5 *2*	100 *7*	0.0	0^+			
2044.02	$(0^+,1,2)$	1437.37 *10*	100	606.64	2^+			
2060.82	$(1,2^+)$	2060.8 *2*	100	0.0	0^+			
2132.1	8^+	749.5[#]	100[#]	1382.6	6^+	E2	0.00282	α(K)=0.00243 *4*; α(L)=0.000316 *5*; α(M)=6.30×10^{-5} *9*; α(N)=1.239×10^{-5} *18*; α(O)=1.318×10^{-6} *19*
2211.57	$(0^+,1,2)$	1604.92 *10*	100	606.64	2^+			
2573.15	$(0^+,1,2)$	1004.79 *5*	100	1568.36	(2^+)			
2633.05	$(0^+,1,2)$	2026.4 *2*	100	606.64	2^+			
2792.3	10^+	660.2[#]	100[#]	2132.1	8^+	E2	0.00387	α(K)=0.00332 *5*; α(L)=0.000440 *7*; α(M)=8.80×10^{-5} *13*; α(N)=1.729×10^{-5} *25*; α(O)=1.83×10^{-6} *3*
2801.1	$(0^+,1,2)$	2194.4 *3*	100	606.64	2^+			
2821.0	$(0,1,2)$	777.0 *10*	100	2044.02	$(0^+,1,2)$			
3187.1	(12^+)	394.8[#]	100[#]	2792.3	10^+	(E2)	0.01629	α(K)=0.01375 *20*; α(L)=0.00204 *3*; α(M)=0.000411 *6*; α(N)=8.00×10^{-5} *12*; α(O)=8.13×10^{-6} *12* Mult.: Q from $\gamma\gamma(\theta)$ in ^{248}Cm SF decay, E2 from assumed band structure.

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Adopted Levels, Gammas (continued)

$\gamma(^{136}Te)$ (continued)

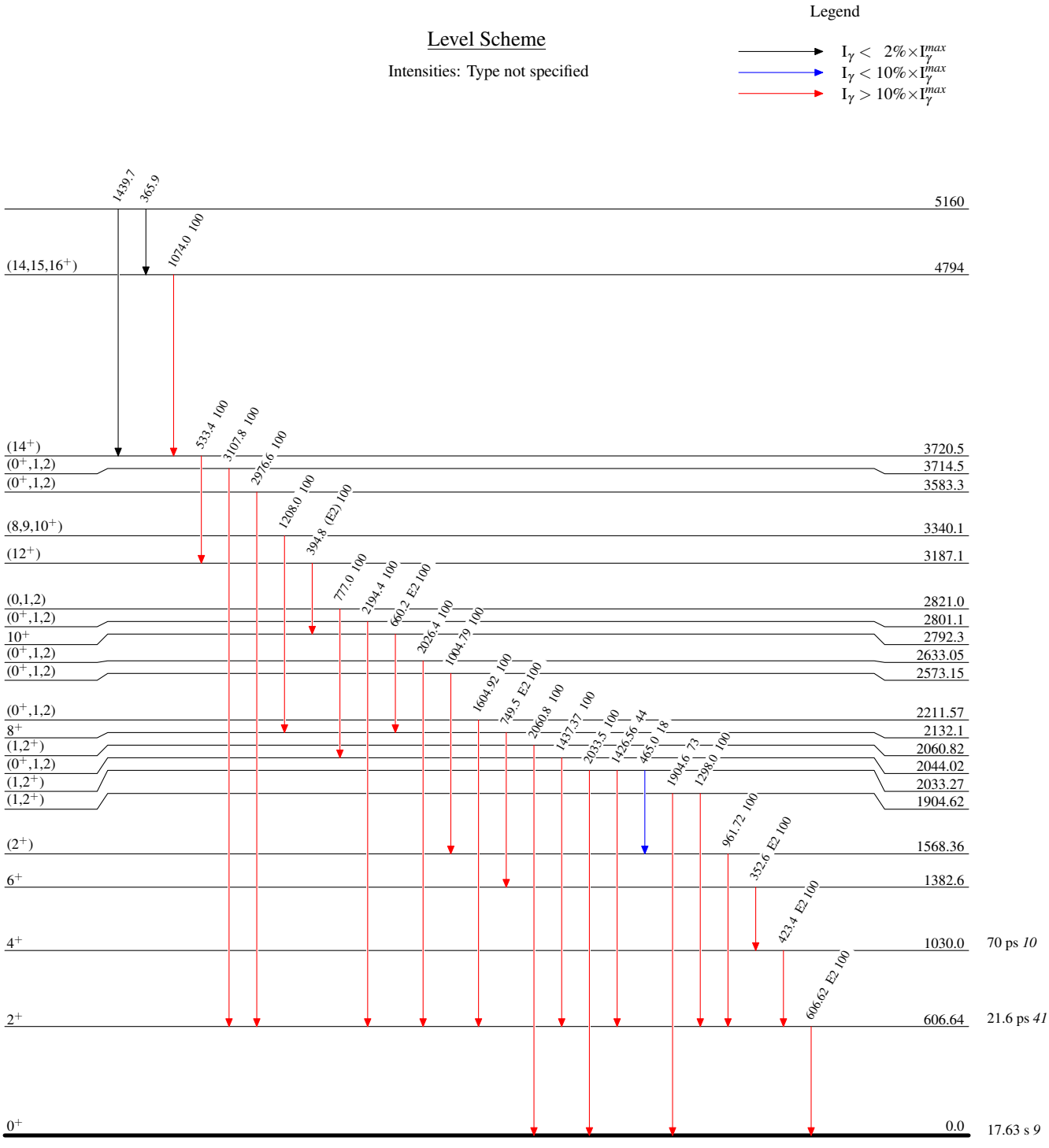
E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π
3340.1	(8,9,10$^+$)	1208.0#	100#	2132.1	8$^+$
3583.3	(0$^+$,1,2)	2976.6 *4*	100	606.64	2$^+$
3714.5	(0$^+$,1,2)	3107.8 *4*	100	606.64	2$^+$
3720.5	(14$^+$)	533.4#	100#	3187.1	(12$^+$)
4794	(14,15,16$^+$)	1074.0#	100#	3720.5	(14$^+$)
5160		365.9#		4794	(14,15,16$^+$)
		1439.7#		3720.5	(14$^+$)

† From ^{136}Sb β^- decay, except where noted.
‡ From $\gamma\gamma(\theta)$ and linear polarization in ^{248}Cm SF decay, except where noted.
# From ^{248}Cm SF decay.

Adopted Levels, Gammas

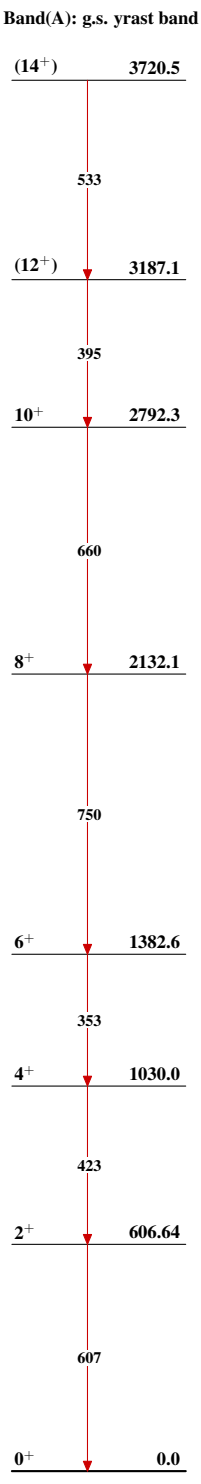
Level Scheme

Intensities: Type not specified



$^{136}_{52}Te_{84}$

Adopted Levels, Gammas



$^{136}_{52}Te_{84}$