^{130}I β^- decay (8.84 min) 1974Me17

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 93, 33 (2001)	11-May-2001

Parent: ^{130}I: E=39.9542 *13*; $J^\pi=2^+$; $T_{1/2}$=8.84 min *6*; Q(β^-)=2949 *3*; %β^- decay=16 *2*
^{130}I-%β^- decay: %IT=84 *2*, %β^-=16 *2*.
1974Me17 (also 1973Ho25): measured Eγ, Iγ, $\gamma\gamma$, $T_{1/2}$.
1999SaZW: measured Eγ, Iγ using GAMS 1,2,3 (curved-crystal) spectrometer.
1972Ba51: measured Eγ, Iγ, $\gamma\gamma$, $\gamma\gamma(\theta)$, Eβ, Iβ, $\beta\gamma$ coin, $T_{1/2}$.
1970Qa03 (also 1970Qa02): Eγ, Iγ, Eβ, Iβ, $\beta\gamma$, $T_{1/2}$.
Others: 1974Di03, 1968Re04, 1967Ke12, 1967Ke11, 1966Wi15.

^{130}Xe Levels

E(level)†	J^π‡	E(level)†	J^π‡	E(level)†	J^π‡	E(level)†	J^π‡
0.0	0^+	1808.127 *20*	(4^+)	2494.10 *4*		2644.87 *5*	
536.068 *6*	2^+	2150.193 *25*	(2^+)	2502.211 *25*	1,2	2762.6 *3*	1,2
1122.120 *10*	2^+	2296.09 *5*	1,2	2544.43 *8*			
1204.603 *19*	4^+	2307.78? *18*	1,2	2628.38? *10*			
1632.489 *20*	3^+	2385.50 *22*		2637.51? *5*			

† From least-squares fit to Eγ's.
‡ From Adopted Levels.

β^- radiations

E(decay)	E(level)	Iβ^-†	Log *ft*	Comments
(226 *3*)	2762.6	0.00088 *17*	7.1 *1*	av Eβ=62.8 *10*
(344 *3*)	2644.87	0.022 *3*	6.3 *1*	av Eβ=100.0 *10*
(351 *3*)	2637.51?	0.0099 *14*	6.7 *1*	av Eβ=102.4 *10*
(361 *3*)	2628.38?	0.0050 *8*	7.0 *1*	av Eβ=105.4 *10*
(445 *3*)	2544.43	0.0051 *8*	7.3 *1*	av Eβ=133.8 *11*
(487 *3*)	2502.211	0.102 *14*	6.2 *1*	av Eβ=148.5 *11*
(495 *3*)	2494.10	0.019 *3*	6.9 *1*	av Eβ=151.3 *11*
(603 *3*)	2385.50	0.0038 *8*	7.9 *1*	av Eβ=190.5 *11*
(681 *3*)	2307.78?	0.0022 *5*	8.3 *1*	av Eβ=219.5 *12*
(693 *3*)	2296.09	0.035 *6*	7.1 *1*	av Eβ=223.9 *12*
(839 *3*)	2150.193	0.51 *7*	6.3 *1*	av Eβ=280.4 *12*
(1356 *3*)	1632.489	0.0065 *10*	8.9 *1*	av Eβ=494.4 *13*
1850 *80*	1122.120	1.15 *15*	7.2 *1*	av Eβ=718.5 *14*
				E(decay): from 1970Qa03.
2480 *50*	536.068	14.0 *18*	6.6 *1*	av Eβ=984.2 *14*
				E(decay): from 1970Qa03. Other: 1972Ba51.

† Absolute intensity per 100 decays.

^{130}I β^- decay (8.84 min) 1974Me17 (continued)

$\gamma(^{130}Xe)$

Iγ normalization: Σ (I(γ+ce) of γ′s to g.s.)=100.

E_γ	I_γ[†][#]	E_i(level)	J_i^π	E_f	J_f^π
352.27 *20*	0.007 *2*	2502.211	1,2	2150.193	(2^+)
427.93 *4*	0.0022 *6*	1632.489	3^+	1204.603	4^+
510.35 *2*	0.023 *3*	1632.489	3^+	1122.120	2^+
536.066[‡] *6*	100	536.068	2^+	0.0	0^+
586.049[‡] *8*	6.81 *22*	1122.120	2^+	536.068	2^+
603.5 *4*	0.0013 *1*	1808.127	(4^+)	1204.603	4^+
668.54 *2*	0.069 *4*	1204.603	4^+	536.068	2^+
685.99 *2*	0.0022 *1*	1808.127	(4^+)	1122.120	2^+
837.03 *25*	0.0051 *2*	2644.87		1808.127	(4^+)
946.0[@] *5*	0.005 *2*	2150.193	(2^+)	1204.603	4^+
1028.11 *4*	0.249 *10*	2150.193	(2^+)	1122.120	2^+
1096.48 *6*	0.016 *2*	1632.489	3^+	536.068	2^+
1122.15 *5*	1.07 *4*	1122.120	2^+	0.0	0^+
1174.22 *25*	0.0081 *20*	2296.09	1,2	1122.120	2^+
1263.5 *3*	0.013 *3*	2385.50		1122.120	2^+
1272.12 *4*	0.0016 *1*	1808.127	(4^+)	536.068	2^+
1380.15 *4*	0.229 *9*	2502.211	1,2	1122.120	2^+
1440.18 *8*	0.068 *4*	2644.87		1204.603	4^+
1614.10 *4*	2.85 *10*	2150.193	(2^+)	536.068	2^+
1759.97 *5*	0.188 *20*	2296.09	1,2	536.068	2^+
1849.3 *3*	0.011 *2*	2385.50		536.068	2^+
1958.02 *4*	0.118 *6*	2494.10		536.068	2^+
1966.04 *4*	0.332 *17*	2502.211	1,2	536.068	2^+
[x]1989.10 *20*	0.015 *4*				
2008.35 *8*	0.029 *3*	2544.43		536.068	2^+
[x]2029.3 *4*	0.0027 *12*				
2092.29 *10*	0.032 *3*	2628.38?		536.068	2^+
2101.42 *5*	0.063 *4*	2637.51?		536.068	2^+
2108.80 *5*	0.065 *4*	2644.87		536.068	2^+
2150.15 *5*	0.133 *6*	2150.193	(2^+)	0.0	0^+
2296.21 *12*	0.024 *2*	2296.09	1,2	0.0	0^+
2307.76 *18*	0.014 *2*	2307.78?	1,2	0.0	0^+
2502.20 *5*	0.084 *4*	2502.211	1,2	0.0	0^+
2544.0 *6*	0.0033 *10*	2544.43		0.0	0^+
2762.6 *3*	0.0056 *8*	2762.6	1,2	0.0	0^+

[†] A 3% uncertainty is added in quadrature to account for the uncertainty in the efficiency calibration.
[‡] From curved-crystal measurements of 1999SaZW.
[#] For absolute intensity per 100 decays, multiply by 0.16 *2*.
[@] 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