^{136}Pm ε decay:E=x 1989Vi04

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 152, 331 (2018)	1-Apr-2018

Parent: ^{136}Pm: E=x; J^π=(2); $T_{1/2}$=300 s *50*; Q(ε)=8030 *70*; %ε+%$β^+$ decay=100.0

^{136}Pm activity produced in the ^{92}Mo(^{48}Ti,xpyn) reaction followed by the decay of ^{136}Sm. Authors state that in their experiment only the low-spin isomer was populated, via the decay through the ^{136}Sm parent ($J^\pi=0^+$).

The decay scheme is most likely incomplete, due to the highest observed level at 862 keV and the decay Q value of 8020 keV. Thus, no attempt has been made to normalize the decay scheme and/or deduce beta feedings.

α: Additional information 1.

^{136}Nd Levels

E(level)	J^π[†]
0	0^+
373.7	2^+
862.2	2^+
976.3	4^+
1230.9	$(3)^+$
1541.5	(4^+)

[†] From the Adopted Levels.

γ(^{136}Nd)

E_γ	I_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.[†]	α	Comments
368.7	≈3.5	1230.9	$(3)^+$	862.2	2^+			
373.7	100	373.7	2^+	0	0^+	E2	0.0268	α(K)=0.0217 *3*; α(L)=0.00401 *6*; α(M)=0.000870 *13*; α(N)=0.000192 *3*; α(O)=2.75×10^{-5} *4*; α(P)=1.233×10^{-6} *18*
488.6	22	862.2	2^+	373.7	2^+	E2+M1	0.016 *4*	
602.6	17	976.3	4^+	373.7	2^+	E2	0.00723	α(K)=0.00605 *9*; α(L)=0.000932 *13*; α(M)=0.000200 *3*; α(N)=4.43×10^{-5} *7*; α(O)=6.54×10^{-6} *10*; α(P)=3.60×10^{-7} *5*
679.3	2.9	1541.5	(4^+)	862.2	2^+			
857.2	15	1230.9	$(3)^+$	373.7	2^+	E2+M1	0.0040 *9*	
862.2	28	862.2	2^+	0	0^+	E2	0.00310	α(K)=0.00263 *4*; α(L)=0.000371 *6*; α(M)=7.87×10^{-5} *11*; α(N)=1.755×10^{-5} *25*; α(O)=2.63×10^{-6} *4*; α(P)=1.585×10^{-7} *23*

[†] From the Adopted Gammas.

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Decay Scheme

Intensities: Relative I_γ