

Adopted Levels, Gammas

Type	Author	History	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja	NDS 198,449 (2024)	31-Jul-2022

$Q(\beta^-)=-1350$ 60; $S(n)=6458.9$ 12; $S(p)=6572.5$ 20; $Q(\alpha)=5475.1$ 9 [2021Wa16](#)
 $S(2n)=11977.6$ 11, $S(2p)=11767.1$ 27 ([2021Wa16](#)).

Average neutron emitted per fission:

[1970Th06](#), [1972Pr19](#), [1973Da34](#), [1973Go20](#), [1973Go46](#).

Theoretical structure calculations:

$Q(\alpha)$, $T_{1/2}(\alpha)$ and $T_{1/2}$ s.f.

[2022Wa06](#), [2022Xu04](#), [2021Ch44](#), [2021El09](#), [2021He09](#), [2021Ko21](#), [2021Pa24](#),
[2021Po06](#), [2020Ca10](#), [2019So15](#), [2019Sr04](#), [2018Po05](#), [2017Vi02](#), [2016Sa53](#),
[2016Su09](#), [2015Ba24](#), [2015Ba24](#), [2014Lu01](#), [2013Ra05](#), [2013Se17](#), [2012Ja08](#),
[2010Sa09](#), [2010Ko36](#), [1992Bh03](#), [1989Ho24](#), [1983Bo15](#), [1993Bu09](#), [1992So06](#).

Fission barrier heights:

[2020Ja01](#), [2018Ch21](#), [2014Ro09](#), [2013Gi06](#), [2010Ab23](#), [1991Pa11](#), [1983Bo15](#),
[1982Du16](#), [1982Eg01](#).

Deformation parameter:

[2021Im01](#), [2010Ab23](#), [1991Pa11](#), [1982Du16](#), [1982Eg01](#), [1981Kr21](#).

Excited levels, yrast states:

[2021Ef02](#), [2016Li37](#), [2002Pr01](#), [1984Eg01](#).

K-isomeric state:

[2022Mi06](#), [2021Yo09](#).

Potential energy surfaces for fission:

[2015Ku28](#), [1976Iw02](#).

Compilation of long lived isomer:

[2011He12](#).

Heavy fragment decay:

[1989Si13](#).

Rotational bands:

[1993Gu08](#), [1991Ah01](#), [1991Pi05](#), [1988Ab07](#), [1988Bh04](#), [1985Si13](#), [1985Si23](#), [1983Pe12](#), [1981Kr21](#).

 ^{246}Cm Levels**Cross Reference (XREF) Flags**

A	^{246}Am β^- decay (39 min)	E	$^{246}\text{Cm}(d,d')$
B	^{246}Am β^- decay (25.0 min)	F	$^{248}\text{Cm}(p,t)$
C	^{246}Bk ε decay	G	$^{248}\text{Cm}(^{209}\text{Bi},^{211}\text{Bi}\gamma)$
D	^{250}Cf α decay	H	Coulomb excitation

E(level) [†]	J ^π	T _{1/2}	XREF	Comments
0.0 [‡]	0 ⁺	4706 y 40	ABCDEFGH	%SF=0.02615 7; % α =99.97385 7 T _{1/2} : From ingrowth activity method (2007Ko01). The evaluator is adopting the value from 2007Ko01 as the measurement uses a high-purity source and the absolute efficiencies are not needed as the half-life is determined from the activity ratio of the daughter ^{246}Cm to the parent ^{250}Cf . The T _{1/2} (^{250}Cf)=13.08 y 9 used by 2007Ko01 is the current value available in the ENSDF database (2001Ak11). Earlier measurements as specified in "Others" either used the absolute or specific activity methods with exception to 1955Br02 and 1956Bu91 . The latter two used the

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Adopted Levels, Gammas (continued)**²⁴⁶Cm Levels (continued)**

E(level) [†]	J ^π	T _{1/2}	XREF	Comments
42.851 [‡] 5	2 ⁺	123.2 ps 23	ABCDEFGH	ingrowth method but had very discrepant results. Others: 4852 y 76 (1977Po20), 4820 y 20 (1971Ma32) 4654 y 40 (1971Mc19), 4711 y 22 (1969Me01), 5480 y 170 (1961Ca01), 6620 y 320 (1956Bu91), 2300 y 460 (1955Br02), 4000 y 600 (1954Fr19).
142.009 [‡] 20	4 ⁺		ABCDEFG	%SF,%α: From α/SF= 3823 10: weighted average of α/SF=3822 10 (1969Me01), 3833 32 (1971Ma32). Spontaneous fission rate=9000 700 fission /mole (1981Gi02).
295.04 [‡] 17	6 ⁺		AB DE G	J ^π : 153.0γ to 4 ⁺ 142-keV level; band member.
499.8 [‡] 4	8 ⁺		A G	J ^π : 205γ to 6 ⁺ 295-keV level; band member.
752.6 [‡] 11	10 ⁺		G	J ^π : 252.8γ to 8 ⁺ 499-keV level; band member.
841.680 [#] 17	2 ⁻		ABC	J ^π : E1 798.79γ to 2 ⁺ 43-keV level; (M1,E2) 34.8γ from 3- 876-keV level; no gamma from 5- 980-keV level.
876.444 [#] 18	3 ⁻		ABC E	J ^π : E1 734.40γ to 4 ⁺ 142-keV level; band member.
923.31 [#] 3	4 ⁻		AB G	J ^π : 46.87γ to 3- 876-keV level; band member.
980.31 [#] 22	5 ⁻		A E G	J ^π : natural parity yields negative parity for J=5 (observed in (d,d')); 685.1γ to 6 ⁺ 295-keV level; 838.5γ to 4 ⁺ 143-keV level; band member.
1049.4 [‡] 15	12 ⁺		G	J ^π : 296.8γ 10 ⁺ 753-keV level; band member.
1051.1 [#] 3	6 ⁻		A G	J ^π : E2 127.4γ to 4- 923-keV level; band member.
1059 3			E	
1078.853 [@] 18	1 ⁻		BC E	J ^π : E1 1078.85γ to 0 ⁺ g.s.
1104.865 [@] 19	2 ⁻		BC	J ^π : E1 1062.04γ to 2 ⁺ 43-keV level; band member.
1124.261 ^{&} 22	2 ⁺		BC e H	J ^π : E2 1124.29γ to 0 ⁺ g.s.
1128.025 [@] 21	3 ⁻		BC e	J ^π : E1 1085.15γ 2 ⁺ 43-keV level; to band member.
1128.8 [#] 3	7 ⁻		A G	J ^π : 148.5γ to 5- 980-keV level; 628.8γ to 8 ⁺ 499-keV level; band member.
1165.49 ^{&} 3	3 ⁺		BC	J ^π : E2 1122.64γ to 2 ⁺ 43-keV level; band member.
1174.74 ^a 7	0 ⁺		B EF	J ^π : E0 to 0 ⁺ g.s.
1178.9 4	8 ⁻	1.12 s 24	A G	%IT=100 J ^π : E2 127.4γ to 6- 1051-keV level; 679.2γ to 8 ⁺ 499-keV level; calculated from Woods-Saxon single-particle energies (2008Ro21) and Gogny interaction (2006De23); systematics of N=150 isotones (²⁴⁴ Pu, ²⁴⁸ Cf, ²⁵⁰ No). Configuration=7/2[624]⊗9/2[734] (2019Sh34). Identified as K ^π =8 ⁻ isomer (1973Mu03). T _{1/2} : from summed double coincidence intensities of 679γ, 153γ, 205γ(t) in (²⁰⁹ Bi, ²¹¹ Biγ) (2019Sh34).
1210.53 ^a 5	2 ⁺		B F	J ^π : E0+(M1,E2) to 2 ⁺ ; L=(2) in (p,t); band member.
1219.97 ^{&} 11	4 ⁺		B E	J ^π : 925.0γ to 6 ⁺ 295-keV level; 1177.2γ to 2 ⁺ 43-keV level; band member.
1249.777 ^b 19	1 ⁻		B E	J ^π : E1 1206.96γ to 2 ⁺ 43-keV level; natural parity yields negative parity for J=1 (observed in (d,d')).
1289.3 ^c 3	0 ⁺		B	J ^π : E0 to g.s.
1300.45 ^b 4	3 ⁻		B E	J ^π : 1257.62γ to 2 ⁺ 43-keV level; 1158.47γ to 4 ⁺ 142-keV level; natural parity yields negative parity for J=3 (observed in (d,d')); band member.
1317.57? ^c 4	(2) ⁺		B	J ^π : M1 1274.72γ to 2 ⁺ 43-keV level; band member.
1340.16 16			B e	
1348.863 ^d 20	1 ⁻		B e	J ^π : M1+E2 270.07γ to 1- 1078-keV level; (E1) 1348.81γ to 0 ⁺ g.s.
1366.633 ^d 21	(2 ⁻)		B	J ^π : M1(+E2) 524.92γ to 2- 842-keV; (M1) 287.78γ to 1- 1078-keV; band member.

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Adopted Levels, Gammas (continued) **^{246}Cm Levels (continued)**

E(level) [†]	J ^π	XREF	Comments
1379.23 ^c 7	(4 ⁺)	B	J ^π : 1237.2γ to 4 ⁺ 142-keV level; 1336.38γ to 43-keV level; band member.
1386.4 [‡] 18	14 ⁺	G	J ^π : 337.0γ to 12 ⁺ 1049-keV level; band member.
1397 3	5 ⁻	E	
1451.89 ^e 4	1 ⁺	B	J ^π : (M1) 1451.91γ to 0 ⁺ g.s.; E1 609.98γ to 2- 842-keV level.
1471 3		E	
1478.44 ^e 4	(2 ⁺)	B	J ^π : 228.71γ to 1- 1249-keV level; 1336.38γ to 142-keV level; band member.
1509.24 ^e 6	(3 ⁺)	B	J ^π : 1466.53γ to 2 ⁺ 43-keV level; band member.
1525.928 ^f 21	3 ⁻	B E	J ^π : E1 401.68γ to 2 ⁺ 1124-keV level; 1383.94γ to 4 ⁺ 142-keV level; natural parity yields negative parity for J=3 (observed in (d,d')).
1573.74 5	(1 ⁺)	B	J ^π : (M1) 1573.74γ to 0 ⁺ g.s.
1593.702 ^g 20	2 ⁻	B	J ^π : (M1+E0) transition to 2- 842-keV level; E1 1550.94γ to 2 ⁺ 43-keV level.
1601.232 25	(2,3) ⁺	B	J ^π : E1 759.59γ to 2- 842-keV level; E1 724.79γ to 3- 676-keV level.
1604.17 ^h 3	(1 ⁻)	B E	J ^π : 1604.14γ to 0 ⁺ g.s.; γ decay pattern similar to the first and second $K^{\pi}=1^-$ band.
1621.500 ^g 21	3 ⁻	B e	J ^π : E1 1479.43γ to 4 ⁺ 142-keV level; 779.76γ to 2- 842-keV level; band member.
1628.92? 7		B e	
1633.53 ^h 3	(2) ⁻	B	J ^π : E1+M2 1590.68γ to 2 ⁺ 43-keV level; band member.
1652 3		E	
1659.19 9	(1 ⁻)	B	J ^π : (M1,E2) 554.4γ to 2- 1105-keV level; 1659.18γ to 0 ⁺ g.s.
1661.65 ⁱ 3	(1 ⁺)	B	J ^π : (M1) 1661.63γ to 0 ⁺ g.s.
1671.01 ^h 3	(3 ⁻)	B E	J ^π : M1(+E2) 566.12γ to 2- 1105-keV level; band member.
1680.81 ⁱ 5	(2 ⁺)	B	J ^π : 1680.69γ to 0 ⁺ g.s.; (M1) 1637.95γ to 2 ⁺ 43-keV level; band member.
1712.39 ⁱ 4	(3 ⁺)	B	J ^π : 1669.50γ to 2 ⁺ 43-keV level; band member.
1759.5 [‡] 21	16 ⁺	G	J ^π : 373.1γ to 14 ⁺ 1386.4-keV level; band member.
1780.81 3	2 ⁺	B E	J ^π : 1780.5γ to 0 ⁺ g.s.; M1+E0 transition to 2 ⁺ 1125-keV level.
1821.76 6		B	
1836.73 6	2 ^{+,1-}	B E	J ^π : 960.2γ to 3- 876-keV level; 1794.7γ to 2 ⁺ 43-keV level; 1836.71γ to 0 ⁺ g.s.
1856.61 5	3 ⁺	B	J ^π : 1813.73γ to 2 ⁺ 43-keV level; 1714.61γ to 4 ⁺ 142-keV level, level not seen in (d,d') suggests a level with unnatural parity.
1870.21 5	1,2 ⁺	B	J ^π : 1869.81γ to 0 ⁺ g.s.; 1827.39γ to 2 ⁺ 43-keV level.
1875.52 11	1,2 ⁺	B	J ^π : 1875.56γ to 0 ⁺ g.s.; 751.0γ to 2 ⁺ 1124-keV level.
1886.77 3	(1 ⁺)	B	J ^π : (M1+E0) transition to 1 ⁺ 1451-keV level; 1886.80γ to 0 ⁺ g.s.
1898.08 9	2 ⁺	B	J ^π : 1897.8γ to 0 ⁺ g.s.; 1756.1γ to 4 ⁺ 142-keV level.
1901.33 6	2 ^{+,3}	B	J ^π : 1759.30γ to 4 ⁺ 143-keV level; 1858.7 g to 2 ⁺ 43-keV level; logft= 8.28 from $J^{\pi}(^{246}\text{Am})=2^{(-)}$ rules out 4 ⁺ .
1906.12 14	2 ^{+,3,4} ⁺	B e	J ^π : 1764.2γ to 4 ⁺ 143-keV level; 1863.19γ to 2 ⁺ 43-keV level.
1909.32 5	2 ^{+,1}	B e	J ^π : 1866.48γ to 2 ⁺ 43-keV level; 1909.27γ to 0 ⁺ g.s.
1924.56 4	1,2 ⁺	B	J ^π : 1881.70γ to 2 ⁺ 43-keV level; 1924.56γ to 0 ⁺ g.s.
1947.09 6	2 ^{+,3,4} ⁺	B	J ^π : 1804.8γ to 4 ⁺ 142-keV level; 1904.26γ to 2 ⁺ 43-keV level.
1965 4		E	
1983.35 13	(1 ^{-,2} +) ⁺	B	J ^π : 361.85γ to 3- 1621-keV level; 1983.2γ to 0 ⁺ g.s.
2032.51 7	1,2 ⁺	B	J ^π : 1989.63γ to 2 ⁺ 43-keV level; 2032.49γ to 0 ⁺ g.s.
2146.05 5	1,2 ⁺	B	J ^π : 2103.18γ to 2 ⁺ 43-keV level; 2146.05γ to 0 ⁺ g.s.
2164.4 [‡] 23	18 ⁺	G	J ^π : 404.9γ to 16 ⁺ 1759-keV level; band member.
2171.42 6	2 ^{+,3}	B	J ^π : 577.9γ to 2- 1594-keV level; 2029.39γ to 4 ⁺ 142-keV level; 2128.57γ to 2 ⁺ 43-keV level.
2597.4 [‡] 25	20 ⁺	G	J ^π : 433.0γ to 18 ⁺ 2164-keV level; band member.
3055 [‡] 3	22 ⁺	G	J ^π : 457.9γ to 20 ⁺ 2597-keV level; band member.
3534 [‡] 3	24 ⁺	G	J ^π : 479.1γ to 22 ⁺ 3055-keV level; band member.
4033 [‡] 3	26 ⁺	G	J ^π : 498.1γ to 24 ⁺ 3534-keV level; band member.

[†] From least-squares fit to Eγ data by the evaluator. For gammas without uncertainties, ΔEγ=1.0 has been assumed.

Adopted Levels, Gammas (continued)

 ^{246}Cm Levels (continued)

- [‡] Band(A): g.s. rotational band.
[#] Band(B): $K^\pi=2^-$ octupole vibrational band.
[@] Band(C): $K^\pi=1^-$ octupole vibrational band.
[&] Band(D): $K^\pi=2^+$ γ vibrational band.
^a Band(E): $K^\pi=0^+$ band.
^b Band(F): $K^\pi=0^-$ band.
^c Band(G): second $K^\pi=0^+$ band.
^d Band(H): second $K^\pi=1^-$ band.
^e Band(I): $K^\pi=1^+$ band.
^f Band(J): $K^\pi=3^-$ octupole vibrational band head.
^g Band(K): second $K^\pi=2^-$ band.
^h Band(L): third $K^\pi=1^-$ band.
ⁱ Band(M): second $K^\pi=1^+$ band.

Adopted Levels, Gammas (continued) $\gamma(^{246}\text{Cm})$

Additional information 1.

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	α^f	Comments
42.851	2 ⁺	42.852 5	100	0.0	0 ⁺	E2 ^e	1064 15	$\alpha(L)=770~11; \alpha(M)=216.8~30$ $\alpha(N)=60.3~8; \alpha(O)=14.56~20; \alpha(P)=2.379~33; \alpha(Q)=0.00584~8$ $B(E2)(\text{W.u.})=326~8$
142.009	4 ⁺	99.2 1	100	42.851 2 ⁺	E2 ^c		19.43 29	E_γ : from ^{250}Cf α decay. Other: 42.9 2 from ^{246}Am β^- decay (25.0 min). $\alpha(L)=14.05~21; \alpha(M)=3.97~6$ $\alpha(N)=1.105~16; \alpha(O)=0.268~4; \alpha(P)=0.0444~7; \alpha(Q)=0.0001817~26$
295.04	6 ⁺	153.0 2	100	142.009 4 ⁺	[E2]		2.87 4	E_γ : from ^{246}Bk ε decay. Others: 99.2 2 from ^{246}Am β^- decay (39 min) and 99.2 2 from ^{246}Am β^- decay (25.0 min). $\alpha(K)=0.1739~24; \alpha(L)=1.951~30; \alpha(M)=0.550~8$ $\alpha(N)=0.1530~23; \alpha(O)=0.0371~6; \alpha(P)=0.00625~9; \alpha(Q)=3.99\times 10^{-5}~6$
499.8	8 ⁺	205 [‡] 1	100 [#]	295.04 6 ⁺	[E2]		0.896 21	$\alpha(K)=0.1414~22; \alpha(L)=0.547~14; \alpha(M)=0.153~4$ $\alpha(N)=0.0426~11; \alpha(O)=0.01037~26; \alpha(P)=0.00177~4; \alpha(Q)=1.657\times 10^{-5}~33$
752.6	10 ⁺	252.8 ^{&}		499.8 8 ⁺				
841.680	2 ⁻	798.79 4	100	42.851 2 ⁺	E1 ^d		0.00648 9	$\alpha(K)=0.00523~7; \alpha(L)=0.000941~13; \alpha(M)=0.0002260~32$ $\alpha(N)=6.17\times 10^{-5}~9; \alpha(O)=1.560\times 10^{-5}~22; \alpha(P)=3.01\times 10^{-6}~4;$ $\alpha(Q)=2.016\times 10^{-7}~28$
876.444	3 ⁻	34.8 [@] 1	0.05 4	841.680 2 ⁻	(M1,E2) ^c	$1.5\times 10^3~14$		E_γ : weighted average of 798.80 4 from ^{246}Am β^- decay (25.0 min) and 798.7 1 from ^{246}Bk ε decay. Other: 798.8 3 from ^{246}Am β^- decay (39 min). $\alpha(L)=1.1\times 10^3~10; \alpha(M)=3.1\times 10^2~28$ $\alpha(N)=9.E1~8; \alpha(O)=21~19; \alpha(P)=3.5~31; \alpha(Q)=0.021~7$ $\alpha(K)=0.00606~8; \alpha(L)=0.001100~15; \alpha(M)=0.000264~4$ $\alpha(N)=7.22\times 10^{-5}~10; \alpha(O)=1.825\times 10^{-5}~26; \alpha(P)=3.52\times 10^{-6}~5;$ $\alpha(Q)=2.327\times 10^{-7}~33$
		734.40 4	64.7 20	142.009 4 ⁺	E1 ^c		0.00752 11	E_γ : weighted average of 734.41 4 from ^{246}Am β^- decay (25.0 min) and 734.3 1 from ^{246}Bk ε decay. Other: 734.4 3 from ^{246}Am β^- decay (39 min).
		833.59 4	100.0 28	42.851 2 ⁺	E1 ^d		0.00601 8	I_γ : weighted average of 65.4 20 from ^{246}Am β^- decay (25.0 min) and 62 4 from ^{246}Bk ε decay. $\alpha(K)=0.00485~7; \alpha(L)=0.000870~12; \alpha(M)=0.0002088~29$ $\alpha(N)=5.70\times 10^{-5}~8; \alpha(O)=1.442\times 10^{-5}~20; \alpha(P)=2.79\times 10^{-6}~4;$ $\alpha(Q)=1.876\times 10^{-7}~26$
								E_γ : weighted average of 833.60 4 from ^{246}Am β^- decay (25.0 min) and

Adopted Levels, Gammas (continued)

 $\gamma(^{246}\text{Cm})$ (continued)

E_i (level)	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	α^f	Comments
								833.5 1 from ^{246}Bk ε decay. Other: 833.6 3 from ^{246}Am β^- decay (39 min).
								I_γ : Other: 100 6 from ^{246}Bk ε decay.
923.31	4 ⁻	46.87 81.63 781.28 6		876.444 3 ⁻ 841.680 2 ⁻ 100 7		[E1]	0.00674 9	$\alpha(K)=0.00544$ 8; $\alpha(L)=0.000980$ 14; $\alpha(M)=0.0002355$ 33 $\alpha(N)=6.43\times10^{-5}$ 9; $\alpha(O)=1.626\times10^{-5}$ 23; $\alpha(P)=3.14\times10^{-6}$ 4; $\alpha(Q)=2.094\times10^{-7}$ 29
980.31	5 ⁻	685.1 [‡] 3 838.5 [‡] 3	$\approx 100^\#$	295.04 6 ⁺	[E1]	0.00853 12		E_γ : Other: 781.2 3 from ^{246}Am β^- decay (39 min). $\alpha(K)=0.00686$ 10; $\alpha(L)=0.001254$ 18; $\alpha(M)=0.000302$ 4 $\alpha(N)=8.24\times10^{-5}$ 12; $\alpha(O)=2.081\times10^{-5}$ 29; $\alpha(P)=4.00\times10^{-6}$ 6; $\alpha(Q)=2.62\times10^{-7}$ 4
1049.4	12 ⁺	296.8 ^{&}		752.6 10 ⁺				
1051.1	6 ⁻	127.4 [‡] 5 756.0 [‡] 3	≈ 24.0	923.31 4 ⁻	E2 ^a	6.15 14		$\alpha(L)=4.44$ 10; $\alpha(M)=1.255$ 29 $\alpha(N)=0.349$ 8; $\alpha(O)=0.0847$ 19; $\alpha(P)=0.01416$ 32; $\alpha(Q)=7.34\times10^{-5}$ 14
				295.04 6 ⁺	[E1]	0.00714 10		$\alpha(K)=0.00576$ 8; $\alpha(L)=0.001042$ 15; $\alpha(M)=0.0002504$ 35 $\alpha(N)=6.84\times10^{-5}$ 10; $\alpha(O)=1.728\times10^{-5}$ 24; $\alpha(P)=3.33\times10^{-6}$ 5; $\alpha(Q)=2.214\times10^{-7}$ 31
1078.853	1 ⁻	237.23 4 1036.00 4	0.518 27 45.7 14	841.680 2 ⁻ 42.851 2 ⁺	E1 ^d	0.00412 6		$\alpha(K)=0.00334$ 5; $\alpha(L)=0.000588$ 8; $\alpha(M)=0.0001409$ 20 $\alpha(N)=3.84\times10^{-5}$ 5; $\alpha(O)=9.75\times10^{-6}$ 14; $\alpha(P)=1.893\times10^{-6}$ 27; $\alpha(Q)=1.306\times10^{-7}$ 18
								E_γ : Other: 1036.0 1 from ^{246}Bk ε decay. I_γ : Other: 47 4 from ^{246}Bk ε decay.
				1078.85 4	100 4		0.00385 5	
				0.0	0 ⁺			$\alpha(K)=0.00312$ 4; $\alpha(L)=0.000548$ 8; $\alpha(M)=0.0001311$ 18 $\alpha(N)=3.58\times10^{-5}$ 5; $\alpha(O)=9.07\times10^{-6}$ 13; $\alpha(P)=1.764\times10^{-6}$ 25; $\alpha(Q)=1.222\times10^{-7}$ 17
								E_γ : weighted average of 1078.86 4 from ^{246}Am β^- decay (25.0 min) and 1078.8 1 from ^{246}Bk ε decay.
								I_γ : Other: 100 8 from ^{246}Bk ε decay.
1104.865	2 ⁻	263.17 5 962.9 4 1062.04 4	0.195 13 0.0029 29 100.0 20	841.680 2 ⁻ 142.009 4 ⁺ 42.851 2 ⁺	E1 ^d	0.00395 6		$\alpha(K)=0.00320$ 4; $\alpha(L)=0.000563$ 8; $\alpha(M)=0.0001348$ 19

Adopted Levels, Gammas (continued)

 $\gamma^{(246)\text{Cm}}$ (continued)

E _i (level)	J _i ^π	E _γ [†]	I _γ [†]	E _f	J _f ^π	Mult.	α ^f	Comments
1124.261	2 ⁺	982.47 27	3.86 35	142.009	4 ⁺			$\alpha(N)=3.68\times10^{-5} \quad 5; \alpha(O)=9.33\times10^{-6} \quad 13; \alpha(P)=1.813\times10^{-6} \quad 25;$ $\alpha(Q)=1.254\times10^{-7} \quad 18$ E _γ : Other: 1062.0 1 from ^{246}Bk ε decay. E _γ : unweighted average of 982.73 15 from ^{246}Am β ⁻ decay (25.0 min) and 982.2 2 from ^{246}Bk ε decay. I _γ : weighted average of 5.1 15 from ^{246}Am β ⁻ decay (25.0 min) and 3.79 35 from ^{246}Bk ε decay.
	1081.40 6	100 7		42.851	2 ⁺	E2 ^c	0.01190 17	$\alpha(K)=0.00884 \quad 12; \alpha(L)=0.002286 \quad 32; \alpha(M)=0.000575 \quad 8$ $\alpha(N)=0.0001581 \quad 22; \alpha(O)=3.98\times10^{-5} \quad 6; \alpha(P)=7.57\times10^{-6} \quad 11; \alpha(Q)=4.17\times10^{-7} \quad 6$ E _γ : Other: 1081.4 1 from ^{246}Bk ε decay. I _γ : from ^{246}Bk ε decay. Other: 100 10 from ^{246}Am β ⁻ decay (25.0 min).
	1124.29 4	76.1 29		0.0	0 ⁺	E2 ^b	0.01107 15	$\alpha(K)=0.00827 \quad 12; \alpha(L)=0.002090 \quad 29; \alpha(M)=0.000524 \quad 7$ $\alpha(N)=0.0001441 \quad 20; \alpha(O)=3.63\times10^{-5} \quad 5; \alpha(P)=6.92\times10^{-6} \quad 10; \alpha(Q)=3.88\times10^{-7} \quad 5$ $\alpha(\text{IPF})=2.327\times10^{-7} \quad 33$ E _γ : Other: 1124.3 1 from ^{246}Bk ε decay. I _γ : Other: 76 5 from ^{246}Bk ε decay.
7	1128.025	3 ⁻	251.50 10 986.03 4	0.179 33 62.7 20	876.444 3 ⁻ 142.009 4 ⁺	(E1) ^c	0.00449 6	$\alpha(K)=0.00364 \quad 5; \alpha(L)=0.000642 \quad 9; \alpha(M)=0.0001539 \quad 22$ $\alpha(N)=4.20\times10^{-5} \quad 6; \alpha(O)=1.064\times10^{-5} \quad 15; \alpha(P)=2.065\times10^{-6} \quad 29;$ $\alpha(Q)=1.417\times10^{-7} \quad 20$ E _γ : Other: 1124.3 1 from ^{246}Bk ε decay. I _γ : Other: 76 5 from ^{246}Bk ε decay.
	1085.15 6	100.0 31		42.851	2 ⁺	E1 ^b	0.00381 5	$\alpha(K)=0.00309 \quad 4; \alpha(L)=0.000542 \quad 8; \alpha(M)=0.0001297 \quad 18$ $\alpha(N)=3.54\times10^{-5} \quad 5; \alpha(O)=8.98\times10^{-6} \quad 13; \alpha(P)=1.746\times10^{-6} \quad 24;$ $\alpha(Q)=1.210\times10^{-7} \quad 17$
	1128.8	7 ⁻	(78 [‡]) 148.5 [‡] 3 628.8 3	100 20	1051.1 6 ⁻ 980.31 5 ⁻ 499.8 8 ⁺	[E1]	0.00997 14	$\alpha(K)=0.00801 \quad 11; \alpha(L)=0.001479 \quad 21; \alpha(M)=0.000356 \quad 5$ $\alpha(N)=9.72\times10^{-5} \quad 14; \alpha(O)=2.454\times10^{-5} \quad 34; \alpha(P)=4.71\times10^{-6} \quad 7;$ $\alpha(Q)=3.05\times10^{-7} \quad 4$ E _γ : Other: 1124.3 1 from ^{246}Bk ε decay. I _γ : Other: 76 5 from ^{246}Bk ε decay.
	833.8 3	≈200		295.04	6 ⁺	[E1]	0.00600 8	$\alpha(K)=0.00485 \quad 7; \alpha(L)=0.000869 \quad 12; \alpha(M)=0.0002087 \quad 29$ $\alpha(N)=5.70\times10^{-5} \quad 8; \alpha(O)=1.442\times10^{-5} \quad 20; \alpha(P)=2.79\times10^{-6} \quad 4;$ $\alpha(Q)=1.875\times10^{-7} \quad 26$
	1165.49	3 ⁺	289.3 ^g 2 1023.44 7 1122.64 6	<6.1 ^g 40 5 100 5	876.444 3 ⁻ 142.009 4 ⁺ 42.851 2 ⁺	E2 ^b	0.01110 16	E _γ : Other: 1023.4 2 from ^{246}Bk ε decay. $\alpha(K)=0.00829 \quad 12; \alpha(L)=0.002097 \quad 29; \alpha(M)=0.000526 \quad 7$ $\alpha(N)=0.0001446 \quad 20; \alpha(O)=3.64\times10^{-5} \quad 5; \alpha(P)=6.94\times10^{-6} \quad 10; \alpha(Q)=3.89\times10^{-7} \quad 5$

Adopted Levels, Gammas (continued)
 $\gamma(^{246}\text{Cm})$ (continued)

E _i (level)	J _i ^π	E _γ [†]	I _γ [†]	E _f	J _f ^π	Mult.	α ^f	Comments
1174.74	0 ⁺	1131.88 7	100 11	42.851	2 ⁺			$\alpha(\text{IPF})=2.167 \times 10^{-7} 31$ I _γ : Other: 100 19 from ^{246}Bk ε decay.
		1174.72		0.0	0 ⁺	E0		Mult.: no γ observed; K/L=4.2 5 (1976Mu03).
1178.9	8 ⁻	(50 [±])		1128.8	7 ⁻			
		127.4 [±] 5	≈6.0	1051.1	6 ⁻	E2 ^b	6.15 14	$\alpha(L)=4.44 10; \alpha(M)=1.255 29$ $\alpha(N)=0.349 8; \alpha(O)=0.0847 19; \alpha(P)=0.01416 32; \alpha(Q)=7.34 \times 10^{-5} 14$ $B(E2)(W.u.)=7 \times 10^{-9} +7-4$
		679.2 [±] 3	100 [#]	499.8	8 ⁺	[E1]	0.00866 12	$\alpha(K)=0.00697 10; \alpha(L)=0.001275 18; \alpha(M)=0.000307 4$ $\alpha(N)=8.38 \times 10^{-5} 12; \alpha(O)=2.116 \times 10^{-5} 30; \alpha(P)=4.07 \times 10^{-6} 6;$ $\alpha(Q)=2.66 \times 10^{-7} 4$ $B(E1)(W.u.)=3.4 \times 10^{-16} +11-8$
1210.53	2 ⁺	1167.74 5	100 6	42.851	2 ⁺	E0+(M1,E2) ^b	0.023 13	$\alpha(K)=0.018 10; \alpha(L)=0.0038 19; \alpha(M)=9.E-4 4$ $\alpha(N)=2.5 \times 10^{-4} 12; \alpha(O)=6.5 \times 10^{-5} 31; \alpha(P)=1.3 \times 10^{-5} 6; \alpha(Q)=9.E-7$ 5; $\alpha(\text{IPF})=2.5 \times 10^{-6} 13$
8		1210.35 9	45 7	0.0	0 ⁺			
	4 ⁺	925.0 ^b 3	2.5×10 ² 9	295.04	6 ⁺			
		1177.2 2	100 27	42.851	2 ⁺			
	1 ⁻	171.02 11	33 13	1078.853	1 ⁻			
		373.36 5	14.0 8	876.444	3 ⁻			
		407.99 6	6.8 7	841.680	2 ⁻			
		1206.96 4	100.0 33	42.851	2 ⁺	E1 ^b	0.00319 4	$\alpha(K)=0.00258 4; \alpha(L)=0.000450 6; \alpha(M)=0.0001076 15$ $\alpha(N)=2.94 \times 10^{-5} 4; \alpha(O)=7.46 \times 10^{-6} 10; \alpha(P)=1.452 \times 10^{-6} 20;$ $\alpha(Q)=1.017 \times 10^{-7} 14$ $\alpha(\text{IPF})=1.208 \times 10^{-5} 17$
		1249.79 4	100.0 33	0.0	0 ⁺	[E1]	0.00302 4	$\alpha(K)=0.002438 34; \alpha(L)=0.000424 6; \alpha(M)=0.0001013 14$ $\alpha(N)=2.77 \times 10^{-5} 4; \alpha(O)=7.02 \times 10^{-6} 10; \alpha(P)=1.368 \times 10^{-6} 19;$ $\alpha(Q)=9.61 \times 10^{-8} 13$ $\alpha(\text{IPF})=2.379 \times 10^{-5} 33$
1289.3	0 ⁺	1289.4		0.0	0 ⁺	E0		Mult.: no γ observed.
1300.45	3 ⁻	377.2 2	7.0 26	923.31	4 ⁻			
		423.4 ^b 5	<15 ^g	876.444	3 ⁻			
		1158.47 6	31.9 26	142.009	4 ⁺			
		1257.62 6	100 6	42.851	2 ⁺			
1317.57?	(2) ⁺	1274.72 4	100	42.851	2 ⁺	M1 ^b	0.0285 4	$\alpha(K)=0.02252 32; \alpha(L)=0.00446 6; \alpha(M)=0.001084 15$ $\alpha(N)=0.000297 4; \alpha(O)=7.58 \times 10^{-5} 11; \alpha(P)=1.491 \times 10^{-5} 21;$ $\alpha(Q)=1.069 \times 10^{-6} 15$ $\alpha(\text{IPF})=2.91 \times 10^{-5} 4$

Adopted Levels, Gammas (continued)

 $\gamma^{(246)\text{Cm}}(\text{continued})$

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	δ	α^f	Comments
1340.16		1198.19 ^{<i>b</i>} 6	100 5	142.009	4 ⁺				
		1297.34 ^{<i>b</i>} 9	34 4	42.851	2 ⁺				
1348.863	1 ⁻	244.03 3	66.8 24	1104.865	2 ⁻	(M1) ^{<i>b</i>}		2.534 35	$\alpha(K)=1.991\ 28; \alpha(L)=0.408\ 6; \alpha(M)=0.0996\ 14$ $\alpha(N)=0.0274\ 4; \alpha(O)=0.00697\ 10; \alpha(P)=0.001371\ 19;$ $\alpha(Q)=9.79\times10^{-5}\ 14$
		270.07 3	100.0 32	1078.853	1 ⁻	M1+E2 ^{<i>b</i>}	0.36 +10-13	1.73 10	$\alpha(K)=1.34\ 9; \alpha(L)=0.292\ 9; \alpha(M)=0.0720\ 20$ $\alpha(N)=0.0198\ 5; \alpha(O)=0.00502\ 14; \alpha(P)=0.000979\ 33;$ $\alpha(Q)=6.6\times10^{-5}\ 4$
		472.33 5	3.57 17	876.444	3 ⁻				
		507.10 5	6.55 29	841.680	2 ⁻				
		1306.8 ^{<i>b</i>} 2	0.61 10	42.851	2 ⁺				E _{γ} : poor fit.
		1348.81 4	11.8 4	0.0	0 ⁺	(E1) ^{<i>b</i>}		0.00270 4	$\alpha(K)=0.002147\ 30; \alpha(L)=0.000372\ 5; \alpha(M)=8.88\times10^{-5}\ 12$ $\alpha(N)=2.424\times10^{-5}\ 34; \alpha(O)=6.15\times10^{-6}\ 9;$ $\alpha(P)=1.201\times10^{-6}\ 17; \alpha(Q)=8.49\times10^{-8}\ 12$ $\alpha(IPF)=6.09\times10^{-5}\ 9$
9	1366.633	(2 ⁻)	238.64 3	94 5	1128.025	3 ⁻			
		261.73 5	100.0 32	1104.865	2 ⁻				
		287.78 3	82.5 29	1078.853	1 ⁻	(M1) ^{<i>b</i>}		1.601 22	$\alpha(K)=1.259\ 18; \alpha(L)=0.257\ 4; \alpha(M)=0.0628\ 9$ $\alpha(N)=0.01724\ 24; \alpha(O)=0.00439\ 6; \alpha(P)=0.000864\ 12;$ $\alpha(Q)=6.16\times10^{-5}\ 9$
		443.25 18	2.2 6	923.31	4 ⁻				
		524.92 4	46.8 18	841.680	2 ⁻	M1(+E2) ^{<i>b</i>}	0.4 5		$\alpha(K)=0.21\ 7; \alpha(L)=0.045\ 10; \alpha(M)=0.0109\ 24$ $\alpha(N)=0.0030\ 6; \alpha(O)=0.00076\ 17; \alpha(P)=0.000149\ 34;$ $\alpha(Q)=1.03\times10^{-5}\ 31$
	1379.23	(4 ⁺)	1323.77 8	15.9 32	42.851	2 ⁺			
		1237.2 2	100 14	142.009	4 ⁺				
		1336.38 ^{<i>b</i>} 7	<272 ^{<i>b</i>}	42.851	2 ⁺				
1386.4	14 ⁺	337.0 ^{&}		1049.4	12 ⁺				
1451.89	1 ⁺	277.0 2	4.4 17	1174.74	0 ⁺				
		327.81 17	6.6 22	1124.261	2 ⁺				
		609.98 9	98 17	841.680	2 ⁻	E1 ^{<i>b</i>}		0.01055 15	$\alpha(K)=0.00847\ 12; \alpha(L)=0.001568\ 22; \alpha(M)=0.000378\ 5$ $\alpha(N)=0.0001032\ 14; \alpha(O)=2.60\times10^{-5}\ 4;$ $\alpha(P)=4.99\times10^{-6}\ 7; \alpha(Q)=3.21\times10^{-7}\ 4$
		1409.12 8	74 4	42.851	2 ⁺	(M1) ^{<i>b</i>}		0.02181 31	$\alpha(K)=0.01719\ 24; \alpha(L)=0.00340\ 5; \alpha(M)=0.000826\ 12$ $\alpha(N)=0.0002267\ 32; \alpha(O)=5.77\times10^{-5}\ 8;$ $\alpha(P)=1.137\times10^{-5}\ 16; \alpha(Q)=8.16\times10^{-7}\ 11$ $\alpha(IPF)=9.37\times10^{-5}\ 13$

Adopted Levels, Gammas (continued)

 $\gamma^{(246\text{Cm})}$ (continued)

E _i (level)	J _i ^π	E _γ [†]	I _γ [†]	E _f	J _f ^π	Mult.	δ	α ^f	Comments
1451.89	1 ⁺	1451.91 4	100 4	0.0	0 ⁺	(M1) ^b		0.02016 28	$\alpha(K)=0.01586$ 22; $\alpha(L)=0.00314$ 4; $\alpha(M)=0.000762$ 11 $\alpha(N)=0.0002091$ 29; $\alpha(O)=5.33\times10^{-5}$ 7; $\alpha(P)=1.048\times10^{-5}$ 15; $\alpha(Q)=7.53\times10^{-7}$ 11 $\alpha(IPF)=0.0001217$ 17
1478.44	(2 ⁺)	228.71 7 267.38 5 636.728 12 1336.388 7	100 20 <20 ^g <39 ^g <53 ^g	1249.777 1 ⁻ 1210.53 2 ⁺ 841.680 2 ⁻ 142.009 4 ⁺					
1509.24	(3 ⁺)	1435.59 6 289.38 2 381.08 3 1367.9 2 1466.33 6 1509.0 ^h 4	69 7 <38 ^g <13 ^g 100 18 48 6 4.8 24	42.851 2 ⁺ 1219.97 4 ⁺ 1128.025 3 ⁻ 142.009 4 ⁺ 42.851 2 ⁺ 0.0 0 ⁺					E _γ : poor fit.
1525.928	3 ⁻	306.0 3 360.39 4	0.21 13 9.7 4	1219.97 4 ⁺ 1165.49 3 ⁺	E1+M2 ^b	1.1 +8-4	1.4 6		$\alpha(K)=1.0$ 4; $\alpha(L)=0.30$ 13; $\alpha(M)=0.078$ 33 $\alpha(N)=0.022$ 9; $\alpha(O)=0.0055$ 23; $\alpha(P)=0.0011$ 5; $\alpha(Q)=7.1\times10^{-5}$ 30
		398.14 12 401.68 3	1.40 21 45.3 13	1128.025 3 ⁻ 1124.261 2 ⁺	E1 ^b			0.02368 33	$\alpha(K)=0.01879$ 26; $\alpha(L)=0.00368$ 5; $\alpha(M)=0.000894$ 13 $\alpha(N)=0.0002438$ 34; $\alpha(O)=6.12\times10^{-5}$ 9; $\alpha(P)=1.157\times10^{-5}$ 16; $\alpha(Q)=6.91\times10^{-7}$ 10
		421.08 5 446.8 5	3.77 30 0.21 17	1104.865 2 ⁻ 1078.853 1 ⁻					$\alpha(K)=0.037$ 8; $\alpha(L)=0.0127$ 14; $\alpha(M)=0.00327$ 32 $\alpha(N)=0.00090$ 9; $\alpha(O)=0.000225$ 23; $\alpha(P)=4.2\times10^{-5}$ 5; $\alpha(Q)=1.9\times10^{-6}$ 4
		602.54 6	39.8 21	923.31 4 ⁻	E2+M1 ^b	3.2 +21-8	0.054 10		$\alpha(K)=0.045$ 5; $\alpha(L)=0.0124$ 9; $\alpha(M)=0.00315$ 20 $\alpha(N)=0.00087$ 6; $\alpha(O)=0.000218$ 14; $\alpha(P)=4.14\times10^{-5}$ 29; $\alpha(Q)=2.24\times10^{-6}$ 24
		649.48 4	62.7 21	876.444 3 ⁻	E2+M1 ^b	1.96 +31-23	0.062 6		$\alpha(K)=0.059$ 4; $\alpha(L)=0.0139$ 7; $\alpha(M)=0.00345$ 17 $\alpha(N)=0.00095$ 5; $\alpha(O)=0.000240$ 12; $\alpha(P)=4.63\times10^{-5}$ 24; $\alpha(Q)=2.86\times10^{-6}$ 20
		684.28 5	100.0 34	841.680 2 ⁻	(E2+M1) ^b	1.24 +11-10	0.077 5		
1573.74	(1 ⁺)	1383.94 17 1483.09 9	0.93 17 3.52 30	142.009 4 ⁺ 42.851 2 ⁺	(M1)			0.01756 25	$\alpha(K)=0.01376$ 19; $\alpha(L)=0.00272$ 4; $\alpha(M)=0.000661$ 9 $\alpha(N)=0.0001812$ 25; $\alpha(O)=4.62\times10^{-5}$ 6; $\alpha(P)=9.09\times10^{-6}$ $\alpha(Q)=6.53\times10^{-7}$ 9 $\alpha(IPF)=0.0001792$ 25

Adopted Levels, Gammas (continued)

 $\gamma^{(246)\text{Cm}}$ (continued)

E _i (level)	J ^π _i	E _γ [†]	I _γ [†]	E _f	J ^π _f	Mult.	δ	α ^f	Comments
1573.74	(1 ⁺)	1573.74 5	100 4	0.0	0 ⁺	(M1) ^b		0.01634 23	$\alpha(K)=0.01277\ 18; \alpha(L)=0.002521\ 35;$ $\alpha(M)=0.000613\ 9$ $\alpha(N)=0.0001681\ 24; \alpha(O)=4.28\times 10^{-5}\ 6;$ $\alpha(P)=8.43\times 10^{-6}\ 12; \alpha(Q)=6.06\times 10^{-7}\ 8$ $\alpha(IPF)=0.0002136\ 30$
1593.702	2 ⁻	227.4 ^h 2	1.8 6	1366.633	(2 ⁻)				
		244.9 2	0.8 5	1348.863	1 ⁻				
		293.37 ^g 15	<0.70 ^g	1300.45	3 ⁻				
		343.93 4	3.15 12	1249.777	1 ⁻				
		465.61 5	3.12 24	1128.025	3 ⁻				
		469.71 8	1.24 15	1124.261	2 ⁺				
		488.82 4	11.2 4	1104.865	2 ⁻	M1+E2 ^b	0.25 20	0.356 35	E_γ : poor fit. $\alpha(K)=0.280\ 29; \alpha(L)=0.057\ 4; \alpha(M)=0.0140\ 10$ $\alpha(N)=0.00384\ 28; \alpha(O)=0.00098\ 7; \alpha(P)=0.000192\ 15; \alpha(Q)=1.35\times 10^{-5}\ 14$
		514.79 4	10.6 5	1078.853	1 ⁻	M1(+E2) ^b	0.4 4	0.29 7	$\alpha(K)=0.23\ 6; \alpha(L)=0.047\ 9; \alpha(M)=0.0115\ 20$ $\alpha(N)=0.0032\ 6; \alpha(O)=0.00080\ 14; \alpha(P)=0.000157\ 30; \alpha(Q)=1.09\times 10^{-5}\ 27$
11		670.1 2	1.0 4	923.31	4 ⁻				
		717.24 5	30.9 12	876.444	3 ⁻	M1 ^b		0.1330 19	$\alpha(K)=0.1050\ 15; \alpha(L)=0.02104\ 29; \alpha(M)=0.00513\ 7$ $\alpha(N)=0.001406\ 20; \alpha(O)=0.000358\ 5;$ $\alpha(P)=7.05\times 10^{-5}\ 10; \alpha(Q)=5.03\times 10^{-6}\ 7$
		752.06 4	100 4	841.680	2 ⁻	(M1+E0) ^b			
		1550.94 9	33.3 30	42.851	2 ⁺	E1 ^b		2.27×10 ⁻³ 3	$\alpha(K)=0.001707\ 24; \alpha(L)=0.000294\ 4;$ $\alpha(M)=7.00\times 10^{-5}\ 10$ $\alpha(N)=1.912\times 10^{-5}\ 27; \alpha(O)=4.86\times 10^{-6}\ 7;$ $\alpha(P)=9.50\times 10^{-7}\ 13; \alpha(Q)=6.79\times 10^{-8}\ 10$ $\alpha(IPF)=0.0001780\ 25$
1601.232	(2,3) ⁺	381.0 ^g 3	<0.31 ^g	1219.97	4 ⁺				
		476.89 5	3.32 23	1124.261	2 ⁺	(M1) ^b		0.400 6	$\alpha(K)=0.315\ 4; \alpha(L)=0.0638\ 9; \alpha(M)=0.01555\ 22$ $\alpha(N)=0.00427\ 6; \alpha(O)=0.001087\ 15;$ $\alpha(P)=0.0002139\ 30; \alpha(Q)=1.524\times 10^{-5}\ 21$
		677.86 6	7.0 6	923.31	4 ⁻				
		724.79 4	33.2 12	876.444	3 ⁻	E1 ^b		0.00770 11	$\alpha(K)=0.00621\ 9; \alpha(L)=0.001128\ 16; \alpha(M)=0.000271\ 4$ $\alpha(N)=7.40\times 10^{-5}\ 10; \alpha(O)=1.871\times 10^{-5}\ 26;$ $\alpha(P)=3.60\times 10^{-6}\ 5; \alpha(Q)=2.380\times 10^{-7}\ 33$
		759.59 4	100.0 31	841.680	2 ⁻	E1 ^b		0.00708 10	$\alpha(K)=0.00571\ 8; \alpha(L)=0.001033\ 14;$ $\alpha(M)=0.0002482\ 35$

Adopted Levels, Gammas (continued)

 $\gamma(^{246}\text{Cm})$ (continued)

E_i (level)	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	α^f	Comments
1601.232	(2,3) ⁺	1459.32 6 1558.35 10	1.47 16 2.63 27	142.009 42.851	4 ⁺ 2 ⁺			$\alpha(N)=6.77\times10^{-5} 9; \alpha(O)=1.713\times10^{-5} 24; \alpha(P)=3.30\times10^{-6} 5;$ $\alpha(Q)=2.196\times10^{-7} 31$
1604.17	(1 ⁻)	354.45 6 1561.30 5	6.3 10 93 4	1249.777 42.851	1 ⁻ 2 ⁺			
1621.500	3 ⁻	1604.14 5 321.07 4 456.11 6 493.46 4	100 4 7.9 5 5.9 7 45.7 16	1300.45 1165.49 1128.025	0 ⁺ 3 ⁻ 3 ⁺ 3 ⁻		0.365 5	$\alpha(K)=0.288 4; \alpha(L)=0.0581 8; \alpha(M)=0.01416 20$ $\alpha(N)=0.00389 5; \alpha(O)=0.000990 14; \alpha(P)=0.0001948 27;$ $\alpha(Q)=1.388\times10^{-5} 19$
12		516.60 13 698.27 5	4.2 11 49.5 32	1104.865 923.31	2 ⁻ 4 ⁻		(M1) ^b	
		745.05 4 779.76 8	100.0 32 28 4	876.444 841.680	3 ⁻ 2 ⁻		(M1+E0) ^b M1 ^b	0.1430 20 0.1063 15
		1479.43 4	96.8 32	142.009	4 ⁺		E1 ^b	$\alpha(K)=0.0840 12; \alpha(L)=0.02263 32; \alpha(M)=0.00551 8$ $\alpha(N)=0.001512 21; \alpha(O)=0.000385 5; \alpha(P)=7.58\times10^{-5} 11;$ $\alpha(Q)=5.41\times10^{-6} 8$
		1578.62 5 1486.90 ^b 7	32.8 13 40 30	42.851	2 ⁺			
		1586.1 ^b 2 267.3 ^g 5	100 50 <1.5 ^g	142.009 1366.633 (2 ⁻)	4 ⁺ 2 ⁺			
		293.37 ^g 15	<1.10 ^g	1340.16				
		383.73 6	3.6 4	1249.777	1 ⁻		(M1) ^b	0.724 10
		423.4 ^g 5 505.61 ^g 13	<1.1 ^g <2.7 ^g	1210.53 1128.025	2 ⁺ 3 ⁻			$\alpha(K)=0.570 8; \alpha(L)=0.1158 16; \alpha(M)=0.0283 4$ $\alpha(N)=0.00776 11; \alpha(O)=0.001976 28; \alpha(P)=0.000389 5;$ $\alpha(Q)=2.77\times10^{-5} 4$
		528.69 7	2.86 29	1104.865	2 ⁻		(M1) ^b	0.303 4
		554.68 6	2.81 29	1078.853	1 ⁻		(M1,E2) ^b	0.16 11
								$\alpha(K)=0.2386 33; \alpha(L)=0.0481 7; \alpha(M)=0.01173 16$ $\alpha(N)=0.00322 5; \alpha(O)=0.000820 11; \alpha(P)=0.0001613 23;$ $\alpha(Q)=1.150\times10^{-5} 16$
								$\alpha(K)=0.12 9; \alpha(L)=0.028 14; \alpha(M)=0.0070 33$ $\alpha(N)=0.0019 9; \alpha(O)=4.8\times10^{-4} 24; \alpha(P)=9.E-5 5; \alpha(Q)=6.E-6 4$

Adopted Levels, Gammas (continued)

 $\gamma^{(246)\text{Cm}}$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	δ	α^f	Comments
1633.53	(2) ⁻	791.5 2	12.4 24	841.680	2 ⁻	E1+M2 ^b	0.12 8	0.0027 8	$\alpha(K)=0.0020\ 6; \alpha(L)=3.6\times10^{-4}\ 14; \alpha(M)=8.7\times10^{-5}\ 35$ $\alpha(N)=2.4\times10^{-5}\ 10; \alpha(O)=6.1\times10^{-6}\ 24; \alpha(P)=1.2\times10^{-6}\ 5;$ $\alpha(Q)=8.5\times10^{-8}\ 34; \alpha(IPF)=0.000202\ 4$
1659.19	(1) ⁻	554.4 2	100 8	1104.865	2 ⁻	(M1,E2) ^b		0.16 11	$\alpha(K)=0.12\ 9; \alpha(L)=0.028\ 14; \alpha(M)=0.0070\ 34$ $\alpha(N)=0.0019\ 9; \alpha(O)=4.8\times10^{-4}\ 24; \alpha(P)=9.E-5\ 5;$ $\alpha(Q)=6.E-6\ 4$
1661.65	(1) ⁺	1616.3 2	13.5 34	42.851	2 ⁺				
		1659.18 10	57 5	0.0	0 ⁺				
		451.2 ^g 2	<1.6 ^g	1210.53	2 ⁺				
		487.2 3	4.1 9	1174.74	0 ⁺				
		820.7 ^h 3	1.7 10	841.680	2 ⁻				
		1618.80 4	51.0 20	42.851	2 ⁺	(M1) ^b		0.01519 21	$\alpha(K)=0.01183\ 17; \alpha(L)=0.002335\ 33; \alpha(M)=0.000568\ 8$ $\alpha(N)=0.0001557\ 22; \alpha(O)=3.97\times10^{-5}\ 6; \alpha(P)=7.81\times10^{-6}$ $11; \alpha(Q)=5.61\times10^{-7}\ 8$ $\alpha(IPF)=0.0002516\ 35$
13		1661.63 5	100.0 33	0.0	0 ⁺	(M1) ^b		0.01421 20	$\alpha(K)=0.01102\ 15; \alpha(L)=0.002175\ 30; \alpha(M)=0.000529\ 7$ $\alpha(N)=0.0001450\ 20; \alpha(O)=3.69\times10^{-5}\ 5; \alpha(P)=7.27\times10^{-6}$ $10; \alpha(Q)=5.23\times10^{-7}\ 7$ $\alpha(IPF)=0.000290\ 4$
		451.2 ^g 2	<1.6 ^g	1219.97	4 ⁺				
		505.61 ^g 13	<6.4 ^g	1165.49	3 ⁺				
		542.92 5	17.8 22	1128.025	3 ⁻	(M1+E2) ^b	0.5 4	0.24 6	$\alpha(K)=0.18\ 5; \alpha(L)=0.039\ 8; \alpha(M)=0.0095\ 18$ $\alpha(N)=0.0026\ 5; \alpha(O)=0.00066\ 12; \alpha(P)=0.000130\ 25;$ $\alpha(Q)=8.9\times10^{-6}\ 23$
		566.12 5	19.1 11	1104.865	2 ⁻	M1(+E2) ^b	0.3 4	0.23 5	$\alpha(K)=0.18\ 4; \alpha(L)=0.038\ 7; \alpha(M)=0.0092\ 16$ $\alpha(N)=0.0025\ 4; \alpha(O)=0.00064\ 11; \alpha(P)=0.000126\ 23;$ $\alpha(Q)=8.9\times10^{-6}\ 20$
		747.74 8	11.1 22	923.31	4 ⁻				
		829.37 8	8.0 16	841.680	2 ⁻				
		1529.00 7	100 5	142.009	4 ⁺	[E1]			
		1628.17 5	24.6 12	42.851	2 ⁺	(E1) ^b		2.16×10 ⁻³ 3	$\alpha(K)=0.001577\ 22; \alpha(L)=0.000270\ 4; \alpha(M)=6.45\times10^{-5}\ 9$

Adopted Levels, Gammas (continued)

<u>$\gamma^{(246\text{Cm})}$ (continued)</u>								
E _i (level)	J _i ^π	E _γ [†]	I _γ [†]	E _f	J _f ^π	Mult.	α^f	Comments
1680.81	(2 ⁺)	461.2 ^{<i>h</i>} 2 1538.9 2 1637.95 5	2.0 8 0.85 29 100 12	1219.97 4 ⁺ 142.009 4 ⁺ 42.851 2 ⁺	(M1) ^{<i>b</i>}	0.01474 21	$\alpha(N)=1.762\times10^{-5}$ 25; $\alpha(O)=4.48\times10^{-6}$ 6; $\alpha(P)=8.76\times10^{-7}$ 12; $\alpha(Q)=6.29\times10^{-8}$ 9 $\alpha(IPF)=0.0002295$ 32	
1712.39	(3 ⁺)	1680.69 18 1570.46 7 1669.50 5	0.66 12 98 8 100 6	0.0 0 ⁺ 142.009 4 ⁺ 42.851 2 ⁺			$\alpha(K)=0.01146$ 16; $\alpha(L)=0.002262$ 32; $\alpha(M)=0.000550$ 8 $\alpha(N)=0.0001508$ 21; $\alpha(O)=3.84\times10^{-5}$ 5; $\alpha(P)=7.56\times10^{-6}$ 11; $\alpha(Q)=5.44\times10^{-7}$ 8 $\alpha(IPF)=0.000268$ 4	
1759.5	16 ⁺	373.1 ^{&}		1386.4 14 ⁺				
1780.81	2 ⁺	414.16 6 656.35 14 904.42 5 939.15 5 1737.94 5	9.3 11 10.4 25 51.3 20 69 5 100 7	1366.633 (2 ⁻) 1124.261 2 ⁺ 876.444 3 ⁻ 841.680 2 ⁻ 42.851 2 ⁺	M1+E0 ^{<i>b</i>} (E1) ^{<i>b</i>}	0.00521 7 0.00488 7 0.01267 18	$\alpha(K)=0.00422$ 6; $\alpha(L)=0.000750$ 10; $\alpha(M)=0.0001798$ 25 $\alpha(N)=4.91\times10^{-5}$ 7; $\alpha(O)=1.243\times10^{-5}$ 17; $\alpha(P)=2.408\times10^{-6}$ 34; $\alpha(Q)=1.636\times10^{-7}$ 23 $\alpha(K)=0.00395$ 6; $\alpha(L)=0.000701$ 10; $\alpha(M)=0.0001680$ 24 $\alpha(N)=4.58\times10^{-5}$ 6; $\alpha(O)=1.161\times10^{-5}$ 16; $\alpha(P)=2.251\times10^{-6}$ 32; $\alpha(Q)=1.537\times10^{-7}$ 22 $\alpha(K)=0.00975$ 14; $\alpha(L)=0.001924$ 27; $\alpha(M)=0.000468$ 7 $\alpha(N)=0.0001283$ 18; $\alpha(O)=3.27\times10^{-5}$ 5; $\alpha(P)=6.43\times10^{-6}$ 9; $\alpha(Q)=4.63\times10^{-7}$ 6; $\alpha(IPF)=0.000360$ 5	
1821.76		1780.5 2 1778.92 6 1821.70 12		3.6 9 100 6 6.6 13	0.0 0 ⁺ 42.851 2 ⁺ 0.0 0 ⁺			
1836.73	2 ^{+,1-}	960.2 3 1794.7 4 1836.71 6		100 41 6.8 23 86 9	876.444 3 ⁻ 42.851 2 ⁺ 0.0 0 ⁺			
1856.61	3 ⁺	347.26 ^{<i>h</i>} 4 636.72 ^{<i>gh</i>} 12 732.5 ^{<i>g</i>} 2 1714.61 9 1813.73 6		8.8×10 ² 5 <5.4×10 ² ^{<i>g</i>} <7.2×10 ² ^{<i>g</i>} 79 8 100 9	1509.24 (3 ⁺) 1219.97 4 ⁺ 1124.261 2 ⁺ 142.009 4 ⁺ 42.851 2 ⁺			
1870.21	1,2 ⁺	580.9 ^{<i>g</i>} 3 1827.39 5 1869.81 15		<56 ^{<i>g</i>} 100 8 5.2 10	1289.3 0 ⁺ 42.851 2 ⁺ 0.0 0 ⁺			

Adopted Levels, Gammas (continued)

 $\gamma(^{246}\text{Cm})$ (continued)

E_i (level)	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.
1875.52	1,2 ⁺	751.0 3	100 36	1124.261	2 ⁺	
		1832.6 3	1.4 7	42.851	2 ⁺	
		1875.56 12	2.4 6	0.0	0 ⁺	
1886.77	(1 ⁺)	434.92 13	48 15	1451.89	1 ⁺	(M1+E0) ^b
		1045.08 6	100 17	841.680	2 ⁻	
		1843.86 5	49 4	42.851	2 ⁺	
		1886.80 5	69 4	0.0	0 ⁺	
1898.08	2 ⁺	732.5 ^g 2	<1.3×10 ³ ^g	1165.49	3 ⁺	
		1756.1 2	95 15	142.009	4 ⁺	
		1855.34 12	100 33	42.851	2 ⁺	
		1897.8 2	30 7	0.0	0 ⁺	
1901.33	2 ^{+,3}	1759.30 5	100 8	142.009	4 ⁺	
		1858.7 2	3.6 6	42.851	2 ⁺	
1906.12	2 <sup+,3,4< sup="">⁺</sup+,3,4<>	1764.2 2	95 21	142.009	4 ⁺	
		1863.19 18	100 16	42.851	2 ⁺	
1909.32	2 <sup+,1< sup=""></sup+,1<>	1866.48 6	100 15	42.851	2 ⁺	
		1909.27 9	28.5 30	0.0	0 ⁺	
1924.56	1,2 ⁺	1881.70 5	91 9	42.851	2 ⁺	
		1924.56 5	100 9	0.0	0 ⁺	
1947.09	2 <sup+,3,4< sup="">⁺</sup+,3,4<>	325.61 8	100 17	1621.500	3 ⁻	
		1804.8 2	15 4	142.009	4 ⁺	
		1904.26 10	20.4 25	42.851	2 ⁺	
1983.35	(1 <sup-,2< sup="">⁺)</sup-,2<>	271.1 2	100 50	1712.39	(3 ⁺)	
		361.85 ^h 9	245 30	1621.500	3 ⁻	
		1940.43 18	11.0 20	42.851	2 ⁺	
		1983.2 3	6.0 20	0.0	0 ⁺	
2032.51	1,2 ⁺	370.81 ^h 13	4.1×10 ² 10	1661.65	(1 ⁺)	
		580.9 ^g 3	<1.03×10 ³ ^g	1451.89	1 ⁺	
		1989.63 8	100 19	42.851	2 ⁺	
		2032.49 11	98 36	0.0	0 ⁺	
2146.05	1,2 ⁺	2103.18 7	51 5	42.851	2 ⁺	
		2146.05 7	100 6	0.0	0 ⁺	
2164.4	18 ⁺	404.9 ^{&}		1759.5	16 ⁺	
2171.42	2 <sup+,3< sup=""></sup+,3<>	577.9 ^h 3	6.5×10 ² 17	1593.702	2 ⁻	
		2029.39 8	90 10	142.009	4 ⁺	
		2128.57 9	100 10	42.851	2 ⁺	
2597.4	20 ⁺	433.0 ^{&}		2164.4	18 ⁺	
3055	22 ⁺	457.9 ^{&}		2597.4	20 ⁺	

Adopted Levels, Gammas (continued) $\gamma(^{246}\text{Cm})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^{\dagger}	E_f	J_f^π
3534	24^+	479.1 ^{&}	3055	22^+
4033	26^+	498.1 ^{&}	3534	24^+

[†] From ^{246}Am β^- decay (25 min), except as noted.[‡] From ^{246}Am β^- decay (39 min).[#] From ^{246}Am β^- decay (39 min).@ From ^{246}Bk ε decay.& From (+209Bi, $^{211}\text{Bi}\gamma$).^a From conversion electron data in ^{246}Am β^- decay (39 min) ([2008Ro21](#)).^b From conversion electron data in ^{246}Am β^- decay (25.0 min) ([1976Mu03](#),[1966Or01](#)).^c From conversion electron data in ^{246}Bk ε decay ([1976Ah03](#),[1966Or01](#)).^d From conversion electron data in ^{246}Am β^- decay (25.0 min) ([1976Mu03](#),[1966Or01](#)) and ^{246}Bk ε decay ([1976Ah03](#),[1966Or01](#)).^e From conversion electron data in ^{246}Bk ε decay ([1976Ah03](#),[1966Or01](#)) and ^{246}Am α decay ([1971Ch15](#)).^f [Additional information 2](#).^g Multiply placed with undivided intensity.^h Placement of transition in the level scheme is uncertain.

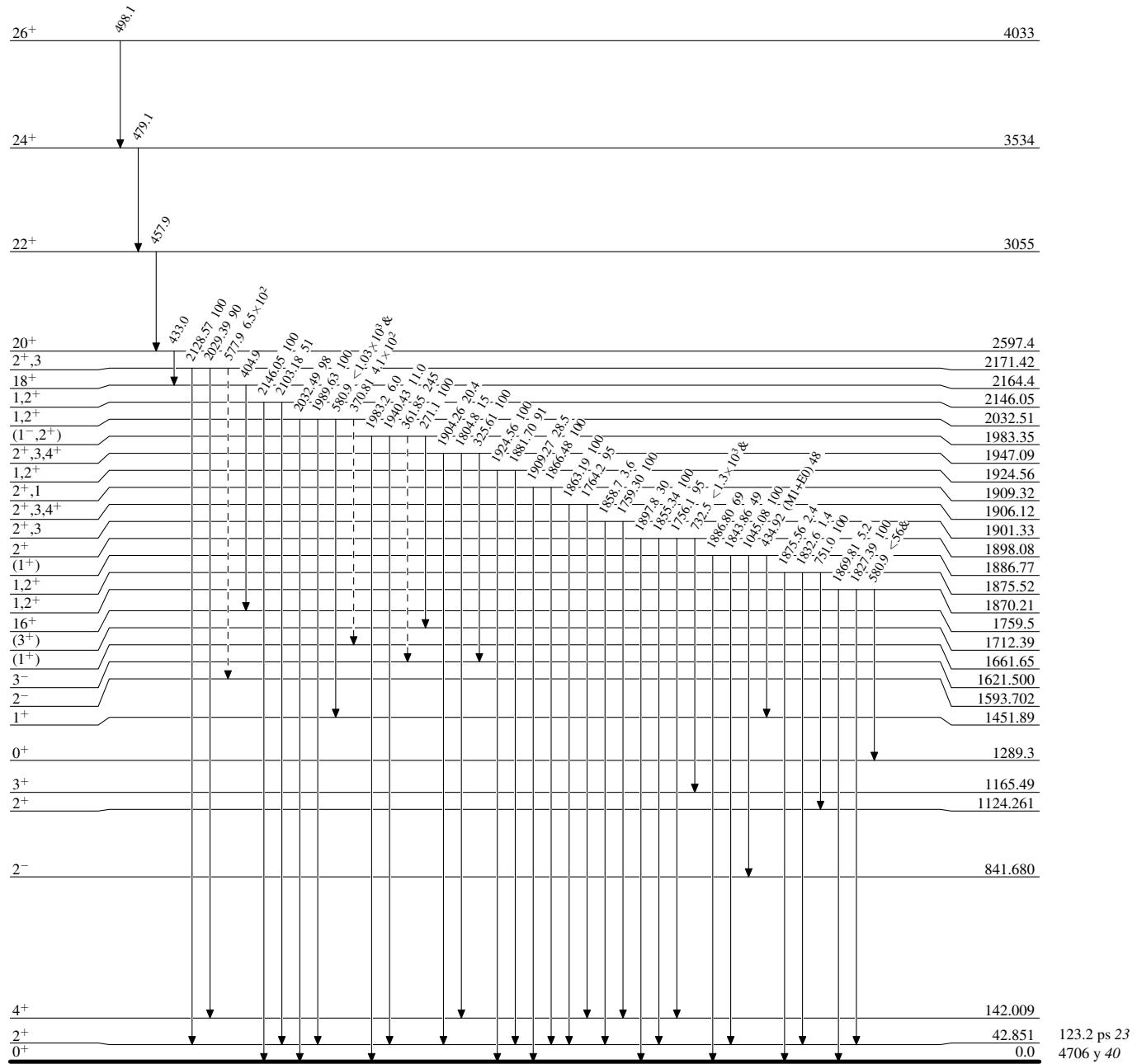
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level
 & Multiply placed: undivided intensity given

— — — — — ► γ Decay (Uncertain)

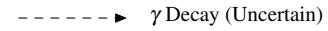
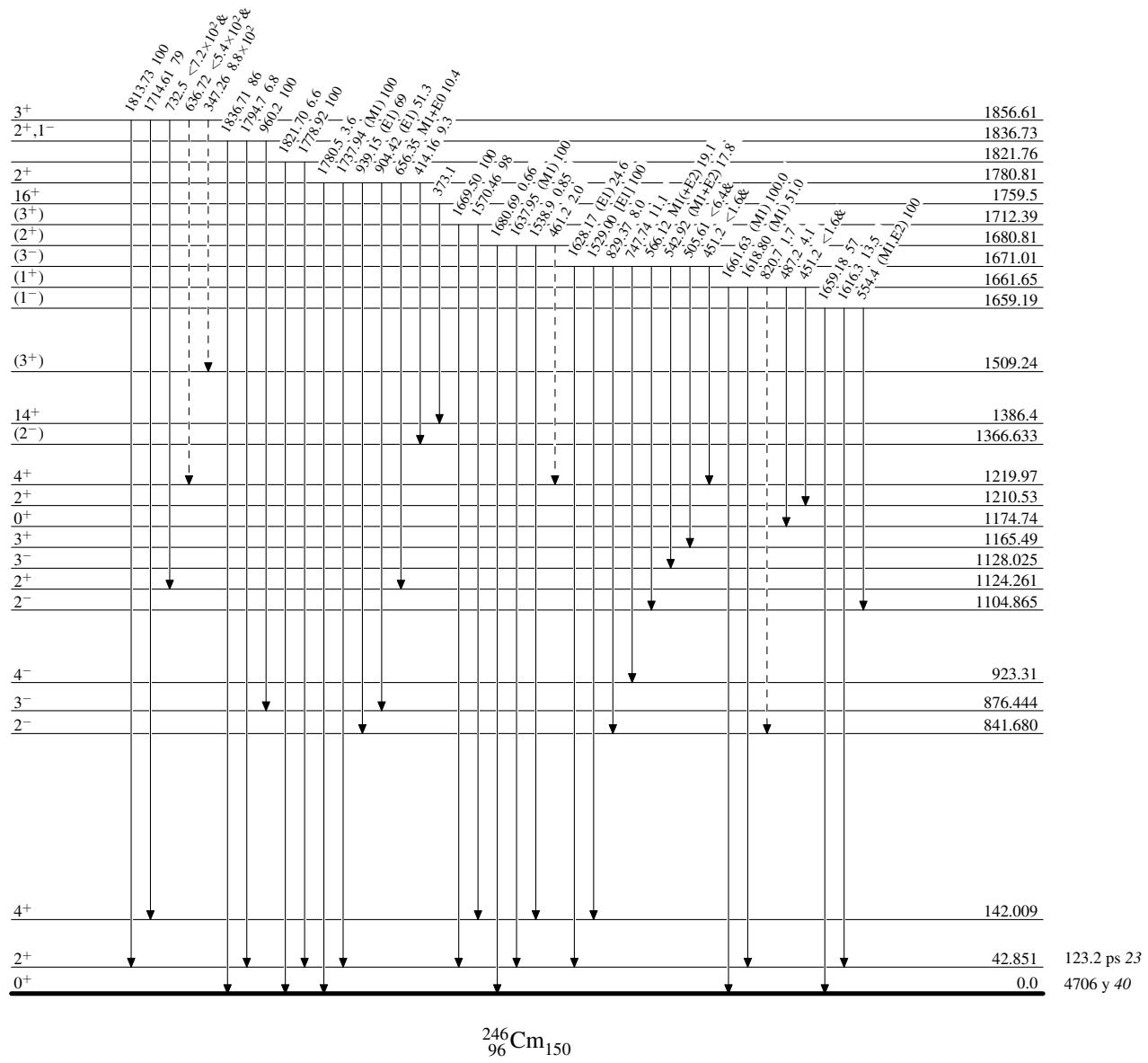


Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
 & Multiply placed: undivided intensity given

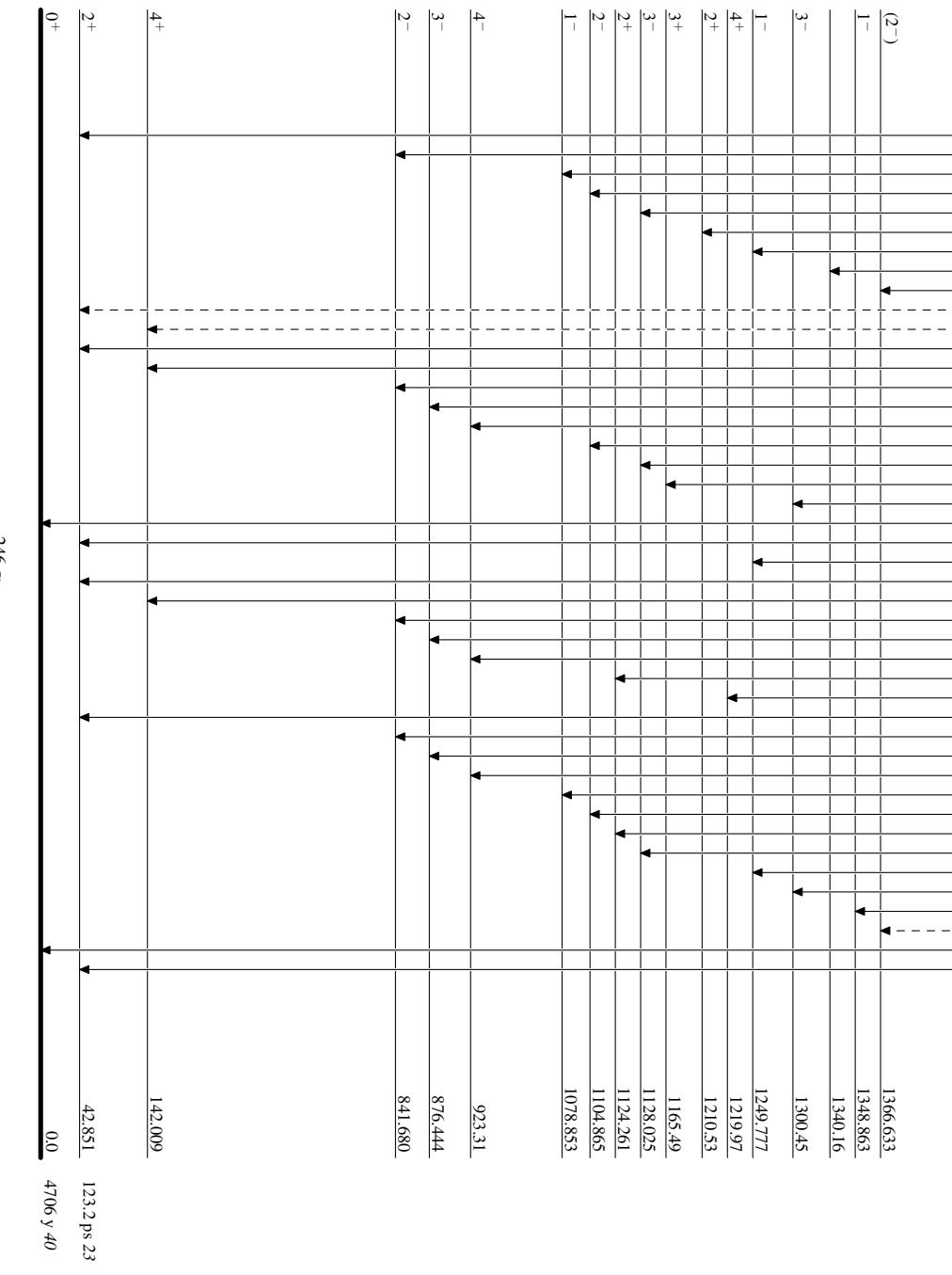



Adopted Levels, Gammas

Legend

Intensities: Relative photon branching from each level
 & Multiply placed: undivided intensity given

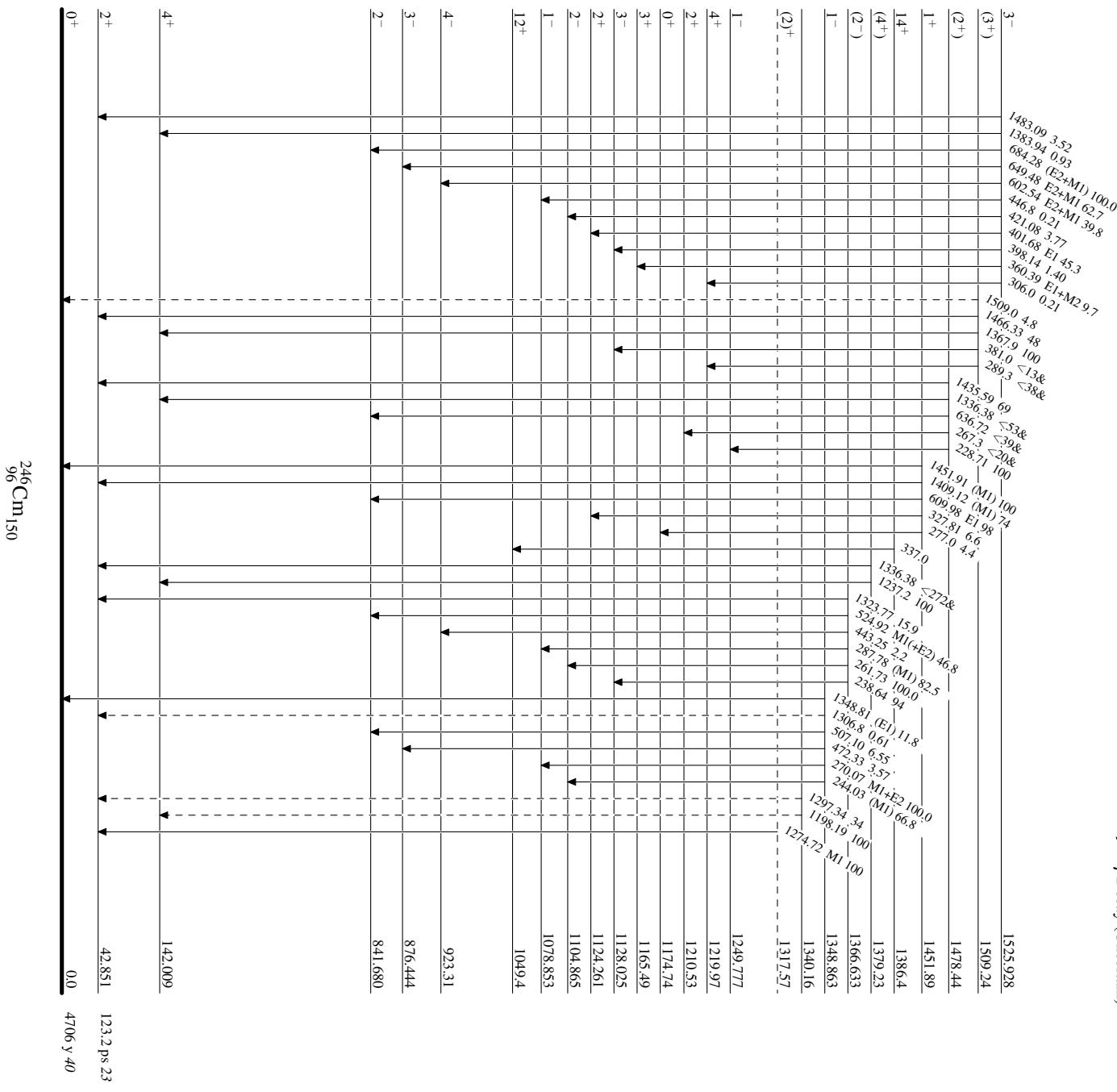
----- ▶ γ Decay (Uncertain)



Adopted Levels, Gammas

Legend

Intensities: Relative photon branching from each level
 & Multiply placed: undivided intensity given

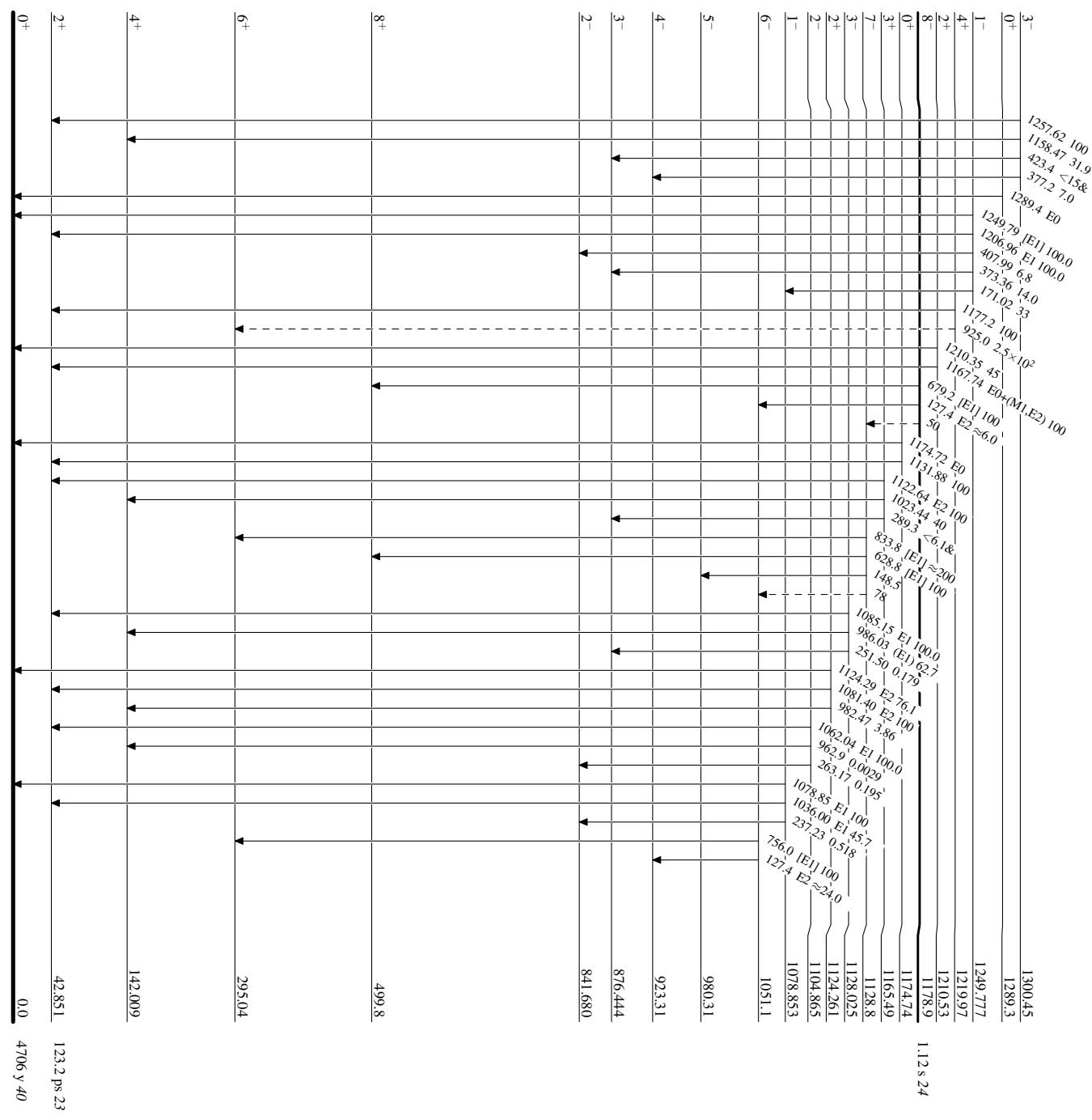


Adopted Levels, Gammas

Legenda

Intensities: Relative photon branching from each level
 & Multiply placed: undivided intensity given

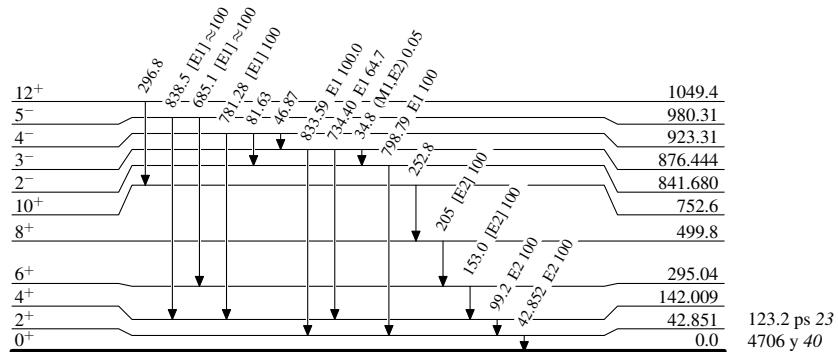
--- ► γ Decay (Uncertain)



LEVEL SCHEME (CONTINUED)

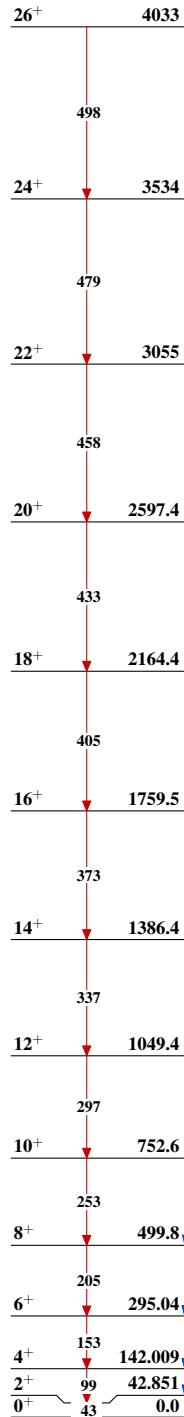
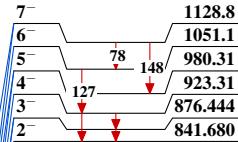
Adopted Levels, Gammas**Level Scheme (continued)**

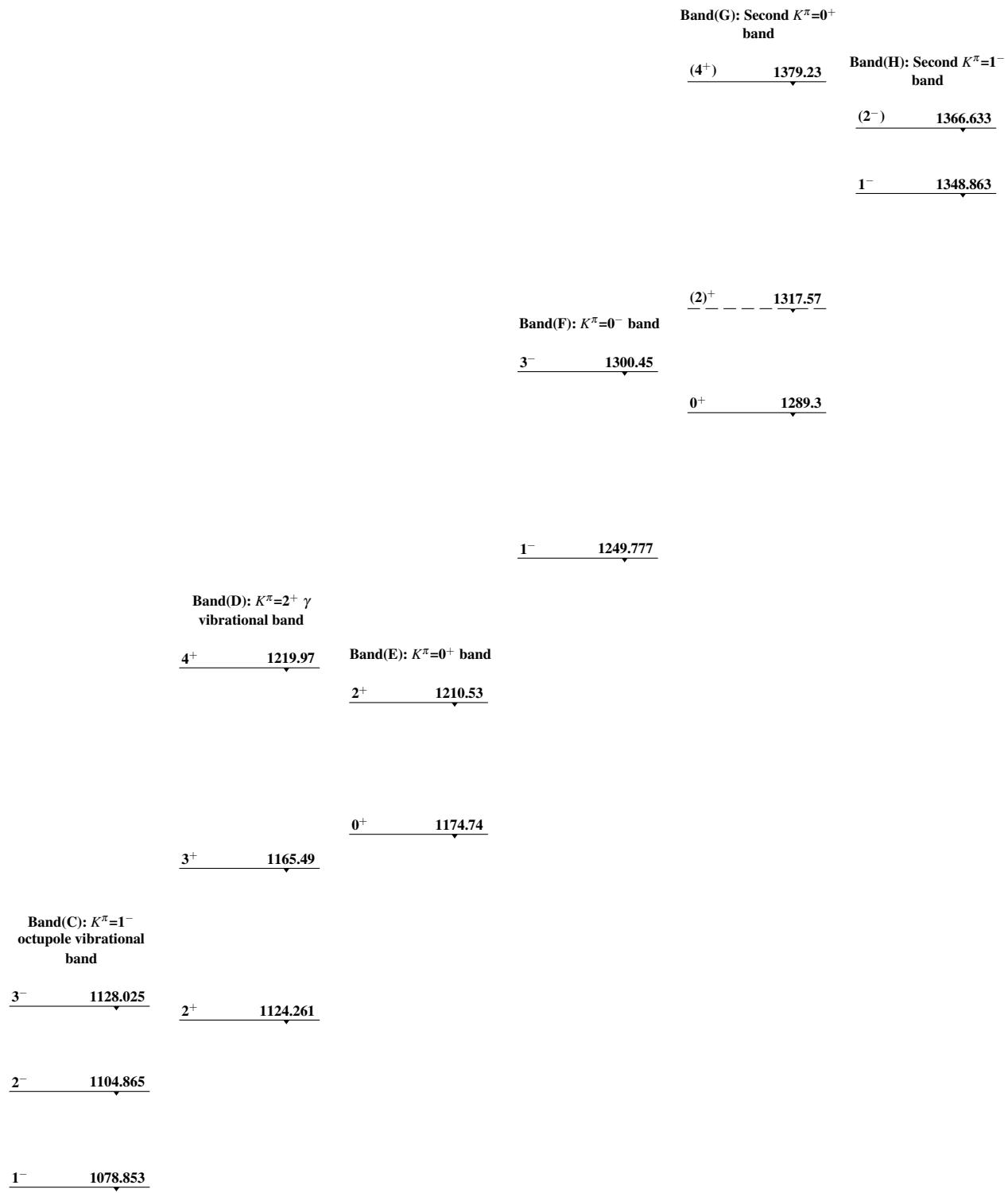
Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



Adopted Levels, Gammas

Band(A): g.s. rotational band

Band(B): $K^\pi=2^-$ octupole vibrational band

Adopted Levels, Gammas (continued)

Adopted Levels, Gammas (continued)

Band(M): Second $K^\pi=1^+$ band

(3⁺) 1712.39

Band(L): Third $K^\pi=1^-$ band (2⁺) 1680.81

(3⁻) 1671.01

(1⁺) 1661.65

Band(K): Second $K^\pi=2^-$ band (2)⁻ 1633.53

3⁻ 1621.500

(1⁻) 1604.17

Band(J): $K^\pi=3^-$ octupole vibrational band head 2⁻ 1593.702

3⁻ 1525.928

Band(I): $K^\pi=1^+$ band

(3⁺) 1509.24

(2⁺) 1478.44

1⁺ 1451.89