Adopted Levels, Gammas

		Hist	ory	
	Туре	Author	Citation	Literature Cutoff Date
	Full Evaluation	Jun Chen and Balraj Singh	NDS 177, 1 (2021)	3-Sep-2021
$Q(\beta^{-}) = -8185 \ 18; \ S(n) = 1$ $S(2n) = 17799 \ 18 \ S(2n) = 0$	$10050 \ 20; \ S(p)=40$	020 19; $Q(\alpha)=4738$ 17 202	1Wa16	
Hyperfine structure meas	urements: $1990Di$	609, 1987Di06.		
Mass measurement: 2000	Ra23 (also 19998	Sc46).		
Additional information 1.				

Theoretical references: consult the NSR database (www.nndc.bnl.gov/nsr/) for 243 primary references dealing with nuclear structure, α decay, and cluster decay half-life calculations.

Level scheme of high-spin states including those for normal bands with the placements of transitions is based on that of 2009Ku03 in ${}^{168}\text{Er}({}^{30}\text{Si},4n\gamma)$, which is extended with respect to the detailed level scheme of 2002Ka01 in ${}^{184}\text{W}({}^{16}\text{O},6n\gamma)$ and has been adopted by the evaluators in Adopted Levels, Gammas, because of higher statistics and completeness. Level scheme of super-deformed (SD) bands is from (HI,xny):SD (1997Ha24,1994Hu10) and the absolute excitation energy of the bandhead of SD-1 band is determined by 1997Ha24 and 1996Lo12.

¹⁹⁴Pb Levels

Band configurations are given by 2009Ku03 in (30 Si,4n γ) in terms of quasiparticle labels, where A, B, C and D refer to $i_{13/2}$ quasineutrons and E, F to natural-parity quasineutrons of $p_{3/2}$ and $f_{5/2}$ origin. The proton pairing is neglected as there are only a few involved above the Z=82 gap. Example: $vi_{13/2}^{-2} \otimes \pi(h_{9/2}^{+2})_{8+}$ is labeled as AB8. See details on page 17 of 2009Ku03 paper.

Cross Reference (XREF) Flags

		$ \begin{array}{ccc} A & {}^{194}\text{Bi} \ \varepsilon \ \alpha \\ B & {}^{194}\text{Bi} \ \varepsilon \ \alpha \\ C & {}^{198}\text{Po} \ \alpha \\ D & {}^{150}\text{Sm}({}^{48} \end{array} $	decay (95 s) decay (125 s+11: decay (1.77 min) ³ Ca,4nγ)	$ \begin{array}{cccccc} {\tt E} & {}^{158}{\rm Gd}({}^{40}{\rm Ar},\!4n\gamma) & {\tt I} & {}^{209}{\rm Bi}(\pi^-,\!xn\gamma) \\ {\tt 5}{\tt s}) & {\tt F} & {}^{162}{\rm Dy}({}^{36}{\rm S},\!4n\gamma) & {\tt J} & ({\rm HI},\!xn\gamma){\rm :SD} \\ {\tt 0} & {\tt G} & {}^{168}{\rm Er}({}^{30}{\rm Si},\!4n\gamma) \\ {\tt H} & {}^{184}{\rm W}({}^{16}{\rm O},\!6n\gamma), {}^{182}{\rm W}({}^{16}{\rm O},\!4n\gamma) \end{array} $
E(level) [†]	$J^{\pi \ddagger}$	T _{1/2}	XREF	Comments
0.0	0+	10.7 min 6	ABCDEFGHI J	$\frac{1}{6} \frac{1}{6} \frac{1}{6} \frac{1}{6} \frac{1}{2} \frac{1}{6} \frac{1}{2} \frac{1}{2} \frac{1}{2} \frac{1}{6} \frac{1}{2} 1$
930.70 <i>21</i>	0+	1.1 ns 2	ABC FGH J	XREF: B(?). E(level): level proposed by 1987Va09 in ¹⁹⁴ Bi ε decay. J ^{π} : E0 transition to 0 ⁺ . T ₁ / ₂ : from $\alpha\beta$ (t) in ¹⁹⁸ Po α decay (1989De18).
965.12 9	2+		AB DEFGHIJ	J^{π} : 965.1 γ E2 to 0 ⁺ .
1308.27 13	(2 ⁺)		AB FGH J	XREF: $B(?)$. J ^{π} : 1308.3 γ (E2) to 0 ⁺ .
1540.13 <i>13</i>	4+		AB DEFGHIJ	J^{π} : 575.0 γ E2, $\Delta J=2$ to 2 ⁺ . Observed anisotropy in $\gamma(\theta)$ data in (HLxn γ):SD (1997Ha24) forbids 0 ⁺ .
1636.92 22	(≤4)		A J	$\begin{array}{c} \text{XREF: } J(?). \\ J^{\pi}: 671 \text{ 8y to } 2^{+}. \end{array}$
1738.78 20	$(1,2^{+})$		Α	J^{π} : 1738.9 γ and 808.1 γ to 0 ⁺ .
1820.29 16	(5)-	1.1 ns 2	B DEFGHIJ	J ^π : 280.2γ E1, ΔJ=1 to 4 ⁺ ; 3056.4γ from (6 ⁺). T _{1/2} : from γγ(t) in (¹⁶ O,6nγ) (1986Pa18). Probable configuration=((v f _{5/2})(v i _{13/2})+(v p _{3/2})(v i _{13/2})) (1986Va03).
2019.18 24	(≤4)		Α	J^{π} : 710.9 γ to (2 ⁺).

Continued on next page (footnotes at end of table)

¹⁹⁴Pb Levels (continued)

2135.06.09 (b)* B DEFGH J J [*] , 594.89 E2, AJ=2 to 4 [*] ; possible 315y to (5) [*] . 2241.26 18 (7) [*] B DEFGH J J [*] , 594.89 E2, AJ=2 to (5) [*] . Probable configuration=((r f _{3/2})(r i _{13/2})+(r p _{3/2})(r i _{13/2})) (1986/303). 2288.83 22 (5 [*] , 6 ⁻) B DEFGH J J [*] , 2379y from 6 [*] SD level is possibly E1. Population uncertain in ¹⁹⁸ Bi decay. 2407.46 ^j 20 (9) ⁻ 17 ns 3 B DEFGH J $\mu = -0.38$ /4 (2004Vy01, 2020SC/V) T [*] , 2579y from (°10 a) meclaar reactions (2004Vy01). Other: -0.63 36 (1985St16, TDPAD). 2407.84 (4 ⁺ , 5, 6 ⁺) J B DEFGH J $\mu = 1783$ (M1+E2), AJ=2 to (6 ⁺) [*] , 2627; B1, J1-J1, J2) is consistent with measured gradient configuration= $\nu(2f_{3/2}^{-1} I_{3/2}^{-1})$ is consistent with measured gradient configuration (292/2017); 2627.97 from (8 ⁺). 2407.84 (4 ⁺ , 5, 6 ⁺) J B DE GH J $\mu = 7837$ (A ⁺), possible 272 to (6 ⁺). $\Delta = (1) \times (1) \times (7)^{-}.$ 2419.64 23 (8 ⁺) B DE GH J $\mu = 178.37$ (M1+E2). AJ=(1) to (7) ⁻ , 2627.97 from (8 ⁺). $252.47 + 4$ (8 ⁺) B DE GH J $\mu = 72353/47$ (M1+E2). AJ=(1) to (7) ⁻ . $T_{1/2}$: from yY(0 in [²⁰ /254/11, 1/254/10] (1994/908). $252.44 + (8+)$ B DE GH J $\mu = 72353/47$ (M1+E2). AJ=(1) to (7) ⁻ . $T_{1/2}$: from yY(0 in [²⁰ /254/11, 1/254/10] (1994/908). $252.44 + (8+)$	E(level) [†]	$J^{\pi \ddagger}$	T _{1/2}	XREF	Comments
2241.26 I^8 (7) ⁻ B DEFGH J f^2 , 421, Φ_{122}^2 , h_{132}^2) (h_{132}^2) (h_{132}^2) (h_{132}^2)) (1980/403), 2298.83 22 (5 ⁻ , 6 ⁻) B J XEF: B(7), f^2 , 25797 from 6 ⁺ SD level is possibly E1. Population uncertain 1 ⁴⁴ Bi <i>e</i> decay. 2407.46 ^{<i>I</i>} 20 (9) ⁻ 17 ns 3 B DEFGH J μ =-0.38 /4 (2004Y91, 22025CV) T ₁₂ : from yry(0 and recoil-shadow anisotropy in (h_{02}^{10} , 6ny). Other: 17 ns 4 from yry(0) in (h_{02}^{10} , 4ny) f^2 , 166.29 E2, AL=2 to (7) ⁻ ; 5269 from (11) ⁻ , μ : from time differential perturbed angular distribution of y rays following nuclear reactions (2004Y91). Other: -0.63 36 (1985St16, TDPAD). Dominant configuration= $V(2_{22}^{-1})$ [h_{132}^{-1}) is consistent with measured p factor (2004Y91). 2407.8 4 (4 ⁺ , 5,6 ⁺) 2419.64 23 (8 ⁻) 2437.53 20 (8) ⁺ 17 ns 4 B DEFGH J f^2 ; 103, y(14, H22). AJ=(1) to (7) ⁻ ; 26279 yron (8 ⁺). 2437.53 20 (8) ⁺ 17 ns 4 B DEFGH J f^2 ; 203.29 (2, 2, 4) (0, 1) (52, 7) (1, 3) (10, 7) ⁻ , T ₁₂ ; from yry(1) in ¹⁹⁴ Bi a decay (1987Va06). Configuration=(r, 2) (2) (52) (f, 7) (10, 10, 7) ⁻ , T ₁₂ ; from yry(1) in ¹⁹⁴ Bi a decay (1987Va06). Configuration=(r, 12) (2) (57), 705.47 (Q), \DeltaJ=(2) from (10 ⁻). 2524.14 (8 ⁺) 258.118 22 (10) ⁺ 17.2 ns 5 B DEFGH J f^2 ; 203.97 (2, 1, 4) to (9) ⁻ ; 705.47 (Q), \DeltaJ=(2) from (10 ⁻). T ₁₂ ; from yry(1) in ¹⁹⁴ Bi a decay. 2608.31 24 B J KEF: B(7). E(level): level proposed by 1996.12 and 1997Ha24 in (H1, xny):SD. Population uncertain in ¹⁹⁴ Bi a decay. 2628.33 ⁽⁶⁾ 250 (12 ⁺) 370 ns 13 B DEFGH J μ =-2.00 2 (1985St16, 2016St14) f^2 ; configuration=(r) (132, 5) (1986Va03), see (¹⁶ O, 6ny) dataset. T(12; from yry(1) in (¹⁰ O, 6ny). Quoted value is weighted average of 389 ms 28 (2004G104), 350 ms 10 (1985St16) agrees with μ . See (¹⁶ O, 6ny) dataset. T(12; from yry(1) in (¹⁰ O, 6ny). Quoted value is weighted average of 389 ms 28 (2004G104), 350 ms 10 (1985St16) agrees with μ . See (¹⁶ O, 6ny) dataset. T(12; from yry(1) in (¹⁰ O, 6ny). Quot	2135.06 19	$(6)^+$		B DEFGH J	J^{π} : 594.8 γ E2, $\Delta J=2$ to 4 ⁺ ; possible 315 γ to (5) ⁻ .
$ \begin{array}{cccc} Probable configuration=((r \ f_{52})(r \ f_{132})+(r \ p_{32})(r \ f_{132})) \\ (1980 \ values) \\ (1980 \ values) \\ 2298.33 \ 22 \ (5^-, 6^-) \\ B \\ 2407.46^{\frac{1}{2}} \ 20 \ (9)^- \\ 17 \ ns \ 3 \\ B \ DEFGH \ J \\ \mu=-0.38 \ I4 \ (2004 \ Yol \ yol \ 2005 \ CV) \\ T_{12}: \ from \ yr(0 \ no \ f^{-}SD \ level is possibly E1. \\ Population uncertain in \ ^{104} Bi \ e \ decay. \\ P_{12}: \ from \ yr(0 \ no \ f^{-}SD \ level is possibly E1. \\ Population uncertain in \ ^{104} Bi \ e \ decay. \\ T_{12}: \ from \ yr(0 \ no \ f^{-}SD \ level is possibly E1. \\ Population uncertain in \ ^{104} Bi \ e \ decay. \\ T_{12}: \ from \ yr(0 \ no \ f^{-}SD \ rot \ (1)^{-}, \\ \mu: \ from \ time \ differential perturbed angular \ distribution \ of \ y \ rays \ following nuclear reactions (2004 \ Yol)). \ Other: \ -0.63 \ 36 \ (1985 \ Stol 6, \\ TDPAD). \\ Dominant \ configuration=v(2F_{11}^{-1}I_{12}^{-}) \ is \ consistent \ with \ measured \ g \ factor \ (2004 \ Yol)). \\ D_{12}: \ from \ (110 \ value \ Yol) \ (110 \ value \ Yol). \ (110 \ value \ Yol) \ (110 \ Yol) \ (1$	2241.26 18	$(7)^{-}$		B DEFGHIJ	J^{π} : 421.0 γ E2, $\Delta J=2$ to (5) ⁻ .
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					Probable configuration= $((v f_{5/2})(v i_{13/2})+(v p_{3/2})(v i_{13/2}))$
2298.83 22 (5 ⁻ ,6 ⁻) B XREF: B(7), J XREF: B(7)					(1986Va03).
$\begin{array}{ccccc} F: 2.5/9 from G SD level is possible $F1.$ Population uncertain in $F5$ is decay.$ Population uncertain in $F5$ is decay.$ Population uncertain in $F5$ is decay.$ Possible C Population uncertain in $F5$ is decay.$ Population indecay.$ Population uncertain in $F5$ is decay.$ Population indecay.$ Population uncertain in $F5$ is decay.$ Population indecay.$ Popu$	2298.83 22	(5 ⁻ ,6 ⁻)		B J	$\begin{array}{c} \text{XREF: } B(?). \\ \text{III} 2570 \text{f} (\uparrow \text{SD} \ \text{I} \end{array}$
$\begin{array}{ccccc} \mbox{Population uncertain III $^{-1}$ B & decay. \\ \mbox{Population III $^{-1}$ B & decay. \\ \mbox{Population IIII $^{-1}$ B & decay. \\ \mbox{Population IIIII $^{-1}$ B & decay. \\ Population IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII$					$J^{*}: 25/9\gamma$ from 6° SD level is possibly E1.
2407.46 ⁷ 20 (9) 17 ns 3 B DEFGH J μ =-0.38 /4 (2004Y0], 2008/27) T ₁₂ : from yy(0) in (²⁰ SiAny), J ⁷ : 166.3 y E2, Al=2 to (7); 526y from (11) ⁻ , μ : from time differential perturbed angular distribution of y rays following nuclear reactions (2004Y0]). Other: -0.63 36 (1985S116, TDPAD), 2407.8 4 (4 ⁺ ,5,6 ⁺) J E(level): from (HLxny):SD only, TP: 867y to 4 ⁺ , possible 272y to (6) ⁺ . 2419.64 23 (8 ⁻) B DE GH J J ⁷ : 178.3 y (M1+E2), AJ=(1) to (7) ⁻ ; 2627.9 y from (8 ⁺). 2437.53 20 (8) ⁺ 17 ns 4 B DEFGH J J ⁷ : 302.5 y E2, Al=2 to (6) ⁺ , 196.2 y (E1), AJ=(1) to (7) ⁻ . 2524.4 4 (8 ⁺) G J J ⁷ : 200.9 y(01), AJ=(1) to (7) ⁻ ; 253.4 y from (6 ⁺); possible 859 to (8) ⁺ , possible 859 tro (10 ⁻). 2581.18 22 (10) ⁺ 17.2 ns 5 B DEFGH J J ⁷ : 173.7 y E1, AJ=1 to (9) ⁻ ; 46.8 y from (12 ⁺). T ₁₂ : from yr(0) in (¹⁶ Co,fro) (1986Da18). Possible configuration=((v i _{13/2}) ²) (1986Va03). Sec (¹⁶ O,6ny) dataset. 2688.31 24 B J XREF: B(7). E(level): level proposed by 1996Lo12 and 1997Ha24 in (HLxny):SD. Population uncertain in ¹⁵⁴ B is decay. 2628.33 (⁶ 25 (12 ⁺) 370 ns <i>I</i> 3 B DEFGH J μ =-2.00 2 (1985S116,2020S2V) Q=-0.49 3 (1985S16,2006S2V) Q=0.49 3 (1985S16,2006S2V) Q=0.49 3 (1985S16,10) Other: 325 ns +100-46 from 2003G105 is superseded by 2004G104, 350 ns <i>I</i> 0 (1977Ro15). Q: differential perturbed angular distribution of y rays following nuclear reactions (1985S116). Other: -1.90 7 (1977Ro15). Q: differential perturbed angular distribution of y rays following nuclear reactions (1985S116). Other: 325 ns +100-46 from 2003G105 is superseded by 2004G104, 410 ref rays 7 (2005DF11) and 133 ns 15	2407 461 20	$\langle 0 \rangle =$	17 2		Population uncertain in β^{2} Bi ε decay.
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	2407.46 20	(9)	1 / ns 3	B DEFGH J	$\mu = -0.38 \ 14 \ (2004 \ \text{Vy} 01, 2020 \text{StZV})$
$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$					$I_{1/2}$: from $\gamma\gamma(t)$ and recoil-snadow anisotropy in (100,6n γ). Other: 1/
$ \begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$					$IIS \neq IIOIII \gamma \gamma(\theta) III (-SI,4II\gamma).$ $I^{\pi} \cdot 166 2\gamma F2 AI-2 \text{ to } (7)^{-1} \cdot 526\gamma \text{ from } (11)^{-1}$
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					μ : from time differential perturbed angular distribution of γ rays
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					following nuclear reactions (2004Vy01). Other: -0.63 36 (1985St16,
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					TDPAD).
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					Dominant configuration= $\nu(2f_{5/2}^{-1}1i_{13/2}^{-1})$ is consistent with measured
240.8 4 (4 ⁺ , 3, 5 ⁺) Fit (867) to 4 ⁺ , possible 272y to (6) ⁺ . 2419,64 23 (8 ⁻) 2437,53 20 (8) ⁺ 17 ns 4 B DEFGH J J ⁺ : 178,3y (M1+E2), $\Delta I = (1)$ to (7) ⁻ ; 2627,9y from (8 ⁺), T _{1/2} : from yr(0 in ¹⁹⁴ Bi ε decay (1987Va09). Configuration=(π 9/2[505](π 7/2[514]) (1994Po08). 2502.07 24 (8 ⁻) 2502.07 24 (8 ⁻) 2524.4 4 (8 ⁺) 2581.18 22 (10) ⁺ 17.2 ns 5 B DEFGH J J ⁺ : 263y to (7) ⁻ ; 2353.4y from (6 ⁺); possible 86y to (8) ⁺ , possible 55y from (10) ⁺ . T _{1/2} : from yr(0 in ¹⁶⁰ O, 6ny) (1986Pa18). Possible configuration=($(\nu 1_{3/2})^2$) (1986Va03). See (¹⁶ O, 6ny) dataset. 2608.31 24 B J XREF: B(?). 2628.33 2 (12 ⁺) 370 ns 13 B DEFGH J μ =-2.00 2 (1985St16,2016St14) J ⁺ : configuration= $\pi^{1}_{13/2}$ (1986Va03,1985St16) agrees with μ . See (¹⁶ O, 6ny) dataset. T _{1/2} : from yr(0 in (¹⁶ O, 6ny) dute is weighted average of 389 ns 28 (2004Gl04), 350 ns 10 (1985St16) agrees with μ . See (¹⁶ O, 6ny) dataset. T _{1/2} : from yr(0 in (¹⁶ O, 6ny)) cutter: 325 ns +100-46 from 2003Gl05 is superseded by 2004Gl04, 350 ns 10 (1985St16), 392 ns 10 (1977Ro15), 335 ns 30 (1972A149). Other: -1.90 7 (1977Ro15). Q ⁻ differential perturbed angular distribution of y rays following nuclear reactions (1985St16). Other: -1.90 7 (1977Ro15). Q ⁻ differential perturbed angular distribution of y rays following nuclear reactions (1985St16). Other: -0.48 3 (2004I001). J ⁺ : 664.2y to (6) ⁺ . 2933.21 25 (11) ⁻ 133 ns 7 B DEFGH J μ =-1.13 2 (2004Vy01,2020StZV) Q=3.64 (2007Io3,2016St14) J ⁺ : 672.1y (0, ΔI =(2) to (7) ⁻ . 293.65 (11) ⁻ 133 ns 7 B DEFGH J μ =-1.13 2 (2004Vy01,2020StZV) Q=3.64 (2007Io3,2016St14) J ⁺ : ΔI =1, E1 y to (10) ⁺ and E1 y to (12 ⁺). T _{1/2} : weighted average of 139 ns 7 (2005D ⁺) 1) and 133 ns 15	0407.0.4	(4 + 5 (+))			g factor ($2004Vy01$).
2419.64 23 (8 ⁻) 2419.64 23 (8 ⁻) 2437.53 20 (8) ⁺ 17 ns 4 B DEFGH J J^{+} : 178.3y (M1+E2), $\Delta J=(1)$ to (7) ⁻ ; 2627.9y from (8 ⁺). 2437.53 20 (8) ⁺ 17 ns 4 B DEFGH J J^{+} : 302.5Y E2, $\Delta J=2$ to (6) ⁺ , 196.2y (E1), $\Delta J=(1)$ to (7) ⁻ . T _{1/2} : from γ (t) in ¹⁹⁴ B is decay (1987Va09). Configuration=($(\pi 9/2)$ (505))(π 7/2[514])) (1994Pd08). 2502.07 24 (8 ⁻) 2522.4 4 (8 ⁺) 2522.4 4 (8 ⁺) 2538.1 8 22 (10) ⁺ 17.2 ns 5 B DEFGH J J^{+} : 260.9y (M1), $\Delta J=1$ to (9) ⁻ ; 46.8y from (12 ⁺). T _{1/2} : from γ (t) in (¹⁶ O, 6ny) (1986Pa18). Possible configuration=($(\nu 1_{132})^2$) (1986Va03). See (¹⁶ O, 6ny) dataset. 2608.31 24 B J XREF: B(?). E(level): level proposed by 1996Lo12 and 1997Ha24 in (HI,xn\gamma):SD. Population uncertain in ¹⁹⁴ B is decay. 2628.33 (⁶ 25 (12 ⁺) 370 ns <i>I</i> 3 B DEFGH J $\mu=-2.00 2$ (1985St16,202StZV) Q=0.49 3 (1985St16,202StZV) Q=0.49 3 (1985St16,202StZV) Q=0.49 3 (1985St16,30 son s <i>I</i> 0 (1977Ro15), 335 ns 30 (1977Ro15), 335 ns 30 (1977Ro15). 335 ns 30 (1977Ro15). Q: differential perturbed angular distribution of y rays following nuclear reactions (1985St16). Other: -1.90 7 (1977Ro15), 335 ns 30 (1977Ro15). Q: differential perturbed angular distribution of y rays following nuclear reactions (1985St16). Other: -1.90 7 (1977Ro15), 335 ns 30 (1977Ro15). Q: differential perturbed angular distribution of y rays following nuclear reactions (1985St16). Other: -1.90 7 (1977Ro15). Q: differential perturbed angular distribution of y rays form nuclear reactions (1985St16). Other: -0.48 3 (2004I001). <i>J</i> ⁺ : 672.1Y (Q), $\Delta J=(2)$ to (0) ⁺ . 2933.21 25 (11) ⁻ 133 ns 7 B DEFGH J J^{+} : 672.1Y (Q), $\Delta J=(2)$ to (7) ⁻ . 323.64 (2007Io3,2016St14) <i>J</i> ⁺ : $\Delta J=1$, E1 y to (10) ⁺ and E1 y to (12 ⁺). T _{1/2} : weighted average of 139 ns 7 (2005D+11) and 133 ns 15	2407.8 4	(4, 5, 0)		J	E(level): from (H1,Xn γ):SD only. I ^{π} : 867 α to 4^+ possible 272 α to (6) ⁺
2437.53 20 (8) ² 17 ns 4 B DEFGH J $J^{F}: 302.5y E2, \Delta J=2 \text{ to } (6)^{+}, 196.2y (E1), \Delta J=(1) \text{ to } (7)^{-}, T_{1/2}: from \gamma y(1) in ^{194}B is decay (1987Va09).Configuration=(\pi 9/2[505])(\pi 7/2[514]))(1994Po08).2502.07 24 (8-) B D GH J J^{F}: 260.9y (M1), \Delta J=1 to (7)-; 705.4y (Q), \Delta J=(2) from (10-).2524.4 4 (8+) G J J^{F}: 283y to (7)-, 2353.4y from (6+); possible 86y to (8)+, possible558 from (10)+.2581.18 22 (10)+ 17.2 ns 5 B DEFGH J J^{F}: 173.7y \text{ E1}, \Delta J=1 to (9)-; 46.8y from (12+).T1/2: from \gamma y(1) in (160, 6ny) (1986Pa18).Possible configuration=((v i_{13/2})^{2}) (1986Va03). See (16O, 6ny) dataset.2608.31 24 B J XREF: B(?).2628.33 (6) 25 (12+) 370 ns I3 B DEFGH J \mu=-2.00 2 (1985St16, 2016St14)J^{F}: configuration=\pii_{12}^{2} (1986Va03,1985St16) agrees with \mu. See(16O, 6ny) dataset.T1/2: from \gamma \gamma(1) in (160, 6ny). Quoted value is weighted average of389 ns 28 (2004Gl04), 350 ns I0 (1977Ro15),335 ns 30 (1972A149). Other: 325 ns +I00-46 from 2003Gl05 issuperseded by 2004Gl04.\mu: differential perturbed angular distribution of \gamma rays following nuclearreactions (1985St16). Other: -1.90 7 (1977Ro15).Q: differential perturbed angular distribution of \gamma rays from nuclearreactions (1985St16). Other: -1.90 7 (1977Ro15).Q: differential perturbed angular distribution of \gamma rays from nuclearreactions (1985St16). Other: -1.90 7 (1977Ro15).Q: differential perturbed angular distribution of \gamma rays from nuclearreactions (1985St16). Other: -1.90 7 (1977Ro15).Q: differential perturbed angular distribution of \gamma rays from nuclearreactions (1985St16). Other: -1.90 7 (1977Ro15).Q: differential perturbed angular distribution of \gamma rays from nuclearreactions (1985St16). Other: -1.90 7 (1977Ro15).Q: differential perturbed angular distribution of \gamma rays from nuclearreactions (1985St16). Other: -1.90 7 (1977Ro15).Q: differential perturbed angular distribution of \gamma rays from nucle$	2419.64 23	(8-)		B DE GH J	J^{π} : 178.3 γ (M1+E2), AJ=(1) to (7) ⁻ : 2627.9 γ from (8 ⁺).
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2437.53 20	$(8)^+$	17 ns 4	B DEFGH J	J^{π} : 302.5 γ E2, ΔJ =2 to (6) ⁺ , 196.2 γ (E1), ΔJ =(1) to (7) ⁻ .
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					$T_{1/2}$: from $\gamma\gamma(t)$ in ¹⁹⁴ Bi ε decay (1987Va09).
2502.07 24 (8 ⁻) B D GH J I^{π} : 260.97 (M1), $\Delta I = 10$ (7) ⁻ ; 705.47 (Q), $\Delta I = (2)$ from (10 ⁻). 2524.4 4 (8 ⁺) G J I^{π} : 2837 to (7) ⁻ , 2353.47 from (6 ⁺); possible 867 to (8) ⁺ , possible 557 from (10) ⁺ . 2581.18 22 (10) ⁺ 17.2 ns 5 B DEFGH J I^{π} : 173.77 EI, $\Delta I = 1$ to (9) ⁻ ; 46.87 from (12 ⁺). T _{1/2} : from $\gamma\gamma(0)$ in (¹⁶ O,6n7) (1986Pa18). Possible configuration=(($\nu 1_{3/2})^2$) (1986Va03). See (¹⁶ O,6n7) dataset. XREF: B(?). E(level): level proposed by 1996Lo12 and 1997Ha24 in (HI,xn7):SD. Population uncertain in ¹⁹⁴ Bi s decay. 2628.33 [@] 25 (12 ⁺) 370 ns 13 B DEFGH J $\mu = -2.00 2$ (1985St16,2016St14) J ^{\pi} : configuration= $\nu i_{3/2}^2$ (1986Va03,1985St16) agrees with μ . See (¹⁶ O,6n7) dataset. T _{1/2} : from $\gamma\gamma(0)$ in (¹⁶ O,6n7). Quoted value is weighted average of 389 ns 28 (2004Gl04), 350 ns 10 (1985St16), 392 ns 10 (1977Ro15), 335 ns 30 (1972Al49). Other: 325 ns +100-46 from 2003Gl05 is superseded by 2004Gl04. μ : differential perturbed angular distribution of γ rays following nuclear reactions (1985St16). Other: -1.90 7 (1977Ro15). Q: differential perturbed angular distribution of γ rays form nuclear reactions (1985St16). Other: -0.48 3 (2004l001). 2799.3 4 (4 ⁺ to 8 ⁺) B G J J ^{\pi} : 664.27 to (6) ⁺ . 2799.3 5 (4 ⁺ to 8 ⁺) B D GH J J ^{\pi} : 672.17 (Q), $\Delta J = (2)$ to (7) ⁻ . 2799.3 6 (4 ⁺ to 8 ⁺) B D GH J J ^{\pi} : 672.17 (Q), $\Delta J = (2)$ to (7) ⁻ . 2799.3 7 (1) ⁻ 133 ns 7 B DEFGH J $\mu = +11.3 2 (2004Vy01, 2020StZV)$ Q=3.6 4 (2007Io03, 2016St14) J ^{\pi} : $\Delta J = 1$, E1 γ to (10) ⁺ and E1 γ to (12 ⁺). T _{1/2} : weighted average of 139 ns 7 (2005Dr11) and 133 ns 15					Configuration= $((\pi \ 9/2[505])(\pi \ 7/2[514]))$ (1994Po08).
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2502.07 24	(8^{-})		B D GH J	J^{π} : 260.9 γ (M1), ΔJ =1 to (7) ⁻ ; 705.4 γ (Q), ΔJ =(2) from (10 ⁻).
2581.18 22 (10) ⁺ 17.2 ns 5 B DEFGH J J^{π} : 173.7 FL , $\Delta I = 1$ to (9) ⁻ ; 46.8 y from (12 ⁺). T _{1/2} : from $\gamma\gamma(t)$ in (¹⁶ O, 6ny) (1986Pa18). Possible configuration=(($v i_{13/2}$) ²) (1986Va03). See (¹⁶ O, 6ny) dataset. 2608.31 24 B J XREF: B(?). E(level): level proposed by 1996Lo12 and 1997Ha24 in (HI, xny):SD. Population uncertain in ¹⁹⁴ Bi ε decay. 2628.33 [@] 25 (12 ⁺) 370 ns 13 B DEFGH J $\mu = -2.00$ 2 (1985St16, 2020StZV) Q=0.49 3 (1985St16, 2016St14) J ^{\pi} : configuration= $v_{13/2}^2$ (1986Va03,1985St16) agrees with μ . See (¹⁶ O, 6ny) dataset. T _{1/2} : from $\gamma\gamma(t)$ in (¹⁶ O, 6ny). Quoted value is weighted average of 389 ns 28 (2004G104), 350 ns 10 (1985St16), 392 ns 10 (1977Ro15), 335 ns 30 (1972Al49). Other: 325 ns +100-46 from 2003G105 is superseded by 2004G104. μ : differential perturbed angular distribution of γ rays following nuclear reactions (1985St16). Other: 0.48 3 (2004I001). 2799.3 3 (4 ⁺ to 8 ⁺) B G J J ^{\pi} : 664.2y to (6) ⁺ . 2913.30 24 (9 ⁻) B D GH J J ^{\pi} : 672.1y (Q), $\Delta J = (2)$ to (7) ⁻ . 2933.72 1 (9 ⁺) 2933.72 1 (11) ⁻ 133 ns 7 B DEFGH J $\mu = +11.3$ 2 (2004Vy01,2020StZV) Q=3.6 4 (2007L03,2016St14) J ^{\pi} : $\Delta J = 1$, E1 γ to (10) ⁺ and E1 γ to (12 ⁺). T _{1/2} : weighted average of 139 ns 7 (2005Dr11) and 133 ns 15	2524.4 4	(81)		GJ	J [*] : 283 γ to (/) , 2353.4 γ from (6'); possible 86 γ to (8)', possible
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2581 18 22	$(10)^{+}$	17.2 ns 5	B DEEGH 1	I^{π} : 173 7 ν E1 AI=1 to (9) ⁻ : 46 8 ν from (12 ⁺)
Possible configuration= $(v i_{13/2})^2$ (1986Va03). See (¹⁶ O,6ny) dataset. 2608.31 24 B J XREF: B(?). E(level): level proposed by 1996Lo12 and 1997Ha24 in (HI,xny):SD. Population uncertain in ¹⁹⁴ Bi ε decay. 2628.33 [@] 25 (12 ⁺) 370 ns <i>I</i> 3 B DEFGH J $\mu = -2.00 \ 2 \ (1985St16,2010St2V)$ Q=0.49 3 (1985St16,2010St14) J ^{\pi} : configuration= $v_{13/2}^2$ (1986Va03,1985St16) agrees with μ . See (¹⁶ O,6ny) dataset. T _{1/2} : from $\gamma \gamma(t)$ in (¹⁶ O,6ny). Quoted value is weighted average of 389 ns 28 (2004Gl04), 350 ns <i>I</i> 0 (1985St16), 392 ns <i>I</i> 0 (1977Ro15), 335 ns 30 (1972A149). Other: 325 ns + <i>I</i> 00-46 from 2003Gl05 is superseded by 2004Gl04. μ : differential perturbed angular distribution of γ rays following nuclear reactions (1985St16). Other: -1.90 7 (1977Ro15). Q: differential perturbed angular distribution of γ rays from nuclear reactions (1985St16). Other: 0.48 3 (2004Io01). 2799.3 3 (4 ⁺ to 8 ⁺) B G J J ^{\pi} : 672.1 γ (Q), Δ I=(2) to (7) ⁻ . 2930.75 2 <i>I</i> (9 ⁺) B EFGH J J ^{\pi} : 493.2 γ to (8 ⁺ . 2933.21 25 (11) ⁻ 133 ns 7 B DEFGH J μ =+11.3 2 (2004Vy01,2020StZV) Q=3.6 4 (2007Io03,2016St14) J ^{\pi} : Δ I=1, E1 γ to (10) ⁺ and E1 γ to (12 ⁺). T _{1/2} : weighted average of 139 ns 7 (2005Dr11) and 133 ns <i>I</i> 5	2001.10 22	(10)	17.2 115 5		$T_{1/2}$: from $\gamma \gamma(t)$ in (¹⁶ 0.6n γ) (1986Pa18).
B J XREF: B(?). B J XREF: B(?). E(level): level proposed by 1996Lo12 and 1997Ha24 in (HI,xny):SD. Population uncertain in ¹⁹⁴ Bi ϵ decay. 2628.33 ^(a) 25 (12 ⁺) 370 ns <i>l</i> 3 B DEFGH J μ =-2.00 2 (1985St16,2020StZV) Q=0.49 3 (1985St16,2016St14) J ^{\pi} : configuration=vi ² ₁₃₂ (1986Va03,1985St16) agrees with μ . See (¹⁶ O,6ny) dataset. T _{1/2} : from $\gamma\gamma(t)$ in (¹⁶ O,6ny). Quoted value is weighted average of 389 ns 28 (2004Gl04), 350 ns <i>l</i> 0 (1985St16), 392 ns <i>l</i> 0 (1977Ro15), 335 ns 30 (1972Al49). Other: 325 ns + <i>l</i> 00-46 from 2003Gl05 is superseded by 2004Gl04. μ : differential perturbed angular distribution of γ rays following nuclear reactions (1985St16). Other: -1.90 7 (1977Ro15). Q: differential perturbed angular distribution of γ rays from nuclear reactions (1985St16). Other: -0.48 3 (2004Io01). 2799.3 3 (4 ⁺ to 8 ⁺) B G J J ^{\pi} : 664.2 γ to (6) ⁺ . 2913.30 24 (9 ⁻) B D GH J J ^{\pi} : 672.1 γ (Q), ΔI =(2) to (7) ⁻ . 2930.75 2 <i>l</i> (9 ⁺) B D GH J J ^{\pi} : 493.2 γ to (8) ⁺ . 2933.21 25 (11) ⁻ 133 ns 7 B DEFGH J μ =+11.3 2 (2004Vy01,2020StZV) Q=3.6 4 (2007Io03,2016St14) J ^{\pi} : ΔI =1, E1 γ to (10) ⁺ and E1 γ to (12 ⁺). T _{1/2} : weighted average of 139 ns 7 (2005Dr11) and 133 ns <i>l</i> 5					Possible configuration= $((v_{13/2})^2)$ (1986Va03). See (¹⁶ O,6ny) dataset.
E(level): level proposed by 1996Lo12 and 1997Ha24 in (HI,xny):SD. Population uncertain in ¹⁹⁴ Bi ε decay. 2628.33 ^(a) 25 (12 ⁺) 370 ns <i>I</i> 3 B DEFGH J μ =-2.00 2 (1985816,2020StZV) Q=0.49 3 (1985816,2016St14) J ^{<i>n</i>} : configuration=vi ² _{13/2} (1986Va03,1985St16) agrees with μ . See (¹⁶ O,6ny) dataset. T _{1/2} : from $\gamma\gamma$ (t) in (¹⁶ O,6ny). Quoted value is weighted average of 389 ns 28 (2004Gl04), 350 ns <i>I</i> 0 (1985St16), 392 ns <i>I</i> 0 (1977Ro15), 335 ns 30 (1972A149). Other: 325 ns + <i>I</i> 00-46 from 2003Gl05 is superseded by 2004Gl04. μ : differential perturbed angular distribution of γ rays following nuclear reactions (1985St16). Other: -1.90 7 (1977Ro15). Q: differential perturbed angular distribution of γ rays from nuclear reactions (1985St16). Other: 0.48 3 (2004I001). 2799.3 3 (4 ⁺ to 8 ⁺) B G J J ^{<i>x</i>} : 664.2 γ to (6) ⁺ . 2913.30 24 (9 ⁻) B D GH J J ^{<i>x</i>} : 672.1 γ (Q), Δ I=(2) to (7) ⁻ . 2930.75 2 <i>I</i> (9 ⁺) B EFGH J J ^{<i>x</i>} : 493.2 γ to (8) ⁺ . 2933.21 25 (11) ⁻ 133 ns 7 B DEFGH J μ =+11.3 2 (2004Vy01,2020StZV) Q=3.6 4 (2007Io03,2016St14) J ^{<i>x</i>} : Δ I=1, E1 γ to (10) ⁺ and E1 γ to (12 ⁺). T _{1/2} : weighted average of 139 ns 7 (2005Dr11) and 133 ns <i>I</i> 5	2608.31 24			B J	XREF: B(?).
Population uncertain in ¹⁹⁴ Bi ε decay. 2628.33 ^(@) 25 (12 ⁺) 370 ns <i>I</i> 3 B DEFGH J μ =-2.00 2 (1985St16,2020StZV) Q=0.49 3 (1985St16,2016St14) J ^{\$\pi\$} configuration= $v_{13/2}^2$ (1986Va03,1985St16) agrees with μ . See (¹⁶ O,6ny) dataset. T _{1/2} : from $\gamma\gamma(t)$ in (¹⁶ O,6ny). Quoted value is weighted average of 389 ns 28 (2004Gl04), 350 ns <i>IO</i> (1985St16), 392 ns <i>IO</i> (1977Ro15), 335 ns <i>3O</i> (1972A149). Other: 325 ns + <i>IOO</i> -46 from 2003Gl05 is superseded by 2004Gl04. μ : differential perturbed angular distribution of γ rays following nuclear reactions (1985St16). Other: -1.90 7 (1977Ro15). Q: differential perturbed angular distribution of γ rays from nuclear reactions (1985St16). Other: 0.48 3 (2004Io01). 2799.3 3 (4 ⁺ to 8 ⁺) B G J J ^{\$\pi\$} : 664.2 γ to (6) ⁺ . 2913.30 24 (9 ⁻) B D GH J J ^{\$\pi\$} : 672.1 γ (Q), Δ J=(2) to (7) ⁻ . 2930.75 2 <i>I</i> (9 ⁺) B EFGH J J ^{\$\pi\$} : 493.2 γ to (8) ⁺ . 2933.21 25 (11) ⁻ 133 ns 7 B DEFGH J μ =+11.3 2 (2004Vy01,2020StZV) Q=3.6 4 (2007Io03,2016St14) J ^{\$\pi\$} : Δ J=1, E1 γ to (10) ⁺ and E1 γ to (12 ⁺). T _{1/2} : weighted average of 139 ns 7 (2005Dr11) and 133 ns <i>I</i> 5					E(level): level proposed by 1996Lo12 and 1997Ha24 in (HI, $xn\gamma$):SD.
2628.33 ^(f) 25 (12 ⁺) 370 ns 13 ^(f) B DEFGH J $\mu = -2.00 \ 2 \ (1985St16, 2016St14)$ $J^{\pi}: \text{ configuration} = v_{13/2}^2 \ (1986Va03, 1985St16) \text{ agrees with } \mu. \text{ See} \ (^{16}O, 6n\gamma) \text{ dataset.}$ $T_{1/2}: \text{ from } \gamma\gamma(\text{t}) \text{ in } (^{16}O, 6n\gamma). \text{ Quoted value is weighted average of} \ 389 \text{ ns } 28 \ (2004Gl04), 350 \text{ ns } 10 \ (1985St16), 392 \text{ ns } 10 \ (1977Ro15), 335 \text{ ns } 30 \ (1972Al49). \text{ Other: } 325 \text{ ns } +100-46 \ \text{from } 2003Gl05 \text{ is} \ \text{superseded by } 2004Gl04.$ $\mu: \text{ differential perturbed angular distribution of } \gamma \text{ rays following nuclear} \ \text{reactions } (1985St16). \text{ Other: } -1.90 \ 7 \ (1977Ro15).$ Q: differential perturbed angular distribution of $\gamma \text{ rays from nuclear} \ \text{reactions } (1985St16). \text{ Other: } 0.48 \ 3 \ (2004Io01).$ 2799.3 3 (4 ⁺ to 8 ⁺) B G J J ^{\pi} : 664.2\gamma to (6) ⁺ . 2913.30 24 (9 ⁻) B D GH J J ^{\pi} : 672.1\gamma (Q), $\Delta J = (2) \text{ to } (7)^$ 2933.21 25 (11) ⁻ 133 \text{ ns } 7 B DEFGH J $\mu = +11.3 \ 2 \ (2004Vy01, 2020StZV)$ Q=3.64 (2007Io03, 2016St14) J ^{\pi} : $\Delta J = 1, \text{ EI } \gamma \text{ to } (10)^+ \text{ and EI } \gamma \text{ to } (12^+).$ $T_{1/2}: \text{ weighted average of } 139 \text{ ns } 7 \ (2005Dr11) \text{ and } 133 \text{ ns } 15$	0				Population uncertain in ¹⁹⁴ Bi ε decay.
$\begin{array}{llllllllllllllllllllllllllllllllllll$	2628.33 [@] 25	(12^{+})	370 ns 13	B DEFGH J	$\mu = -2.00 \ 2 \ (1985 \text{St} 16, 2020 \text{St} \text{ZV})$
$\begin{array}{rcl} J^{r:} \mbox{ configuration} = vi_{1/2}^{-1} \mbox{ (1980 value}, 1985 stile) agrees with μ. See $$ ($^{16}O,6ny) dataset.$$ T_{1/2}: from $\gamma\gamma(t)$ in ($^{16}O,6ny)$. Quoted value is weighted average of $$ 389 ns 28 (2004Gl04), 350 ns 10 (1985 stile), 392 ns 10 (1977 Ro15), $$ 335 ns 30 (1972 Al49)$. Other: 325 ns $$ +100-46$ from 2003Gl05$ is superseded by 2004Gl04.$$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $$ $					Q=0.493 (1985) St16,2016 St14)
$\begin{array}{c} (-0,0)^{\prime} \text{ (Jatset.} \\ T_{1/2}: \text{ from } \gamma\gamma(\text{t}) \text{ in } (^{16}\text{O},6n\gamma). \text{ Quoted value is weighted average of} \\ 389 \text{ ns } 28 \ (2004\text{Gl04}), 350 \text{ ns } 10 \ (1985\text{St16}), 392 \text{ ns } 10 \ (1977\text{Ro15}), \\ 335 \text{ ns } 30 \ (1972\text{Al49}). \text{ Other: } 325 \text{ ns } +100-46 \ \text{from } 2003\text{Gl05 is} \\ \text{superseded by } 2004\text{Gl04}. \\ \mu: \text{ differential perturbed angular distribution of } \gamma \text{ rays following nuclear} \\ \text{reactions } (1985\text{St16}). \text{ Other: } -1.90 \ 7 \ (1977\text{Ro15}). \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions } (1985\text{St16}). \text{ Other: } 0.48 \ 3 \ (2004\text{Io01}). \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions } (1985\text{St16}). \text{ Other: } 0.48 \ 3 \ (2004\text{Io01}). \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions } (1985\text{St16}). \text{ Other: } 0.48 \ 3 \ (2004\text{Io01}). \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions } (1985\text{St16}). \text{ Other: } 0.48 \ 3 \ (2004\text{Io01}). \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions } (1985\text{St16}). \text{ Other: } 0.48 \ 3 \ (2004\text{Io01}). \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions } (1985\text{St16}). \text{ Other: } 0.48 \ 3 \ (2004\text{Io01}). \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{Reactions } (1985\text{St16}). \text{ Other: } 0.48 \ 3 \ (2004\text{Io01}). \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays form nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays form nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays form nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays form nuclear} \\ Q: differentia$					J [*] : configuration= $v_{13/2}^{2}$ (1986 va03, 1985 St16) agrees with μ . See
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					(10 O,00 γ) dataset.
$\begin{array}{rrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrr$					$1_{1/2}$: from $\gamma\gamma(t)$ in ($0,01\gamma$). Quoted value is weighted average of 389 ns 28 (2004Gl04) 350 ns 10 (1985St16) 392 ns 10 (1977Ro15)
$\begin{array}{c} \text{superseded by 2004G104.} \\ \mu: \text{ differential perturbed angular distribution of } \gamma \text{ rays following nuclear} \\ \text{reactions (1985St16). Other: -1.90 7 (1977Ro15).} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions (1985St16). Other: 0.48 3 (2004Io01).} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions (1985St16). Other: 0.48 3 (2004Io01).} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions (1985St16). Other: 0.48 3 (2004Io01).} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions (1985St16). Other: 0.48 3 (2004Io01).} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions (1985St16). Other: 0.48 3 (2004Io01).} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions (1985St16). Other: 0.48 3 (2004Io01).} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions (1985St16). Other: 0.48 3 (2004Io01).} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions (1985St16). Other: 0.48 3 (2004Io01).} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{Q: differential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ Q: d$					335 ns 30 (1972Al49). Other: 325 ns +100-46 from 2003Gl05 is
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					superseded by 2004G104.
$\begin{array}{cccccccccccccccccccccccccccccccccccc$					μ : differential perturbed angular distribution of γ rays following nuclear
$\begin{array}{c} (2) \text{ interential perturbed angular distribution of } \gamma \text{ rays from nuclear} \\ \text{reactions (1985St16). Other: 0.48 3 (2004Io01).} \\ (4^{+} \text{ to } 8^{+}) \\ (9^{-}) \\ (9^{-}) \\ (9^{+}) \\ 2933.21 25 \\ (11)^{-} \\ 133 \text{ ns } 7 \end{array} \qquad \begin{array}{c} \text{B} \text{G} \text{J} J^{\pi}: 664.2\gamma \text{ to } (6)^{+}. \\ \text{B} \text{G} \text{J} J^{\pi}: 672.1\gamma \text{ (Q)}, \Delta \text{J}=(2) \text{ to } (7)^{-}. \\ \text{B} \text{EFGH} \text{J} J^{\pi}: 493.2\gamma \text{ to } (8)^{+}. \\ \text{B} \text{EFGH} \text{J} \mu=+11.3 2 (2004\text{Vy}01, 2020\text{StZV}) \\ Q=3.6 4 (2007Io03, 2016\text{St14}) \\ J^{\pi}: \Delta \text{J}=1, \text{ E1 } \gamma \text{ to } (10)^{+} \text{ and E1 } \gamma \text{ to } (12^{+}). \\ \text{T}_{1/2}: \text{ weighted average of } 139 \text{ ns } 7 (2005\text{Dr11}) \text{ and } 133 \text{ ns } 15 \end{array}$					reactions (1985St16). Other: -1.90 7 (1977Ro15).
2799.3 3 $(4^{+} \text{ to } 8^{+})$ 2913.30 24 (9^{-}) 2930.75 21 (9^{+}) 2933.21 25 $(11)^{-}$ 133 ns 7 B D GH J J ^{π} : 664.2 γ to (6) ⁺ . B D GH J J ^{π} : 672.1 γ (Q), $\Delta J=(2)$ to (7) ⁻ . B EFGH J J ^{π} : 493.2 γ to (8) ⁺ . B DEFGH J $\mu=+11.3$ 2 (2004Vy01,2020StZV) Q=3.6 4 (2007Io03,2016St14) J ^{π} : $\Delta J=1$, E1 γ to (10) ⁺ and E1 γ to (12 ⁺). T _{1/2} : weighted average of 139 ns 7 (2005Dr11) and 133 ns 15					Q: differential perturbed angular distribution of γ rays from nuclear reactions (1985St16). Other: 0.48.3 (2004Lo01)
2913.30 24 (9 ⁻) 2933.75 21 (9 ⁺) 2933.21 25 (11) ⁻ 133 ns 7 B D GH J J^{π} : 672.1 γ (Q), $\Delta J=(2)$ to (7) ⁻ . B EFGH J J^{π} : 493.2 γ to (8) ⁺ . B DEFGH J $\mu=+11.3$ 2 (2004Vy01,2020StZV) Q=3.6 4 (2007Io03,2016St14) J^{\pi}: $\Delta J=1$, E1 γ to (10) ⁺ and E1 γ to (12 ⁺). T _{1/2} : weighted average of 139 ns 7 (2005Dr11) and 133 ns 15	2799.3 3	$(4^+ \text{ to } 8^+)$		BGJ	J^{π} : 664.2 γ to (6) ⁺ .
2930.75 21 (9 ⁺) 2933.21 25 (11) ⁻ 133 ns 7 B EFGH J J^{π} : 493.2 γ to (8) ⁺ . B DEFGH J μ =+11.3 2 (2004Vy01,2020StZV) Q=3.6 4 (2007Io03,2016St14) J ^{π} : Δ J=1, E1 γ to (10) ⁺ and E1 γ to (12 ⁺). T _{1/2} : weighted average of 139 ns 7 (2005Dr11) and 133 ns 15	2913.30 24	(9 ⁻)		BD GHJ	J^{π} : 672.1 γ (Q), $\Delta J=(2)$ to (7) ⁻ .
2933.21 25 (11) ⁻ 133 ns 7 B DEFGH J μ =+11.3 2 (2004Vy01,2020StZV) Q=3.6 4 (2007Io03,2016St14) J ^{π} : Δ J=1, E1 γ to (10) ⁺ and E1 γ to (12 ⁺). T _{1/2} : weighted average of 139 ns 7 (2005Dr11) and 133 ns 15	2930.75 21	(9 ⁺)		B EFGH J	J^{π} : 493.2 γ to (8) ⁺ .
$Q=3.6 \ 4 \ (20071603,2016St14)$ $J^{\pi}: \Delta J=1, E1 \ \gamma \text{ to } (10)^+ \text{ and } E1 \ \gamma \text{ to } (12^+).$ $T_{1/2}:$ weighted average of 139 ns 7 (2005Dr11) and 133 ns 15	2933.21 25	$(11)^{-}$	133 ns 7	B DEFGH J	$\mu = +11.3 \ 2 \ (2004 \text{Vy} 01, 2020 \text{StZV})$
$T_{1/2}$: weighted average of 139 ns 7 (2005Dr11) and 133 ns 15					Q=5.0.4 (200/1003,2016ST14) I^{π} : AI-1 E1 v to (10) ⁺ and E1 v to (12 ⁺)
$r_{1/2}$, weighted average of 157 hs / (2005) rr j and 155 hs 15					$T_{1/2}$: weighted average of 139 ns 7 (2005Dr11) and 133 ns 15
$(2004Vv01)$ in $({}^{30}Si.4n\gamma)$, 122 ns 10 (1986Va03) and 135 ns 25					$(2004Vv01)$ in $({}^{30}Si,4ny)$, 122 ns 10 (1986Va03) and 135 ns 25
(1986Pa18) in (¹⁶ O,6n γ). Method: $\gamma\gamma(t)$, pulsed beam.					(1986Pa18) in (¹⁶ O,6ny). Method: $\gamma\gamma(t)$, pulsed beam.
μ : $\gamma(\theta, H, t)$ (time-dependent perturbed angular distribution method)					μ : $\gamma(\theta,H,t)$ (time-dependent perturbed angular distribution method)
					(2004Vy01). Measured g factor is smaller than the calculated value of
					$(2004 \text{ y} \text{y} \text{U}^{2})$. Measured g factor is smaller than the calculated value of

¹⁹⁴Pb Levels (continued)

E(level) [†]	$J^{\pi \ddagger}$	XREF	Comments
			 1.10 for configuration=π3s⁻¹_{1/2}⊗p(h_{9/2}i_{13/2}). Considerations of Particle-vibration coupling and core excitations (giving 1.12) did not improve the agreement. The Nilsson model approach gives a value of 1.055 in better agreement, supporting proposed oblate deformation. Q: from TDPAD (2007Io03). Other: 4.5 9 from γ(θ,H), level-mixing spectroscopy technique (2002Vv01)
			Configuration= $\pi 9/2[505] \otimes \pi 13/2[606]$ (1994Po08,1986Pa18). 1986Va03 suggested configuration= $\pi 1/2[404]^{-2} \otimes \pi 9/2[514] \otimes \pi 13/2[606]$ for $J^{\pi}=10^{-}$.
3207.39 24	(10^{-})	DE GH J	J ^π : 787.6γ (Q), Δ J=(2) to (8 ⁻); 800.3γ to (9) ⁻ .
3271.34 ^J 25	(11 ⁻)	E GH J	J^{π} : 863.8 γ (Q), $\Delta J=(2)$ to (9 ⁻); band assignment.
3282.74 23	(10^{+})	EFGH J	J^{π} : 845.4 γ to (8) ⁺ , 351.8 γ to (9 ⁺).
3349.1 3	(12^+)	GH	J^{π} : 767.9 γ (Q) to (10) ⁺ , 720.8 γ to (12 ⁺).
3372.8 3	(11 ⁻)	D GH J	XREF: D(?). J^{π} : 459.5γ (Q), ΔJ=(2) to (9 ⁻).
3382.3 7	$(10^+, 11, 12^+)$	G	J^{n} : 754.0 γ to (12 ⁺), 801.0 γ to (10) ⁺ .
3470.6 5	(10)=	G J	
34/4.8 3	(12)	DEFGH J	$J^{A}: 541.7\gamma \text{ M1}, \Delta J=1 \text{ to } (11)$.
3521.9 7 3545.2 9		G	
3560.8 [@] 3	(14^{+})	DEFGH J	J^{π} : 932.5 γ E2, ΔJ =2 to (12 ⁺).
3561 / 7		C	Possible configuration= $(\nu i_{13/2})_{12+}^2 \otimes 2^+$ (1986Va03).
3609.4.3	(12^{+})	FCH	I^{π} : 1028 2 γ (O) to (10) ⁺ 980 9 γ to (12 ⁺)
3647 3 4	(12^+)	GH	I^{π} : 1066 0v (O) $\Lambda I=(2)$ to (10) ⁺
3726.9 3	(12^{-})	DE GH J	J^{π} : 519.6 γ (O), ΔJ =(2) to (10 ⁻). 454.8 γ to (11 ⁻).
3771.2 3	(11^+)	FGH J	J^{π} : 488.4 γ to (10 ⁺), 840.7 γ to (9 ⁺).
3782.6 5		FGH	
3803.6 8	(12^{+})	G	J^{π} : 1222.3 γ to (10) ⁺ , 406.4 γ from (14 ⁺).
3810.6 7		GH	
3839.0 3	(13) ⁻	DEFGH J	J^{π} : 905.8 γ E2, $\Delta J=2$ to (11) ⁻ , 364.0 γ M1, $\Delta J=1$ to (12) ⁻ .
3844.1 [#] 3	(14^{+})	GH	J^{π} : 494.8 γ to (12 ⁺), 283.2 γ to (14 ⁺); 158.2 γ from (15 ⁻), 291.5 γ from (16 ⁺).
3849.3 ^j 4	(13 ⁻)	E GH J	J^{π} : 577.9γ (Q), ΔJ=(2) to (11 ⁻).
3860.5 8		G	
3908.3 8		G	
3936.2 4		GH	
3984.8 11	(15^{-})	H	I^{π} : 441 6x E1 AI-1 to (14 ⁺)
4002.55	(13)	DEFGH	J^{*} : 441.07 E1, ΔJ =1 10 (14).
4135.5 3	(10^{+})	DEFGH	$J^{A}: 5/4.0\gamma$ (Q), $\Delta J = (2)$ to (14 ⁺).
4100.9 9	(14^{+})	G	I^{π} : 600.7 $_{24}$ (O) $\Lambda I = (2)$ to (12 ⁺)
4210.1 5	(14)	G	$J : 000.77 (Q), \Delta J = (2) to (12).$
4235.9 3	(12^{+})	EFGH J	J^{π} : 953.2 γ to (10 ⁺), 464.7 γ to (11 ⁺), 1302.6 γ to (11) ⁻ ; band assignment.
4262.4 7		G	
4264.8 ⁱ 4	(14^{-})	DE GH	J^{π} : 538.0 γ (O), $\Delta J=(2)$ to (12^{-}) , 415.6 γ to (13^{-}) .
4316.0 4	()	EFGH	
4332.7 3	(12)	EFGH	J^{π} : 858.0 γ (D), $\Delta J=(0)$ to (12) ⁻ .
4364.8 5	(16 ⁺)	G	J ^π : 904.0γ and 904.0γ (Q), $\Delta J=(2)$ to $(14)^+$; 220.3γ to (16^+) .
4365.2 <mark>8</mark> <i>3</i>	(14 ⁻)	DEFGH	J^{π} : 526.3 γ D, $\Delta J=1$, (M1) to (13) ⁻ ; band assignment.
4374.6 4	(16^{-})	DEFGH	J^{n} : 372.5 γ M1, Δ J=1 to (15 ⁻).
4375.8 3	(13 ⁺)	DEFGH	J [*] : 140.1 γ M1 to (12 ⁺), 536.8 γ (D) to (13) ⁻ .
4408.0 ^{<i>l</i>} 4	(15^{-})	DE GH	J^{n} : 143.4 γ D, $\Delta J=1$ to (14 ⁻), 558.6 γ to (13 ⁻).
4448.2 3	$(15)^{-}$	DEFGH	J^{n} : 609.2 γ E2, $\Delta J=2$ to (13) ⁻ .
4453.4 3	(15')	D GH	XREF: D(?). J ^π : 892.6γ D, Δ J=1 to (14 ⁺), 273.0γ from (16 ⁺).
4477.1 ^{j} 4	(15 ⁻)	E GH	J^{π} : 627.8 γ to (13 ⁻); band assignment.
4503.8 4	(14 ⁺)	G	J^{π} : 128.3 γ (D) to (13 ⁺), most likely (M1); proposed by 2009Ku03 in (³⁰ Si,4n γ).
			Continued on next page (footnotes at end of table)

¹⁹⁴Pb Levels (continued)

E(level) [†]	$J^{\pi \ddagger}$	T _{1/2}	XREF	Comments
4512.4 4	(14^{+})		DEFGH	J^{π} : 136.7 γ M1 to (13 ⁺).
4586.3 7			G	
4599.2 <i>4</i>	(17^{-})		DE GH	J^{π} : 596.9 γ (Q), $\Delta J=(2)$ to (15 ⁻).
4612.8 5	(16^{+})		G	J^{π} : 402.7 γ and 768.8 γ to (14 ⁺); 586.7 γ from (18 ⁺).
4615.6 4	(16 ⁻)		D GH	XREF: D(?). J ^π : 613.0γ D, Δ J=1 to (15 ⁻), most likely M1.
4641.1 [°] 6	(15^{+})		G	J^{π} : 797.0 γ and 1080.2 γ to (14 ⁺); band assignment.
4642.5 ^{&} 4	(15 ⁺)		DEFGH	XREF: D(?). J ^π : 130.1γ M1, Δ J=1 to (14 ⁺).
4683.1 [#] 6	(16 ⁺)		G	J^{π} : 839.0 γ to (14 ⁺), 516.5 γ from (18 ⁺).
4692.0 ^{<i>i</i>} 4	(16 ⁻)		DE GH	J^{π} : 284.0 γ (D), $\Delta J=(1)$ to (15 ⁻); band assignment.
4700.7 4	(18 ⁻)		DEFGH	J^{π} : 326.3 γ E2, ΔJ =2 to (16 ⁻).
4701.4 ^{&} 7	(16^{+})		DEFGH	J^{π} : band assignment.
4707.8 4	(15^{-})		GH	J^{π} : 869.8 γ to (13) ⁻ , 342.8 γ to (14 ⁻); proposed by 2009Ku03 in (³⁰ Si,4n γ).
4726.5 [°] 3	(16^{+})		DEFGH	J^{π} : 1165.5 γ (Q), ΔJ =(2) to (14 ⁺), 591.2 γ (D) to (16 ⁺).
4738.6 6	(16^{+})		G	J^{π} : 528.4 γ (Q), $\Delta J=(2)$ to (14 ⁺).
4764.4 ⁸ 4	(15^{-})		GH	J^{π} : 925.3 γ (Q) to (13 ⁻), 399.3 γ (M1) to (14 ⁻).
4767.2 ^{&} 6	(17^{+})		DEFGH	J ^π : 65.5γ D, Δ J=1 to (16 ⁺).
4794.9 [@] 4	(18^{+})		DEFGH	J^{π} : 659.4 γ E2, ΔJ =2 to (16 ⁺).
4877.78 ¹ 19	(6+)		J	J^{π} : from deexciting transitions to normal deformed levels (1996Lo12,1997Ha24). See (HI,xny):SD dataset.
4888.8 ^C 4	(17^{+})		DE GH	J^{π} : 162.3 γ D, $\Delta J=1$ to (16 ⁺); band assignment.
4930.1 ^{&} 5	(18^{+})		DEFGH	J^{π} : 162.9 γ M1, $\Delta J=1$ to (17 ⁺); band assignment.
4950.3 4	(17 ⁻)		GH	J^{π} : 947.9 γ (Q) to (15 ⁻), 575.7 γ to (16 ⁻).
4963.1 <i>4</i>	(16 ⁻)		DEFGH	J^{π} : 514.8 γ M1, $\Delta J=1$ to (15 ⁻).
4986.5 ^e 4	(17 ⁻)		DEFGH	J^{π} : 538.2 γ (Q) to (15) ⁻ , 294.6 γ to (16 ⁻).
5047.30 ^l 19	(8+)	14 ps 5	J	J ^π : 169.52γ (E2) to (6 ⁺); member of SD band. T _{1/2} : RDDS (1997Kr03) for 170γ. Deduced Q(transition)=17.3 +40-24 (1997Kr03).
5048.9 ⁸ 4	(16 ⁻)		G	J^{π} : 600.7 γ (M1) to (15) ⁻ in (³⁰ Si,4n γ).
5053.1 ^{<i>i</i>} 5 5059.2 5	(17 ⁻)		DE GH D GH	J^{π} : 361.1 γ (D), $\Delta J=(1)$ to (16 ⁻); band assignment. XREF: D(2).
5089.3 4	(18^{-})		DE GH	J^{π} : 714.8 γ (Q), ΔJ =(2) to (16 ⁻).
5105.7 ^e 5	(18-)		DEFGH	J^{π} : 119.2 γ M1, $\Delta J=(1)$ to (17 ⁻); band assignment.
5108.2 ^j 5	(17^{-})		E GH	J^{π} : 631.5 γ (Q) to (15 ⁻), 416.1 γ to (16 ⁻).
5113.5 <mark>8</mark> 5	(17 ⁻)		G	J^{π} : 636.1 γ (Q) to (15 ⁻), 150.6 γ (M1) to (16 ⁻).
5121.6 [°] 4	(18^{+})		DE GH	J^{π} : 232.8 γ D, $\Delta J=1$ to (17 ⁺); band assignment.
5179.2 5	(17^{-})		G	J^{π} : 731.0 γ (Q) to (15 ⁻), 216.3 γ to (16 ⁻).
5199.6 6	(181)		G	$J'': 461.0\gamma$ (Q) to (16 ⁺).
5233.2°C 5	(19^+)		DEFGH	J^{π} : 303.1 γ M1, $\Delta J=1$ to (18 ⁺); band assignment.
5250.4° 5	(19)		DEFGH	$J^{\prime\prime}$: 144.8 γ MI, $\Delta J=1$ to (18); band assignment.
5250.04	(20^{+})	5.0.10	DE GH	J^{T} : 401. γ (Q) to (16°).
5260.56° 20	(10))	5.8 ps 12	J	$J^{*}: 213.26\gamma$ (E2) to (8 ⁺); member of SD band. T _{1/2} : RDDS (1997Kr03). Other: 6.0 ps 22 (RDDS,1994Kr18). Deduced O(transition)=20.7 +25-18 (1997Kr03).
5326.6 4	(19 ⁻)		DE GH	J^{π} : 727.5 γ (Q) to (17 ⁻).
5329.2 [#] 10			GH	
5376.1 11			G	
5384.1 <mark>8</mark> 6			G	
5409.6 [°] 4	(19 ⁺)		DE GH	J^{π} : 288.0 γ (D), $\Delta J=(1)$ to (18 ⁺); band assignment.
5433.5 ¹ 6	(18 ⁻)		GH	J^{π} : 380.4 γ to (17 ⁻); band assignment.
5447.2 ^e 5	(20 ⁻)		DEFGH J	J^{π} : 196.9 γ M1, $\Delta J=1$ to (19 ⁻); band assignment.

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¹⁹⁴Pb Levels (continued)

E(level) [†]	$J^{\pi \ddagger}$	T _{1/2}	XREF	Comments
5494.6 6	(19 ⁻)		DEFGH	J^{π} : 315.6 γ (Q) to (17 ⁻), 243.9 γ to (19 ⁻).
5516.88 ¹ 20	(12 ⁺)	3.8 ps 7	J	J^{π} : 256.32 γ (E2) to (10 ⁺); member of SD band. T _{1/2} : RDDS (1997Kr03). Other: 2.4 ps +14-10 (RDDS,1994Kr18). Deduced Q(transition)=18.2 +19-15 (1997Kr03).
5549.4 <i>4</i>	(20^{-})		DE GH	J^{π} : 459.9 γ (Q), $\Delta J=(2)$ to (18 ⁻).
5550.0 [@] 4	(20^{+})		DEFGH	J^{π} : 755.0 γ (Q), $\Delta J=(2)$ to (18 ⁺).
5630.1 ^{&} 5	(20^{+})		DEFGH	J^{π} : 396.9 γ M1, $\Delta J=1$ to (19 ⁺); band assignment.
5672.7 ^j 7			G	
5685.4? 7			Н	E(level): from $({}^{16}\text{O},6n\gamma)$ (2002Ka01) only.
5707.3° 6	(21 ⁻)	0.16 ps 5	DEFGH J	J^{*} : 260.1γ M1, ΔJ=1 to (20 ⁻); band assignment. T _{1/2} : from DSAM in (HI,xnγ):SD (1998Cl06); systematic uncertainty of 20% as stated in 1998Cl06 has been added in quadrature by evaluators.
5729.5 5	(20^{-})		DEFGH	J^{π} : 1028.2 γ E2, Δ J=2 to (18 ⁻).
5757.5° 4	(20^{+})		DE GH CH	$J^*: 34/.8\gamma$ D, $\Delta J=1$ to (19 ⁺); band assignment.
5784.9 8	(20)		G	$3 \cdot 1050.07 (Q), \Delta J - (2) to (10^{-}).$
5801.2 ^g 7			G	
5812.9 9			G	
5815.37 ¹ 20	(14+)	1.8 ps 5	J	J^{π} : 298.49 γ (E2) to (12 ⁺); member of SD band. T _{1/2} : from RDDS (1997Kr03) in (HI,xn γ):SD. Other: 1.8 ps +10–7 (RDDS.1994Kr18). Deduced O(transition)=18.5 +32–20 (1997Kr03).
5818.4 9	(19 ⁻)		G	J^{π} : 384.8 γ to (18 ⁻).
5824.0 7			GH	
5824.5 5	(21^{-})		GH	I^{π} , 591 2 (0) to (10 ⁻)
5907.75	(21^{-})		Gn	J : Joi 27 (Q) to (19).
5933.8 5	(20^{-}) (21^{+})		GH	J^{π} : 677.2 γ (D) to (20 ⁺).
5942.2 6	(20 ⁻)		GH	J^{π} : 1241.5 γ (Q) to (18 ⁻).
5973.4 ^{# 11}			G	
5993.3 ^h 6	(20 ⁻)		DE GH	J^{π} : 498.8 γ D, $\Delta J=1$ to (19 ⁻); band assignment.
6006.5 ^{&} 5 6028.3 <i>14</i>	(21 ⁺)		DEFGH GH	J^{π} : 376.3 γ M1, $\Delta J=1$ to (20 ⁺); 773.4 γ (Q) to (19 ⁺).
6043.4 ^e 6	(22 ⁻)	0.15 ps 3	DEFGH J	J^{π} : 336.1 γ M1, Δ J=1 to (21 ⁻); band assignment. T _{1/2} : from DSAM in (HI,xn γ):SD (1998Cl06); systematic uncertainty of 20% as stated in 1998Cl06 has been added in quadrature by evaluators
6083.3 <i>10</i> 6094.8 <i>9</i>	(21 ⁺)		G G	J^{π} : proposed by 2009Ku03 in (³⁰ Si,4n γ) based on 286.4 γ from (22 ⁺).
6122.2 ^h 6	(21^{-})		DE GH	J^{π} : 129.0 γ (D) to (20 ⁻); band assignment.
6131.8 ^c 5	(21^{+})		DE GH	J^{π} : 722.2 γ to (19 ⁺), 374.3 γ to (20 ⁺); band assignment.
6155.27 ¹ 21	(16^{+})		J	J^{π} : 339.9 γ (E2) to (14 ⁺); member of SD band.
6164.9 ^{<i>f</i>} 7	(21 ⁻)		G	J^{π} : 914.7γ, ΔJ=(2), (Q) to (19 ⁻), 256.2γ to (20 ⁻); band assignment.
6203.5 5	(21^{-})		DE GH	J^{π} : 654.1 γ (M1) to (20 ⁻).
6219.5 5	(22^+)		GH	$J^*: 962.9\gamma$ (Q) to (20 ⁺). $I^{\pi}: 1007.2\alpha$ (Q) to (20 ⁺).
6205.9° 12	(22)		G	$\mathbf{J} : 1007.27 (Q) to (20).$
6308.5^{k} 6	(21^{-})		GH	J^{π} : 759.0 γ to (20 ⁻); band assignment.
6318.1 ^h 6	(22^{-})		DE GH	J^{π} : 195.9 γ D. $\Delta J=1$ to (21 ⁻).
6329.8 6	()		G	
6369.9 <mark>&</mark> 5	(22 ⁺)		DEFGH	J^{π} : 363.4 γ M1, $\Delta J=1$ to (21 ⁺); band assignment.
6374.5 [@] 5	(22^{+})		D FGH	J^{π} : 824.4 γ (Q), ΔJ =(2) to (20 ⁺).
6416.0 ^{<i>a</i>} 5	(22+)		DEFGH	J^{π} : 409.4 γ (D) to (21 ⁺); band assignment.
6419.1 ^e 6	(23^{-})	0.13 ps 4	DEFGH J	J^{n} : 375.7 γ M1, $\Delta J=1$ to (22 ⁻); band assignment.

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¹⁹⁴Pb Levels (continued)

E(level) [†]	$J^{\pi \ddagger}$	T _{1/2}	XREF	Comments
	_			$T_{1/2}$: from DSAM in (HI,xn γ):SD (1998Cl06); systematic uncertainty of 20% as stated in 1998Cl06 has been added in quadrature by evaluators.
6426.2 6			GH	
6436.6 10			G	
6451.7 ^J 7 6489.4 5	(22 ⁻)		G GH	J^{π} : 286.8 γ to (21 ⁻), 1004.5 γ to (20 ⁻); band assignment.
6510.4 ^k 6	(22^{-})		GH	J^{π} : 201.9 γ to (21 ⁻), 961.1 γ to (20 ⁻); band assignment.
6526.4 ^h 6	(23 ⁻)		DE GH	J ^{π} : 208.4 γ D, Δ J=1 to (22 ⁻); band assignment.
6528.6 [°] 5	(22^{+})		DE GH	J ^{π} : 396.9 γ D, Δ J=1 to (21 ⁺); band assignment.
6535.47 ¹ 21	(18+)	>0.5 ps	J	J^{π} : 380.20 γ (E2) to (16 ⁺); member of SD band. T _{1/2} : from DSAM in (HI,xn γ) (1993Wi02).
6561.2 6			GH	
6573.1 10			G	
6598.9 9			G	
6630.4 ^{&} 5	(23^{+})		DEFGH	J^{π} : 260.6v M1, AI=1 to (22 ⁺); hand assignment.
6641.3 9	(20)		G	
6716.5 9			G	
6759.5 ^k 6	(23 ⁻)		GH	J^{π} : 249.1 γ D to (22 ⁻); band assignment.
6763.9 ^{<i>a</i>} 6	(23^{+})		EFGH	J^{π} : 348.0 γ D to (22 ⁺); band assignment.
6787.1 ^J 7	(23 ⁻)		G	J^{π} : 743.7 γ (D) to (22 ⁻); band assignment.
6795.9 ⁿ 6	(24 ⁻)		DE GH	J ^π : 269.5γ D, Δ J=1 to (23 ⁻), 753.6γ (Q) to (22 ⁻); band assignment.
6800.0 ⁰ 7	(23^{+})		G	J^{π} : 383.8 γ (M1) to (22 ⁺); band assignment.
6836.2° 6	(24)	0.13 ps 4	DEFGH J	J [*] : 417.0γ M1, ΔJ=1 to (23), 793.2γ to (22); band assignment. $T_{1/2}$: from DSAM in (HI,xnγ):SD (1998Cl06); systematic uncertainty of 20% as stated in 1998Cl06 has been added in quadrature by evaluators.
6842.6 ^{&} 5	(24^{+})		DEFGH	J^{π} : 212.2 γ D, $\Delta J=1$ to (23 ⁺); band assignment.
6906.1 [°] 7	(23^{+})		GH	J ^{π} : 377.4 γ to (22 ⁺); band assignment.
6955.5 ¹ 3	(20 ⁺)	0.24 ps +43-14	J	J^{π} : 420.0 γ to (18 ⁺); member of SD band. T _{1/2} : from DSAM in (HI,xn γ):SD (1993Wi02). Deduced Q(transition)=23 +14-10 (1993Wi02).
6961.8 <i>5</i>			GH	
7035.8 ^k 7	(24 ⁻)		GH	J ^{π} : 276.3 γ D to (23 ⁻); band assignment.
7036.0 8	(2.14)		GH	
7068.90 6	(24 ⁺)		GH	J^{π} : 268.8 γ to (23 ⁺); band assignment.
$7070.2^{\circ\circ} 6$ 7114.7 ^{<i>a</i>} 7	(25^+) (24^+)		DEF GH GH	J^{A} : 227.6 γ M1, $\Delta J=1$ to (24 ⁺); band assignment. J^{π} : 350.8 γ D to (23 ⁺); band assignment.
7124.5 ^h 7	(25 ⁻)		D GH	J ^{π} : 328.6 γ D to (24 ⁻); band assignment.
7138.7 <mark>5</mark> 9	(24 ⁻)		G	J^{π} : 351.6 γ to (23 ⁻); band assignment.
7160.1 6			GH	
7182.1 12 7260 0 ^e 7	(25^{-})		G FFCH	I^{π} : 423.8 v D to (24 ⁻); hand assignment
7277.6 [°] 12	(23^{+}) (24^{+})		GH	5. 425.07 D to (24), band assignment.
1301.00	(2(+))		GH	π , 267 2. D AL-1 to (25 [±]), hand
7347.4 11	(20)		G	$\mathbf{J} = 207.2\gamma \mathbf{D}, \Delta \mathbf{J} = 1.00 (23)$, band assignment.
7353.3 ^k 7	(25^{-})		GH	J^{π} : 317.5 γ D to (24 ⁻); band assignment.
7365.4 ^b 7	(25^+)		GH	J^{π} : 296.5 γ to (24 ⁺); band assignment.
7391.2 14	< 2 /		G	

¹⁹⁴Pb Levels (continued)

E(level) [†]	Jπ‡	T _{1/2}	XREF	Comments
7412.1 16			G	
7413.4 14			G	
7413.5 ¹ 3	(22+)	0.17 ps +10-7	J	J^{π} : 458.0 γ to (20 ⁺); member of SD band. T _{1/2} : from DSAM in (HI,xn γ):SD (1993Wi02). Deduced Q(transition)=22 +7-5 (1993Wi02).
7431.2 ^a 8 7433.1 <i>14</i>	(25 ⁺)		GH G	J^{π} : 316.5 γ D to (24 ⁺); band assignment.
7487.8 ^h 8	(26 ⁻)		GH	J^{π} : 363.3 γ D to (25 ⁻); band assignment.
7500.7 ^f 10	(25 ⁻)		G	J^{π} : 362.0 γ to (24 ⁻); band assignment.
7638.6 [°] 16	(25^+)		GH	J^{π} : 361.0 γ to (24 ⁺); band assignment.
7644.3 ^{&} 6	(27 ⁺)		DEFGH	J^{π} : 306.9 γ D, $\Delta J=1$ to (26 ⁺); band assignment.
7680.9 ⁰ 8	(26^+)		G	J^{π} : 315.5 γ to (25 ⁺); band assignment.
7701.9° 7	(26)		GH	J^{*} : 441.9 γ D to (25); band assignment.
7748 8 13	(26)		GH	J^{*} : 363.1 γ D to (25); band assignment.
7775.8 11			G	
7793.5 13			GH	
7822.8 11			G	
7860.7 <mark>^h 9</mark>	(27 ⁻)		GH	J^{π} : 372.9 γ D to (26 ⁻); band assignment.
7909.3 ^l 4	(24+)	0.13 ps 5	J	J^{π} : 495.8 γ to (22 ⁺); member of SD band. T _{1/2} : from DSAM in (HI,xn γ):SD (1993Wi02). Deduced Q(transition)=20 +5-3 (1993Wi02).
8005.1 ^{&} 8	(28^+)		EFGH	J^{π} : 360.8 γ D to (27 ⁺); band assignment.
8022.9 ^b 13	(27^{+})		G	J^{π} : 342.0 γ to (26 ⁺); band assignment.
8101.1 ^k 7	(27 ⁻)		GH	J ^{π} : 384.7 γ D to (26 ⁻); band assignment.
8130.1 ^e 8	(27 ⁻)		GH	J^{π} : 428.2 γ D to (26 ⁻); band assignment.
8173.7 12			G	
$8257.3^{h} 9$	(28)		GH	J^{π} : 396.6 γ D to (27); band assignment.
8354.5° 1/	(28^+)		G	J^{π} : 331.6 γ to (2/ ⁺); band assignment.
8398.8 9	(29^+)	0.00	EFGH	J^* : 393. $I\gamma$ to (28 ⁺); band assignment.
8441.8° 4	(261)	0.08 ps +4-5	J	$J^{*:}$ 523.5 γ to (24'); member of SD band. T _{1/2} : from DSAM in (HI,xn γ):SD (1993Wi02). Deduced Q(transition)=21 +10-4 (1993Wi02).
8513.6 ^k 8	(28 ⁻)		GH	J^{π} : 412.5 γ D to (27 ⁻); band assignment.
8515.1 ^e 13	(28 ⁻)		GH	J^{π} : 385.0 γ to (27 ⁻); band assignment.
8645.1 ^{<i>n</i>} 10	(29 ⁻)		GH	J^{π} : 387.8 γ D to (28 ⁻); band assignment.
8819.7 ^{x} 9	(30^+)		GH	J^{π} : 420.9 γ to (29 ⁺); band assignment.
9010.1^{l} 5	(29^{-}) (28^{+})	0.07 ps 2	G	$T_{1/2}$: from DSAM in (HI,xn γ):SD (1993Wi02). Deduced Q(transition)=20
and the second	(20-)			+4-2 (1993W102).
9036.6^{n} 14 0254.6^{e} 10	(30)		G	J^{π} : 391.5 γ to (29); band assignment.
9234.0 19	(30^{-})		G	J : 572.57 to (29^{+}) ; band assignment.
9200.0 10 $9437.6^{h} 17$	(31^{-})		Gn	J : 440.97 to (30 ⁻); band assignment
9437.0^{-17}	(31^{+})		U I	J^{π} : 602 A_{α} to (29 ⁺); member of SD hand
$9013.5 \ 5$	(30^{+})		CI CI	J = 003.47 to (20), memory of SD band.
9722.0 14	(32)		Gn	J : $402y$ to (31°) ; band assignment
10200.6 - 14 10251.6 - 7	(33^{+})		п	J . TOT.27 ID ($J2$), Danie assignment.
10231.0 /	(32)		L L	
$10923.9^{\circ}0$ 11630 1 $l^{\circ}0$	(34)		L	
11030.1 8	(50.)		J	

Continued on next page (footnotes at end of table)

¹⁹⁴Pb Levels (continued)

12369.6 ¹ 9 (38^+) J x ^d J G 154.6+x ^d 10 J+1 G 456.4+x ^d 12 J+2 G 857.8+x ^d 13 J+3 G 1245.5+x ^d 14 J+4 G 1643.0+x ^d 17 J+5 G 1928.8+x ^d 20 J+6 G 2152.1+x ^d 22 J+7 G 2395.0+x ^d 24 J+8 G y ^m J1×(10) J 241.2+y ^m 3 J1+2 J 521.8+y ^m 6 J1+6 J 1202.5+y ^m 6 J1+6 J 2383.3+y ^m 7 J1+14 J 3023.4+y ^m 8 J1+14 J 3567.2+y ^m 11 J1+18 J 2 ^d J2+6 J 2 ^f J2+6 J 2157.3+z ^m 9 J2+16 J 1284.2+z ^m 78 J2+6 J 1284.2+z ^m 79 J2+12 J 269.4+z ^m 10 J2+12 J	E(level) [†]	J ^π ‡	XREF	Comments
x^d JGE(level): x>4.6 MeV as shown in level scheme figure of 2009Ku03 in (30 Si,4ny).154.6+ x^d 10J+1G456.4+ x^d 12J+2G857.8+ x^d 13J+3G1245.5+ x^d 14J+4G1643.0+ x^d 17J+5G1928.8+ x^d 20J+6G2152.1+ x^d 22J+7G2395.0+ x^d 24J+8G y^m J1+2J521.8+ y^m J1+4J842.5+ y^m J1+4J1202.5+ y^m J1+10J2038.3+ y^m J1+10J2038.3+ y^m J1+14J3023.4+ y^m J1+16J260.9+ x^{2n} J2+4J90.4.2+ x^{2n} GJ2+4170.15+ x^{2n} J2+101284.2+ x^{2n} J2+101284.2+ x^{2n} J2+121264.9+ $4x^{2n}$ J2+121264.9+ $4x^{2n}$ J2+121264.9+ $4x^{2n}$ J2+12264.9+ $4x^{2n}$ J2+12264.9+ $4x^{2n}$ J2+12J264.9+ $4x^{2n}$ J2+14J264.9+ $4x^{2n}$ J2+14J264.9+ $4x^{2n}$ J2+14J264.9+ $4x^{2n}$ J2+14J264.9+ $4x^{2n}$ J2+14J264.9+ 4	12369.6 ¹ 9	(38+)	J	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	xd	J	G	E(level): x>4.6 MeV as shown in level scheme figure of 2009Ku03 in $({}^{30}Si,4n\gamma)$.
$456.4+x^d$ 12 $1+2$ G $857.8+x^d$ 13 $1+3$ G $1245.5+x^d$ 14 $1+4$ G $1643.0+x^d$ 17 $1+5$ G $1928.8+x^d$ 20 $1+6$ G $2152.1+x^d$ 22 $1+7$ G $2395.0+x^d$ 24 $1+8$ G y^m $11\approx(10)$ 1 $241.2+y^m$ 3 $11+2$ 1 $521.8+y^m$ 6 $11+6$ 1 $1202.5+y^m$ 6 $11+8$ 1 $1601.5+y^m$ 6 $11+10$ 1 $2038.3+y^m$ 7 $11+12$ 1 $2032.4+y^m$ 9 $11+16$ 1 $2032.4+y^m$ 9 $11+16$ 1 $2032.4+y^m$ 7 $12\approx(11)$ 1 $260.9+z^m$ 1244 1 9 $904.2+z^m$ $12+6$ 1 $1284.2+z^m$ $12+14$ $904.2+z^m$ 9 $12+12$ 12	154.6+x ^d 10	J+1	G	
857.8+ x^d 131+361245.5+ x^d 141+461643.0+ x^d 171+561928.8+ x^d 201+662152.1+ x^d 221+762395.0+ x^d 241+86 y^m 11 $\approx(10)$ 1241.2+ y^m 311+2521.8+ y^m 511+41842.5+ y^m 611202.5+ y^m 11+61202.5+ y^m 11+101203.3+ y^m 11+101233.3+ y^m 11+141303.4+ y^m 911+181 z^n 12 $\approx(11)$ 1260.9+ x^{2n} 12 $\approx(11)$ 1284.2+ x^{2n} 12 $\approx(11)$ <t< td=""><td>$456.4 + x^{d}$ 12</td><td>J+2</td><td>G</td><td></td></t<>	$456.4 + x^{d}$ 12	J+2	G	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$857.8 + x^{d}$ 13	I+3	G	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$1245 5 \pm x^{d} 14$	J+4	G	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$1643.0 \pm x^{d}$ 17	J+5	G	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$1078.8 \pm x^{d}$ 20	J+5	C	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$1920.0 \pm x = 20$	J+0 I+7	G	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$2132.1 + x^{-1}22$	J+7	G	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$2395.0+x^{\alpha}$ 24	J+8	G	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	y ^m	J1≈(10)	J	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	241.2+y ^m 3	J1+2	J	
$842.5+y^m 6$ $J1+6$ J $1202.5+y^m 6$ $J1+8$ J $1601.5+y^m 6$ $J1+10$ J $2038.3+y^m 7$ $J1+12$ J $2512.3+y^m 8$ $J1+14$ J $3023.4+y^m 9$ $J1+16$ J $3567.2+y^m 11$ $J1+18$ J z^n $J2\approx(11)$ J $260.9+z?^n 4$ $J2+2$ J $562.9+z?^n 5$ $J2+4$ J $904.2+z?^n 6$ $J2+6$ J $1284.2+z?^n 8$ $J2+8$ J $1701.5+z?^n 9$ $J2+10$ J $2157.3+z?^n 9$ $J2+12$ J $2649.4+z?^n 10$ $J2+14$ J	521.8+y ^m 5	J1+4	J	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	842.5+y ^m 6	J1+6	J	
$1601.5+y^m 6$ $JI+10$ J $2038.3+y^m 7$ $JI+12$ J $2512.3+y^m 8$ $JI+14$ J $3023.4+y^m 9$ $JI+16$ J $3567.2+y^m 11$ $JI+18$ J z^{ll} $J2\approx(11)$ J $260.9+z?^n 4$ $J2+2$ J $562.9+z?^n 5$ $J2+4$ J $904.2+z?^n 6$ $J2+6$ J $1284.2+z?^n 8$ $J2+8$ J $1701.5+z?^n 9$ $J2+10$ J $2649.4+z?^n 10$ $J2+12$ J $2649.4+z?^n 10$ $J2+14$ J	1202.5+y ^m 6	J1+8	J	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1601.5+y ^m 6	J1+10	J	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$2038.3 + y^m 7$	J1+12	J	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$2512.3 + y^m 8$	J1+14	J	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$3023.4 + v^m 9$	J1+16	J	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$3567.2 + v^m$ 11	J1+18	j	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	z ⁿ	J2≈(11)	1	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$260.9 + z?^{n}$ 4	J2+2	1	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$562.9+z^{n}.5$	J2+4	1	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$904.2 + 72^{n}$ 6	12+6	1	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$1284.2 \pm 72^{n}.8$	12+8	1	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1201.2+2.00 $1701.5+72^{n}.9$	12+10	1	
$2649.4+z?^{n}$ 10 J2+14 J	$2157.3 \pm \pi 2^{n}$ 0	12 + 12	5	
	2137.3+21 9 $2640 A + \pi 2^{11} 10$	J_{2+12}	ך ר	
$31/80\pm7''$ 13 17 ± 16 1	20+9.++2! 10 $3178 \cap_{\pm 7} n 13$	J_{2+14} I_{2+16}	J 1	

3178.0+z?ⁿ 13 J2+16 3741.2+z?ⁿ 15 J2+18

[†] From a least-squares fit to γ -ray energies, assuming $\Delta E \gamma = 0.3$ keV for those quoted to tenth of a keV and 1 keV for those quoted to nearest keV.

[‡] For levels populated in (HI,xn γ) reactions, it is assumed that spins ascend with excitation energy in such reactions, where yrast pattern of levels is populated.

[#] Band(A): Band based on (14⁺).

[@] Band(B): Band based on (12⁺).

& Band(C): Magnetic-rotational band-1 based on (15⁺) Configuration=AE11 and ABCE11 above the band crossing.

^{*a*} Band(D): Band based on (22^+) . This short band decays into band-1.

J

- ^b Band(E): Band based on (23^+) . This short band decays into band-1.
- ^c Band(F): Magnetic-rotational band-2 based on (15⁺). Configuration=AB8 and ABCD8 above the band crossing.

^d Band(G): Magnetic-rotational band-3. Configuration=AF11 and ABCF11 above the band crossing.

^e Band(H): Magnetic-rotational band-4 based on (17⁻). Configuration=AB11 and ABCD11 above the band crossing.

^f Band(I): Band based on (20⁻). This short band decays into band-4.

^g Band(J): Band based on (14⁻).

^h Band(K): Magnetic-rotational band-5 based on (20⁻). Configuration=ABEF11 and ABCDEF11 above the band crossing.

¹⁹⁴Pb Levels (continued)

^{*i*} Band(L): Magnetic-rotational band-6 based on (14⁻). Configuration=AE8.

- ^k Band(N): Magnetic-rotational band-7 based on (21⁻). This band may be continuation of band-6. Configuration=ABCE8.
- ¹ Band(O): SD-1 band. Band from 1997Ha24, 1996Br07, 1995Ga10, 1990Br10, 1990Hu10, 1993Wi02, 1993Ko08, 1993Ha20, 1994Hu10, 1994Kr18, 1995De26, 1996Lo12, 1997Ha44, 1997Kr03, 1998Va18, 1999Lu04, 2000Mc01). Average Q(intrinsic)=20.1 +3-5 (centroid-shift method) (1998Va18), 20.7 *19* (line shape analysis) (1998Va18); 20.6 *13* (1994Kr18). Percent population (1995De26): 1.0 2, 1.0 1, 1.2 3 in ¹⁸⁴W(¹⁶O,6n\gamma); 1.1 3 in ¹⁸⁴W(¹⁷O,7n\gamma); 0.7 2, 0.9 3 in ¹⁶⁴Dy(³⁴S,4n\gamma); 0.8 2 in ¹⁶²Dy(³⁶S,4n\gamma). From smooth extrapolation to J=0, the bandhead is estimated at 4640.7 4 (1997Ha24).
- ^{*m*} Band(P): SD-2 band. Band from 1994Hu10. Percent population ≈ 0.05 (5% of SD-1 band).
- ^{*n*} Band(Q): SD-3 band (?). Tentative (possibly a signature partner of SD-2 band) band from 1994Hu10 with percent population ≈ 0.06 (6% of SD-1 band).

^j Band(M): Band based on (9)⁻.

					Adopted Lev	els, Gamma	s (contin	ued)
						γ(¹⁹⁴ Pb)		
E_i (level)	\mathbf{J}_i^{π}	${\rm E}_{\gamma}^{\dagger}$	I_{γ}^{\dagger}	$E_f = J_f^{\pi}$	Mult.&	α ^b	$I_{(\gamma+ce)}$	Comments
930.70	0^+	930.6 [‡] 4		0.0 0+	E0		100	Mult.: from ce data in ¹⁹⁴ Bi ε decay (1987Va09). $\rho^2(E0)=0.00098$ 18 (2005Ki02,evaluation).
965.12	2+	965.1 <i>1</i>	100	0.0 0+	E2	0.00714		E_{γ} : weighted average of 965.0 2 from ¹⁹⁴ Bi ε decay, 965.1 3 from (³⁰ Si,4nγ), and 965.1 <i>I</i> from (¹⁶ O,6nγ).
1308.27	(2 ⁺)	343.2 [‡] 2 377.5 [‡] 3	17 [‡] 7 7 [‡] 3	965.12 2 ⁺ 930.70 0 ⁺	(E0+M1+E2)	0.72 11		Mult., α : from ce data in ¹⁹⁴ Bi ε decay (95 s).
		1308.3 [‡] 2	100 [‡] 20	$0.0 0^+$	(E2)	0.00400		Mult.: from ce data in ¹⁹⁴ Bi ε decay.
1540.13	4+	231.9 [‡] 2	0.42 [‡] 21	1308.27 (2+	[E2]	0.259		$\alpha(K)=0.1192 \ 17; \ \alpha(L)=0.1046 \ 16; \ \alpha(M)=0.0272 \ 4 \\ \alpha(N)=0.00687 \ 10; \ \alpha(O)=0.001248 \ 18; \ \alpha(P)=6.72\times10^{-5} \ 10 \\ E_{\gamma}: \ from \ ^{194}Bi \ \varepsilon \ decay \ (115 \ s + 125 \ s).$
		575.0 1	100.0 <i>15</i>	965.12 2+	E2	0.0212		E_{γ} : weighted average of 575.0 2 from ¹⁹⁴ Bi ε decay, 575.1 3 from (³⁰ Si,4nγ), and 575.0 <i>1</i> from (¹⁶ O,6nγ). I_{γ} : from ¹⁹⁴ Bi ε decay. Others: 100 <i>11</i> from (³⁰ Si,4nγ), 100 <i>12</i> from (¹⁶ O,6nγ), and 100 6 from (HI,xnγ):SD.
1636.92	(≤4)	671.8 [‡] 2	100	965.12 2+				
1738.78	$(1,2^+)$	773.5 [‡] 3	100 [‡] 50	965.12 2+				
		808.1 [‡] 3	20 [‡] 15	930.70 0+				
		1738.9 [‡] 3	30 [‡] 10	0.0 0+				
1820.29	(5)-	280.2 1	100	1540.13 4+	E1	0.0346		$\begin{split} & B(\text{E1})(\text{W.u.}) = 8.1 \times 10^{-6} + 18 - 13 \\ & \alpha(\text{K}) = 0.0283 \ 4; \ \alpha(\text{L}) = 0.00483 \ 7; \ \alpha(\text{M}) = 0.001127 \ 16 \\ & \alpha(\text{N}) = 0.000284 \ 4; \ \alpha(\text{O}) = 5.51 \times 10^{-5} \ 8; \ \alpha(\text{P}) = 5.06 \times 10^{-6} \ 7 \\ & E_{\gamma}: \text{ weighted average of } 280.3 \ 2 \ \text{from } ^{194}\text{Bi } \varepsilon \text{ decay } (125 \\ & \text{s} + 115 \ \text{s}), \ 280.1 \ 3 \ \text{from } (^{30}\text{Si}, 4n\gamma), \text{ and } 280.2 \ 1 \ \text{from } (^{16}\text{O}, 6n\gamma). \\ & Mult.: from ce and \gamma(\theta) \text{ in } (^{16}\text{O}, 6n\gamma), \ \gamma\gamma(\theta) \text{ in } (^{48}\text{Ca}, 4n\gamma), \text{ with } \Delta J = 1. \end{split}$
2019.18	(≤4)	710.9 [‡] 2	100	1308.27 (2+)			
2135.06	$(6)^{+}$	315 [°] 1	100	1820.29 (5)	50	0.0107		E_{γ} : from 1997Ha24 in (HI,xn γ) only.
		594.8 2	100	1540.13 4	E2	0.0196		E_{γ} : weighted average of 594.7 2 from ¹⁵ Bi ε decay (125 s+115 s), 594.9 3 from (³⁰ Si,4n γ), and 594.8 3 from (¹⁶ O,6n γ).
2241.26	(7)-	106.1 <i>10</i>	1.3 5	2135.06 (6)4	E1	0.378 11		Mult.: deduced by 2005Dr11 in (30 Si,4n γ) from total conversion coefficient obtained from delayed intensity balances (not given in 2005Dr11 explicitly).
		421.0 <i>I</i>	100	1820.29 (5)	E2	0.0451		$\begin{aligned} \alpha(\mathbf{K}) = 0.0301 \ 5; \ \alpha(\mathbf{L}) = 0.01129 \ 16; \ \alpha(\mathbf{M}) = 0.00284 \ 4 \\ \alpha(\mathbf{N}) = 0.000718 \ 10; \ \alpha(\mathbf{O}) = 0.0001345 \ 19; \ \alpha(\mathbf{P}) = 9.72 \times 10^{-6} \ 14 \\ \mathbf{E}_{\gamma}: \text{ weighted average of } 421.0 \ 2 \ \text{from } ^{194}\text{Bi } \varepsilon \text{ decay } (125 \\ \text{s} + 115 \ \text{s}), \ 420.9 \ 3 \ \text{from } (^{30}\text{Si}, 4n\gamma), \ \text{and } 421.0 \ 1 \ \text{from } (^{16}\text{O}, 6n\gamma). \end{aligned}$

10

 $^{194}_{82} \mathrm{Pb}_{112}\text{--}10$

L

From ENSDF

 $^{194}_{82} \mathrm{Pb}_{112} \text{--} 10$

$\gamma(^{194}\text{Pb})$ (continued)

E_i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_f J ²	Mult. ^{&}	δ	$\alpha^{\boldsymbol{b}}$	Comments
2298.83 2407.46	(5 ⁻ ,6 ⁻) (9) ⁻	478.7 [‡] 2 166.2 <i>1</i>	100 100	1820.29 (5) 2241.26 (7)	- - E2		0.831	E _γ : tentative placement from 1996Lo12. B(E2)(W.u.)=2.15 +46-32 $\alpha(K)=0.255 4$; $\alpha(L)=0.430 7$; $\alpha(M)=0.1129 16$ $\alpha(N)=0.0285 4$; $\alpha(O)=0.00512 8$; $\alpha(P)=0.000238 4$ E _γ : weighted average of 166.2 2 from ¹⁹⁴ Bi ε decay (125 s+115 s), 166.3 3 from (³⁰ Si 4m) and 166.2 4 from (¹⁶ O 6m)
2407.8	$(4^+, 5, 6^+)$	272 [°] 1 867 1		2135.06 (6) $1540.13 4^{+}$	+			E_{γ} : from (HI,xn γ):SD (1997Ha24). E_{γ} : from (HI,xn γ):SD (1997Ha24).
2419.64	(8-)	178.3 2	100	2241.26 (7)	- (M1+E2)	<0.7	1.62 20	
2437.53	(8)+	196.2 2	25 3	2241.26 (7)	- (E1)		0.0818	B(E1)(W.u.)= $2.8 \times 10^{-7} + 10 - 6$ $\alpha(K)=0.0664 \ 10; \ \alpha(L)=0.01178 \ 17; \ \alpha(M)=0.00276 \ 4$ $\alpha(N)=0.000694 \ 10; \ \alpha(O)=0.0001334 \ 19; \ \alpha(P)=1.163 \times 10^{-5} \ 17$ E _{γ} : weighted average of 196.1 2 from ¹⁹⁴ Bi ε decay (125 s+115 s), 196.0 5 from (³⁰ Si,4n γ), and 196.4 3 from (¹⁶ O,6n γ). I _{γ} : weighted average of 24.4 22 from ¹⁹⁴ Bi ε decay (125 s+115 s) and 40 12 from (³⁰ Si,4n γ). Other: 78 17 from (¹⁶ O,6n γ) is discrepant. Mult.: from ce data in ¹⁹⁴ Bi ε decay (125 s+115 s) and γ asymmetry in (H1 xna):SD
		302.5 1	100 5	2135.06 (6)	+ E2		0.1127	(III,XIIY).5D. B(E2)(W.u.)=0.142 +44-27 $\alpha(K)=0.0638 \ 9; \ \alpha(L)=0.0367 \ 6; \ \alpha(M)=0.00942 \ 14$ $\alpha(N)=0.00238 \ 4; \ \alpha(O)=0.000438 \ 7; \ \alpha(P)=2.69\times10^{-5} \ 4$ E _{γ} : weighted average of 302.5 2 from ¹⁹⁴ Bi ε decay (125 s+115 s), 302.1 3 from (³⁰ Si,4n γ), and 302.6 1 from (¹⁶ O,6n γ). I _{γ} : from ¹⁹⁴ Bi ε decay (125 s+115 s). Others: 100 16 from (³⁰ Si,4n γ), 100 28 from (¹⁶ O,6n γ), and 100 23 from (HI,xn γ):SD. Mult : from ce data in ¹⁹⁴ Bi ε decay (125 s+115 s) and (¹⁶ O,6n γ).
2502.07	(8-)	260.9 2	100	2241.26 (7)	- (M1)		0.626	a(K)=0.511 8; α(L)=0.0875 13; α(M)=0.0205 3 α(N)=0.00521 8; α(L)=0.0875 13; α(M)=0.0205 3 α(N)=0.00521 8; α(O)=0.001039 15; α(P)=0.0001111 16 E _γ : weighted average of 261.1 2 from ¹⁹⁴ Bi ε decay (125 s+115 s), 260.5 5 from (³⁰ Si,4nγ), and 260.5 3 from (¹⁶ O,6nγ). Mult.: from ce data in ¹⁹⁴ Bi ε decay (125 s+115 s) and γγ(θ) in (⁴⁸ Co 4mα) with A1=1
2524.4	(8 ⁺)	86 [°] 1 283 1		2437.53 (8) 2241.26 (7)	+ -			E_{γ} : from 1997Ha24 in (HI,xn γ):SD only. E_{γ} : from 1997Ha24 in (HI,xn γ):SD and 2005Dr11 in (³⁰ Si.4n γ).
2581.18	(10)+	55 ^c 173.7 <i>1</i>	100	2524.4 (8 2407.46 (9)	-) - E1		0.1105	E_{γ} : from (³⁰ Si,4nγ) (2009Ku03) only. B(E1)(W.u.)=2.02×10 ⁻⁶ 6

					Adopte	d Levels, Gamm	as (continued)
						$\gamma(^{194}\text{Pb})$ (conti	nued)
E _i (level)	J_i^π	E_{γ}^{\dagger}	I_{γ}^{\dagger}	$\mathbf{E}_f \qquad \mathbf{J}_f^{\pi}$	Mult. ^{&}	$\alpha^{\boldsymbol{b}}$	Comments
							$\alpha(K)=0.0894 \ 13; \ \alpha(L)=0.01613 \ 23; \ \alpha(M)=0.00379 \ 6$
							α (N)=0.000951 14; α (O)=0.000182 3; α (P)=1.556×10 ⁻³ 22
							E_{γ} : weighted average of 1/3.9 2 from 15 Bi ε decay (125 s+115 s),
							$1/5.05$ from $(-51,411\gamma)$, and $1/5.77$ from $(-0,011\gamma)$. Mult : $AI = 1$ from $a(\alpha(\theta))$ in $(\frac{48}{2}C_0 An\alpha)$
2608-31		787 9 2		$1820.29(5)^{-1}$			F : from 194 Bi s decay: tentative placement by 1996L o12 in
2000.01		101.7 2		1020.29 (3)			(HLxny):SD. Other: 788 from (HLxny).
2628.33	(12^{+})	46.8 4	100	2581.18 (10)+	[E2]	221 10	B(E2)(W.u.)=0.460 +34-32
							α (L)=165 8; α (M)=43.4 20
							$\alpha(N)=10.95; \alpha(O)=1.939; \alpha(P)=0.0663$
							E_{γ} : from ce data in ¹⁹⁴ Bi ε decay (1987Va09). Other: 47.0 from ce data
0700.2	$(4\pm 4, 0\pm)$	((10.0	100	2125.06 (6)+			in $({}^{+0}Ca,4n\gamma)$ (1991Fa05).
2799.3	$(4^{+} to 8^{+})$	664.2 2	100	2135.06 (6)			E_{γ} : weighted average of 664.2 2 from ¹⁵ Bi ε decay (125 s+115 s) and $\epsilon \epsilon 4.0.5$ from ϵ^{30} s: (and
2013 30	(0^{-})	67212	100	$2241.26(7)^{-1}$	(0)		1004.0 J HOIII ($^{-1}\text{SI},411\gamma$).
2915.50	(9)	072.12	100	2241.20 (7)	(Q)		E_{γ} . weighted average of 0.71.8.2 from (10) by E_{γ} (12) $S = 115$ S), 672.1.5 from (³⁰ Si 4ng) and 672.3.2 from (¹⁶ O 6ng)
							Mult : from $\gamma \gamma(\theta)$ in $({}^{48}Ca 4n\gamma)$ and $\gamma(\theta)$ in $({}^{16}O 6n\gamma)$ AI=(2)
2930.75	(9^{+})	493.2.1	100	$2437.53(8)^+$			$E_{\rm ac}$: from (¹⁶ 0.6ny). Others: 493.2.2 from ¹⁹⁴ Bi ε decay (125 s+115 s)
2700170	(-)	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	100	2107100 (0)			and 493.2 5 from $({}^{30}Si.4n\gamma)$.
2933.21	$(11)^{-}$	304.9 1	100 3	2628.33 (12 ⁺)	E1	0.0284	$B(E1)(W.u.)=2.50\times10^{-8}+15-14$
							$\alpha(K)=0.0233$ 4; $\alpha(L)=0.00393$ 6; $\alpha(M)=0.000918$ 13
							α (N)=0.000231 4; α (O)=4.50×10 ⁻⁵ 7; α (P)=4.18×10 ⁻⁶ 6
							E_{γ} : weighted average of 304.8 2 from ¹⁹⁴ Bi ε decay (125 s+115 s) and
							304.9 <i>I</i> from (16 O,6n γ). Other: 304.4 <i>10</i> from (30 Si,4n γ).
							I _{γ} : from (³⁰ Si,4n γ) (2005Dr11). Others: 100 27 from ¹⁹⁴ Bi ε decay
							$(125 \text{ s}+115 \text{ s})$ and $100 \ 20 \text{ from} ({}^{40}\text{Ca},4n\gamma)$.
		252 1 2	04.2	2591.19(10)+	E 1	0.0205	Mult.: from ce data in (10 O,6n γ) (1986Pa18).
		352.1 3	94 3	2581.18 (10)	EI	0.0205	$B(E1)(W.U.)=1.53\times10^{-5}+10-8$ $\alpha(K)=0.01682.24; \alpha(L)=0.00280.4; \alpha(M)=0.000652.10$
							$\alpha(\mathbf{N})=0.001642\ 24;\ \alpha(\mathbf{\Omega})=3.21\times10^{-5}\ 5;\ \alpha(\mathbf{P})=3.03\times10^{-6}\ 5$
							E_{v} : weighted average of 352.3 2 from ¹⁹⁴ Bi ε decay (125 s+115 s) and
							$351.8\ 2\ \text{from}\ ({}^{16}\text{O},6n\gamma)$. Other: $351.4\ 10\ \text{from}\ ({}^{30}\text{Si},4n\gamma)$.
							I_{γ} : from (³⁰ Si,4n γ) (2005Dr11). Others: 159 21 from ¹⁹⁴ Bi ε decay
							(125 s+115 s) and 164 10 from (48 Ca,4n γ) are discrepant.
							Mult.: from ce data and $\gamma\gamma$ (DCO) in (¹⁶ O,6n γ), ce data in (³⁶ S,4n γ),
							and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ). Other: ce(K) data in ¹⁹⁴ Bi ε decay gives
		105 7 10	11.0.72	0427 52 (D)±	(122)	0 1005 16	E2, but the ce(K) line is very weak (1987Va09). $P(F_{2})(W_{1}) \ge 20 (+27.2)$
		495./ 10	11.8 13	2437.53 (8) ⁺	[E3]	0.1005 16	B(E3)(W.U.)=30.0 + 37 - 30 $\alpha(K)=0.0530 + 37 - 30$
							$\alpha(N) = 0.00335 4$, $\alpha(\Omega) = 0.000437 8$, $\alpha(P) = 3.06 \times 10^{-5} 5$

12

From ENSDF

 $^{194}_{82} \mathrm{Pb}_{112}\text{--}12$

L

						Adopted	Levels	, Gammas	(continued)
						- -	γ(¹⁹⁴ Pl	o) (continu	ed)
E _i (level)	${ m J}^{\pi}_i$	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_f	\mathbf{J}_f^{π}	Mult. ^{&}	δ	$\alpha^{\boldsymbol{b}}$	Comments
									 E_γ: weighted average of 495.3 <i>10</i> from (³⁰Si,4nγ) and 496 <i>1</i> from (¹⁶O,6nγ). Not seen in (⁴⁸Ca,4nγ). I_γ: from (³⁰Si,4nγ) (2005Dr11). Other: I(496γ)/I(352γ)=100 38/100 25 in(¹⁶O 6nγ)
2933.21	(11) ⁻	526	2.3 6	2407.46	(9)-	[E2]		0.0260	B(E2)(W.u.)=1.70×10 ⁻⁵ +44-46 α (K)=0.0187 3; α (L)=0.00556 9; α (M)=0.001377 21 α (N)=0.000349 6; α (O)=6.61×10 ⁻⁵ 10; α (P)=5.27×10 ⁻⁶ 8 E. L : from (³⁰ Si 4ng) (2005Dr11) only
3207.39	(10 ⁻)	705.4 2	40 9	2502.07	(8 ⁻)	(Q)			E_{γ} , E_{γ} , weighted average of 705.3 5 from (³⁰ Si,4n γ) and 705.4 2 from (¹⁶ O,6n γ).
		787.6 2	100 5	2419.64	(8-)	(Q)			I_{γ} : weighted average of 52 <i>13</i> from (³⁰ Si,4nγ) and 33 <i>10</i> from (¹⁰ O,6nγ). E_{γ} : weighted average of 787.5 <i>3</i> from (³⁰ Si,4nγ) and 787.7 <i>2</i> from (¹⁶ O,6nγ). I_{γ} : from (¹⁶ O,6nγ). Other: 100 <i>18</i> from (³⁰ Si,4nγ).
		800.3 3	28 8	2407.46	(9)-				Mult.: from $\gamma\gamma(\theta)$ in (⁴⁶ Ca,4n γ) and $\gamma(\theta)$ in (¹⁰ O,6n γ), with ΔJ =(2). E $_{\gamma}$: weighted average of 799.5 5 from (³⁰ Si,4n γ) and 800.4 2 from (¹⁶ O,6n γ).
3271.34	(11 ⁻)	358.1 <i>3</i>	21 10	2913.30	(9 ⁻)				I _{γ} : weighted average of 43 <i>13</i> from (³⁰ Si,4n γ) and 24 7 from (¹⁶ O,6n γ). E _{γ} : weighted average of 357.9 5 from (³⁰ Si,4n γ) and 358.1 3 from (¹⁶ O,6n γ).
		863.8 2	100 11	2407.46	(9)-	(Q)			I_{γ} : unweighted average of 11.7 44 from (⁵⁰ S1,4n γ) and 31.1 67 from (¹⁶ O,6n γ). E_{γ} : weighted average of 863.7 3 from (³⁰ S1,4n γ) and 863.9 2 from (¹⁶ O,6n γ).
3282.74	(10 ⁺)	351.8 2	46 14	2930.75	(9+)				<i>I</i> _γ : from (¹⁰ O, 6ηγ). Other: 100 <i>I</i> ³ from (²⁰ S1,4ηγ). Mult.: from $γ(θ)$ in (³⁰ Si,4ηγ) and (¹⁶ O, 6ηγ), ΔJ=(2). <i>E</i> _γ : weighted average of 352.0 <i>5</i> from (³⁰ Si,4ηγ) and 351.8 <i>2</i> from (¹⁶ O, 6ηγ).
		845.4 2	100 22	2437.53	(8)+				I _{γ} : from (³⁰ Si,4n γ). E _{γ} : weighted average of 845.2 5 from (³⁰ Si,4n γ) and 845.4 2 from (¹⁶ O,6n γ).
3349.1	(12 ⁺)	720.8 <i>5</i> 767.9 <i>2</i>	85 26 100 28	2628.33 2581.18	(12^+) $(10)^+$	(Q)			 I_γ: from (³⁰Si,4nγ). E_γ,I_γ: from (³⁰Si,4nγ). E_γ: weighted average of 767.8 5 from (³⁰Si,4nγ) and 767.9 2 from (¹⁶O,6nγ).
3372.8	(11 ⁻)	459.5 2	100	2913.30	(9 ⁻)	(Q)			$I_{\gamma}: \text{ from } ({}^{30}\text{Si},4n\gamma).$ Mult.: from γ(θ) in (${}^{30}\text{Si},4n\gamma$). E _γ : from (${}^{16}\text{O},6n\gamma$). Other: 459.5 5 from (${}^{30}\text{Si},4n\gamma$), 459.4 from (${}^{48}\text{Ca},4n\gamma$).
3382.3	(10+,11,12+)	754.0 <i>10</i> 801.0 <i>10</i>	100 <i>46</i> 45 <i>18</i>	2628.33 2581.18	(12^+) $(10)^+$				Mult.: from $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), Δ J=(2).

$\gamma(^{194}\text{Pb})$ (continued)

E_i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbf{E}_{f}	J_f^π	Mult.&	α b	Comments
3470.6 3474.8	(12)-	671.3 <i>5</i> 541.7 <i>2</i>	100 100	2799.3 2933.21	(4 ⁺ to 8 ⁺) (11) ⁻	M1	0.0874	$\alpha(K)=0.0716 \ 10; \ \alpha(L)=0.01204 \ 17; \ \alpha(M)=0.00281 \ 4$ $\alpha(N)=0.000715 \ 10; \ \alpha(O)=0.0001426 \ 20; \ \alpha(P)=1.529\times10^{-5} \ 22$ E_{γ} : weighted average of 542.0 3 from (³⁰ Si,4n γ) and 541.6 2 from (¹⁶ O,6n γ). Mult.: from ce and $\gamma(\theta,pol)$ in (¹⁶ O,6n γ), $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), and ce data in (³⁶ S 4n γ). $\Delta I=1$.
3521.9		722.5 10	100	2799.3	(4 ⁺ to 8 ⁺)			
3545.2		614.4 10	100	2930.75	(9 ⁺)			20 1/
3560.8	(14+)	932.5 1	100	2628.33	(12 ⁺)	E2	0.00764	E_{γ} : weighted average of 932.4 <i>3</i> from (³⁰ Si,4nγ) and 932.5 <i>l</i> from (¹⁰ O,6nγ). Mult.: from ce and $\gamma(\theta)$ in (¹⁶ O,6nγ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4nγ), $\Delta J=2$.
3564.4		765.0 10	100	2799.3	$(4^+ \text{ to } 8^+)$			20
3609.4	(12^{+})	980.9 2		2628.33	(12^{+})			E_{γ} : weighted average of 981.0 <i>10</i> from (³⁰ Si,4n γ) and 980.9 2 from (¹⁶ O,6n γ).
		1028.2 3	100	2581.18	(10)+	(Q)		E_{γ} : weighted average of 1028.0 5 from (³⁰ Si,4n γ) and 1028.3 3 from (¹⁶ O,6n γ).
								Mult.: from $\gamma(\theta)$ in (⁵⁰ Si,4n γ).
3647.3	(12 ⁺)	1066.0 <i>3</i>	100	2581.18	$(10)^{+}$	(Q)		E_{γ} : weighted average of 1066.1 5 from (³⁰ Si,4n γ) and 1065.9 3 from (¹⁶ O,6n γ).
								Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
3726.9	(12^{-})	454.8 10	62	3271.34	(11^{-})			E_{γ} : weighted average of 455.5 <i>10</i> from (⁵⁰ Si,4n γ) and 456 <i>1</i> from (¹⁰ O,6n γ).
								I_{γ} : weighted average of 11.3 36 from (³⁰ Si,4n γ) and 5.9 20 from (¹⁶ O,6n γ).
		519.6 2	100 10	3207.39	(10 ⁻)	(Q)		E_{γ} : weighted average of 519.7 <i>3</i> from (³⁰ Si,4n γ) and 519.6 <i>2</i> from (¹⁶ O,6n γ). I_{γ} : from (¹⁶ O,6n γ) and (³⁰ Si,4n γ). Mult : from $\alpha(0)$ in (³⁰ Si,4n γ).
2771.0	(11^{+})	100 1 2	01 24	2202 74	(10^{\pm})			F is uniabled eveness of $488.0.5$ from $(^{30}Si 4nc)$ and $488.4.2$ from $(^{10}O 6nc)$
5771.2	(11)	400.4 2	01 24	3262.74	(10)			E_{γ} , weighted average of 400.0 5 from (30,5; 4nz) and 400.8 2 from (160 (rg)).
2702 (840.7 3	100 50	2930.75	(9^{+})			E_{γ} : weighted average of 840.0 5 from (*S1,4n γ) and 840.8 2 from (*O,0n γ).
3782.6		1154.4 5	100	2628.33	(12)			E_{γ} : weighted average of 1154.0 <i>10</i> from (⁵⁰ S1,4n γ) and 1154.5 5 from (¹⁶ O,6n γ).
3803.6	(12^{+})	1222.3 10	100	2581.18	$(10)^{+}$			
3810.6		1229.2 10	100	2581.18	$(10)^{+}$			
3839.0	(13)-	364.0 <i>3</i>	100 4	3474.8	(12) ⁻	M1	0.252	$\alpha(K)=0.206\ 3;\ \alpha(L)=0.0351\ 5;\ \alpha(M)=0.00821\ 12$ $\alpha(N)=0.00209\ 3;\ \alpha(O)=0.000416\ 6;\ \alpha(P)=4.45\times10^{-5}\ 7$
								E_{γ} : from (³⁰ Si,4nγ). Other: 364 <i>1</i> from (¹⁶ O,6nγ), 364.6 from (⁴⁸ Ca,4nγ), 364.4 from (⁴⁰ Ar,4nγ). I_{γ} : from (⁴⁸ Ca,4nγ). Others: 100 <i>16</i> from (³⁶ S,4nγ) and 100 <i>13</i> from (³⁰ Si,4nγ).
								(-51,4117).
								Mult.: from ce and $\gamma(\theta, \text{pol})$ in (*0,6n γ) and $\gamma\gamma(\theta)$ in (*0Ca,4n γ), with $\Delta J=1$.
		905.8 2	85 2	2933.21	(11)-	E2	0.00809	E_{γ} : weighted average of 906.0 <i>3</i> from (³⁰ Si,4nγ) and 905.7 <i>2</i> from (¹⁶ O,6nγ). Others: 907.1 from (⁴⁸ Ca,4nγ), 906.0 from (⁴⁰ Ar,4nγ), 906.3 from (³⁶ S,4nγ).

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¹⁹⁴₈₂Pb₁₁₂-14

					Ad	opted Leve	els, Gamma	as (continued)
						$\gamma(^{194}$	⁴ Pb) (contin	nued)
E _i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbf{E}_{f}	\mathbf{J}_f^{π}	Mult. ^{&}	$\alpha^{\boldsymbol{b}}$	Comments
								I _γ : from (⁴⁸ Ca,4nγ). Other: 73 <i>13</i> from (³⁶ S,4nγ). Mult.: from ce and $\gamma(\theta,\text{pol})$ in (¹⁶ O,6nγ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4nγ), with ΔJ =2.
3844.1	(14 ⁺)	283.2 <i>10</i> 494.8 <i>5</i>	17 8 100 <i>3</i> 8	3560.8 3349.1	(14 ⁺) (12 ⁺)			16
3849.3	(13 ⁻)	1215.6 <i>3</i> 476.2 <i>10</i>	8.7 <i>3</i>	2628.33 3372.8	(12^+) (11^-)			E_{γ} : other: 1215.5 5 from (¹⁰ O,6n γ).
	()	577.9 3	100 13	3271.34	(11 ⁻)	(Q)		E_{γ} : weighted average of 577.8 <i>3</i> from (³⁰ Si,4n γ) and 577.9 <i>3</i> from (¹⁶ O,6n γ).
3860.5		1232.1 10	100	2628.33	(12^+)			
3908.3 3936.2		1279.9 10 553 7 10	100	2628.33	(12^+) $(10^+ 11 12^+)$			
5950.2		587.0 3	100 32	3349.1	(12 ⁺)			E_{γ} : weighted average of 586.9 5 from (³⁰ Si,4n γ) and 587.0 3 from (¹⁶ O,6n γ).
3984.8		612 ^c	100	3372.8	(11 ⁻)			E_{γ} : from 2002Ka01 in (¹⁶ O,6n γ) only.
4002.3	(15 ⁻)	158.2 2	4.5 13	3844.1	(14+)			E_{γ} : weighted average of 158.5 5 from (³⁰ Si,4n γ) and 158.1 2 from (¹⁶ O,6n γ).
		441.6 2	100 14	3560.8	(14 ⁺)	E1	0.01244	E_{γ} : weighted average of 441.7 3 from (³⁰ Si,4n γ) and 441.6 2 from (¹⁶ O,6n γ).
								AJ=1. Notice and $\gamma(\theta, \text{pol})$ in (*0,6n γ) and $\gamma\gamma(\theta)$ in (*Ca,4n γ),
4135.5	(16 ⁺)	291.5 10	0.96 40	3844.1	(14 ⁺)			
		574.6 2	100 11	3560.8	(14 ⁺)	(Q)		E_{γ} : weighted average of 574.7 <i>3</i> from (³⁰ Si,4nγ) and 574.6 2 from (¹⁶ O,6nγ).
4160.0		(15 (10	100	2545.2				Mult.: from $\gamma(\theta)$ in (¹⁶ O,6n γ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=(2)$.
4160.9 4210.1	(14^{+})	615.6 <i>10</i> 406 4 <i>10</i>	100 38 <i>14</i>	3545.2 3803.6	(12^{+})			
4210.1	(14)	562.6 10	39 14	3647.3	(12^{+})			
		600.7 5	100 25	3609.4	(12 ⁺)	(Q)		Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
4214.8		365.5 5	100	3849.3	(13 ⁻)			20
4235.9	(12 ⁺)	464.7 2	84 25	3771.2	(11 ⁺)			E_{γ} : weighted average of 465.0 5 from (³⁰ Si,4n γ) and 464.7 2 from (¹⁶ O,6n γ).
		953.2 2	100 28	3282.74	(10 ⁺)			E_{γ} : weighted average of 953.0 5 from (³⁰ Si,4n γ) and 953.2 2 from (¹⁶ O,6n γ).
		1302.6 5		2933.21	(11)-			E_{γ} : weighted average of 1302.9 <i>10</i> from (³⁰ Si,4n γ) and 1302.5 5 from (¹⁶ O,6n γ).
4262.4		354.0 10		3908.3				
		401.8 <i>10</i> 479.9 <i>10</i>		3860.5 3782.6				
4264.8	(14 ⁻)	(50 [@])	20.0	4214.8	(12-)			
		415.6 10	20.8	3849.3	(13^{-})	$\langle \mathbf{O} \rangle$		$E_{1} = \frac{1}{2} \frac{1}$
		538.0 2	100 18	3726.9	(12)	(Q)		E_{γ} : weighted average of 537.9.3 from (5°S1,4n γ) and 538.1.2 from (¹⁶ O,6n γ).

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$\gamma(^{194}\text{Pb})$ (continued)

E _i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbf{E}_{f}	J_f^π	Mult.&	α b	Comments
4316.0		505.5 10	18 9	3810.6				
		533.7 10		3782.6				
		668.6 10	33 13	3647.3	(12^+)			
		/06./ 10	100 31	3609.4	(12^{+})			
		794 2 10	$\frac{13}{20.9}$	3521.9				
		845.4 10	49 18	3470.6				
		1687.5 5		2628.33	(12^{+})			E_{γ} : weighted average of 1687.7 10 from (³⁰ Si,4n γ) and 1687.5 5 from (¹⁶ O,6n γ).
4332.7	(12)	98 ^c		4235.9	(12^{+})			E_{γ} : from 1993Me12 in (⁴⁰ Ar,4n γ) only.
		171.8 10	4 2	4160.9				
		521.9 <i>10</i>	74	3810.6				
		550.1 10	14.6	3782.6	(10+)			
		685.0 <i>10</i>	14 0	3647.3	(12^{+})			F_{1} , from (160 (m)), Othern 722.1.5 from (308: And)
		723.1 3	38 12 7 3	3009.4 3564.4	(12^{+})			E_{γ} : from (~0,0n γ). Other: 723.1 3 from (~31,4n γ).
		810.6 10	11.5	3521.9				
		858.0 2	100 23	3474.8	$(12)^{-}$	(D)		E_{γ} : weighted average of 857.7 5 from (³⁰ Si,4n γ) and 858.0 2 from (¹⁶ O,6n γ).
								I_{γ} : from (³⁰ Si,4n γ). Other: 100 28 from (¹⁶ O,6n γ).
								Mult.: from $\gamma(\theta)$ in (¹⁶ O,6n γ), $\Delta J=(0)$.
		861.8 <i>19</i>	12 6	3470.6				
		1399.5 5		2933.21	$(11)^{-}$			E_{γ} : weighted average of 1399.7 10 from (³⁰ Si,4n γ) and 1399.5 5 from (¹⁶ O,6n γ).
		1704.5 8		2628.33	(12^{+})			E_{γ} : weighted average of 1704.1 10 from (³⁰ Si,4n γ) and 1704.7 8 from (¹⁶ O,6n γ).
4364.8	(16 ⁺)	229.3 10	34 15	4135.5	(16^+)			
		520.8 10	100 34	3844.1	(14^{+})	(Q)		Mult.: from $\gamma(\theta)$ in (³⁰ S1,4n γ).
1265.0	(1.4-)	804.0 10	94 43	3560.8	(14^{+})	(Q)		Mult.: from $\gamma(\theta)$ in ($^{55}S_{1,4}n\gamma$).
4365.2	(14)	526.3 2	100 24	3839.0	(13)	(M1)		E_{γ} : weighted average of 526.0 3 from (³⁰ Si,4n γ) and 526.4 2 from (³⁰ O,6n γ). Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=1$.
		890.4 <i>3</i>	40 9	3474.8	$(12)^{-}$			E_{γ} : weighted average of 890.0 5 from (³⁰ Si,4n γ) and 890.6 3 from (¹⁶ O,6n γ).
4374.6	(16 ⁻)	372.5 2	100	4002.3	(15^{-})	M1	0.237	$\alpha(K)=0.194 \ 3; \ \alpha(L)=0.0329 \ 5; \ \alpha(M)=0.00771 \ 11$
								$\alpha(N)=0.00196$ 3; $\alpha(O)=0.000391$ 6; $\alpha(P)=4.18\times10^{-3}$ 6
								E_{γ} : from (100,6n γ). Other: 372.5 3 from (1081,4n γ).
	(1.0.1)	(12)						Mult.: from ce and $\gamma(\text{pol})$ in (100,0n γ), $\gamma\gamma(\theta)$ in (100,a,4n γ), $\Delta J=1$.
4375.8	(13+)	(43)		4332.7	(12)			E_{γ} : inferred from $\gamma\gamma$ -coin in (³⁰ S1,4n γ) (2009Ku03) and (¹⁰ O,6n γ) (2002Ka01), not observed directly.
		140.1 3		4235.9	(12^{+})	M1	3.57	$\alpha(K)=2.925; \alpha(L)=0.5048; \alpha(M)=0.118318$
								$\alpha(N)=0.03015; \alpha(O)=0.0059910; \alpha(P)=0.00064010$
		506.0.0	100 15	2020.0	(10) -			E_{γ} : weighted average of 139.7 10 from (⁵⁰ Si,4n γ) and 140.1 3 from (¹⁰ O,6n γ).
4 4 0 0 0	(15-)	536.8 2	100 15	3839.0	(13)	(D)		E_{γ} : weighted average of 536.6 3 from (³⁰ Si,4n γ) and 536.9 2 from (¹⁰ O,6n γ).
4408.0	(15)	145.4 3	100 25	4204.8	(14)	D		E_{γ} : weighted average of 143.2 5 from (³⁰ Si (4rg) and 145.4 5 from (¹⁰ U, $\delta n\gamma$).
								I_{γ} . weighted average of 100 25 from (\Im Si,4iry) and 100 29 from (\Im O,0ir γ). Mult : from $\alpha(\beta)$ in (${}^{16}\Omega$ Gray) and $\alpha\alpha(\beta)$ in (${}^{48}\Omega$ Area). A I=1
		558 6 3	47 13	3840 3	(13^{-})			F : weighted average of 558.8 10 from $({}^{30}$ Si 4na) and 558.6 3 from $({}^{16}$ O 6na)
		550.0 5	17 15	50 17.5	(15)			I_{γ} : weighted average of 39 13 from (³⁰ Si,4n γ) and 57 14 from (¹⁶ O,6n γ).

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γ (¹⁹⁴Pb) (continued)

E_i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbf{E}_{f}	J_f^{π}	Mult. ^{&}	α b	Comments
4448.2	(15)-	(83 [@])		4365.2	(14 ⁻)			E_{γ} : inferred from $\gamma\gamma$ -coin in (³⁰ Si,4n γ) (2009Ku03) and (¹⁶ O,6n γ) (2002Ka01), not observed directly.
		609.2 2	100	3839.0	(13)-	E2	0.0186	E _γ : weighted average of 609.0 <i>3</i> from (30 Si,4nγ) and 609.3 <i>2</i> from (16 O,6nγ). Mult.: from ce data in (16 O,6nγ) and (36 S,4nγ), $\gamma\gamma(\theta)$ in (48 Ca,4nγ), $\Delta J=2$.
4453.4	(15^{+})	516.9 5	48 15	3936.2				
		609.0 10	31 11	3844.1	(14^{+})			
		892.6 2	100 22	3560.8	(14+)	D		E_{γ} : weighted average of 892.2 5 from (³⁰ Si,4n γ) and 892.7 2 from (¹⁶ O,6n γ). Mult : from $\gamma(\theta)$ in (¹⁶ O 6n γ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca 4n γ) AI=1
4477.1	(15^{-})	627.8.3	100	3849.3	(13^{-})			$E_{\rm ac}$: weighted average of 627.7.5 from (³⁰ Si 4ny) and 627.9.3 from (¹⁶ O 6ny).
4503.8	(14 ⁺)	128.3 10		4375.8	(13 ⁺)	(M1)	4.59 <i>13</i>	$\alpha(K)=3.74$ 10; $\alpha(L)=0.649$ 18; $\alpha(M)=0.152$ 4 $\alpha(N)=0.0387$ 11; $\alpha(O)=0.00771$ 21; $\alpha(P)=0.000823$ 22 Mult.: (D) from $\gamma(\theta)$ in (³⁰ Si,4n γ), most likely M1.
		567.6 5	78 20	3936.2				
		664.9 5	100 32	3839.0	$(13)^{-}$			
4512.4	(14+)	136.7 4		4375.8	(13 ⁺)	M1	3.83 7	$\alpha(K)=3.13 5; \alpha(L)=0.541 9; \alpha(M)=0.1269 21$ $\alpha(N)=0.0322 6; \alpha(O)=0.00643 11; \alpha(P)=0.000687 12$ E_{γ} : weighted average of 137.0 10 from (³⁰ Si,4n γ) and 136.6 4 from (¹⁶ O,6n γ). This γ is placed from the 4643 level by 2002Ka01 in (¹⁶ O,6n γ) and here replaced by evaluators based on that of 2009Ku03 in (³⁰ Si,4n γ).
		668.4 10	100	3844.1	(14^{+})			
4586.3		803.6 10		3782.6				
		1025.2 10	100	3560.8	(14^{+})			
4599.2	(17 ⁻)	596.9 2	100	4002.3	(15 ⁻)	(Q)		E_{γ} : weighted average of 596.6 <i>3</i> from (³⁰ Si,4nγ) and 597.0 2 from (¹⁶ O,6nγ). Mult.: from $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4nγ), $\Delta J=(2)$.
4612.8	(16^{+})	248.0 5	74 22	4364.8	(16^{+})			
		350.5 10		4262.4				
		402.7 5	100 32	4210.1	(14^{+})			
		768.8 10	36 13	3844.1	(14^{+})			
4615.6	(16 ⁻)	613.0 2	100	4002.3	(15 ⁻)	D		E_{γ} : weighted average of 613.1 5 from (³⁰ Si,4nγ) and 613.0 2 from (¹⁶ O,6nγ). Mult.: from $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4nγ), ΔJ =1.
4641.1	(15^{+})	797.0 10	16 8	3844.1	(14^{+})			
		1080.2 6	100 34	3560.8	(14^{+})			
4642.5	(15 ⁺)	130.1 4		4512.4	(14+)	M1	4.41 8	α (K)=3.60 6; α (L)=0.623 11; α (M)=0.1462 25 α (N)=0.0372 7; α (O)=0.00741 13; α (P)=0.000791 14
								E _γ : weighted average of 130.2 <i>10</i> from (50 Si,4nγ) and 130.1 <i>4</i> from (10 O,6nγ). This γ is placed from 4506 level by 2002Ka01 in (16 O,6nγ) and replaced here by evaluators based on that of 2009Ku03 in (30 Si,4nγ). I _γ : 200 50 from (16 O,6nγ), but no intensity reported by 2009Ku03 in (30 Si,4nγ).
		138.9 10		4503.8	(14+)	[M1]	3.66 10	$\alpha(K)=2.99 \ 8; \ \alpha(L)=0.517 \ 13; \ \alpha(M)=0.121 \ 3 \ \alpha(N)=0.0308 \ 8; \ \alpha(O)=0.00614 \ 16; \ \alpha(P)=0.000656 \ 17$
		506.9 <i>3</i>	100 <i>31</i>	4135.5	(16+)			E_{γ} : weighted average of 507.1 5 from (³⁰ Si,4n γ) and 506.8 3 from (¹⁶ O,6n γ). I_{γ} : other: 100 50 from (¹⁶ O,6n γ).

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γ (¹⁹⁴Pb) (continued)

E _i (level)	\mathbf{J}_i^{π}	${\rm E_{\gamma}}^{\dagger}$	I_{γ}^{\dagger}	E_f	J_f^π	Mult. ^{&}	$\alpha^{\boldsymbol{b}}$	Comments
4642.5	(15 ⁺)	1081.7 5	37 17	3560.8	(14 ⁺)			E_{γ} : weighted average of 1081.8 <i>10</i> from (³⁰ Si,4nγ) and 1081.7 5 from (¹⁶ O,6nγ).
								I_{γ} : other: 166 66 from (¹⁶ O,6n γ).
4683.1	(16^{+})	839.0 5	100	3844.1	(14^{+})			20
4692.0	(16 ⁻)	215.0 10	73	4477.1	(15^{-})	(D)		Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
		284.0 2	100 21	4408.0	(15 ⁻)	(D)		E_{γ} : weighted average of 283.9 5 from (³⁰ Si,4n γ) and 284.0 2 from (¹⁶ O,6n γ).
								Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=(1)$.
4700.7	(18^{-})	326.3 2	100	4374.6	(16 ⁻)	E2	0.0903	$\alpha(K)=0.0535 8; \alpha(L)=0.0277 4; \alpha(M)=0.00707 10$
								$\alpha(N)=0.00179 \ 3; \ \alpha(O)=0.000330 \ 5; \ \alpha(P)=2.11\times10^{-3} \ 3$
								E_{γ} : weighted average of 326.2 <i>3</i> from (³⁰ Si,4n γ) and 326.3 <i>2</i> from (¹⁶ O,6n γ).
								Mult.: from ce and $\gamma(\theta, \text{pol})$ in (¹⁶ O,6n γ), $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=2$.
4701.4	(16^{+})	58.3 10		4642.5	(15^{+})			
		248.3 10		4453.4	(15^{+})			20
4707.8	(15 ⁻)	342.8 2	100 24	4365.2	(14 ⁻)			E_{γ} : weighted average of 342.8 5 from (³⁰ Si,4n γ) and 342.8 2 from (¹⁶ O,6n γ).
		868.8 10	78 24	3839.0	(13)-			
4726.5	(16+)	(85 [@])		4641.1	(15 ⁺)	[M1]	2.78 11	α (L)=2.13 8; α (M)=0.499 <i>19</i> α (N)=0.127 5; α (O)=0.0253 <i>10</i> ; α (P)=0.00270 <i>11</i>
		140.0 10		4586.3				
		273.0 <i>3</i>	100 18	4453.4	(15^{+})			E_{γ} : from (¹⁶ O,6n γ). Other: 273.0 5 from (³⁰ Si,4n γ).
		591.2 2	86 24	4135.5	(16^{+})	(D)		E_{γ} : weighted average of 590.5 5 from (³⁰ Si,4n γ) and 591.2 2 from
								(¹⁶ Ο,6nγ).
								I_{γ} : other: I(591.2 γ)/I(273.0 γ)=100 15/38 15 is discrepant.
		1165.5 5	29 11	3560.8	(14 ⁺)	(Q)		E_{γ} : weighted average of 1165.2 <i>10</i> from (³⁰ Si,4n γ) and 1165.6 <i>5</i> from (¹⁶ O,6n γ).
4738.6	(16^{+})	528.4 10	100 35	4210.1	(14^{+})	(Q)		Mult.: from $\gamma(\theta)$ in $({}^{30}\text{Si},4n\gamma)$.
		894.5 10	83 30	3844.1	(14^{+})			
4764.4	(15 ⁻)	399.3 5	92 24	4365.2	(14 ⁻)	(M1)		Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
		925.3 5	100 32	3839.0	(13)-	(Q)		Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
4767.2	(17^{+})	65.5 10	100	4701.4	(16 ⁺)	D		E_{γ} : this γ is placed from a 2646 level by 2002Ka01 in (¹⁶ O,6n γ), 1994Po08
								in $({}^{36}S,4n\gamma)$ and 1993Me12 in $({}^{40}Ar,4n\gamma)$; it is placed from an unknown level by 1991Ea05 in $({}^{48}Ca,4n\gamma)$
								Mult : from $\gamma\gamma(\theta)$ in $({}^{48}Ca 4n\gamma) \wedge I=1$
4794.9	(18 ⁺)	659.4 2	100	4135.5	(16 ⁺)	E2	0.01562	E _{γ} : weighted average of 659.2 <i>3</i> from (³⁰ Si,4n γ) and 659.5 2 from (¹⁶ O.6n γ).
								Mult.: from ce and $\gamma(\theta)$ in (¹⁶ O,6n γ), $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=2$.
4877.78	(6^{+})	2353.4 [#] 3	93 <mark>#</mark> 20	2524.4	(8^{+})			
1077170		2359.7 3	50 [#] 20	2407.8	$(4^+ 5 6^+)$			
		2+09.7 4	$100^{\#} 20$	2407.0	(+, 5, 0)			
		25/9.1" 2	100" 20	2298.83	(5,6)			

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γ (¹⁹⁴Pb) (continued)

E _i (level)	\mathbf{J}_i^π	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_f	\mathbf{J}_f^{π}	Mult. ^{&}	$\alpha^{\boldsymbol{b}}$	Comments
4877.78	(6^{+})	2636.6 [#] 2	63 [#] 13	2241.26	$(7)^{-}$	$(E1)^{a}$	1.43×10^{-3}	
	(~)	2742.5 [#] 2	90 [#] 13	2135.06	$(6)^+$	$(M1)^{a}$	0.00231	
		$3056.4^{\#}$ 12	27# 17	1820.29	$(5)^{-}$	()		
4888.8	(17^{+})	150.1 10	63	4738.6	(16^+)			
		162.3 2	45 6	4726.5	(16 ⁺)	D		E_{γ} : weighted average of 162.6 5 from (³⁰ Si,4n γ) and 162.2 2 from (¹⁶ O,6n γ).
								I _{γ} : weighted average of 47 3 from (⁴⁸ Ca,4n γ), 78 22 from (³⁰ Si,4n γ), and 29 7 from (¹⁶ O,6n γ).
								Mult.: from $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), Δ J=1.
		753.3 2	100 14	4135.5	(16+)	(D)		E_{γ} : weighted average of 753.1 5 from (³⁰ Si,4n γ) and 753.3 2 from (¹⁶ O.6n γ).
								I_{γ} : from (¹⁶ O,6n γ). Others: 100 25 from (⁴⁸ Ca,4n γ) and 100 30 from (³⁰ Si 4n γ)
4930.1	(18^{+})	162.9 2	100	4767.2	(17^{+})	M1	2.33	$\alpha(K)=1.90 \ 3; \ \alpha(L)=0.328 \ 5; \ \alpha(M)=0.0770 \ 12$
								α (N)=0.0196 3; α (O)=0.00390 6; α (P)=0.000417 6
								E_{γ} : weighted average of 163.0 <i>3</i> from (³⁰ Si,4n γ) and 162.9 2 from (¹⁶ O.6n γ).
								Mult.: from ce and $\gamma(\theta)$ in (¹⁶ O,6n γ), $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=1$.
4950.3	(17 ⁻)	575.7 10	68 22	4374.6	(16 ⁻)			E_{γ} : weighted average of 575.4 <i>10</i> from (³⁰ Si,4n γ) and 576 <i>1</i> from (¹⁶ O,6n γ).
								I _{γ} : weighted average of 60 22 from (³⁰ Si,4n γ) and 100 43 from (¹⁶ O 6n γ)
		947.9 2	100 29	4002.3	(15^{-})	(\mathbf{O})		E_{α} : from (¹⁶ O.6n γ). Other: 947.9.5 from (³⁰ Si.4n γ).
		2.1.12 -			()			I_{γ} : from (³⁰ Si,4n γ). Other: 100 57 from (¹⁶ O,6n γ).
								Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
4963.1	(16 ⁻)	198.4 10	1.3 8	4764.4	(15 ⁻)			E_{γ} : weighted average of 198.4 <i>10</i> from (³⁰ Si,4n γ) and 197 <i>1</i> from (¹⁶ O 6n γ).
								I_{γ} : weighted average of 1.5 9 from (³⁰ Si.4n γ) and 1.2 8 from (¹⁶ O.6n γ).
		255.5 3	2.6 9	4707.8	(15 ⁻)			E_{γ} : weighted average of 254.9 <i>10</i> from (³⁰ Si,4n γ) and 255.5 <i>3</i> from (¹⁶ O 6n γ)
		514.8 2	100 10	4448.2	$(15)^{-}$	M1	0.0999	$\alpha(K)=0.0819$ 12; $\alpha(L)=0.01379$ 20; $\alpha(M)=0.00322$ 5
					()			$\alpha(N)=0.000819$ 12; $\alpha(O)=0.0001633$ 23; $\alpha(P)=1.750\times10^{-5}$ 25
								E_{γ} : weighted average of 514.7 <i>3</i> from (³⁰ Si,4n γ) and 514.8 <i>2</i> from (¹⁶ O 6n γ)
								$L_{\rm c}$: from (³⁰ Si 4ny) Other: 100 12 from (¹⁶ O 6ny)
								Mult.: from ce and $\gamma(\theta, \text{pol})$ in (¹⁶ O, 6ny), $\gamma\gamma(\theta)$ in (⁴⁸ Ca.4ny), $\Lambda I=1$
		597.7 10	2.2 7	4365.2	(14 ⁻)			
4986.5	(17-)	(24 [@])		4963.1	(16 ⁻)	[M1]	115 16	$\alpha(L)=88 \ 12; \ \alpha(M)=21 \ 3$
		~ /			. /			$\alpha(N)=5.2$ 7; $\alpha(O)=1.04$ 15; $\alpha(P)=0.111$ 15
		294.6 <i>3</i>	90 26	4692.0	(16 ⁻)			E_{γ} : weighted average of 294.0 <i>10</i> from (³⁰ Si,4n γ) and 294.6 <i>3</i> from (¹⁶ O,6n γ).

γ (¹⁹⁴Pb) (continued)

E _i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbf{E}_{f}	\mathbf{J}_f^π	Mult.&	$\alpha^{\boldsymbol{b}}$	Comments
4986.5	(17^{-})	538.2 10	100 39	4448.2	$(15)^{-}$	(O)		Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
5047.30	(8+)	169.52 [#] 4	100 [#] 7	4877.78	(6^+)	$(E2)^{a}$	0.773	$B(E2)(W.u.)=5.1\times10^2 +40-17$
	(0)				(-)	()		$\alpha(K)=0.244$ 4; $\alpha(L)=0.394$ 6; $\alpha(M)=0.1035$ 15
								α (N)=0.0261 4; α (O)=0.00470 7; α (P)=0.000220 3
		2116.5 [#] 4	2.8 [#] 16	2930.75	(9+)	(M1+E2) ^{<i>a</i>}	0.0026 6	$B(M1)(W.u.) < 3.3 \times 10^{-6}; B(E2)(W.u.) < 3.0 \times 10^{-4}$
		2438.5 [#] 4	3.1 [#] 10	2608.31				
		2609.6 [#] 4	5.3 [#] 19	2437.53	$(8)^{+}$	(M1) ^{<i>a</i>}	0.00241	$B(M1)(W.u.)=11\times10^{-7}+5-3$
		2627.9 [#] 4	4.1 [#] 19	2419.64	(8 ⁻)	(E1) ^{<i>a</i>}	1.43×10^{-3}	$B(E1)(W.u.)=7.7\times10^{-9}+39-20$
		2806.1 [#] 3	5.3 [#] 9	2241.26	$(7)^{-}$	(E1) ^{<i>a</i>}	1.48×10^{-3}	$B(E1)(W.u.)=8.1\times10^{-9}+34-18$
5048.9	(16 ⁻)	284.4 5	39 12	4764.4	(15 ⁻)			
		600.7 <i>3</i>	100 24	4448.2	(15)-	(M1)		Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
5053.1	(17 ⁻)	361.1 3	100 22	4692.0	(16 ⁻)	(D)		E_{γ} : weighted average of 361.0 5 from (³⁰ Si,4n γ) and 361.2 3 from (¹⁶ O,6n γ).
								Mult.: from $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=(1)$.
		644.9 10	35 12	4408.0	(15 ⁻)			
5059.2		1056.8 4		4002.3	(15 ⁻)			E_{γ} : weighted average of 1056.7 5 from (³⁰ Si,4n γ) and 1056.9 4 from (¹⁶ O,6n γ).
5089.3	(18-)	473.5 2	50 14	4615.6	(16 ⁻)			E_{γ} : weighted average of 473.9 <i>10</i> from (³⁰ Si,4n γ) and 473.5 2 from (¹⁶ O,6n γ).
		714.8 2	100 21	4374.6	(16 ⁻)	(Q)		E_{γ} : weighted average of 714.5 5 from (³⁰ Si,4n γ) and 714.9 2 from (¹⁶ O,6n γ).
								Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ), but $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ) gives (D) with λ J=(1).
5105.7	(18 ⁻)	119.2 2	100	4986.5	(17^{-})	M1	5.66	$\alpha(K)=4.62$ 7; $\alpha(L)=0.801$ 12; $\alpha(M)=0.188$ 3
								α (N)=0.0478 7; α (O)=0.00952 15; α (P)=0.001017 15
								E_{γ} : weighted average of 119.5 5 from (³⁰ Si,4n γ) and 119.2 2 from (¹⁶ O,6n γ).
								Mult.: from ce and $\gamma(\theta)$ in (¹⁶ O,6n γ), $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=(1)$.
5108.2	(17 ⁻)	416.1 4	49 20	4692.0	(16 ⁻)			E_{γ} : weighted average of 415.8 <i>10</i> from (³⁰ Si,4n γ) and 416.2 4 from (¹⁶ O,6n γ).
								I_{γ} : from (³⁰ Si,4n γ). Other: 133 67 from (¹⁶ O,6n γ).
		631.5 7	100 35	4477.1	(15 ⁻)	(Q)		E_{γ} : unweighted average of 630.8 5 from (³⁰ Si,4n γ) and 632.1 3 from (¹⁶ O,6n γ).
								I_{γ} : from (³⁰ Si,4n γ). Other: 100 33 from (¹⁶ O,6n γ). Mult : from $g(\theta)$ in (³⁰ Si,4n γ)
5112 5	(17^{-})	$(65^{@})$		5048.0	(16^{-})			
5115.5	(17)	150.6.5	100.26	JU40.9 /063 1	(10^{-})	(M1)		Mult: from $\gamma(\theta)$ in $({}^{30}Si(4n\gamma))$
		636 1 <i>10</i>	37 15	4903.1	(10^{-})	$(\mathbf{M}\mathbf{I})$		Mult : from $\gamma(\theta)$ in $(30,540\gamma)$.
5121.6	(18^{+})	232.8.2	100	4888.8	(13^{+})	D		$F_{\rm eff}$ ($^{16}\Omega$ 6nv) Other: 232.8.5 from (30 Si 4nv)
5121.0	(10)	252.0 2	100	1000.0	(1)	2		Mult.: from $\gamma(\theta)$ in (¹⁶ O,6n γ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), Δ J=1.

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$\gamma(^{194}\text{Pb})$ (continued)

E_i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_f	\mathbf{J}_{f}^{π}	Mult. ^{&}	$\alpha^{\boldsymbol{b}}$	Comments
5179.2	(17^{-})	216.3 10	95	4963.1	(16^{-})			
		731.0 5	100 18	4448.2	$(15)^{-}$	(Q)		Mult.: from $\gamma(\theta)$ in $({}^{30}\text{Si},4n\gamma)$.
5199.6	(18^{+})	461.0 5	100 24	4738.6	(16^{+})	(Q)		Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
		516.5 10	14 7	4683.1	(16^{+})			
		586.7 10		4612.8	(16^{+})			
5233.2	(19+)	303.1 2	100	4930.1	(18^{+})	M1	0.415	$\alpha(K)=0.339\ 5;\ \alpha(L)=0.0579\ 9;\ \alpha(M)=0.01355\ 20$
								$\alpha(N)=0.00344\ 5;\ \alpha(O)=0.000686\ 10;\ \alpha(P)=7.34\times10^{-5}\ 11$
								E_{γ} : weighted average of 303.0 <i>3</i> from (³⁰ Si,4n γ) and 303.2 <i>2</i> from (¹⁶ O,6n γ).
								Mult.: from ce and $\gamma(\theta)$ in (¹⁶ O,6n γ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=1$.
5250.4	(19 ⁻)	144.8 2	100	5105.7	(18 ⁻)	M1	3.25	$\alpha(K)=2.65$ 4; $\alpha(L)=0.459$ 7; $\alpha(M)=0.1076$ 16
								α (N)=0.0274 4; α (O)=0.00545 8; α (P)=0.000582 9
								E_{γ} : weighted average of 145.0 <i>3</i> from (³⁰ Si,4n γ) and 144.7 2 from (¹⁶ O,6n γ).
								Mult.: from ce and $\gamma(\theta)$ in (¹⁶ O,6n γ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=1$.
5256.6	(20+)	461.7 2	100	4794.9	(18+)	(Q)		E_{γ} : weighted average of 461.6 <i>3</i> from (³⁰ Si,4n γ) and 461.8 2 from (¹⁶ O,6n γ).
								Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
5260.56	(10^{+})	213.26 [#] 3	100 [#] 6	5047.30	(8^{+})	(E2) ^{<i>a</i>}	0.343	$B(E2)(W.u.)=2.4\times10^3+6-4$
								$\alpha(K)=0.1451\ 21;\ \alpha(L)=0.1478\ 21;\ \alpha(M)=0.0385\ 6$
								$\alpha(N)=0.00973 \ 14; \ \alpha(O)=0.001764 \ 25; \ \alpha(P)=9.12\times 10^{-5} \ 13$
		1887.9 [#] 3	1.6 [#] 7	3372.8	(11^{-})	(E1) ^{<i>a</i>}	1.29×10^{-3}	$B(E1)(W.u.) = 7.6 \times 10^{-8} + 30 - 23$
5326.6	(19 ⁻)	375.9 5	51 19	4950.3	(17 ⁻)			E_{γ} : weighted average of 375.9 5 from (³⁰ Si,4n γ) and 376 1 from (¹⁶ O,6n γ).
								I_{γ} : weighted average of 43 11 from (³⁰ Si.4n γ) and 95 25 from (¹⁶ O.6n γ).
		727.5 2	100 15	4599.2	(17 ⁻)	(Q)		E_{γ} : weighted average of 727.2 5 from (³⁰ Si,4n γ) and 727.5 2 from (¹⁶ O.6n γ).
								L_{x} : from (¹⁶ O, 6ny). Other: 100 22 from (³⁰ Si 4ny).
								Mult.: from $\gamma(\theta)$ in (³⁰ Si.4n γ), but $\gamma\gamma(\theta)$ in (⁴⁸ Ca.4n γ) gives (D) with
								$\Delta J=(1).$
5329.2		646.0 10	100	4683.1	(16^{+})			
5376.1		323.0 10	100	5053.1	(17 ⁻)			
5384.1		205.0 10	15 7	5179.2	(17^{-})			
		270.7 5	100 33	5113.5	(17^{-})			
5409.6	(19 ⁺)	288.0 2	100 24	5121.6	(18 ⁺)	(D)		E_{γ} : weighted average of 288.1 <i>3</i> from (³⁰ Si,4n γ) and 287.9 2 from (¹⁶ O,6n γ).
								I_{γ} : trom (³⁰ S1,4n γ). Other: 100 24 trom (¹⁰ O,6n γ).
								Mult.: from $\gamma(\theta)$ in (¹⁰ O,6n γ) and $\gamma\gamma(\theta)$ in (⁴⁰ Ca,4n γ), ΔJ =(1).
		614.7 3	29 9	4794.9	(18 ⁺)	(D)		E_{γ} : weighted average of 614.8 5 from (⁵⁰ Si,4n γ) and 614.7 3 from (¹⁶ O,6n γ).
								I_{γ} : from (³⁰ S1,4n γ). Other: 29 <i>12</i> from (¹⁰ O,6n γ).

$\gamma(^{194}\text{Pb})$ (continued)

E _i (level)	\mathbf{J}_i^π	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbf{E}_{f}	\mathbf{J}_f^{π}	Mult. <mark>&</mark>	$\alpha^{\boldsymbol{b}}$	Comments
5433.5	(18-)	380.4 <i>3</i> 741 5 10	100 32	5053.1	(17^{-})			E_{γ} : weighted average of 380.5 5 from (³⁰ Si,4n γ) and 380.4 3 from (¹⁶ O,6n γ).
5447.2	(20 ⁻)	196.9 2	100	5250.4	(10 ⁻)	M1	1.368	$\alpha(K)=1.117 \ 16; \ \alpha(L)=0.192 \ 3; \ \alpha(M)=0.0450 \ 7 \\ \alpha(N)=0.01144 \ 17; \ \alpha(O)=0.00228 \ 4; \ \alpha(P)=0.000244 \ 4 \\ E_{\gamma}: \text{ weighted average of } 197.0 \ 3 \ \text{from } ({}^{30}\text{Si},4n\gamma) \text{ and } 196.9 \ 2 \ \text{from } ({}^{16}\text{O},6n\gamma). \\ \text{Mult: from ce and } \chi(\theta) \text{ in } ({}^{16}\text{O},6n\gamma) \text{ and } \chi(\theta) \text{ in } ({}^{48}\text{Ca},4n\gamma) \ \text{AI=1} \\ \end{array}$
5494.6	(19 ⁻)	110.6 10	50 25	5384.1	(10=)			
		243.9 10 315.6 10 508.4 10	92 29 92 29 100 31	5250.4 5179.2 4986.5	(19) (17^{-}) (17^{-})	(Q)		Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
5516.88	(12+)	256.32 [#] 3	100	5260.56	(10 ⁺)	(E2) ^{<i>a</i>}	0.187	B(E2)(W.u.)=1.70×10 ³ +38-27 α (K)=0.0941 <i>14</i> ; α (L)=0.0698 <i>10</i> ; α (M)=0.0181 <i>3</i> α (N)=0.00457 <i>7</i> ; α (O)=0.000833 <i>12</i> ; α (P)=4.71×10 ⁻⁵ <i>7</i>
5549.4	(20 ⁻)	459.9 2	29 9	5089.3	(18 ⁻)	(Q)		E_{γ} : weighted average of 459.7 5 from (³⁰ Si,4n γ) and 459.9 2 from (¹⁶ O,6n γ). I_{γ} : weighted average of 411 from (³⁰ Si,4n γ), and 23 8 from (¹⁶ O,6n γ). Other: 95 27 from (⁴⁸ Ca,4n γ) is discrepant.
		849.1 <i>3</i>	100 7	4700.7	(18 ⁻)	(Q)		Mult.: from $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=(2)$. E_{γ} : from (¹⁶ O,6n γ). Others: 848.0 <i>3</i> (³⁰ Si,4n γ), 849.1 from (⁴⁸ Ca,4n γ), 848.7 from (⁴⁰ A4,4n γ). I_{γ} : from (⁴⁸ Ca,4n γ). Others: 100 <i>19</i> from (³⁰ Si,4n γ) and 100 <i>13</i> from (¹⁶ O,6n γ).
5550.0	(20+)	755.0 2	100	4794.9	(18+)	(Q)		Mult.: from $\gamma(\theta)$ in (¹⁶ O,6n γ) and ³⁵ S1,4n γ). E _{γ} : weighted average of 754.9 3 from (³⁰ Si,4n γ) and 755.0 2 from (¹⁶ O,6n γ).
5630.1	(20+)	396.9 2	100 15	5233.2	(19+)	M1	0.200	Mult.: from $\gamma\gamma(\theta)$ in (¹⁶ Ca,4n γ), $\Delta J=(2)$. $\alpha(K)=0.1636\ 23$; $\alpha(L)=0.0277\ 4$; $\alpha(M)=0.00649\ 10$ $\alpha(N)=0.001649\ 24$; $\alpha(O)=0.000329\ 5$; $\alpha(P)=3.52\times10^{-5}\ 5$ E_{γ} : weighted average of 396.8 3 from (³⁰ Si,4n γ) and 396.9 2 from (¹⁶ O,6n γ). I_{γ} : from (³⁰ Si,4n γ). Other: 100 22 from (¹⁶ O,6n γ). Mult : from ce and $\gamma(\theta$ no)) in (¹⁶ O (n γ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca 4n γ), $\Delta I=1$
5672.7		699.8 <i>5</i> 564.5 <i>5</i>	6.1 <i>19</i> 100	4930.1 5108.2	(18 ⁺) (17 ⁻)			E _{γ} : weighted average of 699.8 5 from (³⁰ Si,4n γ) and 700 <i>1</i> from (¹⁶ O,6n γ).
5685.4? 5707.3	(21-)	1310.8 <i>6</i> 260.1 2	100 100	4374.6 5447.2	(16 ⁻) (20 ⁻)	M1	0.631	$E_{\gamma}: \text{ from } ({}^{16}\text{O},6n\gamma) \text{ (2002Ka01) only.} \\ \alpha(\text{K})=0.516 8; \ \alpha(\text{L})=0.0883 13; \ \alpha(\text{M})=0.0207 3 \\ \alpha(\text{N})=0.00526 8; \ \alpha(\text{O})=0.001048 15; \ \alpha(\text{P})=0.0001120 16 \\ \text{B}(\text{M1})(\text{W.u.})=4.8 + 21 - 12 \\ \end{array}$
5729.5	(20 ⁻)	1028.7 <i>3</i>	100	4700.7	(18 ⁻)	E2	0.00630	E _γ : weighted average of 260.2 <i>3</i> from (³⁰ Si,4nγ), 260.1 <i>2</i> from (¹⁶ O,6nγ). Mult.: from ce and $\gamma(\theta,\text{pol})$ in (¹⁶ O,6nγ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4nγ), $\Delta J=1$. E _γ : weighted average of 1028.5 <i>5</i> from (³⁰ Si,4nγ) and 1028.8 <i>3</i> from (¹⁶ O,6nγ).
5757.5	(20 ⁺)	347.8 2	100 18	5409.6	(19 ⁺)	D		Mult.: from ce data in $({}^{36}S,4n\gamma)$ and $\gamma(\theta)$ in $({}^{30}Si,4n\gamma)$ and $({}^{16}O,6n\gamma)$. E _{γ} : weighted average of 347.6 5 from $({}^{30}Si,4n\gamma)$ and 347.8 2 from $({}^{16}O,6n\gamma)$.

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 $^{194}_{82} \text{Pb}_{112}\text{-}22$

						Adopt	ed Levels,	Gammas (continued)
							γ (¹⁹⁴ Pt	b) (continued)
E _i (level)	\mathbf{J}_i^π	${\rm E_{\gamma}}^{\dagger}$	I_{γ}^{\dagger}	\mathbf{E}_{f}	\mathbf{J}_f^{π}	Mult. ^{&}	$\alpha^{\boldsymbol{b}}$	Comments
								I_{γ} : from (³⁰ Si,4n γ). Other: 100 <i>19</i> from (¹⁶ O,6n γ).
5757.5	(20 ⁺)	636.0 <i>3</i>	4.3 18	5121.6	(18 ⁺)			Mult.: from $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ) and $\gamma(\theta)$ in (¹⁶ O,6n γ), $\Delta J=1$. E_{γ} : weighted average of 635.7 <i>10</i> from (³⁰ Si,4n γ) and 636.0 <i>3</i> from (¹⁶ O,6n γ). L.: weighted average of 3.5 <i>18</i> from (³⁰ Si,4n γ) and 13.6 from (¹⁶ O,6n γ).
5759.5	(20 ⁻)	1058.8 4	100	4700.7	(18-)	(Q)		E_{γ} : from (¹⁶ O,6n γ). Other: 1058.8 <i>10</i> from (³⁰ Si,4n γ). Mult : from $\gamma(\theta)$ in (³⁰ Si,4n γ).
5784.9		585.1 10		5199.6	(18^{+})			
5801.2		417.1 5	100	5384.1				
5812.9		486.3 10	100	5326.6	(19 ⁻)			
5815.37	(14^{+})	298.49 [#] 3	100	5516.88	(12^{+})	(E2) ^{<i>a</i>}	0.1173	$B(E2)(W.u.)=1.8\times10^3 +7-4$
								$\alpha(K) = 0.0058 \ I0; \ \alpha(L) = 0.0386 \ 6; \ \alpha(M) = 0.00991 \ I4$
5818 /	(10^{-})	38/ 8 10	100.36	5/22 5	(18^{-})			$\alpha(N)=0.002514; \alpha(O)=0.0004617; \alpha(P)=2.81\times10^{-5}4$
5010.4	(17)	765.3 10	45 24	5053.1	(10) (17^{-})			
5824.0		1123.3.5	100	4700.7	(18^{-})			E_{ν} ; from (¹⁶ O.6n ν), Other: 1123.3 10 from (³⁰ Si.4n ν).
5824.5		567.9 3	100	5256.6	(20^+)			E_{ν} ; weighted average of 567.6 5 from (³⁰ Si.4n ν) and 568.0 3 from (¹⁶ O.6n ν).
5907.7	(21 ⁻)	581.1 2	100	5326.6	(19 ⁻)	(Q)		E_{γ} : weighted average of 581.0 5 from (³⁰ Si,4n γ) and 581.1 2 from (¹⁶ O,6n γ). Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
5908.7	(20 ⁻)	461.5 10	100	5447.2	(20 ⁻)			
5933.8	(21^{+})	109.2 10	11 5	5824.5				
		677.2 3	100 <i>31</i>	5256.6	(20 ⁺)	(D)		E_{γ} : weighted average of 676.8 5 from (³⁰ Si,4nγ) and 677.4 3 from (¹⁶ O,6nγ). Mult.: from $\gamma(\theta)$ in (³⁰ Si,4nγ).
5942.2	(20 ⁻)	1241.5 5	100	4700.7	(18 ⁻)	(Q)		E_{γ} : weighted average of 1241.3 <i>10</i> from (³⁰ Si,4n γ) and 1241.5 5 from (¹⁶ O,6n γ).
								Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
5973.4		644.0 10	100	5329.2				
5993.3	(20^{-})	192.4 10	13 6	5801.2	(10-)	D		7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
(00) -	(01+)	498.8 3	100 22	5494.6	(19 ⁻)	D	0.001	E_{γ} : weighted average of 498.9 5 from (³⁰ Si,4nγ) and 498.8 3 from (¹⁰ O,6nγ). Mult.: from $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4nγ) and $\gamma(\theta)$ in (¹⁶ O,6nγ), Δ J=1.
6006.5	(21)	376.3 3	100 14	5630.1	(20^{+})	MI	0.231	$\alpha(K)=0.189 \ 3; \ \alpha(L)=0.0320 \ 5; \ \alpha(M)=0.00/50 \ 11$
								$\alpha(IN) = 0.001913; \alpha(U) = 0.000380; \alpha(P) = 4.0/X10 \circ 0$ E : weighted average of 376.3.3 from (305; 4m) and 376.4.4 from (160 from)
								E_{γ} . weighted average of 5/0.5 5 from (²⁵ 5,447) and 5/0.4 4 from (²⁰ 0,017).
								γ_{γ} from (= 51,4117). Other, 100 55 from (= 0,0117). Mult : from ce and $\gamma(4 \text{ nol})$ in $\binom{16}{0}$ fractional and $\gamma(4)$ in $\binom{48}{2}$ a fraction AI-1
		773.4 3	18.6	5233.2	(19^{+})	(\mathbf{O})		F_{ac} : weighted average of 773.1.5 from (³⁰ Si 4nv) and 773.5.3 from (¹⁶ O 6nv)
			10 0	0200.2	(1))			L_{γ} : weighted average of 19.6 from (³⁰ Si.4n γ) and 17.8 from (¹⁶ O.6n γ).
6028.3		699.0 10	100	5329.2				
6043.4	(22 ⁻)	336.1 2	100 17	5707.3	(21 ⁻)	M1	0.313	B(M1)(W.u.)=2.7 + 7 - 5
								$\alpha(K)=0.256 4; \alpha(L)=0.0436 7; \alpha(M)=0.01020 15$
								α (N)=0.00259 4; α (O)=0.000517 8; α (P)=5.53×10 ⁻⁵ 8
								E_{γ} : weighted average of 336.0 <i>3</i> from (³⁰ Si,4n γ), 336.2 2 from (¹⁶ O,6n γ). Mult.: from ce and $\gamma(\theta, \text{pol})$ in (¹⁶ O,6n γ) and $\gamma\nu(\theta)$ in (⁴⁸ Ca.4n γ). Λ I=1.

From ENSDF

 $^{194}_{82} \text{Pb}_{112}\text{--}23$

L

$\gamma(^{194}\text{Pb})$ (continued)

E_i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbf{E}_{f}	\mathbf{J}_{f}^{π}	Mult. ^{&}	α b	Comments
6043.4	(22^{-})	596.2 5	13 4	5447.2	(20^{-})			
6083.3	(21^{+})	109.8 10	100	5973.4				
6094.8		768.2 10	100	5326.6	(19 ⁻)			
6122.2	(21^{-})	129.0 4	100	5993.3	(20^{-})	(D)		E_{γ} : weighted average of 129.2 <i>10</i> from (³⁰ Si,4n γ) and 129.0 4 from (¹⁶ O,6n γ).
6131.8	(21 ⁺)	374.3 3	100 30	5757.5	(20 ⁺)			E_{γ} : weighted average of 374.2 5 from (³⁰ Si,4n γ) and 374.3 3 from (¹⁶ O,6n γ). I _{γ} : from (³⁰ Si,4n γ). Other: 100 30 from (¹⁶ O,6n γ).
		581.7 10	25 9	5550.0	(20^{+})			
		722.2 3	25 10	5409.6	(19 ⁺)			E_{γ} : weighted average of 721.8 <i>10</i> from (³⁰ Si,4n γ) and 722.2 <i>3</i> from (¹⁶ O,6n γ). I_{γ} : weighted average of 29 <i>10</i> from (³⁰ Si,4n γ) and 20 <i>10</i> from (¹⁶ O,6n γ).
6155.27	(16 ⁺)	339.90 [#] 5	100	5815.37	(14 ⁺)	(E2) ^{<i>a</i>}	0.0804	α (K)=0.0487 7; α (L)=0.0238 4; α (M)=0.00607 9 α (N)=0.001535 22; α (O)=0.000284 4; α (P)=1.85×10 ⁻⁵ 3
6164.9	(21^{-})	256.2 10	67 23	5908.7	(20^{-})			
	. ,	457.5 10	56 23	5707.3	(21^{-})			
		914.7 <i>10</i>	100 28	5250.4	(19 ⁻)	(Q)		
6203.5	(21 ⁻)	654.1 2	100	5549.4	(20 ⁻)	(M1)		E_{γ} : weighted average of 653.9 5 from (³⁰ Si,4n γ) and 654.1 2 from (¹⁶ O,6n γ). Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
6219.5	(22^{+})	286.1 10	14 6	5933.8	(21^{+})			
		962.9 3	100 27	5256.6	(20 ⁺)	(Q)		E_{γ} : from (¹⁶ O,6n γ). Other: 962.9 5 from (³⁰ Si,4n γ). Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
6263.9	(22+)	1007.2 5	100	5256.6	(20+)	(Q)		E_{γ} : weighted average of 1007.4 5 from (³⁰ Si,4nγ) and 1007.0 5 from (¹⁶ O,6nγ). Mult.: from $\gamma(\theta)$ in (³⁰ Si,4nγ).
6275.9		474.7 10	100	5801.2				
6308.5	(21^{-})	213.7 10	60 <i>30</i>	6094.8				
		759.0 10	100 45	5549.4	(20^{-})			
6318.1	(22-)	195.9 2		6122.2	(21-)	D		E_{γ} : weighted average of 196.3 5 from (³⁰ Si,4nγ) and 195.8 2 from (¹⁶ O,6nγ). Mult.: from $\gamma(\theta)$ in (¹⁶ O,6nγ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4nγ), $\Delta J=1$.
6329.8		396.3 10	57 20	5933.8	(21^+)			
		544.8 10		5784.9				
		779.8 10	100 40	5550.0	(20^{+})			
		1073.1 10	47 20	5256.6	(20^{+})			20
6369.9	(22^{+})	286.4 10	1.8 8	6083.3	(21^{+})	(M1)		Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
		363.4 <i>3</i>	100 15	6006.5	(21^{+})	M1	0.253	$\alpha(K)=0.207 \ 3; \ \alpha(L)=0.0352 \ 5; \ \alpha(M)=0.00825 \ 12$
								$\alpha(N)=0.00210 \ 3; \ \alpha(O)=0.000418 \ 6; \ \alpha(P)=4.47\times10^{-5} \ 7$
								E_{γ} : other: 363 <i>1</i> from (¹⁶ O,6n γ).
								I_{γ} : from (¹⁶ O,6n γ). Other: 100 <i>18</i> from (³⁰ Si,4n γ).
								Mult.: from ce and $\gamma(\theta, \text{pol})$ in (¹⁶ O,6n γ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=1$.
		739.8 <i>3</i>	18 5	5630.1	(20^{+})			E_{γ} : weighted average of 739.7 5 from (³⁰ Si,4n γ) and 739.8 3 from (¹⁶ O,6n γ).
								I_{γ} : weighted average of 19 6 from (³⁰ Si,4n γ) and 18 5 from (¹⁶ O,6n γ).
		819.9 <i>3</i>	16 <i>5</i>	5550.0	(20 ⁺)	(Q)		E_{γ} : weighted average of 819.6 <i>10</i> from (³⁰ Si,4nγ) and 819.9 <i>3</i> from (¹⁶ O,6nγ). I _γ : weighted average of 12 <i>4</i> from (³⁰ Si,4nγ) and 21 <i>5</i> from (¹⁶ O,6nγ). Mult.: from $\gamma(\theta)$ in (³⁰ Si,4nγ).

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 $^{194}_{82} \text{Pb}_{112}\text{-}24$

						Ado	pted Level	s, Gammas (continued)
							$\gamma(^{194}]$	Pb) (continued)
E _i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbf{E}_{f}	\mathbf{J}_f^{π}	Mult. ^{&}	α b	Comments
6374.5	(22+)	824.4 2	100	5550.0	(20+)	(Q)		E_{γ} : from (¹⁶ O,6nγ). Other: 824.4 5 from (³⁰ Si,4nγ). Mult.: from ce and $\gamma(\theta)$ in (³⁰ Si,4nγ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4nγ), $\Delta J=(2)$.
6416.0	(22 ⁺)	409.4 2	100 20	6006.5	(21+)	(D)		E_{γ} : weighted average of 409.3 <i>3</i> from (³⁰ Si,4nγ) and 409.4 2 from (¹⁶ O,6nγ). Mult.: from $\gamma(\theta)$ in (¹⁶ O,6nγ), but $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4nγ) gives (Q).
6419.1	(23 ⁻)	785.6 <i>5</i> 375.7 2	23 7 100 20	5630.1 6043.4	(20 ⁺) (22 ⁻)	M1	0.232	B(M1)(W.u.)=2.3 +10-6 α (K)=0.190 3; α (L)=0.0322 5; α (M)=0.00753 11 α (N)=0.00191 3; α (O)=0.000382 6; α (P)=4.08×10 ⁻⁵ 6 E _γ : weighted average of 376.0 3 from (³⁰ Si,4nγ), 375.5 2 from (¹⁶ O,6nγ). I _γ : from (³⁰ Si,4nγ). Other: 100 40 from (¹⁶ O,6nγ). Mult.: from ce and γ (θ,pol) in (¹⁶ O,6nγ) and γ γ (θ) in (⁴⁸ Ca,4nγ), Δ J=1.
		711.8 4	15 5	5707.3	(21 ⁻)	(Q)		E_{γ} : weighted average of 712.0 5 from (³⁰ Si,4n γ) and 711.7 4 from (¹⁶ O,6n γ). I _{γ} : weighted average of 17 5 from (³⁰ Si,4n γ) and 12 6 from (¹⁶ O,6n γ).
6426.2		666.8 <i>10</i> 696.7 <i>3</i>	81 <i>33</i> 100 <i>38</i>	5759.5 5729.5	(20 ⁻) (20 ⁻)			E_{γ} : weighted average of 697.1 <i>10</i> from (³⁰ Si,4n γ) and 696.7 <i>3</i> from (¹⁶ O,6n γ).
6436.6 6451.7	(22 ⁻)	651.7 <i>10</i> 286.8 <i>5</i> 1004.5 <i>10</i>	100 29 19 10	5784.9 6164.9 5447.2	(21^{-}) (20^{-})			
6489.4	(22-)	759.92	100	5729.5	(20 ⁻)			E_{γ} : weighted average of 760.0 5 from (³⁰ Si,4n γ) and 759.9 2 from (¹⁶ O,6n γ).
0510.4	(22)	201.9 <i>3</i> 603.0 <i>10</i> 961.1 <i>10</i>	57 25 79 32 100 36	6308.5 5907.7 5549.4	(21^{-}) (21^{-}) (20^{-})			E_{γ} : weighted average of 202.1 <i>10</i> from (³⁰ Si,4n γ) and 201.9 <i>3</i> from (¹⁶ O,6n γ).
6526.4	(23 ⁻)	208.4 2	100 25	6318.1	(22 ⁻)	D		E_{γ} : weighted average of 208.5 5 from (³⁰ Si,4nγ) and 208.4 2 from (¹⁶ O,6nγ). Mult.: from $\gamma(\theta)$ in (¹⁶ O,6nγ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4nγ), ΔJ =1.
6528.6	(22+)	483.6 <i>10</i> 396.9 <i>2</i>	10 4 100 24	6043.4 6131.8	(22^{-}) (21^{+})	D		E_{γ} : weighted average of 396.8 5 from (³⁰ Si,4nγ) and 396.9 2 from (¹⁶ O,6nγ). I _γ : from (³⁰ Si,4nγ). Other: 100 33 from (¹⁶ O,6nγ). Mult.: from $\gamma(\theta)$ in (¹⁶ O,6nγ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4nγ). $\Delta J=1$.
		771.1 3	26 10	5757.5	(20 ⁺)			E _{γ} : weighted average of 771.0 <i>10</i> from (³⁰ Si,4n γ) and 771.1 <i>3</i> from (¹⁶ O,6n γ). I _{γ} : weighted average of 24 <i>10</i> from (³⁰ Si,4n γ) and 33 <i>17</i> from (¹⁶ O,6n γ).
6535.47	(18+)	380.20 [#] 5	100	6155.27	(16+)	(E2) ^{<i>a</i>}	0.0590	B(E2)(W.u.)<2020 α (K)=0.0377 6; α (L)=0.01598 23; α (M)=0.00405 6 α (N)=0.001023 15; α (O)=0.000190 3; α (P)=1.311×10 ⁻⁵ 19
6561.2		296.9 <i>10</i>	35 18	6263.9	(22^+)			E : weighted average of $341.4.10$ from $(^{30}Si.4pa)$ and $341.7.3$ from $(^{16}O.6pa)$
6573.1		665.4 <i>10</i> 760.1 <i>10</i>	84 <i>32</i> 100 <i>28</i>	5907.7 5812.9	(22^{-}) (21^{-})			L_{γ} , weighted average of 541.4 to from (51,4117) and 541.7 5 from (0,0117).
6592.2		1042.2 10	100 20	5550.0	(20^{+})			
0398.9		379.3 10	63 42 100 50	6219.8	(22^{+})			

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From ENSDF

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						Ado	pted Leve	is, Gammas (continued)
γ ⁽¹⁹⁴ Pb) (continued)								
E _i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_f	\mathbf{J}_{f}^{π}	Mult. ^{&}	α ^{b}	Comments
6630.4	(23+)	255.7 3	5.2 18	6374.5	(22 ⁺)			E_{γ} : weighted average of 255.9 <i>10</i> from (³⁰ Si,4n γ) and 255.7 <i>3</i> from (¹⁶ O,6n γ).
		260.6 2	100 21	6369.9	(22+)	M1	0.628	I _γ : weighted average of 4.6 <i>18</i> from (³⁰ Si,4nγ) and 8 <i>4</i> from (¹⁶ O,6nγ). α (K)=0.513 <i>8</i> ; α (L)=0.0878 <i>13</i> ; α (M)=0.0206 <i>3</i> α (N)=0.00523 <i>8</i> ; α (O)=0.001042 <i>15</i> ; α (P)=0.0001114 <i>16</i> E _γ : weighted average of 260.7 <i>3</i> from (³⁰ Si,4nγ) and 260.6 <i>2</i> from (¹⁶ O,6nγ). I _γ : from (¹⁶ O,6nγ). Other: 100 22 from (³⁰ Si,4nγ). Mult : from ce and α (<i>θ</i> po)) in (¹⁶ O 6nγ) and $\alpha\alpha$ (<i>θ</i>) in (⁴⁸ Ca 4nγ) Δ I=1
		624.1 10	7.1 32	6006.5	(21^{+})			
6641.3		699.0 10	100 32	5942.2	(20^{-})			
		911.8 10	54 25	5729.5	(20-)			
6716.5		452.5 10	24 14	6263.9	(22^{+})			
		497.0 10	100 33	6219.5	(22^{+})			
6759.5	(23 ⁻)	249.1 2	100 28	6510.4	(22 ⁻)	D		E_{γ} : weighted average of 248.8 5 from (³⁰ Si,4nγ) and 249.1 2 from (¹⁶ O,6nγ). Mult.: from $\gamma(\theta)$ in (¹⁶ O,6nγ) and (³⁰ Si,4nγ).
(- (-)	(22)	556.0 10	23 11	6203.5	(21)			
0/03.9	(23^{+})	348.0 3	100 26	6416.0	(22^{+})	D		E_{γ} : weighted average of 347.9.5 from (³⁰ S1,4n γ) and 348.0.3 from (¹⁰ O,6n γ).
0/8/.1	(23)	333.4 3	100 30	0451./	(22)			M = 1 + 5 + (0) + (30 - 3)
(705.0	(24-)	143.1 3	66 17	6043.4	(22)	(D)		Mult.: from $\gamma(\theta)$ in (°°S1,4n γ).
6795.9	(24 ⁻)	269.5 2	100 29	6526.4	(23^{-})	D		E_{γ} : weighted average of 2/0.0 5 from (⁵⁰ S1,4nγ) and 269.4 2 from (¹⁰ O,6nγ). Mult.: from $\gamma(\theta)$ in (¹⁶ O,6nγ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4nγ), $\Delta J=1$.
		577.0 10	1/ /	0419.1 6042.4	(23)	(\mathbf{O})		Multiple from $u(0)$ in (300: 4)
(000.0	(22+)	755.0 10	28 /	6043.4	(22)	(Q) (MI)		Mult.: from $\gamma(\theta)$ in ($^{\circ\circ}$ S1,4n γ).
6800.0	(231)	383.8 10	100 31	6416.0	(22^{+})	(M1)		Mult.: from $\gamma(\theta)$ in $({}^{50}S1,4n\gamma)$.
6836 2	(24^{-})	195.1 10 117 0 3	88 27 100 22	6410-1	(21^{+}) (22^{-})	M1	0 1750	$R(M1)(W_{11}) = 1.7 \pm 8 - 4$
0050.2	(24)	+17.0 J	100 22	0419.1	(23)	1111	0.1750	$\alpha(K) = 0.1433.21; \alpha(L) = 0.0243.4; \alpha(M) = 0.00568.8$
								$\alpha(\mathbf{N}) = 0.01442 \ 21 \ \alpha(\Omega) = 0.000088 \ 4 \ \alpha(\mathbf{P}) = 3.08 \times 10^{-5} \ 5$
								$E : weighted average of 116.8.5 from (^{30}Si (ma)) 117.1.3 from (^{16}O (Sma))$
								L_{γ} , weighted average of 410.85 from ($31,411\gamma$), 417.15 from ($0,011\gamma$).
								γ_{γ} from (51, $\pi_{1\gamma}$). Otter, 100 24 from (0, η_{γ}). Mult : from ce and $\eta_{\gamma}(\beta)$ in (¹⁶ O 6ng) and $\eta_{\gamma}(\beta)$ in (⁴⁸ Co 4ng). AI-1
		702 2 5	<u> </u>	6012 1	(22^{-1})	(0)		For unique to the property and $\gamma(\theta)$ in (~0,017) and $\gamma\gamma(\theta)$ in (~0,4117), $\Delta J=1$.
		193.2 3	23 0	0045.4	(22)			E_{γ} , weighted average of 22.8 from (³⁰ C; 4m) and 24.40 from (¹⁶ O, 6m).
60176	(24+)	212.2.2	100	6620 4	(22+)	D		I_{γ} : weighted average of 22 8 from (* 51,4ny) and 24 10 from (* 0,6ny).
0842.0	(24.)	212.2 2	100	0030.4	(23.)	D		E_{γ} : weighted average of 212.5 5 from (*51,4n γ) and 212.2 2 from (*0,6n γ).
(00(1	(22+)	277 4 5	100	(500 ((22+)			Wuth.: from $\gamma(\theta)$ in (*0,00 γ) and $\gamma\gamma(\theta)$ in (*0,0,40 γ), $\Delta J=1$.
0906.1	(23')	3/1.4 5	100	6528.6	(22')			E_{γ} : weighted average of 3/1.2 10 from (⁵⁰ S1,4n γ) and 3/1.5 5 from (¹⁰ O,6n γ).
6955.5	(20 ⁺)	420.0" 2	100	6535.47	(18+)	[E2]	0.0454	B(E2)(W.u.)= $2.6 \times 10^{3} + 37 - 16$ α (K)= $0.0302 5$; α (L)= $0.01138 16$; α (M)= $0.00286 4$ α (N)= $0.000724 11$; α (O)= $0.0001355 19$; α (P)= $9.79 \times 10^{-6} 14$
6961.8		758.3.2	100	6203.5	(21^{-})			$E_{\rm eff}$ weighted average of 758.4.5 from (³⁰ Si 4ny) and 758.3.2 from (¹⁶ O 6ny)
7035.8	(24^{-})	27632	100	6759.5	(21) (23^{-})	D		E_{γ} : weighted average of 276.0 10 from (30 Si 4no) and 276.3.2 from (16 O.6no)
7036.0	(24)	599 4 10	100	6436.6	(25)	D		L_{γ} . weighted average of 270.0 10 from ($51, \pi r\gamma$) and 270.5 2 from ($0, 017$).
,050.0		706.3 10	80.35	6329.8				

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From ENSDF

 $^{194}_{82} \mathrm{Pb}_{112}\text{--}26$

γ (¹⁹⁴Pb) (continued)

E _i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbf{E}_{f}	\mathbf{J}_f^{π}	Mult. ^{&}	$\alpha^{\boldsymbol{b}}$	Comments
7036.0		816.5 10	100 40	6219.5	(22^{+})			
7068.9	(24^{+})	268.8 5	100 32	6800.0	(23^{+})			
	. ,	305.0 2	48 19	6763.9	(23^{+})			E_{ν} : weighted average of 304.7 10 from (³⁰ Si.4n ν) and 305.0 2 from (¹⁶ O.6n ν).
7070.2	(25^{+})	227.6 2	100	6842.6	(24^{+})	M1	0.913	$\alpha(K)=0.746 \ 11; \ \alpha(L)=0.1280 \ 19; \ \alpha(M)=0.0300 \ 5$
								$\alpha(N)=0.00762$ 11; $\alpha(O)=0.001519$ 22; $\alpha(P)=0.0001624$ 23
								E_{γ} : from (¹⁶ O,6n γ). Other: 227.6 5 from (³⁰ Si,4n γ).
								Mult.: from ce and $\gamma(\theta)$ in (¹⁶ O,6n γ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=1$.
7114.7	(24^{+})	350.8 4	100	6763.9	(23^{+})	D		E_{α} ; weighted average of 351.5.5 from (³⁰ Si.4ny) and 350.6.3 from (¹⁶ O.6ny).
7124.5	(25^{-})	328.6.2	100	6795.9	(24^{-})	D		$E_{\rm ev}$: weighted average of 328.9.5 from (³⁰ Si 4ny) and 328.6.2 from (¹⁶ O 6ny).
/12/10	(20)	02010 2	100	0,,,01,	()	2		Mult : from $v(\theta)$ in ${}^{16}O(6nv)$ but $vv(\theta)$ in ${}^{48}Ca(4nv)$ gives (O)
7138.7	(24^{-})	351.6.5	100	6787.1	(23^{-})			(0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
7160.1	(= ·)	785.6.4	100	6374.5	(22^+)			$F_{\rm ev}$: weighted average of 784.6 10 from (³⁰ Si 4ny) and 785.8 4 from (¹⁶ O 6ny).
7182.1		395.0 10	100	6787.1	(23^{-})			
7260.0	(25^{-})	423.8 3	100.37	6836.2	(24^{-})	D		E_{α} ; weighted average of 424.0.5 from (³⁰ Si.4ny) and 423.7.3 from (¹⁶ O.6ny).
	(-)							L_{v} : from (³⁰ Si.4ny), Other: 100.33 from (¹⁶ O.6ny).
		840.8 10	28 12	6419.1	(23^{-})			
7277.6	(24^{+})	371.5 10	100	6906.1	(23+)			
7307.0		817.6 2	100	6489.4				E_{γ} : weighted average of 818.0 10 from (³⁰ Si,4n γ) and 817.6 2 from (¹⁶ O,6n γ).
7337.4	(26^{+})	267.2 2	100	7070.2	(25^{+})	D		E_{γ} : weighted average of 266.8 5 from (³⁰ Si,4n γ) and 267.3 2 from (¹⁶ O,6n γ).
								Mult.: from $\gamma(\theta)$ in (¹⁶ O,6n γ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=1$.
7347.4		972.9 10	100	6374.5	(22^{+})			
7353.3	(25^{-})	317.5 2	100	7035.8	(24 ⁻)	D		E_{γ} : weighted average of 317.1 10 from (³⁰ Si,4n γ) and 317.5 2 from (¹⁶ O,6n γ).
7365.4	(25^{+})	296.5 2	100	7068.9	(24^{+})			E_{γ} : weighted average of 296.4 5 from (³⁰ Si,4n γ) and 296.5 2 from (¹⁶ O,6n γ).
7391.2		818.1 <i>10</i>	100	6573.1				
7412.1		230.0 10	100	7182.1				
7413.4		772.1 10	100	6641.3				
7413.5	(22^{+})	458.0 [#] 1	100	6955.5	(20^{+})	[E2]	0.0364	$B(E2)(W.u.)=2.4\times10^3 + 17-92$
								$\alpha(K)=0.0250$ 4; $\alpha(L)=0.00857$ 12; $\alpha(M)=0.00214$ 3
								$\alpha(N)=0.000542 8; \alpha(O)=0.0001019 15; \alpha(P)=7.66\times 10^{-6} 11$
7431.2	(25^+)	316.5 3	100	7114.7	(24+)	D		E_{γ} : weighted average of 317.3 10 from (³⁰ Si,4n γ) and 316.4 3 from (¹⁶ O,6n γ).
7433.1		791.8 10	100	6641.3				
7487.8	(26 ⁻)	363.3 5	100	7124.5	(25^{-})	D		E_{γ} : weighted average of 363.0 5 from (³⁰ Si,4n γ) and 363.5 5 from (¹⁶ O,6n γ).
7500.7	(25 ⁻)	362.0 5	100	7138.7	(24 ⁻)			
7638.6	(25^{+})	361.0 10	100	7277.6	(24^{+})			E_{γ} : from (³⁰ Si,4n γ). Other: 361 <i>I</i> from (¹⁶ O,6n γ).
7644.3	(27^{+})	306.9 2	100	7337.4	(26^{+})	D		E_{γ} : from (¹⁶ O,6n γ). Other: 306.9 5 from (³⁰ Si,4n γ).
								Mult.: from $\gamma(\theta)$ in (¹⁶ O,6n γ) and $\gamma\gamma(\theta)$ in (⁴⁸ Ca,4n γ), $\Delta J=1$.
7680.9	(26^{+})	315.5 5	100	7365.4	(25^{+})			
7701.9	(26 ⁻)	441.9 2	100 30	7260.0	(25 ⁻)	D		E_{γ} : weighted average of 441.8 5 from (³⁰ Si,4n γ) and 441.9 2 from (¹⁶ O,6n γ).
		865.8 10	37 14	6836.2	(24-)			
7716.4	(26 ⁻)	363.1 2	100	7353.3	(25 ⁻)	D		E_{γ} : weighted average of 363.2 10 from (³⁰ Si,4n γ) and 363.1 2 from (¹⁶ O,6n γ).
7748.8		712.8 10	100	7036.0				
7775.8		814.0 10	100	6961.8				
7793.5		757.5 10	100	7036.0				

γ (¹⁹⁴Pb) (continued)

E _i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	E_f	\mathbf{J}_{f}^{π}	Mult.&	δ	α b	$I_{(\gamma+ce)}$	Comments
7822.8		861.0 10	100	6961.8						
7860.7	(27 ⁻)	372.9 3	100	7487.8	(26 ⁻)	D				E _{γ} : weighted average of 373.0 5 from (³⁰ Si,4n γ) and 372.8 3 from (¹⁶ O,6n γ).
7909.3	(24 ⁺)	495.8 [#] 1	100	7413.5	(22^{+})	[E2]		0.0300		$B(E2)(W.u.)=2.1\times10^3+13-6$
8005.1	(28 ⁺)	360.8 5	100	7644.3	(27 ⁺)	D				E_{γ} : weighted average of 360.8 5 from (³⁰ Si,4n γ) and 361 <i>l</i> from (¹⁶ O,6n γ).
8022.9	(27^{+})	342.0 10	100	7680.9	(26^{+})					
8101.1	(27 ⁻)	384.7 2	100	7716.4	(26 ⁻)	D				E_{γ} : weighted average of 384.9 <i>10</i> from (³⁰ Si,4n γ) and 384.7 2 from (¹⁶ O,6n γ).
8130.1	(27 ⁻)	428.2 3	100	7701.9	(26 ⁻)	D				E _{γ} : weighted average of 428.5 <i>10</i> from (³⁰ Si,4n γ) and 428.2 <i>3</i> from (¹⁶ O,6n γ).
8173.7		866.7 10	100	7307.0						20
8257.3	(28 ⁻)	396.6 2	100	7860.7	(27 ⁻)	D				E_{γ} : weighted average of 396.8 5 from (³⁰ Si,4n γ) and 396.6 2 from (¹⁶ O,6n γ).
8354.5	(28^+)	331.6 10	100	8022.9	(27 ⁺)					20
8398.8	(29+)	393.7 3	100	8005.1	(28 ⁺)	D				E_{γ} : weighted average of 394.1 5 from (³⁰ Si,4n γ) and 393.6 3 from (¹⁶ O,6n γ).
8441.8	(26^{+})	532.5 [#] 2	100	7909.3	(24 ⁺)	[E2]		0.0253		$B(E2)(W.u.)=2.4\times10^3+22-9$
8513.6	(28 ⁻)	412.5 3	100	8101.1	(27 ⁻)	D				E_{γ} : weighted average of 413.0 <i>10</i> from (³⁰ Si,4n γ) and 412.5 <i>3</i> from (¹⁶ O,6n γ).
8515.1	(28 ⁻)	385.0 10	100	8130.1	(27 ⁻)					E_{γ} : weighted average of 384.9 10 from (³⁰ Si,4n γ) and 385 1 from (¹⁶ O,6n γ).
8645.1	(29 ⁻)	387.8 <i>3</i>	100	8257.3	(28 ⁻)	D				E_{γ} : weighted average of 387.9 <i>10</i> from (³⁰ Si,4n γ) and 387.8 <i>3</i> from (¹⁶ O,6n γ).
8819.7	(30^{+})	420.9 3	100	8398.8	(29^{+})					E_{γ} : from (¹⁶ O,6n γ). Other: 420.9 10 from (³⁰ Si,4n γ).
8882.1	(29-)	367.0 10	100	8515.1	(28-)					
9010.1	(28^{+})	568.3 [#] 2	100	8441.8	(26^{+})	[E2]		0.0218		$B(E2)(W.u.)=2.0\times10^3 +8-5$
9036.6	(30 ⁻)	391.5 10	100	8645.1	(29 ⁻)					
9254.6	(30 ⁻)	372.5 10	100	8882.1	(29 ⁻)					20
9260.6	(31 ⁺)	440.9 <i>3</i>	100	8819.7	(30 ⁺)					E_{γ} : weighted average of 441 <i>I</i> from (³⁰ Si,4n γ) and 440.9 <i>3</i> from (¹⁶ O,6n γ).
9437.6	(31 ⁻)	401.0 10	100	9036.6	(30 ⁻)	(M1)		0.194		α (K)=0.1591 25; α (L)=0.0270 5; α (M)=0.00631 10 α (N)=0.001604 25; α (O)=0.000320 5; α (P)=3.42×10 ⁻⁵ 6
9613.5	(30^{+})	603.4 [#] 2	100	9010.1	(28^{+})					
9722.6	(32+)	462 1	100	9260.6	(31+)					E_{γ} : from (³⁰ Si,4n γ). Other: 462 <i>1</i> from (¹⁶ O,6n γ).
10206.8	(33+)	484.2 2	100	9722.6	(32+)					E_{γ} : weighted average of 484 <i>1</i> from (³⁰ Si,4n γ) and 484.2 2 from (¹⁶ O,6n γ).
10251.6	(32+)	638.1 4	100	9613.5	(30+)					
10923.9	(34 ⁺)	672.3 4	100	10251.6	(32^+)					
11630.1	(36^+)	706.2 2	100	10923.9	(34^+)					
12369.6	(38 ⁺)	739.5 4	100	11630.1	(36 ⁺)					
154.6+x	J+1	154.6 10	100	Х	J	(M1)				Mult.: from $\gamma(\theta)$ in (³⁰ S1,4n γ).

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γ (¹⁹⁴Pb) (continued)

E_i (level)	\mathbf{J}_i^{π}	E_{γ}^{\dagger}	I_{γ}^{\dagger}	\mathbf{E}_{f}	\mathbf{J}_{f}^{π}	Mult.	Comments
456.4+x	J+2	301.8 5	100	154.6+x	J+1		
857.8+x	J+3	401.4 5	100	456.4+x	J+2		
1245.5+x	J+4	387.7 5	100	857.8+x	J+3	(M1)	Mult.: from $\gamma(\theta)$ in (³⁰ Si,4n γ).
1643.0+x	J+5	397.5 10	100	1245.5+x	J+4		
1928.8+x	J+6	285.8 10	100	1643.0+x	J+5		
2152.1+x	J+7	223.3 10	100	1928.8+x	J+6		
2395.0+x	J+8	242.9 10	100	2152.1+x	J+7		
241.2+y	J1+2	241.2 3	100	У	J1≈(10)		
521.8+y	J1+4	280.6 4	100	241.2+y	J1+2		
842.5+y	J1+6	320.7 2	100	521.8+y	J1+4		
1202.5+y	J1+8	360.0 2	100	842.5+y	J1+6		
1601.5+y	J1+10	399.0 2	100	1202.5+y	J1+8		
2038.3+y	J1+12	436.8 <i>3</i>	100	1601.5+y	J1+10		
2512.3+y	J1+14	474.0 <i>3</i>	100	2038.3+y	J1+12		
3023.4+y	J1+16	511.1 5	100	2512.3+y	J1+14		
3567.2+y	J1+18	543.8 5	100	3023.4+y	J1+16		
260.9+z?	J2+2	260.9 4	100	Z	J2≈(11)		
562.9+z?	J2+4	302.0 <i>3</i>	100	260.9+z?	J2+2		
904.2+z?	J2+6	341.3 <i>3</i>	100	562.9+z?	J2+4		
1284.2+z?	J2+8	380.0 5	100	904.2+z?	J2+6		
1701.5+z?	J2+10	417.3 <i>3</i>	100	1284.2+z?	J2+8		
2157.3+z?	J2+12	455.8 <i>3</i>	100	1701.5+z?	J2+10		
2649.4+z?	J2+14	492.1 <i>4</i>	100	2157.3+z?	J2+12		
3178.0+z?	J2+16	528.6 8	100	2649.4+z?	J2+14		
3741.2 ± 72	I_{2+18}	563 2 8	100	3178.0+7?	I_{2+16}		

[†] From ${}^{168}\text{Er}({}^{30}\text{Si},4n\gamma)$ (2009Ku03), unless otherwise noted.

[‡] From ¹⁹⁴Bi ε decay (1987Va09).

[#] From (HI, $xn\gamma$):SD.

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^(a) γ inferred from $\gamma\gamma$ coincidence data in (³⁰Si,4n γ) (2009Ku03), not observed directly. Energy from level-energy difference.

& From ce data in ¹⁹⁴Bi ε decay up to 2934 level, and/or, ce, $\gamma(\theta)$ and $\gamma(\text{lin pol})$ in ¹⁸⁴W(¹⁶O,6n γ), unless otherwise noted.

^{*a*} From γ asymmetry ratio in (HI,xn γ):SD (1997Ha24), with magnetic or electric nature from level scheme.

^b Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on γ -ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.

^c Placement of transition in the level scheme is uncertain.

Level Scheme

Intensities: Relative photon branching from each level

$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Ş	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	J2+18	3741.2+z
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\underline{J2+16} \qquad \underline{\downarrow} \underline{\$} \underline{\$} $	<u>3178.0+z</u>
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		<u>_2649.4+z</u>
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	J2+12	2157.3+z
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	12+10 × 3	1701 5+7
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	12+8 S	1284 2+z
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	12+6	904.2+z
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	<u>12+4</u> ↓ ² ⊗ ⊗	562.9+z
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	J2+2 ↓ ⁽³⁾ ₍₃₎	<u>260.9+z</u>
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		2567.2
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		3307.2+y
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	<u>J1+16</u>	3023.4+y
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	<u>J1+14</u>	2512.3+y
$\begin{array}{c c c c c c c c c c c c c c c c c c c $		2038.3+y
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	<u>J1+10</u>	1601.5+y
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	<u>J1+8</u>	1202.5+y
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	J1+6 ▼ ² 2 2	842.5+y
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	J1+4	521.8+y
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	<u>J1+2</u>	241.2+y
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		<u> </u>
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\frac{118}{117} \qquad \qquad$	2395.0+x 2152.1+x
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	<u>1+6</u>	1928.8+x
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		1643.0+x
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	J+4	1245.5+x
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	J+3	857.8+x
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		456 4+x
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		154.6+x
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	J V C	<u> </u>
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		12369.6
$\begin{array}{c} (34^+) \\ (34^+) \\ (32^+) \\ (33^+) \\ (32^+) \\ (33^+) \\ (31^+) \\ (28^+) \\ (28^+) \\ 0^+ \\ (28^+) \\ 0^+ \\ (10251.6) \\ (1025$	(36 ⁺)	11630.1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		11050.1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	(34°) $\downarrow \circ$ \Im \Im	10923.9
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$		10251.6
(32+) (32+) (30+) 9613.5 (31+) 9260.6 (28+) 9010.1 0.0 0.07 ps 2 0+ 0.0		10206.8
(30+) 9613.5 (31+) 9260.6 (28+) 9010.1 0+ 0.0 10.7 min 6		9722.6
(31 ⁺) 9260.6 (28 ⁺) 9010.1 0.07 ps 2 0 ⁺ 0.0 10.7 min 6		9613.5
(28 ⁺) 9010.1 0.07 ps 2 0 ⁺ 0.0 10.7 min €	(31 ⁺)	9260.6
<u>0+</u> <u>0.0</u> 10.7 min 6	(28 ⁺)	9010.1 0.07 ps 2
0^+ 0.0 10.7 min 6		
	<u>U</u> ⁺	0.0 10.7 min 6

 $^{194}_{\ 82} Pb_{112}$

Level Scheme (continued)



Level Scheme (continued)



Level Scheme (continued)



Level Scheme (continued)



 $^{194}_{82}{\rm Pb}_{112}$

Level Scheme (continued)





Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level



 $^{194}_{82}{\rm Pb}_{112}$

Level Scheme (continued)



Level Scheme (continued)



 $^{194}_{82} \rm{Pb}_{112}$

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

 $--- \sim \gamma$ Decay (Uncertain)



 $^{194}_{82} \rm{Pb}_{112}$

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level





Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level



 $^{194}_{82}{\rm Pb}_{112}$

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level



 $^{194}_{82} \rm{Pb}_{112}$

Level Scheme (continued)



Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

 $--- \rightarrow \gamma$ Decay (Uncertain)



 $^{194}_{82} \rm{Pb}_{112}$







Band(H): Magnetic-rotational

 (30^{-})

(29-)

 (28^{-})

(27⁻)

 (26^{-})

 (25^{-})

(24⁻)

 (23^{-})

 (22^{-})

(21-)

 (20^{-})

(19⁻)

(18-)

 (17^{-})





Band(K)

: Magnetic-rotational

9437.6

9036.6

8645.1

8257.3

7860.7

7487.8

7124.5

6795.9

6526.4

6318.1

6122.2

5993.3



 $^{194}_{82}$ Pb $_{112}$

(14-)

4365.2

Band(Q): SD-3 band (?)						
J2+18		<u>3741.2+z</u>				
<u>J2+16</u>	563	<u>3178.0+z</u>				
J2+14	529 - 📕 —	<u>2649.4+z</u>				
J2+12	492	2157.3+z				
J2+10	456	1701.5+z				
<u>J2+8</u>	417	_1284.2+z				
J2+6	380	904.2+z				
J2+4	341	<u>562.9+z</u>				
J2+2	302	-260.9+z				
J2≈(11) ⁻	261	<u> </u>				

Band(P): SD-2 band

J1+18		3567.2+y
J1+16	544	3023.4+y
J1+14	511	2512.3+y
J1+12	474	2038.3+y
J1+10	437	1601.5+y
J1+8	399	1202.5+y
J1+6	360	842.5+y
J1+4	321	<u> </u>
J1+2	281	241.2+y
J1≈(10)	241	у

Band(O): SD-1 band

	(38+)	12369.6
	(36 ⁺) 740	11630.1
	(34+) 706	10923.9
	(32 ⁺) 672	10251.6
Band(N) : Magnetic-rotational	(30+) 638	9613.5
band-7 based on (21 ⁻)	(28 ⁺) 603	9010.1
$\frac{(28^{-})}{(27^{-})}$ 8513.6	(26 ⁺) 568	8441.8
$\frac{(27^{-})}{(26^{-})} \xrightarrow[-385]{412} 8101.1}{7716.4}$	(24+) 532	7909.3
$\begin{array}{c c}\hline (25^{-}) & \hline & 7353.3\\\hline \hline (24^{-}) & 363 \\\hline & 7035.8 \\\hline \end{array}$	(22^+) 496	7413.5
(23^{-}) (318) (6759.5) (7650.6)	$\frac{(20^+)}{(18^+)}$ 458	6955.5 6535.47
(22^{-}) (249) (510.4) (21^{-}) (249) (308.5)		6155.27
202 0508.5	(14+) 380	5815.37
	(12^+) 340 (10^+) 200	$\frac{5516.88}{5260.56}$
	(10^{-}) 298 (8^{+}) 256	5260.56 5260.56 5260.56
	(6^+) (213) (6^+) 170	4877.78
	170	

Band(M): Band based on (9)-

		5672.7
(17-)	564	5108.2
(15 ⁻)	632	4477.1
(13-)	628	3849.3
(11-)	578	3271.34
(9)-	864	2407.46

 $^{194}_{82} \rm{Pb}_{112}$