^{135}Xe β^- decay (15.29 min) 1974MeZV

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Alexander A. Rodionov And Yuri L. Khazov	NDS 109, 517 (2008)	22-Jan-2008

Parent: ^{135}Xe: E=526.55; $J^\pi=11/2^-$; $T_{1/2}=15.29$ min *5*; $Q(\beta^-)=1165$ *4*; $\%\beta^-$ decay=0.3 *3*

^{135}Xe-$Q(\beta^-)$: From 2003Au03, based on 1167 *5* from $\beta\gamma$ data of 1999Fo01.

^{135}Xe-$\%\beta^-$ decay: $\%\beta^-=0.004$ to 0.6. $\%\beta^-=0.004$ (1974MeZV,1982Wa21), ≤25 (1976Fe04). $I\beta$(g.s.)<0.6% from log $f^{1u}t$>8.5 for a possible first-forbidden unique transition to $7/2^+$ g.s. (evaluators).

1974MeZV (priv comm to 1975He12; also 1974FoZY,1982Wa21): measured Eγ, Iγ.

Other: 1976Fe04.

^{135}Cs Levels

E(level)	J^π[†]
0.0	$7/2^+$
786.9	$11/2^+$
1133?	
1192?	
1358?	

[†] From 'Adopted Levels'.

β^- radiations

E(decay)	E(level)	$I\beta^-$[†]	Log *ft*	Comments
(334[‡] *4*)	1358?	0.00016	8.4	av Eβ=96.4 *13*
(500[‡] *4*)	1192?	0.000032	9.6	av Eβ=152.8 *15*
(559[‡] *4*)	1133?	0.00024	8.9	av Eβ=173.9 *15*
(905 *4*)	786.9	0.0035	8.5	av Eβ=306.0 *16*
(1692[‡] *4*)	0.0	<0.6	>8.5[1u]	av Eβ=641.4 *17*

[†] Absolute intensity per 100 decays.

[‡] Existence of this branch is questionable.

$\gamma(^{135}Cs)$

Eγ	Iγ[†‡]	E_i(level)	J_i^π	E_f	J_f^π
786.9	0.0044	786.9	$11/2^+$	0.0	$7/2^+$
1133[#]	0.0003	1133?		0.0	$7/2^+$
1192.2[#]	0.00004	1192?		0.0	$7/2^+$
1358[#]	0.0002	1358?		0.0	$7/2^+$

[†] Relative to Iγ(526.56γ)=100 in ^{135}Xe IT decay; α(526.56γ)=0.236.

[‡] Absolute intensity per 100 decays.

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

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Decay Scheme

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