^{116}Cd(^{13}C,4nγ) 2007Mo37,1991Gr02

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	J. Katakura	NDS 112, 495 (2011)	1-Jan-2010

2007Mo37: E=62 MeV. Measured Eγ, Iγ, $\gamma\gamma$, $\gamma\gamma(\theta)$(DCO) using an array of nine HPGe detectors with BGO anti-Compton shields.
1991Gr02: E=46-60 MeV, enriched target 97.2%, Compton-suppressed spectrometer, $\gamma\gamma$ coin, $\gamma(\theta)$, polarization.

^{125}Xe Levels

E(level)†	Jπ#	E(level)†	Jπ#	E(level)†	Jπ#	E(level)†	Jπ#
0.0	1/2(+)	1580.3[b] 4	17/2(−)	3075.2 4	(21/2)	4268.3[f] 5	(29/2)
111.80[d] 23	3/2(+)	1718.4[d] 4	15/2	3099.9[@] 4	27/2(−)	4292.6[g] 5	(29/2)
252.7[&] 3	9/2(−)	1859.3 4	17/2(−)	3131.2[e] 4	(23/2)	4383.3[c] 5	(31/2)
296.0[e] 3	7/2(+)	1925.3[e] 4	17/2(+)	3151.1 4	(21/2)	4573.3[a] 5	(31/2)
310.5[@] 4	11/2(−)	2006.7[a] 4	19/2(−)	3210.8 4	(21/2)	4762.8[g] 5	(31/2)
335.40[d] 23	5/2(+)	2166.7[&] 4	21/2	3272.6[b] 4	(25/2)	4912.0[f] 6	(31/2)
483.7[d] 3	7/2(+)	2215.8[@] 4	23/2(−)	3277.9 4	(23/2)	5066.8[@] 5	(35/2)
497.1 3	5/2(+)	2237.7[d] 4	17/2	3322.8[f] 4	(23/2)	5122.2[&] 6	(33/2)
596.8[e] 4	9/2(+)	2272.3[e] 4	19/2(+)	3379.5 4		5138.0[f] 6	(33/2)
736.9[&] 4	13/2(−)	2315.2 4		3486.3[g] 4	(25/2)	5162.3[g] 5	(33/2)
741.6 3	7/2(+)	2385.1[b] 4	21/2(−)	3487.1[e] 5	(25/2)	5200.2 6	
796.7[@] 4	15/2(−)	2423.7 4	19/2(+)	3519.5[f] 4	(25/2)	5200.4[b] 12	(33/2)
837.0[d] 4	9/2(+)	2550.7 4	19/2	3523.9 5		5320.3[c] 5	(35/2)
870.6[e] 4	11/2(+)	2616.6 4	(15/2,17/2)	3562.8 5		5826.7[f] 7	(35/2)
893.5[b] 4	13/2(−)	2652.7 4	19/2	3619.0[c] 4	(27/2)	6096.8[@] 6	(39/2−)
1019.2 4	9/2(+)	2704.1[e] 4	21/2(+)	3649.9 5		6113.6[f] 7	(37/2)
1030.1[d] 4	11/2(+)	2811.6[a] 4	(23/2)	3753.0[a] 5	(27/2)	6251.5[g] 6	(37/2)
1210.0[e] 4	13/2(+)	2819.3 4	(17/2)	3898.7 5		6345.4[c] 5	(39/2)
1310.3[a] 4	15/2(−)	2890.5[f] 4	(21/2)	3959.7[g] 5		6752.8[g] 7	(39/2)
1316.2 4	(11/2+)	2926.5 4	(19/2)	4052.8[&] 5	29/2	7215.7[@] 7	(43/2−)
1388.0[&] 4	17/2	2952.5 4	(19/2)	4064.8[f] 5	(27/2)	7286.9[g] 7	
1441.5[@] 4	19/2(−)	2970.3[d] 4	(21/2)	4070.8[@] 5	(31/2−)	7334.1[c] 9	(43/2)
1480.4[d] 4	13/2(+)	2999.5 4		4134.6 4		8265.2[g] 7	(45/2)
1536.4[e] 4	15/2(+)	3055.3[&] 4	25/2	4210.9[b] 5	(29/2)	8453.2?[‡] 8	

† From least-squares fit to Eγ's (by the evaluators) assuming Δ(Eγ)=0.3 keV for each γ ray.
‡ 1991Gr02 report 8453-keV level with γ ray connecting to 7216-keV level, but the connection is uncertain.
# From Adopted Levels.
@ Band(A): $\nu h_{11/2}$7/2[523], α=−1/2. This band exhibits signature inversion.
& Band(a): $\nu h_{11/2}$7/2[523], α=+1/2.
a Band(B): $\nu h_{11/2}\otimes$(γ vibration), α=−1/2. This band exhibits signature inversion.
b Band(b): $\nu h_{11/2}\otimes$(γ vibration), α=+1/2.
c Band(C): ν7/2[523]$\otimes\pi$1/2[550]^2. The neutron and proton orbitals originate from respective $h_{11/2}$ orbitals.
d Band(D): $d_{3/2}$,$s_{1/2}$ mixture, decoupled.
e Band(E): $g_{7/2}$, decoupled.
f Band(F): positive-parity band.
g Band(G): Configuration=((ν $h_{11/2}$)(π $h_{11/2}$)^2).

^{116}Cd(^{13}C,4nγ) 2007Mo37,1991Gr02 (continued)

$\gamma(^{125}Xe)$

E_i(level)	J_i^π	E_γ[†]	I_γ[#]	E_f	J_f^π	Mult.[@]	Comments
111.80	$3/2^{(+)}$	111.8 *3*	100	0.0	$1/2^{(+)}$		
252.7	$9/2^{(-)}$	140.8 *3*	100	111.80	$3/2^{(+)}$		
296.0	$7/2^{(+)}$	184.1 *3*	100	111.80	$3/2^{(+)}$		
310.5	$11/2^{(-)}$	57.6 *3*	100	252.7	$9/2^{(-)}$		
335.40	$5/2^{(+)}$	223.7 *3*	9 *4*	111.80	$3/2^{(+)}$		
		335.4 *3*	100 *20*	0.0	$1/2^{(+)}$	E2	A_2=+0.14 *1*, A_4=+0.03 *1*, pol.=+0.1 *2* (1991Gr02).
483.7	$7/2^{(+)}$	148.3 *3*	7 *3*	335.40	$5/2^{(+)}$	(M1+E2)	Mult.: D+Q and relevant levels. R(DCO)=1.0 *2* (1991Gr02).
		372.0 *3*	100 *20*	111.80	$3/2^{(+)}$	E2	A_2=+0.221 *7*, A_4=+0.004 *9*, pol.=+0.38 *9* (1991Gr02).
497.1	$5/2^{(+)}$	161.9 *3*		335.40	$5/2^{(+)}$		
		385.3 *3*		111.80	$3/2^{(+)}$		
596.8	$9/2^{(+)}$	300.9 *3*	100 *20*	296.0	$7/2^{(+)}$	M1+E2	A_2=−0.309 *6*, A_4=+0.186 *7*, pol.=+0.7 *1* (1991Gr02).
		344.2 *3*	8 *3*	252.7	$9/2^{(-)}$	E1	A_2=−0.05 *2*, A_4=−0.41 *2*, pol.=−0.1 *2* (1991Gr02).
736.9	$13/2^{(-)}$	426.4 *3*	100 *20*	310.5	$11/2^{(-)}$	M1+E2	A_2=−0.706 *4*, A_4=+0.099 *5*, pol.=+0.08 *4* (1991Gr02).
		484.2 *3*	37 *12*	252.7	$9/2^{(-)}$	E2	A_2=+0.255 *9*, A_4=−0.29 *1*, pol.=+0.34 *4* (1991Gr02).
741.6	$7/2^{(+)}$	244.4 *3*		497.1	$5/2^{(+)}$		
		445.6 *3*		296.0	$7/2^{(+)}$		
		488.6 *3*		252.7	$9/2^{(-)}$		
796.7	$15/2^{(-)}$	486.2 *3*	100	310.5	$11/2^{(-)}$	E2	A_2=+0.325 *1*, A_4=−0.045 *2*, pol.=+0.50 *1* (1991Gr02).
837.0	$9/2^{(+)}$	501.5 *3*	100	335.40	$5/2^{(+)}$	E2	A_2=−0.01 *4*, A_4=+0.09 *5*, R(DCO)=0.85 *9*, pol.=+0.12 *7* (1991Gr02).
870.6	$11/2^{(+)}$	273.8 *3*	8 *3*	596.8	$9/2^{(+)}$	(M1+E2)	Mult.: D+Q and relevant levels. A_2=−0.30 *1*, A_4=−0.21 *2*, pol.=−0.1 *1* (1991Gr02).
		574.4 *3*	100 *10*	296.0	$7/2^{(+)}$	E2	A_2=+0.273 *6*, A_4=−0.047 *7*, pol.=+0.55 *6* (1991Gr02).
893.5	$13/2^{(-)}$	583.0 *3*	100 *20*	310.5	$11/2^{(-)}$		
		640.9 *3*	9×10^1 *3*	252.7	$9/2^{(-)}$	E2	A_2=+0.44 *1*, A_4=−0.16 *2*, pol.=+0.5 *1* (1991Gr02).
1019.2	$9/2^{(+)}$	277.6 *3*	52 *23*	741.6	$7/2^{(+)}$		
		522.3 *3*	1.0×10^2 *3*	497.1	$5/2^{(+)}$		
1030.1	$11/2^{(+)}$	193.0 *3*	3 *2*	837.0	$9/2^{(+)}$		
		546.5 *3*	100 *10*	483.7	$7/2^{(+)}$		
1210.0	$13/2^{(+)}$	339.4 *3*	6 *2*	870.6	$11/2^{(+)}$		
		613.2 *3*	100 *20*	596.8	$9/2^{(+)}$	E2	A_2=+0.258 *9*, A_4=−0.098 *11*, pol.=+0.26 *4* (1991Gr02).
1310.3	$15/2^{(-)}$	416.8 *3*	28 *8*	893.5	$13/2^{(-)}$	M1+E2	A_2=−0.16 *1*, A_4=+0.07 *1*, pol.=+0.20 *9*, R(DCO)=0.44 *18* (1991Gr02).
		513.4 *3*	13 *5*	796.7	$15/2^{(-)}$	(M1+E2)	R(DCO)=0.7 *1* (1991Gr02).
		573.4 *3*	100 *20*	736.9	$13/2^{(-)}$	M1+E2	A_2=−0.63 *1*, A_4=−0.01 *1*, pol.=+0.05 *6*, R(DCO)=0.4 *1* (1991Gr02).
1316.2	$(11/2^+)$	297.2 *3*		1019.2	$9/2^{(+)}$		
		574.4 *3*		741.6	$7/2^{(+)}$		A_2=+0.273 *6*, A_4=−0.047 *7*, pol.=+0.55 *6* (1991Gr02).
1388.0	17/2	591.2 *3*	100 *20*	796.7	$15/2^{(-)}$	D+Q	R(DCO)=0.4 *1* (1991Gr02).
		651.0 *3*	87 *24*	736.9	$13/2^{(-)}$	Q	R(DCO)=1.04 *15* (1991Gr02).
1441.5	$19/2^{(-)}$	644.6 *3*	100	796.7	$15/2^{(-)}$	E2	A_2=+0.316 *2*, A_4=−0.044 *3*, pol.=+0.48 *3*, R(DCO)=0.95 *3* (1991Gr02).
1480.4	$13/2^{(+)}$	643.4 *3*	100	837.0	$9/2^{(+)}$	E2	A_2=+0.30 *3*, A_4=−0.69 *4*, pol.=+0.8 *1*, R(DCO)=1.26 *24* (1991Gr02).

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^{116}Cd(^{13}C,4nγ) 2007Mo37,1991Gr02 (continued)

γ(^{125}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[#]	E_f	J_f^π	Mult.[@]	Comments
1536.4	15/2$^{(+)}$	326.5 *3*	<10	1210.0	13/2$^{(+)}$	D+Q	R(DCO)=0.4 *1* (1991Gr02).
		665.7 *3*	100 *10*	870.6	11/2$^{(+)}$		
1580.3	17/2$^{(-)}$	269.9 *3*	5 *2*	1310.3	15/2$^{(-)}$		
		686.4 *3*	100 *20*	893.5	13/2$^{(-)}$	(E2)	A_2=+0.28 *1*, A_4=−0.08 *2*, pol.=+0.54 *6*, R(DCO)=0.97 *8* (1991Gr02).
		784.1 *3*	35 *13*	796.7	15/2$^{(-)}$	(D+Q)	R(DCO)=0.7 *1* (1991Gr02).
1718.4	15/2	688.4 *3*	100	1030.1	11/2$^{(+)}$		
1859.3	17/2$^{(-)}$	548.9 *3*	100 *20*	1310.3	15/2$^{(-)}$	M1+E2	A_2=−0.81 *4*, A_4=−0.02 *5*, pol.=+0.4 *1* (1991Gr02).
		966.1 *3*	<20	893.5	13/2$^{(-)}$		
1925.3	17/2$^{(+)}$	715.3 *3*	100	1210.0	13/2$^{(+)}$	E2	A_2=+0.29 *1*, A_4=+0.02 *1*, pol.=+0.58 *5*, R(DCO)=1.0 *1* (1991Gr02).
2006.7	19/2$^{(-)}$	619.0 *3*	39 *14*	1388.0	17/2	M1+E2	A_2=−0.17 *2*, A_4=−0.08 *2*, pol.=+0.13 *8* (1991Gr02).
		696.5 *3*	100 *20*	1310.3	15/2$^{(-)}$		
		1209.8 *3*	<20	796.7	15/2$^{(-)}$		
2166.7	21/2	725.4 *3*	82 *30*	1441.5	19/2$^{(-)}$	D+Q	R(DCO)=0.30 *3* (1991Gr02).
		778.7 *3*	100 *20*	1388.0	17/2	Q	R(DCO)=1.0 *2* (1991Gr02).
2215.8	23/2$^{(-)}$	774.3 *3*	100	1441.5	19/2$^{(-)}$	E2	A_2=+0.319 *4*, A_4=−0.038 *5*, pol.=+0.53 *2*, R(DCO)=0.93 *3* (1991Gr02).
2237.7	17/2	757.3 *3*	100 *30*	1480.4	13/2$^{(+)}$	(Q)	A_2=+0.16 *2*, A_4=+0.02 *3* (1991Gr02).
		1441.0 *3*	47 *20*	796.7	15/2$^{(-)}$	(D)	R(DCO)=0.47 *21* (1991Gr02).
2272.3	19/2$^{(+)}$	735.9 *3*	100	1536.4	15/2$^{(+)}$	E2	A_2=+0.35 *1*, A_4=−0.02 *1*, pol.=+0.45 *3* (1991Gr02).
2315.2		1005.0 *3*	<30	1310.3	15/2$^{(-)}$		
		1518.0 *3*	1.0×10^2 *3*	796.7	15/2$^{(-)}$		
2385.1	21/2$^{(-)}$	378.5 *3*	19 *7*	2006.7	19/2$^{(-)}$		
		804.9 *3*	1.0×10^2 *3*	1580.3	17/2$^{(-)}$	(E2)	A_2=+0.23 *1*, A_4=−0.02 *2*, pol.=+0.42 *6* (1991Gr02).
		943.6 *3*	13 *5*	1441.5	19/2$^{(-)}$	M1+E2	A_2=−0.2 *1*, A_4=+0.7 *1*, pol.=−0.7 *4*, R(DCO)=0.8 *2* (1991Gr02).
2423.7	19/2$^{(+)}$	705.2 *3*	1.0×10^2 *3*	1718.4	15/2		
		887.3 *3*	56 *11*	1536.4	15/2$^{(+)}$		Doublet in 1991Gr02 with γ ray from 3272-keV level.
		1035.2 *3*	9×10^1 *4*	1388.0	17/2		
2550.7	19/2	625.3 *3*	15 *6*	1925.3	17/2$^{(+)}$		
		832.4 *3*	1.0×10^2 *3*	1718.4	15/2	E2	A_2=+0.17 *3*, A_4=−0.093 *3*, pol.=+0.4 *1* (1991Gr02).
		1162.7 *3*	7×10^1 *3*	1388.0	17/2	D	R(DCO)=0.5 *2* (1991Gr02).
2616.6	(15/2,17/2)	898.0 *3*	100	1718.4	15/2		A_2=+1.4 *3*, A_4=+0.0 *3*, pol.=−0.2 *4* (1991Gr02).
2652.7	19/2	793.5 *3*	1.0×10^2 *3*	1859.3	17/2$^{(-)}$		
		1264.7 *3*	7×10^1 *3*	1388.0	17/2	M1+E2	Mult.: From adopted gammas.
2704.1	21/2$^{(+)}$	778.7 *3*	100	1925.3	17/2$^{(+)}$	E2	A_2=+0.323 *7*, A_4=−0.039 *9*, pol.=+0.56 *5*, R(DCO)=0.9 *1* (1991Gr02).
2811.6	(23/2)	596.2 *3*	53 *22*	2215.8	23/2$^{(-)}$	(D+Q)	R(DCO)=0.9 *1* (1991Gr02).
		804.9 *3*	1.0×10^2 *3*	2006.7	19/2$^{(-)}$		A_2=+0.23 *1*, A_4=−0.02 *2*, pol.=+0.42 *6* (1991Gr02).
2819.3	(17/2)	202.6[&] *3*	12 *4*	2616.6	(15/2,17/2)		A_2=−0.35 *1*, A_4=+0.03 *1* (1991Gr02).
		268.7 *3*	15 *5*	2550.7	19/2		
		504.2 *3*	12 *4*	2315.2			
		812.9 *3*	13 *4*	2006.7	19/2$^{(-)}$		
		894.0 *3*	8 *3*	1925.3	17/2$^{(+)}$		

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^{116}Cd(^{13}C,4nγ) 2007Mo37,1991Gr02 (continued)

γ(^{125}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[#]	E_f	J_f^π	Mult.[@]	Comments
2819.3	(17/2)	1377.5 *3*	100 *20*	1441.5	$19/2^{(-)}$		
2890.5	(21/2)	466.6 *3*	21 *8*	2423.7	$19/2^{(+)}$		Doublet in 1991Gr02 with γ ray from 3278-keV level.
		618.2 *3*	100 *20*	2272.3	$19/2^{(+)}$		A_2=−0.17 *2*, A_4=−0.08 *2*, pol.=+0.13 *8*, R(DCO)=1.0 *1* (1991Gr02).
		674.6 *3*	24 *9*	2215.8	$23/2^{(-)}$		R(DCO)=0.9 *2* (1991Gr02).
		723.8 *3*	63 *18*	2166.7	21/2		R(DCO)=0.5 *1* (1991Gr02).
2926.5	(19/2)	1484.5 *3*	100	1441.5	$19/2^{(-)}$		
2952.5	(19/2)	528.7 *3*	8×10^1 *3*	2423.7	$19/2^{(+)}$		
		680.3 *3*	7×10^1 *3*	2272.3	$19/2^{(+)}$		A_2=+0.4 *1*, A_4=+0.2 *1*, pol.=+0.9 *3*, R(DCO)=1.4 *3* (1991Gr02).
		785.7 *3*	1.0×10^2 *3*	2166.7	21/2		A_2=−0.29 *4*, A_4=+0.13 *6*, pol.=+0.5 *2*, R(DCO)=0.2 *1* (1991Gr02).
2970.3	(21/2)	732.6 *3*	1.0×10^2 *3*	2237.7	17/2		A_2=+0.76 *4*, A_4=−0.20 *5* (1991Gr02).
		1529.0 *3*	<30	1441.5	$19/2^{(-)}$		
2999.5		783.0[&] *3*	100	2215.8	$23/2^{(-)}$		A_2=+0.065 *7*, A_4=+0.069 *9*, pol.=+0.46 *8*, R(DCO)=1.4 *3* (1991Gr02). Doublet in 1991Gr02 with γ ray from 3487-keV level.
3055.3	25/2	839.3 *3*	8×10^1 *3*	2215.8	$23/2^{(-)}$	D+Q	A_2=−0.29 *3*, A_4=+0.14 *4*, R(DCO)=0.42 *6* (1991Gr02).
		888.5 *3*	1.0×10^2 *3*	2166.7	21/2	E2	A_2=+0.22 *3*, A_4=+0.04 *4*, pol.=+0.81 *9* (1991Gr02).
3075.2	(21/2)	105.2 *3*	16 *7*	2970.3	(21/2)		
		148.3[&] *3*	9 *4*	2926.5	(19/2)		
		255.9 *3*	43 *15*	2819.3	(17/2)		A_2=−0.464 *5*, A_4=+0.143 *7* (1991Gr02).
		371.0 *3*	8×10^1 *3*	2704.1	$21/2^{(+)}$		
		422.6 *3*	14 *6*	2652.7	19/2		
		524.4 *3*	9×10^1 *3*	2550.7	19/2		
		690.5 *3*	30 *13*	2385.1	$21/2^{(-)}$		
		802.9[&] *3*	68 *24*	2272.3	$19/2^{(+)}$		R(DCO)=0.9 *1* (1991Gr02).
		859.0[&] *3*	43 *15*	2215.8	$23/2^{(-)}$		R(DCO)=0.9 *2* (1991Gr02).
		908.5 *3*	100 *30*	2166.7	21/2		
		1633.5 *3*	<9	1441.5	$19/2^{(-)}$		
3099.9	$27/2^{(-)}$	884.2 *3*	100	2215.8	$23/2^{(-)}$	E2	A_2=+0.30 *1*, A_4=−0.03 *1*, pol.=+0.39 *6* (1991Gr02).
3131.2	(23/2)	859.0 *3*	100	2272.3	$19/2^{(+)}$		
3151.1	(21/2)	331.9 *3*	91 *23*	2819.3	(17/2)		
		878.9 *3*	1.0×10^2 *3*	2272.3	$19/2^{(+)}$		A_2=+0.408 *8*, A_4=−0.009 *9*, pol.=+0.38 *5* (1991Gr02).
3210.8	(21/2)	660.3 *3*		2550.7	19/2		
		938.3[&] *3*		2272.3	$19/2^{(+)}$		
3272.6	(25/2)	887.3 *3*		2385.1	$21/2^{(-)}$		
		1057.0 *3*		2215.8	$23/2^{(-)}$		E_γ: From 2007Mo37.
3277.9	(23/2)	126.8 *3*	17 *6*	3151.1	(21/2)		A_2=−0.26 *5*, A_4=+0.06 *6* (1991Gr02).
		146.7 *3*	8 *3*	3131.2	(23/2)		
		202.6[&] *3*	100 *20*	3075.2	(21/2)		A_2=−0.35 *1*, A_4=+0.03 *1* (1991Gr02).
		277.6[&] *3*	9 *4*	2999.5			
		325.7 *3*	8 *3*	2952.5	(19/2)		
		387.6 *3*	19 *8*	2890.5	(21/2)		
		458.6 *3*	8×10^1 *3*	2819.3	(17/2)		A_2=+0.21 *3*, A_4=+0.04 *4*, pol.=+0.2 *1* (1991Gr02).
		466.6 *3*	34 *14*	2811.6	(23/2)		Doublet in 1991Gr02 with γ ray from 2890-keV level.
		573.4 *3*	8×10^1 *3*	2704.1	$21/2^{(+)}$		A_2=−0.63 *1*, A_4=−0.01 *1*, Pol.=+0.05 *6* (1991Gr02). Doublet in 1991Gr02 with γ ray from 1310-keV level.
		1062.1 *3*	56 *20*	2215.8	$23/2^{(-)}$		R(DCO)=0.4 *1* (1991Gr02).
3322.8	(23/2)	370.0 *3*	8×10^1 *3*	2952.5	(19/2)		
		619.0 *3*	1.0×10^2 *3*	2704.1	$21/2^{(+)}$		A_2=−0.17 *2*, A_4=−0.08 *2*, pol.=+0.13 *8* (1991Gr02). Doublet in 1991Gr02 with γ ray from 2006-keV level.

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^{116}Cd(^{13}C,4nγ) 2007Mo37,1991Gr02 (continued)

γ(^{125}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[#]	E_f	J_f^π	Mult.[@]	Comments
3322.8	(23/2)	1107.0 *3*	8×10^1 *3*	2215.8	$23/2^{(-)}$		R(DCO)=0.4 *1* (1991Gr02).
3379.5		248.2 *3*	31 *11*	3131.2	(23/2)		
		304.4 *3*	100 *20*	3075.2	(21/2)		A_2=−0.51 *3*, A_4=−0.02 *4*, pol.=0.0 *2* (1991Gr02).
3486.3	(25/2)	163.4 *3*	2 *1*	3322.8	(23/2)		
		208.3 *3*	100 *20*	3277.9	(23/2)		A_2=−0.356 *7*, A_4=+0.109 *9* (1991Gr02).
3487.1	(25/2)	783.0[&] *3*		2704.1	$21/2^{(+)}$		A_2=+0.065 *7*, A_4=+0.069 *9*, Pol.=+0.46 *8* (1991Gr02).
3519.5	(25/2)	464.2 *3*	11 *4*	3055.3	25/2		
		628.9 *3*	100 *20*	2890.5	(21/2)		
3523.9		1308.1 *3*	100	2215.8	$23/2^{(-)}$		R(DCO)=0.43 *15* (1991Gr02).
3562.8		1347.0 *3*	100	2215.8	$23/2^{(-)}$		
3619.0	(27/2)	519.2 *3*	1.0×10^2 *3*	3099.9	$27/2^{(-)}$	(D+Q)	R(DCO)=1.2 *3* (1991Gr02).
		807.7 *3*	56 *24*	2811.6	(23/2)		
3649.9		697.4 *3*	100	2952.5	(19/2)		
3753.0	(27/2)	941.3 *3*	100	2811.6	(23/2)		
3898.7		519.2[&] *3*	100	3379.5			
3959.7		473.3 *3*	100	3486.3	(25/2)		
4052.8	29/2	953.1 *3*	1.0×10^2 *4*	3099.9	$27/2^{(-)}$		R(DCO)=0.3 *1* (1991Gr02).
		997.4 *3*	1.0×10^2 *3*	3055.3	25/2		
4064.8	(27/2)	742.0 *3*	100	3322.8	(23/2)		
4070.8	$(31/2^-)$	970.9 *3*	100	3099.9	$27/2^{(-)}$	(E2)	Mult.: 1991Gr02 assign this transition as (E1) but this assignment is inconsistent with band assignment. A_2=+0.14 *3*, A_4=+0.04 *4*, pol.=+0.8 *2* R(DCO)=0.9 *1* (1991Gr02).
4134.6		648.3 *3*	8×10^1 *3*	3486.3	(25/2)		
		857.0 *3*	1.0×10^2 *3*	3277.9	(23/2)		
4210.9	(29/2)	938.3[&] *3*		3272.6	(25/2)		
		1111.5[a] *3*		3099.9	$27/2^{(-)}$		
4268.3	(29/2)	748.8 *3*	100	3519.5	(25/2)		
4292.6	(29/2)	158.1 *3*	9 *3*	4134.6			A_2=−0.482 *2*, A_4=−0.441 *3* (1991Gr02).
		333.1 *3*	23 *8*	3959.7			A_2=−0.46 *6*, A_4=−0.01 *8* (1991Gr02).
		806.2 *3*	100 *30*	3486.3	(25/2)		
4383.3	(31/2)	312.3 *3*	1.0×10^2 *3*	4070.8	$(31/2^-)$		
		764.6 *3*	<5	3619.0	(27/2)		
		1283.1 *3*	<5	3099.9	$27/2^{(-)}$	(Q)	R(DCO)=0.82 *6* (1991Gr02). Mult.: From adopted gammas.
4573.3	(31/2)	820.1[‡] *3*		3753.0	(27/2)		
		954.5 *3*		3619.0	(27/2)		
4762.8	(31/2)	470.5 *3*	100 *20*	4292.6	(29/2)		A_2=−0.393 *3*, A_4=+0.05 *5*, pol.=−0.04 *9* (1991Gr02).
		802.9[&] *3*	13 *5*	3959.7			
4912.0	(31/2)	847.2 *3*	100	4064.8	(27/2)		A_2=−0.211 *9*, A_4=+0.08 *1*, pol.=−0.30 *6* (1991Gr02).
5066.8	(35/2)	996.6 *3*	100	4070.8	$(31/2^-)$		
5122.2	(33/2)	1069.4 *3*	100	4052.8	29/2		
5138.0	(33/2)	869.7[&] *3*	100	4268.3	(29/2)		
5162.3	(33/2)	399.6 *3*	24 *10*	4762.8	(31/2)		
		869.7[&] *3*	100 *30*	4292.6	(29/2)		
5200.2		1147.4 *3*	100	4052.8	29/2		
5200.4	(33/2)	989.5[‡]		4210.9	(29/2)		
5320.3	(35/2)	936.9 *3*	<50	4383.3	(31/2)		
		1248.9 *3*	1.0×10^2 *5*	4070.8	$(31/2^-)$		
5826.7	(35/2)	914.7 *3*	100	4912.0	(31/2)		
6096.8	$(39/2^-)$	1030.0 *3*	100	5066.8	(35/2)		
6113.6	(37/2)	975.6 *3*	100	5138.0	(33/2)		
6251.5	(37/2)	1089.1 *3*	100	5162.3	(33/2)		

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^{116}Cd(^{13}C,4nγ) 2007Mo37,1991Gr02 (continued)

γ(^{125}Xe) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[#]	E_f	J_f^π	Comments
6345.4	(39/2)	1024.5 *3*		5320.3	(35/2)	
		1279.2[‡] *3*		5066.8	(35/2)	
6752.8	(39/2)	501.5 *3*	100	6251.5	(37/2)	A_2=−0.01 *4*, A_4=+0.09 *5*, pol.=+0.12 *7* (1991Gr02). Doublet in 1991Gr02 with γ ray from 837-keV level.
7215.7	(43/2$^-$)	1118.9 *3*	100	6096.8	(39/2$^-$)	
7286.9		534.3 *3*		6752.8	(39/2)	
		1035.2 *3*		6251.5	(37/2)	
7334.1	(43/2)	988.6[‡]		6345.4	(39/2)	
		1237.4[‡]		6096.8	(39/2$^-$)	
8265.2	(45/2)	978.3 *3*		7286.9		
8453.2?		1237.5[a] *3*		7215.7	(43/2$^-$)	

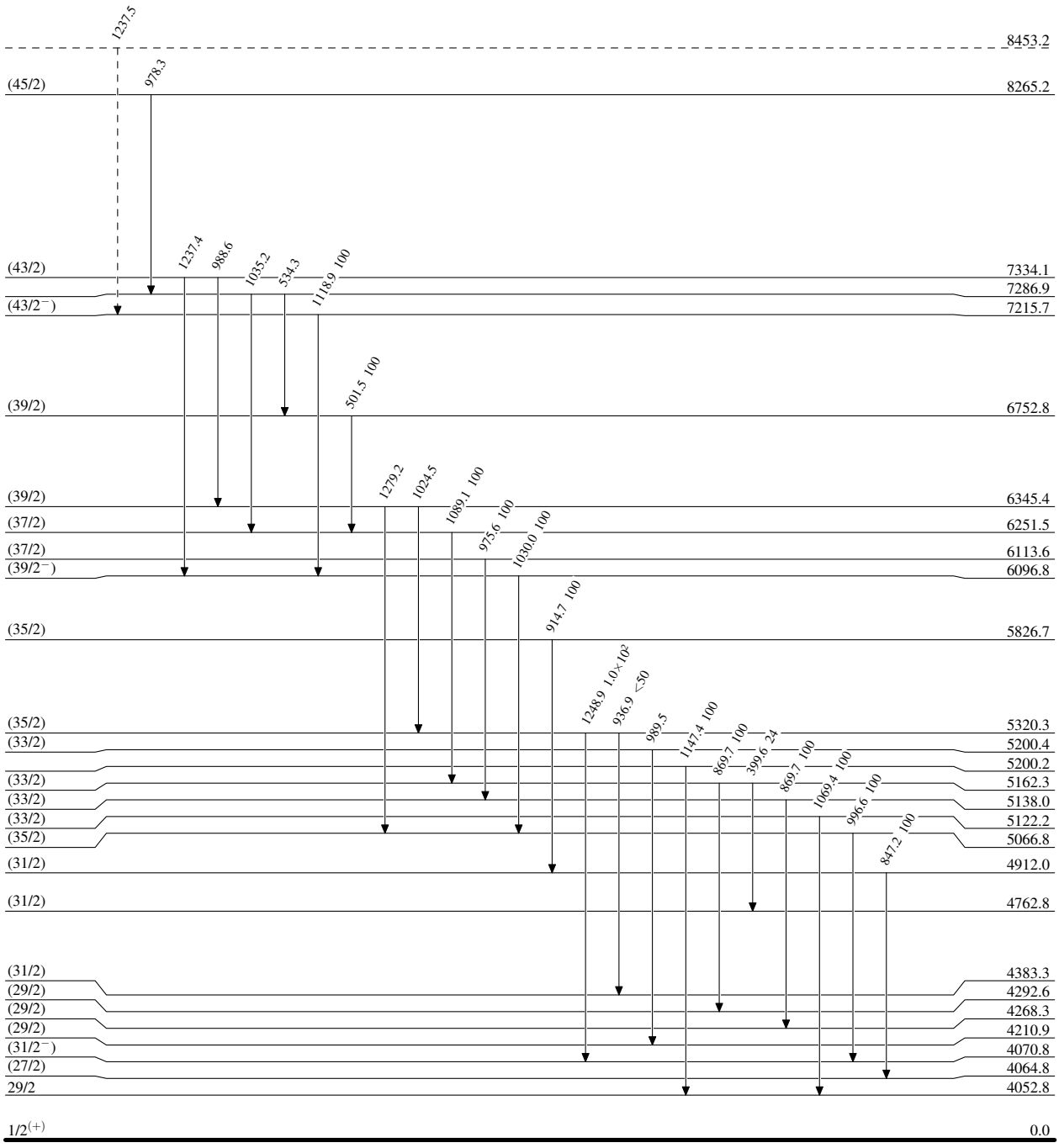
[†] From 1991Gr02.
[‡] From 2007Mo37.
[#] Photon branching ratios. From 1991Gr02.
[@] From angular distribution and linear polarization (1991Gr02) and collective structures are taken into account, unless otherwise noted.
[&] Multiply placed.
[a] Placement of transition in the level scheme is uncertain.

^{116}Cd(^{13}C,4nγ) 2007Mo37,1991Gr02 Legend

Level Scheme

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



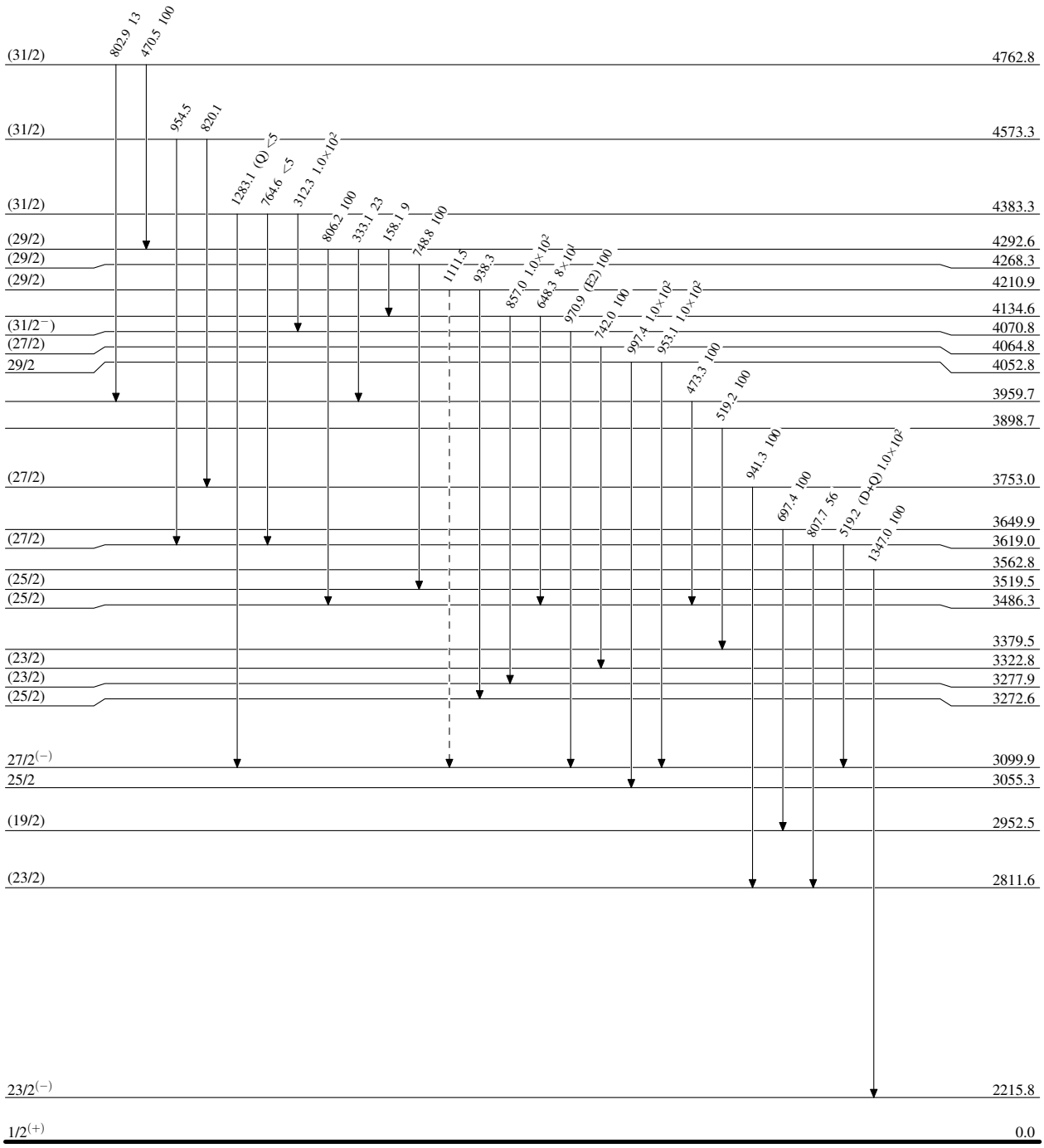
$^{125}_{54}Xe_{71}$

^{116}Cd(^{13}C,4nγ) 2007Mo37,1991Gr02 Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

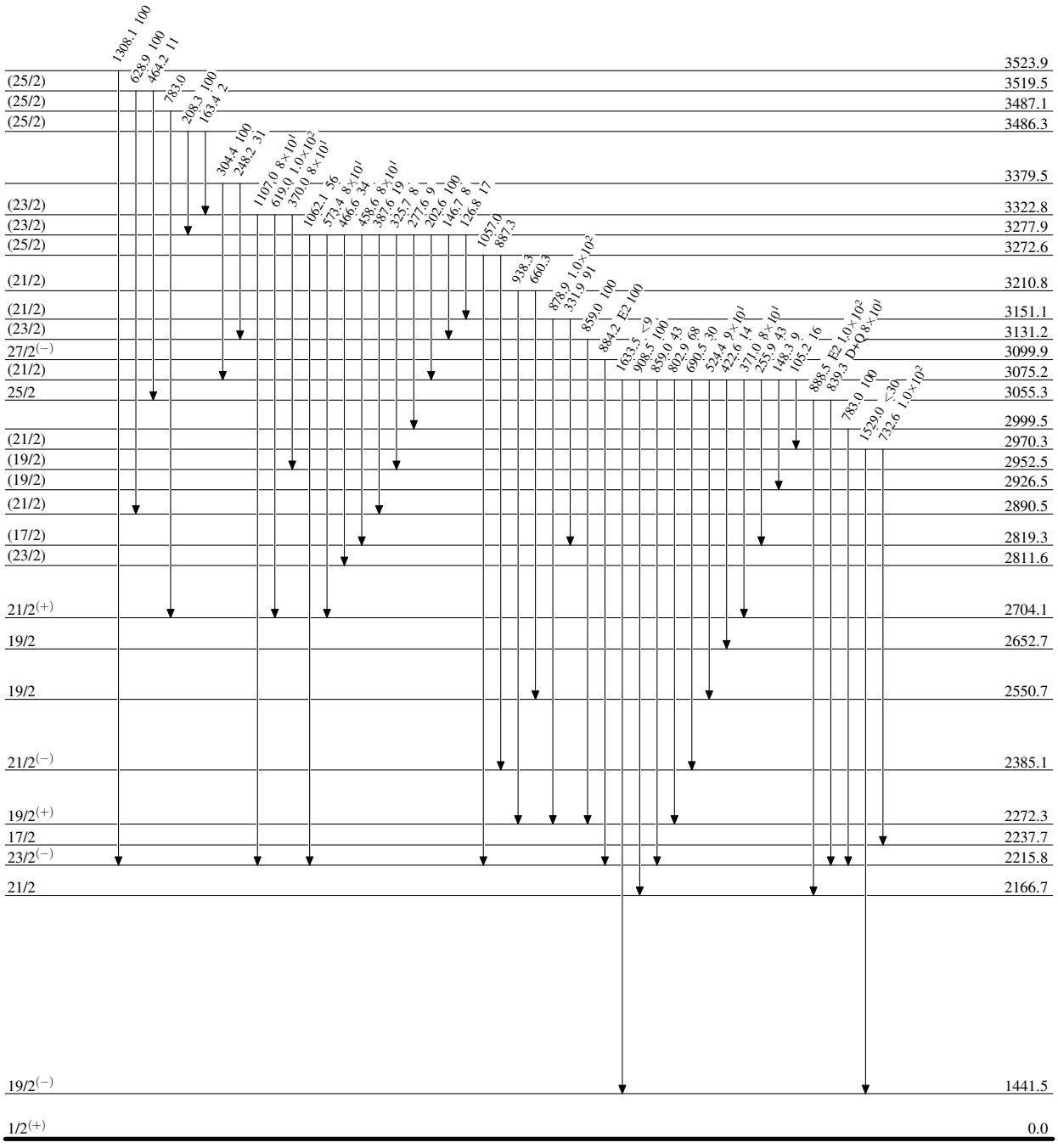


$^{125}_{54}Xe_{71}$

^{116}Cd(^{13}C,4nγ) 2007Mo37,1991Gr02

Level Scheme (continued)

Intensities: Relative photon branching from each level

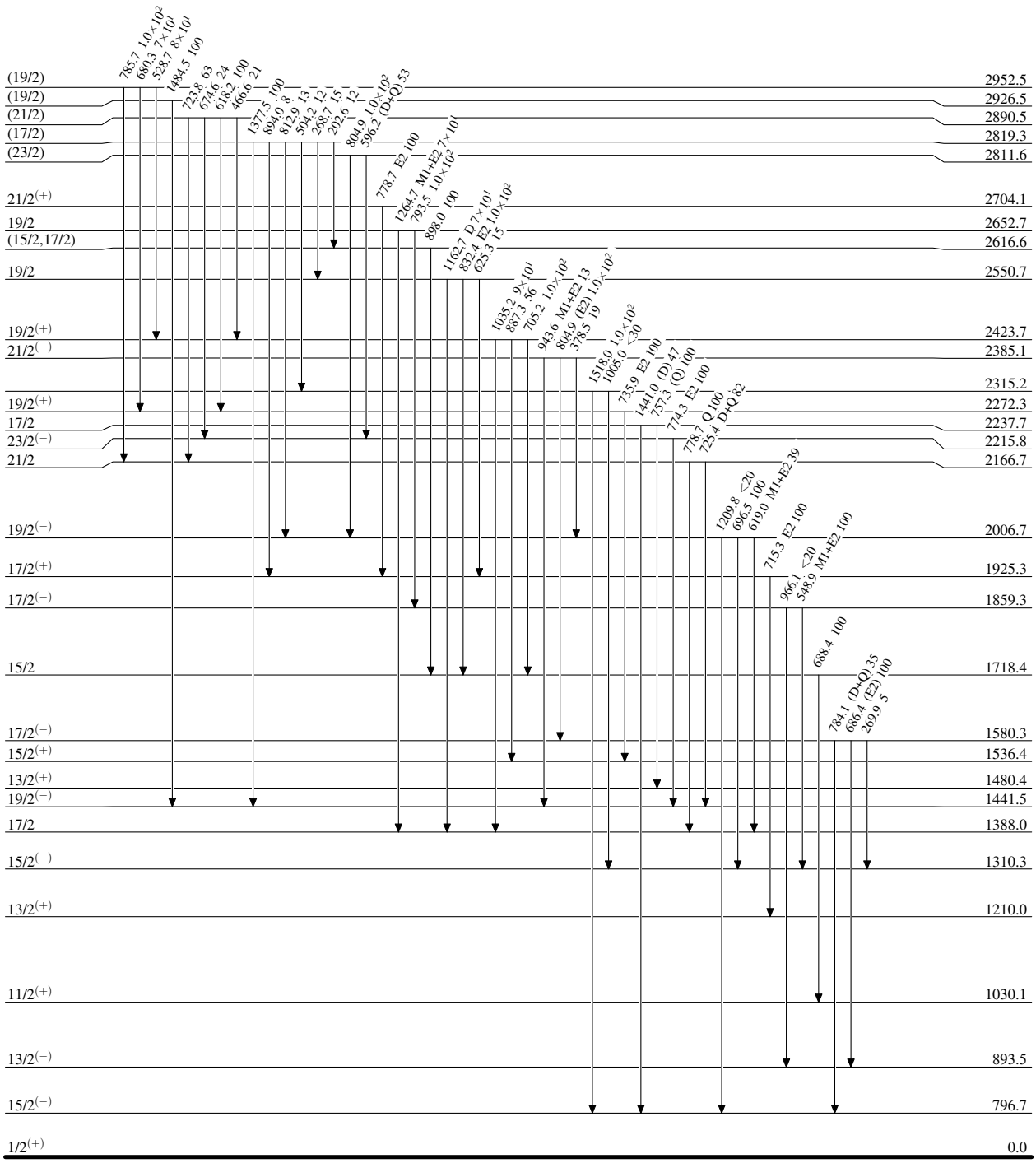


$^{125}_{54}Xe_{71}$

^{116}Cd(^{13}C,4nγ) 2007Mo37,1991Gr02

Level Scheme (continued)

Intensities: Relative photon branching from each level

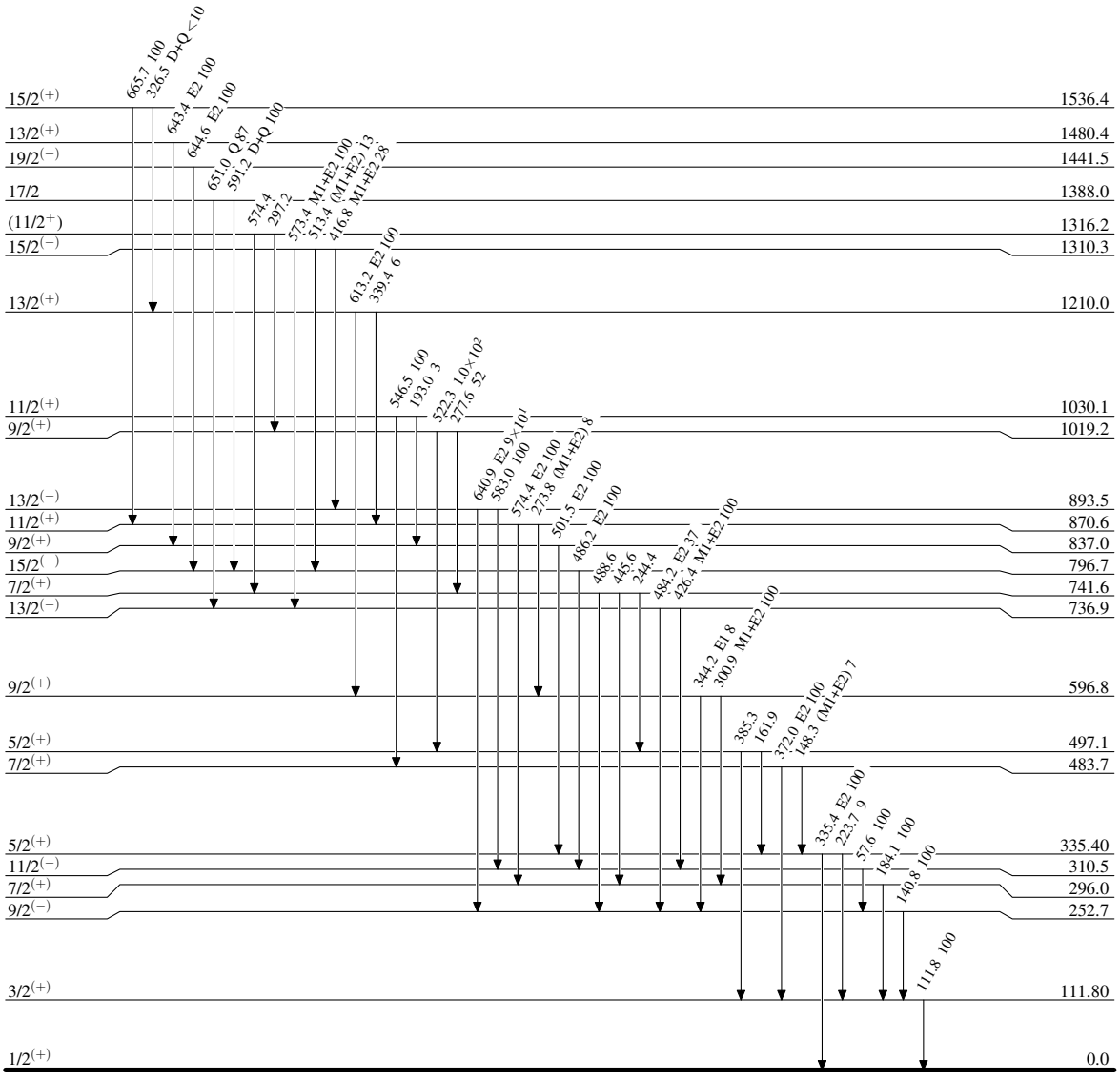


$^{125}_{54}Xe_{71}$

^{116}Cd(^{13}C,4nγ) 2007Mo37,1991Gr02

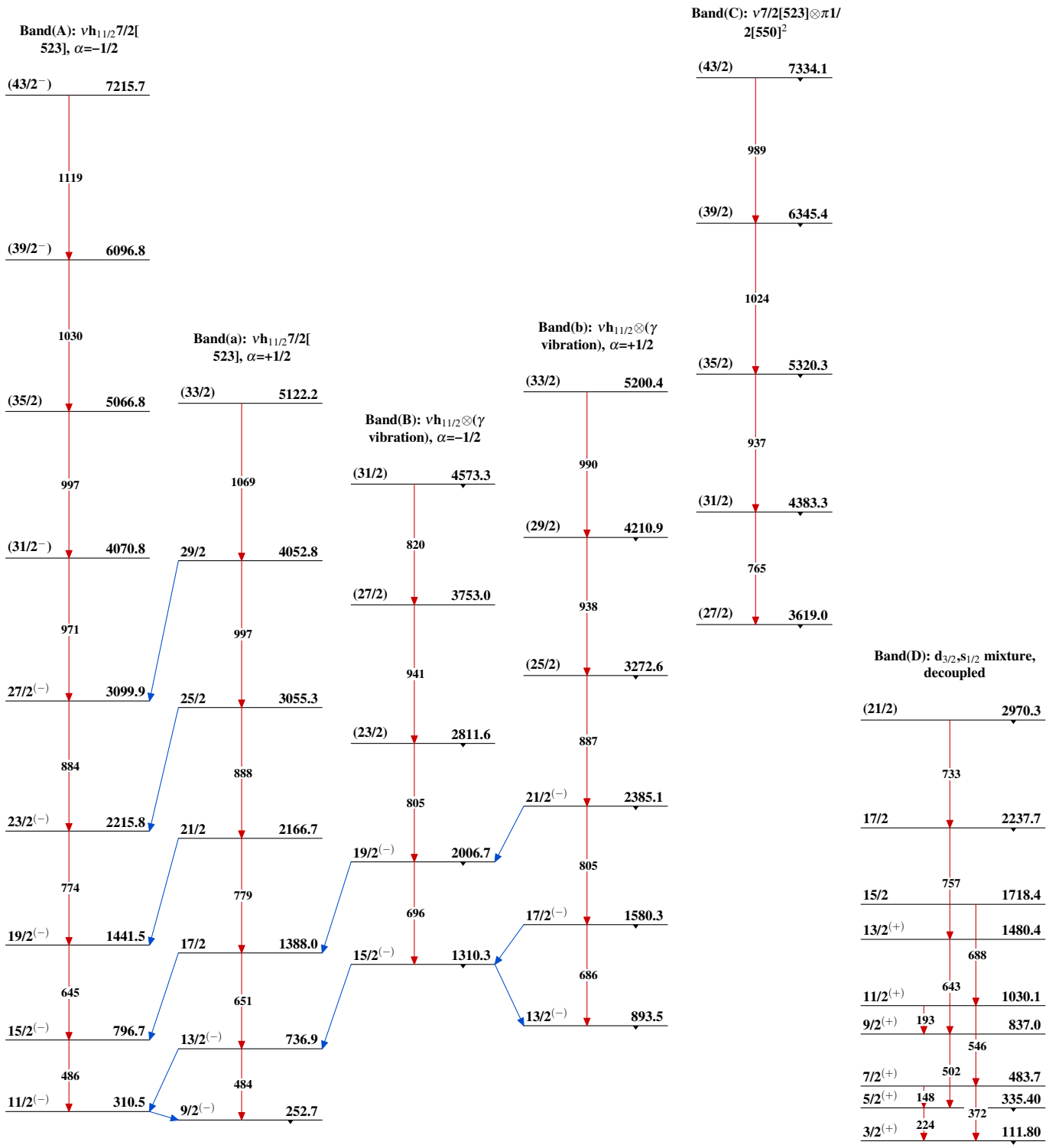
Level Scheme (continued)

Intensities: Relative photon branching from each level



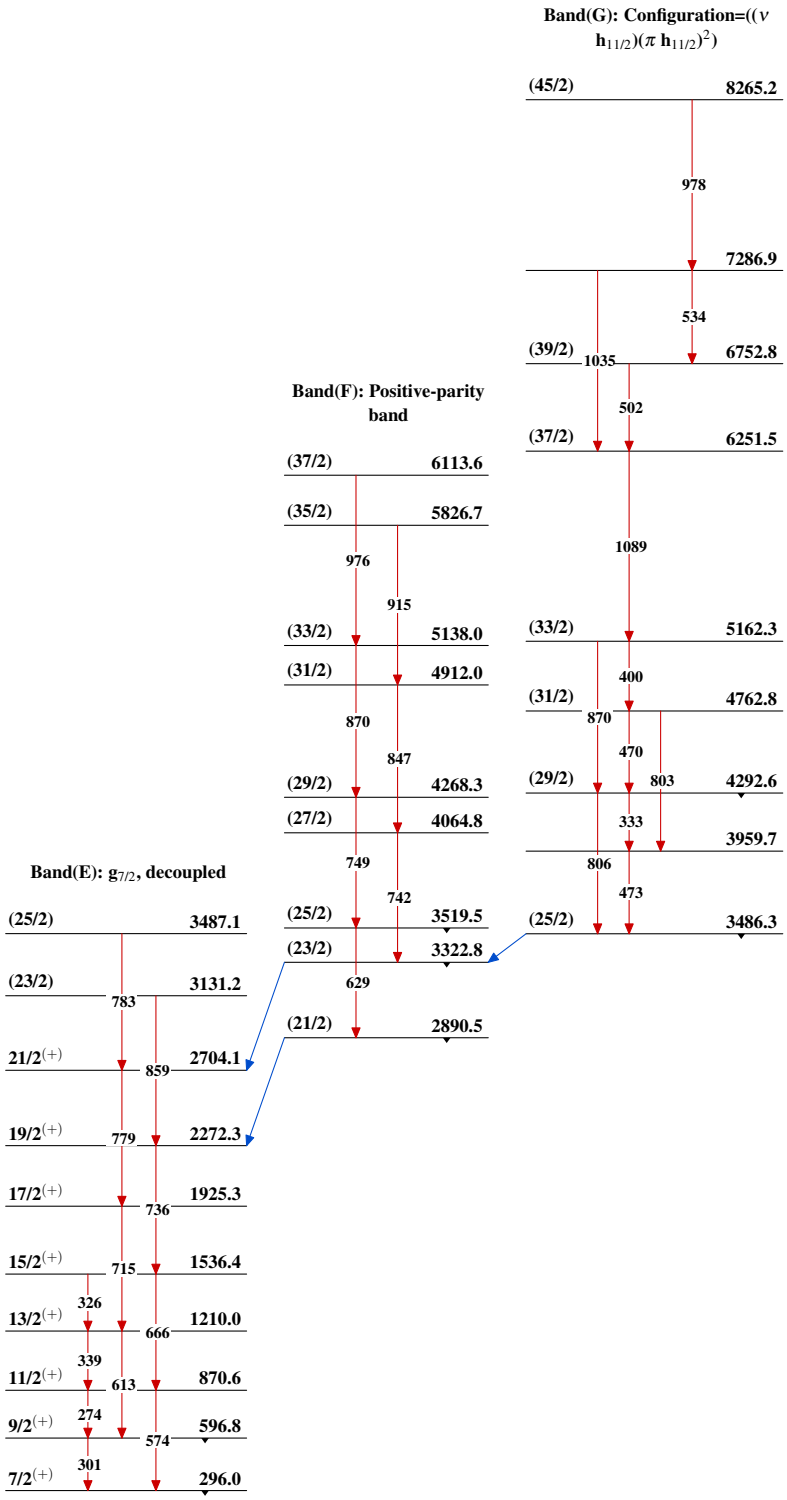
$^{125}_{54}Xe_{71}$

$^{116}Cd(^{13}C,4n\gamma)$ 2007Mo37,1991Gr02



$^{125}_{54}Xe_{71}$

$^{116}Cd(^{13}C,4n\gamma)$ 2007Mo37,1991Gr02 (continued)



$^{125}_{54}Xe_{71}$