^{255}Fm α decay 2005Ah09

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	C. Morse	NDS 189,111 (2023)	23-Sep-2022

Parent: ^{255}Fm: E=0.0; $J^\pi=7/2^+$; $T_{1/2}$=20.07 h *7*; Q(α)=7240.6 *5*; %α decay=100
^{255}Fm-$T_{1/2}$: From 1964As01.
^{255}Fm-Q(α): From 2021Wa16.
2006Ah09, 2005Ah09, 2000Ah09, 2002Ah06: source from ^{255}Es β^-, chem, measured γ, Xγ, Ge, LEPS; $\gamma\gamma$, gammasphere array of 101 Ge detectors.
1975Ah01: source from ^{255}Es β^-, ms. Measured: Eα, Iα.
1971Ah01: source from ^{255}Es β^-, chem. Measured: α, γ, ce, $\alpha\gamma$, $\gamma\gamma$, $\alpha\gamma$(t); semi, Ge(Li), mag spect, Si(Li).
1974So10, 2009Se09: α angular distribution from oriented nuclei.
1990Po14: Measured relative M- and L- x-ray intensities.
Others: 2011Zh36, 2006Ah09, 2005Gu40, 2005St14, 1964As01, 1991Po17.

^{251}Cf Levels

The level scheme and rotational bands are from 2005Ah09, 1975Ah01, 1971Ah01 and agree with some earlier assignments by 1964As01. There is intensity imbalance at some levels. This might be due to either missing low energy γ rays, or undetermined multipolarities being M1+E2 rather than M1 as assumed.

E(level)[†]	J^π[‡]	$T_{1/2}$	Comments
0.0[#]	$1/2^+$		configuration=$\nu 1/2^+[620]$ (2005Ah09)
24.826[#] *12*	$3/2^+$		
47.832[#] *14*	$5/2^+$		
105.738[#] *20*	$7/2^+$		
106.309[@] *18*	$7/2^+$	38 ns *2*	configuration=$\nu 7/2^+[613]$ (2005Ah09); g=0.66 *5* (2005Ah09) $T_{1/2}$: from $\alpha\gamma$(t) (1971Ah01); other 37 ns *2* $\alpha\gamma$(t) (1964As01).
146.729[#] *21*	$9/2^+$		
166.303[@] *23*	$9/2^+$		
177.602[&] *19*	$3/2^+$		configuration=$\nu 3/2^+[622]$ (2005Ah09) Deexcitation intensity is larger than the known feeding.
211.530[&] *20*	$5/2^+$		
237.71[#] *4*	$(11/2^+)$		
239.33[@] *3*	$11/2^+$		
258.514[&] *18*	$7/2^+$		
295.97[#] *3*	$(13/2^+)$		
319.643[&] *25*	$9/2^+$		
325.29[@] *3*	$(13/2^+)$		
370.47 *3*	$11/2^-$	1.3 μs *1*	configuration=$\nu 11/2^-[725]$ (2005Ah09) $T_{1/2}$: from $\alpha\gamma$(t) (1971Ah01).
392.33[&] *5*	$(11/2^+)$		
420.0?			
423.92[@] *4*	$(15/2^+)$		
433.90 *4*	$9/2^-$		configuration=$\nu 9/2^-[734]$ (2005Ah09)
535.0?			
543.99[a] *3*	$5/2^+$		configuration=$\nu 5/2^+[622]$ (2005Ah09)
590.01[a] *3*	$(7/2^+)$		
601.04[b] *12*	$3/2^-$		configuration=$\nu 1/2^-[750]$ (2005Ah09)
625.12[b] *17*	$7/2^-$		

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^{255}Fm α decay 2005Ah09 (continued)

^{251}Cf Levels (continued)

E(level)[†]	Jπ[‡]	Comments
632.02[b] *14*	1/2⁻	
648.94[a] *4*	(9/2⁺)	
708.05[b] *14*	5/2⁻	
720.50[a] *12*	(11/2⁺)	
774?	(3/2⁺)	Jπ: configuration=1/2[631].
942.48 *13*	(5/2⁻)	configuration={ν7/2⁺[613]⊗1⁻}5/2⁻
973.98 *12*	(9/2⁺)	Jπ: configuration=9/2[604] (2000Ah09).
981.51[c] *10*	(3/2⁻)	configuration={ν7/2⁺[613]⊗2⁻}3/2⁻ (2000Ah09)
1009.13[c] *8*	(5/2⁻)	
1043.77[c] *11*	(7/2⁻)	
1077.56 *7*	(9/2)	
1086.46 *14*	(9/2⁻)	configuration={ν7/2⁺[613]⊗1⁻}9/2⁻ (2005Ah09)
1094.57[c] *18*	9/2⁻	
1155.80[c] *19*	11/2⁻	
1185.50 *18*	(5/2,7/2)	
1249.98 *13*	(7/2⁺)	configuration={ν7/2⁺[613]⊗0⁺}7/2⁺ (2005Ah09)

[†] From least-squares fit to γ-ray energies.
[‡] From Adopted Levels.
[#] Band(A): ν1/2⁺[620].
[@] Band(B): ν7/2⁺[613].
[&] Band(C): ν3/2⁺[622].
[a] Band(D): ν5/2⁺[622].
[b] Band(E): ν1/2⁻[750].
[c] Band(F): {ν7/2⁺[613]⊗2⁻}3/2⁻.

α radiations

1975Ah01 identifies an α with E_α=6621 keV *3* and I_α=2.2×10^{-3}% *5*. However, this α was not identified in the more sensitive study of 2005Ah09.

Eα	E(level)	Iα[†@]	HF[#]	Comments
(5897[‡])	1249.98	1.9×10^{-5}[‡]	26	
(5961[‡])	1185.50	5.8×10^{-6}[‡]	188	
(5989[‡])	1155.80	≈4×10^{-6}[‡]	≈392	
(6049[‡])	1094.57	6.3×10^{-6}[‡]	522	
(6057[‡])	1086.46	1.0×10^{-5}[‡]	362	
(6066[‡])	1077.56	4.7×10^{-5}[‡]	86	
(6099[‡])	1043.77	2.2×10^{-5}[‡]	274	
(6134[‡])	1009.13	3.7×10^{-5}[‡]	245	
(6161[‡])	981.51	4.1×10^{-5}[‡]	305	
(6168[‡])	973.98	2.3×10^{-5}[‡]	594	
(6199[‡])	942.48	3.6×10^{-5}[‡]	547	
(6365[‡])	774?	3.8×10^{-5}[‡]	3481	
(6430[‡])	708.05	≈6×10^{-6}[‡]	≈45515	
6487.6 *24*	648.94	0.0030 *5*	173 *29*	Eα: Weighted average of 6487 keV *4* (1971Ah01) and 6488 keV *3* (1975Ah01).

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^{255}Fm α decay 2005Ah09 (continued)

α radiations (continued)

Eα	E(level)	Iα[†@]	HF[#]	Comments
(6505[‡])	632.02	≈3×10^{-6}[‡]	≈207004	
(6512[‡])	625.12	≈4×10^{-6}[‡]	≈167148	
(6535[‡])	601.04	≈4×10^{-6}[‡]	≈216066	
6546.0 *18*	590.01	0.014 *2*	69 *10*	Eα: Weighted average of 6546 keV *4* (1971Ah01) and 6546 keV *2* (1975Ah01).
6591.8 *18*	543.99	0.017 *2*	93 *11*	Eα: Weighted average of 6591 keV *4* (1971Ah01) and 6592 keV *2* (1975Ah01).
6699.4 *18*	433.90	0.036 *2*	137 *8*	Eα: Weighted average of 6701 keV *4* (1971Ah01) and 6699 keV *2* (1975Ah01).
6710.6 *18*	423.92	0.013 *1*	420 *33*	Eα: Weighted average of 6713 keV *4* (1971Ah01) and 6710 keV *2* (1975Ah01).
6741 *3*	392.33	0.0012 *4*	6.3×10^{3} *21*	From 1975Ah01.
6763.4 *18*	370.47	0.016 *2*	587 *74*	Eα: Weighted average of 6765 keV *4* (1971Ah01) and 6763 keV *2* (1975Ah01).
6807.0 *17*	325.29	0.110 *6*	134 *8*	Eα: Weighted average of 6807 keV *3* (1971Ah01) and 6807 keV *2* (1975Ah01).
6814.7 *24*	319.643	0.0020 *5*	7.8×10^{3} *20*	Eα: Weighted average of 6816 keV *4* (1971Ah01) and 6814 keV *3* (1975Ah01).
6836 *2*	295.97	0.008 *1*	2.47×10^{3} *31*	Eα: From 1975Ah01.
6873.0 *18*	258.514	0.008 *1*	3.58×10^{3} *45*	Eα: Weighted average of 6873 keV *4* (1971Ah01) and 6873 keV *2* (1975Ah01).
6892.3 *17*	239.33	0.62 *1*	55.7 *10*	Eα: Weighted average of 6893 keV *3* (1971Ah01) and 6892 keV *2* (1975Ah01).
6917.8 *18*	211.530	0.017 *2*	2.66×10^{3} *32*	Eα: Weighted average of 6917 keV *4* (1971Ah01) and 6918 keV *2* (1975Ah01).
6953.0 *24*	177.602	0.022 *4*	2.86×10^{3} *52*	Eα: Weighted average of 6953 keV *4* (1971Ah01) and 6953 keV *3* (1975Ah01).
6963.6 *17*	166.303	5.04 *6*	13.92 *20*	Eα: Weighted average of 6965 keV *3* (1971Ah01) and 6963 keV *2* (1975Ah01).
6983 *2*	146.729	0.13 *1*	651 *51*	Eα: From 1975Ah01.
7022.3 *17*	106.309	93.4 *3*	1.332 *12*	Eα: Weighted average of 7023 keV *3* (1971Ah01) and 7022 keV *2* (1975Ah01).
7080.0 *18*	47.832	0.40 *3*	540 *41*	Eα: Weighted average of 7080 keV *4* (1971Ah01) and 7080 keV *2* (1975Ah01).
7102.8 *18*	24.826	0.090 *9*	2.98×10^{3} *30*	Eα: Weighted average of 7102 keV *4* (1971Ah01) and 7103 keV *2* (1975Ah01).
7127.0 *18*	0.0	0.070 *7*	4.82×10^{3} *49*	Eα: Weighted average of 7127 keV *4* (1971Ah01) and 7127 keV *2* (1975Ah01).

[†] From 1975Ah01 unless otherwise noted.
[‡] Existence of this branch is based on observation of γ rays from the associated level in 2005Ah09. E_α based on level-energy differences, I_α based on γ-ray intensity balance.
[#] The nuclear radius parameter $r_0(^{251}Cf)$=1.4938 *22* is deduced from interpolation (or unweighted average) of radius parameters of the adjacent even-even nuclides (2020Si16).
[@] Absolute intensity per 100 decays.

γ(^{251}Cf)

Kα x ray=0.048 *3*, Kβ x ray=0.015 *2* (1971Ah01).
Measured relative Cf M- and L- x-ray intensities (1990Po14).

Cf x-ray (2005Ah09):

x-ray	E	I(%)
Kα2	109.83 *5*	0.0180 *15*
Kα1	115.05 *5*	0.028 *2*
Kβ3	128.58 *5*	0.0033 *3*
Kβ1	129.81 *5*	0.0087 *7*
Kβ2+Kβ4	133.73 *5*	0.0020 *2*
Ko2,3	134.68 *5*	0.00075 *7*

E_γ †	I_γ a	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	α&	$I_{(\gamma+ce)}$ #a	Comments
0.57 c		106.309	7/2+	105.738	7/2+				19.1 *20*	$I_{(\gamma+ce)}$: from intensity balance at 105 level.
23.001‡ *17*		47.832	5/2+	24.826	3/2+	(M1+E2)	<0.04	176 *13*	24 *4*	ce(L)/(γ+ce)=0.05 *4*; ce(M)/(γ+ce)=0.69 *5*; ce(N)/(γ+ce)=0.192 *15*; ce(O)/(γ+ce)=0.050 *4*; ce(P)/(γ+ce)=0.0095 *8* ce(Q)/(γ+ce)=0.00055 *4* α(L)=9 *7*; α(M)=122 *5*; α(N)=33.9 *13*; α(O)=8.78 *32*; α(P)=1.69 *5*; α(Q)=0.0976 *14* Mult.: M1:M2:N1=17: 2.2: 5 (1971Ah01).
24.824‡ *15*		24.826	3/2+	0.0	1/2+	M1+E2	0.27 *4*	8.8×10^2 *22*	81 *7*	ce(L)/(γ+ce)=0.47 *12*; ce(M)/(γ+ce)=0.39 *10*; ce(N)/(γ+ce)=0.108 *34*; ce(O)/(γ+ce)=0.027 *9*; ce(P)/(γ+ce)=0.0045 *14* ce(Q)/(γ+ce)=8.8×10^{-5} *22* α(L)=4.2×10^2 *12*; α(M)=3.4×10^2 *7*; α(N)=95 *20*; α(O)=24 *5*; α(P)=3.9 *8*; α(Q)=0.0770 *11* Mult.: M1:M2:M3:M4:M5=24:11: 16: 14: 0.4 *2*: 0.4 *4*, N12:N3:O123= 8: 3.7: 3.5, L3:M1=24:11 (1971Ah01).
41.0 *1*	1.5×10^{-3} *4*	146.729	9/2+	105.738	7/2+	[M1+E2]		8×10^2 *7*		α(L)=6×10^2 *5*; α(M)=1.7×10^2 *15*; α(N)=5.E1 4; α(O)=12 *10*; α(P)=1.9 *16*; α(Q)=0.013 *5*
45.2 *1*	9×10^{-4} *2*	370.47	11/2−	325.29	(13/2+)	[E1]		1.155 *17*		α(L)=0.859 *13*; α(M)=0.2196 *33*; α(N)=0.0599 *9*; α(O)=0.01447 *22*; α(P)=0.002120 *32* α(Q)=5.36×10^{-5} *8*

$^{251}_{98}$Cf$_{153}$-4

γ(^{251}Cf) (continued)

E_γ †	I_γ a	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	α&	$I_{(\gamma+ce)}$ #a	Comments
47.84 *2*	0.025 *3*	47.832	5/2$^+$	0.0	1/2$^+$	E2		737 *10*	17.6 *20*	ce(L)/(γ+ce)=0.720 *8*; ce(M)/(γ+ce)=0.205 *4*; ce(N)/(γ+ce)=0.0576 *11*; ce(O)/(γ+ce)=0.01423 *28*; ce(P)/(γ+ce)=0.00223 *4* ce(Q)/(γ+ce)=5.24×10^{-6} *10* α(L)=531 *8*; α(M)=151.2 *21*; α(N)=42.5 *6*; α(O)=10.50 *15*; α(P)=1.647 *23*; α(Q)=0.00386 *5* Mult.: L1:L2:L3=0.51: 8.0: 5.1, M1:M2:M3=0.10 *5*: 1.6: 1.4, N2:N3:O23=0.29: 0.34: 0.31 (1971Ah01).
57.92 *3*	0.16 *2*	105.738	7/2$^+$	47.832	5/2$^+$	(M1+E2)	<0.23	48 *6*	5.2 *10*	ce(L)/(γ+ce)=0.73 *7*; ce(M)/(γ+ce)=0.184 *32*; ce(N)/(γ+ce)=0.051 *10*; ce(O)/(γ+ce)=0.0132 *25*; ce(P)/(γ+ce)=0.0025 *4* ce(Q)/(γ+ce)=0.000127 *17* α(L)=36 *5*; α(M)=9.0 *13*; α(N)=2.5 *4*; α(O)=0.65 *9*; α(P)=0.121 *14*; α(Q)=0.00624 *15* Mult.: L1:L3:M1=4.0: 0.5: 0.6 *2* (1971Ah01).
58.48 *2*	0.80 *6*	106.309	7/2$^+$	47.832	5/2$^+$	M1(+E2)	<0.12	42.4 *18*	34.2 *68*	ce(L)/(γ+ce)=0.730 *23*; ce(M)/(γ+ce)=0.181 *10*; ce(N)/(γ+ce)=0.0502 *31*; ce(O)/(γ+ce)=0.0130 *8*; ce(P)/(γ+ce)=0.00249 *14* ce(Q)/(γ+ce)=0.000142 *6* α(L)=31.7 *13*; α(M)=7.9 *4*; α(N)=2.18 *10*; α(O)=0.565 *26*; α(P)=0.108 *4*; α(Q)=0.00615 *9* B(E2)(W.u.)<0.029; B(M1)(W.u.)>2.0×10^{-5} ce(Q)/(γ+ce)=0.00014 *2*. Mult.: L1:L2:L3:M12=23: 3.5: 1.0: 6.0 (1971Ah01).
60.00 *2*	0.140 *15*	166.303	9/2$^+$	106.309	7/2$^+$	M1(+E2)	<0.25	44 *6*	7.1 *14*	ce(L)/(γ+ce)=0.73 *8*; ce(M)/(γ+ce)=0.184 *34*; ce(N)/(γ+ce)=0.051 *10*; ce(O)/(γ+ce)=0.0131 *27*; ce(P)/(γ+ce)=0.0025 *5* ce(Q)/(γ+ce)=0.000125 *18* α(L)=33 *4*; α(M)=8.3 *13*; α(N)=2.3 *4*; α(O)=0.59 *9*; α(P)=0.110 *14*; α(Q)=0.00561 *15* Mult.: α(L1)exp=28 *7*, L1:L2:L3:M12=3.2: 1.0: 0.5: 1.5.
63.4 *1*	1.0×10^{-3} *3*	433.90	9/2$^-$	370.47	11/2$^-$	(M1)		32.1 *5*		α(L)=24.05 *35*; α(M)=5.92 *9*; α(N)=1.641 *24*; α(O)=0.426 *6*; α(P)=0.0824 *12*; α(Q)=0.00487 *7* Mult.: α=44 *17* from the intensity balance at the 434 level and I(63.8γ)=0.08 *3* (1970Ah01).
73.05 *2*	0.028 *3*	239.33	11/2$^+$	166.303	9/2$^+$	M1(+E2)	<0.2	22.7 *15*	0.46 *9*	ce(L)/(γ+ce)=0.715 *34*; ce(M)/(γ+ce)=0.178 *15*; ce(N)/(γ+ce)=0.049 *5*; ce(O)/(γ+ce)=0.0128 *12*; ce(P)/(γ+ce)=0.00243 *21* ce(Q)/(γ+ce)=0.000134 *9* α(L)=16.9 *11*; α(M)=4.22 *31*; α(N)=1.17 *9*; α(O)=0.303 *22*; α(P)=0.0576 *33*; α(Q)=0.00317 *7* Mult.: L1:M1:M2:N1=30: 11: <2.5: 2.2.

$^{251}_{98}Cf_{153}$-5

^{255}Fm α decay 2005Ah09 (continued)

γ(^{251}Cf) (continued)

E_γ[†]	I_γ[a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α[&]	$I_{(\gamma+ce)}$[#a]	Comments
80.92 *5*	0.23 *2*	105.738	7/2$^+$	24.826	3/2$^+$	E2	59.9 *9*	12.5 *25*	ce(L)/(γ+ce)=0.708 *8*; ce(M)/(γ+ce)=0.202 *4*; ce(N)/(γ+ce)=0.0569 *11*; ce(O)/(γ+ce)=0.01406 *28*; ce(P)/(γ+ce)=0.00223 *4* ce(Q)/(γ+ce)=7.09×10^{-6} *14* α(L)=43.1 *6*; α(M)=12.30 *18*; α(N)=3.46 *5*; α(O)=0.856 *12*; α(P)=0.1359 *19*; α(Q)=0.000432 *6* Mult.: L2:L3:M3=4.5: 3.6: 1.1 (1971Ah01).
81.48 *2*	1.00 *8*	106.309	7/2$^+$	24.826	3/2$^+$	E2	58.0 *8*	49.3 *99*	ce(L)/(γ+ce)=0.708 *7*; ce(M)/(γ+ce)=0.2019 *35*; ce(N)/(γ+ce)=0.0568 *11*; ce(O)/(γ+ce)=0.01405 *27*; ce(P)/(γ+ce)=0.00223 *4* ce(Q)/(γ+ce)=7.12×10^{-6} *14* α(L)=41.7 *6*; α(M)=11.91 *17*; α(N)=3.35 *5*; α(O)=0.828 *12*; α(P)=0.1316 *18*; α(Q)=0.000420 *6* Mult.: L2:L3=20:13, M2:M3:O23=5.8: 3.9: 0.8.
85.98 *2*	7.5×10^{-3} *8*	325.29	(13/2$^+$)	239.33	11/2$^+$	(M1)	13.21 *19*		α(L)=9.89 *14*; α(M)=2.434 *34*; α(N)=0.674 *9*; α(O)=0.1751 *25*; α(P)=0.0338 *5* α(Q)=0.001999 *28* Mult.: α≈15 from intensity balance at the 325.3 level.
91.00 *5*	3.2×10^{-4} *5*	237.71	(11/2$^+$)	146.729	9/2$^+$	[M1+E2]	23 *12*		α(L)=17 *8*; α(M)=4.6 *25*; α(N)=1.3 *7*; α(O)=0.32 *17*; α(P)=0.054 *25*; α(Q)=1.0×10^{-3} *7*
98.88 *2*	2.8×10^{-3} *3*	146.729	9/2$^+$	47.832	5/2$^+$	[E2]	23.44 *33*		α(L)=16.88 *24*; α(M)=4.81 *7*; α(N)=1.355 *19*; α(O)=0.335 *5*; α(P)=0.0536 *8* α(Q)=0.0001967 *28*
111.78 *5*	4.6×10^{-4} *7*	258.514	7/2$^+$	146.729	9/2$^+$	[M1+E2]	10 *4*		α(L)=7.1 *25*; α(M)=1.9 *8*; α(N)=0.54 *23*; α(O)=0.14 *5*; α(P)=0.023 *7*; α(Q)=5.E−4 *4*
131.13 *5*	0.027 *3*	370.47	11/2$^-$	239.33	11/2$^+$	E1	0.0741 *10*		α(L)=0.0555 *8*; α(M)=0.01375 *19*; α(N)=0.00377 *5*; α(O)=0.000946 *13*; α(P)=0.0001619 *23* α(Q)=5.94×10^{-6} *8* Mult.: α(L)exp≤0.05.
131.95 *5*	1.7×10^{-3} *2*	237.71	(11/2$^+$)	105.738	7/2$^+$	(E2)	6.24 *9*	0.0021 *4*	ce(L)/(γ+ce)=0.621 *6*; ce(M)/(γ+ce)=0.1769 *29*; ce(N)/(γ+ce)=0.0498 *9*; ce(O)/(γ+ce)=0.01233 *23*; ce(P)/(γ+ce)=0.00199 *4* ce(Q)/(γ+ce)=9.46×10^{-6} *18* α(L)=4.50 *6*; α(M)=1.281 *18*; α(N)=0.360 *5*; α(O)=0.0893 *13*; α(P)=0.01440 *20* α(Q)=6.85×10^{-5} *10* Mult.: α(L2)exp=2.2, L2:L3=0.47: 0.26 *9*.
133.04 *5*	6.8×10^{-3} *7*	239.33	11/2$^+$	106.309	7/2$^+$	(E2)	6.01 *8*		α(L)=4.33 *6*; α(M)=1.234 *17*; α(N)=0.347 *5*; α(O)=0.0860 *12*; α(P)=0.01388 *20* α(Q)=6.66×10^{-5} *9* Mult.: L2:L3:M2=1.8: 0.91: 0.67 *20*.

$^{251}_{98}Cf_{153}$-6

^{255}Fm α decay 2005Ah09 (continued)

γ(^{251}Cf) (continued)

E_γ[†]	I_γ[a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	δ	α[&]	Comments
149.24 *2*	6.0×10^{-4} *4*	295.97	(13/2$^+$)	146.729	9/2$^+$	[E2]		3.74 *5*	α(K)=0.1473 *21*; α(L)=2.59 *4*; α(M)=0.736 *10*; α(N)=0.2071 *29*; α(O)=0.0514 *7* α(P)=0.00833 *12*; α(Q)=4.51×10^{-5} *6*
152.78[b] *2*	1.80×10^{-3}[b] *14*	177.602	3/2$^+$	24.826	3/2$^+$	M1[@]		11.36 *16*	α(K)=8.85 *12*; α(L)=1.884 *26*; α(M)=0.463 *6*; α(N)=0.1283 *18*; α(O)=0.0333 *5* α(P)=0.00644 *9*; α(Q)=0.000378 *5*
152.78[b] *2*	1.80×10^{-3}[b] *14*	258.514	7/2$^+$	105.738	7/2$^+$	[M1]		11.36 *16*	α(K)=8.85 *12*; α(L)=1.884 *26*; α(M)=0.463 *6*; α(N)=0.1283 *18*; α(O)=0.0333 *5* α(P)=0.00644 *9*; α(Q)=0.000378 *5*
158.96 *2*	4.2×10^{-3} *3*	325.29	(13/2$^+$)	166.303	9/2$^+$	[E2]		2.87 *4*	α(K)=0.1545 *22*; α(L)=1.957 *27*; α(M)=0.556 *8*; α(N)=0.1564 *22*; α(O)=0.0388 *5* α(P)=0.00631 *9*; α(Q)=3.67×10^{-5} *5*
163.69 *2*	2.00×10^{-3} *15*	211.530	5/2$^+$	47.832	5/2$^+$	M1		9.35 *13*	α(K)=7.28 *10*; α(L)=1.547 *22*; α(M)=0.380 *5*; α(N)=0.1054 *15*; α(O)=0.0273 *4* α(P)=0.00528 *7*; α(Q)=0.000311 *4*
172.88 *3*	2.5×10^{-4} *3*	319.643	9/2$^+$	146.729	9/2$^+$	[M1]		8.01 *11*	α(K)=6.24 *9*; α(L)=1.324 *19*; α(M)=0.325 *5*; α(N)=0.0902 *13*; α(O)=0.02340 *33* α(P)=0.00452 *6*; α(Q)=0.000266 *4*
177.59 *3*	4.5×10^{-3} *3*	177.602	3/2$^+$	0.0	1/2$^+$	M1+E2[@]	0.39	6.69 *9*	α(K)=5.04 *7*; α(L)=1.224 *17*; α(M)=0.307 *4*; α(N)=0.0852 *12*; α(O)=0.02196 *31* α(P)=0.00415 *6*; α(Q)=0.0002169 *30* Mult.,δ: from 2005Ah09.
182.3[c] *3*	≈6×10^{-5}	420.0?		237.71	(11/2$^+$)				
184.59 *3*	8.7×10^{-4} *7*	423.92	(15/2$^+$)	239.33	11/2$^+$	[E2]		1.563 *22*	α(K)=0.1501 *21*; α(L)=1.019 *14*; α(M)=0.289 *4*; α(N)=0.0812 *11*; α(O)=0.02017 *28* α(P)=0.00330 *5*; α(Q)=2.296×10^{-5} *32*
186.66 *5*	1.10×10^{-4} *15*	211.530	5/2$^+$	24.826	3/2$^+$	[M1]		6.45 *9*	α(K)=5.03 *7*; α(L)=1.065 *15*; α(M)=0.262 *4*; α(N)=0.0725 *10*; α(O)=0.01881 *26* α(P)=0.00363 *5*; α(Q)=0.0002134 *30*
194.6 *4*	3.4×10^{-5} *5*	433.90	9/2$^-$	239.33	11/2$^+$	[E1]		0.1179 *17*	α(K)=0.0901 *13*; α(L)=0.02086 *31*; α(M)=0.00514 *8*; α(N)=0.001413 *21*; α(O)=0.000357 *5* α(P)=6.32×10^{-5} *9*; α(Q)=2.60×10^{-6} *4* I_γ: includes 204.1 escape peak.
197.4 *4*	7×10^{-6} *2*	590.01	(7/2$^+$)	392.33	(11/2$^+$)	[E2]		1.201 *19*	α(K)=0.1424 *20*; α(L)=0.764 *13*; α(M)=0.216 *4*; α(N)=0.0608 *10*; α(O)=0.01511 *25* α(P)=0.00248 *4*; α(Q)=1.878×10^{-5} *29*
204.17 *2*	0.0240 *18*	370.47	11/2$^-$	166.303	9/2$^+$	E1		0.1059 *15*	α(K)=0.0811 *11*; α(L)=0.01857 *26*; α(M)=0.00458 *6*; α(N)=0.001258 *18*; α(O)=0.000318 *4* α(P)=5.65×10^{-5} *8*; α(Q)=2.350×10^{-6} *33* Mult.: α(L12)exp<0.17.

$^{251}_{98}Cf_{153}$-7

γ(^{251}Cf) (continued)

E_γ †	I_γ a	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α &	Comments
209.7 c 2	≈5×10^{-5}	535.0?		325.29	(13/2$^+$)			
210.70 4	2.8×10^{-4} 4	258.514	7/2$^+$	47.832	5/2$^+$	[M1]	4.59 6	α(K)=3.58 5; α(L)=0.755 11; α(M)=0.1856 26; α(N)=0.0514 7; α(O)=0.01334 19 α(P)=0.00258 4; α(Q)=0.0001512 21
211.55 5	1.3×10^{-4} 2	211.530	5/2$^+$	0.0	1/2$^+$			
213.90 5	1.18×10^{-4} 12	319.643	9/2$^+$	105.738	7/2$^+$	[M1]	4.40 6	α(K)=3.43 5; α(L)=0.724 10; α(M)=0.1779 25; α(N)=0.0493 7; α(O)=0.01279 18 α(P)=0.002470 35; α(Q)=0.0001449 20
233.69 2	3.50×10^{-4} 25	258.514	7/2$^+$	24.826	3/2$^+$	[E2]	0.639 9	α(K)=0.1179 17; α(L)=0.376 5; α(M)=0.1059 15; α(N)=0.0298 4; α(O)=0.00741 10 α(P)=0.001229 17; α(Q)=1.161×10^{-5} 16
245.7 4	7×10^{-6} 2	392.33	(11/2$^+$)	146.729	9/2$^+$			
256.67 5	8.6×10^{-5} 8	648.94	(9/2$^+$)	392.33	(11/2$^+$)			
264.15 3	1.04×10^{-3} 8	370.47	11/2$^-$	106.309	7/2$^+$	[M2]	7.97 11	α(K)=5.28 7; α(L)=1.973 28; α(M)=0.526 7; α(N)=0.1483 21; α(O)=0.0384 5 α(P)=0.00724 10; α(Q)=0.000393 6 Mult.: α(K)exp<6, (α(L12)exp or α(L3)exp)<6.
267.61 4	1.52×10^{-4} 15	433.90	9/2$^-$	166.303	9/2$^+$	[E1]	0.0584 8	α(K)=0.0453 6; α(L)=0.00981 14; α(M)=0.002408 34; α(N)=0.000662 9 α(O)=0.0001684 24; α(P)=3.04×10^{-5} 4; α(Q)=1.354×10^{-6} 19
270.37 3	3.5×10^{-4} 3	590.01	(7/2$^+$)	319.643	9/2$^+$	[M1]	2.282 32	α(K)=1.781 25; α(L)=0.375 5; α(M)=0.0920 13; α(N)=0.0255 4; α(O)=0.00661 9 α(P)=0.001277 18; α(Q)=7.48×10^{-5} 10
271.88 5	≈3×10^{-5}	319.643	9/2$^+$	47.832	5/2$^+$			
285.49 3	3.7×10^{-4} 4	543.99	5/2$^+$	258.514	7/2$^+$	[M1]	1.961 27	α(K)=1.531 21; α(L)=0.322 5; α(M)=0.0790 11; α(N)=0.02188 31; α(O)=0.00568 8 α(P)=0.001096 15; α(Q)=6.42×10^{-5} 9
286.65 5	5.4×10^{-5} 5	392.33	(11/2$^+$)	105.738	7/2$^+$			
301.0 3	≈5×10^{-7}	1009.13	(5/2$^-$)	708.05	5/2$^-$			E_γ: seen only in coin.
327.58 4	2.1×10^{-4} 2	433.90	9/2$^-$	106.309	7/2$^+$	[E1]	0.0380 5	α(K)=0.0297 4; α(L)=0.00621 9; α(M)=0.001520 21; α(N)=0.000418 6; α(O)=0.0001066 15 α(P)=1.946×10^{-5} 27; α(Q)=9.09×10^{-7} 13
329.27 4	4.4×10^{-4} 4	648.94	(9/2$^+$)	319.643	9/2$^+$	[M1]	1.320 18	α(K)=1.032 14; α(L)=0.2163 30; α(M)=0.0531 7; α(N)=0.01470 21; α(O)=0.00381 5 α(P)=0.000737 10; α(Q)=4.31×10^{-5} 6
331.52 4	1.8×10^{-3} 2	590.01	(7/2$^+$)	258.514	7/2$^+$	[M1]	1.296 18	α(K)=1.013 14; α(L)=0.2122 30; α(M)=0.0521 7; α(N)=0.01442 20; α(O)=0.00374 5 α(P)=0.000723 10; α(Q)=4.23×10^{-5} 6
332.43 4	2.5×10^{-3} 2	543.99	5/2$^+$	211.530	5/2$^+$	(M1)	1.286 18	α(K)=1.005 14; α(L)=0.2106 29; α(M)=0.0517 7; α(N)=0.01431 20; α(O)=0.00371 5

$^{251}_{98}Cf_{153}$-8

γ(^{251}Cf) (continued)

E_γ †	I_γ a	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α &	Comments
								α(P)=0.000717 *10*; α(Q)=4.20×10^{-5} *6* Mult.: α(K)exp=1.1 *3*.
349.6 *3*	≈1×10^{-6}	981.51	(3/2$^-$)	632.02	1/2$^-$	(M1)	1.119 *16*	α(K)=0.875 *12*; α(L)=0.1832 *26*; α(M)=0.0449 *6*; α(N)=0.01244 *18*; α(O)=0.00323 *5* α(P)=0.000624 *9*; α(Q)=3.65×10^{-5} *5* Mult.: from I(K x ray)/Iγ≈1 (2000Ah09). E_γ: seen only in coin.
350.6 *2*	8×10^{-6} *1*	590.01	(7/2$^+$)	239.33	11/2$^+$			
366.4 *1*	5.7×10^{-3} *4*	543.99	5/2$^+$	177.602	3/2$^+$	(M1)	0.984 *14*	α(K)=0.769 *11*; α(L)=0.1608 *23*; α(M)=0.0395 *6*; α(N)=0.01093 *15*; α(O)=0.00284 *4* α(P)=0.000548 *8*; α(Q)=3.20×10^{-5} *4* Mult.: α(K)exp=0.9 *3*.
378.5 *1*	2.60×10^{-3} *19*	590.01	(7/2$^+$)	211.530	5/2$^+$	(M1)	0.900 *13*	α(K)=0.703 *10*; α(L)=0.1470 *21*; α(M)=0.0361 *5*; α(N)=0.00999 *14*; α(O)=0.00259 *4* α(P)=0.000500 *7*; α(Q)=2.93×10^{-5} *4* Mult.: α(K)exp=0.8 *3*.
381.0 *3*	≈2×10^{-6}	981.51	(3/2$^-$)	601.04	3/2$^-$			E_γ: seen only in coin.
390.4 *1*	4.5×10^{-4} *3*	648.94	(9/2$^+$)	258.514	7/2$^+$	[M1]	0.826 *12*	α(K)=0.646 *9*; α(L)=0.1350 *19*; α(M)=0.0331 *5*; α(N)=0.00917 *13*; α(O)=0.002379 *33* α(P)=0.000459 *6*; α(Q)=2.69×10^{-5} *4*
395.3 *2*	7×10^{-6} *1*	720.50	(11/2$^+$)	325.29	(13/2$^+$)			
397.5 *2*	2.5×10^{-6} *5*	543.99	5/2$^+$	146.729	9/2$^+$			
400.9 *2*	2.9×10^{-5} *4*	720.50	(11/2$^+$)	319.643	9/2$^+$			
x404.0 *3*	2.0×10^{-6} *3*							
408.2 *2*	≈2×10^{-6}	1009.13	(5/2$^-$)	601.04	3/2$^-$			E_γ: seen only in coin.
409.6 *1*	1.25×10^{-4} *12*	648.94	(9/2$^+$)	239.33	11/2$^+$	[M1]	0.724 *10*	α(K)=0.567 *8*; α(L)=0.1182 *17*; α(M)=0.0290 *4*; α(N)=0.00803 *11*; α(O)=0.002083 *29* α(P)=0.000402 *6*; α(Q)=2.352×10^{-5} *33*
412.2 *2*	3.3×10^{-5} *3*	590.01	(7/2$^+$)	177.602	3/2$^+$			
x416.9 *3*	3.2×10^{-6} *5*							
423.7 *1*	7.1×10^{-4} *5*	590.01	(7/2$^+$)	166.303	9/2$^+$	[M1]	0.660 *9*	α(K)=0.516 *7*; α(L)=0.1077 *15*; α(M)=0.0264 *4*; α(N)=0.00731 *10*; α(O)=0.001898 *27* α(P)=0.000366 *5*; α(Q)=2.143×10^{-5} *30*
437.7 *1*	1.65×10^{-3} *12*	543.99	5/2$^+$	106.309	7/2$^+$	[M1]	0.604 *8*	α(K)=0.473 *7*; α(L)=0.0985 *14*; α(M)=0.02416 *34*; α(N)=0.00669 *9*; α(O)=0.001735 *24* α(P)=0.000335 *5*; α(Q)=1.959×10^{-5} *27*
443.2 *1*	6.4×10^{-5} *5*	590.01	(7/2$^+$)	146.729	9/2$^+$	[M1]	0.584 *8*	α(K)=0.457 *6*; α(L)=0.0952 *13*; α(M)=0.02334 *33*; α(N)=0.00646 *9*; α(O)=0.001676 *23* α(P)=0.000324 *5*; α(Q)=1.893×10^{-5} *27*

γ(^{251}Cf) (continued)

E_γ [†]	I_γ [a]	E_i(level)	J_i^π	E_f	J_f^π	Mult.	α [&]	Comments
454.4 *3*	≈5×10^{-7}	632.02	1/2$^-$	177.602	3/2$^+$			
[x]463.2 *3*	7.8×10^{-6} *9*							
478.3 *2*	8×10^{-7} *1*	625.12	7/2$^-$	146.729	9/2$^+$			
482.5 *3*	5.7×10^{-5} *6*	648.94	(9/2$^+$)	166.303	9/2$^+$			
483.7 *2*	3.60×10^{-4} *24*	590.01	(7/2$^+$)	106.309	7/2$^+$	[M1]	0.460 *6*	α(K)=0.360 *5*; α(L)=0.0749 *11*; α(M)=0.01836 *26*; α(N)=0.00508 *7*; α(O)=0.001318 *19* α(P)=0.000255 *4*; α(Q)=1.488×10^{-5} *21*
496.2 *2*	2.00×10^{-4} *15*	543.99	5/2$^+$	47.832	5/2$^+$	[M1]	0.429 *6*	α(K)=0.336 *5*; α(L)=0.0698 *10*; α(M)=0.01712 *24*; α(N)=0.00474 *7*; α(O)=0.001229 *17* α(P)=0.0002374 *33*; α(Q)=1.388×10^{-5} *19*
502.1 *2*	7.5×10^{-5} *6*	648.94	(9/2$^+$)	146.729	9/2$^+$	[M1]	0.415 *6*	α(K)=0.325 *5*; α(L)=0.0676 *9*; α(M)=0.01657 *23*; α(N)=0.00459 *6*; α(O)=0.001190 *17* α(P)=0.0002298 *32*; α(Q)=1.343×10^{-5} *19*
519.2 *2*	2.20×10^{-4} *17*	543.99	5/2$^+$	24.826	3/2$^+$	[M1]	0.379 *5*	α(K)=0.297 *4*; α(L)=0.0617 *9*; α(M)=0.01512 *21*; α(N)=0.00418 *6*; α(O)=0.001086 *15* α(P)=0.0002097 *29*; α(Q)=1.226×10^{-5} *17*
530.4 *4*	≈5×10^{-7}	708.05	5/2$^-$	177.602	3/2$^+$			
542.2 *2*	2.8×10^{-4} *3*	590.01	(7/2$^+$)	47.832	5/2$^+$			
543.9 *2*	2.0×10^{-4} *2*	543.99	5/2$^+$	0.0	1/2$^+$	[E2]	0.0543 *8*	α(K)=0.0310 *4*; α(L)=0.01709 *24*; α(M)=0.00458 *6*; α(N)=0.001279 *18*; α(O)=0.000323 *5* α(P)=5.71×10^{-5} *8*; α(Q)=1.546×10^{-6} *22*
553.0 *2*	3.5×10^{-6} *6*	601.04	3/2$^-$	47.832	5/2$^+$			
[x]556.0 *3*	3.8×10^{-6} *6*							
565.2 *2*	6.5×10^{-5} *5*	590.01	(7/2$^+$)	24.826	3/2$^+$			
573.7 *2*	6.7×10^{-6} *6*	720.50	(11/2$^+$)	146.729	9/2$^+$			
577.5[b] *3*	3.5×10^{-6}[b] *4*	601.04	3/2$^-$	24.826	3/2$^+$			
577.5[b] *3*	3.5×10^{-6}[b] *4*	625.12	7/2$^-$	47.832	5/2$^+$			
[x]579.1 *4*	1.1×10^{-6} *2*							
[x]583.0 *4*	2.8×10^{-6} *3*							
601.0 *4*	≈2×10^{-6}	601.04	3/2$^-$	0.0	1/2$^+$			E_γ: seen only in coin.
601.0 *2*	1.70×10^{-5} *15*	648.94	(9/2$^+$)	47.832	5/2$^+$			
607.1 *4*	1.3×10^{-6} *2*	632.02	1/2$^-$	24.826	3/2$^+$			
614.5 *4*	1.6×10^{-6} *2*	720.50	(11/2$^+$)	105.738	7/2$^+$			
632.1 *2*	2.1×10^{-6} *2*	632.02	1/2$^-$	0.0	1/2$^+$			
[x]637.0 *3*	2.0×10^{-6} *2*							
641.6 *3*	≈1×10^{-6}	1185.50	(5/2,7/2)	543.99	5/2$^+$			
643.6 *3*	≈1×10^{-6}	1077.56	(9/2)	433.90	9/2$^-$			

$^{251}_{98}$Cf$_{153}$-10

$\gamma(^{251}Cf)$ (continued)

E_γ †	I_γ [a]	E_i(level)	J_i^π	E_f	J_f^π
652.5 *2*	3.6×10^{-6} *3*	1086.46	(9/2$^-$)	433.90	9/2$^-$
660.2 *2*	5.1×10^{-6} *4*	708.05	5/2$^-$	47.832	5/2$^+$
683.2 *3*	1.5×10^{-6} *3*	708.05	5/2$^-$	24.826	3/2$^+$
702.3 *3*	1.4×10^{-6} *3*	1094.57	9/2$^-$	392.33	(11/2$^+$)
707.0 *3*	3.0×10^{-6} *6*	1077.56	(9/2)	370.47	11/2$^-$
715.8 *4*	2.4×10^{-6} *4*	1086.46	(9/2$^-$)	370.47	11/2$^-$
724.1 *4*	4.9×10^{-6} *5*	1043.77	(7/2$^-$)	319.643	9/2$^+$
731.0 *2*	2.8×10^{-6} *3*	942.48	(5/2$^-$)	211.530	5/2$^+$
734.5 *2*	1.9×10^{-6} *2*	973.98	(9/2$^+$)	239.33	11/2$^+$
x747.8 *4*	8.7×10^{-6} *8*				
750.5 *2*	4.3×10^{-6} *4*	1009.13	(5/2$^-$)	258.514	7/2$^+$
x754.6 *4*	3.3×10^{-6} *3*				
763.5 *4*	$\approx2\times10^{-6}$	1155.80	11/2$^-$	392.33	(11/2$^+$)
764.7 *3*	4.9×10^{-6} *5*	942.48	(5/2$^-$)	177.602	3/2$^+$
770.0 *4*	8×10^{-6} *1*	981.51	(3/2$^-$)	211.530	5/2$^+$
x774.0 *2*	3.8×10^{-5} *3*				
774[c]		774?	(3/2$^+$)	0.0	1/2$^+$
x778.9 *4*	5.4×10^{-7} *6*				
785.4 *2*	9×10^{-7} *1*	1043.77	(7/2$^-$)	258.514	7/2$^+$
x789.2 *4*	1.10×10^{-6} *14*				
x794.1 *4*	6.7×10^{-7} *9*				
797.6 *2*	9.4×10^{-6} *7*	1009.13	(5/2$^-$)	211.530	5/2$^+$
803.8 *2*	1.10×10^{-5} *8*	981.51	(3/2$^-$)	177.602	3/2$^+$
807.7 *2*	1.10×10^{-5} *8*	973.98	(9/2$^+$)	166.303	9/2$^+$
816.1 *3*	3.5×10^{-6} *4*	1249.98	(7/2$^+$)	433.90	9/2$^-$
831.9[b] *2*	6.0×10^{-6}[b] *5*	1009.13	(5/2$^-$)	177.602	3/2$^+$
831.9[b] *2*	6.0×10^{-6}[b] *5*	1043.77	(7/2$^-$)	211.530	5/2$^+$
836.2 *2*	2.8×10^{-5} *2*	942.48	(5/2$^-$)	106.309	7/2$^+$
838.4 *3*	$\approx2\times10^{-6}$	1077.56	(9/2)	239.33	11/2$^+$
847.0 *3*	2.2×10^{-6} *3*	1086.46	(9/2$^-$)	239.33	11/2$^+$
x851.7 *3*	5.6×10^{-6} *5*				
859.8 *3*	1.8×10^{-6} *3*	1155.80	11/2$^-$	295.97	(13/2$^+$)
867.8 *2*	1.00×10^{-5} *8*	973.98	(9/2$^+$)	106.309	7/2$^+$
x890.8 *5*	1.2×10^{-6} *4*				
x900.3 *4*	1.2×10^{-6} *3*				
903.1 *3*	1.4×10^{-6} *2*	1009.13	(5/2$^-$)	106.309	7/2$^+$
911.3 *1*	1.20×10^{-5} *10*	1077.56	(9/2)	166.303	9/2$^+$
918.1 *3*	$\approx1.0\times10^{-6}$	1155.80	11/2$^-$	237.71	(11/2$^+$)
920.5 *3*	2.1×10^{-6} *4*	1086.46	(9/2$^-$)	166.303	9/2$^+$
938.1 *3*	1.6×10^{-6} *2*	1043.77	(7/2$^-$)	105.738	7/2$^+$
947.8 *3*	1.6×10^{-6} *2*	1094.57	9/2$^-$	146.729	9/2$^+$
956.6 *2*	2.9×10^{-6} *3*	981.51	(3/2$^-$)	24.826	3/2$^+$
961.2 *2*	4.6×10^{-6} *4*	1009.13	(5/2$^-$)	47.832	5/2$^+$
971.2 *1*	2.90×10^{-5} *22*	1077.56	(9/2)	106.309	7/2$^+$
981.4 *2*	1.50×10^{-5} *15*	981.51	(3/2$^-$)	0.0	1/2$^+$
984.2 *2*	1.10×10^{-5} *12*	1009.13	(5/2$^-$)	24.826	3/2$^+$
988.8 *3*	3.3×10^{-6} *5*	1094.57	9/2$^-$	105.738	7/2$^+$
991.6 *3*	2.3×10^{-6} *4*	1249.98	(7/2$^+$)	258.514	7/2$^+$
996.1 *2*	1.10×10^{-5} *8*	1043.77	(7/2$^-$)	47.832	5/2$^+$
1019.2 *3*	1.0×10^{-6} *3*	1185.50	(5/2,7/2)	166.303	9/2$^+$
1038.3 *3*	2.2×10^{-6} *5*	1249.98	(7/2$^+$)	211.530	5/2$^+$
1072.3 *3*	5.0×10^{-6} *7*	1249.98	(7/2$^+$)	177.602	3/2$^+$
1079.1 *3*	3.8×10^{-6} *5*	1185.50	(5/2,7/2)	106.309	7/2$^+$
1083.9 *3*	5.5×10^{-6} *7*	1249.98	(7/2$^+$)	166.303	9/2$^+$
1144.0 *4*	$\approx7\times10^{-7}$	1249.98	(7/2$^+$)	105.738	7/2$^+$

† From 2005Ah09, unless otherwise noted.
‡ From 1971Ah01.
# From ce+γ of 1971Ah01. The uncertainty of the individual ce intensity is 20%.
@ K x ray/(153γ+178γ)=6 *2* from $\alpha\gamma$ experiment, suggesting that both both 152.8γ and 177.7γ are mainly M1.
& Additional information 1.
[a] Absolute intensity per 100 decays.

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γ(^{251}Cf) (continued)

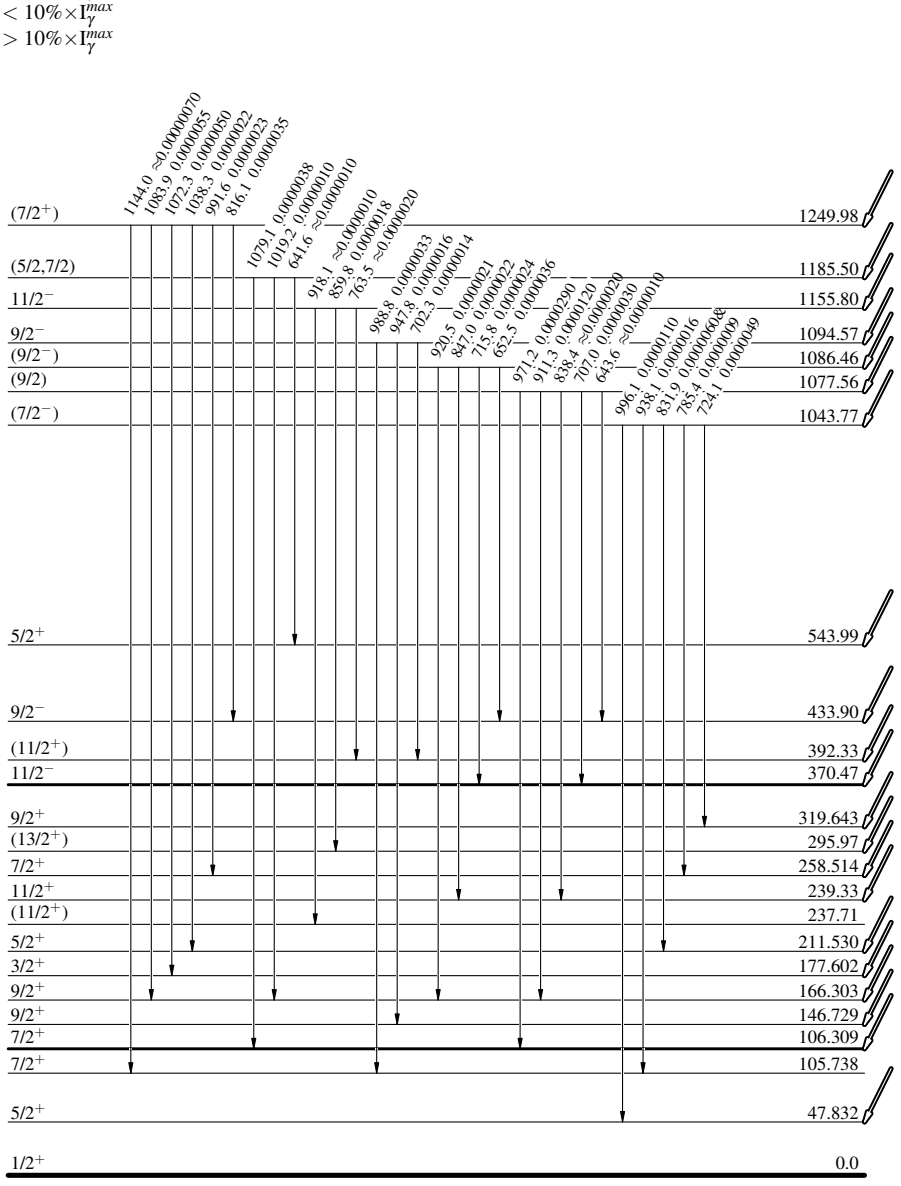
[b] Multiply placed with undivided intensity.
[c] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

^{255}Fm α decay 2005Ah09

Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



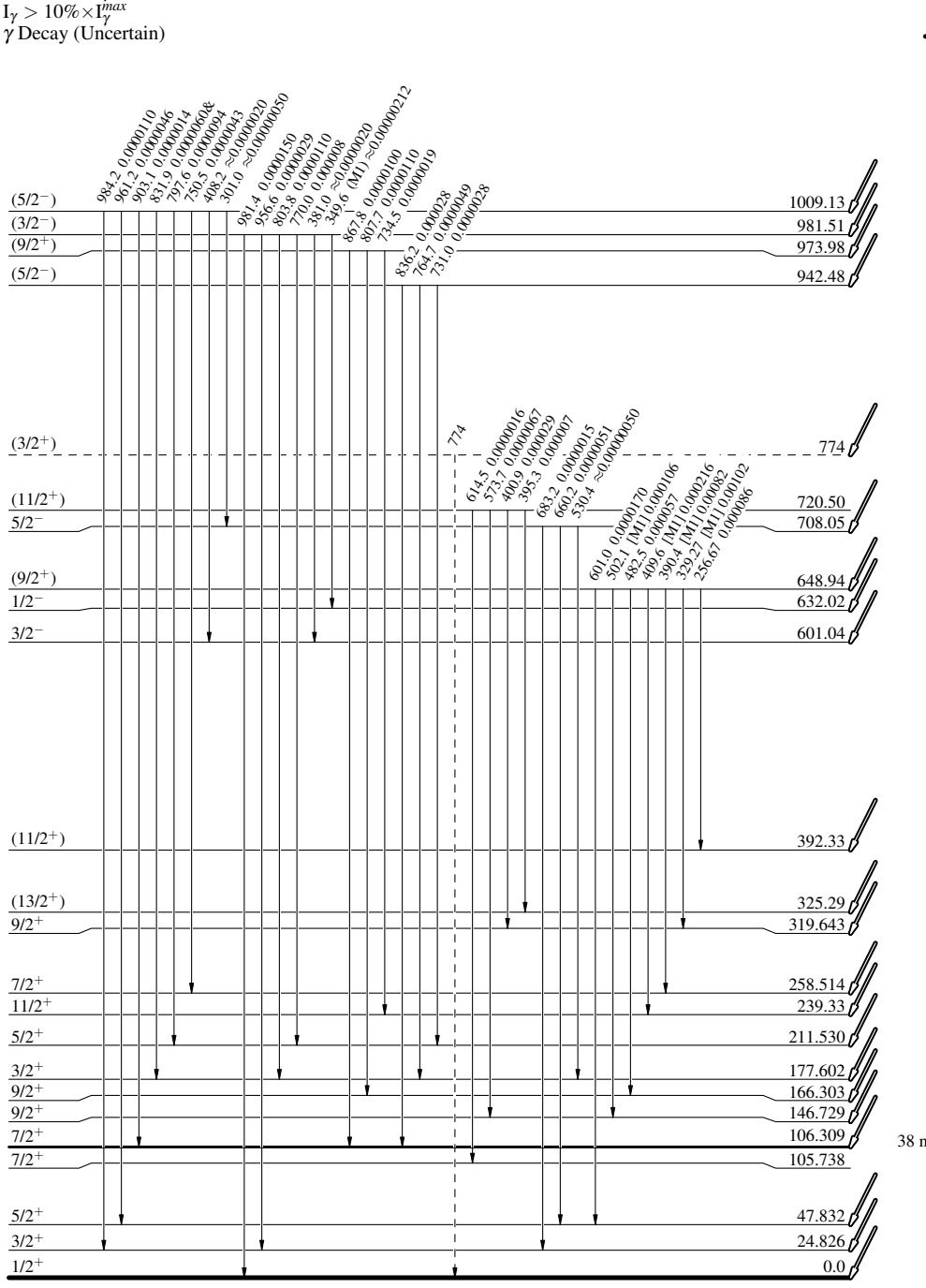
$^{251}_{98}Cf_{153}$

^{255}Fm α decay 2005Ah09

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
& Multiply placed: undivided intensity given

Legend
- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)



	Eα	Iα	HF
	6134	0.000037	245
	6161	0.000041	305
	6168	0.000023	594
	6199	0.000036	547
	6365	0.000038	3481
	6430	$\approx 6 \times 10^{-6}$	≈45515
	6487.6	0.0030	173
	6505	$\approx 3 \times 10^{-6}$	≈207004
	6535	$\approx 4 \times 10^{-6}$	≈216066
	6741	0.0012	6300
	6807.0	0.110	134
	6814.7	0.0020	7800
	6873.0	0.008	3580
	6892.3	0.62	55.7
	6917.8	0.017	2660
	6953.0	0.022	2860
	6963.6	5.04	13.92
	6983	0.13	651
	7022.3	93.4	1.332
	7080.0	0.40	540
	7102.8	0.090	2980
	7127.0	0.070	4820

$^{251}_{98}Cf_{153}$

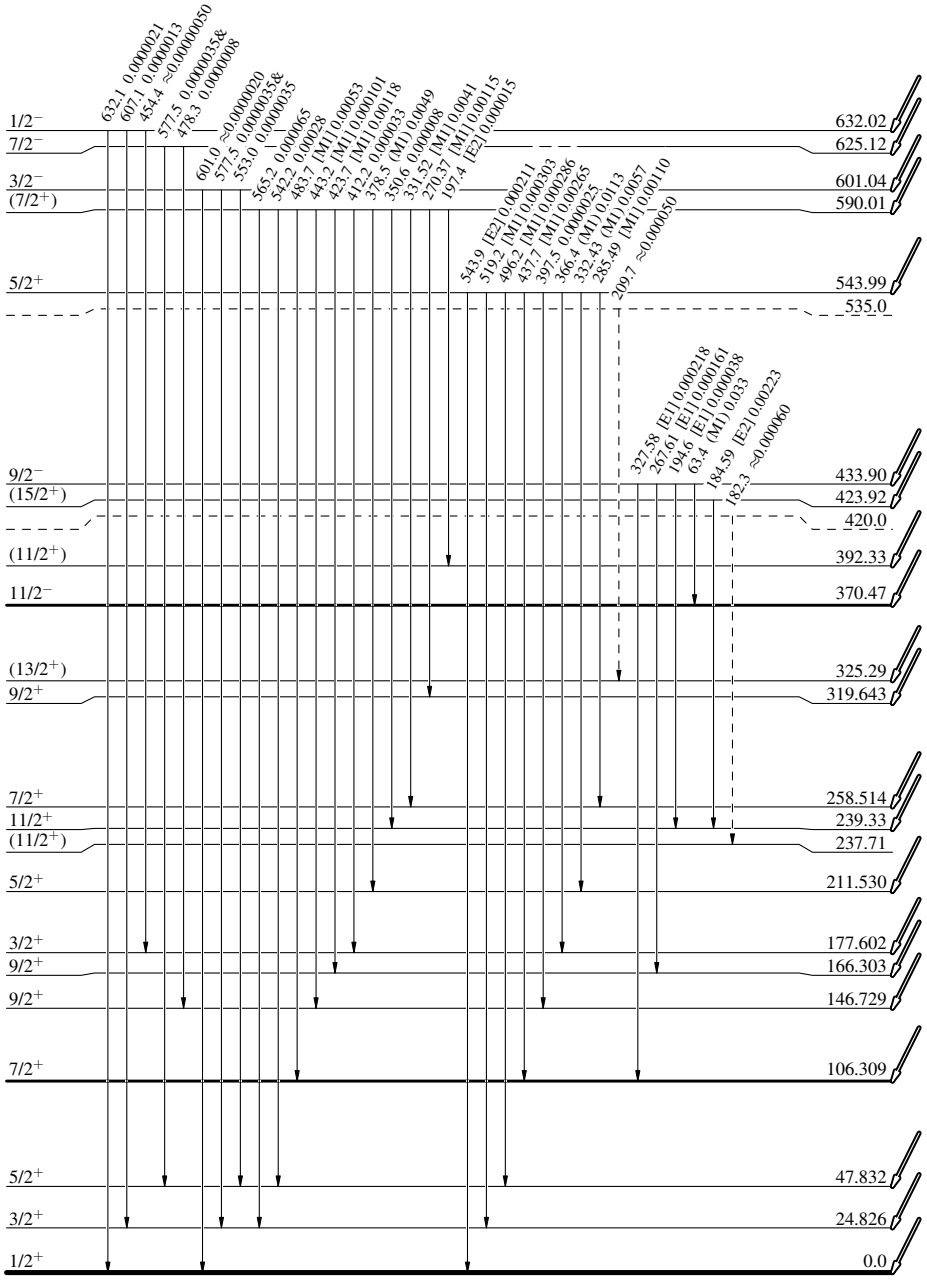
^{255}Fm α decay 2005Ah09

Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
& Multiply placed: undivided intensity given

Legend
- $I_\gamma < 2\% \times I_\gamma^{max}$
- $I_\gamma < 10\% \times I_\gamma^{max}$
- $I_\gamma > 10\% \times I_\gamma^{max}$
- γ Decay (Uncertain)

$^{255}_{100}Fm_{155}$: 7/2+, 0.0, 20.07 h 7, Q_α=7240.6 5, %α=100



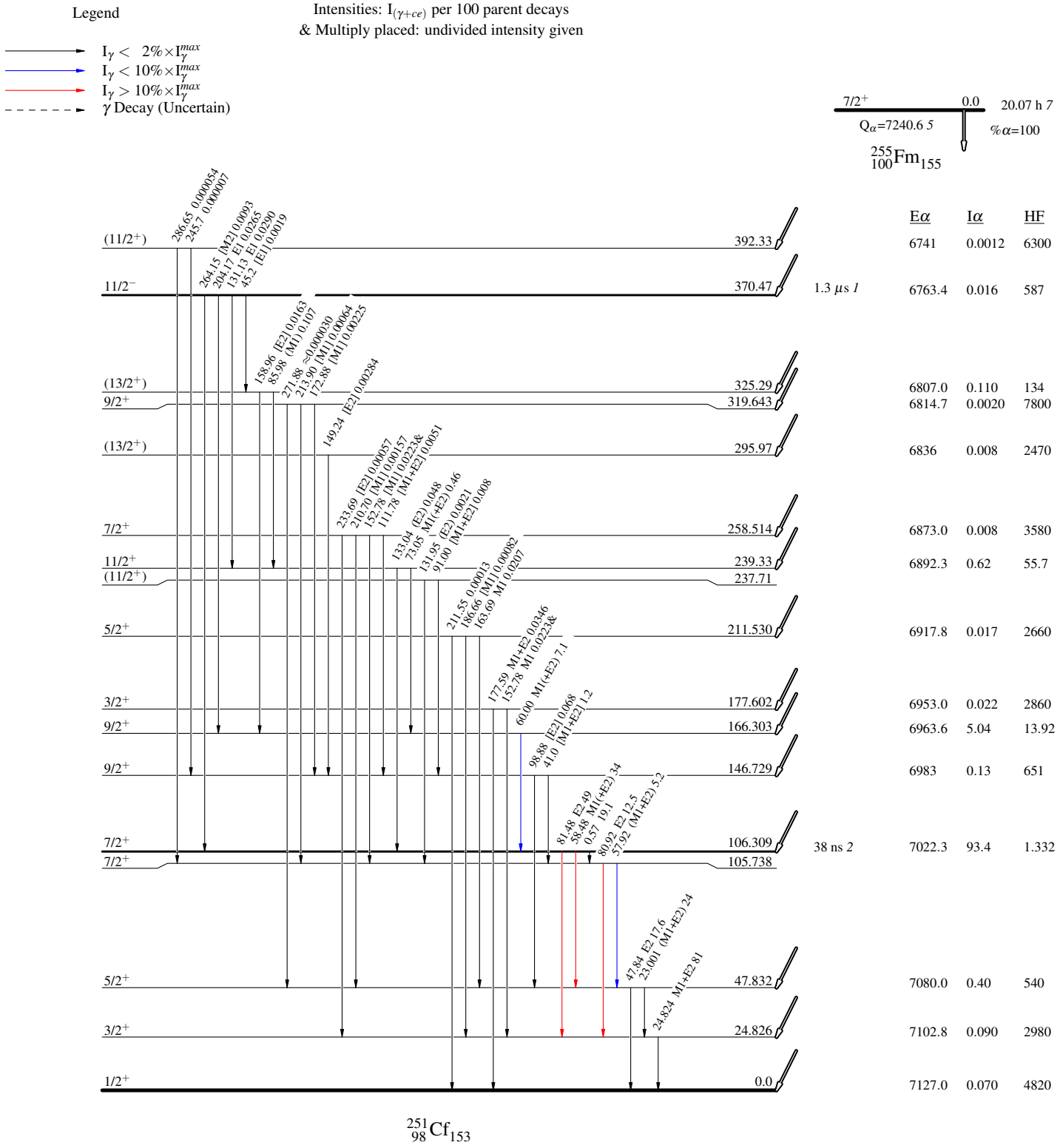
		Eα	Iα	HF
632.02		6505	≈3 × 10^{-6}	≈207004
625.12		6512	≈4 × 10^{-6}	≈167148
601.04		6535	≈4 × 10^{-6}	≈216066
590.01		6546.0	0.014	69
543.99		6591.8	0.017	93
433.90		6699.4	0.036	137
423.92		6710.6	0.013	420
392.33		6741	0.0012	6300
370.47	1.3 μs *1*	6763.4	0.016	587
325.29		6807.0	0.110	134
319.643		6814.7	0.0020	7800
258.514		6873.0	0.008	3580
239.33		6892.3	0.62	55.7
211.530		6917.8	0.017	2660
177.602		6953.0	0.022	2860
166.303		6963.6	5.04	13.92
146.729		6983	0.13	651
106.309	38 ns *2*	7022.3	93.4	1.332
47.832		7080.0	0.40	540
24.826		7102.8	0.090	2980
0.0		7127.0	0.070	4820

$^{251}_{98}Cf_{153}$

^{255}Fm α decay 2005Ah09

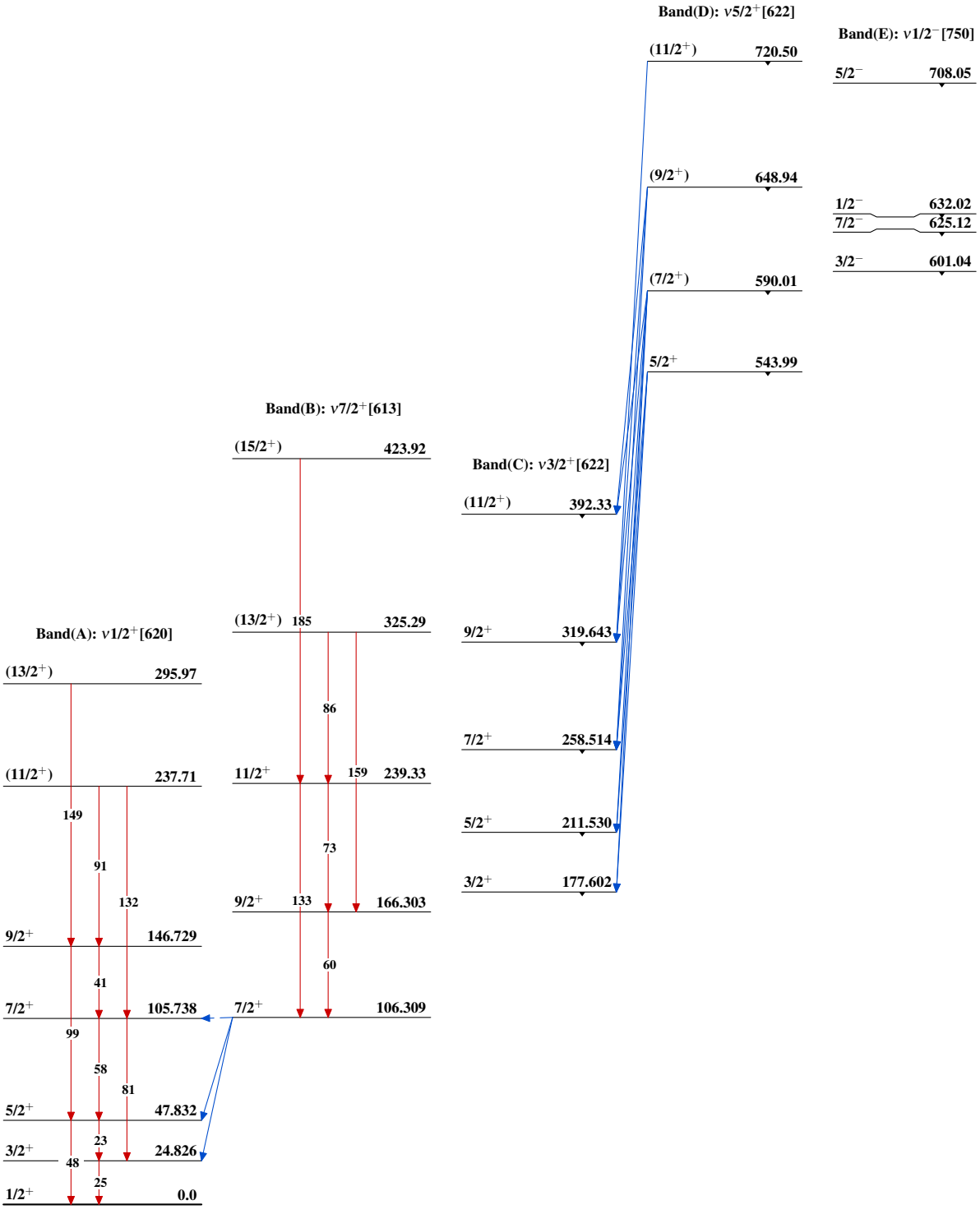
Decay Scheme (continued)

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays
& Multiply placed: undivided intensity given



$^{251}_{98}Cf_{153}$

^{255}Fm α decay 2005Ah09



$^{251}_{98}Cf_{153}$

^{255}Fm α decay 2005Ah09 (continued)

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