

^{252}Cf SF decay 2008Hw02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 160, 1 (2019)	21-Oct-2019

Parent: ^{252}Cf : $E=0.0$; $J^\pi=0^+$; $T_{1/2}=2.645$ y 8; %SF decay=3.092 8

^{252}Cf - $T_{1/2}$: From 2005Ni22.

Compiled for the XUNDL database by S. Geraedts and B. Singh (McMaster).

Measured E_γ , I_γ , γ coin using GAMMASPHERE array of 101 HPGe detectors with Compton-suppression. Transitions assigned to Nd nuclei based on coincidence with known γ rays from complementary Sr fragments.

 ^{155}Nd Levels

E(level) [†]	J^π [‡]
0.0@	(3/2 ⁻)
59.8# 3	(5/2 ⁻)
135.8@ 3	(7/2 ⁻)
230.7# 3	(9/2 ⁻)
340.3@ 4	(11/2 ⁻)
613.3@ 5	(15/2 ⁻)
954.3@ 6	(19/2 ⁻)
1361.8@ 7	(23/2 ⁻)
1831.6@ 7	(27/2 ⁻)

[†] From least-squares fit to E_γ 's, assuming an uncertainty of 0.3 keV.

[‡] Tentative assignment of 2008Hw02 based on the fact that the $\nu 3/2[521]$ rotational band in ^{153}Nd has nearly identical transitions as this one in ^{155}Nd .

Band(A): $\nu 3/2[521]$, $\alpha=+1/2$.

@ Band(a): $\nu 3/2[521]$, $\alpha=-1/2$.

 $\gamma(^{155}\text{Nd})$

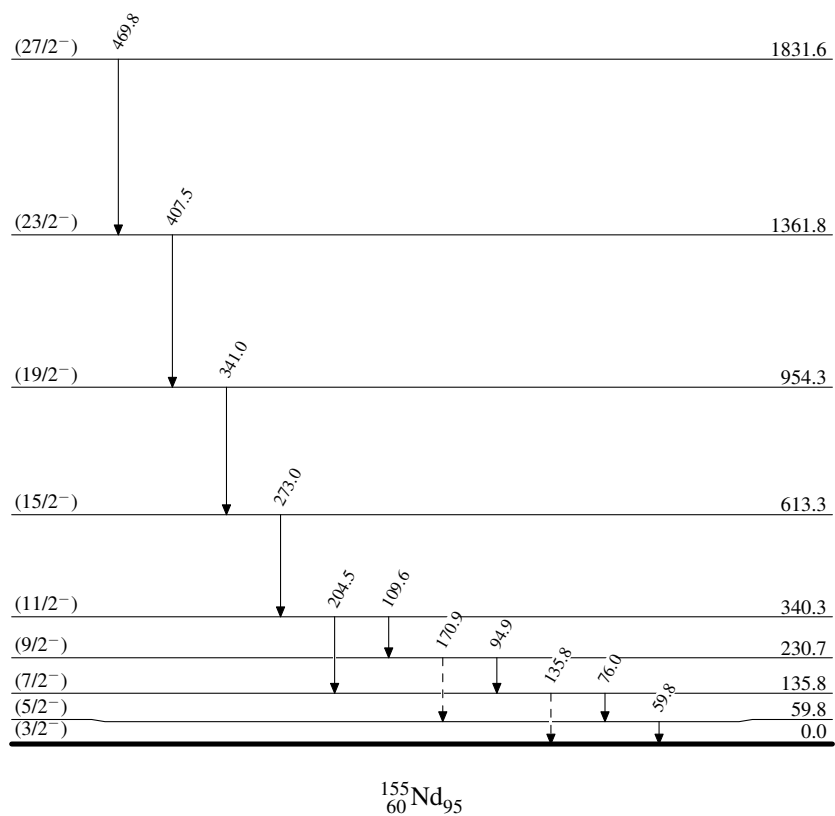
E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
59.8	59.8	(5/2 ⁻)	0.0	(3/2 ⁻)	204.5	340.3	(11/2 ⁻)	135.8	(7/2 ⁻)
76.0	135.8	(7/2 ⁻)	59.8	(5/2 ⁻)	273.0	613.3	(15/2 ⁻)	340.3	(11/2 ⁻)
94.9	230.7	(9/2 ⁻)	135.8	(7/2 ⁻)	341.0	954.3	(19/2 ⁻)	613.3	(15/2 ⁻)
109.6	340.3	(11/2 ⁻)	230.7	(9/2 ⁻)	407.5	1361.8	(23/2 ⁻)	954.3	(19/2 ⁻)
135.8 [†]	135.8	(7/2 ⁻)	0.0	(3/2 ⁻)	469.8	1831.6	(27/2 ⁻)	1361.8	(23/2 ⁻)
170.9 [†]	230.7	(9/2 ⁻)	59.8	(5/2 ⁻)					

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

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Legend

Level Scheme

 - - - - - $\rightarrow$ γ Decay (Uncertain)


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