

**Adopted Levels, Gammas**

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 187,355 (2023)	20-Sep-2022

Q(β<sup>-</sup>)=-5732 10; S(n)=7651 9; S(p)=3440 23; Q(α)=5799.3 17 [2021Wa16](#)

<sup>201</sup>Po Levels

Cross Reference (XREF) Flags

- A** <sup>201</sup>Po IT decay (8.96 min)
- B** <sup>201</sup>At ε decay
- C** <sup>205</sup>Rn α decay
- D** <sup>194</sup>Pt(<sup>12</sup>C,5nγ)

E(level) <sup>†</sup>	J <sup>π</sup>	T <sub>1/2</sub>	XREF	Comments
0 <sup>@</sup>	3/2 <sup>-</sup>	15.50 min 22	<b>ABCD</b>	<p>%α=1.13 3; %ε+%β<sup>+</sup>=98.87 3                      μ=-0.98 7 (<a href="#">2014Se07,2019StZV</a>)                      Q=+0.10 10 (<a href="#">2014Se07,2021StZZ</a>)                      δ⟨r<sup>2</sup>⟩(<sup>201</sup>Po,<sup>210</sup>Po)=-0.510 fm<sup>2</sup> 13 (<a href="#">2013Se03</a>).                      ⟨β<sub>2</sub><sup>2</sup>⟩<sup>1/2</sup>=0.10 (<a href="#">2013Se03,2014Se07</a>).                      %α is unweighted average of %α=1.15% 1 (<a href="#">1967Le21</a>) and 1.10% 4 (<a href="#">1993Wa04</a>).                      Other: 1.6% 3 (<a href="#">1971Ho01</a>). %ε+%β<sup>+</sup> has not been directly measured.                      J<sup>π</sup>: atomic beam (<a href="#">1962Ax02</a>) and μ.                      T<sub>1/2</sub>: Weighted average of 15.3 min 8 (<a href="#">1963Ho18</a>), 15.8 min 3 (<a href="#">1967Le08</a>), 15.1 min 3 (<a href="#">1967Ti04</a>), 16.0 min 15 (<a href="#">1968Go12</a>), 15 min 3 (<a href="#">1970Jo26</a>), 15.2 min 3 (<a href="#">1970Ra14</a>), 15.5 min 6 (<a href="#">1970DaZM</a>), 15.1 min 4 (<a href="#">1971Ho01</a>), 17.5 min 5 (<a href="#">1964Br23</a>) and 14.5 min 10 (<a href="#">1976Ko13</a>).                      Eα=5683.3 keV 16, recommended by <a href="#">1991Ry01</a>. Values from individual measurements are 5674 keV 9 (<a href="#">1963Ho18</a>), 5670 keV 10 (<a href="#">1967Le08</a>), 5677 keV 5 (<a href="#">1967Tr06</a>), 5684 keV 6 (<a href="#">1967Ti04</a>), 5684 keV 2 (<a href="#">1968Go12</a>), 5689 keV 10 (<a href="#">1970Jo26</a>), 5680 keV 10 (<a href="#">1970DaZM</a>) and 5685 keV 4 (<a href="#">1970Ra14</a>).                      μ,Q: hyperfine structure studies using in-source resonance ionization spectroscopy at CERN-ISOLDE facility (<a href="#">2014Se07</a>). Total (statistical uncertainties=0.010 for μ and 0.08 for Q, and systematic) uncertainties are given. Others: μ=0.94 8 (<a href="#">1991Wo04</a>, using the static nuclear orientation technique), 0.74 11 (<a href="#">1988Wo12</a>).</p>
5.61 <sup>‡</sup> 13 142 <sup>#</sup> 3	5/2 <sup>-</sup> (1/2 <sup>-</sup> )		<b>ABCD</b> <b>C</b>	<p>J<sup>π</sup>: Favored α-decay from the <sup>205</sup>Rn g.s. (J<sup>π</sup>=5/2<sup>-</sup>).                      E(level): From <sup>205</sup>Rn α decay.                      J<sup>π</sup>: Unfavored α-decay from <sup>205</sup>Rn g.s. (J<sup>π</sup>=5/2<sup>-</sup>). Systematics of structures in neighboring nuclei.</p>
423.41 <sup>&amp;</sup> 22	13/2 <sup>+</sup>	8.96 min 12	<b>AB D</b>	<p>%IT≈42.6; %α=2.4 5; %ε+%β<sup>+</sup>≈55                      μ=-1.00 7 (<a href="#">2014Se07,2019StZV</a>)                      Q=+1.3 4 (<a href="#">2014Se07,2021StZZ</a>)                      δν(<sup>201</sup>Po,<sup>196</sup>Po)=-2.20 GHz 15; δ⟨r<sup>2</sup>⟩(<sup>201</sup>Po,<sup>210</sup>Po)=-0.452 fm<sup>2</sup> 13 (<a href="#">2013Se03</a>).                      ⟨β<sub>2</sub><sup>2</sup>⟩<sup>1/2</sup>=0.12 (<a href="#">2013Se03,2014Se07</a>).                      %IT, %α, and %ε+%β<sup>+</sup> from %IT + %α + %ε+%β<sup>+</sup>=%100 and %IT/(%ε+%β<sup>+</sup>) ≈ 0.76, deduced by the evaluator from the decay scheme and γ-ray intensities of <a href="#">1986Br28</a>. %α is unweighted average of 2.9% 2 (<a href="#">1967Le21</a>) and 1.9% 4 (<a href="#">1970Jo26</a>). Others: %IT=28 +12 -7 (<a href="#">1971Jo19</a>).                      E(level): Other: 423.8 keV 24 in <a href="#">2021Ko07</a> from E<sub>α</sub>.                      J<sup>π</sup>: 417.8γ M4 to 5/2<sup>-</sup>; favored α decay to the 319.31 keV level (J<sup>π</sup>=13/2<sup>+</sup>) in <sup>197</sup>Pb.                      T<sub>1/2</sub>: Weighted average of 8.7 min 6 (<a href="#">1963Ho18</a>), 9.0 min 2 (<a href="#">1967Le08</a>), 8.9 min</p>

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**Adopted Levels, Gammas (continued)**

<sup>201</sup>Po Levels (continued)

E(level) <sup>†</sup>	J <sup>π</sup>	XREF	Comments
			4 (1967Ti04), 10.0 min 15 (1968Go12), 9 min 3 (1970Jo26), 8.8 min 4 (1970Ra14), 8.9 min 8 (1970DaZM), 9.0 min 3 (1976Ko13) and 9.0 min 3 (1986Br28). Eα=5786.0 keV 16 recommended by 1991Ry01. Values from individual measurements are 5780 keV 7 (1963Ho18), 5770 keV 10 (1967Le08), 5780 keV 5 (1967Tr06), 5788 keV 7 (1967Ti04), 5787 keV 2 (1968Go12), 5778 keV 10 (1970Jo26), 5780 keV 10 (1970DaZM) and 5786 keV 4 (1970Ra14). μ,Q: hyperfine structure studies using in-source resonance ionization spectroscopy at CERN-ISOLDE facility (2014Se07). Total (statistical uncertainties=0.055 for μ and 0.20 for Q, and systematic) uncertainties are given. Others: μ=1.00 8 (1991Wo04, using the static nuclear orientation technique), 0.99 11 (1988Wo12).
621.66 16	(7/2) <sup>-</sup>	B	J <sup>π</sup> : 616.1γ M1+E2 to 5/2 <sup>-</sup> , 621.6γ (E2) to 3/2 <sup>-</sup> ; direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
623.3? 3	(5/2) <sup>-</sup>	B	J <sup>π</sup> : 617.7γ to 5/2 <sup>-</sup> , 623.3γ to 3/2 <sup>-</sup> ; no direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
722.44 18	7/2 <sup>-</sup>	B	J <sup>π</sup> : 722.5γ E2 to 3/2 <sup>-</sup> ; direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
758.30? 20	(7/2) <sup>-</sup>	B	J <sup>π</sup> : 758.3γ E2 to 3/2 <sup>-</sup> ; direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
766.31? 24	(9/2) <sup>-</sup>	B	J <sup>π</sup> : 760.7γ E2 to 5/2 <sup>-</sup> ; direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
1006.7? 3	(11/2) <sup>+</sup>	B	J <sup>π</sup> : 583.3γ M1+E2 to 13/2 <sup>+</sup> ; direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
1015.2 3	(11/2) <sup>+</sup>	B	J <sup>π</sup> : 591.8γ M1+E2 to 13/2 <sup>+</sup> ; direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
1037.0 <sup>a</sup> 11	17/2 <sup>+</sup>	D	J <sup>π</sup> : 613.6γ (E2) to 13/2 <sup>+</sup> .
1059.5 3	(7/2) <sup>-</sup>	B	J <sup>π</sup> : 436.2γ M1+E2 to (5/2 <sup>-</sup> ).
1124.8? 5	(7/2,9/2,11/2)	B	J <sup>π</sup> : 358.5γ to (9/2) <sup>-</sup> ; direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
1242.9? 5	(7/2,9/2,11/2)	B	J <sup>π</sup> : 476.6γ to (9/2) <sup>-</sup> ; direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
1552.2 3	(9/2) <sup>+</sup>	B	J <sup>π</sup> : 492.7γ E1 to (7/2) <sup>-</sup> , 537γ M1+E2 to (11/2) <sup>+</sup> ; direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
1574.3 4	(9/2,11/2) <sup>+</sup>	B	J <sup>π</sup> : 559.1γ M1+E2 to (11/2) <sup>+</sup> ; direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
1593.6 <sup>b</sup> 15	21/2 <sup>+</sup>	D	J <sup>π</sup> : 556.6γ E2 to 17/2 <sup>+</sup> .
1912.3 <sup>c</sup> 18	25/2 <sup>+</sup>	D	J <sup>π</sup> : 318.7γ E2 to 21/2 <sup>+</sup> .
2044.0 4	(9/2) <sup>+</sup>	B	J <sup>π</sup> : 491.8γ E2 to (9/2) <sup>+</sup> ; direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
2101.6 21		D	
2133.8 21	25/2 <sup>+</sup> , (29/2 <sup>+</sup> )	D	J <sup>π</sup> : 221.5γ D,Q to 25/2 <sup>+</sup> .
2202.9 4	(9/2,11/2) <sup>+</sup>	B	J <sup>π</sup> : 628.6γ E2 to (9/2,11/2) <sup>+</sup> ; direct feeding in <sup>201</sup> At ε decay (J <sup>π</sup> =(9/2 <sup>-</sup> )).
2239.6 23		D	
2332.2 21	(27/2)	D	J <sup>π</sup> : 419.9γ D to 25/2 <sup>+</sup> .
2347.6 18		D	
2354.7 21	(27/2 <sup>+</sup> )	D	J <sup>π</sup> : 442.4γ (M1) to 25/2 <sup>+</sup> .
2463.9 21		D	
2570.2 21	(27/2 <sup>+</sup> )	D	J <sup>π</sup> : 657.9γ (M1) to 25/2 <sup>+</sup> .
2627.5 23	(29/2 <sup>+</sup> )	D	J <sup>π</sup> : 272.8γ (M1) to (27/2 <sup>+</sup> ).
2770.1 21		D	
2979.0 23	27/2 <sup>+</sup> , 31/2 <sup>+</sup>	D	J <sup>π</sup> : 408.8γ M1,E2 to (27/2 <sup>+</sup> ).
3039.6 23		D	
3196.5 23	(29/2)	D	J <sup>π</sup> : 626.3γ D to (27/2 <sup>+</sup> ).
3210.3 23	(31/2 <sup>+</sup> )	D	J <sup>π</sup> : 640.1γ E2 to (27/2 <sup>+</sup> ).
3333.1 25		D	
3710.1 25	(35/2 <sup>+</sup> )	D	J <sup>π</sup> : 499.8γ to (31/2 <sup>+</sup> ).
4153? 3		D	

<sup>†</sup> From a least-squares fit to E<sub>γ</sub>. ΔE<sub>γ</sub>=0.5 keV is assumed for E<sub>γ</sub>'s without uncertainties.

<sup>‡</sup> Configuration=ν f<sub>5/2</sub><sup>-1</sup>.

# Configuration=ν p<sub>1/2</sub><sup>-1</sup>. The assignment is tentative.

@ Configuration=ν p<sub>3/2</sub><sup>-1</sup>.

& Configuration=ν i<sub>13/2</sub><sup>-1</sup>.

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**Adopted Levels, Gammas (continued)** **$^{201}\text{Po}$  Levels (continued)**

<sup>a</sup> Configuration= $\nu (i_{13/2}^{-1})\otimes 2^+$ .

<sup>b</sup> Configuration= $\nu (i_{13/2}^{-1})\otimes 4^+$ .

<sup>c</sup> Possibly a mixture between configuration= $\nu (i_{13/2}^{-1})\otimes 6^+$  and configuration= $\nu (i_{13/2}^{-1}) \pi (h_{9/2}^{+2})_8^+$ .

**Adopted Levels, Gammas (continued)**

$\gamma(^{201}\text{Po})$									
$E_i(\text{level})$	$J_i^\pi$	$E_\gamma^\dagger$	$I_\gamma^\dagger$	$E_f$	$J_f^\pi$	Mult.#	$\delta$	$\alpha^@$	Comments
5.61 423.41	5/2 <sup>-</sup> 13/2 <sup>+</sup>	(5.61 13) 417.8 2	100 100	0 5.61	3/2 <sup>-</sup> 5/2 <sup>-</sup>	M4		4.84 7	E <sub>γ</sub> : From level energy difference. B(M4)(W.u.)≈1.8 α(K)=2.74 4; α(L)=1.542 22; α(M)=0.424 6 α(N)=0.1116 16; α(O)=0.02250 32; α(P)=0.00253 4 E <sub>γ</sub> : Weighted average of 418.5 keV 6 (1976Ko13), 417.6 keV 3 (1971Jo19) an 417.8 keV 6 (1986Br28). Mult.: α(K)exp=2.49 32, K/L=1.8 2, L/M=2.5 3 (1986Br28); K/L=2.0 3 (1976Ko13), 1.6 2 (1971Jo19).
621.66	(7/2) <sup>-</sup>	616.1 2	100 9	5.61	5/2 <sup>-</sup>	M1+E2	1.72 20	0.0334 27	α(K)=0.0260 23; α(L)=0.00561 32; α(M)=0.00136 7 α(N)=0.000349 19; α(O)=7.1×10 <sup>-5</sup> 4; α(P)=8.7×10 <sup>-6</sup> 6 Mult.,δ: α(K)exp=0.026 4 in <sup>201</sup> At ε decay (2010De04). α(K)=0.01430 20; α(L)=0.00393 6; α(M)=0.000972 14 α(N)=0.0002497 35; α(O)=5.03×10 <sup>-5</sup> 7; α(P)=5.74×10 <sup>-6</sup> 8 Mult.: α(K)exp=0.019 3 in <sup>201</sup> At ε decay (2010De04). α(K)=0.037 23; α(L)=0.0071 31; α(M)=0.0017 7 α(N)=4.4×10 <sup>-4</sup> 18; α(O)=9.E-5 4; α(P)=1.1×10 <sup>-5</sup> 5
623.3?	(5/2) <sup>-</sup>	(617.9 3)		5.61	5/2 <sup>-</sup>				E <sub>γ</sub> : From level energy difference. α(K)=0.036 22; α(L)=0.0069 30; α(M)=0.0017 7 α(N)=4.3×10 <sup>-4</sup> 18; α(O)=9.E-5 4; α(P)=1.1×10 <sup>-5</sup> 5
		(623.3 3)		0	3/2 <sup>-</sup>				E <sub>γ</sub> : From level energy difference. α(K)=0.026 15; α(L)=0.0048 21; α(M)=0.0011 5 α(N)=2.9×10 <sup>-4</sup> 12; α(O)=6.1×10 <sup>-5</sup> 27; α(P)=8.E-6 4 α(K)=0.01068 15; α(L)=0.00261 4; α(M)=0.000639 9 α(N)=0.0001642 23; α(O)=3.33×10 <sup>-5</sup> 5; α(P)=3.90×10 <sup>-6</sup> 5 Mult.: α(K)exp=0.008 1 in <sup>201</sup> At ε decay (2010De04). α(K)=0.00973 14; α(L)=0.002303 32; α(M)=0.000562 8 α(N)=0.0001444 20; α(O)=2.94×10 <sup>-5</sup> 4; α(P)=3.46×10 <sup>-6</sup> 5 Mult.: α(K)exp=0.007 1 in <sup>201</sup> At ε decay (2010De04). α(K)=0.00968 14; α(L)=0.002285 32; α(M)=0.000558 8 α(N)=0.0001432 20; α(O)=2.91×10 <sup>-5</sup> 4; α(P)=3.43×10 <sup>-6</sup> 5
722.44	7/2 <sup>-</sup>	716.6 4	20.9 18	5.61	5/2 <sup>-</sup>	[M1,E2]		0.032 18	
		722.5 2	100 9	0	3/2 <sup>-</sup>	E2		0.01413 20	
758.30?	(7/2) <sup>-</sup>	758.3 2	100	0	3/2 <sup>-</sup>	E2		0.01278 18	
766.31?	(9/2) <sup>-</sup>	760.7 2	100	5.61	5/2 <sup>-</sup>	E2		0.01269 18	
1006.7?	(11/2) <sup>+</sup>	583.3 2	100	423.41	13/2 <sup>+</sup>	M1+E2	2.61 17	0.0304 11	Mult.: α(K)exp=0.009 1 in <sup>201</sup> At ε decay (2010De04). α(K)=0.0230 9; α(L)=0.00563 14; α(M)=0.001379 32 α(N)=0.000354 8; α(O)=7.20×10 <sup>-5</sup> 17; α(P)=8.44×10 <sup>-6</sup> 23
1015.2	(11/2) <sup>+</sup>	591.8 2	100	423.41	13/2 <sup>+</sup>	M1+E2	2.67 18	0.0291 10	Mult.,δ: α(K)exp=0.023 3 in <sup>201</sup> At ε decay (2010De04). α(K)=0.0220 9; α(L)=0.00537 13; α(M)=0.001315 31 α(N)=0.000338 8; α(O)=6.87×10 <sup>-5</sup> 17; α(P)=8.06×10 <sup>-6</sup> 22
1037.0	17/2 <sup>+</sup>	613.6 <sup>‡</sup>	100 <sup>‡</sup>	423.41	13/2 <sup>+</sup>	(E2)		0.02007 28	Mult.,δ: α(K)exp=0.022 3 in <sup>201</sup> At ε decay (2010De04). α(K)=0.01467 21; α(L)=0.00408 6; α(M)=0.001009 14

**Adopted Levels, Gammas (continued)**

$\gamma(^{201}\text{Po})$  (continued)

$E_i(\text{level})$	$J_i^\pi$	$E_\gamma^\dagger$	$I_\gamma^\dagger$	$E_f$	$J_f^\pi$	Mult.#	$\delta$	$\alpha^@$	Comments
1059.5	(7/2) <sup>-</sup>	436.2 2	100	623.3?	(5/2) <sup>-</sup>	M1+E2	0.93 23	0.119 19	$\alpha(\text{N})=0.000259$ 4; $\alpha(\text{O})=5.22 \times 10^{-5}$ 7; $\alpha(\text{P})=5.95 \times 10^{-6}$ 8 Mult.: $A_2=0.5$ 2, $A_4=0.1$ 3, but values are distorted since the 613.6 $\gamma$ is situated on the slope of both the neutron bump and the stronger 611.2 $\gamma$ in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05). $\alpha(\text{K})=0.094$ 16; $\alpha(\text{L})=0.0193$ 19; $\alpha(\text{M})=0.0046$ 4 $\alpha(\text{N})=0.00119$ 11; $\alpha(\text{O})=0.000246$ 24; $\alpha(\text{P})=3.0 \times 10^{-5}$ 4 Mult., $\delta$ : $\alpha(\text{K})_{\text{exp}}=0.094$ 14 in <sup>201</sup> At $\epsilon$ decay (2010De04).
1124.8?	(7/2,9/2,11/2)	358.5 4	100	766.31?	(9/2) <sup>-</sup>				
1242.9?	(7/2,9/2,11/2)	476.6 4	100	766.31?	(9/2) <sup>-</sup>				
1552.2	(9/2) <sup>+</sup>	492.7 2	100 15	1059.5	(7/2) <sup>-</sup>	E1		0.01058 15	$\alpha(\text{K})=0.00871$ 12; $\alpha(\text{L})=0.001433$ 20; $\alpha(\text{M})=0.000335$ 5 $\alpha(\text{N})=8.57 \times 10^{-5}$ 12; $\alpha(\text{O})=1.768 \times 10^{-5}$ 25; $\alpha(\text{P})=2.196 \times 10^{-6}$ 31 Mult.: $\alpha(\text{K})_{\text{exp}}=0.010$ 4 in <sup>201</sup> At $\epsilon$ decay (2010De04). $\alpha(\text{K})=0.0240$ 6; $\alpha(\text{L})=0.00665$ 11; $\alpha(\text{M})=0.001647$ 27 $\alpha(\text{N})=0.000423$ 7; $\alpha(\text{O})=8.53 \times 10^{-5}$ 14; $\alpha(\text{P})=9.74 \times 10^{-6}$ 17 Mult., $\delta$ : $\alpha(\text{K})_{\text{exp}}=0.024$ 3 in <sup>201</sup> At $\epsilon$ decay (2010De04). $\alpha(\text{K})=0.0320$ 28; $\alpha(\text{L})=0.0072$ 4; $\alpha(\text{M})=0.00176$ 9 $\alpha(\text{N})=0.000453$ 22; $\alpha(\text{O})=9.3 \times 10^{-5}$ 5; $\alpha(\text{P})=1.11 \times 10^{-5}$ 7 Mult., $\delta$ : $\alpha(\text{K})_{\text{exp}}=0.032$ 5 in <sup>201</sup> At $\epsilon$ decay (2010De04).
1574.3	(9/2,11/2) <sup>+</sup>	537.0 2	95 8	1015.2	(11/2) <sup>+</sup>	M1+E2	3.58 17	0.0328 7	
1574.3	(9/2,11/2) <sup>+</sup>	559.1 2	100	1015.2	(11/2) <sup>+</sup>	M1+E2	1.78 20	0.0415 33	$\alpha(\text{K})=0.0320$ 28; $\alpha(\text{L})=0.0072$ 4; $\alpha(\text{M})=0.00176$ 9 $\alpha(\text{N})=0.000453$ 22; $\alpha(\text{O})=9.3 \times 10^{-5}$ 5; $\alpha(\text{P})=1.11 \times 10^{-5}$ 7 Mult., $\delta$ : $\alpha(\text{K})_{\text{exp}}=0.032$ 5 in <sup>201</sup> At $\epsilon$ decay (2010De04).
1593.6	21/2 <sup>+</sup>	556.6 $\ddagger$	100 $\ddagger$	1037.0	17/2 <sup>+</sup>	E2		0.02499 35	$\alpha(\text{K})=0.01781$ 25; $\alpha(\text{L})=0.00540$ 8; $\alpha(\text{M})=0.001347$ 19 $\alpha(\text{N})=0.000346$ 5; $\alpha(\text{O})=6.94 \times 10^{-5}$ 10; $\alpha(\text{P})=7.77 \times 10^{-6}$ 11 Mult.: $A_2=0.24$ 4, $A_4=-0.01$ 5 in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
1912.3	25/2 <sup>+</sup>	318.7 $\ddagger$	100 $\ddagger$	1593.6	21/2 <sup>+</sup>	E2		0.1054 15	$\alpha(\text{K})=0.0585$ 8; $\alpha(\text{L})=0.0350$ 5; $\alpha(\text{M})=0.00907$ 13 $\alpha(\text{N})=0.002329$ 33; $\alpha(\text{O})=0.000455$ 6; $\alpha(\text{P})=4.60 \times 10^{-5}$ 6 Mult.: $A_2=0.22$ 1, $A_4=-0.05$ 1 in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
2044.0	(9/2) <sup>+</sup>	491.8 2	100	1552.2	(9/2) <sup>+</sup>	E2		0.0334 5	$\alpha(\text{K})=0.02292$ 32; $\alpha(\text{L})=0.00788$ 11; $\alpha(\text{M})=0.001982$ 28 $\alpha(\text{N})=0.000509$ 7; $\alpha(\text{O})=0.0001015$ 14; $\alpha(\text{P})=1.111 \times 10^{-5}$ 16 Mult.: $\alpha(\text{K})_{\text{exp}}=0.023$ 7 in <sup>201</sup> At $\epsilon$ decay (2010De04). Mult.: $A_2=0.1$ 4, $A_4=0.2$ 3 in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
2101.6		189.3 $\ddagger$	100 $\ddagger$	1912.3	25/2 <sup>+</sup>	D,Q			Mult.: $A_2=0.1$ 4, $A_4=0.2$ 3 in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
2133.8	25/2 <sup>+</sup> ,(29/2 <sup>+</sup> )	221.5 $\ddagger$	100 $\ddagger$	1912.3	25/2 <sup>+</sup>	D,Q			$\alpha(\text{K})=0.6$ 5; $\alpha(\text{L})=0.162$ 13; $\alpha(\text{M})=0.0402$ 10; $\alpha(\text{N}+..)=0.0135$ 4 Mult.: $A_2=0.10$ 6, $A_4=-0.11$ 9 in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).

**Adopted Levels, Gammas (continued)**

$\gamma(^{201}\text{Po})$  (continued)

$E_i(\text{level})$	$J_i^\pi$	$E_\gamma^\dagger$	$I_\gamma^\ddagger$	$E_f$	$J_f^\pi$	Mult.#	$\alpha^@$	Comments
2202.9	(9/2,11/2) <sup>+</sup>	628.6 2	100	1574.3	(9/2,11/2) <sup>+</sup>	E2	0.01903 27	$\alpha(\text{K})=0.01399\ 20$ ; $\alpha(\text{L})=0.00381\ 5$ ; $\alpha(\text{M})=0.000941\ 13$ $\alpha(\text{N})=0.0002418\ 34$ ; $\alpha(\text{O})=4.88\times 10^{-5}\ 7$ ; $\alpha(\text{P})=5.58\times 10^{-6}\ 8$ Mult.: $\alpha(\text{K})_{\text{exp}}=0.014\ 3$ in <sup>201</sup> At $\varepsilon$ decay (2010De04).
2239.6		138.0 <sup>‡</sup>	100 <sup>‡</sup>	2101.6				
2332.2	(27/2)	419.9 <sup>‡</sup>	100 <sup>‡</sup>	1912.3	25/2 <sup>+</sup>	D		Mult.: $A_2=-0.2\ 3$ , $A_4=-0.1\ 4$ in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
2347.6		754.0 <sup>‡</sup>	100 <sup>‡</sup>	1593.6	21/2 <sup>+</sup>			
2354.7	(27/2 <sup>+</sup> )	442.4 <sup>‡</sup>	100 <sup>‡</sup>	1912.3	25/2 <sup>+</sup>	(M1)	0.1766 25	$\alpha(\text{K})=0.1439\ 20$ ; $\alpha(\text{L})=0.02492\ 35$ ; $\alpha(\text{M})=0.00587\ 8$ $\alpha(\text{N})=0.001510\ 21$ ; $\alpha(\text{O})=0.000316\ 4$ ; $\alpha(\text{P})=4.09\times 10^{-5}\ 6$ Mult.: $A_2=-0.05\ 7$ , $A_4=0.27\ 9$ in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
2463.9		551.6 <sup>‡</sup>	100 <sup>‡</sup>	1912.3	25/2 <sup>+</sup>			
2570.2	(27/2 <sup>+</sup> )	657.9 <sup>‡</sup>	100 <sup>‡</sup>	1912.3	25/2 <sup>+</sup>	(M1)	0.0618 9	$\alpha(\text{K})=0.0505\ 7$ ; $\alpha(\text{L})=0.00864\ 12$ ; $\alpha(\text{M})=0.002030\ 28$ $\alpha(\text{N})=0.000522\ 7$ ; $\alpha(\text{O})=0.0001094\ 15$ ; $\alpha(\text{P})=1.416\times 10^{-5}\ 20$ Mult.: $A_2=-0.30\ 18$ , $A_4=-0.2\ 2$ in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
2627.5	(29/2 <sup>+</sup> )	272.8 <sup>‡</sup>	100 <sup>‡</sup>	2354.7	(27/2 <sup>+</sup> )	(M1)	0.656 9	$\alpha(\text{K})=0.534\ 7$ ; $\alpha(\text{L})=0.0934\ 13$ ; $\alpha(\text{M})=0.02203\ 31$ $\alpha(\text{N})=0.00567\ 8$ ; $\alpha(\text{O})=0.001187\ 17$ ; $\alpha(\text{P})=0.0001533\ 21$ Mult.: $A_2=0.3\ 3$ , $A_4=0.4\ 3$ in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
2770.1		857.8 <sup>‡</sup>	100 <sup>‡</sup>	1912.3	25/2 <sup>+</sup>			
2979.0	27/2 <sup>+</sup> ,31/2 <sup>+</sup>	408.8 <sup>‡</sup>	100 <sup>‡</sup>	2570.2	(27/2 <sup>+</sup> )	M1,E2	0.14 8	$\alpha(\text{K})=0.11\ 7$ ; $\alpha(\text{L})=0.023\ 8$ ; $\alpha(\text{M})=0.0055\ 18$ $\alpha(\text{N})=0.0014\ 5$ ; $\alpha(\text{O})=2.9\times 10^{-4}\ 10$ ; $\alpha(\text{P})=3.5\times 10^{-5}\ 15$ Mult.: $A_2=0.5\ 2$ , $A_4=0.1\ 3$ in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
3039.6		905.8 <sup>‡</sup>	100 <sup>‡</sup>	2133.8	25/2 <sup>+</sup> , (29/2 <sup>+</sup> )	D		Mult.: $A_2=-0.1\ 3$ , $A_4=-0.1\ 5$ in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
3196.5	(29/2)	626.3 <sup>‡</sup>	100 <sup>‡</sup>	2570.2	(27/2 <sup>+</sup> )	D		Mult.: $A_2=-0.36\ 7$ , $A_4=-0.48\ 10$ in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
3210.3	(31/2 <sup>+</sup> )	640.1 <sup>‡</sup>	100 <sup>‡</sup>	2570.2	(27/2 <sup>+</sup> )	(E2)	0.01829 26	$\alpha(\text{K})=0.01350\ 19$ ; $\alpha(\text{L})=0.00362\ 5$ ; $\alpha(\text{M})=0.000894\ 13$ $\alpha(\text{N})=0.0002296\ 32$ ; $\alpha(\text{O})=4.64\times 10^{-5}\ 6$ ; $\alpha(\text{P})=5.31\times 10^{-6}\ 7$ Mult.: $A_2=0.44\ 19$ , $A_4=-0.2\ 3$ in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
3333.1		354.1 <sup>‡</sup>	100 <sup>‡</sup>	2979.0	27/2 <sup>+</sup> ,31/2 <sup>+</sup>	D		Mult.: $A_2=0.02\ 16$ , $A_4=0.1\ 2$ in <sup>194</sup> Pt( <sup>12</sup> C,5n $\gamma$ ) (1985We05).
3710.1	(35/2 <sup>+</sup> )	499.8 <sup>‡</sup>	100 <sup>‡</sup>	3210.3	(31/2 <sup>+</sup> )			
4153?		442.4 <sup>‡</sup>	100 <sup>‡</sup>	3710.1	(35/2 <sup>+</sup> )			

<sup>†</sup> From <sup>201</sup>At  $\varepsilon$  decay, unless otherwise stated.

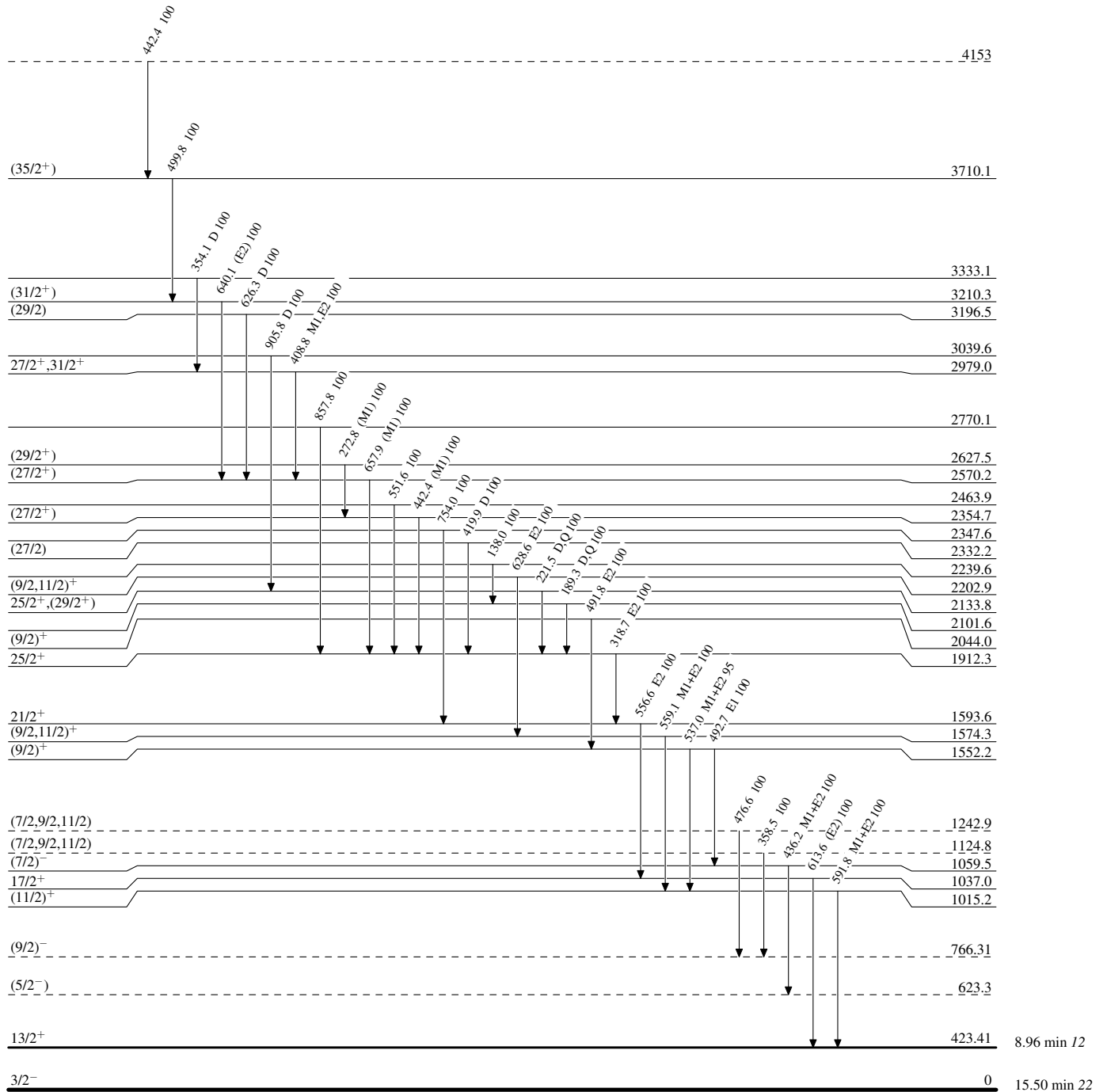
<sup>‡</sup> From <sup>194</sup>Pt(<sup>12</sup>C,5n $\gamma$ ).

# From  $\alpha(\text{K})_{\text{exp}}$  in <sup>201</sup>At  $\varepsilon$  decay and  $\gamma(\theta)$  in <sup>194</sup>Pt(<sup>12</sup>C,5n $\gamma$ ), unless otherwise stated.

@ Additional information 1.

**Adopted Levels, Gammas****Level Scheme**

Intensities: Relative photon branching from each level



Adopted Levels, Gammas

Legend

Level Scheme (continued)

Intensities: Relative photon branching from each level

-----►  $\gamma$  Decay (Uncertain)