^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov and A. Rodionov, F. G. Kondev	NDS 112, 855 (2011)	31-Oct-2010

1996Ha20,1995Ha28,1995Ha34,1996Se04: ^{116}Cd(^{22}Ne,5nγ), E=120 MeV; measured $\gamma\gamma(\theta)$, $\gamma\gamma\gamma$; deduced levels, rotational bands, triaxial bands, SD bands, Q_t. GAMMASPHERE array with 31 HPGe detectors, DSAM technique; cranked Strutinsky-Woods-Saxon calculations.
1998Jo16: ^{100}Mo(^{36}S,3nγ); measured lifetimes by DSAM technique; cranked Woods-Saxon calculations.
2001Li61: SD-1 and SD-2 bands calculated in supersymmetry approach.

^{133}Ce Levels

E(level)[†]	J$^\pi$[‡]	$T_{1/2}$	Comments
0	1/2$^+$	97 min *4*	E(level),J$^\pi$: from 'Adopted Levels'.
37.3[@] *6*	9/2$^-$		Additional information 1. E(level): from 'Adopted Levels'.
206.4[@] *8*	11/2$^-$		
589.2[@] *8*	13/2$^-$		
825.8[@] *10*	15/2$^-$		
1342.9[@] *10*	17/2$^-$		
1590.8[@] *11*	19/2$^-$		
1895.5[&] *11*	15/2$^+$		
2095.7[&] *11*	17/2$^+$		
2198.1[@] *12*	21/2$^-$		
2296.7[&] *11*	19/2$^+$		
2455.7[&] *13*	21/2$^+$		
2487.3[@] *13*	23/2$^-$		
2645.7[&] *13*	23/2$^+$		
2881.7[&] *14*	25/2$^+$		
3130.2[@] *14*	25/2$^-$		
3176.7[&] *15*	27/2$^+$		
3234.1[a] *18*	23/2$^-$		
3375.1[a] *15*	25/2$^-$		
3434.3[@] *15*	27/2$^-$		
3532.2[a] *15*	27/2$^-$		
3533.8[&] *15*	29/2$^+$		
3774.2[a] *18*	29/2$^-$		
3918.5[&] *16*	31/2$^+$		
4069.8[a] *20*	31/2$^-$		
4376.2[&] *17*	33/2$^+$		
4411.6[a] *20*	33/2$^-$		
4803.7[a] *20*	35/2$^-$		
4832.3[&] *17*	35/2$^+$		
5219.7[a] *21*	37/2$^-$		
5367.3[&] *18*	37/2$^+$		
5673.7[a] *21*	39/2$^-$		
5877.3[&] *19*	39/2$^+$		
6153.7[a] *22*	41/2$^-$		
6669.7[a] *22*	43/2$^-$		
7213.7[a] *23*	45/2$^-$		

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^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16 (continued)

^{133}Ce Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	$T_{1/2}$	Comments
0+x[d]	(27/2$^-$)		Additional information 2. E(level): 832, 847, 934 and 1177 γ's are in coincidence with γ's of the band F and γ's of the band B but decay path is unknown: energy value of this bandhead remains uncertain.
423.7+x[d] *5*	(31/2$^-$)		
913.1+x[d] *7*	(35/2$^-$)		
1557.2+x[d] *9*	(39/2$^-$)		
2326.0+x[d] *10*	(43/2$^-$)		
3208.0+x[c] *15*			
3214.9+x[d] *12*	(47/2$^-$)	0.77[#] ps *9*	
4090.0+x[c] *18*			
4215.4+x[d] *13*	(51/2$^-$)	0.23[#] ps *3*	
4982.4+x[c] *18*			
5314.1+x[d] *14*	(55/2$^-$)	0.139[#] ps *14*	
5979.7+x[c] *19*			
6502.4+x[d] *15*	(59/2$^-$)	0.146[#] ps *14*	
7078.4+x[c] *20*			
7777.6+x[d] *15*	(63/2$^-$)		
8268.4+x[c] *22*			
9133.9+x[d] *16*	(67/2$^-$)		
9504.8+x[b] *23*			
9580.7+x[c] *23*			
10559.2+x[d] *17*	(71/2$^-$)		
10698.8+x[b] *23*			
10960.7+x[c] *23*			
11989.2+x[b] *24*			
12061.3+x[d] *18*	(75/2$^-$)		
12461.0+x[c] *24*			
13384.6+x[b] *24*			
14884.8+x[b] *25*			
16492.1+x[b] *25*			
18203+x[b] *3*			
20028+x?[b] *3*			
0+y[i]			Additional information 3. E(level): possibly decays to 5219 level.
966.3+y[i] *5*			
2028.1+y[i] *7*			
3184.3+y[i] *9*			
4425.0+y[i] *10*			
5625.7+y[g] *12*			
5732.0+y?[i] *15*			
6899.7+y[g] *13*			
8277.0+y[g] *14*			
9759.8+y[g] *15*			
11351.5+y[g] *15*			
13051.9+y[g] *16*			
14831.2+y[g] *17*			
16687.2+y?[g] *20*			

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^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16 (continued)

^{133}Ce Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	Comments
0+z[e]		Additional information 4. E(level): higher than 1557.2+x.
703.5+z[e] *5*		E(level): possibly decays to 1557.2+x level.
1475.2+z[e] *12*		E(level): possibly decays to 2326.0+x level.
2356.5+z[e] *13*		
3342.9+z[e] *14*		
4422.0+z[e] *15*		
5590.1+z[e] *15*		
6832.2+z[e] *16*		
8003.6+z[f] *17*		
8152.2+z[e] *19*		
9226.1+z[f] *18*		
9537.2+z[e] *22*		
10562.6+z[f] *18*		
11998.7+z[f] *21*		
0+u[h]		Additional information 5. E(level): possibly decays to 4375 level.
774.2+u[h] *5*		
1634.5+u[h] *7*		
2600.2+u[h] *9*		
3663.0+u[h] *10*		
4815.6+u[h] *12*		
6059.8+u[h] *13*		
7401.1+u[h] *14*		
8840.4+u[h] *15*		
0+r[j]	(43/2)	Additional information 6. SD-1 band; Q(intrinsic)=7.4 *7*; percent population ≈ 3%. J$^{\pi}$: J=(43/2) from feeding the 35/2^{-} level of normal deformed band and the assumption that the unobserved linking transitions contribute ≈ 4$\hbar$ to total spin (1995Ha34).
748.30+r[j] *11*	J+2	
1557.43+r[j] *12*	J+4	
2430.30+r[j] *13*	J+6	
3367.57+r[j] *16*	J+8	
4370.61+r[j] *17*	J+10	
5438.17+r[j] *18*	J+12	
6570.44+r[j] *19*	J+14	
7768.83+r[j] *22*	J+16	
9035.44+r[j] *23*	J+18	
10372.84+r[j] *24*	J+20	
11784.24+r[j] *25*	J+22	
13272.9+r[j] *3*	J+24	
14843.0+r[j] *3*	J+26	
16497.7+r[j] *3*	J+28	
18240.7+r[j] *4*	J+30	
20074.2+r[j] *7*	J+32	
22001.7+r[j] *14*	J+34	
0+s[k]	(37/2)	Additional information 7. SD-2 band; Q(intrinsic)=7.5 *8* (1995Ha28); percent population ≈1.5%. J$^{\pi}$: J$_1$=(37/2) from feeding by the third lowest state the 37/2^{-} level of the normal deformed band and the assumption that the unobserved linking transitions contribute ≈ 4$\hbar$ to total spin (1995Ha34).

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^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16 (continued)

^{133}Ce Levels (continued)

E(level)†	Jπ‡	Comments
720.32+s[k] *9*	J1+2	
1505.75+s[k] *14*	J1+4	
2359.98+s[k] *16*	J1+6	
3280.27+s[k] *17*	J1+8	
4267.19+s[k] *19*	J1+10	
5319.39+s[k] *20*	J1+12	
6437.62+s[k] *22*	J1+14	
7621.96+s[k] *24*	J1+16	
8875.16+s[k] *25*	J1+18	
10199.0+s[k] *3*	J1+20	
11596.9+s[k] *3*	J1+22	
13072.4+s[k] *3*	J1+24	
14629.7+s[k] *4*	J1+26	
16272.7+s[k] *4*	J1+28	
18004.1+s[k] *5*	J1+30	
19825.7+s[k] *5*	J1+32	
21735.7+s[k] *6*	J1+34	
0+t[l]	(45/2)	Additional information 8. SD-3 band; percent population ≈ 0.6%. Jπ: J_2=(45/2) from feeding by the lowest state the 37/2$^+$ level of the normal deformed band and the assumption that the unobserved linking transitions contribute ≈ 4ħ to total spin (1995Ha34).
956.9+t[l] *10*	J2+2	
1942.8+t[l] *15*	J2+4	
2963.3+t[l] *18*	J2+6	
4045.4+t[l] *20*	J2+8	
5193.9+t[l] *23*	J2+10	
6401.5+t[l] *25*	J2+12	
7676+t[l] *3*	J2+14	
9011+t[l] *3*	J2+16	
10399+t[l] *3*	J2+18	
11838+t[l] *4*	J2+20	
13327+t[l] *4*	J2+22	
14875+t[l] *4*	J2+24	
16487+t[l] *4*	J2+26	
18174+t[l] *4*	J2+28	
19938+t?[l] *4*	J2+30	

† From a least-squares fit to Eγ′s.
‡ From Adopted Levels.
# From DSAM measurements in 1998Jo16.
@ Band(A): Band based on 9/2$^-$ state; configuration=ν9/2[514] ($h_{11/2}$).
& Band(B): Band based on 15/2$^+$ state; possible 3-qp configuration=ν9/2[514] ($h_{11/2}$)⊗π($h_{11/2}$,$g_{7/2}$).
[a] Band(C): Band based on 23/2$^-$ state; configuration=ν9/2[514] ($h_{11/2}$)⊗π($h^2_{11/2}$).
[b] Band(D): Triaxial band; possible 7-qp configuration=ν($h^3_{11/2}$)⊗π($h^2_{11/2}$,$g^2_{7/2}$).
[c] Band(E): Triaxial band; possible 5-qp configuration=ν($h^3_{11/2}$)⊗π($h^2_{11/2}$).
[d] Band(F): Triaxial band based on (27/2$^-$) state; possible 3-qp configuration=ν($h^3_{11/2}$); Q_t=2.2 *1*, β_2=0.186 *7*, γ=−83° (1998Jo16).

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^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16 (continued)

^{133}Ce Levels (continued)

[e] Band(G): Triaxial band; possible 5-qp configuration=$\nu(h^3_{11/2})\otimes\pi(h^2_{11/2})$.

[f] Band(H): Triaxial band; possible 7-qp configuration=$\nu(h^3_{11/2})\otimes\pi(h^2_{11/2},g^2_{7/2})$.

[g] Band(I): Triaxial band; possible 7-qp configuration= $\nu(h^2_{11/2},s_{1/2})\otimes\pi(h^2_{11/2},g^2_{7/2})$.

[h] Band(J): Triaxial band; possible 5-qp configuration=$\nu(h^2_{11/2},s_{1/2})\otimes\pi(h_{11/2},g_{7/2})$.

[i] Band(K): Rotational level sequence.

[j] Band(L): SD-1 band based on (43/2) state; possible configuration=ν1/2[530] coupled to ($\pi5^4\nu6^2$).

[k] Band(M): SD-2 band based on (37/2) state; possible configuration=ν1/2[530] coupled to ($\pi5^4\nu6^2$).

[l] Band(N): SD-3 band based on (45/2) state; possible configuration=($\pi5^4\nu6^3$). At low frequencies, there may be admixtures from the configuration=($\pi5^4\nu6^1$).

γ(^{133}Ce)

E_γ [†]	E_i(level)	J^π_i	E_f	J^π_f	Comments
141	3375.1	25/2$^-$	3234.1	23/2$^-$	
157	3532.2	27/2$^-$	3375.1	25/2$^-$	
159	2455.7	21/2$^+$	2296.7	19/2$^+$	
171	206.4	11/2$^-$	37.3	9/2$^-$	
190	2645.7	23/2$^+$	2455.7	21/2$^+$	
200	2095.7	17/2$^+$	1895.5	15/2$^+$	
201	2296.7	19/2$^+$	2095.7	17/2$^+$	
236	825.8	15/2$^-$	589.2	13/2$^-$	
236	2881.7	25/2$^+$	2645.7	23/2$^+$	
242	3774.2	29/2$^-$	3532.2	27/2$^-$	
248	1590.8	19/2$^-$	1342.9	17/2$^-$	
289	2487.3	23/2$^-$	2198.1	21/2$^-$	
295	3176.7	27/2$^+$	2881.7	25/2$^+$	E_γ: from level-energy difference. Eγ=285 in figure 3 of 1996Ha20 seems incorrect in view of earlier value of 294.6.
296	4069.8	31/2$^-$	3774.2	29/2$^-$	
304	3434.3	27/2$^-$	3130.2	25/2$^-$	
342	4411.6	33/2$^-$	4069.8	31/2$^-$	
349	2645.7	23/2$^+$	2296.7	19/2$^+$	
357	3533.8	29/2$^+$	3176.7	27/2$^+$	
360	2455.7	21/2$^+$	2095.7	17/2$^+$	
384	589.2	13/2$^-$	206.4	11/2$^-$	
385	3918.5	31/2$^+$	3533.8	29/2$^+$	
392	4803.7	35/2$^-$	4411.6	33/2$^-$	
401	2296.7	19/2$^+$	1895.5	15/2$^+$	
416	5219.7	37/2$^-$	4803.7	35/2$^-$	
423.7 *5*	423.7+x	(31/2$^-$)	0+x	(27/2$^-$)	
426	2881.7	25/2$^+$	2455.7	21/2$^+$	
454	5673.7	39/2$^-$	5219.7	37/2$^-$	
456	4832.3	35/2$^+$	4376.2	33/2$^+$	
458	4376.2	33/2$^+$	3918.5	31/2$^+$	
480	6153.7	41/2$^-$	5673.7	39/2$^-$	
489.4 *5*	913.1+x	(35/2$^-$)	423.7+x	(31/2$^-$)	
510	5877.3	39/2$^+$	5367.3	37/2$^+$	
516	6669.7	43/2$^-$	6153.7	41/2$^-$	
518	1342.9	17/2$^-$	825.8	15/2$^-$	
531	3176.7	27/2$^+$	2645.7	23/2$^+$	
535	5367.3	37/2$^+$	4832.3	35/2$^+$	
544	7213.7	45/2$^-$	6669.7	43/2$^-$	
550	589.2	13/2$^-$	37.3	9/2$^-$	
606	2198.1	21/2$^-$	1590.8	19/2$^-$	
620	825.8	15/2$^-$	206.4	11/2$^-$	

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^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16 (continued)

$\gamma(^{133}Ce)$ (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Comments
637		4411.6	33/2$^-$	3774.2	29/2$^-$	
643		3130.2	25/2$^-$	2487.3	23/2$^-$	
644.1 *5*		1557.2+x	(39/2$^-$)	913.1+x	(35/2$^-$)	
652		3533.8	29/2$^+$	2881.7	25/2$^+$	
703.5 *5*		703.5+z		0+z		
720.32 *9*	0.054 *12*	720.32+s	J1+2	0+s	(37/2)	
734		4803.7	35/2$^-$	4069.8	31/2$^-$	
742		3918.5	31/2$^+$	3176.7	27/2$^+$	
748.30 *11*	0.66 *18*	748.30+r	J+2	0+r	(43/2)	
754		1342.9	17/2$^-$	589.2	13/2$^-$	
764		1590.8	19/2$^-$	825.8	15/2$^-$	
768.8 *5*		2326.0+x	(43/2$^-$)	1557.2+x	(39/2$^-$)	
771.7		1475.2+z		703.5+z		
774.2 *5*		774.2+u		0+u		
785.43 *10*	0.14 *2*	1505.75+s	J1+4	720.32+s	J1+2	
808		5219.7	37/2$^-$	4411.6	33/2$^-$	
809.13 *3*	0.95 *15*	1557.43+r	J+4	748.30+r	J+2	
842		4376.2	33/2$^+$	3533.8	29/2$^+$	
854.22 *7*	0.40 *15*	2359.98+s	J1+6	1505.75+s	J1+4	
856		2198.1	21/2$^-$	1342.9	17/2$^-$	
860.3 *5*		1634.5+u		774.2+u		
870		5673.7	39/2$^-$	4803.7	35/2$^-$	
872.86 *5*	1.00 *15*	2430.30+r	J+6	1557.43+r	J+4	
881.3 *5*		2356.5+z		1475.2+z		
882[#]		3208.0+x		2326.0+x	(43/2$^-$)	
882[#]		4090.0+x		3208.0+x		
888.9 *5*		3214.9+x	(47/2$^-$)	2326.0+x	(43/2$^-$)	E_γ: 887.4 (1998Jo16).
892.4 *5*		4982.4+x		4090.0+x		
897		2487.3	23/2$^-$	1590.8	19/2$^-$	
914		4832.3	35/2$^+$	3918.5	31/2$^+$	
920.29 *7*	0.39 *7*	3280.27+s	J1+8	2359.98+s	J1+6	
932		3130.2	25/2$^-$	2198.1	21/2$^-$	
934		6153.7	41/2$^-$	5219.7	37/2$^-$	
937.27 *9*	0.83 *17*	3367.57+r	J+8	2430.30+r	J+6	
947		3434.3	27/2$^-$	2487.3	23/2$^-$	
954		2296.7	19/2$^+$	1342.9	17/2$^-$	
956.9	0.094 *15*	956.9+t	J2+2	0+t	(45/2)	
965.7 *5*		2600.2+u		1634.5+u		
966.3 *5*		966.3+y		0+y		
985.9	0.19 *3*	1942.8+t	J2+4	956.9+t	J2+2	
986.4 *5*		3342.9+z		2356.5+z		
986.92 *8*	0.40 *7*	4267.19+s	J1+10	3280.27+s	J1+8	
991		5367.3	37/2$^+$	4376.2	33/2$^+$	
996		6669.7	43/2$^-$	5673.7	39/2$^-$	E_γ: from level energy difference. Eγ=941 In figure 3 of 1996Ha20 does not fit between the levels shown In the level scheme. IT is assumed (by the evaluators) that Eγ=516 is correct.
997.3 *5*		5979.7+x		4982.4+x		
1000.5 *5*		4215.4+x	(51/2$^-$)	3214.9+x	(47/2$^-$)	E_γ: 999.3 (1998Jo16).
1003.03 *7*	0.87 *16*	4370.61+r	J+10	3367.57+r	J+8	
1020.5	0.19 *3*	2963.3+t	J2+6	1942.8+t	J2+4	
1045		3532.2	27/2$^-$	2487.3	23/2$^-$	
1045		5877.3	39/2$^+$	4832.3	35/2$^+$	
1052.19 *7*	0.40 *7*	5319.39+s	J1+12	4267.19+s	J1+10	
1060		7213.7	45/2$^-$	6153.7	41/2$^-$	E_γ: from level energy difference. Eγ=1055 In figure 3 of 1996Ha20.

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^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16 (continued)

γ(^{133}Ce) (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Comments
1061.8 *5*		2028.1+y		966.3+y		
1062.8 *5*		3663.0+u		2600.2+u		
1067.56 *6*	0.85 *16*	5438.17+r	J+12	4370.61+r	J+10	
1079.1 *5*		4422.0+z		3342.9+z		
1082.1	0.20 *4*	4045.4+t	J2+8	2963.3+t	J2+6	
1098.7[#] *5*		5314.1+x	(55/2$^-$)	4215.4+x	(51/2$^-$)	E_γ: 1097.6 (1998Jo16).
1098.7[#] *5*		7078.4+x		5979.7+x		
1118.23 *8*	0.39 *7*	6437.62+s	J1+14	5319.39+s	J1+12	
1132.26 *6*	0.74 *18*	6570.44+r	J+14	5438.17+r	J+12	
1148.5	0.18 *2*	5193.9+t	J2+10	4045.4+t	J2+8	
1152.6 *5*		4815.6+u		3663.0+u		
1156.2 *5*		3184.3+y		2028.1+y		
1168.1 *5*		5590.1+z		4422.0+z		
1171.4 *5*		8003.6+z		6832.2+z		
1177		3375.1	25/2$^-$	2198.1	21/2$^-$	
1184.33 *9*	0.30 *5*	7621.96+s	J1+16	6437.62+s	J1+14	
1188.3 *5*		6502.4+x	(59/2$^-$)	5314.1+x	(55/2$^-$)	
1190.0		8268.4+x		7078.4+x		
1194.0 *5*		10698.8+x		9504.8+x		
1198.39 *10*	0.56 *10*	7768.83+r	J+16	6570.44+r	J+14	
1200.7 *5*		5625.7+y		4425.0+y		
1207.6	0.17 *2*	6401.5+t	J2+12	5193.9+t	J2+10	
1222.5 *5*		9226.1+z		8003.6+z		
1236.4 *5*		9504.8+x		8268.4+x		
1240.7 *5*		4425.0+y		3184.3+y		
1242.1 *5*		6832.2+z		5590.1+z		
1244.2 *5*		6059.8+u		4815.6+u		
1253.19 *8*	0.25 *4*	8875.16+s	J1+18	7621.96+s	J1+16	
1266.60 *6*	0.43 *10*	9035.44+r	J+18	7768.83+r	J+16	
1270		2095.7	17/2$^+$	825.8	15/2$^-$	
1274.0 *5*		6899.7+y		5625.7+y		
1274.7	0.18 *3*	7676+t	J2+14	6401.5+t	J2+12	
1275.2 *5*		7777.6+x	(63/2$^-$)	6502.4+x	(59/2$^-$)	
1290.4 *5*		11989.2+x		10698.8+x		
1306		1895.5	15/2$^+$	589.2	13/2$^-$	
1307[@]		5732.0+y?		4425.0+y		
1312.3 *5*		9580.7+x		8268.4+x		E_γ: 1319 in figure 3 of 1996Ha20.
1320		8152.2+z		6832.2+z		
1323.86 *10*	0.21 *4*	10199.0+s	J1+20	8875.16+s	J1+18	
1334.7	0.18 *3*	9011+t	J2+16	7676+t	J2+14	
1336.5 *5*		10562.6+z		9226.1+z		
1337.40 *8*	0.32 *6*	10372.84+r	J+20	9035.44+r	J+18	
1341.3 *5*		7401.1+u		6059.8+u		
1356.3 *5*		9133.9+x	(67/2$^-$)	7777.6+x	(63/2$^-$)	
1377.3 *5*		8277.0+y		6899.7+y		
1380.0 *5*		10960.7+x		9580.7+x		
1385[@]		9537.2+z		8152.2+z		
1388.3	0.15 *2*	10399+t	J2+18	9011+t	J2+16	
1395.3 *5*		13384.6+x		11989.2+x		
1397.89 *11*	0.17 *3*	11596.9+s	J1+22	10199.0+s	J1+20	
1411.39 *8*	0.27 *4*	11784.24+r	J+22	10372.84+r	J+20	
1425.3 *5*		10559.2+x	(71/2$^-$)	9133.9+x	(67/2$^-$)	
1436		11998.7+z		10562.6+z		
1438.6	0.13 *2*	11838+t	J2+20	10399+t	J2+18	
1439.3 *5*		8840.4+u		7401.1+u		
1475.51 *9*	0.15 *3*	13072.4+s	J1+24	11596.9+s	J1+22	

Continued on next page (footnotes at end of table)

^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16 (continued)

γ(^{133}Ce) (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Comments
1482.8 *5*		9759.8+y		8277.0+y		
1488.63 *9*	0.24 *4*	13272.9+r	J+24	11784.24+r	J+22	
1488.9	0.126 *19*	13327+t	J2+22	11838+t	J2+20	
1500.2[#] *5*		12461.0+x		10960.7+x		E_γ: 1501 in figure 3 of 1996Ha20.
1500.2[#] *5*		14884.8+x		13384.6+x		
1502.0 *5*		12061.3+x	(75/2$^-$)	10559.2+x	(71/2$^-$)	
1547.8	0.099 *15*	14875+t	J2+24	13327+t	J2+22	
1557.29 *11*	0.14 *5*	14629.7+s	J1+26	13072.4+s	J1+24	
1570.09 *8*	0.17 *5*	14843.0+r	J+26	13272.9+r	J+24	
1591.6 *5*		11351.5+y		9759.8+y		
1607.3 *5*		16492.1+x		14884.8+x		
1612.6	0.068 *12*	16487+t	J2+26	14875+t	J2+24	
1642.98 *21*	0.070 *9*	16272.7+s	J1+28	14629.7+s	J1+26	
1654.70 *12*	0.10 *4*	16497.7+r	J+28	14843.0+r	J+26	
1686.7		18174+t	J2+28	16487+t	J2+26	
1700.4 *5*		13051.9+y		11351.5+y		
1711.1 *5*		18203+x		16492.1+x		
1731.35 *21*		18004.1+s	J1+30	16272.7+s	J1+28	
1743.04 *14*		18240.7+r	J+30	16497.7+r	J+28	
1764[@]		19938+t?	J2+30	18174+t	J2+28	
1779.3 *5*		14831.2+y		13051.9+y		
1821.62 *22*		19825.7+s	J1+32	18004.1+s	J1+30	
1824.9[@] *5*		20028+x?		18203+x		
1833.4 *6*		20074.2+r	J+32	18240.7+r	J+30	
1856[@]		16687.2+y?		14831.2+y		
1910.00 *20*		21735.7+s	J1+34	19825.7+s	J1+32	
1927.5 *12*		22001.7+r	J+34	20074.2+r	J+32	

[†] Values have been read from figs. 1 *3* 3 of 1996Ha20; for SD-1 and SD-2 bands from 1996Se04; for SD-3 band from fig. 1 of 1995Ha34, assuming 0.5 keV uncertainty when Eγ quoted to nearest tenth of a keV, 1 keV otherwise.

[‡] For SD-bands, Iγ′s are assumed by the evaluators to be the intensities of transitions since the correction in the calculation of Iγ of them is ≤ 0.4%. Absolute transition intensities for SD bands are read from plots in fig.1 of 1995Ha34 (normalized to the strongest transition intensity in SD-1 band).

[#] Multiply placed.

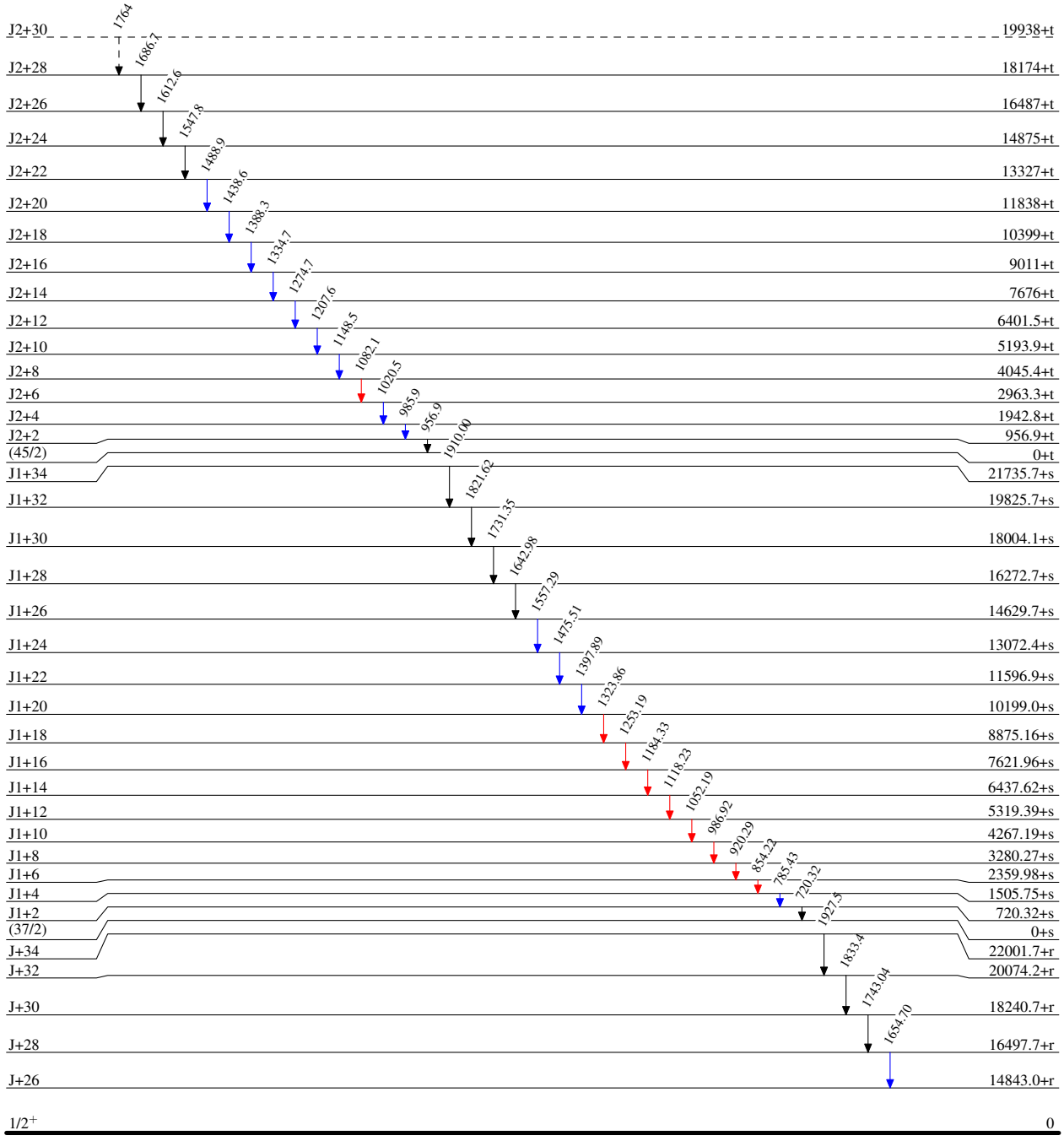
[@] Placement of transition in the level scheme is uncertain.

^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16

Level Scheme

Intensities: Relative $I_{(\gamma+ce)}$

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)



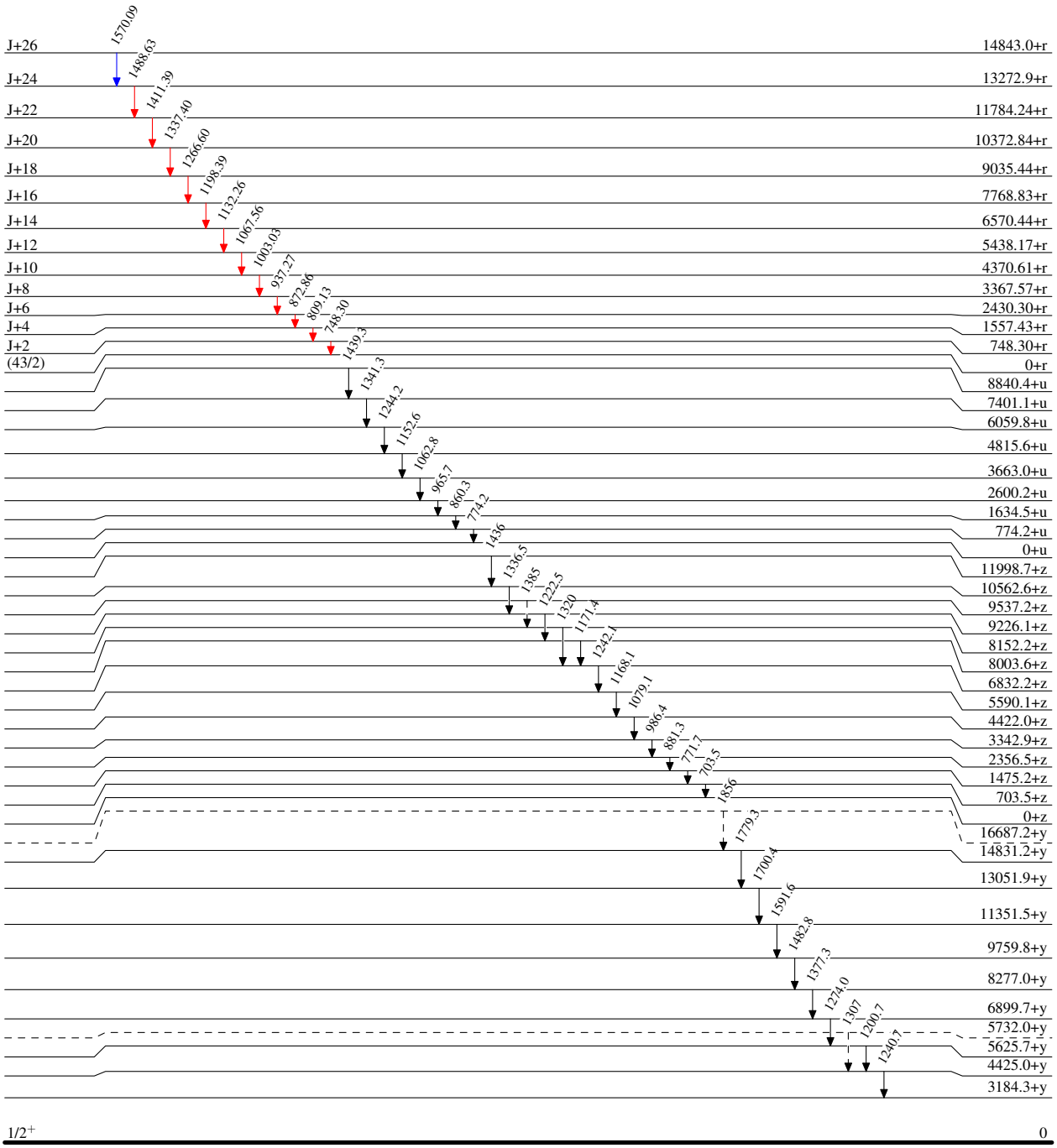
$^{133}_{58}Ce_{75}$

^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16

Level Scheme (continued)

Intensities: Relative $I_{(\gamma+ce)}$

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)



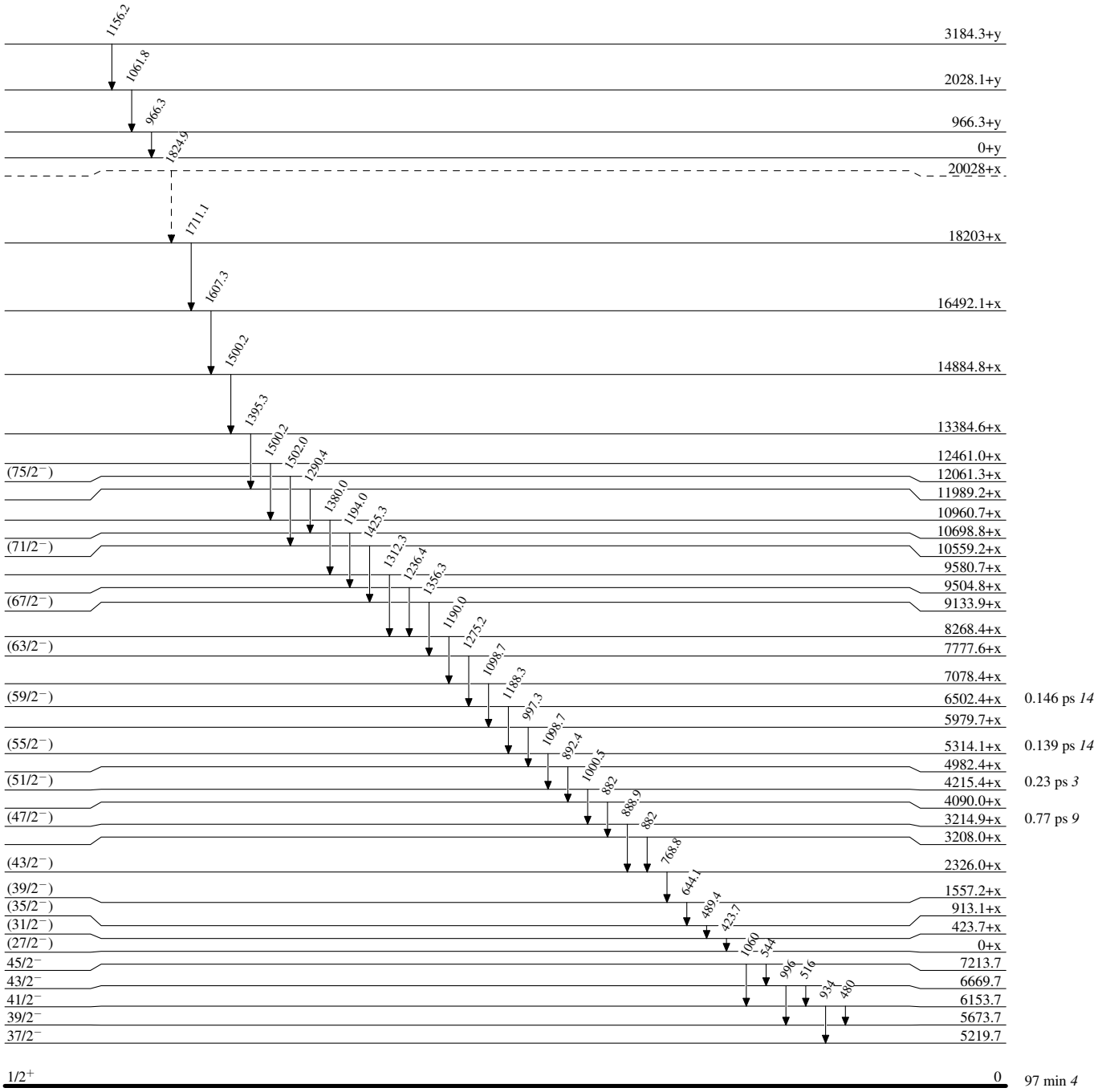
$^{133}_{58}Ce_{75}$

^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16 Legend

Level Scheme (continued)

Intensities: Relative $I_{(\gamma+ce)}$

γ Decay (Uncertain)

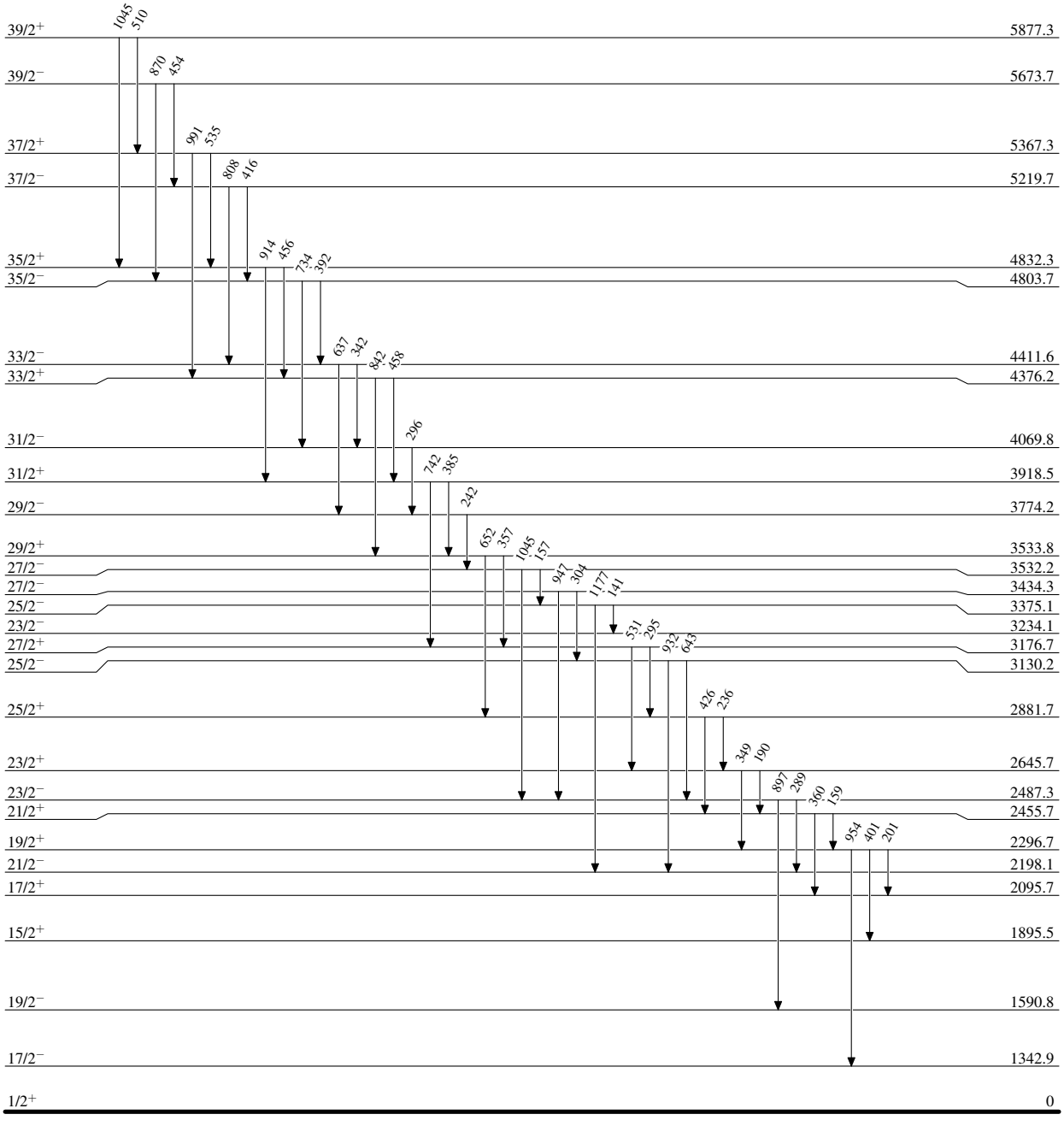


$^{133}_{58}Ce_{75}$

^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16

Level Scheme (continued)

Intensities: Relative $I_{(\gamma+ce)}$

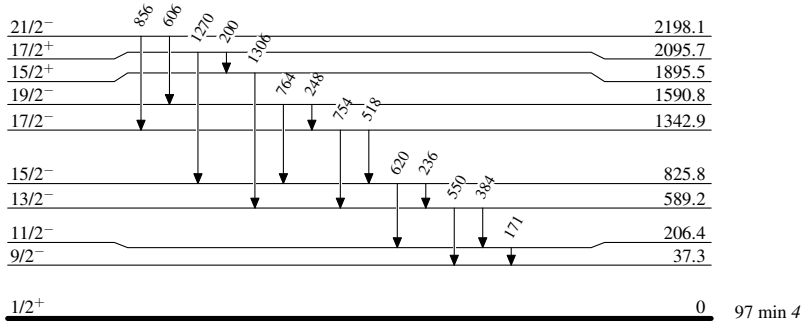


$^{133}_{58}Ce_{75}$

^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16

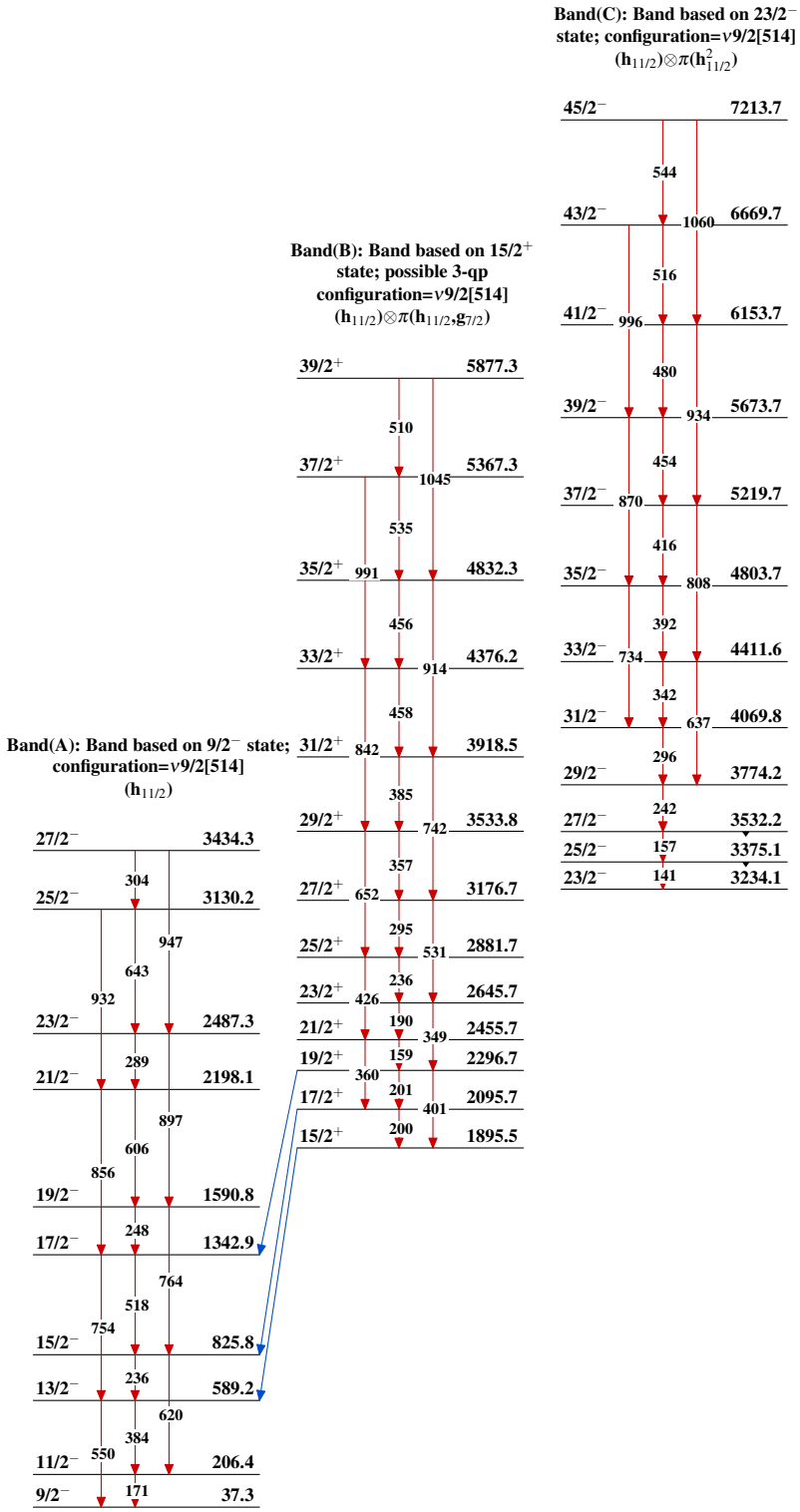
Level Scheme (continued)

Intensities: Relative $I_{(\gamma+ce)}$



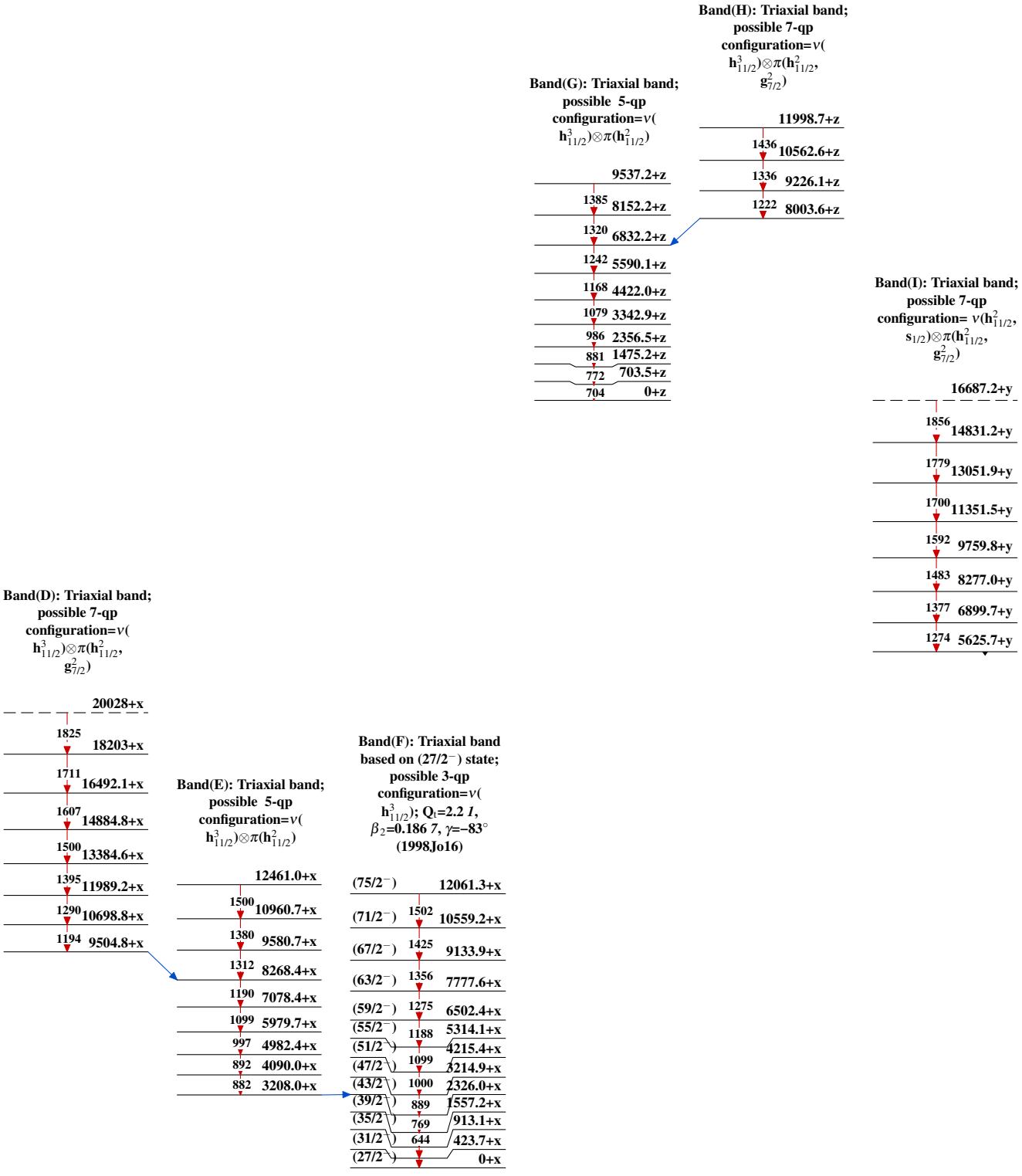
$^{133}_{58}Ce_{75}$

^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16



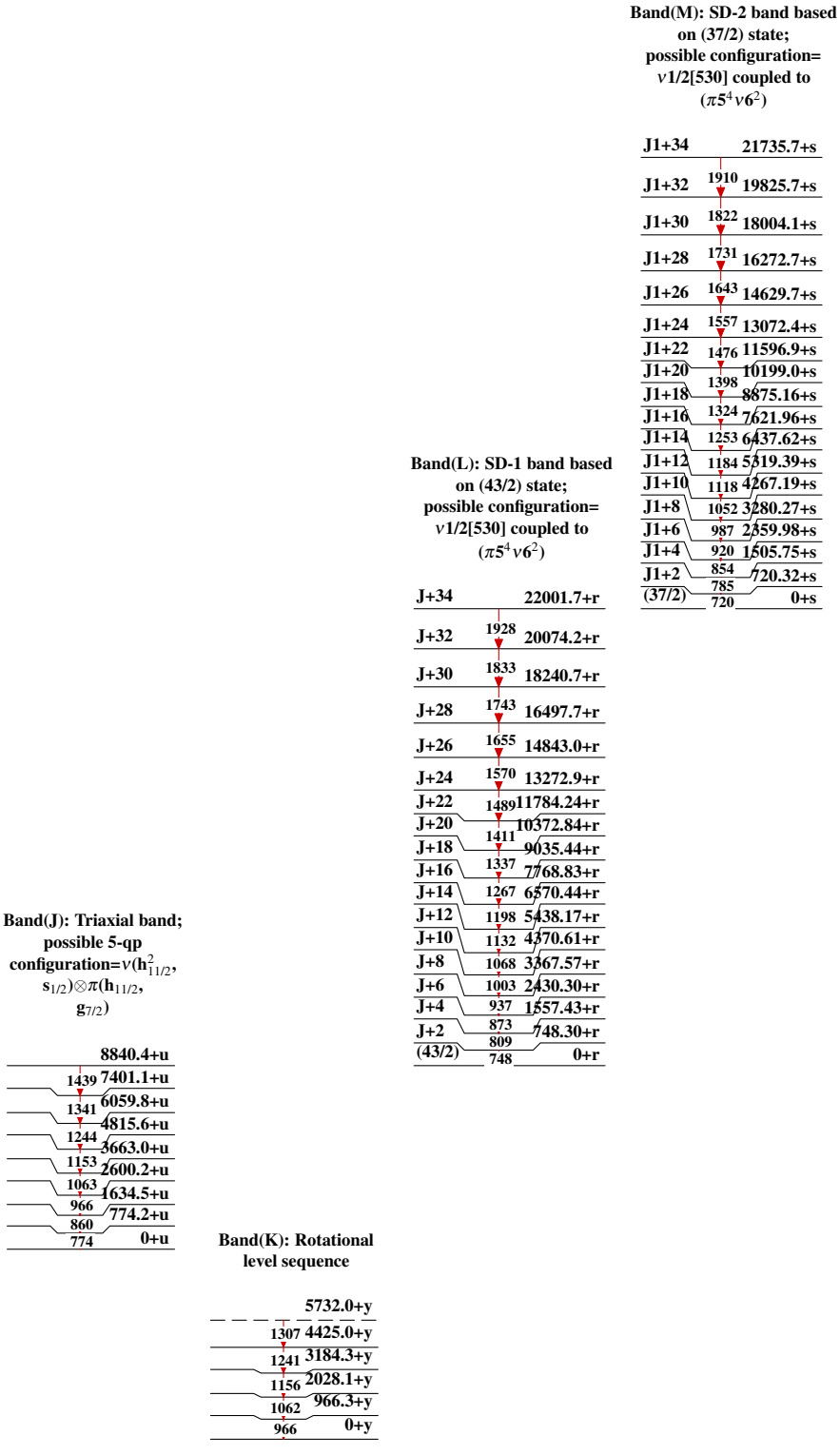
$^{133}_{58}Ce_{75}$

^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16 (continued)



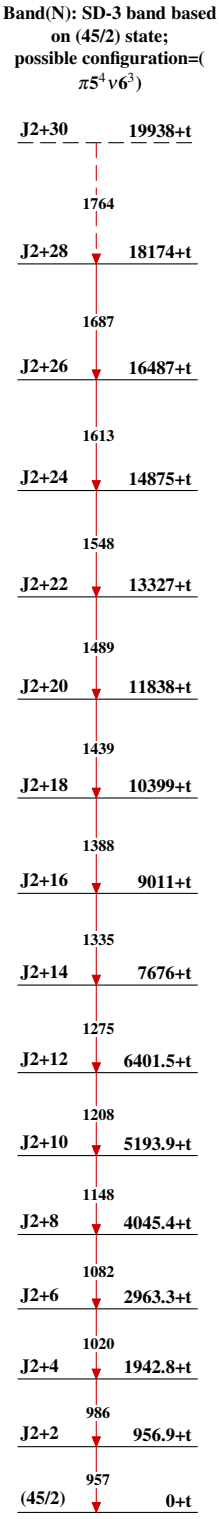
$^{133}_{58}Ce_{75}$

$^{116}Cd(^{22}Ne,5n\gamma)$ 1996Ha20,1998Jo16 (continued)



$^{133}_{58}Ce_{75}$

^{116}Cd(^{22}Ne,5nγ) 1996Ha20,1998Jo16 (continued)



$^{133}_{58}Ce_{75}$