

^{136}Ba IT decay

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

Parent: ^{136}Ba : E=2030.535 18; $J^\pi=7^-$; $T_{1/2}=0.3084$ s 19; %IT decay=100.0

α : [Additional information 1](#).

 ^{136}Ba Levels

All data from the Adopted Levels, Gammas.

E(level)	J^π	$T_{1/2}$	Comments
0.0	0^+	stable	
818.522 10	2^+	1.89 ps 3	
1550.987 13	2^+	0.89 ps 24	
1866.611 18	4^+	0.76 ps +49-22	
2030.535 18	7^-	0.3084 s 19	%IT=100

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

E_γ	$I_\gamma^{\ddagger\ddagger}$	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult.	δ	α	Comments
163.920 2	31.25	2030.535	7^-	1866.611	4^+	E3		2.23	$\alpha(\text{K})=1.104$ 16; $\alpha(\text{L})=0.881$ 13; $\alpha(\text{M})=0.198$ 3; $\alpha(\text{N})=0.0411$ 6; $\alpha(\text{O})=0.00537$ 8 $\alpha(\text{P})=5.35\times 10^{-5}$ 8
315.5 [#] 5	0.024 22	1866.611	4^+	1550.987	2^+	[E2]		0.0385	$\alpha(\text{K})=0.0315$ 5; $\alpha(\text{L})=0.00559$ 9; $\alpha(\text{M})=0.001177$ 18; $\alpha(\text{N})=0.000249$ 4; $\alpha(\text{O})=3.60\times 10^{-5}$ 6 $\alpha(\text{P})=1.80\times 10^{-6}$ 3
732.41 2	0.012 11	1550.987	2^+	818.522	2^+	M1+E2	-1.00 4	0.00443	$\alpha(\text{K})=0.00381$ 6; $\alpha(\text{L})=0.000500$ 8; $\alpha(\text{M})=0.0001030$ 16; $\alpha(\text{N})=2.22\times 10^{-5}$ 4; $\alpha(\text{O})=3.38\times 10^{-6}$ 6 $\alpha(\text{P})=2.41\times 10^{-7}$ 4
818.514 12	99.706 20	818.522	2^+	0.0	0^+	E2		0.00283	$\alpha(\text{K})=0.00242$ 4; $\alpha(\text{L})=0.000327$ 5; $\alpha(\text{M})=6.75\times 10^{-5}$ 10; $\alpha(\text{N})=1.449\times 10^{-5}$ 21; $\alpha(\text{O})=2.19\times 10^{-6}$ 3 $\alpha(\text{P})=1.495\times 10^{-7}$ 21
1048.073 20	99.82 2	1866.611	4^+	818.522	2^+	E2		1.64×10^{-3}	$\alpha(\text{K})=0.001406$ 20; $\alpha(\text{L})=0.000183$ 3; $\alpha(\text{M})=3.77\times 10^{-5}$ 6; $\alpha(\text{N})=8.11\times 10^{-6}$ 12 $\alpha(\text{O})=1.234\times 10^{-6}$ 18; $\alpha(\text{P})=8.73\times 10^{-8}$ 13
1550.99 2	0.013 12	1550.987	2^+	0.0	0^+	E2		8.37×10^{-4}	$\alpha(\text{K})=0.000640$ 9; $\alpha(\text{L})=8.03\times 10^{-5}$ 12; $\alpha(\text{M})=1.645\times 10^{-5}$ 23;

Continued on next page (footnotes at end of table)

^{136}Ba IT decay (continued)

$\gamma(^{136}\text{Ba})$ (continued)

E_γ	$E_i(\text{level})$	Comments
		$\alpha(\text{N})=3.55 \times 10^{-6} \text{ } 5$; $\alpha(\text{O})=5.43 \times 10^{-7} \text{ } 8$ $\alpha(\text{P})=3.98 \times 10^{-8} \text{ } 6$

† From Adopted Branching ratios and correcting for conversion electrons.

‡ Absolute intensity per 100 decays.

Placement of transition in the level scheme is uncertain.

^{136}Ba IT decay

Decay Scheme

Intensities: $I(\gamma+ce)$ per 100 parent decays
%IT=100.0

Legend

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

