Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 201,346 (2025)	21-Jan-2025

Q(β^-)=1532.2 *6*; S(n)=6503.8 *4*; S(p)=7255 *4*; Q(α)=−325 *23* 2021Wa16
S(2n)=14049.9 *6*, S(2p)=16440 *200* (syst) (2021Wa16).

^{206}Tl Levels

For results from theoretical calculations and expected configurations see 2025Ci01, 1985To20, 1971KuZM and 1972Se27.

Cross Reference (XREF) Flags

A	^{206}Hg β^- decay	E	^{9}Be(^{208}Pb,Xγ)	I	^{207}Pb(t,α)
B	^{210}Bi α decay (5.012 d)	F	^{205}Tl(n,γ) E=th	J	^{208}Pb(d,α)
C	^{210}Bi α decay (3.04×10^6 y)	G	^{205}Tl(d,p)		
D	^{206}Tl IT decay	H	^{207}Pb(μ^-,nγ),^{205}Tl(^{17}O,^{16}Oγ),		

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
0.0	0$^-$	4.202 min *14*	ABCDEFGHIJ	%β^-=100 J$^\pi$: From atomic-beam magnetic resonance (1969Cu09,1968Ro12,1969Fu11); π from L=1 in ^{208}Pb(d,α), L=1 in ^{205}Tl(d,p), and L=0 in ^{207}Pb(t,α). T$_{1/2}$: Weighted average of 4.23 min *3* (1941Fa04), 4.19 min *2* (1953Sa11), 4.29 min *5* (1959Po64), 4.27 min *5* (1970Fl12), 4.183 min *17* (1971Pe03), 4.14 min *5* (1972CoYX), and 4.27 min *5* (1972Wi18). Others: 4.2 min *2* (1972Gr01) and 4.2 min (1961Nu01). Dominant configuration=$\pi(s^{-1}_{1/2})\otimes\nu(p^{-1}_{1/2})$.
265.833 *5*	2$^-$	2.29 ns *14*	ABCDEFGHIJ	J$^\pi$: 265.862γ E2 to 0$^-$; L=3 in ^{208}Pb(d,α) and L=2 in ^{207}Pb(t,α). T$_{1/2}$: From 1984Bh06 [^{205}Tl(d,pγ)] using the p-γ delayed coincidences and the centroid-shift analysis. Other: 1.25 ns *20* from α-γ(t) in ^{210}Bi α decay (3.04×10^6 y) (1961Ru02). Dominant configuration=$\pi(d^{-1}_{3/2})\otimes\nu(p^{-1}_{1/2})$.
304.896 *6*	1$^-$	4.2 ps *14*	ABC FGHIJ	J$^\pi$: 304.896γ M1 to 0$^-$; L=1 in ^{205}Tl(d,p) and ^{208}Pb(d,α), and L=0 in^{207}Pb(t,α). T$_{1/2}$: From ^{205}Tl(^{17}O,^{16}Oγ) (1975Do12) using the recoil distance technique. Dominant configuration=$\pi(s^{-1}_{1/2})\otimes\nu(p^{-1}_{1/2})$.
635.03 *4*	2$^-$	4.0 ps *9*	C FGH J	J$^\pi$: 330.13γ M1 to 1$^-$, 369.18γ M1 to 2$^-$; L=1 in ^{208}Pb(d,α) and L=(1) in ^{205}Tl(d,p). T$_{1/2}$: From ^{205}Tl(^{17}O,^{16}Oγ) (1975Do12) using recoil distance technique. Dominant configuration=$\pi(s^{-1}_{1/2})\otimes\nu(p^{-1}_{3/2})$.
649.42 *4*	1$^-$		A C FGHIJ	J$^\pi$: 649.42γ M1 to 0$^-$; L=(1) in ^{208}Pb(d,α) and L=2 in ^{207}Pb(t,α). Dominant configuration=$\pi(d^{-1}_{3/2})\otimes\nu(p^{-1}_{1/2})$.
801.36 *4*	3$^-$	2.4 ps *7*	CD FGHIJ	J$^\pi$: 535.53γ M1 [$\gamma\gamma(\theta)$] to 2$^-$; L=3 in ^{208}Pb(d,α) and ^{205}Tl(d,p), and L=2 in ^{207}Pb(t,α). T$_{1/2}$: From ^{205}Tl(^{17}O,^{16}Oγ) (1975Do12) using the recoil distance technique. Dominant configuration=$\pi(s^{-1}_{1/2})\otimes\nu(f^{-1}_{5/2})$.
952.17 *6*	4$^-$	42 ps *10*	CDE H J	J$^\pi$: 686.31γ to 2$^-$; L=5 in ^{208}Pb(d,α). T$_{1/2}$: From ^{205}Tl(^{17}O,^{16}Oγ) (1975Do12) using recoil distance technique. Dominant configuration=$\pi(d^{-1}_{3/2})\otimes\nu(f^{-1}_{5/2})$.
998.20 *5*	2$^-$		C FGHIJ	J$^\pi$: 998.2γ E2 [$\gamma\gamma(\theta)$] to 0$^-$, 196.8γ to 3$^-$; L=3 in ^{205}Tl(d,p) and L=2 in ^{207}Pb(t,α). Dominant configurations=$\pi(d^{-1}_{3/2})\otimes\nu(p^{-1}_{1/2})$ + $\pi(s^{-1}_{1/2})\otimes\nu(f^{-1}_{5/2})$.

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Adopted Levels, Gammas (continued)

^{206}Tl Levels (continued)

E(level)†	Jπ	$T_{1/2}$	XREF	Comments
1079.6 *7*	$(1^-,2)$		F	Jπ: 278.2γ to 3^-; 5423γ, primary γ ray from thermal neutron-capture state ($J^\pi=0^+,1^+$).
1116.84 *5*	1^-		C FGHIJ	Jπ: 1116.9γ M1 [γγ(θ)] to 0^-, 481.8γ to 2^-; L=2 in ^{207}Pb(t,α). Dominant configuration=$\pi(d^{-1}_{3/2})\otimes\nu(f^{-1}_{5/2})$.
1257?‡ *10*			I	Jπ: L=(0,5) in ^{207}Pb(t,α) would suggest $J^\pi=0^-,1^-$ or $5^+,6^+$.
1331.84 *5*	1^-		FG IJ	Jπ: 1331.8γ M1 [γγ(θ)] to 0^-; L=1 in ^{208}Pb(d,α) and L=2 in ^{207}Pb(t,α). Dominant configuration=$\pi(s^{-1}_{1/2})\otimes\nu(p^{-1}_{3/2})$.
1360.16 *6*	0^-		F H J	Jπ: 1055.3γ M1 [γγ(θ)] to 1^-; L=1 in ^{208}Pb(d,α). Dominant configuration=$\pi(d^{-1}_{3/2})\otimes\nu(p^{-1}_{3/2})$.
1399.53 *13*	2^-		F	Jπ: 598.2γ M1+E2 [γγ(θ)] to 3^-; 5103γ, primary γ ray from thermal neutron-capture state ($J^\pi=0^+,1^+$). Dominant configuration=$\pi(d^{-1}_{3/2})\otimes\nu(f^{-1}_{5/2})$.
1405.47 *7*	$(5)^+$	78 ns *1*	DE HIJ	μ=4.27 *6* Jπ: L=4 in ^{208}Pb(d,α) and L=5 in ^{207}Pb(t,α). $T_{1/2}$: From γ(t) in 1976Ha44 [^{206}Tl IT decay]. Other: 71 ns 4 from sum of 266γ(t), 453γ(t) and 686γ(t) in 2011St21 [^{9}Be(^{208}Pb,xγ)]. μ: Using g-factor=0.853 *12* in 1976Ha44, 2020StZV [^{206}Tl IT decay] deduced using the time-differential, perturbed-angular distribution technique. The value is corrected for diamagnetism and Knight shift. Dominant configuration=$\pi(h^{-1}_{11/2})\otimes\nu(p^{-1}_{1/2})$.
1473# *4*			J	L=(3,4) in ^{208}Pb(d,α).
1486.52 *5*	(1^-)		F iJ	XREF: i(1485)J(1483) Jπ: 837.1γ M1+E2 [γγ(θ)] to 1^-, 126γ to 0^-, 851.2γ to 2^-; L=2 in ^{207}Pb(t,α). Dominant configuration=$\pi(d^{-1}_{3/2})\otimes\nu(p^{-1}_{3/2})$.
1621.70 *11*	$(7)^+$	10.1 ns *6*	D H J	μ<2.45 XREF: J(1623) Jπ: 216.26γ to $(5)^+$; L=6 in ^{208}Pb(d,α). $T_{1/2}$: From γ(t) in 1976Ha44 [^{206}Tl IT decay]. μ: g-factor<0.35 in 1976Ha44 [^{206}Tl IT decay] using the time-differential, perturbed-angular distribution technique. Dominant configuration=$\pi(s^{-1}_{1/2})\otimes\nu(i^{-1}_{13/2})$ with small $\pi(h^{-1}_{11/2})\otimes\nu(p^{-1}_{3/2})$ admixtures.
1630?#	(2^-)		J	Jπ: L=(3) in ^{208}Pb(d,α).
1647.86 *7*	(2^-)		F IJ	XREF: I(1653)J(1649) Jπ: 998.4γ and 1343.0γ to 1^-; 4855γ, primary γ ray from thermal neutron-capture state ($J^\pi=0^+,1^+$); L=(1) in ^{208}Pb(d,α) and L=2 in ^{207}Pb(t,α). Dominant configuration=$\pi(d^{-1}_{3/2})\otimes\nu(p^{-1}_{3/2})$.
1710.53 *18*	$(6)^+$		D IJ	XREF: I(1717)J(1712) Jπ: 88.5γ to $(7)^+$; 304.9γ to $(5)^+$; L=6 in ^{208}Pb(d,α) and L=5 in ^{207}Pb(t,α). Dominant configuration=$\pi(h^{-1}_{11/2})\otimes\nu(p^{-1}_{1/2})$.
1800# *5*	(3^+)		J	Jπ: L=(4+2) in ^{208}Pb(d,α).
1843.41 *5*	2^-		F IJ	XREF: I(1852)J(1845) Jπ: 1843.4γ (E2) to 0^-, 1042.1γ M1(+E2) to 3^-; L=2 in ^{207}Pb(t,α). Dominant configuration=$\pi(d^{-1}_{5/2})\otimes\nu(p^{-1}_{1/2})$.
1983# *6*	$(5)^+$		IJ	XREF: I(1985) Jπ: L=(4,3) in ^{208}Pb(d,α) and L=5 in ^{207}Pb(t,α).
2058# *6*	$2^-,3^-$		IJ	XREF: I(2061) Jπ: L=3 in ^{208}Pb(d,α); L=2 in ^{207}Pb(t,α).
2078.90 *18*	$(8)^+$		D H J	XREF: J(2080)

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Adopted Levels, Gammas (continued)

^{206}Tl Levels (continued)

E(level)†	J$^\pi$	T$_{1/2}$	XREF	Comments
				J$^\pi$: 368.2γ to (6)$^+$, 457.2γ to (7)$^+$; L=8 in ^{208}Pb(d,α). Dominant configuration=$\pi(h^{-1}_{11/2})\otimes\nu(f^{-1}_{5/2})$ with $\pi(d^{-1}_{3/2})\otimes\nu(i^{-1}_{13/2})$ admixtures.
2126# *6*	5$^+$,6$^+$		IJ	XREF: I(2128) J$^\pi$: L=5 in ^{207}Pb(t,α).
2170# *7*			J	
2189.7 *3*	(2$^-$)		F	J$^\pi$: 1540.3γ to 1$^-$; 4313γ, primary γ ray from thermal neutron-capture state (J^π=0$^+$,1$^+$). Dominant configurations=$\pi(d^{-1}_{5/2})\otimes\nu(f^{-1}_{5/2})$ + $\pi(d^{-1}_{3/2})\otimes\nu(f^{-1}_{7/2})$.
2217# *7*	3$^-$,4$^-$		J	J$^\pi$: L=3 in ^{208}Pb(d,α).
2241.24 *16*	(1$^-$)		F	J$^\pi$: 1591.8γ M1+E2 [$\gamma\gamma(\theta)$] to 1$^-$, 841.8γ to 2$^-$; 4262γ, primary γ ray from thermal neutron-capture state (J^π=0$^+$,1$^+$). Dominant configurations=$\pi(d^{-1}_{5/2})\otimes\nu(f^{-1}_{5/2})$ + $\pi(h^{-1}_{11/2})\otimes\nu(i^{-1}_{13/2})$.
2243# *7*	(5$^+$,6$^+$,7$^+$)		J	J$^\pi$: L=6 in ^{208}Pb(d,α).
2264‡ *10*	5$^+$,6$^+$		IJ	XREF: J(2250?) J$^\pi$: L=5 in ^{207}Pb(t,α).
2326.16 *19*	(8$^+$)		D J	XREF: J(2328) J$^\pi$: 616.3γ to (6)$^+$, 242.7γ to (8)$^+$. Dominant configuration=$\pi(h^{-1}_{11/2})\otimes\nu(f^{-1}_{5/2})$ with $\pi(d^{-1}_{3/2})\otimes\nu(i^{-1}_{13/2})$ admixtures.
2347# *7*			J	
2380.64 *8*	(0$^-$)		F	J$^\pi$: 1048.8γ, 1263.8γ and 2075.7γ M1 [$\gamma\gamma(\theta)$] to 1$^-$, 1382.3γ to 2$^-$. Dominant configuration=$\pi(d^{-1}_{5/2})\otimes\nu(f^{-1}_{5/2})$.
2411# *7*	(5$^+$,6$^+$)		J	J$^\pi$: L=(6) in ^{208}Pb(d,α).
2442# *7*			J	
2462# *7*	2$^-$,3$^-$		IJ	XREF: I(2464) J$^\pi$: L=2 in ^{207}Pb(t,α).
2494.71 *17*	(1$^-$)		F IJ	XREF: I(2506) J$^\pi$: 1378.0γ to 1$^-$, 1496.1γ to 2$^-$; 4008γ, primary γ ray from thermal neutron-capture state (J^π=0$^+$,1$^+$); L=1 in ^{208}Pb(d,α) and L=2 in ^{207}Pb(t,α). Dominant configurations=$\pi(d^{-1}_{5/2})\otimes\nu(f^{-1}_{5/2})$ + $\pi(h^{-1}_{11/2})\otimes\nu(i^{-1}_{13/2})$.
2530# *8*			J	
2581@ *7*	(5$^+$)		G	J$^\pi$: From the analysis of ^{205}Tl(d,p) reaction data. Probable configuration=$\pi(s^{-1}_{1/2})\otimes\nu(g^{+1}_{9/2})$ (1965Er02,1969Wh05).
2594@ *7*	(4$^+$)		G	J$^\pi$: From analysis of ^{205}Tl(d,p) reaction data. Probable configuration=$\pi(s^{-1}_{1/2})\otimes\nu(g^{+1}_{9/2})$ (1965Er02,1969Wh05).
2617# *8*	(4$^+$,5$^+$)		J	J$^\pi$: L=(4) in ^{208}Pb(d,α).
2643.10 *18*	(12)$^-$	3.74 min *3*	D H J	%IT=100 J$^\pi$: L=11 in ^{208}Pb(d,α) for a level reported at 2610 (1977Fr11); 316.8γ, 564.2γ M4 to (8)$^+$. T$_{1/2}$: Weighted average of 3.6 min *2* (1976Be44), 3.76 min *4* (1976Ha44), and 3.73 min *4* (1978Ur01). Other: 3.77 min *2* in 1977UrZY, superseded by the value in 1978Ur01. Dominant configuration=$\pi(h^{-1}_{11/2})\otimes\nu(i^{-1}_{13/2})$.
2646# *8*	(4$^+$,5$^+$)		J	J$^\pi$: L=(4) in ^{208}Pb(d,α).
2708# *8*	(1,2,3)$^-$		IJ	XREF: I(2717) J$^\pi$: L=2 in ^{207}Pb(t,α).
2728# *8*			J	
2803.75 *8*	(2$^-$)		F IJ	XREF: I(2813)J(2807)

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Adopted Levels, Gammas (continued)

^{206}Tl Levels (continued)

E(level)†	J$^{\pi}$	XREF	Comments
			J$^{\pi}$: 2154.4γ to 1$^-$, 2002.4γ to 3$^-$; 3699γ, primary γ ray from thermal neutron-capture state (J$^{\pi}$=0$^+$,1$^+$); L=2 in ^{207}Pb(t,α). Dominant configuration=$\pi(d^{-1}_{5/2})\otimes\nu(f^{-1}_{5/2})$.
2828@ *7*		G	
2872# *7*	4$^+$,5$^+$	G J	XREF: G(2868) J$^{\pi}$: L=4 in ^{208}Pb(d,α).
2891# *9*		G J	XREF: G(2896)
2936# *9*	(6$^+$,7$^+$)	J	J$^{\pi}$: L=(6) in ^{208}Pb(d,α).
2977# *9*		J	
3002.7 *5*	(2$^-$)	FG J	XREF: G(3014)J(3008) J$^{\pi}$: 1642.3γ to 0$^-$, 2353.3γ to 1$^-$; 3500γ, primary γ ray from thermal neutron-capture state (J$^{\pi}$=0$^+$,1$^+$). Dominant configuration=$\pi(d^{-1}_{5/2})\otimes\nu(p^{-1}_{1/2})$.
3024# *9*		IJ	XREF: I(3022) J$^{\pi}$: L=(4,3) in ^{208}Pb(d,α) would suggest J$^{\pi}$=3$^-$,4$^-$ or 4$^+$,5$^+$.
3041.12 *21*	(1$^-$)	F J	XREF: J(3046) J$^{\pi}$: 2406.0γ to 2$^-$, 3041.1γ to 0$^-$; 3462γ, primary γ ray from thermal neutron-capture state (J$^{\pi}$=0$^+$,1$^+$); L=1 in ^{208}Pb(d,α). Dominant configuration=$\pi(d^{-1}_{5/2})\otimes\nu(p^{-1}_{3/2})$.
3106# *9*		J	
3123# *9*		J	
3181# *10*		J	
3225# *10*		J	
3278# *10*		J	L=9,10 in ^{208}Pb(d,α) would suggest J$^{\pi}$=9$^-$,10$^-$ or 10$^+$,11$^+$.
3330# *10*	(4$^+$,5$^+$)	J	J$^{\pi}$: L=(4) in ^{208}Pb(d,α).
3363@ *7*		G	
3424@ *7*		G	
3452@ *7*		G	
3538@ *7*		G	
3564@ *7*		G	
3638@ *7*		G	
3717@ *7*		G	
3784@ *7*		G	
3874@ *7*	(3$^-$,4$^-$)	G I	XREF: I(3865) J$^{\pi}$: L=(4) in ^{207}Pb(t,α).
3900@ *7*		G	
3938@ *7*		G	
3976@ *7*		G	
4126@ *7*		G	
4200@ *7*		G	
4238@ *7*	(3$^+$)	G	J$^{\pi}$: From analysis of ^{205}Tl(d,p) reaction data. Probable configuration=$\pi(s^{-1}_{1/2})\otimes\nu(d^{+1}_{5/2})$ (1965Er02).
4273@ *7*	(2$^+$)	G	J$^{\pi}$: From analysis of ^{205}Tl(d,p) reaction data. Probable configuration=$\pi(s^{-1}_{1/2})\otimes\nu(d^{+1}_{5/2})$ (1965Er02).
4416.3 *4*	(1$^-$)	F	J$^{\pi}$: 4150.8γ to 2$^-$, 4416.2γ to 0$^-$; 2087γ, primary γ ray from thermal neutron-capture state (J$^{\pi}$=0$^+$,1$^+$).

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Adopted Levels, Gammas (continued)

^{206}Tl Levels (continued)

E(level)†	J^π	XREF	Comments
			Dominant configuration=$\pi(g_{7/2}^{-1})\otimes\nu(f_{5/2}^{-1})$.
4426@ 7	(1+)	G	J^π: From analysis of ^{205}Tl(d,p) reaction data. Probable configuration=$\pi(s_{1/2}^{-1})\otimes\nu(s_{1/2}^{+1})$ (1965Er02).
4491@ 7	(0+)	G	J^π: From analysis of ^{205}Tl(d,p) reaction data. Probable configuration=$\pi(s_{1/2}^{-1})\otimes\nu(s_{1/2}^{+1})$ (1965Er02).
4555@ 7		G	
4622@ 7		G	
4680@ 7		G	
4739@ 7		G	
4775@ 7		G	
4879@ 7		G	
4904@ 7		G	
4941@ 7		G	
5015@ 7		G	
5055@ 7		G	
5091@ 7		G	
5140@ 7		G	

† From a least-square fit to Eγ, unless otherwise stated.
‡ From ^{207}Pb(t,α).
# From ^{208}Pb(d,α).
@ From ^{205}Tl(d,p).

Adopted Levels, Gammas (continued)

$\gamma(^{206}Tl)$

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	α[&]	Comments
265.833	2^-	265.832 *5*	100	0.0	0^-	E2	0.1603 *22*	B(E2)(W.u.)=2.22 *14* α(K)=0.0855 *12*; α(L)=0.0561 *8*; α(M)=0.01440 *20* α(N)=0.00361 *5*; α(O)=0.000639 *9*; α(P)=3.09×10^{-5} *4* Mult.: α(K)exp=0.092, α(L)exp=0.057 and α(M)exp=0.013 (1976TuZY); α(K)exp=0.15 *6* and K/L=1.5 *3* (1961Ru02) in ^{210}Bi α decay (3.04×10^6 y).
304.896	1^-	304.896 *6*	100	0.0	0^-	M1	0.375 *5*	B(M1)(W.u.)=0.13 *5* α(K)=0.308 *4*; α(L)=0.0519 *7*; α(M)=0.01211 *17* α(N)=0.00306 *4*; α(O)=0.000594 *8*; α(P)=5.62×10^{-5} *8* Mult.: α(K)exp=0.37, α(L)exp=0.060 and α(M)exp=0.017 (1976TuZY); α(K)exp=0.26 *1* and K/L=6.3 *1* (1961Ru02) in ^{210}Bi α decay (3.04×10^6 y).
635.03	2^-	330.13 *6*	100 *20*	304.896	1^-	M1	0.302 *4*	α(K)=0.2478 *35*; α(L)=0.0417 *6*; α(M)=0.00973 *14* α(N)=0.002458 *34*; α(O)=0.000478 *7*; α(P)=4.52×10^{-5} *6* B(M1)(W.u.)=0.067 *16* I_γ: From ^{210}Bi α decay (3.04×10^6 y). Mult.: α(K)exp=0.29 and α(L)exp=0.074 (1976TuZY) in ^{210}Bi α decay (3.04×10^6 y).
		369.18 *7*	80 *7*	265.833	2^-	M1	0.2234 *31*	α(K)=0.1833 *26*; α(L)=0.0308 *4*; α(M)=0.00718 *10* α(N)=0.001812 *25*; α(O)=0.000352 *5*; α(P)=3.33×10^{-5} *5* B(M1)(W.u.)=0.038 *10* I_γ: From ^{210}Bi α decay (3.04×10^6 y). Others: 95 *14* in ^{205}Tl(n,γ)E=th. Mult.: α(K)exp=0.18 and α(L)exp=0.038 (1976TuZY) in ^{210}Bi α decay (3.04×10^6 y).
		635[‡]	1.3[‡]	0.0	0^-	[E2]	0.01621 *23*	α(K)=0.01224 *17*; α(L)=0.00301 *4*; α(M)=0.000733 *10* α(N)=0.0001844 *26*; α(O)=3.43×10^{-5} *5*; α(P)=2.56×10^{-6} *4* B(E2)(W.u.)=0.11 *4* E_γ: Only reported in ^{210}Bi α decay (3.0×10^6 y).
649.42	1^-	344.5[@] *1*	25.8[@] *24*	304.896	1^-	M1	0.269 *4*	α(N)=0.002188 *31*; α(O)=0.000425 *6*; α(P)=4.02×10^{-5} *6* α(K)=0.2208 *31*; α(L)=0.0371 *5*; α(M)=0.00866 *12* I_γ: Weighted average 23.6 *42* in ^{205}Tl(n,γ)E=th., 27.6 *35* in ^{210}Bi α decay (3.04×10^6 y) and 25 *5* in ^{206}Hg β^- decay. Mult.: α(K)exp=0.15 and α(L)exp=0.033 (1976TuZY) in ^{210}Bi α decay (3.04×10^6 y).
		384[‡]	0.19[‡]	265.833	2^-	[M1]	0.2010 *28*	α(K)=0.1649 *23*; α(L)=0.0277 *4*; α(M)=0.00645 *9* α(N)=0.001628 *23*; α(O)=0.000316 *4*; α(P)=3.00×10^{-5} *4*
		649.42 *5*	100 *10*	0.0	0^-	M1	0.0501 *7*	α(K)=0.0412 *6*; α(L)=0.00681 *10*; α(M)=0.001585 *22* α(N)=0.000400 *6*; α(O)=7.78×10^{-5} *11*; α(P)=7.38×10^{-6} *10* I_γ: From ^{206}Hg β^- decay (1970As05). Mult.: α(K)exp=0.029 (1976TuZY) in ^{210}Bi α decay (3.04×10^6 y); $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ)E=th.

$^{206}_{81}Tl_{125}$-6

Adopted Levels, Gammas (continued)

γ(^{206}Tl) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$[†]	I$_\gamma$[†]	E$_f$	J$^\pi_f$	Mult.	δ	α[&]	Comments
801.36	3$^-$	535.53 *4*	100	265.833	2$^-$	M1(+E2)	<0.06	0.0829 *12*	B(M1)(W.u.)=0.055 *16*; B(E2)(W.u.)<0.19 α(K)=0.0681 *10*; α(L)=0.01132 *16*; α(M)=0.00264 *4* α(N)=0.000666 *9*; α(O)=0.0001294 *18*; α(P)=1.227$\times10^{-5}$ *17* Mult.,δ: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
952.17	4$^-$	149		801.36	3$^-$				E$_\gamma$: Only reported in ^{205}Tl(^{17}O,^{16}Oγ) (1975Do12).
		686.31 *6*	100	265.833	2$^-$	[E2]		0.01368 *19*	B(E2)(W.u.)=1.2 *3* α(K)=0.01047 *15*; α(L)=0.002442 *34*; α(M)=0.000591 *8* α(N)=0.0001486 *21*; α(O)=2.78$\times10^{-5}$ *4*; α(P)=2.132$\times10^{-6}$ *30*
998.20	2$^-$	196.8[@] *1*	3.4[@] *7*	801.36	3$^-$	[M1+E2]		0.8 *4*	α(K)=0.6 *4*; α(L)=0.184 *9*; α(M)=0.045 *5* α(N)=0.0114 *11*; α(O)=0.00209 *9*; α(P)=1.4$\times10^{-4}$ *5*
		348.8[@] *1*	6.7[@] *13*	649.42	1$^-$	[M1+E2]		0.17 *9*	α(K)=0.13 *8*; α(L)=0.028 *8*; α(M)=0.0067 *16* α(N)=0.0017 *4*; α(O)=3.2$\times10^{-4}$ *9*; α(P)=2.6$\times10^{-5}$ *13*
		732.34 *7*	100	265.833	2$^-$	M1+E2	0.18 *3*	0.0359 *6*	α(K)=0.0295 *5*; α(L)=0.00488 *8*; α(M)=0.001135 *17* α(N)=0.000287 *4*; α(O)=5.57$\times10^{-5}$ *9*; α(P)=5.28$\times10^{-6}$ *8* Mult.,δ: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
		998.2[@] *1*	2.0[@] *4*	0.0	0$^-$	E2		0.00636 *9*	α(K)=0.00509 *7*; α(L)=0.000972 *14*; α(M)=0.0002303 *32* α(N)=5.80$\times10^{-5}$ *8*; α(O)=1.103$\times10^{-5}$ *15*; α(P)=9.36$\times10^{-7}$ *13* Mult.: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
1079.6	(1$^-$,2)	278.2[@] *7*	100[@]	801.36	3$^-$				
1116.84	1$^-$	467.4 *1*	20.2 *33*	649.42	1$^-$	[M1+E2]		0.08 *4*	α(K)=0.06 *4*; α(L)=0.012 *4*; α(M)=0.0028 *10* α(N)=7.1$\times10^{-4}$ *25*; α(O)=1.4$\times10^{-4}$ *5*; α(P)=1.2$\times10^{-5}$ *6*
		481.8 *1*	77 *11*	635.03	2$^-$	[M1+E2]		0.07 *4*	α(K)=0.056 *34*; α(L)=0.011 *4*; α(M)=0.0026 *9* α(N)=6.5$\times10^{-4}$ *23*; α(O)=1.2$\times10^{-4}$ *5*; α(P)=1.1$\times10^{-5}$ *6*
		812.0 *1*	26.6 *33*	304.896	1$^-$	[M1+E2]		0.019 *9*	α(K)=0.015 *8*; α(L)=0.0027 *11*; α(M)=6.3$\times10^{-4}$ *25* α(N)=1.6$\times10^{-4}$ *6*; α(O)=3.1$\times10^{-5}$ *13*; α(P)=2.8$\times10^{-6}$ *13*
		850.4 *3*	6.9 *10*	265.833	2$^-$	[M1+E2]		0.017 *8*	α(K)=0.014 *7*; α(L)=0.0024 *10*; α(M)=5.6$\times10^{-4}$ *22* α(N)=1.4$\times10^{-4}$ *6*; α(O)=2.7$\times10^{-5}$ *11*; α(P)=2.5$\times10^{-6}$ *12*
		1116.9 *1*	100 *10*	0.0	0$^-$	M1		0.01242 *17*	α(K)=0.01025 *14*; α(L)=0.001665 *23*; α(M)=0.000387 *5* α(N)=9.75$\times10^{-5}$ *14*; α(O)=1.898$\times10^{-5}$ *27*; α(P)=1.809$\times10^{-6}$ *25*; α(IPF)=5.53$\times10^{-7}$ *8* Mult.: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
1331.84	1$^-$	682.4[@] *1*	30[@] *5*	649.42	1$^-$	M1+E2	0.03 *2*	0.0440 *6*	α(K)=0.0362 *5*; α(L)=0.00598 *8*; α(M)=0.001390 *20* α(N)=0.000351 *5*; α(O)=6.82$\times10^{-5}$ *10*; α(P)=6.48$\times10^{-6}$ *9* Mult.,δ: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
		696.8[@] *1*	15.1[@] *22*	635.03	2$^-$	[M1+E2]		0.027 *14*	α(K)=0.022 *12*; α(L)=0.0040 *17*; α(M)=9 α(N)=2.4$\times10^{-4}$ *9*; α(O)=4.6$\times10^{-5}$ *19*; α(P)=4.1$\times10^{-6}$ *20*
		1027.0[@] *1*	54[@] *8*	304.896	1$^-$	M1(+E2)	<0.07	0.01536 *22*	α(K)=0.01267 *18*; α(L)=0.002063 *29*; α(M)=0.000479 *7*

From ENSDF

$^{206}_{81}$Tl$_{125}$-7

Adopted Levels, Gammas (continued)

$\gamma(^{206}$Tl) (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	δ	α[&]	Comments
									α(N)=0.0001209 *17*; α(O)=2.353×10^{-5} *33*; α(P)=2.241×10^{-6} *32* Mult.,δ: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
1331.84	1$^-$	1331.8[@] *1*	100[@] *15*	0.0	0$^-$	M1		0.00797 *11*	α(K)=0.00656 *9*; α(L)=0.001060 *15*; α(M)=0.0002459 *34* α(N)=6.21×10^{-5} *9*; α(O)=1.208×10^{-5} *17*; α(P)=1.152×10^{-6} *16*; α(IPF)=3.62×10^{-5} *5* Mult.: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
1360.16	0$^-$	243.3[@] *1*	1.7[@] *4*	1116.84	1$^-$	[M1]		0.697 *10*	α(K)=0.571 *8*; α(L)=0.0968 *14*; α(M)=0.02260 *32* α(N)=0.00571 *8*; α(O)=0.001108 *16*; α(P)=0.0001048 *15*
		710.7[@] *1*	56[@] *8*	649.42	1$^-$	M1		0.0396 *6*	α(K)=0.0326 *5*; α(L)=0.00538 *8*; α(M)=0.001250 *18* α(N)=0.000316 *4*; α(O)=6.14×10^{-5} *9*; α(P)=5.83×10^{-6} *8* Mult.: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
		1055.3[@] *1*	100[@] *14*	304.896	1$^-$	M1		0.01435 *20*	α(K)=0.01184 *17*; α(L)=0.001926 *27*; α(M)=0.000447 *6* α(N)=0.0001129 *16*; α(O)=2.197×10^{-5} *31*; α(P)=2.093×10^{-6} *29* Mult.: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
1399.53	2$^-$	598.2[@] *2*	100[@] *18*	801.36	3$^-$	M1+E2	0.17 *3*	0.0609 *10*	α(K)=0.0500 *8*; α(L)=0.00832 *13*; α(M)=0.001937 *29* α(N)=0.000489 *7*; α(O)=9.50×10^{-5} *15*; α(P)=8.99×10^{-6} *14* Mult.,δ: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
		1094.8[@] *3*	92[@] *15*	304.896	1$^-$	[M1+E2]		0.009 *4*	α(K)=0.0075 *33*; α(L)=0.0013 *5*; α(M)=3.0×10^{-4} *11* α(N)=7.5×10^{-5} *28*; α(O)=1.4×10^{-5} *6*; α(P)=1.3×10^{-6} *6*
1405.47	(5)$^+$	453.28 *5*	100 *5*	952.17	4$^-$	[E1]		0.01136 *16*	α(K)=0.00940 *13*; α(L)=0.001508 *21*; α(M)=0.000349 *5* α(N)=8.76×10^{-5} *12*; α(O)=1.672×10^{-5} *23*; α(P)=1.438×10^{-6} *20* B(E1)(W.u.)=2.45×10^{-8} *6* I_γ: From ^{206}Tl IT decay.
		604.3[#] *2*	1.1[#] *8*	801.36	3$^-$	[M2]		0.1664 *23*	α(K)=0.1318 *18*; α(L)=0.0263 *4*; α(M)=0.00629 *9* α(N)=0.001595 *22*; α(O)=0.000309 *4*; α(P)=2.84×10^{-5} *4* B(M2)(W.u.)=0.0014 *10*
		1139.9[#] *3*	6.3[#] *22*	265.833	2$^-$	[E3]		0.01089 *15*	α(K)=0.00831 *12*; α(L)=0.001960 *27*; α(M)=0.000476 *7* α(N)=0.0001200 *17*; α(O)=2.264×10^{-5} *32*; α(P)=1.848×10^{-6} *26*; α(IPF)=1.952×10^{-7} *35* B(E3)(W.u.)=0.14 *5*
1486.52	(1$^-$)	126.0[@a] *10*	0.5[@] *3*	1360.16	0$^-$	[M1]		4.44 *12*	α(K)=3.63 *10*; α(L)=0.622 *17*; α(M)=0.145 *4* α(N)=0.0367 *10*; α(O)=0.00713 *19*; α(P)=0.000673 *18*
		370.4[@] *10*	<11[@]	1116.84	1$^-$	[M1+E2]		0.14 *8*	α(K)=0.11 *7*; α(L)=0.023 *7*; α(M)=0.0056 *15* α(N)=0.0014 *4*; α(O)=2.7×10^{-4} *8*; α(P)=2.2×10^{-5} *11*
		488.3[@] *5*	3.8[@] *9*	998.20	2$^-$	[M1+E2]		0.07 *4*	α(K)=0.054 *33*; α(L)=0.011 *4*; α(M)=0.0025 *9* α(N)=6.3×10^{-4} *22*; α(O)=1.2×10^{-4} *5*; α(P)=1.0×10^{-5} *5*

$^{206}_{81}$Tl$_{125}$-8

Adopted Levels, Gammas (continued)

$\gamma(^{206}Tl)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	δ	α[&]	Comments
1486.52	(1^-)	837.1[@] *1*	14.6[@] *28*	649.42	1^-	M1+E2	−0.03 *1*	0.0260 *4*	α(K)=0.02139 *30*; α(L)=0.00351 *5*; α(M)=0.000815 *11* α(N)=0.0002057 *29*; α(O)=4.00×10^{-5} *6*; α(P)=3.80×10^{-6} *5* Mult.,δ: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
		851.5[@] *1*	100[@] *19*	635.03	2^-	[M1+E2]		0.017 *8*	α(K)=0.014 *7*; α(L)=0.0024 *10*; α(M)=5.6×10^{-4} *22* α(N)=1.4×10^{-4} *6*; α(O)=2.7×10^{-5} *11*; α(P)=2.5×10^{-6} *12*
		1181.6[@] *1*	62[@] *12*	304.896	1^-	[M1+E2]		0.0077 *31*	α(K)=0.0063 *26*; α(L)=0.0011 *4*; α(M)=2.5×10^{-4} *9* α(N)=6.2×10^{-5} *22*; α(O)=1.2×10^{-5} *4*; α(P)=1.1×10^{-6} *5*; α(IPF)=3.5×10^{-6} *10*
		1220.7[@] *1*	3.4[@] *6*	265.833	2^-	[M1+E2]		0.0071 *28*	α(K)=0.0058 *23*; α(L)=9.7×10^{-4} *35*; α(M)=2.3×10^{-4} *8* α(N)=5.7×10^{-5} *20*; α(O)=1.1×10^{-5} *4*; α(P)=1.0×10^{-6} *4*; α(IPF)=8.0×10^{-6} *21*
1621.70	$(7)^+$	216.26 *8*	100	1405.47	$(5)^+$	[E2]		0.313 *4*	B(E2)(W.u.)=1.25 *7* α(K)=0.1404 *20*; α(L)=0.1292 *18*; α(M)=0.0335 *5* α(N)=0.00839 *12*; α(O)=0.001471 *21*; α(P)=6.36×10^{-5} *9*
1647.86	(2^-)	998.4[@] *1*	100[@] *20*	649.42	1^-	[M1+E2]		0.011 *5*	α(K)=0.009 *4*; α(L)=0.0016 *6*; α(M)=3.7×10^{-4} *14* α(N)=9; α(O)=1.8×10^{-5} *7*; α(P)=1.7×10^{-6} *7*
		1343.0[@] *1*	70[@] *13*	304.896	1^-	[M1+E2]		0.0057 *21*	α(K)=0.0047 *17*; α(L)=7.7×10^{-4} *26*; α(M)=1.8×10^{-4} *6* α(N)=4.5×10^{-5} *15*; α(O)=8.8×10^{-6} *30*; α(P)=8.2×10^{-7} *31*; α(IPF)=3.2×10^{-5} *8*
1710.53	$(6)^+$	88.5[#a] *5*	<35[#]	1621.70	$(7)^+$				
		304.9[#] *2*	100[#] *54*	1405.47	$(5)^+$				
1843.41	2^-	1042.1[@] *1*	16.7[@] *32*	801.36	3^-	M1(+E2)	−0.03 *5*	0.01481 *21*	α(K)=0.01222 *18*; α(L)=0.001989 *28*; α(M)=0.000462 *7* α(N)=0.0001166 *17*; α(O)=2.268×10^{-5} *33*; α(P)=2.160×10^{-6} *31* Mult.,δ: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
		1194.0[@] *1*	100[@] *18*	649.42	1^-	M1(+E2)	−0.01 *2*	0.01048 *15*	α(K)=0.00865 *12*; α(L)=0.001402 *20*; α(M)=0.000326 *5* α(N)=8.21×10^{-5} *12*; α(O)=1.599×10^{-5} *22*; α(P)=1.524×10^{-6} *21*; α(IPF)=6.02×10^{-6} *9* Mult.,δ: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
		1208.3[@] *1*	2.6[@] *6*	635.03	2^-	M1+E2	−0.19 *7*	0.00997 *22*	α(K)=0.00822 *18*; α(L)=0.001335 *28*; α(M)=0.000310 *6* α(N)=7.82×10^{-5} *16*; α(O)=1.522×10^{-5} *32*; α(P)=1.449×10^{-6} *31*; α(IPF)=7.97×10^{-6} *15* Mult.,δ: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
		1538.6[@] *2*	9.3[@] *19*	304.896	1^-	[M1+E2]		0.0043 *14*	α(K)=0.0034 *11*; α(L)=5.6×10^{-4} *17*; α(M)=1.3×10^{-4} *4* α(N)=3.3×10^{-5} *10*; α(O)=6.4×10^{-6} *20*; α(P)=6.0×10^{-7} *20*; α(IPF)=0.000102 *25*

$\gamma(^{206}Tl)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	δ	α[&]	Comments
1843.41	2^-	1577.5[@] *1*	94[@] *17*	265.833	2^-	M1+E2	−0.06 *3*	0.00532 *8*	α(K)=0.00427 *6*; α(L)=0.000687 *10*; α(M)=0.0001594 *23* α(N)=4.02×10^{-5} *6*; α(O)=7.83×10^{-6} *11*; α(P)=7.48×10^{-7} *11*; α(IPF)=0.0001488 *21* Mult.,δ: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
		1843.4[@] *1*	18.3[@] *35*	0.0	0^-	(E2)		2.21×10^{-3} *3*	α(K)=0.001660 *23*; α(L)=0.000269 *4*; α(M)=6.24×10^{-5} *9* α(N)=1.572×10^{-5} *22*; α(O)=3.04×10^{-6} *4*; α(P)=2.80×10^{-7} *4*; α(IPF)=0.0001956 *27* Mult.: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
2078.90	$(8)^+$	368.2[#] *2*	5[#] *3*	1710.53	$(6)^+$				
		457.2[#] *5*	100[#] *12*	1621.70	$(7)^+$				
2189.7	(2^-)	1540.3[@] *3*	100[@]	649.42	1^-	[M1+E2]		0.0042 *14*	α(K)=0.0034 *11*; α(L)=5.6×10^{-4} *17*; α(M)=1.3×10^{-4} *4* α(N)=3.3×10^{-5} *10*; α(O)=6.3×10^{-6} *20*; α(P)=5.9×10^{-7} *20*; α(IPF)=0.000103 *26*
2241.24	(1^-)	841.8[@] *5*	14.7[@] *29*	1399.53	2^-	[M1+E2]		0.017 *8*	α(K)=0.014 *7*; α(L)=0.0025 *10*; α(M)=5.8×10^{-4} *23* α(N)=1.5×10^{-4} *6*; α(O)=2.8×10^{-5} *11*; α(P)=2.5×10^{-6} *12*
		881.1[@a] *5*	14.7[@] *29*	1360.16	0^-	[M1]		0.02277 *32*	α(K)=0.01877 *26*; α(L)=0.00307 *4*; α(M)=0.000714 *10* α(N)=0.0001801 *25*; α(O)=3.50×10^{-5} *5*; α(P)=3.33×10^{-6} *5*
		909.4[@] *3*	27[@] *6*	1331.84	1^-	[M1+E2]		0.014 *7*	α(K)=0.012 *6*; α(L)=0.0020 *8*; α(M)=4.7×10^{-4} *19* α(N)=1.2×10^{-4} *5*; α(O)=2.3×10^{-5} *9*; α(P)=2.1×10^{-6} *10*
		1591.8[@] *2*	100[@] *15*	649.42	1^-	M1+E2	0.04 *3*	0.00521 *7*	α(K)=0.00418 *6*; α(L)=0.000672 *9*; α(M)=0.0001559 *22* α(N)=3.93×10^{-5} *6*; α(O)=7.66×10^{-6} *11*; α(P)=7.31×10^{-7} *10*; α(IPF)=0.0001571 *22* Mult.,δ: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
2326.16	(8^+)	247.2[#] *1*	100[#] *21*	2078.90	$(8)^+$				
		616.3[#a] *2*	<6[#]	1710.53	$(6)^+$				
		704.6[#] *3*	18[#] *12*	1621.70	$(7)^+$				
2380.64	(0^-)	1048.8[@] *1*	86[@] *15*	1331.84	1^-	M1		0.01458 *20*	α(K)=0.01203 *17*; α(L)=0.001957 *27*; α(M)=0.000455 *6* α(N)=0.0001147 *16*; α(O)=2.232×10^{-5} *31*; α(P)=2.126×10^{-6} *30* Mult.: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
		1263.8[@] *1*	100[@] *16*	1116.84	1^-	M1		0.00909 *13*	α(K)=0.00749 *10*; α(L)=0.001212 *17*; α(M)=0.000281 *4* α(N)=7.10×10^{-5} *10*; α(O)=1.382×10^{-5} *19*; α(P)=1.318×10^{-6} *18*; α(IPF)=1.852×10^{-5} *26* Mult.: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
		1382.3[@a] *3*	6.6[@] *13*	998.20	2^-	[E2]		0.00345 *5*	α(K)=0.00279 *4*; α(L)=0.000479 *7*; α(M)=0.0001122 *16*

γ(^{206}Tl) (continued)

E_i(level)	J^π_i	E_γ†	I_γ†	E_f	J^π_f	Mult.	α&	Comments
								α(N)=2.82×10^{-5} *4*; α(O)=5.43×10^{-6} *8*; α(P)=4.86×10^{-7} *7*; α(IPF)=3.21×10^{-5} *5*
2380.64	(0$^-$)	1731.2@ *3*	10.5@ *26*	649.42	1$^-$	[M1]	0.00433 *6*	α(K)=0.00338 *5*; α(L)=0.000543 *8*; α(M)=0.0001259 *18* α(N)=3.18×10^{-5} *4*; α(O)=6.19×10^{-6} *9*; α(P)=5.91×10^{-7} *8*; α(IPF)=0.0002421 *34*
		2075.7@ *3*	43@ *7*	304.896	1$^-$	M1	0.00307 *4*	α(K)=0.002142 *30*; α(L)=0.000342 *5*; α(M)=7.93×10^{-5} *11* α(N)=2.001×10^{-5} *28*; α(O)=3.90×10^{-6} *5*; α(P)=3.73×10^{-7} *5*; α(IPF)=0.000478 *7* Mult.: From $\gamma\gamma(\theta)$ in ^{205}Tl(n,γ) E=th.
2494.71	(1$^-$)	1378.0@ *2*	100@ *19*	1116.84	1$^-$	[M1+E2]	0.0054 *19*	α(K)=0.0044 *16*; α(L)=7.3×10^{-4} *24*; α(M)=1.7×10^{-4} *6* α(N)=4.3×10^{-5} *14*; α(O)=8.3×10^{-6} *28*; α(P)=7.7×10^{-7} *28*; α(IPF)=4.2×10^{-5} *11*
		1496.1@ *3*	31@ *8*	998.20	2$^-$	[M1+E2]	0.0045 *15*	α(K)=0.0037 *12*; α(L)=6.0×10^{-4} *19*; α(M)=1.4×10^{-4} *4* α(N)=3.5×10^{-5} *11*; α(O)=6.8×10^{-6} *22*; α(P)=6.4×10^{-7} *22*; α(IPF)=8.4×10^{-5} *21*
		1860.3@ *8*	23@ *4*	635.03	2$^-$	[M1+E2]	0.0030 *8*	α(K)=0.0022 *6*; α(L)=3.6×10^{-4} *9*; α(M)=8.3×10^{-5} *22* α(N)=2.1×10^{-5} *6*; α(O)=4.1×10^{-6} *11*; α(P)=3.8×10^{-7} *11*; α(IPF)=0.00027 *6*
2643.10	(12)$^-$	316.8# *2*	1.1# *4*	2326.16	(8$^+$)	M4	13.63 *19*	α(K)=6.90 *10*; α(L)=4.93 *7*; α(M)=1.376 *20* α(N)=0.355 *5*; α(O)=0.0650 *9*; α(P)=0.00381 *5* B(M4)(W.u.)=5.5 *18* Mult.: α(exp)≈14.2 in 1976Ha44 [^{206}Tl IT decay].
		564.2# *1*	8.0# *13*	2078.90	(8)$^+$	M4	1.165 *16*	α(K)=0.775 *11*; α(L)=0.291 *4*; α(M)=0.0756 *11* α(N)=0.01934 *27*; α(O)=0.00363 *5*; α(P)=0.000268 *4* B(M4)(W.u.)=0.22 *4* Mult.: From α(exp)≈1.2 in 1976Ha44 [^{206}Tl IT decay].
		1021.5# *2*	100# *9*	1621.70	(7)$^+$	[E5]	0.0617 *9*	α(K)=0.0383 *5*; α(L)=0.01753 *25*; α(M)=0.00452 *6* α(N)=0.001146 *16*; α(O)=0.0002109 *30*; α(P)=1.488×10^{-5} *21* B(E5)(W.u.)=14.2 *7*
2803.75	(2$^-$)	960.1@ *2*	58@ *10*	1843.41	2$^-$	[M1+E2]	0.013 *6*	α(K)=0.010 *5*; α(L)=0.0018 *7*; α(M)=4.1×10^{-4} *16* α(N)=1.0×10^{-4} *4*; α(O)=2.0×10^{-5} *8*; α(P)=1.8×10^{-6} *8*
		1155.9@ *2*	13@ *3*	1647.86	(2$^-$)	[M1+E2]	0.0081 *33*	α(K)=0.0066 *28*; α(L)=0.0011 *4*; α(M)=2.6×10^{-4} *9* α(N)=6.5×10^{-5} *24*; α(O)=1.3×10^{-5} *5*; α(P)=1.2×10^{-6} *5*; α(IPF)=1.7×10^{-6} *5*
		1317.3@ *2*	58@ *10*	1486.52	(1$^-$)	[M1+E2]	0.0060 *22*	α(K)=0.0049 *18*; α(L)=8.1×10^{-4} *28*; α(M)=1.9×10^{-4} *6* α(N)=4.8×10^{-5} *16*; α(O)=9.2×10^{-6} *32*; α(P)=8.6×10^{-7} *33*; α(IPF)=2.5×10^{-5} *7*

$^{206}_{81}$Tl$_{125}$-11

Adopted Levels, Gammas (continued)

γ(^{206}Tl) (continued)

E$_i$(level)	J$^\pi_i$	E$_\gamma$[†]	I$_\gamma$[†]	E$_f$	J$^\pi_f$	Mult.	α[&]	Comments
2803.75	(2$^-$)	1404.3[@] 2	71[@] 13	1399.53	2$^-$	[M1+E2]	0.0052 18	α(K)=0.0042 15; α(L)=6.9×10^{-4} 23; α(M)=1.6×10^{-4} 5 α(N)=4.1×10^{-5} 13; α(O)=7.9×10^{-6} 26; α(P)=7.4×10^{-7} 27; α(IPF)=5.0×10^{-5} 13
		1687.0[@] 5	45[@] 10	1116.84	1$^-$	[M1+E2]	0.0035 10	α(K)=0.0028 8; α(L)=4.5×10^{-4} 13; α(M)=1.05×10^{-4} 30 α(N)=2.6×10^{-5} 8; α(O)=5.1×10^{-6} 15; α(P)=4.8×10^{-7} 15; α(IPF)=0.00017 4
		1805.5[@] 2	39[@] 7	998.20	2$^-$	[M1+E2]	0.0031 9	α(K)=0.0024 7; α(L)=3.8×10^{-4} 10; α(M)=8.9×10^{-5} 24 α(N)=2.2×10^{-5} 6; α(O)=4.4×10^{-6} 12; α(P)=4.1×10^{-7} 12; α(IPF)=0.00024 6
		2002.4[@] 2	39[@] 7	801.36	3$^-$	[M1+E2]	0.0026 6	α(K)=0.0019 5; α(L)=0.00030 7; α(M)=7.0×10^{-5} 17 α(N)=1.8×10^{-5} 4; α(O)=3.4×10^{-6} 8; α(P)=3.2×10^{-7} 8; α(IPF)=0.00035 8
		2154.4[@] 5	65[@] 10	649.42	1$^-$	[M1+E2]	0.0024 5	α(K)=0.00160 35; α(L)=0.00025 6; α(M)=5.9×10^{-5} 13 α(N)=1.49×10^{-5} 33; α(O)=2.9×10^{-6} 7; α(P)=2.7×10^{-7} 7; α(IPF)=0.00044 10
		2168.8[@] 2	100[@] 16	635.03	2$^-$	[M1+E2]	0.0023 5	α(K)=0.00158 34; α(L)=0.00025 6; α(M)=5.8×10^{-5} 13 α(N)=1.47×10^{-5} 32; α(O)=2.8×10^{-6} 6; α(P)=2.7×10^{-7} 6; α(IPF)=0.00044 10
3002.7	(2$^-$)	1642.3[@a] 8	10[@] 5	1360.16	0$^-$	[E2]	0.00260 4	α(K)=0.002045 29; α(L)=0.000338 5; α(M)=7.87×10^{-5} 11 α(N)=1.982×10^{-5} 28; α(O)=3.82×10^{-6} 5; α(P)=3.49×10^{-7} 5; α(IPF)=0.0001137 16
		2353.3[@] 5	100[@] 15	649.42	1$^-$	[M1+E2]	0.0021 4	α(K)=0.00132 25; α(L)=0.00021 4; α(M)=4.8×10^{-5} 9 α(N)=1.21×10^{-5} 24; α(O)=2.4×10^{-6} 5; α(P)=2.2×10^{-7} 5; α(IPF)=0.00055 12
3041.12	(1$^-$)	1393.6[@] 8	69[@] 15	1647.86	(2$^-$)	[M1+E2]	0.0053 19	α(K)=0.0043 15; α(L)=7.1×10^{-4} 24; α(M)=1.6×10^{-4} 5 α(N)=4.2×10^{-5} 14; α(O)=8.0×10^{-6} 27; α(P)=7.5×10^{-7} 27; α(IPF)=4.7×10^{-5} 12
		1554.6[@] 10	31[@] 8	1486.52	(1$^-$)	[M1+E2]	0.0042 13	α(K)=0.0033 11; α(L)=5.5×10^{-4} 17; α(M)=1.3×10^{-4} 4 α(N)=3.2×10^{-5} 10; α(O)=6.2×10^{-6} 19; α(P)=5.8×10^{-7} 20; α(IPF)=0.000109 27
		1680.9[@] 5	77[@] 23	1360.16	0$^-$	[M1]	0.00462 6	α(K)=0.00365 5; α(L)=0.000585 8; α(M)=0.0001358 19 α(N)=3.43×10^{-5} 5; α(O)=6.67×10^{-6} 9; α(P)=6.37×10^{-7} 9; α(IPF)=0.0002104 30
		1709.2[@] 5	100[@] 23	1331.84	1$^-$	[M1+E2]	0.0035 10	α(K)=0.0027 8; α(L)=4.4×10^{-4} 12; α(M)=1.01×10^{-4} 29 α(N)=2.6×10^{-5} 7; α(O)=5.0×10^{-6} 14; α(P)=4.7×10^{-7} 14; α(IPF)=0.00018 4
		1924.2[@] 10	69[@] 15	1116.84	1$^-$	[M1+E2]	0.0028 7	α(K)=0.0021 5; α(L)=3.3×10^{-4} 8; α(M)=7.7×10^{-5} 19 α(N)=1.9×10^{-5} 5; α(O)=3.8×10^{-6} 10; α(P)=3.5×10^{-7} 10; α(IPF)=0.00030 7
		2043.0[@] 5	92[@] 23	998.20	2$^-$	[M1+E2]	0.0026 6	α(K)=0.0018 4; α(L)=0.00029 7; α(M)=6.7×10^{-5} 16 α(N)=1.7×10^{-5} 4; α(O)=3.3×10^{-6} 8; α(P)=3.1×10^{-7} 8; α(IPF)=0.00037 9
		2391.7[@] 8	46[@] 8	649.42	1$^-$	[M1+E2]	0.0021 4	α(K)=0.00127 23; α(L)=0.00020 4; α(M)=4.6×10^{-5} 9 α(N)=1.17×10^{-5} 23; α(O)=2.3×10^{-6} 4; α(P)=2.2×10^{-7} 4; α(IPF)=0.00057 13
		2406.0[@] 5	92[@] 23	635.03	2$^-$	[M1+E2]	0.0021 4	α(K)=0.00125 23; α(L)=0.00020 4; α(M)=4.6×10^{-5} 9 α(N)=1.15×10^{-5} 22; α(O)=2.2×10^{-6} 4; α(P)=2.1×10^{-7} 4; α(IPF)=0.00058 13

$^{206}_{81}$Tl$_{125}$-12

Adopted Levels, Gammas (continued)

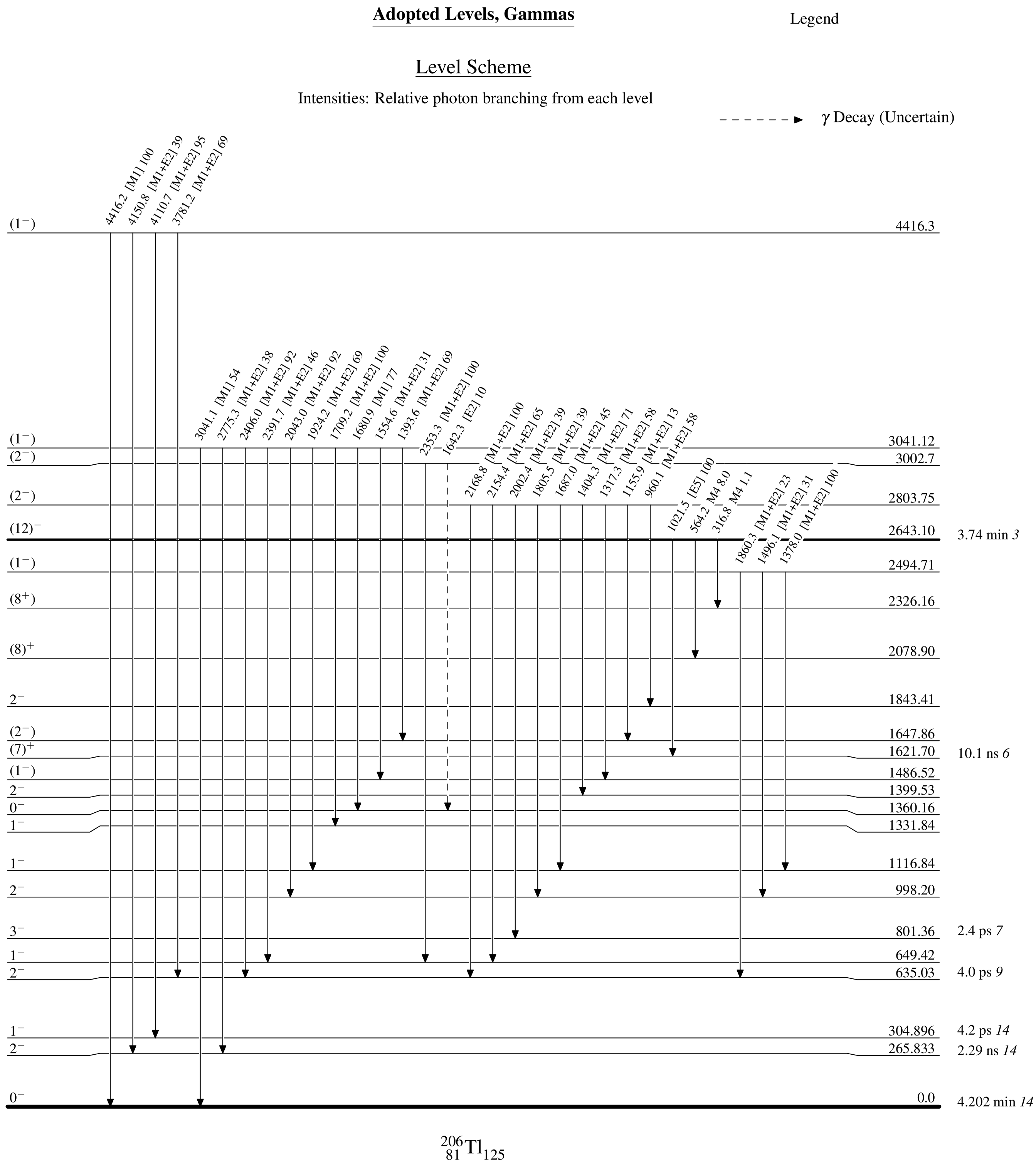
$\gamma(^{206}Tl)$ (continued)

E_i(level)	J^π_i	E_γ[†]	I_γ[†]	E_f	J^π_f	Mult.	α[&]	Comments
3041.12	(1⁻)	2775.3[@] *10*	38[@] *8*	265.833	2⁻	[M1+E2]	0.00189 *31*	α(K)=0.00091 *12*; α(L)=0.000143 *21*; α(M)=3.3×10^{-5} *5* α(N)=8.3×10^{-6} *12*; α(O)=1.62×10^{-6} *24*; α(P)=1.55×10^{-7} *24*; α(IPF)=0.00079 *16*
		3041.1[@] *8*	54[@] *15*	0.0	0⁻	[M1]	2.10×10^{-3} *3*	α(K)=0.000821 *12*; α(L)=0.0001299 *18*; α(M)=3.01×10^{-5} *4* α(N)=7.59×10^{-6} *11*; α(O)=1.479×10^{-6} *21*; α(P)=1.416×10^{-7} *20*; α(IPF)=0.001111 *16*
4416.3	(1⁻)	3781.2[@] *5*	69[@] *19*	635.03	2⁻	[M1+E2]	0.00183 *25*	α(K)=0.000468 *12*; α(L)=7.21×10^{-5} *33*; α(M)=1.66×10^{-5} *8* α(N)=4.19×10^{-6} *21*; α(O)=8.2×10^{-7} *4*; α(P)=7.8×10^{-8} *4*; α(IPF)=0.00127 *24*
		4110.7[@] *10*	95[@] *24*	304.896	1⁻	[M1+E2]	0.00188 *25*	α(K)=0.000392 *6*; α(L)=6.01×10^{-5} *13*; α(M)=1.385×10^{-5} *33* α(N)=3.49×10^{-6} *9*; α(O)=6.81×10^{-7} *17*; α(P)=6.51×10^{-8} *17*; α(IPF)=0.00141 *25*
		4150.8[@] *8*	39[@] *7*	265.833	2⁻	[M1+E2]	0.00188 *25*	α(K)=0.000384 *6*; α(L)=5.88×10^{-5} *11*; α(M)=1.357×10^{-5} *29* α(N)=3.42×10^{-6} *8*; α(O)=6.66×10^{-7} *15*; α(P)=6.37×10^{-8} *15*; α(IPF)=0.00142 *25*
		4416.2[@] *8*	100[@] *26*	0.0	0⁻	[M1]	2.19×10^{-3} *3*	α(K)=0.000327 *5*; α(L)=5.12×10^{-5} *7*; α(M)=1.183×10^{-5} *17* α(N)=2.98×10^{-6} *4*; α(O)=5.82×10^{-7} *8*; α(P)=5.57×10^{-8} *8*; α(IPF)=0.001792 *25*

[†] From $^{207}Pb(\mu^-,n\gamma)$ (1983Bu02), unless otherwise stated.
[‡] From ^{210}Bi α decay (3.04×10^6 y).
[#] From ^{206}Tl IT decay.
[@] From $^{205}Tl(n,\gamma)$ E=th.
[&] Additional information 1.
[a] Placement of transition in the level scheme is uncertain.

$^{206}_{81}Tl_{125}$-13

Adopted Levels, Gammas



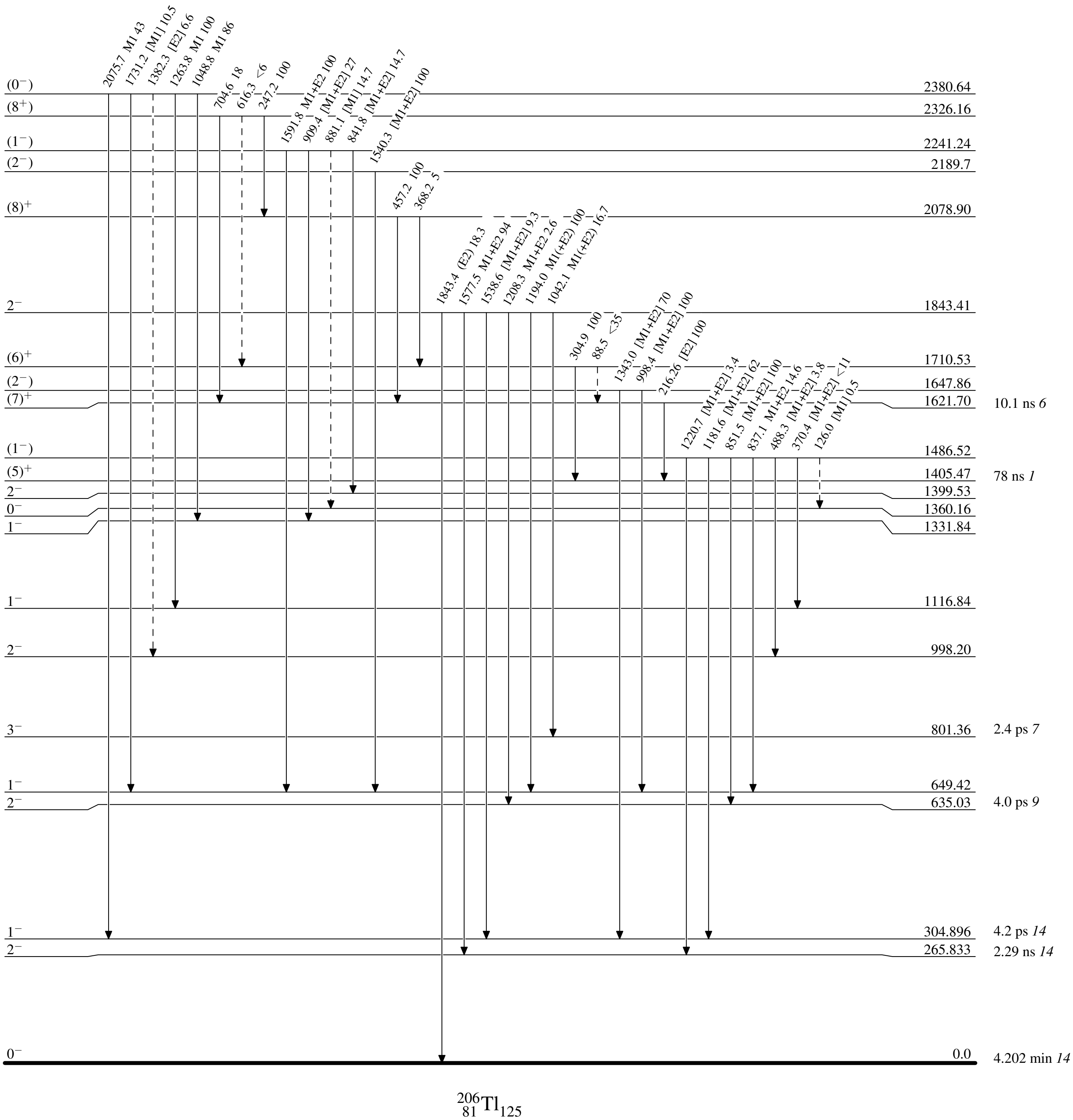
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

Legend

γ Decay (Uncertain)



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level