^{135}Xe IT decay (15.29 min) 1982Wa21,1975Fu12,1972Ac02

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=526.562 *17*; $J^{\pi}=11/2^-$; $T_{1/2}$=15.29 min *5*; %IT decay=99.70 *30*

^{135}Xe-E: 526.551 *13* in 'Adopted Levels'.

^{135}Xe-%IT decay: 99.4<%IT<99.996; 0.004<%β^-<0.6.

Others: 1976Fe04, 1976SeZN, 1971Ha13, 1968Al16, 1966Ha28, 1960Ko02, 1960Al12.

Pre-1960 references: 1950No09, 1945Wu05, 1943Ri01, 1940Go01.

Total decay energy of 522 keV *3* calculated (by RADLIST code) from level scheme agrees with the expected value of 525 keV *2*.

^{135}Xe Levels

E(level)	J^{π}[†]	$T_{1/2}$	Comments
0.0	$3/2^+$		
526.562 *17*	$11/2^-$	15.29 min *5*	E(level): 526.551 *13* in 'Adopted Levels'. $T_{1/2}$: from 1975Fu12. Others: 15.287 min *22* (1971Ha13), 15.2 min *7* (1968Al16), 15.65 min *10* (1960Ko02), 15.8 min *4* (1960Al12).

[†] From 'Adopted Levels'.

$\gamma(^{135}Xe)$

E_γ	I_γ[†#]	E_i(level)	J_i^π	E_f	J_f^π	Mult.[‡]	α[@]	$I_{(\gamma+ce)}$[#]	Comments
526.561 *17*	80.8 *5*	526.562	$11/2^-$	0.0	$3/2^+$	M4	0.237	99.7 *3*	ce(K)/(γ+ce)=0.1543 *19*; ce(L)/(γ+ce)=0.0294 *4*; ce(M)/(γ+ce)=0.00623 *9*; ce(N+)/(γ+ce)=0.001437 *21* ce(N)/(γ+ce)=0.001283 *19*; ce(O)/(γ+ce)=0.0001533 *22* $I_{(\gamma+ce)}$: 99.4<%IT<99.996. E_γ: from 1982Wa21. α(K)exp=0.198 *12* (1972Ac02), K/L=5.8 *11* (1960Al12).

[†] From I(526.56γ)(1+α)=100.

[‡] From ce data.

[#] For absolute intensity per 100 decays, multiply by 0.9970 *30*.

[@] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

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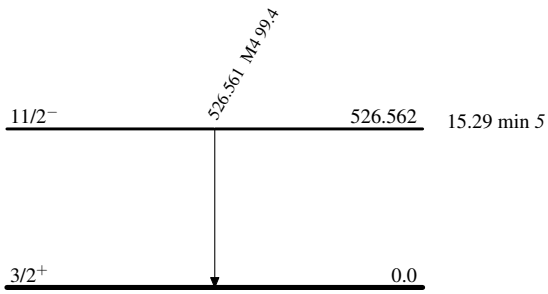
Decay Scheme

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

%IT=99.70 *30*



$^{135}_{54}Xe_{81}$