^{110}Cd(^{14}N,3nγ),^{109}Ag(^{16}O,4nγ) 1979Ga02,2001Mo15

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	S. Ohya	NDS 111, 1619 (2010)	20-Jan-2009

1979Ga02: ^{110}Cd(^{14}N,3n) γ, $\gamma\gamma$ coin, $\gamma(\theta)$, deduced band structure: 9/2[404] normal band up to $23/2^+$; $1h_{11/2}$ decoupled band up to $23/2^-$ in analogy with ^{119}Cs-^{129}Cs. No Iγ's are given.
1992Dr05: ^{107}Ag(^{18}O,4n) E(^{18}O)=78 MeV; measured lifetime by Doppler-shift attenuation method.
2001Mo05:E=80 MeV measured Eγ, Iγ, $\gamma\gamma$-coin, DCO using 7 Compton suppressed Ge array,reported only bands built on $1h_{11/2}$.

^{121}Cs Levels

E(level)†	J$^\pi$‡	$T_{1/2}$	Comments
0.0	$3/2^{(+)}$	155 s *4*	$T_{1/2}$: from Adopted Levels.
68.5@ *3*	$9/2^{(+)}$	122 s *3*	E(level),$T_{1/2}$: from Adopted Levels.
314.5@ *9*	$(11/2^+)$	5.7 ps *8*	$T_{1/2}$: effective half-life, not corrected for feeding life-time, from Doppler-shift recoil distance method (1992Dr05).
590.5@ *9*	$(13/2^+)$		
894.5@ *10*	$(15/2^+)$	3.8 ps *12*	$T_{1/2}$: effective half-life, not corrected for feeding life-time, from Doppler-shift recoil distance method (1992Dr05).
1222.5@ *11*	$(17/2^+)$		
1569.5@ *12*	$(19/2^+)$		
1930.5@ *13*	$(21/2^+)$		
2297.5@ *14*	$(23/2^+)$		
x	$(11/2^-)$		Additional information 1.
x+285.7# *3*	$(15/2^-)$	48 ps *+4–6*	$T_{1/2}$: from Doppler-shift recoil distance method (1992Dr05).
x+757.6# *4*	$(19/2^-)$	3.4 ps *7*	$T_{1/2}$: from Doppler-shift recoil distance method (1992Dr05).
x+1065.9& *4*	$(17/2^-)$		
x+1372.4# *5*	$(23/2^-)$	≤1.7 ps	$T_{1/2}$: from Doppler-shift recoil distance method (1992Dr05).
x+1435.9a *4*	$(19/2^-)$		
x+1603.0& *4*	$(21/2^-)$		
x+2001.7a *4*	$(23/2^-)$		
x+2098.4# *5*	$(27/2^-)$		
x+2260.0& *5*	$(25/2^-)$		
x+2674.2a *5*	$(27/2^-)$		
x+2737.9 *5*	(25/2)		
x+2835.0 *6*	(25/2)		
x+2914.5# *5*	$(31/2^-)$		
x+3007.6& *5*	$(29/2^-)$		
x+3111.1 *6*	(27/2)		
x+3375.2 *5*	(29/2)		
x+3418.2 *6*	(29/2)		
x+3434.3a *5*	$(31/2^-)$		
x+3808.3# *6*	$(35/2^-)$		
x+3824.6& *6*	$(33/2^-)$		
x+4077.4 *6*			
x+4280.4a *6*	$(35/2^-)$		
x+4703.7& *6*	$(37/2^-)$		
x+4776.5# *7*	$(39/2^-)$		

† From least-squares fit to Eγ's.

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^{110}Cd(^{14}N,3nγ),^{109}Ag(^{16}O,4nγ) 1979Ga02,2001Mo15 (continued)

^{121}Cs Levels (continued)

‡ Spins and parities for positive parity states are from Adopted Levels. Spin and parities for negative parity states are proposed based on angular distribution, and DCO ratios from 2001Mo15.
# Band(A): $h_{11/2}[550]1/2$, $\alpha=-1/2$.
@ Band(B): 9/2[404].
& Band(C): $h_{11/2}[550]1/2$, $\alpha=+1/2$.
a Band(D): γ-vibration band on $h_{11/2}$.

$\gamma(^{121}Cs)$

E_γ †	I_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡	Comments
68.5 *3*	100	68.5	$9/2^{(+)}$	0.0	$3/2^{(+)}$		E_γ: from adopted gammas.
246		314.5	$(11/2^+)$	68.5	$9/2^{(+)}$		
276		590.5	$(13/2^+)$	314.5	$(11/2^+)$		
276.1 *3*	2.3 *3*	x+3111.1	(27/2)	x+2835.0	(25/2)	D+Q	Mult.: DCO ratio =0.5.
285.7 *3*	100 *15*	x+285.7	$(15/2^-)$	x	$(11/2^-)$	Q	Mult.: DCO ratio =0.9.
304		894.5	$(15/2^+)$	590.5	$(13/2^+)$		
307.1 *3*	0.8 *1*	x+3418.2	(29/2)	x+3111.1	(27/2)	D+Q	Mult.: DCO ratio =0.4.
308.4 *3*	1.5 *2*	x+1065.9	$(17/2^-)$	x+757.6	$(19/2^-)$	D+Q	Mult.: DCO ratio =0.3.
328		1222.5	$(17/2^+)$	894.5	$(15/2^+)$		
347		1569.5	$(19/2^+)$	1222.5	$(17/2^+)$		
361		1930.5	$(21/2^+)$	1569.5	$(19/2^+)$		
367		2297.5	$(23/2^+)$	1930.5	$(21/2^+)$		
370.0 *3*	0.8 *1*	x+1435.9	$(19/2^-)$	x+1065.9	$(17/2^-)$	D+Q	Mult.: DCO ratio =0.4.
471.9 *3*	98 *15*	x+757.6	$(19/2^-)$	x+285.7	$(15/2^-)$	Q	Mult.: DCO ratio =1.0.
522		590.5	$(13/2^+)$	68.5	$9/2^{(+)}$		
537.1 *3*	1.3 *2*	x+1603.0	$(21/2^-)$	x+1065.9	$(17/2^-)$	Q	Mult.: DCO ratio =0.8.
565.8 *3*	5.7 *9*	x+2001.7	$(23/2^-)$	x+1435.9	$(19/2^-)$	Q	Mult.: DCO ratio =0.8.
580		894.5	$(15/2^+)$	314.5	$(11/2^+)$		
583.2 *3*	0.7 *1*	x+3418.2	(29/2)	x+2835.0	(25/2)	Q	Mult.: DCO ratio =0.8.
614.8 *3*	72 *11*	x+1372.4	$(23/2^-)$	x+757.6	$(19/2^-)$	Q	Mult.: DCO ratio =0.9.
632		1222.5	$(17/2^+)$	590.5	$(13/2^+)$		
637.3 *3*	1.2 *2*	x+3375.2	(29/2)	x+2737.9	(25/2)	Q	Mult.: DCO ratio =0.7.
657.0 *3*	3.9 *6*	x+2260.0	$(25/2^-)$	x+1603.0	$(21/2^-)$	Q	Mult.: DCO ratio =1.0.
672.5 *3*	6.4 *10*	x+2674.2	$(27/2^-)$	x+2001.7	$(23/2^-)$	Q	Mult.: DCO ratio =0.8.
675		1569.5	$(19/2^+)$	894.5	$(15/2^+)$		
702.2 *3*	1.4 *2*	x+4077.4		x+3375.2	(29/2)		
708		1930.5	$(21/2^+)$	1222.5	$(17/2^+)$		
726.0 *3*	72 *11*	x+2098.4	$(27/2^-)$	x+1372.4	$(23/2^-)$	Q	Mult.: DCO ratio =0.9.
728		2297.5	$(23/2^+)$	1569.5	$(19/2^+)$		
747.6 *3*	3.8 *6*	x+3007.6	$(29/2^-)$	x+2260.0	$(25/2^-)$	Q	Mult.: DCO ratio =0.8.
760.1 *3*	3.1 *5*	x+3434.3	$(31/2^-)$	x+2674.2	$(27/2^-)$	Q	Mult.: DCO ratio =0.8.
780.2 *3*	9.1 *14*	x+1065.9	$(17/2^-)$	x+285.7	$(15/2^-)$	D+Q	Mult.: DCO ratio =0.3.
816.1 *3*	24.9 *37*	x+2914.5	$(31/2^-)$	x+2098.4	$(27/2^-)$	Q	Mult.: DCO ratio =0.8.
817.0 *3*	2.5 *4*	x+3824.6	$(33/2^-)$	x+3007.6	$(29/2^-)$	Q	Mult.: DCO ratio =1.0.
845.4 *3*	11 *2*	x+1603.0	$(21/2^-)$	x+757.6	$(19/2^-)$	D+Q	Mult.: DCO ratio =0.3.
846.1 *3*	1.2 *2*	x+4280.4	$(35/2^-)$	x+3434.3	$(31/2^-)$	Q	Mult.: DCO ratio =0.8.
879.1 *3*	2.0 *3*	x+4703.7	$(37/2^-)$	x+3824.6	$(33/2^-)$	Q	Mult.: DCO ratio =0.9.
887.6 *3*	7.3 *11*	x+2260.0	$(25/2^-)$	x+1372.4	$(23/2^-)$	D+Q	Mult.: DCO ratio =0.3.
893.8 *3*	7.7 *12*	x+3808.3	$(35/2^-)$	x+2914.5	$(31/2^-)$	Q	Mult.: DCO ratio =0.8.
909.2 *3*	3.6 *5*	x+3007.6	$(29/2^-)$	x+2098.4	$(27/2^-)$	D+Q	Mult.: DCO ratio =0.3.
910.1 *3*	1.3 *2*	x+3824.6	$(33/2^-)$	x+2914.5	$(31/2^-)$	D+Q	Mult.: DCO ratio =0.3.
968.2 *3*	3.1 *5*	x+4776.5	$(39/2^-)$	x+3808.3	$(35/2^-)$	Q	Mult.: DCO ratio =0.8.
1150.2 *3*	4.5 *7*	x+1435.9	$(19/2^-)$	x+285.7	$(15/2^-)$	Q	Mult.: DCO ratio =0.9.
1244.1 *3*	2.6 *4*	x+2001.7	$(23/2^-)$	x+757.6	$(19/2^-)$	Q	Mult.: DCO ratio =1.0.
1276.8 *3*	1.5 *2*	x+3375.2	(29/2)	x+2098.4	$(27/2^-)$	D+Q	Mult.: DCO ratio =0.5.

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^{110}Cd(^{14}N,3nγ),^{109}Ag(^{16}O,4nγ) 1979Ga02,2001Mo15 (continued)

γ(^{121}Cs) (continued)

E_γ [†]	I_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult. [‡]	Comments
1301.8 *3*	0.8 *1*	x+2674.2	(27/2$^-$)	x+1372.4	(23/2$^-$)	Q	Mult.: DCO ratio =0.8.
1335.9 *3*	0.5 *1*	x+3434.3	(31/2$^-$)	x+2098.4	(27/2$^-$)		
1365.5 *3*	2.1 *3*	x+2737.9	(25/2)	x+1372.4	(23/2$^-$)	Q	Mult.: DCO ratio =0.3.
1462.6 *3*	2.3 *3*	x+2835.0	(25/2)	x+1372.4	(23/2$^-$)	D+Q	Mult.: DCO ratio =0.5.

[†] Eγ's from positive parity states from 199Ga02; Evaluator assumed the uncertainties to be 1 keV for least-squares fit. Eγ's from negative parity states from 2001Mo15, unless noted otherwise.

[‡] From DCO ratios; DCO=Iγ(0°)/Iγ(117°) from 2001Mo15.

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Level Scheme

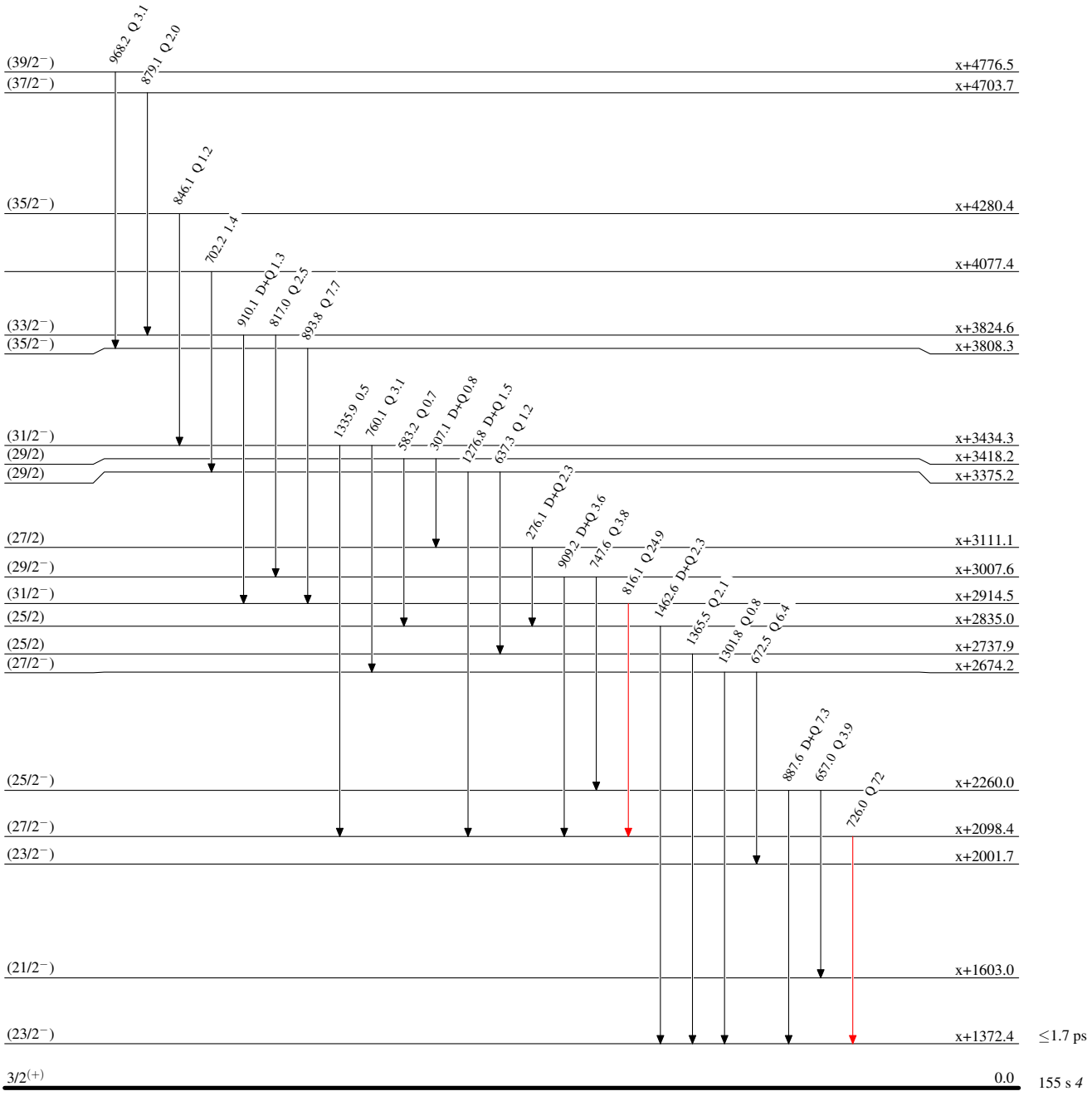
Intensities: Relative I_γ

Legend

$I_\gamma < 2\% \times I_\gamma^{max}$

$I_\gamma < 10\% \times I_\gamma^{max}$

$I_\gamma > 10\% \times I_\gamma^{max}$



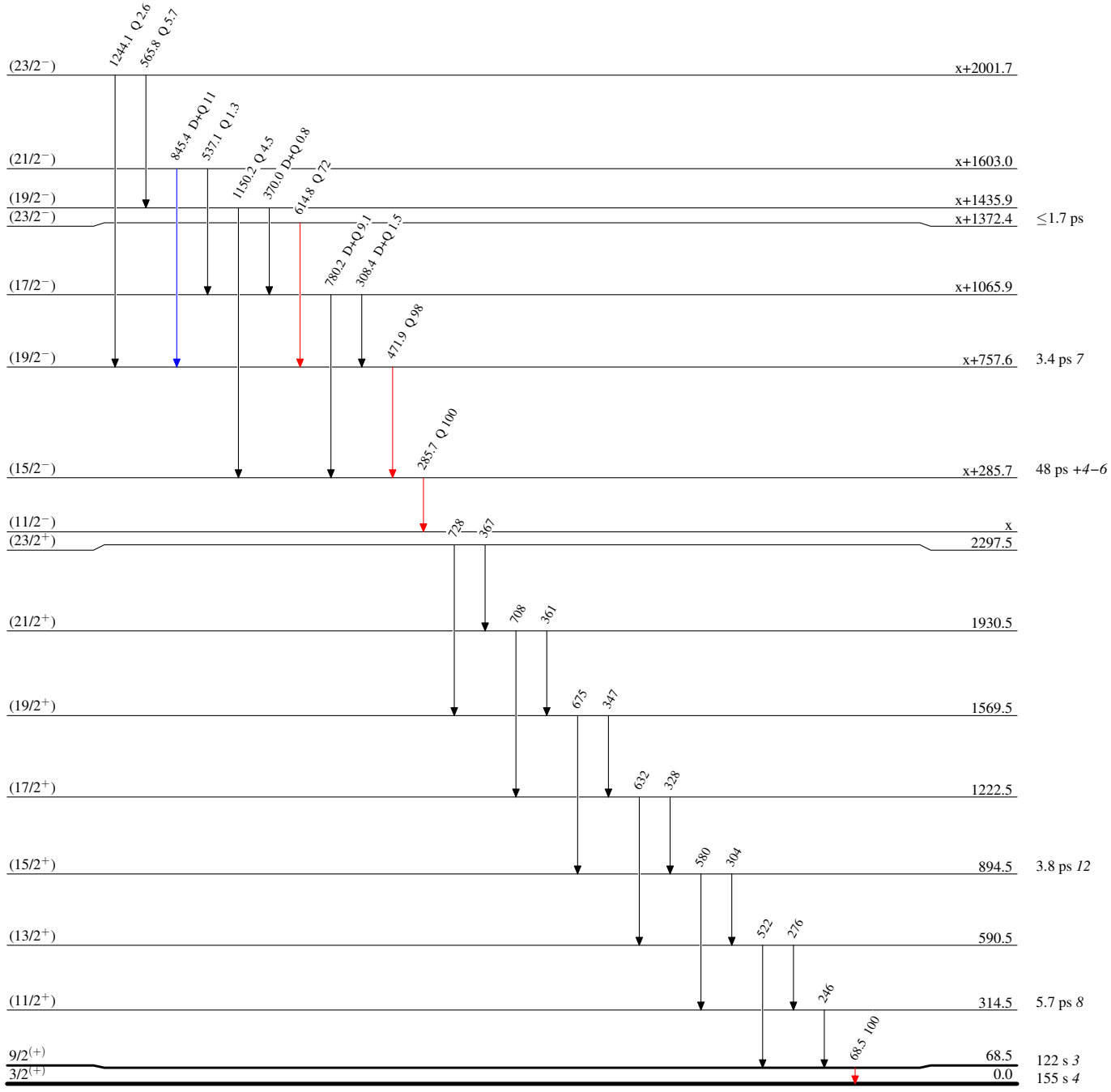
$^{121}_{55}Cs_{66}$

^{110}Cd(^{14}N,3nγ),^{109}Ag(^{16}O,4nγ) 1979Ga02,2001Mo15

Level Scheme (continued)

Intensities: Relative I_γ

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



$^{121}_{55}Cs_{66}$

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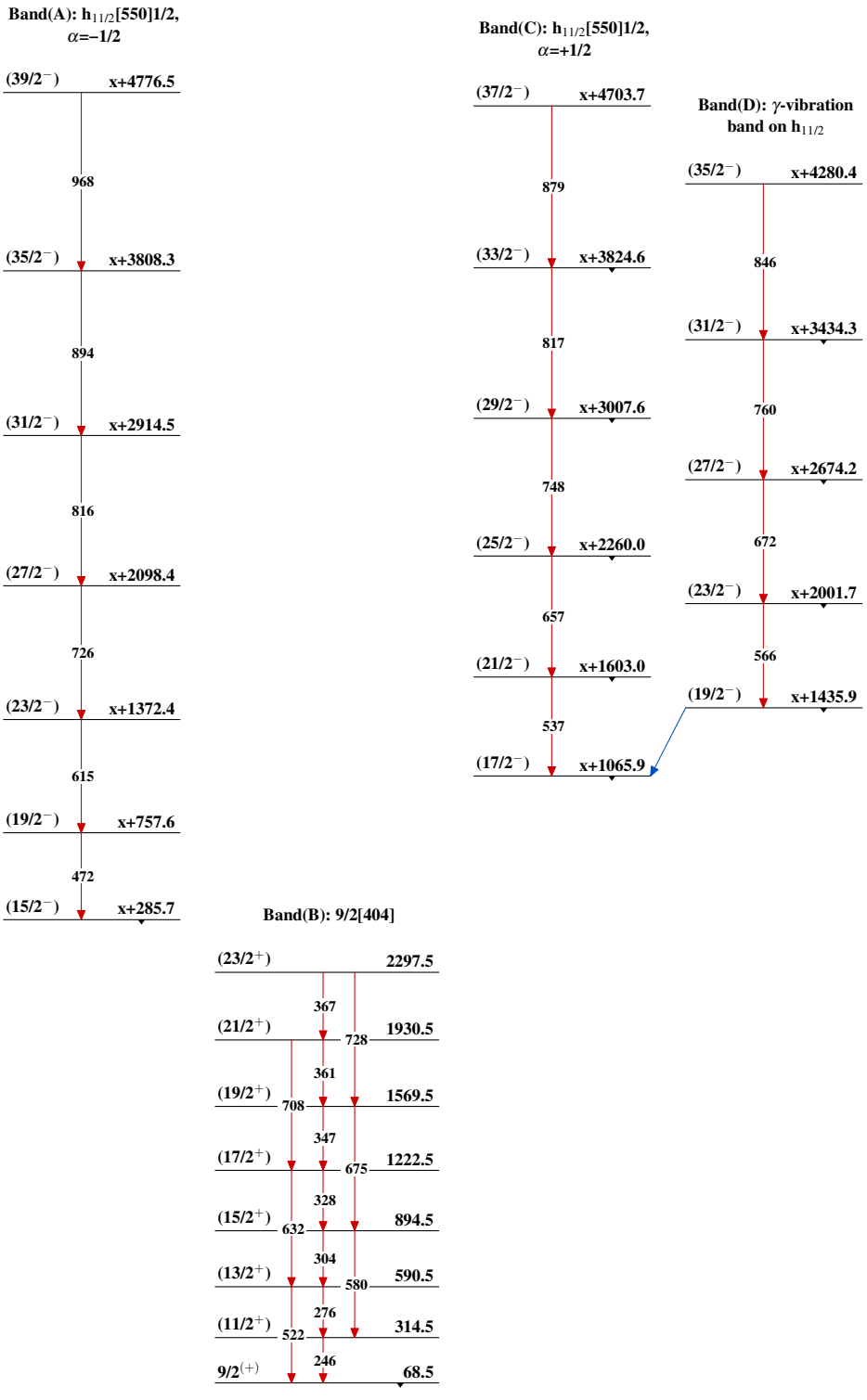

$^{121}_{55}Cs_{66}$