^{132}Sb β^- decay (2.79 min) 1974Ke08

History

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

Parent: ^{132}Sb: E=0.0; J^π=(4$^+$); $T_{1/2}$=2.79 min *7*; Q(β^-)=5509 *14*; %β^- decay=100.0

1974Ke08 (also 1973Mc09,1973Ke25): measured Eγ, Iγ, ce, β, $\gamma\gamma$, $\gamma\gamma$(t).

See also ^{132}Sb β^- decay (2.79 min+4.10 min) dataset from 2004Hu08 and 2004HuZX.

Others:

1999Fo01: measured Q(β^-) from $\beta\gamma$ data.

1977Al09, 1975Al11: measured β spectra, deduced Q(β^-), β-strength functions.

1975Ba36: measured $T_{1/2}$, Eγ, Iγ.

1974MeZP, 1974Gr29, 1974Fo06, 1972Na10: isotopic $T_{1/2}$.

1973Jo02: total absorption γ spectra, deduced β-strength functions.

1973Er18 (also 1970ErZZ): $T_{1/2}$, Eγ, Iγ, $\gamma\gamma$.

Other $T_{1/2}$(^{132}Sb): 1956Po07, 1956Pa20, 1939Ab02.

^{132}Te Levels

E(level)	J^π‡	Comments
0.0	0$^+$	
973.97 *10*	2$^+$	
1671.02 *10*	4$^+$	
1774.54 *10*	6$^+$	
2053.34 *14*	(5)$^-$	
2107.76 *19*	(3,4)	
2280.91?† *21*		J^π: (3$^-$) (1974Ke08).
2410.14 *19*		J^π: (4,5) (1974Ke08), 5$^-$,6$^+$ (1979MeZO).
2487.60 *21*	(2$^+$,3,4$^+$)	
2763.99 *18*		J^π: (4,5) (1974Ke08).
2867.60?† *22*		J^π: (4,5) (1974Ke08).
2884.3 *5*		J^π: (3,4,5) (1974Ke08).
3211.04 *21*	(4$^+$,5)	J^π: (3,4,5) (1974Ke08).
3349.54 *23*		a level At 3350.6 is established by 2004HuZX with deexciting γ rays of 383.3 and 1425.3, these γ's not reported by 1974Ke06.
3562.2 *3*		J^π: (3,4,5) (1974Ke08).

† Level not supported by 2004Hu08 and 2004HuZX. All γ rays are placed elsewhere based on $\gamma\gamma$ coin data. This level is not listed In "ADOPTED LEVELS".

‡ From Adopted Levels.

β^- radiations

E(decay)†	E(level)	Comments
2.0×10^3 *3*	3562.2	
2.14×10^3 *22*	3211.04	
2.5×10^3 *3*	2884.3	
2.75×10^3 *26*	2867.60?	
2.85×10^3 *15*	2763.99	
2.9×10^3 *3*	2487.60	
3.01×10^3 *12*	2410.14	
4.0×10^3 *4*	1671.02	av Eβ=1633.5 *66* E(decay): other: 3.9×10^3 *2* (1974Ke08).

† From $\beta\gamma$ coin (1977Al09).

^{132}Sb β^- decay (2.79 min) 1974Ke08 (continued)

$\gamma(^{132}Te)$

Iγ normalization: From ΣI(γ+ce)=100 to g.s.

E_γ	I_γ[†][@]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α[&]	Comments
103.519[‡] *4*	14.0 *14*	1774.54	6^+	1671.02	4^+	E2	1.52	α(K)=1.07 *4*; α(L)=0.359 *11*; α(M)=0.0743 *23*; α(N+..)=0.0166 *5*
138.5[#] *1*	0.7 *2*	3349.54		3211.04	$(4^+,5)$			
[x]312.0 *2*	0.7 *2*							E_γ: γ not reported by 2004HuZX.
353.8 *2*	3.0 *3*	2763.99		2410.14				
382.3 *1*	8.0 *8*	2053.34	$(5)^-$	1671.02	4^+	E1	0.00508	α=0.00508; α(K)=0.00441 *14*; α(L)=0.00054 *2*; α(M)=0.00011
436.8 *2*	3.0 *3*	2107.76	(3,4)	1671.02	4^+			
447.3[#] *3*	2.0 *4*	3211.04	$(4^+,5)$	2763.99				
609.9[#] *3*	2.0 *4*	2280.91?		1671.02	4^+			
635.6 *2*	10 *1*	2410.14		1774.54	6^+			
697.052[‡] *14*	87 *5*	1671.02	4^+	973.97	2^+	E2	0.00341	α=0.00341; α(K)=0.00291 *9*; α(L)=0.00038 *1*
814.1[#] *3*	5.0 *5*	2867.60?		2053.34	$(5)^-$			
816.6 *2*	11 *1*	2487.60	$(2^+,3,4^+)$	1671.02	4^+			
930.0[#] *2*	1.0 *2*	3211.04	$(4^+,5)$	2280.91?				
973.9 *1*	100 *5*	973.97	2^+	0.0	0^+	E2	0.00154	α=0.00154; α(K)=0.00132 *4*; α(L)=0.00017 *1*
989.6 *2*	15.0 *15*	2763.99		1774.54	6^+			
1093.2[#] *3*	5.0 *5*	2867.60?		1774.54	6^+			
1133.5 *3*	6.0 *6*	2107.76	(3,4)	973.97	2^+			
1152.2 *4*	3.0 *3*	3562.2		2410.14				
[x]1183.0 *4*	1.3 *3*							E_γ: placed from a 2854 level In 2004HuZX.
1196.5[#] *4*	3.0 *3*	2867.60?		1671.02	4^+			
1213.3 *4*	2.0 *4*	2884.3		1671.02	4^+			
[x]1274.6 *4*	1.2 *2*							E_γ: placed from a 2248 level In 2004HuZX.
1306.5 *4*	1.0 *2*	2280.91?		973.97	2^+			E_γ: not reported by 2004HuZX.
1436.3 *4*	2.0 *4*	3211.04	$(4^+,5)$	1774.54	6^+			
1454.0 *5*	0.6 *2*	3562.2		2107.76	(3,4)			
1513.5 *5*	2.0 *4*	2487.60	$(2^+,3,4^+)$	973.97	2^+			
1540.4 *5*	1.0 *2*	3211.04	$(4^+,5)$	1671.02	4^+			
1575.0[#] *8*	1.3 *2*	3349.54		1774.54	6^+			
[x]1634.0 *8*	1.0 *2*							E_γ: placed from a 2608 level In 2004HuZX.
[x]1644.5 *8*	2.0 *4*							E_γ: placed from a 4055 level In 2004HuZX.
1788.0[#] *8*	3.5 *4*	3562.2		1774.54	6^+			
1890.9[#] *8*	1.0 *2*	3562.2		1671.02	4^+			
1893.7[#] *8*	0.9 *2*	2867.60?		973.97	2^+			
2280.4[#] *8*	1.0 *2*	2280.91?		0.0	0^+			
2588.3[#] *8*	1.5 *3*	3562.2		973.97	2^+			
[x]2633.8 *8*	0.5 *2*							E_γ: placed from a 4685 level In 2004HuZX.
[x]2913.2 *8*	0.5 *2*							E_γ: placed from a 3887 level In 2004HuZX.

Continued on next page (footnotes at end of table)

^{132}Sb β^- decay (2.79 min) 1974Ke08 (continued)

$\gamma(^{132}Te)$ (continued)

† $\Delta I\gamma$: based on the statement that uncertainties are 5% for $I\gamma>15$, 10% for $15\geq I\gamma>2$ and 20% or 0.2 units, whichever is the larger for $I\gamma\leq 2$ (1974Ke08).
‡ From 1979Bo26 (curved-crystal spectrometer measurement).
# Placed elsewhere In the level scheme given In 2004HuZX (preprint from authors of 2004Hu08) and their $\gamma\gamma$ coin data.
@ For absolute intensity per 100 decays, multiply by 0.99.
& Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
x γ ray not placed in level scheme.

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Decay Scheme

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