

²⁵²Cf SF decay [1974Su04](#),[1974CIZX](#),[1970Jo20](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan	NDS 152, 331 (2018)	1-Apr-2018

Parent: ²⁵²Cf: E=0; J^π=0⁺; T_{1/2}=2.645 y 8; %SF decay=?

[1970Jo20](#): Measured E_γ, I_γ, fragment-fragment, fragment-γ coincidences, fragment-γ(t) using Ge(Li) planar detector and two Si diodes.

[1974CIZX](#), [1972CIZN](#): Measured E_γ, I_γ, fragment-fragment, fragment-γ, and γγ coincidences, fragment-γ(t) using Ge(Li) planar detector and Ge(Li) coaxial detector and two Si-Au surface barrier detectors.

[1974Su04](#): Measured E_γ, I_γ, fragment-γ coincidences using a coaxial Ge(Li) detector and heavy-ion surface barrier detectors.

Others: [1971Ch44](#), [2009Go09](#).

α: [Additional information 1](#).

¹³⁶Xe Levels

E(level) [†]	J ^π [‡]	T _{1/2}	Comments
0.0	0 ⁺		
1313.31 20	2 ⁺		
1694.2 4	4 ⁺		
1891.5 5	6 ⁺	2.92 μs 17	T _{1/2} : weighted average of 2.80 μs 37 and 3.40 μs 35 from fragment-γ(t) using 197γ and 381γ, respectively (1970Jo20) and 2.78 μs 17 and 3.35 μs 47 from fragment-γ(t) (1974CIZX).

[†] From E_γ.

[‡] From the Adopted Levels.

γ(¹³⁶Xe)

γγ-coincidences from [1974CIZX](#).

E _γ	I _γ [†]	E _i (level)	J _i ^π	E _f	J _f ^π	Mult. [‡]	α	Comments
197.3 2	0.60 8	1891.5	6 ⁺	1694.2	4 ⁺	E2	0.1685	α(K)exp=0.152 23 (1972CIZN) α(K)=0.1330 20; α(L)=0.0282 5; α(M)=0.00591 9; α(N)=0.001188 18; α(O)=0.0001305 19 E _γ : weighted average of 197.4 4 (1974Su04) and 197.3 2 (1970Jo20). Mult.: from α(K)exp. α(K)exp: From I _γ (K x ray) and I _γ (197γ) assuming α(K)(382γ; E2) (1972CIZN). I _γ : other: 0.92 14 (1974Su04).
380.9 4	0.73 8	1694.2	4 ⁺	1313.31	2 ⁺	E2	0.0198	α(K)=0.01658 24; α(L)=0.00260 4; α(M)=0.000535 8; α(N)=0.0001089 16 α(O)=1.279×10 ⁻⁵ 19 E _γ : weighted average of 381.6 4 (1974Su04) and 380.7 2 (1970Jo20). I _γ : other: 0.86 17 (1974Su04).
1313.3 2	0.86 30	1313.31	2 ⁺	0.0	0 ⁺	E2	9.40×10 ⁻⁴	α(K)=0.000792 11; α(L)=9.88×10 ⁻⁵ 14; α(M)=2.00×10 ⁻⁵ 3; α(N)=4.13×10 ⁻⁶ 6; α(O)=5.15×10 ⁻⁷ 8 E _γ : weighted average of 1313.4 4 (1974Su04) and 1313.3 2 (1970Jo20). I _γ : from 1974Su04 .

Continued on next page (footnotes at end of table)

^{252}Cf SF decay 1974Su04,1974CIZX,1970Jo20 (continued) $\gamma(^{136}\text{Xe})$ (continued)

E_γ	$E_i(\text{level})$	Comments
		(381 γ)(1313 γ)(θ): $A_2=0.023$ 3, $A_4=0.001$ with A_4 held fixed (2009Go09).

† Photons per 100 fissions from 1970Jo20, except where noted.

‡ From the Adopted Gammas. Additional support for mult assignments as derived from measurements in this dataset are indicated in the comments.

