Energy levels and branching ratios [93Ra11, 05Ko0A]. **$^{203}_{85}$At**

E^*	$2J^\pi$	$T_{1/2}$ or	Ref.	Branching ratios in percentage						
				E_f^*: 0	648.6	660.2	872.0	1225.3	1379.0	1633.4
[keV]		Γ_{cm}		$2J_f^\pi$: 9^-	13^-	11^-	13^+	17^-	15^+	17^+
0	9^-	7.37(13) m								
648.6(1)	13^-			100						
660.2(2)	11^-			100						
872.0(2)	13^+			27(2)	8(2)	65(4)				
1225.3(2)	17^-				100					
1379.0(2)	15^+						100			
1633.4(2)	17^+						68(7)		32(8)	
1636.6(2)	21^-		05Ko0A					100		
1695.6(2)	17^+						73(4)		27(7)	
1792.9(3)	19^-,21^-							100		
1942.0(3)	19^+									75(6)
1942.0+x		16.6(7) ns	05Ko0A							
1964.6(3)	$23^{\langle-\rangle}$									
1964.6+y	$\langle 25^+\rangle$	11.8(14) ns	05Ko0A							
2072.0(3)			05Ko0A					100		
2079.4(3)								100		
2228+x			05Ko0A							
2330+y			05Ko0A							
2486.3+x			05Ko0A							
2502.9(4)			05Ko0A							
2701.1+x			05Ko0A							

Data for this isotope are considered in vol. LB I/18C.

Energy levels and branching ratios [93Ra11, 05Ko0A]. Part 2 **$^{203}_{85}$At**

E^*	$2J^\pi$				Branching ratios in percentage					
		E_f^*:	1636.6	1695.5	1792.9	1942.0	1964.6	1992	2015	2536
[keV]		$2J_f^\pi$:	$\langle 21^-\rangle$	17^+	19^-,21^-	19^+	$\langle 23^-\rangle$		$\langle 25^+\rangle$	
1942.0(3)	19^+			25(2)						
1964.6(3)	$23^{\langle-\rangle}$		100							
2330+y								100		
2502.9(4)					100					

Energy levels [94Sc24].

$^{204}_{85}$At

E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}
0	7^+	9.2(2) m
587.30(20)	$\langle 10^- \rangle$	108(10) ms

Energy levels and branching ratios [04Ko28, 93Ra10].

$^{205}_{85}$At

E^* [keV]	$2J^\pi$	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage				
				E_f^*:	0	265.1	638.2	664.2	969.8
				$2J_f^\pi$:	9^-	$\langle 5^-,7^- \rangle$	11^-	13^-	13^+
0[j]	9^-	26.9(8) m	04Ko28						
265.05(22)	$\langle 5^-,7^- \rangle$		75ZeZY		100				
620.1(2)	$\langle 5,7^- \rangle$		75ZeZY		87	13			
638.20[k]	11^-				100				
664.26[k]	13^-				100				
729.58(24)	$\langle 5,7^- \rangle$		75ZeZY		44	56			
940.1(4)	$\langle 5,7^- \rangle$		75ZeZY			100			
969.81[l]	13^+				15.0(7)		85(3)		
1132.28[m]	15^-						33.3(4)	67(1)	
1230.59[m]	17^-							96(1)	
1441.35(13)[f]	15^+								100
1563.56(21)[i]	21^-								
1756.10(16)[f]	17^+								24(2)
1862.29(11)	19^-								
1877.74(13)	17^+								
1935.98(13)[a]	23^-								
2054.31(13)	21^+								
2062.62(23)[b]	25^+	67.9(1) ns							
2339.65(23)[c]	29^+	7.8(2) μs							
2499.23(24)[d]	27^-								
2721.6(3)[g]	29^+								
3221.8(3)[e]	29^-								
3274.6(3)[h]	33^+								
3481.0(3)	$\langle 29,31 \rangle^+$		04Ko28						
3524.8(3)[g]	$31^{\langle + \rangle}$								
3700.8(4)	$\langle 33^+ \rangle$								
3814.9(3)[h]	35^+								
3894.9(3)	31–35		04Ko28						
3954.5(4)	$\langle 37^+ \rangle$								
4150.1(3)	33–37		04Ko28						
4341.5(3)	37^+		04Ko28						

(continued) **$^{205}_{85}$At**

E^*	$2J^\pi$	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
				E_f^*:	0	265.1	638.2	664.2	969.8
[keV]		Γ_{cm}		$2J_f^\pi$:	9^-	$\langle 5^-,7^-\rangle$	11^-	13^-	13^+
4405.8(5)	$\langle 39^+\rangle$								
4546.0(4)	35–39		04Ko28						

13 nucleon configuration (marked here a-m) are assigned to levels of this nucleus in [04Ko28].
Data for this isotope are considered in vol. LB I/18C.

Energy levels and branching ratios [04Ko28, 93Ra10]. Part 2 **$^{205}_{85}$At**

E^*	$2J^\pi$	Branching ratios in percentage									
	E_f^*:	1132.3	1230.6	1441.4	1563.5	1756.1	1862.3	1877.7	1935.9	2054.3	2062.6
[keV]	$2J_f^\pi$:	15^-	17^-	15^+	21^-	17^+	19^-	17^+	23^-	21^+	25^+
1230.59[m]	17^-	3.8(2)									
1563.56(21)[i]	21^-		100								
1756.10(16)[f]	17^+			76(2)							
1862.29(11)	19^-	82(2)	18(2)								
1877.74(13)	17^+			100		x					
1935.98(13)[a]	23^-				100						
2054.31(13)	21^+					x	71(1)	26.0(4)	3.3(4)		
2062.62(23)[b]	25^+								100	x	
2339.65(23)[c]	29^+								72(2)		28.2(9)
2499.23(24)[d]	27^-								100		
2721.6(3)[g]	29^+										100

Energy levels and branching ratios [04Ko28, 93Ra10]. Part 3 **$^{205}_{85}$At**

E^*	$2J^\pi$	Branching ratios in percentage									
	E_f^*:	2499.2	2721.6	3221.7	3274.6	3480.9	3524.7	3700.7	3814.9	3954.4	4150.1
[keV]	$2J_f^\pi$:	27^-	29^+	29^-	33^+		$31^{\langle+\rangle}$	$\langle 33^+\rangle$	35^+	$\langle 37^+\rangle$	37
3221.8(3)[e]	29^-	100									
3274.6(3)[h]	33^+		100								
3481.0(3)	$\langle 29,31\rangle^+$			100							
3524.8(3)[g]	$31^{\langle+\rangle}$			100		x					
3700.8(4)	$\langle 33^+\rangle$						100				
3814.9(3)[h]	35^+				100						
3954.5(4)	$\langle 37^+\rangle$							100			
4150.1(3)	33–37								100		
4341.5(3)	37^+								100		
4405.8(5)	$\langle 39^+\rangle$									100	
4546.0(4)	35–39										100

Energy levels [99Br39, 99Fe10, 05Ku06, 96Fi0A]. **$^{206}_{85}$At**

E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}	Ref.
0.0	$\langle 5\rangle^+$	30.6(13) m	05Ku06
5.6			05Ku06
31.1			05Ku06
126.3			05Ku06
137.6			05Ku06
148.0			05Ku06
200.9			05Ku06
322.3			05Ku06
340.4			05Ku06
444.2			05Ku06
657.3			05Ku06
686	$\langle 9^+\rangle$		99Fe10
807	$\langle 10^-\rangle$	410 ns	99Fe10
1276	$\langle 11^+\rangle$		99Fe10
1348			99Fe10
1393			99Fe10
1423	$\langle 12^-\rangle$		99Fe10
1622			99Fe10
1741			99Fe10
1798	$\langle 13^-\rangle$		99Fe10
1815	$\langle 14^-\rangle$		99Fe10
1961			99Fe10
2003	$\langle 14^-\rangle$		99Fe10
2010			99Fe10
2104			99Fe10
2134			99Fe10
2252			99Fe10
2292			99Fe10
2553			99Fe10
2646			99Fe10
2797			99Fe10
2903			99Fe10
	99Fe10		Ref.

The spin of the ground state was found to be J^π=(7^+) in [99Fe10].

Energy levels and branching ratios [93Ma73]. **$^{207}_{85}$At**

E^* [keV]	$2J^\pi$	$T_{1/2}$ or Γ_{cm}	Ref.
0	9^-	1.80(4) h	05Ku06
344.53(4)	7^-	<5.5 ns	05Ku06

(continued) **$^{207}_{85}$At**

E^* [keV]	$2J^\pi$	$T_{1/2}$ or Γ_{cm}	Ref.
643.4(2)	11^-	<5.5 ns	05Ku06
674.01(4)	5^-,7^-		
686.3(3)	13^-	<5.5 ns	05Ku06
747.18(5)	7^-		75ZeZY
973.27(8)			
976.08(10)			
1018.55(6)	3^-,5,7		
1041.71(6)	3^-,5^-,7^-		
1055.3(3)	13^-	<5.5 ns	
1084.6(3)	15^-	<5.5 ns	
1108.1(3)			
1114.78(7)	7^-		
1115.7(11)	$\langle 13 \rangle$	<5.5 ns	
1119.95(8)			
1197.90(10)			
1224.74(16)			
1233.8(4)	17^-	<5.5 ns	
1284.14(15)			
1351.20(15)			
1495.4(5)	$\langle 21^- \rangle$	<5.5 ns	
1534.79(16)			
1539.36(13)			
1553.5(2)			
1631.4(11)	$\langle 15 \rangle$	<5.5 ns	
1799.4(2)			
1823.3(3)			
1841.09(17)			
1897.6(6)	$\langle 23^- \rangle$	<5.5 ns	
1966.56(17)			
≈1971		<5.5 ns	
2038.6(2)			
2117.2(7)	$\langle 25^+ \rangle$	108(2) ns	
2149.55(17)			

Data for this isotope are considered in vol. LB I/18C.

Energy levels and branching ratios [93Ma73]. Part 2 **$^{207}_{85}$At**

E^*	$2J^\pi$		Branching ratios in percentage						
		E_f^*:	0	344.5	643.4	674.0	686.3	747.2	973.3
[keV]		$2J_f^\pi$:	9^-	7^-	11^-	5^-,7^-	13^-	7^-	
344.53(4)	7^-		100						
643.4(2)	11^-		100						

(continued) **$^{207}_{85}$At**

E^*	$2J^\pi$	Branching ratios in percentage							
	E_f^*:	0	344.5	643.4	674.0	686.3	747.2	973.3	
[keV]	$2J_f^\pi$:	9^-	7^-	11^-	$5^-,7^-$	13^-	7^-		
674.01(4)	$5^-,7^-$	≈73	27(3)						
686.3(3)	13^-	100							
747.18(5)	7^-	54(5)	46(4)						
973.27(8)		69(12)	31(6)						
976.08(10)			100						
1018.55(6)	$3^-,5,7$		[100]						
1041.71(6)	$3^-,5^-,7^-$		100						
1055.3(3)	13^-			48(4)		52(4)			
1084.6(3)	15^-			76(7)		24(2)			
1108.1(3)			48(17)				52(24)		
1114.78(7)	7^-			8.0(20)			92(10)		
1115.7(11)	⟨13⟩			100					
1119.95(8)			81(10)		19(3)				
1197.90(10)			91(18)		9(5)				
1224.74(16)		52(12)	16(6)				31(7)		
1233.8(4)	17^-					69(7)			
1284.14(15)			29(9)		32(6)		24(7)		
1351.20(15)							19(5)	66(13)	
1534.79(16)			20(8)		13(5)		18(5)	31(7)	
1539.36(13)		35(13)			13(6)		10(3)	17(5)	
1553.5(2)					16(6)		24(9)	30(8)	
1799.4(2)		x							
1823.3(3)			x						
1966.56(17)								35(10)	
2149.55(17)			x					x	

Energy levels and branching ratios [93Ma73]. Part 3 **$^{207}_{85}$At**

E^*	$2J^\pi$	Branching ratios in percentage									
	E_f^*:	976.1	1018.55	1041.71	1055.3	1084.6	1108.1	1115.7	1197.90	1224.74	1233.8
[keV]	$2J_f^\pi$:		$3^-,5,7$		13^-	15^-		⟨13⟩			17^-
1084.6(3)	15^-				x						
1233.8(4)	17^-					31(3)					
1284.14(15)		14(3)									
1351.20(15)							15(5)				
1495.4(5)	⟨21^-⟩										100
1534.79(16)		18(4)									
1539.36(13)			8(4)								
1553.5(2)			31(8)								
1631.4(11)	⟨15⟩							100			
1799.4(2)		37(13)	≈13				22(9)				
1823.3(3)			29(13)	≈10						34(12)	

(continued) **$^{207}_{85}$At**

E^*	$2J^\pi$	Branching ratios in percentage									
	E_f^*:	976.1	1018.55	1041.71	1055.3	1084.6	1108.1	1115.7	1197.90	1224.74	1233.8
[keV]	$2J_f^\pi$:		3^-,5,7		13^-	15^-		$\langle 13\rangle$			17^-
1841.09(17)		12(6)		12(3)					65(12)	12(3)	
1966.56(17)		24(8)	21(6)						20(6)		
2149.55(17)									25(9)		

Energy levels and branching ratios [93Ma73]. Part 4 **$^{207}_{85}$At**

E^*	$2J^\pi$	Branching ratios in percentage								
	E_f^*:	1284.14	1351.20	1495.4	1539.36	1553.5	1631.4	1799.4	1841.09	1897.6
[keV]	$2J_f^\pi$:			$\langle 21^-\rangle$			$\langle 15\rangle$			$\langle 23^-\rangle$
1539.36(13)			15(3)							
1799.4(2)						29(7)				
1823.3(3)			28(8)							
1897.6(6)	$\langle 23^-\rangle$			100						
≈1971							x			
2038.6(2)		20(5)	48(14)			32(5)				
2117.2(7)	$\langle 25^+\rangle$									100
2149.55(17)					26(5)			37(9)	12(3)	

Energy levels and branching ratios [86Ma17]. **$^{208}_{85}$At**

E^*	J^π	$T_{1/2}$ or	Ref.
[keV]		Γ_{cm}	
0.0	6^+	1.63(3) h	05Ku06
23.53	$\langle 5\rangle^+$		05Ku06
63.70	$\langle 4\rangle^+$		05Ku06
71.7(5)	7^+		05Ku06
113.79(3)	$\langle 3\rangle^+$		05Ku06
147.7(5)	5^+		05Ku06
173.76(3)	$\langle 2\rangle^+$		
226.8(10)			05Ku06
237.22(4)	$\langle 3,4,5\rangle^+$		05Ku06
283.9(10)			
335.8(10)			05Ku06
424.82(4)	$\langle 1,2,3\rangle^+$		
430.6(10)			05Ku06
587.9			05Ku06
600.49(3)	$\langle 2,3\rangle^+$		
681.7			05Ku06

(continued) **$^{208}_{85}$At**

E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}	Ref.
734.25(3)	$\langle 2,3\rangle^+$		
788.1	8^+		
853.41(5)*	$\langle 2,3,4\rangle^+$		
903.9	9^+		
904.47(5)			
1090.4	$\langle 10^-\rangle$	46 ns	
1255.0	$\langle 10^+\rangle$		
1299.7	$\langle 11\rangle^+$		
1375.9	$\langle 12^+\rangle$		
1525.1			
1539.64(4)			
1648.4	$X^{\langle -\rangle}$		
1668.1			
1803.7			
1826.57(8)			
1979.44(6)*			
2194.0			
2226.1			
2270.13(5)			
2275.8		1.5 μs	
2576.82(6)*			
2728.5*			
2828.1*			
3348.3*			
3459.6*			

* uncertain [86Ma17].
Data for this isotope are considered in vol. LB I/18C.

Energy levels and branching ratios [86Ma17]. Part 2 **$^{208}_{85}$At**

E^* [keV]	J^π	Branching ratios in percentage						
	E_f^*:	0.0	23.53	63.70	71.7	113.8	173.8	237.28
	J_f^π:	6^+	$\langle 5\rangle^+$	$\langle 4\rangle^+$	7^+	$\langle 3\rangle^+$	$\langle 2\rangle^+$	
23.53	$\langle 5\rangle^+$	100						
63.70	$\langle 4\rangle^+$		100					
71.7(5)	7^+	100						
113.79(3)	$\langle 3\rangle^+$			100				
147.7(5)	5^+	8	68(7)	24(5)				
173.76(3)	$\langle 2\rangle^+$					100		
237.22(4)	$\langle 3,4,5\rangle^+$		26(3)	50(5)		24(3)		
424.82(4)	$\langle 1,2,3\rangle^+$						95.1(23)	4.9(8)
600.49(3)	$\langle 2,3\rangle^+$					18.1(8)	82(2)	

(continued) **$^{208}_{85}$At**

E^*	J^π	Branching ratios in percentage						
	E_f^*:	0.0	23.53	63.70	71.7	113.8	173.8	237.28
[keV]	J_f^π:	6^+	$\langle 5\rangle^+$	$\langle 4\rangle^+$	7^+	$\langle 3\rangle^+$	$\langle 2\rangle^+$	
734.25(3)	$\langle 2,3\rangle^+$					50(3)	50(2)	
788.1	8^+	84			16			
853.41(5)*	$\langle 2,3,4\rangle^+$					100		
903.9	9^+				99			
904.47(5)							6.3(12)	

Energy levels and branching ratios [86Ma17]. Part 3 **$^{208}_{85}$At**

E^*	J^π	Branching ratios in percentage									
	E_f^*:	424.9	600.5	734.2	788.1	853.4	903.9	904.5	1090.4	1255.0	1299.7
[keV]	J_f^π:		$\langle 2,3\rangle^+$	$\langle 2,3\rangle^+$	8^+		9^+		$\langle 10^-\rangle$	$\langle 10^+\rangle$	$\langle 11\rangle^+$
903.9	9^+				0.9						
904.47(5)		89(3)		5.1(13)							
1090.4	$\langle 10^-\rangle$						100				
1255.0	$\langle 10^+\rangle$				100						
1299.7	$\langle 11\rangle^+$						97			3.5	
1375.9	$\langle 12^+\rangle$										100
1539.64(4)			52(2)	48(2)							
1648.4	$X^{\langle -\rangle}$								100		
1668.1									100		
1826.57(8)			100								
1979.44(6)*			93(5)			7.0(13)					
2270.13(5)		50(2)	10(2)					40(2)			
2576.82(6)*		18(2)									

Energy levels and branching ratios [86Ma17]. Part 4 **$^{208}_{85}$At**

E^*	J^π	Branching ratios in percentage								
	E_f^*:	1375.9	1525.1	1648.4	1803.7	2226.1	2270.1	2275.8	2728.5	2828.1
[keV]	J_f^π:	$\langle 12^+\rangle$		$X^{\langle -\rangle}$						
1525.1		100								
1803.7			100							
2194.0				100						
2226.1				100						
2275.8			55		45					
2576.82(6)*							82(8)			
2728.5*						100				
2828.1*								100		

(continued) **$^{208}_{85}$At**

E^*	J^π	Branching ratios in percentage								
	E_f^*:	1375.9	1525.1	1648.4	1803.7	2226.1	2270.1	2275.8	2728.5	2828.1
[keV]	J_f^π:	$\langle 12^+ \rangle$		$X^{\langle - \rangle}$						
3348.3*									100	
3459.6*										x

Energy levels and branching ratios [91Ma16, 90Mu04]. **$^{209}_{85}$At**

E^*	$2J^\pi$	$T_{1/2}$ or	Ref.
[keV]		Γ_{cm}	
0	9^-	5.41(5) h	05Ku06
408.33(3)	7^-	≤5 ns	05Ku06
577.10(5)	$\langle 11 \rangle^-$	≤5 ns	05Ku06
725.06(6)	$\langle 13 \rangle^-$	≤5 ns	
745.78(4)	7^-	≤5 ns	
789.13(21)	$5^-,7^-,9^-$	≤5 ns	
794.69(5)	$\langle 5,7,9 \rangle^-$		
934.48(14)	$\langle 7 \rangle^-$		
1081.15(5)	$\langle 5,7 \rangle^-$		
1093.24(11)	$\langle 7^- \rangle$		
1097.64(5)	$\langle 7 \rangle^-$		
1130.94(21)	$5^-,7^-,9^-$		
1214.28(12)	$\langle 11,13 \rangle^-$	≤5 ns	
1242.32(14)	$\langle 13^- \rangle$	≤5 ns	
1269.82(17)	$\langle 9,11,13 \rangle^-$		
1321.56(9)	$\langle 17 \rangle^-$	≤5 ns	
1339.56(21)	$\langle 11–15 \rangle^-$		
1393.61(20)	$\langle 11–15 \rangle^-$		
1394.38(8)	$5^-,7^-$		
1427.66(12)	$\langle 21 \rangle^-$	25.5(12) ns	
1516.88(14)			
1659.96(21)			
1772.54(17)	$\langle 15^- \rangle$	≤5 ns	
1851.70(18)	$\langle 23 \rangle^-$	≤5 ns	
1907.26(22)	$\langle 19 \rangle^-$		
1953.44(6)	$5^+,7^+$		
2075.96(22)			
2086.3(3)			
2135.64(6)	$\langle 5,7 \rangle^+$		
2183			
2238.28(20)	$\langle 25 \rangle^-$		
2402			
2414.86(8)	$3^+,5^+,7^+$		
2429.25(23)	$\langle 29 \rangle^+$	0.89(4) μs	

(continued) **$^{209}_{85}$At**

E^* [keV]	$2J^\pi$	$T_{1/2}$ or Γ_{cm}	Ref.
2516.52(14)	X^+		
2522.39(20)			
2569.2(3)	$\langle 5,7,9\rangle$		
2581.4(3)			
2605.4(3)	$\langle 25^+\rangle$		
2612.0(3)	$\langle 25^-\rangle$		
2677			
2683			
2689.84(24)			
2713.0(6)			
2821.8(5)			
3140.57(20)			
3172.2(3)			
3188.6(3)	$\langle 31^+\rangle$		
3292			
3388.42(21)			
3544.27(18)	$\langle 5,7,9\rangle$		
3551.3(4)			
3592	$\langle 33^+\rangle$		
3626.9(4)			
3747			
3753.7(3)			
3811			
3897	$\langle 33^+\rangle$		
4176	$\langle 35^+\rangle$		
4375			
4506			
4695			
35000(1)	$\langle 9^-\rangle$		

Data for this isotope are considered in vol. LB I/18C.

Energy levels and branching ratios [91Ma16, 90Mu04]. Part 2 **$^{209}_{85}$At**

E^* [keV]	$2J^\pi$		Branching ratios in percentage						
		E_f^*:	0	408.3	577.1	725.1	745.8	794.7	934.5
		$2J_f^\pi$:	9^-	7^-	$\langle 11\rangle^-$	$\langle 13\rangle^-$	7^-		$\langle 7\rangle^-$
408.33(3)	7^-		100						
577.10(5)	$\langle 11\rangle^-$		100						
725.06(6)	$\langle 13\rangle^-$		91		8.7(17)				
745.78(4)	7^-		61(2)	38.9(12)					
789.13(21)	$5^-,7^-,9^-$			100					
794.69(5)	$\langle 5,7,9\rangle^-$		62(4)	38(2)					

(continued) **$^{209}_{85}$At**

E^*	$2J^\pi$	Branching ratios in percentage							
	E_f^*:	0	408.3	577.1	725.1	745.8	794.7	934.5
[keV]	$2J_f^\pi$:	9^-	7^-	$\langle 11\rangle^-$	$\langle 13\rangle^-$	7^-		$\langle 7\rangle^-$
934.48(14)	$\langle 7\rangle^-$		32(10)	50(15)		18(5)		
1081.15(5)	$\langle 5,7\rangle^-$	2.9(14)	89(3)				8.2(27)	<3
1093.24(11)	$\langle 7^-\rangle$		100					
1097.64(5)	$\langle 7\rangle^-$	2.25(20)	92(3)				5.4(14)	
1130.94(21)	$5^-,7^-,9^-$		100					
1214.28(12)	$\langle 11,13\rangle^-$	25		50	25			
1242.32(14)	$\langle 13^-\rangle$			85	15			
1269.82(17)	$\langle 9,11,13\rangle^-$			100				
1321.56(9)	$\langle 17\rangle^-$				100			
1339.56(21)	$\langle 11–15\rangle^-$				100			
1393.61(20)	$\langle 11–15\rangle^-$				100			
1394.38(8)	$5^-,7^-$	40(2)	22(2)				24(2)	
1516.88(14)				34	50			
1659.96(21)					100			
1772.54(17)	$\langle 15^-\rangle$				17			
1953.44(6)	$5^+,7^+$	1.9(2)				3.6(4)	12.4(8)	
2135.64(6)	$\langle 5,7\rangle^+$		<1.7				7.6(7)	
2414.86(8)	$3^+,5^+,7^+$					4.4(6)		
2516.52(14)	X^+					21(1)	16(2)	
2522.39(20)			14(1)				<4	
2569.2(3)	$\langle 5,7,9\rangle$		23(3)			<28	26(3)	14(4)
2581.4(3)						<18	≈18	
2689.84(24)			31(3)					
2713.0(6)								≈39
2821.8(5)			13.5(15)					13(5)
3140.57(20)						10(1)	14(1)	8(1)
3172.2(3)						≈16		
3388.42(21)			4.0(13)			64(6)		12(3)
3544.27(18)	$\langle 5,7,9\rangle$		14(1)			7(1)	5(1)	
3551.3(4)			29(4)					
3626.9(4)			11(2)			20(5)	≈12	
3753.7(3)						20(2)		

Energy levels and branching ratios [91Ma16, 90Mu04]. Part 3 **$^{209}_{85}$At**

E^*	$2J^\pi$	Branching ratios in percentage									
	E_f^*:	1081.1	1093.2	1097.6	1242.3	1269.8	1321.6	1393.6	1394.4	1427.7	1772.5
[keV]	$2J_f^\pi$:	$\langle 5,7\rangle^-$	$\langle 7^-\rangle$	$\langle 7\rangle^-$	$\langle 13^-\rangle$		$\langle 17\rangle^-$		$5^-,7^-$	$\langle 21\rangle^-$	$\langle 15^-\rangle$
1394.38(8)	$5^-,7^-$			13(2)							
1427.66(12)	$\langle 21\rangle^-$						100				
1516.88(14)						16					
1772.54(17)	$\langle 15^-\rangle$				83						

(continued) **$^{209}_{85}$At**

E^*	$2J^\pi$	Branching ratios in percentage									
	E_f^*:	1081.1	1093.2	1097.6	1242.3	1269.8	1321.6	1393.6	1394.4	1427.7	1772.5
[keV]	$2J_f^\pi$:	$\langle 5,7\rangle^-$	$\langle 7^-\rangle$	$\langle 7\rangle^-$	$\langle 13^-\rangle$		$\langle 17\rangle^-$		$5^-,7^-$	$\langle 21\rangle^-$	$\langle 15^-\rangle$
1851.70(18)	$\langle 23\rangle^-$									100	
1907.26(22)	$\langle 19\rangle^-$						100				
1953.44(6)	$5^+,7^+$	10(4)		72(4)							
2075.96(22)							100				
2086.3(3)											100
2135.64(6)	$\langle 5,7\rangle^+$	25.0(13)		64(3)							
2183										100	
2238.28(20)	$\langle 25\rangle^-$									40(2)	
2414.86(8)	$3^+,5^+,7^+$			<3.6							
2522.39(20)			<4								
2569.2(3)	$\langle 5,7,9\rangle$			38(5)							
2581.4(3)		14(2)							68(5)		
2689.84(24)		18(3)		52(3)							
2713.0(6)		28(8)		32(7)							
2821.8(5)		7(3)									
3140.57(20)				<13					18(1)		
3172.2(3)				47(6)					≈37		
3388.42(21)		≈5.5		15(3)							
3544.27(18)	$\langle 5,7,9\rangle$	11(1)		7(1)					17(2)		
3551.3(4)				27(5)							
3626.9(4)								<47			
3753.7(3)				22(5)							

Energy levels and branching ratios [91Ma16, 90Mu04]. Part 4 **$^{209}_{85}$At**

E^*	$2J^\pi$	Branching ratios in percentage									
	E_f^*:	1851.7	1953.4	2076.0	2135.6	2183	2238.3	2414.9	2429.2	2516.5	2683
[keV]	$2J_f^\pi$:	$\langle 23\rangle^-$	$5^+,7^+$		$\langle 5,7\rangle^+$		$\langle 25\rangle^-$		$\langle 29\rangle^+$	X^+	
2135.64(6)	$\langle 5,7\rangle^+$		3.8(8)								
2238.28(20)	$\langle 25\rangle^-$	60(4)									
2402				100							
2414.86(8)	$3^+,5^+,7^+$		54(3)		42(4)						
2429.25(23)	$\langle 29\rangle^+$	100									
2516.52(14)	X^+				63(19)						
2522.39(20)					86(5)						
2605.4(3)	$\langle 25^+\rangle$	100									
2612.0(3)	$\langle 25^-\rangle$	100									
2677						100					
2683							100				
2821.8(5)			≈67								
3140.57(20)			51(4)								
3188.6(3)	$\langle 31^+\rangle$								100		

(continued) **$^{209}_{85}$At**

E^*	$2J^\pi$	Branching ratios in percentage									
		E_f^*:	1851.7	1953.4	2076.0	2135.6	2183	2238.3	2414.9	2429.2	2516.5	2683
[keV]		$2J_f^\pi$:	$\langle 23\rangle^-$	$5^+,7^+$		$\langle 5,7\rangle^+$		$\langle 25\rangle^-$		$\langle 29\rangle^+$	X^+	
3292												100
3544.27(18)	⟨5,7,9⟩								19(3)		20(5)	
3551.3(4)				44(5)		<44						
3626.9(4)											57(24)	
3753.7(3)									57(7)			

Energy levels and branching ratios [91Ma16, 90Mu04]. Part 5 **$^{209}_{85}$At**

E^*	$2J^\pi$	Branching ratios in percentage						
		E_f^*:	3188.6	3551.3	3592	3747	3811	3897
[keV]		$2J_f^\pi$:	$\langle 31^+\rangle$		$\langle 33^+\rangle$			$\langle 33^+\rangle$
3592	$\langle 33^+\rangle$		100					
3747			100					
3753.7(3)				<40				
3811			100					
3897	$\langle 33^+\rangle$		100					
4176	$\langle 35^+\rangle$				100			
4375							100	
4506						100		
4695								100