

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) 1976Mu03

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

Parent: <sup>246</sup>Am: E=0.0+x; J<sup>π</sup>=(2<sup>-</sup>); T<sub>1/2</sub>=25.0 min 2; Q(β<sup>-</sup>)=2377 *syst*; %β<sup>-</sup> decay=100

<sup>246</sup>Am-E: x=30 10 (1984So03). X=0 is assumed for logft calculation.

<sup>246</sup>Am-Q(β<sup>-</sup>): 2377 18 (*syst*,2021Wa16).

1976Mu03: <sup>246</sup>Pu was produced by double neutron capture on <sup>244</sup>Pu. at the Oak Ridge National Laboratory high flux reactor.

Gamma rays from the β decay sequence of <sup>246</sup>Pu → <sup>246</sup>Am → <sup>246</sup>Cm were investigated with Ge(Li) planar, coaxial and Compton-suppressed Ge(Li) detectors. Conversion-electron spectra were measured with a Si(Li) detector (FWHM=2 keV). Measured E<sub>γ</sub>, I<sub>γ</sub>, γγ, Ice, and conversion coefficients.

1971Mu05: <sup>246</sup>Pu was produced from the debris of a heavy element- production underground nuclear detonation. It was then followed by a series of chemical separation processes. γ-ray singles measurements from the β decay sequence of <sup>246</sup>Pu → <sup>246</sup>Am → <sup>246</sup>Cm was performed using several Ge(Li) detectors.

1966Or01: <sup>246</sup>Pu was produced from the underground explosion, and was chemically separated. γ-ray singles measurements from the β decay of <sup>246</sup>Am → <sup>246</sup>Cm was performed using γ-scintillation spectrometers, and Ge(Li) detectors. A Au-surface-barrier electron detector was used to measure the electron spectrum. Measured, γ singles, γγ- coin, E<sub>γ</sub>, I<sub>γ</sub> and conversion-electron data.

Others: 1965St10,1956Sm85.

<sup>246</sup>Cm Levels

E(level) <sup>†</sup>	J <sup>π</sup> <sup>‡</sup>	T <sub>1/2</sub> <sup>‡</sup>	E(level) <sup>†</sup>	J <sup>π</sup> <sup>‡</sup>
0 <sup>#</sup>	0 <sup>+</sup>	4706 y 40	1593.693 <sup>h</sup> 23	2 <sup>-</sup>
42.835 <sup>#</sup> 17	2 <sup>+</sup>	123.2 ps 23	1601.219 27	(2,3) <sup>+</sup>
141.986 <sup>#</sup> 24	4 <sup>+</sup>		1604.161 <sup>i</sup> 32	(1 <sup>-</sup> )
294.88 17	6 <sup>+</sup>		1621.483 <sup>h</sup> 25	3 <sup>-</sup>
841.668 <sup>@</sup> 20	2 <sup>-</sup>		1628.90? 7	
876.431 <sup>@</sup> 22	3 <sup>-</sup>		1633.521 <sup>i</sup> 32	(2) <sup>-</sup>
923.297 <sup>@</sup> 28	4 <sup>-</sup>		1659.19 8	(1 <sup>-</sup> )
1078.844 <sup>&amp;</sup> 20	1 <sup>-</sup>		1661.651 <sup>j</sup> 32	(1 <sup>+</sup> )
1104.854 <sup>&amp;</sup> 23	2 <sup>-</sup>		1670.990 <sup>i</sup> 29	(3 <sup>-</sup> )
1124.257 <sup>a</sup> 24	2 <sup>+</sup>		1680.80 <sup>j</sup> 5	(2 <sup>+</sup> )
1128.009 <sup>&amp;</sup> 25	3 <sup>-</sup>		1712.37 <sup>j</sup> 5	(3 <sup>+</sup> )
1165.473 <sup>a</sup> 32	3 <sup>+</sup>		1780.799 30	2 <sup>+</sup>
1174.72 <sup>b</sup> 4	0 <sup>+</sup>		1821.75 6	
1210.52 <sup>b</sup> 5	2 <sup>+</sup>		1836.73 6	2 <sup>+</sup> ,1 <sup>-</sup>
1219.87 <sup>a</sup> 8	4 <sup>+</sup>		1856.55 4	3 <sup>+</sup>
1249.766 <sup>c</sup> 22	1 <sup>-</sup>		1870.19 5	1,2 <sup>+</sup>
1289.32 <sup>d</sup> 26	0 <sup>+</sup>		1875.52 11	1,2 <sup>+</sup>
1300.429 <sup>c</sup> 34	3 <sup>-</sup>		1886.756 32	(1 <sup>+</sup> )
1317.56 <sup>d</sup> 5	(2) <sup>+</sup>		1898.07 9	2 <sup>+</sup>
1340.18 5			1901.31 6	2 <sup>+</sup> ,3
1348.860 <sup>e</sup> 22	1 <sup>-</sup>		1906.10 14	2 <sup>+</sup> ,3,4 <sup>+</sup>
1366.619 <sup>e</sup> 24	(2 <sup>-</sup> )		1909.31 5	2 <sup>+</sup> ,1
1379.21 <sup>d</sup> 7	(4 <sup>+</sup> )		1924.55 4	1,2 <sup>+</sup>
1451.882 <sup>f</sup> 32	1 <sup>+</sup>		1947.07 6	2 <sup>+</sup> ,3,4 <sup>+</sup>
1478.42 <sup>f</sup> 4	(2 <sup>+</sup> )		1983.33 8	(1 <sup>-</sup> ,2 <sup>+</sup> )
1509.26 <sup>f</sup> 5	(3 <sup>+</sup> )		2032.49 6	1,2 <sup>+</sup>
1525.917 <sup>g</sup> 24	3 <sup>-</sup>		2146.04 5	1,2 <sup>+</sup>
1573.74 5	(1 <sup>+</sup> )		2171.41 6	2 <sup>+</sup> ,3

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<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) 1976Mu03 (continued)

<sup>246</sup>Cm Levels (continued)

- † From least squares fit to E<sub>γ</sub> data by the evaluator.
- ‡ From Adopted Levels.
- # Band(A): g.s. rotational band.
- @ Band(B): K<sup>π</sup>=2<sup>-</sup> octupole vibrational band.
- & Band(C): K<sup>π</sup>=1<sup>-</sup> octupole vibrational band.
- <sup>a</sup> Band(D): K<sup>π</sup>=2<sup>+</sup> γ vibrational band.
- <sup>b</sup> Band(E): K<sup>π</sup>=0<sup>+</sup> band.
- <sup>c</sup> Band(F): K<sup>π</sup>=0<sup>-</sup> band.
- <sup>d</sup> Band(G): second K<sup>π</sup>=0<sup>+</sup> band.
- <sup>e</sup> Band(H): second K<sup>π</sup>=1<sup>-</sup> band.
- <sup>f</sup> Band(I): K<sup>π</sup>=1<sup>+</sup> band.
- <sup>g</sup> Band(J): K<sup>π</sup>=3<sup>-</sup> octupole vibrational band head.
- <sup>h</sup> Band(K): second K<sup>π</sup>=2<sup>-</sup> band.
- <sup>i</sup> Band(L): third K<sup>π</sup>=1<sup>-</sup> band.
- <sup>j</sup> Band(M): second K<sup>π</sup>=1<sup>+</sup> band.

β<sup>-</sup> radiations

E(decay)	E(level)	Iβ <sup>-†@</sup>	Log ft	Comments
(236 <i>syst</i> )	2171.41	0.0109 27	7.33 17	av Eβ=55.3 52
(261 <i>syst</i> )	2146.04	0.00461 31	7.87 12	av Eβ=62.6 53
(375 <i>syst</i> )	2032.49	0.012 6	8.00 23	av Eβ=96.4 56
(424 <i>syst</i> )	1983.33	0.018 4	8.01 12	av Eβ=111.7 57
(460 <i>syst</i> )	1947.07	0.0081 14	8.48 10	av Eβ=123.0 58
(482 <i>syst</i> )	1924.55	0.0156 13	8.27 7	av Eβ=130.2 58
(498 <i>syst</i> )	1909.31	0.0064 11	8.70 10	av Eβ=135.1 58
(501 <i>syst</i> )	1906.10	0.00184 33	9.25 10	av Eβ=136.1 59
(506 <i>syst</i> )	1901.31	0.0221 20	8.19 7	av Eβ=137.6 59
(509 <i>syst</i> )	1898.07	0.014 11	8.4 4	av Eβ=138.7 59
(520 <i>syst</i> )	1886.756	0.059 10	7.81 9	av Eβ=142.3 59
(531 <i>syst</i> )	1875.52	0.036 14	8.05 18	av Eβ=146.0 59
(537 <i>syst</i> )	1870.19	0.025 7	8.23 14	av Eβ=147.7 59
(550 <i>syst</i> )	1856.55	0.048 16	7.98 16	av Eβ=152.1 59
(570 <i>syst</i> )	1836.73	0.0105 28	8.69 13	av Eβ=158.6 60
(585 <i>syst</i> )	1821.75	0.0238 17	8.38 6	av Eβ=163.6 60
(626 <i>syst</i> )	1780.799	0.274 16	7.42 6	av Eβ=177.1 61
(695 <i>syst</i> )	1712.37	0.026 4	8.60 8	av Eβ=200.2 62
(726 <i>syst</i> )	1680.80	0.170 28	7.85 9	av Eβ=211.0 62
(736 <i>syst</i> )	1670.990	0.435 25	7.46 5	av Eβ=214.3 62
(745 <i>syst</i> )	1661.651	0.360 19	7.56 5	av Eβ=217.5 62
(748 <i>syst</i> )	1659.19	0.041 4	8.51 6	av Eβ=218.4 63
(773 <i>syst</i> )	1633.521	0.68 5	7.34 5	av Eβ=227.3 63
(778 <i>syst</i> )	1628.90?	0.0069 32	9.35 21	av Eβ=228.9 63
(786 <i>syst</i> )	1621.483	0.94 5	7.23 5	av Eβ=231.4 63
(803 <i>syst</i> )	1604.161	0.207 11	7.92 5	av Eβ=237.5 63
(806 <i>syst</i> )	1601.219	0.97 5	7.25 5	av Eβ=238.5 63
(813 <i>syst</i> )	1593.693	1.76 9	7.01 4	av Eβ=241.1 63
(833 <i>syst</i> )	1573.74	0.074 7	8.42 6	av Eβ=248.1 64
(881 <i>syst</i> )	1525.917	1.74 9	7.14 4	av Eβ=265.0 64
(898 <i>syst</i> )	1509.26	<0.0140	>9.3	av Eβ=270.9 64
(929 <i>syst</i> )	1478.42	0.092 22	8.49 11	av Eβ=281.9 65
(955 <i>syst</i> )	1451.882	0.112 17	8.45 8	av Eβ=291.4 65
(1028 & <i>syst</i> )	1379.21	0.017 11	9.9 <sup>1u</sup> 3	av Eβ=305.6 60
(1040 <i>syst</i> )	1366.619	1.12 27	7.58 11	av Eβ=322.2 66

Continued on next page (footnotes at end of table)

$^{246}\text{Am}$   $\beta^-$  decay (25.0 min) 1976Mu03 (continued) $\beta^-$  radiations (continued)

E(decay)	E(level)	$I\beta^{-\dagger@}$	Log $ft$	Comments
(1058 <i>syst</i> )	1348.860	5.42 29	6.93 4	av $E\beta=328.7$ 66
(1067 <i>syst</i> )	1340.18	0.038 4	9.09 6	av $E\beta=331.8$ 66
(1089& <i>syst</i> )	1317.56?	0.276 15	8.26 4	av $E\beta=340.1$ 67
(1107 <i>syst</i> )	1300.429	0.022 13	9.4 3	av $E\beta=346.4$ 67
(1157 <i>syst</i> )	1249.766	0.48 19	8.12 18	av $E\beta=365.1$ 67
(1196 <i>syst</i> )	1210.52	0.024 11	9.47 20	av $E\beta=379.6$ 67
(1232 <i>syst</i> )	1174.72	0.017 5	10.29 <sup>1u</sup> 14	av $E\beta=374.7$ 62
(1279 <i>syst</i> )	1128.009	1.87 19	7.68 5	av $E\beta=410.5$ 68
(1283 <i>syst</i> )	1124.257	0.25 5	8.56 9	av $E\beta=411.9$ 69
(1302‡ <i>syst</i> )	1104.854	14.3 8	6.83 4	av $E\beta=419.2$ 69
(1328‡ <i>syst</i> )	1078.844	37.5 20	6.44 4	av $E\beta=429.0$ 68
(1531 <i>syst</i> )	876.431	7.0 6	7.40 5	av $E\beta=506.2$ 70
(1565 <i>syst</i> )	841.668	16.4 9	7.06 3	av $E\beta=519.6$ 70
(2112 <i>syst</i> )	294.88	0.008 7	10.9 4	av $E\beta=734.3$ 72
(2265& <i>syst</i> )	141.986	0.42 28	10.4 <sup>1u</sup> 3	av $E\beta=752.5$ 70
(2364 <i>syst</i> )	42.835	$\approx 3.5^{\#}$	$\approx 8.4$	av $E\beta=835.1$ 73
(2407 <i>syst</i> )	0	$\approx 3.5^{\#}$	$\approx 9.6^{1u}$	av $E\beta=807.3$ 70

† From level scheme intensity balance. The evaluator notes that several unplaced  $\gamma$  rays may affect the value of  $I\beta$  deduced from intensity balance.

‡ The Fermi plot of  $\beta$ -spectrum from  $^{246}\text{Pu}+^{246}\text{Am}$  equilibrium source shows three groups: 2.10 MeV 7%, 1.60 MeV 14% and 1.31 MeV 79% (1956Sm85).

#  $I\beta(\text{g.s.}+43 \text{ level})\approx 7$  (1956Sm85).

@ Absolute intensity per 100 decays.

& Existence of this branch is questionable.

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm)

I<sub>γ</sub> normalization: From ΣI(γ+ce)(to 0.0+43 level)= 93% 4. (I(γ+ce)(42.852γ) not included in this sum), since Iβ<sup>-</sup>(g.s.) + Iβ(42-keV state)=7% 4 (**1956Sm85**).  
Uncertainty was not provided by the authors (**1956Sm85**), but was assigned by the evaluator.

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>†g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>@</sup></u>	<u>α<sup>f</sup></u>	<u>I<sub>(γ+ce)</sub><sup>g</sup></u>	<u>Comments</u>
34.76 <sup>‡</sup>		876.431	3 <sup>-</sup>	841.668	2 <sup>-</sup>	(M1,E2)	1.5×10 <sup>3</sup> 14	216 <sup>‡</sup> 20	ce(L)/(γ+ce)=0.7 5; ce(M)/(γ+ce)=0.20 23 ce(N)/(γ+ce)=0.06 7; ce(O)/(γ+ce)=0.014 17; ce(P)/(γ+ce)=0.0022 28; ce(Q)/(γ+ce)=1.4×10 <sup>-5</sup> 13 α(L)=1.1×10 <sup>3</sup> 10; α(M)=3.1×10 <sup>2</sup> 29 α(N)=9; α(O)=21 19; α(P)=3.5 31; α(Q)=0.021 7 Mult.: As given in the Adopted Gammas.
42.9 2	≈2	42.835	2 <sup>+</sup>	0	0 <sup>+</sup>	E2 <sup>&amp;</sup>	1058 28		α(L)=766 21; α(M)=216 6 α(N)=60.0 16; α(O)=14.5 4; α(P)=2.37 6; α(Q)=0.00582 14 %I <sub>γ</sub> ≈0.05
46.87 <sup>‡</sup>		923.297	4 <sup>-</sup>	876.431	3 <sup>-</sup>	[M1,E2]	3.8×10 <sup>2</sup> 31	3.5 <sup>‡</sup> 8	ce(L)/(γ+ce)=0.7 4; ce(M)/(γ+ce)=0.20 21 ce(N)/(γ+ce)=0.06 6; ce(O)/(γ+ce)=0.014 16; ce(P)/(γ+ce)=0.0023 26; ce(Q)/(γ+ce)=2.1×10 <sup>-5</sup> 20 α(L)=2.7×10 <sup>2</sup> 23; α(M)=8 α(N)=21 18; α(O)=5 4; α(P)=0.9 7; α(Q)=0.008 4
81.63 <sup>‡</sup>		923.297	4 <sup>-</sup>	841.668	2 <sup>-</sup>	[E2]	48.4 7	5.5 <sup>‡</sup> 12	ce(L)/(γ+ce)=0.708 7; ce(M)/(γ+ce)=0.2001 35 ce(N)/(γ+ce)=0.0557 11; ce(O)/(γ+ce)=0.01348 26; ce(P)/(γ+ce)=0.00223 4; ce(Q)/(γ+ce)=7.85×10 <sup>-6</sup> 15 α(L)=35.0 5; α(M)=9.90 14 α(N)=2.75 4; α(O)=0.666 9; α(P)=0.1102 15; α(Q)=0.000388 5
99.2 2	6.7 5	141.986	4 <sup>+</sup>	42.835	2 <sup>+</sup>	E2 <sup>&amp;</sup>	19.43 33		α(L)=14.05 24; α(M)=3.97 7 α(N)=1.105 19; α(O)=0.268 5; α(P)=0.0444 7; α(Q)=0.0001817 29 %I <sub>γ</sub> =0.166 15 %I <sub>γ</sub> =0.0079 15
<sup>x</sup> 150.81 14 152.9 <sup>#</sup> 2	0.32 6 0.18 6	294.88	6 <sup>+</sup>	141.986	4 <sup>+</sup>	[E2]	2.88 4		α(K)=0.1739 24; α(L)=1.957 30; α(M)=0.551 8 α(N)=0.1534 23; α(O)=0.0373 6; α(P)=0.00627 9; α(Q)=4.00×10 <sup>-5</sup> 6 %I <sub>γ</sub> =0.0045 15
171.02 11	2.0 8	1249.766	1 <sup>-</sup>	1078.844	1 <sup>-</sup>	[M1,E2]	4.4 25		α(K)=2.8 26; α(L)=1.15 4; α(M)=0.304 32 α(N)=0.084 9; α(O)=0.0209 19; α(P)=0.00379 7; α(Q)=1.5×10 <sup>-4</sup> 12 %I <sub>γ</sub> =0.050 20 %I <sub>γ</sub> =0.015 5
<sup>x</sup> 227.4 2 227.4 <sup>#i</sup> 2	0.6 2 0.6 2	1593.693	2 <sup>-</sup>	1366.619	(2 <sup>-</sup> )	[M1,E2]	1.8 12		α(K)=1.3 12; α(L)=0.43 7; α(M)=0.110 11

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) 1976Mu03 (continued)

<u>γ(<sup>246</sup>Cm) (continued)</u>									
<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>†g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>@</sup></u>	<u>δ</u>	<u>α<sup>f</sup></u>	<u>Comments</u>
228.71 7	1.5 3	1478.42	(2 <sup>+</sup> )	1249.766	1 <sup>-</sup>	[E1]		0.0789 11	α(N)=0.0304 30; α(O)=0.0076 9; α(P)=0.00141 26; α(Q)=7 %I <sub>γ</sub> =0.015 5 α(K)=0.0613 9; α(L)=0.01322 19; α(M)=0.00324 5 α(N)=0.000882 12; α(O)=0.0002195 31; α(P)=4.04×10 <sup>-5</sup> 6; α(Q)=2.124×10 <sup>-6</sup> 30 %I <sub>γ</sub> =0.037 8
237.23 4	5.8 3	1078.844	1 <sup>-</sup>	841.668	2 <sup>-</sup>	[M1,E2]		1.6 11	α(K)=1.1 10; α(L)=0.37 7; α(M)=0.095 13 α(N)=0.0263 33; α(O)=0.0066 10; α(P)=0.00122 26; α(Q)=6 %I <sub>γ</sub> =0.144 10
238.64 3	5.9 3	1366.619	(2 <sup>-</sup> )	1128.009	3 <sup>-</sup>	[M1,E2]		1.6 11	α(K)=1.1 10; α(L)=0.36 7; α(M)=0.093 13 α(N)=0.0258 33; α(O)=0.0064 10; α(P)=0.00120 26; α(Q)=6 %I <sub>γ</sub> =0.146 10
244.03 3	27.5 10	1348.860	1 <sup>-</sup>	1104.854	2 <sup>-</sup>	(M1)		2.534 35	α(K)=1.991 28; α(L)=0.408 6; α(M)=0.0996 14 α(N)=0.0274 4; α(O)=0.00697 10; α(P)=0.001371 19; α(Q)=9.79×10 <sup>-5</sup> 14 %I <sub>γ</sub> =0.68 4 Mult.: α(K)=2.9 20 (1966Or01).
244.9 2	0.25 15	1593.693	2 <sup>-</sup>	1348.860	1 <sup>-</sup>	[M1,E2]		1.5 10	α(K)=1.0 9; α(L)=0.33 7; α(M)=0.086 13 α(N)=0.0236 35; α(O)=0.0059 10; α(P)=0.00110 26; α(Q)=5 %I <sub>γ</sub> =0.006 4
251.50 10	0.11 2	1128.009	3 <sup>-</sup>	876.431	3 <sup>-</sup>	[M1,E2]		1.4 10	α(K)=1.0 9; α(L)=0.30 7; α(M)=0.078 13 α(N)=0.0216 35; α(O)=0.0054 10; α(P)=0.00101 25; α(Q)=5 %I <sub>γ</sub> =0.0027 5
261.73 5	6.3 2	1366.619	(2 <sup>-</sup> )	1104.854	2 <sup>-</sup>	[M1,E2]		1.2 9	α(K)=0.9 8; α(L)=0.27 7; α(M)=0.069 13 α(N)=0.019 4; α(O)=0.0047 10; α(P)=8.9×10 <sup>-4</sup> 24; α(Q)=4 %I <sub>γ</sub> =0.156 9
263.17 5	1.35 9	1104.854	2 <sup>-</sup>	841.668	2 <sup>-</sup>	[M1,E2]		1.2 8	α(K)=0.9 8; α(L)=0.26 7; α(M)=0.067 13 α(N)=0.019 4; α(O)=0.0047 10; α(P)=8.7×10 <sup>-4</sup> 24; α(Q)=4.4×10 <sup>-5</sup> 35 %I <sub>γ</sub> =0.0335 27
267.3 <sup>h</sup> 5	0.2 <sup>h</sup> 1	1478.42	(2 <sup>+</sup> )	1210.52	2 <sup>+</sup>	[M1,E2]		1.2 8	α(K)=0.8 7; α(L)=0.25 7; α(M)=0.064 13 α(N)=0.0177 35; α(O)=0.0044 10; α(P)=8.3×10 <sup>-4</sup> 23; α(Q)=4.2×10 <sup>-5</sup> 34 %I <sub>γ</sub> =0.0050 25
267.3 <sup>h</sup> 5	0.2 <sup>h</sup> 1	1633.521	(2 <sup>-</sup> )	1366.619	(2 <sup>-</sup> )	[M1,E2]		1.2 8	α(K)=0.8 7; α(L)=0.25 7; α(M)=0.064 13 α(N)=0.0177 35; α(O)=0.0044 10; α(P)=8.3×10 <sup>-4</sup> 23; α(Q)=4.2×10 <sup>-5</sup> 34 %I <sub>γ</sub> =0.0050 25
270.07 3	41.2 13	1348.860	1 <sup>-</sup>	1078.844	1 <sup>-</sup>	M1+E2	0.36 +10-13	1.73 10	α(K)=1.34 9; α(L)=0.292 9; α(M)=0.0720 20

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<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

$E_\gamma$ †	$I_\gamma$ †g	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. @	$\alpha^f$	Comments
								$\alpha(N)=0.0198$ 5; $\alpha(O)=0.00502$ 14; $\alpha(P)=0.000979$ 33; $\alpha(Q)=6.6\times 10^{-5}$ 4 %I $\gamma=1.02$ 6 Mult., $\delta$ : $\alpha(K)\text{exp}=1.34$ 6, $\alpha(L)\text{exp}=0.34$ 10 ( <b>1976Mu03</b> ); $\alpha(K)\text{exp}=2.2$ 16 ( <b>1966Or01</b> ). %I $\gamma=0.0050$ 25
271.1 2 277.0 2	0.2 1 0.08 3	1983.33 1451.882	(1 <sup>-</sup> ,2 <sup>+</sup> ) 1 <sup>+</sup>	1712.37 1174.72	(3 <sup>+</sup> ) 0 <sup>+</sup>	[M1]	1.780 25	$\alpha(K)=1.399$ 20; $\alpha(L)=0.286$ 4; $\alpha(M)=0.0698$ 10 $\alpha(N)=0.01918$ 27; $\alpha(O)=0.00488$ 7; $\alpha(P)=0.000961$ 14; $\alpha(Q)=6.86\times 10^{-5}$ 10 %I $\gamma=0.0020$ 8
287.78 3	5.20 18	1366.619	(2 <sup>-</sup> )	1078.844	1 <sup>-</sup>	(M1)	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; $\alpha(Q)=6.16\times 10^{-5}$ 9 %I $\gamma=0.129$ 7 Mult.: $\alpha(K)\text{exp}=1.5$ 12 ( <b>1966Or01</b> ).
289.3 <sup>h</sup> 2	0.19 <sup>h</sup> 5	1165.473	3 <sup>+</sup>	876.431	3 <sup>-</sup>	[E1]	0.0470 7	$\alpha(K)=0.0369$ 5; $\alpha(L)=0.00763$ 11; $\alpha(M)=0.001860$ 26 $\alpha(N)=0.000507$ 7; $\alpha(O)=0.0001268$ 18; $\alpha(P)=2.362\times 10^{-5}$ 33; $\alpha(Q)=1.314\times 10^{-6}$ 18 %I $\gamma=0.0047$ 13
289.3 <sup>h</sup> 2	0.19 <sup>h</sup> 5	1509.26	(3 <sup>+</sup> )	1219.87	4 <sup>+</sup>	[M1,E2]	0.9 7	$\alpha(K)=0.7$ 6; $\alpha(L)=0.19$ 6; $\alpha(M)=0.049$ 12 $\alpha(N)=0.0136$ 34; $\alpha(O)=0.0034$ 9; $\alpha(P)=6.4\times 10^{-4}$ 21; $\alpha(Q)=3.4\times 10^{-5}$ 27 %I $\gamma=0.0047$ 13
293.37 <sup>h</sup> 15	0.18 <sup>h</sup> 5	1593.693	2 <sup>-</sup>	1300.429	3 <sup>-</sup>	[M1,E2]	0.9 6	$\alpha(K)=0.6$ 6; $\alpha(L)=0.19$ 6; $\alpha(M)=0.047$ 12 $\alpha(N)=0.0130$ 33; $\alpha(O)=0.0033$ 9; $\alpha(P)=6.2\times 10^{-4}$ 20; $\alpha(Q)=3.2\times 10^{-5}$ 26 %I $\gamma=0.0045$ 13
293.37 <sup>h</sup> 15 <sup>x</sup> 302.96 5 306.0 3	0.18 <sup>h</sup> 5 0.28 3 0.05 3	1633.521 1525.917	(2 <sup>-</sup> ) 3 <sup>-</sup>	1340.18 1219.87		[E1]	0.0417 6	%I $\gamma=0.0069$ 8 $\alpha(K)=0.0328$ 5; $\alpha(L)=0.00671$ 10; $\alpha(M)=0.001635$ 23 $\alpha(N)=0.000446$ 6; $\alpha(O)=0.0001115$ 16; $\alpha(P)=2.084\times 10^{-5}$ 30; $\alpha(Q)=1.174\times 10^{-6}$ 17 %I $\gamma=0.0012$ 8
321.07 4	0.75 5	1621.483	3 <sup>-</sup>	1300.429	3 <sup>-</sup>	[M1,E2]	0.7 5	$\alpha(K)=0.5$ 4; $\alpha(L)=0.14$ 5; $\alpha(M)=0.035$ 11 $\alpha(N)=0.0098$ 29; $\alpha(O)=0.0025$ 8; $\alpha(P)=4.6\times 10^{-4}$ 17; $\alpha(Q)=2.5\times 10^{-5}$ 20 %I $\gamma=0.0186$ 15
325.61 8 327.81 17	0.24 4 0.12 4	1947.07 1451.882	2 <sup>+</sup> ,3,4 <sup>+</sup> 1 <sup>+</sup>	1621.483 1124.257	3 <sup>-</sup> 2 <sup>+</sup>	[M1,E2]	0.6 5	%I $\gamma=0.0060$ 10 $\alpha(K)=0.5$ 4; $\alpha(L)=0.13$ 5; $\alpha(M)=0.033$ 10 $\alpha(N)=0.0092$ 28; $\alpha(O)=0.0023$ 8; $\alpha(P)=4.4\times 10^{-4}$ 17; $\alpha(Q)=2.4\times 10^{-5}$ 19 %I $\gamma=0.0030$ 10
<sup>x</sup> 329.87 14 343.93 4	0.13 4 1.04 4	1593.693	2 <sup>-</sup>	1249.766	1 <sup>-</sup>	[M1,E2]	0.6 4	%I $\gamma=0.0032$ 10 $\alpha(K)=0.42$ 35; $\alpha(L)=0.11$ 4; $\alpha(M)=0.029$ 10

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<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>†g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>@</sup></u>	<u>δ</u>	<u>α<sup>f</sup></u>	<u>Comments</u>
347.26 <sup>i</sup> 4	0.97 5	1856.55	3 <sup>+</sup>	1509.26	(3 <sup>+</sup> )				α(N)=0.0079 26; α(O)=0.0020 7; α(P)=3.8×10 <sup>-4</sup> 15; α(Q)=2.1×10 <sup>-5</sup> 17 %I <sub>γ</sub> =0.0258 15 %I <sub>γ</sub> =0.0241 17 Mult.: α(K)exp=4.4 8 (1976Mu03). Theory: α(K)(M1)=0.806, α(K)(E2)=0.0632. Since this ce(K) is only 0.5 keV from the ce(L1) of the strong 244.03γ, and since 1976Mu03 do not give the Ice(L)(244.03γ) the α(K)exp must be considered questionable.
354.45 6	0.26 4	1604.161	(1 <sup>-</sup> )	1249.766	1 <sup>-</sup>	[M1,E2]		0.5 4	α(K)=0.38 32; α(L)=0.10 4; α(M)=0.026 9 α(N)=0.0072 25; α(O)=0.0018 7; α(P)=3.4×10 <sup>-4</sup> 14; α(Q)=1.9×10 <sup>-5</sup> 15 %I <sub>γ</sub> =0.0065 10
360.39 4	2.29 9	1525.917	3 <sup>-</sup>	1165.473	3 <sup>+</sup>	E1+M2	1.1 +8-4	1.4 6	α(K)=1.0 4; α(L)=0.30 13; α(M)=0.078 33 α(N)=0.022 9; α(O)=0.0055 23; α(P)=0.0011 5; α(Q)=7.1×10 <sup>-5</sup> 30 %I <sub>γ</sub> =0.0568 34 Mult.,δ: α(K)exp=1.0 4 (1976Mu03). M1 given by 1976Mu03 but disagrees with assignment in level scheme.
361.85 <sup>i</sup> 9	0.49 6	1983.33	(1 <sup>-</sup> ,2 <sup>+</sup> )	1621.483	3 <sup>-</sup>				%I <sub>γ</sub> =0.0122 16
370.81 <sup>i</sup> 13	0.17 4	2032.49	1,2 <sup>+</sup>	1661.651	(1 <sup>+</sup> )				%I <sub>γ</sub> =0.0042 10
373.36 5	0.84 5	1249.766	1 <sup>-</sup>	876.431	3 <sup>-</sup>	[E2]		0.1251 18	α(K)=0.0549 8; α(L)=0.0512 7; α(M)=0.01397 20 α(N)=0.00388 5; α(O)=0.000952 13; α(P)=0.0001682 24; α(Q)=3.64×10 <sup>-6</sup> 5 %I <sub>γ</sub> =0.0208 16
377.2 2	0.11 4	1300.429	3 <sup>-</sup>	923.297	4 <sup>-</sup>	[M1,E2]		0.44 32	α(K)=0.33 27; α(L)=0.09 4; α(M)=0.022 8 α(N)=0.0059 22; α(O)=0.0015 6; α(P)=2.8×10 <sup>-4</sup> 12; α(Q)=1.6×10 <sup>-5</sup> 13 %I <sub>γ</sub> =0.0027 10
381.0 <sup>h</sup> 3	0.06 <sup>h</sup> 2	1509.26	(3 <sup>+</sup> )	1128.009	3 <sup>-</sup>	[E1]		0.0264 4	α(K)=0.02089 29; α(L)=0.00413 6; α(M)=0.001002 14 α(N)=0.000273 4; α(O)=6.86×10 <sup>-5</sup> 10; α(P)=1.294×10 <sup>-5</sup> 18; α(Q)=7.65×10 <sup>-7</sup> 11 %I <sub>γ</sub> =0.0015 5
381.0 <sup>h</sup> 3	0.06 <sup>h</sup> 2	1601.219	(2,3) <sup>+</sup>	1219.87	4 <sup>+</sup>	[M1,E2]		0.43 31	α(K)=0.32 26; α(L)=0.083 35; α(M)=0.021 8 α(N)=0.0058 22; α(O)=0.0014 6; α(P)=2.8×10 <sup>-4</sup> 12; α(Q)=1.6×10 <sup>-5</sup> 12 %I <sub>γ</sub> =0.0015 5
383.73 6	0.75 8	1633.521	(2) <sup>-</sup>	1249.766	1 <sup>-</sup>	(M1)		0.724 10	α(K)=0.570 8; α(L)=0.1158 16; α(M)=0.0283 4

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

								<u>γ(<sup>246</sup>Cm) (continued)</u>	
<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>†g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>@</sup></u>	<u>α<sup>f</sup></u>	<u>Comments</u>	
								α(N)=0.00776 11; α(O)=0.001976 28; α(P)=0.000389 5; α(Q)=2.77×10 <sup>-5</sup> 4 %I <sub>γ</sub> =0.0186 22 Mult.: α(K)exp=0.68 10 ( <b>1976Mu03</b> ).	
398.14 12	0.33 5	1525.917	3 <sup>-</sup>	1128.009	3 <sup>-</sup>	[M1,E2]	0.38 27	α(K)=0.28 23; α(L)=0.073 32; α(M)=0.018 7 α(N)=0.0050 20; α(O)=0.0013 5; α(P)=2.4×10 <sup>-4</sup> 11; α(Q)=1.4×10 <sup>-5</sup> 11 %I <sub>γ</sub> =0.0082 13	
401.68 3	10.7 3	1525.917	3 <sup>-</sup>	1124.257	2 <sup>+</sup>	E1	0.02368 33	α(K)=0.01879 26; α(L)=0.00368 5; α(M)=0.000894 13 α(N)=0.0002438 34; α(O)=6.12×10 <sup>-5</sup> 9; α(P)=1.157×10 <sup>-5</sup> 16; α(Q)=6.91×10 <sup>-7</sup> 10 %I <sub>γ</sub> =0.265 14 Mult.: α(K)exp<0.03 ( <b>1976Mu03</b> ).	
407.99 6	0.41 4	1249.766	1 <sup>-</sup>	841.668	2 <sup>-</sup>	[M1,E2]	0.36 26	α(K)=0.26 22; α(L)=0.068 30; α(M)=0.017 7 α(N)=0.0047 19; α(O)=0.0012 5; α(P)=2.3×10 <sup>-4</sup> 10; α(Q)=1.3×10 <sup>-5</sup> 10 %I <sub>γ</sub> =0.0102 11	
414.16 6	0.42 5	1780.799	2 <sup>+</sup>	1366.619	(2 <sup>-</sup> )	[E1]	0.02227 31	α(K)=0.01768 25; α(L)=0.00345 5; α(M)=0.000837 12 α(N)=0.0002283 32; α(O)=5.74×10 <sup>-5</sup> 8; α(P)=1.085×10 <sup>-5</sup> 15; α(Q)=6.52×10 <sup>-7</sup> 9 %I <sub>γ</sub> =0.0104 13	
421.08 5	0.89 7	1525.917	3 <sup>-</sup>	1104.854	2 <sup>-</sup>	[M1,E2]	0.33 24	α(K)=0.24 20; α(L)=0.062 28; α(M)=0.015 6 α(N)=0.0043 17; α(O)=0.0011 5; α(P)=2.1×10 <sup>-4</sup> 10; α(Q)=1.2×10 <sup>-5</sup> 9 %I <sub>γ</sub> =0.0221 20	
423.4 <sup>h</sup> 5	0.16 <sup>h</sup> 7	1300.429	3 <sup>-</sup>	876.431	3 <sup>-</sup>	[M1,E2]	0.32 23	α(K)=0.24 20; α(L)=0.061 28; α(M)=0.015 6 α(N)=0.0042 17; α(O)=0.0011 5; α(P)=2.0×10 <sup>-4</sup> 9; α(Q)=1.2×10 <sup>-5</sup> 9 %I <sub>γ</sub> =0.0040 18	
423.4 <sup>h</sup> 5	0.16 <sup>h</sup> 7	1633.521	(2 <sup>-</sup> )	1210.52	2 <sup>+</sup>	[E1]	0.02130 30	α(K)=0.01693 24; α(L)=0.00329 5; α(M)=0.000798 11 α(N)=0.0002178 31; α(O)=5.47×10 <sup>-5</sup> 8; α(P)=1.037×10 <sup>-5</sup> 15; α(Q)=6.25×10 <sup>-7</sup> 9 %I <sub>γ</sub> =0.0040 18 %I <sub>γ</sub> =0.0087 28	
434.92 13	0.35 11	1886.756	(1 <sup>+</sup> )	1451.882	1 <sup>+</sup>	(M1+E0)	1.2 2	Mult.: α(K)exp=0.9 3 ( <b>1976Mu03</b> ). From α(K)exp the transition is either M1+E0 or M2.	
443.25 18	0.14 4	1366.619	(2 <sup>-</sup> )	923.297	4 <sup>-</sup>	[E2]	0.0792 11	α(K)=0.0408 6; α(L)=0.0281 4; α(M)=0.00758 11 α(N)=0.002098 30; α(O)=0.000517 7; α(P)=9.26×10 <sup>-5</sup> 13; α(Q)=2.477×10 <sup>-6</sup> 35 %I <sub>γ</sub> =0.0035 10	
446.8 5	0.05 4	1525.917	3 <sup>-</sup>	1078.844	1 <sup>-</sup>	[E2]	0.0776 11	α(K)=0.0402 6; α(L)=0.0273 4; α(M)=0.00737 11 α(N)=0.002041 30; α(O)=0.000503 7; α(P)=9.01×10 <sup>-5</sup> 13;	



<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

$\gamma(^{246}\text{Cm})$ (continued)									
$E_\gamma$ <sup>†</sup>	$I_\gamma$ <sup>†g</sup>	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. <sup>@</sup>	$\delta$	$\alpha^f$	Comments
451.2 <sup>h</sup> 2	0.10 <sup>h</sup> 4	1661.651	(1 <sup>+</sup> )	1210.52	2 <sup>+</sup>	[M1,E2]		0.27 19	$\alpha(Q)=2.435\times 10^{-6}$ 35 %I $\gamma=0.0012$ 10 $\alpha(K)=0.20$ 16; $\alpha(L)=0.050$ 24; $\alpha(M)=0.013$ 5 $\alpha(N)=0.0035$ 15; $\alpha(O)=9$ ; $\alpha(P)=1.7\times 10^{-4}$ 8; $\alpha(Q)=1.0\times 10^{-5}$ 8 %I $\gamma=0.0025$ 10
451.2 <sup>h</sup> 2	0.10 <sup>h</sup> 4	1670.990	(3 <sup>-</sup> )	1219.87	4 <sup>+</sup>	[E1]		0.01878 26	$\alpha(K)=0.01495$ 21; $\alpha(L)=0.00288$ 4; $\alpha(M)=0.000698$ 10 $\alpha(N)=0.0001904$ 27; $\alpha(O)=4.79\times 10^{-5}$ 7; $\alpha(P)=9.09\times 10^{-6}$ 13; $\alpha(Q)=5.55\times 10^{-7}$ 8 %I $\gamma=0.0025$ 10
456.11 6	0.56 7	1621.483	3 <sup>-</sup>	1165.473	3 <sup>+</sup>	[E1]		0.01838 26	$\alpha(K)=0.01464$ 20; $\alpha(L)=0.00282$ 4; $\alpha(M)=0.000682$ 10 $\alpha(N)=0.0001861$ 26; $\alpha(O)=4.68\times 10^{-5}$ 7; $\alpha(P)=8.89\times 10^{-6}$ 12; $\alpha(Q)=5.44\times 10^{-7}$ 8 %I $\gamma=0.0139$ 19
461.2 <sup>i</sup> 2	0.13 5	1680.80	(2 <sup>+</sup> )	1219.87	4 <sup>+</sup>	[E2]		0.0717 10	$\alpha(K)=0.0381$ 5; $\alpha(L)=0.02459$ 35; $\alpha(M)=0.00661$ 9 $\alpha(N)=0.001830$ 26; $\alpha(O)=0.000452$ 6; $\alpha(P)=8.11\times 10^{-5}$ 11; $\alpha(Q)=2.273\times 10^{-6}$ 32 %I $\gamma=0.0032$ 13
465.61 5	1.03 8	1593.693	2 <sup>-</sup>	1128.009	3 <sup>-</sup>	[M1,E2]		0.25 18	$\alpha(K)=0.19$ 15; $\alpha(L)=0.046$ 22; $\alpha(M)=0.012$ 5 $\alpha(N)=0.0032$ 14; $\alpha(O)=8$ ; $\alpha(P)=1.5\times 10^{-4}$ 7; $\alpha(Q)=9$ %I $\gamma=0.0255$ 23
469.71 8	0.41 5	1593.693	2 <sup>-</sup>	1124.257	2 <sup>+</sup>	[E1]		0.01735 24	%I $\gamma=0.0102$ 13 $\alpha(K)=0.01383$ 19; $\alpha(L)=0.00265$ 4; $\alpha(M)=0.000641$ 9 $\alpha(N)=0.0001750$ 25; $\alpha(O)=4.40\times 10^{-5}$ 6; $\alpha(P)=8.37\times 10^{-6}$ 12; $\alpha(Q)=5.15\times 10^{-7}$ 7
472.33 5	1.47 7	1348.860	1 <sup>-</sup>	876.431	3 <sup>-</sup>	[E2]		0.0676 9	$E_\gamma$ : poor fit. $\alpha(K)=0.0366$ 5; $\alpha(L)=0.02272$ 32; $\alpha(M)=0.00610$ 9 $\alpha(N)=0.001688$ 24; $\alpha(O)=0.000417$ 6; $\alpha(P)=7.50\times 10^{-5}$ 10; $\alpha(Q)=2.159\times 10^{-6}$ 30 %I $\gamma=0.0365$ 24
476.89 5	0.86 6	1601.219	(2,3) <sup>+</sup>	1124.257	2 <sup>+</sup>	(M1)		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 %I $\gamma=0.0213$ 18
487.2 3	0.37 8	1661.651	(1 <sup>+</sup> )	1174.72	0 <sup>+</sup>	[M1]		0.378 5	Mult.: $\alpha(K)_{\text{exp}}=0.34$ 8 ( <b>1976Mu03</b> ). $\alpha(K)=0.298$ 4; $\alpha(L)=0.0601$ 8; $\alpha(M)=0.01467$ 21 $\alpha(N)=0.00403$ 6; $\alpha(O)=0.001025$ 14; $\alpha(P)=0.0002017$ 28; $\alpha(Q)=1.438\times 10^{-5}$ 20 %I $\gamma=0.0092$ 20
488.82 4	3.70 14	1593.693	2 <sup>-</sup>	1104.854	2 <sup>-</sup>	M1+E2	0.25 20	0.356 35	$\alpha(K)=0.280$ 29; $\alpha(L)=0.057$ 4; $\alpha(M)=0.0140$ 10

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

$\gamma(^{246}\text{Cm})$ (continued)									
$E_\gamma$ †	$I_\gamma$ †g	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. @	$\delta$	$\alpha^f$	Comments
493.46 4	4.34 15	1621.483	3 <sup>-</sup>	1128.009	3 <sup>-</sup>	(M1)		0.365 5	$\alpha(\text{N})=0.00384$ 28; $\alpha(\text{O})=0.00098$ 7; $\alpha(\text{P})=0.000192$ 15; $\alpha(\text{Q})=1.35\times 10^{-5}$ 14 %I $\gamma$ =0.092 6 Mult.: $\alpha(\text{K})_{\text{exp}}=0.280$ 20, K/L=5.0 17 (1976Mu03). $\alpha(\text{K})=0.288$ 4; $\alpha(\text{L})=0.0581$ 8; $\alpha(\text{M})=0.01416$ 20 $\alpha(\text{N})=0.00389$ 5; $\alpha(\text{O})=0.000990$ 14; $\alpha(\text{P})=0.0001948$ 27; $\alpha(\text{Q})=1.388\times 10^{-5}$ 19 %I $\gamma$ =0.108 6 Mult.: $\alpha(\text{K})_{\text{exp}}=0.350$ 20, K/L=4.6 10 (1976Mu03).
505.61 <sup>h</sup> 13	0.49 <sup>h</sup> 9	1633.521	(2) <sup>-</sup>	1128.009	3 <sup>-</sup>	<sup>c</sup>			%I $\gamma$ =0.0122 23
505.61 <sup>h</sup> 13	0.49 <sup>h</sup> 9	1670.990	(3) <sup>-</sup>	1165.473	3 <sup>+</sup>	[E1] <sup>c</sup>		0.01504 21	$\alpha(\text{K})=0.01201$ 17; $\alpha(\text{L})=0.002278$ 32; $\alpha(\text{M})=0.000551$ 8 $\alpha(\text{N})=0.0001503$ 21; $\alpha(\text{O})=3.79\times 10^{-5}$ 5; $\alpha(\text{P})=7.22\times 10^{-6}$ 10; $\alpha(\text{Q})=4.50\times 10^{-7}$ 6 %I $\gamma$ =0.0122 23
507.10 5	2.70 12	1348.860	1 <sup>-</sup>	841.668	2 <sup>-</sup>	<sup>c</sup>			%I $\gamma$ =0.067 4
514.79 4	3.48 15	1593.693	2 <sup>-</sup>	1078.844	1 <sup>-</sup>	M1+(E2)	0.4 4	0.29 7	$\alpha(\text{K})=0.23$ 6; $\alpha(\text{L})=0.047$ 9; $\alpha(\text{M})=0.0115$ 20 $\alpha(\text{N})=0.0032$ 6; $\alpha(\text{O})=0.00080$ 14; $\alpha(\text{P})=0.000157$ 30; $\alpha(\text{Q})=1.09\times 10^{-5}$ 27 %I $\gamma$ =0.086 5 Mult.: $\alpha(\text{K})_{\text{exp}}=0.23$ 6 (1976Mu03).
516.60 13	0.40 10	1621.483	3 <sup>-</sup>	1104.854	2 <sup>-</sup>	[M1,E2]		0.19 13	$\alpha(\text{K})=0.14$ 11; $\alpha(\text{L})=0.034$ 17; $\alpha(\text{M})=0.009$ 4 $\alpha(\text{N})=0.0023$ 11; $\alpha(\text{O})=5.9\times 10^{-4}$ 28; $\alpha(\text{P})=1.1\times 10^{-4}$ 6; $\alpha(\text{Q})=7$ %I $\gamma$ =0.0099 25
<sup>x</sup> 522.53 5	1.85 8					(M1)		0.312 4	$\alpha(\text{K})=0.2463$ 34; $\alpha(\text{L})=0.0497$ 7; $\alpha(\text{M})=0.01212$ 17 $\alpha(\text{N})=0.00332$ 5; $\alpha(\text{O})=0.000847$ 12; $\alpha(\text{P})=0.0001666$ 23; $\alpha(\text{Q})=1.187\times 10^{-5}$ 17 %I $\gamma$ =0.0459 29 Mult.: $\alpha(\text{K})_{\text{exp}}=0.22$ 6 (1976Mu03).
524.92 4	2.95 11	1366.619	(2) <sup>-</sup>	841.668	2 <sup>-</sup>	M1+(E2)	0.4 5	0.27 8	$\alpha(\text{K})=0.21$ 7; $\alpha(\text{L})=0.045$ 10; $\alpha(\text{M})=0.0109$ 24 $\alpha(\text{N})=0.0030$ 6; $\alpha(\text{O})=0.00076$ 17; $\alpha(\text{P})=0.000149$ 34; $\alpha(\text{Q})=1.03\times 10^{-5}$ 31 %I $\gamma$ =0.073 4 Mult.: $\alpha(\text{K})_{\text{exp}}=0.22$ 6 (1976Mu03).
528.69 7	0.60 6	1633.521	(2) <sup>-</sup>	1104.854	2 <sup>-</sup>	(M1)		0.303 4	$\alpha(\text{K})=0.2386$ 33; $\alpha(\text{L})=0.0481$ 7; $\alpha(\text{M})=0.01173$ 16 $\alpha(\text{N})=0.00322$ 5; $\alpha(\text{O})=0.000820$ 11; $\alpha(\text{P})=0.0001613$ 23; $\alpha(\text{Q})=1.150\times 10^{-5}$ 16 %I $\gamma$ =0.0149 16 Mult.: $\alpha(\text{K})_{\text{exp}}=0.31$ 9 (1976Mu03).
542.92 5	1.6 2	1670.990	(3) <sup>-</sup>	1128.009	3 <sup>-</sup>	(M1+E2)	0.5 4	0.24 6	$\alpha(\text{K})=0.18$ 5; $\alpha(\text{L})=0.039$ 8; $\alpha(\text{M})=0.0095$ 18

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>†g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>@</sup></u>	<u>δ</u>	<u>α<sup>f</sup></u>	<u>Comments</u>
554.4 2	0.89 7	1659.19	(1 <sup>-</sup> )	1104.854	2 <sup>-</sup>	(M1,E2) <sup>e</sup>		0.16 11	α(N)=0.0026 5; α(O)=0.00066 12; α(P)=0.000130 25; α(Q)=8.9×10 <sup>-6</sup> 23 %I <sub>γ</sub> =0.040 5 Mult.,δ: α(K)exp=0.18 5 (1976Mu03).
554.68 6	0.59 6	1633.521	(2 <sup>-</sup> )	1078.844	1 <sup>-</sup>	(M1,E2) <sup>e</sup>		0.16 11	α(K)=0.12 9; α(L)=0.028 14; α(M)=0.0070 34 α(N)=0.0019 9; α(O)=4.8×10 <sup>-4</sup> 24; α(P)=9; α(Q)=6 %I <sub>γ</sub> =0.0221 20
566.12 5	1.72 10	1670.990	(3 <sup>-</sup> )	1104.854	2 <sup>-</sup>	M1+(E2)	0.3 4	0.23 5	α(K)=0.12 9; α(L)=0.028 14; α(M)=0.0070 33 α(N)=0.0019 9; α(O)=4.8×10 <sup>-4</sup> 24; α(P)=9; α(Q)=6 %I <sub>γ</sub> =0.0146 16 α(K)=0.18 4; α(L)=0.038 7; α(M)=0.0092 16 α(N)=0.0025 4; α(O)=0.00064 11; α(P)=0.000126 23; α(Q)=8.9×10 <sup>-6</sup> 20 %I <sub>γ</sub> =0.0427 31 Mult.,δ: α(K)exp=0.18 4 (1976Mu03).
577.9 <sup>i</sup> 3	0.34 9	2171.41	2 <sup>+</sup> ,3	1593.693	2 <sup>-</sup>				%I <sub>γ</sub> =0.0084 23
580.9 <sup>h</sup> 3	0.34 <sup>h</sup> 9	1870.19	1,2 <sup>+</sup>	1289.32	0 <sup>+</sup>				%I <sub>γ</sub> =0.0084 23
580.9 <sup>h</sup> 3	0.34 <sup>h</sup> 9	2032.49	1,2 <sup>+</sup>	1451.882	1 <sup>+</sup>				%I <sub>γ</sub> =0.0084 23
602.54 6	9.4 5	1525.917	3 <sup>-</sup>	923.297	4 <sup>-</sup>	E2+M1	3.2 +21-8	0.054 10	α(K)=0.037 8; α(L)=0.0127 14; α(M)=0.00327 32 α(N)=0.00090 9; α(O)=0.000225 23; α(P)=4.2×10 <sup>-5</sup> 5; α(Q)=1.9×10 <sup>-6</sup> 4 %I <sub>γ</sub> =0.233 16 Mult.,δ: α(K)exp=0.037 8 (1976Mu03).
609.98 9	1.8 3	1451.882	1 <sup>+</sup>	841.668	2 <sup>-</sup>	E1		0.01055 15	%I <sub>γ</sub> =0.045 8 α(K)=0.00847 12; α(L)=0.001568 22; α(M)=0.000378 5 α(N)=0.0001032 14; α(O)=2.60×10 <sup>-5</sup> 4; α(P)=4.99×10 <sup>-6</sup> 7; α(Q)=3.21×10 <sup>-7</sup> 4 Mult.: α(K)exp<0.012 6 (1976Mu03).
636.72 <sup>h</sup> 12	0.48 <sup>h</sup> 11	1478.42	(2 <sup>+</sup> )	841.668	2 <sup>-</sup>	[E1]		0.00975 14	α(K)=0.00783 11; α(L)=0.001443 20; α(M)=0.000348 5 α(N)=9.49×10 <sup>-5</sup> 13; α(O)=2.396×10 <sup>-5</sup> 34; α(P)=4.60×10 <sup>-6</sup> 6; α(Q)=2.98×10 <sup>-7</sup> 4 %I <sub>γ</sub> =0.0119 28
636.72 <sup>h#i</sup> 12	0.48 <sup>h</sup> 11	1856.55	3 <sup>+</sup>	1219.87	4 <sup>+</sup>	[M1,E2]		0.11 7	α(K)=0.08 6; α(L)=0.019 10; α(M)=0.0047 24 α(N)=0.0013 6; α(O)=3.3×10 <sup>-4</sup> 17; α(P)=6.4×10 <sup>-5</sup> 34; α(Q)=4.1×10 <sup>-6</sup> 29 %I <sub>γ</sub> =0.0119 28
649.48 4	14.8 5	1525.917	3 <sup>-</sup>	876.431	3 <sup>-</sup>	E2+M1	1.96 +31-23	0.062 6	α(K)=0.045 5; α(L)=0.0124 9; α(M)=0.00315 20

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>@</sup></u>	<u>δ</u>	<u>α<sup>f</sup></u>	<u>Comments</u>
									α(N)=0.00087 6; α(O)=0.000218 14; α(P)=4.14×10 <sup>-5</sup> 29; α(Q)=2.24×10 <sup>-6</sup> 24 %I <sub>γ</sub> =0.367 21 Mult.,δ: α(K)exp=0.045 5 (1976Mu03). %I <sub>γ</sub> =0.0117 28
656.35 14	0.47 11	1780.799	2 <sup>+</sup>	1124.257	2 <sup>+</sup>	M1+E0			Mult.: α(K)exp=0.63 18 (1976Mu03). %I <sub>γ</sub> =0.0117 28
670.1 2	0.33 12	1593.693	2 <sup>-</sup>	923.297	4 <sup>-</sup>	[E2]		0.0306 4	α(K)=0.02004 28; α(L)=0.00779 11; α(M)=0.002031 28 α(N)=0.000561 8; α(O)=0.0001395 20; α(P)=2.58×10 <sup>-5</sup> 4; α(Q)=1.048×10 <sup>-6</sup> 15 %I <sub>γ</sub> =0.0082 30
677.86 6	1.81 15	1601.219	(2,3) <sup>+</sup>	923.297	4 <sup>-</sup>	[E1]		0.00869 12	α(K)=0.00699 10; α(L)=0.001280 18; α(M)=0.000308 4 α(N)=8.41×10 <sup>-5</sup> 12; α(O)=2.124×10 <sup>-5</sup> 30; α(P)=4.09×10 <sup>-6</sup> 6; α(Q)=2.67×10 <sup>-7</sup> 4 %I <sub>γ</sub> =0.045 4
684.28 5	23.6 8	1525.917	3 <sup>-</sup>	841.668	2 <sup>-</sup>	(E2+M1)	1.24 +11-10	0.077 5	α(K)=0.059 4; α(L)=0.0139 7; α(M)=0.00345 17 α(N)=0.00095 5; α(O)=0.000240 12; α(P)=4.63×10 <sup>-5</sup> 24; α(Q)=2.86×10 <sup>-6</sup> 20 %I <sub>γ</sub> =0.585 33
698.27 5	4.7 3	1621.483	3 <sup>-</sup>	923.297	4 <sup>-</sup>	(M1)		0.1430 20	Mult.,δ: α(K)exp=0.060 4, α(L)exp=0.012 2 (1976Mu03). α(K)=0.1128 16; α(L)=0.02263 32; α(M)=0.00551 8 α(N)=0.001512 21; α(O)=0.000385 5; α(P)=7.58×10 <sup>-5</sup> 11; α(Q)=5.41×10 <sup>-6</sup> 8 %I <sub>γ</sub> =0.117 9
717.24 5	10.2 4	1593.693	2 <sup>-</sup>	876.431	3 <sup>-</sup>	M1		0.1330 19	Mult.: α(K)exp=0.125 14 (1976Mu03). α(K)=0.1050 15; α(L)=0.02104 29; α(M)=0.00513 7 α(N)=0.001406 20; α(O)=0.000358 5; α(P)=7.05×10 <sup>-5</sup> 10; α(Q)=5.03×10 <sup>-6</sup> 7 %I <sub>γ</sub> =0.253 15
724.79 4	8.6 3	1601.219	(2,3) <sup>+</sup>	876.431	3 <sup>-</sup>	E1		0.00770 11	Mult.: α(K)exp=0.106 7 (1976Mu03). α(K)=0.00621 9; α(L)=0.001128 16; α(M)=0.000271 4 α(N)=7.40×10 <sup>-5</sup> 10; α(O)=1.871×10 <sup>-5</sup> 26; α(P)=3.60×10 <sup>-6</sup> 5; α(Q)=2.380×10 <sup>-7</sup> 33 %I <sub>γ</sub> =0.213 12
732.5 <sup>h</sup> 2	0.61 <sup>h</sup> 17	1856.55	3 <sup>+</sup>	1124.257	2 <sup>+</sup>	[M1,E2]		0.08 5	Mult.: α(K)exp<0.007 (1976Mu03). α(K)=0.06 4; α(L)=0.013 7; α(M)=0.0032 16 α(N)=9; α(O)=2.2×10 <sup>-4</sup> 12; α(P)=4.3×10 <sup>-5</sup> 23; α(Q)=2.8×10 <sup>-6</sup> 19 %I <sub>γ</sub> =0.015 4
732.5 <sup>h</sup> 2	0.61 <sup>h</sup> 17	1898.07	2 <sup>+</sup>	1165.473	3 <sup>+</sup>	[M1,E2]		0.08 5	α(K)=0.06 4; α(L)=0.013 7; α(M)=0.0032 16

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>@</sup></u>	<u>α<sup>f</sup></u>	<u>Comments</u>
734.41 4	47.1 14	876.431	3 <sup>-</sup>	141.986	4 <sup>+</sup>	E1	0.00752 11	α(N)=9; α(O)=2.2×10 <sup>-4</sup> 12; α(P)=4.3×10 <sup>-5</sup> 23; α(Q)=2.8×10 <sup>-6</sup> 19 %I <sub>γ</sub> =0.015 4 %I <sub>γ</sub> =1.17 6 α(K)=0.00606 8; α(L)=0.001100 15; α(M)=0.000264 4 α(N)=7.22×10 <sup>-5</sup> 10; α(O)=1.825×10 <sup>-5</sup> 26; α(P)=3.52×10 <sup>-6</sup> 5; α(Q)=2.327×10 <sup>-7</sup> 33 Mult.: As given in the Adopted Gammas. Mult.: α(K)exp<0.007, K/L<0.3 (1976Mu03). E1 α(K)exp is in agreement with the BrIcc value of 0.00606 9, however disagrees with the ratio of 5.51 11 from BrIcc.
745.05 4	9.5 3	1621.483	3 <sup>-</sup>	876.431	3 <sup>-</sup>	(M1+E0)		%I <sub>γ</sub> =0.236 13 α(K)exp=0.144 18 (1976Mu03).
747.74 8	1.0 2	1670.990	(3 <sup>-</sup> )	923.297	4 <sup>-</sup>	[M1,E2]	0.07 5	α(K)=0.06 4; α(L)=0.012 7; α(M)=0.0030 15 α(N)=8; α(O)=2.1×10 <sup>-4</sup> 11; α(P)=4.1×10 <sup>-5</sup> 22; α(Q)=2.7×10 <sup>-6</sup> 18 %I <sub>γ</sub> =0.025 5
751.0 3	1.4 5	1875.52	1,2 <sup>+</sup>	1124.257	2 <sup>+</sup>			%I <sub>γ</sub> =0.035 13
752.06 4	33.0 12	1593.693	2 <sup>-</sup>	841.668	2 <sup>-</sup>	(M1+E0)		%I <sub>γ</sub> =0.82 5
759.59 4	25.9 8	1601.219	(2,3) <sup>+</sup>	841.668	2 <sup>-</sup>	E1	0.00708 10	Mult.: α(K)exp=0.143 6 (1976Mu03). α(K)=0.00571 8; α(L)=0.001033 14; α(M)=0.0002482 35 α(N)=6.77×10 <sup>-5</sup> 9; α(O)=1.713×10 <sup>-5</sup> 24; α(P)=3.30×10 <sup>-6</sup> 5; α(Q)=2.196×10 <sup>-7</sup> 31 %I <sub>γ</sub> =0.642 35
<sup>x</sup> 776.3 3	0.16 5							Mult.: α(K)exp<0.006 (1976Mu03). %I <sub>γ</sub> =0.0040 13
779.76 8	2.7 4	1621.483	3 <sup>-</sup>	841.668	2 <sup>-</sup>	M1	0.1063 15	α(K)=0.0840 12; α(L)=0.01679 24; α(M)=0.00409 6 α(N)=0.001122 16; α(O)=0.000286 4; α(P)=5.62×10 <sup>-5</sup> 8; α(Q)=4.01×10 <sup>-6</sup> 6 %I <sub>γ</sub> =0.067 11
781.28 6	6.8 5	923.297	4 <sup>-</sup>	141.986	4 <sup>+</sup>	[E1]	0.00674 9	Mult.: α(K)exp=0.089 23 (1976Mu03). α(K)=0.00544 8; α(L)=0.000980 14; α(M)=0.0002355 33 α(N)=6.43×10 <sup>-5</sup> 9; α(O)=1.626×10 <sup>-5</sup> 23; α(P)=3.14×10 <sup>-6</sup> 4; α(Q)=2.094×10 <sup>-7</sup> 29 %I <sub>γ</sub> =0.169 15
791.5 2	2.6 5	1633.521	(2) <sup>-</sup>	841.668	2 <sup>-</sup>	[M1,E2]	0.06 4	α(K)=0.048 33; α(L)=0.011 6; α(M)=0.0026 13 α(N)=7; α(O)=1.8×10 <sup>-4</sup> 9; α(P)=3.5×10 <sup>-5</sup> 19; α(Q)=2.3×10 <sup>-6</sup> 16 %I <sub>γ</sub> =0.065 13
798.80 4	1000	841.668	2 <sup>-</sup>	42.835	2 <sup>+</sup>	E1	0.00648 9	α(K)=0.00523 7; α(L)=0.000941 13; α(M)=0.0002259 32 α(N)=6.17×10 <sup>-5</sup> 9; α(O)=1.560×10 <sup>-5</sup> 22; α(P)=3.01×10 <sup>-6</sup> 4; α(Q)=2.016×10 <sup>-7</sup> 28

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

								<u>γ(<sup>246</sup>Cm) (continued)</u>	
<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>†g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>@</sup></u>	<u>α<sup>f</sup></u>	<u>Comments</u>	
<sup>x</sup> 810.2 3	0.25 11							%I <sub>γ</sub> =25 Mult.: α(K)exp=0.0052 2, K/L=5.6 11 (1976Mu03). %I <sub>γ</sub> =0.0062 28 Mult.: α(K)exp=0.4 2 (1976Mu03). 1976Mu03 suggests that this is a M1+E0 γ deexciting to the 1289 0+ level. However, in that case, the γ must have pure multipolarity.	
820.7 <sup>#i</sup> 3	0.15 9	1661.651	(1 <sup>+</sup> )	841.668	2 <sup>-</sup>	[E1]	0.00617 9	α(K)=0.00499 7; α(L)=0.000895 13; α(M)=0.0002149 30 α(N)=5.87×10 <sup>-5</sup> 8; α(O)=1.484×10 <sup>-5</sup> 21; α(P)=2.87×10 <sup>-6</sup> 4; α(Q)=1.926×10 <sup>-7</sup> 27 %I <sub>γ</sub> =0.0037 23	
829.37 8	0.72 14	1670.990	(3 <sup>-</sup> )	841.668	2 <sup>-</sup>	[M1,E2]	0.055 35	α(K)=0.043 29; α(L)=0.009 5; α(M)=0.0023 12 α(N)=6.3×10 <sup>-4</sup> 32; α(O)=1.6×10 <sup>-4</sup> 8; α(P)=3.1×10 <sup>-5</sup> 17; α(Q)=2.0×10 <sup>-6</sup> 14 %I <sub>γ</sub> =0.018 4	
833.60 4	72 2	876.431	3 <sup>-</sup>	42.835	2 <sup>+</sup>	E1	0.00601 8	α(K)=0.00485 7; α(L)=0.000870 12; α(M)=0.0002088 29 α(N)=5.70×10 <sup>-5</sup> 8; α(O)=1.442×10 <sup>-5</sup> 20; α(P)=2.79×10 <sup>-6</sup> 4; α(Q)=1.876×10 <sup>-7</sup> 26 %I <sub>γ</sub> =1.79 9	
904.42 5	2.31 9	1780.799	2 <sup>+</sup>	876.431	3 <sup>-</sup>	(E1)	0.00521 7	Mult.: α(K)exp=0.0043 8 (1976Mu03). α(K)=0.00422 6; α(L)=0.000750 10; α(M)=0.0001798 25 α(N)=4.91×10 <sup>-5</sup> 7; α(O)=1.243×10 <sup>-5</sup> 17; α(P)=2.408×10 <sup>-6</sup> 34; α(Q)=1.636×10 <sup>-7</sup> 23 %I <sub>γ</sub> =0.0573 34 Mult.: α(K)exp<0.09 (1976Mu03); E1,M1 or E2 from α(K)exp, E1 from level scheme.	
925.0 <sup>#i</sup> 3	0.37 13	1219.87	4 <sup>+</sup>	294.88	6 <sup>+</sup>	[E2]	0.01602 22	α(K)=0.01155 16; α(L)=0.00332 5; α(M)=0.000845 12 α(N)=0.0002327 33; α(O)=5.83×10 <sup>-5</sup> 8; α(P)=1.101×10 <sup>-5</sup> 15; α(Q)=5.60×10 <sup>-7</sup> 8 %I <sub>γ</sub> =0.0092 33	
939.15 5	3.1 2	1780.799	2 <sup>+</sup>	841.668	2 <sup>-</sup>	(E1)	0.00488 7	α(K)=0.00395 6; α(L)=0.000701 10; α(M)=0.0001680 24 α(N)=4.58×10 <sup>-5</sup> 6; α(O)=1.161×10 <sup>-5</sup> 16; α(P)=2.251×10 <sup>-6</sup> 32; α(Q)=1.537×10 <sup>-7</sup> 22 %I <sub>γ</sub> =0.077 6 Mult.: α(K)exp<0.09 (1976Mu03); E1,M1 or E2 from α(K)exp, E1 from level scheme.	
960.2 3	0.22 9	1836.73	2 <sup>+</sup> ,1 <sup>-</sup>	876.431	3 <sup>-</sup>			%I <sub>γ</sub> =0.0055 23	
962.9 4	0.02 2	1104.854	2 <sup>-</sup>	141.986	4 <sup>+</sup>	[M2]	0.1366 19	α(K)=0.1039 15; α(L)=0.02438 34; α(M)=0.00609 9	

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

$E_\gamma$ †	$I_\gamma$ †g	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. @	$\alpha^f$	Comments
982.73 15	0.7 2	1124.257	2 <sup>+</sup>	141.986	4 <sup>+</sup>	[E2]	0.01427 20	$\alpha(N)=0.001679$ 24; $\alpha(O)=0.000427$ 6; $\alpha(P)=8.37\times 10^{-5}$ 12; $\alpha(Q)=5.79\times 10^{-6}$ 8 %I $\gamma=5\times 10^{-4}$ 5 %I $\gamma=0.017$ 5 $\alpha(K)=0.01041$ 15; $\alpha(L)=0.00287$ 4; $\alpha(M)=0.000726$ 10 $\alpha(N)=0.0001998$ 28; $\alpha(O)=5.01\times 10^{-5}$ 7; $\alpha(P)=9.50\times 10^{-6}$ 13; $\alpha(Q)=4.99\times 10^{-7}$ 7
986.03 4	38.6 12	1128.009	3 <sup>-</sup>	141.986	4 <sup>+</sup>	(E1)	0.00449 6	E $\gamma$ : poor fit. $\alpha(K)=0.00364$ 5; $\alpha(L)=0.000642$ 9; $\alpha(M)=0.0001539$ 22 $\alpha(N)=4.20\times 10^{-5}$ 6; $\alpha(O)=1.064\times 10^{-5}$ 15; $\alpha(P)=2.065\times 10^{-6}$ 29; $\alpha(Q)=1.417\times 10^{-7}$ 20 %I $\gamma=0.96$ 5
1023.44 7	1.6 2	1165.473	3 <sup>+</sup>	141.986	4 <sup>+</sup>	[E2]	0.01321 18	Mult.: $\alpha(K)\text{exp}<0.009$ (1976Mu03), $\alpha(K)\text{exp}<0.008$ (1966Or01). $\alpha(K)=0.00971$ 14; $\alpha(L)=0.00260$ 4; $\alpha(M)=0.000657$ 9 $\alpha(N)=0.0001807$ 25; $\alpha(O)=4.54\times 10^{-5}$ 6; $\alpha(P)=8.62\times 10^{-6}$ 12; $\alpha(Q)=4.63\times 10^{-7}$ 6 %I $\gamma=0.040$ 5
1036.00 4	512 15	1078.844	1 <sup>-</sup>	42.835	2 <sup>+</sup>	E1 <sup>a</sup>	0.00412 6	$\alpha(K)=0.00334$ 5; $\alpha(L)=0.000588$ 8; $\alpha(M)=0.0001409$ 20 $\alpha(N)=3.84\times 10^{-5}$ 5; $\alpha(O)=9.75\times 10^{-6}$ 14; $\alpha(P)=1.893\times 10^{-6}$ 27; $\alpha(Q)=1.306\times 10^{-7}$ 18 %I $\gamma=12.7$ 7
1045.08 6	0.73 12	1886.756	(1 <sup>+</sup> )	841.668	2 <sup>-</sup>	[E1]	0.00406 6	Mult.: $\alpha(K)\text{exp}\leq 0.003$ (1966Or01); $\alpha(K)\text{exp}=0.0035$ 1 (1976Mu03). $\alpha(K)=0.00329$ 5; $\alpha(L)=0.000579$ 8; $\alpha(M)=0.0001387$ 19 $\alpha(N)=3.79\times 10^{-5}$ 5; $\alpha(O)=9.60\times 10^{-6}$ 13; $\alpha(P)=1.864\times 10^{-6}$ 26; $\alpha(Q)=1.287\times 10^{-7}$ 18 %I $\gamma=0.0181$ 31 %I $\gamma=0.0181$ 31
<sup>x</sup> 1045.66 6 1062.04 4	0.73 12 691 14	1104.854	2 <sup>-</sup>	42.835	2 <sup>+</sup>	E1 <sup>a</sup>	0.00395 6	$\alpha(K)=0.00320$ 4; $\alpha(L)=0.000563$ 8; $\alpha(M)=0.0001348$ 19 $\alpha(N)=3.68\times 10^{-5}$ 5; $\alpha(O)=9.33\times 10^{-6}$ 13; $\alpha(P)=1.813\times 10^{-6}$ 25; $\alpha(Q)=1.254\times 10^{-7}$ 18 %I $\gamma=17.1$ 9
1078.86 4	1120 40	1078.844	1 <sup>-</sup>	0	0 <sup>+</sup>	E1 <sup>a</sup>	0.00385 5	Mult.: $\alpha(K)\text{exp}\leq 0.003$ (1966Or01); $\alpha(K)\text{exp}=0.0033$ 1 (1976Mu03). $\alpha(K)=0.00312$ 4; $\alpha(L)=0.000548$ 8; $\alpha(M)=0.0001311$ 18 $\alpha(N)=3.58\times 10^{-5}$ 5; $\alpha(O)=9.07\times 10^{-6}$ 13; $\alpha(P)=1.764\times 10^{-6}$ 25; $\alpha(Q)=1.222\times 10^{-7}$ 17 %I $\gamma=27.8$ 16 Mult.: $\alpha(K)\text{exp}\leq 0.003$ (1966Or01); $\alpha(K)\text{exp}=0.00294$ 13 (1976Mu03).

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

								<u>γ(<sup>246</sup>Cm) (continued)</u>			
<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>†g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult. @</u>	<u>α<sup>f</sup></u>	<u>Comments</u>			
1081.40 6	13.8 14	1124.257	2 <sup>+</sup>	42.835	2 <sup>+</sup>	E2 <sup>&amp;</sup>	0.01190 17	α(K)=0.00884 12; α(L)=0.002286 32; α(M)=0.000575 8 α(N)=0.0001581 22; α(O)=3.98×10 <sup>-5</sup> 6; α(P)=7.57×10 <sup>-6</sup> 11; α(Q)=4.17×10 <sup>-7</sup> 6 %I <sub>γ</sub> =0.34 4 I <sub>γ</sub> : Calculated from I <sub>γ</sub> (1081)/I <sub>γ</sub> (1124)=1.32 13 in <sup>246</sup> Bk ε decay (1976Ah03). 1976Mu03 measured I <sub>γ</sub> ≈10.			
1085.15 6	61.6 19	1128.009	3 <sup>-</sup>	42.835	2 <sup>+</sup>	E1	0.00381 5	α(K)=0.00309 4; α(L)=0.000542 8; α(M)=0.0001297 18 α(N)=3.54×10 <sup>-5</sup> 5; α(O)=8.98×10 <sup>-6</sup> 13; α(P)=1.746×10 <sup>-6</sup> 24; α(Q)=1.210×10 <sup>-7</sup> 17 %I <sub>γ</sub> =1.53 8 Mult.: α(K)exp=0.0024 10 (1976Mu03). %I <sub>γ</sub> =0.0035 10 %I <sub>γ</sub> =7×10 <sup>-4</sup> 5 Assigned by 1976Mu03 as sum peak. %I <sub>γ</sub> =0.0067 13			
<sup>x</sup> 1102.5 2	0.14 4										
<sup>x</sup> 1105.0 5	0.03 2										
<sup>x</sup> 1113.6 2	0.27 5										
1122.64 6	4.0 2	1165.473	3 <sup>+</sup>	42.835	2 <sup>+</sup>	E2 <sup>b</sup>	0.01110 16	α(K)=0.00829 12; α(L)=0.002097 29; α(M)=0.000526 7 α(N)=0.0001446 20; α(O)=3.64×10 <sup>-5</sup> 5; α(P)=6.94×10 <sup>-6</sup> 10; α(Q)=3.89×10 <sup>-7</sup> 5 α(IPF)=2.167×10 <sup>-7</sup> 31 %I <sub>γ</sub> =0.099 7			
1124.29 4	10.5 4	1124.257	2 <sup>+</sup>	0	0 <sup>+</sup>	E2 <sup>b</sup>	0.01107 15	α(K)=0.00827 12; α(L)=0.002090 29; α(M)=0.000524 7 α(N)=0.0001441 20; α(O)=3.63×10 <sup>-5</sup> 5; α(P)=6.92×10 <sup>-6</sup> 10; α(Q)=3.88×10 <sup>-7</sup> 5 α(IPF)=2.327×10 <sup>-7</sup> 33 %I <sub>γ</sub> =0.260 15			
1131.88 7	0.44 5	1174.72	0 <sup>+</sup>	42.835	2 <sup>+</sup>	[E2]	0.01093 15	α(K)=0.00817 11; α(L)=0.002058 29; α(M)=0.000516 7 α(N)=0.0001419 20; α(O)=3.57×10 <sup>-5</sup> 5; α(P)=6.81×10 <sup>-6</sup> 10; α(Q)=3.83×10 <sup>-7</sup> 5; α(IPF)=3.19×10 <sup>-7</sup> 5 %I <sub>γ</sub> =0.0109 13 %I <sub>γ</sub> =0.0184 17			
<sup>x</sup> 1148.62 6	0.74 6										
1158.47 6	0.50 4	1300.429	3 <sup>-</sup>	141.986	4 <sup>+</sup>	[E1]	0.00341 5	α(K)=0.00277 4; α(L)=0.000483 7; α(M)=0.0001156 16 α(N)=3.16×10 <sup>-5</sup> 4; α(O)=8.01×10 <sup>-6</sup> 11; α(P)=1.559×10 <sup>-6</sup> 22; α(Q)=1.087×10 <sup>-7</sup> 15 α(IPF)=3.52×10 <sup>-6</sup> 5 %I <sub>γ</sub> =0.0124 11			
1167.74 5	1.01 6	1210.52	2 <sup>+</sup>	42.835	2 <sup>+</sup>	E0+(M1,E2)	0.023 13	α(K)=0.018 10; α(L)=0.0038 19; α(M)=9 α(N)=2.5×10 <sup>-4</sup> 12; α(O)=6.5×10 <sup>-5</sup> 31; α(P)=1.3×10 <sup>-5</sup> 6; α(Q)=9; α(IPF)=2.5×10 <sup>-6</sup> 13 %I <sub>γ</sub> =0.0251 19 Mult.: α(K)exp=0.71 15, K/L=4.2 11 (1976Mu03).			



<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

<u>γ(<sup>246</sup>Cm) (continued)</u>									
<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>†g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>@</sup></u>	<u>α<sup>f</sup></u>	<u>I<sub>(γ+ce)</sub><sup>g</sup></u>	<u>Comments</u>
1174.72		1174.72	0 <sup>+</sup>	0	0 <sup>+</sup>	E0		0.99 4	Mult.: no γ observed; K/L=4.2 5 (1976Mu03). I <sub>(γ+ce)</sub> : From experimental I(ce(K))+I(ce(L)) of 1976Mu03. K/L(E0) = 4.82 (theory) (2020Do01).
1177.2 2	0.15 4	1219.87	4 <sup>+</sup>	42.835	2 <sup>+</sup>	[E2]	0.01016 14		α(K)=0.00764 11; α(L)=0.001882 26; α(M)=0.000471 7 α(N)=0.0001294 18; α(O)=3.26×10 <sup>-5</sup> 5; α(P)=6.23×10 <sup>-6</sup> 9; α(Q)=3.56×10 <sup>-7</sup> 5 α(IPF)=1.528×10 <sup>-6</sup> 23 %I <sub>γ</sub> =0.0037 10
1198.19 <sup>#i</sup> 6	1.24 6	1340.18		141.986	4 <sup>+</sup>				%I <sub>γ</sub> =0.0308 20 %I <sub>γ</sub> =0.0050 18
<sup>x</sup> 1203.2 2	0.20 7								α(K)=0.00258 4; α(L)=0.000450 6; α(M)=0.0001076 15
1206.96 4	6.0 2	1249.766	1 <sup>-</sup>	42.835	2 <sup>+</sup>	E1	0.00319 4		α(N)=2.94×10 <sup>-5</sup> 4; α(O)=7.46×10 <sup>-6</sup> 10; α(P)=1.452×10 <sup>-6</sup> 20; α(Q)=1.017×10 <sup>-7</sup> 14 α(IPF)=1.208×10 <sup>-5</sup> 17 %I <sub>γ</sub> =0.149 8
1210.35 9	0.45 7	1210.52	2 <sup>+</sup>	0	0 <sup>+</sup>	[E2]	0.00965 14		Mult.: α(K)exp<0.005 (1976Mu03). α(K)=0.00728 10; α(L)=0.001767 25; α(M)=0.000441 6 α(N)=0.0001213 17; α(O)=3.06×10 <sup>-5</sup> 4; α(P)=5.85×10 <sup>-6</sup> 8; α(Q)=3.38×10 <sup>-7</sup> 5; α(IPF)=3.44×10 <sup>-6</sup> 5 %I <sub>γ</sub> =0.0112 18
1237.2 2	0.29 4	1379.21	(4 <sup>+</sup> )	141.986	4 <sup>+</sup>	[M1,E2]	0.020 11		α(K)=0.016 9; α(L)=0.0033 16; α(M)=8 α(N)=2.2×10 <sup>-4</sup> 10; α(O)=5.6×10 <sup>-5</sup> 27; α(P)=1.1×10 <sup>-5</sup> 5; α(Q)=7; α(IPF)=1.2×10 <sup>-5</sup> 6 %I <sub>γ</sub> =0.0072 11
1249.79 4	6.0 2	1249.766	1 <sup>-</sup>	0	0 <sup>+</sup>	[E1]	0.00302 4		α(K)=0.002438 34; α(L)=0.000424 6; α(M)=0.0001013 14 α(N)=2.77×10 <sup>-5</sup> 4; α(O)=7.02×10 <sup>-6</sup> 10; α(P)=1.368×10 <sup>-6</sup> 19; α(Q)=9.61×10 <sup>-8</sup> 13 α(IPF)=2.379×10 <sup>-5</sup> 33 %I <sub>γ</sub> =0.149 8
1257.62 6	1.57 10	1300.429	3 <sup>-</sup>	42.835	2 <sup>+</sup>	[E1]	0.00299 4		Mult.: α(K)exp=0.018 4 (1976Mu03) is in disagreement with an E1 assignment. γ is possibly a doublet. α(K)=0.002413 34; α(L)=0.000419 6; α(M)=0.0001002 14 α(N)=2.74×10 <sup>-5</sup> 4; α(O)=6.94×10 <sup>-6</sup> 10; α(P)=1.353×10 <sup>-6</sup> 19; α(Q)=9.51×10 <sup>-8</sup> 13; α(IPF)=2.62×10 <sup>-5</sup> 4 %I <sub>γ</sub> =0.0389 30
1274.72 4	10.8 3	1317.56?	(2) <sup>+</sup>	42.835	2 <sup>+</sup>	M1	0.0285 4		α(K)=0.02252 32; α(L)=0.00446 6; α(M)=0.001084 15

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

$E_\gamma$ <sup>†</sup>	$I_\gamma$ <sup>†g</sup>	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. <sup>@</sup>	$\alpha^f$	$I_{(\gamma+ce)}$ <sup>g</sup>	Comments
1289.4		1289.32	0 <sup>+</sup>	0	0 <sup>+</sup>	E0		0.08 1	$\alpha(N)=0.000297$ 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 $\alpha(IPF)=2.91\times 10^{-5}$ 4 $\%I_\gamma=0.268$ 14 Mult.: $\alpha(K)_{exp}=0.028$ 10, K/L1=5.0 23 (1976Mu03). Mult.: $\gamma$ not observed (1976Mu03). $I_{(\gamma+ce)}$ : deduced from $I(ce(K))=0.07$ 1 (1976Mu03) with K/L(E0) = 4.82 (theory) (2020Do01).
1297.34 <sup>#i</sup> 9 x1303.20 11	0.42 5 0.35 4	1340.18		42.835	2 <sup>+</sup>				$\%I_\gamma=0.0104$ 13 $\%I_\gamma=0.0087$ 11
1306.8 <sup>#i</sup> 2	0.25 4	1348.860	1 <sup>-</sup>	42.835	2 <sup>+</sup>	[E1]	0.00283 4		$\%I_\gamma=0.0062$ 10 $\alpha(K)=0.002263$ 32; $\alpha(L)=0.000392$ 5; $\alpha(M)=9.38\times 10^{-5}$ 13 $\alpha(N)=2.56\times 10^{-5}$ 4; $\alpha(O)=6.50\times 10^{-6}$ 9; $\alpha(P)=1.267\times 10^{-6}$ 18; $\alpha(Q)=8.94\times 10^{-8}$ 13; $\alpha(IPF)=4.28\times 10^{-5}$ 6
1323.77 8	1.0 2	1366.619	(2 <sup>-</sup> )	42.835	2 <sup>+</sup>	[E1]	0.00277 4		$E_\gamma$ : poor fit. $\alpha(K)=0.002215$ 31; $\alpha(L)=0.000384$ 5; $\alpha(M)=9.17\times 10^{-5}$ 13 $\alpha(N)=2.504\times 10^{-5}$ 35; $\alpha(O)=6.36\times 10^{-6}$ 9; $\alpha(P)=1.240\times 10^{-6}$ 17; $\alpha(Q)=8.76\times 10^{-8}$ 12 $\alpha(IPF)=4.96\times 10^{-5}$ 7 $\%I_\gamma=0.025$ 5
1336.38 <sup>h</sup> 7	0.74 <sup>h</sup> 5	1379.21	(4 <sup>+</sup> )	42.835	2 <sup>+</sup>	[E2]	0.00805 11		$\alpha(K)=0.00614$ 9; $\alpha(L)=0.001419$ 20; $\alpha(M)=0.000352$ 5 $\alpha(N)=9.68\times 10^{-5}$ 14; $\alpha(O)=2.442\times 10^{-5}$ 34; $\alpha(P)=4.69\times 10^{-6}$ 7; $\alpha(Q)=2.82\times 10^{-7}$ 4 $\alpha(IPF)=1.752\times 10^{-5}$ 25 $\%I_\gamma=0.0184$ 15
1336.38 <sup>h</sup> 7	0.74 <sup>h</sup> 5	1478.42	(2 <sup>+</sup> )	141.986	4 <sup>+</sup>	[E2]	0.00805 11		$\alpha(K)=0.00614$ 9; $\alpha(L)=0.001419$ 20; $\alpha(M)=0.000352$ 5 $\alpha(N)=9.68\times 10^{-5}$ 14; $\alpha(O)=2.442\times 10^{-5}$ 34; $\alpha(P)=4.69\times 10^{-6}$ 7; $\alpha(Q)=2.82\times 10^{-7}$ 4 $\alpha(IPF)=1.752\times 10^{-5}$ 25 $\%I_\gamma=0.0184$ 15
1348.81 4	4.84 17	1348.860	1 <sup>-</sup>	0	0 <sup>+</sup>	(E1)	0.00270 4		$\alpha(K)=0.002147$ 30; $\alpha(L)=0.000372$ 5; $\alpha(M)=8.88\times 10^{-5}$ 12 $\alpha(N)=2.424\times 10^{-5}$ 34; $\alpha(O)=6.15\times 10^{-6}$ 9; $\alpha(P)=1.201\times 10^{-6}$ 17; $\alpha(Q)=8.49\times 10^{-8}$ 12 $\alpha(IPF)=6.09\times 10^{-5}$ 9 $\%I_\gamma=0.120$ 7
1367.9 2	0.63 11	1509.26	(3 <sup>+</sup> )	141.986	4 <sup>+</sup>	[M1,E2]	0.016 8		Mult.: $\alpha(K)_{exp}<0.005$ (1976Mu03). $\%I_\gamma=0.0156$ 28

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>@</sup></u>	<u>α<sup>f</sup></u>	<u>Comments</u>
								α(K)=0.012 6; α(L)=0.0025 12; α(M)=6.2×10 <sup>-4</sup> 28 α(N)=1.7×10 <sup>-4</sup> 8; α(O)=4.3×10 <sup>-5</sup> 20; α(P)=8; α(Q)=5.8×10 <sup>-7</sup> 31; α(IPF)=4.6×10 <sup>-5</sup> 23 E <sub>γ</sub> : poor fit. %I <sub>γ</sub> =0.0017 10
<sup>x</sup> 1379.3 4 1383.94 17	0.07 4 0.22 4	1525.917	3 <sup>-</sup>	141.986	4 <sup>+</sup>	[E1]	0.00261 4	α(K)=0.002058 29; α(L)=0.000356 5; α(M)=8.50×10 <sup>-5</sup> 12 α(N)=2.319×10 <sup>-5</sup> 32; α(O)=5.89×10 <sup>-6</sup> 8; α(P)=1.150×10 <sup>-6</sup> 16; α(Q)=8.15×10 <sup>-8</sup> 11 α(IPF)=7.87×10 <sup>-5</sup> 11 %I <sub>γ</sub> =0.0055 10
1409.12 8	1.35 7	1451.882	1 <sup>+</sup>	42.835	2 <sup>+</sup>	(M1)	0.02181 31	α(K)=0.01719 24; α(L)=0.00340 5; α(M)=0.000826 12 α(N)=0.0002267 32; α(O)=5.77×10 <sup>-5</sup> 8; α(P)=1.137×10 <sup>-5</sup> 16; α(Q)=8.16×10 <sup>-7</sup> 11 α(IPF)=9.37×10 <sup>-5</sup> 13 %I <sub>γ</sub> =0.0335 23 Mult.: α(K)exp=0.037 14 ( <b>1976Mu03</b> ).
1435.59 6	1.04 10	1478.42	(2 <sup>+</sup> )	42.835	2 <sup>+</sup>	[M1,E2]	0.014 7	α(K)=0.011 5; α(L)=0.0022 10; α(M)=5.4×10 <sup>-4</sup> 24 α(N)=1.5×10 <sup>-4</sup> 7; α(O)=3.8×10 <sup>-5</sup> 17; α(P)=7.4×10 <sup>-6</sup> 34; α(Q)=5.1×10 <sup>-7</sup> 26; α(IPF)=7 %I <sub>γ</sub> =0.0258 27
1451.91 4	1.83 8	1451.882	1 <sup>+</sup>	0	0 <sup>+</sup>	(M1)	0.02016 28	α(K)=0.01586 22; α(L)=0.00314 4; α(M)=0.000762 11 α(N)=0.0002091 29; α(O)=5.33×10 <sup>-5</sup> 7; α(P)=1.048×10 <sup>-5</sup> 15; α(Q)=7.53×10 <sup>-7</sup> 11 α(IPF)=0.0001217 17 %I <sub>γ</sub> =0.0454 28 Mult.: α(K)exp=0.019 9 ( <b>1976Mu03</b> ).
1459.32 6	0.38 4	1601.219	(2,3) <sup>+</sup>	141.986	4 <sup>+</sup>	[M1,E2]	0.013 7	α(K)=0.010 5; α(L)=0.0021 10; α(M)=5.2×10 <sup>-4</sup> 23 α(N)=1.4×10 <sup>-4</sup> 6; α(O)=3.6×10 <sup>-5</sup> 16; α(P)=7.1×10 <sup>-6</sup> 32; α(Q)=4.9×10 <sup>-7</sup> 25; α(IPF)=9 %I <sub>γ</sub> =0.0094 11
1466.33 6	0.30 4	1509.26	(3 <sup>+</sup> )	42.835	2 <sup>+</sup>	[M1,E2]	0.013 6	α(K)=0.010 5; α(L)=0.0021 9; α(M)=5.1×10 <sup>-4</sup> 23 α(N)=1.4×10 <sup>-4</sup> 6; α(O)=3.6×10 <sup>-5</sup> 16; α(P)=7.0×10 <sup>-6</sup> 32; α(Q)=4.9×10 <sup>-7</sup> 25; α(IPF)=9 %I <sub>γ</sub> =0.0074 11
1479.43 4	9.2 3	1621.483	3 <sup>-</sup>	141.986	4 <sup>+</sup>	E1	2.40×10 <sup>-3</sup> 3	α(K)=0.001844 26; α(L)=0.000318 4; α(M)=7.59×10 <sup>-5</sup> 11 α(N)=2.071×10 <sup>-5</sup> 29; α(O)=5.26×10 <sup>-6</sup> 7; α(P)=1.028×10 <sup>-6</sup> 14; α(Q)=7.32×10 <sup>-8</sup> 10

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

$E_\gamma$ †	$I_\gamma$ †g	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. @	$\alpha^f$	Comments
1483.09 9	0.83 7	1525.917	3 <sup>-</sup>	42.835	2 <sup>+</sup>	[E1]	2.39×10 <sup>-3</sup> 3	<p>α(IPF)=0.0001332 19                      %I<sub>γ</sub>=0.228 13                      Mult.: α(K)exp&lt;0.003 (1976Mu03).                      α(K)=0.001837 26; α(L)=0.000316 4; α(M)=7.55×10<sup>-5</sup> 11                      α(N)=2.062×10<sup>-5</sup> 29; α(O)=5.24×10<sup>-6</sup> 7; α(P)=1.023×10<sup>-6</sup> 14;                      α(Q)=7.29×10<sup>-8</sup> 10                      α(IPF)=0.0001354 19                      %I<sub>γ</sub>=0.0206 20                      %I<sub>γ</sub>=0.0020 15                      %I<sub>γ</sub>=6×10<sup>-4</sup> 4</p>
1486.90 <sup>i</sup> 7	0.08 6	1628.90?		141.986	4 <sup>+</sup>			
<sup>x</sup> 1497.0 4	0.024 15							
1509.0 <sup>i</sup> 4	0.030 15	1509.26	(3 <sup>+</sup> )	0	0 <sup>+</sup>	[M3]	0.0681 10	<p>α(K)=0.0510 7; α(L)=0.01271 18; α(M)=0.00320 4                      α(N)=0.000885 12; α(O)=0.0002249 32; α(P)=4.39×10<sup>-5</sup> 6;                      α(Q)=2.95×10<sup>-6</sup> 4                      α(IPF)=1.938×10<sup>-5</sup> 28                      %I<sub>γ</sub>=7×10<sup>-4</sup> 4                      %I<sub>γ</sub>=0.0136 28                      Assigned by 1976Mu03 as sum peak.</p>
<sup>x</sup> 1526.30 15	0.55 11							
1529.00 7	9.0 4	1670.990	(3 <sup>-</sup> )	141.986	4 <sup>+</sup>	(E1) <sup>d</sup>	2.31×10 <sup>-3</sup> 3	<p>α(K)=0.001748 24; α(L)=0.000301 4; α(M)=7.18×10<sup>-5</sup> 10                      α(N)=1.959×10<sup>-5</sup> 27; α(O)=4.98×10<sup>-6</sup> 7; α(P)=9.73×10<sup>-7</sup> 14;                      α(Q)=6.95×10<sup>-8</sup> 10                      α(IPF)=0.0001639 23                      %I<sub>γ</sub>=0.223 14</p>
1530.7 5	1.0 2	1573.74	(1 <sup>+</sup> )	42.835	2 <sup>+</sup>	(M1) <sup>d</sup>	0.01756 25	<p>α(K)=0.01376 19; α(L)=0.00272 4; α(M)=0.000661 9                      α(N)=0.0001812 25; α(O)=4.62×10<sup>-5</sup> 6; α(P)=9.09×10<sup>-6</sup> 13;                      α(Q)=6.53×10<sup>-7</sup> 9                      α(IPF)=0.0001792 25                      %I<sub>γ</sub>=0.025 5</p>
1538.9 2	0.055 19	1680.80	(2 <sup>+</sup> )	141.986	4 <sup>+</sup>	[E2]	0.00627 9	<p>α(K)=0.00481 7; α(L)=0.001050 15; α(M)=0.000259 4                      α(N)=7.10×10<sup>-5</sup> 10; α(O)=1.796×10<sup>-5</sup> 25; α(P)=3.47×10<sup>-6</sup> 5;                      α(Q)=2.176×10<sup>-7</sup> 30                      α(IPF)=6.54×10<sup>-5</sup> 9                      %I<sub>γ</sub>=0.0014 5                      %I<sub>γ</sub>=7×10<sup>-4</sup> 5                      %I<sub>γ</sub>=0.0022 10                      %I<sub>γ</sub>=0.052 25                      Mult.: α(K)exp&lt;0.01 (1976Mu03).</p>
<sup>x</sup> 1540.6 2	0.03 2							
<sup>x</sup> 1545.0 5	0.09 4							
<sup>x</sup> 1550.0 2	2.1 10							
1550.94 9	11.0 10	1593.693	2 <sup>-</sup>	42.835	2 <sup>+</sup>	E1	2.27×10 <sup>-3</sup> 3	<p>α(K)=0.001707 24; α(L)=0.000294 4; α(M)=7.00×10<sup>-5</sup> 10</p>

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Mult.<sup>@</sup></u>	<u>δ</u>	<u>α<sup>f</sup></u>	<u>Comments</u>
<sup>x</sup> 1552.22 16	2.1 10								α(N)=1.912×10 <sup>-5</sup> 27; α(O)=4.86×10 <sup>-6</sup> 7; α(P)=9.50×10 <sup>-7</sup> 13; α(Q)=6.79×10 <sup>-8</sup> 10 α(IPF)=0.0001780 25 %I <sub>γ</sub> =0.273 28 Mult.: α(K)exp<0.003 (1976Mu03). %I <sub>γ</sub> =0.052 25
1558.35 10	0.68 7	1601.219	(2,3) <sup>+</sup>	42.835	2 <sup>+</sup>	[M1,E2]		0.011 5	Mult.: α(K)exp<0.01 (1976Mu03). α(K)=0.009 4; α(L)=0.0018 8; α(M)=4.4×10 <sup>-4</sup> 19 α(N)=1.2×10 <sup>-4</sup> 5; α(O)=3.1×10 <sup>-5</sup> 13; α(P)=6.0×10 <sup>-6</sup> 26; α(Q)=4.2×10 <sup>-7</sup> 20; α(IPF)=1.4×10 <sup>-4</sup> 6 %I <sub>γ</sub> =0.0169 19
1561.30 5	3.84 15	1604.161	(1 <sup>-</sup> )	42.835	2 <sup>+</sup>	[E1]		2.26×10 <sup>-3</sup> 3	α(K)=0.001689 24; α(L)=0.000290 4; α(M)=6.93×10 <sup>-5</sup> 10 α(N)=1.891×10 <sup>-5</sup> 26; α(O)=4.81×10 <sup>-6</sup> 7; α(P)=9.39×10 <sup>-7</sup> 13; α(Q)=6.72×10 <sup>-8</sup> 9 α(IPF)=0.0001848 26 %I <sub>γ</sub> =0.095 6
1570.46 7	0.62 5	1712.37	(3 <sup>+</sup> )	141.986	4 <sup>+</sup>	[M1,E2]		0.011 5	Mult.: α(K)exp<0.005 (1976Mu03). α(K)=0.009 4; α(L)=0.0018 8; α(M)=4.3×10 <sup>-4</sup> 18 α(N)=1.2×10 <sup>-4</sup> 5; α(O)=3.0×10 <sup>-5</sup> 13; α(P)=5.9×10 <sup>-6</sup> 26; α(Q)=4.1×10 <sup>-7</sup> 20; α(IPF)=1.4×10 <sup>-4</sup> 7 %I <sub>γ</sub> =0.0154 14
1573.74 5	1.95 8	1573.74	(1 <sup>+</sup> )	0	0 <sup>+</sup>	(M1)		0.01634 23	α(K)=0.01277 18; α(L)=0.002521 35; α(M)=0.000613 9 α(N)=0.0001681 24; α(O)=4.28×10 <sup>-5</sup> 6; α(P)=8.43×10 <sup>-6</sup> 12; α(Q)=6.06×10 <sup>-7</sup> 8 α(IPF)=0.0002136 30 %I <sub>γ</sub> =0.0484 29
1578.62 5	3.12 12	1621.483	3 <sup>-</sup>	42.835	2 <sup>+</sup>	[E1]		2.23×10 <sup>-3</sup> 3	Mult.: α(K)exp=0.014 5 (1976Mu03). α(K)=0.001659 23; α(L)=0.000285 4; α(M)=6.80×10 <sup>-5</sup> 10 α(N)=1.856×10 <sup>-5</sup> 26; α(O)=4.72×10 <sup>-6</sup> 7; α(P)=9.22×10 <sup>-7</sup> 13; α(Q)=6.60×10 <sup>-8</sup> 9 α(IPF)=0.0001962 27 %I <sub>γ</sub> =0.077 5
1586.1 <sup>i</sup> 2	0.2 1	1628.90?		42.835	2 <sup>+</sup>				Mult.: α(K)exp<0.005 (1976Mu03). %I <sub>γ</sub> =0.0050 25
1590.68 5	21.0 15	1633.521	(2 <sup>-</sup> )	42.835	2 <sup>+</sup>	E1+M2	0.12 8	0.0027 8	α(K)=0.0020 6; α(L)=3.6×10 <sup>-4</sup> 14; α(M)=8.7×10 <sup>-5</sup> 35 α(N)=2.4×10 <sup>-5</sup> 10; α(O)=6.1×10 <sup>-6</sup> 24; α(P)=1.2×10 <sup>-6</sup> 5; α(Q)=8.5×10 <sup>-8</sup> 34; α(IPF)=0.000202 4

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

$E_\gamma$ †	$I_\gamma$ †g	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. @	$\alpha^f$	Comments
<sup>x</sup> 1601.8 3 1604.14 5	0.11 5 4.11 15	1604.161	(1 <sup>-</sup> )	0	0 <sup>+</sup>	[E1]	2.20×10 <sup>-3</sup> 3	%I <sub>γ</sub> =0.52 5 Mult.: α(K)exp=0.0020 6 ( <b>1976Mu03</b> ). %I <sub>γ</sub> =0.0027 13 α(K)=0.001616 23; α(L)=0.000277 4; α(M)=6.62×10 <sup>-5</sup> 9 α(N)=1.807×10 <sup>-5</sup> 25; α(O)=4.59×10 <sup>-6</sup> 6; α(P)=8.98×10 <sup>-7</sup> 13; α(Q)=6.44×10 <sup>-8</sup> 9 α(IPF)=0.0002133 30 %I <sub>γ</sub> =0.102 6
1616.3 2	0.12 3	1659.19	(1 <sup>-</sup> )	42.835	2 <sup>+</sup>	[E1]	2.18×10 <sup>-3</sup> 3	Mult.: α(K)exp<0.005 ( <b>1976Mu03</b> ). α(K)=0.001596 22; α(L)=0.000274 4; α(M)=6.53×10 <sup>-5</sup> 9 α(N)=1.784×10 <sup>-5</sup> 25; α(O)=4.53×10 <sup>-6</sup> 6; α(P)=8.87×10 <sup>-7</sup> 12; α(Q)=6.36×10 <sup>-8</sup> 9 α(IPF)=0.0002215 31 %I <sub>γ</sub> =0.0030 8
1618.80 4	4.64 18	1661.651	(1 <sup>+</sup> )	42.835	2 <sup>+</sup>	(M1)	0.01519 21	α(K)=0.01183 17; α(L)=0.002335 33; α(M)=0.000568 8 α(N)=0.0001557 22; α(O)=3.97×10 <sup>-5</sup> 6; α(P)=7.81×10 <sup>-6</sup> 11; α(Q)=5.61×10 <sup>-7</sup> 8 α(IPF)=0.0002516 35 %I <sub>γ</sub> =0.115 7
1628.17 5	2.21 11	1670.990	(3 <sup>-</sup> )	42.835	2 <sup>+</sup>	(E1)	2.16×10 <sup>-3</sup> 3	Mult.: α(K)exp=0.014 2 ( <b>1976Mu03</b> ). α(K)=0.001577 22; α(L)=0.000270 4; α(M)=6.45×10 <sup>-5</sup> 9 α(N)=1.762×10 <sup>-5</sup> 25; α(O)=4.48×10 <sup>-6</sup> 6; α(P)=8.76×10 <sup>-7</sup> 12; α(Q)=6.29×10 <sup>-8</sup> 9 α(IPF)=0.0002295 32 %I <sub>γ</sub> =0.055 4
1637.95 5	6.5 8	1680.80	(2 <sup>+</sup> )	42.835	2 <sup>+</sup>	(M1)	0.01474 21	Mult.: α(K)exp<0.005 ( <b>1976Mu03</b> ). E1 or E2 from α(K)exp, Δπ=yes from level scheme. α(K)=0.01146 16; α(L)=0.002262 32; α(M)=0.000550 8 α(N)=0.0001508 21; α(O)=3.84×10 <sup>-5</sup> 5; α(P)=7.56×10 <sup>-6</sup> 11; α(Q)=5.44×10 <sup>-7</sup> 8 α(IPF)=0.000268 4 %I <sub>γ</sub> =0.161 21
1659.18 10	0.51 4	1659.19	(1 <sup>-</sup> )	0	0 <sup>+</sup>	[E1]	2.13×10 <sup>-3</sup> 3	Mult.: α(K)exp=0.014 2 ( <b>1976Mu03</b> ). α(K)=0.001529 21; α(L)=0.000262 4; α(M)=6.25×10 <sup>-5</sup> 9 α(N)=1.707×10 <sup>-5</sup> 24; α(O)=4.34×10 <sup>-6</sup> 6; α(P)=8.49×10 <sup>-7</sup> 12; α(Q)=6.10×10 <sup>-8</sup> 9 α(IPF)=0.0002507 35 %I <sub>γ</sub> =0.0127 12
1661.63 5	9.1 3	1661.651	(1 <sup>+</sup> )	0	0 <sup>+</sup>	(M1)	0.01421 20	α(K)=0.01102 15; α(L)=0.002175 30; α(M)=0.000529 7

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

$E_\gamma$ †	$I_\gamma$ †g	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. @	$\alpha^f$	Comments
								$\alpha(N)=0.0001450$ 20; $\alpha(O)=3.69\times 10^{-5}$ 5; $\alpha(P)=7.27\times 10^{-6}$ 10; $\alpha(Q)=5.23\times 10^{-7}$ 7 $\alpha(IPF)=0.000290$ 4 %I $\gamma=0.226$ 13 Mult.: $\alpha(K)\text{exp}=0.010$ 1 ( <b>1976Mu03</b> ).
1669.50 5	0.63 4	1712.37	(3 <sup>+</sup> )	42.835	2 <sup>+</sup>	[M1,E2]	0.010 4	$\alpha(K)=0.0075$ 34; $\alpha(L)=0.0015$ 6; $\alpha(M)=3.7\times 10^{-4}$ 15 $\alpha(N)=1.0\times 10^{-4}$ 4; $\alpha(O)=2.6\times 10^{-5}$ 11; $\alpha(P)=5.1\times 10^{-6}$ 21; $\alpha(Q)=3.5\times 10^{-7}$ 16; $\alpha(IPF)=2.0\times 10^{-4}$ 9 %I $\gamma=0.0156$ 12
1680.69 18	0.043 8	1680.80	(2 <sup>+</sup> )	0	0 <sup>+</sup>	[E2]	0.00540 8	$\alpha(K)=0.00412$ 6; $\alpha(L)=0.000873$ 12; $\alpha(M)=0.0002145$ 30 $\alpha(N)=5.88\times 10^{-5}$ 8; $\alpha(O)=1.489\times 10^{-5}$ 21; $\alpha(P)=2.89\times 10^{-6}$ 4; $\alpha(Q)=1.852\times 10^{-7}$ 26 $\alpha(IPF)=0.0001130$ 16 %I $\gamma=0.00107$ 21 %I $\gamma=0.0012$ 5 %I $\gamma=0.00216$ 24
<sup>x</sup> 1690.15 16	0.05 2							
1714.61 9	0.087 9	1856.55	3 <sup>+</sup>	141.986	4 <sup>+</sup>			
1737.94 5	4.5 3	1780.799	2 <sup>+</sup>	42.835	2 <sup>+</sup>	(M1)	0.01267 18	$\alpha(K)=0.00975$ 14; $\alpha(L)=0.001924$ 27; $\alpha(M)=0.000468$ 7 $\alpha(N)=0.0001283$ 18; $\alpha(O)=3.27\times 10^{-5}$ 5; $\alpha(P)=6.43\times 10^{-6}$ 9; $\alpha(Q)=4.63\times 10^{-7}$ 6; $\alpha(IPF)=0.000360$ 5 %I $\gamma=0.112$ 9 Mult.: $\alpha(K)\text{exp}=0.013$ 2 ( <b>1976Mu03</b> ).
1756.1 2	0.057 9	1898.07	2 <sup>+</sup>	141.986	4 <sup>+</sup>	[E2]	0.00502 7	$\alpha(K)=0.00381$ 5; $\alpha(L)=0.000797$ 11; $\alpha(M)=0.0001955$ 27 $\alpha(N)=5.36\times 10^{-5}$ 8; $\alpha(O)=1.358\times 10^{-5}$ 19; $\alpha(P)=2.63\times 10^{-6}$ 4; $\alpha(Q)=1.709\times 10^{-7}$ 24 $\alpha(IPF)=0.0001411$ 20 %I $\gamma=0.00141$ 23 %I $\gamma=0.0213$ 20
1759.30 5	0.86 7	1901.31	2 <sup>+</sup> ,3	141.986	4 <sup>+</sup>			%I $\gamma=8.9\times 10^{-4}$ 20
1764.2 2	0.036 8	1906.10	2 <sup>+</sup> ,3,4 <sup>+</sup>	141.986	4 <sup>+</sup>			%I $\gamma=0.0020$ 4
<sup>x</sup> 1769.47 7	0.079 14							%I $\gamma=0.0223$ 16
1778.92 6	0.90 5	1821.75		42.835	2 <sup>+</sup>			$\alpha(K)=0.00372$ 5; $\alpha(L)=0.000775$ 11; $\alpha(M)=0.0001900$ 27
1780.5 2	0.16 4	1780.799	2 <sup>+</sup>	0	0 <sup>+</sup>	[E2]	0.00491 7	$\alpha(N)=5.21\times 10^{-5}$ 7; $\alpha(O)=1.319\times 10^{-5}$ 18; $\alpha(P)=2.56\times 10^{-6}$ 4; $\alpha(Q)=1.666\times 10^{-7}$ 23 $\alpha(IPF)=0.0001504$ 21 %I $\gamma=0.0040$ 10 %I $\gamma=3.7\times 10^{-4}$ 13 %I $\gamma=0.0094$ 11 %I $\gamma=9.2\times 10^{-4}$ 23
1794.7 4	0.015 5	1836.73	2 <sup>+</sup> ,1 <sup>-</sup>	42.835	2 <sup>+</sup>			%I $\gamma=0.00273$ 28
<sup>x</sup> 1801.53 6	0.38 4							%I $\gamma=0.00146$ 31
1804.8 2	0.037 9	1947.07	2 <sup>+</sup> ,3,4 <sup>+</sup>	141.986	4 <sup>+</sup>			
1813.73 6	0.110 10	1856.55	3 <sup>+</sup>	42.835	2 <sup>+</sup>			
1821.70 12	0.059 12	1821.75		0	0 <sup>+</sup>			

<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

$E_\gamma$ †	$I_\gamma$ †g	$E_i$ (level)	$J_i^\pi$	$E_f$	$J_f^\pi$	Mult. @	$\alpha^f$	Comments
1827.39 5	0.77 6	1870.19	1,2 <sup>+</sup>	42.835	2 <sup>+</sup>			%I <sub>γ</sub> =0.0191 17
1832.6 3	0.019 9	1875.52	1,2 <sup>+</sup>	42.835	2 <sup>+</sup>			%I <sub>γ</sub> =4.7×10 <sup>-4</sup> 23
1836.71 6	0.19 2	1836.73	2 <sup>+</sup> ,1 <sup>-</sup>	0	0 <sup>+</sup>			%I <sub>γ</sub> =0.0047 6
1843.86 5	0.36 3	1886.756	(1 <sup>+</sup> )	42.835	2 <sup>+</sup>	[M1,E2]	0.0078 32	α(K)=0.0059 24; α(L)=0.0012 5; α(M)=2.9×10 <sup>-4</sup> 11 α(N)=7.9×10 <sup>-5</sup> 30; α(O)=2.0×10 <sup>-5</sup> 8; α(P)=3.9×10 <sup>-6</sup> 15; α(Q)=2.8×10 <sup>-7</sup> 12; α(IPF)=3.2×10 <sup>-4</sup> 14 %I <sub>γ</sub> =0.0089 9
1855.34 12	0.06 2	1898.07	2 <sup>+</sup>	42.835	2 <sup>+</sup>	[M1,E2]	0.0077 31	α(K)=0.0058 24; α(L)=0.0012 4; α(M)=2.8×10 <sup>-4</sup> 11 α(N)=7.8×10 <sup>-5</sup> 30; α(O)=2.0×10 <sup>-5</sup> 8; α(P)=3.9×10 <sup>-6</sup> 15; α(Q)=2.7×10 <sup>-7</sup> 12; α(IPF)=3.3×10 <sup>-4</sup> 15 %I <sub>γ</sub> =0.0015 5
1858.7 2	0.031 5	1901.31	2 <sup>+</sup> ,3	42.835	2 <sup>+</sup>			%I <sub>γ</sub> =7.7×10 <sup>-4</sup> 13
1863.19 18	0.038 6	1906.10	2 <sup>+</sup> ,3,4 <sup>+</sup>	42.835	2 <sup>+</sup>			%I <sub>γ</sub> =9.4×10 <sup>-4</sup> 16
1866.48 6	0.20 3	1909.31	2 <sup>+</sup> ,1	42.835	2 <sup>+</sup>			%I <sub>γ</sub> =0.0050 8
1869.81 15	0.040 8	1870.19	1,2 <sup>+</sup>	0	0 <sup>+</sup>			%I <sub>γ</sub> =9.9×10 <sup>-4</sup> 20
1875.56 12	0.034 8	1875.52	1,2 <sup>+</sup>	0	0 <sup>+</sup>			%I <sub>γ</sub> =8.4×10 <sup>-4</sup> 20
1881.70 5	0.30 3	1924.55	1,2 <sup>+</sup>	42.835	2 <sup>+</sup>			%I <sub>γ</sub> =0.0074 8
1886.80 5	0.50 3	1886.756	(1 <sup>+</sup> )	0	0 <sup>+</sup>	[M1]	0.01034 14	α(K)=0.00779 11; α(L)=0.001536 22; α(M)=0.000373 5 α(N)=0.0001024 14; α(O)=2.61×10 <sup>-5</sup> 4; α(P)=5.14×10 <sup>-6</sup> 7; α(Q)=3.70×10 <sup>-7</sup> 5; α(IPF)=0.000502 7 %I <sub>γ</sub> =0.0124 9
1897.8 2	0.018 4	1898.07	2 <sup>+</sup>	0	0 <sup>+</sup>	[E2]	0.00443 6	α(K)=0.00333 5; α(L)=0.000680 10; α(M)=0.0001663 23 α(N)=4.56×10 <sup>-5</sup> 6; α(O)=1.156×10 <sup>-5</sup> 16; α(P)=2.247×10 <sup>-6</sup> 31; α(Q)=1.482×10 <sup>-7</sup> 21 α(IPF)=0.0001977 28 %I <sub>γ</sub> =4.5×10 <sup>-4</sup> 10
1904.26 10	0.049 6	1947.07	2 <sup>+</sup> ,3,4 <sup>+</sup>	42.835	2 <sup>+</sup>			%I <sub>γ</sub> =0.00122 16
1909.27 9	0.057 6	1909.31	2 <sup>+</sup> ,1	0	0 <sup>+</sup>			%I <sub>γ</sub> =0.00141 16
1924.56 5	0.33 3	1924.55	1,2 <sup>+</sup>	0	0 <sup>+</sup>			%I <sub>γ</sub> =0.0082 8
1940.43 18	0.022 4	1983.33	(1 <sup>-</sup> ,2 <sup>+</sup> )	42.835	2 <sup>+</sup>			%I <sub>γ</sub> =5.5×10 <sup>-4</sup> 10
<sup>x</sup> 1944.79 15	0.014 7							%I <sub>γ</sub> =3.5×10 <sup>-4</sup> 18
<sup>x</sup> 1953.6 5	0.004 2							%I <sub>γ</sub> =1.0×10 <sup>-4</sup> 5
<sup>x</sup> 1974.2 3	0.012 4							%I <sub>γ</sub> =3.0×10 <sup>-4</sup> 10
1983.2 3	0.012 4	1983.33	(1 <sup>-</sup> ,2 <sup>+</sup> )	0	0 <sup>+</sup>			%I <sub>γ</sub> =3.0×10 <sup>-4</sup> 10
1989.63 8	0.042 8	2032.49	1,2 <sup>+</sup>	42.835	2 <sup>+</sup>			%I <sub>γ</sub> =0.00104 21
<sup>x</sup> 2000.3 5	0.005 3							%I <sub>γ</sub> =1.2×10 <sup>-4</sup> 8
2029.39 8	0.047 5	2171.41	2 <sup>+</sup> ,3	141.986	4 <sup>+</sup>			%I <sub>γ</sub> =0.00117 14
2032.49 11	0.041 15	2032.49	1,2 <sup>+</sup>	0	0 <sup>+</sup>			%I <sub>γ</sub> =0.0010 4
<sup>x</sup> 2058.18 6	0.058 4							%I <sub>γ</sub> =0.00144 12



<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) **1976Mu03** (continued)

γ(<sup>246</sup>Cm) (continued)

<u>E<sub>γ</sub><sup>†</sup></u>	<u>I<sub>γ</sub><sup>‡g</sup></u>	<u>E<sub>i</sub>(level)</u>	<u>J<sub>i</sub><sup>π</sup></u>	<u>E<sub>f</sub></u>	<u>J<sub>f</sub><sup>π</sup></u>	<u>Comments</u>
<sup>x</sup> 2065.0 2	0.017 4					%I <sub>γ</sub> =4.2×10 <sup>-4</sup> 10
<sup>x</sup> 2068.69 8	0.061 4					%I <sub>γ</sub> =0.00151 12
<sup>x</sup> 2083.1 2	0.013 3					%I <sub>γ</sub> =3.2×10 <sup>-4</sup> 8
<sup>x</sup> 2091.4 3	0.008 2					%I <sub>γ</sub> =2.0×10 <sup>-4</sup> 5
2103.18 7	0.063 6	2146.04	1,2 <sup>+</sup>	42.835	2 <sup>+</sup>	%I <sub>γ</sub> =0.00156 17
<sup>x</sup> 2123.66 7	0.105 7					%I <sub>γ</sub> =0.00260 21
2128.57 9	0.052 5	2171.41	2 <sup>+</sup> ,3	42.835	2 <sup>+</sup>	%I <sub>γ</sub> =0.00129 14
<sup>x</sup> 2140.2 3	0.009 2					%I <sub>γ</sub> =2.2×10 <sup>-4</sup> 5
2146.05 7	0.123 7	2146.04	1,2 <sup>+</sup>	0	0 <sup>+</sup>	%I <sub>γ</sub> =0.00305 22
<sup>x</sup> 2149.5 2	0.019 3					%I <sub>γ</sub> =4.7×10 <sup>-4</sup> 8
<sup>x</sup> 2156.05 17	0.014 3					%I <sub>γ</sub> =3.5×10 <sup>-4</sup> 8
<sup>x</sup> 2168.33 7	0.044 4					%I <sub>γ</sub> =0.00109 11
<sup>x</sup> 2184.79 15	0.011 2					%I <sub>γ</sub> =2.7×10 <sup>-4</sup> 5
<sup>x</sup> 2203.4 5	0.003 1					%I <sub>γ</sub> =7.4×10 <sup>-5</sup> 25
<sup>x</sup> 2234.4 3	0.006 2					%I <sub>γ</sub> =1.5×10 <sup>-4</sup> 5
<sup>x</sup> 2259.2 4	0.004 2					%I <sub>γ</sub> =1.0×10 <sup>-4</sup> 5
<sup>x</sup> 2287.0 6	0.002 1					%I <sub>γ</sub> =5.0×10 <sup>-5</sup> 25

<sup>†</sup> From **1976Mu03**.

<sup>‡</sup> I(γ+ce) deduced from coincidence measurements. E<sub>γ</sub> from E(level) difference.

# γ-ray placed by the evaluator on basis of good energy fit.

@ From conversion electron data in **1976Mu03**, **1966Or01**, except as noted. These multiplicities are provided in the Adopted Gammas. **1976Mu03** normalized the α(K)exp (E1) for 1036, 1062 and 1079 γ rays to the weighted average of the three theoretical values by Hager Seltzer. The evaluator deduced the re-normalization value using BrICC and considered the correction factor to be negligible (0.997) for the conversion electron data in **1976Mu03**. **1966Or01** normalized the 800 γ ray to α(K)exp(E1) =0.00524. The evaluator deduced the re-normalization factor using BrICC and considered it to be negligible (0.998) for the conversion electron data for E<sub>γ</sub>= 798.804 in **1966Or01**.

& From Adopted Gammas.

<sup>a</sup> From Adopted Gammas. α(K)exp used for normalization of γ- and ce-spectra. See general comments for multi.

<sup>b</sup> α(K)exp=0.009 2 for the 1123+1124 peak (**1976Mu03**); α(K)exp=0.007 2 (**1966Or01**). α(K)exp indicates that both γ rays are predominantly E2.

<sup>c</sup> α(K)exp=0.050 10 for the 505.61+507.10 multiplet (**1976Mu03**).

<sup>d</sup> α(K)exp=0.0045 14 for the 1529.00+1530.7 doublet (**1976Mu03**).

<sup>e</sup> α(K)exp=0.17 6 for the 554.4+554.68 doublet (**1976Mu03**).

<sup>f</sup> **Additional information 1.**

<sup>g</sup> For absolute intensity per 100 decays, multiply by 0.0248 11.

<sup>h</sup> Multiply placed with undivided intensity.

<sup>i</sup> Placement of transition in the level scheme is uncertain.

<sup>x</sup> γ ray not placed in level scheme.

$^{246}\text{Am} \beta^-$  decay (25.0 min) 1976Mu03

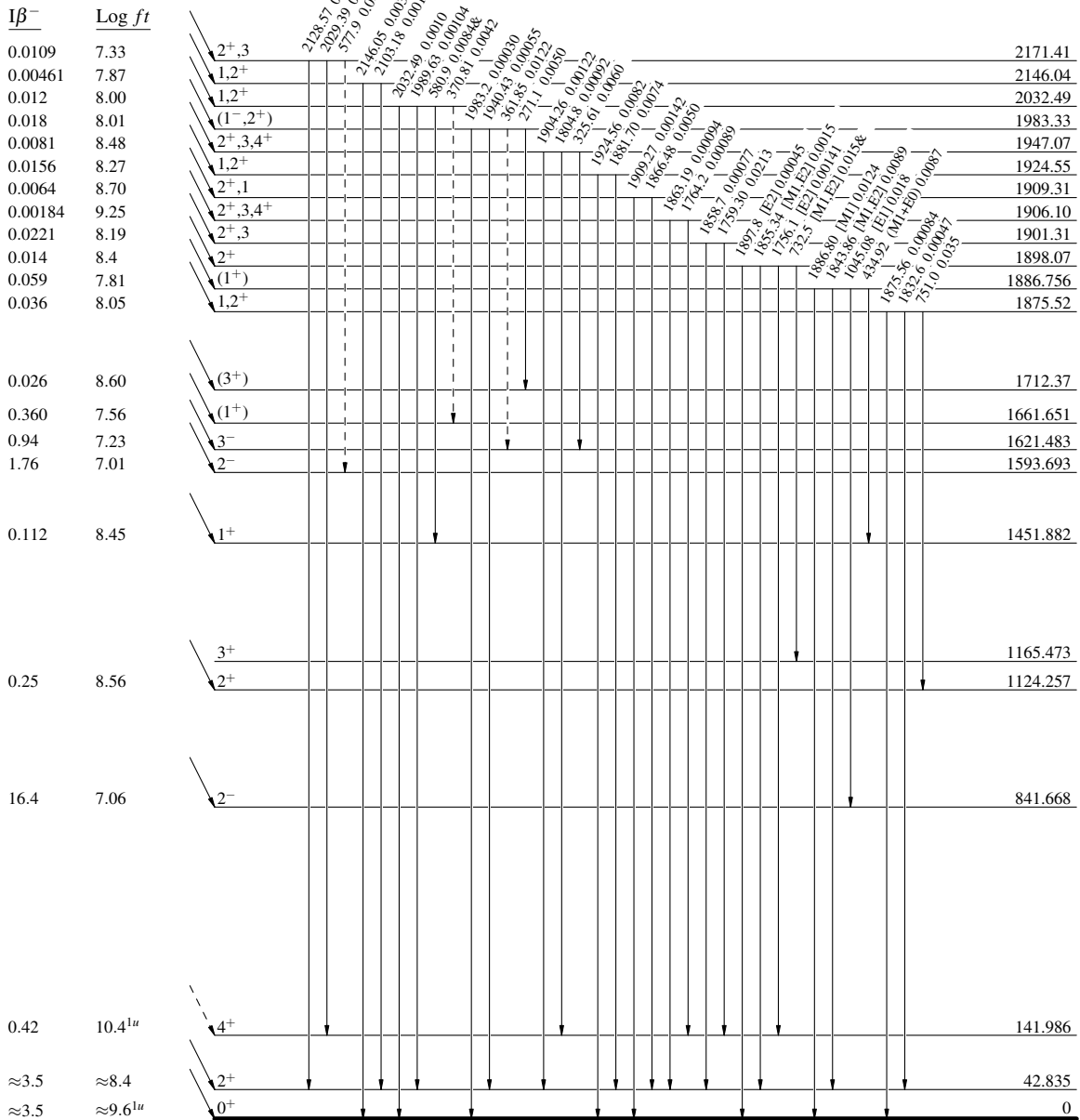
Decay Scheme

Intensities:  $I_\gamma$  per 100 parent decays  
& Multiply placed: undivided intensity given

Legend

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

$(2^-)$  0.0+x 25.0 min 2  
 $Q_{\beta^-} = 2377$  syst  
 $\% \beta^- = 100$   
 $^{246}_{95}\text{Am}_{151}$



$^{246}_{96}\text{Cm}_{150}$

123.2 ps 23  
4706 y 40

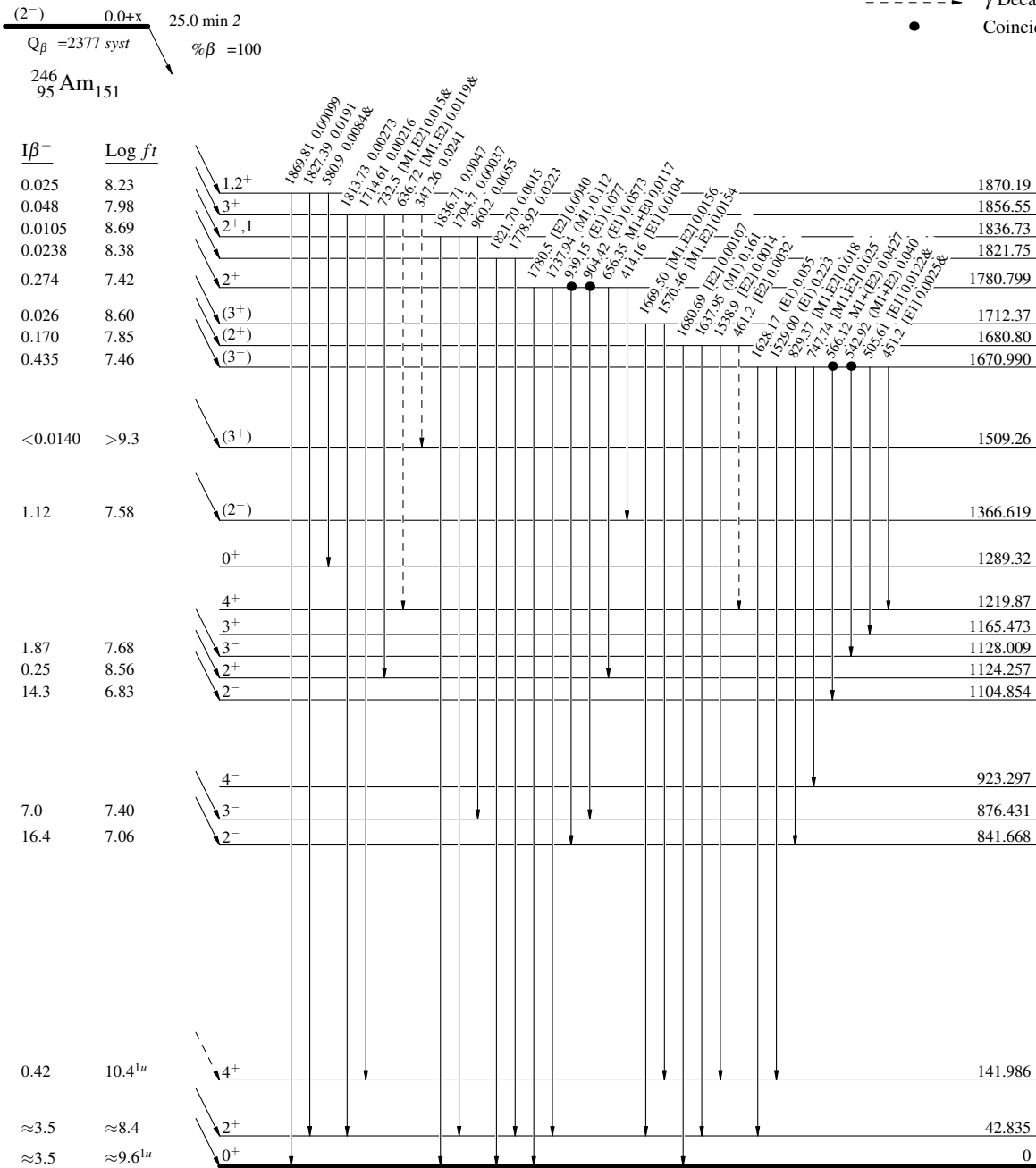
<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) 1976Mu03

Decay Scheme (continued)

Intensities: I<sub>γ</sub> per 100 parent decays  
& Multiply placed: undivided intensity given

Legend

- I<sub>γ</sub> < 2% × I<sub>γ</sub><sup>max</sup>
- I<sub>γ</sub> < 10% × I<sub>γ</sub><sup>max</sup>
- I<sub>γ</sub> > 10% × I<sub>γ</sub><sup>max</sup>
- - - - - γ Decay (Uncertain)
- Coincidence



<sup>246</sup>Cm<sub>150</sub>

123.2 ps 23  
4706 y 40

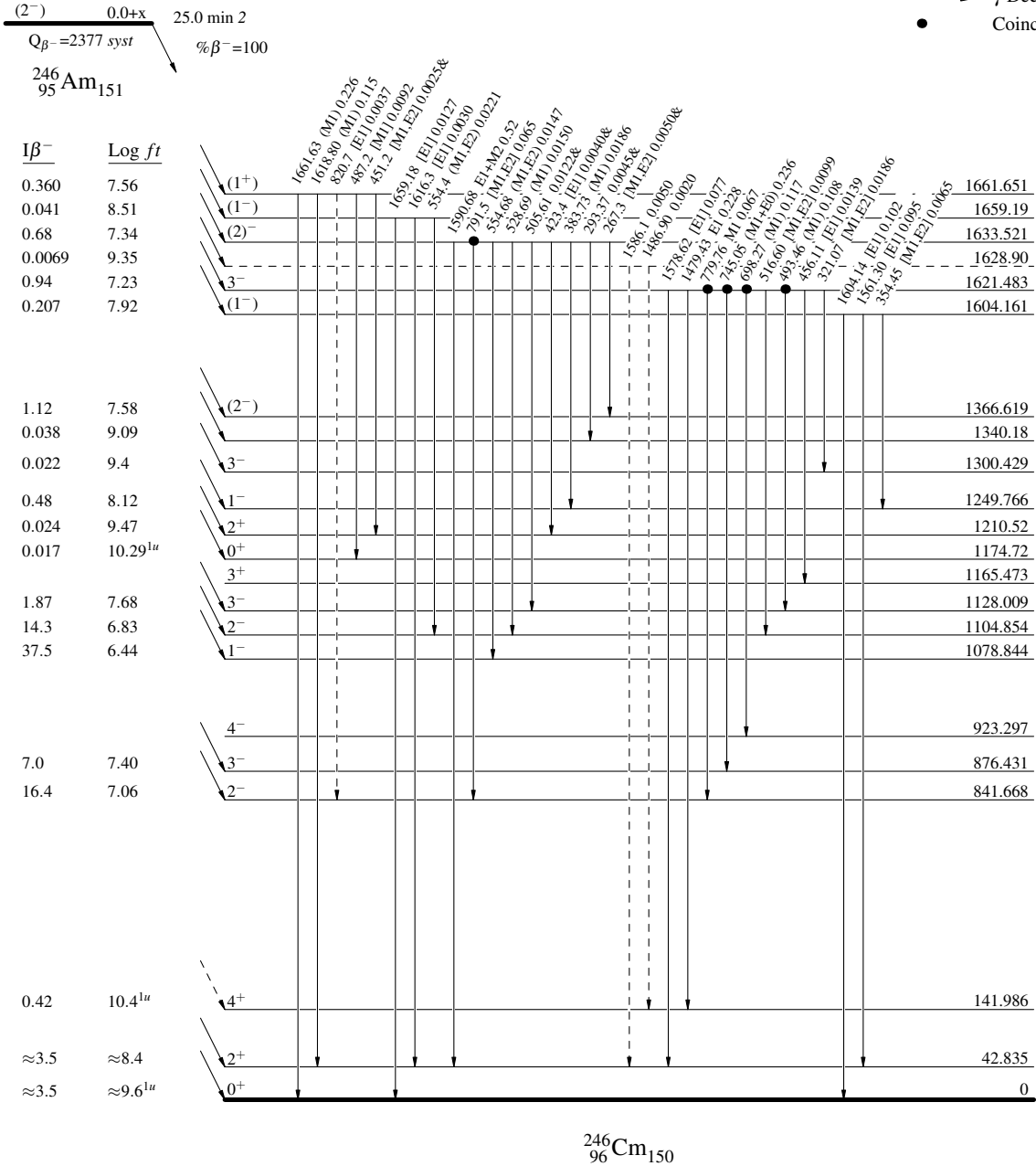
$^{246}\text{Am}$   $\beta^-$  decay (25.0 min) 1976Mu03

Decay Scheme (continued)

Intensities:  $I_\gamma$  per 100 parent decays  
& Multiply placed: undivided intensity given

Legend

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



123.2 ps 23  
4706 y 40

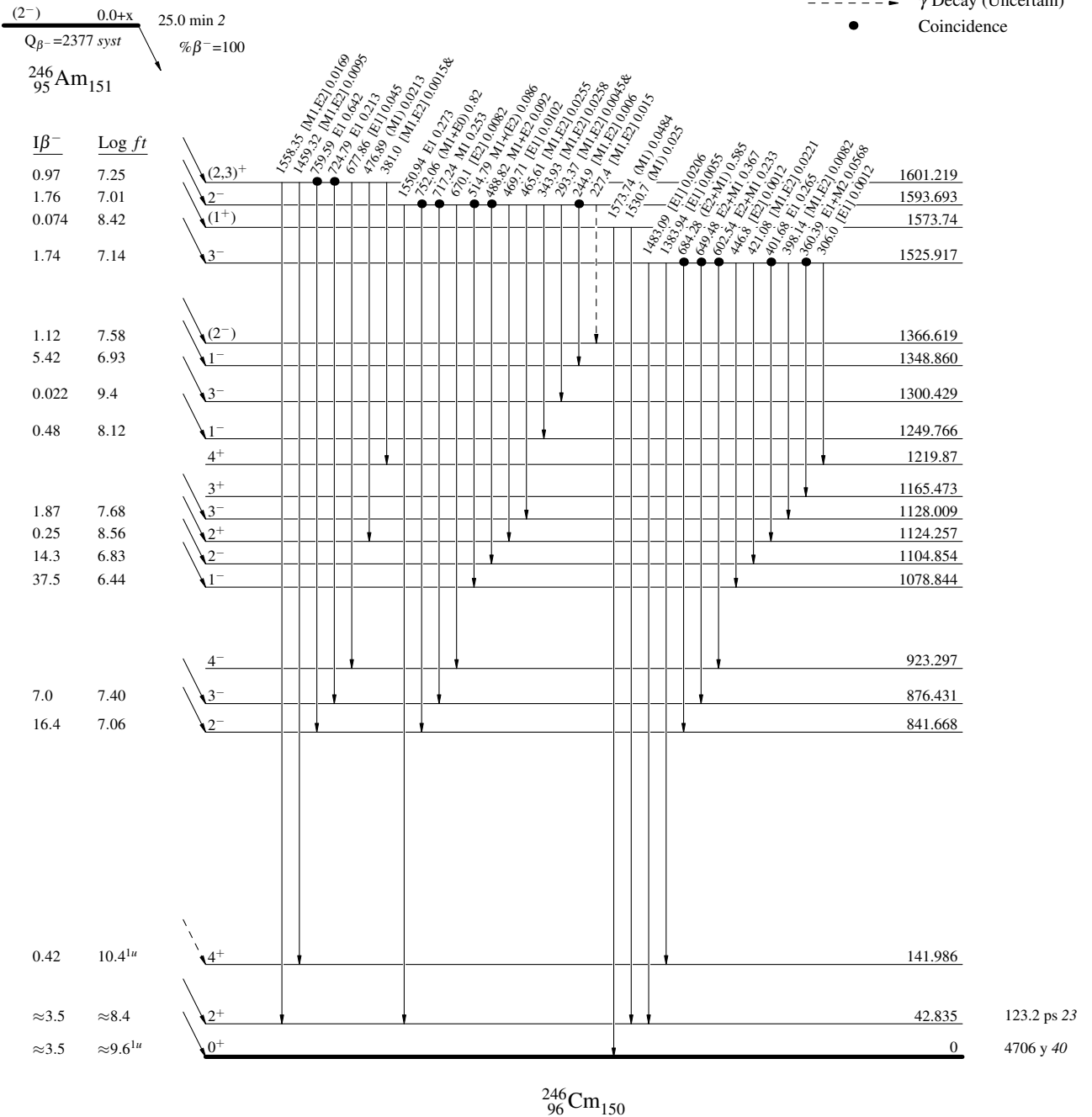
$^{246}\text{Am} \beta^-$  decay (25.0 min) 1976Mu03

Decay Scheme (continued)

Intensities:  $I_\gamma$  per 100 parent decays  
& Multiply placed: undivided intensity given

Legend

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



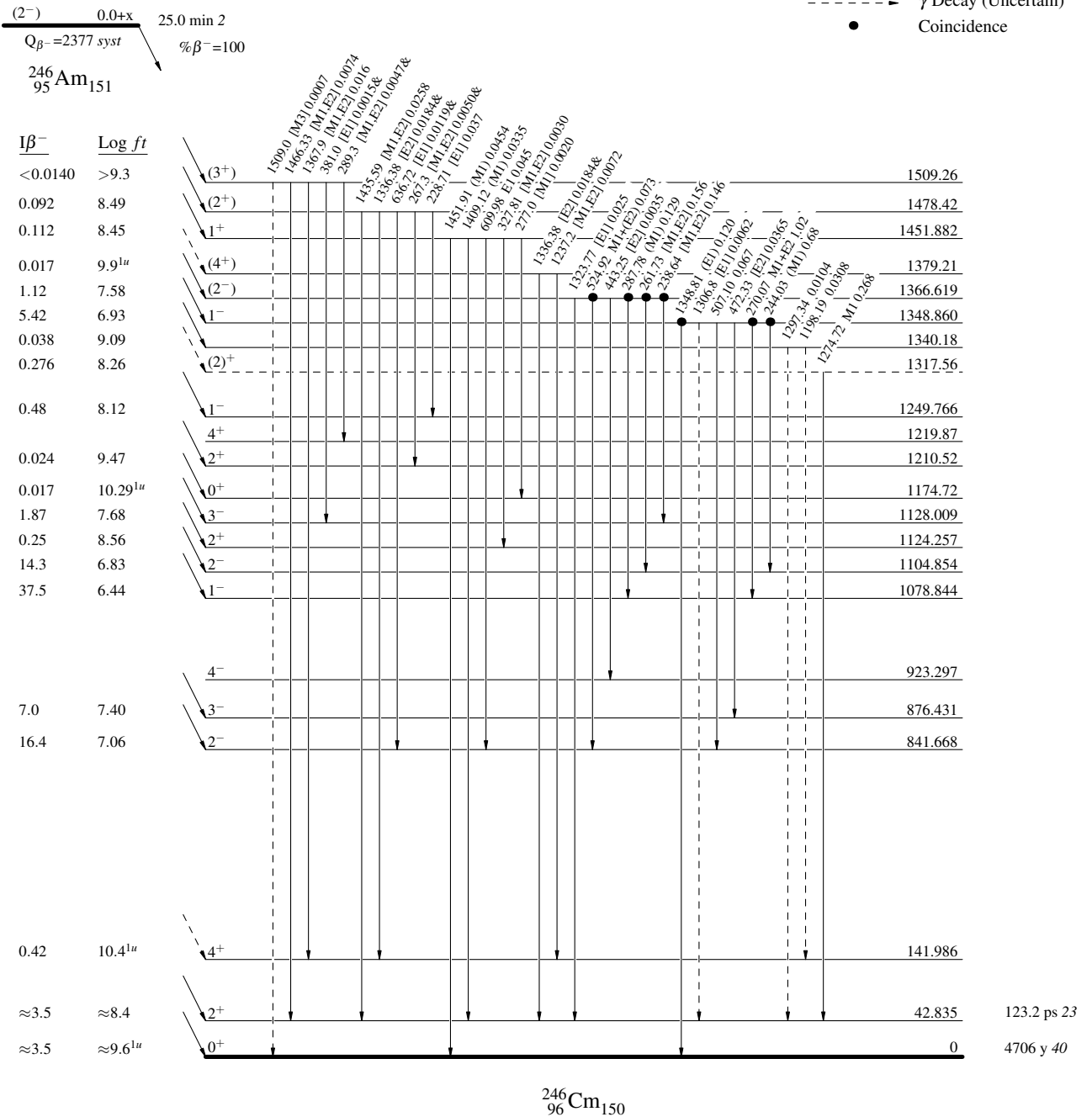
<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) 1976Mu03

Decay Scheme (continued)

Intensities: I<sub>γ</sub> per 100 parent decays  
& Multiply placed: undivided intensity given

Legend

- I<sub>γ</sub> < 2% × I<sub>γ</sub><sup>max</sup>
- I<sub>γ</sub> < 10% × I<sub>γ</sub><sup>max</sup>
- I<sub>γ</sub> > 10% × I<sub>γ</sub><sup>max</sup>
- - - - - γ Decay (Uncertain)
- Coincidence



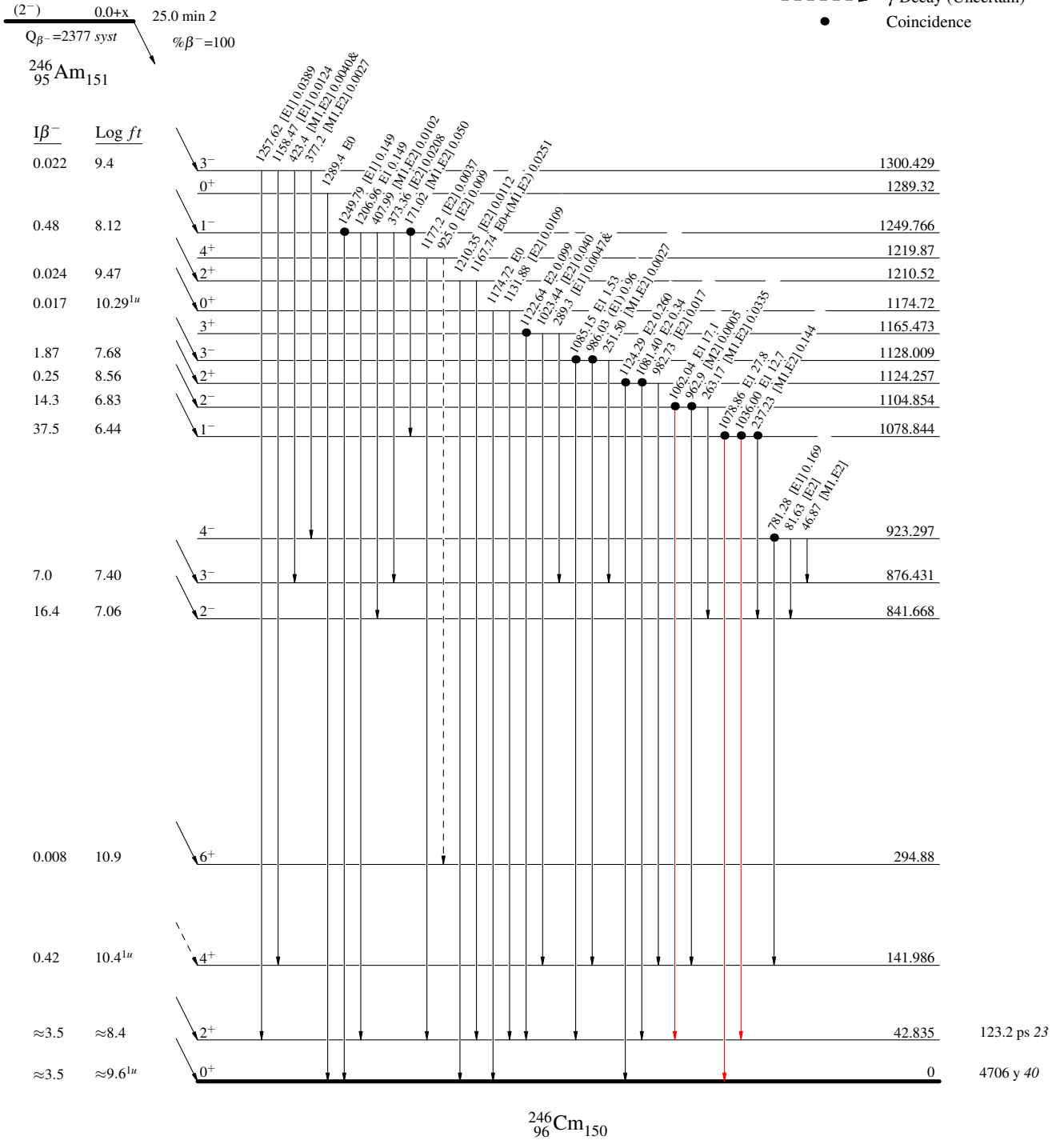
<sup>246</sup>Am β<sup>-</sup> decay (25.0 min) 1976Mu03

Decay Scheme (continued)

Intensities: I<sub>γ</sub> per 100 parent decays  
& Multiply placed: undivided intensity given

Legend

- I<sub>γ</sub> < 2% × I<sub>γ</sub><sup>max</sup>
- I<sub>γ</sub> < 10% × I<sub>γ</sub><sup>max</sup>
- I<sub>γ</sub> > 10% × I<sub>γ</sub><sup>max</sup>
- - - - - γ Decay (Uncertain)
- Coincidence



123.2 ps 23  
4706 y 40

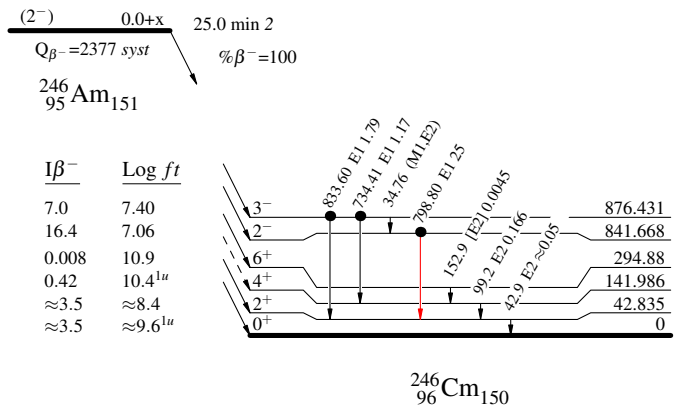
$^{246}\text{Am}$   $\beta^-$  decay (25.0 min) 1976Mu03

Decay Scheme (continued)

Intensities:  $I_\gamma$  per 100 parent decays  
& Multiply placed: undivided intensity given

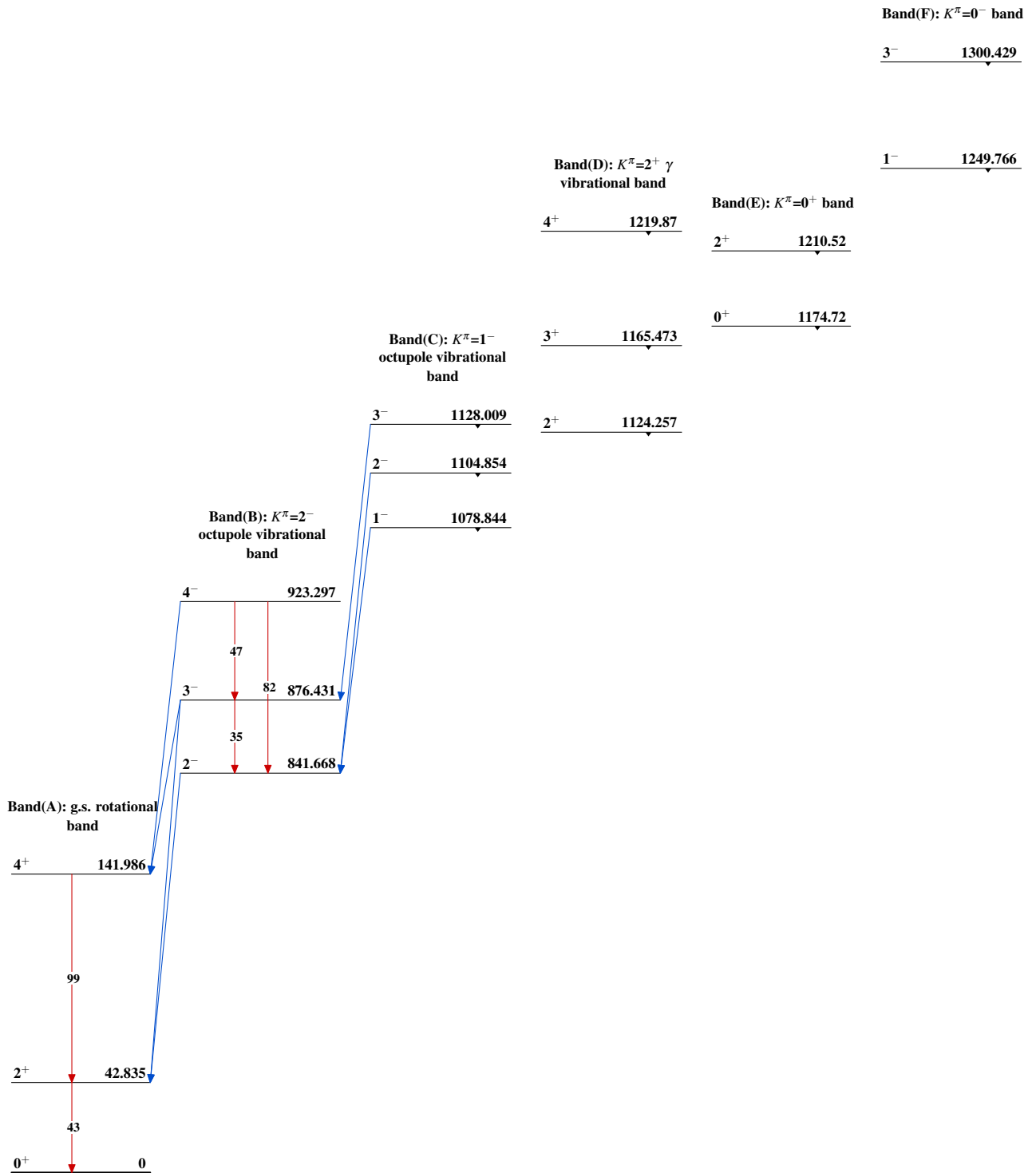
Legend

- $I_\gamma < 2\% \times I_\gamma^{\text{max}}$
- $I_\gamma < 10\% \times I_\gamma^{\text{max}}$
- $I_\gamma > 10\% \times I_\gamma^{\text{max}}$
- Coincidence



123.2 ps 23  
4706 y 40



$^{246}\text{Am} \beta^-$  decay (25.0 min) 1976Mu03

$^{246}\text{Am}$   $\beta^-$  decay (25.0 min) 1976Mu03 (continued)

		<b>Band(L): Third <math>K^\pi=1^-</math> band</b>
		<u>(3<sup>-</sup>) 1670.990</u>
		<b>Band(K): Second <math>K^\pi=2^-</math> band</b>
		<u>(2<sup>-</sup>) 1633.521</u>
		<u>3<sup>-</sup> 1621.483</u>
		<u>(1<sup>-</sup>) 1604.161</u>
		<u>2<sup>-</sup> 1593.693</u>
		<b>Band(J): <math>K^\pi=3^-</math> octupole vibrational band head</b>
		<u>3<sup>-</sup> 1525.917</u>
	<b>Band(I): <math>K^\pi=1^+</math> band</b>	
	<u>(3<sup>+</sup>) 1509.26</u>	
	<u>(2<sup>+</sup>) 1478.42</u>	
	<u>1<sup>+</sup> 1451.882</u>	
<b>Band(G): Second <math>K^\pi=0^+</math> band</b>		
<u>(4<sup>+</sup>) 1379.21</u>		
	<b>Band(H): Second <math>K^\pi=1^-</math> band</b>	
	<u>(2<sup>-</sup>) 1366.619</u>	
	<u>1<sup>-</sup> 1348.860</u>	
<u>(2<sup>+</sup>) 1317.56</u>		
<u>0<sup>+</sup> 1289.32</u>		

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$^{246}\text{Am}$   $\beta^-$  decay (25.0 min) 1976Mu03 (continued)

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

(3<sup>+</sup>) 1712.37  
↓

(2<sup>+</sup>) 1680.80  
↓

(1<sup>+</sup>) 1661.651  
↓

$^{246}_{96}\text{Cm}_{150}$