^{122}Sn(^{36}S,4nγ):SD 2009Ij01,1995Ni03,1996Fi08

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	N. Nica	NDS 200,2 (2025)	22-Aug-2022

Additional information 1.

2009Ij01: ^{122}Sn(^{36}S,4nγ), E(^{36}S)=165 MeV. Measured Eγ, Iγ, $\gamma\gamma$ using the Gammasphere spectrometer with 103 Compton-suppressed HPGe detectors. Authors report identification of six SD bands through considerations of $\gamma\gamma$ coincidence relations, comparison of energy spacings and intensity patterns with other SD bands in the A ≈ 150 region. Interpretation of bands with cranked relativistic mean-field theory using effective alignment method.

1995Ni03: ^{122}Sn(^{36}S,4nγ), E(^{36}S)=165 MeV. Measured γ's in the Gammasphere spectrometer with 36 Compton-suppressed Ge detectors. Authors report a sequence of 18 cascade γ's which, through considerations of coincidence relations, comparison of energy spacings and intensity patterns with other SD bands in the A ≈ 150 region, they identify as an SD band.

1996Fi08: many of the same authors as 1995Ni03. As part of their study of ^{155}Dy, using DSAM techniques, they also report population of the SD band in ^{154}Dy previously identified by 1995Ni03. They deduce a value for the transition quadrupole moment (assumed to be constant) within this band and infer a value for the quadrupole deformation parameter from IT.

All data are from 2009Ij01. In 1995Ni03 and 1996Fi08, only the SD-1 band was reported.

^{154}Dy Levels

Configurations are from 2009Ij01 based on assignments proposed in the theoretical interpretations by 1998Af02. These are labeled with respect to intruder configuration of $\pi 6^4 \nu 7^2$ for the yrast SD band in ^{152}Dy, N=86.

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
x#	J≈(24)	4428.2+y@ *10*	J1+10	11052.1+z& *16*	J2+22
701.7+x# *2*	J+2	5451.2+y@ *10*	J1+12	12332.2+z& *16*	J2+24
1450.7+x# *3*	J+4	6519.6+y@ *11*	J1+14	13659.4+z& *16*	J2+26
2245.1+x# *4*	J+6	7632.6+y@ *12*	J1+16	15033.1+z& *17*	J2+28
3085.7+x# *4*	J+8	8789.9+y@ *13*	J1+18	16453.2+z& *17*	J2+30
3973.1+x# *5*	J+10	9991.7+y@ *13*	J1+20	17919.3+z& *17*	J2+32
4907.8+x# *5*	J+12	11237.8+y@ *13*	J1+22	19431.5+z& *19*	J2+34
5888.9+x# *6*	J+14	12527.9+y@ *13*	J1+24	u[a]	J3
6917.7+x# *6*	J+16	13861.7+y@ *14*	J1+26	721.1+u[a] *7*	J3+2
7993.2+x# *6*	J+18	15239.0+y@ *15*	J1+28	1490.1+u[a] *10*	J3+4
9116.7+x# *7*	J+20	16659.7+y@ *15*	J1+30	2307.1+u[a] *11*	J3+6
10288.0+x# *7*	J+22	18123.3+y@ *16*	J1+32	3172.5+u[a] *12*	J3+8
11506.6+x# *7*	J+24	19629.1+y@ *16*	J1+34	4086.8+u[a] *14*	J3+10
12772.6+x# *8*	J+26	z&	J2≈(33)	5050.1+u[a] *14*	J3+12
14086.7+x# *8*	J+28	780.5+z& *6*	J2+2	6061.8+u[a] *14*	J3+14
15448.6+x# *8*	J+30	1607.7+z& *10*	J2+4	7120.8+u[a] *15*	J3+16
16858.3+x# *8*	J+32	2479.7+z& *12*	J2+6	8226.3+u[a] *15*	J3+18
18314.9+x# *9*	J+34	3392.1+z& *13*	J2+8	9377.2+u[a] *15*	J3+20
19819.2+x# *9*	J+36	4349.5+z& *14*	J2+10	10573.6+u[a] *15*	J3+22
y@	J1	5351.6+z& *14*	J2+12	11815.4+u[a] *15*	J3+24
794.9+y?@ *9*	J1+2	6399.0+z& *15*	J2+14	13102.4+u[a] *15*	J3+26
1634.8+y@ *10*	J1+4	7492.4+z& *15*	J2+16	14434.5+u[a] *16*	J3+28
2520.1+y@ *10*	J1+6	8632.5+z& *15*	J2+18	15811.3+u[a] *16*	J3+30
3451.1+y@ *10*	J1+8	9819.6+z& *15*	J2+20	17232.4+u[a] *17*	J3+32

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^{122}Sn(^{36}S,4nγ):SD 2009Ij01,1995Ni03,1996Fi08 (continued)

^{154}Dy Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
18696.8+u[a] *18*	J3+34	9471.9+v[b] *21*	J4+20	2704.1+w[c] *15*	J5+6
20204.0+u[a] *20*	J3+36	10675.0+v[b] *23*	J4+22	3698.4+w[c] *16*	J5+8
v[b]	J4≈(31)	11923.6+v[b] *23*	J4+24	4739.3+w[c] *17*	J5+10
738.6+v[b] *8*	J4+2	13218.0+v[b] *23*	J4+26	5826.2+w[c] *18*	J5+12
1522.6+v[b] *12*	J4+4	14559.2+v[b] *24*	J4+28	6959.5+w[c] *18*	J5+14
2352.5+v[b] *14*	J4+6	15946+v[b] *3*	J4+30	8138.9+w[c] *19*	J5+16
3229.0+v[b] *15*	J4+8	17380+v[b] *3*	J4+32	9364.4+w[c] *20*	J5+18
4152.5+v[b] *17*	J4+10	18859+v[b] *3*	J4+34	10636.2+w[c] *20*	J5+20
5122.8+v[b] *18*	J4+12	20385+v[b] *3*	J4+34	11954.2+w[c] *21*	J5+22
6140.2+v[b] *19*	J4+14	w[c]	J5≈(36)	13318.5+w[c] *23*	J5+24
7204.4+v[b] *20*	J4+16	855.2+w?[c] *10*	J5+2	14728.7+w[c] *24*	J5+26
8315.0+v[b] *21*	J4+18	1756.4+w?[c] *15*	J5+4	16185+w[c] *3*	J5+28

† From Eγ's.
‡ As proposed by 2009Ij01 from assigned configurations and effective alignments.
# Band(A): SD-1 band (2009Ij01,1995Ni03). Proposed configuration: $(\pi 6)^4(\nu 7)^2\otimes(\nu 5/2[402])^2$. Earlier in 1995Ni03, $(\nu 9/2[514])^2$ orbital was proposed Q_t=15.9 *+31−21*. $\beta_2 \approx 0.57$ (1996Fi08). Percent feeding=0.70 *10*, relative to that of the g.s. band.
@ Band(B): SD-2 band (2009Ij01). Percent feeding=0.30 *10*, relative to that of the g.s. band.
& Band(C): SD-3 band (2009Ij01). Band crossing at $\hbar\omega\approx$0.45 MeV. Proposed configuration: $(\pi 6)^4(\nu 7)^2\otimes(\nu 3/2[761])\otimes(\nu 3/2[521])$. Percent feeding=0.11 *5*, relative to that of the g.s. band.
a Band(D): SD-4 band (2009Ij01). Percent feeding=0.07 *4*, relative to that of the g.s. band.
b Band(E): SD-5 band (2009Ij01), α=1. Band crossing at $\hbar\omega\approx$0.55 MeV. Proposed configuration: $(\pi 6)^4(\nu 7)^2\otimes(\nu 5/2[402])\otimes(\nu 3/2[761])$. Percent feeding=0.05 *3*, relative to that of the g.s. band. SD-5 and SD-6 bands are interpreted as signature partners.
c Band(e): SD-6 band (2009Ij01), α=0 Proposed configuration: $(\pi 6)^4(\nu 7)^2\otimes(\nu 5/2[402])\otimes(\nu 3/2[761])$. Percent feeding=0.03 *2*, relative to that of the g.s. band. SD-5 and SD-6 bands are interpreted as signature partners.

γ(^{154}Dy)

Eγ†	Iγ‡	E_i(level)	J_i^π	E_f	J_f^π	Comments
701.7 *2*	0.20 *3*	701.7+x	J+2	x	J≈(24)	Eγ=701.7 *10*, Iγ=0.20 *5* (1995Ni03).
721.1 *7*	0.015 *4*	721.1+u	J3+2	u	J3	
738.6 *8*	0.012 *3*	738.6+v	J4+2	v	J4≈(31)	
749.0 *2*	0.27 *4*	1450.7+x	J+4	701.7+x	J+2	Eγ=749.0 *3*, Iγ=0.30 *5* (1995Ni03).
769.0 *6*	0.020 *7*	1490.1+u	J3+4	721.1+u	J3+2	
780.5 *6*	<0.02	780.5+z	J2+2	z	J2≈(33)	
784.0 *8*	0.013 *3*	1522.6+v	J4+4	738.6+v	J4+2	
794.4 *2*	0.39 *4*	2245.1+x	J+6	1450.7+x	J+4	Eγ=794.4 *2*, Iγ=0.67 *8* (1995Ni03).
794.9# *9*	<0.1	794.9+y?	J1+2	y	J1	
817.0 *6*	0.028 *11*	2307.1+u	J3+6	1490.1+u	J3+4	
827.2 *8*	0.030 *7*	1607.7+z	J2+4	780.5+z	J2+2	
829.9 *8*	0.019 *3*	2352.5+v	J4+6	1522.6+v	J4+4	
839.9 *2*	0.20 *2*	1634.8+y	J1+4	794.9+y?	J1+2	
840.6 *2*	0.59 *11*	3085.7+x	J+8	2245.1+x	J+6	Eγ=840.6 *2*, Iγ=0.95 *15* (1995Ni03).
855.2# *10*	<0.01	855.2+w?	J5+2	w	J5≈(36)	
865.4 *4*	0.040 *11*	3172.5+u	J3+8	2307.1+u	J3+6	
872.0 *6*	0.040 *9*	2479.7+z	J2+6	1607.7+z	J2+4	

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^{122}Sn(^{36}S,4nγ):SD 2009Ij01,1995Ni03,1996Fi08 (continued)

$\gamma(^{154}Dy)$ (continued)

E_γ[†]	I_γ[‡]	E_i(level)	J_i^π	E_f	J_f^π	Comments
876.5 *6*	0.028 *7*	3229.0+v	J4+8	2352.5+v	J4+6	
885.3 *2*	0.27 *3*	2520.1+y	J1+6	1634.8+y	J1+4	
887.4 *2*	0.70 *11*	3973.1+x	J+10	3085.7+x	J+8	Eγ=887.4 *2*, Iγ=1.10 *20* (1995Ni03).
901.2[#] *10*	<0.01	1756.4+w?	J5+4	855.2+w?	J5+2	
912.4 *5*	0.065 *9*	3392.1+z	J2+8	2479.7+z	J2+6	
914.3 *6*	0.055 *11*	4086.8+u	J3+10	3172.5+u	J3+8	
923.5 *6*	0.035 *7*	4152.5+v	J4+10	3229.0+v	J4+8	
931.0 *2*	0.25 *4*	3451.1+y	J1+8	2520.1+y	J1+6	
934.7 *2*	0.68 *12*	4907.8+x	J+12	3973.1+x	J+10	Eγ=933.5 *2*, Iγ=1.02 *15* (1995Ni03).
947.7 *5*	0.020 *2*	2704.1+w	J5+6	1756.4+w?	J5+4	
957.4 *5*	0.090 *9*	4349.5+z	J2+10	3392.1+z	J2+8	
963.3 *4*	0.080 *11*	5050.1+u	J3+12	4086.8+u	J3+10	
970.3 *6*	0.035 *9*	5122.8+v	J4+12	4152.5+v	J4+10	
977.1 *2*	0.30 *4*	4428.2+y	J1+10	3451.1+y	J1+8	
981.1 *2*	0.50 *12*	5888.9+x	J+14	4907.8+x	J+12	Eγ=981.1 *1*, Iγ=1.00 *15* (1995Ni03).
994.3 *5*	0.023 *4*	3698.4+w	J5+8	2704.1+w	J5+6	
1002.1 *3*	0.090 *14*	5351.6+z	J2+12	4349.5+z	J2+10	
1011.7 *3*	0.080 *11*	6061.8+u	J3+14	5050.1+u	J3+12	
1017.4 *8*	0.045 *9*	6140.2+v	J4+14	5122.8+v	J4+12	
1023.0 *2*	0.30 *4*	5451.2+y	J1+12	4428.2+y	J1+10	
1028.8 *2*	0.52 *12*	6917.7+x	J+16	5888.9+x	J+14	Eγ=1028.2 *2*, Iγ=1.07 *15* (1995Ni03).
1040.9 *5*	0.023 *4*	4739.3+w	J5+10	3698.4+w	J5+8	
1047.4 *3*	0.070 *14*	6399.0+z	J2+14	5351.6+z	J2+12	
1059.0 *3*	0.075 *11*	7120.8+u	J3+16	6061.8+u	J3+14	
1064.2 *6*	0.045 *9*	7204.4+v	J4+16	6140.2+v	J4+14	
1068.4 *4*	0.24 *4*	6519.6+y	J1+14	5451.2+y	J1+12	
1075.5 *2*	0.49 *12*	7993.2+x	J+18	6917.7+x	J+16	Eγ=1075.8 *2*, Iγ=1.10 *12* (1995Ni03).
1086.9 *5*	0.035 *4*	5826.2+w	J5+12	4739.3+w	J5+10	
1093.4 *3*	0.100 *14*	7492.4+z	J2+16	6399.0+z	J2+14	
1105.5 *2*	0.075 *11*	8226.3+u	J3+18	7120.8+u	J3+16	
1110.6 *4*	0.055 *9*	8315.0+v	J4+18	7204.4+v	J4+16	
1113.0 *4*	0.21 *4*	7632.6+y	J1+16	6519.6+y	J1+14	
1123.5 *2*	0.42 *12*	9116.7+x	J+20	7993.2+x	J+18	Eγ=1123.8 *2*, Iγ=1.05 *17* (1995Ni03).
1133.3 *5*	0.027 *4*	6959.5+w	J5+14	5826.2+w	J5+12	
1140.1 *2*	0.110 *14*	8632.5+z	J2+18	7492.4+z	J2+16	
1150.9 *2*	0.072 *11*	9377.2+u	J3+20	8226.3+u	J3+18	
1156.9 *5*	0.055 *9*	9471.9+v	J4+20	8315.0+v	J4+18	
1157.3 *4*	0.20 *4*	8789.9+y	J1+18	7632.6+y	J1+16	
1171.3 *2*	0.35 *12*	10288.0+x	J+22	9116.7+x	J+20	Eγ=1171.1 *2*, Iγ=0.90 *10* (1995Ni03).
1179.4 *5*	0.027 *4*	8138.9+w	J5+16	6959.5+w	J5+14	
1187.1 *3*	0.100 *14*	9819.6+z	J2+20	8632.5+z	J2+18	
1196.4 *2*	0.070 *11*	10573.6+u	J3+22	9377.2+u	J3+20	
1201.8 *2*	0.21 *4*	9991.7+y	J1+20	8789.9+y	J1+18	
1203.1 *7*	0.040 *9*	10675.0+v	J4+22	9471.9+v	J4+20	
1218.6 *2*	0.30 *12*	11506.6+x	J+24	10288.0+x	J+22	Eγ=1218.7 *2*, Iγ=0.65 *8* (1995Ni03).
1225.5 *5*	0.020 *4*	9364.4+w	J5+18	8138.9+w	J5+16	
1232.5 *3*	0.060 *14*	11052.1+z	J2+22	9819.6+z	J2+20	
1241.8 *2*	0.045 *11*	11815.4+u	J3+24	10573.6+u	J3+22	
1246.1 *3*	0.19 *4*	11237.8+y	J1+22	9991.7+y	J1+20	
1248.6 *5*	0.045 *9*	11923.6+v	J4+24	10675.0+v	J4+22	
1266.0 *2*	0.30 *11*	12772.6+x	J+26	11506.6+x	J+24	Eγ=1266.7 *2*, Iγ=0.45 *7* (1995Ni03).
1271.8 *5*	0.020 *4*	10636.2+w	J5+20	9364.4+w	J5+18	
1280.1 *3*	0.060 *14*	12332.2+z	J2+24	11052.1+z	J2+22	
1287.0 *2*	0.042 *6*	13102.4+u	J3+26	11815.4+u	J3+24	
1290.1 *3*	0.18 *4*	12527.9+y	J1+24	11237.8+y	J1+22	
1294.4 *4*	0.055 *9*	13218.0+v	J4+26	11923.6+v	J4+24	

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^{122}Sn(^{36}S,4nγ):SD 2009Ij01,1995Ni03,1996Fi08 (continued)

γ(^{154}Dy) (continued)

E_γ [†]	I_γ [‡]	E_i(level)	J_i^π	E_f	J_f^π	Comments
1314.0 *2*	0.25 *10*	14086.7+x	J+28	12772.6+x	J+26	Eγ=1315.1 *2*, Iγ=0.40 *10* (1995Ni03).
1318.0 *6*	0.018 *3*	11954.2+w	J5+22	10636.2+w	J5+20	
1327.1 *3*	0.055 *9*	13659.4+z	J2+26	12332.2+z	J2+24	
1332.0 *3*	0.030 *6*	14434.5+u	J3+28	13102.4+u	J3+26	
1333.7 *4*	0.10 *4*	13861.7+y	J1+26	12527.9+y	J1+24	
1341.1 *7*	0.045 *9*	14559.2+v	J4+28	13218.0+v	J4+26	
1361.9 *2*	0.22 *10*	15448.6+x	J+30	14086.7+x	J+28	Eγ=1361.9 *3*, Iγ=0.30 *7* (1995Ni03).
1364.2 *8*	0.015 *3*	13318.5+w	J5+24	11954.2+w	J5+22	
1373.7 *4*	0.045 *9*	15033.1+z	J2+28	13659.4+z	J2+26	
1376.8 *3*	0.030 *6*	15811.3+u	J3+30	14434.5+u	J3+28	
1377.3 *4*	0.09 *4*	15239.0+y	J1+28	13861.7+y	J1+26	
1387.3 *8*	0.032 *9*	15946+v	J4+30	14559.2+v	J4+28	
1409.7 *2*	0.30 *10*	16858.3+x	J+32	15448.6+x	J+30	Eγ=1410.2 *5*, Iγ=0.25 *5* (1995Ni03).
1410.2 *8*	0.013 *2*	14728.7+w	J5+26	13318.5+w	J5+24	
1420.1 *3*	0.040 *9*	16453.2+z	J2+30	15033.1+z	J2+28	
1420.7 *4*	0.04 *3*	16659.7+y	J1+30	15239.0+y	J1+28	
1421.1 *4*	0.025 *6*	17232.4+u	J3+32	15811.3+u	J3+30	
1433.5 *6*	0.032 *8*	17380+v	J4+32	15946+v	J4+30	
1456.0 *8*		16185+w	J5+28	14728.7+w	J5+26	
1456.6 *3*	0.11 *8*	18314.9+x	J+34	16858.3+x	J+32	Eγ=1457.5 *6*, Iγ=0.17 *7* (1995Ni03).
1463.6 *4*	<0.1	18123.3+y	J1+32	16659.7+y	J1+30	
1464.4 *7*	0.025 *6*	18696.8+u	J3+34	17232.4+u	J3+32	
1466.1 *3*	0.030 *4*	17919.3+z	J2+32	16453.2+z	J2+30	
1479.4 *5*	0.030 *6*	18859+v	J4+34	17380+v	J4+32	
1504.3 *2*	<0.1	19819.2+x	J+36	18314.9+x	J+34	Eγ=1503.7 *7* (1995Ni03).
1505.8 *4*	<0.1	19629.1+y	J1+34	18123.3+y	J1+32	
1507.2 *8*	0.010 *6*	20204.0+u	J3+36	18696.8+u	J3+34	
1512.2 *7*	<0.02	19431.5+z	J2+34	17919.3+z	J2+32	
1525.2 *8*	0.020 *4*	20385+v	J4+34	18859+v	J4+34	

[†] From values received in e-mail reply from W.C. Ma on Oct 16, 2009. Values for SD-1 band were first reported in 1995Ni03, which are in agreement with those from 2009Ij01. Values from 1995Ni03 are listed under comments.

[‡] Values are relative to 100 for the population of normal-deformed g.s. band, and inferred by the evaluator from intensity profile figure 1 in 2009Ji01. For SD-1 band, values are also available from 1995Ni03 as an intensity plot. These values are listed under comments. The two sets of intensities are on a different scale, the values from 2009Ij01 are normalized to ≈0.7 for the most intense γ rays in the cascade, whereas in 1995Ni03, these are normalized to ≈1.

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

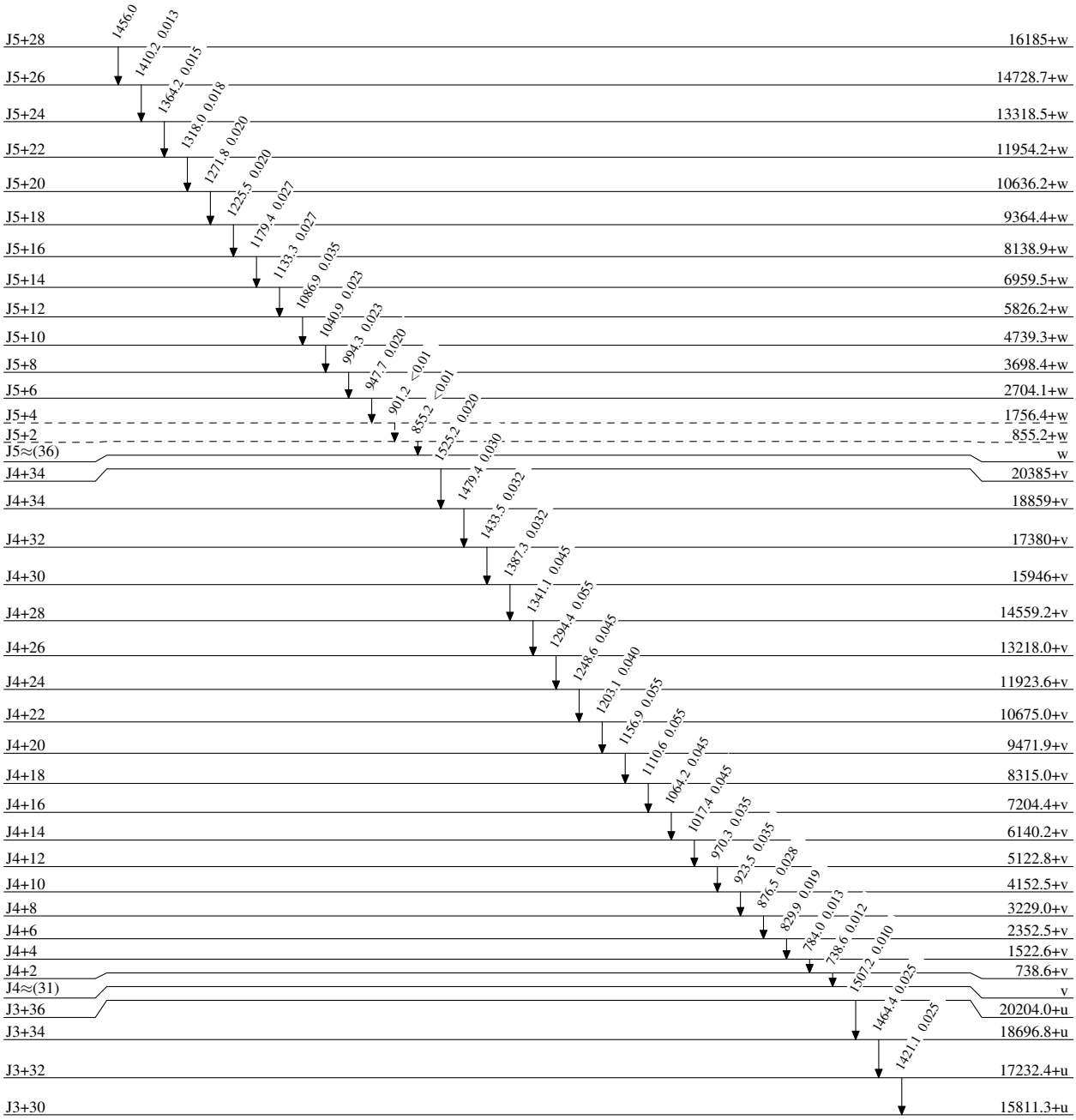
^{122}Sn(^{36}S,4nγ):SD 2009Ij01,1995Ni03,1996Fi08

Level Scheme

Intensities: Relative I_γ

Legend

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



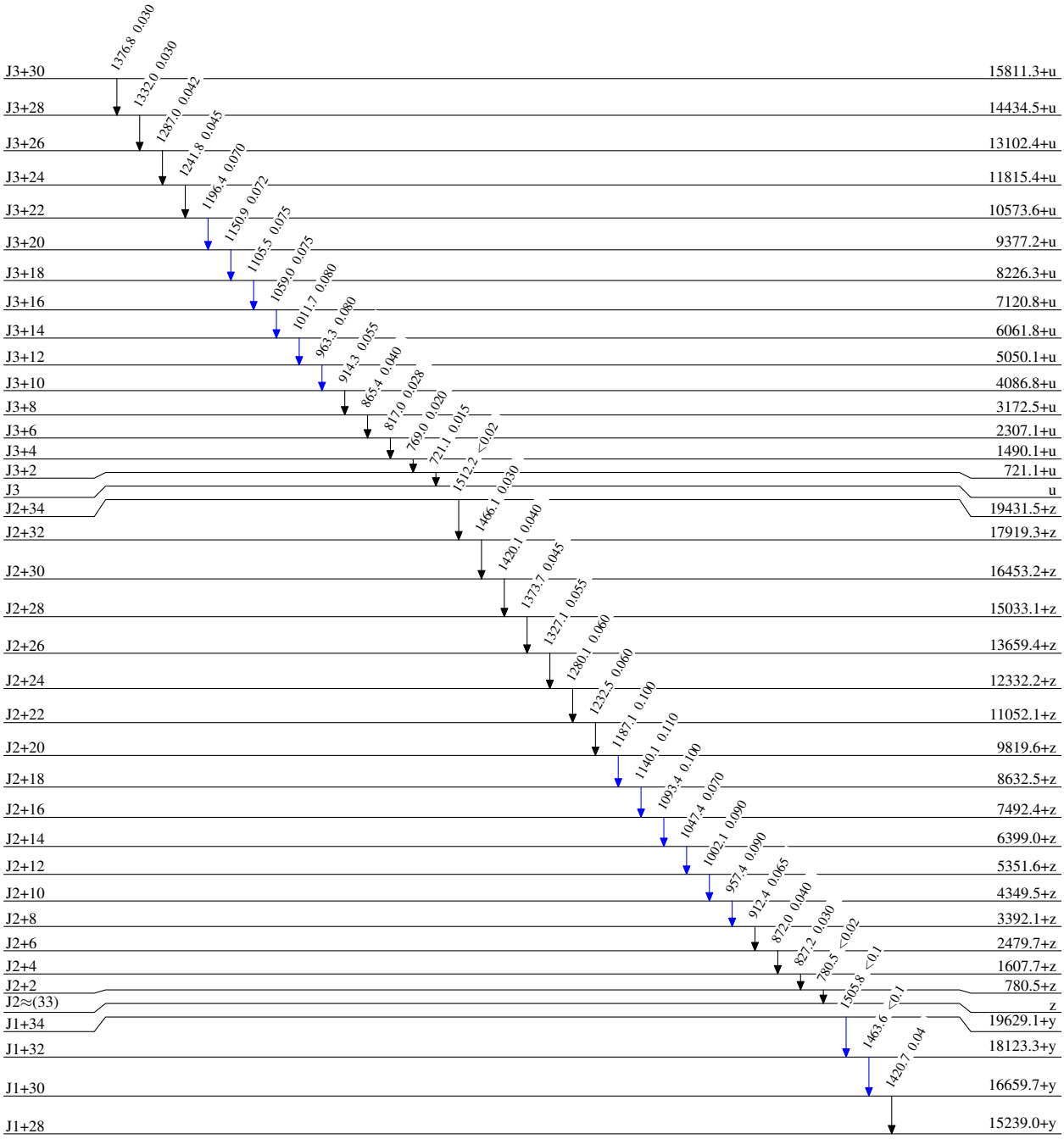
$^{154}_{66}Dy_{88}$

^{122}Sn(^{36}S,4nγ):SD 2009Ij01,1995Ni03,1996Fi08

Level Scheme (continued)

Intensities: Relative I_γ

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



$^{154}_{66}Dy_{88}$

^{122}Sn(^{36}S,4nγ):SD **2009Ij01,1995Ni03,1996Fi08**

Level Scheme (continued)

Intensities: Relative I_γ

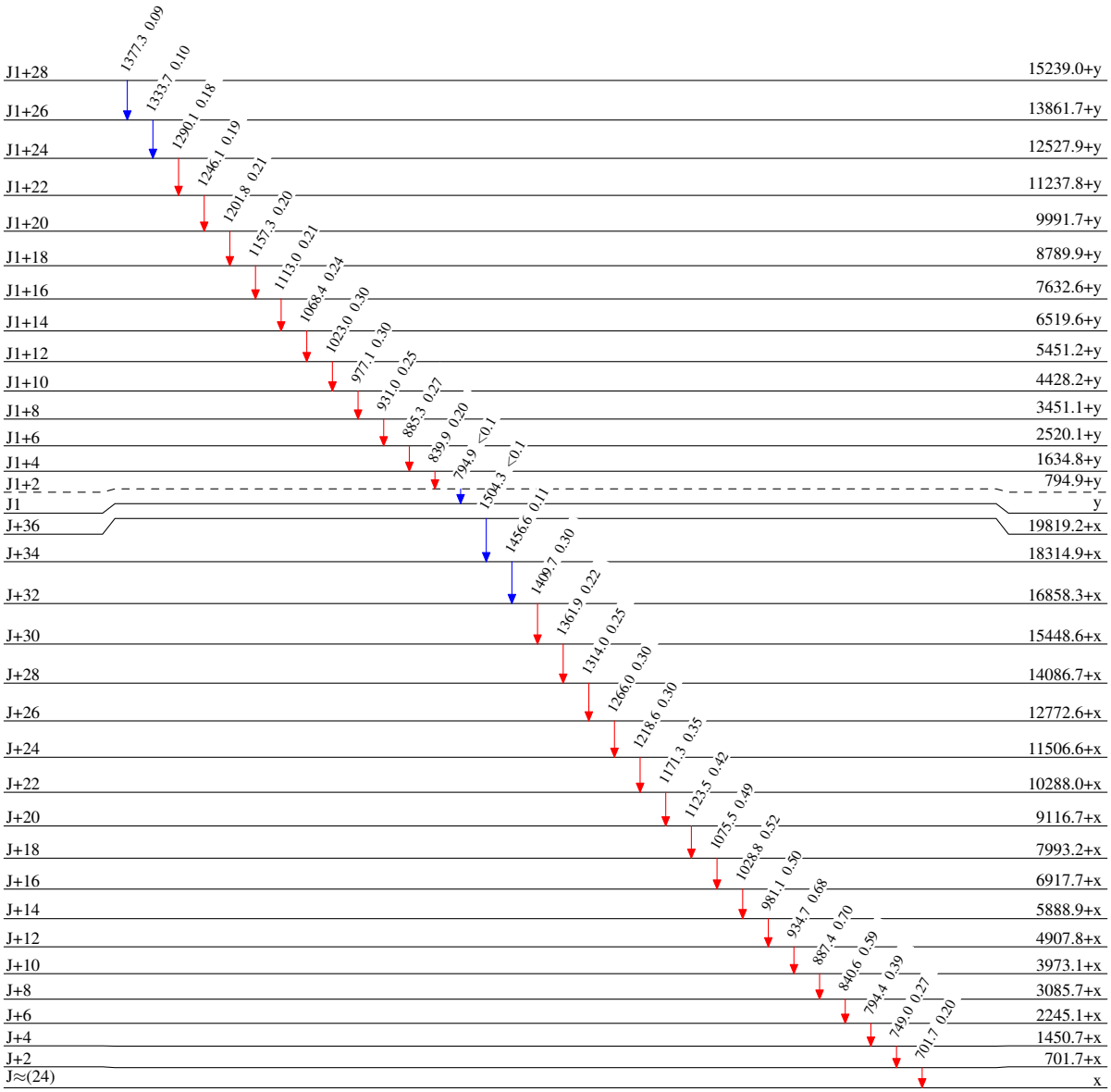
Legend

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

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

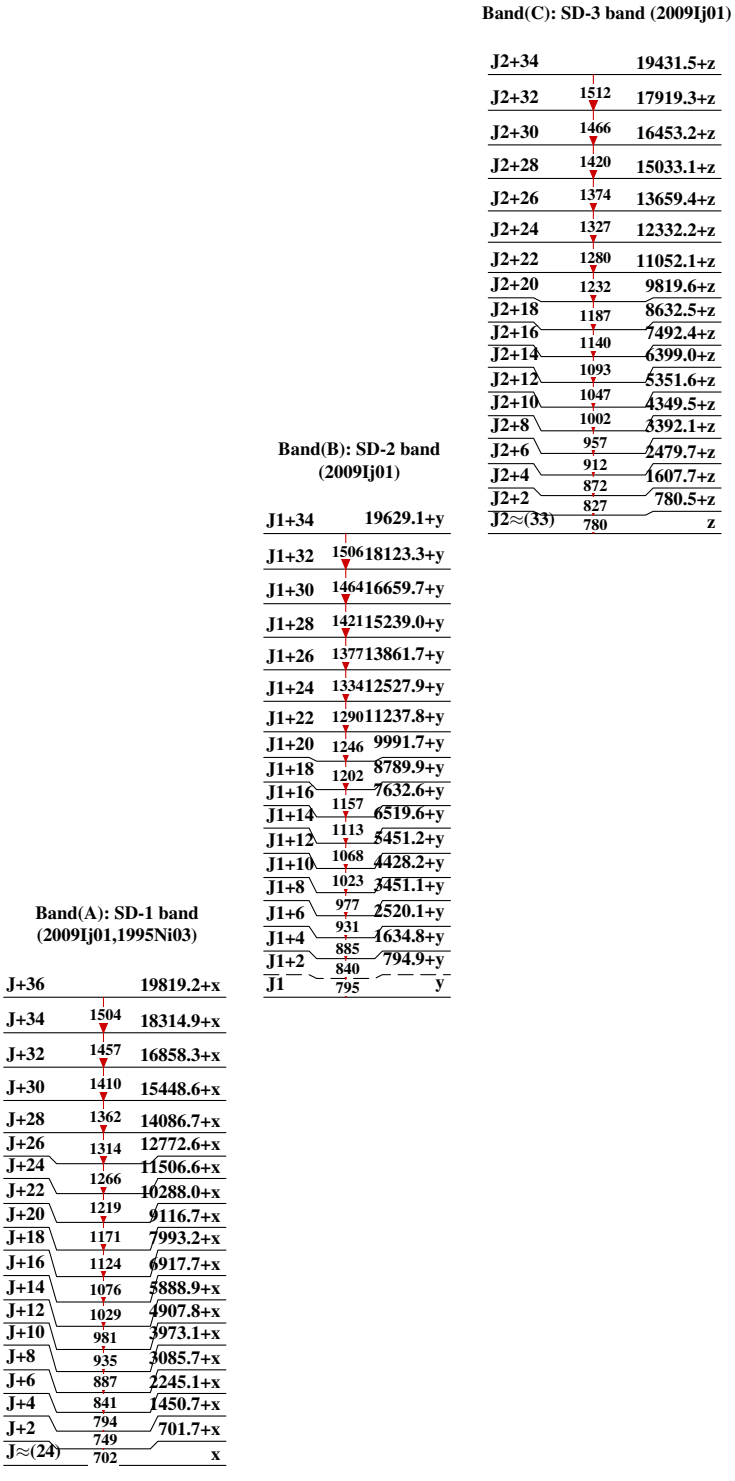
$I_\gamma > 10\% \times I_\gamma^{max}$

γ Decay (Uncertain)



$^{154}_{66}Dy_{88}$

$^{122}Sn(^{36}S,4n\gamma)$:SD 2009Ij01,1995Ni03,1996Fi08



$^{154}_{66}Dy_{88}$

^{122}Sn(^{36}S,4nγ):SD 2009Ij01,1995Ni03,1996Fi08 (continued)

Band(D): SD-4 band (2009Ij01)

J3+36		20204.0+u
	1507	
J3+34		18696.8+u
	1464	
J3+32		17232.4+u
	1421	
J3+30		15811.3+u
	1377	
J3+28		14434.5+u
	1332	
J3+26		13102.4+u
	1287	
J3+24		11815.4+u
	1242	
J3+22		10573.6+u
	1196	
J3+20		9377.2+u
	1151	
J3+18		8226.3+u
	1106	
J3+16		7120.8+u
	1059	
J3+14		6061.8+u
	1012	
J3+12		5050.1+u
	963	
J3+10		4086.8+u
	914	
J3+8		3172.5+u
	865	
J3+6		2307.1+u
	817	
J3+4		1490.1+u
	769	
J3+2		721.1+u
	721	
J3		u

Band(E): SD-5 band (2009Ij01), α=1

J4+34		20385+v
	1525	
J4+34		18859+v
	1479	
J4+32		17380+v
	1434	
J4+30		15946+v
	1387	
J4+28		14559.2+v
	1341	
J4+26		13218.0+v
	1294	
J4+24		11923.6+v
	1249	
J4+22		10675.0+v
	1203	
J4+20		9471.9+v
	1157	
J4+18		8315.0+v
	1111	
J4+16		7204.4+v
	1064	
J4+14		6140.2+v
	1017	
J4+12		5122.8+v
	970	
J4+10		4152.5+v
	924	
J4+8		3229.0+v
	876	
J4+6		2352.5+v
	830	
J4+4		1522.6+v
	784	
J4+2		738.6+v
	739	
J4≈(31)		v

Band(e): SD-6 band (2009Ij01), α=0 Proposed configuration: $(\pi 6)^4(\nu 7)^2\otimes(\nu 5/2[402])\otimes(\nu 3/2[761])$

J5+28		16185+w
	1456	
J5+26		14728.7+w
	1410	
J5+24		13318.5+w
	1364	
J5+22		11954.2+w
	1318	
J5+20		10636.2+w
	1272	
J5+18		9364.4+w
	1226	
J5+16		8138.9+w
	1179	
J5+14		6959.5+w
	1133	
J5+12		5826.2+w
	1087	
J5+10		4739.3+w
	1041	
J5+8		3698.4+w
	994	
J5+6		2704.1+w
	948	
J5+4		1756.4+w
	901	
J5+2		855.2+w
	855	
J5≈(36)		w