$^{196}_{82}$Pb

Δ: (–25420) **S_n:** (9700) **S_p:** (4440) **Q_{EC}:** (2050) **Q_α:** (4200)

Nuclear Bands

- *A* Δ=2 band
- *B* SD-1 band (95Va32,94Cl02,93Mo19,91Wa14,90Br10)
- *C* SD-2 band? (95Va32)
- *D* SD-3 band? (95Va32)

Levels and γ-ray branchings:

0, 0^+, 37 *3* m, %EC+%β^+≈100, %α≤3×10^{-5}

1049.20 *9*, 2^+, <100 ns γ_0***1049.21*** *9* ($\dagger_\gamma$100) E2

A **1142.86** *17*, 0^+ γ_0***1142.7*** *3* ($\dagger_e$2.0 *3*) E0

A **1449.87** *13*, 2^+ γ_{1143}***306.9*** *3* ($\dagger_\gamma$16 *5*) γ_{1049}***400.9*** *2* ($\dagger_\gamma$91 *5*) E0+M1+E2 γ_0***1449.7*** *3* ($\dagger_\gamma$100 *9*) E2

1697.8 *5*, 0^+ γ_0***1697.8*** *5* ($\dagger_e$0.2 *1*) E0

1738.27 *12*, 4^+, <1 μs γ_{1450}***288.7*** *2* ($\dagger_\gamma$1.3 *4*) γ_{1049}***689.00*** *9* ($\dagger_\gamma$100 *4*) E2

1797.51 *14*, 5^-, 133 *8* ns, μ=0.490 *15* γ_{1738}***59.23*** *9* ($\dagger_\gamma$100 *23*) E1 γ_{1049}***748.4*** *3* ($\dagger_\gamma$10 *1*) E3

1825.60 *16*, $(3,4)^+$ γ_{1450}***375.5*** *2* ($\dagger_\gamma$9 *2*) γ_{1049}***776.6*** *2* ($\dagger_\gamma$100 *7*) E2(+M1): δ=2.0

A **1861.7** *6*, (4^+) γ_{1450}***411.8*** *5* ($\dagger_\gamma$100)

1896.10 *17*, $(2)^+$ γ_{1143}***753.4*** *2* ($\dagger_\gamma$58 *25*) (E2) γ_{1049}***846.7*** *2* ($\dagger_\gamma$100 *8*) E2(+M1): δ=1.83 γ_0***1896.3*** *5* ($\dagger_\gamma$38 *17*)

1991.61 *22*, 3^- γ_{1049}***942.4*** *2* ($\dagger_\gamma$100) E1

2060.06 *23*, $(1,2)^+$ γ_{1143}***916.8*** *3* ($\dagger_\gamma$33 *25*) γ_{1049}***1011.1*** *3* ($\dagger_\gamma$100 *17*) γ_0***2060.9*** *7* ($\dagger_\gamma$17 *8*)

2124.41 *22*, (1,2,3) γ_{1450}***674.6*** *2* ($\dagger_\gamma$100 *20*) γ_{1049}***1075.0*** *4* ($\dagger_\gamma$70 *50*)

2169.44 *16*, 7^-, <5 ns γ_{1798}***371.93*** *8* ($\dagger_\gamma$100) E2

2203.27 *24*, (4^+) γ_{1450}***753.4*** *2* ($\dagger_\gamma$100) (E2)

2307.83 *18*, 9^-, 53 *3* ns γ_{2169}***138.41*** *7* ($\dagger_\gamma$100) E2

2333.9 *3*, (8^-) γ_{2169}***164.5*** *2* ($\dagger_\gamma$100)

2376.05 *20*, 6^+ γ_{1826}***550.4*** *3* ($\dagger_\gamma$12 *6*) γ_{1738}***637.8*** *2* ($\dagger_\gamma$100 *18*) E2

A **2423.9** *8*, (6^+) γ_{1862}***562.2*** *5* ($\dagger_\gamma$100)

2470.77 *23* γ_{1738}***732.5*** *2* ($\dagger_\gamma$100)

2590.96 *19*, 8^+ γ_{2308}***283.2*** *2* ($\dagger_\gamma$63 *8*) γ_{2169}***421.5*** *1* ($\dagger_\gamma$100 *13*) E1

A **2621.9** *9*, (8^+), 50 *15* ns γ_{2424}***198.0*** *5* ($\dagger_\gamma$100)

2645.12 *19*, 10^+, <2 ns γ_{2308}***337.29*** *7* ($\dagger_\gamma$100) E1

2692.8 *6*, 12^+, 271 *3* ns, μ=–1.920 *18*, Q=0.65 *5* γ_{2645}***47.7*** *5* ($\dagger_\gamma$100) (E2)

3041.4 *3*, 4^+ γ_{2376}***665.4*** *2* ($\dagger_\gamma$100) E2

3087.25 *25*, $(9,10)^+$ γ_{2591}***496.3*** *2* ($\dagger_\gamma$100) M1(+E2): δ=0.89

3190.5 *6*, 11^-, 72 *3* ns, μ=10.6 *9* γ_{2693}***497.7*** *2* ($\dagger_\gamma$100) (E1) γ_{2645}***548.4*** (?)

3394.12 *25*, $(9,10)^+$ γ_{3087}***306.9*** *3* ($\dagger_\gamma$75 *25*) (E2) γ_{2645}***749.0*** *2* ($\dagger_\gamma$<100) γ_{2591}***803.1*** *5* ($\dagger_\gamma$50 *25*)

3652.5 *6*, 14^+ γ_{2693}***959.69*** *9* ($\dagger_\gamma$100) E2

3737.9 *7*, $(12,13)^-$ γ_{3191}***547.4*** *4* ($\dagger_\gamma$100) (E2+M1)

4120.1 *6*, 15^- γ_{3653}***467.61*** *9* ($\dagger_\gamma$100) E1

4217.2 *6*, 16^+ γ_{3653}***564.7*** *1* ($\dagger_\gamma$7.2 *6*) E2

4332.1 *6*, 16^+ γ_{3653}***679.7*** *3* ($\dagger_\gamma$100) E2

4478.0 *6*, 15^-, 5.0 *5* ns γ_{4120}***357.9*** *1* ($\dagger_\gamma$100) M1+E2: δ=1.5 $^{+20}_{-5}$

4646.0 *7*, 16^- γ_{4120}***525.9*** *3* ($\dagger_\gamma$100) M1+E2: δ=–0.4 $^{+3}_{-40}$

4675.0 *7*, $(^-)$ γ_{4478}***197.0*** *4* ($\dagger_\gamma$100) (E2)

4722.3 *6*, 16^- γ_{4478}***244.31*** *10* ($\dagger_\gamma$100) M1+E2: δ=0.3 $^{+1}_{-5}$

4962.4 *6*, (18^+) γ_{4332}***630.4*** *3* ($\dagger_\gamma$91 *9*) E2 γ_{4217}***745.2*** *2* ($\dagger_\gamma$100 *18*) E2

5491.5 *7*, (20^+) γ_{4962}***529.1*** *3* ($\dagger_\gamma$100) E2

5707.7, (19^-) γ_{4962}***745.2*** *2* (?) ($\dagger_\gamma$100) E1

B **x**, J≈(6)

B **171.4+x**, J+2 γ_x***171.4*** *2* ($\dagger_\gamma$0.20 *5*) *$I^{(1)}$=82.7, $I^{(2)}$=90.5, ħω=0.097*

B **387.0+x**, J+4 γ_{171+x}***215.6*** *2* ($\dagger_\gamma$0.60 *5*) (E2) *$I^{(1)}$=84.2, $I^{(2)}$=91.1, ħω=0.119*

B **646.5+x**, J+6 γ_{387+x}***259.5*** *2* ($\dagger_\gamma$0.90 *5*) (E2) *$I^{(1)}$=85.3, $I^{(2)}$=92.0, ħω=0.141*

B **949.5+x**, J+8 γ_{647+x}***303.0*** *2* ($\dagger_\gamma$0.95 *5*) (E2) *$I^{(1)}$=86.3, $I^{(2)}$=93.5, ħω=0.162*

B **1295.3+x**, J+10 γ_{950+x}***345.8*** *2* ($\dagger_\gamma$1.00 *5*) (E2) *$I^{(1)}$=87.3, $I^{(2)}$=95.7, ħω=0.183*

B **1682.9+x**, J+12 γ_{1295+x}***387.6*** *2* ($\dagger_\gamma$1.05 *5*) (E2) *$I^{(1)}$=88.2, $I^{(2)}$=97.8, ħω=0.204*

B **2111.4+x**, J+14 γ_{1683+x}***428.5*** *2* ($\dagger_\gamma$1.03 *5*) (E2) *$I^{(1)}$=89.1, $I^{(2)}$=97.8, ħω=0.224*

B **2580.8+x**, J+16, 0.23 *10* ps γ_{2111+x}***469.4*** *2* ($\dagger_\gamma$1.00 *5*) (E2) *$I^{(1)}$=90.0, $I^{(2)}$=102.3, ħω=0.244*

B **3089.3+x**, J+18, 0.12 $^{+3}_{-5}$ *ps* γ_{2581+x}***508.5*** *2* ($\dagger_\gamma$0.85 *5*) (E2) *$I^{(1)}$=91.0, $I^{(2)}$=104.2, ħω=0.264*

B **3636.2+x**, J+20, 0.08 $^{+5}_{-2}$ *ps* γ_{3089+x}***546.9*** *2* ($\dagger_\gamma$1.00 *5*) (E2) *$I^{(1)}$=91.9, $I^{(2)}$=107.2, ħω=0.283*

B **4220.4+x**, J+22 γ_{3636+x}***584.2*** *2* ($\dagger_\gamma$0.75 *5*) (E2) *$I^{(1)}$=93.0, $I^{(2)}$=109.9, ħω=0.301*

B **4841.0+x**, J+24 γ_{4220+x}***620.6*** *2* ($\dagger_\gamma$0.65 *5*) (E2) *$I^{(1)}$=94.1, $I^{(2)}$=116.6, ħω=0.319*

B **5495.9+x**, J+26 γ_{4841+x}***654.9*** *3* ($\dagger_\gamma$0.65 *5*) *$I^{(1)}$=95.3, $I^{(2)}$=118.0, ħω=0.336*

B **6184.7+x**, J+28 γ_{5496+x}***688.8*** *3* ($\dagger_\gamma$0.55 *5*) *$I^{(1)}$=96.5, $I^{(2)}$=127.8, ħω=0.352*

B **6904.8+x**, J+30 γ_{6185+x}***720.1*** *5* ($\dagger_\gamma$0.35 *5*) *$I^{(1)}$=97.8, $I^{(2)}$=125.0, ħω=0.368*

B **7656.9+x**, J+32 γ_{6905+x}***752.1*** *5* ($\dagger_\gamma$0.20 *5*)

C **y**, J≈(8)

C **204.5+y**, J+2 γ_y***204.5*** *$I^{(1)}$=88.4, $I^{(2)}$=92.2, ħω=0.113*

C **452.4+y**, J+4 γ_{205+y}***247.9*** *$I^{(1)}$=89.3, $I^{(2)}$=96.4, ħω=0.134*

C **741.8+y**, J+6 γ_{452+y}***289.4*** *$I^{(1)}$=90.5, $I^{(2)}$=99.3, ħω=0.155*

C **1071.5+y**, J+8 γ_{742+y}***329.7*** *$I^{(1)}$=91.5, $I^{(2)}$=100.5, ħω=0.175*

C **1441.0+y**, J+10 γ_{1072+y}***369.5*** *$I^{(1)}$=92.4, $I^{(2)}$=100.3, ħω=0.195*

C **1850.4+y**, J+12 γ_{1441+y}***409.4*** *$I^{(1)}$=93.3, $I^{(2)}$=104.2, ħω=0.214*

C **2298.2+y**, J+14 γ_{1850+y}***447.8*** *$I^{(1)}$=94.3, $I^{(2)}$=106.7, ħω=0.233*

C **2783.5+y**, J+16 γ_{2298+y}***485.3*** *$I^{(1)}$=95.2, $I^{(2)}$=107.2, ħω=0.252*

C **3306.1+y**, J+18 γ_{2784+y}***522.6*** *$I^{(1)}$=96.2, $I^{(2)}$=112.4, ħω=0.270*

C **3864.3+y**, J+20 γ_{3306+y}***558.2*** *$I^{(1)}$=97.2, $I^{(2)}$=111.4, ħω=0.288*

C **4458.4+y**, J+22 γ_{3864+y}***594.1*** *$I^{(1)}$=98.0, $I^{(2)}$=111.4, ħω=0.306*

C **5088.4+y**, J+24 γ_{4458+y}***630.0*** *$I^{(1)}$=98.8, $I^{(2)}$=113.6, ħω=0.324*

C **5753.6+y**, J+26 γ_{5088+y}***665.2***

D **z**, J≈(9)

D **226.7+z**, J+2 γ_z***226.7*** *$I^{(1)}$=89.0, $I^{(2)}$=97.6, ħω=0.124*

D **494.4+z**, J+4 γ_{227+z}***267.7*** *$I^{(1)}$=90.3, $I^{(2)}$=98.5, ħω=0.144*

D **802.7+z**, J+6 γ_{494+z}***308.3*** *$I^{(1)}$=91.4, $I^{(2)}$=99.8, ħω=0.164*

D **1151.1+z**, J+8 γ_{803+z}***348.4*** *$I^{(1)}$=92.3, $I^{(2)}$=100.5, ħω=0.184*

D **1539.3+z**, J+10 γ_{1151+z}***388.2*** *$I^{(1)}$=93.2, $I^{(2)}$=101.5, ħω=0.204*

D **1966.9+z**, J+12 γ_{1539+z}***427.6*** *$I^{(1)}$=94.0, $I^{(2)}$=103.6, ħω=0.223*

D **2433.1+z**, J+14 γ_{1967+z}***466.2*** *$I^{(1)}$=94.9, $I^{(2)}$=108.4, ħω=0.242*

D **2936.2+z**, J+16 γ_{2433+z}***503.1*** *$I^{(1)}$=95.8, $I^{(2)}$=107.8, ħω=0.261*

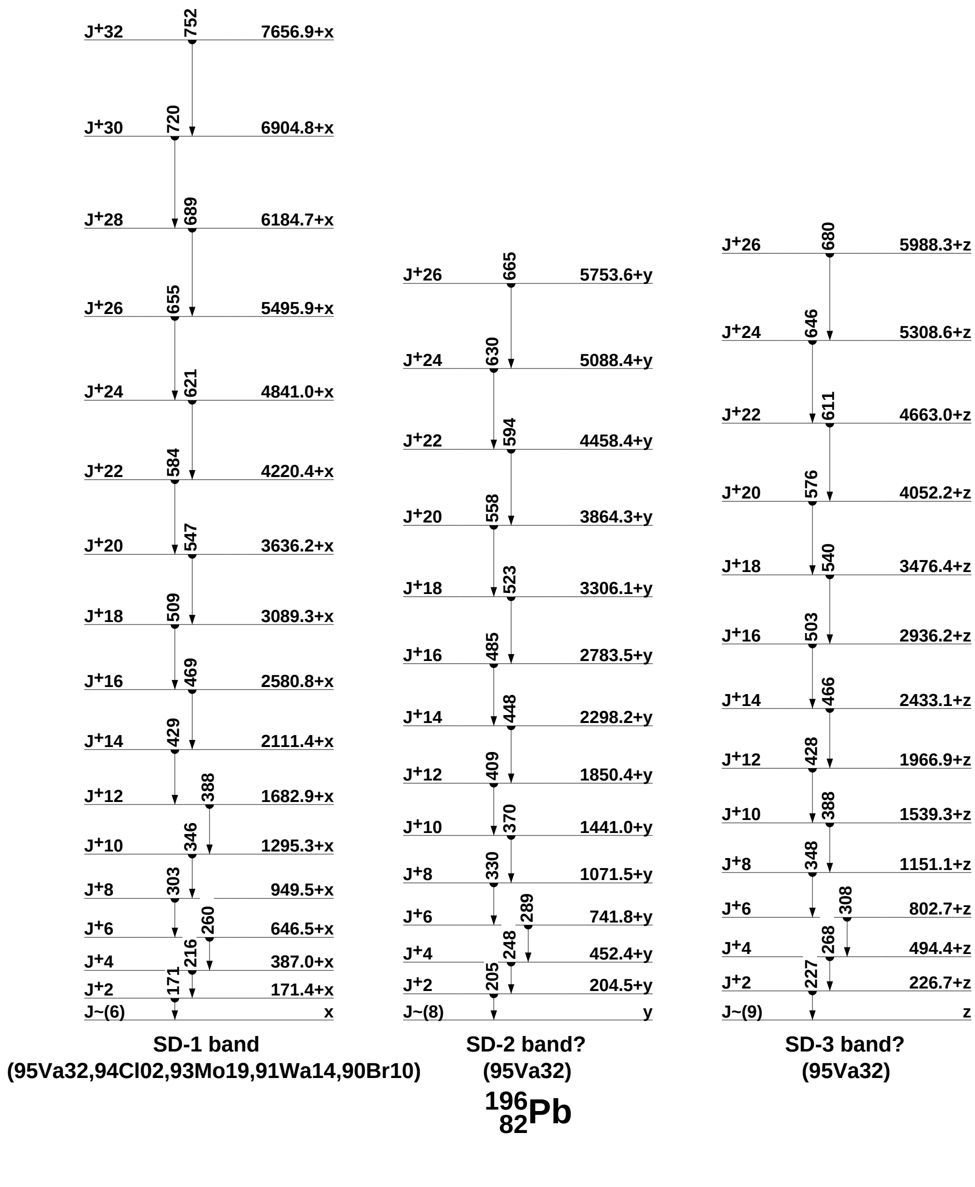
D **3476.4+z**, J+18 γ_{2936+z}***540.2*** *$I^{(1)}$=96.8, $I^{(2)}$=112.4, ħω=0.279*

D **4052.2+z**, J+20 γ_{3476+z}***575.8*** *$I^{(1)}$=97.8, $I^{(2)}$=114.3, ħω=0.297*

D **4663.0+z**, J+22 γ_{4052+z}***610.8*** *$I^{(1)}$=98.7, $I^{(2)}$=114.9, ħω=0.314*

D **5308.6+z**, J+24 γ_{4663+z}***645.6*** *$I^{(1)}$=99.6, $I^{(2)}$=117.3, ħω=0.331*

D **5988.3+z**, J+26 γ_{5309+z}***679.7***


J+32 7656.9+x
J+30 6904.8+x
J+28 6184.7+x
J+26 5495.9+x
J+24 4841.0+x
J+22 4220.4+x
J+20 3636.2+x
J+18 3089.3+x
J+16 2580.8+x
J+14 2111.4+x
J+12 1682.9+x
J+10 1295.3+x
J+8 949.5+x
J+6 646.5+x
J+4 387.0+x
J+2 171.4+x
J~(6) x
752
720
689
655
621
584
547
509
469
429
388
346
303
260
216
171
SD-1 band
(95Va32,94Cl02,93Mo19,91Wa14,90Br10)
J+26 5753.6+y
J+24 5088.4+y
J+22 4458.4+y
J+20 3864.3+y
J+18 3306.1+y
J+16 2783.5+y
J+14 2298.2+y
J+12 1850.4+y
J+10 1441.0+y
J+8 1071.5+y
J+6 741.8+y
J+4 452.4+y
J+2 204.5+y
J~(8) y
665
630
594
558
523
485
448
409
370
330
289
248
205
SD-2 band?
(95Va32)
J+26 5988.3+z
J+24 5308.6+z
J+22 4663.0+z
J+20 4052.2+z
J+18 3476.4+z
J+16 2936.2+z
J+14 2433.1+z
J+12 1966.9+z
J+10 1539.3+z
J+8 1151.1+z
J+6 802.7+z
J+4 494.4+z
J+2 226.7+z
J~(9) z
680
646
611
576
540
503
466
428
388
348
308
268
227
SD-3 band?
(95Va32)
196 82 Pb