Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	A. A. Sonzogni	NDS 103,1 (2004)	31-Jul-2004

Q(β^-)=−6.30×10^3 *3*; S(n)=1.049×10^4 *3*; S(p)=6.63×10^3 *4*; Q(α)=4 *21* 2012Wa38

Note: Current evaluation has used the following Q record −632E+1 4 10480 *30* 6630 *30* 1 21 2003Au03.

The high-spin level scheme is based on the ^{120}Sn(^{18}O,4nγ) and ^{124}Sn(^{16}O,6nγ) datasets, plus some γ information from ^{134}Ba(α,4nγ),^{135}Ba(α,5nγ). The 2027 keV level was assigned a 5$^+$ value by 2000Ga24, which would be in conflict with the 1062 keV γ transition to a 2$^+$ level reported by the two ε decay studies. A (4) value is adopted here.

^{134}Ce Levels

Cross Reference (XREF) Flags

A	^{134}Pr ε decay (17 min)	D	^{134}Ba(α,4nγ),^{135}Ba(α,5nγ)
B	^{134}Pr ε decay (11 min)	E	^{120}Sn(^{18}O,4nγ)
C	^{134}Pr ε decay: mixed source	F	^{124}Sn(^{16}O,6nγ)

E(level)[†]	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0[#]	0$^+$	3.16 d *4*	ABCDE	%ε=100 T$_{1/2}$: from 1976Ge10. Others: 3.00 d *2* (1951St03), 3.25 d *4* (1965Bu11), 3.38 d *8* (1965Bi12), 3.54 d *21* (1967Go16), 3.17 d *8* (1973Al20).
409.20[#] *10*	2$^+$	23[‡] ps *2*	ABCDE	J$^\pi$: E2 γ to 0$^+$ g.s.
965.66[a] *18*	2$^+$		ABCDE	J$^\pi$: E2 γ to 0$^+$ g.s.
1048.68[#] *23*	4$^+$	3.3[‡] ps *6*	ABCDE	J$^\pi$: E2 γ to 4$^+$.
1382.7[a] *3*	3$^+$		ABCDE	J$^\pi$: M1+E2 γ to 2$^+$, M1+E2 γ to 4$^+$.
1533.5[@] *6*	(0$^+$)		C	
1572.5 *5*			BC	
1643.47[a] *21*	4$^+$		ABCDE	J$^\pi$: M1+E2 γ to 4$^+$, E2 γ to 2$^+$.
1775.0 *4*			A C	
1812.0[&] *4*	(4)$^+$		ABCDE	
1863.1[#] *3*	6$^+$	2.8[‡] ps *9*	BCDE	J$^\pi$: E2 γ to 4$^+$.
1903.8 *3*	1,2,3		A C	
1964.4[@] *5*	(2$^+$)		C	
1989.1 *4*	1,2,3		A	
2027.3[&] *3*	(4)$^+$		ABCDE	J$^\pi$: See comment on top of page.
2050.0[a] *4*	5$^+$		BCDE	J$^\pi$: M1+E2 γ to 4$^+$, (E2) γ to 3$^+$.
2158.6 *4*			CD	
2170.3 *5*	(5)		C	
2174.4[c] *3*	(5)$^-$		BCDE	J$^\pi$: E1 γ to 4$^+$.
2206.3 *8*			C	
2246.8 *4*	(5)		BCD	
2260.9 *8*			C	
2272.0 *11*			C	
2303.8[a] *4*	6$^+$		CD	J$^\pi$: M1+E2 γ to 5$^+$.
2313.7 *3*	1,2,3		A C	
2338.7 *11*			C	
2359.1[e] *3*	(6$^-$)		BCDE	
2361.4 *4*	6$^{(+)}$		BCD	J$^\pi$: Fed by E2 γ from 8$^+$, feeds 4$^+$.
2373.3 *10*			A	
2474.1[d] *3*	(6)$^-$		BCDE	J$^\pi$: M1+E2 γ from (7)$^-$.
2545.20 *19*	(3)		A C	
2565.8[e] *4*	(7)$^-$		CDE	J$^\pi$: E2 γ to (5)$^-$.

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Adopted Levels, Gammas (continued)

^{134}Ce Levels (continued)

E(level)[†]	Jπ	$T_{1/2}$	XREF	Comments
2654.9 *8*			BC	
2706.6[c] *3*	$(7)^-$		CDE	Jπ: E2 to $(5)^-$.
2768.0[a] *7*	(7^+)		CD	Jπ: γ's to 6^+, $(5)^+$.
2772.8 *11*			C	
2811.1[#] *3*	8^+	<0.7[‡] ps	CDE	Jπ: Strong E2 γ to 6^+.
2820.9 *5*	(7)		CD	
2839.9 *7*			C	
2896.4[d] *3*	$(8)^-$		CDE	Jπ: M1+E2 γ to (7^-).
2948.2 *11*			C	
2969.5[e] *5*	(8^-)		CD	
3017.6[a] *4*	8^+		CD	Jπ: E2 γ to 6^+.
3032.2 *8*			C	
3068.5 *11*			C	
3072.9 *5*	(9)		CD	
3141.1 *5*			C	
3158.0[c] *4*	$(9)^-$		DE	Jπ: E2 to $(7)^-$.
3198.8 *11*			C	
3208.6[b] *4*	10^+	308[‡] ns *5*	DE	μ=−1.87 *2* (1989Ra17) Jπ: E2 γ to 8^+.
3261.1 *8*			C	
3289.1 *11*			C	
3299.4 *12*			C	
3306.5 *11*			C	
3317.4 *11*			C	
3405.0[d] *6*	$(10)^-$		E	Jπ: E2 to $(8)^-$.
3466.6 *11*			C	
3592.2 *11*			C	
3592.8 *11*			C	
3600.7 *9*	(9^-)		E	Jπ: (E2) γ from $(11)^-$, γ to $(7)^-$.
3657.9 *15*			C	
3663.4 *11*			C	
3719.3[#] *4*	10^+	5.8[‡] ps *10*	DE	μ=−3.0 *25* (1989Ra17) Jπ: E2 γ to 8^+.
3751.4[c] *8*	$(11)^-$		E	Jπ: E2 to $(9)^-$.
3817.6 *5*	(10^+)		D	Jπ: (E2) γ to 8^+.
3865.7 *11*			C	
3895.4 *15*			C	
4006.8[b] *5*	12^+		D	Jπ: E2 γ to 10^+.
4022.8[f] *13*	(9^-)		E	
4108.8 *11*			C	
4142.3[d] *8*	$(12)^-$		E	Jπ: E2 to $(10)^-$.
4183.6[#] *6*	12^+	11.0[‡] ps *13*	DE	Jπ: E2 γ to 10^+.
4187.8[f] *7*	$(10)^-$		E	Jπ: M1 γ to $(9)^-$.
4383.9[f] *8*	$(11)^-$		E	Jπ: E1 γ to 10^+.
4539.8[c] *9*	$(13)^-$		E	Jπ: E2 γ to $(11)^-$.
4622.7[f] *9*	$(12)^-$		E	Jπ: E2 γ to $(10)^-$.
4762.8[b] *6*	14^+		DE	Jπ: E2 γ to 12^+.
4897.9[f] *10*	$(13)^-$		E	Jπ: E2 γ to $(11)^-$.
4908.2[#] *8*	14^+	1.2[‡] ps *4*	DE	Jπ: E2 γ to 12^+.
5018.3[d] *8*	$(14)^-$		E	Jπ: E2 γ to $(12)^-$.
5229.8[f] *11*	$(14)^-$		E	Jπ: E2 γ to $(12)^-$.

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Adopted Levels, Gammas (continued)

^{134}Ce Levels (continued)

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
5493.1[c] 6	(15)$^-$		D	Jπ: M1 γ from (16)$^-$.
5495.3[c] 7	(15)$^-$		DE	Jπ: E2 γ to (13)$^-$.
5591.7[g] 9	(14)$^-$		E	Jπ: E2 γ to (12)$^-$.
5628.8[f] 12	(15)$^-$		E	Jπ: E2 γ to (13)$^-$.
5725.9[#] 9	16$^+$	1.5[‡] ps 5	DE	Jπ: E2 γ to 14$^+$.
5745.9[g] 9	(15)$^-$		E	Jπ: m1g to (14)$^-$.
5865.8[b] 12	(16$^+$)		D	
5965.3[g] 9	(16)$^-$		E	Jπ: E2 γ to (14)$^-$.
6023.7[d] 10	(16)$^-$		E	Jπ: E2 γ to (14)$^-$.
6048.8[f] 13	(16)$^-$	0.56 ps 8	E	Jπ: E2 γ to (14)$^-$.
6305.5[g] 14	(17)$^-$	0.59 ps 5	E	Jπ: M1 γ to (16)$^-$.
6524.4[f] 14	(17)$^-$	<0.64 ps	E	Jπ: E2 γ to (15)$^-$.
6598.1[#] 10	(18$^+$)		DE	Jπ: (E2) γ to 16$^+$.
6763.1[g] 17	(18)$^-$	0.236 ps 21	E	Jπ: M1 γ to (17)$^-$.
7044.6[f] 15	(18$^-$)		E	
7068.4[d] 14	(18)$^-$		E	Jπ: E2 γ to (16)$^-$.
7282.9[g] 20	(19)$^-$	0.194 ps 21	E	Jπ: M1 γ to (18)$^-$.
7583.1[#] 14	(20$^+$)		E	
7830.9[g] 22	(20)$^-$	<0.22 ps	E	Jπ: M1 γ to (19)$^-$.
8585.1[#] 18	(22$^+$)		E	
9538.3[#] 20	(24$^+$)		E	
10528.7[#] 23	(26$^+$)		E	
11602.9[#] 25	(28$^+$)		E	
12764[#] 3	(30$^+$)		E	
14009[#] 3	(32$^+$)		E	
15332[#] 3	(34$^+$)		E	
x[h]	J		F	Jπ: >18 since this band may feed the 6597 (18$^+$) level.
928+x[h]	J+2		F	
1916+x[h]	J+4		F	
2966+x[h]	J+6		F	
4077+x[h]	J+8		F	
5251+x[h]	J+10		F	
6490+x[h]	J+12		F	
7789+x[h]	J+14		F	
9154+x[h]	J+16		F	
10587+x[h]	J+18		F	
12090+x[h]	J+20		F	
13665+x[h]	J+22		F	
15313+x[h]	J+24		F	
17039+x[h]	J+26		F	
y[i]	J1		F	Jπ: >26 since this band may feed the 10528 (26$^+$) level.
911+y[i]	J1+2		F	
1923+y[i]	J1+4		F	
3035+y[i]	J1+6		F	
4247+y[i]	J1+8		F	
5573+y[i]	J1+10		F	

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Adopted Levels, Gammas (continued)

^{134}Ce Levels (continued)

E(level)[†]	Jπ	XREF	Comments
z[j]	J2	F	Jπ: >18 since this band may feed the 6597 (18^+) level.
874+z[j]	J2+2	F	
1824+z[j]	J2+4	F	
2868+z[j]	J2+6	F	
4004+z[j]	J2+8	F	
5228+z[j]	J2+10	F	
6540+z[j]	J2+12	F	
7926+z[j]	J2+14	F	
9377+z[j]	J2+16	F	
10897+z[j]	J2+18	F	

[†] From least squares-fit to Eγ assuming°=1 keV when unknown.
[‡] From ^{134}Ba(α,4nγ),^{135}Ba(α,5nγ), unless otherwise noted.
[#] Band(A): g.s. band.
[@] Band(B): K=0 band.
[&] Band(C): K=4 band.
[a] Band(D): Quasi γ-band.
[b] Band(E): Band based on 10^+, 3207 keV level.
[c] Band(F): Octupole band, odd spins.
[d] Band(f): Octupole band, even spins.
[e] Band(G): Possible negative parity band.
[f] Band(H): Magnetic-dipole rotational band based on 9^-. Configurations=$\pi g^2_{7/2}\otimes\nu(h_{11/2}d_{3/2})$ and $\pi h^2_{11/2}\otimes\nu(h_{11/2}d_{3/2})$ Configurations=$\pi g^2_{7/2}\otimes\nu(h_{11/2}d_{3/2})$ and $\pi h^2_{11/2}\otimes\nu(h_{11/2}d_{3/2})$.
[g] Band(I): Magnetic-dipole rotational band based on 14^-. Configuration=$\pi(g_{7/2}h_{11/2})\otimes\nu h^2_{11/2}$.
[h] Band(J): Highly-deformed band. possible Configuration=$\nu(i^3_{13/2}f_{7/2})$.
[i] Band(K): Triaxial Band. Configuration=$\nu(h^2_{11/2}4^2)\pi h^2_{11/2}$.
[j] Band(L): Triaxial Band Configuration=$\nu(h^3_{11/2}4^1)\pi h^2_{11/2}$.

Adopted Levels, Gammas (continued)

γ(^{134}Ce)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ	α[a]	Comments
409.20	2+	409.2† *1*	100	0.0	0+	E2		0.0190	α(K)=0.0156 *5*; α(L)=0.00264 *8*; α(M)=0.00056 *2*; B(E2)(W.u.)=52 *5*
965.66	2+	556.6@ *3*	83 *17*	409.20	2+	M1+E2	+9 *+16−4*	0.0082 *1*	α(K)=0.00684 *10*; α(L)=0.00104 *1*
		965.7@ *3*	100 *25*	0.0	0+	E2		0.00220	α(K)=0.00186 *6*; α(L)=0.00025 *1*
1048.68	4+	639.5@ *3*	100	409.20	2+	E2		0.00572	α(K)=0.00479 *15*; α(L)=0.00070 *2*; B(E2)(W.u.)=39 *8*
1382.7	3+	334.1#	11.3	1048.68	4+				
		417.1#	19.3	965.66	2+	M1+E2	6.0 *+22−14*	0.0182 *1*	α(K)=0.0150 *1*; α(L)=0.00249 *1*; α(M)=0.00053
		973.4#	100	409.20	2+	M1+E2	4.0 *+3−2*	0.00222 *1*	α(K)=0.00188 *1*; α(L)=0.00025
1533.5	(0+)	567.9	100	965.66	2+				
		1124.2	≤82	409.20	2+				
1572.5		189.1#		1382.7	3+				
		1162.5#		409.20	2+				E_γ: Seen only by ^{134}Pr ε decay: mixed source.
1643.47	4+	260.9@ *5*	39 *19*	1382.7	3+				
		595.0@ *5*	24 *5*	1048.68	4+	M1+E2	10 *+100−5*	0.00690 *10*	α(K)=0.00576 *9*; α(L)=0.00086 *1* Mult.: from ^{134}Pr ε decay: mixed source.
		677.7@ *3*	100 *23*	965.66	2+	E2		0.00496	α(K)=0.00416 *13*; α(L)=0.00060 *2*
		1234.3@ *3*	14 *4*	409.20	2+				
1775.0		809.5† *5*	36 *18*	965.66	2+				
		1365.7† *5*	10×10[1] *3*	409.20	2+				
1812.0	(4)+	168.5#	7.5	1643.47	4+	M1+E2	0.24 *+19−3*		Mult.: from ^{134}Pr ε decay: mixed source (2000Ga24).
		429.4#	55	1382.7	3+				
		763.2#	100	1048.68	4+				
		846.4#	48	965.66	2+				
		1402.7#	9	409.20	2+				
1863.1	6+	814.4@ *3*	100	1048.68	4+	E2		0.00321	α(K)=0.00271 *9*; α(L)=0.00038 *1*; B(E2)(W.u.)=14 *5*
1903.8	1,2,3	855.1		1048.68	4+				
		1494.6 *3*		409.20	2+				
1964.4	(2+)	430.9		1533.5	(0+)				
		998.9		965.66	2+				
		1555.2		409.20	2+				
		1964.3		0.0	0+				
1989.1	1,2,3	1579.9 *3*	100 *14*	409.20	2+				
2027.3	(4)+	123.4#		1903.8	1,2,3				
		215.3#	100	1812.0	(4)+				
		383.9#	52	1643.47	4+				

$^{134}_{58}Ce_{76}$-5

Adopted Levels, Gammas (continued)

γ(^{134}Ce) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	δ	α[a]	Comments
2027.3	(4)$^+$	644.6#	17	1382.7	3$^+$				
		978.6#	58	1048.68	4$^+$	M1+E2	0.50 *4*		Mult.: from ^{134}Pr ε decay: mixed source (2000Ga24).
		1062.1‡ *5*	5	965.66	2$^+$				
2050.0	5$^+$	238.2#		1812.0	(4)$^+$				
		406.7#		1643.47	4$^+$				
		667.5#	100	1382.7	3$^+$	(E2)		0.00515	α(K)=0.00432 *13*; α(L)=0.00062 *2* Mult.: from ^{134}Ba(α,4nγ),^{135}Ba(α,5nγ).
		1001.4#	≤57	1048.68	4$^+$	M1+E2	1.86 *+22−26*	0.00224 *6*	α(K)=0.00191 *5*; α(L)=0.00025 *1*
2158.6		346.7#		1812.0	(4)$^+$				
2170.3	(5)	358.4		1812.0	(4)$^+$				
		526.9		1643.47	4$^+$				
		787.5		1382.7	3$^+$				
		1121.6		1048.68	4$^+$				
2174.4	(5)$^-$	270.6#		1903.8	1,2,3				
		311.4#		1863.1	6$^+$				
		530.9#		1643.47	4$^+$				
		1125.7#		1048.68	4$^+$	E1		0.00068	α(K)=0.00059 *2* Mult.: ^{120}Sn(^{18}O,4nγ).
2206.3		1157.6		1048.68	4$^+$				
		1797.1		409.20	2$^+$				
2246.8	(5)	1198.1@ *3*		1048.68	4$^+$				
2260.9		878.2		1382.7	3$^+$				
		1295.2		965.66	2$^+$				
2272.0		460.0		1812.0	(4)$^+$				
2303.8	6$^+$	253.7#	3.5	2050.0	5$^+$	M1+E2	0.064 *24*	0.091	α(K)=0.0777 *1*; α(L)=0.0104; α(M)=0.00216
		440.6#	2.5	1863.1	6$^+$				
		660.2#	100	1643.47	4$^+$	E2			
		1255.0#	5.2	1048.68	4$^+$				
2313.7	1,2,3	1904.3 *3*	100	409.20	2$^+$				
2338.7		1290.0		1048.68	4$^+$				
2359.1	(6$^-$)	184.3‡ *5*	26 *4*	2174.4	(5)$^-$				
		188.7#		2170.3	(5)				
		309.1‡ *3*	51 *7*	2050.0	5$^+$				
		331.8‡ *6*	100 *14*	2027.3	(4)$^+$				
		786.2‡ *5*	14 *4*	1572.5					

$^{134}_{58}Ce_{76}$-6

Adopted Levels, Gammas (continued)

γ(^{134}Ce) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	α[a]	Comments
2361.4	$6^{(+)}$	187.0#		2174.4	$(5)^-$			
		334.2#	100	2027.3	$(4)^+$			
		549.5#	7.6	1812.0	$(4)^+$			
		717.9#	3.2	1643.47	4^+			
		1312.8#	6.5	1048.68	4^+			
2373.3		1964.1 *10*	100	409.20	2^+			
2474.1	$(6)^-$	114.9@ *5*	18 *7*	2359.1	(6^-)			
		170.1@ *5*	33 *17*	2303.8	6^+			
		299.7@ *3*	100 *12*	2174.4	$(5)^-$	M1+E2		
		315.5@ *3*	9 *3*	2158.6				
		446.9@ *3*	71 *13*	2027.3	$(4)^+$			
		611&		1863.1	6^+			
2545.20	(3)	231.3† *4*	12.5 *25*	2313.7	1,2,3			
		370.7#		2174.4	$(5)^-$			E_γ: seen only by ^{134}Pr ε decay: mixed source.
		518.1† *5*	39 *13*	2027.3	$(4)^+$			
		580.7#		1964.4	(2^+)			E_γ: seen only by ^{134}Pr ε decay: mixed source.
		1162.5† *5*	6.3 *25*	1382.7	3^+			
		1580.0#		965.66	2^+			E_γ: seen only by ^{134}Pr ε decay: mixed source.
		2136.0† *2*	100 *13*	409.20	2^+			
2565.8	$(7)^-$	206.7@ *5*	82 *16*	2359.1	(6^-)			
		262.2@ *5*	80 *40*	2303.8	6^+			
		391.5@ *3*	100 *18*	2174.4	$(5)^-$	E2	0.0216	α(K)=0.0178 *6*; α(L)=0.00305 *10*; α(M)=0.00065 *2*
2654.9		293.5‡		2361.4	$6^{(+)}$			
		480.5#		2174.4	$(5)^-$			E_γ: seen only by ^{134}Pr ε decay: mixed source.
2706.6	$(7)^-$	141.2@ *5*	51 *25*	2565.8	$(7)^-$			
		232.0@ *3*	6.3 *14*	2474.1	$(6)^-$	M1+E2	0.114 *2*	α(K)=0.093 *6*; α(L)=0.016 *4*; α(M)=0.0035 *8*
		347.6#		2359.1	(6^-)			
		403.1#		2303.8	6^+			
		532.3@ *3*	100 *10*	2174.4	$(5)^-$	E2	0.0092	α(K)=0.00763 *23*; α(L)=0.00117 *4*
		844&		1863.1	6^+			
2768.0	(7^+)	464.3	2.2	2303.8	6^+			
		717.9	95	2050.0	5^+			
		904.8	100	1863.1	6^+			
2772.8		598.4		2174.4	$(5)^-$			

$^{134}_{58}Ce_{76}$-7

Adopted Levels, Gammas (continued)

γ(^{134}Ce) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	α[a]	Comments
2811.1	8^+	245[@]	1.9 *7*	2565.8	$(7)^-$	D		
		449.7[@] *3*	5.0 *17*	2361.4	$6^{(+)}$			
		948.0[@] *3*	100 *10*	1863.1	6^+	E2	0.00229	α(K)=0.00194 *6*; α(L)=0.00026 *1*; B(E2)(W.u.)=24.25 *4*
2820.9	(7)	517.1[@] *3*	100	2303.8	6^+			
2839.9		1028.0		1812.0	$(4)^+$			
		1196.5		1643.47	4^+			
		1791.1		1048.68	4^+			
2896.4	$(8)^-$	189.6[@] *3*	62 *10*	2706.6	$(7)^-$	M1+E2	0.211 *11*	α(K)=0.169 *3*; α(L)=0.033 *11*; α(M)=0.0071 *24*
		330.8[@]		2565.8	$(7)^-$			
		422.6[@] *3*	100 *12*	2474.1	$(6)^-$	E2	0.0173	α(K)=0.0143 *5*; α(L)=0.00238 *8*; α(M)=0.00050 *2*
		537.2[@] *3*	73 *17*	2359.1	(6^-)	(E2)	0.0090	α(K)=0.00745 *23*; α(L)=0.00114 *4*
2948.2		589.1		2359.1	(6^-)			
2969.5	(8^-)	403.7[@] *5*		2565.8	$(7)^-$			
		610.4[@] *5*		2359.1	(6^-)			
3017.6	8^+	121.1[@] *5*	26 *14*	2896.4	$(8)^-$			
		206.6[@] *5*	100 *20*	2811.1	8^+			
		310.8[@] *5*	20 *8*	2706.6	$(7)^-$			
		713.8[@] *3*	94 *24*	2303.8	6^+	E2	0.00437	α(K)=0.00368 *11*; α(L)=0.00052 *2*
3032.2		670.6		2361.4	$6^{(+)}$			
		673.3		2359.1	(6^-)			
3068.5		709.4		2359.1	(6^-)			
3072.9	(9)	176.4[@] *5*	22 *9*	2896.4	$(8)^-$			
		261.9[@] *5*	10×10^1 *5*	2811.1	8^+			
3141.1		837.3		2303.8	6^+			
		1278.0		1863.1	6^+			
		1329.1		1812.0	$(4)^+$			
		1498.0		1643.47	4^+			
		2092.0		1048.68	4^+			
3158.0	$(9)^-$	261.5[@] *5*	50 *30*	2896.4	$(8)^-$	M1+E2	0.080 *4*	α(K)=0.066 *6*; α(L)=0.0111 *15*; α(M)=0.0023 *4*
		346.7[@] *5*	≈17	2811.1	8^+			
		451.6[@] *3*	100 *10*	2706.6	$(7)^-$	E2	0.0143	α(K)=0.0119 *4*; α(L)=0.00193 *6*; α(M)=0.00041 *1*
3198.8		895.0		2303.8	6^+			
3208.6	10^+	190.8[@] *3*	24 *6*	3017.6	8^+	E2	0.217	α(K)=0.163 *5*; α(L)=0.0424 *13*; α(M)=0.0092 *3*; B(E2)(W.u.)=0.033 *9*
		397.4[@] *3*	100 *13*	2811.1	8^+	E2	0.0207	α(K)=0.0170 *6*; α(L)=0.00290 *9*; α(M)=0.00062 *2*; B(E2)(W.u.)=0.0035 *6*
3261.1		1210.9		2050.0	5^+			
		1233.9		2027.3	$(4)^+$			

$^{134}_{58}Ce_{76}$-8

Adopted Levels, Gammas (continued)

γ(^{134}Ce) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	α[a]	Comments
3289.1		930.0		2359.1	(6^-)			
3299.4		459.5		2839.9				
3306.5		761.3		2545.20	(3)			
3317.4		956.0		2361.4	$6^{(+)}$			
3405.0	$(10)^-$	247[&]		3158.0	$(9)^-$			
		509.5[&]		2896.4	$(8)^-$	E2	0.0103	α(K)=0.0086 *3*; α(L)=0.00134 *4*
3466.6		2417.9		1048.68	4^+			
3592.2		1817.1		1775.0				
3592.8		1233.7		2359.1	(6^-)			
3600.7	(9^-)	894	100	2706.6	$(7)^-$			
3657.9		589.4		3068.5				
3663.4		2697.7		965.66	2^+			
3719.3	10^+	561.0[@] *5*	≈7.7	3158.0	$(9)^-$			
		701.7[@] *3*	2.9 *18*	3017.6	8^+	E2	0.00456	α(K)=0.00383 *12*; α(L)=0.00055 *2*; B(E2)(W.u.)=0.37 *24*
		908.3[@] *3*	100 *9*	2811.1	8^+	E2	0.00251	α(K)=0.00213 *7*; α(L)=0.00029 *1*; B(E2)(W.u.)=3.5 *8* Mult.: from ^{134}Ba(α,4nγ),^{135}Ba(α,5nγ).
3751.4	$(11)^-$	347		3405.0	$(10)^-$			
		595.0[&]		3158.0	$(9)^-$	E2	0.00687	α(K)=0.00573 *18*; α(L)=0.00085 *3*
3817.6	(10^+)	1006.5[@] *3*	100	2811.1	8^+	(E2)	0.00201	α(K)=0.00171 *6*; α(L)=0.00023 *1*
3865.7		1561.9		2303.8	6^+			
3895.4		578.0		3317.4				
4006.8	12^+	798.0 *3*	100	3208.6	10^+	E2	0.00336	α(K)=0.00284 *9*; α(L)=0.00039 *1*
4108.8		1634.6		2474.1	$(6)^-$			
4142.3	$(12)^-$	392[&]		3751.4	$(11)^-$			
		737.6[&]		3405.0	$(10)^-$	E2	0.00404	α(K)=0.00340 *11*; α(L)=0.00048 *2*
4183.6	12^+	464.3[@] *5*	100	3719.3	10^+	E2	0.0132	α(K)=0.0110 *4*; α(L)=0.00177 *6*; α(M)=0.00037 *1*; B(E2)(W.u.)=58 *7*
4187.8	$(10)^-$	165.0	100 *17*	4022.8	(9^-)	(M1)	0.293	α(K)=0.250 *8*; α(L)=0.0339 *11*; α(M)=0.00705 *22*
		783		3405.0	$(10)^-$			
		1030.0	<86.957	3158.0	$(9)^-$	M1	0.00278	α(K)=0.00237 *8*; α(L)=0.00030 *1*
4383.9	$(11)^-$	196.2	86 *11*	4187.8	$(10)^-$	M1	0.182	α(K)=0.156 *5*; α(L)=0.0210 *7*; α(M)=0.00436 *13*
		664.3	100 *11*	3719.3	10^+	E1	0.00193	α(K)=0.00165 *5*; α(L)=0.00021 *1*
		783.1	54 *11*	3600.7	(9^-)	(E2)	0.00351	α(K)=0.00296 *9*; α(L)=0.00041 *1*
4539.8	$(13)^-$	397[&]		4142.3	$(12)^-$			
		789.4[&]		3751.4	$(11)^-$	E2	0.00345	α(K)=0.00291 *9*; α(L)=0.00041 *1*
4622.7	$(12)^-$	238.8	100 *8*	4383.9	$(11)^-$	M1	0.107	α(K)=0.091 *3*; α(L)=0.0123 *4*; α(M)=0.00254 *8*
		435.2	6.1 *18*	4187.8	$(10)^-$	E2	0.0159	α(K)=0.0131 *4*; α(L)=0.00217 *7*; α(M)=0.00046 *1*
4762.8	14^+	755.8 *3*	100	4006.8	12^+	E2	0.00382	α(K)=0.00322 *10*; α(L)=0.00045 *1*
4897.9	$(13)^-$	275.3	100 *8*	4622.7	$(12)^-$	M1	0.0731	α(K)=0.0626 *19*; α(L)=0.0084 *3*; α(M)=0.00173 *6*
		513.7	10.2 *8*	4383.9	$(11)^-$	E2	0.0101	α(K)=0.0084 *3*; α(L)=0.00130 *4*

$^{134}_{58}Ce_{76}$-9

Adopted Levels, Gammas (continued)

γ(^{134}Ce) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	Mult.	α[a]	Comments
4908.2	14^+	724.6[@] *5*	100	4183.6	12^+	E2	0.00422	α(K)=0.00355 *11*; α(L)=0.00050 *2*; B(E2)(W.u.)=58 *20*
5018.3	$(14)^-$	479[&]		4539.8	$(13)^-$			
		877.3[&]		4142.3	$(12)^-$			
5229.8	$(14)^-$	331.7	100 *7*	4897.9	$(13)^-$	M1	0.0448	α(K)=0.0384 *12*; α(L)=0.00510 *16*; α(M)=0.00106 *4*
		607.2	13.0 *20*	4622.7	$(12)^-$	E2	0.00652	α(K)=0.00545 *17*; α(L)=0.00081 *3*
5493.1	$(15)^-$	730.0[@] *3*		4762.8	14^+			
5495.3	$(15)^-$	476		5018.3	$(14)^-$			
		955.5		4539.8	$(13)^-$	E2		
5591.7	$(14)^-$	574		5018.3	$(14)^-$			
		1450.2	<100	4142.3	$(12)^-$	E2	0.00095	α(K)=0.00081 *3*; α(L)=0.00010
5628.8	$(15)^-$	398.8	100 *14*	5229.8	$(14)^-$	M1	0.0279	α(K)=0.0239 *8*; α(L)=0.00315 *10*; α(M)=0.00065 *2*
		731.1	20.0 *18*	4897.9	$(13)^-$	E2	0.00413	α(K)=0.00347 *11*; α(L)=0.00049 *2*
5725.9	16^+	817.7[@] *3*	100	4908.2	14^+	E2	0.00318	α(K)=0.00269 *8*; α(L)=0.00037 *1*; B(E2)(W.u.)=25 *9*
5745.9	$(15)^-$	155.5	100 *13*	5591.7	$(14)^-$	M1	0.346	α(K)=0.295 *9*; α(L)=0.0400 *12*; α(M)=0.00832 *25*
		251.7	100 *13*	5493.1	$(15)^-$			
5865.8	(16^+)	1103[@]		4762.8	14^+			
5965.3	$(16)^-$	219.6	100 *9*	5745.9	$(15)^-$	M1	0.134	α(K)=0.115 *4*; α(L)=0.0154 *5*; α(M)=0.00320 *10*
		471.5	30.2 *23*	5493.1	$(15)^-$	M1	0.0182	α(K)=0.0156 *5*; α(L)=0.00205 *7*; α(M)=0.00043 *1*
		947.4	30 *5*	5018.3	$(14)^-$	E2	0.00229	α(K)=0.00194 *6*; α(L)=0.00026 *1*
6023.7	$(16)^-$	530		5493.1	$(15)^-$			
		1006.0	100 *7*	5018.3	$(14)^-$	E2	0.00201	α(K)=0.00171 *6*; α(L)=0.00023 *1*
6048.8	$(16)^-$	420.0	100 *8*	5628.8	$(15)^-$	M1	0.0244	α(K)=0.0209 *7*; α(L)=0.00276 *9*; α(M)=0.00057 *2*; B(M1)(W.u.)=0.39 *8*
		819.1	32 *9*	5229.8	$(14)^-$	E2	0.00317	α(K)=0.00267 *8*; α(L)=0.00037 *1*; B(E2)(W.u.)=16 *6*
6305.5	$(17)^-$	340.2	100	5965.3	$(16)^-$	M1	0.0420	α(K)=0.0359 *11*; α(L)=0.00477 *15*; α(M)=0.00099 *3*; B(M1)(W.u.)=0.91 *8*
6524.4	$(17)^-$	475.5		6048.8	$(16)^-$	M1	0.0178	α(K)=0.0153 *5*; α(L)=0.00201 *6*; α(M)=0.00042 *1*
		895.5		5628.8	$(15)^-$	E2	0.00259	α(K)=0.00219 *7*; α(L)=0.00030 *1*
6598.1	(18^+)	872.2 *5*	100	5725.9	16^+	(E2)	0.00275	α(K)=0.00232 *7*; α(L)=0.00032 *1*
6763.1	$(18)^-$	457.6		6305.5	$(17)^-$	M1	0.0196	α(K)=0.0168 *5*; α(L)=0.00221 *7*; α(M)=0.00046 *1*; B(M1)(W.u.)=0.96 *9*
7044.6	(18^-)	520		6524.4	$(17)^-$			
		996		6048.8	$(16)^-$			
7068.4	$(18)^-$	1044.7		6023.7	$(16)^-$	E2	0.00186	α(K)=0.00158 *5*; α(L)=0.00021 *1*
7282.9	$(19)^-$	519.8	100	6763.1	$(18)^-$	M1	0.0143	α(K)=0.0122 *4*; α(L)=0.00160 *5*; B(M1)(W.u.)=0.80 *9*
7583.1	(20^+)	985		6598.1	(18^+)			
7830.9	$(20)^-$	548.0		7282.9	$(19)^-$	M1	0.0126	α(K)=0.0107 *4*; α(L)=0.00140 *5*; B(M1)(W.u.)=0.601 *4*
8585.1	(22^+)	1002		7583.1	(20^+)			
9538.3	(24^+)	953.2		8585.1	(22^+)			
10528.7	(26^+)	990.3		9538.3	(24^+)			
11602.9	(28^+)	1074.2		10528.7	(26^+)			
12764	(30^+)	1161.2		11602.9	(28^+)			
14009	(32^+)	1245.1		12764	(30^+)			

$^{134}_{58}Ce_{76}$-10

Adopted Levels, Gammas (continued)

γ(^{134}Ce) (continued)

E_i(level)	J_i^π	E_γ	I_γ	E_f	J_f^π	E_i(level)	J_i^π	E_γ	E_f	J_f^π
15332	(34$^+$)	1323.2		14009	(32$^+$)	911+y	J1+2	911	y	J1
928+x	J+2	928	100	x	J	1923+y	J1+4	1012	911+y	J1+2
1916+x	J+4	988	100	928+x	J+2	3035+y	J1+6	1112	1923+y	J1+4
2966+x	J+6	1050[b]	100	1916+x	J+4	4247+y	J1+8	1212	3035+y	J1+6
4077+x	J+8	1111	100	2966+x	J+6	5573+y	J1+10	1326	4247+y	J1+8
5251+x	J+10	1174	100	4077+x	J+8	874+z	J2+2	874[b]	z	J2
6490+x	J+12	1239	100	5251+x	J+10	1824+z	J2+4	950	874+z	J2+2
7789+x	J+14	1299	100	6490+x	J+12	2868+z	J2+6	1044	1824+z	J2+4
9154+x	J+16	1365	100	7789+x	J+14	4004+z	J2+8	1136	2868+z	J2+6
10587+x	J+18	1433	100	9154+x	J+16	5228+z	J2+10	1224	4004+z	J2+8
12090+x	J+20	1503	100	10587+x	J+18	6540+z	J2+12	1312	5228+z	J2+10
13665+x	J+22	1575[b]	100	12090+x	J+20	7926+z	J2+14	1386[b]	6540+z	J2+12
15313+x	J+24	1648[b]	100	13665+x	J+22	9377+z	J2+16	1451[b]	7926+z	J2+14
17039+x	J+26	1726[b]	100	15313+x	J+24	10897+z	J2+18	1520[b]	9377+z	J2+16

† From ^{134}Pr ε decay (17 min).
‡ From ^{134}Pr ε decay (11 min).
# From ^{134}Pr ε decay: mixed source.
@ From ^{134}Ba(α,4nγ),^{135}Ba(α,5nγ).
& From ^{120}Sn(^{18}O,4nγ).
[a] Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
[b] Placement of transition in the level scheme is uncertain.

$^{134}_{58}Ce_{76}$-11

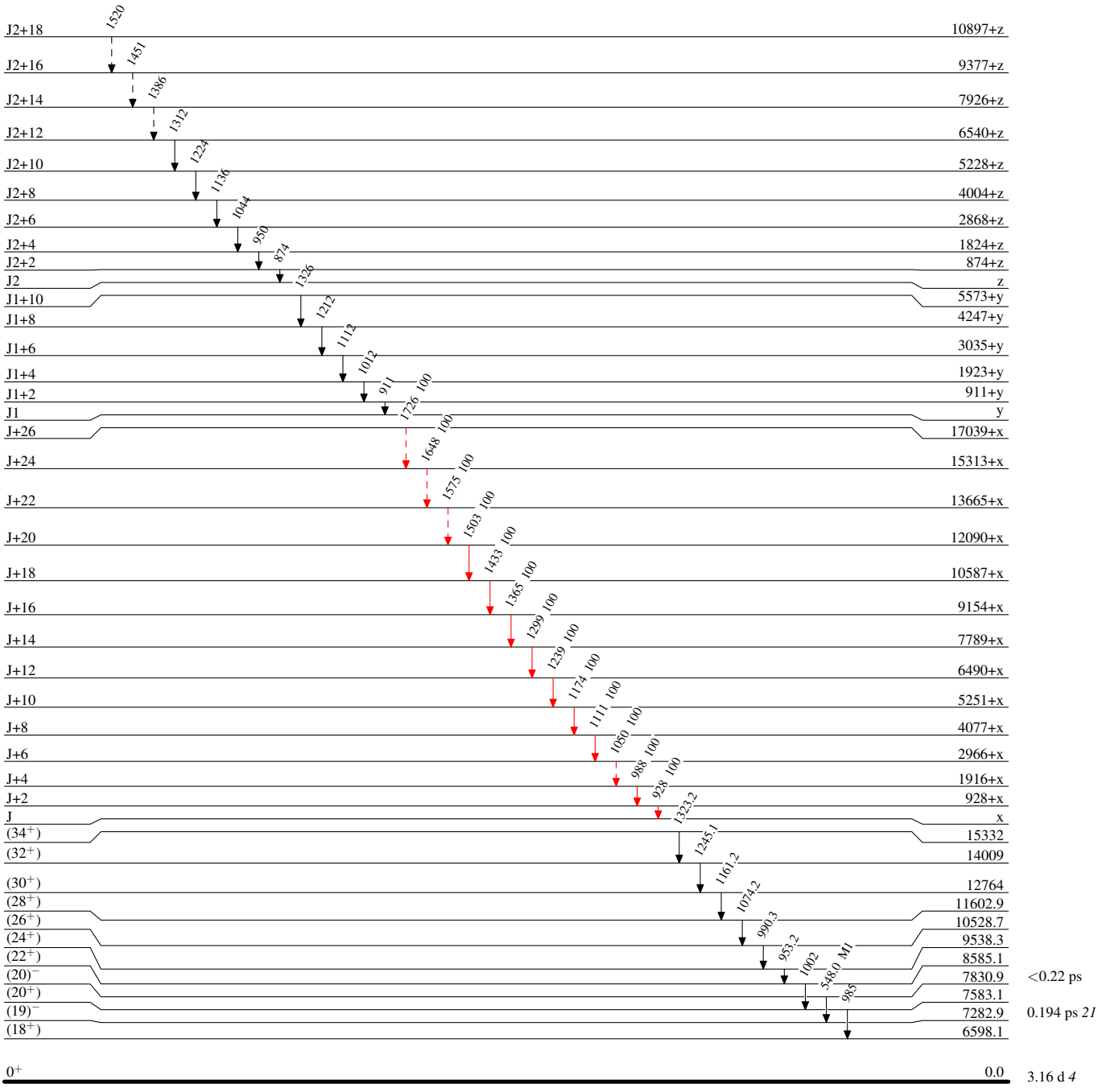
Adopted Levels, Gammas

Level Scheme

Intensities: Type not specified

Legend

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

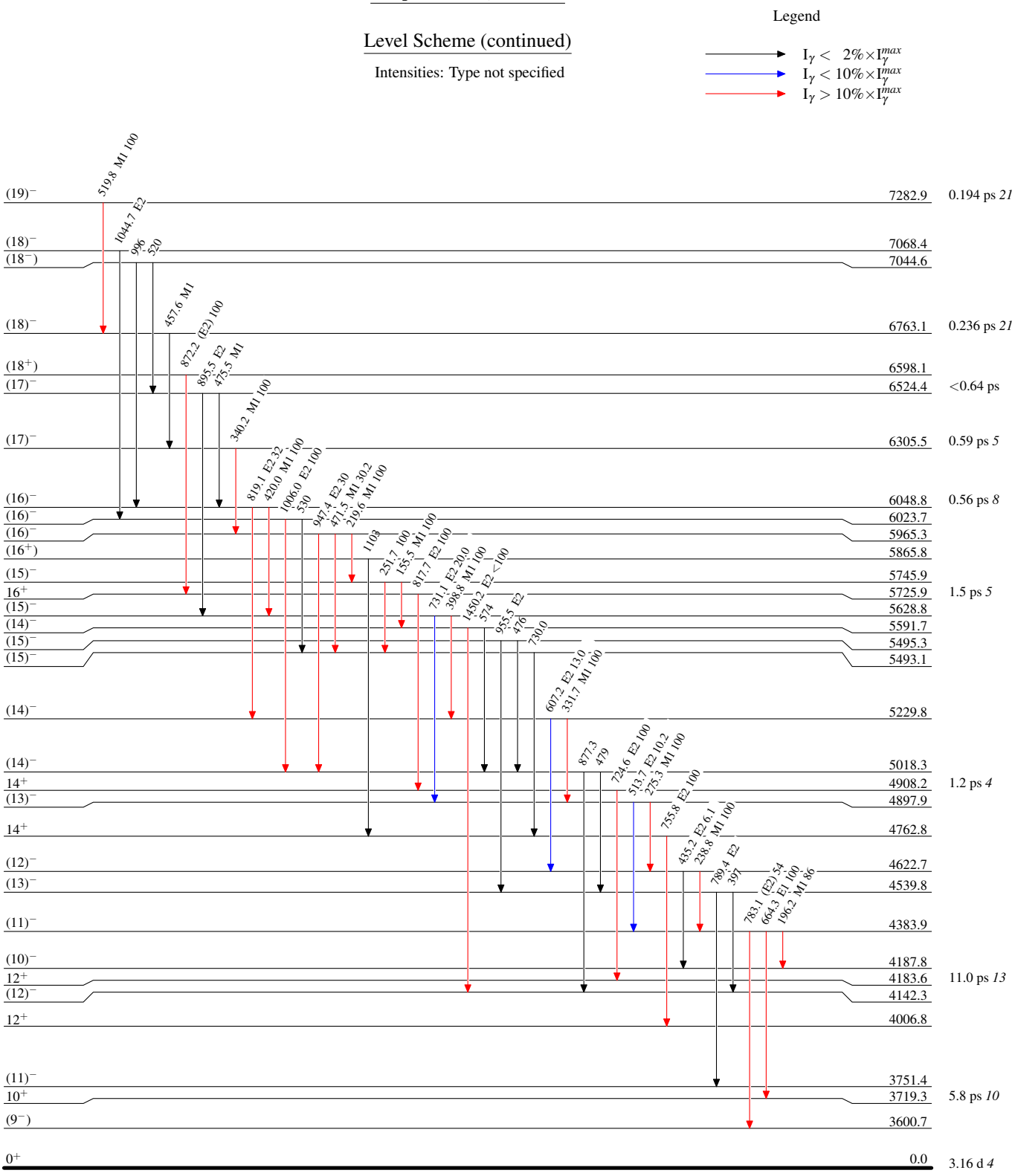


$^{134}_{58}Ce_{76}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

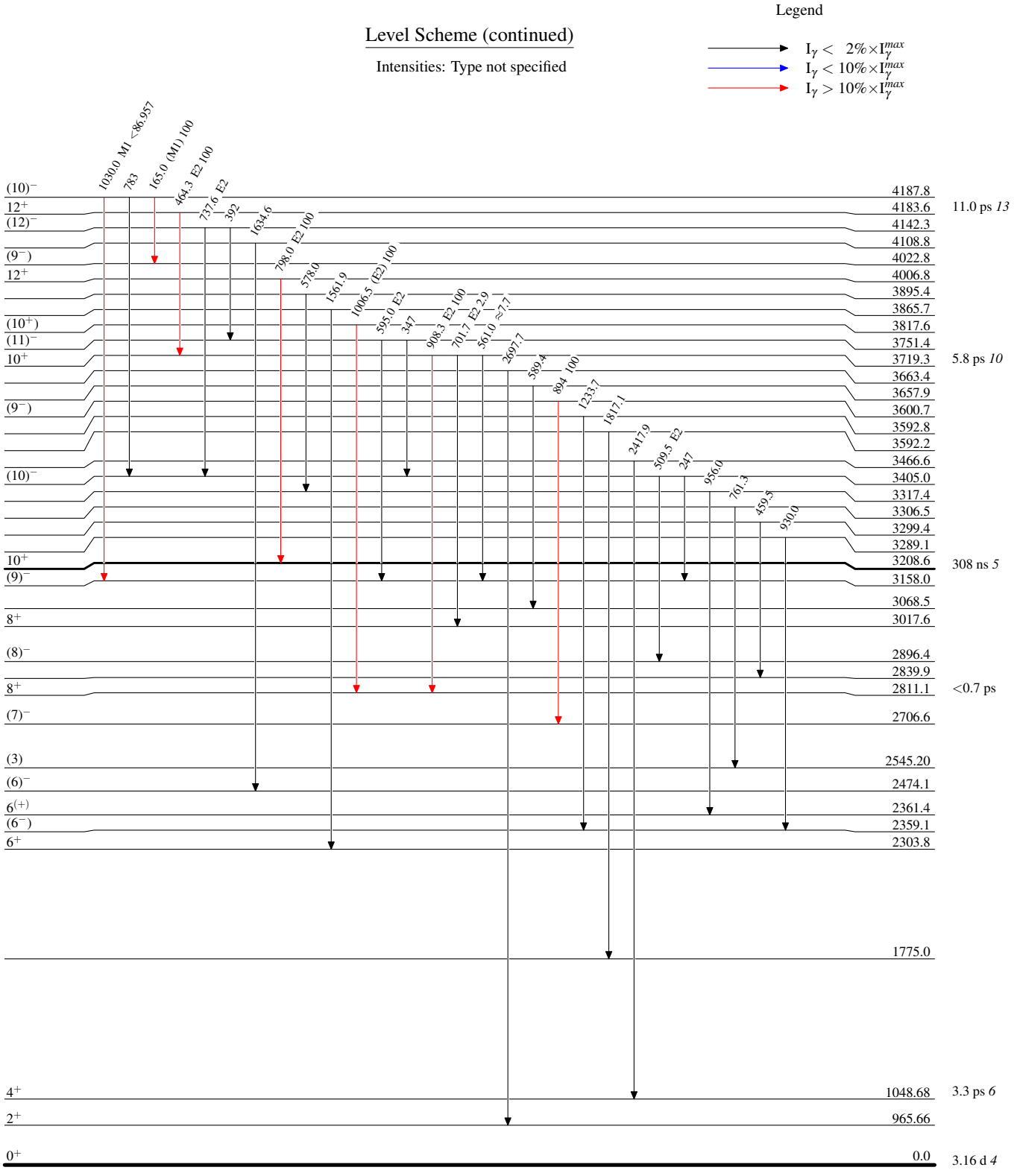


$^{134}_{58}Ce_{76}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

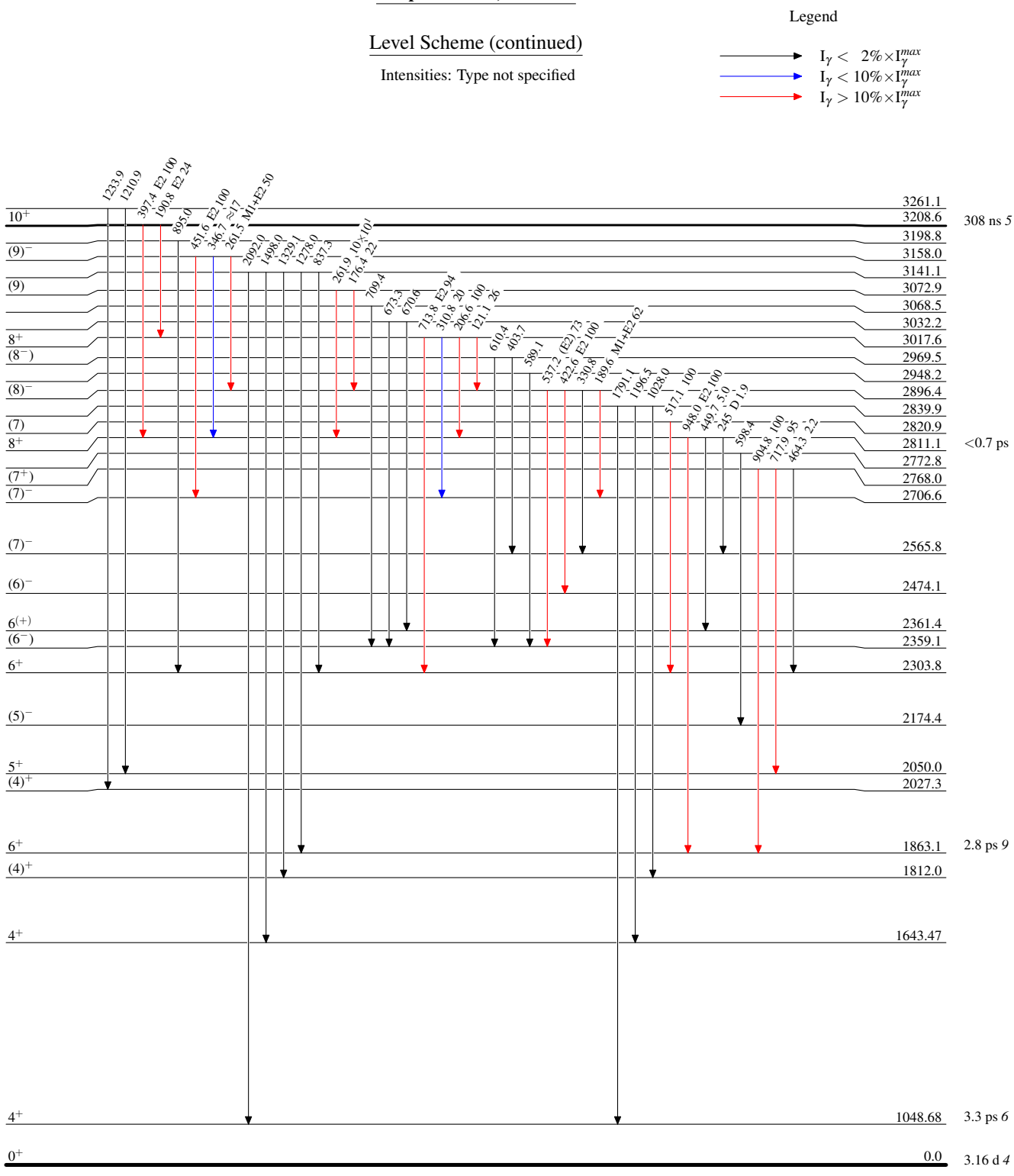


$^{134}_{58}Ce_{76}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

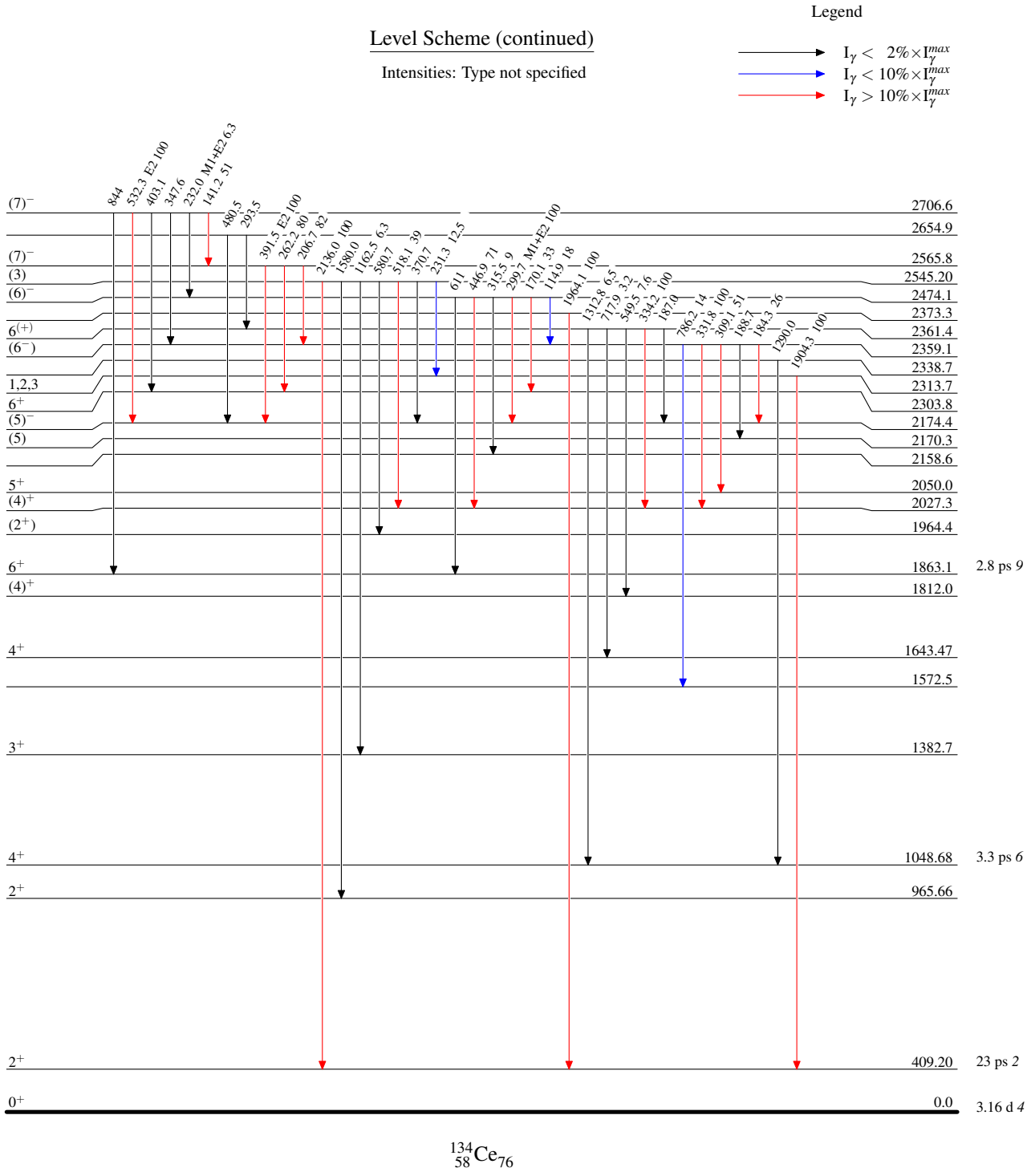


$^{134}_{58}Ce_{76}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

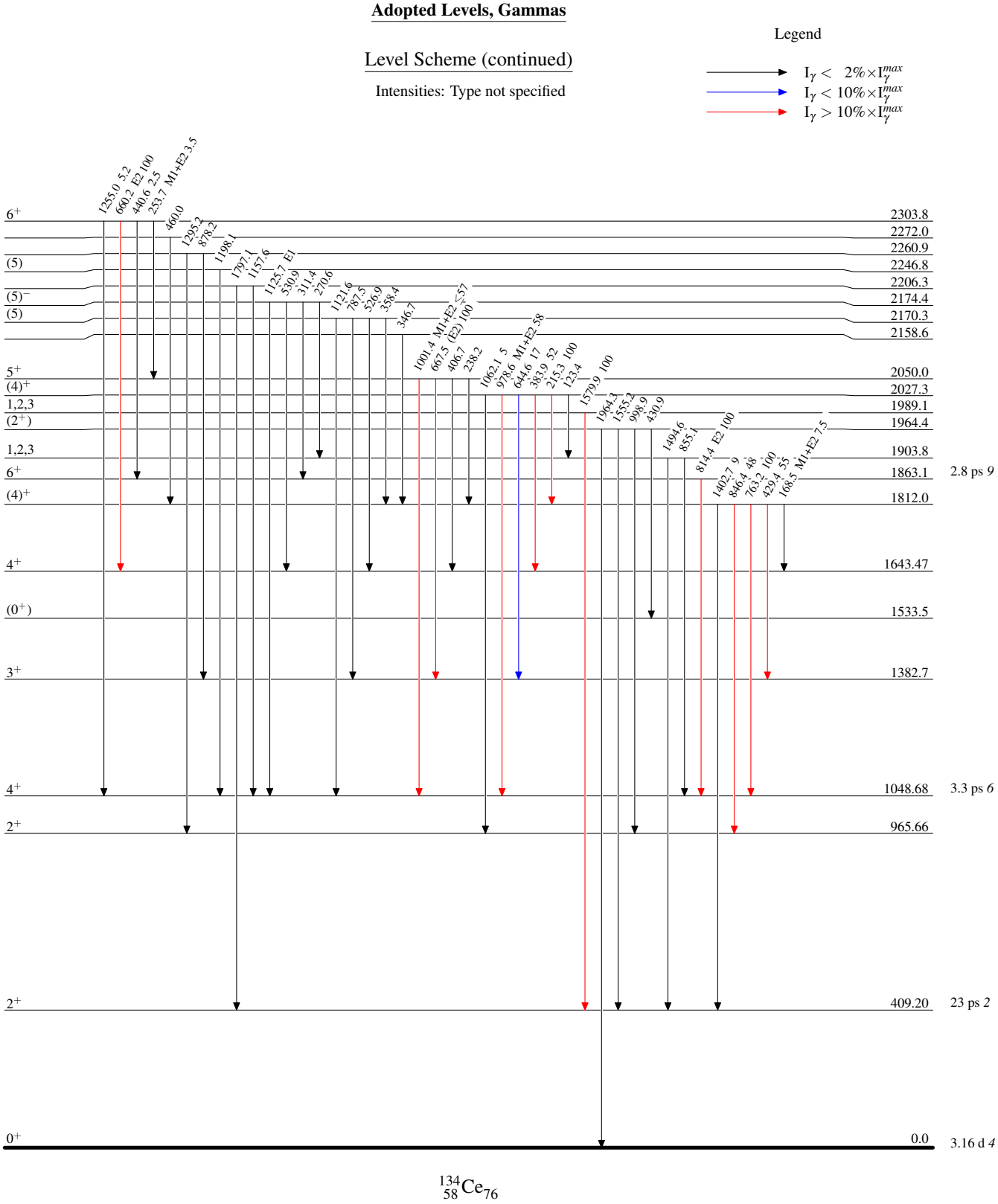


$^{134}_{58}Ce_{76}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Type not specified

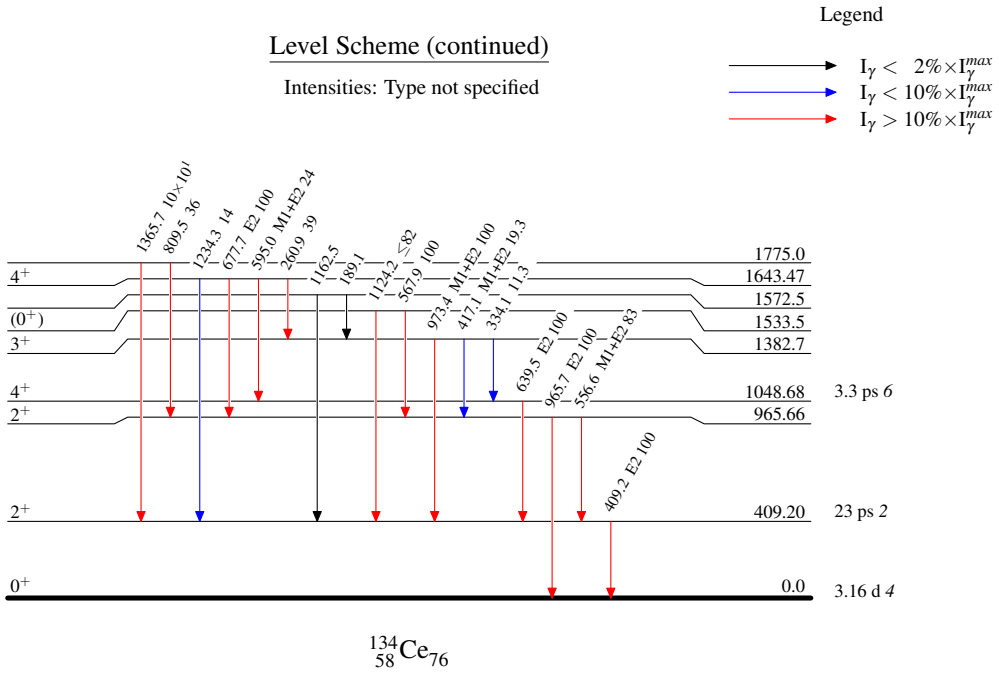


$^{134}_{58}Ce_{76}$

Adopted Levels, Gammas

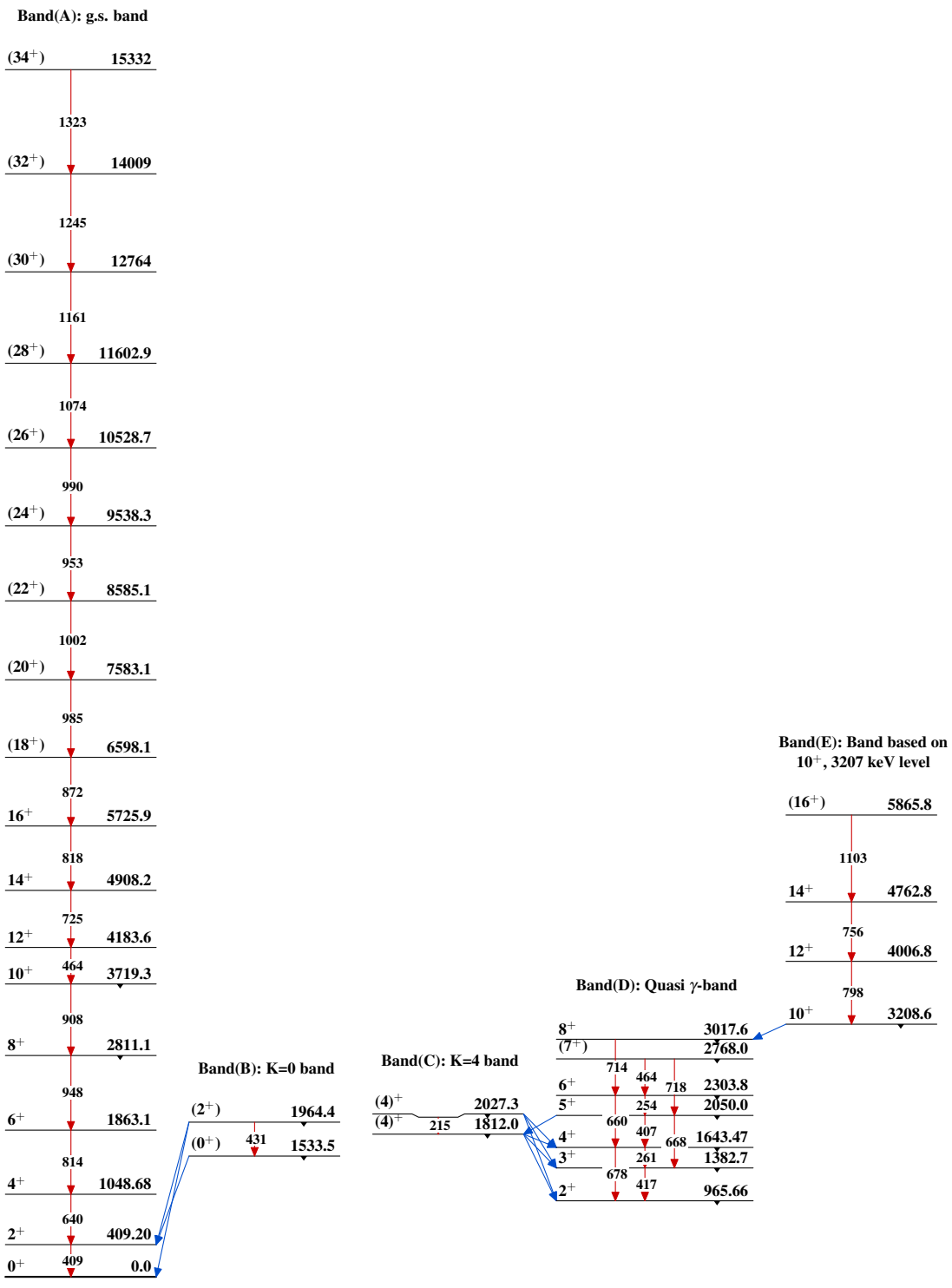
Level Scheme (continued)

Intensities: Type not specified



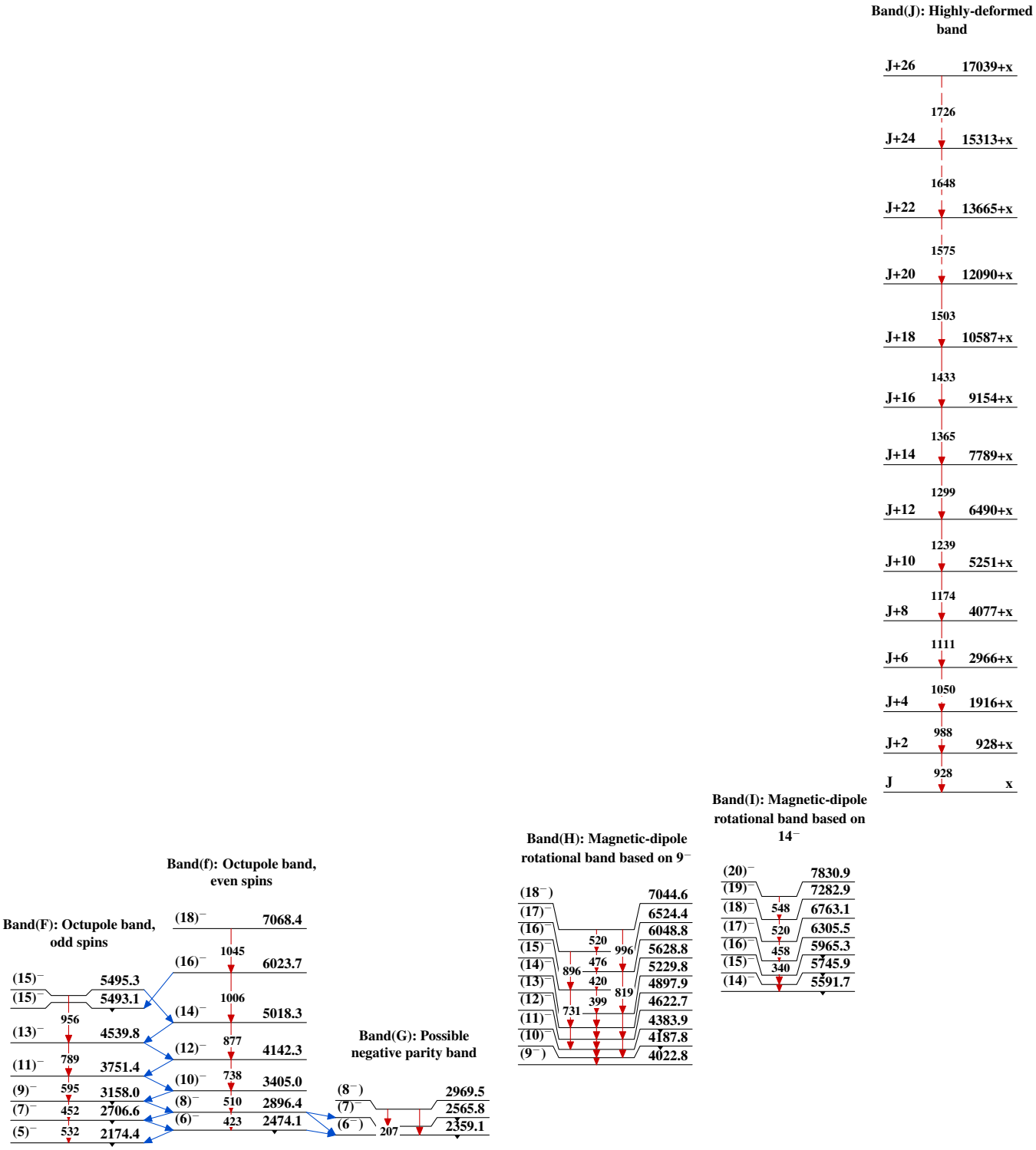
$^{134}_{58}Ce_{76}$

Adopted Levels, Gammas

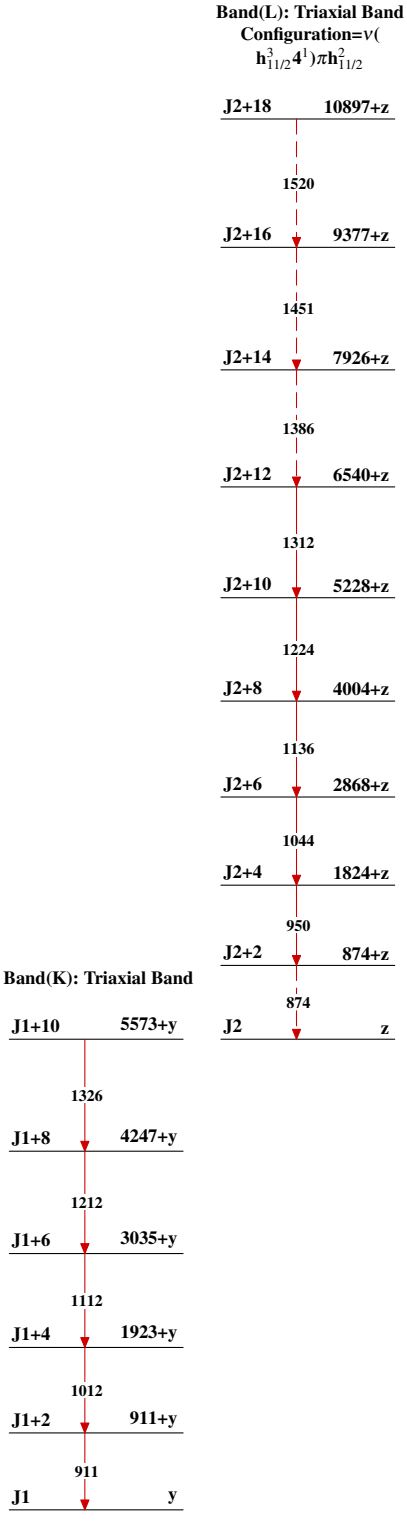


$^{134}_{58}Ce_{76}$

Adopted Levels, Gammas (continued)



Adopted Levels, Gammas (continued)



$^{134}_{58}Ce_{76}$