^{252}Cf SF decay 1998Hw08

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 172, 1 (2021)	31-Jan-2021

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

^{252}Cf-%SF decay: %SF=3.092 *8* for ^{252}Cf SF decay.

1998Hw08: measured Eγ, γγ-coin using Gammasphere array of 72 Ge detectors.

Other: 2010Rz02: measured Eγ, γγ-coin from ^{248}Cm SF decay using Eurogam array, and from ^{252}Cf SF decay using Gammasphere array. The main paper is about the high-spin structure of ^{149}Pr. One line at 179.0 keV was attributed to ^{100}Y, a complementary fission fragment.

^{100}Y Levels

E(level)[†]	J^π[‡]
0.0	$(1)^-$
10.70[‡#] *2*	1^+
76.1[#] *5*	$(2)^+$
172.0[#] *7*	(3^+)
303.1[#] *9*	(4^+)
461.1[#] *10*	(5^+)
656.6[#] *11*	(6^+)
874.0[#] *12*	(7^+)

[†] From Eγ data, assuming Δ(Eγ)=0.5 keV for each γ ray. The energy of the 10.7 level, taken from the Adopted Level is kept as fixed.

[‡] From the Adopted Levels. The excited states are possible members of a $K^\pi=1^+$ band.

[#] Band(A): $K^\pi=1^+$, π5/2[422]⊗ν3/2[411].

γ(^{100}Y)

Eγ	Ei(level)	J_i^π	E_f	J_f^π	Comments
65.4	76.1	$(2)^+$	10.70	1^+	
95.9	172.0	(3^+)	76.1	$(2)^+$	
131.1	303.1	(4^+)	172.0	(3^+)	
158.0	461.1	(5^+)	303.1	(4^+)	
[x]179.0					Eγ: from γ spectra of ^{252}Cf SF and ^{248}Cm SF decay in 2010Rz02.
195.5	656.6	(6^+)	461.1	(5^+)	
217.4	874.0	(7^+)	656.6	(6^+)	

[x] γ ray not placed in level scheme.

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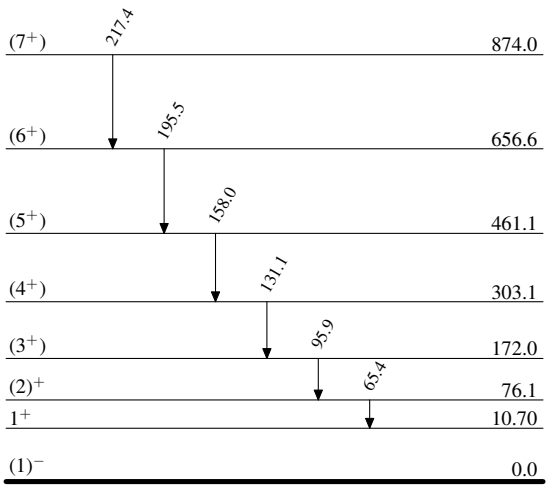
Level Scheme



$^{100}_{39}Y_{61}$

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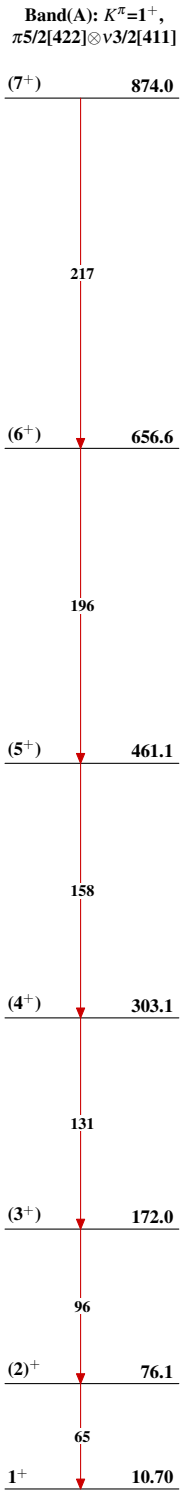

$^{100}_{39}Y_{61}$