^{135}Ba IT decay (28.7 h) 1971Ba18,1973LeYP,1968Bo28

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}Ba: E=268.218 *20*; $J^{\pi}=11/2^{-}$; $T_{1/2}$=28.7 h *2*; %IT decay=100.0

Others: 1975Ma32, 1967Ba56, 1960Wi10, 1958Mi88, 1951Hi52, 1951Cu40, 1949Ro05, 1948Yu01.

Additional information 1.

Total decay energy calculated (by RADLIST code) from level scheme agrees with the expected value of 268 keV.

^{135}Ba Levels

E(level)	J^{π} †	$T_{1/2}$	Comments
0.0	$3/2^{+}$		
268.218 *20*	$11/2^{-}$	28.7 h *2*	$T_{1/2}$: from 1960Wi10. Others: 28.7 h (1948Yu01), 27.2 h *15* (1968Bo28).

† From 'Adopted Levels'.

γ(^{135}Ba)

E_{γ}	I_{γ} †‡	E_i(level)	J_i^{π}	E_f	J_f^{π}	Mult.	α#	$I_{(\gamma+ce)}$‡	Comments
268.218 *20*	16.0 *4*	268.218	$11/2^{-}$	0.0	$3/2^{+}$	M4	5.31	100	ce(K)/(γ+ce)=0.601 *6*; ce(L)/(γ+ce)=0.187 *3*; ce(M)/(γ+ce)=0.0423 *8*; ce(N+)/(γ+ce)=0.01043 *19* ce(N)/(γ+ce)=0.00907 *17*; ce(O)/(γ+ce)=0.001300 *24*; ce(P)/(γ+ce)=6.42×10^{-5} *12* E_{γ}: average of 268.238 *18* (1971Ba18) and 268.198 *16* (1980VyZZ). Mult.: from α(exp)=5.42 *11* (1973LeYP), α(K)exp=3.84 *11*. α(exp): from absolute ce and γ-ray counting (1973LeYP). α(K)exp: weighted average of 3.68 *20* (1958Mi88) and 3.91 *13* (1973LeYP). K/L+M+=2.6 *1* (1973LeYP).

† From intensity balance.

‡ Absolute intensity per 100 decays.

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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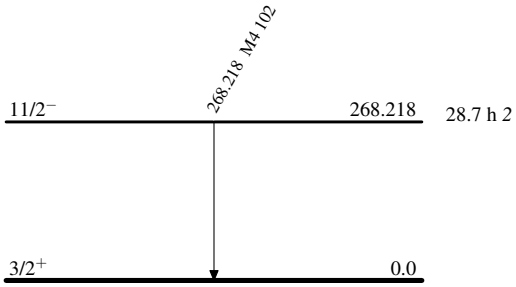
Decay Scheme

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



$^{135}_{56}Ba_{79}$