

¹⁴⁸Gd ⁶⁴

Δ : -76280 3 S_n : 8983.9 14 S_p : 6014 3
 Q_α : 3271.21 3

Nuclear Bands

- A SD-1 band
(96De04,95DeZZ)(93Ha19,88De10)
- B SD-2 band (96De04,95DeZZ)(93Ha19)
- C SD-3 band (95DeZZ,96De04)
- D SD-4 band (95DeZZ,96De04)
- E SD-5 band (95DeZZ,96De04)
- F SD-6 band (95DeZZ,96De04,97Ha19)

Levels and γ -ray branchings:

0, 0⁺, 74.6 30 y, % α =100

784.430 16, 2⁺ γ_0 784.430 16 (†_Y100) E2

1273.479 20, 3⁻ γ_{784} 489.049 12 (†_Y100)
E1

1416.377 23, 4⁺ γ_{1273} 142.878 14
(†_Y2.90 13) E1 γ_{784} 631.947 17
(†_Y100.0 19) E2

1811.0, 6⁺ γ_{1416} 394.6 (†_Y100) E2

1834.58 5, + γ_{784} 1050.15 4 (†_Y100)
E2,M1

1863.42 5, 2⁺ γ_{1273} 589.9 7 (†_Y5.2 3)
 γ_{784} 1079.025 25 (†_Y100.0 19)
E2+M1: $\delta=4.6^{+35}_{-14}$ γ_0 1863.391 38
(†_Y49.3 10)

1912.95 10, 4⁻ γ_{1273} 639.47 7 (†_Y100)
M1

2082.04 15, 5⁻ γ_{1913} 169.2 γ_{1811} 270.9
(†_Y38) E1 γ_{1416} 665.6 (†_Y<39)
 γ_{1273} 808.56 7 (†_Y100) E2

2188.65 20, 2⁺ γ_{1273} 915.30 12 (†_Y14)
 γ_{784} 1404.224 35 (†_Y100) E2,M1
 γ_0 2188.65 7 (†_Y80)

2233.59 6, 3⁻ γ_{1273} 960.09 7 (†_Y<100)
E2,M1 γ_{784} 1449.16 4 (†_Y85)

2310.88 7, 2⁺ γ_{784} 1526.45 7 (†_Y55)
 γ_0 2311.03 7 (†_Y100)

2424.09 15, + γ_{1416} 1007.72 9 (†_Y<100)
 γ_{784} 1639.66 22 (†_Y65) M1,E2

2503.86 15, - γ_{1273} 1230.18 5 (†_Y56)
E2,M1 γ_{784} 1719.63 20 (†_Y100)

2506.4 5, 3⁻ γ_{1416} 1089.411 28 (†_Y100)
E1 γ_{784} 1722.47 28 (†_Y15.3)

2522.0 3, 4⁺ γ_{1416} 1105.65 11 (†_Y100)
M1,E2 γ_{1273} 1248.2 8 (†_Y33)
 γ_{784} 1737.9 6 (†_Y27)

2563.8 3, 7⁻ γ_{2082} 481.65 10 (†_Y100) E2
 γ_{1811} 752.8 2 (†_Y23.3) E1

2615.0 8, 2⁺ γ_{1273} 1342.2 6 (†_Y9.2)
 γ_{784} 1830.14 4 (†_Y100) γ_0 2614.3 6
(†_Y38)

2632.8 2, 5⁻ γ_{784} 1848.36 8 (†_Y100)

2693.3 2, 8⁺ γ_{2564} 129.5 2 (†_Y2.7 4)
 γ_{1811} 882.3 E2

2694.6, 9⁻, 16.5 3 ns, $\mu=-0.162$ 18,
Q=1.01 5 γ_{2564} 130.8 E2 γ_{1811} 883.6
E3

2700.3 2, (2⁺) γ_{1273} 1426.49 8 (†_Y44)
 γ_{784} 1915.54 19 (†_Y63) γ_0 2700.57 20
(†_Y100)

2763 3, 4⁺
2872.9 4 γ_{1913} 960.09 7 (†_Y<100)
 γ_{1273} 1599.39 6 (†_Y100) γ_{784} 2089 1
(†_Y41)

2886.3 2 γ_{2504} 382.0 8 (†_Y24)
 γ_{1416} 1470.1 8 (†_Y20) γ_{784} 2101.87 10
(†_Y100)

2915.3 3 γ_{1913} 1002.48 9 (†_Y28)
 γ_{1273} 1641.98 21 (†_Y37)
 γ_{784} 2131.14 11 (†_Y100)

2936.3, 7⁻ γ_{1811} 1125.3 (†_Y100)

3029.3, 8⁻ γ_{2695} 334.7 (†_Y100) M1
 γ_{2564} 465.6 (†_Y58) M1

3065 γ_{1835} 1230

3076.1 4 γ_{1273} 1802.62 24 (†_Y100)

3089.5 4 γ_{2082} 1007.72 9 (†_Y<100)
(E2,M1) γ_{1273} 1816.06 9 (†_Y68)
 γ_0 3090.5 15 (†_Y25)

3130.9 2 γ_{784} 2345.1 8 (†_Y63)
 γ_0 3130.89 16 (†_Y100)

3152.1, 8⁻ γ_{3029} 122.9 D+Q γ_{2695} 457.6
 γ_{2564} 588.3

3295.0 2 γ_{784} 2510.56 15 (†_Y100)
 γ_0 3295.5 10 (†_Y33)

3310.0 (?), 8⁻ γ_{2936} 373.7 (†_Y100)

3366.8, 9⁻ γ_{3310} 57 γ_{3152} 214.7
 γ_{3029} 337.2 γ_{2936} 430.5 (†_Y100)
 γ_{2693} 673.8 (†_Y78) γ_{2564} 803.2

3574.9 4 γ_{1273} 2301.44 21 (†_Y100)
 γ_0 3574.6 10 (†_Y90)

3701.3, 11⁻ γ_{2695} 1006.7 (†_Y100) E2

3757.9, 10⁺ γ_{2695} 1063.3 (†_Y100)

3822, 10⁺ γ_{3758} 63 γ_{2693} 1128
 γ_{2633} 1129

3917.4, 10⁻ γ_{3367} 550.3 γ_{3152} 765.3
 γ_{3029} 888.3

3980.1, 12⁺ γ_{3758} 221.6 γ_{3701} 278.8 E1
 γ_{2695} 1285.4

4050.8 15 γ_{1416} 2634.6 10 (†_Y39)
 γ_{1273} 2777.5 10 (†_Y19) γ_{784} 3266.4 10
(†_Y100)

4068.7 15 γ_{1913} 2155.33 25 (†_Y100)
 γ_{1273} 2794.6 10 (†_Y51) γ_0 4066.8 10
(†_Y43)

4121.2, 11⁻ γ_{3701} 420.1 γ_{3367} 754.2

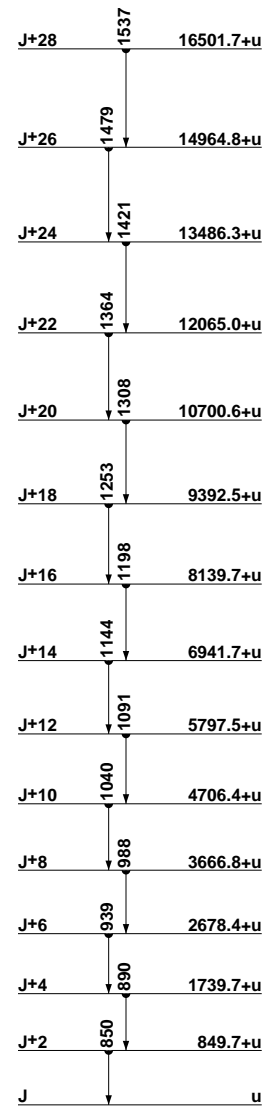
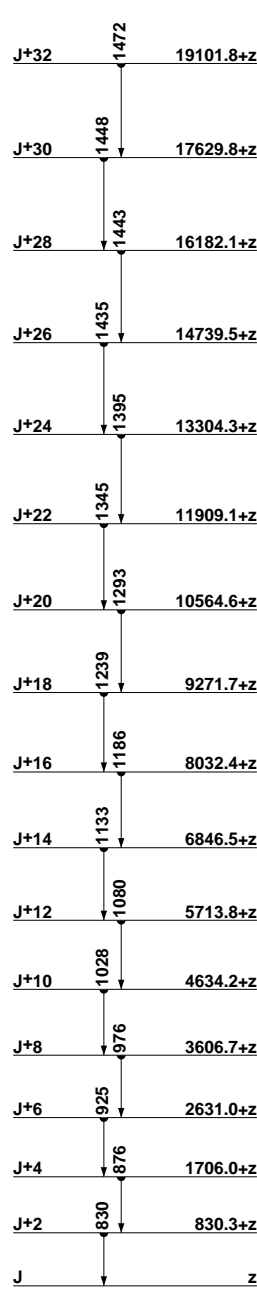
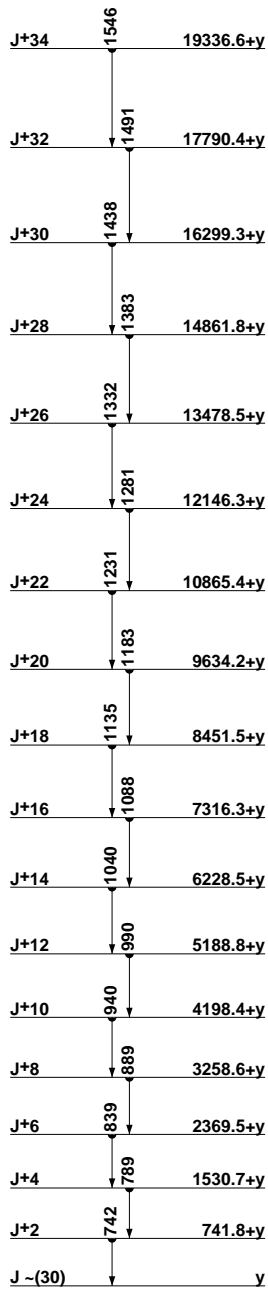
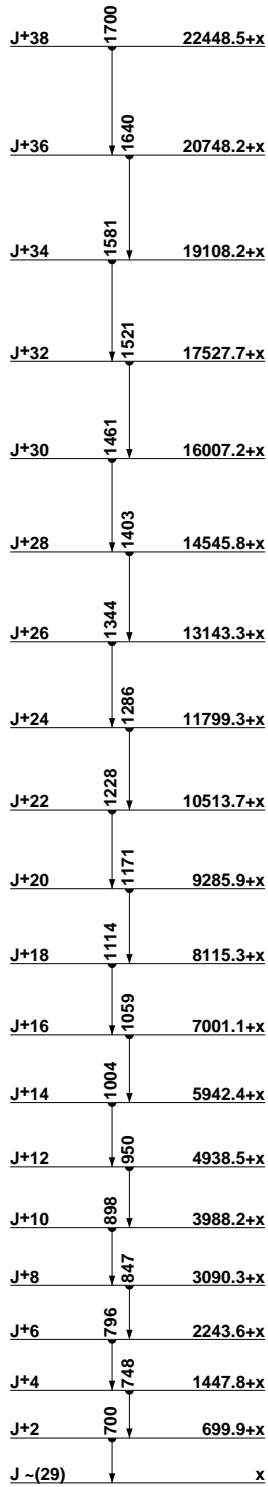
4429.4, 12⁻ γ_{4121} 308.2 γ_{3980} 449.1
 γ_{3917} 511 γ_{3701} 728.3

4499.8, 12 ⁺	γ_{3980}	519.7	(† γ_{100})	7273, 20 ⁺	γ_{7051}	223	γ_{6574}	699	γ_{10317}	840				
	γ_{3822}	678	γ_{3758}	7333	γ_{6574}	759			11183, 29	γ_{10060}	1123			
	γ_{3701}	799		7530, 21 ⁺	γ_{7333}	197	γ_{7273}	257	γ_{11183}	271	γ_{11157}	298		
4542.3 4	γ_{1416}	3125.44	29 († γ_{47})		γ_{7051}	479			11478	γ_{10317}	1160			
	γ_{1273}	3269.22	30 († γ_{100})	7790, 22 ⁺	γ_{7530}	260	γ_{7110}	680	11546, 29 ⁻	γ_{10694}	852	γ_{10317}	1228	
4550.6, 13 ⁻	γ_{4429}	121.2	γ_{4121}	8003, 22 ⁻	γ_{7155}	849	γ_{6834}	1170	11585, 30	γ_{11455}	130			
	γ_{3980}	570		8241, 22 ⁻	γ_{6834}	1408			11725, 30	γ_{11183}	542	γ_{10867}	858	
4905.5, 14 ⁻	γ_{4551}	354.9		8304, 23 ⁻	γ_{7155}	1149				γ_{10757}	967			
5025.1, 14 ⁺	γ_{4551}	475	γ_{4500}	8308, 23 ⁺	γ_{7790}	518			12011	γ_{11455}	556			
	γ_{3980}	1045.1		8363, 23 ⁻	γ_{7790}	574	γ_{7155}	1208	12061, 30 ⁻	γ_{11183}	878			
5116.9, 15 ⁻	γ_{4906}	211.4	(† γ_{100})	8453, 23 ⁻	γ_{8304}	151	γ_{8241}	213	γ_{12061}	74	γ_{11725}	411		
	γ_{4551}	566.3	(† γ_{100})		γ_{7790}	664			γ_{11585}	554	γ_{11546}	593	γ_{11478}	661
5167.4, 14 ⁺	γ_{3980}	1187.3	(† γ_{100})	8608, 23	γ_{7790}	818			12283, 30 ⁻	γ_{11455}	880	γ_{11157}	1126	
5354.7, 16 ⁺	γ_{5117}	237.9	(† γ_{14})	8637, 24 ⁻	γ_{8453}	184	γ_{8308}	330	12380, 31	γ_{11455}	925			
	γ_{5025}	329.6	(† γ_{100})	8831, 24	γ_{8608}	223	γ_{8453}	377	12527, 32	γ_{12283}	244	γ_{12139}	391	
5437.7, 16 ⁻	γ_{5117}	320.8	γ_{4906}		γ_{8308}	523				γ_{11585}	943			
	γ_{5167}	411		8986, 25 ⁻	γ_{8831}	155	γ_{8637}	348	12681, 31	γ_{11585}	1096			
5578	γ_{5167}	411			γ_{8304}	1742			13037, 33	γ_{12681}	361	γ_{12527}	510	
5689, 17	γ_{5355}	334		9241, 25 ⁻	γ_{8637}	604				γ_{12380}	657			
5800	γ_{5578}	222		9258	γ_{8637}	620	γ_{8363}	895	13123, 33 ⁻	γ_{12139}	987			
5831.8, 18 ⁺	γ_{5689}	142	γ_{5355}	9652, 26 ⁻	γ_{8986}	666			13146, 32	γ_{12681}	462	γ_{12380}	766	
5882, 17	γ_{5438}	444		9755, 26 ⁻	γ_{9241}	514	γ_{8986}	771		γ_{12139}	1009			
5933, 17	γ_{5800}	133	γ_{5438}	9933, 26	γ_{8831}	1102			13242, 32	γ_{12681}	561			
	γ_{5117}	816		9956	γ_{9241}	714			13352, 34	γ_{12527}	825			
6268, 18	γ_{5832}	436		10045, 25 ⁻	γ_{9258}	788	γ_{8363}	1682	13734, 34	γ_{181}	γ_{13242}	492	γ_{13146}	588
6381, 18	γ_{5933}	448	γ_{5882}		γ_{8304}	1742				γ_{13037}	697			
6545, 18 ⁻	γ_{5933}	612	γ_{5689}	10060, 27	γ_{9755}	305			13868, 35, \approx 2 ns	γ_{13734}	134			
6574, 19 ⁺	γ_{6381}	193	γ_{6268}	10317, 27 ⁻	γ_{9755}	560	γ_{9652}	665		γ_{12527}	1340			
6640, 19 ⁻	γ_{5832}	808			γ_{10045}	272	γ_{9956}	361	13886	γ_{13037}	849			
6834, 20 ⁻ , \approx 2 ns	γ_{6640}	194	γ_{6574}	10472, 27 ⁻	γ_{9755}	717			14009, 34	γ_{13037}	972			
	γ_{6545}	289	γ_{5832}	10694, 27 ⁻	γ_{9652}	1042			14144, 35	γ_{13037}	1107			
7051, 19 ⁺	γ_{6381}	670	γ_{5832}	10757, 28	γ_{10060}	697			14827, 37	γ_{13868}	959			
7110, 20 ⁺	γ_{5832}	1278		10867, 28	γ_{10060}	807			14923, 36	γ_{14144}	779	γ_{13886}	1036	
7155, 21 ⁻	γ_{6834}	321	γ_{6640}	11157, 28	γ_{10694}	464	γ_{10472}	684		γ_{13868}	1056			
									15122, 38	γ_{14827}	295			

- 15164, 38 γ_{14827} **337**
 15726 γ_{14923} **803**
 16076 γ_{15726} **350**
 16111, 38 γ_{14923} **1188**
 16203, 40 γ_{15164} **1039**
 16256, 40 γ_{15164} **1092**
 16406, 40 γ_{16111} **295**
 16472, 39 γ_{15164} **1308**
 17240 γ_{16406} **834**
 17318 γ_{16472} **846**
 17370, 42 γ_{16406} **964**
 18481, 44 γ_{17370} **1111**
 19148 γ_{18481} **667**
- A x, J=(29)
 A **699.9+x**, J+2 γ_x **699.9** 1 ($\dagger_{\gamma} 0.54$ 15)
 $I^{(2)}=83.3, \bar{h}\omega=0.362$
 A **1447.8+x**, J+4 γ_{700+x} **747.9** 1 ($\dagger_{\gamma} 0.87$ 9)
 $I^{(2)}=83.5, \bar{h}\omega=0.386$
 A **2243.6+x**, J+6 γ_{1448+x} **795.8** 1 ($\dagger_{\gamma} 0.99$ 8)
 $I^{(2)}=78.6, \bar{h}\omega=0.411$
 A **3090.3+x**, J+8 γ_{2244+x} **846.7** 1 ($\dagger_{\gamma} 0.97$ 8)
 $I^{(2)}=78.1, \bar{h}\omega=0.436$
 A **3988.2+x**, J+10 γ_{3090+x} **897.9** 1
 $(\dagger_{\gamma} 1.00$ 8) $I^{(2)}=76.3, \bar{h}\omega=0.462$
 A **4938.5+x**, J+12 γ_{3988+x} **950.3** 1
 $(\dagger_{\gamma} 0.97$ 8) $I^{(2)}=74.6, \bar{h}\omega=0.489$
 A **5942.4+x**, J+14 γ_{4939+x} **1003.9** 1
 $(\dagger_{\gamma} 1.00$ 10) $I^{(2)}=73.0, \bar{h}\omega=0.516$
 A **7001.1+x**, J+16 γ_{5942+x} **1058.7** 1
 $(\dagger_{\gamma} 0.98$ 9) $I^{(2)}=72.1, \bar{h}\omega=0.543$
 A **8115.3+x**, J+18 γ_{7001+x} **1114.2** 1
 $(\dagger_{\gamma} 0.99$ 10) $I^{(2)}=70.9, \bar{h}\omega=0.571$
 A **9285.9+x**, J+20 γ_{8115+x} **1170.6** 1
 $(\dagger_{\gamma} 1.00$ 15) $I^{(2)}=69.9, \bar{h}\omega=0.600$
 A **10513.7+x**, J+22 γ_{9286+x} **1227.8** 1
- ($\dagger_{\gamma} 0.84$ 7) $I^{(2)}=69.2, \bar{h}\omega=0.628$
 A **11799.3+x**, J+24 $\gamma_{10514+x}$ **1285.6** 1
 $(\dagger_{\gamma} 0.71$ 8) $I^{(2)}=68.5, \bar{h}\omega=0.657$
 A **13143.3+x**, J+26 $\gamma_{11799+x}$ **1344.0** 2
 $(\dagger_{\gamma} 0.66$ 7) $I^{(2)}=68.4, \bar{h}\omega=0.687$
 A **14545.8+x**, J+28 $\gamma_{13143+x}$ **1402.5** 2
 $(\dagger_{\gamma} 0.55$ 6) $I^{(2)}=67.9, \bar{h}\omega=0.716$
 A **16007.2+x**, J+30 $\gamma_{14546+x}$ **1461.4** 2
 $(\dagger_{\gamma} 0.48$ 7) $I^{(2)}=67.7, \bar{h}\omega=0.745$
 A **17527.7+x**, J+32 $\gamma_{16007+x}$ **1520.5** 3
 $(\dagger_{\gamma} 0.34$ 5) $I^{(2)}=66.7, \bar{h}\omega=0.775$
 A **19108.2+x**, J+34 $\gamma_{17528+x}$ **1580.5** 6
 $(\dagger_{\gamma} 0.19$ 3) $I^{(2)}=67.2, \bar{h}\omega=0.805$
 A **20748.2+x**, J+36 $\gamma_{19108+x}$ **1640.0** 10
 $(\dagger_{\gamma} 0.15$ 5) $I^{(2)}=66.3, \bar{h}\omega=0.835$
 A **22448.5+x**, J+38 $\gamma_{20748+x}$ **1700.3** 6
 $(\dagger_{\gamma} 0.07$ 3)
- B y, J=(30)
 B **741.8+y**, J+2 γ_y **741.8** 3 $I^{(2)}=84.9,$
 $\bar{h}\omega=0.383$
 B **1530.7+y**, J+4 γ_{742+y} **788.9** 2 ($\dagger_{\gamma} 0.46$ 10)
 $I^{(2)}=80.2, \bar{h}\omega=0.407$
 B **2369.5+y**, J+6 γ_{1531+y} **838.8** 2 ($\dagger_{\gamma} 0.88$ 9)
 $I^{(2)}=79.5, \bar{h}\omega=0.432$
 B **3258.6+y**, J+8 γ_{2370+y} **889.1** 2 ($\dagger_{\gamma} 0.89$ 9)
 $I^{(2)}=78.9, \bar{h}\omega=0.457$
 B **4198.4+y**, J+10 γ_{3259+y} **939.8** 2
 $(\dagger_{\gamma} 0.93$ 15) $I^{(2)}=79.1, \bar{h}\omega=0.483$
 B **5188.8+y**, J+12 γ_{4198+y} **990.4** 3
 $(\dagger_{\gamma} 1.00$ 11) $I^{(2)}=81.1, \bar{h}\omega=0.508$
 B **6228.5+y**, J+14 γ_{5189+y} **1039.7** 2
 $(\dagger_{\gamma} 0.95$ 20) $I^{(2)}=83.2, \bar{h}\omega=0.532$
 B **7316.3+y**, J+16 γ_{6229+y} **1087.8** 2
 $(\dagger_{\gamma} 1.03$ 15) $I^{(2)}=84.4, \bar{h}\omega=0.556$
- B **8451.5+y**, J+18 γ_{7316+y} **1135.2** 2
 $(\dagger_{\gamma} 0.94$ 10) $I^{(2)}=84.2, \bar{h}\omega=0.579$
 B **9634.2+y**, J+20 γ_{8452+y} **1182.7** 2
 $(\dagger_{\gamma} 0.82$ 8) $I^{(2)}=82.5, \bar{h}\omega=0.603$
 B **10865.4+y**, J+22 γ_{9634+y} **1231.2** 2
 $(\dagger_{\gamma} 0.79$ 8) $I^{(2)}=80.5, \bar{h}\omega=0.628$
 B **12146.3+y**, J+24 $\gamma_{10865+y}$ **1280.9** 2
 $(\dagger_{\gamma} 0.77$ 8) $I^{(2)}=78.0, \bar{h}\omega=0.653$
 B **13478.5+y**, J+26 $\gamma_{12146+y}$ **1332.2** 2
 $(\dagger_{\gamma} 0.62$ 7) $I^{(2)}=78.3, \bar{h}\omega=0.679$
 B **14861.8+y**, J+28 $\gamma_{13479+y}$ **1383.3** 3
 $(\dagger_{\gamma} 0.56$ 6) $I^{(2)}=73.8, \bar{h}\omega=0.705$
 B **16299.3+y**, J+30 $\gamma_{14862+y}$ **1437.5** 5
 $(\dagger_{\gamma} 0.44$ 5) $I^{(2)}=74.6, \bar{h}\omega=0.732$
 B **17790.4+y**, J+32 $\gamma_{16299+y}$ **1491.1** 8
 $(\dagger_{\gamma} 0.27$ 4) $I^{(2)}=72.6, \bar{h}\omega=0.759$
 B **19336.6+y**, J+34 $\gamma_{17790+y}$ **1546.2** 10
 $(\dagger_{\gamma} 0.23$ 4)
- C z, J
 C **830.3+z**, J+2 γ_z **830.3** 6 ($\dagger_{\gamma} 0.23$ 5)
 $I^{(2)}=88.1, \bar{h}\omega=0.426$
 C **1706.0+z**, J+4 γ_{830+z} **875.7** 3 ($\dagger_{\gamma} 0.42$ 6)
 $I^{(2)}=81.1, \bar{h}\omega=0.450$
 C **2631.0+z**, J+6 γ_{1706+z} **925.0** 2 ($\dagger_{\gamma} 0.43$ 7)
 $I^{(2)}=78.9, \bar{h}\omega=0.475$
 C **3606.7+z**, J+8 γ_{2631+z} **975.7** 3 ($\dagger_{\gamma} 0.62$ 7)
 $I^{(2)}=77.2, \bar{h}\omega=0.501$
 C **4634.2+z**, J+10 γ_{3607+z} **1027.5** 2
 $(\dagger_{\gamma} 0.63$ 8) $I^{(2)}=76.8, \bar{h}\omega=0.527$
 C **5713.8+z**, J+12 γ_{4634+z} **1079.6** 3
 $(\dagger_{\gamma} 0.95$ 11) $I^{(2)}=75.3, \bar{h}\omega=0.553$
 C **6846.5+z**, J+14 γ_{5714+z} **1132.7** 2
 $(\dagger_{\gamma} 1.00$ 12) $I^{(2)}=75.2, \bar{h}\omega=0.580$
 C **8032.4+z**, J+16 γ_{6847+z} **1185.9** 3

- $(\dagger_{\gamma} 0.9330) I^{(2)}=74.9, \bar{h}\omega=0.606$
 C **9271.7+z**, J+18 γ_{8032+z} **1239.33**
 $(\dagger_{\gamma} 0.7215) I^{(2)}=74.6, \bar{h}\omega=0.633$
 C **10564.6+z**, J+20 γ_{9272+z} **1292.93**
 $(\dagger_{\gamma} 0.9520) I^{(2)}=77.5, \bar{h}\omega=0.659$
 C **11909.1+z**, J+22 $\gamma_{10565+z}$ **1344.53**
 $(\dagger_{\gamma} 0.7118) I^{(2)}=78.9, \bar{h}\omega=0.685$
 C **13304.3+z**, J+24 $\gamma_{11909+z}$ **1395.24**
 $(\dagger_{\gamma} 0.6415) I^{(2)}=100.0, \bar{h}\omega=0.708$
 C **14739.5+z**, J+26 $\gamma_{13304+z}$ **1435.25**
 $(\dagger_{\gamma} 0.468) I^{(2)}=540.5, \bar{h}\omega=0.719$
 C **16182.1+z**, J+28 $\gamma_{14740+z}$ **1442.610**
 $(\dagger_{\gamma} 0.4012) I^{(2)}=784.3, \bar{h}\omega=0.723$
 C **17629.8+z**, J+30 $\gamma_{16182+z}$ **1447.76**
 $(\dagger_{\gamma} 0.189) I^{(2)}=164.6, \bar{h}\omega=0.730$
 C **19101.8+z**, J+32 $\gamma_{17630+z}$ **1472.010**
 $(\dagger_{\gamma} 0.228)$
 D u, J
 D **849.7+u**, J+2 γ_0 **849.73** $I^{(2)}=99.3,$
 $\bar{h}\omega=0.435$
 D **1739.7+u**, J+4 γ_{850+u} **890.02** $(\dagger_{\gamma} 0.6215)$
 $I^{(2)}=82.1, \bar{h}\omega=0.457$
 D **2678.4+u**, J+6 γ_{1740+u} **938.72**
 $(\dagger_{\gamma} 0.6012) I^{(2)}=80.5, \bar{h}\omega=0.482$
 D **3666.8+u**, J+8 γ_{2678+u} **988.43**
 $(\dagger_{\gamma} 0.6410) I^{(2)}=78.1, \bar{h}\omega=0.507$
 D **4706.4+u**, J+10 γ_{3667+u} **1039.63**
 $(\dagger_{\gamma} 0.6810) I^{(2)}=77.7, \bar{h}\omega=0.533$
 D **5797.5+u**, J+12 γ_{4706+u} **1091.13**
 $(\dagger_{\gamma} 0.9215) I^{(2)}=75.3, \bar{h}\omega=0.559$
 D **6941.7+u**, J+14 γ_{5798+u} **1144.23**
 $(\dagger_{\gamma} 1.0520) I^{(2)}=74.3, \bar{h}\omega=0.586$
 D **8139.7+u**, J+16 γ_{6942+u} **1198.03**
 $(\dagger_{\gamma} 1.0015) I^{(2)}=73.0, \bar{h}\omega=0.613$
- D **9392.5+u**, J+18 γ_{8140+u} **1252.83**
 $(\dagger_{\gamma} 1.0213) I^{(2)}=72.3, \bar{h}\omega=0.640$
 D **10700.6+u**, J+20 γ_{9393+u} **1308.13**
 $(\dagger_{\gamma} 0.8815) I^{(2)}=71.0, \bar{h}\omega=0.668$
 D **12065.0+u**, J+22 $\gamma_{10701+u}$ **1364.43**
 $(\dagger_{\gamma} 0.9018) I^{(2)}=70.3, \bar{h}\omega=0.696$
 D **13486.3+u**, J+24 $\gamma_{12065+u}$ **1421.34**
 $(\dagger_{\gamma} 0.8210) I^{(2)}=69.9, \bar{h}\omega=0.725$
 D **14964.8+u**, J+26 $\gamma_{13486+u}$ **1478.54**
 $(\dagger_{\gamma} 0.579) I^{(2)}=68.5, \bar{h}\omega=0.754$
 D **16501.7+u**, J+28 $\gamma_{14965+u}$ **1536.910**
 $(\dagger_{\gamma} 0.3010)$
 E v, J
 E **853.7+v**, J+2 γ_0 **853.73** $(\dagger_{\gamma} 0.456)$
 $I^{(2)}=86.6, \bar{h}\omega=0.438$
 E **1753.6+v**, J+4 γ_{854+v} **899.92** $(\dagger_{\gamma} 0.839)$
 $I^{(2)}=88.9, \bar{h}\omega=0.461$
 E **2698.5+v**, J+6 γ_{1754+v} **944.93**
 $(\dagger_{\gamma} 0.8510) I^{(2)}=86.0, \bar{h}\omega=0.484$
 E **3689.9+v**, J+8 γ_{2699+v} **991.42**
 $(\dagger_{\gamma} 0.8610) I^{(2)}=86.0, \bar{h}\omega=0.507$
 E **4727.8+v**, J+10 γ_{3690+v} **1037.92**
 $(\dagger_{\gamma} 0.8520) I^{(2)}=85.7, \bar{h}\omega=0.531$
 E **5812.4+v**, J+12 γ_{4728+v} **1084.62**
 $(\dagger_{\gamma} 1.0015) I^{(2)}=84.6, \bar{h}\omega=0.554$
 E **6944.3+v**, J+14 γ_{5812+v} **1131.92**
 $(\dagger_{\gamma} 1.0013) I^{(2)}=84.0, \bar{h}\omega=0.578$
 E **8123.8+v**, J+16 γ_{6944+v} **1179.52**
 $(\dagger_{\gamma} 0.9010) I^{(2)}=85.1, \bar{h}\omega=0.602$
 E **9350.3+v**, J+18 γ_{8124+v} **1226.52**
 $(\dagger_{\gamma} 0.8010) I^{(2)}=84.6, \bar{h}\omega=0.625$
 E **10624.1+v**, J+20 γ_{9350+v} **1273.82**
 $(\dagger_{\gamma} 0.8010) I^{(2)}=82.8, \bar{h}\omega=0.649$
 E **11946.2+v**, J+22 $\gamma_{10624+v}$ **1322.12**
- $(\dagger_{\gamma} 0.528) I^{(2)}=84.2, \bar{h}\omega=0.673$
 E **13315.8+v**, J+24 $\gamma_{11946+v}$ **1369.62**
 $(\dagger_{\gamma} 0.5010) I^{(2)}=84.2, \bar{h}\omega=0.697$
 E **14732.9+v**, J+26 $\gamma_{13316+v}$ **1417.13**
 $(\dagger_{\gamma} 0.447) I^{(2)}=83.7, \bar{h}\omega=0.721$
 E **16197.8+v**, J+28 $\gamma_{14733+v}$ **1464.94**
 $(\dagger_{\gamma} 0.315) I^{(2)}=83.0, \bar{h}\omega=0.744$
 E **17710.9+v**, J+30 $\gamma_{16198+v}$ **1513.10**
 $(\dagger_{\gamma} 0.264) I^{(2)}=81.8, \bar{h}\omega=0.769$
 E **19272.9+v**, J+32 $\gamma_{17711+v}$ **1562.1**
 $(\dagger_{\gamma} 0.206)$
 F w, J
 F **802.2+w**, J+2 γ_0 **802.23** $I^{(2)}=84.7,$
 $\bar{h}\omega=0.413$
 F **1651.6+w**, J+4 γ_{802+w} **849.4422**
 $I^{(2)}=83.4, \bar{h}\omega=0.437$
 F **2549.0+w**, J+6 γ_{1652+w} **897.4016**
 $(\dagger_{\gamma} 0.9112) I^{(2)}=82.5, \bar{h}\omega=0.461$
 F **3494.9+w**, J+8 γ_{2549+w} **945.8615**
 $(\dagger_{\gamma} 1.0012) I^{(2)}=79.6, \bar{h}\omega=0.485$
 F **4491.0+w**, J+10 γ_{3495+w} **996.0819**
 $(\dagger_{\gamma} 1.0022) I^{(2)}=78.8, \bar{h}\omega=0.511$
 F **5537.8+w**, J+12 γ_{4491+w} **1046.8314**
 $(\dagger_{\gamma} 1.0010) I^{(2)}=76.1, \bar{h}\omega=0.537$
 F **6637.2+w**, J+14 γ_{5538+w} **1099.3916**
 $(\dagger_{\gamma} 0.9518) I^{(2)}=75.7, \bar{h}\omega=0.563$
 F **7789.4+w**, J+16 γ_{6637+w} **1152.2015**
 $(\dagger_{\gamma} 0.9710) I^{(2)}=73.3, \bar{h}\omega=0.590$
 F **8996.2+w**, J+18 γ_{7789+w} **1206.7624**
 $(\dagger_{\gamma} 1.0015) I^{(2)}=73.7, \bar{h}\omega=0.617$
 F **10257.2+w**, J+20 γ_{8996+w} **1261.0016**
 $(\dagger_{\gamma} 1.0019) I^{(2)}=72.0, \bar{h}\omega=0.644$
 F **11573.7+w**, J+22 $\gamma_{10257+w}$ **1316.5714**
 $(\dagger_{\gamma} 0.9610) I^{(2)}=72.0, \bar{h}\omega=0.672$

F 12945.8+w, J+24 $\gamma_{11574+w}$ 1372.10²²
 ($\dagger_{\gamma} 0.78 \ 9$) $I^{(2)}=70.9$, $\bar{h}\omega=0.700$
 F 14374.4+w, J+26 $\gamma_{12946+w}$ 1428.55²⁴
 ($\dagger_{\gamma} 0.77 \ 10$) $I^{(2)}=70.7$, $\bar{h}\omega=0.728$
 F 15859.5+w, J+28 $\gamma_{14374+w}$ 1485.15²⁶
 ($\dagger_{\gamma} 0.70 \ 15$) $I^{(2)}=69.9$, $\bar{h}\omega=0.757$
 F 17401.9+w, J+30 $\gamma_{15860+w}$ 1542.44
 ($\dagger_{\gamma} 0.63 \ 15$)



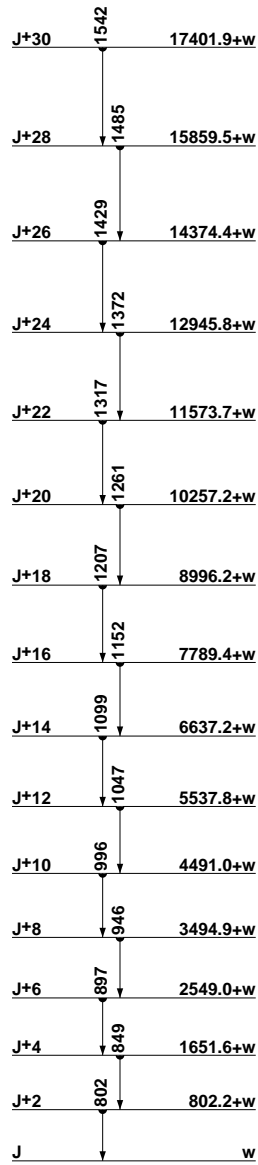
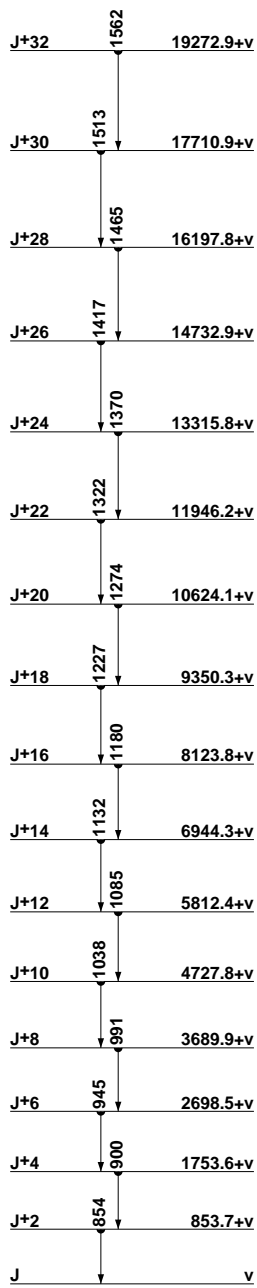
SD-1 band
(96De04,95DeZZ)
(93Ha19,88De10)

SD-2 band
(96De04,95DeZZ)
(93Ha19)

SD-3 band
(95DeZZ,96De04)

SD-4 band
(95DeZZ,96De04)

¹⁴⁸Gd
64



SD-5 band
(95DeZZ,96De04)

SD-6 band
(95DeZZ,96De04,97Ha19)