^{113}Te ε decay 1975WiZX,1976Wi11

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jean Blachot	NDS 111, 1471 (2010)	1-May-2009

Parent: ^{113}Te: E=0.0; J^π=(7/2$^+$); $T_{1/2}$=1.7 min *2*; Q(ε)=6070 *30*; %ε+%$β^+$ decay=100.0

γ singles with escape-suppression spectrometer and semi, γγ coin, γ(t), 1975WiZX, 1976Wi11.

Others: 1974Ch17, 1974Bu21, 1975BuYW.

^{113}Sb Levels

E(level)	J^π	$T_{1/2}$	E(level)	J^π	E(level)
0.0	5/2$^+$	6.67 min *7*	1257.1 *3*	(9/2$^+$)	2094.2 *6*
644.78 *20*	1/2$^+$		1461.3 *5*	(9/2$^+$)	2115.4 *6*
814.07 *24*	7/2$^+$		1550.9 *4*	(5/2)$^+$	2132.3? *8*
1018.5 *4*	(5/2)$^+$		1716.5? *5*		2172.1 *5*
1181.0 *4*			1853.3 *5*		2534.6 *4*

ε,$β^+$ radiations

ε+$β^+$ branches were obtained from (γ+ce) imbalance at each level and measured annihilation radiation intensity.

E(decay)†	E(level)	Iβ$^+$ †‡	Iε†‡	Log *ft*	I(ε+β$^+$)‡	Comments
(3.54×10^3 *3*)	2534.6	≈3.5	≈1.5	≈5.4	≈5.0	av Eβ=1133 *14*; εK=0.254 *7*; εL=0.0330 *9*; εM+=0.00857 *23*
(3.90×10^3 *3*)	2172.1	≈2.0	≈0.57	≈5.9	≈2.57	av Eβ=1301 *14*; εK=0.187 *5*; εL=0.0243 *6*; εM+=0.00631 *16*
(3.95×10^3 *3*)	2115.4	≈2.9	≈0.77	≈5.8	≈3.7	av Eβ=1327 *14*; εK=0.179 *5*; εL=0.0232 *6*; εM+=0.00603 *15*
(3.98×10^3 *3*)	2094.2	≈3.7	≈0.94	≈5.7	≈4.6	av Eβ=1337 *14*; εK=0.176 *5*; εL=0.0228 *6*; εM+=0.00592 *15*
(4.22×10^3 *3*)	1853.3	≈3.5	≈0.71	≈5.9	≈4.2	av Eβ=1450 *14*; εK=0.145 *4*; εL=0.0188 *5*; εM+=0.00489 *12*
(4.52×10^3 *3*)	1550.9	≈2.8	≈0.43	≈6.2	≈3.2	av Eβ=1592 *15*; εK=0.115 *3*; εL=0.0149 *4*; εM+=0.00388 *9*
(4.81×10^3 *3*)	1257.1	≈4.6	≈0.57	≈6.1	≈5.2	av Eβ=1731 *15*; εK=0.0934 *20*; εL=0.0121 *3*; εM+=0.00314 *7*
(4.89×10^3 *3*)	1181.0	≈11	≈1.2	≈5.8	≈12.2	av Eβ=1767 *15*; εK=0.0886 *19*; εL=0.01147 *24*; εM+=0.00298 *7*
(5.05×10^3 *3*)	1018.5	≈10.0	≈1.0	≈5.9	≈11	av Eβ=1844 *15*; εK=0.0794 *16*; εL=0.01027 *21*; εM+=0.00267 *6*
(5.26×10^3 *3*)	814.07	≈13	≈1.1	≈5.9	≈14	av Eβ=1941 *15*; εK=0.0695 *14*; εL=0.00899 *18*; εM+=0.00233 *5*
(5.43×10^3 *3*)	644.78	<5.6	<0.44	>6.3	<6.0	av Eβ=2021 *15*; εK=0.0625 *12*; εL=0.00807 *16*; εM+=0.00210 *4*
5.7×10^3 *2*	0.0	≈28	≈1.4	≈5.9	≈29.4	av Eβ=2330 *15*; εK=0.0428 *8*; εL=0.00553 *10*; εM+=0.001436 *25*
						E(decay): from 1974Ch17. Other: 5600 *200* (1975BuYW).

† $β^+$ and ε intensities are approximate because of the large number of unplaced Iγ's.

‡ Absolute intensity per 100 decays.

γ(^{113}Sb)

Iγ normalization: from Σ(Iγ+ce) to g.s. + Σ(ε+$β^+$) to g.s.=100.

Measured Iγ($γ^\pm$) is 780 *200* relative to Iγ(814)=100, 1976Wi11.

E_γ	I_γ†	E_i(level)	J_i^π	E_f	J_f^π
238.4 *5*	2.1 *7*	1257.1	(9/2$^+$)	1018.5	(5/2)$^+$
x269.8 *5*	2.7 *7*				
391.8 *5*	12 *6*	1853.3		1461.3	(9/2$^+$)
x437.7 *4*	1.1 *6*				

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^{113}Te ε decay 1975WiZX,1976Wi11 (continued)

γ(^{113}Sb) (continued)

E_γ	I_γ †	E_i(level)	J_i^π	E_f	J_f^π
443.3 *4*	3.0 *9*	1257.1	(9/2$^+$)	814.07	7/2$^+$
x473.1 *8*	2.5 *6*				
x583.0 *5*	3 *2*				
x609.3 *5*	5 *2*				
644.8 *2*	29 *3*	644.78	1/2$^+$	0.0	5/2$^+$
647.5 *8*	3.6 *10*	1461.3	(9/2$^+$)	814.07	7/2$^+$
737.0 *4*	4.4 *14*	1550.9	(5/2)$^+$	814.07	7/2$^+$
814.4 *3*	100	814.07	7/2$^+$	0.0	5/2$^+$
915.0 *4*	6.3 *16*	2172.1		1257.1	(9/2$^+$)
1018.1 *4*	59 *6*	1018.5	(5/2)$^+$	0.0	5/2$^+$
1039.5 *5*	7 *2*	1853.3		814.07	7/2$^+$
1071.7‡ *4*	7 *2*	1716.5?		644.78	1/2$^+$
1181.0 *4*	56 *6*	1181.0		0.0	5/2$^+$
x1206.6 *6*	6 *2*				
x1245.4 *5*	4 *3*				
1256.7 *5*	25 *3*	1257.1	(9/2$^+$)	0.0	5/2$^+$
1301.3 *7*	8 *3*	2115.4		814.07	7/2$^+$
1317.9‡ *6*	6 *2*	2132.3?		814.07	7/2$^+$
1358.0 *8*	5.3 *14*	2172.1		814.07	7/2$^+$
1449.7 *7*	8 *2*	2094.2		644.78	1/2$^+$
1460.0 *10*	8 *4*	1461.3	(9/2$^+$)	0.0	5/2$^+$
1515.1 *7*	7 *2*	2534.6		1018.5	(5/2)$^+$
1550.3 *7*	10 *3*	1550.9	(5/2)$^+$	0.0	5/2$^+$
x1567.2 *8*	6 *2*				
1719.8 *10*	3.9 *12*	2534.6		814.07	7/2$^+$
x1803.6 *7*	8 *3*				
x1868.1 *9*	11 *3*				
x1944.3 *11*	4 *2*				
x2047.8 *10*	7 *2*				
2093.7 *10*	13 *3*	2094.2		0.0	5/2$^+$
2115.5 *10*	9 *2*	2115.4		0.0	5/2$^+$
x2221.2 *9*	9 *3*				
2535.2 *5*	12 *3*	2534.6		0.0	5/2$^+$
x2552.4 *9*	7 *2*				
x2606.5 *5*	8 *3*				

† For absolute intensity per 100 decays, multiply by 0.22.
‡ Placement of transition in the level scheme is uncertain.
x γ ray not placed in level scheme.

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Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

Legend

- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)