

¹³⁶Xe($\alpha,3n\gamma$) 1973Ke07,1973Ke22

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli		NDS 108,2173 (2007)	1-Oct-2006

E=29 MeV measured: γ , $\gamma\gamma$, $\gamma(\theta)$, $\gamma(t)$.

¹³⁷Ba Levels

E(level) [#]	J ^π [‡]	E(level) [#]	J ^π [‡]	T _{1/2} [†]	E(level) [#]	J ^π [‡]	T _{1/2} [†]
0.0	3/2 ⁺	2229.0 4	(13/2 ⁻)		2590.1 5		
661.6 3	11/2 ⁻	2349.2 5	(17/2 ⁻)	0.59 μ s 10	2623.9 5	(19/2)	\leq 30 ns
1252.9 3	7/2 ⁺	2407.9 5			3179.5 6		
2047.2 4		2438.7? 4			3244.1 6		

[†] For γ 's: 1183.7, 1192.4, 1252.9, 1385.7, T_{1/2}<10 ns.

[‡] From Adopted Levels.

[#] Authors' 279 level based on 1183.7 γ -279 γ cascade originating from 1463 level is not confirmed (1997WaZZ,1996Bi23).

$\gamma(^{137}\text{Ba})$

E _{γ}	I _{γ} [†]	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.	Comments
120.2 2	25	2349.2	(17/2 ⁻)	2229.0	(13/2 ⁻)	(Q)	Mult.: A ₂ =+0.04 10, A ₄ =0.0.
^x 146.8 3	5						
151.3 3	2	2590.1		2438.7?			
178.9 3	2	2407.9		2229.0	(13/2 ⁻)		
182.0 3	1	2229.0	(13/2 ⁻)	2047.2			
274.7 2	27	2623.9	(19/2)	2349.2	(17/2 ⁻)	D	Mult.: A ₂ =-0.25 9, A ₄ =+0.16 9.
^x 279.2 3	6						
361.1 3	1.6	2590.1		2229.0	(13/2 ⁻)		
^x 380.3 3	1.8						
^x 539.6 3	5						
555.6 3	4	3179.5		2623.9	(19/2)		
620.2 3	2	3244.1		2623.9	(19/2)		
661.6 3	100	661.6	11/2 ⁻	0.0	3/2 ⁺		
^x 1183.7 3	6						
^x 1192.4 3	6						
1252.9 3	10	1252.9	7/2 ⁺	0.0	3/2 ⁺		
1385.7 3	10	2047.2		661.6	11/2 ⁻		
1567.3 3	65	2229.0	(13/2 ⁻)	661.6	11/2 ⁻	D	Mult.: A ₂ =-0.17 15, A ₄ =+0.06 20.
1777.1 3	8	2438.7?		661.6	11/2 ⁻		
^x 1977 1	1						

[†] Uncertainty 10%.

^x γ ray not placed in level scheme.

$^{136}\text{Xe}(\alpha,3n\gamma)$ 1973Ke07,1973Ke22

Level Scheme

Intensities: Relative I_γ

Legend

- \blacktriangleright $I_\gamma < 2\% \times I_\gamma^{\max}$
- \blacktriangleright $I_\gamma < 10\% \times I_\gamma^{\max}$
- \blacktriangleright $I_\gamma > 10\% \times I_\gamma^{\max}$

