

Adopted Levels, Gammas

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

Q(β^-)=-2548.2 21; S(n)=8351.7 13; S(p)=7512.8 13; Q(α)=1522.8 5 2021Wa16
 S(2n)=14614.2 25, S(2p)=13455.7 23 (2021Wa16).

Other reactions:

¹⁹⁴Pt(n,n'): 1989Cl08.

¹⁹⁴Pt(⁷Li,⁷Li'): 1984Da12.

¹⁹⁵Pt(γ ,n): 2004Be49; measured isomer yields.

Additional information 1.

¹⁹⁵Pt(p,pn): 1970Co18.

¹⁹⁴Pt(⁷⁶Se,⁷⁶Se); ¹⁹⁴Pt(⁸²Se,⁸²Se): 1992Wo04.

¹⁹⁴Pt(γ , γ'): 1972Sh38.

Photonuclear reactions: 1974Da08.

¹⁹⁶Pt(n,xnyp) E=1-250 MeV: 2001Ta31; measured prompt γ , excitation functions.

Mass measurements: 2016Ei01, 2013Sh30, 2005Sh52, 1985De40, 1960Bh02.

Isotope shift: 1995Kr05.

1984Bu19: measured hyperfine structure (hfs), magnetic dipole hfs constants, electronic g(J) factors using ABMR technique.

Theoretical references: consult the NSR database (www.nndc.bnl.gov/nsr/) for 208 primary references dealing with nuclear structure calculations.

¹⁹⁴Pt Levels

Band assignments are from ¹⁹⁷Au(²⁰⁹Bi,X γ) (2015Ta25) and ¹⁹²Os(⁸²Se,X γ) (2005Jo11).

Cross Reference (XREF) Flags

| | | | | | |
|----------|--|----------|---|----------|---|
| A | ¹⁹⁴ Ir β^- decay (19.18 h) | H | ¹⁹⁴ Pt(γ , γ') | O | ¹⁹⁵ Pt(d,t) |
| B | ¹⁹⁴ Ir β^- decay (171 d) | I | ¹⁹⁴ Pt(e,e') | P | ¹⁹⁶ Pt(p,t) |
| C | ¹⁹⁴ Au ϵ decay (38.02 h) | J | ¹⁹⁴ Pt(n,n' γ),(n,n') | Q | ¹⁹⁷ Au(p, α) |
| D | ¹⁹² Os(α ,2n γ) | K | ¹⁹⁴ Pt(pol p,p') | R | ¹⁹⁷ Au(²⁰⁹ Bi,X γ) |
| E | ¹⁹² Os(⁸² Se,X γ) | L | ¹⁹⁴ Pt(p,p'),(d,d'),(α , α') | S | Coulomb excitation |
| F | ¹⁹² Pt(t,p) | M | ¹⁹⁴ Pt(¹² C, ¹² C') | T | Muonic atom |
| G | ¹⁹³ Ir(³ He,d) | N | ¹⁹⁵ Pt(p,d) | | |

| E(level) [†] | J π [‡] | T _{1/2} | XREF | Comments |
|------------------------|----------------------|------------------|--------------------|---|
| 0.0 [@] | 0 ⁺ | stable | ABCDEFGHIJKLMNQRST | J π : absence of hyperfine splitting (1935Fu06) consistent with J=0. $\langle r^2 \rangle^{1/2} = 5.4236$ fm 25 (2013An02 evaluation). $\Delta \langle r^2 \rangle$ (¹⁹² Pt, ¹⁹⁴ Pt) = 0.052 fm ² 5, average of 0.051 fm ² 5 (1988Le22) and 0.053 fm ² 5 (1987Ne09). $\Delta \langle r^2 \rangle$ (¹⁹⁴ Pt, ¹⁹⁶ Pt) = 0.054 fm ² 5, from 0.054 fm ² 5 (1988Le22) and 0.055 fm ² 5 (1987Ne09). Others: 1992Hi07, 1988Bo31. |
| 328.473 [@] 4 | 2 ⁺ | 41.7 ps 17 | ABCDE GHIJKLMNQRST | $\mu = +0.59$ 2 (1992Br03, 2020StZV) $Q = +0.48$ 14 (1986Gy04, 2016St14) J π : 328.5 γ E2 to 0 ⁺ . Also L(p,p')=L(p,t)=2 from 0 ⁺ . T _{1/2} : from B(E2)=1.649 15 in Coulomb excitation. Uncertainty of 1% seems to be statistical only. Evaluators have assumed an uncertainty of 4% in deducing level half-life and B(E2)(W.u.). Others: 45.0 ps 24 from recoil-distance method (RDM) in Coulomb excitation, 51 ps 7 from Γ_γ in (γ , γ') (1972Sh38), 35.0 ps 35 from $\gamma\gamma(t)$ in ¹⁹⁴ Ir β^- decay (1972Be53); 50.5 ps 22 |

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Adopted Levels, Gammas (continued) ^{194}Pt Levels (continued)

| <u>E(level)[†]</u> | <u>J^{π‡}</u> | <u>T_{1/2}</u> | <u>XREF</u> | <u>Comments</u> |
|------------------------------|-----------------------|------------------------|---------------------|---|
| 622.024 ^{&} 4 | 2 ⁺ | 35 ps 4 | A CD GH JKLMNOPQ ST | <p>from RDM in Coulomb excitation (1971NoZV). μ: transient field integral perturbed angular correlations in Coulomb excitation (1992Br03). Others: +0.60 3 (1995An15), +0.592 44 (1991St04), 0.406 12 (1982Le02, 1987Be08), 0.600 23 (1975Ka42), +0.70 6 (1974Ga31), 0.64 6 (1972Do18), 0.49 3 (1970Ke14), +0.54 8 (1969Ku06), 0.64 8 (1967Ka16), 0.52 5 (1966Ag02), 0.45 4 (1965Ke11), 0.66 30 (1965Sp03). Values from 1975Ka42, 1970Ke14, 1966Ag02, 1965Ke11 are from IPAC technique in ^{194}Ir β^- decay and have been adjusted for adopted T_{1/2} of 328.5 level based on their measured precession angles (see ^{194}Ir β^- decay dataset for original values of g-factors). Other values are from different techniques in Coulomb excitation. Additional information 2. Q: from Coulomb excitation reorientation (1986Gy04). Others: +0.63 6 (1978Ba38), 0.125 17 (1983Ch35), +0.77 50 (1973Gr06), 0.64 16 or 0.87 18 (1969G108, 1968G101), 0.25 17 (quoted by 1983Ch35 from muonic data of 1979HoZX). 1987Hi04 deduced Q=0.18 from a fit to (n,n') scattering data. β_2=-0.154 2 from 1981De12 in (p,p'), -0.170 5 from 1987Hi04 in (n,n'), -0.15 from 1980Se05 in (p,t). μ=+0.56 11 (1992Br03,2020StZV) Q=-0.5 5 (1978Ba38,2014StZZ) J^π: 622.0γ E2 to 0⁺; E0 component in 293.5γ to 2⁺; L(p,t)=2 from 0⁺. T_{1/2}: from ce-γ(t) in ^{194}Ir β^- (1972Be53). Other: 42 ps 3 from B(E2)(from g.s.)=0.0080 4 in Coulomb excitation and adopted %I(γ+ce)=11.15 15 for 622.0γ. μ: from g(622)/g(328)=0.95 18, transient field integral perturbed angular correlations in Coulomb excitation (1992Br03), and μ(328)=+0.60 3. Others: 0.69 9 (1975Ka42), 0.55 11 (1970Ke14), 0.53 14 (1966Ag02), 0.46 9 (1965Ke11), using IPAC method in ^{194}Ir β^- decay and adjusted for adopted T_{1/2}. Additional information 3. Q: from Coulomb excitation reorientation (1978Ba38). Not listed in 2020StZV evaluation. β_2(Coulomb)=-0.154 2 ((p,p'), 1981De12). Other: (α,α') (1976Ba35).</p> |
| 811.288 [@] 7 | 4 ⁺ | 3.7 ps 2 | ABCDE IJKLMN QRST | <p>μ=+1.12 12 (1992Br03,2020StZV) Q=+0.5 10 (1978Ba38,2014StZZ) J^π: 482.8γ E2 to 2⁺; L(p,p')=L(p,t)=4 from 0⁺. T_{1/2}: from Doppler-shift recoil-distance method in Coulomb excitation (1977Jo05). Others: 4.8 ps 14 from DSAM in 1977St26 in Coulomb excitation; 4.7 ps 2 from B(E2)(from 328.5, 2⁺)=0.78 3 in Coulomb excitation. μ: from g(811)/g(328)=0.95 10, transient field integral perturbed angular correlations in Coulomb excitation (1992Br03), and μ(328)=+0.60 3. Q: from Coulomb excitation reorientation (1978Ba38). Value is not listed in 2020StZV evaluation. β_4=-0.0455 10 ((p,p'), 1981De12), -0.040 5 ((n,n'), 1987Hi04). Others: ($^{12}\text{C}, ^{12}\text{C}'$) (1979Ba19); ($\alpha,\alpha'$) (1976Ba35).</p> |
| 922.772 ^{&} 6 | 3 ⁺ | | A CD J L N Q S | <p>J^π: spin=3 from $\gamma\gamma(\theta)$ in ^{194}Ir β^- decay (1973Si22); 300.8γ and 594.3γ E2(+M1) to 2⁺.</p> |
| 1229.520 ^{&} 10 | 4 ⁺ | 3.8 ps 6 | A CD IJKL NOPQ S | <p>J^π: L(p,p')=L(p,t)=4 from 0⁺; 607.5γ E2 to 2⁺.</p> |

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Adopted Levels, Gammas (continued)

| <u>^{194}Pt Levels (continued)</u> | | | | |
|--|---|-----------------|------------------|---|
| E(level) [†] | J^{π} [‡] | $T_{1/2}$ | XREF | Comments |
| 1267.200 6 | 0 ⁺ | 6.1 ps 14 | A C G J N P Q S | $T_{1/2}$: from Doppler-shift attenuation method in Coulomb excitation (1977St26). Other: 1.53 ps +7-9 from B(E2)(from 622.0, 2 ⁺)=0.64 +3-2 in Coulomb excitation (1996Wu07) and adopted %I(γ +ce)=81.0 12 for 607.5 γ . J^{π} : spin=0 from $\gamma\gamma(\theta)$ in ^{194}Ir β^- ; 645.2 γ and 938.7 γ E2 to 2 ⁺ . $T_{1/2}$: from B(E2)(from 622 level)=0.011 +3-2 (1996Wu07) in Coulomb excitation and adopted branching ratio %I(γ +ce)=66.9 4 for 645.2 γ . J^{π} : 562.5 γ (E1) to 4 ⁺ ; $\gamma(\theta)$ in (n,n' γ) consistent with J=5 not J=4 or 3; L(p,p')=(5) from 0 ⁺ . J^{π} : L(p,t)=6 from 0 ⁺ ; 600.5 γ E2 to 4 ⁺ . |
| 1373.772 ^a 17 | (5 ⁻) | | BCDE J L N PQRST | $T_{1/2}$: from Doppler-shift attenuation method in Coulomb excitation (1977St26). Other: 1.11 ps +3-8 from B(E2)(from 811.0, 4 ⁺)=0.93 +7-2 (1996Wu07) in Coulomb excitation. J^{π} : L(p,d)=3 gives $J^{\pi}=2^+, 3^+, 4^+$. Absence of g.s. transition disfavors 2 ⁺ . J^{π} : L(p,p')=L(p,t)=3 from 0 ⁺ ; 1104.0 γ E1 to 2 ⁺ , 621.3 γ E1 to 4 ⁺ . $T_{1/2}$: from B(E3)=0.120 8 in Coulomb excitation and adopted %I(γ +ce)=1.93 4 for 1432.5 γ . Other: B(E3)=0.157 13 from (e,e') (1988Bo08) gives $T_{1/2}=84$ ps +10-8. J^{π} : L(p,t)=0 from 0 ⁺ ; also E0 transition to 0 ⁺ . $\mu=+1.8$ 6 (2006Le06,2020StZV) J^{π} : L(p,p')=(7) from 0 ⁺ ; 111.4 γ (E2) to (5 ⁻). $T_{1/2}$: from $\gamma\gamma(t)$ in ^{194}Ir β^- decay (171 d) (1970To14). μ : from g=+0.26 8 (IPAD method in ($\alpha, 2n\gamma$), 2006Le06). |
| 1411.83 [@] 8 | 6 ⁺ | 1.6 ps 5 | B DE J L P RST | J^{π} : 576 $\gamma(\theta)$ in ($\alpha, 2n\gamma$) and (n,n' γ) consistent with stretched E2 to 3 ⁺ . Also absence of transitions to levels with J \leq 2. J^{π} : 700.7 γ E2 to 4 ⁺ , 244.8 γ and 1512.1 γ (E2) to 0 ⁺ . E(level): from (p,p') only. J^{π} : spin=0 from $\gamma\gamma(\theta)$ in ^{194}Ir β^- (19.18 h); E0 transition to 0 ⁺ . $T_{1/2}$: from B(E2)(from 328.5, 2 ⁺)=0.0191 +11-13 (1996Wu07) and adopted %I(γ +ce)=79.5 4 for 1218.8 γ . E(level): from (p,d) only. J^{π} : L(p,d)=(1) from 1/2 ⁻ . J^{π} : $\gamma(\theta)$ of 670 γ to 3 ⁺ consistent with mult=Q. The $\Delta J=2$ transition is E2 rather than M2. XREF: O(1640). J^{π} : 1622.2 γ E2 to 0 ⁺ . J^{π} : spin=2 from $\gamma\gamma(\theta)$ in ^{194}Ir β^- (19.15 h); 1048.6 γ M1 to 2 ⁺ . J^{π} : 223.9 γ (M1+E2) from 2 ⁻ ; 363.1 γ to (5 ⁻). XREF: G(1780). J^{π} : $\gamma\gamma(\theta)$ in ^{194}Au ε decay gives J=1 or 2; 855.8 γ to 3 ⁺ is not E2 or M2 based on ce data |
| 1422.21 11 | (3,4) ⁺ | | D J N P Q S | |
| 1432.551 6 | 3 ⁻ | 110 ps +10-9 | A CD IJ L P S | |
| 1479.272 6 | 0 ⁺ | | A C g J n Pq | |
| 1485.04 ^a 16 | (7 ⁻) | 3.45 ns 12 | B DE g L n PqR | |
| 1498.77 ^{&} 20 | (5 ⁺) | | D J | |
| 1512.004 6 | 2 ⁺ | | A C G J L N P Q | |
| 1529 2 | | | L | |
| 1547.281 8 | 0 ⁺ | 0.175 ps +14-11 | A C J L N P Q S | |
| 1584 3 | (0 ⁺ , 1 ⁺ , 2 ⁺) | | N | |
| 1592.8 3 | (5 ⁺) | | D | |
| 1622.197 7 | 2 ⁺ | | A C G J NO Q | |
| 1670.667 7 | 2 ⁺ | | A C G J L N P Q | |
| 1737.427 14 | (3 ⁻) | | C L | |
| 1778.578 10 | 2 ⁺ | | A C G J N P Q | |

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Adopted Levels, Gammas (continued) ^{194}Pt Levels (continued)

| <u>E(level)[†]</u> | <u>J^π[‡]</u> | <u>T_{1/2}</u> | <u>XREF</u> | | <u>Comments</u> |
|-----------------------------|--|------------------------|-------------|----------|--|
| | | | | | in ^{194}Au ε decay; 1156.5 γ M1(+E2) to 2 ⁺ . L($^3\text{He,d}$)=0+2 from 3/2 ⁺ also gives 1 ⁺ or 2 ⁺ . A possible 345.98 γ to 3 ⁻ supports 2 ⁺ but not 1 ⁺ . |
| 1783.52 ^b 11 | (6 ⁻) | | D | J | J ^π : $\gamma(\theta)$ in ($\alpha,2n\gamma$); 409.75 γ M1+E2 to (5 ⁻). |
| 1797.390 5 | 1 ⁻ | | A C | J L N P | J ^π : 318.1 γ , 530.2 γ , 1797.4 γ E1 to 0 ⁺ ; 364.8 γ E2 to 3 ⁻ . |
| 1802.646? 14 | 1 ⁺ ,2 ⁺ | | C | | J ^π : 1802.6 γ M1,E2 γ to 0 ⁺ . |
| 1816.591 8 | (2) ⁺ | | C | J L N PQ | J ^π : L(p,d)=1+3 from 1/2 ⁻ ; possible 1816.3 γ to 0 ⁺ . |
| 1871.6 1 | 2 ⁺ ,3 ⁺ ,4 ⁺ | | g | L N PQ | XREF: g(1880). E(level): from (p,t). Others: 1870 1 in (p,p'), 1869 3 in (p,d), 1873 5 in (p, α). J ^π : L(p,d)=3 from 1/2 ⁻ . |
| 1888.35 9 | (2,3,4) | | g J | q | XREF: g(1880)q(1890). J ^π : 455.8 $\gamma(\theta)$ to 3 ⁻ does not allow $\Delta J=2$. |
| 1893.588 12 | 0 ⁺ | | A C | L N Pq | XREF: q(1890). J ^π : L(p,t)=0 from 0 ⁺ ; (E0) transition to 0 ⁺ ; L(p,d)=1 from 1/2 ⁻ . |
| 1912.9 1 | (4 ⁺) | | | KL PQ | E(level): from (p,t). Others: 1911 5 in (p, α). J ^π : L(p,p')=L(p,t)=(4) from 0 ⁺ . |
| 1924.285 8 | 1 ⁺ | | A C G | J | XREF: G(1920). J ^π : 1924.3 γ M1 γ to 0 ⁺ . |
| 1925.85 7 | (6 ⁺) | 1.3 ps 2 | | S | J ^π : 696.4 γ to 4 ⁺ , 514.0 γ to 6 ⁺ ; absence of γ rays to levels with J<4. T _{1/2} : from Doppler-shift attenuation method in Coulomb excitation (1977St26). |
| 1930.368 9 | 2 ⁺ | | A C | J l n P | XREF: l(1932)n(1932). J ^π : L(p,d)=1+3 from 1/2 ⁻ ; 1601.9 γ M1(+E2) to 2 ⁺ , 1930.4 γ to 0 ⁺ , 1119.1 γ to 4 ⁺ . |
| 1934.7 1 | | | | l n P | XREF: l(1932)n(1932). E(level): from (p,t). |
| 1948.9 1 | | | | L P | E(level): from (p,t). Other: 1948 3 from (p,p'). |
| 1961.332 7 | 2 ⁻ | | C | J | J ^π : 163.95 γ M1+E2 to 1 ⁻ , 528.77 γ M1+E2 to 3 ⁻ ; also E1 γ s to 2 ⁺ . |
| 1974 2 | | | | L q | XREF: q(1979). E(level): from (p,p'). |
| 1981.3 1 | | | | L Pq | XREF: q(1979). E(level): from (p,t). Other: 1981 2 from (p,p'). |
| 1984.4 3 | (6,7,8 ⁺) | | D | | J ^π : 572.6 γ to 6 ⁺ ; absence of γ to J<6. |
| 1991.69 20 | (7 ⁻) | | D | N Pq | XREF: D(?)q(1996). J ^π : L(p,d)=6 from 1/2 ⁻ for a group at 1993; M1,E2 γ to (7 ⁻); L(p,t)=(6,7) from 0 ⁺ . |
| 1999.8 ^b 3 | (8 ⁻) | | D | q | XREF: q(1996). J ^π : 514.8 γ M1+E2 to (7 ⁻) and 514.8 $\gamma(\theta)$. |
| 2003.659 13 | (2 ⁺) | | A C G | J P | XREF: G(2000). J ^π : L($^3\text{He,d}$)=0+2 for a group at 2000 20; 1675.2 γ (M1) to 2 ⁺ , 1080.9 γ (M1(+E2)) to 3 ⁺ ; 2003.65 γ to 0 ⁺ . |
| 2032.8 1 | | | | L NoPQ | XREF: N(2025)o(2030). E(level): from (p,t). Others: 2030 2 from (p,p'), 2025 10 from (p,d), 2028 5 from (p, α). |
| 2043.718 6 | 1 ⁺ | | A C | J no | XREF: n(2049)o(2030). J ^π : 2043.7 γ M1 γ to 0 ⁺ ; L(p,d)=1 from 1/2 ⁻ . |
| 2046.2 3 | | | | P | E(level): level seen in (p,t) only; it is different from the 2047.5, (9 ⁻) level populated in (HI,xn γ). |
| 2047.52 ^a 17 | (9 ⁻) | | B DE | R | J ^π : 562.5 γ (E2) to (7 ⁻); possible band assignment. |
| 2053.018 17 | (2) ⁺ | | A C | J n P | XREF: n(2049). J ^π : weak β^- feeding from 1 ⁻ (log ft=9.0) and weak ε feeding |

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Adopted Levels, Gammas (continued)

¹⁹⁴Pt Levels (continued)

| E(level) [†] | J ^π [‡] | T _{1/2} | XREF | | Comments |
|-------------------------|-----------------------------------|------------------|------|----------|---|
| | | | | | from 1 ⁻ (log ft=9.0); possible 1241.9γ to 4 ⁺ , 162.6γ M1(+E2) from 1 ⁺ . |
| 2063.746 9 | 2 ⁺ | | A C | J NoPQ | J ^π : 1140.99γ M1 to 3 ⁺ ; spin=1 or 2 from γγ(θ) in ¹⁹⁴ Au ε decay; L(p,d)=1 from 1/2 ⁻ . |
| 2073.6 2 | | | | L oP | E(level): from (p,t). Other: 2072 3 from (p,p'). |
| 2085.475 11 | 0 ⁺ | | A C | NoP | XREF: N(2090)o(2080). E(level): the observed group at E=2090 5 in (p,d) with L=1+3 is either a doublet or a different level. J ^π : E0 transition to 0 ⁺ . |
| 2099.55 [@] 12 | (8) ⁺ | 1.1 ps 3 | B DE | RS | J ^π : 687.7γ (E2), ΔJ=(2) to 6 ⁺ ; absence of transitions to levels with J <6; E2 excitation in Coulomb excitation. T _{1/2} : from Doppler-shift attenuation method in Coulomb excitation (1977St26). Other: 0.65 ps +7-4 from B(E2)(from 1411.9, 6 ⁺)=0.73 +5-7 in Coulomb excitation. |
| 2109.068 13 | (2) ⁺ | | A C | L noP | XREF: L(2104)n(2115)o(2130). J ^π : ce data from ¹⁹⁴ Au ε decay (38.02 h) give Mult=D+Q for 1186.37γ to 3 ⁺ and 1487.08γ to 2 ⁺ ; L(p,d)=1+3 from 1/2 ⁻ for a group at E=2115 5, a possible 2109+2114 doublet, favors 2 ⁺ . |
| 2114.106 8 | 1 ⁺ | | A C | no | XREF: n(2115)o(2130). J ^π : 846.96γ and 2114.1γ M1 γ to 0 ⁺ . Other: J=2 from (1786γ)(328γ)(θ) in ¹⁹⁴ Ir β ⁻ decay (19.18 h) (1965Ma10) is inconsistent. |
| 2117.7 1 | | | | P | |
| 2126.5 1 | (4) ⁺ | | | L oPq | XREF: o(2130)q(2129). E(level): from (p,t). Other: 2126 2 from (p,p'). J ^π : L(p,p')=L(p,t)=(4) from 0 ⁺ . |
| 2131.126 11 | (2) ⁺ | | C | g noPq | XREF: g(2150)n(2138)o(2130)q(2129). J ^π : possible 1802.6γ (doublet) M1,E2 to 2 ⁺ , possible 1319.7γ to 4 ⁺ and possible 2131.08γ to 0 ⁺ . |
| 2134.123 14 | 1 ⁺ ,2 ⁺ | | A C | g J no q | XREF: g(2150)n(2138)o(2130)q(2129). J ^π : 1805.7γ M1(+E2) to 2 ⁺ ; spin=1 or 2 from γγ(θ) in ¹⁹⁴ Au ε decay (38.02 h). |
| 2140.696 12 | (1 ⁺ ,2 ⁺) | | A C | g J noP | XREF: g(2150)n(2138)o(2130). J ^π : 1812.2γ (M1) to 2 ⁺ , 2140.7γ to 0 ⁺ . |
| 2154 2 | 3 ⁻ | | | L | J ^π : L(p,p')=3 from 0 ⁺ . |
| 2157.995 14 | (2) ⁺ | | A C | g J n Pq | XREF: g(2150)n(2161)q(2163). J ^π : 1829.5γ M1(+E2) to 2 ⁺ , 1346.7γ to 4 ⁺ ; spin=1 or 2 from γγ(θ) in ¹⁹⁴ Au ε decay (38.02 h). |
| 2163.747 10 | 0 ⁺ | | C | n Pq | XREF: n(2161)q(2163). XREF: S(2163). J ^π : E0 transition to 0 ⁺ ; 1835.3γ E2 to 2 ⁺ . |
| 2165 2 | (5 ⁻) | | | L q | XREF: q(2163). J ^π : L(p,p')=(5) form 0 ⁺ . |
| 2175.4 1 | | | | PQ | E(level): from (p,t). Other: 2171 5 from (p,α). |
| 2184.910 12 | 1 ⁺ ,2 ⁺ | | C | P | J ^π : 1562.89γ M1(+E2) to 2 ⁺ ; spin=1 or 2 from γγ(θ) in ¹⁹⁴ Au ε decay (38.02 h). |
| 2192.9 1 | (6 ⁻ ,7 ⁻) | | | L N P | E(level): from (p,t). Others: 2192 4 from (p,p') and 2191 10 from (p,d). J ^π : L(p,d)=6 from 1/2 ⁻ for an unresolved doublet at E=2191 20, assuming i _{13/2} shell. |
| 2214.525 9 | (2) ⁺ | | C | J N Pq | XREF: q(2210). J ^π : 1291.8γ (M1(+E2)) to 3 ⁺ , 702.5γ (M1) to 2 ⁺ , 2214.47γ to 0 ⁺ ; L(p,d)=1+3 from 1/2 ⁻ suggesting 2 ⁺ for a group at 2214 5. |
| 2215.534 6 | 1 ⁺ | | C | J q | XREF: q(2210). J ^π : 668.2γ, 736.2γ, 948.3γ M1 to 0 ⁺ . |
| 2219.0 3 | | | | L P | E(level): from (p,t). Other: 2222 2 from (p,p'). |

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Adopted Levels, Gammas (continued)

| <u>¹⁹⁴Pt Levels (continued)</u> | | | | | |
|--|---|------|---------|----------|--|
| E(level) [†] | J ^π [‡] | XREF | | Comments | |
| 2228.3 1 | | | | P | |
| 2239.636 8 | (2) ⁻ | C | n | | XREF: n(2240). J ^π : 1617.6γ E1 to 2 ⁺ , 1316.9γ to 3 ⁺ ; ε feeding from 1 ⁻ (log ft=7.7). |
| 2246 2 | 3 ⁻ | | L n | | XREF: n(2240). E(level): from (p,p'). J ^π : L(p,p')=3 from 0 ⁺ . J ^π : L(p,t)=(4) from 0 ⁺ . J ^π : possible 1922.2γ to 2 ⁺ and 2250.7γ to 0 ⁺ . |
| 2248.2 1 | (4 ⁺) | | | P | |
| 2250.665? 21 | (1,2 ⁺) | C | | | J ^π : possible 1922.2γ to 2 ⁺ and 2250.7γ to 0 ⁺ . |
| 2275.6 1 | (2 ⁺ ,3 ⁺ ,4 ⁺) | | N PQ | | E(level): from (p,t). Others: 2270 5 from (p,d), 2269 5 from (p,α). J ^π : L(p,d)=(3) from 1/2 ⁻ . |
| 2287.376 10 | (1 ⁺ ,2 ⁺) | C | L P | | XREF: L(2285). J ^π : 1958.9γ (M1(+E2)) to 2 ⁺ , 2287.3γ to 0 ⁺ ; ε feeding from 1 ⁻ (log ft=7.8). J ^π : L(p,t)=(7,8) from 0 ⁺ . |
| 2297.2 1 | (7 ⁻ ,8 ⁺) | | | P | |
| 2298.157 8 | 1 ⁺ | C | J n | | XREF: n(2302). E(level): the 2302 group in (p,d) with L(p,d)=1+3 (implying J ^π =2 ⁺) may be a doublet or a different level. J ^π : 818.9γ, 1031.0γ, 2298.2γ M1 to 0 ⁺ . |
| 2309.0 1 | | | | P | |
| 2309.6 3 | (11 ⁻) | D | | | J ^π : 262.1γ(θ) to (9 ⁻) is consistent with ΔJ=2. |
| 2311.875 8 | 2 ⁺ | C | L n | | XREF: L(2309)n(2302). J ^π : strong E0 component in 1983.4γ to 2 ⁺ , 1500.7γ (E2) to 4 ⁺ , 2311.9γ (E2) to 0 ⁺ ; 197.8γ M1 to 1 ⁺ . |
| 2324.1 1 | (6 ⁻ ,7 ⁻) | | L N P | | XREF: N(2332). E(level): from (p,t). Others: 2323 4 from (p,p'), 2332 5 from (p,d). J ^π : L(p,d)=6 from 1/2 ⁻ assuming i _{13/2} orbit for a group at E=2332 5. |
| 2356.059 14 | 0 ⁺ | C | l | | J ^π : E0 transition to 0 ⁺ . E(level): 2356.3 1 (2010II03) and 2353 2 (1979De25) in (p,t) with L=(4) (1979De25) suggesting (4 ⁺) and non-zero L(p,t) in 2010II03 has been listed as a separate level, assuming that angular distributions in (p,t) are correct. |
| 2356.3 1 | (4 ⁺) | | l P | | E(level): 2356.3 1 from 2010II03 and 2353 2 from 1979De25 in (p,t), with L(p,t)=(4) in 1979De25 and non-zero L(p,t) in 2010II03 is probably a different level from 2356.059, 0 ⁺ level, assuming that angular distributions in (p,t) are correct. |
| 2365.932 21 | 1 ⁺ | C | l n | | XREF: l(2370)n(2363). J ^π : 2365.9γ M1 to 0 ⁺ . The group at 2363 5 in (p,d) with L=(1+3) suggesting (2 ⁺) could be a doublet; the σ(θ) data in (p,d) also consistent with L=(1+4). |
| 2369.9 1 | | | l n P | | XREF: l(2370)n(2363). E(level): from (p,t). J ^π : see comment for 2365 level. |
| 2385.2 1 | | | | P | |
| 2397.321 14 | 2 ⁺ | C | J L NoP | | XREF: L(2395)N(2394)o(2410)P(2395.3). E(level): other: 2395.3 5 from (p,t) may be a different level. J ^π : L(p,d)=1+3 from 1/2 ⁻ for a group at 2394 5. |
| 2407.8 1 | | | L noP | | XREF: L(2404)n(2411)o(2410). E(level): from (p,t). Other: 2404 2 from (p,p'). |
| 2412.744 13 | 1 ⁺ | C | l no | | XREF: l(2418)n(2411)o(2410). J ^π : 2412.7γ M1 to 0 ⁺ . L(p,d)=(0) from 1/2 ⁻ suggesting (0 ⁻ ,1 ⁻) for a group at 2411 10 is inconsistent. |
| 2423.6 4 | (6 ⁺ ,7,8 ⁺) | B | l no | | XREF: B(?)l(2418)n(2427)o(2410). J ^π : 1011.8γ to 6 ⁺ , possible 324.0γ to (8) ⁺ . |
| 2429.5 1 | | | n P | | XREF: n(2427). E(level): from (p,t). |
| 2438.44 19 | (10 ⁺) | B DE | | R | J ^π : 338.8γ (E2), ΔJ=2 to (8) ⁺ , 391.0γ (E1) to (9 ⁻); possible |

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

¹⁹⁴Pt Levels (continued)

| E(level) [†] | J ^{π‡} | T _{1/2} | XREF | | Comments |
|------------------------|---|------------------|------|-------|---|
| 2444.5 1 | (0 ⁺ ,1 ⁺ ,2 ⁺) | | N | P | configuration= $\pi h_{11/2}^{-2}$ (2006Le06) from (⁸² Se,X γ) . XREF: N(2450). E(level): from (p,t). J ^π : L(p,d)=(1) for a group at 2450 5. |
| 2451.1 ^C 13 | (12 ⁺) | 5.9 ns 8 | D | R | $\mu = -2.0$ 8 (2006Le06,2014StZZ) XREF: D(?). T _{1/2} : weighted average of 6.4 ns 8 from ¹⁹⁴ Ir β^- decay (171 d) and 5 ns 1 from (α ,2n γ). J ^π : possible band member of $i_{13/2}^{-2}$ configuration from systematics and g factor measurements. T _{1/2} : $\beta\gamma(t)$ in ¹⁹⁴ Ir β^- decay (1970To14). Other 5 ns 1 in (α ,2n γ). Other: 6.6 ns 6 only listed in Fig. 1 of 2015Ta25, with no data shown. μ : from $g = -0.17$ 7 (IPAD method in (α ,2n γ),2006Le06). Value is not listed in 2020StZV evaluation. |
| 2457.3 1 | | | | P | |
| 2473.3 3 | (0 ⁺ ,1 ⁺ ,2 ⁺) | | N | P | E(level): from (p,t). Other: 2472 5 from (p,d). J ^π : L(p,d)=1(+3) from 1/2 ⁻ . |
| 2481.9 1 | | | | P | |
| 2500.9 2 | | | g | n P | XREF: g(2520)n(2500). E(level): from (p,t). Other: 2500 10 from (p,d) for a triplet. J ^π : L(p,d)=(1+3) from 1/2 ⁻ suggesting (2 ⁺) for a triplet of unresolved levels at 2500, 2515 and 2530; L(³ He,d)=0+2 from 3/2 ⁺ suggesting 1 ⁺ ,2 ⁺ for a group at 2520 25 also for a composite peak. |
| 2511.0 1 | 0 ⁺ | | | n P | XREF: n(2515). J ^π : L(p,t)=0 from 0 ⁺ . |
| 2517.20 24 | 1 [#] | | gH | n P | XREF: g(2520)n(2515). E(level): other: 2517.6 2 from (p,t). |
| 2528.1 1 | (2 ⁺) | | g | n P | XREF: g(2520)n(2530). J ^π : L(p,t)=(2) from 0 ⁺ . |
| 2536 3 | | | g | L n | XREF: g(2520)n(2530). E(level): from (p,p'). |
| 2544.3 1 | 3 ⁻ | | | L noP | XREF: n(2530)o(2560). E(level): from (p,t). Other: 2543 3 from (p,p'). J ^π : L(p,p')=3 from 0 ⁺ . |
| 2554.1 1 | | | | noP | XREF: n(2557)o(2560). E(level): from (p,t). J ^π : L(p,d)=(1+3) suggesting (2 ⁺) for a group at 2557 10. |
| 2557.8 2 | | | | noP | XREF: n(2557)o(2560). E(level): from (p,t). |
| 2569.9 1 | (6 ⁺) | | l | oP | J ^π : L(p,d)=(1+3) suggesting (2 ⁺) for a group at 2557 10. XREF: l(2575)o(2560). E(level): from (p,t). J ^π : L(p,t)=(6) from 0 ⁺ . |
| 2577.30 24 | 1 [#] | | H | l oP | XREF: l(2575)o(2560). E(level): other: 2576.7 1 from (p,t). |
| 2586.6 1 | | | | L P | E(level): from (p,t). Other: 2586 5 from (p,p'). |
| 2599.5 1 | | | | P | |
| 2607.9 3 | | | | n P | XREF: n(2615). E(level): from (p,t). J ^π : L(p,d)=(1) giving (0 ⁺ ,1 ⁺ ,2 ⁺) for a group at 2615 10, probably a doublet. |
| 2616.4 1 | | | | n P | XREF: n(2615). E(level): from (p,t). |

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued)

| <u>¹⁹⁴Pt Levels (continued)</u> | | | | |
|--|---|------------------|-------|---|
| E(level) [†] | J ^π [‡] | T _{1/2} | XREF | Comments |
| 2630.6 1 | | | n P | J ^π : L(p,d)=(1) giving (0 ⁺ ,1 ⁺ ,2 ⁺) for a group at 2615 10, probably a doublet. XREF: n(2640). E(level): from (p,t). J ^π : L(p,d)=(3) giving (2 ⁺ ,3 ⁺ ,4 ⁺) for a group at 2640 10, probably a doublet. |
| 2640.0 1 | (4 ⁺) | | n P | XREF: n(2640). E(level): from (p,t). J ^π : L(p,t)=(4) from 0 ⁺ . |
| 2660.5 2 | | | n P | XREF: n(2667). J ^π : L(p,d)=(1) giving (0 ⁺ ,1 ⁺ ,2 ⁺) for a group at 2667 10, probably a doublet. |
| 2663.4 4 | (10,11,12 ⁺) | | E | J ^π : 225.0γ to (10 ⁺). |
| 2676.4 1 | (0 ⁺ ,1 ⁺ ,2 ⁺) | | L n P | XREF: n(2667). E(level): from (p,t). Other: 2677 3 from (p,p'). J ^π : L(p,d)=(1) giving (0 ⁺ ,1 ⁺ ,2 ⁺) for a group at 2667 10, probably a doublet. |
| 2685.7 1 | (2 ⁺ ,3 ⁺ ,4 ⁺) | | L n P | XREF: n(2690). E(level): from (p,t). Other: 2688 5 from (p,p'). |
| 2689.25 12 | (8 ⁺) | 0.61 ps +9-11 | S | J ^π : L(p,d)=(3) from 1/2 ⁻ for a group at 2690 10. J ^π : 763.4γ to (6 ⁺); absence of transitions to levels with J<6. T _{1/2} : from B(E2)(from 1925.9, 6 ⁺)=0.46 +10-6 (1996Wu07) in Coulomb excitation. |
| 2695.3 1 | | | L n P | XREF: L(2698)n(2690). E(level): from (p,t). Other: 2698 3 from (p,p'). |
| 2700.1 ^a 3 | (11 ⁻) | | DE | J ^π : 652.6γ ΔJ=(2) to (9 ⁻); possible band assignment. |
| 2703.1 2 | (6 ⁺) | | noP | XREF: n(2710)o(2720). J ^π : L(p,t)=(6) from 0 ⁺ . |
| 2710.5 2 | | | noP | XREF: n(2710)o(2720). |
| 2717.9 2 | | | noP | XREF: n(2710)o(2720). |
| 2720.2 3 | 1 [#] | | H | XREF: n(2710)o(2720). E(level): other: 2721.7 1 from (p,t). |
| 2739.7 1 | | | noP | XREF: n(2743)o(2720). J ^π : L(p,d)=(1+3) suggesting (2 ⁺) for an unresolved doublet at 2743 10. |
| 2747.0 1 | | | n P | XREF: n(2743). J ^π : L(p,d)=(1+3) suggesting (2 ⁺) for an unresolved doublet at 2743 10. |
| 2755.4 1 | | | P | |
| 2769.9 2 | (0 ⁺) | | P | J ^π : L(p,t)=(0) from 0 ⁺ . |
| 2771.9 4 | | | P | |
| 2783 10 | (2 ⁺) | | N | E(level): probably a doublet. J ^π : L(p,d)=(1+3) from 1/2 ⁻ . |
| 2795.1 2 | | | P | |
| 2799.6 1 | | | P | |
| 2805.3 2 | | | P | |
| 2817.3 2 | (2 ⁺) | | N P | XREF: N(2826). J ^π : L(p,d)=(1+3) suggesting (2 ⁺) for a group at 2826 10. |
| 2842.1 ^c 13 | (14 ⁺) | | DE | XREF: E(2829). J ^π : 391.0γ to (12 ⁺); band member. |
| 2842.2 1 | | | P | |
| 2848.6 [@] 10 | (10 ⁺) | 1.05 ps +30-22 | E | J ^π : 749γ to (8 ⁺); band assignment. T _{1/2} : from B(E2)(from 2099,8 ⁺)=0.28 +7-6 (1996Wu07) in Coulomb excitation. |

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Adopted Levels, Gammas (continued)

| <u>¹⁹⁴Pt Levels (continued)</u> | | | | | | |
|--|---|------------------|------|-----|--|--|
| E(level) [†] | J ^π [‡] | T _{1/2} | XREF | | Comments | |
| 2850.2 1 | | | | P | | |
| 2855.8 1 | | | g | P | XREF: g(2880). | |
| 2862.7 1 | | | g | n P | XREF: g(2880)n(2870). | |
| 2878.7 2 | | | g | n P | XREF: g(2880)n(2870). | |
| | | | | | J ^π : L(³ d)=0+2 suggesting 1 ⁺ ,2 ⁺ for a group at 2880 29, probably a multiplet of 2856+2863+2879+2895+2908 levels. | |
| 2882.4 1 | | | g | P | XREF: g(2880). | |
| 2895 3 | (2 ⁺) | | g | N P | XREF: g(2880). | |
| | | | | | J ^π : L(p,d)=(1+3) suggesting (2 ⁺) for a doublet of unresolved levels at 2895 10 and 2908 10. | |
| 2908 10 | | | g | N | XREF: g(2880). | |
| | | | | | J ^π : see comments for 2895 level. | |
| 2916.6 10 | (10 ⁺) | 0.54 ps +26-12 | E | S | J ^π : 817γ to (8) ⁺ ; no γ to levels with J<8. T _{1/2} : from B(E2)(from 2099,8 ⁺)=0.35 +9-11 (1996Wu07) in Coulomb excitation. | |
| 2956 10 | (2 ⁺) | | | N | J ^π : L(p,d)=(1+3) from 1/2 ⁻ . | |
| 2980 10 | | | g | No | XREF: g(3010)α(2990). | |
| | | | | | J ^π : see comments for 3000 level. | |
| 2990.17 ^a 11 | (13 ⁻) | | E | | J ^π : 290γ to (11 ⁻); band member. | |
| 3000 10 | (2 ⁺) | | g | No | XREF: g(3010)α(2990). | |
| | | | | | E(level): from (p,d). | |
| | | | | | J ^π : L(p,d)=(1+3) from 1/2 ⁻ . L(³ He,d)=(0) suggesting (1 ⁺ ,2 ⁺) for a group at 3010 30, probably a multiplet of 2980+3000+3015+3033 levels. | |
| 3000.11 22 | 1 [#] | | gH | o | XREF: g(3010)α(2990). | |
| 3014.81 22 | 1 [#] | | gH | | XREF: g(3010). | |
| 3033 10 | (2 ⁺) | | g | N | XREF: g(3010). | |
| | | | | | J ^π : L(p,d)=(1+3) from 1/2 ⁻ . | |
| 3057.8? 4 | (10,11,12 ⁺) | | E | | J ^π : possible 619.4γ to (10 ⁺). | |
| 3065 10 | (0 ⁺ ,1 ⁺ ,2 ⁺) | | | N | J ^π : L(p,d)=(1) from 1/2 ⁻ . | |
| 3078 10 | (2 ⁺) | | | N | J ^π : L(p,d)=(1+3) from 1/2 ⁻ . | |
| 3078.81 22 | 1 [#] | | H | | | |
| 3100 10 | (2 ⁺) | | | N | J ^π : L(p,d)=(1+3) from 1/2 ⁻ for an unresolved doublet. | |
| 3132 10 | (0 ⁺ ,1 ⁺ ,2 ⁺) | | | N | J ^π : L(p,d)=(1) from 1/2 ⁻ . | |
| 3141.11 24 | 1 [#] | | H | | | |
| 3170 10 | (2 ⁺) | | | N | J ^π : L(p,d)=(1+3) from 1/2 ⁻ . | |
| 3198 10 | (2 ⁺) | | | N | J ^π : L(p,d)=(1+3) from 1/2 ⁻ . | |
| 3225 10 | (0 ⁺ ,1 ⁺ ,2 ⁺) | | | N | J ^π : L(p,d)=(1) from 1/2 ⁻ . | |
| 3351.31 22 | 1 [#] | | H | | | |
| 3375.24 22 | 1 [#] | | H | | | |
| 3383.01 24 | 1 [#] | | H | | | |
| 3417.12 22 | 1 [#] | | H | | | |
| 3421.4 3 | 1 [#] | | H | | | |
| 3427.71 24 | 1 [#] | | H | | | |
| 3459.31 24 | 1 [#] | | H | | | |
| 3465.2 3 | 1 [#] | | H | | | |
| 3477.01 24 | 1 [#] | | H | | | |
| 3497.9 3 | 1 [#] | | H | | | |
| 3499.7 ^c 13 | (16 ⁺) | | E | R | XREF: E(3487). | |
| | | | | | J ^π : 657.6γ to (14 ⁺); possible band member. | |
| 3545.3 3 | 1 [#] | | H | | | |

Continued on next page (footnotes at end of table)

Adopted Levels, Gammas (continued) ^{194}Pt Levels (continued)

| E(level) [†] | J^π [‡] | XREF | | Comments |
|------------------------|----------------------|------|---|--|
| 3697.5 3 | 1 [#] | | H | |
| 3703.3 4 | 1 [#] | | H | |
| 3717.02 24 | 1 [#] | | H | |
| 3726.8 4 | 1 [#] | | H | |
| 3747.1 3 | 1 [#] | | H | |
| 3754.7 ^c 13 | (18 ⁺) | E | R | XREF: E(3670). E(level): 3683 from reverse ordering of 183-255 cascade in ($^{82}\text{Se}, X\gamma$). J^π : 255.0 γ to (16 ⁺); possible band member. |
| 3813.62 24 | 1 [#] | | H | |
| 3890.22 24 | 1 [#] | | H | |
| 3937.7 ^c 14 | (20 ⁺) | E | R | XREF: E(3925). J^π : 183.0 γ to (18 ⁺); possible band member. |
| 4529.8 14 | (22 ⁺) | E | R | XREF: E(4517). J^π : 592.1 γ to (20 ⁺); possible band member. |
| 4541.7 ^c 17 | (22 ⁺) | | R | J^π : 604 γ to (20 ⁺); possible band member. |
| 4896.7 ^c 20 | (24 ⁺) | | R | J^π : 355 γ to (22 ⁺); possible band member. |
| 5336.7 ^c 22 | (26 ⁺) | | R | J^π : 440 γ to (24 ⁺); possible band member. |

[†] From a least-squares fit to γ -ray energies for levels populated in γ -ray studies. For levels reported in particle transfer reactions only, weighted averages of available values have been taken.

[‡] For levels populated in ($\alpha, 2n\gamma$) reaction, it is assumed that spin values are generally in ascending order as the excitation energy increases. Above ≈ 2 MeV excitation energy, the J^π values based only on L-transfers are given in parentheses, since the level density is high and identification of individual levels is difficult. The exception to this is $J^\pi=3^-$ well defined L=3 transitions (at 2154, 2246, 2543) in (pol p,p').

[#] From (γ, γ').

@ Band(A): g.s. band.

& Band(B): γ -vibrational band.

^a Band(C): Negative parity band, odd spin.

^b Band(D): Negative parity band, even spin.

^c Band(E): Yrast oblate structure based on $i_{13/2}^{-2}$.

Adopted Levels, Gammas (continued)

| $E_i(\text{level})$ | J_i^π | E_γ^\dagger | I_γ^\dagger | E_f | J_f^π | Mult. & | $\delta^\&$ | $\gamma(^{194}\text{Pt})$ | | Comments |
|---------------------|----------------|--------------------|--------------------|---------|----------------|----------|-------------|---------------------------|--|---|
| | | | | | | | | α^a | | |
| 328.473 | 2 ⁺ | 328.469 6 | 100 | 0.0 | 0 ⁺ | E2 | | 0.0755 | | B(E2)(W.u.)=49.5 20 $\alpha(\text{K})=0.0488$ 7; $\alpha(\text{L})=0.0202$ 3; $\alpha(\text{M})=0.00504$ 7 $\alpha(\text{N})=0.001236$ 18; $\alpha(\text{O})=0.000202$ 3; $\alpha(\text{P})=4.97 \times 10^{-6}$ 7 E_γ : weighted average of 328.467 10 from $^{194}\text{Ir} \beta^-$ decay (19.18 h), 328.470 6 from $^{194}\text{Au} \varepsilon$ decay (38.02 h), and 328.45 3 from (n,n' γ). Others: 328.5 5 from $^{194}\text{Ir} \beta^-$ decay (171 d), 328.5 1 from ($\alpha,2n\gamma$), and 328.5 1 from Coulomb excitation. |
| 622.024 | 2 ⁺ | 293.547 7 | 100.0 10 | 328.473 | 2 ⁺ | E2+M1+E0 | +15 2 | 0.1060 16 | | B(M1)(W.u.)= 8.8×10^{-5} +45-27; B(E2)(W.u.)=89 +12-10 $\alpha(\text{K})=0.0654$ 10; $\alpha(\text{L})=0.0308$ 5; $\alpha(\text{M})=0.00771$ 11 $\alpha(\text{N})=0.00189$ 3; $\alpha(\text{O})=0.000307$ 5; $\alpha(\text{P})=6.58 \times 10^{-6}$ 10 E_γ : weighted average of 293.544 10 from $^{194}\text{Ir} \beta^-$ decay (19.18 h) and 293.549 7 from $^{194}\text{Au} \varepsilon$ decay (38.02 h). Others: 293.55 7 from ($\alpha,2n\gamma$), 293.50 5 from (n,n' γ), and 293.5 1 from Coulomb excitation. I_γ : from $^{194}\text{Au} \varepsilon$ decay (38.02 h). Others: 100.0 11 from $^{194}\text{Ir} \beta^-$ decay (19.18 h), 100 6 from ($\alpha,2n\gamma$), 100 5 from (n,n' γ), and 1.0E2 5 from muonic atom. δ : for $\delta(\text{E2/M1})$, from $\gamma\gamma(\theta)$ in $^{194}\text{Au} \varepsilon$ decay. $\rho^2(\text{E0})=0.00046$ 16 (1999Wo07 evaluation). E0/E2 mixing ratio(q)=-0.17 to +0.24 with penetration parameter (λ)=-170 to +270 (1971Do12). α : for E2. |
| | | 622.007 10 | 13.68 15 | 0.0 | 0 ⁺ | E2 | | 0.01483 | | B(E2)(W.u.)=0.286 +44-35 E_γ : weighted average of 622.003 20 from $^{194}\text{Ir} \beta^-$ decay (19.18 h), 622.010 10 from $^{194}\text{Au} \varepsilon$ decay (38.02 h), 621.8 1 from ($\alpha,2n\gamma$), 622.0 2 from (n,n' γ), and 622.0 1 from Coulomb excitation. I_γ : weighted average of 13.40 16 from $^{194}\text{Ir} \beta^-$ decay (19.18 h), 13.85 12 from $^{194}\text{Au} \varepsilon$ decay (38.02 h), 19 6 from ($\alpha,2n\gamma$), and 12.2 14 from (n,n' γ). |
| 811.288 | 4 ⁺ | 482.806 8 | 100 | 328.473 | 2 ⁺ | E2 | | 0.0270 | | B(E2)(W.u.)=85.1 +48-44 E_γ : weighted average of 482.823 13 from $^{194}\text{Ir} \beta^-$ decay (19.18 h), 482.6 5 from $^{194}\text{Ir} \beta^-$ decay (171 d), 482.800 8 from $^{194}\text{Au} \varepsilon$ decay (38.02 h), 482.75 12 from ($\alpha,2n\gamma$), 482.80 6 from (n,n' γ), and 482.9 1 from Coulomb excitation. |
| 922.772 | 3 ⁺ | 111.4 4 | 0.49 15 | 811.288 | 4 ⁺ | [M1,E2] | | 4.0 9 | | $\alpha(\text{K})=2.3$ 17; $\alpha(\text{L})=1.3$ 7; $\alpha(\text{M})=0.32$ 17 $\alpha(\text{N})=0.08$ 4; $\alpha(\text{O})=0.013$ 6; $\alpha(\text{P})=0.00026$ 20 γ seen in $^{194}\text{Ir} \beta^-$ only (1976Cl03). |
| | | 300.750 7 | 100.0 10 | 622.024 | 2 ⁺ | E2(+M1) | >5 | 0.102 5 | | $\alpha(\text{K})=0.064$ 4; $\alpha(\text{L})=0.0283$ 5; $\alpha(\text{M})=0.00706$ 11 $\alpha(\text{N})=0.00173$ 3; $\alpha(\text{O})=0.000283$ 5; $\alpha(\text{P})=6.5 \times 10^{-6}$ 5 E_γ : from $^{194}\text{Au} \varepsilon$ decay (38.02 h). Others: 300.751 10 from ^{194}Ir β^- decay (19.18 h), 300.74 8 from ($\alpha,2n\gamma$), 300.74 7 from (n,n' γ), |

Adopted Levels, Gammas (continued)

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

| <u>E_i(level)</u> | <u>J_i^{π}</u> | <u>E_{γ}[†]</u> | <u>I_{γ}[†]</u> | <u>E_f</u> | <u>J_f^{π}</u> | <u>Mult.&</u> | <u>δ&</u> | <u>α^a</u> | <u>Comments</u> |
|-----------------------------|---|--|--|----------------------|---|-------------------|---------------------------------|------------------------------|---|
| 922.772 | 3 ⁺ | 594.292 10 | 18.63 14 | 328.473 | 2 ⁺ | E2(+M1) | >10 | 0.0166 3 | and 300.6 1 from Coulomb excitation. I _{γ} : from ¹⁹⁴ Au ϵ decay (38.02 h). Others: 100.0 11 from ¹⁹⁴ Ir β^- decay (19.18 h), 100 7 from ($\alpha,2n\gamma$), and 100 5 from (n,n' γ). E _{γ} : weighted average of 594.288 10 from ¹⁹⁴ Ir β^- decay (19.18 h) and 594.299 14 from ¹⁹⁴ Au ϵ decay (38.02 h). Others: 594.3 3 from ($\alpha,2n\gamma$) and 594.3 2 from (n,n' γ). I _{γ} : weighted average of 18.87 30 from ¹⁹⁴ Ir β^- decay (19.18 h) and 18.58 14 from ¹⁹⁴ Au ϵ decay (38.02 h). Others: 14 5 from ($\alpha,2n\gamma$) and 11.3 10 from (n,n' γ). I _{γ} : 11.3 9 from (n,n' γ) not used in averaging. δ : >+50 or <-10 ($\gamma\gamma(\theta)$ in ¹⁹⁴ Ir β^-). ce data in ¹⁹⁴ Au ϵ decay give 0.8 +6-4. |
| 1229.520 | 4 ⁺ | 418.19 3 | 14.6 14 | 811.288 | 4 ⁺ | (E2(+M1)) | >3 | 0.043 5 | B(M1)(W.u.)=9.2×10 ⁻⁴ +29-92; B(E2)(W.u.)=18 +8-4 $\alpha(K)$ =0.031 4; $\alpha(L)$ =0.0091 5; $\alpha(M)$ =0.00223 9 $\alpha(N)$ =0.000548 23; $\alpha(O)$ =9.2×10 ⁻⁵ 5; $\alpha(P)$ =3.3×10 ⁻⁶ 5 E _{γ} : weighted average of 418.27 7 from ¹⁹⁴ Ir β^- decay (19.18 h), 418.195 23 from ¹⁹⁴ Au ϵ decay (38.02 h), 418.2 3 from ($\alpha,2n\gamma$), 417.96 11 from (n,n' γ), and 418.1 1 from Coulomb excitation. I _{γ} : weighted average of 16.2 22 from ¹⁹⁴ Ir β^- decay (19.18 h), 14.3 15 from ¹⁹⁴ Au ϵ decay (38.02 h), 14 4 from ($\alpha,2n\gamma$), and 14.4 14 from (n,n' γ). B(E2)(W.u.)=21.5 +46-34 E _{γ} : weighted average of 607.502 24 from ¹⁹⁴ Ir β^- decay (19.18 h), 607.496 10 from ¹⁹⁴ Au ϵ decay (38.02 h), 607.5 2 from ($\alpha,2n\gamma$), 607.63 9 from (n,n' γ), and 607.5 1 from Coulomb excitation. I _{γ} : from ¹⁹⁴ Au ϵ decay (38.02 h). Others: 100 19 from ¹⁹⁴ Ir β^- decay (19.18 h), 100 20 from ($\alpha,2n\gamma$), and 100 9 from (n,n' γ). B(E2)(W.u.)=0.26 +9-7 E _{γ} : weighted average of 901.077 25 from ¹⁹⁴ Au ϵ decay (38.02 h) and 901.0 1 from Coulomb excitation. Others: 900.9 6 from ($\alpha,2n\gamma$) and 901.05 17 from (n,n' γ). I _{γ} : unweighted average of 10.7 4 from ¹⁹⁴ Au ϵ decay (38.02 h), 8 4 from ($\alpha,2n\gamma$), and 7.2 7 from (n,n' γ). B(E2)(W.u.)=8.2 +25-16 E _{γ} : weighted average of 645.169 10 from ¹⁹⁴ Ir β^- decay (19.18 h) and 645.164 9 from ¹⁹⁴ Au ϵ decay (38.02 h). Others: 645.16 10 from (n,n' γ) and 645.2 1 from Coulomb excitation. I _{γ} : from ¹⁹⁴ Ir β^- decay (19.18 h). Others: 100.0 22 from ¹⁹⁴ Au ϵ decay (38.02 h) and 100 11 from (n,n' γ). B(E2)(W.u.)=0.63 +20-13 E _{γ} : weighted average of 938.719 10 from ¹⁹⁴ Ir β^- decay (19.18 h), |
| | | 607.498 10 | 100.0 11 | 622.024 | 2 ⁺ | E2 | | 0.01565 | |
| | | 901.073 25 | 8.6 11 | 328.473 | 2 ⁺ | [E2] | | 0.00674 | |
| 1267.200 | 0 ⁺ | 645.166 9 | 100.0 10 | 622.024 | 2 ⁺ | E2 | | 0.01367 | |
| | | 938.719 9 | 49.9 7 | 328.473 | 2 ⁺ | E2 | | 0.00621 | |

Adopted Levels, Gammas (continued)

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

| <u>E_i(level)</u> | <u>J_i^π</u> | <u>E_γ[†]</u> | <u>I_γ[†]</u> | <u>E_f</u> | <u>J_f^π</u> | <u>Mult. &</u> | <u>α^a</u> | <u>I_(γ+ce)</u> | <u>Comments</u> |
|-----------------------------|----------------------------------|----------------------------------|----------------------------------|---|----------------------------------|--------------------|----------------------|---------------------------|--|
| 1267.200 | 0 ⁺ | 1267.36 16 | | 0.0 | 0 ⁺ | E0 | | 0.11 1 | 938.720 9 from ¹⁹⁴ Au ε decay (38.02 h), and 938.6 2 from (n,n'γ). I _γ : weighted average of 50.7 15 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 49.7 5 from ¹⁹⁴ Au ε decay (38.02 h), and 61 6 from (n,n'γ). q _K ² (E0/E2)=0.337 23, X(E0/E2)=0.0082 5, ρ ² (E0)=0.00019 10 (2005Ki02,evaluation). Other: ρ ² (E0)=0.00016 8 (1999Wo07,evaluation). |
| 1373.772 | (5 ⁻) | 144.5 2 562.482 15 | 1.21 35 100 33 | 1229.520 4 ⁺ 811.288 4 ⁺ | 4 ⁺ 4 ⁺ | (E1) | 0.00646 | | E _γ ,I _γ : γ seen in (α,2nγ) only. E _γ : weighted average of 562.4 5 from ¹⁹⁴ Ir β ⁻ decay (171 d), 562.478 14 from ¹⁹⁴ Au ε decay (38.02 h), 562.5 1 from (α,2nγ), 562.64 8 from (n,n'γ), and 562.4 1 from Coulomb excitation. |
| 1411.83 | 6 ⁺ | 600.5 1 | 100 | 811.288 4 ⁺ | 4 ⁺ | E2 | 0.01607 | | I _γ : from (α,2nγ). B(E2)(W.u.)=67 +30-16 E _γ : from (α,2nγ). Others: 600.5 5 from ¹⁹⁴ Ir β ⁻ decay (171 d), 600.3 2 from (n,n'γ), and 600.6 1 from Coulomb excitation. |
| 1422.21 | (3,4) ⁺ | 499.48 12 | 100 10 | 922.772 3 ⁺ | 3 ⁺ | | | | Mult.: from ce data in ¹⁹⁴ Ir β ⁻ decay (171 d). E _γ : weighted average of 499.4 2 from (α,2nγ), 499.65 9 from (n,n'γ), and 499.3 1 from Coulomb excitation. |
| | | 1093.6 2 | 23.4 24 | 328.473 2 ⁺ | 2 ⁺ | | | | I _γ : from (n,n'γ). E _γ : weighted average of 1093.9 2 from (n,n'γ) and 1093.5 1 from Coulomb excitation. |
| 1432.551 | 3 ⁻ | 59.2 4 | 0.023 6 | 1373.772 (5 ⁻) | (5 ⁻) | (E2) | 50.9 19 | | I _γ : from (n,n'γ). B(E2)(W.u.)=14 +7-5 α(L)=38.2 14; α(M)=9.9 4 α(N)=2.40 9; α(O)=0.372 14; α(P)=0.000406 12 |
| | | 203.04 3 | 16.3 15 | 1229.520 4 ⁺ | 4 ⁺ | E1 | 0.0675 | | E _γ ,I _γ : from ¹⁹⁴ Ir β ⁻ decay (19.18 h) only. B(E1)(W.u.)=2.09×10 ⁻⁵ +42-37 α(K)=0.0555 8; α(L)=0.00929 13; α(M)=0.00214 3 α(N)=0.000525 8; α(O)=9.07×10 ⁻⁵ 13; α(P)=4.85×10 ⁻⁶ 7 E _γ : weighted average of 203.056 21 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 202.96 5 from ¹⁹⁴ Au ε decay (38.02 h), and 202.8 2 from (n,n'γ). |
| | | 621.256 15 | 38.89 29 | 811.288 4 ⁺ | 4 ⁺ | E1 | 0.00527 | | I _γ : unweighted average of 18.7 9 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 16.61 32 from ¹⁹⁴ Au ε decay (38.02 h), and 13.6 17 from (n,n'γ). B(E1)(W.u.)=1.74×10 ⁻⁶ +21-19 E _γ : weighted average of 621.295 36 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 621.250 14 from ¹⁹⁴ Au ε decay (38.02 h). Others: 621.8 1 from (α,2nγ) and 621.4 2 from (n,n'γ). I _γ : from ¹⁹⁴ Au ε decay (38.02 h). Others: 39 4 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 63 31 from (α,2nγ), and 37.3 34 from (n,n'γ). |

Adopted Levels, Gammas (continued)

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

| $E_i(\text{level})$ | J_i^π | E_γ^\dagger | I_γ^\dagger | E_f | J_f^π | Mult.& | α^a | $I_{(\gamma+ce)}$ | Comments |
|---------------------|-------------------|--------------------|--------------------|----------|-------------------|--------|-----------------------|-------------------|---|
| 1432.551 | 3 ⁻ | 810.547 14 | 9.7 12 | 622.024 | 2 ⁺ | E1 | 0.00313 | | B(E1)(W.u.)=1.96×10 ⁻⁷ +47-40 E _γ : weighted average of 810.569 18 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 810.533 14 from ¹⁹⁴ Au ε decay (38.02 h), 811.0 5 from (α,2nγ), 810.5 2 from (n,n'γ), and 811 1 from Coulomb excitation. I _γ : unweighted average of 9.67 19 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 8.27 9 from ¹⁹⁴ Au ε decay (38.02 h), 13 6 from (α,2nγ), and 7.8 9 from (n,n'γ). |
| | | 1104.064 10 | 100.0 9 | 328.473 | 2 ⁺ | E1 | 1.77×10 ⁻³ | | B(E1)(W.u.)=8.0×10 ⁻⁷ 9 E _γ : weighted average of 1104.073 10 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 1104.056 10 from ¹⁹⁴ Au ε decay (38.02 h), 1104.0 3 from (α,2nγ), 1104.01 8 from (n,n'γ), and 1104 1 from Coulomb excitation. I _γ : from ¹⁹⁴ Au ε decay (38.02 h). Others: 100.0 14 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 100 16 from (α,2nγ), and 100 5 from (n,n'γ). |
| | | 1432.542 14 | 3.28 6 | 0.0 | 0 ⁺ | [E3] | 0.00566 | | B(E3)(W.u.)=7.7 +11-9 E _γ : from ¹⁹⁴ Au ε decay (38.02 h). Other: 1432.56 8 from ¹⁹⁴ Ir β ⁻ decay (19.18 h). I _γ : weighted average of 3.33 14 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 3.27 6 from ¹⁹⁴ Au ε decay (38.02 h). |
| 1479.272 | 0 ⁺ | 857.234 18 | 0.974 22 | 622.024 | 2 ⁺ | [E2] | 0.00746 | | E _γ : weighted average of 857.224 14 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 857.265 24 from ¹⁹⁴ Au ε decay (38.02 h). I _γ : weighted average of 0.976 13 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 0.69 17 from ¹⁹⁴ Au ε decay (38.02 h). |
| | | 1150.788 10 | 100.0 10 | 328.473 | 2 ⁺ | E2 | 0.00416 | | E _γ : weighted average of 1150.799 12 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1150.780 10 from ¹⁹⁴ Au ε decay (38.02 h). Other: 1150.8 2 from (n,n'γ). I _γ : from ¹⁹⁴ Au ε decay (38.02 h). Other: 100.0 11 from ¹⁹⁴ Ir β ⁻ decay (19.18 h). |
| | | 1479.33 11 | | 0.0 | 0 ⁺ | E0 | | 5.5 4 | q _K ² (E0/E2)=10.4 4, X(E0/E2)=0.410 16 (2005Ki02 evaluation). |
| 1485.04 | (7 ⁻) | 111.4 2 | 100 | 1373.772 | (5 ⁻) | (E2) | 3.15 | | B(E2)(W.u.)=34.5 13 α(K)=0.617 9; α(L)=1.90 4; α(M)=0.492 8 α(N)=0.1201 20; α(O)=0.0187 3; α(P)=6.66×10 ⁻⁵ 10 E _γ : from (α,2nγ). Other: 111.7 5 from ¹⁹⁴ Ir β ⁻ decay (171 d). Mult.: deduced from intensity balance in ¹⁹⁴ Ir β ⁻ decay (171 d). |
| 1498.77 | (5 ⁺) | 576.0 2 | 100 | 922.772 | 3 ⁺ | | | | E _γ : from (α,2nγ). |
| 1512.004 | 2 ⁺ | 244.781 19 | 3.06 7 | 1267.200 | 0 ⁺ | (E2) | 0.184 | | α(K)=0.1019 15; α(L)=0.0623 9; α(M)=0.01576 22 |

Adopted Levels, Gammas (continued)

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

| <u>E_i(level)</u> | <u>J^{π}_i</u> | <u>E_{γ}^{\dagger}</u> | <u>I_{γ}^{\dagger}</u> | <u>E_f</u> | <u>J^{π}_f</u> | <u>Mult. &</u> | <u>δ &</u> | <u>α^a</u> | <u>Comments</u> |
|-----------------------------|---|---|---|----------------------|---|--------------------|----------------------------------|------------------------------|--|
| 1512.004 | 2 ⁺ | 589.207 10 | 44.3 8 | 922.772 | 3 ⁺ | E2+M1 | 2.2 +6-4 | 0.0226 23 | $\alpha(\text{N})=0.00386$ 6; $\alpha(\text{O})=0.000620$ 9; $\alpha(\text{P})=9.98\times 10^{-6}$ 14 E _{γ} : weighted average of 244.769 19 from ¹⁹⁴ Ir β^- decay (19.18 h) and 244.798 22 from ¹⁹⁴ Au ϵ decay (38.02 h). I _{γ} : weighted average of 2.91 16 from ¹⁹⁴ Ir β^- decay (19.18 h) and 3.09 7 from ¹⁹⁴ Au ϵ decay (38.02 h). E _{γ} : weighted average of 589.202 19 from ¹⁹⁴ Ir β^- decay (19.18 h) and 589.208 10 from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 589.18 11 from (n,n' γ). I _{γ} : unweighted average of 45.1 5 from ¹⁹⁴ Ir β^- decay (19.18 h) and 43.5 4 from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 34 4 from (n,n' γ) is discrepant. |
| | | 700.680 16 | 8.93 16 | 811.288 | 4 ⁺ | E2 | | 0.01140 | E _{γ} : weighted average of 700.687 20 from ¹⁹⁴ Ir β^- decay (19.18 h) and 700.675 16 from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 700.5 2 from (n,n' γ). I _{γ} : unweighted average of 8.77 9 from ¹⁹⁴ Ir β^- decay (19.18 h) and 9.08 9 from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 44 4 from (n,n' γ) is discrepant. |
| | | 889.980 10 | 17.78 18 | 622.024 | 2 ⁺ | E2+M1 | +0.50 16 | 0.0155 12 | E _{γ} : weighted average of 889.986 10 from ¹⁹⁴ Ir β^- decay (19.18 h) and 889.969 14 from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 889.90 15 from (n,n' γ). I _{γ} : weighted average of 17.67 18 from ¹⁹⁴ Ir β^- decay (19.18 h) and 18.08 30 from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 29.3 29 from (n,n' γ) is discrepant. δ : from ce and $\gamma\gamma(\theta)$ in ¹⁹⁴ Au ϵ decay (38.02 h). Other: +1.51 40 from $\gamma(\theta)$ in ¹⁹⁴ Ir β^- decay (19.18 h). |
| | | 1183.537 10 | 100.0 9 | 328.473 | 2 ⁺ | M1+E2 | +1.09 +18-16 | 0.0061 4 | E _{γ} : weighted average of 1183.539 10 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1183.535 10 from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 1183.60 12 from (n,n' γ). I _{γ} : from ¹⁹⁴ Ir β^- decay (19.18 h). Others: 100.0 10 from ¹⁹⁴ Au ϵ decay (38.02 h) and 100 7 from (n,n' γ). δ : unweighted average of +1.32 9 (1983Ri14) and +0.9 1 (1973Si22) from $\gamma(\theta)$ in ¹⁹⁴ Ir β^- decay (19.18 h) and +1.09 +18-16 from ce and $\gamma\gamma(\theta)$ in ¹⁹⁴ Au ϵ decay (38.02 h). |
| | | 1512.071 [#] 14 | 7.5 10 | 0.0 | 0 ⁺ | (E2) | | 0.00255 | E _{γ} : weighted average of 1511.98 10 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1512.073 14 from ¹⁹⁴ Au ϵ decay (38.02 h). I _{γ} : weighted average of 7.9 10 from ¹⁹⁴ Ir β^- decay (19.18 h) and 6.7 15 from ¹⁹⁴ Au ϵ decay (38.02 h). Level-energy difference=1512.998. B(E2)(W.u.)=14.4 +10-12 |
| 1547.281 | 0 ⁺ | 925.260 14 | 25.5 6 | 622.024 | 2 ⁺ | E2 | | 0.00639 | E _{γ} : weighted average of 925.269 14 from ¹⁹⁴ Ir β^- decay |

Adopted Levels, Gammas (continued)

| $\gamma(^{194}\text{Pt})$ (continued) | | | | | | | | | | |
|---------------------------------------|-------------------|-----------------------|--------------------|---------|----------------|----------|-------------|------------|-------------------|---|
| $E_i(\text{level})$ | J_i^π | E_γ^\dagger | I_γ^\dagger | E_f | J_f^π | Mult.& | $\delta^\&$ | α^a | $I_{(\gamma+ce)}$ | Comments |
| 1547.281 | 0 ⁺ | 1218.802 10 | 100.0 9 | 328.473 | 2 ⁺ | E2 | | 0.00373 | | (19.18 h) and 925.251 14 from ^{194}Au ϵ decay (38.02 h). Others: 925.5 3 from (n,n' γ) and 925.3 1 from Coulomb excitation. I_γ : unweighted average of 24.94 23 from ^{194}Ir β^- decay (19.18 h) and 26.12 26 from ^{194}Au ϵ decay (38.02 h). Other: 48 4 from (n,n' γ) is discrepant. B(E2)(W.u.)=14.3 +10-11 E_γ : weighted average of 1218.813 10 from ^{194}Ir β^- decay (19.18 h), 1218.791 10 from ^{194}Au ϵ decay (38.02 h), 1218.75 13 from (n,n' γ), and 1218.8 1 from Coulomb excitation. I_γ : from ^{194}Ir β^- decay (19.18 h). Others: 100.0 10 from ^{194}Au ϵ decay (38.02 h) and 100 10 from (n,n' γ). E_γ ,Mult.: transition seen only in ce data in ^{194}Au ϵ decay (38.02 h). $q_K^2(E0/E2)=0.53$ 4, $X(E0/E2)=0.0238$ 18, $\rho^2(E0)=0.010$ 4 (2005Ki02, evaluation). Other: $\rho^2(E0)=0.011$ 4 (1999Wo07, evaluation). E_γ : from ($\alpha,2n\gamma$) only. |
| | | 1547.9 4 | | 0.0 | 0 ⁺ | E0 | | | 0.23 2 | |
| 1592.8 | (5 ⁺) | 670.0 3 | 100 | 922.772 | 3 ⁺ | | | | | |
| 1622.197 | 2 ⁺ | 699.29 [@] 4 | 8.0 4 | 922.772 | 3 ⁺ | [M1,E2] | | 0.022 11 | | E_γ : unweighted average of 699.332 29 from ^{194}Ir β^- decay (19.18 h) and 699.257 18 from ^{194}Au ϵ decay (38.02 h). I_γ : unweighted average of 7.60 25 from ^{194}Ir β^- decay (19.18 h) and 8.43 23 from ^{194}Au ϵ decay (38.02 h). |
| | | 1000.178 10 | 84 8 | 622.024 | 2 ⁺ | M1+E2 | 1.38 +13-12 | 0.0081 4 | | E_γ : weighted average of 1000.173 10 from ^{194}Ir β^- decay (19.18 h) and 1000.190 15 from ^{194}Au ϵ decay (38.02 h). Other: 999.99 14 from (n,n' γ). I_γ : unweighted average of 76.2 9 from ^{194}Ir β^- decay (19.18 h), 99 7 from ^{194}Au ϵ decay (38.02 h), and 76 8 from (n,n' γ). |
| | | 1293.716 14 | 79 6 | 328.473 | 2 ⁺ | E2+M1+E0 | -0.9 1 | 0.0192 8 | | E_γ : weighted average of 1293.723 14 from ^{194}Ir β^- decay (19.18 h) and 1293.708 14 from ^{194}Au ϵ decay (38.02 h). Other: 1293.5 2 from (n,n' γ). I_γ : unweighted average of 71.4 6 from ^{194}Ir β^- decay (19.18 h), 73.7 7 from ^{194}Au ϵ decay (38.02 h), and 91 10 from (n,n' γ). δ : E2/M1 ratio from $\gamma\gamma(\theta)$ in ^{194}Ir β^- decay (19.18 h). α : from ^{194}Au ϵ decay. |
| | | 1622.185 14 | 100.0 10 | 0.0 | 0 ⁺ | E2 | | 0.00229 | | E_γ : from ^{194}Ir β^- decay (19.18 h). Others: 1622.185 14 from ^{194}Au ϵ decay (38.02 h) and |

Adopted Levels, Gammas (continued)

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

| <u>$E_i(\text{level})$</u> | <u>J_i^π</u> | <u>E_γ</u> | <u>I_γ</u> | <u>E_f</u> | <u>J_f^π</u> | <u>Mult.</u> | <u>δ</u> | <u>α^a</u> | <u>$I_{(\gamma+ce)}$</u> | <u>Comments</u> |
|---------------------------------------|-----------------------------|------------------------------|------------------------------|-------------------------|-----------------------------|--------------|----------------------------|------------------------------|-------------------------------------|---------------------------------|
| | | | | | | | | | | 1622.4 3 from (n,n' γ). |

Adopted Levels, Gammas (continued)

| $\gamma(^{194}\text{Pt})$ (continued) | | | | | | | | | |
|---------------------------------------|-------------------|-------------------------|--------------------|----------------|-------------------|---------|-------------|------------|--|
| $E_i(\text{level})$ | J_i^π | E_γ^\dagger | I_γ^\dagger | E_f | J_f^π | Mult. & | $\delta^\&$ | α^a | Comments |
| 1670.667 | 2 ⁺ | 747.88 ^c 4 | 0.321 19 | 922.772 | 3 ⁺ | [M1,E2] | | 0.019 9 | I _γ : from ¹⁹⁴ Au ε decay (38.02 h). Others: 100.0 11 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 100 10 from (n,n'γ). E _γ ,I _γ : from ¹⁹⁴ Au ε decay (38.02 h) only. E _γ : weighted average of 859.396 25 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 859.370 24 from ¹⁹⁴ Au ε decay (38.02 h). I _γ : from ¹⁹⁴ Au ε decay (38.02 h). Other: 4.38 20 from ¹⁹⁴ Ir β ⁻ decay (19.18 h). E _γ : weighted average of 1048.655 14 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 1048.633 10 from ¹⁹⁴ Au ε decay (38.02 h), and 1048.55 13 from (n,n'γ). I _γ : weighted average of 66.4 7 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 66.4 7 from ¹⁹⁴ Au ε decay (38.02 h). Other: 93 9 from (n,n'γ). E _γ : weighted average of 1342.204 10 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 1342.170 10 from ¹⁹⁴ Au ε decay (38.02 h), and 1342.12 14 from (n,n'γ). I _γ : from ¹⁹⁴ Ir β ⁻ decay (19.18 h). Others: 100.0 19 from ¹⁹⁴ Au ε decay (38.02 h) and 100 10 from (n,n'γ). E _γ : weighted average of 1670.680 16 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1670.665 14 from ¹⁹⁴ Au ε decay (38.02 h). I _γ : unweighted average of 14.87 13 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 14.00 14 from ¹⁹⁴ Au ε decay (38.02 h). α(K)=0.15 10; α(L)=0.033 7; α(M)=0.0079 13 α(N)=0.0019 3; α(O)=0.00034 7; α(P)=1.7×10 ⁻⁵ 11 α(K)=0.0383 6; α(L)=0.01413 20; α(M)=0.00350 5 α(N)=0.000859 13; α(O)=0.0001418 20; α(P)=3.94×10 ⁻⁶ 6 α(K)=0.0139 15; α(L)=0.00224 20; α(M)=0.00052 5 α(N)=0.000128 12; α(O)=2.30×10 ⁻⁵ 21; α(P)=1.54×10 ⁻⁶ 17 E _γ : weighted average of 1156.48 4 from ¹⁹⁴ Ir β ⁻ |
| | | 859.382 24 | 4.44 6 | 811.288 | 4 ⁺ | (E2) | | 0.00742 | |
| | | 1048.640 10 | 66.4 7 | 622.024 | 2 ⁺ | M1 | | 0.01161 | |
| | | 1342.187 12 | 100.0 10 | 328.473 | 2 ⁺ | M1+E2 | -0.23 9 | 0.00612 16 | |
| 1670.672 14 | | 14.4 4 | 0.0 | 0.0 | 0 ⁺ | (E2) | | 0.00219 | |
| | | | | | | | | | |
| 1737.427 | (3 ⁻) | 304.886 17 | 100.0 21 | 1432.551 | 3 ⁻ | [M1,E2] | | 0.19 10 | |
| | | 363.10 [@] 18 | 34 8 | 1373.772 | (5 ⁻) | [E2] | | 0.0569 | |
| 1778.578 | 2 ⁺ | 814.59 6 | 34.8 21 | 922.772 | 3 ⁺ | [E1] | | 0.00310 | |
| | | 345.984 ^c 20 | 1.03 5 | 1432.551 | 3 ⁻ | [E1] | | 0.0187 | |
| | | 855.823 17 | 14.09 14 | 922.772 | 3 ⁺ | (M1+E2) | 0.53 +22-24 | 0.0168 17 | |
| 1156.542 16 | | 100.0 10 | 622.024 | 2 ⁺ | M1(+E2) | <0.2 | 0.00898 16 | | |

Adopted Levels, Gammas (continued)

$\gamma(^{194}\text{Pt})$ (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>δ&</u> | <u>α^a</u> | <u>Comments</u> |
|-----------------------------|---|---|---|----------------------|---|-------------------|---------------------------------|------------------------------|--|
| 1778.578 | 2 ⁺ | 1450.25 13 | 71 7 | 328.473 | 2 ⁺ | M1+E2 | -0.27 10 | 0.00506 15 | decay (19.18 h), 1156.550 14 from ¹⁹⁴ Au ϵ decay (38.02 h), and 1156.5 2 from (n,n' γ). I _{γ} : from ¹⁹⁴ Au ϵ decay (38.02 h). Others: 100 4 from ¹⁹⁴ Ir β^- decay (19.18 h) and 100 10 from (n,n' γ). $\alpha(K)=0.00414$ 13; $\alpha(L)=0.000645$ 19; $\alpha(M)=0.000148$ 5 $\alpha(N)=3.66\times 10^{-5}$ 11; $\alpha(O)=6.61\times 10^{-6}$ 19; $\alpha(P)=4.55\times 10^{-7}$ 14; $\alpha(IPF)=7.69\times 10^{-5}$ 18 E _{γ} : unweighted average of 1450.137 14 from ¹⁹⁴ Ir β^- decay (19.18 h), 1450.098 14 from ¹⁹⁴ Au ϵ decay (38.02 h), and 1450.5 2 from (n,n' γ). I _{γ} : unweighted average of 61.6 24 from ¹⁹⁴ Ir β^- decay (19.18 h), 68.6 7 from ¹⁹⁴ Au ϵ decay (38.02 h), and 84 9 from (n,n' γ). |
| | | 1778.39 14 | 8.3 3 | 0.0 | 0 ⁺ | (E2) | | 0.00201 | E _{γ} : unweighted average of 1778.25 14 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1778.532 20 from ¹⁹⁴ Au ϵ decay (38.02 h). I _{γ} : weighted average of 9.2 8 from ¹⁹⁴ Ir β^- decay (19.18 h) and 8.19 27 from ¹⁹⁴ Au ϵ decay (38.02 h). $\alpha(K)=0.098$ 6; $\alpha(L)=0.0165$ 6; $\alpha(M)=0.00383$ 13 $\alpha(N)=0.00095$ 3; $\alpha(O)=0.000169$ 6; $\alpha(P)=1.10\times 10^{-5}$ 6 E _{γ} : weighted average of 409.8 1 from ($\alpha,2n\gamma$) and 409.69 10 from (n,n' γ). Mult., δ : from $\gamma(\theta)$ and ce data in ($\alpha,2n\gamma$). $\alpha(K)=0.0333$ 5; $\alpha(L)=0.00546$ 8; $\alpha(M)=0.001258$ 18 $\alpha(N)=0.000308$ 5; $\alpha(O)=5.36\times 10^{-5}$ 8; $\alpha(P)=2.98\times 10^{-6}$ 5 |
| 1783.52 | (6 ⁻) | 409.75 10 | 100 | 1373.772 | (5 ⁻) | M1+E2 | +0.4 1 | 0.119 6 | $\alpha(K)=0.0378$ 6; $\alpha(L)=0.01390$ 20; $\alpha(M)=0.00344$ 5 $\alpha(N)=0.000844$ 12; $\alpha(O)=0.0001394$ 20; $\alpha(P)=3.90\times 10^{-6}$ 6 E _{γ} : weighted average of 364.852 10 from ¹⁹⁴ Ir β^- decay (19.18 h), 364.836 6 from ¹⁹⁴ Au ϵ decay (38.02 h), and 364.8 2 from (n,n' γ). I _{γ} : weighted average of 23.45 28 from ¹⁹⁴ Ir β^- decay (19.18 h) and 23.55 23 from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 69 7 from (n,n' γ) is discrepant. |
| 1797.390 | 1 ⁻ | 250.102 17 | 0.549 7 | 1547.281 | 0 ⁺ | E1 | | 0.0404 | E _{γ} : weighted average of 530.184 14 from ¹⁹⁴ Ir β^- decay (19.18 h) and 530.173 10 from ¹⁹⁴ Au ϵ decay (38.02 h). I _{γ} : weighted average of 9.16 7 from ¹⁹⁴ Ir β^- decay (19.18 h) and 9.03 8 from ¹⁹⁴ Au ϵ decay (38.02 h). E _{γ} : weighted average of 1175.377 10 from ¹⁹⁴ Ir β^- |
| | | 318.122 10 | 3.189 28 | 1479.272 | 0 ⁺ | E1 | | 0.0227 | |
| | | 364.840 6 | 23.51 23 | 1432.551 | 3 ⁻ | E2 | | 0.0562 | |
| | | 530.177 10 | 9.10 7 | 1267.200 | 0 ⁺ | E1 | | 0.00730 | |
| | | 1175.369 10 | 31.6 3 | 622.024 | 2 ⁺ | E1 | | 1.60 $\times 10^{-3}$ | |

Adopted Levels, Gammas (continued)

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

| <u>E_i(level)</u> | <u>J_i^{π}</u> | <u>E_{γ}[†]</u> | <u>I_{γ}[†]</u> | <u>E_f</u> | <u>J_f^{π}</u> | <u>Mult.&</u> | <u>δ&</u> | <u>α^a</u> | <u>I_($\gamma+ce$)</u> | <u>Comments</u> |
|-----------------------------|---|--|--|----------------------|---|-------------------|---------------------------------|------------------------------|---|--|
| 1797.390 | 1 ⁻ | 1468.907 10 | 100.0 7 | 328.473 | 2 ⁺ | E1 | | 1.23×10 ⁻³ | | decay (19.18 h), 1175.360 10 from ¹⁹⁴ Au ϵ decay (38.02 h), and 1175.4 2 from (n,n' γ). I _{γ} : weighted average of 31.69 28 from ¹⁹⁴ Ir β^- decay (19.18 h), 31.52 28 from ¹⁹⁴ Au ϵ decay (38.02 h), and 25.9 24 from (n,n' γ). E _{γ} : weighted average of 1468.910 10 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1468.904 10 from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 1468.99 12 from (n,n' γ). I _{γ} : from ¹⁹⁴ Ir β^- decay (19.18 h). Others: 100.0 10 from ¹⁹⁴ Au ϵ decay (38.02 h) and 100 11 from (n,n' γ). |
| | | 1797.406 14 | 8.93 24 | 0.0 | 0 ⁺ | E1 | | 1.16×10 ⁻³ | | E _{γ} : weighted average of 1797.408 14 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1797.404 14 from ¹⁹⁴ Au ϵ decay (38.02 h). I _{γ} : unweighted average of 9.16 7 from ¹⁹⁴ Ir β^- decay (19.18 h) and 8.69 8 from ¹⁹⁴ Au ϵ decay (38.02 h). |
| 1802.646? | 1 ⁺ ,2 ⁺ | 1802.637 ^b 14 | 100 ^b | 0.0 | 0 ⁺ | M1,E2 | | 0.0026 7 | | E _{γ} ,I _{γ} : reported in (n,n' γ) only. |
| 1816.591 | (2) ⁺ | 304.8 ^c 3 894.29 22 | 159 15 85 17 | 1512.004 922.772 | 2 ⁺ 3 ⁺ | (M1+E2) | 1.1 +8-4 | 0.0116 25 | | E _{γ} : unweighted average of 894.07 18 from ¹⁹⁴ Au ϵ decay (38.02 h) and 894.51 13 from (n,n' γ). I _{γ} : from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 113 11 from (n,n' γ). |
| | | 1005.292 ^c 13 1194.530 19 | 46.1 7 100 15 | 811.288 622.024 | 4 ⁺ 2 ⁺ | (E2) | | 0.00388 | | E _{γ} : weighted average of 1194.529 14 from ¹⁹⁴ Au ϵ decay (38.02 h) and 1194.8 2 from (n,n' γ). I _{γ} : from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 100 11 from (n,n' γ). |
| | | 1488.94 [#] 15 | 31.9 19 | 328.473 | 2 ⁺ | | | | | E _{γ} : weighted average of 1489.01 9 from ¹⁹⁴ Au ϵ decay (38.02 h) and 1488.6 2 from (n,n' γ). I _{γ} : from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 217 28 from (n,n' γ). Level-energy difference=1488.112. |
| 1888.35 | (2,3,4) | 1816.33 17 455.80 9 | <3.4 100 | 0.0 1432.551 | 0 ⁺ 3 ⁻ | | | | | E _{γ} : from (n,n' γ). Mult.: $\gamma(\theta)$ does not allow $\Delta J=2$. |

Adopted Levels, Gammas (continued)

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

| <u>E_i(level)</u> | <u>J_i^π</u> | <u>E_γ[†]</u> | <u>I_γ[†]</u> | <u>E_f</u> | <u>J_f^π</u> | <u>Mult.&</u> | <u>δ&</u> | <u>α^a</u> | <u>I_(γ+ce)</u> | <u>Comments</u> |
|-----------------------------|----------------------------------|---|-------------------------------------|--|--|--------------------------|---------------|--------------------------------|---------------------------|--|
| 1893.588 | 0 ⁺ | 1565.118 14 | 100 4 | 328.473 | 2 ⁺ | | | | | E _γ : weighted average of 1565.116 14 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1565.20 8 from ¹⁹⁴ Au ε decay (38.02 h). |
| 1924.285 | 1 ⁺ | 1893.1 ^c 4 126.82 ^c 4 | 0.281 25 | 1797.390 | 1 ⁻ | (E0) [E1] | | 0.222 | 1.2 3 | E _γ ,Mult.: from ce data only in ¹⁹⁴ Au ε decay. α(K)=0.181 3; α(L)=0.0322 5; α(M)=0.00747 11 α(N)=0.00182 3; α(O)=0.000309 5; α(P)=1.478×10 ⁻⁵ 21 α(K)=0.30 11; α(L)=0.062 4; α(M)=0.0146 6 α(N)=0.00360 14; α(O)=0.00063 5; α(P)=3.3×10 ⁻⁵ 12 α(K)=0.072 25; α(L)=0.014 3; α(M)=0.0032 6 α(N)=0.00079 14; α(O)=0.00014 3; α(P)=8.E-6 3 |
| | | 253.61 7 | 0.159 18 | 1670.667 | 2 ⁺ | M1(+E2) | <1.4 | 0.38 11 | | |
| | | 412.288 17 | 0.893 12 | 1512.004 | 2 ⁺ | (M1+E2) | 0.9 +8-5 | 0.09 3 | | |
| | | 1001.481 ^c 28 1302.255 14 1595.806 14 | 0.590 22 13.30 12 90 3 | 922.772 622.024 328.473 | 3 ⁺ 2 ⁺ 2 ⁺ | [E2] (M1+E2) M1+E2 | | 0.00546 0.0059 5 0.00420 | | E _γ : weighted average of 1595.802 23 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1595.807 14 from ¹⁹⁴ Au ε decay (38.02 h). Other: 1595.6 2 from (n,n'γ). |
| | | 1924.289 25 | 100.0 15 | 0.0 | 0 ⁺ | M1 | | 0.00290 | | I _γ : unweighted average of 84.5 13 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 91.7 9 from ¹⁹⁴ Au ε decay (38.02 h), and 93 10 from (n,n'γ). E _γ : weighted average of 1924.327 28 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 1924.273 20 from ¹⁹⁴ Au ε decay (38.02 h), and 1924.0 2 from (n,n'γ). I _γ : from ¹⁹⁴ Au ε decay (38.02 h). Others: 100.0 19 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 100 10 from (n,n'γ). |
| 1925.85 | (6 ⁺) | 514.0 1 | 6 4 | 1411.83 | 6 ⁺ | | | | | Branching ratio for 514γ, 696γ and 1114γ deduced from T _{1/2} (1926 level) and B(E2) values from 1996Wu07 in Coulomb excitation. |
| 1930.368 | 2 ⁺ | 696.4 1 1114.5 1 308.17 ^c 4 1007.582 14 | 100 20 12 4 1.59 13 25.9 4 | 1229.520 811.288 1622.197 922.772 | 4 ⁺ 4 ⁺ 2 ⁺ 3 ⁺ | (M1+E2) | 1.1 +5-3 | 0.0088 13 | | E _γ : from ¹⁹⁴ Au ε decay (38.02 h). Others: 1007.55 7 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1007.57 9 from (n,n'γ). I _γ : weighted average of 27.7 32 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 25.89 34 from ¹⁹⁴ Au ε decay (38.02 h). Other: 149 15 from (n,n'γ). |

Adopted Levels, Gammas (continued)

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

| $E_i(\text{level})$ | J_i^π | E_γ^\dagger | I_γ^\dagger | E_f | J_f^π | Mult.& | $\delta^\&$ | α^a | Comments |
|---------------------|----------------|--------------------------|--------------------|----------|-------------------|---------|-------------|-----------------------|--|
| 1930.368 | 2 ⁺ | 1119.117 22 | 27.7 5 | 811.288 | 4 ⁺ | [E2] | | 0.00439 | E_γ : weighted average of 1119.118 16 from ¹⁹⁴ Au ϵ decay (38.02 h) and 1118.7 3 from (n,n' γ). I_γ : weighted average of 27.6 5 from ¹⁹⁴ Au ϵ decay (38.02 h) and 30.1 32 from (n,n' γ). Mult.: D+Q suggested in ce data (¹⁹⁴ Au ϵ decay) is inconsistent with $\Delta J=2$ from level scheme. |
| | | 1308.328 14 | 62.2 5 | 622.024 | 2 ⁺ | (M1+E2) | 1.7 +11-5 | 0.0042 6 | E_γ : weighted average of 1308.304 40 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1308.331 14 from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 1308.3 2 from (n,n' γ). I_γ : weighted average of 62.9 19 from ¹⁹⁴ Ir β^- decay (19.18 h), and 62.2 5 from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 122 14 in (n,n' γ). |
| | | 1601.913 20 | 100.0 11 | 328.473 | 2 ⁺ | M1(+E2) | <-0.2 | 0.00414 7 | E_γ : weighted average of 1601.947 17 from ¹⁹⁴ Ir β^- decay (19.18 h), 1601.891 14 from ¹⁹⁴ Au ϵ decay (38.02 h), and 1601.8 2 from (n,n' γ). I_γ : from ¹⁹⁴ Au ϵ decay (38.02 h). Others: 100.0 19 from ¹⁹⁴ Ir β^- decay (19.18 h), 100 11 from (n,n' γ). |
| 1961.332 | 2 ⁻ | 1930.35 9 | 0.70 18 | 0.0 | 0 ⁺ | [E2] | | 0.00182 | $\alpha(\text{K})=0.1295$ 19; $\alpha(\text{L})=0.0226$ 4; $\alpha(\text{M})=0.00524$ 8 $\alpha(\text{N})=0.001277$ 18; $\alpha(\text{O})=0.000218$ 3; $\alpha(\text{P})=1.079 \times 10^{-5}$ 16 |
| | | 144.742 ^c 15 | 0.60 4 | 1816.591 | (2) ⁺ | [E1] | | 0.1589 | |
| | | 163.951 24 | 7.22 18 | 1797.390 | 1 ⁻ | M1+E2 | 0.50 +7-8 | 1.45 5 | $\alpha(\text{K})=1.13$ 6; $\alpha(\text{L})=0.244$ 7; $\alpha(\text{M})=0.0582$ 20 $\alpha(\text{N})=0.0143$ 5; $\alpha(\text{O})=0.00249$ 7; $\alpha(\text{P})=0.000128$ 7 |
| | | 223.911 21 | 1.92 4 | 1737.427 | (3 ⁻) | (M1+E2) | 1.7 +14-5 | 0.36 8 | $\alpha(\text{K})=0.24$ 7; $\alpha(\text{L})=0.0901$ 14; $\alpha(\text{M})=0.0223$ 4 $\alpha(\text{N})=0.00548$ 9; $\alpha(\text{O})=0.000904$ 17; $\alpha(\text{P})=2.6 \times 10^{-5}$ 9 |
| | | 290.688 14 | 11.48 18 | 1670.667 | 2 ⁺ | E1 | | 0.0281 | $\alpha(\text{K})=0.0232$ 4; $\alpha(\text{L})=0.00375$ 6; $\alpha(\text{M})=0.000864$ 12 $\alpha(\text{N})=0.000212$ 3; $\alpha(\text{O})=3.70 \times 10^{-5}$ 6; $\alpha(\text{P})=2.12 \times 10^{-6}$ 3 |
| | | 339.01 13 | 0.592 21 | 1622.197 | 2 ⁺ | [E1] | | 0.0196 | $\alpha(\text{K})=0.0265$ 9; $\alpha(\text{L})=0.00542$ 12; $\alpha(\text{M})=0.00128$ 3 $\alpha(\text{N})=0.000317$ 7; $\alpha(\text{O})=5.51 \times 10^{-5}$ 13; $\alpha(\text{P})=2.89 \times 10^{-6}$ 10 |
| | | 449.317 12 | 8.56 7 | 1512.004 | 2 ⁺ | (E1) | | 0.01040 | |
| | | 528.773 9 | 100.0 11 | 1432.551 | 3 ⁻ | M1+E2 | -1.68 +8-7 | 0.0336 10 | |
| | | 1038.567 14 | 17.57 18 | 922.772 | 3 ⁺ | E1 | | 0.00198 | E_γ : weighted average of 528.773 8 from ¹⁹⁴ Au ϵ decay (38.02 h) and 529.0 2 from (n,n' γ). |
| | | 1339.251 [@] 14 | 12.68 14 | 622.024 | 2 ⁺ | E1 | | 1.34×10^{-3} | |
| | | 1632.847 16 | 15.07 18 | 328.473 | 2 ⁺ | E1 | | 1.17×10^{-3} | |

Adopted Levels, Gammas (continued)

| $\gamma(^{194}\text{Pt})$ (continued) | | | | | | | | | |
|---------------------------------------|-----------------------|---------------------------------------|--------------------|---|-------------------|-------------------|------------|----------------------------------|---|
| $E_i(\text{level})$ | J_i^π | E_γ^\dagger | I_γ^\dagger | E_f | J_f^π | Mult. & | δ & | α^a | Comments |
| 1984.4 | (6,7,8 ⁺) | 572.6 3 | 100 | 1411.83 | 6 ⁺ | | | | E_γ : from ($\alpha,2n\gamma$) only. |
| 1991.69 | (7 ⁻) | 506.7 2 | 100 14 | 1485.04 | (7 ⁻) | M1,E2 | | 0.05 3 | $\alpha(\text{K})=0.040$ 23; $\alpha(\text{L})=0.007$ 3; $\alpha(\text{M})=0.0017$ 6 $\alpha(\text{N})=0.00043$ 15; $\alpha(\text{O})=8.E-5$ 3; $\alpha(\text{P})=4.E-6$ 3 Mult.: from ce and $\gamma(\theta)$ in ($\alpha,2n\gamma$). |
| 1999.8 | (8 ⁻) | 617.8 3 514.8 2 | 17 6 100 | 1373.772 (5 ⁻) 1485.04 (7 ⁻) | | M1+E2 | +0.5 1 | 0.062 4 | $\alpha(\text{K})=0.051$ 3; $\alpha(\text{L})=0.0086$ 4; $\alpha(\text{M})=0.00199$ 8 $\alpha(\text{N})=0.000492$ 20; $\alpha(\text{O})=8.8\times 10^{-5}$ 4; $\alpha(\text{P})=5.7\times 10^{-6}$ 4 Mult., δ : from ce and $\gamma(\theta)$ data in ($\alpha,2n\gamma$). |
| 2003.659 | (2 ⁺) | 1080.90 11 1675.174 18 | 16.5 14 100.0 7 | 922.772 3 ⁺ 328.473 2 ⁺ | | (M1(+E2)) (M1) | <0.4 | 0.0103 5 0.00379 | E_γ : weighted average of 1675.147 24 from ¹⁹⁴ Ir β^- decay (19.18 h), 1675.188 18 from ¹⁹⁴ Au ϵ decay (38.02 h), and 1675.27 15 from (n,n' γ). |
| 2043.718 | 1 ⁺ | 2003.651 19 227.05 ^c 11 | 8.6 4 0.094 10 | 0.0 0 ⁺ 1816.591 (2 ⁺) | | [E2] [M1,E2] | | 1.75 $\times 10^{-3}$ 0.45 21 | $\alpha(\text{K})=0.33$ 21; $\alpha(\text{L})=0.087$ 3; $\alpha(\text{M})=0.0210$ 6 $\alpha(\text{N})=0.00516$ 11; $\alpha(\text{O})=0.00088$ 4; $\alpha(\text{P})=3.7\times 10^{-5}$ 25 |
| | | 265.091 ^c 27 | 0.140 7 | 1778.578 2 ⁺ | | [M1,E2] | | 0.29 15 | $\alpha(\text{K})=0.22$ 14; $\alpha(\text{L})=0.052$ 7; $\alpha(\text{M})=0.0124$ 10 $\alpha(\text{N})=0.0031$ 3; $\alpha(\text{O})=0.00052$ 7; $\alpha(\text{P})=2.4\times 10^{-5}$ 16 |
| | | 373.11 4 | 0.175 9 | 1670.667 2 ⁺ | | [M1,E2] | | 0.11 6 | $\alpha(\text{K})=0.09$ 6; $\alpha(\text{L})=0.018$ 5; $\alpha(\text{M})=0.0042$ 11 $\alpha(\text{N})=0.0010$ 3; $\alpha(\text{O})=0.00018$ 6; $\alpha(\text{P})=1.0\times 10^{-5}$ 6 |
| | | 421.59 6 | 0.740 14 | 1622.197 2 ⁺ | | [M1,E2] | | 0.08 5 | $\alpha(\text{K})=0.06$ 4; $\alpha(\text{L})=0.012$ 4; $\alpha(\text{M})=0.0029$ 9 $\alpha(\text{N})=0.00072$ 21; $\alpha(\text{O})=0.00013$ 5; $\alpha(\text{P})=7.E-6$ 5 |
| | | 531.702 ^c 15 | 0.645 14 | 1512.004 2 ⁺ | | [M1,E2] | | 0.044 23 | $\alpha(\text{K})=0.035$ 20; $\alpha(\text{L})=0.0065$ 24; $\alpha(\text{M})=0.0015$ 6 $\alpha(\text{N})=0.00037$ 13; $\alpha(\text{O})=6.6\times 10^{-5}$ 25; $\alpha(\text{P})=3.9\times 10^{-6}$ 23 |
| | | 564.444 ^c 7 | 0.492 5 | 1479.272 0 ⁺ | | [M1] | | 0.0568 | $\alpha(\text{K})=0.0470$ 7; $\alpha(\text{L})=0.00753$ 11; $\alpha(\text{M})=0.001734$ 25 $\alpha(\text{N})=0.000429$ 6; $\alpha(\text{O})=7.73\times 10^{-5}$ 11; $\alpha(\text{P})=5.26\times 10^{-6}$ 8 |
| | | 776.70 [@] 6 | 0.069 7 | 1267.200 0 ⁺ | | [M1] | | 0.0249 | $\alpha(\text{K})=0.0206$ 3; $\alpha(\text{L})=0.00327$ 5; $\alpha(\text{M})=0.000753$ 11 $\alpha(\text{N})=0.000186$ 3; $\alpha(\text{O})=3.36\times 10^{-5}$ 5; $\alpha(\text{P})=2.30\times 10^{-6}$ 4 |
| | | 1120.961 17 1421.683 14 | 0.950 17 9.0 7 | 922.772 3 ⁺ 622.024 2 ⁺ | | [E2] M1(+E2) | <0.2 | 0.00438 0.00542 10 | E_γ : weighted average of 1421.72 4 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1421.679 14 from |

Adopted Levels, Gammas (continued)

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

| <u>E_i(level)</u> | <u>J_i^π</u> | <u>E_γ[†]</u> | <u>I_γ[†]</u> | <u>E_f</u> | <u>J_f^π</u> | <u>Mult.&</u> | <u>δ&</u> | <u>α^a</u> | <u>I_(γ+ce)</u> | <u>Comments</u> |
|-----------------------------|----------------------------------|---------------------------------------|----------------------------------|--|----------------------------------|-------------------|---------------|----------------------|---------------------------|--|
| | | | | | | | | | | ¹⁹⁴ Au ε decay (38.02 h). I _γ : unweighted average of 8.3 4 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 9.75 9 from ¹⁹⁴ Au ε decay (38.02 h). |
| 2043.718 | 1 ⁺ | 1715.237 16 | 19.82 24 | 328.473 | 2 ⁺ | E2+M1 | -1.10 12 | 0.00279 10 | | E _γ : weighted average of 1715.243 25 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1715.235 16 from ¹⁹⁴ Au ε decay (38.02 h). Other: 1715.2 2 from (n,n'γ). I _γ : weighted average of 20.0 4 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 19.75 24 from ¹⁹⁴ Au ε decay (38.02 h). Other: 49 5 from (n,n'γ) is discrepant. |
| | | 2043.723 15 | 100.0 7 | 0.0 | 0 ⁺ | M1 | | 0.00263 | | E _γ : weighted average of 2043.727 17 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 2043.719 15 from ¹⁹⁴ Au ε decay (38.02 h). Other: 2043.5 2 from (n,n'γ). I _γ : from ¹⁹⁴ Au ε decay (38.02 h). Others: 100.0 9 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 100 10 from (n,n'γ). |
| 2047.52 | (9 ⁻) | 562.5 1 | 100 | 1485.04 | (7 ⁻) | (E2) | | 0.0187 | | E _γ : from (α,2nγ). Other: 562.4 5 from ¹⁹⁴ Ir β ⁻ decay (171 d). Mult.: from ce data in ¹⁹⁴ Ir β ⁻ decay (171 d). |
| 2053.018 | (2) ⁺ | 1241.93 ^c 7 1430.992 22 | 10.8 9 100.0 9 | 811.288 4 ⁺ 622.024 2 ⁺ | [E2] [M1,E2] | | | 0.00361 0.0041 13 | | E _γ : weighted average of 1430.95 4 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 1430.996 14 from ¹⁹⁴ Au ε decay (38.02 h), and 1431.6 3 from (n,n'γ). I _γ : from ¹⁹⁴ Au ε decay (38.02 h). Other: 100 11 from ¹⁹⁴ Ir β ⁻ decay (19.18 h). |
| | | 1724.53 3 | 77.7 8 | 328.473 | 2 ⁺ | [M1,E2] | | 0.0028 8 | | E _γ : weighted average of 1724.535 27 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1724.40 14 from ¹⁹⁴ Au ε decay (38.02 h). I _γ : from ¹⁹⁴ Au ε decay (38.02 h). Other: 79 5 from ¹⁹⁴ Ir β ⁻ decay (19.18 h). |
| 2063.746 | 2 ⁺ | 1140.990 20 1441.714 14 | 6.51 11 54.0 7 | 922.772 3 ⁺ 622.024 2 ⁺ | M1 M1(+E2) | | <0.6 | 0.00939 0.0050 4 | | E _γ : weighted average of 1441.733 19 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1441.703 14 from ¹⁹⁴ Au ε decay (38.02 h). Other: 1441.6 3 from (n,n'γ). I _γ : weighted average of 55.2 14 from ¹⁹⁴ Ir β ⁻ decay (19.18 h), 53.7 6 from ¹⁹⁴ Au ε decay (38.02 h), and 62 6 from (n,n'γ). |
| | | 1735.253 14 | 100.0 11 | 328.473 | 2 ⁺ | M1+E2 | +0.12 6 | 0.00351 6 | | E _γ : weighted average of 1735.272 21 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1735.245 14 from ¹⁹⁴ Au ε decay (38.02 h). Other: 1735.2 2 from (n,n'γ). I _γ : from ¹⁹⁴ Au ε decay (38.02 h). Others: 100.0 18 |

Adopted Levels, Gammas (continued)

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

| <u>E_i(level)</u> | <u>J_i^π</u> | <u>E_γ[†]</u> | <u>I_γ[†]</u> | <u>E_f</u> | <u>J_f^π</u> | <u>Mult.&</u> | <u>δ&</u> | <u>α^a</u> | <u>I_(γ+ce)</u> | <u>Comments</u> |
|-----------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------|----------------------------------|-------------------|---------------|-----------------------|---------------------------|--|
| 2063.746 | 2 ⁺ | 2063.764 21 | 1.92 9 | 0.0 | 0 ⁺ | [E2] | | 1.70×10 ⁻³ | | from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 100 |
| 2085.475 | 0 ⁺ | 288.13 ^c 4 | 2.31 7 | 1797.390 | 1 ⁻ | [E1] | | 0.0287 | | 11 from (n,n'γ). α(K)=0.0237 4; α(L)=0.00384 6; α(M)=0.000883 13 α(N)=0.000217 3; α(O)=3.78×10 ⁻⁵ 6; α(P)=2.16×10 ⁻⁶ 3 |
| | | 1463.439 14 | 100.0 10 | 622.024 | 2 ⁺ | (E2) | | 0.00270 | | E _γ : weighted average of 1463.445 14 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1463.434 14 from ¹⁹⁴ Au ε decay (38.02 h). I _γ : from ¹⁹⁴ Au ε decay (38.02 h). Other: 100.0 11 from ¹⁹⁴ Ir β ⁻ decay (19.18 h). |
| | | 1756.995 14 | 8.65 11 | 328.473 | 2 ⁺ | (E2) | | 0.00204 | | E _γ : weighted average of 1756.93 7 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1756.998 14 from ¹⁹⁴ Au ε decay (38.02 h). I _γ : weighted average of 8.1 4 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 8.67 8 from ¹⁹⁴ Au ε decay (38.02 h). |
| | | 2085.8 4 | | 0.0 | 0 ⁺ | E0 | | | 0.57 4 | E _γ ,Mult.: seen only in ce data in ¹⁹⁴ Au ε decay (38.02 h). q _K ² (E0/E2)=61 21, X(E0/E2)=6.1 21 (2005Ki02,evaluation). B(E2)(W.u.)=50 +18-11 |
| 2099.55 | (8) ⁺ | 687.7 1 | 100 | 1411.83 | 6 ⁺ | (E2) | | 0.01188 | | E _γ : from (α,2nγ) and Coulomb excitation. Others: 687.8 5 from ¹⁹⁴ Ir β ⁻ decay (171 d). Mult.: from ce data in ¹⁹⁴ Ir β ⁻ decay (171 d) and γ(θ) in (α,2nγ) with ΔJ=(2). |
| 2109.068 | (2) ⁺ | 1186.37 4 | 55.7 9 | 922.772 | 3 ⁺ | (E2+M1) | 1.1 +6-4 | 0.0060 10 | | E _γ : unweighted average of 1186.408 26 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1186.325 19 from ¹⁹⁴ Au ε decay (38.02 h). I _γ : weighted average of 56.4 9 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 54.8 10 from ¹⁹⁴ Au ε decay (38.02 h). |
| | | 1487.080 22 | 100.0 8 | 622.024 | 2 ⁺ | (M1(+E2)) | <0.3 | 0.00483 12 | | E _γ : unweighted average of 1487.058 14 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1487.102 16 from ¹⁹⁴ Au ε decay (38.02 h). I _γ : from ¹⁹⁴ Ir β ⁻ decay (19.18 h). Other: 100.0 10 from ¹⁹⁴ Au ε decay (38.02 h). |
| | | 1780.560 18 | 25.1 10 | 328.473 | 2 ⁺ | | | | | E _γ : weighted average of 1780.571 18 from ¹⁹⁴ Ir β ⁻ decay (19.18 h) and 1780.543 |

Adopted Levels, Gammas (continued)

$\gamma(^{194}\text{Pt})$ (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>δ &</u> | <u>α^a</u> | <u>I_($\gamma+ce$)</u> | <u>Comments</u> |
|-----------------------------|---|---|---|----------------------|---|--------------------|----------------------------------|------------------------------|---|---|
| | | | | | | | | | | 22 from ¹⁹⁴ Au ϵ decay (38.02 h). |

Adopted Levels, Gammas (continued)

$\gamma(^{194}\text{Pt})$ (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>δ^{&}</u> | <u>α^a</u> | <u>Comments</u> |
|-----------------------------|---|---|---|--|--|------------------------------|--|--|---|
| 2114.106 | 1 ⁺ | 190.05 ^c 8 | 0.82 15 | 1924.285 | 1 ⁺ | M1 | | 1.077 | I _{γ} : unweighted average of 26.1 4 from ¹⁹⁴ Ir β^- decay (19.18 h) and 24.1 4 from ¹⁹⁴ Au ϵ decay (38.02 h). $\alpha(\text{K})=0.887$ 13; $\alpha(\text{L})=0.1461$ 21; $\alpha(\text{M})=0.0338$ 5 $\alpha(\text{N})=0.00835$ 12; $\alpha(\text{O})=0.001503$ 22; $\alpha(\text{P})=0.0001014$ 15 |
| | | 491.967 ^c 25 566.91 ^c 4 | 1.25 6 0.82 5 | 1622.197 2 ⁺ 1547.281 0 ⁺ | 2 ⁺ 0 ⁺ | [M1] | | 0.0561 | $\alpha(\text{K})=0.0465$ 7; $\alpha(\text{L})=0.00744$ 11; $\alpha(\text{M})=0.001715$ 24 $\alpha(\text{N})=0.000424$ 6; $\alpha(\text{O})=7.64 \times 10^{-5}$ 11; $\alpha(\text{P})=5.20 \times 10^{-6}$ 8 |
| | | 602.053 18 846.96 12 | 2.10 9 9.78 9 | 1512.004 2 ⁺ 1267.200 0 ⁺ | 2 ⁺ 0 ⁺ | M1 | | 0.0200 | Mult.: ce data give $\delta(\text{E2/M1}) < 0.4$, ΔJ^π requires M1. |
| | | 1492.055 18 | 42.1 6 | 622.024 2 ⁺ | 2 ⁺ | M1(+E2) | <0.5 | 0.00466 24 | E _{γ} : weighted average of 1492.020 27 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1492.065 14 from ¹⁹⁴ Au ϵ decay (38.02 h). |
| | | 1785.634 17 | 100.0 9 | 328.473 2 ⁺ | 2 ⁺ | M1(+E2) | -0.04 3 | 0.00333 | I _{γ} : weighted average of 41.1 9 from ¹⁹⁴ Ir β^- decay (19.18 h) and 42.4 5 from ¹⁹⁴ Au ϵ decay (38.02 h). E _{γ} : weighted average of 1785.631 21 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1785.636 17 from ¹⁹⁴ Au ϵ decay (38.02 h). |
| | | 2114.100 14 | 60.9 17 | 0.0 0 ⁺ | 0 ⁺ | M1 | | 0.00250 | I _{γ} : from ¹⁹⁴ Ir β^- decay (19.18 h). E _{γ} : from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 2114.099 26 from ¹⁹⁴ Ir β^- decay (19.18 h). |
| | | | | | | | | | I _{γ} : unweighted average of 59.2 6 from ¹⁹⁴ Ir β^- decay (19.18 h) and 62.6 6 from ¹⁹⁴ Au ϵ decay (38.02 h). Mult.: ce data gives $\delta(\text{E2/M1}) < 0.5$, ΔJ^π requires M1. |
| 2131.126 | (2 ⁺) | 1208.372 18 1319.70 ^c 4 1509.08 ^c 3 1802.637 ^b 14 | 100.0 29 39.4 25 49 4 <817 ^b | 922.772 3 ⁺ 811.288 4 ⁺ 622.024 2 ⁺ 328.473 2 ⁺ | 3 ⁺ 4 ⁺ 2 ⁺ 2 ⁺ | [E2] | | 0.00322 | |
| | | 2131.08 ^c 7 | 6.5 8 | 0.0 0 ⁺ | 0 ⁺ | [E2] | | 1.65 $\times 10^{-3}$ | |
| 2134.123 | 1 ⁺ , 2 ⁺ | 1512.073 14 | 37 4 | 622.024 2 ⁺ | 2 ⁺ | M1,E2 | | 0.0037 11 | E _{γ} : from ¹⁹⁴ Au ϵ decay (38.02 h). Others: 1512.15 21 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1511.6 4 from (n,n' γ). |

Adopted Levels, Gammas (continued)

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

| <u>E_i(level)</u> | <u>J_i^{π}</u> | <u>E_{γ}[†]</u> | <u>I_{γ}[†]</u> | <u>E_f</u> | <u>J_f^{π}</u> | <u>Mult.&</u> | <u>δ&</u> | <u>α^a</u> | <u>I_(γ+ce)</u> | <u>Comments</u> |
|-----------------------------|---|---|--|--|--|--------------------------|---------------------------------|-------------------------------|---|--|
| 2134.123 | 1 ⁺ ,2 ⁺ | 1805.727 [@] 14 | 100.0 8 | 328.473 | 2 ⁺ | M1(+E2) | <0.5 | 0.00313 14 | | I _{γ} : weighted average of 41 6 from ¹⁹⁴ Ir β^- decay (19.18 h), 43 4 from ¹⁹⁴ Au ϵ decay (38.02 h), and 32.2 34 from (n,n' γ). E _{γ} : from ¹⁹⁴ Ir β^- decay (19.18 h). Others: 1805.729 14 from ¹⁹⁴ Au ϵ decay (38.02 h) and 1805.7 2 from (n,n' γ). I _{γ} : from ¹⁹⁴ Ir β^- decay (19.18 h). Others: 100.0 14 from ¹⁹⁴ Au ϵ decay (38.02 h) and 100 10 from (n,n' γ). |
| 2140.696 | (1 ⁺ ,2 ⁺) | 1518.657 14 | 100.0 9 | 622.024 | 2 ⁺ | (M1(+E2)) | <0.7 | 0.0043 4 | | E _{γ} : weighted average of 1518.652 22 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1518.659 14 from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 1518.7 2 from (n,n' γ). I _{γ} : from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 100.0 22 from ¹⁹⁴ Ir β^- decay (19.18 h). E _{γ} : weighted average of 1812.18 7 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1812.228 17 from ¹⁹⁴ Au ϵ decay (38.02 h). I _{γ} : weighted average of 33 9 from ¹⁹⁴ Ir β^- decay (19.18 h) and 44.9 7 from ¹⁹⁴ Au ϵ decay (38.02 h). |
| | | 1812.225 17 | 44.8 9 | 328.473 | 2 ⁺ | (M1) | | 0.00324 | | |
| 2157.995 | (2 ⁺) | 2140.71 8 1346.68 4 1535.781 [#] 21 1829.519 14 | 0.45 18 6.40 10 6.1 23 100.0 10 | 0.0 0 ⁺ 811.288 4 ⁺ 622.024 2 ⁺ 328.473 2 ⁺ | | M1(+E2) | <0.3 | 0.00313 7 | | E _{γ} : level-energy difference=1535.965. E _{γ} : from ¹⁹⁴ Au ϵ decay (38.02 h). Others: 1829.524 33 from ¹⁹⁴ Ir β^- decay (19.18 h) and 1829.4 2 from (n,n' γ). α (L)=7.02 16; α (M)=1.62 4 α (N)=0.402 10; α (O)=0.0722 17; α (P)=0.00486 11 α (K)=0.467 7; α (L)=0.0766 11; α (M)=0.01769 25 α (N)=0.00438 7; α (O)=0.000788 11; α (P)=5.32×10 ⁻⁵ 8 |
| 2163.747 | 0 ⁺ | 49.7 3 239.443 17 | 6.2 17 12.5 5 | 2114.106 1924.285 | 1 ⁺ 1 ⁺ | M1 M1 | | 9.12 21 0.567 | | α (L)=7.02 16; α (M)=1.62 4 α (N)=0.402 10; α (O)=0.0722 17; α (P)=0.00486 11 α (K)=0.467 7; α (L)=0.0766 11; α (M)=0.01769 25 α (N)=0.00438 7; α (O)=0.000788 11; α (P)=5.32×10 ⁻⁵ 8 |
| | | 366.365 22 1541.715 18 1835.274 14 2164.1 4 | 7.43 23 6.14 9 100.0 9 | 1797.390 622.024 328.473 0.0 | 1 ⁻ 2 ⁺ 2 ⁺ 0 ⁺ | [E1] [E2] E2 E0 | | 0.01639 0.00248 0.00193 | 3.1 2 | E _{γ} ,Mult.: seen in ce data only. q _K ² (E0/E2)=15.8 10, X(E0/E2)=1.73 11 (2005Ki02,evaluation). |
| 2184.910 | 1 ⁺ ,2 ⁺ | 752.47 ^C 7 1262.27 15 1562.891 14 1856.403 17 | 1.00 11 8.78 15 100.0 11 13.19 18 | 1432.551 922.772 622.024 328.473 | 3 ⁻ 3 ⁺ 2 ⁺ 2 ⁺ | M1(+E2) | <0.3 | 0.00432 11 | | |

Adopted Levels, Gammas (continued)

| $\gamma(^{194}\text{Pt})$ (continued) | | | | | | | | | |
|---------------------------------------|-------------------|--|---|--|--|---|----------------------|--|--|
| $E_i(\text{level})$ | J_i^π | E_γ^\dagger | I_γ^\dagger | E_f | J_f^π | Mult.& | $\delta^\&$ | α^a | Comments |
| 2214.525 | (2 ⁺) | 397.84 ^C 5 702.54 4 | 0.208 19 1.47 4 | 1816.591 1512.004 | (2) ⁺ 2 ⁺ | (M1) | | 0.0322 | $\alpha(\text{K})=0.0267$ 4; $\alpha(\text{L})=0.00425$ 6; $\alpha(\text{M})=0.000977$ 14 $\alpha(\text{N})=0.000242$ 4; $\alpha(\text{O})=4.36\times 10^{-5}$ 7; $\alpha(\text{P})=2.98\times 10^{-6}$ 5 |
| | | 781.974 17 1291.765 14 1592.489 14 1885.95 7 | 2.140 27 4.81 8 64.0 11 100.0 23 | 1432.551 922.772 622.024 328.473 | 3 ⁻ 3 ⁺ 2 ⁺ 2 ⁺ | [E1] (M1(+E2)) M1(+E2) M1(+E2) | <0.3 <0.3 <0.3 | 0.00335 0.00675 18 0.00415 10 0.00296 7 | |
| 2215.534 | 1 ⁺ | 2214.47 5 101.46 4 | 0.57 15 0.269 17 | 0.0 2114.106 | 0 ⁺ 1 ⁺ | [E2] M1 | | 1.60×10 ⁻³ 6.39 | $\alpha(\text{K})=5.26$ 8; $\alpha(\text{L})=0.875$ 13; $\alpha(\text{M})=0.202$ 3 $\alpha(\text{N})=0.0501$ 7; $\alpha(\text{O})=0.00901$ 13; $\alpha(\text{P})=0.000606$ 9 |
| | | 106.51 4 | 0.400 17 | 2109.068 | (2) ⁺ | M1 | | 5.56 | $\alpha(\text{K})=4.58$ 7; $\alpha(\text{L})=0.761$ 11; $\alpha(\text{M})=0.1759$ 25 $\alpha(\text{N})=0.0435$ 7; $\alpha(\text{O})=0.00783$ 11; $\alpha(\text{P})=0.000527$ 8 |
| | | 151.83 3 | 3.18 8 | 2063.746 | 2 ⁺ | M1 | | 2.03 | $\alpha(\text{K})=1.667$ 24; $\alpha(\text{L})=0.276$ 4; $\alpha(\text{M})=0.0637$ 9 $\alpha(\text{N})=0.01577$ 22; $\alpha(\text{O})=0.00284$ 4; $\alpha(\text{P})=0.000191$ 3 |
| | | 162.58 4 | 1.12 4 | 2053.018 | (2) ⁺ | M1(+E2) | <0.7 | 1.52 16 | $\alpha(\text{K})=1.20$ 18; $\alpha(\text{L})=0.247$ 20; $\alpha(\text{M})=0.058$ 6 $\alpha(\text{N})=0.0144$ 15; $\alpha(\text{O})=0.00252$ 19; $\alpha(\text{P})=0.000136$ 22 |
| | | 171.837 23 | 3.07 6 | 2043.718 | 1 ⁺ | M1 | | 1.428 | $\alpha(\text{K})=1.176$ 17; $\alpha(\text{L})=0.194$ 3; $\alpha(\text{M})=0.0448$ 7 $\alpha(\text{N})=0.01110$ 16; $\alpha(\text{O})=0.00200$ 3; $\alpha(\text{P})=0.0001346$ 19 |
| | | 211.87 3 285.315 [#] 14 | 0.225 17 2.197 25 | 2003.659 1930.368 | (2) ⁺ 2 ⁺ | (M1+E2) | 1.5 +3-2 | 0.187 18 | $\alpha(\text{K})=0.137$ 16; $\alpha(\text{L})=0.0382$ 11; $\alpha(\text{M})=0.00930$ 21 $\alpha(\text{N})=0.00229$ 6; $\alpha(\text{O})=0.000386$ 12; $\alpha(\text{P})=1.49\times 10^{-5}$ 19 E _γ : level-energy difference=285.166. |
| | | 291.52 [@] 7 | 1.04 14 | 1924.285 | 1 ⁺ | E2(+M1) | >2.0 | 0.130 23 | $\alpha(\text{K})=0.086$ 21; $\alpha(\text{L})=0.0328$ 14; $\alpha(\text{M})=0.0081$ 3 $\alpha(\text{N})=0.00200$ 7; $\alpha(\text{O})=0.000329$ 15; $\alpha(\text{P})=9.0\times 10^{-6}$ 25 |
| | | 321.960 ^C 18 398.937 8 418.200 25 436.90 9 544.826 17 | 0.381 14 0.526 19 2.14 17 0.537 17 1.096 25 | 1893.588 1816.591 1797.390 1778.578 1670.667 | 0 ⁺ (2) ⁺ 1 ⁻ 2 ⁺ 2 ⁺ | [E1] (M1(+E2)) | <0.7 | 0.01218 0.055 7 | $\alpha(\text{K})=0.046$ 6; $\alpha(\text{L})=0.0075$ 8; $\alpha(\text{M})=0.00174$ 17 $\alpha(\text{N})=0.00043$ 4; $\alpha(\text{O})=7.7\times 10^{-5}$ 8; $\alpha(\text{P})=5.1\times 10^{-6}$ 7 |
| | | 593.37 3 | 12.74 11 | 1622.197 | 2 ⁺ | M1+E2 | -0.25 18 | 0.048 4 | $\alpha(\text{K})=0.040$ 3; $\alpha(\text{L})=0.0064$ 4; $\alpha(\text{M})=0.00147$ 8 |

Adopted Levels, Gammas (continued)

$\gamma(^{194}\text{Pt})$ (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>δ&</u> | <u>α^a</u> | <u>Comments</u> |
|-----------------------------|---|---|---|----------------------|---|--------------------|---------------------------------|------------------------------|---|
| 2215.534 | 1 ⁺ | 668.247 17 | 4.79 6 | 1547.281 | 0 ⁺ | M1 | | 0.0366 | $\alpha(\text{N})=0.000364$ 20; $\alpha(\text{O})=6.6\times 10^{-5}$ 4; $\alpha(\text{P})=4.4\times 10^{-6}$ 4 |
| | | 703.525 14 | 17.92 17 | 1512.004 | 2 ⁺ | M1+E2 | +0.24 6 | 0.0310 8 | $\alpha(\text{K})=0.0304$ 5; $\alpha(\text{L})=0.00484$ 7; $\alpha(\text{M})=0.001114$ 16 $\alpha(\text{N})=0.000276$ 4; $\alpha(\text{O})=4.96\times 10^{-5}$ 7; $\alpha(\text{P})=3.39\times 10^{-6}$ 5 |
| | | 736.249 14 | 5.51 33 | 1479.272 | 0 ⁺ | M1 | | 0.0285 | $\alpha(\text{K})=0.0256$ 7; $\alpha(\text{L})=0.00410$ 9; $\alpha(\text{M})=0.000945$ 20 $\alpha(\text{N})=0.000234$ 5; $\alpha(\text{O})=4.21\times 10^{-5}$ 9; $\alpha(\text{P})=2.86\times 10^{-6}$ 7 |
| | | 948.323 9 | 100.0 8 | 1267.200 | 0 ⁺ | M1 | | 0.01497 | $\alpha(\text{K})=0.0237$ 4; $\alpha(\text{L})=0.00376$ 6; $\alpha(\text{M})=0.000865$ 13 $\alpha(\text{N})=0.000214$ 3; $\alpha(\text{O})=3.86\times 10^{-5}$ 6; $\alpha(\text{P})=2.64\times 10^{-6}$ 4 E _{γ} : from ¹⁹⁴ Au ε decay (38.02 h). Other: 948.3 2 from (n,n' γ). I _{γ} : from ¹⁹⁴ Au ε decay (38.02 h). Other: 100 10 from (n,n' γ). |
| | | 1593.530 20 | 33.4 6 | 622.024 | 2 ⁺ | (M1+E2) | 0.74 8 | 0.00356 11 | |
| | | 1887.030 23 | 90 11 | 328.473 | 2 ⁺ | (M1+E2) | +0.75 24 | 0.00260 18 | E _{γ} : other: 1886.6 2 from (n,n' γ). I _{γ} : other: 141 14 from (n,n' γ). |
| 2239.636 | (2) ⁻ | 2215.509 16 | 7.32 14 | 0.0 | 0 ⁺ | M1 | | 0.00235 | |
| | | 442.225 ^c 19 | 3.42 11 | 1797.390 | 1 ⁻ | | | | |
| | | 807.119 21 | 6.9 22 | 1432.551 | 3 ⁻ | | | | |
| | | 1316.857 14 | 32.05 28 | 922.772 | 3 ⁺ | | | | |
| | | 1617.604 14 | 100.0 11 | 622.024 | 2 ⁺ | E1 | | 1.18 $\times 10^{-3}$ | |
| | | 1911.154 14 | 55.1 6 | 328.473 | 2 ⁺ | E1 | | 1.17 $\times 10^{-3}$ | |
| 2250.665? | (1,2) ⁺ | 1922.171 ^c 22 | 100.0 19 | 328.473 | 2 ⁺ | | | | |
| | | 2250.73 ^c 6 | 0.77 7 | 0.0 | 0 ⁺ | | | | |
| 2287.376 | (1 ⁺ ,2 ⁺) | 173.3 3 | 2.9 11 | 2114.106 | 1 ⁺ | | | | |
| | | 243.65 3 | 4.52 26 | 2043.718 | 1 ⁺ | | | | |
| | | 490.030 ^c 22 | 4.15 15 | 1797.390 | 1 ⁻ | | | | |
| | | 1665.321 18 | 17.06 22 | 622.024 | 2 ⁺ | | | | |
| | | 1958.898 14 | 100.0 11 | 328.473 | 2 ⁺ | (M1(+E2)) | <0.6 | 0.00268 14 | |
| | | 2287.28 5 | 0.37 7 | 0.0 | 0 ⁺ | | | | |
| 2298.157 | 1 ⁺ | 189.17 6 | 0.88 13 | 2109.068 | (2) ⁺ | M1 | | 1.091 | $\alpha(\text{K})=0.899$ 13; $\alpha(\text{L})=0.1480$ 21; $\alpha(\text{M})=0.0342$ 5 $\alpha(\text{N})=0.00846$ 12; $\alpha(\text{O})=0.001523$ 22; $\alpha(\text{P})=0.0001027$ 15 |
| | | 500.737 24 | 1.37 7 | 1797.390 | 1 ⁻ | [E1] | | 0.00824 | |
| | | 627.59 [@] 3 | 1.00 7 | 1670.667 | 2 ⁺ | [M1,E2] | | 0.029 15 | $\alpha(\text{K})=0.023$ 13; $\alpha(\text{L})=0.0041$ 16; $\alpha(\text{M})=0.0010$ |

Adopted Levels, Gammas (continued)

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

| $E_i(\text{level})$ | J_i^π | E_γ^\dagger | I_γ^\dagger | E_f | J_f^π | Mult.& | $\delta\&$ | α^a | Comments |
|---------------------|--------------------|-------------------------|--------------------|----------|-----------------------------------|-----------|------------|----------------------|---|
| 2298.157 | 1 ⁺ | 675.943 16 | 9.43 9 | 1622.197 | 2 ⁺ | M1(+E2) | <0.4 | 0.0340 17 | 4 $\alpha(\text{N})=0.00024$ 9; $\alpha(\text{O})=4.2\times 10^{-5}$ 17; $\alpha(\text{P})=2.6\times 10^{-6}$ 14 $\alpha(\text{K})=0.0281$ 15; $\alpha(\text{L})=0.00452$ 19; $\alpha(\text{M})=0.00104$ 5 $\alpha(\text{N})=0.000257$ 11; $\alpha(\text{O})=4.63\times 10^{-5}$ 20; $\alpha(\text{P})=3.13\times 10^{-6}$ 17 |
| | | 786.07 ^c 5 | 0.83 5 | 1512.004 | 2 ⁺ | [M1,E2] | | 0.017 8 | |
| | | 818.856 18 | 7.24 9 | 1479.272 | 0 ⁺ | M1 | | 0.0217 | |
| | | 1030.997 23 | 2.31 7 | 1267.200 | 0 ⁺ | M1 | | 0.01212 | |
| | | 1676.111 21 | 16.13 13 | 622.024 | 2 ⁺ | (M1) | | 0.00379 | |
| | | 1969.680 14 | 100.0 9 | 328.473 | 2 ⁺ | M1+E2 | -0.35 4 | 0.00268 5 | E_γ : from ¹⁹⁴ Au ϵ decay (38.02 h). Other: 1969.6 3 from (n,n' γ). |
| 2309.6 | (11 ⁻) | 2298.171 17 | 5.68 8 | 0.0 | 0 ⁺ | M1 | | 0.00224 | |
| 2311.875 | 2 ⁺ | 262.1 2 | 100 | 2047.52 | (9 ⁻) | | | | |
| | | 197.82 7 | 2.5 6 | 2114.106 | 1 ⁺ | M1 | | 0.963 | $\alpha(\text{K})=0.793$ 12; $\alpha(\text{L})=0.1305$ 19; $\alpha(\text{M})=0.0302$ |
| | | 387.65 ^c 5 | 1.78 18 | 1924.285 | 1 ⁺ | [M1,E2] | | 0.10 6 | 5 $\alpha(\text{N})=0.00746$ 11; $\alpha(\text{O})=0.001343$ 19; $\alpha(\text{P})=9.06\times 10^{-5}$ 13 $\alpha(\text{K})=0.08$ 5; $\alpha(\text{L})=0.016$ 5; $\alpha(\text{M})=0.0038$ 10 $\alpha(\text{N})=0.00093$ 25; $\alpha(\text{O})=0.00016$ 5; $\alpha(\text{P})=9.E-6$ 6 |
| | | 689.61 ^c 3 | 2.86 11 | 1622.197 | 2 ⁺ | [M1,E2] | | 0.023 11 | |
| | | 799.857 ^c 26 | 3.14 14 | 1512.004 | 2 ⁺ | [M1,E2] | | 0.016 8 | |
| | | 1081.8 19 | <5.2 | 1229.520 | 4 ⁺ | [E2] | | 0.00469 | |
| | | 1388.93 19 | 9.30 21 | 922.772 | 3 ⁺ | [M1,E2] | | 0.0044 15 | |
| | | 1500.66 ^c 13 | 16.7 21 | 811.288 | 4 ⁺ | (E2) | | 0.00259 | |
| | | 1689.845 14 | 73.9 11 | 622.024 | 2 ⁺ | (M1(+E2)) | <0.4 | 0.00362 12 | |
| | | 1983.411 17 | 20.66 21 | 328.473 | 2 ⁺ | M1+E2+E0 | | 0.026 4 | α : from $\alpha(\text{K})\text{exp}$ in ¹⁹⁴ Au ϵ decay. |
| | | 2311.856 14 | 100.0 14 | 0.0 | 0 ⁺ | (E2) | | 1.56×10^{-3} | |
| 2356.059 | 0 ⁺ | 69.6 [@] 3 | 4.5 15 | 2287.376 | (1 ⁺ ,2 ⁺) | [M1] | | 3.40 7 | $\alpha(\text{L})=2.61$ 5; $\alpha(\text{M})=0.605$ 12 $\alpha(\text{N})=0.150$ 3; $\alpha(\text{O})=0.0269$ 5; $\alpha(\text{P})=0.00181$ 4 E_γ, I_γ : seen in ce data, with intensity deduced from measured I(ceL) and theoretical $\alpha(\text{L1})=2.35$ assuming Mult=M1. |
| | | 140.514 18 | 100.0 22 | 2215.534 | 1 ⁺ | M1 | | 2.52 | $\alpha(\text{K})=2.08$ 3; $\alpha(\text{L})=0.344$ 5; $\alpha(\text{M})=0.0794$ 12 $\alpha(\text{N})=0.0197$ 3; $\alpha(\text{O})=0.00354$ 5; $\alpha(\text{P})=0.000238$ 4 |
| | | 431.61 ^c 6 | 4.7 5 | 1924.285 | 1 ⁺ | [M1] | | 0.1149 | $\alpha(\text{K})=0.0950$ 14; $\alpha(\text{L})=0.01535$ 22; $\alpha(\text{M})=0.00354$ 5 $\alpha(\text{N})=0.000876$ 13; $\alpha(\text{O})=0.0001577$ 22; $\alpha(\text{P})=1.070\times 10^{-5}$ 15 |
| | | 843.89 ^c 20 | <2.33 | 1512.004 | 2 ⁺ | [E2] | | 0.00770 | |

Adopted Levels, Gammas (continued)

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

| $E_i(\text{level})$ | J_i^π | E_γ^\dagger | I_γ^\dagger | E_f | J_f^π | Mult.& | α^a | $I_{(\gamma+ce)}$ | Comments |
|---------------------|-------------------------------------|--|---|--|--|---|---|-------------------|---|
| 2356.059 | 0 ⁺ | 2027.608 ^c 20 2357.0 8 | 8.95 23 | 328.473 0.0 | 2 ⁺ 0 ⁺ | [E2] E0 | 1.73×10 ⁻³ | 0.20 2 | E_γ , Mult.: seen in ce data only. |
| 2365.932 | 1 ⁺ | 1743.77 15 2365.919 21 | 47.5 6 100.0 14 | 622.024 0.0 | 2 ⁺ 0 ⁺ | M1 | 0.00218 | | |
| 2397.321 | 2 ⁺ | 435.935 ^c 28 1474.37 7 1775.795 [#] 27 2068.869 17 2397.25 4 | 35.1 18 81 4 100.0 18 88 6 15.9 9 | 1961.332 922.772 622.024 328.473 0.0 | 2 ⁻ 3 ⁺ 2 ⁺ 2 ⁺ 0 ⁺ | [E1] [M1,E2] [M1,E2] [M1,E2] [E2] | 0.01111 0.0038 12 0.0027 7 0.0021 5 1.52×10 ⁻³ | | E_γ : level-energy difference=1775.289. E_γ : other: 2068.8 5 from (n,n' γ). Mult.: ce data in ¹⁹⁴ Au ϵ decay (30.02 h) suggests M3, which disagrees with E2 expected from $J^\pi=2^+$ for 2397 level. |
| 2412.744 | 1 ⁺ | 1790.6 1 2084.290 17 2412.693 19 | 10.2 17 100 7 40.0 7 | 622.024 328.473 0.0 | 2 ⁺ 2 ⁺ 0 ⁺ | M1 | 0.00213 | | |
| 2423.6 | (6 ⁺ ,7,8 ⁺) | 324.0 ^c 5 1011.8 5 | ≈56 100 6 | 2099.55 1411.83 | (8) ⁺ 6 ⁺ | | | | |
| 2438.44 | (10 ⁺) | 338.8 2 | 100 6 | 2099.55 | (8) ⁺ | (E2) | 0.0691 | | $\alpha(K)=0.0453$ 7; $\alpha(L)=0.0181$ 3; $\alpha(M)=0.00450$ 7 $\alpha(N)=0.001103$ 16; $\alpha(O)=0.000181$ 3; $\alpha(P)=4.63\times 10^{-6}$ 7 E_γ : from ($\alpha,2n\gamma$). Other: 338.8 5 from ¹⁹⁴ Ir β^- decay (171 d). I_γ : from ¹⁹⁴ Ir β^- decay (171 d). Others: 100 16 from ($\alpha,2n\gamma$) and 100 11 from (⁸² Se,X γ). Mult.: from ce data in ¹⁹⁴ Ir β^- decay (171 d); $\gamma(\theta)$ in ($\alpha,2n\gamma$) consistent with $\Delta J=2$. |
| | | 391.0 2 | 64 4 | 2047.52 | (9 ⁻) | (E1) | 0.01415 | | E_γ : from ($\alpha,2n\gamma$). Other: 390.8 5 from ¹⁹⁴ Ir β^- decay (171 d). I_γ : from ¹⁹⁴ Ir β^- decay (171 d). Other: 63 19 from ($\alpha,2n\gamma$). Mult.: from ce data in ¹⁹⁴ Ir β^- decay (171 d). E_γ : from ¹⁹⁴ Ir β^- decay (171 d). |
| 2451.1 | (12 ⁺) | (12.7 12) | | 2438.44 | (10 ⁺) | | | | E_γ : from (⁸² Se,X γ) only. |
| 2517.20 | 1 | 2188.7 ^{‡c} 2517.2 [‡] 4 | <35 [‡] 100 [‡] | 328.473 0.0 | 2 ⁺ 0 ⁺ | | | | B(E2)(W.u.)=53 +12-7 E_γ : from Coulomb excitation only. |
| 2577.30 | 1 | 2248.8 ^{‡c} 2577.3 [‡] 4 | <28 [‡] 100 [‡] | 328.473 0.0 | 2 ⁺ 0 ⁺ | | | | E_γ : from ($\alpha,2n\gamma$). γ also reported in (⁸² Se,X γ) and (²⁰⁹ Bi,X γ). Mult.: $\gamma(\theta)$ in ($\alpha,2n\gamma$) consistent with $\Delta J=2$. |
| 2663.4 | (10,11,12 ⁺) | 225.0 | 100 | 2438.44 | (10 ⁺) | | | | |
| 2689.25 | (8 ⁺) | 763.4 1 | 100 | 1925.85 | (6 ⁺) | [E2] | 0.00949 | | |
| 2700.1 | (11 ⁻) | 652.6 2 | 100 | 2047.52 | (9 ⁻) | | | | |

Adopted Levels, Gammas (continued)

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

| $E_i(\text{level})$ | J_i^π | E_γ † | I_γ † | E_f | J_f^π | Mult. & | α^a | Comments |
|---------------------|-------------|--------------|--------------|---------|-----------|---------|------------|--|
| 2720.2 | 1 | 2391.7 †c | <52 † | 328.473 | 2+ | | | |
| | | 2720.2 † 5 | 100 † | 0.0 | 0+ | | | |
| 2842.1 | (14+) | 391.0 2 | 100 | 2451.1 | (12+) | | | E_γ : from $(\alpha, 2n\gamma)$. |
| 2848.6 | (10+) | 749 1 | 100 | 2099.55 | (8)+ | [E2] | 0.00988 | B(E2)(W.u.)=34 +9-8 |
| | | | | | | | | E_γ : from Coulomb excitation. |
| 2916.6 | (10+) | 817 1 | 100 | 2099.55 | (8)+ | [E2] | 0.00824 | B(E2)(W.u.)=43 +12-14 |
| | | | | | | | | E_γ : from Coulomb excitation. |
| 2990.1? | (13-) | 290 | 100 | 2700.1 | (11-) | | | |
| 3000.11 | 1 | 2671.6 †c | <10.0 † | 328.473 | 2+ | | | |
| | | 3000.1 † 3 | 100 † | 0.0 | 0+ | | | |
| 3014.81 | 1 | 2686.3 † | 55 † 8 | 328.473 | 2+ | | | |
| | | 3014.8 † 3 | 100 † | 0.0 | 0+ | | | |
| 3057.8? | (10,11,12+) | 619.4 †c | 100 | 2438.44 | (10+) | | | |
| 3078.81 | 1 | 2750.3 †c | <15.0 † | 328.473 | 2+ | | | |
| | | 3078.8 † 3 | 100 † | 0.0 | 0+ | | | |
| 3141.11 | 1 | 2812.6 †c | <26 † | 328.473 | 2+ | | | |
| | | 3141.1 † 4 | 100 † | 0.0 | 0+ | | | |
| 3351.31 | 1 | 3022.8 † | 27 † 17 | 328.473 | 2+ | | | |
| | | 3351.3 † 3 | 100 † | 0.0 | 0+ | | | |
| 3375.24 | 1 | 2753.2 † | 100 † 13 | 622.024 | 2+ | | | |
| | | 3375.2 † 3 | 78 † | 0.0 | 0+ | | | |
| 3383.01 | 1 | 3054.5 †c | <23.0 † | 328.473 | 2+ | | | |
| | | 3383.0 † 4 | 100 † | 0.0 | 0+ | | | |
| 3417.12 | 1 | 3088.6 †c | <6.0 † | 328.473 | 2+ | | | |
| | | 3417.1 † 3 | 100 † | 0.0 | 0+ | | | |
| 3421.4 | 1 | 3092.9 †c | <18.0 † | 328.473 | 2+ | | | |
| | | 3421.4 † 5 | 100 † | 0.0 | 0+ | | | |
| 3427.71 | 1 | 3099.2 †c | <25.0 † | 328.473 | 2+ | | | |
| | | 3427.7 † 4 | 100 † | 0.0 | 0+ | | | |
| 3459.31 | 1 | 3130.8 †c | <16.0 † | 328.473 | 2+ | | | |
| | | 3459.3 † 4 | 100 † | 0.0 | 0+ | | | |
| 3465.2 | 1 | 3136.7 †c | <72 † | 328.473 | 2+ | | | |
| | | 3465.2 † 7 | 100 † | 0.0 | 0+ | | | |
| 3477.01 | 1 | 3148.5 †c | <36 † | 328.473 | 2+ | | | |
| | | 3477.0 † 4 | 100 † | 0.0 | 0+ | | | |
| 3497.9 | 1 | 3169.4 †c | <64 † | 328.473 | 2+ | | | |

Adopted Levels, Gammas (continued) $\gamma(^{194}\text{Pt})$ (continued)

| $E_i(\text{level})$ | J_i^π | E_γ^\dagger | I_γ^\ddagger | E_f | J_f^π | Comments |
|---------------------|--------------------|-----------------------|---------------------|---------|--------------------|--|
| 3497.9 | 1 | 3497.9 [‡] 6 | 100 [‡] | 0.0 | 0 ⁺ | |
| 3499.7 | (16 ⁺) | 657.6 | | 2842.1 | (14 ⁺) | E_γ : from (⁸² Se,X γ). γ also reported in (²⁰⁹ Bi,X γ). |
| 3545.3 | 1 | 3216.8 ^{‡c} | <33 [‡] | 328.473 | 2 ⁺ | |
| | | 3545.3 [‡] 5 | 100 [‡] | 0.0 | 0 ⁺ | |
| 3697.5 | 1 | 3369.0 ^{‡c} | <52 [‡] | 328.473 | 2 ⁺ | |
| | | 3697.4 [‡] 5 | 100 [‡] | 0.0 | 0 ⁺ | |
| 3703.3 | 1 | 3703.3 [‡] 4 | | 0.0 | 0 ⁺ | |
| 3717.02 | 1 | 3388.5 ^{‡c} | <36 [‡] | 328.473 | 2 ⁺ | |
| | | 3717.0 [‡] 4 | 100 [‡] | 0.0 | 0 ⁺ | |
| 3726.8 | 1 | 3726.8 [‡] 4 | | 0.0 | 0 ⁺ | |
| 3747.1 | 1 | 3418.6 ^{‡c} | <26 [‡] | 328.473 | 2 ⁺ | |
| | | 3747.1 [‡] 6 | 100 [‡] | 0.0 | 0 ⁺ | |
| 3754.7 | (18 ⁺) | 255.0 | | 3499.7 | (16 ⁺) | E_γ : from (⁸² Se,X γ) and (²⁰⁹ Bi,X γ). |
| 3813.62 | 1 | 3485.1 ^{‡c} | <16.0 [‡] | 328.473 | 2 ⁺ | |
| | | 3813.6 [‡] 4 | 100 [‡] | 0.0 | 0 ⁺ | |
| 3890.22 | 1 | 3561.7 ^{‡c} | <30 [‡] | 328.473 | 2 ⁺ | |
| | | 3890.2 [‡] 4 | 100 [‡] | 0.0 | 0 ⁺ | |
| 3937.7 | (20 ⁺) | 183.0 | | 3754.7 | (18 ⁺) | E_γ : from (⁸² Se,X γ) and (²⁰⁹ Bi,X γ). |
| 4529.8 | (22 ⁺) | 592.1 | | 3937.7 | (20 ⁺) | E_γ : from (⁸² Se,X γ). Other: 529 from (²⁰⁹ Bi,X γ). |
| 4541.7 | (22 ⁺) | 604 | | 3937.7 | (20 ⁺) | E_γ : from (²⁰⁹ Bi,X γ) only. |
| 4896.7 | (24 ⁺) | 355 | | 4541.7 | (22 ⁺) | E_γ : from (²⁰⁹ Bi,X γ) only. |
| 5336.7 | (26 ⁺) | 440 | | 4896.7 | (24 ⁺) | E_γ : from (²⁰⁹ Bi,X γ) only. |

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[†] Unless otherwise noted, values are from ¹⁹⁴Au ϵ decay (38.02 h) for transitions from levels up to 2413. Above 2413 level, values are from various reactions, as specifically noted. All E0 transitions are from ¹⁹⁴Au ϵ decay.

[‡] From (γ,γ') only.

Very poor fit; uncertainty has been increased by a factor of 5 in the fitting procedure by evaluators.

@ Poor fit; uncertainty has been increase by a factor of 2 in the fitting procedure by evaluators.

& From ce and $\gamma\gamma(\theta)$ data in ¹⁹⁴Au ϵ decay, unless otherwise noted.

^a 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.

^b Multiply placed with undivided intensity.

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

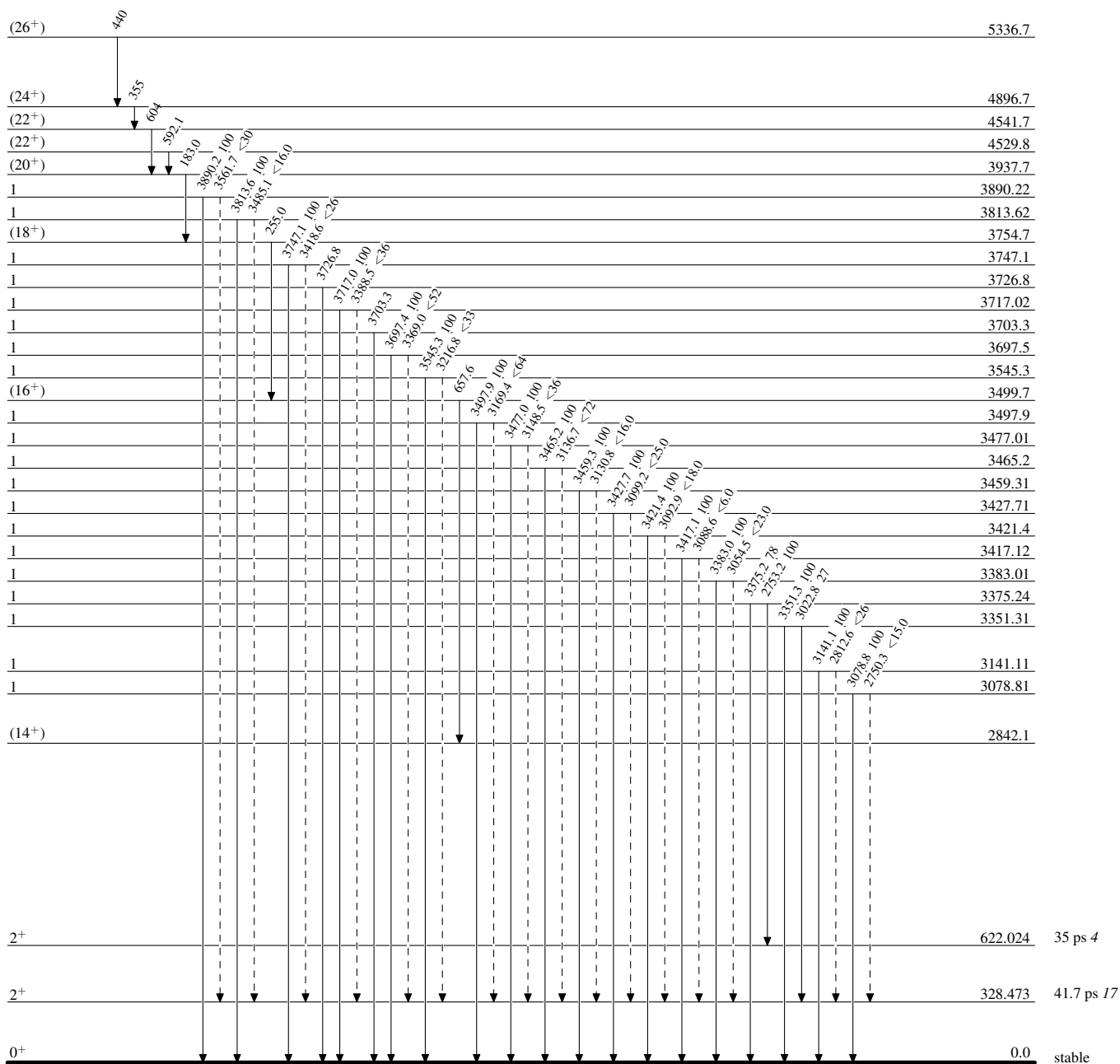
Adopted Levels, Gammas

Legend

Level Scheme

Intensities: Relative photon branching from each level

-----▶ γ Decay (Uncertain)



$^{194}_{78}\text{Pt}_{116}$

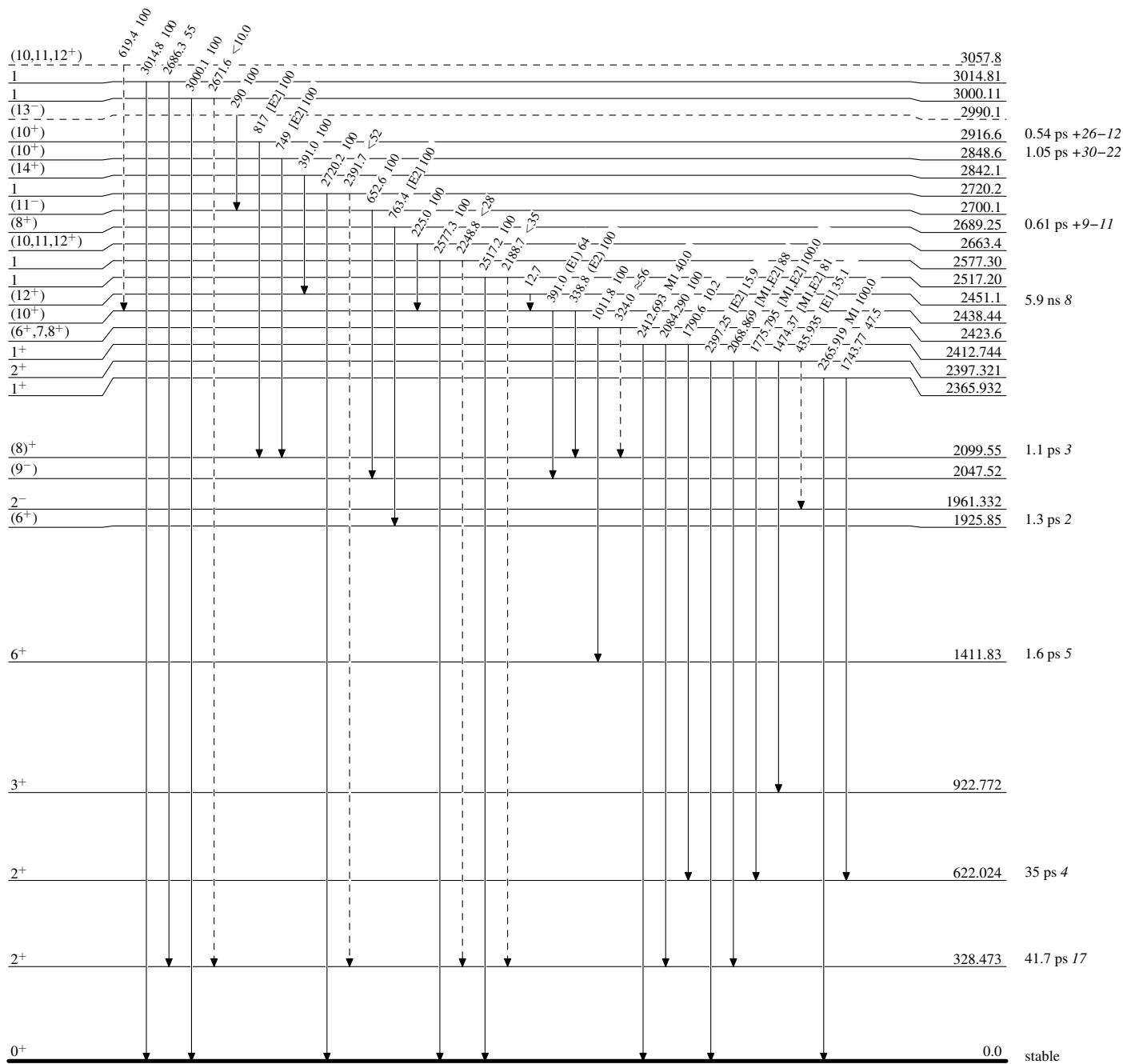
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

-----▶ γ Decay (Uncertain)



$^{194}_{78}\text{Pt}_{116}$

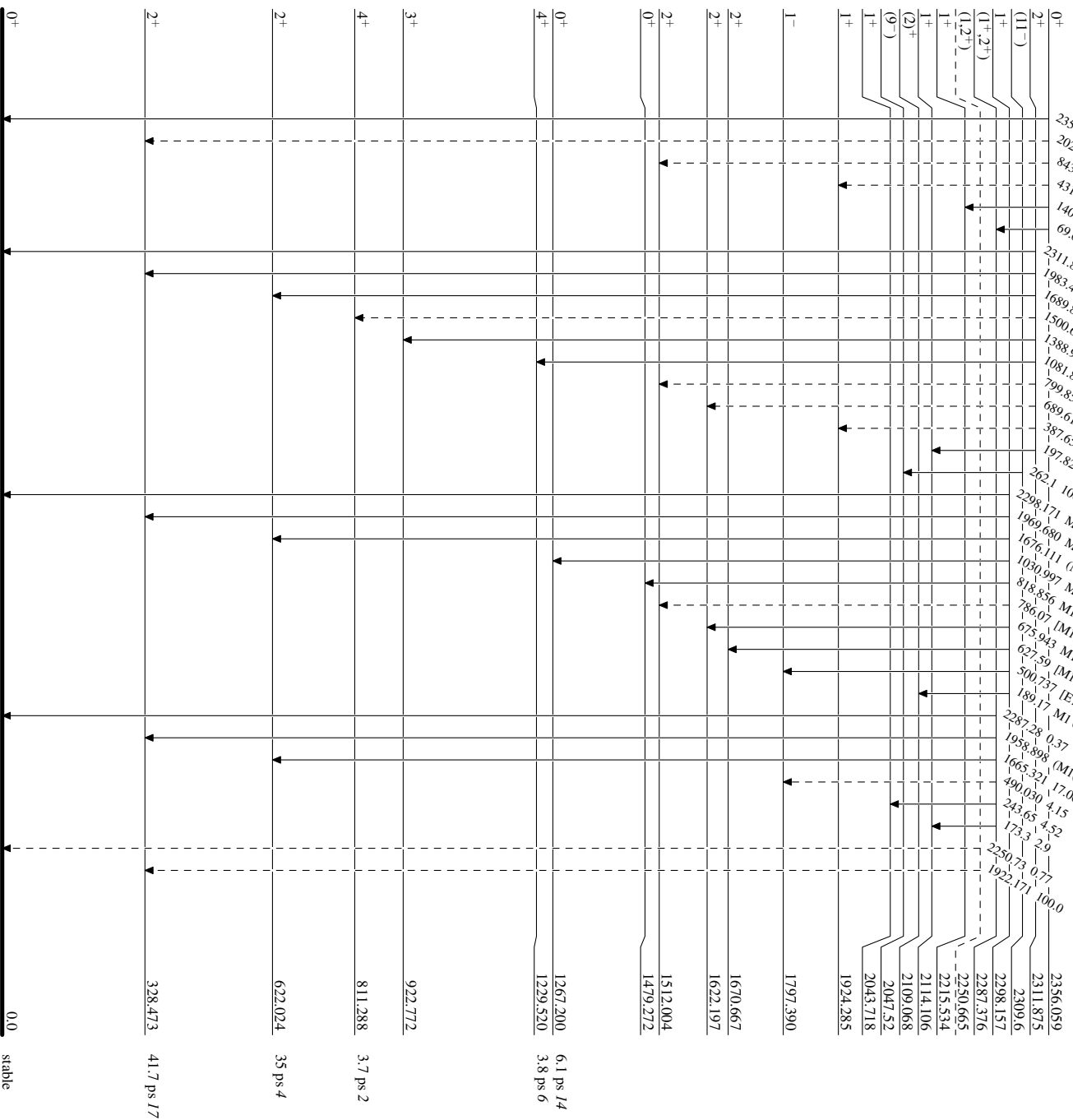
Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level

Legend

-----▶ γ Decay (Uncertain)



¹⁹⁴Pt
₇₈Pt₁₁₆

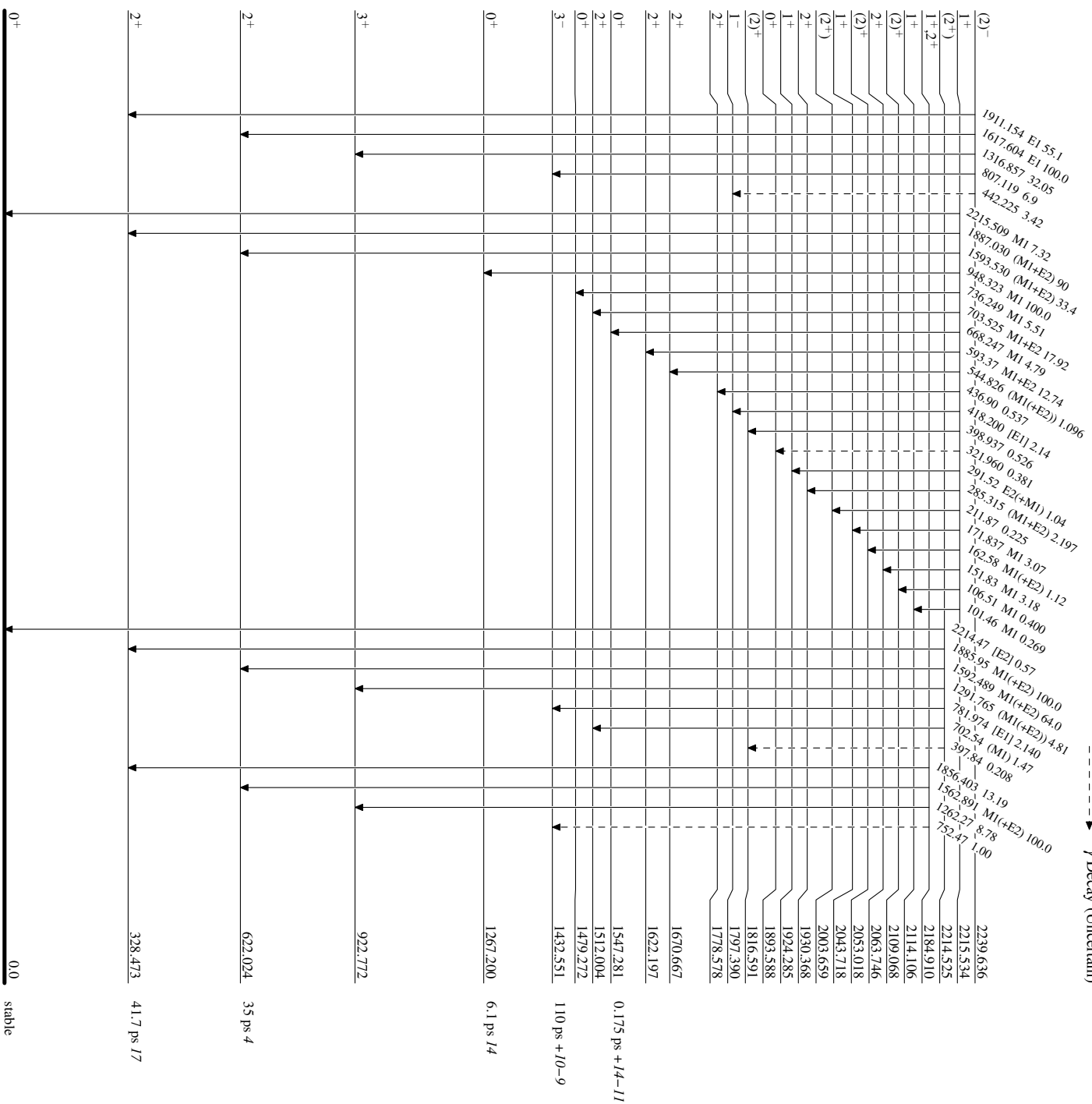
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

-----▶ γ Decay (Uncertain)



¹⁹⁴Pt
₇₈Pt₁₁₆

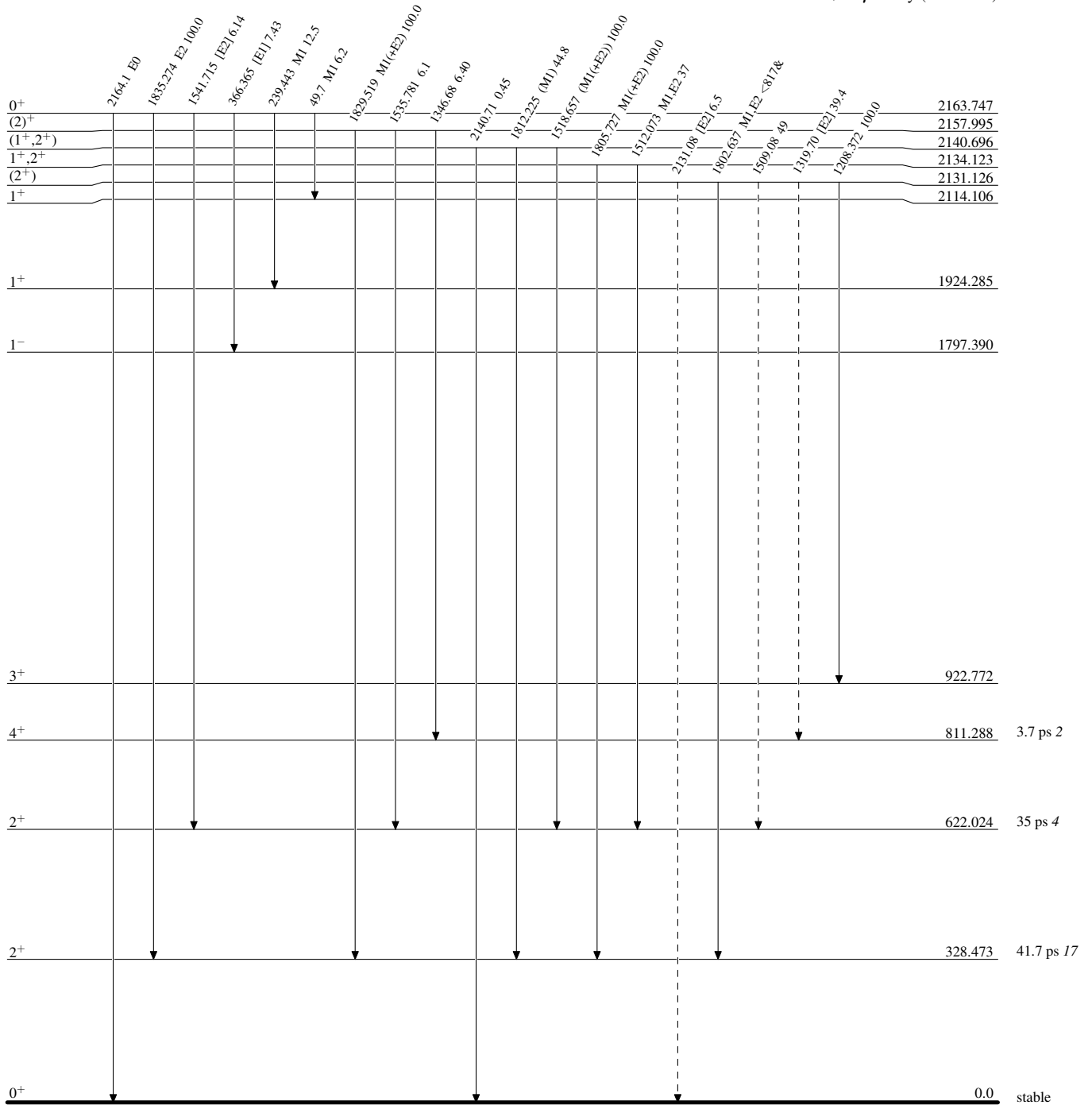
Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

-----▶ γ Decay (Uncertain)



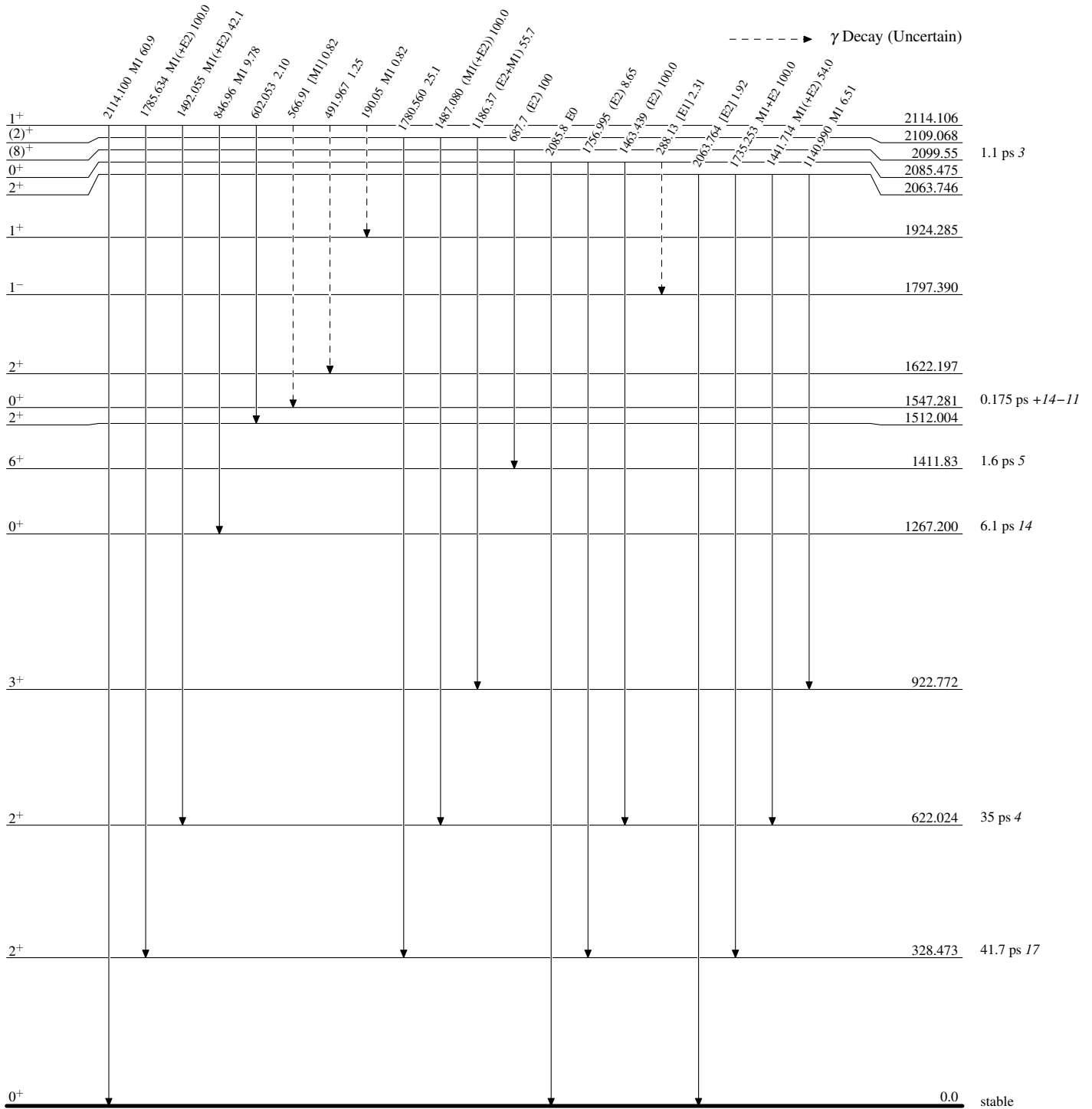
$^{194}_{78}\text{Pt}_{116}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

Legend



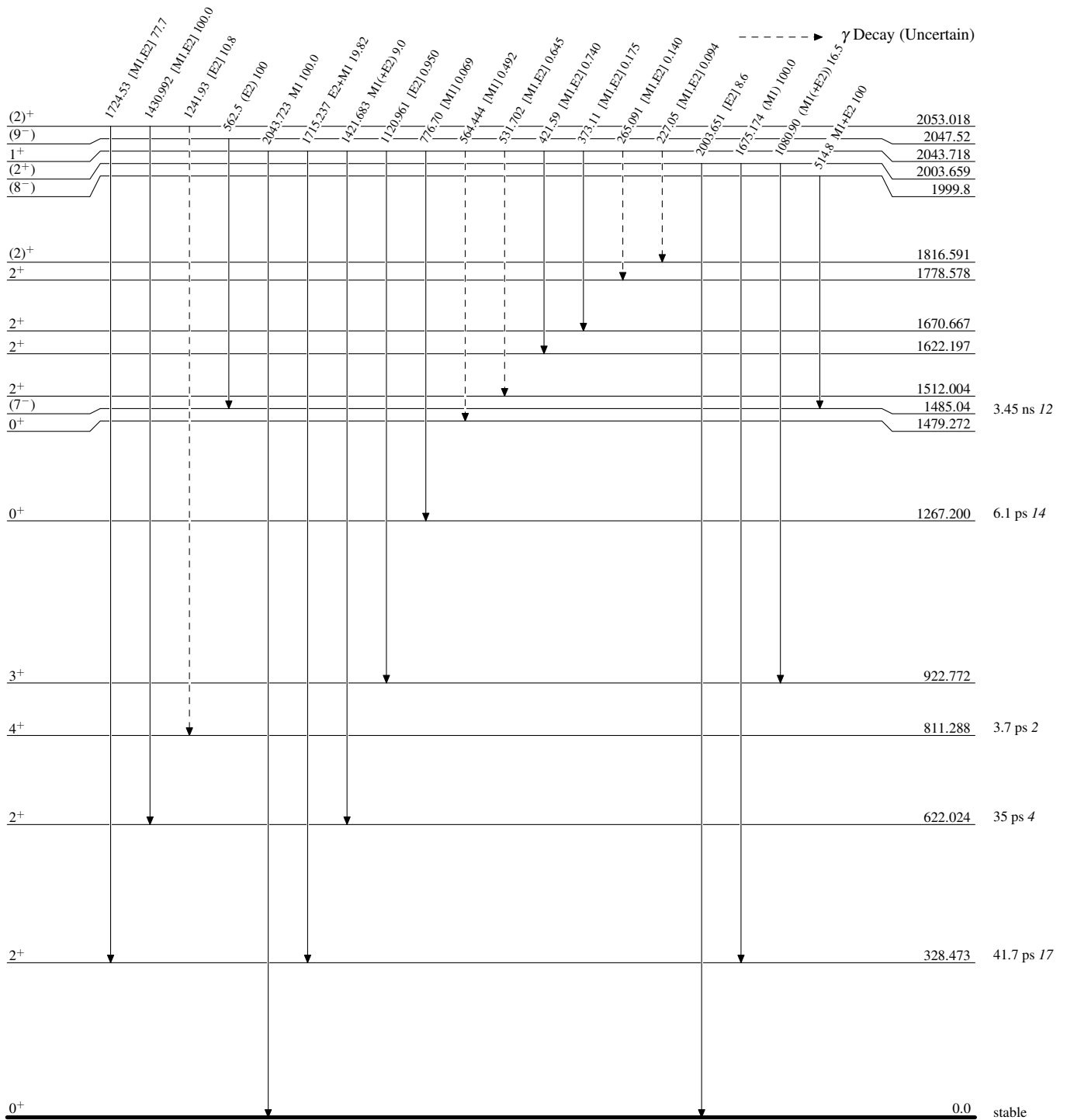
$^{194}_{78}\text{Pt}_{116}$

Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

Legend



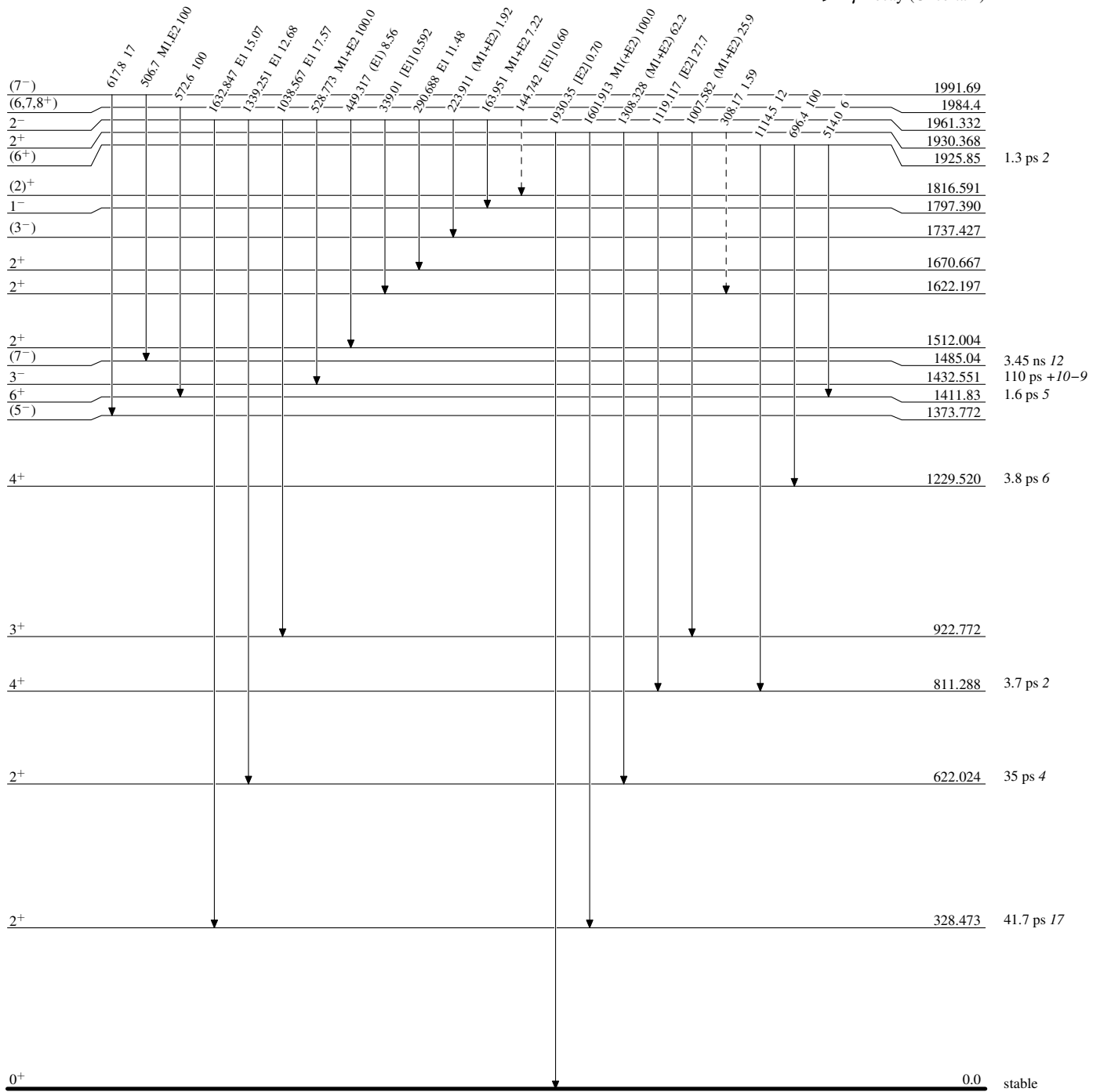
Adopted Levels, Gammas

Level Scheme (continued)

Legend

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

-----▶ γ Decay (Uncertain)



$^{194}_{78}\text{Pt}_{116}$

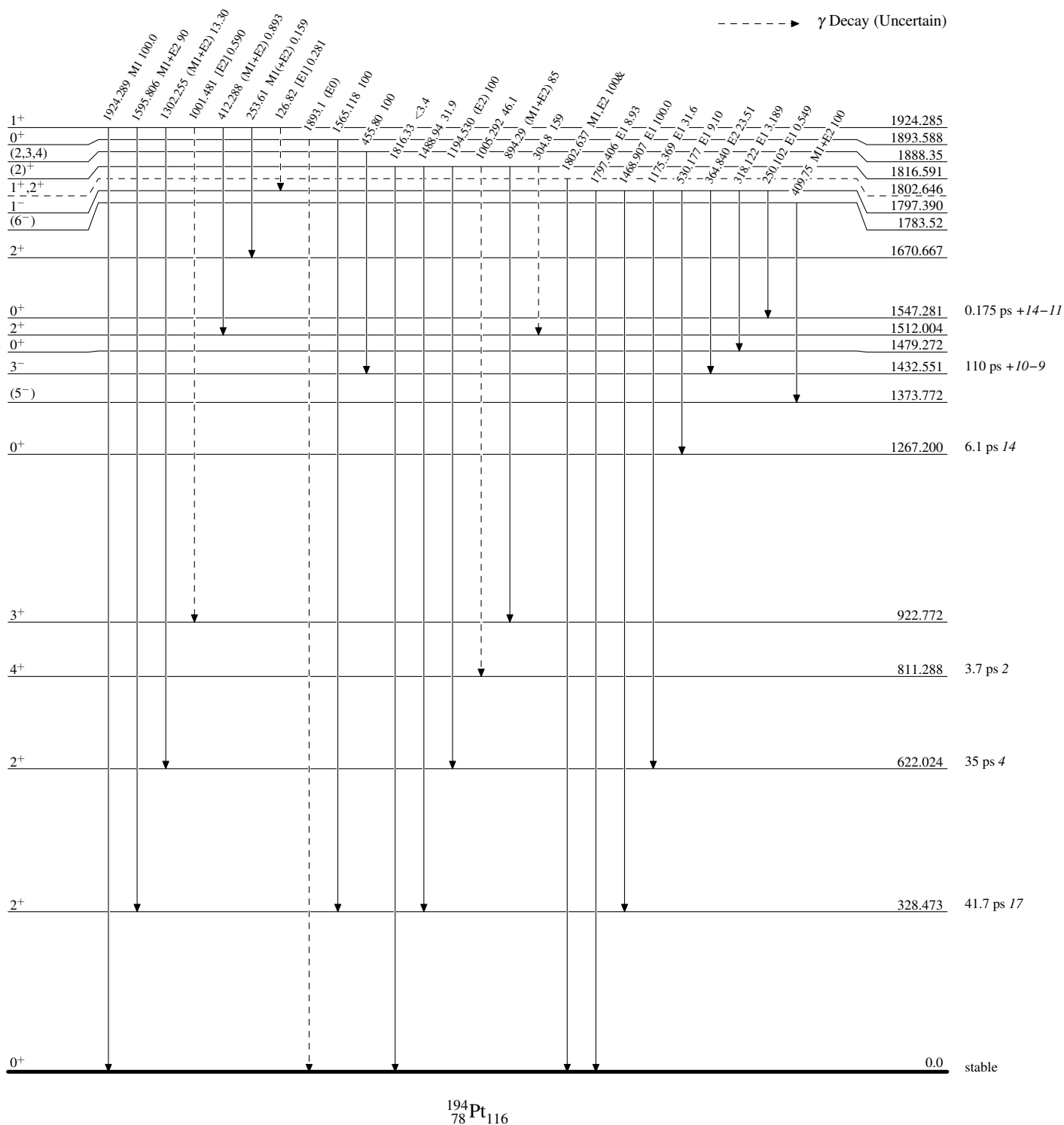
Adopted Levels, Gammas

Level Scheme (continued)

Legend

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

-----▶ γ Decay (Uncertain)



$^{194}_{78}\text{Pt}_{116}$

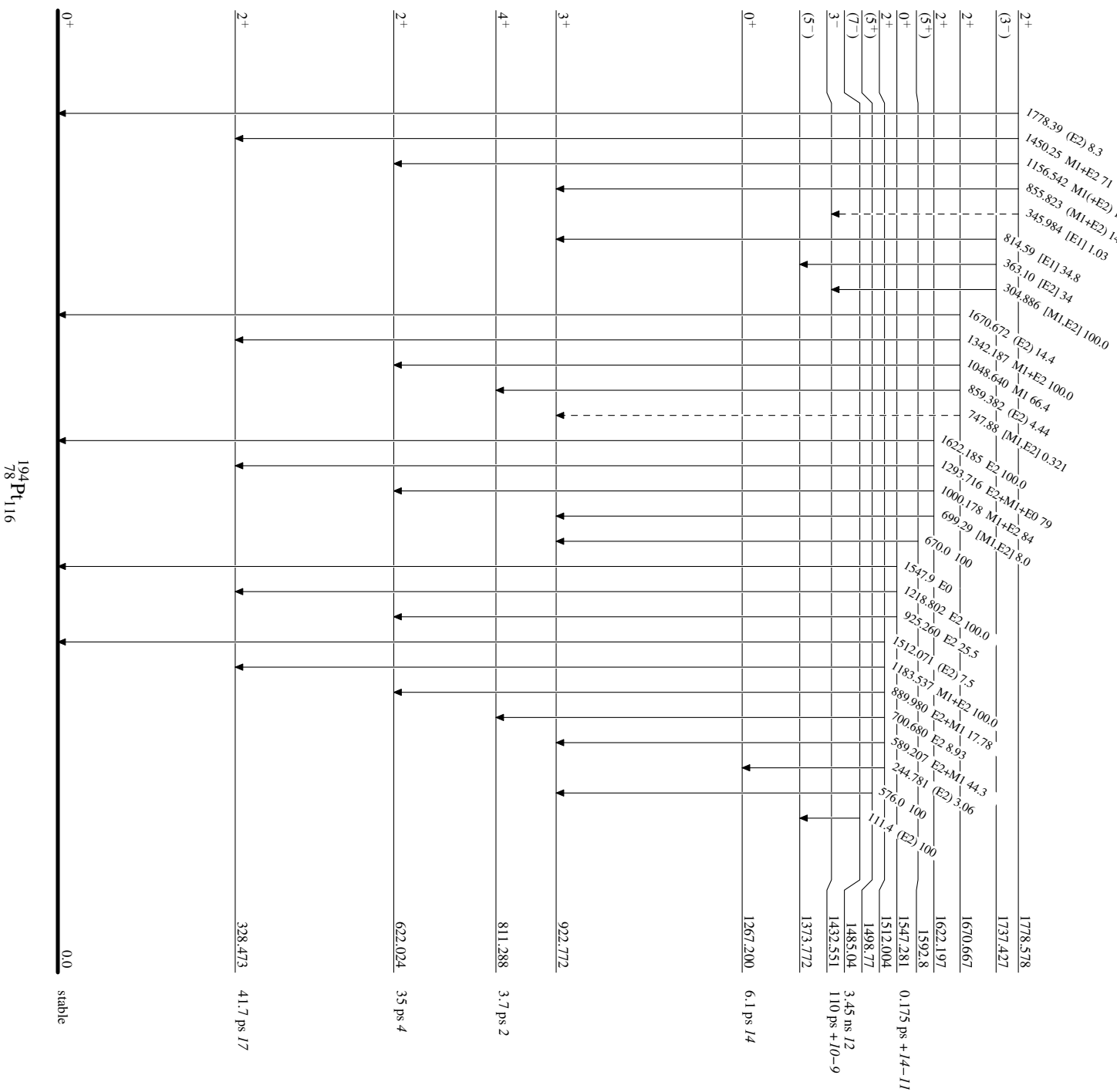
Adopted Levels, Gammas

Level Scheme (continued)

Legend

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given

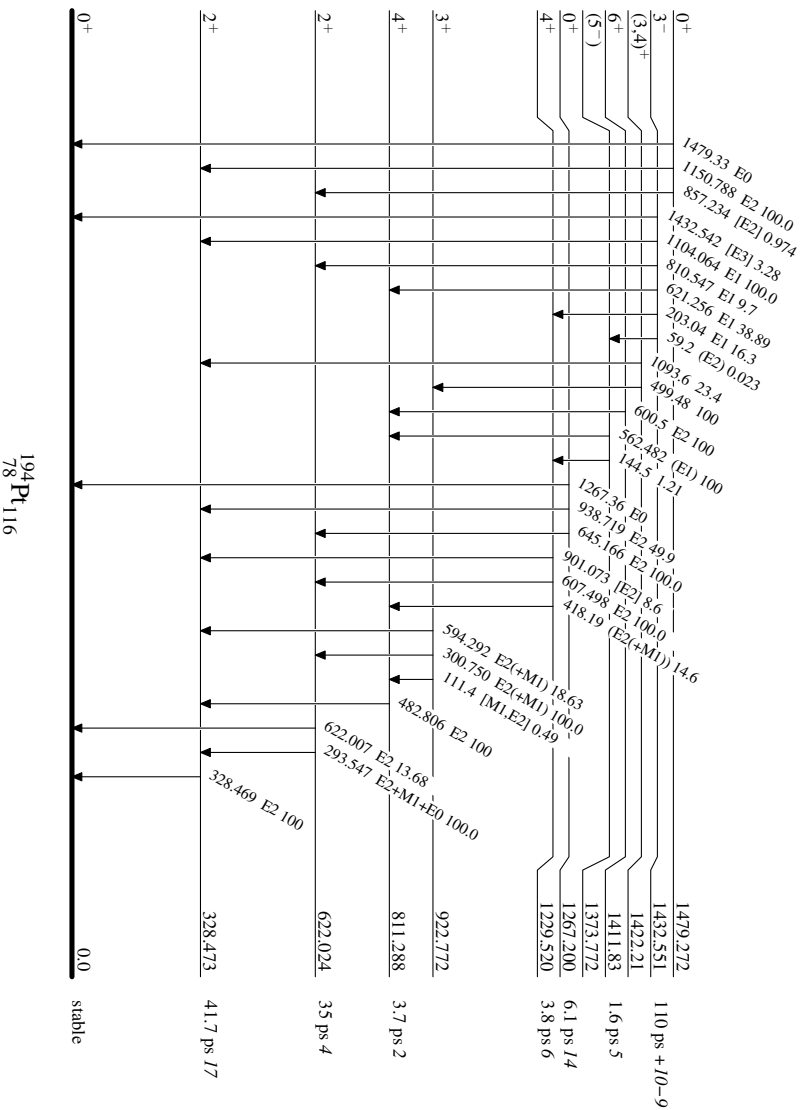
-----> γ Decay (Uncertain)



Adopted Levels, Gammas

Level Scheme (continued)

Intensities: Relative photon branching from each level
& Multiply placed: undivided intensity given



Adopted Levels, Gammas