

^{136}I β^- decay (83.4 s+46.6 s) 1977We04

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

Parent: ^{136}I : E=0.0; $J^\pi=(1^-)$; $T_{1/2}=83.4$ s 4; $Q(\beta^-)=6884$ 14; % β^- decay=?

Parent: ^{136}I : E=201 26; $J^\pi=(6^-)$; $T_{1/2}=46.6$ s 10; $Q(\beta^-)=6884$ 14; % β^- decay=?

1977We04: ^{136}I activity from $^{235}\text{U}(\text{n},\text{f})$ followed by mass separation at the TRISTAN on-line isotope separator facility at the Ames reserach reactor. Measured E_γ , I_γ , $\gamma(t)$, $\gamma\gamma$ using two Ge(Li) detectors.

This dataset contains only those transitions which could not be classified as belonging to either the 83.4-s or 46.6-s decay. See 1977We04 for suggested $I\beta'$'s and $\log ft'$'s.

 ^{136}Xe Levels

E(level) [†]	J^π [‡]	E(level) [†]	J^π [‡]	E(level) [†]	J^π [‡]	E(level) [†]
0.0	0 ⁺	2465.03 [#] 13		3872.81 [#] 23	(6 ⁺ ,5)	6090.9? [@] 4
1313.028 10	2 ⁺	2559.89 7	(4 ⁺)	3873.13 14	(3 ⁻)	6186.5? [@] 4
2125.73 6	3 ⁺ ,4 ⁺	2608.59 7	4 ⁺ ,5 ⁺	4947.4 [@] 3		6412.3? [@] 4
2261.82 7	6 ⁺	2634.16 7	1 ⁺ ,2 ⁺	5608.3? [@] 3	1	
2444.43 6	5	3211.89 20	(1,2 ⁺)	5760.3 [@] 3		

[†] From ^{136}I β^- decay (83.4 s), except where noted.

[‡] From the Adopted Levels.

[#] From ^{136}I β^- decay (46.6 s).

[@] From 1977We04.

 $\gamma(^{136}\text{Xe})$

E_γ	I_γ [†]	$E_i(\text{level})$	J^π_i	E_f	J^π_f
^x 682.7 3	2.8 4				
^x 1222.6 4	2.3 4				
^x 1639.8 5	2.8 6				
^x 1663.1 8	1.0 4				
^x 1686.1 3	4.6 5				
^x 1689.0 3	3.9 5				
^x 1738.1 3	2.4 4				
^x 2227.9 5	1.6 4				
2312.8 [‡] 5	1.0 [‡] 2	4947.4		2634.16	1 ⁺ ,2 ⁺
2312.8 ^{‡#} 5	1.0 [‡] 2	6186.5?		3873.13	(3 ⁻)
^x 2427.8 3	2.7 4				
^x 2480.4 4	2.0 4				
^x 2581.9 7	0.8 2				
^x 2889.7 7	0.6 2				
^x 3132.1 5	0.73 15				
3200.5 [‡] 10	0.7 [‡] 3	5760.3		2559.89	(4 ⁺)
3200.5 ^{‡#} 10	0.7 [‡] 3	6412.3?		3211.89	(1,2 ⁺)
3482.6 ^{‡#} 4	1.36 [‡] 14	5608.3?	1	2125.73	3 ⁺ ,4 ⁺
3482.6 ^{‡#} 4	1.36 [‡] 14	6090.9?		2608.59	4 ⁺ ,5 ⁺
^x 3489.4 5	0.70 12				
3626.4 ^{‡#} 4	2.5 [‡] 2	6090.9?		2465.03	
3626.4 ^{‡#} 4	2.5 [‡] 2	6186.5?		2559.89	(4 ⁺)
^x 3794.3 6	0.72 18				
3925.0 [#] 4	1.21 19	6186.5?		2261.82	6 ⁺

Continued on next page (footnotes at end of table)

$^{136}\text{I} \beta^-$ decay (83.4 s+46.6 s) 1977We04 (continued) $\gamma(^{136}\text{Xe})$ (continued)

E_γ	$I_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	$I_\gamma^\dagger$	$E_i(\text{level})$	E_f	J_f^π
3967.8 [#] 5	1.41 18	6412.3?		2444.43 5		^x 4864.4 6	0.36 9			
^x 4005.0 8	0.8 2					4873.4 [#] 9	0.28 12	6186.5?	1313.028	2 ⁺
^x 4560.0 4	1.41 18					^x 4889.3 4	2.2 3			
^x 4614.4 6	0.74 14					^x 5091.2 6	0.54 12			
^x 4723.0 14	0.19 11					^x 5128.9 11	0.41 15			
^x 4729.6 8	0.40 11					^x 5187.0 4	1.04 18			
^x 4772.0 8	0.55 14					^x 5255.4 9	0.58 14			

[†] Same normalization as for the $^{136}\text{I} \beta^-$ decay (83.4 s).

[‡] Multiply placed with undivided intensity.

[#] Placement of transition in the level scheme is uncertain.

^x γ ray not placed in level scheme.

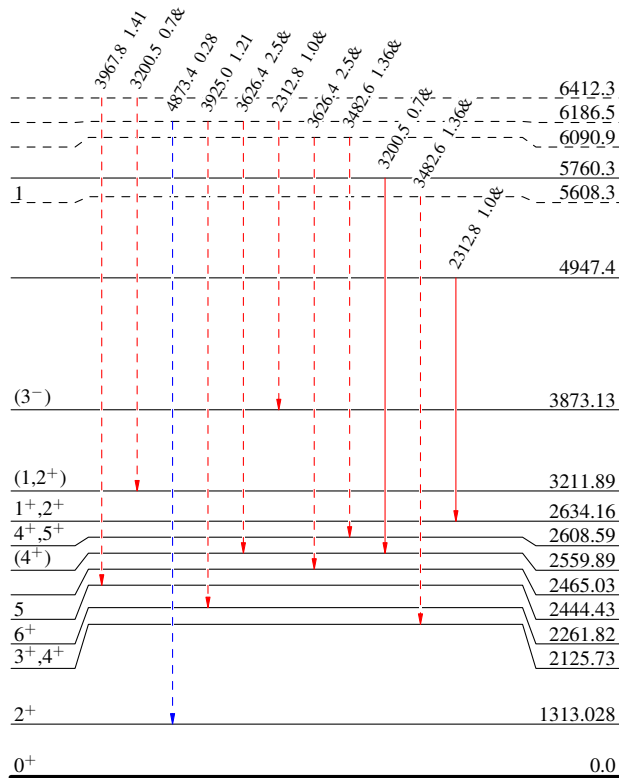
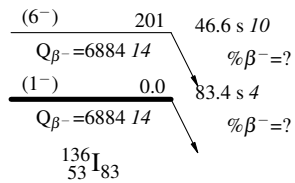
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Decay Scheme

Intensities: Relative I_γ
& Multiply placed: undivided intensity given

Legend

- $\longrightarrow$ $I_\gamma < 2\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma < 10\% \times I_\gamma^{\max}$
 $\longrightarrow$ $I_\gamma > 10\% \times I_\gamma^{\max}$
 $\cdots$ γ Decay (Uncertain)

 $^{136}_{54}\text{Xe}_{82}$