

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 196,342 (2024)	1-Sep-2023

$Q(\beta^-) = -1364.9$ 18; $S(n) = 7754.10$ 20; $S(p) = 8234$ 3; $Q(\alpha) = 133.8$ 22 [2021Wa16](#)

 ^{202}Hg LevelsCross Reference (XREF) Flags

A	^{202}Au β^- decay	F	$^{201}\text{Hg}(n,\gamma)$ E=70.9 eV res	K	$^{202}\text{Hg}(d,pn\gamma)$
B	^{202}Tl ε decay	G	$^{201}\text{Hg}(n,\gamma)$ E=210.3 eV res	L	$^{202}\text{Hg}(d,d')$
C	$^{197}\text{Au}(\text{HI},x\gamma)$	H	$^{202}\text{Hg}(\gamma,\gamma')$	M	$^{203}\text{Tl}(\mu^-,n\gamma)$
D	$^{201}\text{Hg}(n,\gamma)$ E=thermal	I	$^{202}\text{Hg}(n,n'\gamma)$	N	$^{204}\text{Hg}(p,t)$
E	$^{201}\text{Hg}(n,\gamma)$ E=43 eV res	J	$^{202}\text{Hg}(p,p')$	O	Coulomb excitation

E(level) [†]	J^π	$T_{1/2}$	XREF	Comments
0.0 [‡]	0 ⁺	stable	ABCDEFGHIJKLMNO	$\delta v(^{202}\text{Hg}, ^{198}\text{Hg}) = -10100$ MHz 180 (2021Da01). $\delta \langle r^2 \rangle(^{202}\text{Hg}, ^{198}\text{Hg}) = +0.197$ fm ² 3(stat) 14(syst) (2021Da01).
439.564 [‡] 10	2 ⁺	27.35 ps 23	ABCDEFGHIJKLMNO	$\mu = +0.78$ 6 Q=1.01 13 XREF: L(446). J^π : 439.56 γ E2 to 0 ⁺ ; L(p,t)=2. $T_{1/2}$: From B(E2) \uparrow =0.608 5. Other: 24 ps 5 (1955Me35) in $^{202}\text{Hg}(\gamma,\gamma')$. B(E2) \uparrow =0.608 5, weighted average of B(E2) \uparrow =0.616 9 (1979Bo16) and 0.605 5 (1980Sp05). Other: B(E2) \uparrow =0.65 8 (1970Ka09). μ : From g=+0.392 31 in 1995Br34,2020StZV using the transient field perturbed angular correlation technique. Others: g=0.37 4 (1990Ba40), 0.44 9 (1986Ko02), 0.51 14 (1970Ka09) and 0.50 10 (1974Do01). Q: From 1980Sp05,2021StZZ . Other: 0.32 14 (1979Bo16). Both values were deduced using the reorientation effect in Coulomb excitation technique. The agreement between 1980Sp05 and 1979Bo16 is poor, but the former value is recommended by the evaluator.
959.89 5	2 ⁺	13.5 ps 28	ABCDEFG IJK MNO	J^π : 960.1 γ E2 to 0 ⁺ ; L(p,t)=2. B(E2) \uparrow (0 ⁺ to 2 ⁺)=0.0035 10 and B(E2) \uparrow (2 ⁺ to 2 ⁺)=0.053 18 (1979Bo16). $T_{1/2}$: Weighted average of 11 ps 4 from B(E2) \uparrow in 1979Bo16 and 16 ps 4 from B(E2,520.13 γ)(e ² b ²) in 1985Ag01 . Others: 28.6 ps 26 from B(E2,960.1 γ)(W.u.) and 29 ps 5 from B(E2,520.13 γ)(W.u.) in 2019Ke01 .
1119.91 [‡] 10	4 ⁺	2.05 ps 3	CDEF IJK MNO	$\mu = 1.36$ 27 J^π : 680.4 γ E2 to 2 ⁺ . B(E2) \uparrow (2 ⁺ to 4 ⁺)=0.34 1 (1979Bo16). $T_{1/2}$: Weighted average of 2.05 ps 4 (2019Ke01), 2.11 ps 19 (1985Ag01) and 2.03 ps 6 (1979Bo16). Values determined from the B(E2) data. μ : From g=+0.341 68 in 1995Br34,2020StZV using the transient field perturbed angular correlation technique.
1182.24 6	2 ⁺	11 ps +4-7	CDEFG I K MNO	J^π : 129.2 γ from 4 ⁺ , 222.2 γ M1+E2 to 2 ⁺ , 1182.4 γ to 0 ⁺ . $T_{1/2}$: Weighted average of 11 ps +2-10 from B(E2,742.8 γ)(W.u.) and 11 ps +8-11 from B(E2,222.2 γ)(W.u.) in 2019Ke01 .
1296.5 ^a 6 1311.54 7	4 ⁺	5.7 ps 5	EFG CD IJKLMNO	XREF: l(1332). J^π : L(p,t)=4, 351.6 γ (E2) to 2 ⁺ .

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Adopted Levels, Gammas (continued) ^{202}Hg Levels (continued)

E(level) [†]	J ^π	T _{1/2}	XREF	Comments
1347.89 8	(1 ⁺ ,2 ⁺)		A DEFG I LMNO	T _{1/2} : Weighted average of 5.4 ps 7 from B(E2,351.6γ)(W.u.) and 5.9 ps 6 from B(E2,872.0γ)(W.u.) in 2019Ke01 . XREF: I(1332). J ^π : 908.4γ (M1+E2) to 2 ⁺ ; strong γ-ray feeding from 1 ⁻ , 2 ⁻ thermal capture state in (n,γ);
1389.58 8	2 ⁺	8.0 ps 29	DEFG IJ NO	XREF: J(1385). J ^π : 1389.5γ (E2) to 0 ⁺ , 950.0γ (E2+M1), ΔJ=0 to 2 ⁺ . T _{1/2} : From B(E2,1389.5γ)(W.u.)=0.013 1 in 2019Ke01 . J ^π : L(p,t)=0; 971.85γ (E2) to 2 ⁺ .
1411.35 12	0 ⁺		A I N	
1457.5 ^a 17			EFG	
1508.8 ^a 10			EFG	
1524.3 ^a 12			EFG	
1561.96 9	3 ⁽⁺⁾		D I N	XREF: N(1564.6). J ^π : 602γ D to 2 ⁺ , 250γ D to 4 ⁺ , 379.7γ D,E2 to 2 ⁺ ; no γ to 0 ⁺ .
1564.78 8	0 ⁺		A DEFG I NO	J ^π : 1125γ to 2 ⁺ , L(p,t)=0.
1575.48 12	(2 ⁺)	2.1 ps 6	DEFG IJ NO	XREF: E(1576.4)F(1576.4)G(1576.0)J(1574). J ^π : 456.3γ to 4 ⁺ ; 615.6γ (E2),ΔJ=0 to 2 ⁺ . T _{1/2} : From B(E2,1135.6γ)(W.u.)=0.47 2 in 2019Ke01 . Other: 1.1 ps 4 from B(E2,615.6γ)(W.u.)=17 6 in 2019Ke01 .
1624.02 10	(4 ⁺)		I K N	J ^π : 312γ (E2),ΔJ=0 to 4 ⁺ ; 1184.5γ (E2) to 2 ⁺ ; no γ to 0 ⁺ .
1643.67 10	0 ⁺		A DEFG IJ MNO	XREF: E(1642.4)F(1642.4)G(1641.5)J(1644)M(1644.1). J ^π : L(p,t)=0; p(θ) in ²⁰² Hg(p,p').
1655.8 ^b 13	(0 ⁺)			J ^π : From t(θ) in ²⁰⁴ Hg(p,t) (2013Be21).
1678.24 13	2 ⁺		DEFG I N	XREF: E(1677.1)F(1677.1)G(1676.7). J ^π : 718.3γ M1+E2, ΔJ=0 to 2 ⁺ , 496.2γ (M1+E2) to 2 ⁺ .
1724.80 11	(4 ⁺)		EFG I K N	XREF: E(1722.5)F(1722.5)G(1722.1). J ^π : 413.1γ M1+E2 to 4 ⁺ ; 542.6γ (E2) to 2 ⁺ .
1745.99 8	1,2 ⁺		A DEF I N	XREF: E(1747.8)F(1747.8)N(1748.2). J ^π : 1306.37γ to 2 ⁺ , 1746.4γ to 0 ⁺ ; possible direct feeding in ²⁰² Au β ⁻ decay [J ^π =(1 ⁻)].
1778.9 ^b 6	(0 ⁺)			J ^π : From t(θ) in ²⁰⁴ Hg(p,t) (2013Be21).
1788.39 25	2 ⁺		DEFG	XREF: E(1787)F(1787)G(1786). J ^π : 1789.0γ to 0 ⁺ ; 476.5γ to 4 ⁺ .
1794.05 20	2 ⁺	0.09 ps 5	DEFG Ij NO	XREF: E(1792.9)F(1792.9)G(1792.5)j(1798). J ^π : L(p,t)=2; 1354.8γ M1+E2 to 2 ⁺ , 1794.4γ to 0 ⁺ . T _{1/2} : From B(E2,833γ)(W.u.)=6 3 in 2019Ke01 . Other: 0.08 ps 6 from B(E2,1794.4γ)(W.u.)=0.13 6 in 2019Ke01 .
1800.9 ^a 19			EFG j	XREF: j(1798).
1823.50 12	(2 ⁺)	0.27 ps 10	DEFG IJ NO	XREF: E(1822.7)F(1822.7)G(1822.1)J(1824). J ^π : 1384.0γ (E2+M1) to 2 ⁺ , 1823.1γ to 0 ⁺ . T _{1/2} : From B(E2,1823.1γ)(W.u.)=0.052 3 in 2019Ke01 .
1852.26 17	2 ⁺		A DEFG IJ	XREF: A(1851.7). J ^π : 1412γ (E2+M1),ΔJ=0 to 2 ⁺ ; 732.3γ to 4 ⁺ , 1853.0γ to 0 ⁺ .
1861.7 3	(3)		DEF I N	XREF: E(1863.0)F(1863.0). J ^π : 549.7γ D (not ΔJ=0) to 4 ⁺ ; 472.5γ to 2 ⁺ .
1903.1 ^b 4			EFG	XREF: E(1901.3)F(1901.3)G(1900.9).
1915.0 ^a 11			EFG	
1959.43 20	1,2 ⁺		A DEFG I	J ^π : 1519.6γ to 2 ⁺ , 1959.4γ to 0 ⁺ .
1965.62 [@] 12	5 ⁻		C IJK M O	J ^π : 654γ (E1) to 4 ⁺ , p(θ) in ²⁰² Hg(p,p').
1966.00 16	2 ⁺		DEFG I NO	J ^π : 554.8γ to 0 ⁺ , 653.7γ to 4 ⁺ .
1988.82 [‡] 22	6 ⁺	0.647 ps 3	C K NO	J ^π : 868.9γ E2 to 4 ⁺ . T _{1/2} : From B(E2,868.9γ)(W.u.)=24.9 1 in 2019Ke01 . Other: 0.65 ps 6 from B(E2,868.9γ)=0.175 e ² b ² 15 in 1985Ag01 .

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Adopted Levels, Gammas (continued) ^{202}Hg Levels (continued)

E(level) [†]	J ^π	T _{1/2}	XREF	Comments
1991.8 ^a 17			EFG J	XREF: J(1995).
2059.8 [@] 5	(7 ⁻)	10.4 ns 4	C	N J ^π : 84.2γ to 5 ⁻ ; systematics in neighboring nuclei. T _{1/2} : From 164γ-440γ(Δt) and the centroid-shift analysis (2021Su02).
2071.27 10	(2) ⁺		DEFG IJ	N XREF: J(2067). J ^π : L(p,t)=2; 1631.7γ to 2 ⁺ .
2096.1 ^a 8			E G	
2111.8 ^b 1				N
2126.38 15	(1,2) ⁺		DEF I	N XREF: E(2128.7)F(2128.7). J ^π : 1687γ M1+E2 to 2 ⁺ ; 564γ to (3 ⁺); t(θ) in ²⁰⁴ Hg(p,t) (2013Be21) suggests J ^π =(0 ⁺).
2133.91 14			IJ	MNO
2142.5 ^a 18			EFG	
2155.6 ^b 2				N
2161.87 20			DEFG I	M
2196.3 ^b 4			EFG	N
2205.3 ^b 3				N
2223.1 [@] 7	(9 ⁻)	1.4 ns 3	C	T _{1/2} : From 404γ-164γ(Δt) and the centroid-shift analysis (2021Su02). J ^π : 163.3γ to (7 ⁻).
2223.5 ^b 1			EFG J	N
2249.70 23	(2) ⁺		EFG I K	N J ^π : 524.9γ to 4 ⁺ ; feeding from J ^π =1 ⁻ , 2 ⁻ neutron resonance capture state.
2280.16 12	(1 ⁺ ,2)		D	N J ^π : 1840.4γ to 2 ⁺ ; 718.3γ to 3 ⁺ ; feeding from J ^π =1 ⁻ , 2 ⁻ neutron capture state.
2283.6 ^a 23			EFG j	XREF: j(2289).
2292.1 3			efg Ij	n XREF: e(2295.4)f(2295.4)g(2295.0)j(2289)n(2294.7). J ^π : 902.5γ (E2) to 2 ⁺ .
2293.20 15	(4) ⁺	0.042 ps 11	efg Ij	n0 XREF: e(2295.4)f(2295.4)g(2295.0)j(2289)n(2294.7). J ^π : 669.3γ to (4 ⁺); 1853.5γ to 2 ⁺ ; J>3 from excitation function in ²⁰² Hg(n,n'γ).
2309.2 4	(3 ⁻)		DEFG I	N T _{1/2} : From B(E2,1853.5γ)(W.u.)=3.40 5 in 2019Ke01. XREF: E(2310.9)F(2310.9)G(2310.5). J ^π : 1869.6γ to 2 ⁺ ; J>3 from excitation function in ²⁰² Hg(n,n'γ); feeding from J ^π =1 ⁻ , 2 ⁻ neutron capture state.
2323.27 10			D I	N
2339.29? 31	(1 ⁺ ,2 ⁺)		EFG	N XREF: N(2342.1). J ^π : 991.4γ to (1 ⁺ ,2 ⁺); feeding from J ^π =1 ⁻ , 2 ⁻ neutron resonance capture state; observation in Coulomb Excitation.
2356.83 18	3 ⁻		D IJ	NO J ^π : From p(θ) in ²⁰² Hg(p,p'); J>3 from excitation function in ²⁰² Hg(n,n'γ); 1045γ to 4 ⁺ , 1917.2γ to 2 ⁺ ; population in Coulomb Excitation.
2367.4 ^a 20			EFG	
2371.9 ^b 2				N
2415.4 ^b 8			EFG	N XREF: E(2417.4)F(2417.4)G(2417.0).
2427.5 ^b 8			EFG	N XREF: E(2428.5)F(2428.5)G(2428.1).
2441.1 ^b 2				N
2454.9 10			EFG	O XREF: E(2456.8)F(2456.8)G(2456.4).
2461.7 ^b 2			J	N XREF: J(2466).
2473.4 ^b 4			EFG	N
2516.5 3	(2) ⁺		EFG I	NO XREF: E(2515)F(2515)G(2515)N(2515.6).

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Adopted Levels, Gammas (continued) ^{202}Hg Levels (continued)

E(level) [†]	J ^π	T _{1/2}	XREF	Comments
				J ^π : 2516.5γ to 0 ⁺ .
2523 ^{&b} 4			J	
2550.3 ^b 2			EFG N	
2560.1 ^b 2	(4 ⁺)		J N	XREF: J(2564). J ^π : From p(θ) in $^{202}\text{Hg}(p,p')$.
2570.7 ^b 10	(0 ⁺)		EFG N	XREF: E(2568.1)F(2568.1)G(2567.7). J ^π : From t(θ) in $^{204}\text{Hg}(p,t)$ (2013Be21).
2584.6 ^b 5			N	
2598.5 ^b 2	0 ⁺		N	J ^π : From t(θ) in $^{204}\text{Hg}(p,t)$ (2013Be21).
2605.0 ^b 4			J N	XREF: J(2610).
2639.1 ^b 15			N	
2652.9 ^b 3			N	
2675.7 ^b 3			N	
2681.0 10	(2 ⁺)	0.29 ps 3	0	J ^π : 2681γ to 0 ⁺ . T _{1/2} : From B(E2,2681γ)(W.u.)=0.20 2 in 2019Ke01.
2685.7 ^b 5	(0 ⁺)		N	J ^π : From t(θ) in $^{204}\text{Hg}(p,t)$ (2013Be21).
2706.8 5	3 ⁻	≤23.3 ps	EFG J NO	XREF: E(2705)F(2705)G(2705)J(2710)N(2708.5). J ^π : From α(θ) in Coulomb Excitation; p(θ) in $^{202}\text{Hg}(p,p')$. T _{1/2} : Upper limit from B(E3)(W.u.)=21 1 in 2019Ke01. Other: <20.7 ps an upper limit from B(E3)↑=0.42 4 in 1991Li03. B(E3)↑=0.42 4 from Coulomb Excitation (1991Li03).
2731.4 ^b 3			EFG N	XREF: E(2729)F(2729)G(2728).
2748.2 ^b 3			N	
2755.0 ^b 3			E G J N	XREF: E(2751.6)G(2751.2)J(2752).
2781.7 ^b 3			N	
2814.7 ^b 6			N	
2821.2 [@] 9	(11 ⁻)		C	J ^π : 598.1γ to (9 ⁻).
2824.8 ^b 3			N	
2831 ^a 4			EFG	XREF: G(2830).
2847.8 ^b 4			EFG N	XREF: E(2845.5)F(2845.5)G(2845.1).
2858.1 ^a 24			EFG	
2872.2 ^b 4			N	
2882.4 ^b 5			N	
2897 ^a 3			EFG	
2906.2 ^b 18			EFG N	XREF: E(2908.9)F(2908.9)G(2908.5).
2923.8 ^b 4			EFG J N	XREF: E(2918.3)F(2918.3)G(2917.9)J(2923).
2934.0 ^b 8			N	
2950.7 ^a 17			EFG	
2970.1 ^a 10			EFG	
2997.5 ^a 8			EFG	
3017.9 ^a 6			EFG	
3028 ^a 3			EFG J	XREF: G(3027)J(3026).
3058.8 ^a 22			EFG	
3059 ^{&} 4	5 ⁻		J	J ^π : From p(θ) in $^{202}\text{Hg}(p,p')$.
3080.2 ^a 21			EFG J	XREF: J(3087).
3118 ^{&} 4			J	
3164.1 7	3 ⁻		J 0	XREF: J(3166). J ^π : From p(θ) in $^{202}\text{Hg}(p,p')$; population in Coulomb Excitation.

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Adopted Levels, Gammas (continued) ^{202}Hg Levels (continued)

E(level) [†]	J ^π	T _{1/2}	XREF	Comments
3179 ^a 3			EFG	
3200.1 ^a 14			EFG	
3222.5 ^a 13			EFG	
3254.3 ^a 21			EFG	
3264 ^{&} 4			J	
3295 ^a 4			EFG J	XREF: J(3299).
3311.0 ^a 21			EFG	
3350.4 ^a 13			EFG	
3416 ^a 3			EFG	
3481 ^a 3			EFG	
3514.0 [#] 10	(12 ⁺)		C	J ^π : 692.8γ to (11 ⁻); systematics of similar structures in neighboring nuclei. configuration: Probable $\nu(i_{13/2}^{-2})$.
3605.9 ^a 17			EFG	
3777.3 [@] 10	(13 ⁻)		C	J ^π : 956.1γ to (11 ⁻).
3918.3 [#] 11			C	
4156.4 [@] 11			C	
4493.9 [@] 13			C	
4648.0 [#] 13			C	
4924 5	1 ⁻	0.30 eV 5	H	J ^π : 4924γ E1 to 0 ⁺ ; excitation in $^{202}\text{Hg}(\gamma, \gamma')$. T _{1/2} : From 1974Te01 in $^{202}\text{Hg}(\gamma, \gamma')$.
5490.3 [#] 14			C	
5710.3 [#] 14			C	
6339.3 [#] 15			C	
7126.9 [#] 16			C	
7663.5 [#] 17			C	

[†] From a least-square fit to Eγ, unless otherwise stated.

[‡] Band(A): Ground-state band.

[#] Seq.(B): γ-ray cascade based on the (12⁺) state.

[@] Seq.(C): γ-ray cascade based on the 5⁻ state.

[&] From $^{202}\text{Hg}(p, p')$.

^a From $^{201}\text{Hg}(n, \gamma)$ E=43 eV res.

^b From $^{204}\text{Hg}(p, t)$.

Adopted Levels, Gammas (continued)

$\gamma(^{202}\text{Hg})$									
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	δ	$\alpha\&$	Comments
439.564	2 ⁺	439.56 1	100	0.0	0 ⁺	E2		0.0371 5	$\alpha(\text{K})=0.0259$ 4; $\alpha(\text{L})=0.00851$ 12; $\alpha(\text{M})=0.002108$ 30 $\alpha(\text{N})=0.000526$ 7; $\alpha(\text{O})=9.29\times 10^{-5}$ 13; $\alpha(\text{P})=3.42\times 10^{-6}$ 5 $\text{B}(\text{E}2)(\text{W.u.})=17.27$ 15 E_γ, I_γ : From 1975Co19 in ^{202}Tl ε decay. Mult.: From $\text{K/L}(\text{exp})=2.6$ and $(\text{L}1+\text{L}2)/\text{L}3(\text{exp})=3.5$ (1953Be79), and $\alpha(\text{K})\text{exp}=0.03$, $\alpha(\text{exp})=0.041$, $\alpha(\text{L}1)\text{exp}=0.0078$, $\alpha(\text{L}2)\text{exp}=0.0011$, $\alpha(\text{L}3)\text{exp}=0.0025$ (1957Ha97).
959.89	2 ⁺	520.13 7	100 1	439.564	2 ⁺	M1+E2	+0.9 1	0.0566 34	$\alpha(\text{K})=0.0456$ 29; $\alpha(\text{L})=0.0084$ 4; $\alpha(\text{M})=0.00198$ 8 $\alpha(\text{N})=0.000497$ 21; $\alpha(\text{O})=9.3\times 10^{-5}$ 4; $\alpha(\text{P})=6.3\times 10^{-6}$ 4 $\text{B}(\text{M}1)(\text{W.u.})=0.0054$ 13; $\text{B}(\text{E}2)(\text{W.u.})=5.9$ 14 E_γ : From 1975Co19 in ^{202}Tl ε decay. I_γ : From 2019Ke01 in Coulomb Excitation. Mult., δ : From 520 γ -439 $\gamma(\theta)$ in 1973BeYM [$A_2=-0.27$ 3, $A_4=+0.13$ 5]; Other: $A_2=0.11$ 1, $A_4=0.012$ 16 from $\gamma(\theta)$ in 2019Ke01, consistent with $\Delta J=0$.
		960.1 1	13.5 4	0.0	0 ⁺	E2		0.00654 9	$\alpha(\text{K})=0.00524$ 7; $\alpha(\text{L})=0.000996$ 14; $\alpha(\text{M})=0.0002354$ 33 $\alpha(\text{N})=5.89\times 10^{-5}$ 8; $\alpha(\text{O})=1.088\times 10^{-5}$ 15; $\alpha(\text{P})=6.89\times 10^{-7}$ 10 $\text{B}(\text{E}2)(\text{W.u.})=0.083$ 17 E_γ : From 1989Ga07 in $^{202}\text{Hg}(\text{n},\text{n}'\gamma)$. I_γ : Weighted average of 11.7 12 (1984Ta09) in ^{202}Tl ε decay, 13.0 14 (1975Br02) in $^{201}\text{Hg}(\text{n},\gamma)$ $\text{E}=\text{thermal}$, 14.9 12 (1989Ga07) in $^{202}\text{Hg}(\text{n},\text{n}'\gamma)$ and 14.0 3 (2019Ke01), 13.0 5 (1979Bo16), and 15.4 18 (1985Ag01) in Coulomb Excitation. Mult.: $\alpha(\text{K})\text{exp}(439\gamma)/\alpha(\text{K})\text{exp}(961\gamma)=5.5$ 7 (1965Le04). $\alpha(\text{K})=0.01024$ 14; $\alpha(\text{L})=0.002339$ 33; $\alpha(\text{M})=0.000563$ 8 $\alpha(\text{N})=0.0001407$ 20; $\alpha(\text{O})=2.56\times 10^{-5}$ 4; $\alpha(\text{P})=1.358\times 10^{-6}$ 19 $\text{B}(\text{E}2)(\text{W.u.})=26.5$ 4 Mult.: $A_2=0.30$ 3 (1989Ga07), $A_2=0.16$ 2, $A_4=-0.01$ 13 (2019Ke01).
1119.91	4 ⁺	680.4 1	100	439.564	2 ⁺	E2		0.01331 19	$\alpha(\text{K})=0.667$ 10; $\alpha(\text{L})=0.1134$ 16; $\alpha(\text{M})=0.0264$ 4 $\alpha(\text{N})=0.00663$ 9; $\alpha(\text{O})=0.001252$ 18; $\alpha(\text{P})=9.47\times 10^{-5}$ 15 $\text{B}(\text{M}1)(\text{W.u.})=0.07$ +5-3; $\text{B}(\text{E}2)(\text{W.u.})=9$ +7-5 Mult., δ : $A_2=0.12$ 2, $A_4=-0.007$ 22 (2019Ke01); Other: $A_2=0.40$ 3 (1989Ga07), $\Delta J=0$ transition.
1182.24	2 ⁺	222.2 1	100 [‡] 4	959.89	2 ⁺	M1+E2	-0.13 3	0.815 12	$\alpha(\text{K})=0.0120$ 13; $\alpha(\text{L})=0.00233$ 19; $\alpha(\text{M})=0.00055$ 4 $\alpha(\text{N})=0.000138$ 11; $\alpha(\text{O})=2.55\times 10^{-5}$ 20; $\alpha(\text{P})=1.62\times 10^{-6}$ 19 $\text{B}(\text{M}1)(\text{W.u.})=0.00019$ +14-9; $\text{B}(\text{E}2)(\text{W.u.})=0.55$ +36-21 I_γ : Others: 60 9 (1989Ga07), 50 5 (1975Br02), 36 (1984Sc19). Mult., δ : $A_2=0.21$ 4, $A_4=-0.039$ 54 (2019Ke01); Other: $A_2=0.44$ 2 (1989Ga07), $\Delta J=0$ transition.
		742.8 1	51.4 [‡] 11	439.564	2 ⁺	M1+E2	2.1 4	0.0150 16	$\alpha(\text{K})=0.0120$ 13; $\alpha(\text{L})=0.00233$ 19; $\alpha(\text{M})=0.00055$ 4 $\alpha(\text{N})=0.000138$ 11; $\alpha(\text{O})=2.55\times 10^{-5}$ 20; $\alpha(\text{P})=1.62\times 10^{-6}$ 19 $\text{B}(\text{M}1)(\text{W.u.})=0.00019$ +14-9; $\text{B}(\text{E}2)(\text{W.u.})=0.55$ +36-21 I_γ : Others: 60 9 (1989Ga07), 50 5 (1975Br02), 36 (1984Sc19). Mult., δ : $A_2=0.21$ 4, $A_4=-0.039$ 54 (2019Ke01); Other: $A_2=0.44$ 2 (1989Ga07), $\Delta J=0$ transition.
		1182.4 [@] 4	11.3 [@] 28	0.0	0 ⁺	[E2]		0.00437 6	$\alpha(\text{K})=0.00355$ 5; $\alpha(\text{L})=0.000626$ 9; $\alpha(\text{M})=0.0001467$ 21

Adopted Levels, Gammas (continued)

$\gamma(^{202}\text{Hg})$ (continued)

<u>E_i(level)</u>	<u>J_i^{π}</u>	<u>E_{γ}^{\dagger}</u>	<u>I_{γ}^{\dagger}</u>	<u>E_f</u>	<u>J_f^{π}</u>	<u>Mult.</u>	<u>α&</u>	<u>Comments</u>
1311.54	4 ⁺	129.8 [#] 5	13.9 [#] 21	1182.24	2 ⁺	[E2]	1.92 4	$\alpha(\text{N})=3.67 \times 10^{-5}$ 5; $\alpha(\text{O})=6.83 \times 10^{-6}$ 10; $\alpha(\text{P})=4.64 \times 10^{-7}$ 7; $\alpha(\text{IPF})=2.69 \times 10^{-6}$ 5 B(E2)(W.u.)=0.015 +10-7 $\alpha(\text{K})=0.439$ 7; $\alpha(\text{L})=1.108$ 25; $\alpha(\text{M})=0.289$ 7 $\alpha(\text{N})=0.0717$ 16; $\alpha(\text{O})=0.01195$ 27; $\alpha(\text{P})=6.04 \times 10^{-5}$ 10 I _{γ} : Others: 20 (1984Sc19) and 17 8 (2019Ke01). B(E2)(W.u.)=2637 403 using the adopted T _{1/2} , I _{γ} and α is anomalously high and violates RUL.
		351.6 1	100 [‡] 4	959.89	2 ⁺	(E2)	0.0674 9	$\alpha(\text{K})=0.0432$ 6; $\alpha(\text{L})=0.01824$ 26; $\alpha(\text{M})=0.00458$ 6 $\alpha(\text{N})=0.001142$ 16; $\alpha(\text{O})=0.0001988$ 28; $\alpha(\text{P})=5.63 \times 10^{-6}$ 8 B(E2)(W.u.)=130 13 Mult.: A ₂ =0.34 3 (1989Ga07).
		872.0 1	54 3	439.564	2 ⁺	[E2]	0.00793 11	$\alpha(\text{K})=0.00629$ 9; $\alpha(\text{L})=0.001249$ 17; $\alpha(\text{M})=0.000297$ 4 $\alpha(\text{N})=7.41 \times 10^{-5}$ 10; $\alpha(\text{O})=1.365 \times 10^{-5}$ 19; $\alpha(\text{P})=8.30 \times 10^{-7}$ 12 B(E2)(W.u.)=0.75 8 I _{γ} : Weighted average of 51 6 (2019Ke01), 59 6 (1975Br02), 50 4 (1989Ga07) and 58 5 (2021Su02). Other: 62 (1984Sc19).
1347.89	(1 ⁺ ,2 ⁺)	388.0 1	50 6	959.89	2 ⁺	(M1+E2)	0.12 6	$\alpha(\text{K})=0.09$ 6; $\alpha(\text{L})=0.019$ 6; $\alpha(\text{M})=0.0045$ 12 $\alpha(\text{N})=0.00112$ 31; $\alpha(\text{O})=2.1 \times 10^{-4}$ 6; $\alpha(\text{P})=1.3 \times 10^{-5}$ 8 Mult.: A ₂ =0.08 6 (1989Ga07).
		908.4 1	100 6	439.564	2 ⁺	(M1+E2)	0.013 6	$\alpha(\text{K})=0.011$ 5; $\alpha(\text{L})=0.0019$ 7; $\alpha(\text{M})=4.4 \times 10^{-4}$ 17 $\alpha(\text{N})=1.1 \times 10^{-4}$ 4; $\alpha(\text{O})=2.0 \times 10^{-5}$ 8; $\alpha(\text{P})=1.5 \times 10^{-6}$ 7 Mult.: A ₂ =0.03 7 (1989Ga07).
1389.58	2 ⁺	207.3 2	9.6 21	1182.24	2 ⁺	[M1,E2]	0.67 33	$\alpha(\text{K})=0.49$ 33; $\alpha(\text{L})=0.1403$ 32; $\alpha(\text{M})=0.0345$ 24 $\alpha(\text{N})=0.0086$ 6; $\alpha(\text{O})=0.001536$ 26; $\alpha(\text{P})=7.E-5$ 5 B(M1)(W.u.)=0.018 7 if M1, B(E2)(W.u.)=157 66 if E2.
		429.8 2	32 7	959.89	2 ⁺	(E2+M1)	0.09 5	$\alpha(\text{K})=0.07$ 4; $\alpha(\text{L})=0.014$ 5; $\alpha(\text{M})=0.0033$ 10 $\alpha(\text{N})=8.3 \times 10^{-4}$ 26; $\alpha(\text{O})=1.5 \times 10^{-4}$ 5; $\alpha(\text{P})=1.0 \times 10^{-5}$ 6 Mult.: A ₂ =0.28 11 (1989Ga07), $\Delta\text{I}=0$ transition. B(M1)(W.u.)=0.0067 27 if M1, B(E2)(W.u.)=14 6 if E2.
		950.0 1	100 7	439.564	2 ⁺	(E2+M1)	0.012 5	$\alpha(\text{K})=0.010$ 5; $\alpha(\text{L})=0.0017$ 6; $\alpha(\text{M})=3.9 \times 10^{-4}$ 15 $\alpha(\text{N})=1.0 \times 10^{-4}$ 4; $\alpha(\text{O})=1.8 \times 10^{-5}$ 7; $\alpha(\text{P})=1.3 \times 10^{-6}$ 6 Mult.: A ₂ =0.14 4 (1989Ga07), $\Delta\text{J}=0$ transition. B(M1)(W.u.)=0.0020 7 if M1, B(E2)(W.u.)=0.80 29 if E2.
		1389.5 2	11 4	0.0	0 ⁺	(E2)	0.00325 5	$\alpha(\text{K})=0.00264$ 4; $\alpha(\text{L})=0.000445$ 6; $\alpha(\text{M})=0.0001037$ 15 $\alpha(\text{N})=2.60 \times 10^{-5}$ 4; $\alpha(\text{O})=4.86 \times 10^{-6}$ 7; $\alpha(\text{P})=3.43 \times 10^{-7}$ 5; $\alpha(\text{IPF})=3.42 \times 10^{-5}$ 5 B(E2)(W.u.)=0.013 7 Mult.: A ₂ =0.52 17 (1989Ga07).
1411.35	0 ⁺	971.85 13	100	439.564	2 ⁺	(E2)	0.00638 9	$\alpha(\text{K})=0.00512$ 7; $\alpha(\text{L})=0.000969$ 14; $\alpha(\text{M})=0.0002288$ 32

Adopted Levels, Gammas (continued)

$\gamma(^{202}\text{Hg})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	$\alpha^\&$	Comments
								$\alpha(\text{N})=5.72\times 10^{-5}$ 8; $\alpha(\text{O})=1.058\times 10^{-5}$ 15; $\alpha(\text{P})=6.73\times 10^{-7}$ 9 E_γ : From ^{202}Au β^- decay. Mult.: $A_2=0.02$ 21 (1989Ga07). E_γ, I_γ : From $^{201}\text{Hg}(n,\gamma)$ $E=43$ eV res.
1508.8		549.8 9	100	959.89	2 ⁺			
1561.96	3 ⁽⁺⁾	172.1 4	33 16	1389.58	2 ⁺	D		Mult.: $A_2=-0.52$ 12 (1989Ga07).
		250.6 2	39 12	1311.54	4 ⁺	D		Mult.: $A_2=-0.31$ 20 (1989Ga07).
		379.7 1	66 13	1182.24	2 ⁺	D,E2		Mult.: $A_2=0.12$ 11 (1989Ga07).
		442.3 8	≈ 40	1119.91	4 ⁺			
		602.1 2	100 16	959.89	2 ⁺	D		Mult.: $A_2=-0.25$ 8 (1989Ga07).
		1122 @ 1	≈ 10 @	439.564	2 ⁺			
1564.78	0 ⁺	1125.20 8	100	439.564	2 ⁺	(E2)	0.00480 7	$\alpha(\text{K})=0.00389$ 5; $\alpha(\text{L})=0.000697$ 10; $\alpha(\text{M})=0.0001637$ 23 $\alpha(\text{N})=4.09\times 10^{-5}$ 6; $\alpha(\text{O})=7.61\times 10^{-6}$ 11; $\alpha(\text{P})=5.09\times 10^{-7}$ 7; $\alpha(\text{IPF})=4.45\times 10^{-7}$ 6 E_γ : From ^{202}Au β^- decay. Mult.: $A_2=0.03$ 11 (1989Ga07).
1575.48	(2 ⁺)	185.8 @ 4	33 @	1389.58	2 ⁺	[M1,E2]	0.9 4	$\alpha(\text{K})=0.7$ 5; $\alpha(\text{L})=0.207$ 20; $\alpha(\text{M})=0.051$ 8 $\alpha(\text{N})=0.0128$ 18; $\alpha(\text{O})=0.00227$ 20; $\alpha(\text{P})=9.E-5$ 7 B(M1)(W.u.)=0.12 4 if M1; B(E2)(W.u.)=1337 475 if E2 using the adopted $T_{1/2}$, I_γ and α is anomalously high and violates RUL.
		227.2 @ 6	46 @	1347.89	(1 ⁺ ,2 ⁺)	(M1+E2)	0.51 26	$\alpha(\text{K})=0.38$ 26; $\alpha(\text{L})=0.102$ 5; $\alpha(\text{M})=0.0250$ 4 $\alpha(\text{N})=0.00624$ 10; $\alpha(\text{O})=0.00112$ 6; $\alpha(\text{P})=5.E-5$ 4 Mult.: $A_2=-0.05$ 20 (1989Ga07). B(M1)(W.u.)=0.09 3 if M1; B(E2)(W.u.)=680 240 if E2 using the adopted $T_{1/2}$, I_γ and α is anomalously high and violates RUL.
		393.3 @ 4	46 @ 18	1182.24	2 ⁺	[M1,E2]	0.11 6	$\alpha(\text{K})=0.09$ 5; $\alpha(\text{L})=0.018$ 6; $\alpha(\text{M})=0.0043$ 12 $\alpha(\text{N})=0.00107$ 31; $\alpha(\text{O})=2.0\times 10^{-4}$ 6; $\alpha(\text{P})=1.2\times 10^{-5}$ 8 B(M1)(W.u.)=0.018 8 if M1, B(E2)(W.u.)=43 20 if E2.
		456.3 @ 3	63 @ 9	1119.91	4 ⁺	[E2]	0.0338 5	$\alpha(\text{K})=0.02380$ 34; $\alpha(\text{L})=0.00754$ 11; $\alpha(\text{M})=0.001864$ 26 $\alpha(\text{N})=0.000465$ 7; $\alpha(\text{O})=8.23\times 10^{-5}$ 12; $\alpha(\text{P})=3.15\times 10^{-6}$ 4 B(E2)(W.u.)=28 9
		615.6 @ 2	89 @ 18	959.89	2 ⁺	(E2)	0.01660 23	$\alpha(\text{K})=0.01256$ 18; $\alpha(\text{L})=0.00307$ 4; $\alpha(\text{M})=0.000745$ 10 $\alpha(\text{N})=0.0001859$ 26; $\alpha(\text{O})=3.36\times 10^{-5}$ 5; $\alpha(\text{P})=1.667\times 10^{-6}$ 23 B(E2)(W.u.)=9 3 Mult.: $A_2=0.23$ 8 (1989Ga07).
		1135.6 @ 2	100 @ 35	439.564	2 ⁺	(E2+M1)	0.0079 32	$\alpha(\text{K})=0.0065$ 27; $\alpha(\text{L})=0.0011$ 4; $\alpha(\text{M})=2.5\times 10^{-4}$ 9 $\alpha(\text{N})=6.3\times 10^{-5}$ 22; $\alpha(\text{O})=1.2\times 10^{-5}$ 4; $\alpha(\text{P})=9.E-7$ 4; $\alpha(\text{IPF})=8.9\times 10^{-7}$ 24 Mult.: $A_2=0.67$ 27 (1989Ga07). B(M1)(W.u.)=0.0016 7 if M1, B(E2)(W.u.)=0.46 19 if E2.
1624.02	(4 ⁺)	312.5 1	100 16	1311.54	4 ⁺	(E2)	0.0944 13	$\alpha(\text{K})=0.0572$ 8; $\alpha(\text{L})=0.0280$ 4; $\alpha(\text{M})=0.00710$ 10

Adopted Levels, Gammas (continued)

$\gamma(^{202}\text{Hg})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	$\alpha^\&$	Comments	
1624.02	(4 ⁺)	1184.5 2	98 18	439.564	2 ⁺	(E2)	0.00435 6	$\alpha(\text{N})=0.001766$ 25; $\alpha(\text{O})=0.000305$ 4; $\alpha(\text{P})=7.38\times 10^{-6}$ 10 Mult.: $A_2=0.33$ 9 (1989Ga07). $\alpha(\text{K})=0.00354$ 5; $\alpha(\text{L})=0.000624$ 9; $\alpha(\text{M})=0.0001461$ 20 $\alpha(\text{N})=3.65\times 10^{-5}$ 5; $\alpha(\text{O})=6.81\times 10^{-6}$ 10; $\alpha(\text{P})=4.62\times 10^{-7}$ 6; $\alpha(\text{IPF})=2.83\times 10^{-6}$ 4	
1643.67	0 ⁺	1204.1 1	100	439.564	2 ⁺	(E2)	0.00422 6	Mult.: $A_2=0.35$ 6 (1989Ga07). $\alpha(\text{K})=0.00343$ 5; $\alpha(\text{L})=0.000602$ 8; $\alpha(\text{M})=0.0001410$ 20 $\alpha(\text{N})=3.53\times 10^{-5}$ 5; $\alpha(\text{O})=6.57\times 10^{-6}$ 9; $\alpha(\text{P})=4.48\times 10^{-7}$ 6; $\alpha(\text{IPF})=4.37\times 10^{-6}$ 6 Mult.: $A_2=-0.02$ 7 (1989Ga07).	
1678.24	2 ⁺	288.4@ 5 496.2@ 2	31@ 14@ 3	1389.58 2 ⁺ 1182.24 2 ⁺	2 ⁺	(M1+E2)	0.060 33	$\alpha(\text{K})=0.048$ 29; $\alpha(\text{L})=0.0092$ 34; $\alpha(\text{M})=0.0022$ 8 $\alpha(\text{N})=5.5\times 10^{-4}$ 19; $\alpha(\text{O})=1.0\times 10^{-4}$ 4; $\alpha(\text{P})=7.E-6$ 4 Mult.: $A_2=0.05$ 18 (1989Ga07).	
		718.3@ 3	100@ 10	959.89 2 ⁺	2 ⁺	(E2+M1)	0.024 12	$\alpha(\text{K})=0.019$ 10; $\alpha(\text{L})=0.0034$ 14; $\alpha(\text{M})=8.0\times 10^{-4}$ 31 $\alpha(\text{N})=2.0\times 10^{-4}$ 8; $\alpha(\text{O})=3.7\times 10^{-5}$ 15; $\alpha(\text{P})=2.6\times 10^{-6}$ 14 Mult.: $A_2=0.14$ 5 (1989Ga07), $\Delta J=0$.	
		1238.8@ 3	80@ 8	439.564 2 ⁺	2 ⁺	(E2+M1)	0.0064 24	$\alpha(\text{K})=0.0053$ 20; $\alpha(\text{L})=8.7\times 10^{-4}$ 30; $\alpha(\text{M})=2.0\times 10^{-4}$ 7 $\alpha(\text{N})=5.1\times 10^{-5}$ 17; $\alpha(\text{O})=9.5\times 10^{-6}$ 34; $\alpha(\text{P})=7.2\times 10^{-7}$ 29; $\alpha(\text{IPF})=1.06\times 10^{-5}$ 27 Mult.: $A_2=0.17$ 8 (1989Ga07), $\Delta J=0$.	
1724.80	(4 ⁺)	413.1 2	27 8	1311.54	4 ⁺	(E2+M1)	0.10 5	$\alpha(\text{K})=0.08$ 5; $\alpha(\text{L})=0.016$ 5; $\alpha(\text{M})=0.0037$ 11 $\alpha(\text{N})=9.3\times 10^{-4}$ 28; $\alpha(\text{O})=1.7\times 10^{-4}$ 6; $\alpha(\text{P})=1.1\times 10^{-5}$ 7 Mult.: $A_2=0.68$ 31 (1989Ga07).	
		542.6 1	100 10	1182.24	2 ⁺	(E2)	0.02217 31	$\alpha(\text{K})=0.01635$ 23; $\alpha(\text{L})=0.00442$ 6; $\alpha(\text{M})=0.001080$ 15 $\alpha(\text{N})=0.000269$ 4; $\alpha(\text{O})=4.83\times 10^{-5}$ 7; $\alpha(\text{P})=2.170\times 10^{-6}$ 30 Mult.: $A_2=0.42$ 23 (1989Ga07).	
1745.99	1,2 ⁺	786.0 4 1306.37 8 1746.4 5	23 4 100 3 3.2 11	959.89 2 ⁺ 439.564 2 ⁺ 0.0 0 ⁺	2 ⁺ 2 ⁺ 0 ⁺			E_γ, I_γ : From 1984Cr01 in ^{202}Au β^- decay. E_γ, I_γ : From 1984Cr01 in ^{202}Au β^- decay. E_γ, I_γ : From 1984Cr01 in ^{202}Au β^- decay.	
1788.39	2 ⁺	476.5@ 3 1789.0@ 4	100@ 30 99@ 11	1311.54 4 ⁺ 0.0 0 ⁺	4 ⁺ 0 ⁺				
1794.05	2 ⁺	611.3@ 5	≈ 3 @	1182.24	2 ⁺	[M1,E2]	0.036 19	$\alpha(\text{K})=0.029$ 16; $\alpha(\text{L})=0.0052$ 21; $\alpha(\text{M})=0.0012$ 5 $\alpha(\text{N})=3.1\times 10^{-4}$ 12; $\alpha(\text{O})=5.7\times 10^{-5}$ 23; $\alpha(\text{P})=4.0\times 10^{-6}$ 23 B(M1)(W.u.)=0.029 22 if M1, B(E2)(W.u.)=29 21 if E2.	
		833	3.0 6	959.89	2 ⁺	[E2]	0.00870 12	$\alpha(\text{K})=0.00687$ 10; $\alpha(\text{L})=0.001396$ 20; $\alpha(\text{M})=0.000332$ 5 $\alpha(\text{N})=8.30\times 10^{-5}$ 12; $\alpha(\text{O})=1.525\times 10^{-5}$ 21; $\alpha(\text{P})=9.07\times 10^{-7}$ 13 B(E2)(W.u.)=6 4 E_γ, I_γ : From 2019Ke01 in Coulomb Excitation.	

Adopted Levels, Gammas (continued)

$\gamma(^{202}\text{Hg})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	δ	$\alpha^\&$	Comments
1794.05	2 ⁺	1354.8 @ 3	100 @ 9	439.564	2 ⁺	M1+E2	0.06 4	0.00709 10	$\alpha(\text{K})=0.00584$ 8; $\alpha(\text{L})=0.000931$ 13; $\alpha(\text{M})=0.0002153$ 31 $\alpha(\text{N})=5.40 \times 10^{-5}$ 8; $\alpha(\text{O})=1.024 \times 10^{-5}$ 15; $\alpha(\text{P})=8.00 \times 10^{-7}$ 12; $\alpha(\text{IPF})=4.31 \times 10^{-5}$ 6 B(M1)(W.u.)=0.09 5; B(E2)(W.u.)=0.064 +9-7 Mult., δ : A ₂ =0.23 2, A ₄ =0.028 25 (2019Ke01); A ₂ =0.40 8 (1989Ga07).
		1794.4 @ 6	2.8 @ 13	0.0	0 ⁺	[E2]		2.18×10^{-3} 3	$\alpha(\text{K})=0.001660$ 23; $\alpha(\text{L})=0.000266$ 4; $\alpha(\text{M})=6.16 \times 10^{-5}$ 9 $\alpha(\text{N})=1.542 \times 10^{-5}$ 22; $\alpha(\text{O})=2.90 \times 10^{-6}$ 4; $\alpha(\text{P})=2.149 \times 10^{-7}$ 30; $\alpha(\text{IPF})=0.0001756$ 25 B(E2)(W.u.)=0.12 9
1823.50	(2) ⁺	77.1 @ 4	3.5 @	1745.99	1,2 ⁺	[D,E2]			B(M1)(W.u.)=3.1 13 if M1; B(E2)(W.u.)=1.6 $\times 10^5$ 6 if E2, both using the adopted T _{1/2} , I _{γ} and α are anomalously high and violates RUL.
		247.4 @ a 11	2.1 @	1575.48	(2 ⁺)	[M1,E2]		0.40 21	$\alpha(\text{K})=0.30$ 20; $\alpha(\text{L})=0.077$ 8; $\alpha(\text{M})=0.0187$ 10 $\alpha(\text{N})=0.00466$ 27; $\alpha(\text{O})=0.00084$ 9; $\alpha(\text{P})=4.2 \times 10^{-5}$ 29 B(M1)(W.u.)=0.060 26 if M1, B(E2)(W.u.)=359 156 if E2.
		434.0 @ a 8	≈ 5.3 @	1389.58	2 ⁺	[M1,E2]		0.09 5	$\alpha(\text{K})=0.07$ 4; $\alpha(\text{L})=0.014$ 5; $\alpha(\text{M})=0.0032$ 10 $\alpha(\text{N})=8.0 \times 10^{-4}$ 25; $\alpha(\text{O})=1.5 \times 10^{-4}$ 5; $\alpha(\text{P})=9.E-6$ 6 B(M1)(W.u.)=0.028 17 if M1, B(E2)(W.u.)=55 34 if E2.
		476.5 @ 3	12 @ 4	1347.89	(1 ⁺ ,2 ⁺)	[M1,E2]		0.07 4	$\alpha(\text{K})=0.054$ 32; $\alpha(\text{L})=0.010$ 4; $\alpha(\text{M})=0.0024$ 8 $\alpha(\text{N})=6.1 \times 10^{-4}$ 21; $\alpha(\text{O})=1.1 \times 10^{-4}$ 4; $\alpha(\text{P})=7.E-6$ 5 B(M1)(W.u.)=0.048 24 if M1, B(E2)(W.u.)=78 39 if E2.
		640.9 @ 3	14.7 @ 14	1182.24	2 ⁺	[E2,M1]		0.032 16	$\alpha(\text{K})=0.026$ 14; $\alpha(\text{L})=0.0046$ 19; $\alpha(\text{M})=0.0011$ 4 $\alpha(\text{N})=2.7 \times 10^{-4}$ 10; $\alpha(\text{O})=5.1 \times 10^{-5}$ 20; $\alpha(\text{P})=3.5 \times 10^{-6}$ 20 B(M1)(W.u.)=0.024 10 if M1, B(E2)(W.u.)=22 9 if E2.
		863.3 @ 3	39 @ 4	959.89	2 ⁺	(E2+M1)		0.015 7	$\alpha(\text{K})=0.012$ 6; $\alpha(\text{L})=0.0021$ 8; $\alpha(\text{M})=5.0 \times 10^{-4}$ 19 $\alpha(\text{N})=1.2 \times 10^{-4}$ 5; $\alpha(\text{O})=2.3 \times 10^{-5}$ 9; $\alpha(\text{P})=1.7 \times 10^{-6}$ 8 Mult.: A ₂ =0.18 10 (1989Ga07). B(M1)(W.u.)=0.026 10 if M1, B(E2)(W.u.)=13 5 if E2.

Adopted Levels, Gammas (continued)

$\gamma(^{202}\text{Hg})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	$\alpha\&$	Comments
1823.50	(2) ⁺	1384.0 @ 3	100 @ 19	439.564	2 ⁺	(E2+M1)	0.0050 17	$\alpha(\text{K})=0.0041$ 14; $\alpha(\text{L})=6.7\times 10^{-4}$ 22; $\alpha(\text{M})=1.5\times 10^{-4}$ 5 $\alpha(\text{N})=3.9\times 10^{-5}$ 13; $\alpha(\text{O})=7.3\times 10^{-6}$ 24; $\alpha(\text{P})=5.5\times 10^{-7}$ 21; $\alpha(\text{IPF})=4.3\times 10^{-5}$ 11 Mult.: $A_2=0.29$ 5 (1989Ga07). B(M1)(W.u.)=0.016 6 if M1, B(E2)(W.u.)=3.1 12 if E2.
		1823.1 @ 3	7.9 @ 28	0.0	0 ⁺	[E2]	2.14×10^{-3} 3	$\alpha(\text{K})=0.001613$ 23; $\alpha(\text{L})=0.000258$ 4; $\alpha(\text{M})=5.97\times 10^{-5}$ 8 $\alpha(\text{N})=1.494\times 10^{-5}$ 21; $\alpha(\text{O})=2.81\times 10^{-6}$ 4; $\alpha(\text{P})=2.088\times 10^{-7}$ 29; $\alpha(\text{IPF})=0.0001879$ 26 B(E2)(W.u.)=0.06 3
1852.26	2 ⁺	173.4 @a 4	2.8 @	1678.24	2 ⁺			
		541.1 @a 3	6.1 @ 17	1311.54	4 ⁺			
		732.3 @ 5	≈4 @	1119.91	4 ⁺			
		892.0 @ 3	18 @ 3	959.89	2 ⁺			
		1412.3 @ 3	100 @ 10	439.564	2 ⁺	(E2+M1)	0.0048 16	$\alpha(\text{K})=0.0039$ 14; $\alpha(\text{L})=6.3\times 10^{-4}$ 20; $\alpha(\text{M})=1.5\times 10^{-4}$ 5 $\alpha(\text{N})=3.7\times 10^{-5}$ 12; $\alpha(\text{O})=7.0\times 10^{-6}$ 23; $\alpha(\text{P})=5.3\times 10^{-7}$ 19; $\alpha(\text{IPF})=5.3\times 10^{-5}$ 13 Mult.: $A_2=0.23$ 8 (1989Ga07).
		1853.0 @ 4	46 @ 12	0.0	0 ⁺	[E2]		
1861.7	(3)	472.5 @ 4	41 @ 14	1389.58	2 ⁺			
		549.7 @ 10	100 @ 25	1311.54	4 ⁺	D		Mult.: $A_2=-0.14$ 7.
1959.43	1,2 ⁺	611.3 @ 5	≈40 @	1347.89	(1 ⁺ ,2 ⁺)			
		999.7 @ 4	26 @ 8	959.89	2 ⁺			
		1519.6 @ 6	100 @ 30	439.564	2 ⁺			
		1959.4 @ 3	80 @ 20	0.0	0 ⁺			
1965.62	5 ⁻	654.1 1	100 10	1311.54	4 ⁺	(E1)	0.00514 7	$\alpha(\text{K})=0.00428$ 6; $\alpha(\text{L})=0.000660$ 9; $\alpha(\text{M})=0.0001518$ 21 $\alpha(\text{N})=3.79\times 10^{-5}$ 5; $\alpha(\text{O})=7.08\times 10^{-6}$ 10; $\alpha(\text{P})=5.11\times 10^{-7}$ 7 Mult.: $A_2=-0.27$ 5; $A_2=-0.12$ 6 (1984Sc19), $A_2=-0.27$ 5 (1989Ga07). E_γ : From 2021Su02 in ¹⁹⁷ Au(HI,x γ). I_γ : From 1984Sc19 in ²⁰² Hg(d,pn γ).
		845.1 5	≈21	1119.91	4 ⁺			
1966.00	2 ⁺	104.5 @ 4	5.8 @	1861.7	(3)			
		113.1 @ 4	1.4 @	1852.26	2 ⁺			
		400.4 @ 8	≈2.5 @	1564.78	0 ⁺			
		554.8 2	32 8	1411.35	0 ⁺			
		653.7 @ 6	≈7.8 @	1311.54	4 ⁺	[E2]	0.01453 21	$\alpha(\text{K})=0.01111$ 16; $\alpha(\text{L})=0.00260$ 4; $\alpha(\text{M})=0.000629$ 9 $\alpha(\text{N})=0.0001570$ 22; $\alpha(\text{O})=2.85\times 10^{-5}$ 4; $\alpha(\text{P})=1.473\times 10^{-6}$ 21

Adopted Levels, Gammas (continued)

$\gamma(^{202}\text{Hg})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	$\alpha^\&$	Comments
1966.00	2 ⁺	783.0@ 8	8@ 3	1182.24	2 ⁺			
1988.82	6 ⁺	1526.7@ 3 868.9 2	100@ 11 100	439.564 1119.91	2 ⁺ 4 ⁺	D E2	0.00798 11	Mult.: $A_2=-0.35$ 12 (1989Ga07). $\alpha(K)=0.00634$ 9; $\alpha(L)=0.001260$ 18; $\alpha(M)=0.000299$ 4 $\alpha(N)=7.48\times 10^{-5}$ 10; $\alpha(O)=1.377\times 10^{-5}$ 19; $\alpha(P)=8.35\times 10^{-7}$ 12 B(E2)(W.u.)=24.89 12 E_γ : From 1985Ag01 in Coulomb Excitation. Mult.: From $\gamma(\theta)$ in Coulomb Excitation (1985Ag01).
2059.8	(7 ⁻)	(70.7# 11)	63# 14	1988.82	6 ⁺	[E1]	0.2183 99	$\alpha(L)=0.167$ 8; $\alpha(M)=0.0394$ 18 $\alpha(N)=0.0097$ 4; $\alpha(O)=0.00168$ 8; $\alpha(P)=7.34\times 10^{-5}$ 29 B(E1)(W.u.)= 3.8×10^{-6} 11 E_γ : From level-energy difference. 2021Su02 give 70.6 keV.
		94.2# 5	100# 19	1965.62	5 ⁻	[E2]	7.14 19	$\alpha(K)=0.625$ 9; $\alpha(L)=4.88$ 14; $\alpha(M)=1.28$ 4 $\alpha(N)=0.316$ 9; $\alpha(O)=0.0524$ 15; $\alpha(P)=0.0001383$ 28 B(E2)(W.u.)=11.7 7
2071.27	(2) ⁺	1631.7 1	100	439.564	2 ⁺			
2126.38	(1,2) ⁺	380.0@ 3 549.7@ 10 564.5@ 3 944.6@ 6 1166.9@ 3 1686.7@ 3	30@ 3 28@ 7 13@ 4 17@ 6 18@ 4 100@ 10	1745.99 1575.48 1561.96 1182.24 959.89 439.564	1,2 ⁺ (2) ⁺ 3(+) 2 ⁺ 2 ⁺ 2 ⁺	M1+E2	0.0033 10	$\alpha(K)=0.0026$ 8; $\alpha(L)=4.2\times 10^{-4}$ 12; $\alpha(M)=9.7\times 10^{-5}$ 27 $\alpha(N)=2.4\times 10^{-5}$ 7; $\alpha(O)=4.6\times 10^{-6}$ 13; $\alpha(P)=3.5\times 10^{-7}$ 11; $\alpha(\text{IPF})=0.00017$ 4 Mult.: $A_2=0.85$ 29. E_γ : Other: 1015.2 keV 5 in Coulomb Excitation.
2133.91		1014.0 1	100	1119.91	4 ⁺			
2161.87		1722.3 2	100	439.564	2 ⁺			
2223.1	(9 ⁻)	163.3# 5	100#	2059.8	(7 ⁻)	[E2]	0.803 14	$\alpha(K)=0.273$ 4; $\alpha(L)=0.397$ 8; $\alpha(M)=0.1032$ 20 $\alpha(N)=0.0256$ 5; $\alpha(O)=0.00430$ 8; $\alpha(P)=3.45\times 10^{-5}$ 5 B(E2)(W.u.)=27 6
2249.70	(2) ⁺	524.9 2	100	1724.80	(4) ⁺			
2280.16	(1 ⁺ ,2)	320.3@ 7 456.3@ 3 486.1@ 4 602.1@ 2 718.3@ 3 1097.8@ 3	4@ 11.0@ 18 3.1@ 9 26@ 3 43@ 4 68@ 3	1959.43 1823.50 1794.05 1678.24 1561.96 1182.24	1,2 ⁺ (2) ⁺ 2 ⁺ 2 ⁺ 3(+) 2 ⁺			

Adopted Levels, Gammas (continued)

$\gamma(^{202}\text{Hg})$ (continued)								
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	$\alpha^\&$	Comments
2280.16	(1 ⁺ ,2)	1320.5 @ 3	55 @ 21	959.89	2 ⁺			
		1840.4 @ 3	100 @ 10	439.564	2 ⁺			
2292.1		902.5 3	100	1389.58	2 ⁺	(E2)	0.00740 10	$\alpha(\text{K})=0.00589$ 8; $\alpha(\text{L})=0.001151$ 16; $\alpha(\text{M})=0.000273$ 4 $\alpha(\text{N})=6.82\times 10^{-5}$ 10; $\alpha(\text{O})=1.258\times 10^{-5}$ 18; $\alpha(\text{P})=7.76\times 10^{-7}$ 11 Mult.: $A_2=0.35$ 40 (1989Ga07).
2293.20	(4 ⁺)	669.3 2	100 27	1624.02	(4 ⁺)	[M1,E2]	0.028 14	$\alpha(\text{K})=0.023$ 12; $\alpha(\text{L})=0.0041$ 17; $\alpha(\text{M})=1.0\times 10^{-3}$ 4 $\alpha(\text{N})=2.4\times 10^{-4}$ 9; $\alpha(\text{O})=4.5\times 10^{-5}$ 18; $\alpha(\text{P})=3.2\times 10^{-6}$ 17 B(M1)(W.u.)=1.0 3 if M1; B(E2)(W.u.)=851 268 if E2 using the adopted $T_{1/2}$, I_γ and α seems anomalously high.
		1853.5 2	66 23	439.564	2 ⁺	[E2]	2.09×10^{-3} 3	$\alpha(\text{K})=0.001566$ 22; $\alpha(\text{L})=0.0002499$ 35; $\alpha(\text{M})=5.78\times 10^{-5}$ 8 $\alpha(\text{N})=1.446\times 10^{-5}$ 20; $\alpha(\text{O})=2.72\times 10^{-6}$ 4; $\alpha(\text{P})=2.026\times 10^{-7}$ 28; $\alpha(\text{IPF})=0.0002013$ 28 B(E2)(W.u.)=3.4 13
2309.2	(3 ⁻)	1869.6 4	100	439.564	2 ⁺			
2323.27		1883.7 1	100	439.564	2 ⁺			
2339.29?	(1 ⁺ ,2 ⁺)	991.4 ^a 3	100	1347.89	(1 ⁺ ,2 ⁺)			E_γ : Unplaced in $^{202}\text{Hg}(n,n'\gamma)$ and in Coulomb Excitation. Placed in 1997Sc07, based on the $(n,n'\gamma)$ threshold which shows that this γ must deexcite a level at <2.5 MeV.
2356.83	3 ⁻	1045	30.5 27	1311.54	4 ⁺	[E1]	2.13×10^{-3} 3	$\alpha(\text{K})=0.001782$ 25; $\alpha(\text{L})=0.000266$ 4; $\alpha(\text{M})=6.09\times 10^{-5}$ 9 $\alpha(\text{N})=1.522\times 10^{-5}$ 21; $\alpha(\text{O})=2.86\times 10^{-6}$ 4; $\alpha(\text{P})=2.162\times 10^{-7}$ 30 E_γ, I_γ : From 2019Ke01 in Coulomb Excitation.
		1174	30.5 24	1182.24	2 ⁺	[E1]	1.74×10^{-3} 2	$\alpha(\text{K})=0.001451$ 20; $\alpha(\text{L})=0.0002151$ 30; $\alpha(\text{M})=4.93\times 10^{-5}$ 7 $\alpha(\text{N})=1.230\times 10^{-5}$ 17; $\alpha(\text{O})=2.319\times 10^{-6}$ 32; $\alpha(\text{P})=1.765\times 10^{-7}$ 25; $\alpha(\text{IPF})=9.30\times 10^{-6}$ 13 E_γ, I_γ : From 2019Ke01 in Coulomb Excitation.
		1397.3 4	75 [‡] 5	959.89	2 ⁺	[E1]	1.39×10^{-3} 2	$\alpha(\text{K})=0.001074$ 15; $\alpha(\text{L})=0.0001579$ 22; $\alpha(\text{M})=3.61\times 10^{-5}$ 5 $\alpha(\text{N})=9.02\times 10^{-6}$ 13; $\alpha(\text{O})=1.703\times 10^{-6}$ 24; $\alpha(\text{P})=1.312\times 10^{-7}$ 18; $\alpha(\text{IPF})=0.0001073$ 15 E_γ : From 1989Ga07 in $^{202}\text{Hg}(n,n'\gamma)$.
		1917.2 2	100 [‡] 4	439.564	2 ⁺	[E1]	1.23×10^{-3} 2	$\alpha(\text{K})=0.000634$ 9; $\alpha(\text{L})=9.21\times 10^{-5}$ 13; $\alpha(\text{M})=2.103\times 10^{-5}$ 29 $\alpha(\text{N})=5.25\times 10^{-6}$ 7; $\alpha(\text{O})=9.94\times 10^{-7}$ 14; $\alpha(\text{P})=7.78\times 10^{-8}$ 11; $\alpha(\text{IPF})=0.000475$ 7 E_γ : From 1989Ga07 in $^{202}\text{Hg}(n,n'\gamma)$.
		2357		0.0	0 ⁺	[E3]	0.00257 4	$\alpha(\text{K})=0.001875$ 26; $\alpha(\text{L})=0.000318$ 4; $\alpha(\text{M})=7.42\times 10^{-5}$ 10 $\alpha(\text{N})=1.859\times 10^{-5}$ 26; $\alpha(\text{O})=3.50\times 10^{-6}$ 5; $\alpha(\text{P})=2.54\times 10^{-7}$ 4; $\alpha(\text{IPF})=0.000278$ 4 E_γ : From 2019Ke01 in Coulomb Excitation. B(E3)(W.u.)=2.5 1 in Coulomb Excitation (2019Ke01).
2454.9		1495	100	959.89	2 ⁺			E_γ, I_γ : From 2019Ke01 in Coulomb Excitation.

Adopted Levels, Gammas (continued)

$\gamma(^{202}\text{Hg})$ (continued)									
$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	$\alpha\&$	Comments	
2516.5	(2 ⁺)	2516.5 3	100	0.0	0 ⁺	[E2]	1.59×10 ⁻³ 2	$\alpha(\text{K})=0.000903$ 13; $\alpha(\text{L})=0.0001389$ 19; $\alpha(\text{M})=3.20\times 10^{-5}$ 4 $\alpha(\text{N})=8.00\times 10^{-6}$ 11; $\alpha(\text{O})=1.512\times 10^{-6}$ 21; $\alpha(\text{P})=1.164\times 10^{-7}$ 16; $\alpha(\text{IPF})=0.000507$ 7	
2681.0	(2 ⁺)	2681	100	0.0	0 ⁺	[E2]	1.55×10 ⁻³ 2	$\alpha(\text{K})=0.000806$ 11; $\alpha(\text{L})=0.0001232$ 17; $\alpha(\text{M})=2.83\times 10^{-5}$ 4 $\alpha(\text{N})=7.09\times 10^{-6}$ 10; $\alpha(\text{O})=1.342\times 10^{-6}$ 19; $\alpha(\text{P})=1.038\times 10^{-7}$ 15; $\alpha(\text{IPF})=0.000582$ 8 B(E2)(W.u.)=0.200 21 E_γ, I_γ : From 2019Ke01 in Coulomb Excitation.	
2706.8	3 ⁻	914	5.0 6	1794.05	2 ⁺	[E1]	0.00271 4	$\alpha(\text{K})=0.002271$ 32; $\alpha(\text{L})=0.000342$ 5; $\alpha(\text{M})=7.84\times 10^{-5}$ 11 $\alpha(\text{N})=1.956\times 10^{-5}$ 27; $\alpha(\text{O})=3.68\times 10^{-6}$ 5; $\alpha(\text{P})=2.74\times 10^{-7}$ 4 E_γ, I_γ : From 2019Ke01 in Coulomb Excitation.	
		1524	15.3 12	1182.24	2 ⁺	[E1]	1.29×10 ⁻³ 2	$\alpha(\text{K})=0.000927$ 13; $\alpha(\text{L})=0.0001359$ 19; $\alpha(\text{M})=3.11\times 10^{-5}$ 4 $\alpha(\text{N})=7.76\times 10^{-6}$ 11; $\alpha(\text{O})=1.466\times 10^{-6}$ 21; $\alpha(\text{P})=1.135\times 10^{-7}$ 16; $\alpha(\text{IPF})=0.0001904$ 27 E_γ, I_γ : From 2019Ke01 in Coulomb Excitation.	
		1747	100.0 21	959.89	2 ⁺	(E1)	1.23×10 ⁻³ 2	$\alpha(\text{K})=0.000739$ 10; $\alpha(\text{L})=0.0001076$ 15; $\alpha(\text{M})=2.459\times 10^{-5}$ 34 $\alpha(\text{N})=6.14\times 10^{-6}$ 9; $\alpha(\text{O})=1.162\times 10^{-6}$ 16; $\alpha(\text{P})=9.06\times 10^{-8}$ 13; $\alpha(\text{IPF})=0.000351$ 5 E_γ, I_γ : From 2019Ke01 in Coulomb Excitation.	
		2264	25.1 10	439.564	2 ⁺	[E1]	1.29×10 ⁻³ 2	Mult.: A ₂ =-0.17 2, A ₄ =0.04 3 in 2019Ke01. $\alpha(\text{K})=0.000484$ 7; $\alpha(\text{L})=7.00\times 10^{-5}$ 10; $\alpha(\text{M})=1.597\times 10^{-5}$ 22 $\alpha(\text{N})=3.99\times 10^{-6}$ 6; $\alpha(\text{O})=7.56\times 10^{-7}$ 11; $\alpha(\text{P})=5.96\times 10^{-8}$ 8; $\alpha(\text{IPF})=0.000716$ 10 E_γ, I_γ : From 2019Ke01 in Coulomb Excitation.	
		2709		0.0	0 ⁺	[E3]	2.15×10 ⁻³ 3	$\alpha(\text{K})=0.001433$ 20; $\alpha(\text{L})=0.0002364$ 33; $\alpha(\text{M})=5.49\times 10^{-5}$ 8 $\alpha(\text{N})=1.376\times 10^{-5}$ 19; $\alpha(\text{O})=2.59\times 10^{-6}$ 4; $\alpha(\text{P})=1.929\times 10^{-7}$ 27; $\alpha(\text{IPF})=0.000407$ 6 E_γ, I_γ : From 2019Ke01 in Coulomb Excitation.	
2821.2	(11 ⁻)	598.1 [#] 5	100 [#]	2223.1	(9 ⁻)				
3164.1	3 ⁻	1980	100 8	1182.24	2 ⁺	[E1]	1.24×10 ⁻³ 2	$\alpha(\text{K})=0.000601$ 8; $\alpha(\text{L})=8.73\times 10^{-5}$ 12; $\alpha(\text{M})=1.992\times 10^{-5}$ 28 $\alpha(\text{N})=4.98\times 10^{-6}$ 7; $\alpha(\text{O})=9.42\times 10^{-7}$ 13; $\alpha(\text{P})=7.39\times 10^{-8}$ 10; $\alpha(\text{IPF})=0.000521$ 7	
		3166		0.0	0 ⁺	[E3]	1.86×10 ⁻³ 3	$\alpha(\text{K})=0.001063$ 15; $\alpha(\text{L})=0.0001708$ 24; $\alpha(\text{M})=3.95\times 10^{-5}$ 6 $\alpha(\text{N})=9.90\times 10^{-6}$ 14; $\alpha(\text{O})=1.871\times 10^{-6}$ 26; $\alpha(\text{P})=1.419\times 10^{-7}$ 20; $\alpha(\text{IPF})=0.000573$ 8 B(E3)(W.u.)=1.0 1 in Coulomb Excitation (2019Ke01).	
3514.0	(12 ⁺)	692.8 [#] 5	100 [#]	2821.2	(11 ⁻)				
3777.3	(13 ⁻)	956.1 [#] 5	100 [#]	2821.2	(11 ⁻)				
3918.3		404.3 [#] 5	100 [#]	3514.0	(12 ⁺)				

Adopted Levels, Gammas (continued)

$\gamma(^{202}\text{Hg})$ (continued)

$E_i(\text{level})$	J_i^π	E_γ^\dagger	I_γ^\dagger	E_f	J_f^π	Mult.	$\alpha\&$	Comments
4156.4		379.1 ^{# 5}	100 [#]	3777.3	(13 ⁻)			
4493.9		337.5 ^{# 5}	100 [#]	4156.4				
4648.0		729.7 ^{# 5}	100 [#]	3918.3				
4924	1 ⁻	4924 ⁵	100	0.0	0 ⁺	E1	2.13×10^{-3} 3	$\alpha(\text{K})=0.0001474$ 21; $\alpha(\text{L})=2.092 \times 10^{-5}$ 29; $\alpha(\text{M})=4.76 \times 10^{-6}$ 7 $\alpha(\text{N})=1.190 \times 10^{-6}$ 17; $\alpha(\text{O})=2.260 \times 10^{-7}$ 32; $\alpha(\text{P})=1.814 \times 10^{-8}$ 26; $\alpha(\text{IPF})=0.001954$ 27 $\text{B}(\text{E}1)(\text{W.u.})=0.00108$ 18 Mult.: From $A_2=0.51$ 2 and polarization $[\text{N}(\text{par})/\text{N}(\text{ver})]=1.18$ 3 (1974Te01) in ²⁰² Hg(γ, γ').
5490.3		842.3 ^{# 5}	100 [#]	4648.0				
5710.3		220.0 ^{# 5}	100 [#]	5490.3				
6339.3		629.0 ^{# 5}	100 [#]	5710.3				
7126.9		787.6 ^{# 5}	100 [#]	6339.3				
7663.5		536.6 ^{# 5}	100 [#]	7126.9				

[†] From ²⁰²Hg(n,n' γ), unless otherwise stated.

[‡] From Coulomb Excitation.

[#] From ¹⁹⁷Au(HI,xn γ).

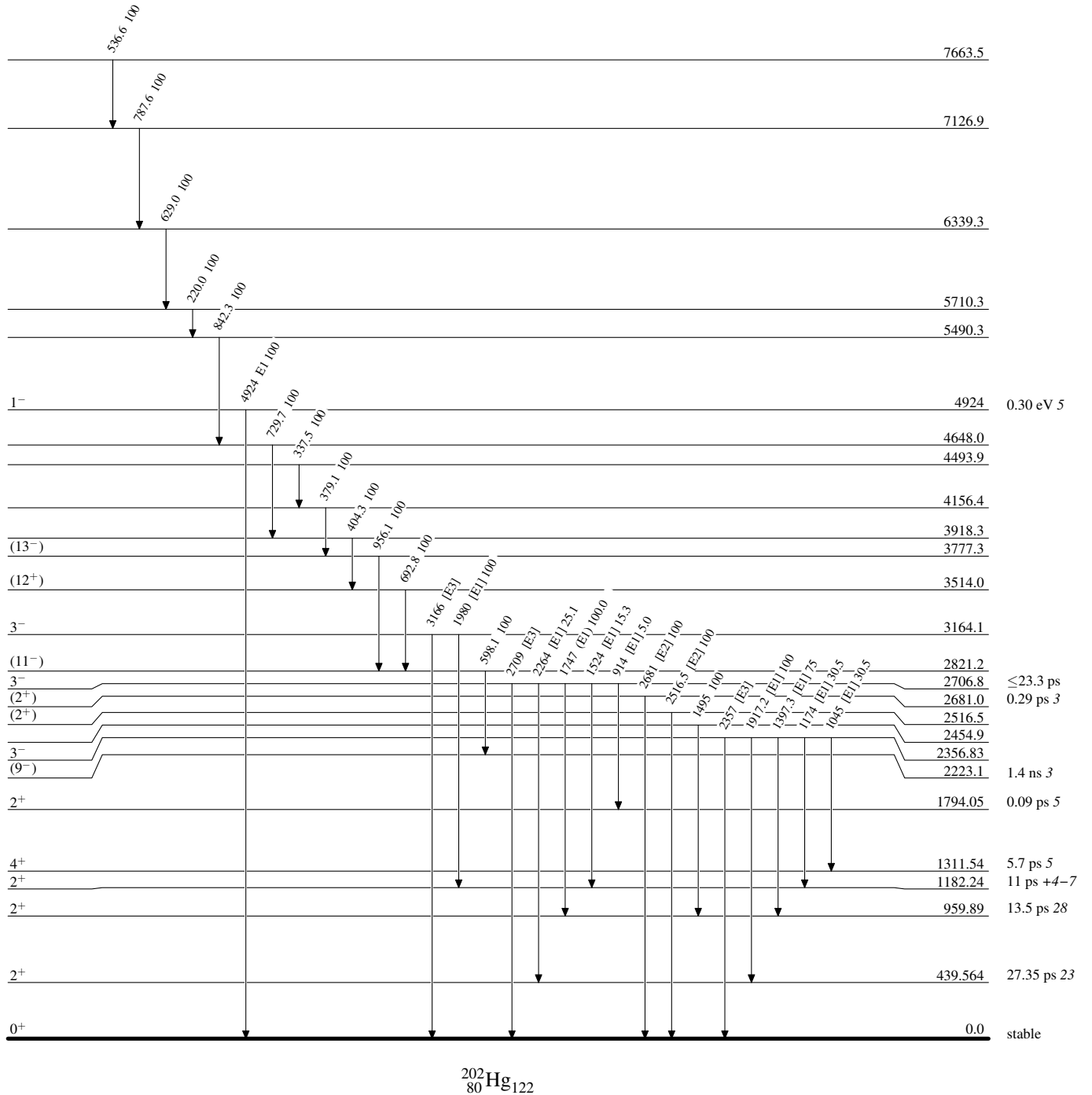
@ From ²⁰¹Hg(n, γ), E=thermal.

& [Additional information 1.](#)

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

Adopted Levels, GammasLevel Scheme

Intensities: Relative photon branching from each level



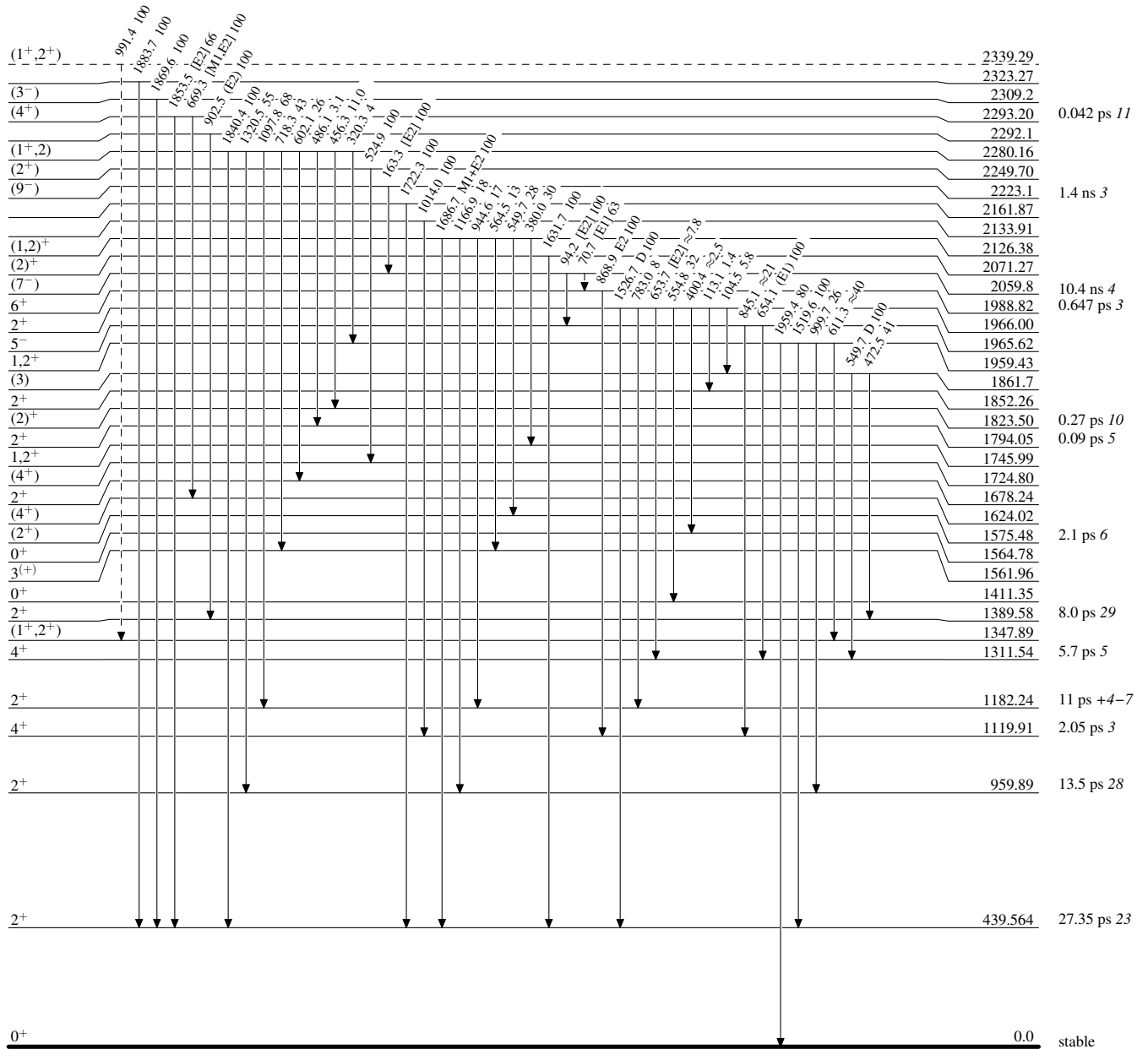
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

-----► γ Decay (Uncertain)



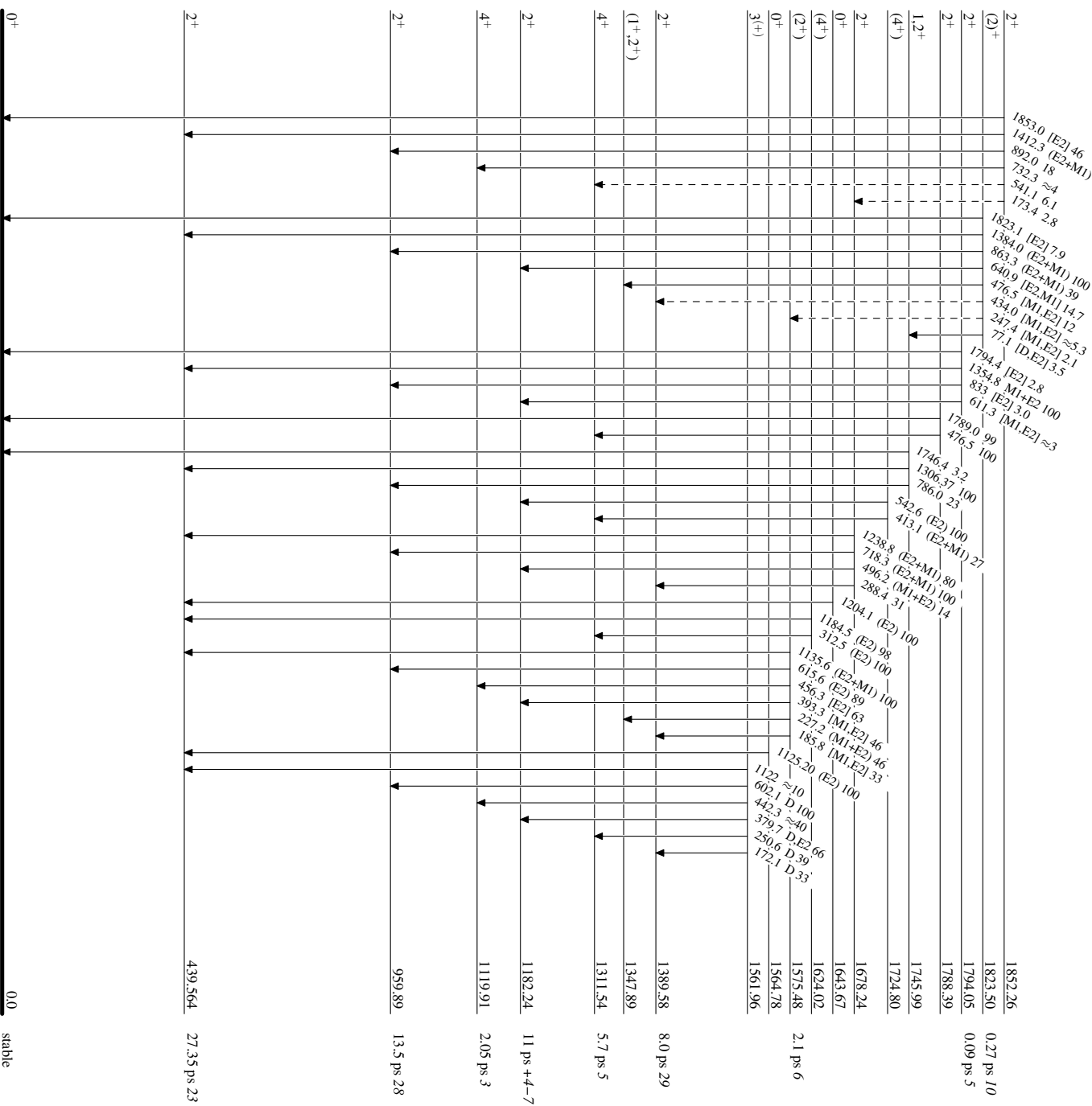
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

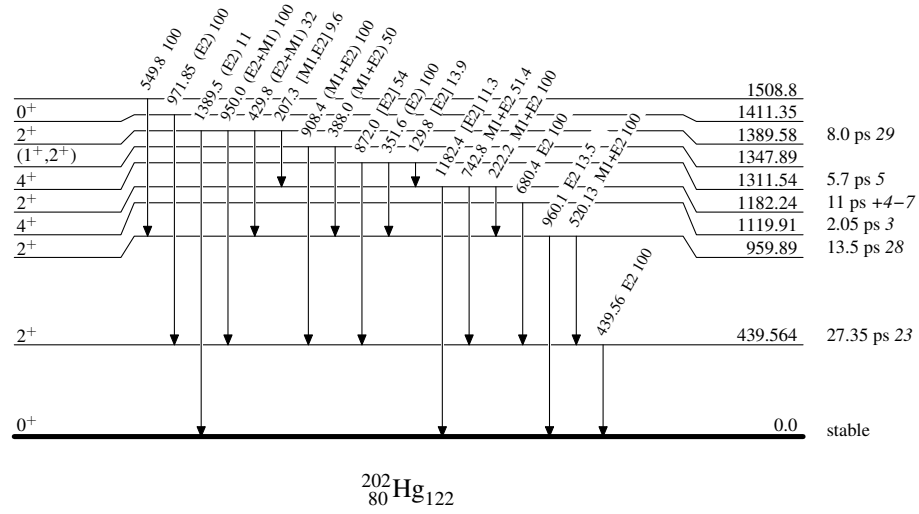
-----▶ γ Decay (Uncertain)



²⁰²Hg₁₂₂
80 Hg₁₂₂

Adopted Levels, Gammas**Level Scheme (continued)**

Intensities: Relative photon branching from each level

 $^{202}_{80}\text{Hg}_{122}$

Adopted Levels, Gammas