Adopted Levels, Gammas

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 177, 1 (2021)	3-Sep-2021

Q(β^-)=−8185 *18*; S(n)=10050 *20*; S(p)=4020 *19*; Q(α)=4738 *17* 2021Wa16
S(2n)=17799 *18*, S(2p)=6774 *23*, Q(ε)=2730 *22* (2021Wa16).
Hyperfine structure measurements: 1990Di09, 1987Di06.
Mass measurement: 2000Ra23 (also 1999Sc46).
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}Er(^{30}Si,4nγ), which is extended with respect to the detailed level scheme of 2002Ka01 in ^{184}W(^{16}O,6nγ) 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,xnγ):SD (1997Ha24,1994Hu10) and the absolute excitation energy of the bandhead of SD-1 band is determined by 1997Ha24 and 1996Lo12.

^{194}Pb Levels

Band configurations are given by 2009Ku03 in (^{30}Si,4nγ) 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: $\nu i^{-2}_{13/2}\otimes\pi(h^{+2}_{9/2})_{8+}$ is labeled as AB8. See details on page 17 of 2009Ku03 paper.

Cross Reference (XREF) Flags

A	^{194}Bi ε decay (95 s)	E	^{158}Gd(^{40}Ar,4nγ)	I	^{209}Bi(π^-,xnγ)
B	^{194}Bi ε decay (125 s+115 s)	F	^{162}Dy(^{36}S,4nγ)	J	(HI,xnγ):SD
C	^{198}Po α decay (1.77 min)	G	^{168}Er(^{30}Si,4nγ)		
D	^{150}Sm(^{48}Ca,4nγ)	H	^{184}W(^{16}O,6nγ),^{182}W(^{16}O,4nγ)		

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
0.0	0^+	10.7 min *6*	ABCDEFGHIJ	%ε+%β^+=100; %α=7.3×10^{-6} *29* (1987El09) $T_{1/2}$: weighted average of 10.0 min *4* (2003Su30), 12.0 min *5* (1987El09), 9.2 min *11* (1982Hi04), 11 min *2* (1960Ju01). <r^2>$^{1/2}$=5.4372 fm *23* (2013An02 evaluation). Δ<r^2>(^{194}Pb,^{208}Pb)=−0.689 fm^2 *4* (2013An02 evaluation). Other: Δ<r^2>(^{194}Pb,^{206}Pb)=−0.564 fm^2 *13* (1987Di06).
930.70 *21*	0^+	1.1 ns *2*	ABC FGH J	XREF: B(?). E(level): level proposed by 1987Va09 in ^{194}Bi ε decay. Jπ: E0 transition to 0^+. $T_{1/2}$: from $\alpha\beta$(t) in ^{198}Po α decay (1989De18).
965.12 *9*	2^+		AB DEFGHIJ	Jπ: 965.1γ E2 to 0^+.
1308.27 *13*	(2^+)		AB FGH J	XREF: B(?). Jπ: 1308.3γ (E2) to 0^+.
1540.13 *13*	4^+		AB DEFGHIJ	Jπ: 575.0γ E2, ΔJ=2 to 2^+. Observed anisotropy in $\gamma(\theta)$ data in (HI,xnγ):SD (1997Ha24) forbids 0^+.
1636.92 *22*	(≤4)		A J	XREF: J(?). Jπ: 671.8γ to 2^+.
1738.78 *20*	$(1,2^+)$		A	Jπ: 1738.9γ and 808.1γ to 0^+.
1820.29 *16*	$(5)^-$	1.1 ns *2*	B DEFGHIJ	Jπ: 280.2γ E1, ΔJ=1 to 4^+; 3056.4γ from (6^+). $T_{1/2}$: from $\gamma\gamma$(t) in (^{16}O,6nγ) (1986Pa18). Probable configuration=((ν $f_{5/2}$)(ν $i_{13/2}$)+(ν $p_{3/2}$)(ν $i_{13/2}$)) (1986Va03).
2019.18 *24*	(≤4)		A	Jπ: 710.9γ to (2^+).

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Adopted Levels, Gammas (continued)

^{194}Pb Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
2135.06 *19*	$(6)^+$		B DEFGH J	Jπ: 594.8γ E2, ΔJ=2 to 4^+; possible 315γ to $(5)^-$.
2241.26 *18*	$(7)^-$		B DEFGHIJ	Jπ: 421.0γ E2, ΔJ=2 to $(5)^-$. Probable configuration=$((\nu\, f_{5/2})(\nu\, i_{13/2})+(\nu\, p_{3/2})(\nu\, i_{13/2}))$ (1986Va03).
2298.83 *22*	$(5^-,6^-)$		B J	XREF: B(?). Jπ: 2579γ from 6^+ SD level is possibly E1. Population uncertain in ^{194}Bi ε decay.
2407.46[j] *20*	$(9)^-$	17 ns *3*	B DEFGH J	μ=−0.38 *14* (2004Vy01,2020StZV) $T_{1/2}$: from γγ(t) and recoil-shadow anisotropy in (^{16}O,6nγ). Other: 17 ns *4* from γγ(θ) in (^{30}Si,4nγ). Jπ: 166.2γ E2, ΔJ=2 to $(7)^-$; 526γ from $(11)^-$. μ: from time differential perturbed angular distribution of γ rays following nuclear reactions (2004Vy01). Other: −0.63 *36* (1985St16, TDPAD). Dominant configuration=$\nu(2f^{-1}_{5/2}\,1i^{-1}_{13/2})$ is consistent with measured g factor (2004Vy01).
2407.8 *4*	$(4^+,5,6^+)$		J	E(level): from (HI,xnγ):SD only. Jπ: 867γ to 4^+, possible 272γ to $(6)^+$.
2419.64 *23*	(8^-)		B DE GH J	Jπ: 178.3γ (M1+E2), ΔJ=(1) to $(7)^-$; 2627.9γ from (8^+).
2437.53 *20*	$(8)^+$	17 ns *4*	B DEFGH J	Jπ: 302.5γ E2, ΔJ=2 to $(6)^+$, 196.2γ (E1), ΔJ=(1) to $(7)^-$. $T_{1/2}$: from γγ(t) in ^{194}Bi ε decay (1987Va09). Configuration=((π 9/2[505])(π 7/2[514])) (1994Po08).
2502.07 *24*	(8^-)		B D GH J	Jπ: 260.9γ (M1), ΔJ=1 to $(7)^-$; 705.4γ (Q), ΔJ=(2) from (10^-).
2524.4 *4*	(8^+)		G J	Jπ: 283γ to $(7)^-$, 2353.4γ from (6^+); possible 86γ to $(8)^+$, possible 55γ from $(10)^+$.
2581.18 *22*	$(10)^+$	17.2 ns *5*	B DEFGH J	Jπ: 173.7γ E1, ΔJ=1 to $(9)^-$; 46.8γ from (12^+). $T_{1/2}$: from γγ(t) in (^{16}O,6nγ) (1986Pa18). Possible configuration=$((\nu\, i_{13/2})^2)$ (1986Va03). See (^{16}O,6nγ) dataset.
2608.31 *24*			B J	XREF: B(?). E(level): level proposed by 1996Lo12 and 1997Ha24 in (HI,xnγ):SD. Population uncertain in ^{194}Bi ε decay.
2628.33[@] *25*	(12^+)	370 ns *13*	B DEFGH J	μ=−2.00 *2* (1985St16,2020StZV) Q=0.49 *3* (1985St16,2016St14) Jπ: configuration=$\nu i^2_{13/2}$ (1986Va03,1985St16) agrees with μ. See (^{16}O,6nγ) dataset. $T_{1/2}$: from γγ(t) in (^{16}O,6nγ). 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 from nuclear reactions (1985St16). Other: 0.48 *3* (2004Io01).
2799.3 *3*	$(4^+$ to $8^+)$		B G J	Jπ: 664.2γ to $(6)^+$.
2913.30 *24*	(9^-)		B D GH J	Jπ: 672.1γ (Q), ΔJ=(2) to $(7)^-$.
2930.75 *21*	(9^+)		B EFGH J	Jπ: 493.2γ to $(8)^+$.
2933.21 *25*	$(11)^-$	133 ns *7*	B DEFGH J	μ=+11.3 *2* (2004Vy01,2020StZV) Q=3.6 *4* (2007Io03,2016St14) Jπ: ΔJ=1, E1 γ to $(10)^+$ and E1 γ to (12^+). $T_{1/2}$: weighted average of 139 ns *7* (2005Dr11) and 133 ns *15* (2004Vy01) in (^{30}Si,4nγ), 122 ns *10* (1986Va03) and 135 ns *25* (1986Pa18) in (^{16}O,6nγ). Method: γγ(t), pulsed beam. μ: γ(θ,H,t) (time-dependent perturbed angular distribution method) (2004Vy01). Measured g factor is smaller than the calculated value of

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Adopted Levels, Gammas (continued)

^{194}Pb Levels (continued)

E(level)[†]	J$^{\pi}$[‡]	XREF	Comments
			1.10 for configuration=$\pi 3s^{-1}_{1/2}\otimes p(h_{9/2}i_{13/2})$. 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 $\gamma(\theta,H)$, level-mixing spectroscopy technique (2002Vy01). 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$^{\pi}$: 787.6γ (Q), ΔJ=(2) to (8^-); 800.3γ to $(9)^-$.
3271.34[j] *25*	(11^-)	E GH J	J$^{\pi}$: 863.8γ (Q), ΔJ=(2) to (9^-); band assignment.
3282.74 *23*	(10^+)	EFGH J	J$^{\pi}$: 845.4γ to $(8)^+$, 351.8γ to (9^+).
3349.1 *3*	(12^+)	GH	J$^{\pi}$: 767.9γ (Q) to $(10)^+$, 720.8γ to (12^+).
3372.8 *3*	(11^-)	D GH J	XREF: D(?). J$^{\pi}$: 459.5γ (Q), ΔJ=(2) to (9^-).
3382.3 *7*	$(10^+,11,12^+)$	G	J$^{\pi}$: 754.0γ to (12^+), 801.0γ to $(10)^+$.
3470.6 *5*		G J	
3474.8 *3*	$(12)^-$	DEFGH J	J$^{\pi}$: 541.7γ M1, ΔJ=1 to $(11)^-$.
3521.9 *7*		G J	
3545.2 *9*		G	
3560.8[@] *3*	(14^+)	DEFGH J	J$^{\pi}$: 932.5γ E2, ΔJ=2 to (12^+). Possible configuration=$(\nu\, i_{13/2})^2_{12+}\otimes 2^+$ (1986Va03).
3564.4 *7*		G	
3609.4 *3*	(12^+)	FGH	J$^{\pi}$: 1028.2γ (Q) to $(10)^+$, 980.9γ to (12^+).
3647.3 *4*	(12^+)	GH	J$^{\pi}$: 1066.0γ (Q), ΔJ=(2) to $(10)^+$.
3726.9 *3*	(12^-)	DE GH J	J$^{\pi}$: 519.6γ (Q), ΔJ=(2) to (10^-), 454.8γ to (11^-).
3771.2 *3*	(11^+)	FGH J	J$^{\pi}$: 488.4γ to (10^+), 840.7γ to (9^+).
3782.6 *5*		FGH	
3803.6 *8*	(12^+)	G	J$^{\pi}$: 1222.3γ to $(10)^+$, 406.4γ from (14^+).
3810.6 *7*		GH	
3839.0 *3*	$(13)^-$	DEFGH J	J$^{\pi}$: 905.8γ E2, ΔJ=2 to $(11)^-$, 364.0γ M1, ΔJ=1 to $(12)^-$.
3844.1[#] *3*	(14^+)	GH	J$^{\pi}$: 494.8γ to (12^+), 283.2γ to (14^+); 158.2γ from (15^-), 291.5γ from (16^+).
3849.3[j] *4*	(13^-)	E GH J	J$^{\pi}$: 577.9γ (Q), ΔJ=(2) to (11^-).
3860.5 *8*		G	
3908.3 *8*		G	
3936.2 *4*		GH	
3984.8 *11*		H	
4002.3 *3*	(15^-)	DEFGH	J$^{\pi}$: 441.6γ E1, ΔJ=1 to (14^+).
4135.5[@] *3*	(16^+)	DEFGH	J$^{\pi}$: 574.6γ (Q), ΔJ=(2) to (14^+).
4160.9 *9*		G	
4210.1 *5*	(14^+)	G	J$^{\pi}$: 600.7γ (Q), ΔJ=(2) to (12^+).
4214.8 *6*		G	
4235.9 *3*	(12^+)	EFGH J	J$^{\pi}$: 953.2γ to (10^+), 464.7γ to (11^+), 1302.6γ to $(11)^-$; band assignment.
4262.4 *7*		G	
4264.8[i] *4*	(14^-)	DE GH	J$^{\pi}$: 538.0γ (Q), ΔJ=(2) to (12^-), 415.6γ to (13^-).
4316.0 *4*		EFGH	
4332.7 *3*	(12)	EFGH	J$^{\pi}$: 858.0γ (D), ΔJ=(0) to $(12)^-$.
4364.8 *5*	(16^+)	G	J$^{\pi}$: 904.0γ and 904.0γ (Q), ΔJ=(2) to $(14)^+$; 220.3γ to (16^+).
4365.2[g] *3*	(14^-)	DEFGH	J$^{\pi}$: 526.3γ D, ΔJ=1, (M1) to $(13)^-$; band assignment.
4374.6 *4*	(16^-)	DEFGH	J$^{\pi}$: 372.5γ M1, ΔJ=1 to (15^-).
4375.8 *3*	(13^+)	DEFGH	J$^{\pi}$: 140.1γ M1 to (12^+), 536.8γ (D) to $(13)^-$.
4408.0[i] *4*	(15^-)	DE GH	J$^{\pi}$: 143.4γ D, ΔJ=1 to (14^-), 558.6γ to (13^-).
4448.2 *3*	$(15)^-$	DEFGH	J$^{\pi}$: 609.2γ E2, ΔJ=2 to $(13)^-$.
4453.4 *3*	(15^+)	D GH	XREF: D(?). J$^{\pi}$: 892.6γ D, ΔJ=1 to (14^+), 273.0γ from (16^+).
4477.1[j] *4*	(15^-)	E GH	J$^{\pi}$: 627.8γ to (13^-); band assignment.
4503.8 *4*	(14^+)	G	J$^{\pi}$: 128.3γ (D) to (13^+), most likely (M1); proposed by 2009Ku03 in (^{30}Si,4nγ).

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Adopted Levels, Gammas (continued)

^{194}Pb Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
4512.4 *4*	(14$^+$)		DEFGH	Jπ: 136.7γ M1 to (13$^+$).
4586.3 *7*			G	
4599.2 *4*	(17$^-$)		DE GH	Jπ: 596.9γ (Q), ΔJ=(2) to (15$^-$).
4612.8 *5*	(16$^+$)		G	Jπ: 402.7γ and 768.8γ to (14$^+$); 586.7γ from (18$^+$).
4615.6 *4*	(16$^-$)		D GH	XREF: D(?). Jπ: 613.0γ D, ΔJ=1 to (15$^-$), most likely M1.
4641.1[c] *6*	(15$^+$)		G	Jπ: 797.0γ and 1080.2γ to (14$^+$); band assignment.
4642.5[&] *4*	(15$^+$)		DEFGH	XREF: D(?). Jπ: 130.1γ M1, ΔJ=1 to (14$^+$).
4683.1[#] *6*	(16$^+$)		G	Jπ: 839.0γ to (14$^+$), 516.5γ from (18$^+$).
4692.0[i] *4*	(16$^-$)		DE GH	Jπ: 284.0γ (D), ΔJ=(1) to (15$^-$); band assignment.
4700.7 *4*	(18$^-$)		DEFGH	Jπ: 326.3γ E2, ΔJ=2 to (16$^-$).
4701.4[&] *7*	(16$^+$)		DEFGH	Jπ: band assignment.
4707.8 *4*	(15$^-$)		GH	Jπ: 869.8γ to (13)$^-$, 342.8γ to (14$^-$); proposed by 2009Ku03 in (^{30}Si,4nγ).
4726.5[c] *3*	(16$^+$)		DEFGH	Jπ: 1165.5γ (Q), ΔJ=(2) to (14$^+$), 591.2γ (D) to (16$^+$).
4738.6 *6*	(16$^+$)		G	Jπ: 528.4γ (Q), ΔJ=(2) to (14$^+$).
4764.4[g] *4*	(15$^-$)		GH	Jπ: 925.3γ (Q) to (13$^-$), 399.3γ (M1) to (14$^-$).
4767.2[&] *6*	(17$^+$)		DEFGH	Jπ: 65.5γ D, ΔJ=1 to (16$^+$).
4794.9[@] *4*	(18$^+$)		DEFGH	Jπ: 659.4γ E2, ΔJ=2 to (16$^+$).
4877.78[l] *19*	(6$^+$)		J	Jπ: from deexciting transitions to normal deformed levels (1996Lo12,1997Ha24). See (HI,xnγ):SD dataset.
4888.8[c] *4*	(17$^+$)		DE GH	Jπ: 162.3γ D, ΔJ=1 to (16$^+$); band assignment.
4930.1[&] *5*	(18$^+$)		DEFGH	Jπ: 162.9γ M1, ΔJ=1 to (17$^+$); band assignment.
4950.3 *4*	(17$^-$)		GH	Jπ: 947.9γ (Q) to (15$^-$), 575.7γ to (16$^-$).
4963.1 *4*	(16$^-$)		DEFGH	Jπ: 514.8γ M1, ΔJ=1 to (15$^-$).
4986.5[e] *4*	(17$^-$)		DEFGH	Jπ: 538.2γ (Q) to (15)$^-$, 294.6γ to (16$^-$).
5047.30[l] *19*	(8$^+$)	14 ps *5*	J	Jπ: 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[g] *4*	(16$^-$)		G	Jπ: 600.7γ (M1) to (15)$^-$ in (^{30}Si,4nγ).
5053.1[i] *5*	(17$^-$)		DE GH	Jπ: 361.1γ (D), ΔJ=(1) to (16$^-$); band assignment.
5059.2 *5*			D GH	XREF: D(?).
5089.3 *4*	(18$^-$)		DE GH	Jπ: 714.8γ (Q), ΔJ=(2) to (16$^-$).
5105.7[e] *5*	(18$^-$)		DEFGH	Jπ: 119.2γ M1, ΔJ=(1) to (17$^-$); band assignment.
5108.2[j] *5*	(17$^-$)		E GH	Jπ: 631.5γ (Q) to (15$^-$), 416.1γ to (16$^-$).
5113.5[g] *5*	(17$^-$)		G	Jπ: 636.1γ (Q) to (15$^-$), 150.6γ (M1) to (16$^-$).
5121.6[c] *4*	(18$^+$)		DE GH	Jπ: 232.8γ D, ΔJ=1 to (17$^+$); band assignment.
5179.2 *5*	(17$^-$)		G	Jπ: 731.0γ (Q) to (15$^-$), 216.3γ to (16$^-$).
5199.6 *6*	(18$^+$)		G	Jπ: 461.0γ (Q) to (16$^+$).
5233.2[&] *5*	(19$^+$)		DEFGH	Jπ: 303.1γ M1, ΔJ=1 to (18$^+$); band assignment.
5250.4[e] *5*	(19$^-$)		DEFGH	Jπ: 144.8γ M1, ΔJ=1 to (18$^-$); band assignment.
5256.6 *4*	(20$^+$)		DE GH	Jπ: 461.7γ (Q) to (18$^+$).
5260.56[l] *20*	(10$^+$)	5.8 ps *12*	J	Jπ: 213.26γ (E2) to (8$^+$); member of SD band. $T_{1/2}$: RDDS (1997Kr03). Other: 6.0 ps *22* (RDDS,1994Kr18). Deduced Q(transition)=20.7 *+25−18* (1997Kr03).
5326.6 *4*	(19$^-$)		DE GH	Jπ: 727.5γ (Q) to (17$^-$).
5329.2[#] *10*			GH	
5376.1 *11*			G	
5384.1[g] *6*			G	
5409.6[c] *4*	(19$^+$)		DE GH	Jπ: 288.0γ (D), ΔJ=(1) to (18$^+$); band assignment.
5433.5[i] *6*	(18$^-$)		GH	Jπ: 380.4γ to (17$^-$); band assignment.
5447.2[e] *5*	(20$^-$)		DEFGH J	Jπ: 196.9γ M1, ΔJ=1 to (19$^-$); band assignment.

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Adopted Levels, Gammas (continued)

^{194}Pb Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
5494.6 *6*	(19⁻)		DEFGH	Jπ: 315.6γ (Q) to (17⁻), 243.9γ to (19⁻).
5516.88[l] *20*	(12⁺)	3.8 ps *7*	J	Jπ: 256.32γ (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 *4*	(20⁻)		DE GH	Jπ: 459.9γ (Q), ΔJ=(2) to (18⁻).
5550.0[@] *4*	(20⁺)		DEFGH	Jπ: 755.0γ (Q), ΔJ=(2) to (18⁺).
5630.1[&] *5*	(20⁺)		DEFGH	Jπ: 396.9γ M1, ΔJ=1 to (19⁺); band assignment.
5672.7[j] *7*			G	
5685.4? *7*			H	E(level): from (^{16}O,6nγ) (2002Ka01) only.
5707.3[e] *6*	(21⁻)	0.16 ps *5*	DEFGH J	Jπ: 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	Jπ: 1028.2γ E2, ΔJ=2 to (18⁻).
5757.5[c] *4*	(20⁺)		DE GH	Jπ: 347.8γ D, ΔJ=1 to (19⁺); band assignment.
5759.5 *6*	(20⁻)		GH	Jπ: 1058.8γ (Q), ΔJ=(2) to (18⁻).
5784.9 *8*			G	
5801.2[g] *7*			G	
5812.9 *9*			G	
5815.37[l] *20*	(14⁺)	1.8 ps *5*	J	Jπ: 298.49γ (E2) to (12⁺); member of SD band. $T_{1/2}$: from RDDS (1997Kr03) in (HI,xnγ):SD. Other: 1.8 ps *+10−7* (RDDS,1994Kr18). Deduced Q(transition)=18.5 *+32−20* (1997Kr03).
5818.4 *9*	(19⁻)		G	Jπ: 384.8γ to (18⁻).
5824.0 *7*			GH	
5824.5 *5*			GH	
5907.7 *5*	(21⁻)		GH	Jπ: 581.2γ (Q) to (19⁻).
5908.7[f] *9*	(20⁻)		G	Jπ: 461.5γ to (20⁻); band assignment.
5933.8 *5*	(21⁺)		GH	Jπ: 677.2γ (D) to (20⁺).
5942.2 *6*	(20⁻)		GH	Jπ: 1241.5γ (Q) to (18⁻).
5973.4[#] *11*			G	
5993.3[h] *6*	(20⁻)		DE GH	Jπ: 498.8γ D, ΔJ=1 to (19⁻); band assignment.
6006.5[&] *5*	(21⁺)		DEFGH	Jπ: 376.3γ M1, ΔJ=1 to (20⁺); 773.4γ (Q) to (19⁺).
6028.3 *14*			GH	
6043.4[e] *6*	(22⁻)	0.15 ps *3*	DEFGH J	Jπ: 336.1γ M1, ΔJ=1 to (21⁻); 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.
6083.3 *10*	(21⁺)		G	Jπ: proposed by 2009Ku03 in (^{30}Si,4nγ) based on 286.4γ from (22⁺).
6094.8 *9*			G	
6122.2[h] *6*	(21⁻)		DE GH	Jπ: 129.0γ (D) to (20⁻); band assignment.
6131.8[c] *5*	(21⁺)		DE GH	Jπ: 722.2γ to (19⁺), 374.3γ to (20⁺); band assignment.
6155.27[l] *21*	(16⁺)		J	Jπ: 339.9γ (E2) to (14⁺); member of SD band.
6164.9[f] *7*	(21⁻)		G	Jπ: 914.7γ, ΔJ=(2), (Q) to (19⁻), 256.2γ to (20⁻); band assignment.
6203.5 *5*	(21⁻)		DE GH	Jπ: 654.1γ (M1) to (20⁻).
6219.5 *5*	(22⁺)		GH	Jπ: 962.9γ (Q) to (20⁺).
6263.9 *6*	(22⁺)		GH	Jπ: 1007.2γ (Q) to (20⁺).
6275.9[g] *12*			G	
6308.5[k] *6*	(21⁻)		GH	Jπ: 759.0γ to (20⁻); band assignment.
6318.1[h] *6*	(22⁻)		DE GH	Jπ: 195.9γ D, ΔJ=1 to (21⁻).
6329.8 *6*			G	
6369.9[&] *5*	(22⁺)		DEFGH	Jπ: 363.4γ M1, ΔJ=1 to (21⁺); band assignment.
6374.5[@] *5*	(22⁺)		D FGH	Jπ: 824.4γ (Q), ΔJ=(2) to (20⁺).
6416.0[a] *5*	(22⁺)		DEFGH	Jπ: 409.4γ (D) to (21⁺); band assignment.
6419.1[e] *6*	(23⁻)	0.13 ps *4*	DEFGH J	Jπ: 375.7γ M1, ΔJ=1 to (22⁻); band assignment.

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Adopted Levels, Gammas (continued)

^{194}Pb Levels (continued)

E(level)[†]	Jπ[‡]	$T_{1/2}$	XREF	Comments
				$T_{1/2}$: from DSAM in (HI,xnγ):SD (1998Cl06); systematic uncertainty of 20% as stated in 1998Cl06 has been added in quadrature by evaluators.
6426.2 *6*			GH	
6436.6 *10*			G	
6451.7[f] *7*	(22⁻)		G	Jπ: 286.8γ to (21⁻), 1004.5γ to (20⁻); band assignment.
6489.4 *5*			GH	
6510.4[k] *6*	(22⁻)		GH	Jπ: 201.9γ to (21⁻), 961.1γ to (20⁻); band assignment.
6526.4[h] *6*	(23⁻)		DE GH	Jπ: 208.4γ D, ΔJ=1 to (22⁻); band assignment.
6528.6[c] *5*	(22⁺)		DE GH	Jπ: 396.9γ D, ΔJ=1 to (21⁺); band assignment.
6535.47[l] *21*	(18⁺)	>0.5 ps	J	Jπ: 380.20γ (E2) to (16⁺); member of SD band. $T_{1/2}$: from DSAM in (HI,xnγ) (1993Wi02).
6561.2 *6*			GH	
6573.1 *10*			G	
6592.2 *11*			G	
6598.9 *9*			G	
6630.4[&] *5*	(23⁺)		DEFGH	Jπ: 260.6γ M1, ΔJ=1 to (22⁺); band assignment.
6641.3 *9*			G	
6716.5 *9*			G	
6759.5[k] *6*	(23⁻)		GH	Jπ: 249.1γ D to (22⁻); band assignment.
6763.9[a] *6*	(23⁺)		EFGH	Jπ: 348.0γ D to (22⁺); band assignment.
6787.1[f] *7*	(23⁻)		G	Jπ: 743.7γ (D) to (22⁻); band assignment.
6795.9[h] *6*	(24⁻)		DE GH	Jπ: 269.5γ D, ΔJ=1 to (23⁻), 753.6γ (Q) to (22⁻); band assignment.
6800.0[b] *7*	(23⁺)		G	Jπ: 383.8γ (M1) to (22⁺); band assignment.
6836.2[e] *6*	(24⁻)	0.13 ps *4*	DEFGH J	Jπ: 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	Jπ: 212.2γ D, ΔJ=1 to (23⁺); band assignment.
6906.1[c] *7*	(23⁺)		GH	Jπ: 377.4γ to (22⁺); band assignment.
6955.5[l] *3*	(20⁺)	0.24 ps *+43−14*	J	Jπ: 420.0γ to (18⁺); member of SD band. $T_{1/2}$: from DSAM in (HI,xnγ):SD (1993Wi02). Deduced Q(transition)=23 *+14−10* (1993Wi02).
6961.8 *5*			GH	
7035.8[k] *7*	(24⁻)		GH	Jπ: 276.3γ D to (23⁻); band assignment.
7036.0 *8*			GH	
7068.9[b] *6*	(24⁺)		GH	Jπ: 268.8γ to (23⁺); band assignment.
7070.2[&] *6*	(25⁺)		DEFGH	Jπ: 227.6γ M1, ΔJ=1 to (24⁺); band assignment.
7114.7[a] *7*	(24⁺)		GH	Jπ: 350.8γ D to (23⁺); band assignment.
7124.5[h] *7*	(25⁻)		D GH	Jπ: 328.6γ D to (24⁻); band assignment.
7138.7[f] *9*	(24⁻)		G	Jπ: 351.6γ to (23⁻); band assignment.
7160.1 *6*			GH	
7182.1 *12*			G	
7260.0[e] *7*	(25⁻)		EFGH	Jπ: 423.8γ D to (24⁻); band assignment.
7277.6[c] *12*	(24⁺)		GH	
7307.0 *6*			GH	
7337.4[&] *6*	(26⁺)		DEFGH	Jπ: 267.2γ D, ΔJ=1 to (25⁺); band assignment.
7347.4 *11*			G	
7353.3[k] *7*	(25⁻)		GH	Jπ: 317.5γ D to (24⁻); band assignment.
7365.4[b] *7*	(25⁺)		GH	Jπ: 296.5γ to (24⁺); band assignment.
7391.2 *14*			G	

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

^{194}Pb Levels (continued)

E(level)†	Jπ‡	$T_{1/2}$	XREF	Comments
7412.1 *16*			G	
7413.4 *14*			G	
7413.5[l] *3*	(22+)	0.17 ps *+10−7*	J	Jπ: 458.0γ to (20+); member of SD band. $T_{1/2}$: from DSAM in (HI,xnγ):SD (1993Wi02). Deduced Q(transition)=22 *+7−5* (1993Wi02).
7431.2[a] *8*	(25+)		GH	Jπ: 316.5γ D to (24+); band assignment.
7433.1 *14*			G	
7487.8[h] *8*	(26−)		GH	Jπ: 363.3γ D to (25−); band assignment.
7500.7[f] *10*	(25−)		G	Jπ: 362.0γ to (24−); band assignment.
7638.6[c] *16*	(25+)		GH	Jπ: 361.0γ to (24+); band assignment.
7644.3[&] *6*	(27+)		DEFGH	Jπ: 306.9γ D, ΔJ=1 to (26+); band assignment.
7680.9[b] *8*	(26+)		G	Jπ: 315.5γ to (25+); band assignment.
7701.9[e] *7*	(26−)		GH	Jπ: 441.9γ D to (25−); band assignment.
7716.4[k] *7*	(26−)		GH	Jπ: 363.1γ D to (25−); band assignment.
7748.8 *13*			G	
7775.8 *11*			G	
7793.5 *13*			GH	
7822.8 *11*			G	
7860.7[h] *9*	(27−)		GH	Jπ: 372.9γ D to (26−); band assignment.
7909.3[l] *4*	(24+)	0.13 ps *5*	J	Jπ: 495.8γ to (22+); member of SD band. $T_{1/2}$: from DSAM in (HI,xnγ):SD (1993Wi02). Deduced Q(transition)=20 *+5−3* (1993Wi02).
8005.1[&] *8*	(28+)		EFGH	Jπ: 360.8γ D to (27+); band assignment.
8022.9[b] *13*	(27+)		G	Jπ: 342.0γ to (26+); band assignment.
8101.1[k] *7*	(27−)		GH	Jπ: 384.7γ D to (26−); band assignment.
8130.1[e] *8*	(27−)		GH	Jπ: 428.2γ D to (26−); band assignment.
8173.7 *12*			G	
8257.3[h] *9*	(28−)		GH	Jπ: 396.6γ D to (27−); band assignment.
8354.5[b] *17*	(28+)		G	Jπ: 331.6γ to (27+); band assignment.
8398.8[&] *9*	(29+)		EFGH	Jπ: 393.7γ to (28+); band assignment.
8441.8[l] *4*	(26+)	0.08 ps *+4−5*	J	Jπ: 523.5γ to (24+); member of SD band. $T_{1/2}$: from DSAM in (HI,xnγ):SD (1993Wi02). Deduced Q(transition)=21 *+10−4* (1993Wi02).
8513.6[k] *8*	(28−)		GH	Jπ: 412.5γ D to (27−); band assignment.
8515.1[e] *13*	(28−)		GH	Jπ: 385.0γ to (27−); band assignment.
8645.1[h] *10*	(29−)		GH	Jπ: 387.8γ D to (28−); band assignment.
8819.7[&] *9*	(30+)		GH	Jπ: 420.9γ to (29+); band assignment.
8882.1[e] *16*	(29−)		G	Jπ: 367.0γ to (28−); band assignment.
9010.1[l] *5*	(28+)	0.07 ps *2*	J	$T_{1/2}$: from DSAM in (HI,xnγ):SD (1993Wi02). Deduced Q(transition)=20 *+4−2* (1993Wi02).
9036.6[h] *14*	(30−)		G	Jπ: 391.5γ to (29−); band assignment.
9254.6[e] *19*	(30−)		G	Jπ: 372.5γ to (29−); band assignment.
9260.6[&] *10*	(31+)		GH	Jπ: 440.9γ to (30+); band assignment.
9437.6[h] *17*	(31−)		G	Jπ: 401.0γ to (30−); band assignment.
9613.5[l] *5*	(30+)		J	Jπ: 603.4γ to (28+); member of SD band.
9722.6[&] *14*	(32+)		GH	Jπ: 462γ to (31+); band assignment.
10206.8[&] *14*	(33+)		GH	Jπ: 484.2γ to (32+); band assignment.
10251.6[l] *7*	(32+)		J	
10923.9[l] *8*	(34+)		J	
11630.1[l] *8*	(36+)		J	

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Adopted Levels, Gammas (continued)

^{194}Pb Levels (continued)

E(level)†	Jπ‡	XREF	Comments
12369.6[l] *9*	(38+)	J	
x[d]	J	G	E(level): x>4.6 MeV as shown in level scheme figure of 2009Ku03 in (^{30}Si,4nγ).
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] *5*	J1+4	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≈(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	
3178.0+z?[n] *13*	J2+16	J	
3741.2+z?[n] *15*	J2+18	J	

† From a least-squares fit to γ-ray energies, assuming ΔEγ=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,xnγ) 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.
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.

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Adopted Levels, Gammas (continued)

^{194}Pb Levels (continued)

[i] Band(L): Magnetic-rotational band-6 based on (14^-). Configuration=AE8.
[j] Band(M): Band based on $(9)^-$.
[k] Band(N): Magnetic-rotational band-7 based on (21^-). This band may be continuation of band-6. Configuration=ABCE8.
[l] 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 ^{184}W(^{16}O,6nγ); 1.1 *3* in ^{184}W(^{17}O,7nγ); 0.7 *2*, 0.9 *3* in ^{164}Dy(^{34}S,4nγ); 0.8 *2* in ^{162}Dy(^{36}S,4nγ). 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).

Adopted Levels, Gammas (continued)

γ(^{194}Pb)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	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). ρ^2(E0)=0.00098 *18* (2005Ki02,evaluation).
965.12	2^+	965.1 *1*	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 *1* from (^{16}O,6nγ).
1308.27	(2^+)	343.2[‡] *2*	17[‡] *7*	965.12	2^+	(E0+M1+E2)	0.72 *11*		Mult.,α: from ce data in ^{194}Bi ε decay (95 s).
		377.5[‡] *3*	7[‡] *3*	930.70	0^+				
		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		α(K)=0.1192 *17*; α(L)=0.1046 *16*; α(M)=0.0272 *4* α(N)=0.00687 *10*; α(O)=0.001248 *18*; α(P)=6.72×10^{-5} *10* E_γ: from ^{194}Bi ε decay (115 s +125 s).
		575.0 *1*	100.0 *15*	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 *1* from (^{16}O,6nγ). I_γ: from ^{194}Bi ε decay. Others: 100 *11* from (^{30}Si,4nγ), 100 *12* 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		B(E1)(W.u.)=8.1×10^{-6} *+18−13* α(K)=0.0283 *4*; α(L)=0.00483 *7*; α(M)=0.001127 *16* α(N)=0.000284 *4*; α(O)=5.51×10^{-5} *8*; α(P)=5.06×10^{-6} *7* E_γ: weighted average of 280.3 *2* from ^{194}Bi ε decay (125 s+115 s), 280.1 *3* from (^{30}Si,4nγ), and 280.2 *1* from (^{16}O,6nγ). Mult.: from ce and γ(θ) in (^{16}O,6nγ), γγ(θ) in (^{48}Ca,4nγ), with ΔJ=1.
2019.18	(≤4)	710.9[‡] *2*	100	1308.27	(2^+)				
2135.06	$(6)^+$	315[c] *1*		1820.29	$(5)^-$				E_γ: from 1997Ha24 in (HI,xnγ) only.
		594.8 *2*	100	1540.13	4^+	E2	0.0196		E_γ: weighted average of 594.7 *2* from ^{194}Bi ε decay (125 s+115 s), 594.9 *3* from (^{30}Si,4nγ), and 594.8 *3* from (^{16}O,6nγ).
2241.26	$(7)^-$	106.1 *10*	1.3 *5*	2135.06	$(6)^+$	E1	0.378 *11*		Mult.: deduced by 2005Dr11 in (^{30}Si,4nγ) from total conversion coefficient obtained from delayed intensity balances (not given in 2005Dr11 explicitly).
		421.0 *1*	100	1820.29	$(5)^-$	E2	0.0451		α(K)=0.0301 *5*; α(L)=0.01129 *16*; α(M)=0.00284 *4* α(N)=0.000718 *10*; α(O)=0.0001345 *19*; α(P)=9.72×10^{-6} *14* E_γ: weighted average of 421.0 *2* from ^{194}Bi ε decay (125 s+115 s), 420.9 *3* from (^{30}Si,4nγ), and 421.0 *1* from (^{16}O,6nγ).

From ENSDF

$^{194}_{82}Pb_{112}$-10

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.&	δ	α b	Comments
2298.83	(5⁻,6⁻)	478.7‡ *2*	100	1820.29	(5)⁻				E_γ: tentative placement from 1996Lo12.
2407.46	(9)⁻	166.2 *1*	100	2241.26	(7)⁻	E2		0.831	B(E2)(W.u.)=2.15 *+46−32* α(K)=0.255 *4*; α(L)=0.430 *7*; α(M)=0.1129 *16* α(N)=0.0285 *4*; α(O)=0.00512 *8*; α(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,4nγ), and 166.2 *1* from (^{16}O,6nγ).
2407.8	(4⁺,5,6⁺)	272c *1*		2135.06	(6)⁺				E_γ: from (HI,xnγ):SD (1997Ha24).
		867 *1*		1540.13	4⁺				E_γ: from (HI,xnγ):SD (1997Ha24).
2419.64	(8⁻)	178.3 *2*	100	2241.26	(7)⁻	(M1+E2)	<0.7	1.62 *20*	α(K)=1.27 *21*; α(L)=0.264 *11*; α(M)=0.063 *4* α(N)=0.0161 *10*; α(O)=0.00314 *14*; α(P)=0.000299 *24* E_γ: weighted average of 178.5 *2* from ^{194}Bi ε decay (125 s+115 s), 178.3 *5* from (^{30}Si,4nγ), and 178.1 *2* from (^{16}O,6nγ). Mult.,δ: from ce data in ^{194}Bi ε decay (125 s+115 s).
2437.53	(8)⁺	196.2 *2*	25 *3*	2241.26	(7)⁻	(E1)		0.0818	B(E1)(W.u.)=2.8×10⁻⁷ *+10−6* α(K)=0.0664 *10*; α(L)=0.01178 *17*; α(M)=0.00276 *4* α(N)=0.000694 *10*; α(O)=0.0001334 *19*; α(P)=1.163×10⁻⁵ *17* E_γ: weighted average of 196.1 *2* from ^{194}Bi ε decay (125 s+115 s), 196.0 *5* from (^{30}Si,4nγ), and 196.4 *3* from (^{16}O,6nγ). I_γ: weighted average of 24.4 *22* from ^{194}Bi ε decay (125 s+115 s) and 40 *12* from (^{30}Si,4nγ). Other: 78 *17* from (^{16}O,6nγ) is discrepant. Mult.: from ce data in ^{194}Bi ε decay (125 s+115 s) and γ asymmetry in (HI,xnγ):SD.
		302.5 *1*	100 *5*	2135.06	(6)⁺	E2		0.1127	B(E2)(W.u.)=0.142 *+44−27* α(K)=0.0638 *9*; α(L)=0.0367 *6*; α(M)=0.00942 *14* α(N)=0.00238 *4*; α(O)=0.000438 *7*; α(P)=2.69×10⁻⁵ *4* E_γ: weighted average of 302.5 *2* from ^{194}Bi ε decay (125 s+115 s), 302.1 *3* from (^{30}Si,4nγ), and 302.6 *1* from (^{16}O,6nγ). I_γ: from ^{194}Bi ε decay (125 s+115 s). Others: 100 *16* from (^{30}Si,4nγ), 100 *28* from (^{16}O,6nγ), and 100 *23* from (HI,xnγ):SD. Mult.: from ce data in ^{194}Bi ε decay (125 s+115 s) and (^{16}O,6nγ).
2502.07	(8⁻)	260.9 *2*	100	2241.26	(7)⁻	(M1)		0.626	α(K)=0.511 *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}Ca,4nγ), with ΔJ=1.
2524.4	(8⁺)	86c *1*		2437.53	(8)⁺				E_γ: from 1997Ha24 in (HI,xnγ):SD only.
		283 *1*		2241.26	(7)⁻				E_γ: from 1997Ha24 in (HI,xnγ):SD and 2005Dr11 in (^{30}Si,4nγ).
2581.18	(10)⁺	55c		2524.4	(8⁺)				E_γ: from (^{30}Si,4nγ) (2009Ku03) only.
		173.7 *1*	100	2407.46	(9)⁻	E1		0.1105	B(E1)(W.u.)=2.02×10⁻⁶ *6*

From ENSDF

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[b]	Comments
								α(K)=0.0894 *13*; α(L)=0.01613 *23*; α(M)=0.00379 *6* α(N)=0.000951 *14*; α(O)=0.000182 *3*; α(P)=1.556×10^{-5} *22* E_γ: weighted average of 173.9 *2* from ^{194}Bi ε decay (125 s+115 s), 173.6 *3* from (^{30}Si,4nγ), and 173.7 *1* from (^{16}O,6nγ). Mult.: ΔJ=1 from γγ(θ) in (^{48}Ca,4nγ).
2608.31		787.9 *2*		1820.29	(5)$^-$			E_γ: from ^{194}Bi ε decay; tentative placement by 1996Lo12 in (HI,xnγ):SD. Other: 788 from (HI,xnγ).
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* α(N)=10.9 *5*; α(O)=1.93 *9*; α(P)=0.066 *3* E_γ: from ce data in ^{194}Bi ε decay (1987Va09). Other: 47.0 from ce data in (^{48}Ca,4nγ) (1991Fa05).
2799.3	(4$^+$ to 8$^+$)	664.2 *2*	100	2135.06	(6)$^+$			E_γ: weighted average of 664.2 *2* from ^{194}Bi ε decay (125 s+115 s) and 664.0 *5* from (^{30}Si,4nγ).
2913.30	(9$^-$)	672.1 *2*	100	2241.26	(7)$^-$	(Q)		E_γ: weighted average of 671.8 *2* from ^{194}Bi ε decay (125 s+115 s), 672.1 *5* from (^{30}Si,4nγ), and 672.3 *2* from (^{16}O,6nγ). Mult.: from γγ(θ) in (^{48}Ca,4nγ) and γ(θ) in (^{16}O,6nγ), ΔJ=(2).
2930.75	(9$^+$)	493.2 *1*	100	2437.53	(8)$^+$			E_γ: from (^{16}O,6nγ). Others: 493.2 *2* from ^{194}Bi ε decay (125 s+115 s) and 493.2 *5* from (^{30}Si,4nγ).
2933.21	(11)$^-$	304.9 *1*	100 *3*	2628.33	(12$^+$)	E1	0.0284	B(E1)(W.u.)=2.50×10^{-8} *+15−14* α(K)=0.0233 *4*; α(L)=0.00393 *6*; α(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 *1* from (^{16}O,6nγ). Other: 304.4 *10* from (^{30}Si,4nγ). I_γ: from (^{30}Si,4nγ) (2005Dr11). Others: 100 *27* from ^{194}Bi ε decay (125 s+115 s) and 100 *20* from (^{48}Ca,4nγ). Mult.: from ce data in (^{16}O,6nγ) (1986Pa18).
		352.1 *3*	94 *3*	2581.18	(10)$^+$	E1	0.0205	B(E1)(W.u.)=1.53×10^{-8} *+10−8* α(K)=0.01682 *24*; α(L)=0.00280 *4*; α(M)=0.000652 *10* α(N)=0.0001644 *24*; α(O)=3.21×10^{-5} *5*; α(P)=3.03×10^{-6} *5* E_γ: weighted average of 352.3 *2* from ^{194}Bi ε decay (125 s+115 s) and 351.8 *2* from (^{16}O,6nγ). Other: 351.4 *10* from (^{30}Si,4nγ). I_γ: from (^{30}Si,4nγ) (2005Dr11). Others: 159 *21* from ^{194}Bi ε decay (125 s+115 s) and 164 *10* from (^{48}Ca,4nγ) are discrepant. Mult.: from ce data and γγ(DCO) in (^{16}O,6nγ), ce data in (^{36}S,4nγ), and γγ(θ) in (^{48}Ca,4nγ). Other: ce(K) data in ^{194}Biε decay gives E2, but the ce(K) line is very weak (1987Va09).
		495.7 *10*	11.8 *13*	2437.53	(8)$^+$	[E3]	0.1005 *16*	B(E3)(W.u.)=30.6 *+37−36* α(K)=0.0530 *8*; α(L)=0.0355 *6*; α(M)=0.00924 *16* α(N)=0.00235 *4*; α(O)=0.000437 *8*; α(P)=3.06×10^{-5} *5*

From ENSDF

$^{194}_{82}Pb_{112}$-12

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	δ	α[b]	Comments
									E_γ: weighted average of 495.3 *10* from (^{30}Si,4nγ) and 496 *1* from (^{16}O,6nγ). Not seen in (^{48}Ca,4nγ).
									I_γ: from (^{30}Si,4nγ) (2005Dr11). Other: I(496γ)/I(352γ)=100 *38*/100 *25* in(^{16}O,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_γ,I_γ: from (^{30}Si,4nγ) (2005Dr11) only.
3207.39	(10^-)	705.4 *2*	40 *9*	2502.07	(8^-)	(Q)			E_γ: weighted average of 705.3 *5* from (^{30}Si,4nγ) and 705.4 *2* from (^{16}O,6nγ). I_γ: weighted average of 52 *13* from (^{30}Si,4nγ) and 33 *10* from (^{16}O,6nγ).
		787.6 *2*	100 *5*	2419.64	(8^-)	(Q)			E_γ: weighted average of 787.5 *3* from (^{30}Si,4nγ) and 787.7 *2* from (^{16}O,6nγ). I_γ: from (^{16}O,6nγ). Other: 100 *18* from (^{30}Si,4nγ). Mult.: from γγ(θ) in (^{48}Ca,4nγ) and γ(θ) in (^{16}O,6nγ), with ΔJ=(2).
		800.3 *3*	28 *8*	2407.46	$(9)^-$				E_γ: weighted average of 799.5 *5* from (^{30}Si,4nγ) and 800.4 *2* from (^{16}O,6nγ). I_γ: weighted average of 43 *13* from (^{30}Si,4nγ) and 24 *7* from (^{16}O,6nγ).
3271.34	(11^-)	358.1 *3*	21 *10*	2913.30	(9^-)				E_γ: weighted average of 357.9 *5* from (^{30}Si,4nγ) and 358.1 *3* from (^{16}O,6nγ). I_γ: unweighted average of 11.7 *44* from (^{30}Si,4nγ) and 31.1 *67* from (^{16}O,6nγ).
		863.8 *2*	100 *11*	2407.46	$(9)^-$	(Q)			E_γ: weighted average of 863.7 *3* from (^{30}Si,4nγ) and 863.9 *2* from (^{16}O,6nγ). I_γ: from (^{16}O,6nγ). Other: 100 *13* from (^{30}Si,4nγ). Mult.: from γ(θ) in (^{30}Si,4nγ) and (^{16}O,6nγ), ΔJ=(2).
3282.74	(10^+)	351.8 *2*	46 *14*	2930.75	(9^+)				E_γ: weighted average of 352.0 *5* from (^{30}Si,4nγ) and 351.8 *2* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ).
		845.4 *2*	100 *22*	2437.53	$(8)^+$				E_γ: weighted average of 845.2 *5* from (^{30}Si,4nγ) and 845.4 *2* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ).
3349.1	(12^+)	720.8 *5*	85 *26*	2628.33	(12^+)				E_γ,I_γ: from (^{30}Si,4nγ).
		767.9 *2*	100 *28*	2581.18	$(10)^+$	(Q)			E_γ: weighted average of 767.8 *5* from (^{30}Si,4nγ) and 767.9 *2* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ). Mult.: from γ(θ) in (^{30}Si,4nγ).
3372.8	(11^-)	459.5 *2*	100	2913.30	(9^-)	(Q)			E_γ: from (^{16}O,6nγ). Other: 459.5 *5* from (^{30}Si,4nγ), 459.4 from (^{48}Ca,4nγ). Mult.: from γγ(θ) in (^{48}Ca,4nγ), ΔJ=(2).
3382.3	$(10^+,11,12^+)$	754.0 *10*	100 *46*	2628.33	(12^+)				
		801.0 *10*	45 *18*	2581.18	$(10)^+$				

From ENSDF

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[b]	Comments
3470.6		671.3 *5*	100	2799.3	$(4^+$ to $8^+)$			
3474.8	$(12)^-$	541.7 *2*	100	2933.21	$(11)^-$	M1	0.0874	α(K)=0.0716 *10*; α(L)=0.01204 *17*; α(M)=0.00281 *4* α(N)=0.000715 *10*; α(O)=0.0001426 *20*; α(P)=1.529×10^{-5} *22* E_γ: weighted average of 542.0 *3* from (^{30}Si,4nγ) and 541.6 *2* from (^{16}O,6nγ). Mult.: from ce and γ(θ,pol) in (^{16}O,6nγ), γγ(θ) in (^{48}Ca,4nγ), and ce data in (^{36}S,4nγ), ΔJ=1.
3521.9		722.5 *10*	100	2799.3	$(4^+$ to $8^+)$			
3545.2		614.4 *10*	100	2930.75	(9^+)			
3560.8	(14^+)	932.5 *1*	100	2628.33	(12^+)	E2	0.00764	E_γ: weighted average of 932.4 *3* from (^{30}Si,4nγ) and 932.5 *1* from (^{16}O,6nγ). Mult.: from ce and γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=2.
3564.4		765.0 *10*	100	2799.3	$(4^+$ to $8^+)$			
3609.4	(12^+)	980.9 *2*		2628.33	(12^+)			E_γ: weighted average of 981.0 *10* from (^{30}Si,4nγ) and 980.9 *2* from (^{16}O,6nγ).
		1028.2 *3*	100	2581.18	$(10)^+$	(Q)		E_γ: weighted average of 1028.0 *5* from (^{30}Si,4nγ) and 1028.3 *3* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{30}Si,4nγ).
3647.3	(12^+)	1066.0 *3*	100	2581.18	$(10)^+$	(Q)		E_γ: weighted average of 1066.1 *5* from (^{30}Si,4nγ) and 1065.9 *3* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{30}Si,4nγ).
3726.9	(12^-)	454.8 *10*	6 *2*	3271.34	(11^-)			E_γ: weighted average of 455.5 *10* from (^{30}Si,4nγ) and 456 *1* from (^{16}O,6nγ). I_γ: weighted average of 11.3 *36* from (^{30}Si,4nγ) and 5.9 *20* from (^{16}O,6nγ).
		519.6 *2*	100 *10*	3207.39	(10^-)	(Q)		E_γ: weighted average of 519.7 *3* from (^{30}Si,4nγ) and 519.6 *2* from (^{16}O,6nγ). I_γ: from (^{16}O,6nγ) and (^{30}Si,4nγ). Mult.: from γ(θ) in (^{30}Si,4nγ),
3771.2	(11^+)	488.4 *2*	81 *24*	3282.74	(10^+)			E_γ: weighted average of 488.0 *5* from (^{30}Si,4nγ) and 488.4 *2* from (^{16}O,6nγ).
		840.7 *3*	100 *30*	2930.75	(9^+)			E_γ: weighted average of 840.0 *5* from (^{30}Si,4nγ) and 840.8 *2* from (^{16}O,6nγ).
3782.6		1154.4 *5*	100	2628.33	(12^+)			E_γ: weighted average of 1154.0 *10* from (^{30}Si,4nγ) and 1154.5 *5* from (^{16}O,6nγ).
3803.6	(12^+)	1222.3 *10*	100	2581.18	$(10)^+$			
3810.6		1229.2 *10*	100	2581.18	$(10)^+$			
3839.0	$(13)^-$	364.0 *3*	100 *4*	3474.8	$(12)^-$	M1	0.252	α(K)=0.206 *3*; α(L)=0.0351 *5*; α(M)=0.00821 *12* α(N)=0.00209 *3*; α(O)=0.000416 *6*; α(P)=4.45×10^{-5} *7* E_γ: from (^{30}Si,4nγ). Other: 364 *1* from (^{16}O,6nγ), 364.6 from (^{48}Ca,4nγ), 364.4 from (^{40}Ar,4nγ). I_γ: from (^{48}Ca,4nγ). Others: 100 *16* from (^{36}S,4nγ) and 100 *13* from (^{30}Si,4nγ). Mult.: from ce and γ(θ,pol) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), with ΔJ=1.
		905.8 *2*	85 *2*	2933.21	$(11)^-$	E2	0.00809	E_γ: weighted average of 906.0 *3* from (^{30}Si,4nγ) and 905.7 *2* from (^{16}O,6nγ). Others: 907.1 from (^{48}Ca,4nγ), 906.0 from (^{40}Ar,4nγ), 906.3 from (^{36}S,4nγ).

From ENSDF

$^{194}_{82}Pb_{112}$-14

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[b]	Comments
								I_γ: from (^{48}Ca,4nγ). Other: 73 *13* from (^{36}S,4nγ). Mult.: from ce and γ(θ,pol) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), with ΔJ=2.
3844.1	(14$^+$)	283.2 *10*	17 *8*	3560.8	(14$^+$)			
		494.8 *5*	100 *38*	3349.1	(12$^+$)			
		1215.6 *3*		2628.33	(12$^+$)			E_γ: other: 1215.5 *5* from (^{16}O,6nγ).
3849.3	(13$^-$)	476.2 *10*	8.7 *3*	3372.8	(11$^-$)			
		577.9 *3*	100 *13*	3271.34	(11$^-$)	(Q)		E_γ: weighted average of 577.8 *3* from (^{30}Si,4nγ) and 577.9 *3* from (^{16}O,6nγ).
3860.5		1232.1 *10*	100	2628.33	(12$^+$)			
3908.3		1279.9 *10*	100	2628.33	(12$^+$)			
3936.2		553.7 *10*	43 *15*	3382.3	(10$^+$,11,12$^+$)			
		587.0 *3*	100 *32*	3349.1	(12$^+$)			E_γ: weighted average of 586.9 *5* from (^{30}Si,4nγ) and 587.0 *3* from (^{16}O,6nγ).
3984.8		612[c]	100	3372.8	(11$^-$)			E_γ: from 2002Ka01 in (^{16}O,6nγ) only.
4002.3	(15$^-$)	158.2 *2*	4.5 *13*	3844.1	(14$^+$)			E_γ: weighted average of 158.5 *5* from (^{30}Si,4nγ) and 158.1 *2* from (^{16}O,6nγ).
		441.6 *2*	100 *14*	3560.8	(14$^+$)	E1	0.01244	E_γ: weighted average of 441.7 *3* from (^{30}Si,4nγ) and 441.6 *2* from (^{16}O,6nγ). Mult.: from ce and γ(θ,pol) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
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 *3* from (^{30}Si,4nγ) and 574.6 *2* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=(2).
4160.9		615.6 *10*	100	3545.2				
4210.1	(14$^+$)	406.4 *10*	38 *14*	3803.6	(12$^+$)			
		562.6 *10*	39 *14*	3647.3	(12$^+$)			
		600.7 *5*	100 *25*	3609.4	(12$^+$)	(Q)		Mult.: from γ(θ) in (^{30}Si,4nγ).
4214.8		365.5 *5*	100	3849.3	(13$^-$)			
4235.9	(12$^+$)	464.7 *2*	84 *25*	3771.2	(11$^+$)			E_γ: weighted average of 465.0 *5* from (^{30}Si,4nγ) and 464.7 *2* from (^{16}O,6nγ).
		953.2 *2*	100 *28*	3282.74	(10$^+$)			E_γ: weighted average of 953.0 *5* from (^{30}Si,4nγ) and 953.2 *2* from (^{16}O,6nγ).
		1302.6 *5*		2933.21	(11)$^-$			E_γ: weighted average of 1302.9 *10* from (^{30}Si,4nγ) and 1302.5 *5* from (^{16}O,6nγ).
4262.4		354.0 *10*		3908.3				
		401.8 *10*		3860.5				
		479.9 *10*		3782.6				
4264.8	(14$^-$)	(50[@])		4214.8				
		415.6 *10*	20 *8*	3849.3	(13$^-$)			
		538.0 *2*	100 *18*	3726.9	(12$^-$)	(Q)		E_γ: weighted average of 537.9 *3* from (^{30}Si,4nγ) and 538.1 *2* from (^{16}O,6nγ).

From ENSDF

$^{194}_{82}Pb_{112}$-15

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	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$^+$)			
		706.7 *10*	100 *31*	3609.4	(12$^+$)			
		751.7 *10*	13 *7*	3564.4				
		794.2 *10*	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,4nγ) and 1687.5 *5* from (^{16}O,6nγ).
4332.7	(12)	98[c]		4235.9	(12$^+$)			E_γ: from 1993Me12 in (^{40}Ar,4nγ) only.
		171.8 *10*	4 *2*	4160.9				
		521.9 *10*	7 *4*	3810.6				
		550.1 *10*		3782.6				
		685.0 *10*	14 *6*	3647.3	(12$^+$)			
		723.1 *3*	38 *12*	3609.4	(12$^+$)			E_γ: from (^{16}O,6nγ). Other: 723.1 *5* from (^{30}Si,4nγ).
		768.1 *10*	7 *3*	3564.4				
		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,4nγ) and 858.0 *2* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ). Other: 100 *28* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{16}O,6nγ), ΔJ=(0).
		861.8 *19*	12 *6*	3470.6				
		1399.5 *5*		2933.21	(11)$^-$			E_γ: weighted average of 1399.7 *10* from (^{30}Si,4nγ) and 1399.5 *5* from (^{16}O,6nγ).
		1704.5 *8*		2628.33	(12$^+$)			E_γ: weighted average of 1704.1 *10* from (^{30}Si,4nγ) and 1704.7 *8* from (^{16}O,6nγ).
4364.8	(16$^+$)	229.3 *10*	34 *15*	4135.5	(16$^+$)			
		520.8 *10*	100 *34*	3844.1	(14$^+$)	(Q)		Mult.: from γ(θ) in (^{30}Si,4nγ).
		804.0 *10*	94 *43*	3560.8	(14$^+$)	(Q)		Mult.: from γ(θ) in (^{30}Si,4nγ).
4365.2	(14$^-$)	526.3 *2*	100 *24*	3839.0	(13)$^-$	(M1)		E_γ: weighted average of 526.0 *3* from (^{30}Si,4nγ) and 526.4 *2* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{30}Si,4nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		890.4 *3*	40 *9*	3474.8	(12)$^-$			E_γ: weighted average of 890.0 *5* from (^{30}Si,4nγ) and 890.6 *3* from (^{16}O,6nγ).
4374.6	(16$^-$)	372.5 *2*	100	4002.3	(15$^-$)	M1	0.237	α(K)=0.194 *3*; α(L)=0.0329 *5*; α(M)=0.00771 *11* α(N)=0.00196 *3*; α(O)=0.000391 *6*; α(P)=4.18×10^{-5} *6* E_γ: from (^{16}O,6nγ). Other: 372.5 *3* from (^{30}Si,4nγ). Mult.: from ce and γ(pol) in (^{16}O,6nγ), γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
4375.8	(13$^+$)	(43[@])		4332.7	(12)			E_γ: inferred from γγ-coin in (^{30}Si,4nγ) (2009Ku03) and (^{16}O,6nγ) (2002Ka01), not observed directly.
		140.1 *3*		4235.9	(12$^+$)	M1	3.57	α(K)=2.92 *5*; α(L)=0.504 *8*; α(M)=0.1183 *18* α(N)=0.0301 *5*; α(O)=0.00599 *10*; α(P)=0.000640 *10* E_γ: weighted average of 139.7 *10* from (^{30}Si,4nγ) and 140.1 *3* from (^{16}O,6nγ).
		536.8 *2*	100 *15*	3839.0	(13)$^-$	(D)		E_γ: weighted average of 536.6 *3* from (^{30}Si,4nγ) and 536.9 *2* from (^{16}O,6nγ).
4408.0	(15$^-$)	143.4 *3*	100 *25*	4264.8	(14$^-$)	D		E_γ: weighted average of 143.2 *5* from (^{30}Si,4nγ) and 143.4 *3* from (^{16}O,6nγ). I_γ: weighted average of 100 *25* from (^{30}Si,4nγ) and 100 *29* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		558.6 *3*	47 *13*	3849.3	(13$^-$)			E_γ: weighted average of 558.8 *10* from (^{30}Si,4nγ) and 558.6 *3* from (^{16}O,6nγ). I_γ: weighted average of 39 *13* from (^{30}Si,4nγ) and 57 *14* from (^{16}O,6nγ).

From ENSDF

$^{194}_{82}Pb_{112}$-16

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[b]	Comments
4448.2	(15)$^-$	(83[@])		4365.2	(14$^-$)			E_γ: inferred from γγ-coin in (^{30}Si,4nγ) (2009Ku03) and (^{16}O,6nγ) (2002Ka01), not observed directly.
		609.2 *2*	100	3839.0	(13)$^-$	E2	0.0186	E_γ: weighted average of 609.0 *3* from (^{30}Si,4nγ) and 609.3 *2* from (^{16}O,6nγ). Mult.: from ce data in (^{16}O,6nγ) and (^{36}S,4nγ), γγ(θ) in (^{48}Ca,4nγ), ΔJ=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,4nγ) and 892.7 *2* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
4477.1	(15$^-$)	627.8 *3*	100	3849.3	(13$^-$)			E_γ: weighted average of 627.7 *5* from (^{30}Si,4nγ) and 627.9 *3* from (^{16}O,6nγ).
4503.8	(14$^+$)	128.3 *10*		4375.8	(13$^+$)	(M1)	4.59 *13*	α(K)=3.74 *10*; α(L)=0.649 *18*; α(M)=0.152 *4* α(N)=0.0387 *11*; α(O)=0.00771 *21*; α(P)=0.000823 *22* Mult.: (D) from γ(θ) in (^{30}Si,4nγ), 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*	α(K)=3.13 *5*; α(L)=0.541 *9*; α(M)=0.1269 *21* α(N)=0.0322 *6*; α(O)=0.00643 *11*; α(P)=0.000687 *12* E_γ: weighted average of 137.0 *10* from (^{30}Si,4nγ) and 136.6 *4* from (^{16}O,6nγ). This γ is placed from the 4643 level by 2002Ka01 in (^{16}O,6nγ) and here replaced by evaluators based on that of 2009Ku03 in (^{30}Si,4nγ).
		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 *3* from (^{30}Si,4nγ) and 597.0 *2* from (^{16}O,6nγ). Mult.: from γγ(θ) in (^{48}Ca,4nγ), ΔJ=(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 γγ(θ) 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 *10* from (^{30}Si,4nγ) and 130.1 *4* from (^{16}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). Mult.: from ce and γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		138.9 *10*		4503.8	(14$^+$)	[M1]	3.66 *10*	α(K)=2.99 *8*; α(L)=0.517 *13*; α(M)=0.121 *3* α(N)=0.0308 *8*; α(O)=0.00614 *16*; α(P)=0.000656 *17*
		506.9 *3*	100 *31*	4135.5	(16$^+$)			E_γ: weighted average of 507.1 *5* from (^{30}Si,4nγ) and 506.8 *3* from (^{16}O,6nγ). I_γ: other: 100 *50* from (^{16}O,6nγ).

From ENSDF

$^{194}_{82}Pb_{112}$-17

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[b]	Comments
4642.5	(15$^+$)	1081.7 *5*	37 *17*	3560.8	(14$^+$)			E_γ: weighted average of 1081.8 *10* from (^{30}Si,4nγ) and 1081.7 *5* from (^{16}O,6nγ). I_γ: other: 166 *66* from (^{16}O,6nγ).
4683.1	(16$^+$)	839.0 *5*	100	3844.1	(14$^+$)			
4692.0	(16$^-$)	215.0 *10*	7 *3*	4477.1	(15$^-$)	(D)		Mult.: from γ(θ) in (^{30}Si,4nγ).
		284.0 *2*	100 *21*	4408.0	(15$^-$)	(D)		E_γ: weighted average of 283.9 *5* from (^{30}Si,4nγ) and 284.0 *2* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{30}Si,4nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=(1).
4700.7	(18$^-$)	326.3 *2*	100	4374.6	(16$^-$)	E2	0.0903	α(K)=0.0535 *8*; α(L)=0.0277 *4*; α(M)=0.00707 *10* α(N)=0.00179 *3*; α(O)=0.000330 *5*; α(P)=2.11×10^{-5} *3* E_γ: weighted average of 326.2 *3* from (^{30}Si,4nγ) and 326.3 *2* from (^{16}O,6nγ). Mult.: from ce and γ(θ,pol) in (^{16}O,6nγ), γγ(θ) in (^{48}Ca,4nγ), ΔJ=2.
4701.4	(16$^+$)	58.3 *10*		4642.5	(15$^+$)			
		248.3 *10*		4453.4	(15$^+$)			
4707.8	(15$^-$)	342.8 *2*	100 *24*	4365.2	(14$^-$)			E_γ: weighted average of 342.8 *5* from (^{30}Si,4nγ) and 342.8 *2* from (^{16}O,6nγ).
		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 *19* α(N)=0.127 *5*; α(O)=0.0253 *10*; α(P)=0.00270 *11*
		140.0 *10*		4586.3				
		273.0 *3*	100 *18*	4453.4	(15$^+$)			E_γ: from (^{16}O,6nγ). Other: 273.0 *5* from (^{30}Si,4nγ).
		591.2 *2*	86 *24*	4135.5	(16$^+$)	(D)		E_γ: weighted average of 590.5 *5* from (^{30}Si,4nγ) and 591.2 *2* from (^{16}O,6nγ). I_γ: other: I(591.2γ)/I(273.0γ)=100 *15*/38 *15* is discrepant.
		1165.5 *5*	29 *11*	3560.8	(14$^+$)	(Q)		E_γ: weighted average of 1165.2 *10* from (^{30}Si,4nγ) and 1165.6 *5* from (^{16}O,6nγ).
4738.6	(16$^+$)	528.4 *10*	100 *35*	4210.1	(14$^+$)	(Q)		Mult.: from γ(θ) in (^{30}Si,4nγ).
		894.5 *10*	83 *30*	3844.1	(14$^+$)			
4764.4	(15$^-$)	399.3 *5*	92 *24*	4365.2	(14$^-$)	(M1)		Mult.: from γ(θ) in (^{30}Si,4nγ).
		925.3 *5*	100 *32*	3839.0	(13)$^-$	(Q)		Mult.: from γ(θ) in (^{30}Si,4nγ).
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,6nγ), 1994Po08 in (^{36}S,4nγ) and 1993Me12 in (^{40}Ar,4nγ); it is placed from an unknown level by 1991Fa05 in (^{48}Ca,4nγ). Mult.: from γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
4794.9	(18$^+$)	659.4 *2*	100	4135.5	(16$^+$)	E2	0.01562	E_γ: weighted average of 659.2 *3* from (^{30}Si,4nγ) and 659.5 *2* from (^{16}O,6nγ). Mult.: from ce and γ(θ) in (^{16}O,6nγ), γγ(θ) in (^{48}Ca,4nγ), ΔJ=2.
4877.78	(6$^+$)	2353.4[#] *3*	93[#] *20*	2524.4	(8$^+$)			
		2469.7[#] *4*	50[#] *20*	2407.8	(4$^+$,5,6$^+$)			
		2579.1[#] *2*	100[#] *20*	2298.83	(5$^-$,6$^-$)			

From ENSDF

$^{194}_{82}Pb_{112}$-18

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.&	α[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*	6 *3*	4738.6	(16$^+$)			
		162.3 *2*	45 *6*	4726.5	(16$^+$)	D		E_γ: weighted average of 162.6 *5* from (^{30}Si,4nγ) and 162.2 *2* from (^{16}O,6nγ). I_γ: weighted average of 47 *3* from (^{48}Ca,4nγ), 78 *22* from (^{30}Si,4nγ), and 29 *7* from (^{16}O,6nγ). Mult.: from γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		753.3 *2*	100 *14*	4135.5	(16$^+$)	(D)		E_γ: weighted average of 753.1 *5* from (^{30}Si,4nγ) and 753.3 *2* from (^{16}O,6nγ). I_γ: from (^{16}O,6nγ). Others: 100 *25* from (^{48}Ca,4nγ) and 100 *30* from (^{30}Si,4nγ).
4930.1	(18$^+$)	162.9 *2*	100	4767.2	(17$^+$)	M1	2.33	α(K)=1.90 *3*; α(L)=0.328 *5*; α(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 *3* from (^{30}Si,4nγ) and 162.9 *2* from (^{16}O,6nγ). Mult.: from ce and γ(θ) in (^{16}O,6nγ), γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
4950.3	(17$^-$)	575.7 *10*	68 *22*	4374.6	(16$^-$)			E_γ: weighted average of 575.4 *10* from (^{30}Si,4nγ) and 576 *1* from (^{16}O,6nγ). I_γ: weighted average of 60 *22* from (^{30}Si,4nγ) and 100 *43* from (^{16}O,6nγ).
		947.9 *2*	100 *29*	4002.3	(15$^-$)	(Q)		E_γ: from (^{16}O,6nγ). Other: 947.9 *5* from (^{30}Si,4nγ). I_γ: from (^{30}Si,4nγ). Other: 100 *57* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{30}Si,4nγ).
4963.1	(16$^-$)	198.4 *10*	1.3 *8*	4764.4	(15$^-$)			E_γ: weighted average of 198.4 *10* from (^{30}Si,4nγ) and 197 *1* from (^{16}O,6nγ). I_γ: weighted average of 1.5 *9* from (^{30}Si,4nγ) and 1.2 *8* from (^{16}O,6nγ).
		255.5 *3*	2.6 *9*	4707.8	(15$^-$)			E_γ: weighted average of 254.9 *10* from (^{30}Si,4nγ) and 255.5 *3* from (^{16}O,6nγ).
		514.8 *2*	100 *10*	4448.2	(15)$^-$	M1	0.0999	α(K)=0.0819 *12*; α(L)=0.01379 *20*; α(M)=0.00322 *5* α(N)=0.000819 *12*; α(O)=0.0001633 *23*; α(P)=1.750×10^{-5} *25* E_γ: weighted average of 514.7 *3* from (^{30}Si,4nγ) and 514.8 *2* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ). Other: 100 *12* from (^{16}O,6nγ). Mult.: from ce and γ(θ,pol) in (^{16}O,6nγ), γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		597.7 *10*	2.2 *7*	4365.2	(14$^-$)			
4986.5	(17$^-$)	(24@)		4963.1	(16$^-$)	[M1]	115 *16*	α(L)=88 *12*; α(M)=21 *3* α(N)=5.2 *7*; α(O)=1.04 *15*; α(P)=0.111 *15*
		294.6 *3*	90 *26*	4692.0	(16$^-$)			E_γ: weighted average of 294.0 *10* from (^{30}Si,4nγ) and 294.6 *3* from (^{16}O,6nγ).

From ENSDF

$^{194}_{82}Pb_{112}$-19

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.&	α b	Comments
4986.5	(17⁻)	538.2 *10*	100 *39*	4448.2	(15)⁻	(Q)		Mult.: from γ(θ) in (^{30}Si,4nγ).
5047.30	(8⁺)	169.52# *4*	100# *7*	4877.78	(6⁺)	(E2)a	0.773	B(E2)(W.u.)=5.1×10^2 *+40−17* α(K)=0.244 *4*; α(L)=0.394 *6*; α(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)a	0.0026 *6*	B(M1)(W.u.)<3.3×10^{-6}; B(E2)(W.u.)<3.0×10^{-4}
		2438.5# *4*	3.1# *10*	2608.31				
		2609.6# *4*	5.3# *19*	2437.53	(8)⁺	(M1)a	0.00241	B(M1)(W.u.)=11×10^{-7} *+5−3*
		2627.9# *4*	4.1# *19*	2419.64	(8⁻)	(E1)a	1.43×10^{-3}	B(E1)(W.u.)=7.7×10^{-9} *+39−20*
		2806.1# *3*	5.3# *9*	2241.26	(7)⁻	(E1)a	1.48×10^{-3}	B(E1)(W.u.)=8.1×10^{-9} *+34−18*
5048.9	(16⁻)	284.4 *5*	39 *12*	4764.4	(15⁻)			
		600.7 *3*	100 *24*	4448.2	(15)⁻	(M1)		Mult.: from γ(θ) in (^{30}Si,4nγ).
5053.1	(17⁻)	361.1 *3*	100 *22*	4692.0	(16⁻)	(D)		E_γ: weighted average of 361.0 *5* from (^{30}Si,4nγ) and 361.2 *3* from (^{16}O,6nγ). Mult.: from γγ(θ) in (^{48}Ca,4nγ), ΔJ=(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,4nγ) and 1056.9 *4* from (^{16}O,6nγ).
5089.3	(18⁻)	473.5 *2*	50 *14*	4615.6	(16⁻)			E_γ: weighted average of 473.9 *10* from (^{30}Si,4nγ) and 473.5 *2* from (^{16}O,6nγ).
		714.8 *2*	100 *21*	4374.6	(16⁻)	(Q)		E_γ: weighted average of 714.5 *5* from (^{30}Si,4nγ) and 714.9 *2* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{30}Si,4nγ), but γγ(θ) in (^{48}Ca,4nγ) gives (D) with ΔJ=(1).
5105.7	(18⁻)	119.2 *2*	100	4986.5	(17⁻)	M1	5.66	α(K)=4.62 *7*; α(L)=0.801 *12*; α(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,4nγ) and 119.2 *2* from (^{16}O,6nγ). Mult.: from ce and γ(θ) in (^{16}O,6nγ), γγ(θ) in (^{48}Ca,4nγ), ΔJ=(1).
5108.2	(17⁻)	416.1 *4*	49 *20*	4692.0	(16⁻)			E_γ: weighted average of 415.8 *10* from (^{30}Si,4nγ) and 416.2 *4* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ). Other: 133 *67* from (^{16}O,6nγ).
		631.5 *7*	100 *35*	4477.1	(15⁻)	(Q)		E_γ: unweighted average of 630.8 *5* from (^{30}Si,4nγ) and 632.1 *3* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ). Other: 100 *33* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{30}Si,4nγ).
5113.5	(17⁻)	(65@)		5048.9	(16⁻)			
		150.6 *5*	100 *26*	4963.1	(16⁻)	(M1)		Mult.: from γ(θ) in (^{30}Si,4nγ).
		636.1 *10*	37 *15*	4477.1	(15⁻)	(Q)		Mult.: from γ(θ) in (^{30}Si,4nγ).
5121.6	(18⁺)	232.8 *2*	100	4888.8	(17⁺)	D		E_γ: from (^{16}O,6nγ). Other: 232.8 *5* from (^{30}Si,4nγ). Mult.: from γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.

From ENSDF

$^{194}_{82}Pb_{112}$-20

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	J_f^π	Mult.[&]	α[b]	Comments
5179.2	(17$^-$)	216.3 *10*	9 *5*	4963.1	(16$^-$)			
		731.0 *5*	100 *18*	4448.2	(15)$^-$	(Q)		Mult.: from γ(θ) in (^{30}Si,4nγ).
5199.6	(18$^+$)	461.0 *5*	100 *24*	4738.6	(16$^+$)	(Q)		Mult.: from γ(θ) in (^{30}Si,4nγ).
		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	α(K)=0.339 *5*; α(L)=0.0579 *9*; α(M)=0.01355 *20* α(N)=0.00344 *5*; α(O)=0.000686 *10*; α(P)=7.34×10^{-5} *11* E_γ: weighted average of 303.0 *3* from (^{30}Si,4nγ) and 303.2 *2* from (^{16}O,6nγ). Mult.: from ce and γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
5250.4	(19$^-$)	144.8 *2*	100	5105.7	(18$^-$)	M1	3.25	α(K)=2.65 *4*; α(L)=0.459 *7*; α(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 *3* from (^{30}Si,4nγ) and 144.7 *2* from (^{16}O,6nγ). Mult.: from ce and γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
5256.6	(20$^+$)	461.7 *2*	100	4794.9	(18$^+$)	(Q)		E_γ: weighted average of 461.6 *3* from (^{30}Si,4nγ) and 461.8 *2* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{30}Si,4nγ).
5260.56	(10$^+$)	213.26[#] *3*	100[#] *6*	5047.30	(8$^+$)	(E2)[a]	0.343	B(E2)(W.u.)=2.4×10^3 *+6−4* α(K)=0.1451 *21*; α(L)=0.1478 *21*; α(M)=0.0385 *6* α(N)=0.00973 *14*; α(O)=0.001764 *25*; α(P)=9.12×10^{-5} *13*
		1887.9[#] *3*	1.6[#] *7*	3372.8	(11$^-$)	(E1)[a]	1.29×10^{-3}	B(E1)(W.u.)=7.6×10^{-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,4nγ) and 376 *1* from (^{16}O,6nγ). I_γ: weighted average of 43 *11* from (^{30}Si,4nγ) and 95 *25* from (^{16}O,6nγ).
		727.5 *2*	100 *15*	4599.2	(17$^-$)	(Q)		E_γ: weighted average of 727.2 *5* from (^{30}Si,4nγ) and 727.5 *2* from (^{16}O,6nγ). I_γ: from (^{16}O,6nγ). Other: 100 *22* from (^{30}Si,4nγ). Mult.: from γ(θ) in (^{30}Si,4nγ), but γγ(θ) in (^{48}Ca,4nγ) gives (D) with ΔJ=(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 *3* from (^{30}Si,4nγ) and 287.9 *2* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ). Other: 100 *24* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=(1).
		614.7 *3*	29 *9*	4794.9	(18$^+$)	(D)		E_γ: weighted average of 614.8 *5* from (^{30}Si,4nγ) and 614.7 *3* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ). Other: 29 *12* from (^{16}O,6nγ).

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$^{194}_{82}Pb_{112}$-21

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.&	α[b]	Comments
5433.5	(18$^-$)	380.4 *3*	100 *32*	5053.1	(17$^-$)			E_γ: weighted average of 380.5 *5* from (^{30}Si,4nγ) and 380.4 *3* from (^{16}O,6nγ).
		741.5 *10*	43 *15*	4692.0	(16$^-$)			
5447.2	(20$^-$)	196.9 *2*	100	5250.4	(19$^-$)	M1	1.368	α(K)=1.117 *16*; α(L)=0.192 *3*; α(M)=0.0450 *7* α(N)=0.01144 *17*; α(O)=0.00228 *4*; α(P)=0.000244 *4* E_γ: weighted average of 197.0 *3* from (^{30}Si,4nγ) and 196.9 *2* from (^{16}O,6nγ). Mult.: from ce and γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
5494.6	(19$^-$)	110.6 *10*	50 *25*	5384.1				
		243.9 *10*	92 *29*	5250.4	(19$^-$)			
		315.6 *10*	92 *29*	5179.2	(17$^-$)	(Q)		Mult.: from γ(θ) in (^{30}Si,4nγ).
		508.4 *10*	100 *31*	4986.5	(17$^-$)			
5516.88	(12$^+$)	256.32# *3*	100	5260.56	(10$^+$)	(E2)[a]	0.187	B(E2)(W.u.)=1.70×10^3 *+38−27* α(K)=0.0941 *14*; α(L)=0.0698 *10*; α(M)=0.0181 *3* α(N)=0.00457 *7*; α(O)=0.000833 *12*; α(P)=4.71×10^{-5} *7*
5549.4	(20$^-$)	459.9 *2*	29 *9*	5089.3	(18$^-$)	(Q)		E_γ: weighted average of 459.7 *5* from (^{30}Si,4nγ) and 459.9 *2* from (^{16}O,6nγ). I_γ: weighted average of 41 *11* from (^{30}Si,4nγ), and 23 *8* from (^{16}O,6nγ). Other: 95 *27* from (^{48}Ca,4nγ) is discrepant. Mult.: from γγ(θ) in (^{48}Ca,4nγ), ΔJ=(2).
		849.1 *3*	100 *7*	4700.7	(18$^-$)	(Q)		E_γ: from (^{16}O,6nγ). Others: 848.0 *3* (^{30}Si,4nγ), 849.1 from (^{48}Ca,4nγ), 848.7 from (^{40}A4,4nγ). I_γ: from (^{48}Ca,4nγ). Others: 100 *19* from (^{30}Si,4nγ) and 100 *13* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{16}O,6nγ) and ^{30}Si,4nγ).
5550.0	(20$^+$)	755.0 *2*	100	4794.9	(18$^+$)	(Q)		E_γ: weighted average of 754.9 *3* from (^{30}Si,4nγ) and 755.0 *2* from (^{16}O,6nγ). Mult.: from γγ(θ) in (^{48}Ca,4nγ), ΔJ=(2).
5630.1	(20$^+$)	396.9 *2*	100 *15*	5233.2	(19$^+$)	M1	0.200	α(K)=0.1636 *23*; α(L)=0.0277 *4*; α(M)=0.00649 *10* α(N)=0.001649 *24*; α(O)=0.000329 *5*; α(P)=3.52×10^{-5} *5* E_γ: weighted average of 396.8 *3* from (^{30}Si,4nγ) and 396.9 *2* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ). Other: 100 *22* from (^{16}O,6nγ). Mult.: from ce and γ(θ,pol) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		699.8 *5*	6.1 *19*	4930.1	(18$^+$)			E_γ: weighted average of 699.8 *5* from (^{30}Si,4nγ) and 700 *1* from (^{16}O,6nγ).
5672.7		564.5 *5*	100	5108.2	(17$^-$)			
5685.4?		1310.8 *6*	100	4374.6	(16$^-$)			E_γ: from (^{16}O,6nγ) (2002Ka01) only.
5707.3	(21$^-$)	260.1 *2*	100	5447.2	(20$^-$)	M1	0.631	α(K)=0.516 *8*; α(L)=0.0883 *13*; α(M)=0.0207 *3* α(N)=0.00526 *8*; α(O)=0.001048 *15*; α(P)=0.0001120 *16* B(M1)(W.u.)=4.8 *+21−12* E_γ: weighted average of 260.2 *3* from (^{30}Si,4nγ), 260.1 *2* from (^{16}O,6nγ). Mult.: from ce and γ(θ,pol) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
5729.5	(20$^-$)	1028.7 *3*	100	4700.7	(18$^-$)	E2	0.00630	E_γ: weighted average of 1028.5 *5* from (^{30}Si,4nγ) and 1028.8 *3* from (^{16}O,6nγ). Mult.: from ce data in (^{36}S,4nγ) and γ(θ) in (^{30}Si,4nγ) and (^{16}O,6nγ).
5757.5	(20$^+$)	347.8 *2*	100 *18*	5409.6	(19$^+$)	D		E_γ: weighted average of 347.6 *5* from (^{30}Si,4nγ) and 347.8 *2* from (^{16}O,6nγ).

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$^{194}_{82}Pb_{112}$-22

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.&	α b	Comments
								I_γ: from (^{30}Si,4nγ). Other: 100 *19* from (^{16}O,6nγ).
								Mult.: from γγ(θ) in (^{48}Ca,4nγ) and γ(θ) in (^{16}O,6nγ), ΔJ=1.
5757.5	(20$^+$)	636.0 *3*	4.3 *18*	5121.6	(18$^+$)			E_γ: weighted average of 635.7 *10* from (^{30}Si,4nγ) and 636.0 *3* from (^{16}O,6nγ).
								I_γ: weighted average of 3.5 *18* from (^{30}Si,4nγ) and 13 *6* from (^{16}O,6nγ).
5759.5	(20$^-$)	1058.8 *4*	100	4700.7	(18$^-$)	(Q)		E_γ: from (^{16}O,6nγ). Other: 1058.8 *10* from (^{30}Si,4nγ).
								Mult.: from γ(θ) in (^{30}Si,4nγ).
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)[a]	0.1173	B(E2)(W.u.)=1.8×10^3 *+7−4*
								α(K)=0.0658 *10*; α(L)=0.0386 *6*; α(M)=0.00991 *14*
								α(N)=0.00251 *4*; α(O)=0.000461 *7*; α(P)=2.81×10^{-5} *4*
5818.4	(19$^-$)	384.8 *10*	100 *36*	5433.5	(18$^-$)			
		765.3 *10*	45 *24*	5053.1	(17$^-$)			
5824.0		1123.3 *5*	100	4700.7	(18$^-$)			E_γ: from (^{16}O,6nγ). Other: 1123.3 *10* from (^{30}Si,4nγ).
5824.5		567.9 *3*	100	5256.6	(20$^+$)			E_γ: weighted average of 567.6 *5* from (^{30}Si,4nγ) and 568.0 *3* from (^{16}O,6nγ).
5907.7	(21$^-$)	581.1 *2*	100	5326.6	(19$^-$)	(Q)		E_γ: weighted average of 581.0 *5* from (^{30}Si,4nγ) and 581.1 *2* from (^{16}O,6nγ).
								Mult.: from γ(θ) in (^{30}Si,4nγ).
5908.7	(20$^-$)	461.5 *10*	100	5447.2	(20$^-$)			
5933.8	(21$^+$)	109.2 *10*	11 *5*	5824.5				
		677.2 *3*	100 *31*	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 γ(θ) in (^{30}Si,4nγ).
5942.2	(20$^-$)	1241.5 *5*	100	4700.7	(18$^-$)	(Q)		E_γ: weighted average of 1241.3 *10* from (^{30}Si,4nγ) and 1241.5 *5* from (^{16}O,6nγ).
								Mult.: from γ(θ) in (^{30}Si,4nγ).
5973.4		644.0 *10*	100	5329.2				
5993.3	(20$^-$)	192.4 *10*	13 *6*	5801.2				
		498.8 *3*	100 *22*	5494.6	(19$^-$)	D		E_γ: weighted average of 498.9 *5* from (^{30}Si,4nγ) and 498.8 *3* from (^{16}O,6nγ).
								Mult.: from γγ(θ) in (^{48}Ca,4nγ) and γ(θ) in (^{16}O,6nγ), ΔJ=1.
6006.5	(21$^+$)	376.3 *3*	100 *14*	5630.1	(20$^+$)	M1	0.231	α(K)=0.189 *3*; α(L)=0.0320 *5*; α(M)=0.00750 *11*
								α(N)=0.00191 *3*; α(O)=0.000380 *6*; α(P)=4.07×10^{-5} *6*
								E_γ: weighted average of 376.3 *3* from (^{30}Si,4nγ) and 376.4 *4* from (^{16}O,6nγ).
								I_γ: from (^{30}Si,4nγ). Other: 100 *33* from (^{16}O,6nγ).
								Mult.: from ce and γ(θ,pol) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		773.4 *3*	18 *6*	5233.2	(19$^+$)	(Q)		E_γ: weighted average of 773.1 *5* from (^{30}Si,4nγ) and 773.5 *3* from (^{16}O,6nγ).
								I_γ: weighted average of 19 *6* from (^{30}Si,4nγ) and 17 *8* from (^{16}O,6nγ).
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*
								α(K)=0.256 *4*; α(L)=0.0436 *7*; α(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 *3* from (^{30}Si,4nγ), 336.2 *2* from (^{16}O,6nγ).
								Mult.: from ce and γ(θ,pol) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.

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$^{194}_{82}Pb_{112}$-23

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	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 *10* from (^{30}Si,4nγ) and 129.0 *4* from (^{16}O,6nγ).
6131.8	(21$^+$)	374.3 *3*	100 *30*	5757.5	(20$^+$)			E_γ: weighted average of 374.2 *5* from (^{30}Si,4nγ) and 374.3 *3* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ). Other: 100 *30* from (^{16}O,6nγ).
		581.7 *10*	25 *9*	5550.0	(20$^+$)			
		722.2 *3*	25 *10*	5409.6	(19$^+$)			E_γ: weighted average of 721.8 *10* from (^{30}Si,4nγ) and 722.2 *3* from (^{16}O,6nγ). I_γ: weighted average of 29 *10* from (^{30}Si,4nγ) and 20 *10* from (^{16}O,6nγ).
6155.27	(16$^+$)	339.90# *5*	100	5815.37	(14$^+$)	(E2)[a]	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 *10*	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,4nγ) and 654.1 *2* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{30}Si,4nγ).
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,6nγ). Other: 962.9 *5* from (^{30}Si,4nγ). Mult.: from γ(θ) in (^{30}Si,4nγ).
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 γ(θ) in (^{30}Si,4nγ).
6275.9		474.7 *10*	100	5801.2				
6308.5	(21$^-$)	213.7 *10*	60 *30*	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 γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=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$^+$)			
6369.9	(22$^+$)	286.4 *10*	1.8 *8*	6083.3	(21$^+$)	(M1)		Mult.: from γ(θ) in (^{30}Si,4nγ).
		363.4 *3*	100 *15*	6006.5	(21$^+$)	M1	0.253	α(K)=0.207 *3*; α(L)=0.0352 *5*; α(M)=0.00825 *12* α(N)=0.00210 *3*; α(O)=0.000418 *6*; α(P)=4.47×10^{-5} *7* E_γ: other: 363 *1* from (^{16}O,6nγ). I_γ: from (^{16}O,6nγ). Other: 100 *18* from (^{30}Si,4nγ). Mult.: from ce and γ(θ,pol) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		739.8 *3*	18 *5*	5630.1	(20$^+$)			E_γ: weighted average of 739.7 *5* from (^{30}Si,4nγ) and 739.8 *3* from (^{16}O,6nγ). I_γ: weighted average of 19 *6* from (^{30}Si,4nγ) and 18 *5* from (^{16}O,6nγ).
		819.9 *3*	16 *5*	5550.0	(20$^+$)	(Q)		E_γ: weighted average of 819.6 *10* from (^{30}Si,4nγ) and 819.9 *3* from (^{16}O,6nγ). I_γ: weighted average of 12 *4* from (^{30}Si,4nγ) and 21 *5* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{30}Si,4nγ).

From ENSDF

$^{194}_{82}Pb_{112}$-24

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	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 γ(θ) in (^{30}Si,4nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=(2).
6416.0	(22$^+$)	409.4 *2*	100 *20*	6006.5	(21$^+$)	(D)		E_γ: weighted average of 409.3 *3* from (^{30}Si,4nγ) and 409.4 *2* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{16}O,6nγ), but γγ(θ) in (^{48}Ca,4nγ) gives (Q).
		785.6 *5*	23 *7*	5630.1	(20$^+$)			
6419.1	(23$^-$)	375.7 *2*	100 *20*	6043.4	(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 γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		711.8 *4*	15 *5*	5707.3	(21$^-$)	(Q)		E_γ: weighted average of 712.0 *5* from (^{30}Si,4nγ) and 711.7 *4* from (^{16}O,6nγ). I_γ: weighted average of 17 *5* from (^{30}Si,4nγ) and 12 *6* from (^{16}O,6nγ).
6426.2		666.8 *10*	81 *33*	5759.5	(20$^-$)			
		696.7 *3*	100 *38*	5729.5	(20$^-$)			E_γ: weighted average of 697.1 *10* from (^{30}Si,4nγ) and 696.7 *3* from (^{16}O,6nγ).
6436.6		651.7 *10*		5784.9				
6451.7	(22$^-$)	286.8 *5*	100 *29*	6164.9	(21$^-$)			
		1004.5 *10*	19 *10*	5447.2	(20$^-$)			
6489.4		759.9 *2*	100	5729.5	(20$^-$)			E_γ: weighted average of 760.0 *5* from (^{30}Si,4nγ) and 759.9 *2* from (^{16}O,6nγ).
6510.4	(22$^-$)	(84[@])		6426.2				
		201.9 *3*	57 *25*	6308.5	(21$^-$)			E_γ: weighted average of 202.1 *10* from (^{30}Si,4nγ) and 201.9 *3* from (^{16}O,6nγ).
		603.0 *10*	79 *32*	5907.7	(21$^-$)			
		961.1 *10*	100 *36*	5549.4	(20$^-$)			
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 γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		483.6 *10*	10 *4*	6043.4	(22$^-$)			
6528.6	(22$^+$)	396.9 *2*	100 *24*	6131.8	(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 γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		771.1 *3*	26 *10*	5757.5	(20$^+$)			E_γ: weighted average of 771.0 *10* from (^{30}Si,4nγ) and 771.1 *3* from (^{16}O,6nγ). I_γ: weighted average of 24 *10* from (^{30}Si,4nγ) and 33 *17* from (^{16}O,6nγ).
6535.47	(18$^+$)	380.20[#] *5*	100	6155.27	(16$^+$)	(E2)[a]	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 *10*	35 *18*	6263.9	(22$^+$)			
		341.7 *3*	100 *39*	6219.5	(22$^+$)			E_γ: weighted average of 341.4 *10* from (^{30}Si,4nγ) and 341.7 *3* from (^{16}O,6nγ).
6573.1		665.4 *10*	84 *32*	5907.7	(21$^-$)			
		760.1 *10*	100 *28*	5812.9				
6592.2		1042.2 *10*	100	5550.0	(20$^+$)			
6598.9		269.1 *10*	83 *42*	6329.8				
		379.3 *10*	100 *50*	6219.5	(22$^+$)			

From ENSDF

$^{194}_{82}Pb_{112}$-25

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	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 *10* from (^{30}Si,4nγ) and 255.7 *3* from (^{16}O,6nγ). I_γ: weighted average of 4.6 *18* from (^{30}Si,4nγ) and 8 *4* from (^{16}O,6nγ).
		260.6 *2*	100 *21*	6369.9	(22$^+$)	M1	0.628	α(K)=0.513 *8*; α(L)=0.0878 *13*; α(M)=0.0206 *3* α(N)=0.00523 *8*; α(O)=0.001042 *15*; α(P)=0.0001114 *16* E_γ: weighted average of 260.7 *3* from (^{30}Si,4nγ) and 260.6 *2* from (^{16}O,6nγ). I_γ: from (^{16}O,6nγ). Other: 100 *22* from (^{30}Si,4nγ). Mult.: from ce and γ(θ,pol) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=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 γ(θ) in (^{16}O,6nγ) and (^{30}Si,4nγ).
		556.0 *10*	23 *11*	6203.5	(21$^-$)			
6763.9	(23$^+$)	348.0 *3*	100	6416.0	(22$^+$)	D		E_γ: weighted average of 347.9 *5* from (^{30}Si,4nγ) and 348.0 *3* from (^{16}O,6nγ).
6787.1	(23$^-$)	335.4 *5*	100 *36*	6451.7	(22$^-$)			
		743.7 *5*	66 *17*	6043.4	(22$^-$)	(D)		Mult.: from γ(θ) in (^{30}Si,4nγ).
6795.9	(24$^-$)	269.5 *2*	100 *29*	6526.4	(23$^-$)	D		E_γ: weighted average of 270.0 *5* from (^{30}Si,4nγ) and 269.4 *2* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		377.6 *10*	17 *7*	6419.1	(23$^-$)			
		753.6 *10*	28 *7*	6043.4	(22$^-$)	(Q)		Mult.: from γ(θ) in (^{30}Si,4nγ).
6800.0	(23$^+$)	383.8 *10*	100 *31*	6416.0	(22$^+$)	(M1)		Mult.: from γ(θ) in (^{30}Si,4nγ).
		793.1 *10*	88 *27*	6006.5	(21$^+$)			
6836.2	(24$^-$)	417.0 *3*	100 *22*	6419.1	(23$^-$)	M1	0.1750	B(M1)(W.u.)=1.7 *+8−4* α(K)=0.1433 *21*; α(L)=0.0243 *4*; α(M)=0.00568 *8* α(N)=0.001442 *21*; α(O)=0.000288 *4*; α(P)=3.08×10^{-5} *5* E_γ: weighted average of 416.8 *5* from (^{30}Si,4nγ), 417.1 *3* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ). Other: 100 *24* from (^{16}O,6nγ). Mult.: from ce and γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
		793.2 *5*	23 *8*	6043.4	(22$^-$)	(Q)		E_γ: weighted average of 792.8 *10* from (^{30}Si,4nγ) and 793.3 *5* from (^{16}O,6nγ). I_γ: weighted average of 22 *8* from (^{30}Si,4nγ) and 24 *10* from (^{16}O,6nγ).
6842.6	(24$^+$)	212.2 *2*	100	6630.4	(23$^+$)	D		E_γ: weighted average of 212.3 *3* from (^{30}Si,4nγ) and 212.2 *2* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
6906.1	(23$^+$)	377.4 *5*	100	6528.6	(22$^+$)			E_γ: weighted average of 377.2 *10* from (^{30}Si,4nγ) and 377.5 *5* from (^{16}O,6nγ).
6955.5	(20$^+$)	420.0# *2*	100	6535.47	(18$^+$)	[E2]	0.0454	B(E2)(W.u.)=2.6×10^3 *+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)=9.79×10^{-6} *14*
6961.8		758.3 *2*	100	6203.5	(21$^-$)			E_γ: weighted average of 758.4 *5* from (^{30}Si,4nγ) and 758.3 *2* from (^{16}O,6nγ).
7035.8	(24$^-$)	276.3 *2*	100	6759.5	(23$^-$)	D		E_γ: weighted average of 276.0 *10* from (^{30}Si,4nγ) and 276.3 *2* from (^{16}O,6nγ).
7036.0		599.4 *10*		6436.6				
		706.3 *10*	80 *35*	6329.8				

From ENSDF

$^{194}_{82}Pb_{112}$-26

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	J_f^π	Mult.&	α 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_γ: weighted average of 304.7 *10* from (^{30}Si,4nγ) and 305.0 *2* from (^{16}O,6nγ).
7070.2	(25$^+$)	227.6 *2*	100	6842.6	(24$^+$)	M1	0.913	α(K)=0.746 *11*; α(L)=0.1280 *19*; α(M)=0.0300 *5* α(N)=0.00762 *11*; α(O)=0.001519 *22*; α(P)=0.0001624 *23* E_γ: from (^{16}O,6nγ). Other: 227.6 *5* from (^{30}Si,4nγ). Mult.: from ce and γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=1.
7114.7	(24$^+$)	350.8 *4*	100	6763.9	(23$^+$)	D		E_γ: weighted average of 351.5 *5* from (^{30}Si,4nγ) and 350.6 *3* from (^{16}O,6nγ).
7124.5	(25$^-$)	328.6 *2*	100	6795.9	(24$^-$)	D		E_γ: weighted average of 328.9 *5* from (^{30}Si,4nγ) and 328.6 *2* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{16}O,6nγ), but γγ(θ) in (^{48}Ca,4nγ) gives (Q).
7138.7	(24$^-$)	351.6 *5*	100	6787.1	(23$^-$)			
7160.1		785.6 *4*	100	6374.5	(22$^+$)			E_γ: weighted average of 784.6 *10* from (^{30}Si,4nγ) and 785.8 *4* from (^{16}O,6nγ).
7182.1		395.0 *10*	100	6787.1	(23$^-$)			
7260.0	(25$^-$)	423.8 *3*	100 *31*	6836.2	(24$^-$)	D		E_γ: weighted average of 424.0 *5* from (^{30}Si,4nγ) and 423.7 *3* from (^{16}O,6nγ). I_γ: from (^{30}Si,4nγ). Other: 100 *33* from (^{16}O,6nγ).
		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,4nγ) and 817.6 *2* from (^{16}O,6nγ).
7337.4	(26$^+$)	267.2 *2*	100	7070.2	(25$^+$)	D		E_γ: weighted average of 266.8 *5* from (^{30}Si,4nγ) and 267.3 *2* from (^{16}O,6nγ). Mult.: from γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=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,4nγ) and 317.5 *2* from (^{16}O,6nγ).
7365.4	(25$^+$)	296.5 *2*	100	7068.9	(24$^+$)			E_γ: weighted average of 296.4 *5* from (^{30}Si,4nγ) and 296.5 *2* from (^{16}O,6nγ).
7391.2		818.1 *10*	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.)=2.4×10^3 *+17−92* α(K)=0.0250 *4*; α(L)=0.00857 *12*; α(M)=0.00214 *3* α(N)=0.000542 *8*; α(O)=0.0001019 *15*; α(P)=7.66×10^{-6} *11*
7431.2	(25$^+$)	316.5 *3*	100	7114.7	(24$^+$)	D		E_γ: weighted average of 317.3 *10* from (^{30}Si,4nγ) and 316.4 *3* from (^{16}O,6nγ).
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,4nγ) and 363.5 *5* from (^{16}O,6nγ).
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,4nγ). Other: 361 *1* from (^{16}O,6nγ).
7644.3	(27$^+$)	306.9 *2*	100	7337.4	(26$^+$)	D		E_γ: from (^{16}O,6nγ). Other: 306.9 *5* from (^{30}Si,4nγ). Mult.: from γ(θ) in (^{16}O,6nγ) and γγ(θ) in (^{48}Ca,4nγ), ΔJ=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,4nγ) and 441.9 *2* from (^{16}O,6nγ).
		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,4nγ) and 363.1 *2* from (^{16}O,6nγ).
7748.8		712.8 *10*	100	7036.0				
7775.8		814.0 *10*	100	6961.8				
7793.5		757.5 *10*	100	7036.0				

From ENSDF

$^{194}_{82}Pb_{112}$-27

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ[†]	I_γ[†]	E_f	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,4nγ) and 372.8 *3* from (^{16}O,6nγ).
7909.3	(24$^+$)	495.8[#] *1*	100	7413.5	(22$^+$)	[E2]		0.0300		B(E2)(W.u.)=2.1×10^3 *+13−6*
8005.1	(28$^+$)	360.8 *5*	100	7644.3	(27$^+$)	D				E_γ: weighted average of 360.8 *5* from (^{30}Si,4nγ) and 361 *1* from (^{16}O,6nγ).
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 *10* from (^{30}Si,4nγ) and 384.7 *2* from (^{16}O,6nγ).
8130.1	(27$^-$)	428.2 *3*	100	7701.9	(26$^-$)	D				E_γ: weighted average of 428.5 *10* from (^{30}Si,4nγ) and 428.2 *3* from (^{16}O,6nγ).
8173.7		866.7 *10*	100	7307.0						
8257.3	(28$^-$)	396.6 *2*	100	7860.7	(27$^-$)	D				E_γ: weighted average of 396.8 *5* from (^{30}Si,4nγ) and 396.6 *2* from (^{16}O,6nγ).
8354.5	(28$^+$)	331.6 *10*	100	8022.9	(27$^+$)					
8398.8	(29$^+$)	393.7 *3*	100	8005.1	(28$^+$)	D				E_γ: weighted average of 394.1 *5* from (^{30}Si,4nγ) and 393.6 *3* from (^{16}O,6nγ).
8441.8	(26$^+$)	532.5[#] *2*	100	7909.3	(24$^+$)	[E2]		0.0253		B(E2)(W.u.)=2.4×10^3 *+22−9*
8513.6	(28$^-$)	412.5 *3*	100	8101.1	(27$^-$)	D				E_γ: weighted average of 413.0 *10* from (^{30}Si,4nγ) and 412.5 *3* from (^{16}O,6nγ).
8515.1	(28$^-$)	385.0 *10*	100	8130.1	(27$^-$)					E_γ: weighted average of 384.9 *10* from (^{30}Si,4nγ) and 385 *1* from (^{16}O,6nγ).
8645.1	(29$^-$)	387.8 *3*	100	8257.3	(28$^-$)	D				E_γ: weighted average of 387.9 *10* from (^{30}Si,4nγ) and 387.8 *3* from (^{16}O,6nγ).
8819.7	(30$^+$)	420.9 *3*	100	8398.8	(29$^+$)					E_γ: from (^{16}O,6nγ). Other: 420.9 *10* from (^{30}Si,4nγ).
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.)=2.0×10^3 *+8−5*
9036.6	(30$^-$)	391.5 *10*	100	8645.1	(29$^-$)					
9254.6	(30$^-$)	372.5 *10*	100	8882.1	(29$^-$)					
9260.6	(31$^+$)	440.9 *3*	100	8819.7	(30$^+$)					E_γ: weighted average of 441 *1* from (^{30}Si,4nγ) and 440.9 *3* from (^{16}O,6nγ).
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,4nγ). Other: 462 *1* from (^{16}O,6nγ).
10206.8	(33$^+$)	484.2 *2*	100	9722.6	(32$^+$)					E_γ: weighted average of 484 *1* from (^{30}Si,4nγ) and 484.2 *2* from (^{16}O,6nγ).
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	x	J	(M1)				Mult.: from γ(θ) in (^{30}Si,4nγ).

From ENSDF

Adopted Levels, Gammas (continued)

γ(^{194}Pb) (continued)

E_i(level)	J_i^π	E_γ †	I_γ †	E_f	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 γ(θ) in (^{30}Si,4nγ).
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	y	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 *3*	100	1601.5+y	J1+10		
2512.3+y	J1+14	474.0 *3*	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 *3*	100	260.9+z?	J2+2		
904.2+z?	J2+6	341.3 *3*	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 *3*	100	1284.2+z?	J2+8		
2157.3+z?	J2+12	455.8 *3*	100	1701.5+z?	J2+10		
2649.4+z?	J2+14	492.1 *4*	100	2157.3+z?	J2+12		
3178.0+z?	J2+16	528.6 *8*	100	2649.4+z?	J2+14		
3741.2+z?	J2+18	563.2 *8*	100	3178.0+z?	J2+16		

† From ^{168}Er(^{30}Si,4nγ) (2009Ku03), unless otherwise noted.
‡ From ^{194}Bi ε decay (1987Va09).
# From (HI,xnγ):SD.
@ γ inferred from γγ coincidence data in (^{30}Si,4nγ) (2009Ku03), not observed directly. Energy from level-energy difference.
& From ce data in ^{194}Bi ε decay up to 2934 level, and/or, ce, γ(θ) and γ(lin pol) in ^{184}W(^{16}O,6nγ), unless otherwise noted.
[a] From γ asymmetry ratio in (HI,xnγ):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.

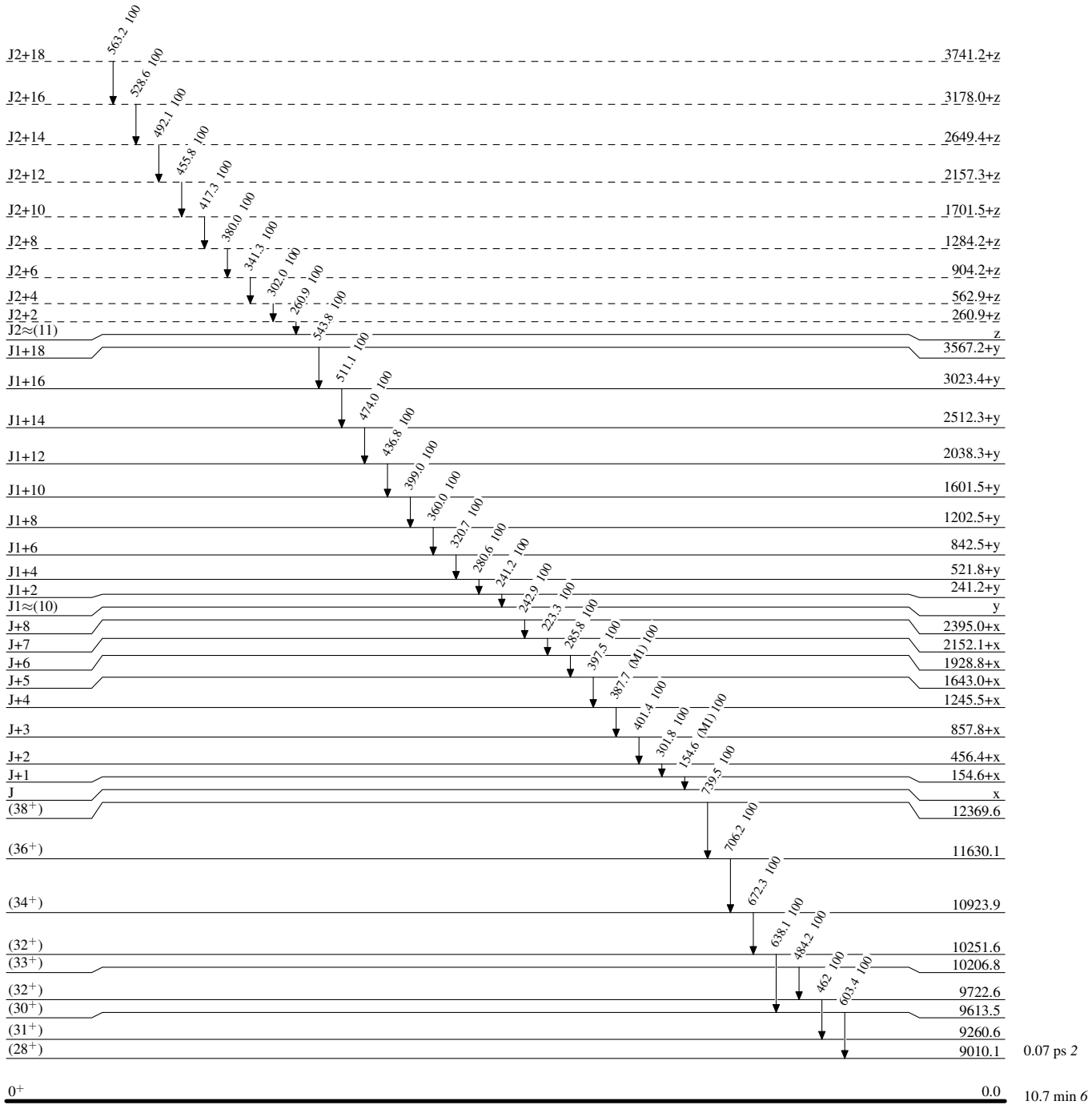
From ENSDF

$^{194}_{82}Pb_{112}$-29

Adopted Levels, Gammas

Level Scheme

Intensities: Relative photon branching from each level

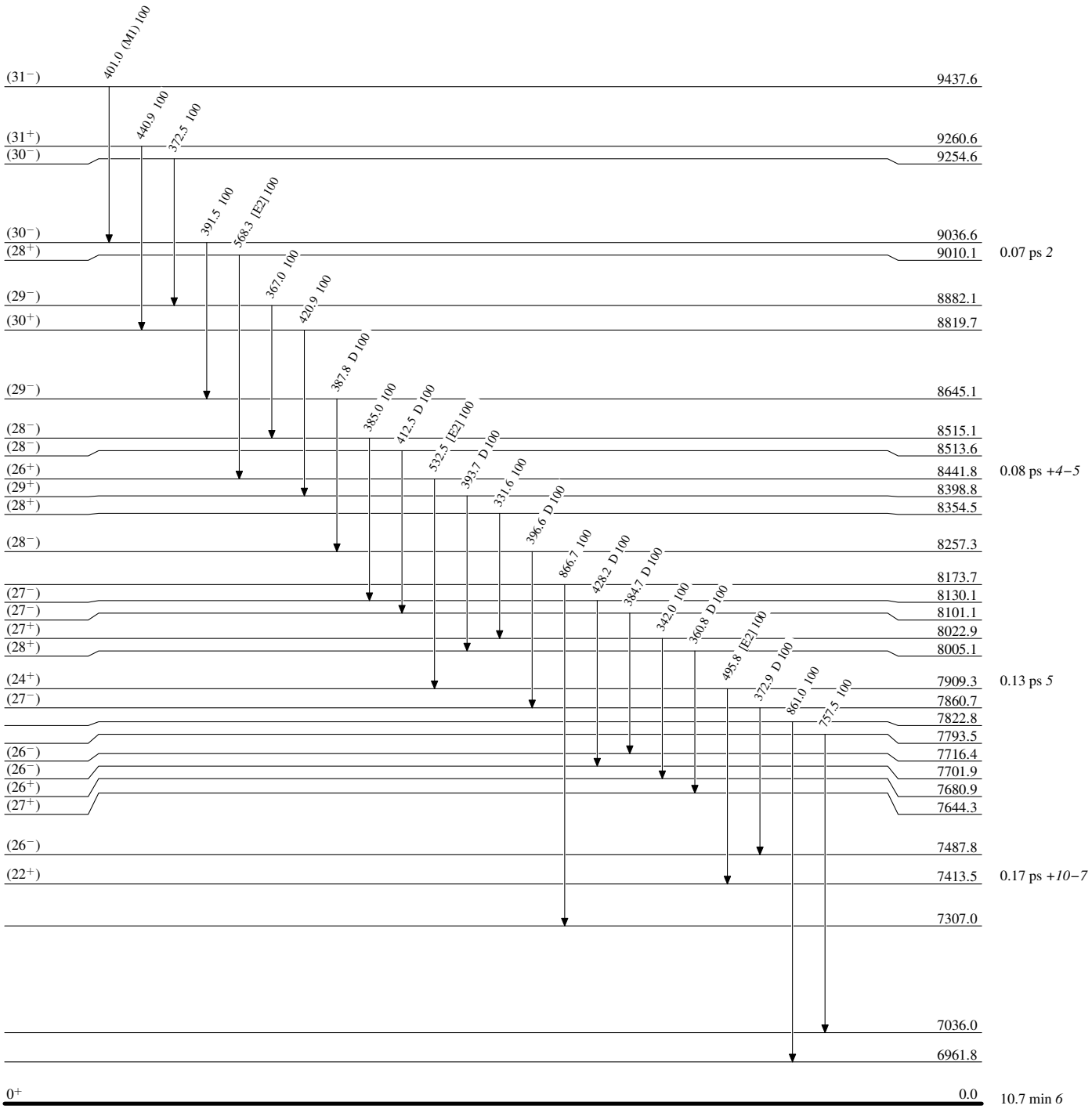


$^{194}_{82}Pb_{112}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

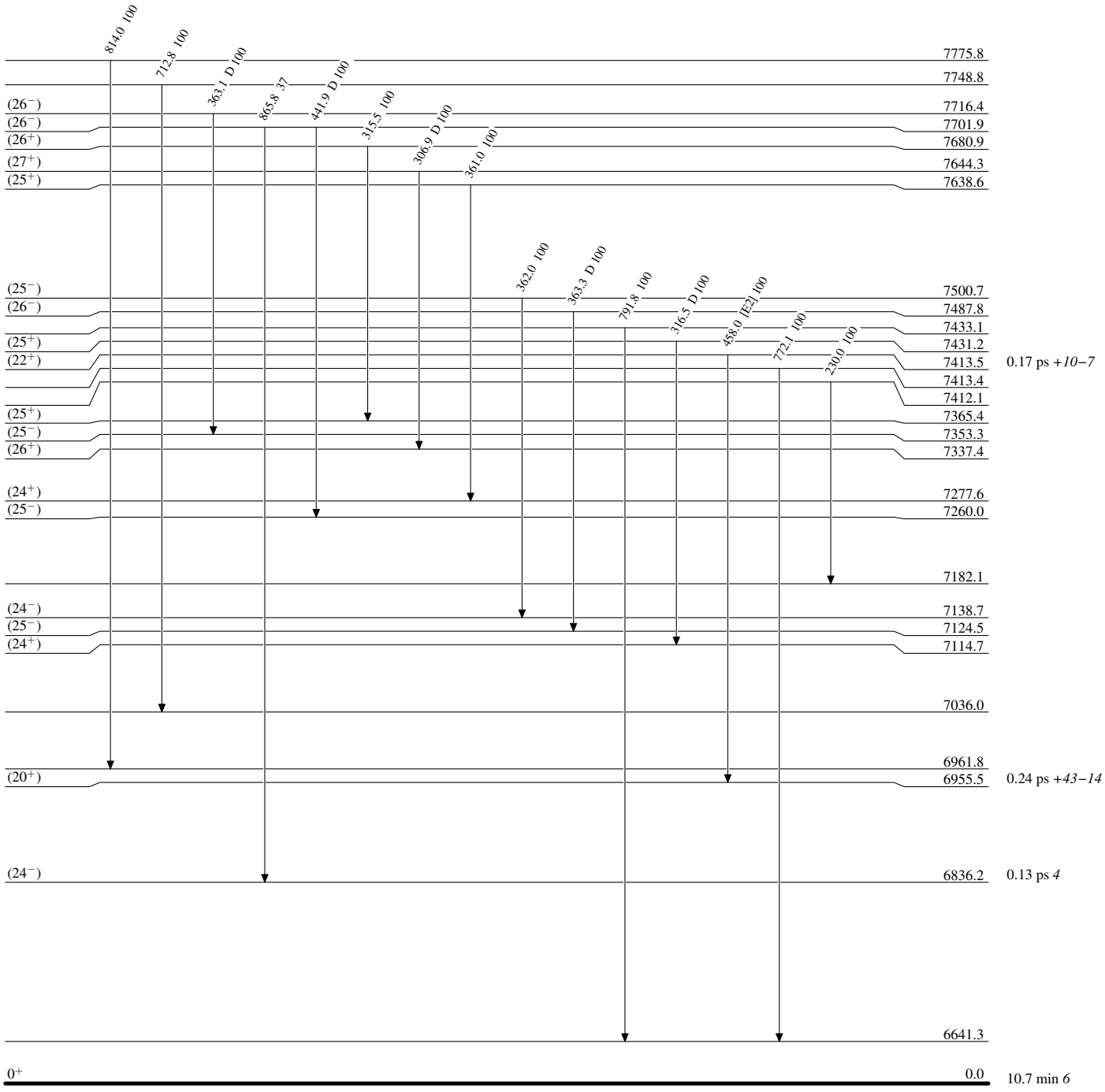


$^{194}_{82}Pb_{112}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

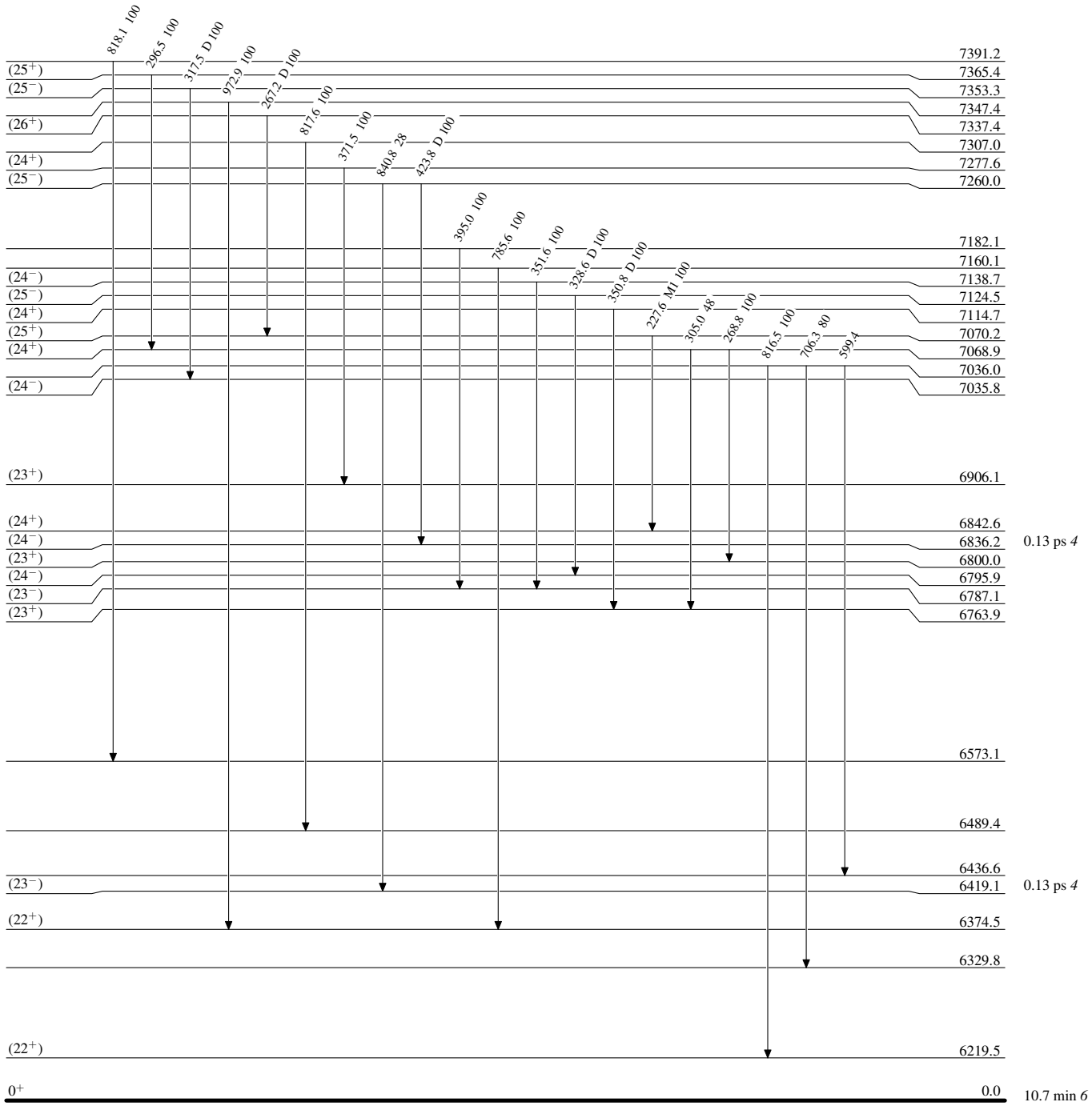


$^{194}_{82}Pb_{112}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

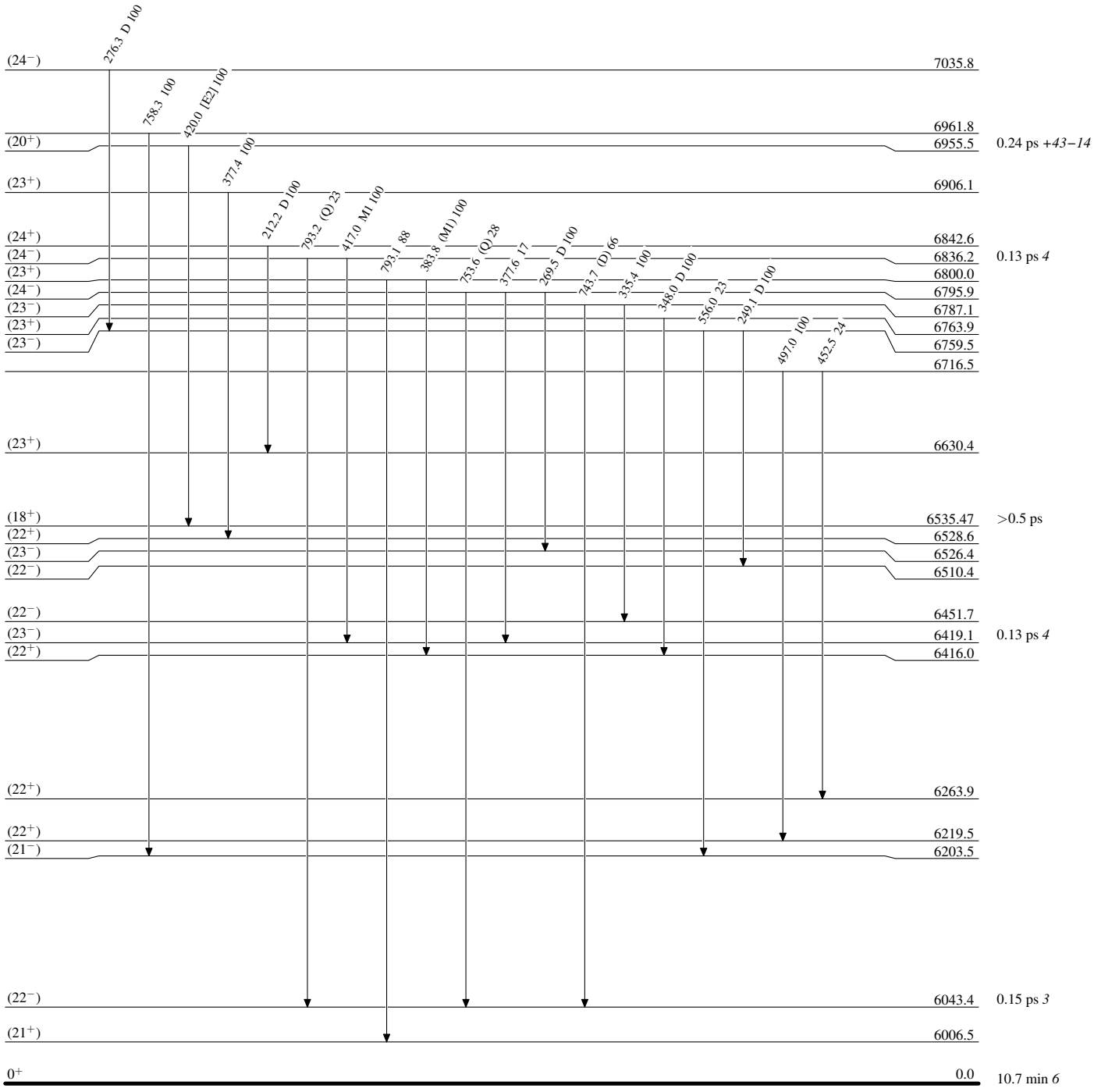


$^{194}_{82}Pb_{112}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

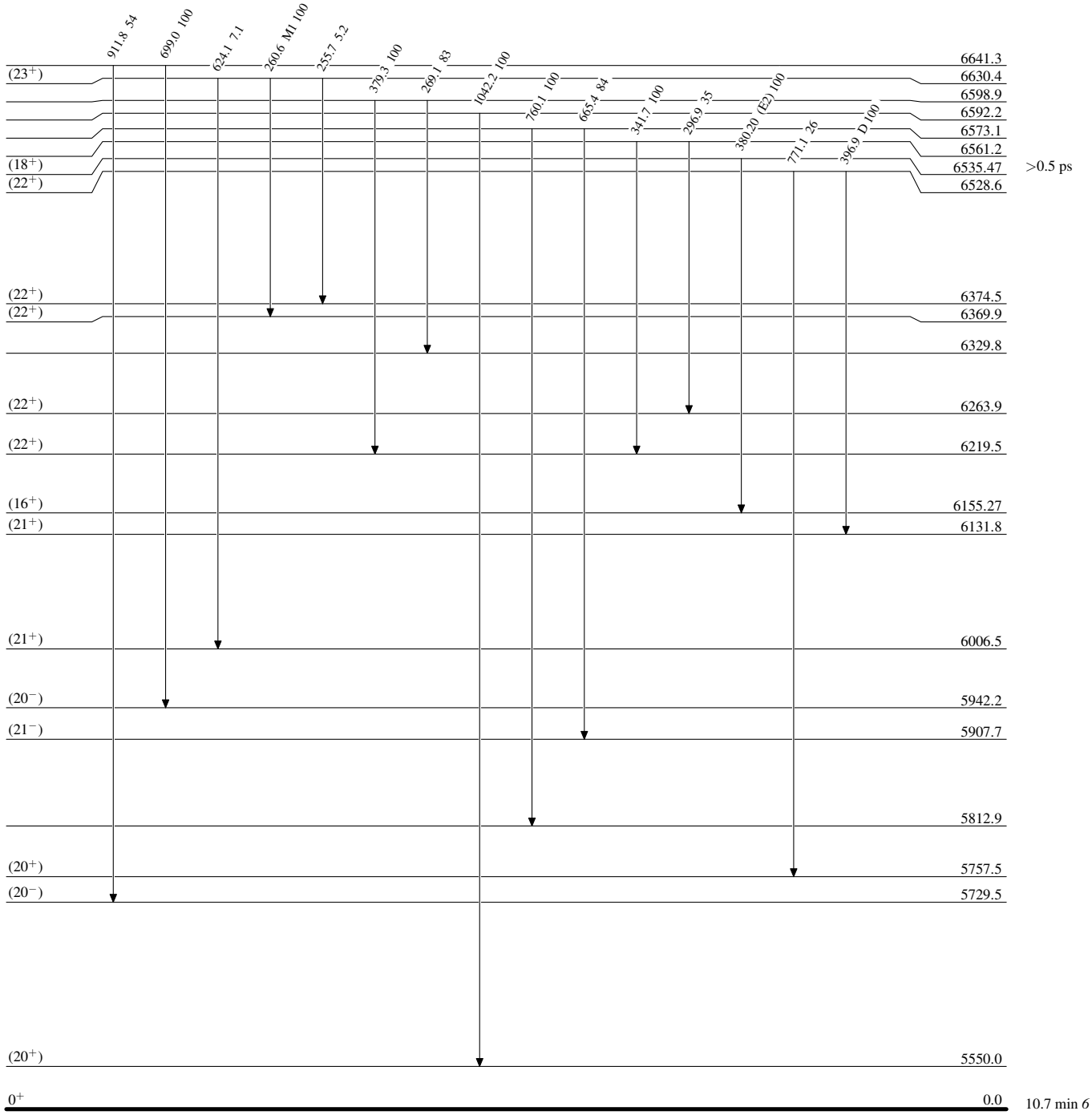


$^{194}_{82}Pb_{112}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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

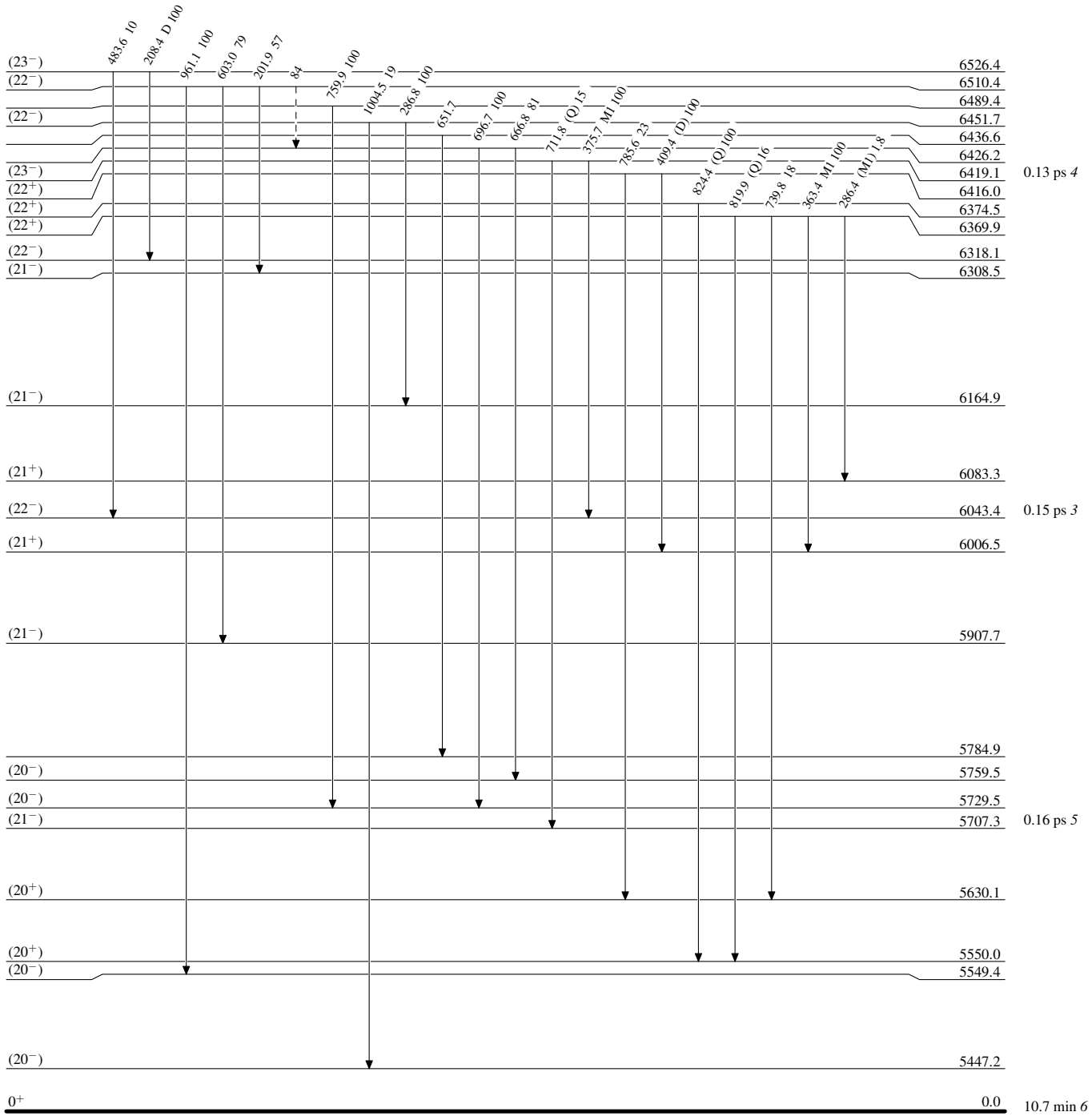
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)

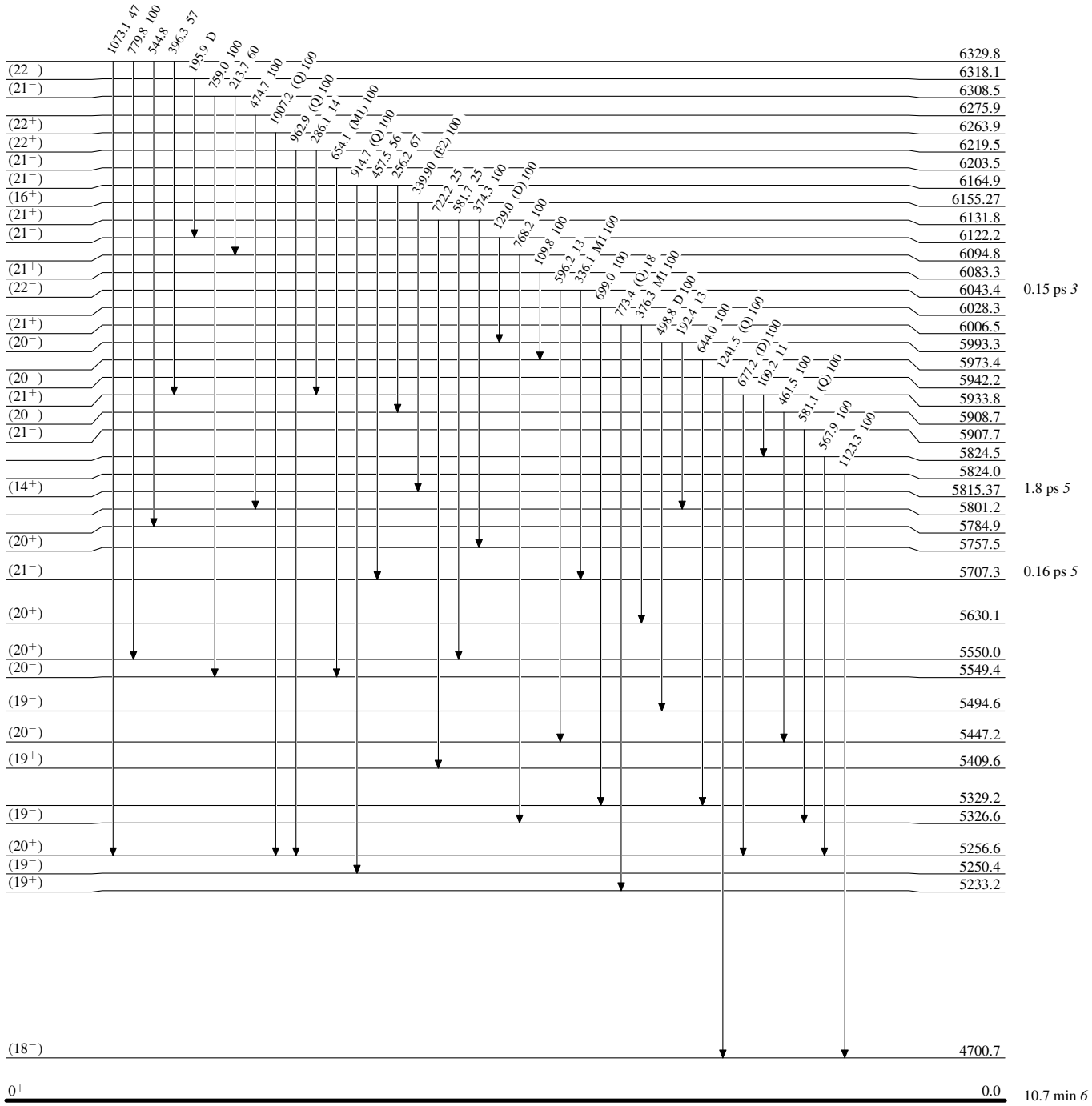


$^{194}_{82}Pb_{112}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

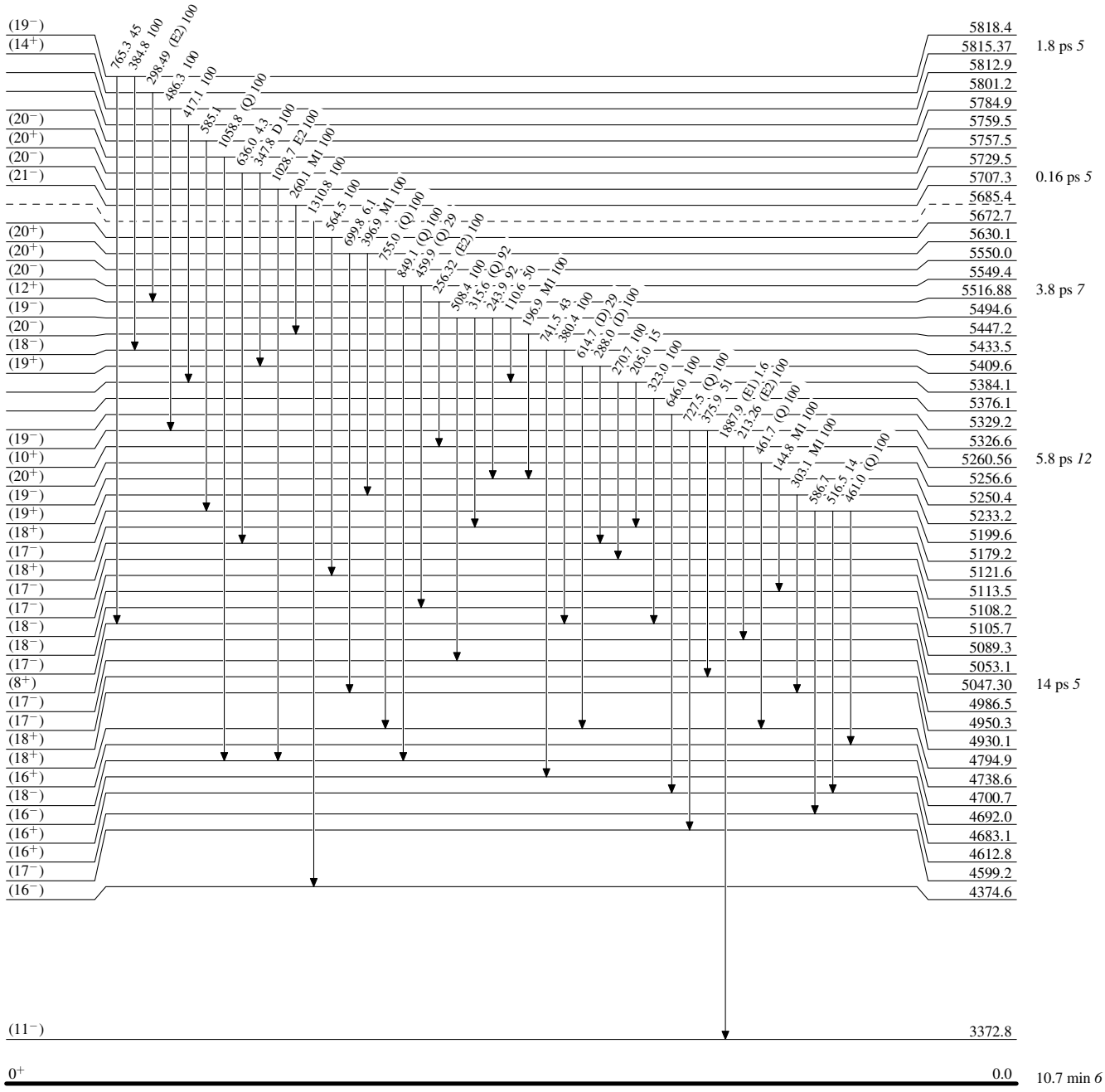


$^{194}_{82}Pb_{112}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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

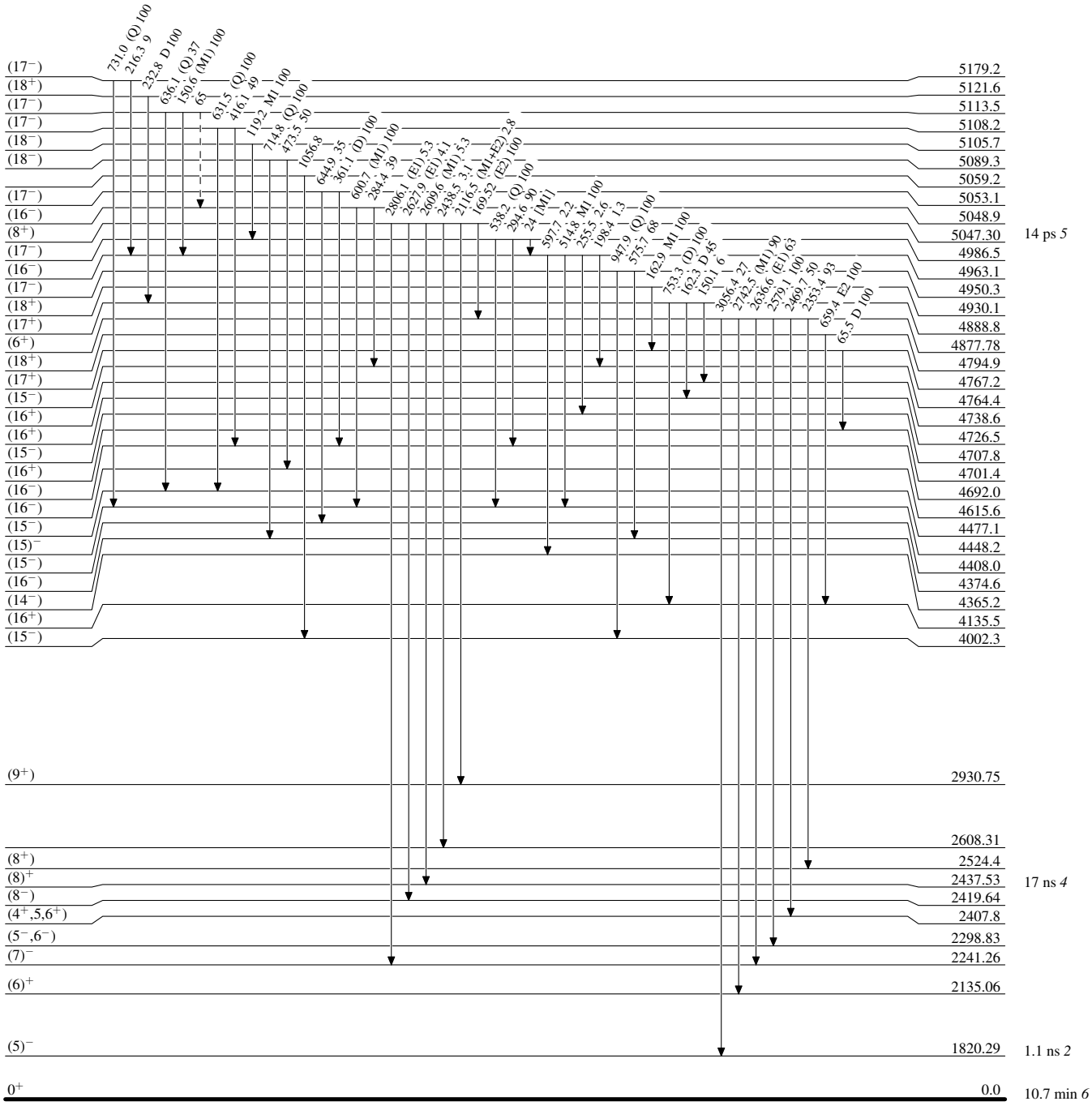
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



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

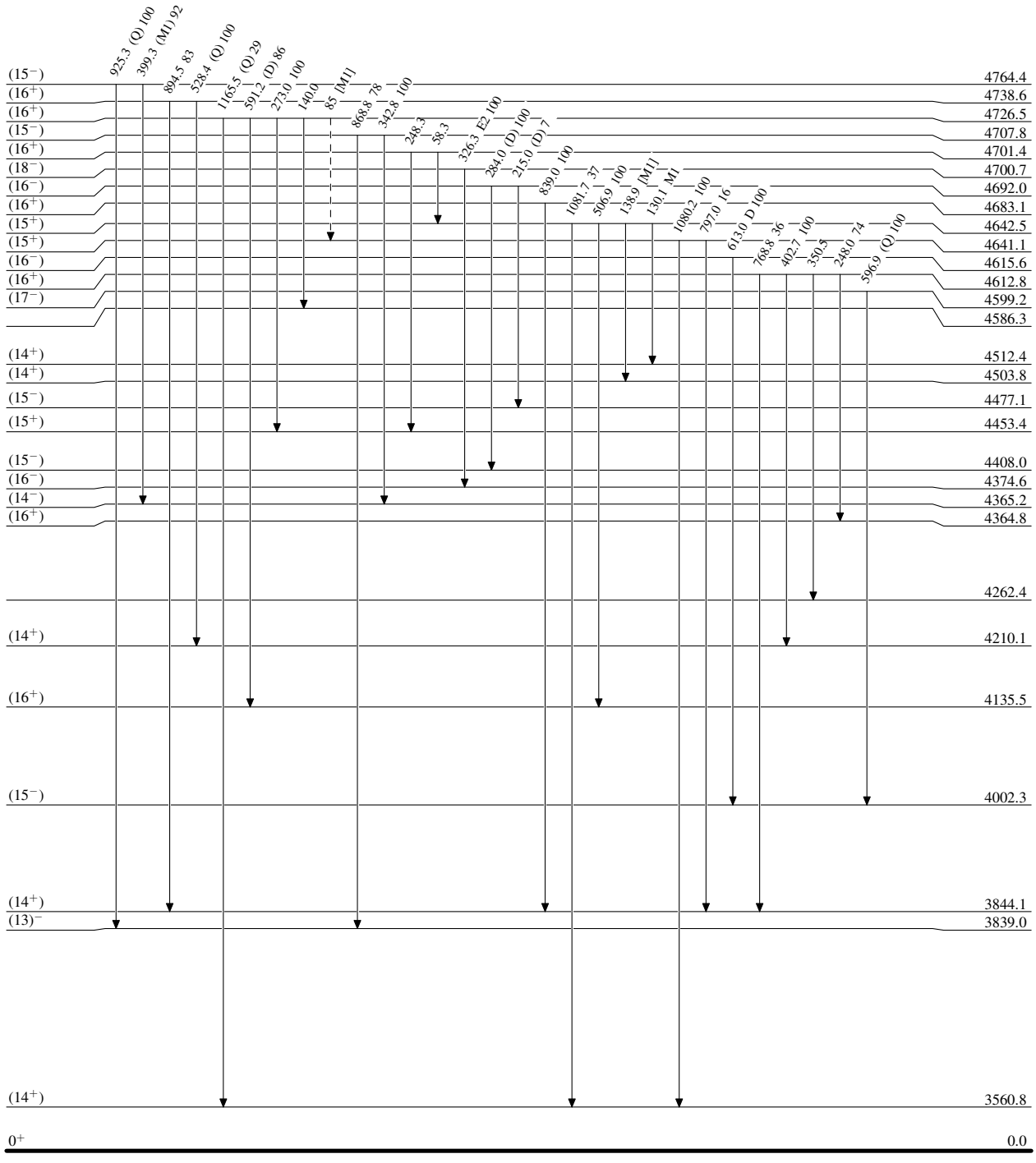
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

γ Decay (Uncertain)



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

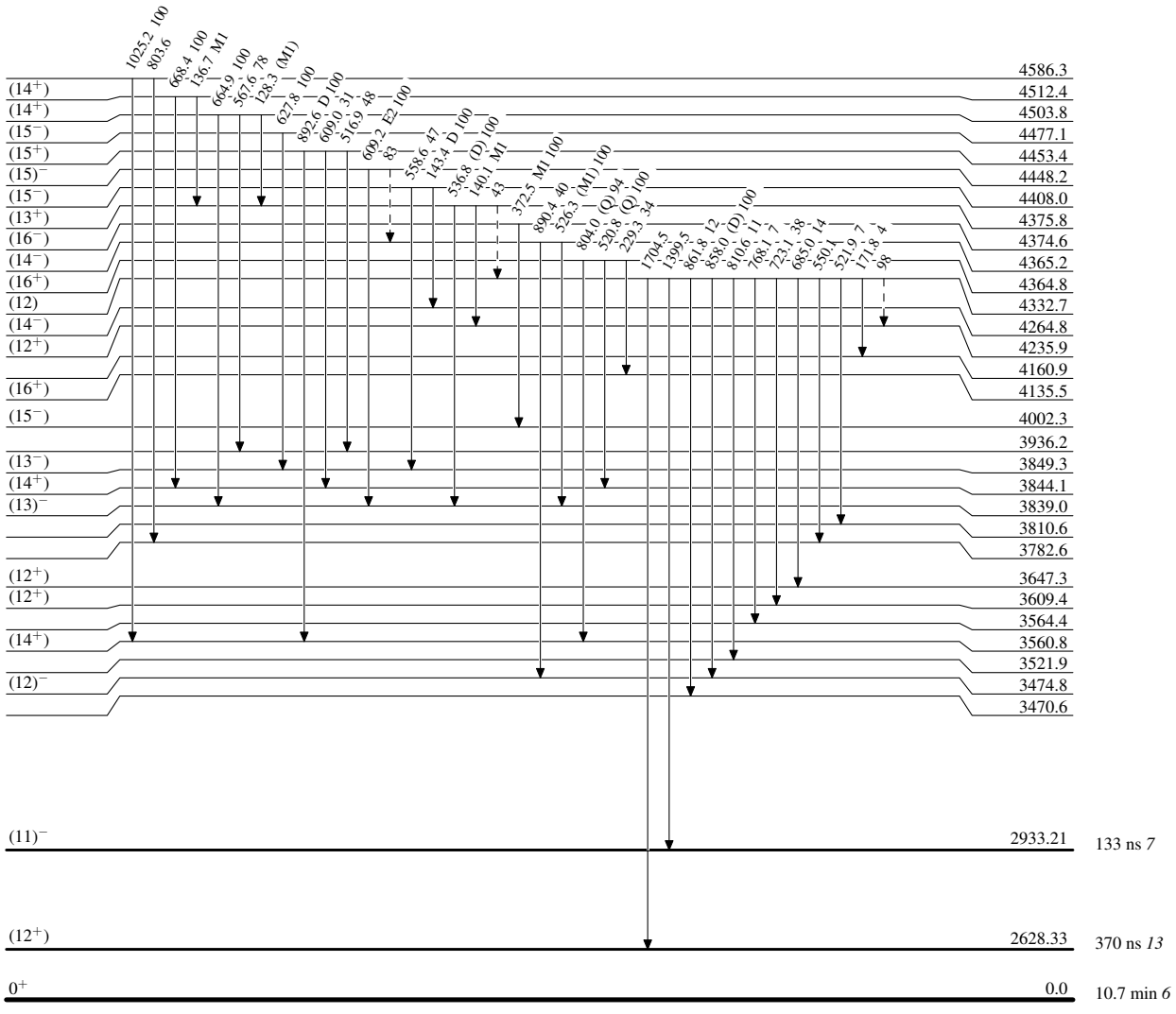
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

– – – – – – ▶ γ Decay (Uncertain)



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

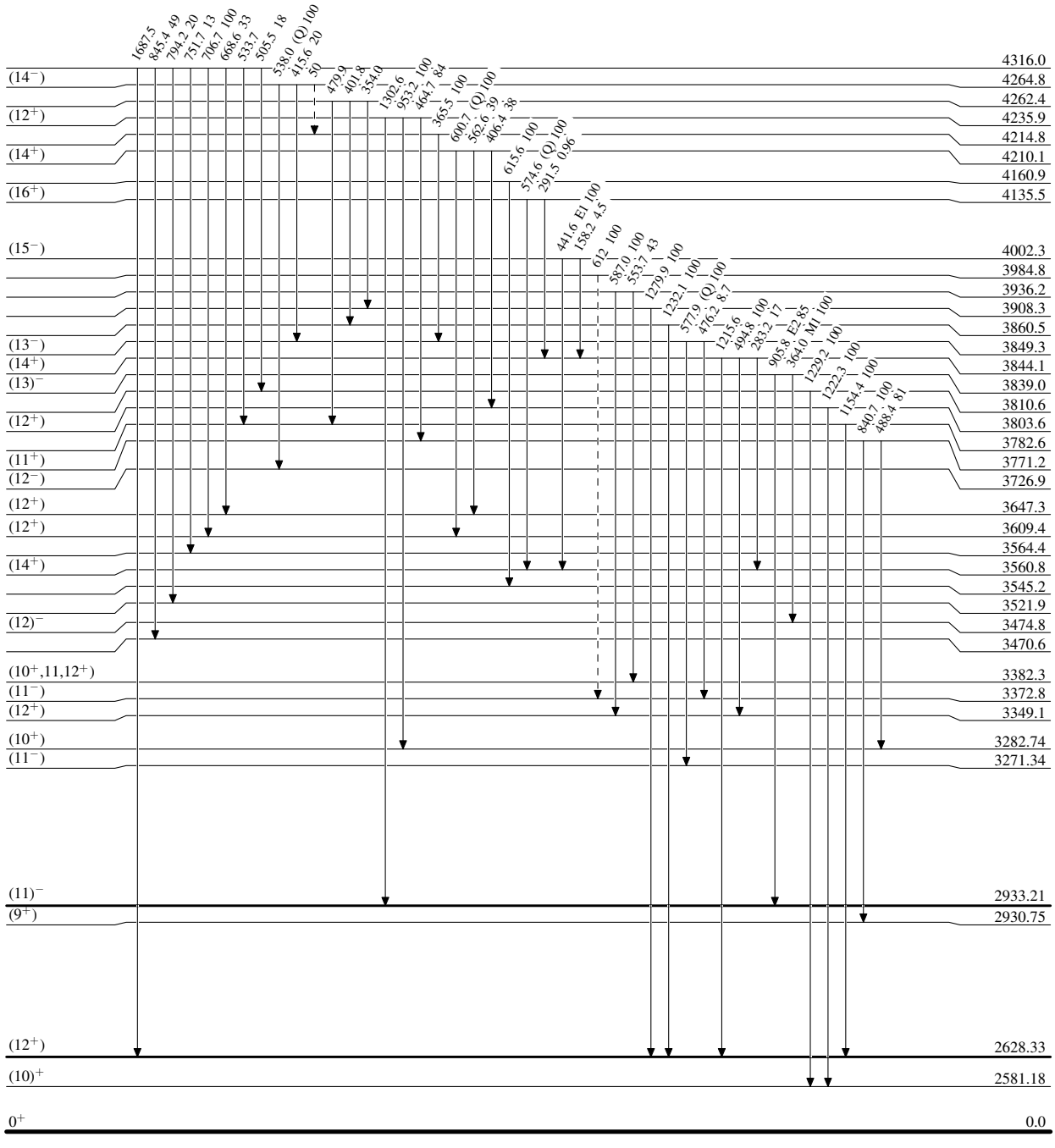
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

– – – – – – ► γ Decay (Uncertain)

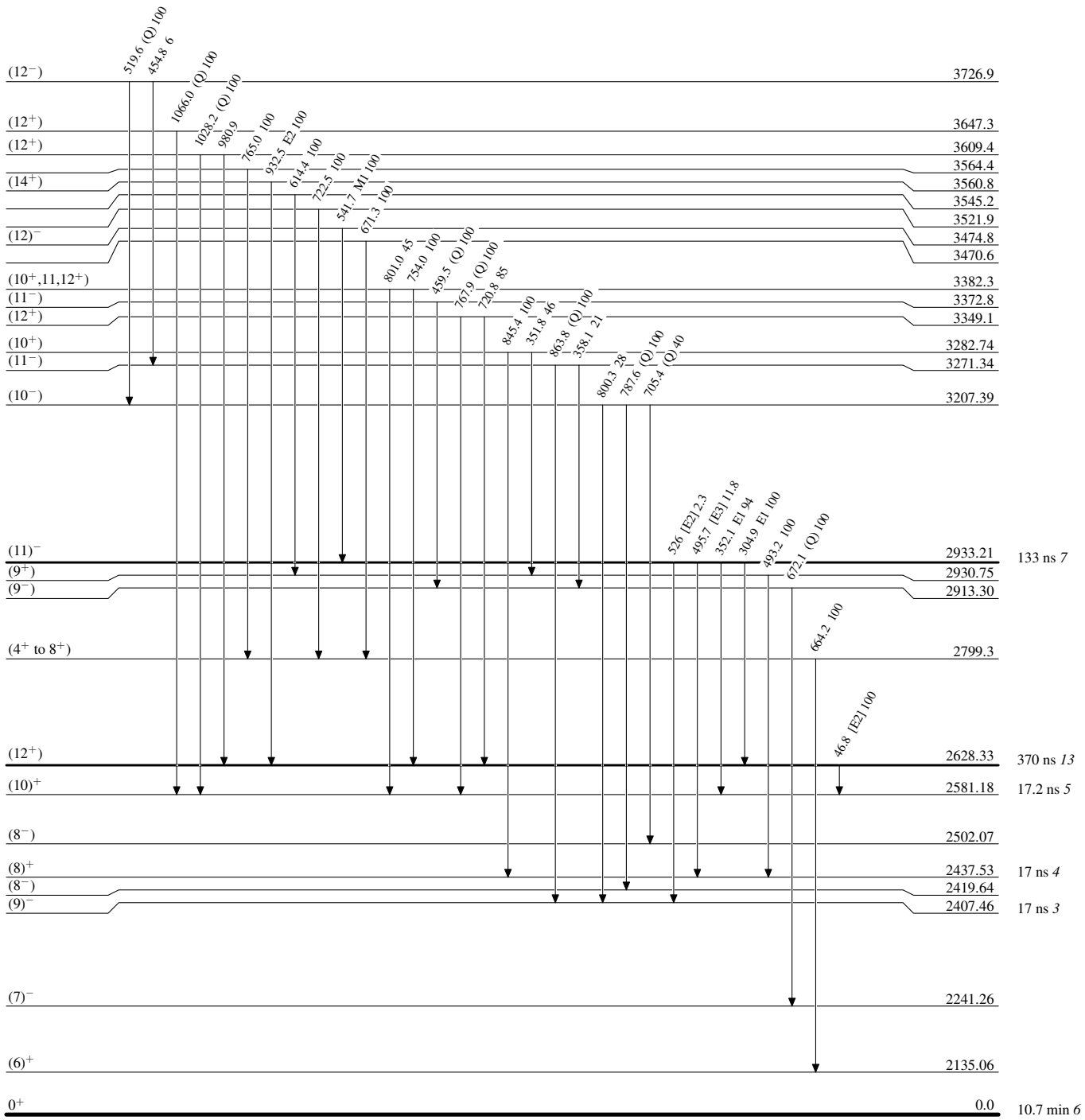


$^{194}_{82}Pb_{112}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level



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

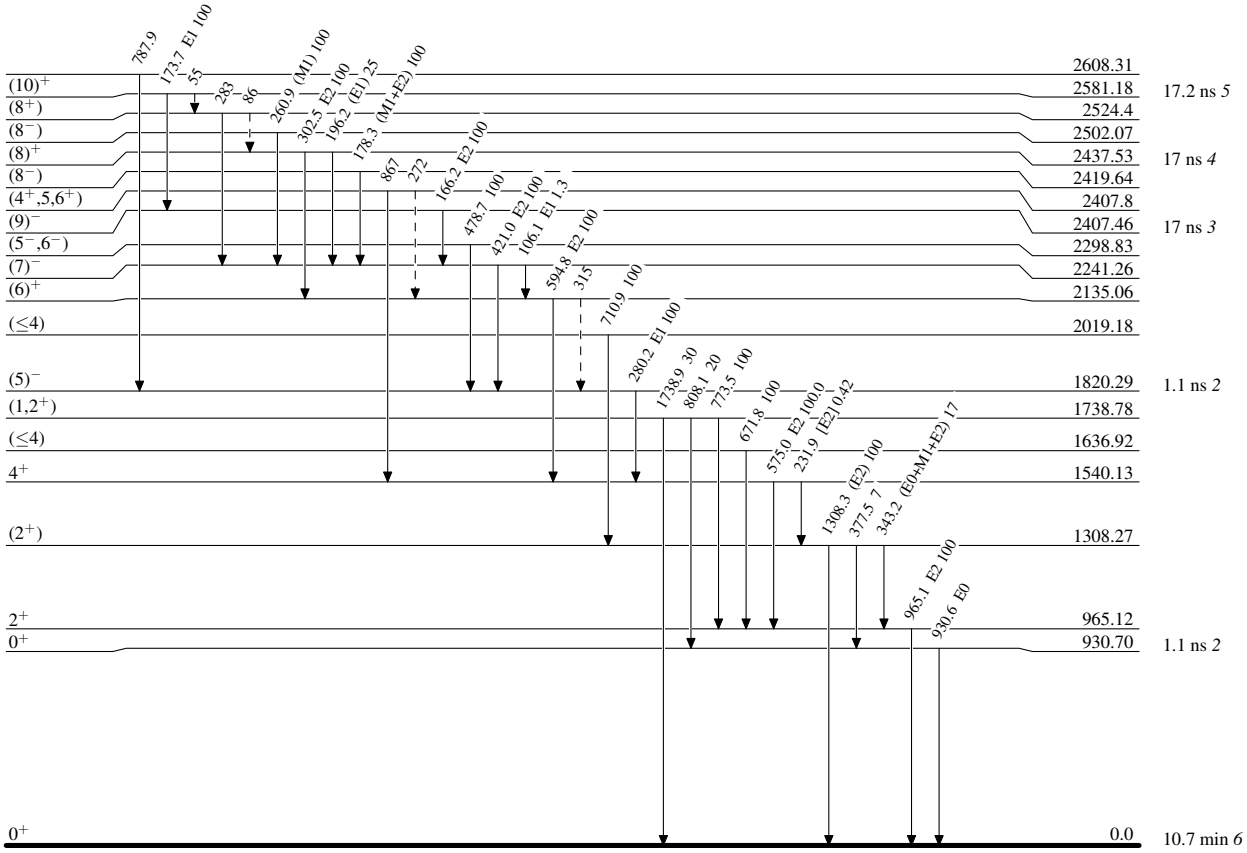
Adopted Levels, Gammas

Legend

Level Scheme (continued)

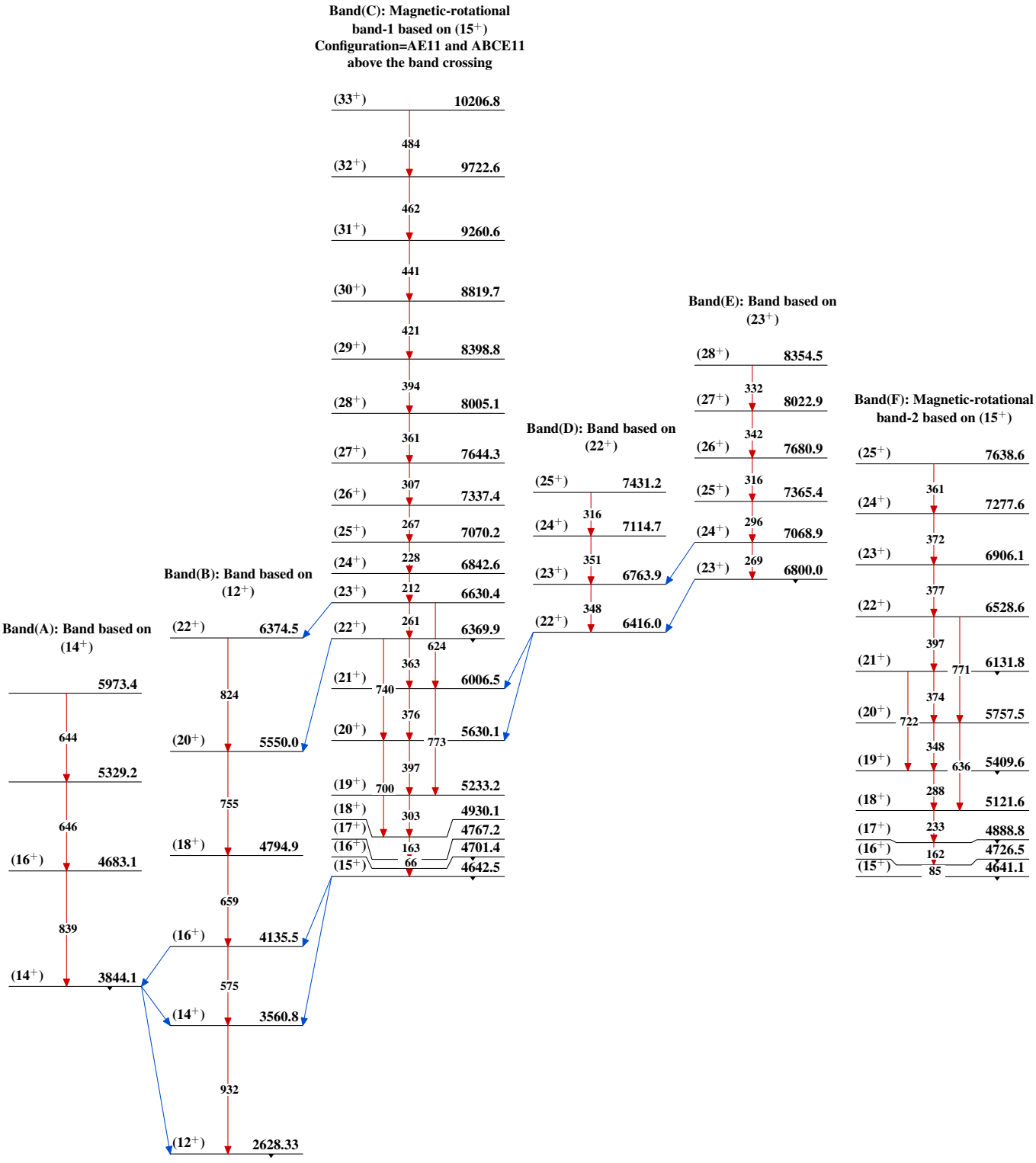
Intensities: Relative photon branching from each level

- - - - - - ► γ Decay (Uncertain)



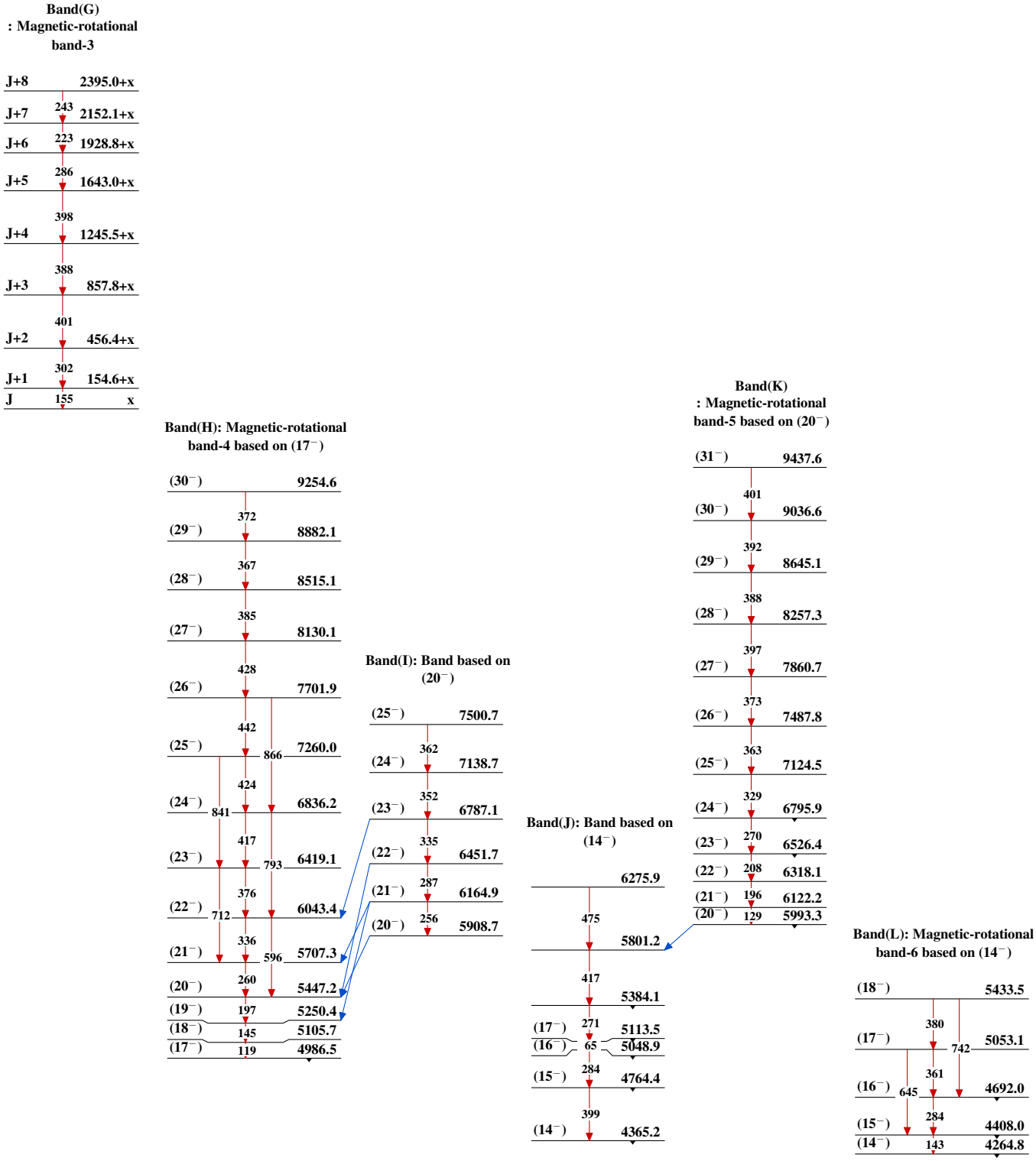
$^{194}_{82}Pb_{112}$

Adopted Levels, Gammas



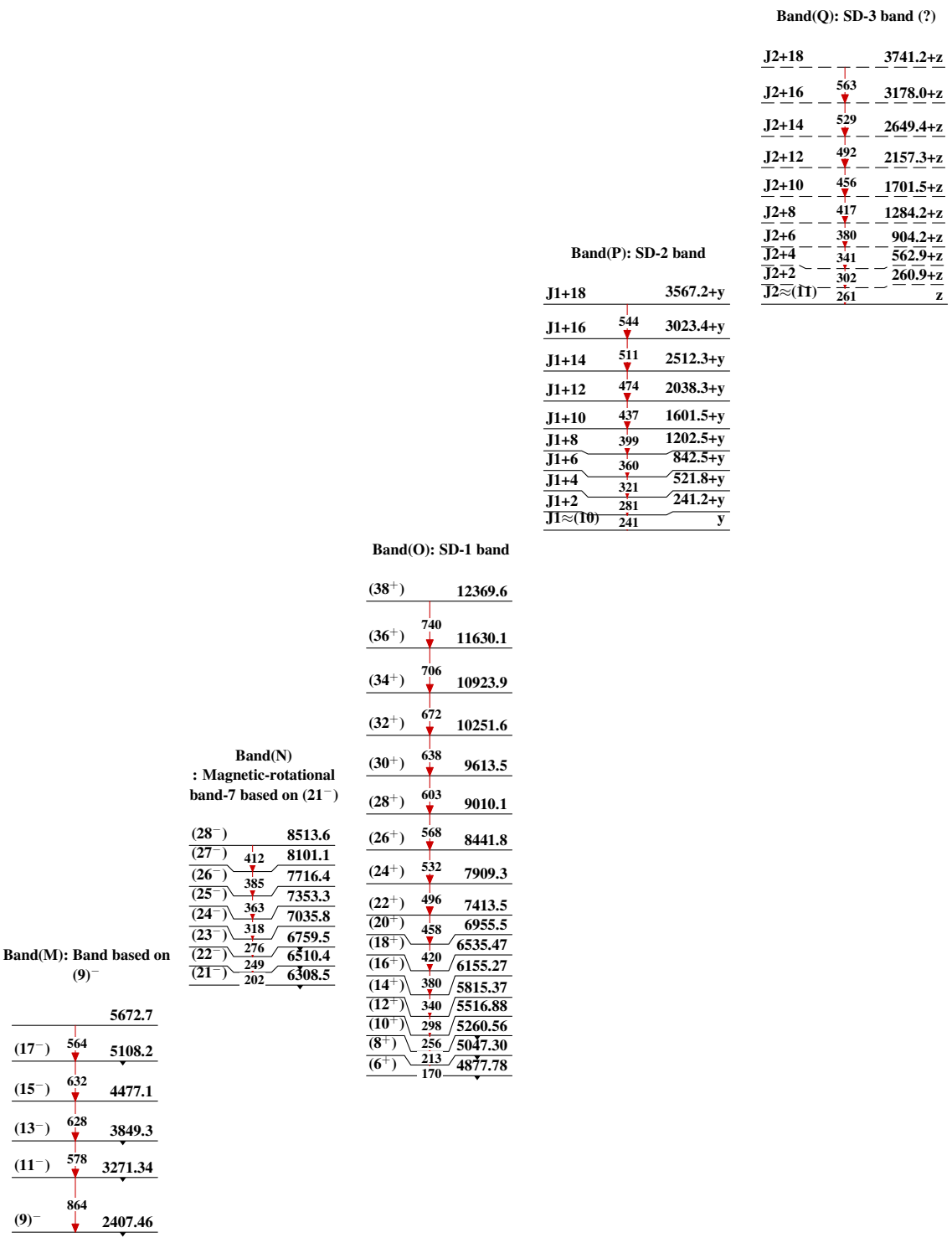
$^{194}_{82}Pb_{112}$

Adopted Levels, Gammas (continued)



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

Adopted Levels, Gammas (continued)



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