^{135}Sb β^-n decay 1981Ho07,1979Kr03

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	A. A. Sonzogni	NDS 103, 1 (2004)	31-Jul-2004

Parent: ^{135}Sb: E=0.0; J^π=(7/2$^+$); $T_{1/2}$=1.68 s *2*; Q(β^-n)=4.78×10^3 *10*; %β^-n decay=17.6 *22*

^{135}Sb-%β^-n decay: %β^-n=22 *3* (2002Sh08).

1989Ho08, 1981Ho07: measured Eγ, Iγ, $\gamma\gamma$, β-strength functions. Deduced β^-delayed neutron feedings.

1979Kr03 (also 1976Kr18): measured delayed neutron energies and intensities, γ-ray spectra.

Others: 1966To02, 1968To19, 1968To18, 1974Sh18, 1974Fr09, 1976Lu02, 1977Ru04, 1978Cr03, 1979Kr03, 1980Lu04, 1993Ru01.
See 1975Iz03, 1977Ru10, 1982Ru01, 1984Ma39, 1989BrZI for analysis and compilations.

^{134}Te Levels

E(level)[†]	J^π[‡]	Comments
0.0	0$^+$	Neutron feeding=62% 6 (1989Ho08), 47% 12 (1979Kr03).
1279.07 *10*	2$^+$	Neutron feeding=21% 3 (1989Ho08), 29% 6 (1981Ho07), 26% 10 (1979Kr03).
1576.15 *15*	4$^+$	Neutron feeding=11% 2 (1989Ho08), 15% 4 (1981Ho07), 3% 3 (1979Kr03).
1691.45 *18*	6$^+$	Neutron feeding=6% 1 (1989Ho08), 9% 2 (1981Ho07), 21% 5 (1979Kr03).
2397.4	(6)$^+$	Neutron feeding=4% 3 (1979Kr03). No feeding shown by 1981Ho07 and 1989Ho08.

[†] From least-squares fit to Eγ.
[‡] From Adopted Levels.

γ(^{134}Te)

Iγ normalization: Ti(1279γ)=38 *6*.

E$_\gamma$[†]	I$_\gamma$[‡@]	E$_i$(level)	J_i^π	E$_f$	J_f^π	Mult.[#]	α[&]	Comments
115.30 *10*	15.5 *12*	1691.45	6$^+$	1576.15	4$^+$	E2	1.04	α(K)=0.755 *23*; α(L)=0.224 *7*; α(M)=0.0463 *14*; α(N+..)=0.0104 *4*
297.08 *10*	43 *2*	1576.15	4$^+$	1279.07	2$^+$	E2	0.0399	α(K)=0.0331 *10*; α(L)=0.00540 *17*; α(M)=0.00109 *4*; α(N+..)=0.00025 *1*
1279.06 *10*	94 *3*	1279.07	2$^+$	0.0	0$^+$	E2	0.00086	α=0.00086; α(K)=0.00074 *2*

[†] From 1989Ho08.
[‡] From 1989Ho08, relative to Iγ(1127.0γ in ^{135}Te)=100.
[#] From adopted gammas.
[@] For absolute intensity per 100 decays, multiply by 0.070 *14*.
[&] 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.

Delayed Neutrons (^{134}Te)

E(n)[†]	E(^{134}Te)	I(n)[‡#]	E(^{135}Te)
	0.0	62 *6*	
162 *3*	1576.15	0.96	5240
458 *2*	1279.07	1.4	5240
499 *3*	2397.4	1.0	6400
549 *3*	1576.15	1.1	5630
623 *3*	1691.45	0.96	5810

Continued on next page (footnotes at end of table)

^{135}Sb β^-n decay 1981Ho07,1979Kr03 (continued)

Delayed Neutrons (continued)

E(n)[†]	E(^{134}Te)	I(n)[‡#]	E(^{135}Te)	Comments
783 *3*	1576.15	0.96	5810	
848 *2*	1279.07	1.7	5630	
977 *2*	1691.45	2.2	6170	
1042 *2*	1691.45	7.7	6240	This transition could also feed 1279 level from 5810 level.
1201 *2*	1691.45	4.7	6400	
1251 *4*	1576.15	0.87	6330	
1322 *4*	1576.15	2.1	6400	
1384 *4*	1279.07	1.5	6170	
1458 *2*	1279.07	8.7	6240	
1549 *3*	1279.07	2.3	6330	
1618 *5*	1279.07	0.87	6400	

[†] Recoil-corrected energies from 1979Kr03.

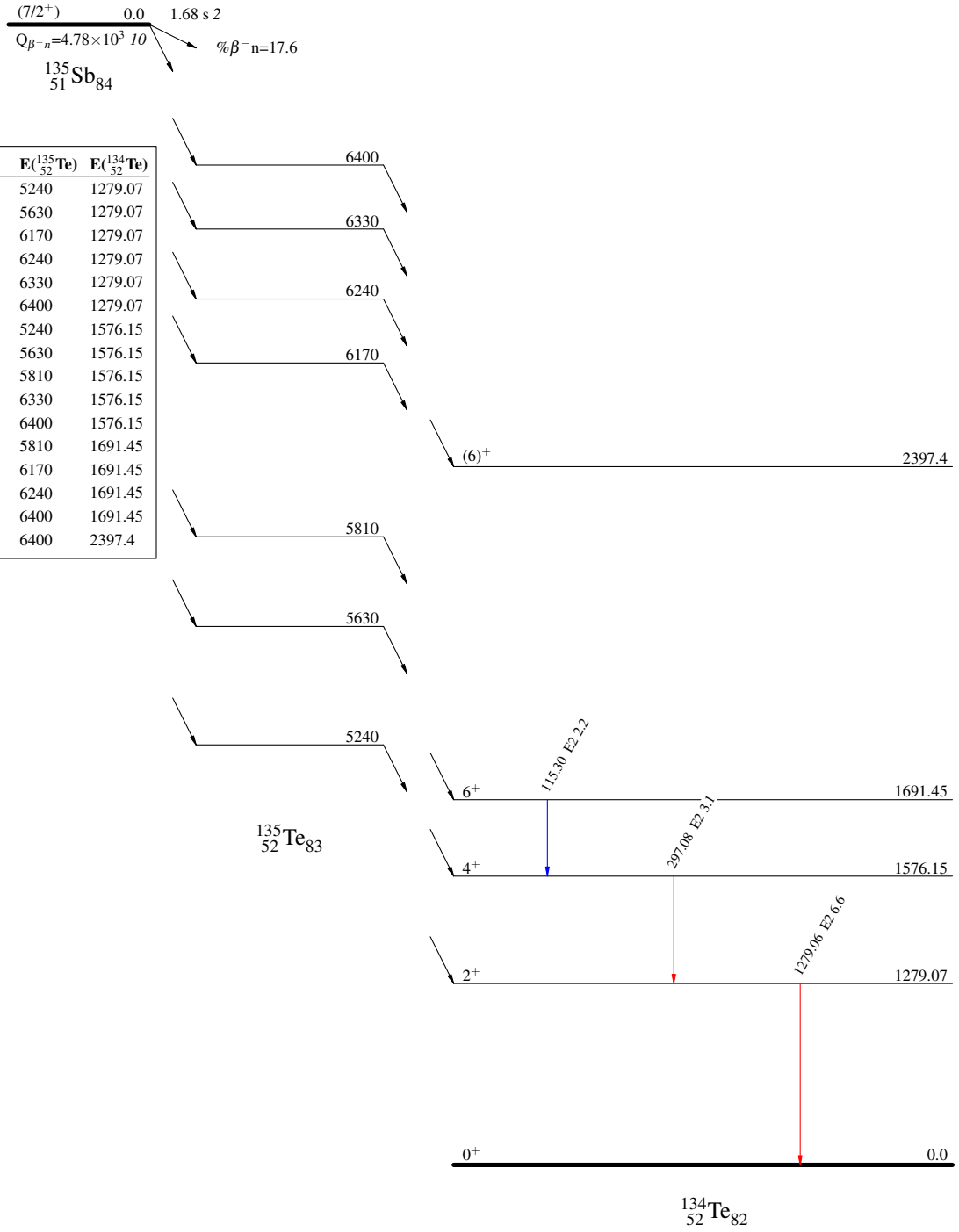
[‡] From 1979Kr03, normalized so that total reported neutron feeding to first 2^+, 4^+ and 6^+ states is 38%, based on 62% 6 (1989Ho08) as the neutron feeding of g.s..

[#] For absolute intensity per 100 decays, multiply by 0.176 *22*.

^{135}Sb β^-n decay 1981Ho07,1979Kr03

Decay Scheme

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



E(n)	I(n)	E($^{135}_{52}$Te)	E($^{134}_{52}$Te)
458	0.25	5240	1279.07
848	0.30	5630	1279.07
1384	0.26	6170	1279.07
1458	1.53	6240	1279.07
1549	0.40	6330	1279.07
1618	0.153	6400	1279.07
162	0.169	5240	1576.15
549	0.194	5630	1576.15
783	0.169	5810	1576.15
1251	0.153	6330	1576.15
1322	0.37	6400	1576.15
623	0.169	5810	1691.45
977	0.39	6170	1691.45
1042	1.36	6240	1691.45
1201	0.83	6400	1691.45
499	0.176	6400	2397.4