^{122}Sn(^{9}Be,4nγ):XUNDL-1 2017Ch46

Compiled (unevaluated) dataset from 2017Ch46.
Braz J Phys 47, 406 (2017).
Compiled by E.A. McCutchan (NNDC,BNL), Jan 2, 2018.
E(^{9}Be)=48 MeV provided by the 15UD pelletron accelerator facility of the Inter-University Accelerator Center, New Delhi. Target was enriched to 99.3% and rolled to a thickness of 8.4 mg/cm^2. Measured Eγ, Iγ, $\gamma\gamma$, $\gamma\gamma(\theta)$ and γ(lin pol) using the INGA array consisting of 14 Compton-suppressed HPGe detectors.

^{127}Xe Levels

E(level)[†]	J$^\pi$[‡]	Comments
309.0[#]	11/2$^-$	E(level): rounded value from the Adopted Levels of ^{127}Xe in the ENSDF database.
828.1[#]	15/2$^-$	
1508.7[#]	19/2$^-$	
2312.9[#]	23/2$^-$	
3202.5[#]	27/2$^-$	
4137.6[#]	31/2$^-$	
5098.8[#]	35/2$^-$	
6123[#]	39/2$^-$	
7199[#]	43/2$^-$	
8334[#]	47/2$^-$	

[†] From a least-squares fit to Eγ, by compiler, except where noted.
[‡] As proposed in 2017Ch46, based on measured multipolarities and assumed band structure.
[#] Band(A): Negative parity $\nu h_{11/2}$ band.

γ(^{127}Xe)

DCO ratios determined from a matrix with events recorded at 90° along one axis with those at 148° on the other axis, with R_{DCO}=Iγ at 148° (gated by γ at 90°) / Iγ at 90° (gated by γ at 148°). For gates on pure quadrupole transitions, expected values are 1.0 and 0.5 for quadrupole and dipole transitions, respectively. A positive (negative) value of Δ_{asym} corresponds to a pure stretched electric (magnetic) transition.

E$_\gamma$	I$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[†]	Comments
519.1	1000	828.1	15/2$^-$	309.0	11/2$^-$	E2	DCO=1.09 *2* Δ_{asym}=0.13 *1*.
680.6	791 *5*	1508.7	19/2$^-$	828.1	15/2$^-$	E2	DCO=1.06 *2* Δ_{asym}=0.12 *1*.
804.2	455 *3*	2312.9	23/2$^-$	1508.7	19/2$^-$	E2	DCO=1.06 *2* Δ_{asym}=0.11 *2*.
889.6	241 *4*	3202.5	27/2$^-$	2312.9	23/2$^-$	E2	DCO=1.01 *3* Δ_{asym}=0.14 *3*.
935.1	106 *2*	4137.6	31/2$^-$	3202.5	27/2$^-$	E2	DCO=0.99 *4* Δ_{asym}=0.11 *4*.
961.2	41 *1*	5098.8	35/2$^-$	4137.6	31/2$^-$	E2	DCO=1.01 *7* Δ_{asym}=0.08 *6*.
1023.8	15 *1*	6123	39/2$^-$	5098.8	35/2$^-$	Q	DCO=1.19 *15*
1076.1	5 *1*	7199	43/2$^-$	6123	39/2$^-$	Q	DCO=1.01 *25*
1135.6	≈1.5	8334	47/2$^-$	7199	43/2$^-$		

[†] From DCO and Δ_{asym} measurements in 2017Ch46.

^{122}Sn(^{9}Be,4nγ):XUNDL-1 2017Ch46

Level Scheme

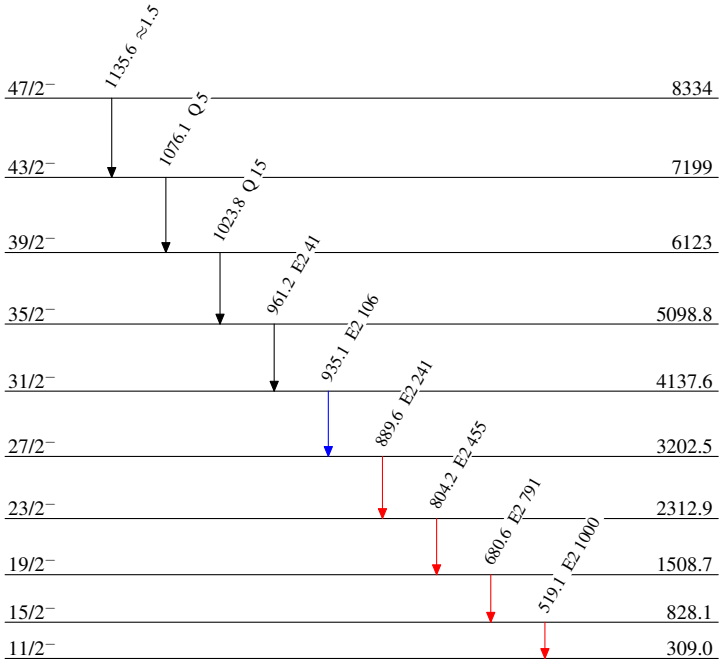
Intensities: Type not specified

Legend

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

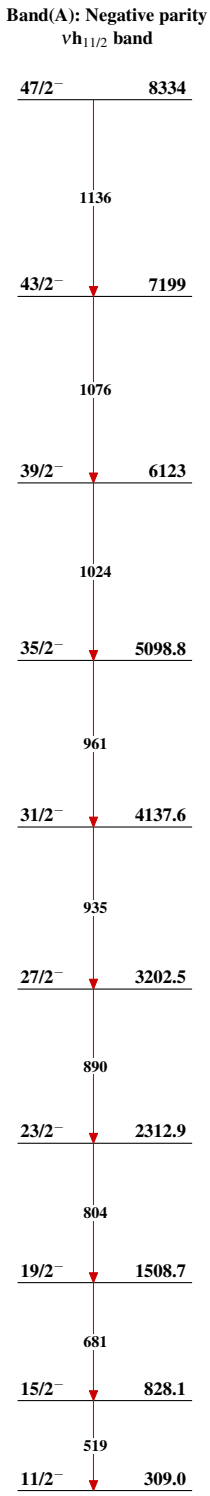
$I_\gamma < 10\% \times I_\gamma^{max}$

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



$^{127}_{54}Xe_{73}$

^{122}Sn(^{9}Be,4nγ):XUNDL-1 2017Ch46



$^{127}_{54}Xe_{73}$

^{122}Sn(^{9}Be,4nγ):XUNDL-2 2018Ch24

Compiled (unevaluated) dataset from 2018Ch24: Phys Rev C 97, 054311 (2018).
Compiled by J. Chen (NSCL, MSU), May 25, 2018.
See also 2017Ch46: Braz J Phys 47, 406 (2017), for another part of the level scheme from the same experiment and 2018CH29: Europhys.Lett. 121, 42001, for another part of the level scheme from the same experiment.
2018Ch24: E=48 MeV ^{9}Be beam was produced from the 15UD pelletron accelerator facility of the Inter-University Accelerator Centre, New Delhi. Target was 8.4 mg/cm^2 thick isotopically enriched (99.3%) ^{122}Sn. γ rays were detected with the INGA anti-Compton γ spectrometer. Measured Eγ, Iγ, $\gamma\gamma$-coin, $\gamma\gamma$(t), $\gamma\gamma$(DCO), γ(lin pol). Deduced levels, J, π, band structures, half-life of an isomer, γ-ray multipolarities, configurations. Comparisons with theoretical calculations.

^{127}Xe Levels

E(level)[†]	J$^\pi$[#]	T$_{1/2}$	Comments
0.0	1/2$^+$		
124.8 *5*	3/2$^+$		
297.3[@] *7*	9/2$^-$		
342.6[&] *7*	7/2$^+$		
792.5[@] *8*	13/2$^-$		
938.5[&] *8*	11/2$^+$		
1466.9[@] *9*	17/2$^-$		
1621.9[&] *9*	15/2$^+$		
2243.7[@] *10*	21/2$^-$		
2394.4[&] *10*	19/2$^+$		
2730.3[a] *10*	23/2$^+$	28 ns *1*	T$_{1/2}$: from 429.5γ(t) and 423.3γ(t) with gate on 486.6γ. Authors state that an additional systematic uncertainty of 8-10% may exist.
3159.8[‡a] *11*	25/2$^+$		
3583.2[‡a] *11*	27/2$^+$		
4104.1[‡a] *11*	29/2$^+$		
4527.6[‡a] *11*	31/2$^+$		
5029.6[‡a] *11*	(33/2$^+$)		

[†] From a least-squares fit to γ-ray energies (by compiler), assuming ΔEγ=0.5 keV.
[‡] Newly found levels in 2018Ch24.
[#] As given in 2018Ch24, based on $\gamma\gamma$(DCO), γ(lin pol) and band assignments.
[@] Band(A): Band 1, based on 9/2$^-$.
[&] Band(B): Band 2, based on 7/2$^+$.
[a] Band(C): Band 3, based on 23/2$^+$.

γ(^{127}Xe)

Δ_{asym} is the linear polarization asymmetry, with a positive value for pure stretched electric transition and negative for magnetic. Expected DCO values are 1.0 and 0.5 for stretched quadrupole and dipole transition, respectively, with a gate on a pure quadrupole, and 2.0 and 1.0 with a gate on a pure dipole transition (2018Ch24).

E$_\gamma$	I$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.[‡]	Comments
124.8	1000	124.8	3/2$^+$	0.0	1/2$^+$	M1	DCO=0.53 *1* DCO gate on 405.6γ.
172.5	538.2 *64*	297.3	9/2$^-$	124.8	3/2$^+$	E3	DCO=0.97 *2* DCO gate on 124.8γ. Δ_{asym}=−0.062 *35*. Mult.: 2018Ch24 give E1 multipolarity, which compiler assumes is

Continued on next page (footnotes at end of table)

^{122}Sn(^{9}Be,4nγ):XUNDL-2 2018Ch24 (continued)

$\gamma(^{127}Xe)$ (continued)

E_γ	I_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.‡	Comments
							a typo due to the ΔJ=3, Δπ=yes character of the transition based on known J^π assignments.
217.8	117.4 *48*	342.6	7/2$^+$	124.8	3/2$^+$	(E2)	DCO=0.64 *2* DCO gate on 596.0γ. Δ_{asym}=+0.029 *44*. Mult.: 2018Ch24 give E2/M1, but M1 is inconsistent with ΔJ=2.
335.9	2.9 *2*	2730.3	23/2$^+$	2394.4	19/2$^+$	E2	DCO=1.00 *18* DCO gate on 772.6γ.
423.3†	8.4 *3*	3583.2	27/2$^+$	3159.8	25/2$^+$	M1	DCO=0.41 *4* DCO gate on 776.7γ. Δ_{asym}=−0.032 *53*. I_γ: for 423.3+423.4 doublet.
423.4†		4527.6	31/2$^+$	4104.1	29/2$^+$	M1	DCO=0.38 *15* DCO gate on 852.9γ.
429.5†	21.0 *4*	3159.8	25/2$^+$	2730.3	23/2$^+$	M1	DCO=0.34 *2* DCO gate on 776.7γ. Δ_{asym}=−0.072 *68*.
486.6	35.8 *6*	2730.3	23/2$^+$	2243.7	21/2$^-$	E1	DCO=0.61 *4* DCO gate on 680.6γ. Δ_{asym}=+0.027 *46*.
495.1	20.3 *12*	792.5	13/2$^-$	297.3	9/2$^-$	E2	DCO=1.02 *21* DCO gate on 674.4γ.
502.2†	2.2 *1*	5029.6	(33/2$^+$)	4527.6	31/2$^+$	(M1)	DCO=0.29 *10* DCO gate on 944.5γ.
520.8†	3.3 *4*	4104.1	29/2$^+$	3583.2	27/2$^+$	M1	DCO=0.65 *28* DCO gate on 852.9γ.
596.0	83.6 *11*	938.5	11/2$^+$	342.6	7/2$^+$	E2	DCO=1.07 *5* DCO gate on 683.4γ. Δ_{asym}=+0.123 *24*.
674.4	46.5 *8*	1466.9	17/2$^-$	792.5	13/2$^-$	E2	DCO=0.98 *10* DCO gate on 776.7γ. Δ_{asym}=+0.100 *56*.
683.4	74.0 *16*	1621.9	15/2$^+$	938.5	11/2$^+$	E2	DCO=1.10 *8* DCO gate on 772.6γ. Δ_{asym}=+0.101 *73*.
772.6	22.3 *5*	2394.4	19/2$^+$	1621.9	15/2$^+$	E2	DCO=1.05 *5* DCO gate on 683.4γ. Δ_{asym}=+0.145 *71*.
776.7	55.9 *7*	2243.7	21/2$^-$	1466.9	17/2$^-$	E2	DCO=1.14 *14* DCO gate on 674.4γ. Δ_{asym}=+0.093 *39*.
852.9†	5.2 *3*	3583.2	27/2$^+$	2730.3	23/2$^+$	E2	DCO=1.31 *38* DCO gate on 944.5γ.
925.4†	1.7 *7*	5029.6	(33/2$^+$)	4104.1	29/2$^+$	(E2)	
944.3†	6.5 *2*	4104.1	29/2$^+$	3159.8	25/2$^+$	(E2)	I_γ: for 944.3+944.5 doublet.
944.5†		4527.6	31/2$^+$	3583.2	27/2$^+$	E2	DCO=1.04 *24* DCO gate on 852.9γ.

† Newly observed transitions in 2018Ch24.
‡ From 2018Ch24 based on measured γγ(DCO) and γ(lin pol).

^{122}Sn(^{9}Be,4nγ):XUNDL-2 2018Ch24

Level Scheme

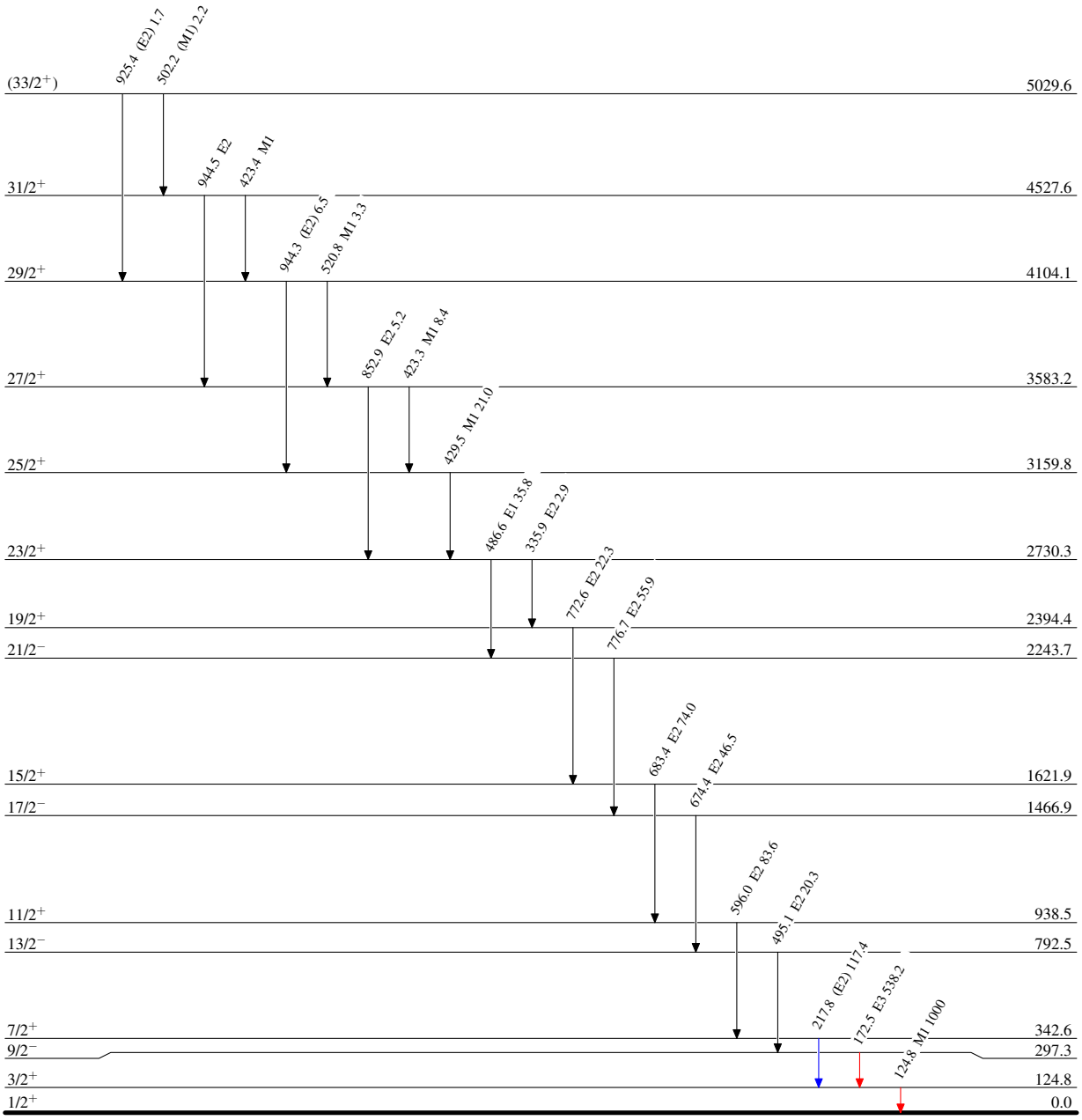
Intensities: Relative I_γ

Legend

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

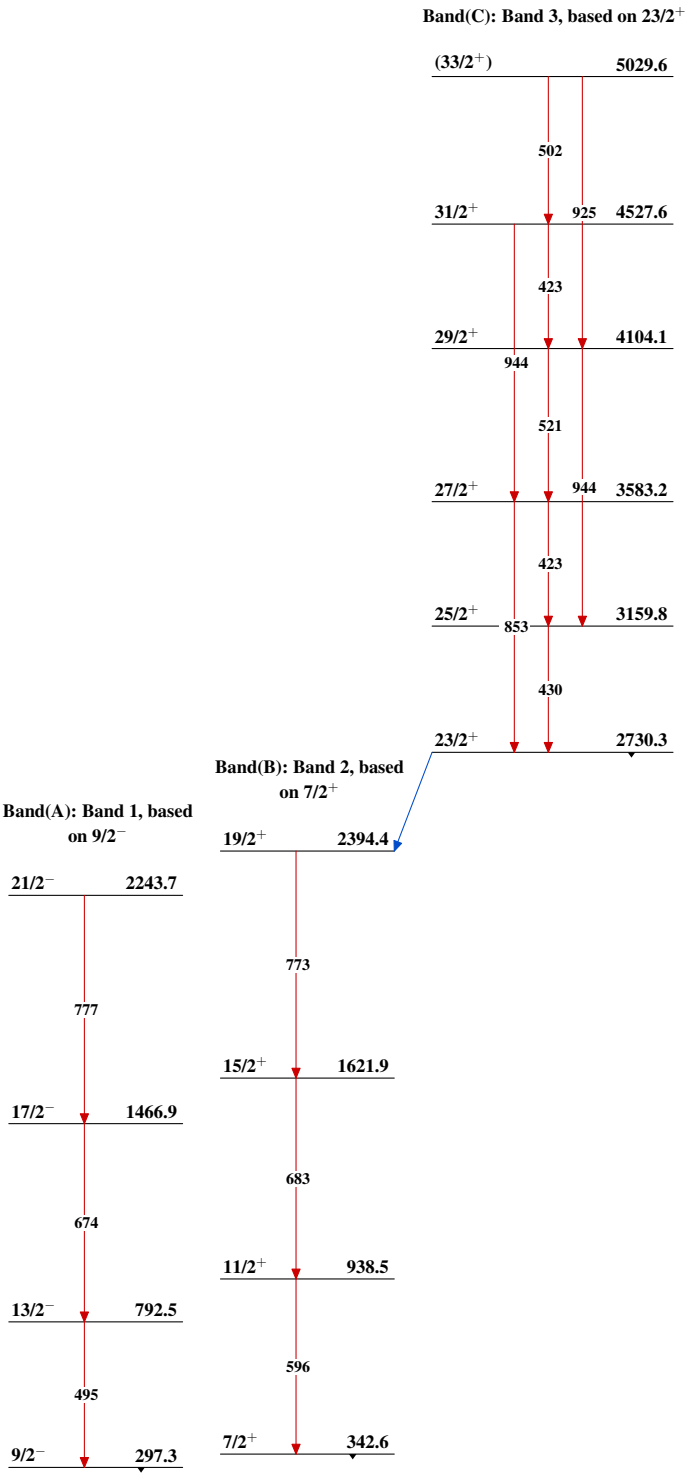
$I_\gamma < 10\% \times I_\gamma^{max}$

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



$^{127}_{54}Xe_{73}$

^{122}Sn(^{9}Be,4nγ):XUNDL-2 2018Ch24



$^{127}_{54}Xe_{73}$

^{122}Sn(^{9}Be,4nγ):XUNDL-3 2018Ch29

Compiled (unevaluated) dataset from 2018Ch29: Europhys Lett 121, 42001 (2018).
Compiled by J. Chen (NSCL, MSU), July 20, 2018.
See also 2018Ch24: Phys Rev C 97, 054311 (2018), and 2017Ch46: Braz J Phys 47, 406 (2017) for other parts of the level scheme from the same experiment.
2018Ch29: E=48 MeV ^{9}Be beam was produced from the 15UD pelletron accelerator facility of the Inter-University Accelerator Centre, New Delhi. Target was 8.4 mg/cm^2 thick isotopically enriched ^{122}Sn. γ rays were detected with the INGA array of Compton-suppressed clover detectors. Measured Eγ, Iγ, $\gamma\gamma$-coin, $\gamma\gamma$(DCO), γ(lin pol). Deduced levels, J, π, band structures, γ-ray multipolarities.

^{127}Xe Levels

E(level)[†]	J$^\pi$[‡]	Comments
0.0	1/2$^+$	J$^\pi$: from Adopted Levels of ^{127}Xe in ENSDF database.
124.8[a] *5*	3/2$^+$	
297.3[@] *7*	9/2$^-$	
309.0[#] *9*	11/2$^-$	
342.6[&] *7*	7/2$^+$	
530.5[a] *7*	7/2$^+$	
792.5[@] *8*	13/2$^-$	
828.1[#] *8*	15/2$^-$	
938.5[&] *8*	11/2$^+$	
1081.1[a] *8*	11/2$^+$	
1466.7[@] *8*	17/2$^-$	
1508.7[#] *9*	19/2$^-$	
1621.9[&] *8*	15/2$^+$	
1751.8[a] *8*	15/2$^+$	
2307.0 *8*	19/2$^+$	E(level): The authors claim that the previously reported 2306+2307 doublet in 1993Wi19: Z Phys A 347, 71 (1993), should be a single level based on their $\gamma\gamma$-coin analysis.
2394.5 *10*	19/2$^+$	J$^\pi$: from 2018Ch24.
2665.1 *9*		
2779.1 *9*	23/2$^+$	
3275.8 *11*		

[†] From a least-squares fit to γ-ray energies (by compiler), assuming $\Delta E\gamma$=0.5 keV.
[‡] As given in 2018Ch29, based on $\gamma\gamma$(DCO), γ(lin pol) and band assignments (in 2018Ch29 and 2018Ch24), unless otherwise noted.
[#] Band(A): Band 1, based on 11/2$^-$.
[@] Band(B): Band 2, based on 9/2$^-$.
[&] Band(C): Band 3, based on 7/2$^+$.
[a] Band(D): Band 4, based on 3/2$^+$.

γ(^{127}Xe)

There are many unidentified γ peaks in the $\gamma\gamma$-coin spectra gated by 472.1γ, 555.1γ, 638.6γ, 683.4γ and 685.1γ, respectively.
Δ_{asym} is the linear polarization asymmetry, with a positive value for pure stretched electric transition and negative for magnetic. Expected DCO values are 1.0 and 0.5 for stretched quadrupole and dipole transition, respectively, with a gate on a pure quadrupole, and 2.0 and 1.0 with a gate on a pure dipole transition (see 2018Ch24).

Continued on next page (footnotes at end of table)

^{122}Sn(^{9}Be,4nγ):XUNDL-3 2018Ch29 (continued)

$\gamma(^{127}Xe)$ (continued)

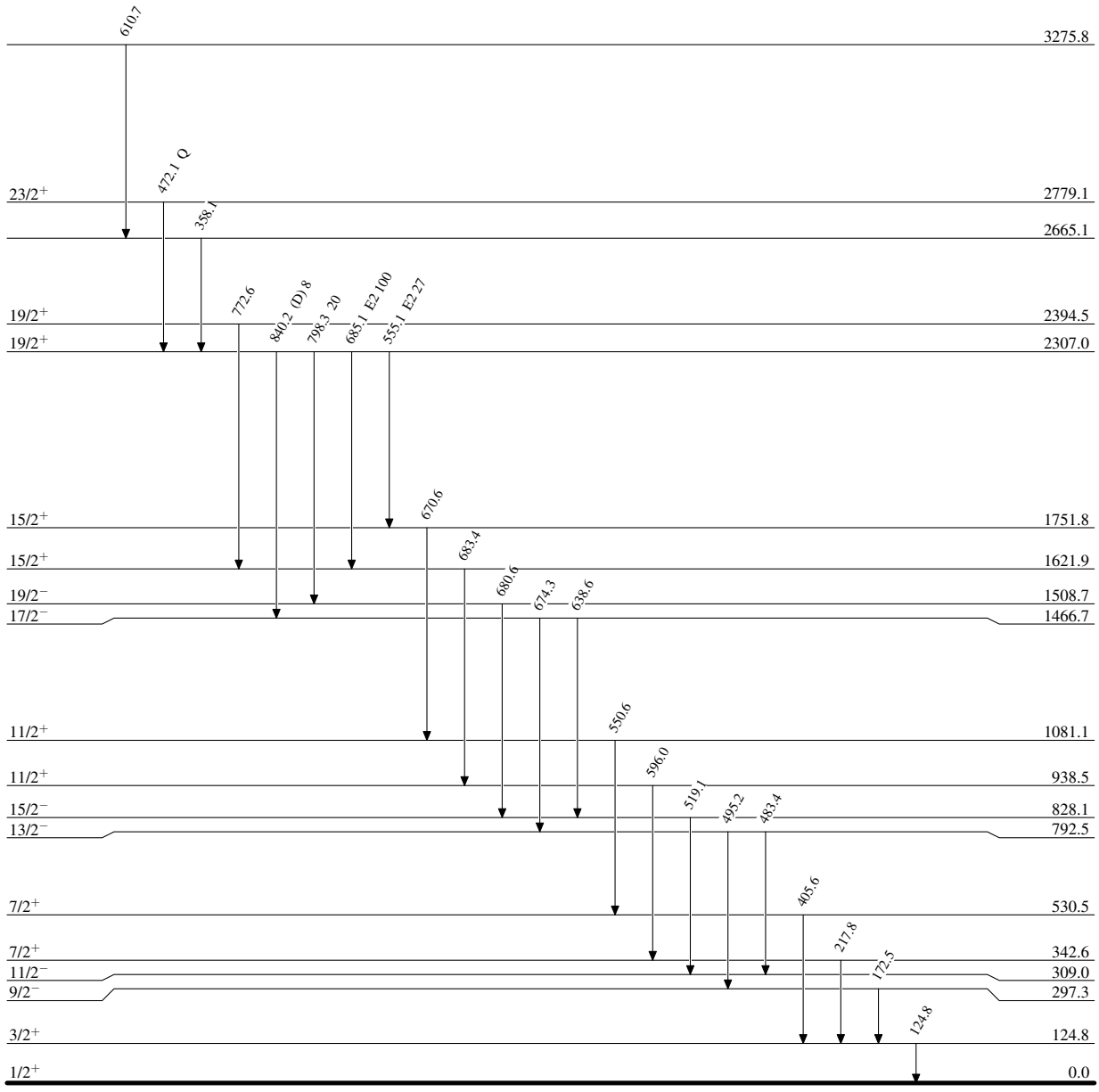
E_i(level)	J_i^π	E_γ[†]	I_γ[#]	E_f	J_f^π	Mult.[@]	Comments
124.8	$3/2^+$	124.8[‡]		0.0	$1/2^+$		
297.3	$9/2^-$	172.5[‡]		124.8	$3/2^+$		
342.6	$7/2^+$	217.8[‡]		124.8	$3/2^+$		
530.5	$7/2^+$	405.6		124.8	$3/2^+$		
792.5	$13/2^-$	483.4		309.0	$11/2^-$		
		495.2		297.3	$9/2^-$		
828.1	$15/2^-$	519.1		309.0	$11/2^-$		
938.5	$11/2^+$	596.0		342.6	$7/2^+$		
1081.1	$11/2^+$	550.6		530.5	$7/2^+$		
1466.7	$17/2^-$	638.6		828.1	$15/2^-$		
		674.3		792.5	$13/2^-$		
1508.7	$19/2^-$	680.6		828.1	$15/2^-$		
1621.9	$15/2^+$	683.4		938.5	$11/2^+$		
1751.8	$15/2^+$	670.6		1081.1	$11/2^+$		
2307.0	$19/2^+$	555.1	27	1751.8	$15/2^+$	E2	DCO=1.05 *7* Δ_{asym}=+0.154 *69*. I_γ: other: 32 from gate on 358.1γ.
		685.1	100	1621.9	$15/2^+$	E2	DCO=1.05 *6* Δ_{asym}=+0.094 *48*.
		798.3	20	1508.7	$19/2^-$		DCO=0.78 *14* I_γ: other: 21 from gate on 358.1γ.
		840.2	8	1466.7	$17/2^-$	(D)	DCO=0.64 *16* Mult.: DCO indicates $\Delta J=1$ (2018Ch29).
2394.5	$19/2^+$	772.6		1621.9	$15/2^+$		E_γ: seen in coincidence with 683.4γ in Fig.3.
2665.1		358.1		2307.0	$19/2^+$		
2779.1	$23/2^+$	472.1		2307.0	$19/2^+$	Q	DCO=1.07 *5* DCO gate on 685.1γ.
3275.8		610.7		2665.1			

[†] From level scheme in Fig.2 of 2018Ch29, unless otherwise noted.
[‡] From 2018Ch24 for the same experiment.
[#] From $\gamma\gamma$-coin spectra gate on 472.1γ. Values from gate on 358.1γ are given under comments.
[@] From 2018Ch29 based on measured $\gamma\gamma$(DCO) and γ(lin pol). Quoted values of DCO are from gate on 472.1γ, unless otherwise noted.

^{122}Sn(^{9}Be,4nγ):XUNDL-3 2018Ch29

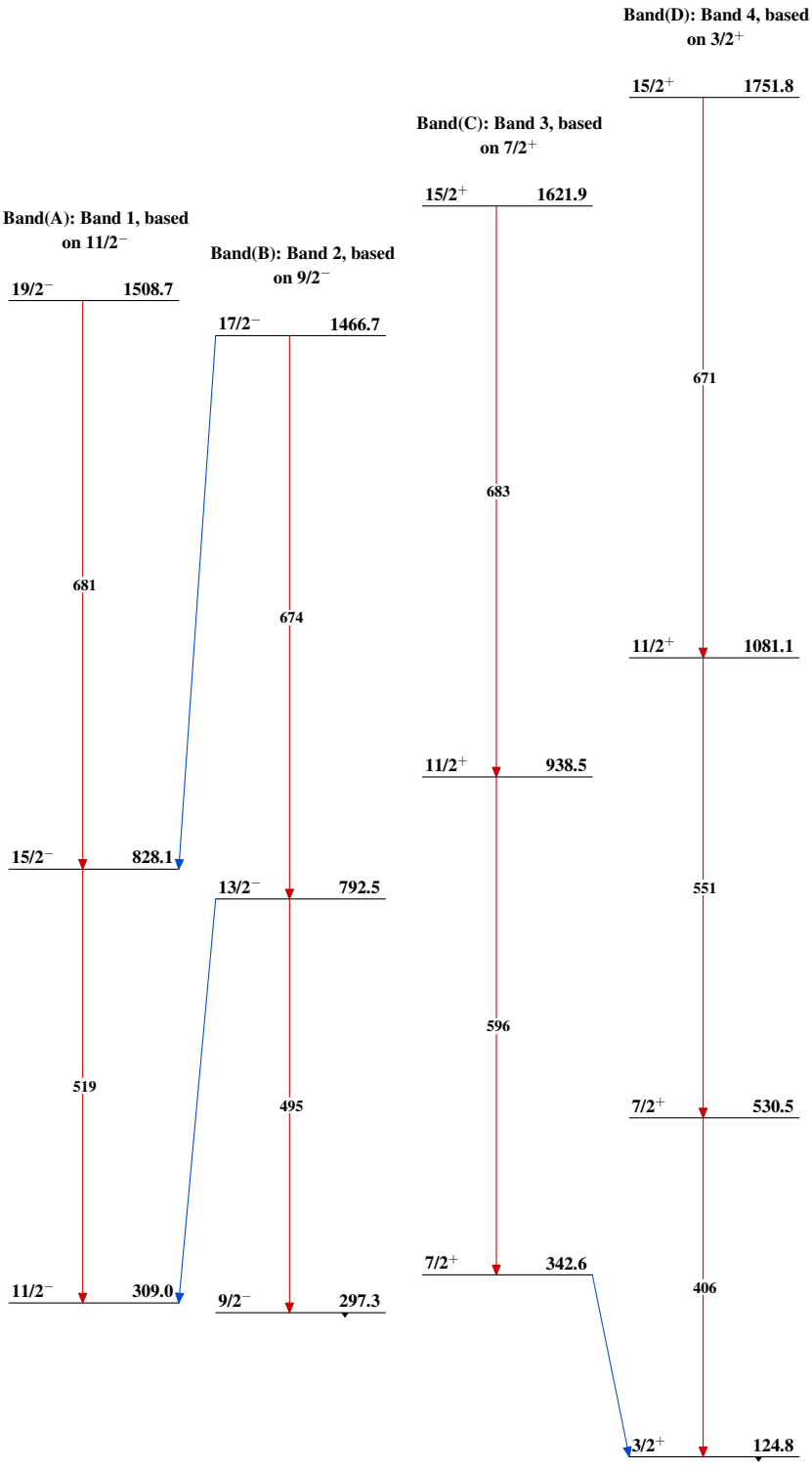
Level Scheme

Intensities: Relative photon branching from each level



$^{127}_{54}Xe_{73}$

^{122}Sn(^{9}Be,4nγ):XUNDL-3 2018Ch29



$^{127}_{54}Xe_{73}$

^{122}Sn(^{9}Be,4nγ):XUNDL-4 2020Ch46

Compiled (unevaluated) dataset from 2020Ch46: Phys Lett B 811, 135854 (2020).
Compiled by J. Chen (NSCL, MSU), February 14, 2021.
2020Ch46: E=48 MeV ^{9}Be beam was produced from the 15UD pelletron accelerator of Inter-University Accelerator Centre (IUAC), New Delhi. Target was 8.4 mg/cm^2 thick 99.3% isotopically enriched ^{122}Sn. γ rays were detected with the INGA spectrometer, consisting of 14 Compton-suppressed HPGe clover detectors. Measured Eγ, Iγ, $\gamma\gamma$-coin, $\gamma\gamma$(DCO), γ(lin pol). Deduced levels, J, π, band structures, γ-ray multipolarities, mixing ratios, transition strengths.

^{127}Xe Levels

E(level)[&]	J$^\pi$[b]	Comments
297[†a]	9/2$^-$	Additional information 1.
309[‡a]	11/2$^-$	Additional information 2.
792.2[#] *3*	13/2$^-$	
828.1[‡] *3*	15/2$^-$	
960.1[†] *3*	13/2$^-$	
1369.1[@] *4*	15/2$^-$	
1466.7[#] *4*	17/2$^-$	
1508.8[‡] *4*	19/2$^-$	
1704.0[†] *4*	17/2$^-$	
2104.5[@] *4*	19/2$^-$	
2243.5[#] *5*	21/2$^-$	
2312.9[‡] *5*	23/2$^-$	
2549.3[†] *5*	21/2$^-$	
2912.4[@] *5*	23/2$^-$	
3113.5[#] *5*	25/2$^-$	
3202.7[‡] *6*	27/2$^-$	
3455.0[†] *5*	25/2$^-$	
3784.4[@] *5*	27/2$^-$	
4086.7[#] *6*	29/2$^-$	
4137.7[‡] *7*	31/2$^-$	
4366.7[†] *6*	29/2$^-$	
5098.9[‡] *8*	35/2$^-$	
5132.0[#] *7*	33/2$^-$	

[†] Band(A): Band 2 based on 9/2$^-$.
[‡] Band(B): Band 1 based on 11/2$^-$.
[#] Band(C): Band 3 based on 13/2$^-$.
[@] Band(D): Band 4 based on 15/2$^-$.
[&] From a least-squares fit to γ-ray energies, assuming ΔEγ=0.5 keV (by compiler), unless otherwise noted.
[a] Energy is rounded value from Adopted Levels of ^{127}Xe in ENSDF database.
[b] As given in 2020Ch46, based on measured $\gamma\gamma$(DCO), γ(lin pol) and band assignments.

γ(^{127}Xe)

E$_i$(level)	J$_i^\pi$	E$_\gamma$[†]	I$_\gamma$[†]	E$_f$	J$_f^\pi$	Mult.[‡]	δ[#]	Comments
792.2	13/2$^-$	483.4	100 *4*	309	11/2$^-$	M1+E2	−2.1 *2*	R$_{DCO}$=0.303 *21*, Δ_{asym}=+0.058 *32*. DCO gate on 674.
		495.0	15 *1*	297	9/2$^-$			R$_{DCO}$=1.02 *21*, Δ_{asym}=+0.159 *180*. DCO gate on 674.

Continued on next page (footnotes at end of table)

^{122}Sn(^{9}Be,4nγ):XUNDL-4 2020Ch46 (continued)

$\gamma(^{127}Xe)$ (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	Comments
828.1	15/2$^-$	519.1	100	309	11/2$^-$			R_{DCO}=1.09 *2*, Δ_{asym}=+0.13 *1*. DCO gate on 681.
960.1	13/2$^-$	651.3	57 *2*	309	11/2$^-$	M1+E2	+0.15 *5*	R_{DCO}=0.717 *69*, Δ_{asym}=−0.012 *137*. DCO gate on 744.
		662.9	100 *2*	297	9/2$^-$			R_{DCO}=1.01 *5*, Δ_{asym}=+0.091 *90*. DCO gate on 744.
1369.1	15/2$^-$	408.9	13 *1*	960.1	13/2$^-$			R_{DCO}=0.69 *15*. DCO gate on 663.
		541.2	20 *2*	828.1	15/2$^-$			R_{DCO}=0.88 *9*. DCO gate on 519.
		576.8	100 *3*	792.2	13/2$^-$	M1+E2	−1.7 *+2−3*	R_{DCO}=0.245 *28*, Δ_{asym}=+0.051 *37*. DCO gate on 735.
1466.7	17/2$^-$	638.7	100 *1*	828.1	15/2$^-$	M1+E2	−2.2 *+2−1*	R_{DCO}=0.304 *15*, Δ_{asym}=+0.008 *36*. DCO gate on 777.
		674.4	46 *2*	792.2	13/2$^-$			R_{DCO}=0.98 *10*, Δ_{asym}=+0.100 *56*. DCO gate on 777.
1508.8	19/2$^-$	680.6	100	828.1	15/2$^-$			R_{DCO}=1.06 *2*, Δ_{asym}=+0.12 *1*. DCO gate on 519.
1704.0	17/2$^-$	744.1	100 *4*	960.1	13/2$^-$			R_{DCO}=1.03 *9*, Δ_{asym}=+0.066 *79*. DCO gate on 663.
		875.9	24 *2*	828.1	15/2$^-$	M1+E2	+0.26 *10*	R_{DCO}=0.85 *85*, Δ_{asym}=−0.114 *132*. DCO gate on 519.
2104.5	19/2$^-$	595.8	53 *5*	1508.8	19/2$^-$			R_{DCO}=0.67 *19*. DCO gate on 808.
		637.8	78 *10*	1466.7	17/2$^-$	M1+E2	−2.4 *+9−7*	R_{DCO}=0.311 *66*, Δ_{asym}=+0.068 *115*. DCO gate on 674.
		735.4	100 *6*	1369.1	15/2$^-$			R_{DCO}=0.97 *22*, Δ_{asym}=+0.125 *130*. DCO gate on 808.
2243.5	21/2$^-$	734.8	100 *2*	1508.8	19/2$^-$	M1+E2	−2.4 *1*	R_{DCO}=0.313 *10*, Δ_{asym}=+0.031 *25*. DCO gate on 681.
		776.8	75 *2*	1466.7	17/2$^-$			R_{DCO}=1.14 *14*, Δ_{asym}=+0.093 *39*. DCO gate on 674.
2312.9	23/2$^-$	804.2	100	1508.8	19/2$^-$			R_{DCO}=1.06 *2*, Δ_{asym}=+0.11 *1*. DCO gate on 681.
2549.3	21/2$^-$	845.4	100 *5*	1704.0	17/2$^-$			R_{DCO}=0.95 *9*, Δ_{asym}=+0.164 *65*. DCO gate on 744.
		1040.4	26 *5*	1508.8	19/2$^-$			
2912.4	23/2$^-$	599.4		2312.9	23/2$^-$			
		669.0	29 *8*	2243.5	21/2$^-$			
		808.0	100 *11*	2104.5	19/2$^-$			R_{DCO}=1.02 *17*. DCO gate on 735.
		1403.6	26 *6*	1508.8	19/2$^-$			R_{DCO}=1.09 *25*. DCO gate on 681.
3113.5	25/2$^-$	800.5	99 *6*	2312.9	23/2$^-$	M1+E2	−2.9 *+7−5*	R_{DCO}=0.352 *41*, Δ_{asym}=+0.074 *61*. DCO gate on 804.
		870.0	100 *6*	2243.5	21/2$^-$			R_{DCO}=0.98 *15*, Δ_{asym}=+0.181 *102*. DCO gate on 777.
3202.7	27/2$^-$	889.6	100	2312.9	23/2$^-$			R_{DCO}=1.01 *3*, Δ_{asym}=+0.14 *3*. DCO gate on 804.
3455.0	25/2$^-$	905.6	100 *12*	2549.3	21/2$^-$			R_{DCO}=1.01 *13*, Δ_{asym}=+0.123 *169*. DCO gate on 744.
		1142.5	34 *11*	2312.9	23/2$^-$			
3784.4	27/2$^-$	581.9		3202.7	27/2$^-$			
		670.9		3113.5	25/2$^-$			
		871.9	100	2912.4	23/2$^-$			
		1471.5		2312.9	23/2$^-$			R_{DCO}=1.05 *23*. DCO gate on 804.

Continued on next page (footnotes at end of table)

^{122}Sn(^{9}Be,4nγ):XUNDL-4 2020Ch46 (continued)

$\gamma(^{127}Xe)$ (continued)

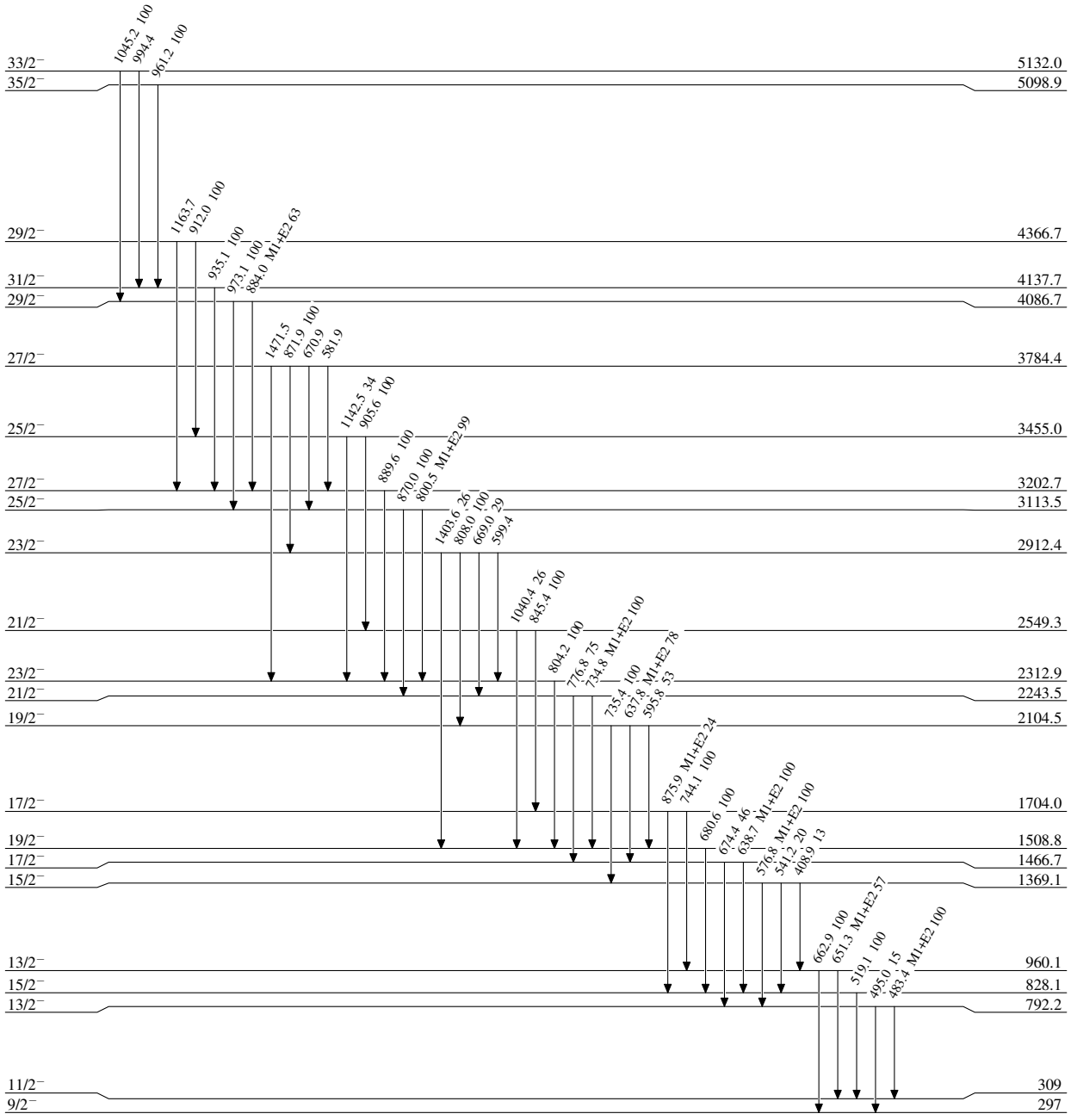
E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[‡]	δ[#]	Comments
4086.7	29/2$^-$	884.0	63 *9*	3202.7	27/2$^-$	M1+E2	−3.1 *+19−11*	R_{DCO}=0.366 *88*, Δ_{asym}=+0.048 *82*. DCO gate on 890.
		973.1	100 *7*	3113.5	25/2$^-$			R_{DCO}=0.99 *13*, Δ_{asym}=+0.162 *130*. DCO gate on 870.
4137.7	31/2$^-$	935.1	100	3202.7	27/2$^-$			R_{DCO}=0.99 *4*, Δ_{asym}=+0.11 *4*. DCO gate on 889.
4366.7	29/2$^-$	912.0	100	3455.0	25/2$^-$			R_{DCO}=0.96 *20*. DCO gate on 744.
		1163.7		3202.7	27/2$^-$			
5098.9	35/2$^-$	961.2	100	4137.7	31/2$^-$			R_{DCO}=1.01 *7*, Δ_{asym}=+0.08 *6*. DCO gate on 935.
5132.0	33/2$^-$	994.4		4137.7	31/2$^-$			R_{DCO}=0.33 *14*. DCO gate on 935.
		1045.2	100	4086.7	29/2$^-$			R_{DCO}=1.08 *30*. DCO gate on 973.

[†] From 2020Ch46. $\Delta E\gamma$ is not given in 2020Ch46 and assumed to be 0.5 keV in the fitting; a 3% additional uncertainty in intensity due to efficiency calibration as stated by authors has been added in quadrature (by compiler).
[‡] From measured $\gamma\gamma$(DCO) and γ(lin pol) asymmetry by 2020Ch46.
[#] Extracted from comparisons of measured DCO ratios with theoretical calculations (2020Ch46).

^{122}Sn(^{9}Be,4nγ):XUNDL-4 2020Ch46

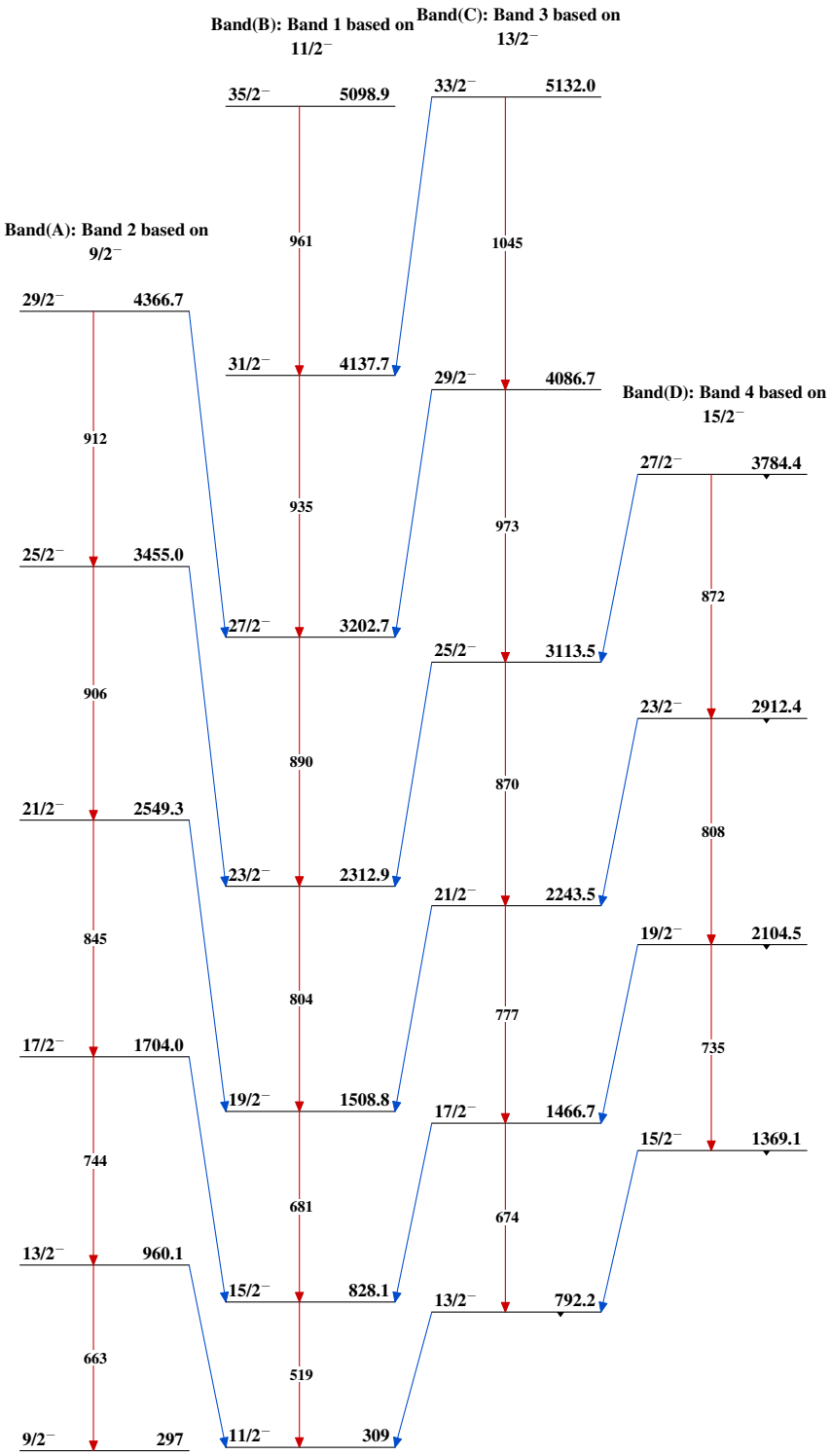
Level Scheme

Intensities: Relative photon branching from each level



$^{127}_{54}Xe_{73}$

^{122}Sn(^{9}Be,4nγ):XUNDL-4 2020Ch46



$^{127}_{54}Xe_{73}$