^{128}I β^- decay (24.99 min) 1979Sc06,1994Mi35

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Zoltan Elekes and Janos Timar	NDS 129,191 (2015)	28-Feb-2015

Parent: ^{128}I: E=0.0; $J^\pi=1^+$; $T_{1/2}$=24.99 min *2*; Q(β^-)=2122 *4*; %β^- decay=93.1 *8*
1979Sc06: ^{127}I(n,γ), G.
1994Mi35: ^{127}I(n,γ), γ, $\beta\gamma$ coincidence.
Others: β^- (1961La16,1956Be18,1951Mi51), γ (1970Re08,1968Sc28).

^{128}Xe Levels

E(level)	J^π	$T_{1/2}$
0.0	0^+	stable
442.901 *10*	2^+	
969.465 *13*	2^+	
1582.966 *16*	0^+	
1877.31 *5*	0^+	

β^- radiations

E(decay)	E(level)	Iβ^-[†‡]	Log *ft*	Comments
(245 *4*)	1877.31	0.00062 *7*	7.86 *6*	av Eβ=68.4 *13*
(539 *4*)	1582.966	0.0107 *5*	7.757 *24*	av Eβ=167.1 *15*
(1153 *4*)	969.465	1.611 *20*	6.758 *9*	av Eβ=408.1 *17*
(1679 *4*)	442.901	12.42 *13*	6.498 *8*	av Eβ=635.1 *18*
(2122 *4*)	0.0	85.9 *3*	6.063 *6*	av Eβ=833.4 *19* Iβ^-: %β^-(to GS)=80.0 *8* is deduced from value of Iγ(442.9γ) for 100 decays of the parent (1994Mi35).

† %β^-=93.1 *6* is deduced using Iε(K)/Iβ^-=0.063 *7* (1961La16,1956Be18,1951Mi51) and Iε(K)=0.8540×Iε(theory). Other: 93.8 *4* from the same value for I(εK) and I(εK)/I(443γ)=0.42 *3* (1961La16).
‡ For absolute intensity per 100 decays, multiply by 0.931 *8*.

$\gamma(^{128}Xe)$

Iγ normalization: from Iγ(442.9γ)=12.61 *8* (1994Mi35) per 100 decays of the parent.

E_γ[†]	I_γ[‡#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	Comments
442.901 *10*	100	442.901	2^+	0.0	0^+	E2		I_γ: Iγ=12.61 *8* per 100 decays of the parent (1994Mi35). Others: 14.0 *14* (1961La16), 16.1 *16* (1956Be18).
526.557 *14*	9.54 *5*	969.465	2^+	442.901	2^+	M1+E2	+4.4 *7*	
613.493 *13*	0.018 *2*	1582.966	0^+	969.465	2^+	E2		
907.84 *5*	0.0008 *4*	1877.31	0^+	969.465	2^+	E2		
969.458 *20*	2.37 *6*	969.465	2^+	0.0	0^+	E2		
1140.079 *23*	0.061 *3*	1582.966	0^+	442.901	2^+	E2		
1434.40 *8*	0.0038 *3*	1877.31	0^+	442.901	2^+	E2		

† taken by the authors of 1979Sc06 from ^{128}Cs ε decay (3.62 min) measured also in 1979Sc06. The evaluators have added 0.002% of Eγ's in quadrature to the uncertainties given by 1979Sc06 to account for the uncertainty in calibration.
‡ Relative to I(442.9γ)=100. Values are from 1994Mi35.
# For absolute intensity per 100 decays, multiply by 0.1261 *8*.

^{128}I β^- decay (24.99 min) 1979Sc06,1994Mi35

Decay Scheme

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