Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	ENSDF	30-Nov-2014

Q(β^-)=−5549 *56*; S(n)=7875 *55*; S(p)=4190 *55*; Q(α)=8953 *20* 2012Wa38

Calculations, compilations:
Cluster model for α decay, Geiger-Nuttall plot: 1991Bu05.
E1 transitions, octupole deformation: 1989De11.
Equilibrium deformation, energy: 1988So08, 1984Na22.
Levels, B(λ) ratios: 1995De13, 1993Dz01, 1986Le05.
n-p interaction energy: 1990Mo11.
Octupole shapes and shape changes: 1987Na10.
Quasibands in even-even nuclei: 1984Sa37.
Spontaneous emission of heavy ions: 1986Po06.
Super- and hyperdeformed configurations: 1995We02.
Other reactions: ^{176}Yb(^{48}Ca,4nγ), E=206, 210.5 MeV: 2001He05.

^{220}Th Levels

Cross Reference (XREF) Flags

A ^{224}U α decay
B ^{198}Pt(^{26}Mg,4nγ)
C ^{208}Pb(^{16}O,4nγ)

E(level)[†#]	J$^\pi$[‡]	$T_{1/2}$	XREF	Comments
0[@]	0$^+$	9.7 μs *6*	ABC	%α=100; %ε=2×10^{-7} syst $T_{1/2}$: From 1973Ha32. Other value: 10.5 μs *38* (2006Pe17). %ε: From gross β-decay strength function (1973Ta30). 1973HaWU report %α>90 but basis not given. From log *ft*>3.6 one gets a limit of <1×10^{-5}% for I(ε+β^+) to any single level in ^{220}Ac.
386.50[@] *10*	2$^+$		BC	J$^\pi$: 386γ E2 to 0$^+$.
759.80[@] *15*	4$^+$		BC	J$^\pi$: 373γ E2 to 2$^+$.
993.77[&] *17*	5$^-$		BC	J$^\pi$: 234γ E1 to 4$^+$.
1166.03[@] *17*	6$^+$		BC	J$^\pi$: 172γ E1 to 5$^-$, 406γ (E2) to 4$^+$.
1328.99[&] *18*	7$^-$		BC	J$^\pi$: 335γ E2 to 5$^-$, 163γ E1 to 6$^+$.
1598.16[@] *20*	8$^+$		BC	J$^\pi$: 269γ E1 to 7$^-$, 432γ E2 to 6$^+$.
1718.89[&] *22*	9$^-$		BC	J$^\pi$: 389γ E2 to 7$^-$, 120γ E1 to 8$^+$.
1934.0[d] *11*	8$^+$		B	
2012.73[@] *23*	10$^+$		BC	J$^\pi$: 293γ E1 to 9$^-$, 415γ (E2) to 8$^+$.
2101.6[c] *4*	10$^{(+)}$		B	
2158.87[&] *24*	11$^-$		BC	J$^\pi$: 440γ E2 to 9$^-$, 146γ E1 to 10$^+$.
2345.3[d] *11*	10		B	
2434.5[b] *4*	12$^-$		BC	J$^\pi$: 275γ (M1) to 11$^-$.
2441.9[@] *3*	12$^+$		BC	J$^\pi$: 283γ E1 to 11$^-$.
2461.5[c] *5*	11		B	
2555.2[&] *3*	13$^-$		BC	J$^\pi$: 113γ (E1) to 12$^+$, 396γ (M1) to 11$^-$.
2685.8[a] *3*	13$^-$		B	J$^\pi$: 244γ (E1) to 12$^+$, 517γ (E2) to 11$^-$.
2709.7?[c] *6*	(12)		B	

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Adopted Levels, Gammas (continued)

^{220}Th Levels (continued)

E(level)[†][#]	J$^\pi$[‡]	XREF	Comments
2885.0[@] *3*	14^+	BC	J$^\pi$: 199γ (E1) to 13^-, 443γ (E2) to 14^+.
2900?	(14^+)	C	
2957.7[c] *12*		B	
3004.8[&] *4*	15^-	BC	J$^\pi$: 450γ (E2) to 13^-.
3027.2[b] *6*	14^-	B	J$^\pi$: 593γ (E2) to 12^-.
3203.0[a] *4*	15^-	B	J$^\pi$: 518γ (E2) to 13^-.
3317.2 *6*	(15)	B	
3376.4[@] *6*	16^+	B	J$^\pi$: 372γ (E1) to 15^-, 492γ (E2) to 14^+.
3467.2[&] *5*	17^-	BC	J$^\pi$: 462γ (E2) to 15^-.
3480.6 *5*		B	
3559.1[b] *7*	(16^-)	B	
3681.5[a] *6*	$17^{(-)}$	B	J$^\pi$: 305γ (E1) to 15^+.
3867.1[@] *6*	18^+	B	J$^\pi$: 400γ (E1) to 17^-.
3953.7[&] *6*	19^-	BC	J$^\pi$: 486γ (E2) to 17^-.
4225.6 *7*	20	B	
4319.6[@] *7*	20^+	B	J$^\pi$: 366γ (E1) to 19^-.
4433.0[&] *7*	21^-	B	J$^\pi$: 479γ (E2) to 19^-.
4519.9[a] *7*	21^-	B	J$^\pi$: 566γ (E2) to 19^-.
4716.1?[@] *12*	(22^+)	B	
4892.0?[&] *8*	(23^-)	B	

[†] Deduced by evaluators from least-squares fit to γ-ray energies.
[‡] From rotational band structure in addition to arguments given to individual levels.
[#] Deduced by evaluators from least-squares fit to adopted γ-ray energies. The energies of the 2^+ to 0^+ and 4^+ to 2^+ transitions in ^{220}Th were previously assigned as 373.3 keV *1* keV and and 386.5 keV *1* (2006Re15), respectively. Based on the observation of (8095α)(386.5γ)-coin, and on the energy of 8095α group relative to that of 8479α, 2014Lo10 suggest that previous assignment is incorrect, and that the ordering of the 373.3- and 386.5-keV transitions should be reversed, thus defining 386.5 keV as the first excited 2^+ state in ^{220}Th.
[@] Band(A): The g.s. sequence, s=+1.
[&] Band(B): Yrast sequence based on 5^-, s=−1.
[a] Band(C): Yrare sequence based on 13^-.
[b] Band(D): Band based on 12^-.
[c] Band(E): Band based on $10^{(+)}$.
[d] Band(F): γ-ray sequence.

γ(^{220}Th)

E$_i$(level)	J$_i^\pi$	E$_\gamma$[#]	I$_\gamma$[#]	E$_f$	J$_f^\pi$	Mult.[‡]	α[†]	Comments
386.50	2^+	386.5 *1*	100	0	0^+	E2	0.0817	α(K)=0.0442 *7*; α(L)=0.0276 *4*; α(M)=0.00731 *11*; α(N+..)=0.00248 *4* α(N)=0.00196 *3*; α(O)=0.000444 *7*; α(P)=7.79×10^{-5} *11*; α(Q)=2.57×10^{-6} *4*
759.80	4^+	373.3 *1*	100	386.50	2^+	E2	0.0897	α(K)=0.0473 *7*; α(L)=0.0313 *5*; α(M)=0.00829 *12*; α(N+..)=0.00281 *4* α(N)=0.00222 *4*; α(O)=0.000504 *7*; α(P)=8.80×10^{-5} *13*; α(Q)=2.78×10^{-6} *4*

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Adopted Levels, Gammas (continued)

$\gamma(^{220}Th)$ (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[#]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
993.77	5^-	233.9 *1*	100	759.80	4^+	E1	0.0655	α(K)=0.0521 *8*; α(L)=0.01014 *15*; α(M)=0.00244 *4*; α(N+..)=0.000823 *12* α(N)=0.000644 *9*; α(O)=0.0001491 *21*; α(P)=2.76×10^{-5} *4*; α(Q)=2.01×10^{-6} *3*
1166.03	6^+	172.2 *1*	100 *1*	993.77	5^-	E1	0.1345	α(K)=0.1058 *15*; α(L)=0.0217 *3*; α(M)=0.00524 *8*; α(N+..)=0.001763 *25* α(N)=0.001383 *20*; α(O)=0.000318 *5*; α(P)=5.80×10^{-5} *9*; α(Q)=3.92×10^{-6} *6*
		406.3 *1*	68 *2*	759.80	4^+	(E2)	0.0715	α(K)=0.0401 *6*; α(L)=0.0232 *4*; α(M)=0.00612 *9*; α(N+..)=0.00208 *3* α(N)=0.001637 *23*; α(O)=0.000373 *6*; α(P)=6.55×10^{-5} *10*; α(Q)=2.31×10^{-6} *4*
1328.99	7^-	162.9 *1*	100 *2*	1166.03	6^+	E1	0.1536	α(K)=0.1205 *17*; α(L)=0.0250 *4*; α(M)=0.00604 *9*; α(N+..)=0.00203 *3* α(N)=0.001593 *23*; α(O)=0.000366 *6*; α(P)=6.65×10^{-5} *10*; α(Q)=4.43×10^{-6} *7*
		335.2 *2*	32 *2*	993.77	5^-	E2	0.1214	α(K)=0.0585 *9*; α(L)=0.0463 *7*; α(M)=0.01235 *18*; α(N+..)=0.00419 *6* α(N)=0.00331 *5*; α(O)=0.000749 *11*; α(P)=0.0001299 *19*; α(Q)=3.53×10^{-6} *5*
1598.16	8^+	269.1 *1*	100 *2*	1328.99	7^-	E1	0.0475	α(K)=0.0379 *6*; α(L)=0.00723 *11*; α(M)=0.001735 *25*; α(N+..)=0.000587 *9* α(N)=0.000459 *7*; α(O)=0.0001065 *15*; α(P)=1.98×10^{-5} *3*; α(Q)=1.486×10^{-6} *21*
		432.4 *2*	17.5 *6*	1166.03	6^+	E2	0.0609	α(K)=0.0356 *5*; α(L)=0.0188 *3*; α(M)=0.00492 *7*; α(N+..)=0.001673 *24* α(N)=0.001317 *19*; α(O)=0.000300 *5*; α(P)=5.31×10^{-5} *8*; α(Q)=2.02×10^{-6} *3*
1718.89	9^-	120.7 *2*	61 *2*	1598.16	8^+	E1	0.314	α(K)=0.242 *4*; α(L)=0.0542 *8*; α(M)=0.01313 *20*; α(N+..)=0.00440 *7* α(N)=0.00346 *5*; α(O)=0.000789 *12*; α(P)=0.0001409 *21*; α(Q)=8.62×10^{-6} *13*
		389.9 *2*	100 *2*	1328.99	7^-	E2	0.0798	α(K)=0.0435 *7*; α(L)=0.0268 *4*; α(M)=0.00708 *10*; α(N+..)=0.00240 *4* α(N)=0.00190 *3*; α(O)=0.000431 *6*; α(P)=7.55×10^{-5} *11*; α(Q)=2.52×10^{-6} *4*
1934.0	8^+	605[&] *1*	≈53	1328.99	7^-			
		768 *1*	100 *5*	1166.03	6^+	(E2)	0.01676	α(K)=0.01222 *18*; α(L)=0.00340 *5*; α(M)=0.000853 *13*; α(N+..)=0.000291 *5* α(N)=0.000228 *4*; α(O)=5.28×10^{-5} *8*; α(P)=9.74×10^{-6} *14*; α(Q)=6.29×10^{-7} *9*
2012.73	10^+	293.8 *1*	100 *2*	1718.89	9^-	E1	0.0390	α(K)=0.0312 *5*; α(L)=0.00587 *9*; α(M)=0.001408 *20*; α(N+..)=0.000477 *7* α(N)=0.000373 *6*; α(O)=8.66×10^{-5} *13*; α(P)=1.615×10^{-5} *23*; α(Q)=1.235×10^{-6} *18*
		414.6 *2*	4.1 *3*	1598.16	8^+	(E2)	0.0679	α(K)=0.0386 *6*; α(L)=0.0217 *3*; α(M)=0.00570 *8*; α(N+..)=0.00193 *3* α(N)=0.001524 *22*; α(O)=0.000347 *5*; α(P)=6.11×10^{-5} *9*; α(Q)=2.21×10^{-6} *3*
2101.6	$10^{(+)}$	382.7 *3*	100	1718.89	9^-	(E1)	0.0219	α(K)=0.01766 *25*; α(L)=0.00321 *5*; α(M)=0.000767 *11*; α(N+..)=0.000260 *4* α(N)=0.000203 *3*; α(O)=4.74×10^{-5} *7*; α(P)=8.92×10^{-6} *13*; α(Q)=7.18×10^{-7} *11*
2158.87	11^-	57.3 *4*	≈11	2101.6	$10^{(+)}$			
		146.1 *1*	52 *3*	2012.73	10^+	E1	0.199	α(K)=0.1555 *22*; α(L)=0.0330 *5*; α(M)=0.00799

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Adopted Levels, Gammas (continued)

$\gamma(^{220}Th)$ (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[#]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
								12; α(N+..)=0.00268 *4* α(N)=0.00211 *3*; α(O)=0.000483 *7*; α(P)=8.72×10^{-5} *13*; α(Q)=5.64×10^{-6} *8*
2158.87	11$^-$	440.1 *2*	100 *4*	1718.89	9$^-$	E2	0.0583	α(K)=0.0344 *5*; α(L)=0.01769 *25*; α(M)=0.00463 *7*; α(N+..)=0.001574 *23* α(N)=0.001240 *18*; α(O)=0.000283 *4*; α(P)=5.00×10^{-5} *7*; α(Q)=1.94×10^{-6} *3*
2345.3	10	411.3 *4*	100	1934.0	8$^+$			
2434.5	12$^-$	275.6 *3*	100 *5*	2158.87	11$^-$	(M1)	1.064	α(K)=0.852 *13*; α(L)=0.1606 *23*; α(M)=0.0386 *6*; α(N+..)=0.01324 *19* α(N)=0.01029 *15*; α(O)=0.00244 *4*; α(P)=0.000473 *7*; α(Q)=4.48×10^{-5} *7*
2441.9	12$^+$	282.8 *2*	100 *4*	2158.87	11$^-$	E1	0.0424	α(K)=0.0339 *5*; α(L)=0.00643 *9*; α(M)=0.001541 *22*; α(N+..)=0.000521 *8* α(N)=0.000408 *6*; α(O)=9.47×10^{-5} *14*; α(P)=1.763×10^{-5} *25*; α(Q)=1.338×10^{-6} *19*
		429.3 *3*	16 *2*	2012.73	10$^+$			
2461.5	11	359.9 *3*	100	2101.6	10$^{(+)}$			
2555.2	13$^-$	113.3 *2*	96 *5*	2441.9	12$^+$	(E1)	0.363	α(K)=0.278 *4*; α(L)=0.0639 *10*; α(M)=0.01550 *23*; α(N+..)=0.00518 *8* α(N)=0.00408 *6*; α(O)=0.000930 *14*; α(P)=0.0001653 *25*; α(Q)=9.92×10^{-6} *15*
		121 *1*	≤33	2434.5	12$^-$	(M1)	10.8 *3*	α(K)=8.60 *24*; α(L)=1.65 *5*; α(M)=0.397 *12*; α(N+..)=0.136 *4* α(N)=0.106 *3*; α(O)=0.0251 *7*; α(P)=0.00487 *14*; α(Q)=0.000463 *13*
		396.4 *3*	100 *5*	2158.87	11$^-$	(E2)	0.0763	α(K)=0.0421 *6*; α(L)=0.0253 *4*; α(M)=0.00668 *10*; α(N+..)=0.00227 *4* α(N)=0.00179 *3*; α(O)=0.000406 *6*; α(P)=7.13×10^{-5} *11*; α(Q)=2.43×10^{-6} *4*
2685.8	13$^-$	243.6 *3*	100 *9*	2441.9	12$^+$	(E1)	0.0596	α(K)=0.0475 *7*; α(L)=0.00918 *14*; α(M)=0.00221 *4*; α(N+..)=0.000745 *11* α(N)=0.000583 *9*; α(O)=0.0001352 *20*; α(P)=2.50×10^{-5} *4*; α(Q)=1.84×10^{-6} *3*
		527.3 *3*	93 *7*	2158.87	11$^-$	(E2)	0.0377	α(K)=0.0244 *4*; α(L)=0.00988 *14*; α(M)=0.00255 *4*; α(N+..)=0.000869 *13* α(N)=0.000683 *10*; α(O)=0.0001566 *23*; α(P)=2.81×10^{-5} *4*; α(Q)=1.330×10^{-6} *19*
2709.7?	(12)	248.2[&] *4*		2461.5	11			
2885.0	14$^+$	199.2 *4*	27 *2*	2685.8	13$^-$	(E1)	0.0953	α(K)=0.0754 *12*; α(L)=0.01506 *23*; α(M)=0.00363 *6*; α(N+..)=0.001223 *19* α(N)=0.000958 *15*; α(O)=0.000221 *4*; α(P)=4.06×10^{-5} *6*; α(Q)=2.84×10^{-6} *5*
		329.7 *2*	100 *6*	2555.2	13$^-$	(E1)	0.0302	α(K)=0.0242 *4*; α(L)=0.00450 *7*; α(M)=0.001076 *16*; α(N+..)=0.000365 *6* α(N)=0.000285 *4*; α(O)=6.63×10^{-5} *10*; α(P)=1.242×10^{-5} *18*; α(Q)=9.72×10^{-7} *14*
		442.8 *3*	33 *4*	2441.9	12$^+$	(E2)	0.0574	α(K)=0.0340 *5*; α(L)=0.01733 *25*; α(M)=0.00454 *7*; α(N+..)=0.001542 *22* α(N)=0.001214 *18*; α(O)=0.000277 *4*; α(P)=4.90×10^{-5} *7*; α(Q)=1.92×10^{-6} *3*
2900?	(14$^+$)	466[@&]		2434.5	12$^-$	[E2]	0.0506	α(K)=0.0308 *5*; α(L)=0.01464 *21*; α(M)=0.00382 *6*; α(N+..)=0.001298 *19* α(N)=0.001022 *15*; α(O)=0.000233 *4*; α(P)=4.15×10^{-5} *6*; α(Q)=1.721×10^{-6} *24*

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Adopted Levels, Gammas (continued)

$\gamma(^{220}Th)$ (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[#]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
2957.7		248[&] *1*		2709.7?	(12)			
3004.8	15^-	119.6 *3*	13 *2*	2885.0	14^+			
		449.7 *2*	100 *4*	2555.2	13^-	(E2)	0.0552	α(K)=0.0330 *5*; α(L)=0.01646 *24*; α(M)=0.00431 *6*; α(N+..)=0.001463 *21* α(N)=0.001152 *17*; α(O)=0.000263 *4*; α(P)=4.66×10^{-5} *7*; α(Q)=1.86×10^{-6} *3*
3027.2	14^-	592.7 *4*	100	2434.5	12^-	(E2)	0.0289	α(K)=0.0196 *3*; α(L)=0.00695 *10*; α(M)=0.00178 *3*; α(N+..)=0.000606 *9* α(N)=0.000476 *7*; α(O)=0.0001095 *16*; α(P)=1.98×10^{-5} *3*; α(Q)=1.048×10^{-6} *15*
3203.0	15^-	317.8 *3*	100 *10*	2885.0	14^+			
		517.5 *4*	52 *6*	2685.8	13^-	(E2)	0.0394	α(K)=0.0252 *4*; α(L)=0.01048 *15*; α(M)=0.00271 *4*; α(N+..)=0.000922 *14* α(N)=0.000725 *11*; α(O)=0.0001662 *24*; α(P)=2.98×10^{-5} *5*; α(Q)=1.382×10^{-6} *20*
3317.2	(15)	289.9 *3*	100	3027.2	14^-			
3376.4	16^+	173.5[&] *4*		3203.0	15^-			
		371.6 *4*	100 *5*	3004.8	15^-	(E1)	0.0233	α(K)=0.0188 *3*; α(L)=0.00343 *5*; α(M)=0.000819 *12*; α(N+..)=0.000278 *4* α(N)=0.000217 *3*; α(O)=5.06×10^{-5} *8*; α(P)=9.51×10^{-6} *14*; α(Q)=7.62×10^{-7} *11*
		491.7[&] *4*	20 *2*	2885.0	14^+	(E2)	0.0444	α(K)=0.0278 *4*; α(L)=0.01231 *18*; α(M)=0.00320 *5*; α(N+..)=0.001088 *16* α(N)=0.000855 *13*; α(O)=0.000196 *3*; α(P)=3.49×10^{-5} *5*; α(Q)=1.537×10^{-6} *22*
3467.2	17^-	91.0[&] *3*		3376.4	16^+			
		462.4 *3*	100	3004.8	15^-	(E2)	0.0515	α(K)=0.0313 *5*; α(L)=0.01502 *22*; α(M)=0.00392 *6*; α(N+..)=0.001332 *19* α(N)=0.001048 *15*; α(O)=0.000240 *4*; α(P)=4.25×10^{-5} *6*; α(Q)=1.749×10^{-6} *25*
3480.6		277.6 *3*	100	3203.0	15^-			
3559.1	(16^-)	241.7 *3*	50 *20*	3317.2	(15)			
		532.5 *5*	100 *10*	3027.2	14^-			
3681.5	$17^{(-)}$	305.1 *3*	100	3376.4	16^+	(E1)	0.0358	α(K)=0.0287 *4*; α(L)=0.00538 *8*; α(M)=0.001289 *19*; α(N+..)=0.000436 *7* α(N)=0.000341 *5*; α(O)=7.93×10^{-5} *12*; α(P)=1.481×10^{-5} *21*; α(Q)=1.141×10^{-6} *17*
3867.1	18^+	399.9 *4*	100	3467.2	17^-	(E1)	0.0200	α(K)=0.01611 *23*; α(L)=0.00291 *5*; α(M)=0.000696 *10*; α(N+..)=0.000236 *4* α(N)=0.000184 *3*; α(O)=4.30×10^{-5} *6*; α(P)=8.10×10^{-6} *12*; α(Q)=6.58×10^{-7} *10*
3953.7	19^-	486.5 *3*	100	3467.2	17^-	(E2)	0.0456	α(K)=0.0284 *4*; α(L)=0.01274 *18*; α(M)=0.00331 *5*; α(N+..)=0.001126 *16* α(N)=0.000886 *13*; α(O)=0.000203 *3*; α(P)=3.61×10^{-5} *6*; α(Q)=1.572×10^{-6} *22*
4225.6	20	271.9 *3*	100	3953.7	19^-			
4319.6	20^+	365.9 *3*	100 *14*	3953.7	19^-	(E1)	0.0241	α(K)=0.0194 *3*; α(L)=0.00355 *5*; α(M)=0.000848 *12*; α(N+..)=0.000288 *4* α(N)=0.000225 *4*; α(O)=5.24×10^{-5} *8*; α(P)=9.84×10^{-6} *14*; α(Q)=7.86×10^{-7} *11*
		452.0[&] *5*	71 *7*	3867.1	18^+			
4433.0	21^-	479.3 *3*	100	3953.7	19^-	(E2)	0.0472	α(K)=0.0292 *5*; α(L)=0.01336 *19*; α(M)=0.00348 *5*; α(N+..)=0.001183 *17*

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Adopted Levels, Gammas (continued)

$\gamma(^{220}Th)$ (continued)

E_i(level)	J_i^π	E_γ[#]	I_γ[#]	E_f	J_f^π	Mult.[‡]	α[†]	Comments
								α(N)=0.000930 *14*; α(O)=0.000213 *3*; α(P)=3.79×10^{-5} *6*; α(Q)=1.622×10^{-6} *23*
4519.9	21$^-$	199.6[&] *4*	38 *15*	4319.6	20$^+$			
		566.2 *4*	100 *15*	3953.7	19$^-$	(E2)	0.0320	α(K)=0.0213 *3*; α(L)=0.00796 *12*; α(M)=0.00205 *3*; α(N+..)=0.000696 *10* α(N)=0.000547 *8*; α(O)=0.0001256 *18*; α(P)=2.27×10^{-5} *4*; α(Q)=1.150×10^{-6} *17*
4716.1?	(22$^+$)	283[&] *1*		4433.0	21$^-$			
4892.0?	(23$^-$)	458.9[&] *5*	100	4433.0	21$^-$			

† Additional information 1.
‡ From α(K)exp in ^{208}Pb(^{16}O,4nγ),and $\gamma(\theta)$ in ^{198}Pt(^{26}Mg,4nγ).
# From ^{198}Pt(^{26}Mg,4nγ).
@ From ^{208}Pb(^{16}O,4nγ).
& Placement of transition in the level scheme is uncertain.

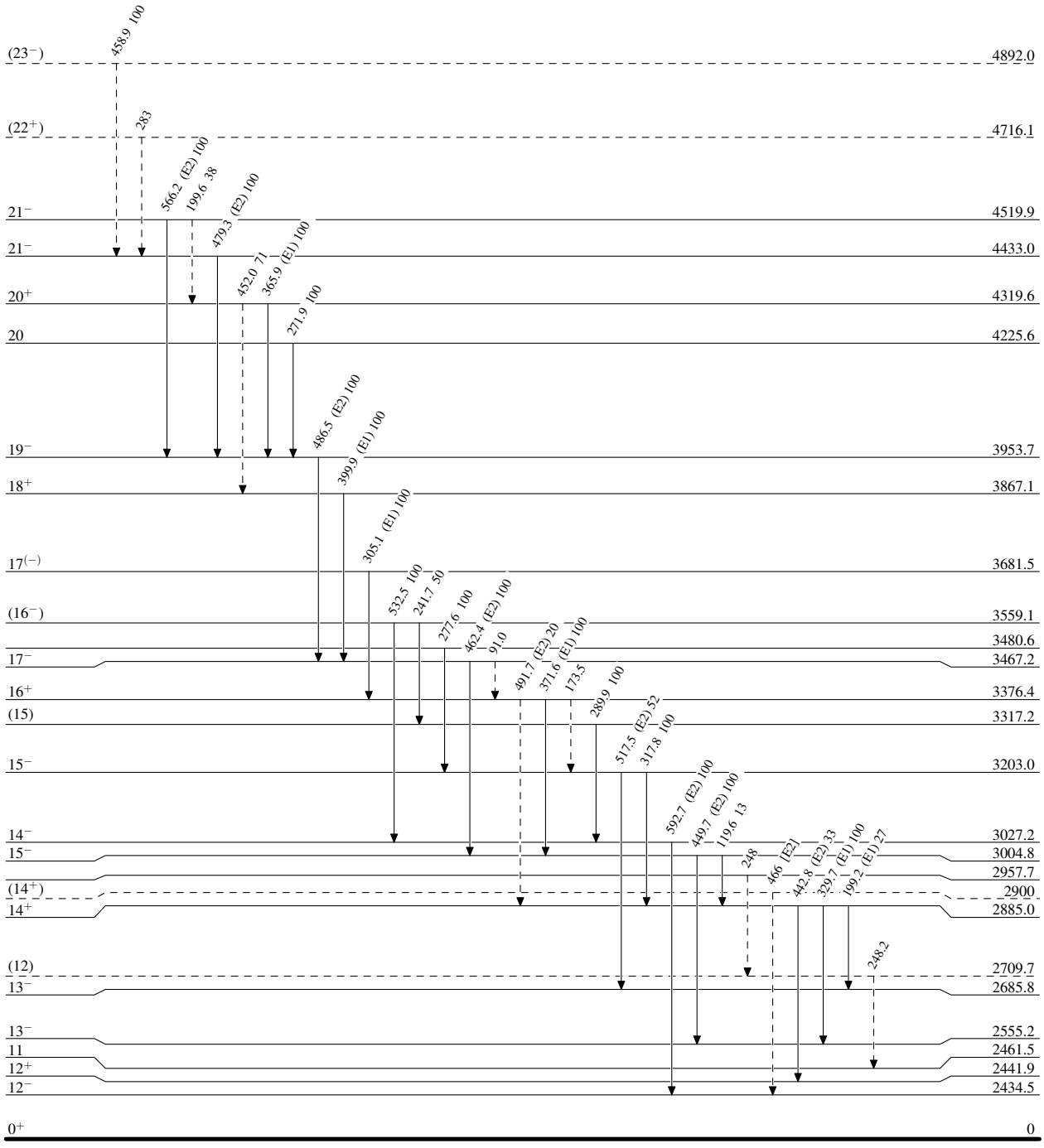
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{220}_{90}Th_{130}$

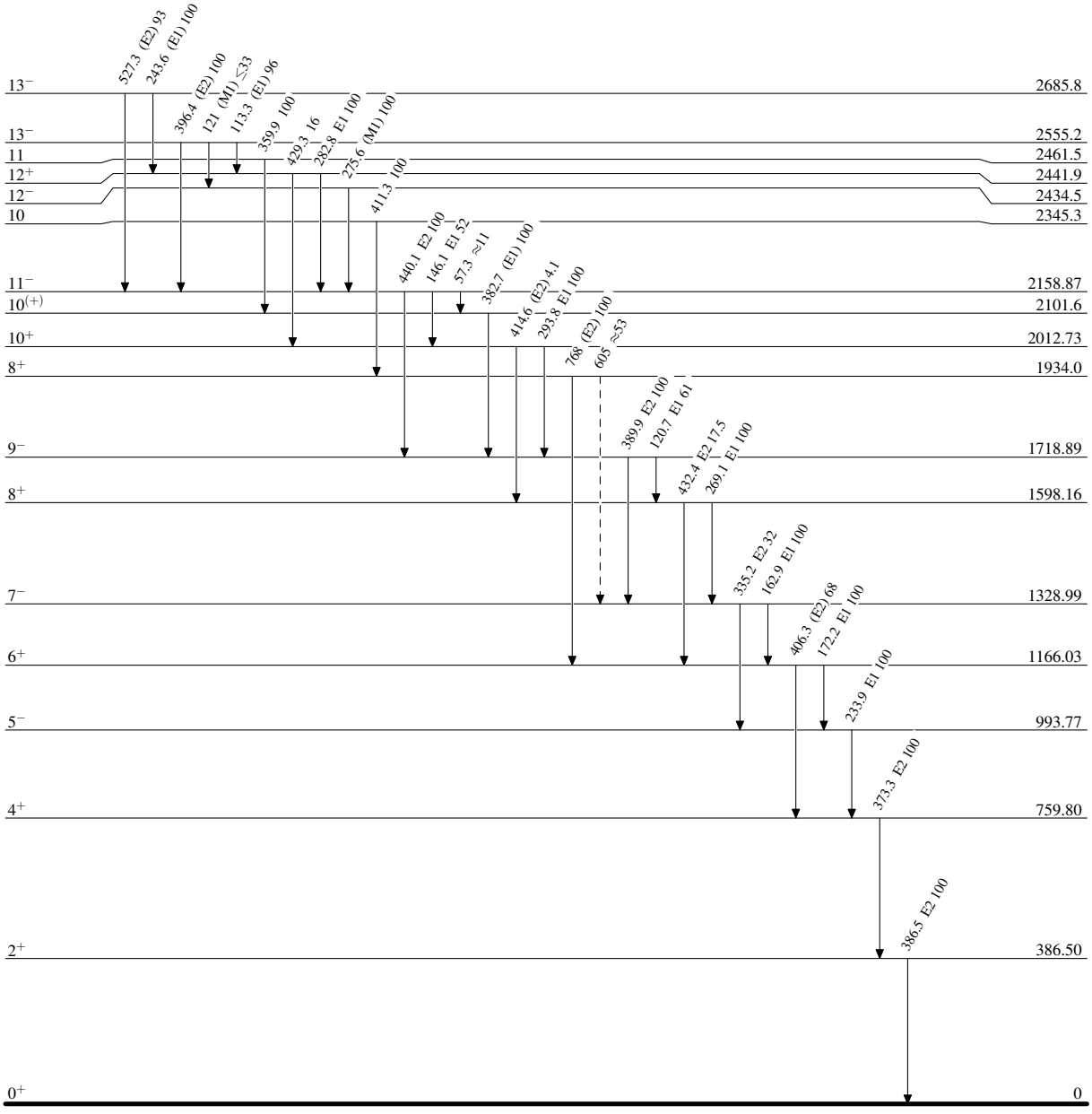
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



$^{220}_{90}Th_{130}$

Adopted Levels, Gammas