

Energy levels and branching ratios [03Wu10].

 **$^{180}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Branching ratios in percentage							
			$E_f^*$ : $J_f^\pi$ :	0.0 $0^+$	153.21 $2^+$	410.74 $4^+$	478.13 $0^+$	677.43 $2^+$	757.07 $6^+$	861.38 $2^+$
0.0	$0^+$	56(2) s								
153.21(7)	$2^+$	374(35) ps		100						
410.74(9)	$4^+$	52(10) ps			100					
478.13(15)	$0^+$			x	x					
677.43(8)	$2^+$			25(2)	71(1)	0.6(4)	4(1)			
757.07(15)	$6^+$	$\leq 35$ ps				100				
861.38(8)	$2^+$			68(1)	10(1)	12(1)	9(1)	0.7(4)		
962.68(10)	$3^{(+)}$				86(2)	11(2)		3.0(6)		
1049.24(13)	$\langle 4^+ \rangle$				13(6)	76(10)		11(3)		
1177.6(3)	$0^+$				88(9)			12(7)		
1181.50(18)	$8^+$								100	
1187.19(18)	$\langle 2^+ \rangle$				93(4)	6(1)	2(2)			$\leq 2$
1248.24(15)	$\langle 4^+ \rangle$				46(9)	12(3)		$\approx 10$		32(18)
1315.26(14)	$\langle 5^+ \rangle$					84(8)			x	
1351.17(16)	$2^+$			$\approx 23$	9(1)	24(3)	35(4)	$\approx 2$		x
1387.5(3)					67(20)			33(20)		
1491.3(3)								71(36)		
1534.97(20)					33(6)	44(4)		14(8)		
1587.62(19)	$\langle 4, 5^+ \rangle$					21(8)				
1614.73(15)	$\langle 4^+, 5^- \rangle$					31(6)			43(6)	
1649.94(19)	$\langle 6^+ \rangle$									
1674.28(24)	$10^+$									
1727.25(17)	$\langle 7^+ \rangle$								63(12)	
1815.03(17)	$\langle 6, 7^+ \rangle$								36(3)	
1852.23(18)	$\langle 6^+, 7^- \rangle$									
1915.26(22)	$\langle 6^-, 7^+ \rangle$									
2012.25(22)	$\langle 7, 8^+ \rangle$									
2107.24(18)	$\langle 8, 9^+ \rangle$									
2161.9(3)	$\langle 7^- \rangle$									
2168.95(23)	$\langle 8^+, 9^- \rangle$									
2182.90(19)	$\langle 8^-, 9^+ \rangle$									
2198.4(8)	$\langle 9^+ \rangle$									
2229.2(3)	$12^+$									
2286.64(21)	$\langle 8, 9^- \rangle$									
2400.7(11)										
2444.35(22)	$\langle 9, 10 \rangle$									
2454.9(3)	$\langle 9, 10 \rangle$									
2556.8(3)	$\langle 10^+, 11^- \rangle$									
2557.97(22)	$\langle 10^-, 11^+ \rangle$									
2626.11(24)	$\langle 10, 11 \rangle$									
2764.7(3)	$\langle 12^+ \rangle$									
2834.2(3)	$\langle 11, 12 \rangle$									
2841.5(4)	$14^+$									
2872.6(4)	$\langle 11, 12 \rangle$									
3006.3(3)	$\langle 12^-, 13^+ \rangle$									

(continued)

 **$^{180}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Branching ratios in percentage							
			$E^*_f$ : $J^\pi_f$ :	0.0 $0^+$	153.21 $2^+$	410.74 $4^+$	478.13 $0^+$	677.43 $2^+$	757.07 $6^+$	861.38 $2^+$
3007.9(4)	$\langle 12^+, 13^- \rangle$									
3050.5(3)	$\langle 12, 13 \rangle$									
3208.8(4)	$\langle 14^+ \rangle$									
3301.9(3)	$\langle 13, 14 \rangle$									
3361.2(4)	$\langle 13, 14 \rangle$									
3504.8(4)	$16^+$									
3507.1(4)	$\langle 14^+, 15^- \rangle$									
3510.2(4)	$\langle 14^-, 15^+ \rangle$									
3544.7(8)	$\langle 14, 15 \rangle$									
3571.6(4)										
3676.6(4)	$\langle 16^+ \rangle$									
3832.9(4)	$\langle 15, 16 \rangle$									
3911.0(5)	$\langle 15, 16 \rangle$									
4044.2(5)	$\langle 16^+, 17^- \rangle$									
4063.4(4)	$\langle 16^-, 17^+ \rangle$									
4099.7(13)	$\langle 16, 17 \rangle$									
4126.0(5)										
4180.7(5)	$\langle 18^+ \rangle$									
4252.8(4)	$18^+$									
4420.9(11)	$\langle 17, 18 \rangle$									
4512.4(5)	$\langle 17, 18 \rangle$									
4639.8(5)	$\langle 18^+, 19^- \rangle$									
4661.1(5)	$\langle 18^-, 19^+ \rangle$									
4676.3(5)										
4709	$\langle 18, 19 \rangle$									
4804.2(5)	$\langle 20^+ \rangle$									
4984.8(5)	$20^+$									
5062.9(15)	$\langle 19, 20 \rangle$									
5160.5(6)	$\langle 19, 20 \rangle$									
5289.3(6)	$\langle 20^+, 21^- \rangle$									
5293.0(5)	$\langle 20^-, 21^+ \rangle$									
5399.8(12)										
5467.9(5)	$\langle 22^+ \rangle$									
5728.8(11)	$22^+$									
5753.9(18)	$\langle 21, 22 \rangle$									
5852.6(12)	$\langle 21, 22 \rangle$									
5938(1)	$\langle 22^-, 23^+ \rangle$									
5947.6(6)	$\langle 22^+, 23^- \rangle$									
6007.3(12)										
6178.4(6)	$\langle 24^+ \rangle$									
6491(2)										
6525.6(12)										
6551	$\langle 24^+ \rangle$									
6580.6(15)	$\langle 23, 24 \rangle$									
6618.4(6)	$\langle 24^+, 25^- \rangle$									

(continued)

 $^{180}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	$T_{1/2}$ or	Branching ratios in percentage							
[keV]		$\Gamma_{\text{cm}}$	$E^*_f$ : $J^\pi_f$ :	0.0 $0^+$	153.21 $2^+$	410.74 $4^+$	478.13 $0^+$	677.43 $2^+$	757.07 $6^+$	861.38 $2^+$
6935.5(6)	$\langle 26^+ \rangle$									
7238(2)										
7434	$\langle 26^+ \rangle$									

Additional data on this isotope can be found in [05Mc09, 99Da18, 97Pi08, 90De04].

9 bands of levels with spins up to  $26^+$  are considered in [03Wu10].

Energy levels and branching ratios [03Wu10]. Part 2

 $^{180}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E^*_f$ : $J^\pi_f$ :	962.68 $3^{(+)}$	1181.50 $8^+$	1248.24 $\langle 4^+ \rangle$	1315.26 $\langle 5^+ \rangle$	1587.62 $\langle 4,5^+ \rangle$	1614.73 $\langle 4^+,5^- \rangle$	1649.94 $\langle 6^+ \rangle$	1674.28 $10^+$	1727.25 $\langle 7^+ \rangle$	1815.03 $\langle 6,7^+ \rangle$
1315.26(14)	$\langle 5^+ \rangle$	16(4)										
1351.17(16)	$2^+$	7(3)										
1491.3(3)		29(21)										
1534.97(20)		9(6)										
1587.62(19)	$\langle 4,5^+ \rangle$	42(17)				38(12)						
1614.73(15)	$\langle 4^+,5^- \rangle$				26(3)							
1649.94(19)	$\langle 6^+ \rangle$				100							
1674.28(24)	$10^+$			100								
1727.25(17)	$\langle 7^+ \rangle$				37(9)							
1815.03(17)	$\langle 6,7^+ \rangle$				51(6)	12(2)	x					
1852.23(18)	$\langle 6^+,7^- \rangle$			70(6)			23(1)	6(2)				
1915.26(22)	$\langle 6^-,7^+ \rangle$				x	x						
2012.25(22)	$\langle 7,8^+ \rangle$		x				x	x				x
2107.24(18)	$\langle 8,9^+ \rangle$			18(3)							16(3)	65(7)
2161.9(3)	$\langle 7^- \rangle$		x									x
2168.95(23)	$\langle 8^+,9^- \rangle$									x		
2182.90(19)	$\langle 8^-,9^+ \rangle$										x	x
2198.4(8)	$\langle 9^+ \rangle$		x								x	
2229.2(3)	$12^+$									100		
2400.7(11)				100								
2764.7(3)	$\langle 12^+ \rangle$									x		

Energy levels and branching ratios [03Wu10]. Part 3

 **$^{180}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage									
		$E_f^*$ : $J_f^\pi$ :	1852.23 $\langle 6^+, 7^- \rangle$	1915.26 $\langle 6^-, 7^+ \rangle$	2012.25 $\langle 7, 8^+ \rangle$	2107.24 $\langle 8, 9^+ \rangle$	2161.9 $\langle 7^- \rangle$	2168.95 $\langle 8^+, 9^- \rangle$	2182.90 $\langle 8^-, 9^+ \rangle$	2229.2 $12^+$	2286.64 $\langle 8, 9^- \rangle$
2012.25(22)	$\langle 7, 8^+ \rangle$	x									
2168.95(23)	$\langle 8^+, 9^- \rangle$	100									
2182.90(19)	$\langle 8^-, 9^+ \rangle$			x							
2286.64(21)	$\langle 8, 9^- \rangle$	x			63(9)	37(11)	x				
2444.35(22)	$\langle 9, 10 \rangle$					54(10)	29(7)				17(5)
2454.9(3)	$\langle 9, 10 \rangle$					88(25)		12(4)			
2556.8(3)	$\langle 10^+, 11^- \rangle$							100			
2557.97(22)	$\langle 10^-, 11^+ \rangle$					x			100		
2626.11(24)	$\langle 10, 11 \rangle$										78(15)
2764.7(3)	$\langle 12^+ \rangle$									80(14)	20(17)
2841.5(4)	$14^+$									100	
3208.8(4)	$\langle 14^+ \rangle$									50(5)	

Energy levels and branching ratios [03Wu10]. Part 4

 **$^{180}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage									
		$E_f^*$ : $J_f^\pi$ :	2444.35 $\langle 9, 10 \rangle$	2454.9 $\langle 9, 10 \rangle$	2556.8	2557.97	2626.11 $\langle 10, 11 \rangle$	2764.7 $\langle 12^+ \rangle$	2834.2 $\langle 11, 12 \rangle$	2841.5 $14^+$	2872.6 $\langle 11, 12 \rangle$
2626.11(24)	$\langle 10, 11 \rangle$	22(8)									
2834.2(3)	$\langle 11, 12 \rangle$	81(29)		x			19(4)				
2872.6(4)	$\langle 11, 12 \rangle$	x		x							
3006.3(3)	$\langle 12^-, 13^+ \rangle$					100					
3007.9(4)	$\langle 12^+, 13^- \rangle$				100						
3050.5(3)	$\langle 12, 13 \rangle$						x		x		
3208.8(4)	$\langle 14^+ \rangle$							50(10)		x	
3301.9(3)	$\langle 13, 14 \rangle$								88(16)		
3361.2(4)	$\langle 13, 14 \rangle$										100
3504.8(4)	$16^+$									100	
3510.2(4)	$\langle 14^-, 15^+ \rangle$										100
3676.6(4)	$\langle 16^+ \rangle$									36(6)	

Energy levels and branching ratios [03Wu10]. Part 5

 **$^{180}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage									
		$E_f^*$ : $J_f^\pi$ :	3007.9	3050.5 $\langle 12, 13 \rangle$	3208.8 $\langle 14^+ \rangle$	3301.9 $\langle 13, 14 \rangle$	3361.2 $\langle 13, 14 \rangle$	3504.8 $16^+$	3507.1	3510.2	3544.7 $\langle 14, 15 \rangle$
3301.9(3)	$\langle 13, 14 \rangle$			12(3)							
3507.1(4)	$\langle 14^+, 15^- \rangle$	100									
3544.7(8)	$\langle 14, 15 \rangle$			x		x					

(continued)

 **$^{180}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $J_f^\pi$ :	3007.9	3050.5 $\langle 12,13 \rangle$	3208.8 $\langle 14^+ \rangle$	3301.9 $\langle 13,14 \rangle$	3361.2 $\langle 13,14 \rangle$	3504.8 $16^+$	3507.1	3510.2	3544.7 $\langle 14,15 \rangle$	3571.6
3571.6(4)			100									
3676.6(4)	$\langle 16^+ \rangle$				64(8)							
3832.9(4)	$\langle 15,16 \rangle$					100						
3911.0(5)	$\langle 15,16 \rangle$						100					
4044.2(5)	$\langle 16^+, 17^- \rangle$								100			
4063.4(4)	$\langle 16^-, 17^+ \rangle$									100		
4099.7(13)	$\langle 16,17 \rangle$										100	
4126.0(5)									x			x
4180.7(5)	$\langle 18^+ \rangle$							76(16)				
4252.8(4)	$18^+$							65(8)				

Energy levels and branching ratios [03Wu10]. Part 6

 **$^{180}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $J_f^\pi$ :	3676.6 $\langle 16^+ \rangle$	3832.9 $\langle 15,16 \rangle$	3911.0 $\langle 15,16 \rangle$	4044.2	4063.4	4099.7 $\langle 16,17 \rangle$	4126.0	4180.7 $\langle 18^+ \rangle$	4252.8 $18^+$	4420.9 $\langle 17,18 \rangle$
4180.7(5)	$\langle 18^+ \rangle$		24(6)									
4252.8(4)	$18^+$		35(12)									
4420.9(11)	$\langle 17,18 \rangle$			100								
4512.4(5)	$\langle 17,18 \rangle$				100							
4639.8(5)	$\langle 18^+, 19^- \rangle$					100						
4661.1(5)	$\langle 18^-, 19^+ \rangle$						100					
4676.3(5)						x			x			
4709	$\langle 18,19 \rangle$							100				
4804.2(5)	$\langle 20^+ \rangle$									93(15)	7(5)	
4984.8(5)	$20^+$									x	x	
5062.9(15)	$\langle 19,20 \rangle$											100

Energy levels and branching ratios [03Wu10]. Part 7

 **$^{180}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $J_f^\pi$ :	4512.4 $\langle 17,18 \rangle$	4639.8	4661.1	4804.2 $\langle 20^+ \rangle$	4984.8 $20^+$	5062.9 $\langle 19,20 \rangle$	5160.5 $\langle 19,20 \rangle$	5289.3	5293.0	5467.9 $\langle 22^+ \rangle$
5160.5(6)	$\langle 19,20 \rangle$		100									
5289.3(6)	$\langle 20^+, 21^- \rangle$			100								
5293.0(5)	$\langle 20^-, 21^+ \rangle$				100							
5399.8(12)				100								
5467.9(5)	$\langle 22^+ \rangle$					x	x					
5728.8(11)	$22^+$					x	x					

(continued)

 $^{180}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	4512.4 $\langle 17,18 \rangle$	4639.8	4661.1	4804.2 $\langle 20^+ \rangle$	4984.8 $20^+$	5062.9 $\langle 19,20 \rangle$	5160.5 $\langle 19,20 \rangle$	5289.3	5293.0	5467.9 $\langle 22^+ \rangle$
5753.9(18)	$\langle 21,22 \rangle$							100				
5852.6(12)	$\langle 21,22 \rangle$								100			
5938(1)	$\langle 22^-,23^+ \rangle$										100	
5947.6(6)	$\langle 22^+,23^- \rangle$									100		
6007.3(12)										100		
6178.4(6)	$\langle 24^+ \rangle$											100

Energy levels and branching ratios [03Wu10]. Part 8

 $^{180}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	Branching ratios in percentage								
[keV]		$E_f^*$ : $J_f^\pi$ :	5728.8 22 <sup>+</sup>	5753.9 ⟨21,22⟩	5852.6 ⟨21,22⟩	5947.6	6007.3	6178.4 ⟨24 <sup>+</sup> ⟩	6525.6	6551 ⟨24 <sup>+</sup> ⟩
6491(2)				100						
6525.6(12)						100				
6551	⟨24 <sup>+</sup> ⟩		100							
6580.6(15)	⟨23,24⟩				100					
6618.4(6)	⟨24 <sup>+</sup> ,25 <sup>-</sup> ⟩					x	x			
6935.5(6)	⟨26 <sup>+</sup> ⟩							100		
7238(2)									100	
7434	⟨26 <sup>+</sup> ⟩									100

Energy levels and branching ratios [91Fi01, 99Ba59].

 $^{181}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.
0.0 <sup>a</sup>	$1^-$	52.0(22) s	
79.41(7) <sup>a</sup>	$3^-$		
93.93(7) <sup>a</sup>	$5^-$		
116.65(8) <sup>c</sup>	$\langle 7^- \rangle$	>300 ns	
166.63(8) <sup>b</sup>	$\langle 5^- \rangle$		
235.40(10) <sup>c</sup>	$\langle 9^- \rangle$		
256.38(10) <sup>b</sup>	$\langle 7^- \rangle$		
275.99(10) <sup>e</sup>	$\langle 9^+ \rangle$	99(9) n	
278.09(9) <sup>a</sup>	$7^-$		
287.15(8) <sup>g</sup>	$\langle 7^+ \rangle$		
300.83(10) <sup>a</sup>	$9^-$		
319.7(3) <sup>e</sup>	$\langle 11^+ \rangle$		
350(15)			

(continued)

 **$^{181}_{78}\text{Pt}$** 

$E^*$	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.
[keV]			
380.11(15) <sup>c</sup>	$\langle 11^- \rangle$		
380.19(12) <sup>b</sup>	$\langle 9^- \rangle$		
380.92(19) <sup>e</sup>	$\langle 13^+ \rangle$		
525.01(12) <sup>i</sup>	$\langle 7^- \rangle$		
525.36(14) <sup>b</sup>	$\langle 11^- \rangle$		
541.68(22) <sup>e</sup>	$\langle 15^+ \rangle$		
542.71(16) <sup>c</sup>	$\langle 13^- \rangle$		
572.49(22) <sup>a</sup>	$11^-$		
597.59(10) <sup>h</sup>	$\langle 5^- \rangle$		
604.04(23) <sup>a</sup>	$13^-$		
642.79(21) <sup>e</sup>	$\langle 17^+ \rangle$		
650.53(24) <sup>f</sup>	$\langle 5^+ \rangle$		
658.71(10)	$\langle 5,7^- \rangle$		
661.69(10)	$\langle 1,3,5^- \rangle$		
695.37(17) <sup>b</sup>	$\langle 13^- \rangle$		
708.61(11)	$\langle 1,3,5^- \rangle$		
726.21(18) <sup>c</sup>	$\langle 15^- \rangle$		
729.44(10)	$1^-, 3^-$		
750.38 <sup>j</sup>	$\langle 1^- \rangle$		
760.58(20)	$\langle 7^- - 11^- \rangle$		
764.9(4)			
783.74(15)	$\langle 5^- \rangle$		
821.83(24)	$\langle 5^+, 7, 9^- \rangle$		
835.37(15)	$\langle 5^- \rangle$		
850.38(15)	$\langle 5, 7, 9^- \rangle$		
855.08(19)	$\langle 1, 3, 5^- \rangle$		
869.1(4)			
881.03(23)	$5^-, 7^-$		
882.76(19) <sup>b</sup>	$\langle 15^- \rangle$		
886.42(19)	$\langle 7^+ \rangle$		
886.72(21) <sup>e</sup>	$\langle 19^+ \rangle$		
904.30(23)	$\langle 5^-, 7^- \rangle$		
917.52(24)			
920.14(20)	$\langle 5^+, 7, 9^- \rangle$		
921.81(19)	$\langle 5^-, 7, 9^- \rangle$		
924.78(19) <sup>c</sup>	$\langle 17^- \rangle$		
943.46(12)	$\langle 3, 5, 7^+ \rangle$		
949.4(3)	$15^-$		
965.66(12)	$X^+$		
966.69(25)			
989.6(3) <sup>a</sup>	$17^-$		
1006.2(4)			
1007.80(10)	$\langle 1^-, 3^- \rangle$		
1012.37(22) <sup>e</sup>	$\langle 21^+ \rangle$		
1050.42(15)	$\langle 5^+, 7 \rangle$		

(continued)

 **$^{181}_{78}\text{Pt}$** 

$E^*$	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.
[keV]			
1087.31(23)			
1091.57(21) <sup>b</sup>	$\langle 17^- \rangle$		
1141.10(21) <sup>c</sup>	$\langle 19^- \rangle$		
1217.21(22)			
1256.1(4)	$\langle 5, 7, 9 \rangle^-$		
1281.73(21)			
1309.48(19)	$\langle 1 \rangle^-$		
1314.17(23) <sup>b</sup>	$\langle 19^- \rangle$		
1322.04(23) <sup>e</sup>	$\langle 23^+ \rangle$		
1326.33(18)	$\langle 3^-, 5^- \rangle$		
1370.00(22) <sup>c</sup>	$\langle 21^- \rangle$		
1371.6(4)	$\langle \leq 7 \rangle$		
1397.4(4)	$19^-$		
1400.67(18)	$\langle 1, 3, 5^- \rangle$		
1417.78(23)	$\langle 1, 3, 5^- \rangle$		
1445.4(4) <sup>a</sup>	$21^-$		
1456.15(18)	$\langle 1^-, 3, 5^- \rangle$		
1465.22(24) <sup>e</sup>	$\langle 25^+ \rangle$		
1474.36(22)	$\langle 1, 3, 5^- \rangle$		
1554.97(25) <sup>b</sup>	$\langle 21^- \rangle$		
1614.73(23) <sup>c</sup>	$\langle 23^- \rangle$		
1806.4(3) <sup>b</sup>	$\langle 23^- \rangle$		
1828.17(25) <sup>e</sup>	$\langle 27^+ \rangle$		
1870.20(24) <sup>c</sup>	$\langle 25^- \rangle$		
1905.5(4) <sup>a</sup>	$23^-$		
1959.5(5) <sup>a</sup>	$25^-$		
1987.11(25) <sup>e</sup>	$\langle 29^+ \rangle$		
2015.41(10)	$\langle 1^-, 3, 5^- \rangle$		
2053.21(21)	$\langle 3^-, 5^- \rangle$		
2072.7(4) <sup>b</sup>	$\langle 25^- \rangle$		
2082.68(14)	$\langle 3^-, 5^- \rangle$		
2085.10(9)	$\langle 5 \rangle^-$		
2095.06(9)	$\langle 5^- \rangle$		
2101.81(9)	$\langle 1, 3, 5 \rangle^-$		
2122.52(12)	$\langle \leq 7 \rangle^-$		
2126.64(13)	$\langle 1, 3, 5 \rangle^-$		
2137.38(10)	$\langle 1^-, 3, 5^- \rangle$		
2140.90(25) <sup>c</sup>	$\langle 27^- \rangle$		
2153.4(4)	$\langle 5^-, 7^- \rangle$		
2240.91(18)	$\langle \leq 7 \rangle$		
2348.8(4) <sup>b</sup>	$\langle 27^- \rangle$		
2388.7(3) <sup>e</sup>	$\langle 31^+ \rangle$		
2420.57(25) <sup>c</sup>	$\langle 29^- \rangle$		
2464.9(5) <sup>a</sup>	$27^-$		
2484.4(5)			



(continued)

 **$^{181}_{78}\text{Pt}$** 

$E^*$	$2J^\pi$	$T_{1/2}$ or	Ref.
[keV]		$\Gamma_{\text{cm}}$	
2521.3(5) <sup>a</sup>	29 <sup>-</sup>		
2571.1(3) <sup>e</sup>	$\langle 33^+ \rangle$		
2627.7(11) <sup>b</sup>			
2716.5(3) <sup>c</sup>	$\langle 31^- \rangle$		
2922.8(11) <sup>b</sup>			
2994.2(4) <sup>e</sup>	$\langle 35^+ \rangle$		
3013.2(3) <sup>c</sup>	$\langle 33^- \rangle$		
3024.4(8) <sup>d</sup>	$\langle 33^- \rangle$		
3066.9(11) <sup>a</sup>	$\langle 31^- \rangle$		
3084.5(5)			
3146.8(5) <sup>a</sup>	$\langle 33^- \rangle$		
3200.7(15)			
3213.0(3) <sup>e</sup>	$\langle 37^+ \rangle$		
3330.8(3) <sup>c</sup>	$\langle 35^- \rangle$		
3388.2(3) <sup>d</sup>	$\langle 35^- \rangle$		
3594.7(3) <sup>d</sup>	$\langle 37^- \rangle$		
3649.5(4) <sup>e</sup>	$\langle 39^+ \rangle$		
3669.2(11) <sup>c</sup>	$\langle 37^- \rangle$		
3751.0(6)			
3781.2(6) <sup>a</sup>	$\langle 37^- \rangle$		
3838.8(3) <sup>d</sup>	$\langle 39^- \rangle$		
3907.2(4) <sup>e</sup>	$\langle 41^+ \rangle$		
4074.2(3) <sup>d</sup>	$\langle 41^- \rangle$		
4266.2(15) <sup>c</sup>			
4358.3(5) <sup>e</sup>	$\langle 43^+ \rangle$		
4421.4(4) <sup>d</sup>	$\langle 43^- \rangle$		
4644.3(4) <sup>e</sup>	$\langle 45^+ \rangle$		
4661.3(4) <sup>d</sup>	$\langle 45^- \rangle$		
5093.4(11) <sup>d</sup>			
5113.8(5) <sup>e</sup>	$\langle 47^+ \rangle$		
5334.3(4) <sup>d</sup>			
5416.4(5) <sup>e</sup>	$\langle 49^+ \rangle$		
5898.6(6) <sup>e</sup>	$\langle 51^+ \rangle$		
6213.4(5) <sup>e</sup>	$\langle 53^+ \rangle$		
6697.6(12) <sup>e</sup>			
7038.4(12) <sup>e</sup>			

Additional data on this isotope can be found in [05Wu06, 92Sa03, 90De03].

10 bands (A-J marked here a-j) are assigned to excited states of this nucleus in [05Wu06, 92Sa03].

Energy levels and branching ratios [91Fi01, 99Ba59]. Part 2

**<sup>181</sup>Pt**  
**78**

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $2J_f^\pi$ :	0.0 1 <sup>-</sup>	79.4 3 <sup>-</sup>	93.9 5 <sup>-</sup>	116.6 $\langle 7 \rangle^-$	166.6 $\langle 5 \rangle^-$	235.4 $\langle 9 \rangle^-$	256.4 $\langle 7 \rangle^-$	276.0 $\langle 9 \rangle^+$	278.1 7 <sup>-</sup>	287.1 $\langle 7 \rangle^+$
79.41(7) <sup>a</sup>	3 <sup>-</sup>		100									
93.93(7) <sup>a</sup>	5 <sup>-</sup>		100	x								
116.65(8) <sup>c</sup>	$\langle 7 \rangle^-$				100							
166.63(8) <sup>b</sup>	$\langle 5 \rangle^-$			16(2)	≈29	54(8)						
235.40(10) <sup>c</sup>	$\langle 9 \rangle^-$					100						
256.38(10) <sup>b</sup>	$\langle 7 \rangle^-$				11.3(17)	≈11	78(12)					
275.99(10) <sup>e</sup>	$\langle 9 \rangle^+$					63(9)		30(4)	7(3)			
278.09(9) <sup>a</sup>	7 <sup>-</sup>			87(13)	12.8(19)							
287.15(8) <sup>g</sup>	$\langle 7 \rangle^+$					43(7)	56(8)		0.73(11)	x		
300.83(10) <sup>a</sup>	9 <sup>-</sup>				100							
319.7(3) <sup>e</sup>	$\langle 11^+ \rangle$									x		
380.11(15) <sup>c</sup>	$\langle 11^- \rangle$					49(16)		51(5)				
380.19(12) <sup>b</sup>	$\langle 9^- \rangle$					35(5)	≈19	≈13	32(5)			
380.92(19) <sup>e</sup>	$\langle 13^+ \rangle$									x		
525.01(12) <sup>i</sup>	$\langle 7 \rangle^-$					31(4)	45(7)	≈13	12(2)			
525.36(14) <sup>b</sup>	$\langle 11^- \rangle$							30(14)	32(11)			
542.71(16) <sup>c</sup>	$\langle 13^- \rangle$							85(3)				
572.49(22) <sup>a</sup>	11 <sup>-</sup>										100	
597.59(10) <sup>h</sup>	$\langle 5 \rangle^-$						[100]					
650.53(24) <sup>f</sup>	$\langle 5 \rangle^+$											100
658.71(10)	$\langle 5, 7 \rangle^-$					34(5)	≈20	19(3)	≈27			
661.69(10)	$\langle 1, 3, 5 \rangle^-$	100										
708.61(11)	$\langle 1, 3, 5 \rangle^-$				[100]							
729.44(10)	1 <sup>-</sup> , 3 <sup>-</sup>	[66(10)]			[28(4)]		[6(1)]					
750.38 <sup>j</sup>	$\langle 1^- \rangle$			100								
760.58(20)	$\langle 7^- - 11^- \rangle$							≈39	≈23			
764.9(4)					99(15)						0.99(15)	
783.74(15)	$\langle 5^- \rangle$	59(9)		25(4)							≈10	
821.83(24)	$\langle 5^+, 7, 9^- \rangle$									[100]		
835.37(15)	$\langle 5^- \rangle$				28(4)		33(5)		14(2)		21(3)	
850.38(15)	$\langle 5, 7, 9 \rangle^-$				62(9)						14(2)	
855.08(19)	$\langle 1, 3, 5 \rangle^-$			50(8)			≈50					
869.1(4)											≈78	
881.03(23)	5 <sup>-</sup> , 7 <sup>-</sup>				24(3)	11(2)			15(2)		38(6)	
886.42(19)	$\langle 7 \rangle^+$									71(11)		29(4)
904.30(23)	$\langle 5^-, 7^- \rangle$			43(6)							39(6)	
917.52(24)							95(14)					
920.14(20)	$\langle 5^+, 7, 9^- \rangle$									65(10)		35(5)
921.81(19)	$\langle 5^-, 7, 9^- \rangle$										77(12)	
943.46(12)	$\langle 3, 5, 7 \rangle^+$											100
965.66(12)	X <sup>+</sup>											100
966.69(25)											100	
1006.2(4)									62(16)		≈38	
1007.80(10)	$\langle 1^-, 3^- \rangle$	100										
1050.42(15)	$\langle 5^+, 7 \rangle$									68(10)		20(3)

(continued)

 $^{181}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $2J_f^\pi$ :	0.0 1 <sup>-</sup>	79.4 3 <sup>-</sup>	93.9 5 <sup>-</sup>	116.6 $\langle 7 \rangle^-$	166.6 $\langle 5 \rangle^-$	235.4 $\langle 9 \rangle^-$	256.4 $\langle 7 \rangle^-$	276.0 $\langle 9 \rangle^+$	278.1 7 <sup>-</sup>	287.1 $\langle 7 \rangle^+$
1087.31(23)						15(2)	65(10)				20(3)	
1217.21(22)					<78		39(6)					
1256.1(4)	$\langle 5,7,9 \rangle^-$						34(5)		66(10)			
1309.48(19)	$\langle 1 \rangle^-$		<14	34(5)	66(10)							
1326.33(18)	$\langle 3^-, 5^- \rangle$		26(4)		17(3)				11(2)		19(3)	
1400.67(18)	$\langle 1,3,5^- \rangle$		63(9)	37(6)								
1417.78(23)	$\langle 1,3,5^- \rangle$		55(8)									
1456.15(18)	$\langle 1^-, 3, 5^- \rangle$		27(4)		65(10)							
1474.36(22)	$\langle 1,3,5^- \rangle$		100									
2015.41(10)	$\langle 1^-, 3, 5^- \rangle$		82(12)	<66	9.5(14)							
2053.21(21)	$\langle 3^-, 5^- \rangle$		19(3)	28(4)			11(2)				16(2)	
2082.68(14)	$\langle 3^-, 5^- \rangle$					68(10)					7.7(11)	
2085.10(9)	$\langle 5^- \rangle$			26(4)	21(3)	18(3)					$\approx 4$	14(2)
2095.06(9)	$\langle 5^- \rangle$				24(4)		4.1(6)	6(1)			7(1)	$\approx 29$
2101.81(9)	$\langle 1,3,5^- \rangle$		7(1)	34(5)			<8					
2122.52(12)	$\langle \leq 7 \rangle^-$			81(12)	19(2)							
2126.64(13)	$\langle 1,3,5^- \rangle$		41(6)		9(1)		41(6)					
2137.38(10)	$\langle 1^-, 3, 5^- \rangle$		5.8(9)	25(4)			42(6)					
2153.4(4)	$\langle 5^-, 7^- \rangle$			23(3)		48(7)					12(2)	

Energy levels and branching ratios [91Fi01, 99Ba59]. Part 3

 $^{181}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $2J_f^\pi$ :	300.8 9 <sup>-</sup>	319.7 $\langle 11^+ \rangle$	380.1 $\langle 11^- \rangle$	380.2 $\langle 9^- \rangle$	380.9 $\langle 13^+ \rangle$	525.4 $\langle 11^- \rangle$	541.7 $\langle 15^+ \rangle$	542.7 $\langle 13^- \rangle$	572.5 11 <sup>-</sup>	597.6 $\langle 5^- \rangle$
380.92(19) <sup>e</sup>	$\langle 13^+ \rangle$			x								
525.36(14) <sup>b</sup>	$\langle 11^- \rangle$					38(19)						
541.68(22) <sup>e</sup>	$\langle 15^+ \rangle$			28(2)			72(21)					
542.71(16) <sup>c</sup>	$\langle 13^- \rangle$					15(3)						
604.04(23) <sup>a</sup>	13 <sup>-</sup>	100										
642.79(21) <sup>e</sup>	$\langle 17^+ \rangle$						61(14)		39(9)			
695.37(17) <sup>b</sup>	$\langle 13^- \rangle$					48(8)		52(16)				
726.21(18) <sup>c</sup>	$\langle 15^- \rangle$				73(9)					27(2)		
760.58(20)	$\langle 7^- - 11^- \rangle$					38(6)						
783.74(15)	$\langle 5^- \rangle$		6.3(9)									
835.37(15)	$\langle 5^- \rangle$		<71		4.0(6)							
850.38(15)	$\langle 5,7,9 \rangle^-$		24(4)									
869.1(4)			22(3)									
881.03(23)	5 <sup>-</sup> , 7 <sup>-</sup>		12(2)									
882.76(19) <sup>b</sup>	$\langle 15^- \rangle$							61(12)				
886.72(21) <sup>e</sup>	$\langle 19^+ \rangle$								62(7)			
904.30(23)	$\langle 5^-, 7^- \rangle$		18(3)									

(continued)

 **$^{181}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $2J_f^\pi$ :	300.8 $9^-$	319.7 $\langle 11^+ \rangle$	380.1 $\langle 11^- \rangle$	380.2 $\langle 9^- \rangle$	380.9 $\langle 13^+ \rangle$	525.4 $\langle 11^- \rangle$	541.7 $\langle 15^+ \rangle$	542.7 $\langle 13^- \rangle$	572.5 $11^-$	597.6 $\langle 5^- \rangle$
917.52(24)												5.0(8)
921.81(19)	$\langle 5^-, 7, 9^- \rangle$		$\approx 23$									
924.78(19) <sup>c</sup>	$\langle 17^- \rangle$									87(10)		
949.4(3)	$15^-$										100	
1326.33(18)	$\langle 3^-, 5^- \rangle$											$\approx 14$
1456.15(18)	$\langle 1^-, 3, 5^- \rangle$											8.6(13)
2082.68(14)	$\langle 3^-, 5^- \rangle$											7.4(11)
2085.10(9)	$\langle 5^- \rangle$		$\approx 0.6$		0.8(1)							
2095.06(9)	$\langle 5^- \rangle$		4.7(7)									
2101.81(9)	$\langle 1, 3, 5^- \rangle$											2.6(4)
2153.4(4)	$\langle 5^-, 7^- \rangle$		7.8(12)									

Energy levels and branching ratios [91Fi01, 99Ba59]. Part 4

 **$^{181}_{78}\text{Pt}$** 

$E^*$	$2J^\pi$	Branching ratios in percentage									
[keV]		$E_f^*$ : $2J_f^\pi$ :	604.0 $13^-$	642.8 $\langle 17^+ \rangle$	650.5 $\langle 5 \rangle^+$	658.7 $\langle 5, 7 \rangle^-$	661.7	695.4 $\langle 13^- \rangle$	708.6	726.2 $\langle 15^- \rangle$	729.4 $1^-, 3^-$
882.76(19) <sup>b</sup>	$\langle 15^- \rangle$							39(14)			
886.72(21) <sup>e</sup>	$\langle 19^+ \rangle$			38(4)							
924.78(19) <sup>c</sup>	$\langle 17^- \rangle$									13.5(14)	
989.6(3) <sup>a</sup>	$17^-$	100									
1012.37(22) <sup>e</sup>	$\langle 21^+ \rangle$			82(8)							
1050.42(15)	$\langle 5^+, 7 \rangle$				13(2)						
1091.57(21) <sup>b</sup>	$\langle 17^- \rangle$							70(15)			
1141.10(21) <sup>c</sup>	$\langle 19^- \rangle$									95(7)	
1217.21(22)							61(9)				
1326.33(18)	$\langle 3^-, 5^- \rangle$										$\approx 12$
1371.6(4)	$\langle \leq 7 \rangle$						82(12)				$\approx 18$
2015.41(10)	$\langle 1^-, 3, 5^- \rangle$					8.3(12)					
2082.68(14)	$\langle 3^-, 5^- \rangle$										5.2(7)
2085.10(9)	$\langle 5 \rangle^-$					2.9(4)	1.0(2)				
2095.06(9)	$\langle 5^- \rangle$					6(1)	2.0(3)				
2101.81(9)	$\langle 1, 3, 5 \rangle^-$						2.8(4)		5.8(9)		6(1)
2126.64(13)	$\langle 1, 3, 5 \rangle^-$								8(1)		
2240.91(18)	$\langle \leq 7 \rangle$						21(3)				22(3)

Energy levels and branching ratios [91Fi01, 99Ba59]. Part 5

 **$^{181}_{78}\text{Pt}$** 

$E^*$	$2J^\pi$	Branching ratios in percentage									
[keV]		$E_f^*:$ $2J_f^\pi:$	750.4 $\langle 1^- \rangle$	764.9	783.7 $\langle 5^- \rangle$	821.8	835.4 $\langle 5^- \rangle$	850.4	855.1	882.8 $\langle 15^- \rangle$	886.4 $\langle 7^+ \rangle$
1091.57(21) <sup>b</sup>	$\langle 17^- \rangle$									30(15)	
1281.73(21)						34(5)					
1314.17(23) <sup>b</sup>	$\langle 19^- \rangle$									75(18)	
1322.04(23) <sup>e</sup>	$\langle 23^+ \rangle$										73(7)
1326.33(18)	$\langle 3^-, 5^- \rangle$				<12						
1417.78(23)	$\langle 1, 3, 5^- \rangle$					32(5)					
2053.21(21)	$\langle 3^-, 5^- \rangle$			8(1)							
2082.68(14)	$\langle 3^-, 5^- \rangle$		3.2(5)								
2085.10(9)	$\langle 5^- \rangle$					x		1.5(2)			6(1)
2095.06(9)	$\langle 5^- \rangle$				$\approx 2$	x	1.6(2)	3.8(6)			
2101.81(9)	$\langle 1, 3, 5^- \rangle$				4.7(7)		0.9(1)		4.0(6)		
2137.38(10)	$\langle 1^-, 3, 5^- \rangle$		4.8(7)	23(3)							
2153.4(4)	$\langle 5^-, 7^- \rangle$				10(1)						

Energy levels and branching ratios [91Fi01, 99Ba59]. Part 6

 **$^{181}_{78}\text{Pt}$** 

$E^*$	$2J^\pi$	Branching ratios in percentage									
[keV]		$E_f^*:$ $2J_f^\pi:$	886.7 $\langle 19^+ \rangle$	917.5	920.1	921.8	924.8 $\langle 17^- \rangle$	943.5	949.4 $15^-$	965.7 $X^+$	966.7
1012.37(22) <sup>e</sup>	$\langle 21^+ \rangle$		18.0(4)								
1141.10(21) <sup>c</sup>	$\langle 19^- \rangle$						5(4)				
1281.73(21)								66(10)			
1370.00(22) <sup>c</sup>	$\langle 21^- \rangle$						91(8)				
1397.4(4)	$19^-$								100		
1417.78(23)	$\langle 1, 3, 5^- \rangle$									13(2)	
1474.36(22)	$\langle 1, 3, 5^- \rangle$							x			
2053.21(21)	$\langle 3^-, 5^- \rangle$										18(3)
2082.68(14)	$\langle 3^-, 5^- \rangle$				2.5(4)	3.5(5)				<6.1	
2085.10(9)	$\langle 5^- \rangle$									<3	
2095.06(9)	$\langle 5^- \rangle$		3.5(5)							$\approx 4$	
2101.81(9)	$\langle 1, 3, 5^- \rangle$			1.7(3)				$\approx 4$			
2240.91(18)	$\langle \leq 7 \rangle$			40(6)				17(3)			

Energy levels and branching ratios [91Fi01, 99Ba59]. Part 7

 **$^{181}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage								
		$E_f^*:$ $2J_f^\pi:$	989.6 17 <sup>-</sup>	1012.4 <21 <sup>+</sup> >	1050.4 <5 <sup>+</sup> , 7>	1087.3	1091.6 <17 <sup>-</sup> >	1141.1 <19 <sup>-</sup> >	1217.2	1281.7 1309.5 <1> <sup>-</sup>
1314.17(23) <sup>b</sup>	<19 <sup>-</sup> >						25(11)			
1322.04(23) <sup>e</sup>	<23 <sup>+</sup> >			27(4)						
1370.00(22) <sup>c</sup>	<21 <sup>-</sup> >							9(3)		
1445.4(4) <sup>a</sup>	21 <sup>-</sup>		100							
1465.22(24) <sup>e</sup>	<25 <sup>+</sup> >			93(9)						
1554.97(25) <sup>b</sup>	<21 <sup>-</sup> >						88(19)			
1614.73(23) <sup>c</sup>	<23 <sup>-</sup> >							93(7)		
2082.68(14)	<3 <sup>-</sup> , 5 <sup>-</sup> >				2.8(4)					
2085.10(9)	<5> <sup>-</sup>				4.1(6)					
2095.06(9)	<5> <sup>-</sup>				1.1(2)					
2101.81(9)	<1, 3, 5> <sup>-</sup>					1.2(2)			≈1.5	1.9(3) 5.2(8)

Energy levels and branching ratios [91Fi01, 99Ba59]. Part 8

 **$^{181}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage								
		$E_f^*:$ $2J_f^\pi:$	1314.2 <19 <sup>-</sup> >	1322.0 <23 <sup>+</sup> >	1326.3 <3 <sup>-</sup> , 5 <sup>-</sup> >	1370.0 <21 <sup>-</sup> >	1397.4 19 <sup>-</sup>	1400.7	1417.8	1445.4 21 <sup>-</sup> 1456.1
1465.22(24) <sup>e</sup>	<25 <sup>+</sup> >			7(3)						
1554.97(25) <sup>b</sup>	<21 <sup>-</sup> >		12(4)							
1614.73(23) <sup>c</sup>	<23 <sup>-</sup> >					6.7(11)				
1806.4(3) <sup>b</sup>	<23 <sup>-</sup> >		89(17)							
1828.17(25) <sup>e</sup>	<27 <sup>+</sup> >			86(9)						
1870.20(24) <sup>c</sup>	<25 <sup>-</sup> >					85(8)				
1905.5(4) <sup>a</sup>	23 <sup>-</sup>						100			
1959.5(5) <sup>a</sup>	25 <sup>-</sup>								100	
2101.81(9)	<1, 3, 5> <sup>-</sup>				4.0(6)			2.4(4) 3.4(5)		4.4(7)

Energy levels and branching ratios [91Fi01, 99Ba59]. Part 9

 **$^{181}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage								
		$E_f^*:$ $2J_f^\pi:$	1465.2 <25 <sup>+</sup> >	1474.4	1555.0 <21 <sup>-</sup> >	1614.7 <23 <sup>-</sup> >	1806.4 <23 <sup>-</sup> >	1828.2 <27 <sup>+</sup> >	1870.2 <25 <sup>-</sup> >	1905.5 23 <sup>-</sup> 1959.5 25 <sup>-</sup>
1806.4(3) <sup>b</sup>	<23 <sup>-</sup> >				11(4)					
1828.17(25) <sup>e</sup>	<27 <sup>+</sup> >		14(3)							
1870.20(24) <sup>c</sup>	<25 <sup>-</sup> >					15(9)				
1987.11(25) <sup>e</sup>	<29 <sup>+</sup> >		81(9)					19(4)		
2072.7(4) <sup>b</sup>	<25 <sup>-</sup> >				100					
2101.81(9)	<1, 3, 5> <sup>-</sup>			2.2(3)						
2140.90(25) <sup>c</sup>	<27 <sup>-</sup> >					88(10)			12(6)	

(continued)

 **$^{181}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage									
		$E_f^*$ : $2J_f^\pi$ :	1465.2 $\langle 25^+ \rangle$	1474.4	1555.0 $\langle 21^- \rangle$	1614.7 $\langle 23^- \rangle$	1806.4 $\langle 23^- \rangle$	1828.2 $\langle 27^+ \rangle$	1870.2 $\langle 25^- \rangle$	1905.5 $23^-$	1959.5 $25^-$
2348.8(4) <sup>b</sup>	$\langle 27^- \rangle$						100				
2388.7(3) <sup>c</sup>	$\langle 31^+ \rangle$							86(9)			
2420.57(25) <sup>c</sup>	$\langle 29^- \rangle$								92(8)		
2464.9(5) <sup>a</sup>	$27^-$									100	
2484.4(5)											100
2521.3(5) <sup>a</sup>	$29^-$										100

Energy levels and branching ratios [91Fi01, 99Ba59]. Part 10

 **$^{181}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage									
		$E_f^*$ : $2J_f^\pi$ :	1987.1 $\langle 29^+ \rangle$	2072.7 $\langle 25^- \rangle$	2140.9 $\langle 27^- \rangle$	2348.8 $\langle 27^- \rangle$	2388.7 $\langle 31^+ \rangle$	2420.6 $\langle 29^- \rangle$	2464.9 $27^-$	2484.4	2521.3 $29^-$
2388.7(3) <sup>c</sup>	$\langle 31^+ \rangle$		14(3)								
2420.57(25) <sup>c</sup>	$\langle 29^- \rangle$				8(5)						
2571.1(3) <sup>e</sup>	$\langle 33^+ \rangle$		94(9)				6.4(13)				
2627.7(11) <sup>b</sup>				100							
2716.5(3) <sup>c</sup>	$\langle 31^- \rangle$				94(8)			6(5)			
2922.8(11) <sup>b</sup>						100					
2994.2(4) <sup>e</sup>	$\langle 35^+ \rangle$						89(10)				
3013.2(3) <sup>c</sup>	$\langle 33^- \rangle$							88(12)			
3024.4(8) <sup>d</sup>	$\langle 33^- \rangle$							100			
3066.9(11) <sup>a</sup>	$\langle 31^- \rangle$								100		
3084.5(5)										x	100
3146.8(5) <sup>a</sup>	$\langle 33^- \rangle$										100

Energy levels and branching ratios [91Fi01, 99Ba59]. Part 11

 **$^{181}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $2J_f^\pi$ :	2571.1 $\langle 33^+ \rangle$	2627.7	2716.5 $\langle 31^- \rangle$	2994.2 $\langle 35^+ \rangle$	3013.2 $\langle 33^- \rangle$	3024.4 $\langle 33^- \rangle$	3084.5	3146.8 $\langle 33^- \rangle$	3213.0 $\langle 37^+ \rangle$	3330.8 $\langle 35^- \rangle$
2994.2(4) <sup>e</sup>	$\langle 35^+ \rangle$		11(5)									
3013.2(3) <sup>c</sup>	$\langle 33^- \rangle$				12(9)							
3200.7(15)				100								
3213.0(3) <sup>e</sup>	$\langle 37^+ \rangle$		100									
3330.8(3) <sup>c</sup>	$\langle 35^- \rangle$				74(11)	26(4)						
3388.2(3) <sup>d</sup>	$\langle 35^- \rangle$		16(15)		74(8)		10(10)					
3594.7(3) <sup>d</sup>	$\langle 37^- \rangle$					52(8)						12(8)
3649.5(4) <sup>e</sup>	$\langle 39^+ \rangle$				100							
3669.2(11) <sup>c</sup>	$\langle 37^- \rangle$					100						

(continued)

 $^{181}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E^*_f$ : $2J^\pi_f$ :	2571.1 $\langle 33^+ \rangle$	2627.7	2716.5 $\langle 31^- \rangle$	2994.2 $\langle 35^+ \rangle$	3013.2 $\langle 33^- \rangle$	3024.4 $\langle 33^- \rangle$	3084.5	3146.8 $\langle 33^- \rangle$	3213.0 $\langle 37^+ \rangle$	3330.8 $\langle 35^- \rangle$
3751.0(6)									x	100		
3781.2(6) <sup>a</sup>	$\langle 37^- \rangle$								x	x		
3838.8(3) <sup>d</sup>	$\langle 39^- \rangle$										x	31(6)
3907.2(4) <sup>e</sup>	$\langle 41^+ \rangle$										100	

Energy levels and branching ratios [91Fi01, 99Ba59]. Part 12

 $^{181}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E^*_f$ : $2J^\pi_f$ :	3388.2 $\langle 35^- \rangle$	3594.7 $\langle 37^- \rangle$	3649.5 $\langle 39^+ \rangle$	3669.2 $\langle 37^- \rangle$	3838.8 $\langle 39^- \rangle$	3907.2 $\langle 41^+ \rangle$	4074.2 $\langle 41^- \rangle$	4358.3 $\langle 43^+ \rangle$	4421.4 $\langle 43^- \rangle$	4644.3 $\langle 45^+ \rangle$
3594.7(3) <sup>d</sup>	$\langle 37^- \rangle$		36(8)									
3838.8(3) <sup>d</sup>	$\langle 39^- \rangle$		43(9)	26(26)								
4074.2(3) <sup>d</sup>	$\langle 41^- \rangle$			44(11)			56(7)					
4266.2(15) <sup>c</sup>						100						
4358.3(5) <sup>e</sup>	$\langle 43^+ \rangle$				100							
4421.4(4) <sup>d</sup>	$\langle 43^- \rangle$						50(34)		$\approx 50$			
4644.3(4) <sup>e</sup>	$\langle 45^+ \rangle$							100				
4661.3(4) <sup>d</sup>	$\langle 45^- \rangle$								50(25)		50(16)	
5093.4(11) <sup>d</sup>											100	
5113.8(5) <sup>e</sup>	$\langle 47^+ \rangle$									100		
5416.4(5) <sup>e</sup>	$\langle 49^+ \rangle$											100

Energy levels and branching ratios [91Fi01, 99Ba59]. Part 13

 $^{181}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage					
		$E^*_f$ : $2J^\pi_f$ :	4661.3 $\langle 45^- \rangle$	5113.8 $\langle 47^+ \rangle$	5416.4 $\langle 49^+ \rangle$	5898.6 $\langle 51^+ \rangle$	6213.4 $\langle 53^+ \rangle$
5334.3(4) <sup>d</sup>			100				
5898.6(6) <sup>e</sup>	$\langle 51^+ \rangle$			100			
6213.4(5) <sup>e</sup>	$\langle 53^+ \rangle$				100		
6697.6(12) <sup>e</sup>						100	
7038.4(12) <sup>e</sup>							100



Energy levels and branching ratios [95Si04].

 **$^{182}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.
[keV]			
0.0 <sup>a</sup>	0 <sup>+</sup>	3.0(2) m	
154.9(1) <sup>a</sup>	2 <sup>+</sup>		
419.08(15) <sup>a</sup>	4 <sup>+</sup>		
499.44(19) <sup>b</sup>	0 <sup>+</sup>		
667.09(20) <sup>c</sup>	2 <sup>+</sup>		
774.10(19) <sup>a</sup>	6 <sup>+</sup>		
855.41(14) <sup>b</sup>	2 <sup>+</sup>		
941.91(16) <sup>c</sup>	$\langle 3 \rangle^+$		
1032.77(17)	$\langle 4^+ \rangle$		
1054.4(3)	$\langle 1,2^+ \rangle$		
1152.0	$\langle 0 \rangle$		99Da18
1181.1(3)	$\langle 1,2 \rangle^+$		
1205.00(22)	8 <sup>+</sup>		
1238.1(5) <sup>b</sup>	$\langle 4^+ \rangle$		99Da18
1303.7(5) <sup>c</sup>	$\langle 5^+ \rangle$		99Da18
1310.9(3)	2 <sup>+</sup>		
1418.2(5)			
1436.2(5)	$\langle 6^+ \rangle$		
1473.9			99Da18
1502.5			99Da18
1521.8			99Da18
1542.5			99Da18
1568.9			99Da18
1648.8(5)	$\langle 6^+ \rangle$		
1669.5(4)	$\langle 5^- \rangle$		
1684.5			99Da18
1697.9(2)	$\langle 10^+ \rangle$		
1729.6(6)	$\langle 7^+ \rangle$		
1844.2(7)	$\langle 6^- \rangle$		
1862.2(5)	$\langle 6^- \rangle$		
1889.2			99Da18
1923.8(4)	$\langle 7^- \rangle$		
1952.9(4)	$\langle 7^- \rangle$		
2079.3(5)	$\langle 8^- \rangle$		
2116.8(11)	$\langle 8^+ \rangle$		
2149.0(6)	$\langle 8^- \rangle$		
2238.4(5)	$\langle 9^- \rangle$		
2239.9(4)	$\langle 9^- \rangle$		
2241.5(3)	$\langle 12^+ \rangle$		
2424.4(5)	$\langle 10^- \rangle$		
2503.0(6)	$\langle 10^- \rangle$		
2614.1(4)	$\langle 11^- \rangle$		
2631.6(5)	$\langle 11^- \rangle$		
2689.7(6)	$\langle 12^+ \rangle$		
2831.6(3)	$\langle 14^+ \rangle$		

(continued)

 **$^{182}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	$T_{1/2}$ or	Ref.
[keV]		$\Gamma_{\text{cm}}$	
2856.8(5)	$\langle 12^- \rangle$		
2930.5(6)	$\langle 12^- \rangle$		
3046.2(6)	$\langle 13^- \rangle$		
3096.0(5)	$\langle 13^- \rangle$		
3099.9(5)	$\langle 13^- \rangle$		
3168.0(7)	$\langle 14^+ \rangle$		
3289.1(8)			
3354.3(5)	$\langle 14^- \rangle$		
3424.5(7)	$\langle 14^- \rangle$		
3460.1(3)	$\langle 16^+ \rangle$		
3480.6(4)	$\langle 15^- \rangle$		
3541.8(6)	$\langle 15^- \rangle$		
3625.8(5)	$\langle 15^- \rangle$		
3644.9(6)	$\langle 16^+ \rangle$		
3902.7(5)	$\langle 16^- \rangle$		
3970.6(7)	$\langle 16^- \rangle$		
3983.0(5)	$\langle 17^- \rangle$		
4077.5(7)	$\langle 17^- \rangle$		
4093.9(3)	$\langle 18^+ \rangle$		
4200.0(5)	$\langle 17^- \rangle$		
4231.7(6)	$\langle 18^+ \rangle$		
4496.9(6)	$\langle 18^- \rangle$		
4554.7(7)	$\langle 18^- \rangle$		
4570.2(5)	$\langle 19^- \rangle$		
4657.0(7)	$\langle 19^- \rangle$		
4728.5(5)	$\langle 20^+ \rangle$		
4821.6(6)	$\langle 19^- \rangle$		
4918.9(7)	$\langle 20^+ \rangle$		
5136.1(6)	$\langle 20^- \rangle$		
5166.2(8)	$\langle 20^- \rangle$		
5208.5(6)	$\langle 21^- \rangle$		
5278.5(8)	$\langle 21^- \rangle$		
5403.2(5)	$\langle 22^+ \rangle$		
5490.8(8)	$\langle 21^- \rangle$		
5637.5(10)	$\langle 22^+ \rangle$		
5772.1(10)	$\langle 22^- \rangle$		
5803.6(15)	$\langle 22^- \rangle$		
5894.5(15)	$\langle 23^- \rangle$		
5951.6(15)	$\langle 23^- \rangle$		
6126.8(6)	$\langle 24^+ \rangle$		
6204.8(15)	$\langle 23^- \rangle$		
6380.5(15)	$\langle 24^+ \rangle$		
6396.1(15)	$\langle 24^- \rangle$		
6478.6(15)	$\langle 24^- \rangle$		
6625.5(15)	$\langle 25^- \rangle$		

(continued)

 **$^{182}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	$T_{1/2}$ or	Ref.
[keV]		$\Gamma_{\text{cm}}$	
6904.8(8)	$\langle 26^+ \rangle$		
6957.8(15)	$\langle 25^- \rangle$		
7398(2)	$\langle 27^- \rangle$		
7757(2)	$\langle 27^- \rangle$		

Additional data on this isotope can be found in [99Da18, 95Sa42].

a,b,c mark three bands considered in [99Da18].

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

Energy levels and branching ratios [95Si04]. Part 2

 **$^{182}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
		$E^*_i$ : 0.0	154.9	419.08	499.44	667.09	774.10	855.41	941.91	1032.77	1205.00	
[keV]		$J^\pi_f$ : $0^+$	$2^+$	$4^+$	$0^+$	$2^+$	$6^+$	$2^+$	$\langle 3 \rangle^+$	$\langle 4^+ \rangle$	$8^+$	
154.9(1) <sup>a</sup>	$2^+$	100										
419.08(15) <sup>a</sup>	$4^+$		100									
499.44(19) <sup>b</sup>	$0^+$	x	100									
667.09(20) <sup>c</sup>	$2^+$	[100]										
774.10(19) <sup>a</sup>	$6^+$			100								
855.41(14) <sup>b</sup>	$2^+$	70(7)	6.3(10)	10.2(15)	13.1(15)							
941.91(16) <sup>c</sup>	$\langle 3 \rangle^+$		87(10)	12.9(19)	<14							
1032.77(17)	$\langle 4^+ \rangle$		x	83(8)	17(3)							
1054.4(3)	$\langle 1,2^+ \rangle$	30(6)	70(8)									
1181.1(3)	$\langle 1,2 \rangle^+$		100		x			x				
1205.00(22)	$8^+$						100					
1238.1(5) <sup>b</sup>	$\langle 4^+ \rangle$		x	x			x	x				
1303.7(5) <sup>c</sup>	$\langle 5^+ \rangle$			100			x		x			
1310.9(3)	$2^+$	100			x			x				
1418.2(5)						100						
1436.2(5)	$\langle 6^+ \rangle$			x			x			x		
1648.8(5)	$\langle 6^+ \rangle$			100			x				x	
1669.5(4)	$\langle 5^- \rangle$			100			x			x		
1697.9(2)	$\langle 10^+ \rangle$										100	
1729.6(6)	$\langle 7^+ \rangle$						100				x	
1862.2(5)	$\langle 6^- \rangle$			22			38			22		
1923.8(4)	$\langle 7^- \rangle$						x				21	
1952.9(4)	$\langle 7^- \rangle$										20	
2239.9(4)	$\langle 9^- \rangle$										x	

## Energy levels and branching ratios [95Si04]. Part 3

 **$^{182}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	1238.1 $\langle 4^+ \rangle$	1303.7 $\langle 5^+ \rangle$	1436.2 $\langle 6^+ \rangle$	1648.8 $\langle 6^+ \rangle$	1669.5 $\langle 5^- \rangle$	1697.9 $\langle 10^+ \rangle$	1729.6 $\langle 7^+ \rangle$	1844.2 $\langle 6^- \rangle$	1862.2 $\langle 6^- \rangle$	1923.8 $\langle 7^- \rangle$
1436.2(5)	$\langle 6^+ \rangle$			x								
1648.8(5)	$\langle 6^+ \rangle$	x										
1669.5(4)	$\langle 5^- \rangle$	x										
1729.6(6)	$\langle 7^+ \rangle$			x								
1844.2(7)	$\langle 6^- \rangle$			100								
1862.2(5)	$\langle 6^- \rangle$			18								
1923.8(4)	$\langle 7^- \rangle$				20	25	34					
1952.9(4)	$\langle 7^- \rangle$				x	29	34				17	
2116.8(11)	$\langle 8^+ \rangle$					x						
2149.0(6)	$\langle 8^- \rangle$								x	100		x
2239.9(4)	$\langle 9^- \rangle$											100
2241.5(3)	$\langle 12^+ \rangle$							100				
2689.7(6)	$\langle 12^+ \rangle$							x				

## Energy levels and branching ratios [95Si04]. Part 4

 **$^{182}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	1952.9 $\langle 7^- \rangle$	2079.3 $\langle 8^- \rangle$	2149.0 $\langle 8^- \rangle$	2238.4 $\langle 9^- \rangle$	2239.9 $\langle 9^- \rangle$	2241.5 $\langle 12^+ \rangle$	2424.4 $\langle 10^- \rangle$	2503.0 $\langle 10^- \rangle$	2614.1 $\langle 11^- \rangle$	2631.6 $\langle 11^- \rangle$
2079.3(5)	$\langle 8^- \rangle$		100									
2238.4(5)	$\langle 9^- \rangle$		70	30								
2424.4(5)	$\langle 10^- \rangle$			71		29						
2503.0(6)	$\langle 10^- \rangle$				100		x					
2614.1(4)	$\langle 11^- \rangle$					100						
2631.6(5)	$\langle 11^- \rangle$					63			37			
2689.7(6)	$\langle 12^+ \rangle$							x				
2831.6(3)	$\langle 14^+ \rangle$							100				
2856.8(5)	$\langle 12^- \rangle$								x			100
2930.5(6)	$\langle 12^- \rangle$									100	x	
3046.2(6)	$\langle 13^- \rangle$										x	
3096.0(5)	$\langle 13^- \rangle$							100				
3099.9(5)	$\langle 13^- \rangle$											85
3289.1(8)								x				

Energy levels and branching ratios [95Si04]. Part 5

 **$^{182}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	2689.7 $\langle 12^+ \rangle$	2831.6 $\langle 14^+ \rangle$	2856.8 $\langle 12^- \rangle$	2930.5 $\langle 12^- \rangle$	3046.2 $\langle 13^- \rangle$	3096.0 $\langle 13^- \rangle$	3099.9 $\langle 13^- \rangle$	3168.0 $\langle 14^+ \rangle$	3354.3 $\langle 14^- \rangle$	3424.5 $\langle 14^- \rangle$
3096.0(5)	$\langle 13^- \rangle$	x	x									
3099.9(5)	$\langle 13^- \rangle$			15								
3168.0(7)	$\langle 14^+ \rangle$	x	x									
3289.1(8)		x										
3354.3(5)	$\langle 14^- \rangle$			82				18				
3424.5(7)	$\langle 14^- \rangle$				100							
3460.1(3)	$\langle 16^+ \rangle$		100									
3480.6(4)	$\langle 15^- \rangle$		56			x	44					
3541.8(6)	$\langle 15^- \rangle$					100	x					
3625.8(5)	$\langle 15^- \rangle$							83			17	
3644.9(6)	$\langle 16^+ \rangle$		x							x		
3902.7(5)	$\langle 16^- \rangle$										81	
3970.6(7)	$\langle 16^- \rangle$											100

Energy levels and branching ratios [95Si04]. Part 6

 **$^{182}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	3460.1 $\langle 16^+ \rangle$	3480.6 $\langle 15^- \rangle$	3541.8 $\langle 15^- \rangle$	3625.8 $\langle 15^- \rangle$	3644.9 $\langle 16^+ \rangle$	3902.7 $\langle 16^- \rangle$	3970.6 $\langle 16^- \rangle$	3983.0 $\langle 17^- \rangle$	4077.5 $\langle 17^- \rangle$	4093.9 $\langle 18^+ \rangle$
3644.9(6)	$\langle 16^+ \rangle$		x									
3902.7(5)	$\langle 16^- \rangle$					19						
3970.6(7)	$\langle 16^- \rangle$				x							
3983.0(5)	$\langle 17^- \rangle$		x	100								
4077.5(7)	$\langle 17^- \rangle$				100							
4093.9(3)	$\langle 18^+ \rangle$		100									
4200.0(5)	$\langle 17^- \rangle$					78		22				
4231.7(6)	$\langle 18^+ \rangle$		x				x					x
4496.9(6)	$\langle 18^- \rangle$							69				
4554.7(7)	$\langle 18^- \rangle$								100		x	
4570.2(5)	$\langle 19^- \rangle$									100		
4657.0(7)	$\langle 19^- \rangle$										100	
4728.5(5)	$\langle 20^+ \rangle$											100
4918.9(7)	$\langle 20^+ \rangle$											x

Energy levels and branching ratios [95Si04]. Part 7

 **$^{182}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	4200.0 $\langle 17^- \rangle$	4231.7 $\langle 18^+ \rangle$	4496.9 $\langle 18^- \rangle$	4554.7 $\langle 18^- \rangle$	4570.2 $\langle 19^- \rangle$	4657.0 $\langle 19^- \rangle$	4728.5 $\langle 20^+ \rangle$	4821.6 $\langle 19^- \rangle$	4918.9 $\langle 20^+ \rangle$	5136.1 $\langle 20^- \rangle$
<hr/>												
4496.9(6)	$\langle 18^- \rangle$	31										
4821.6(6)	$\langle 19^- \rangle$	100			x							
4918.9(7)	$\langle 20^+ \rangle$			x					x			
5136.1(6)	$\langle 20^- \rangle$				100					x		
5166.2(8)	$\langle 20^- \rangle$					100		x				
5208.5(6)	$\langle 21^- \rangle$						100					
5278.5(8)	$\langle 21^- \rangle$							100				
5403.2(5)	$\langle 22^+ \rangle$								100			
5490.8(8)	$\langle 21^- \rangle$									100		
5637.5(10)	$\langle 22^+ \rangle$										x	
5772.1(10)	$\langle 22^- \rangle$											x

Energy levels and branching ratios [95Si04]. Part 8

 **$^{182}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage						
		$E_f^*$ : $J_f^\pi$ :	5166.2 $\langle 20^- \rangle$	5208.5 $\langle 21^- \rangle$	5278.5 $\langle 21^- \rangle$	5403.2 $\langle 22^+ \rangle$	5490.8 $\langle 21^- \rangle$	5637.5 $\langle 22^+ \rangle$
5803.6(15)	$\langle 22^- \rangle$		x					
5894.5(15)	$\langle 23^- \rangle$			x				
5951.6(15)	$\langle 23^- \rangle$				100			
6126.8(6)	$\langle 24^+ \rangle$					100		
6204.8(15)	$\langle 23^- \rangle$						100	
6380.5(15)	$\langle 24^+ \rangle$							x

Energy levels and branching ratios [95Si04]. Part 9

 **$^{182}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage							
		$E_f^*$ : $J_f^\pi$ :	5772.1 $\langle 22^- \rangle$	5803.6 $\langle 22^- \rangle$	5894.5 $\langle 23^- \rangle$	6126.8 $\langle 24^+ \rangle$	6204.8 $\langle 23^- \rangle$	6625.5 $\langle 25^- \rangle$	6957.8 $\langle 25^- \rangle$
6396.1(15)	$\langle 24^- \rangle$		x						
6478.6(15)	$\langle 24^- \rangle$			x					
6625.5(15)	$\langle 25^- \rangle$				x				
6904.8(8)	$\langle 26^+ \rangle$					100			
6957.8(15)	$\langle 25^- \rangle$						x		
7398(2)	$\langle 27^- \rangle$							x	
7757(2)	$\langle 27^- \rangle$								x

Energy levels and branching ratios [92Fi02].

 **$^{183}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Branching ratios in percentage							
			$E^*_f:$ $2J^\pi_f:$	0.0 $1^-$	34.50 $\langle 7 \rangle^-$	84.62 $3^-$	96.06 $5^-$	149.65 $\langle 9 \rangle^-$	195.68 $\langle 9 \rangle^+$	243.47 $\langle 11 \rangle^+$
0.0	$1^-$	6.5(10) m								
34.50(8)	$\langle 7 \rangle^-$	43(5) s								
84.62(7)	$3^-$			100						
96.06(7)	$5^-$			100		$\approx 0.001$				
149.65(10)	$\langle 9 \rangle^-$				100					
195.68(11)	$\langle 9 \rangle^+$	$>150$ ns			99(15)			0.74(12)		
243.47(14)	$\langle 11 \rangle^+$								100	
289.53(11)	$\langle 11 \rangle^-$				74(11)			26(4)		
298.75(8)	$7^-$					88(13)	12(2)			
314.17(10)	$9^-$						100			
316.7(5)	$\langle 13^+ \rangle$								x	x
347.57(8)	$\langle 5 \rangle^-$				69(10)	13(2)	17(3)			
373.08(9)	$\langle 7 \rangle^-$				77(12)		20(3)	$\approx 2.9$		
375.22(12)	$\langle 7 \rangle^+$								100	
449.1(3)	$\langle 13 \rangle^-$							95(4)		
471.52(10)	$\langle 7 \rangle^-$				26(4)		6(1)	28(4)		
477.9(4)	$\langle 15^+ \rangle$									41(2)
531.44(13)	$\langle 9 \rangle^+$								20(3)	62(10)
535.73(12)	$\langle 9 \rangle^-$							5.0(7)		
556.53(13)	$\langle 3 \rangle^-$		$\approx 85$			15(3)				
568.67(11)	$\langle 1 \rangle^-$					100				
590.2(5)	$\langle 17^+ \rangle$									
611.31(16)										
613.13(15)	$\langle 3,5 \rangle^-$			47(7)			53(8)			
617.33(14)	$\langle 5 \rangle^-$				$\approx 60$	$\approx 23$				
627.2(5)	$\langle 13 \rangle^-$									
629.0(4)	$\langle 15 \rangle^-$									
636.23(15)					31(4)					20(3)
650.19(12)	$\langle 3 \rangle^-$					81(15)	19(3)			
678.43(12)	$\langle 3,5 \rangle^-$			11.3(19)		75(11)				
692.92(12)	$\langle 3,5 \rangle^-$			5.8(9)		21(3)	67(11)			
702.24(13)	$\langle 7 \rangle^-$						81(11)			
730.70(18)	$X^+$								72(11)	
762.03(11)	$\langle 5 \rangle^-$				29(4)	26(4)	7(1)	17(3)		
801.79(13)	$X^-$					31(4)	45(7)			
819.81(16)	$\langle 7,9 \rangle^-$									
824.76(16)	$\langle 5,7,9 \rangle^-$									
824.9(4)	$\langle 17 \rangle^-$									
834.3(6)	$\langle 19^+ \rangle$									
835.49(14)	$\langle 3,5 \rangle^-$			13(2)			70(11)			
847.27(22)	$\langle 7,9,11 \rangle^-$									
879.58(16)	$X^{\langle - \rangle}$				22(3)			31(5)		
918.94(16)	$\langle 3,5,7 \rangle^-$				61(9)					
930.49(15)	$X^-$									
931.95(16)	$\langle 7,9,11 \rangle^-$				7(1)					

(continued)

 **$^{183}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Branching ratios in percentage							
			$E^*_f:$ $2J^\pi_f:$	0.0 $1^-$	34.50 $\langle 7 \rangle^-$	84.62 $3^-$	96.06 $5^-$	149.65 $\langle 9 \rangle^-$	195.68 $\langle 9 \rangle^+$	243.47 $\langle 11 \rangle^+$
963.7(3)	$\langle 7,9,11 \rangle^-$									
966.4(7)	$\langle 21^+ \rangle$									
978.43(16)	$\langle 7,9,11 \rangle^-$				40(6)			48(7)		
989.72(23)	$X^{\langle + \rangle}$									
998.33(20)										34(5)
1011.9(7)	$\langle 17^- \rangle$									
1024.49(16)					28(4)					
1034.97(15)	$\langle 5,7,9 \rangle^-$				42(6)					
1038.5(5)	$\langle 19 \rangle^-$									
1057.88(22)										
1071.22(17)	$X^-$				50(8)					
1126.31(16)					42(7)					
1262.5(6)	$\langle 21^- \rangle$									
1280.1(7)	$\langle 23^+ \rangle$									
1421.3(7)	$\langle 25^+ \rangle$									
1444.0(9)	$\langle 21^- \rangle$									
1501.7(6)	$\langle 23^- \rangle$									
1747.6(7)	$\langle 25^- \rangle$									
1790.7(8)	$\langle 27^+ \rangle$									
1810.7(3)										
1814.4(3)	$\langle 3,5,7 \rangle^-$									
1844.3(3)	$X^-$									
1847.43(23)					26(4)			74(10)		
1884.2(3)	$\langle 3,5,7 \rangle^+$									
1892.3(3)						100				
1900.6(10)	$\langle 25^- \rangle$									
1907.4(3)	$\langle 5,7,9 \rangle^-$									
1912.73(19)					55(8)	26(4)		20(3)		
1914.64(19)	$\langle 3,5 \rangle^-$					52(8)				
1936.6(8)	$\langle 29^+ \rangle$									
1938.50(15)	$\langle 7 \rangle^-$				11(2)		24(4)		31(5)	
1940.46(15)	$\langle 3,5,7 \rangle^-$			5.6(9)						
1948.62(19)	$\langle 5^-, 7 \rangle$				10.2(15)		61(9)			
1956.48(13)	$\langle 5,7,9 \rangle^-$				4.4(7)		8(1)		34(5)	
1968.54(22)	$\langle 3,5,7 \rangle^-$				19(3)		81(12)			
1970.69(15)	$\langle 3,5,7 \rangle^-$						23(4)	12(2)		
1979.83(22)					28(5)					
2006.3(7)	$\langle 27^- \rangle$									
2267.7(8)	$\langle 29^- \rangle$									
2340.7(9)	$\langle 31^+ \rangle$									
2373.7(11)	$\langle 29^- \rangle$									
2503.8(11)	$\langle 33^+ \rangle$									
2542.5(8)	$\langle 31^- \rangle$									
2818.5(11)	$\langle 33^- \rangle$									
2872.1(12)	$\langle 33^- \rangle$									



(continued)

 **$^{183}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Branching ratios in percentage							
			$E^*_f$ : $2J^\pi_f$ :	0.0 $1^-$	34.50 $\langle 7 \rangle^-$	84.62 $3^-$	96.06 $5^-$	149.65 $\langle 9 \rangle^-$	195.68 $\langle 9 \rangle^+$	243.47 $\langle 11 \rangle^+$
2919.3(11)	$\langle 35^+ \rangle$									
3108.7(11)	$\langle 35^- \rangle$									
3123.8(11)	$\langle 37^+ \rangle$									
3396.5(15)	$\langle 37^- \rangle$									
3423.1(16)	$\langle 37^- \rangle$									
3544.0(13)	$\langle 39^+ \rangle$									
3697.7(15)	$\langle 39^- \rangle$									
3794.8(15)	$\langle 41^+ \rangle$									
4018.5(18)	$\langle 41^- \rangle$									
4025.1(19)	$\langle 41^- \rangle$									
4289.7(18)	$\langle 43^- \rangle$									
4508.8(18)	$\langle 45^+ \rangle$									
4949.7(20)	$\langle 47^- \rangle$									
5257.8(21)	$\langle 49^+ \rangle$									

Energy levels and branching ratios [92Fi02]. Part 2

 **$^{183}_{78}\text{Pt}$** 

$E^*$	$2J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $2J_f^\pi$ :	289.53 $\langle 11 \rangle^-$	298.75 $7^-$	314.17 $9^-$	316.7 $\langle 13^+ \rangle$	347.57 $\langle 5 \rangle^-$	373.08 $\langle 7 \rangle^-$	375.22 $\langle 7 \rangle^+$	449.1 $\langle 13 \rangle^-$	471.52 $\langle 7 \rangle^-$	477.9 $\langle 15^+ \rangle$
449.1(3)	$\langle 13 \rangle^-$		5.2(10)									
471.52(10)	$\langle 7 \rangle^-$						38(6)	2.1(3)				
477.9(4)	$\langle 15^+ \rangle$					59(5)						
531.44(13)	$\langle 9 \rangle^+$								18(2)			
535.73(12)	$\langle 9^- \rangle$		8.6(13)		$\approx 7.3$			79(12)				
590.2(5)	$\langle 17^+ \rangle$					97(5)						2.6(5)
611.31(16)				86(13)	13.6(20)							
617.33(14)	$\langle 5 \rangle^-$				1.02(15)		16(2)					
627.2(5)	$\langle 13^- \rangle$				100							
629.0(4)	$\langle 15 \rangle^-$		100							x		
636.23(15)											49(7)	
678.43(12)	$\langle 3,5 \rangle^-$			$\approx 14$								
692.92(12)	$\langle 3,5 \rangle^-$			6.1(9)								
702.24(13)	$\langle 7 \rangle^-$						8.1(11)	$\approx 11$				
730.70(18)	$X^+$								28(4)			
762.03(11)	$\langle 5 \rangle^-$			14(2)				7(1)				
801.79(13)	$X^-$							24(4)				
819.81(16)	$\langle 7,9 \rangle^-$			79(12)	21(3)							
824.76(16)	$\langle 5,7,9 \rangle^-$			76(11)			24(3)					
824.9(4)	$\langle 17 \rangle^-$									x		
834.3(6)	$\langle 19^+ \rangle$											88(4)
835.49(14)	$\langle 3,5 \rangle^-$			17(2)								

(continued)

 $^{183}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	289.53 $\langle 11 \rangle^-$	298.75 $7^-$	314.17 $9^-$	316.7 $\langle 13^+ \rangle$	347.57 $\langle 5 \rangle^-$	373.08 $\langle 7 \rangle^-$	375.22 $\langle 7 \rangle^+$	449.1 $\langle 13 \rangle^-$	471.52 $\langle 7 \rangle^-$	477.9 $\langle 15^+ \rangle$
847.27(22)	$\langle 7,9,11 \rangle^-$				100							
879.58(16)	$X^{\langle - \rangle}$			47(8)								
918.94(16)	$\langle 3,5,7 \rangle^-$						39(6)					
930.49(15)	$X^-$						$\approx 81$					
931.95(16)	$\langle 7,9,11 \rangle^-$				34(5)				$\approx 59$			
963.7(3)	$\langle 7,9,11 \rangle^-$			28(4)	72(12)							
978.43(16)	$\langle 7,9,11 \rangle^-$						12(6)					
989.72(23)	$X^{\langle + \rangle}$									100		
998.33(20)										46(7)		
1024.49(16)								72(11)				
1034.97(15)	$\langle 5,7,9 \rangle^-$		13(2)	46(6)								
1057.88(22)								100				
1071.22(17)	$X^-$								50(8)			
1126.31(16)								30(4)				
1810.7(3)				100								
1814.4(3)	$\langle 3,5,7 \rangle^-$						100					
1844.3(3)	$X^-$						100					
1884.2(3)	$\langle 3,5,7 \rangle^+$						100					
1907.4(3)	$\langle 5,7,9 \rangle^-$								100			
1914.64(19)	$\langle 3,5 \rangle^-$			11(2)								
1938.50(15)	$\langle 7 \rangle^-$			8(1)								
1940.46(15)	$\langle 3,5,7 \rangle^-$						45(7)					
1948.62(19)	$\langle 5^-,7 \rangle$				29(4)							
1956.48(13)	$\langle 5,7,9 \rangle^-$		1.3(2)	8(1)	10(1)		5.4(8)				9(1)	
1970.69(15)	$\langle 3,5,7 \rangle^-$				28(4)				8(1)			
1979.83(22)				72(12)								

Energy levels and branching ratios [92Fi02]. Part 3

 $^{183}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	531.44 $\langle 9 \rangle^+$	556.53 $\langle 3 \rangle^-$	568.67 $\langle 1 \rangle^-$	590.2 $\langle 17^+ \rangle$	627.2 $\langle 13^- \rangle$	629.0 $\langle 15 \rangle^-$	824.9 $\langle 17 \rangle^-$	834.3 $\langle 19^+ \rangle$	930.49 $X^-$	966.4 $\langle 21^+ \rangle$
824.9(4)	$\langle 17 \rangle^-$							x				
834.3(6)	$\langle 19^+ \rangle$					11.7(19)						
930.49(15)	$X^-$				19(2)							
966.4(7)	$\langle 21^+ \rangle$					95(5)				4.8(5)		
998.33(20)			19(3)									
1011.9(7)	$\langle 17^- \rangle$						100					
1038.5(5)	$\langle 19 \rangle^-$							100	x			
1126.31(16)			28(4)									
1262.5(6)	$\langle 21^- \rangle$								100			
1280.1(7)	$\langle 23^+ \rangle$									100		x

(continued)

 $^{183}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	531.44 $\langle 9 \rangle^+$	556.53 $\langle 3 \rangle^-$	568.67 $\langle 1 \rangle^-$	590.2 $\langle 17^+ \rangle$	627.2 $\langle 13^- \rangle$	629.0 $\langle 15^- \rangle$	824.9 $\langle 17^- \rangle$	834.3 $\langle 19^+ \rangle$	930.49 X <sup>-</sup>	966.4 $\langle 21^+ \rangle$
1421.3(7)	$\langle 25^+ \rangle$											98(4)
1914.64(19)	$\langle 3,5 \rangle^-$			37(6)								
1938.50(15)	$\langle 7 \rangle^-$		25(4)									
1940.46(15)	$\langle 3,5,7 \rangle^-$			27(4)	11(2)						12(2)	
1956.48(13)	$\langle 5,7,9 \rangle^-$		20(3)									
1970.69(15)	$\langle 3,5,7 \rangle^-$		20(3)									

Energy levels and branching ratios [92Fi02]. Part 4

 $^{183}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	1011.9 $\langle 17^- \rangle$	1038.5 $\langle 19^- \rangle$	1071.22 X <sup>-</sup>	1262.5 $\langle 21^- \rangle$	1280.1 $\langle 23^+ \rangle$	1421.3 $\langle 25^+ \rangle$	1444.0 $\langle 21^- \rangle$	1501.7 $\langle 23^- \rangle$	1747.6 $\langle 25^- \rangle$	1790.7 $\langle 27^+ \rangle$
1421.3(7)	$\langle 25^+ \rangle$						2.3(7)					
1444.0(9)	$\langle 21^- \rangle$		100									
1501.7(6)	$\langle 23^- \rangle$			100		x						
1747.6(7)	$\langle 25^- \rangle$					100						
1790.7(8)	$\langle 27^+ \rangle$						x	100				
1900.6(10)	$\langle 25^- \rangle$								100			
1936.6(8)	$\langle 29^+ \rangle$							100				x
1970.69(15)	$\langle 3,5,7 \rangle^-$				8(1)							
2006.3(7)	$\langle 27^- \rangle$									100	x	
2267.7(8)	$\langle 29^- \rangle$										100	
2340.7(9)	$\langle 31^+ \rangle$											78(10)

Energy levels and branching ratios [92Fi02]. Part 5

 $^{183}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	1900.6 $\langle 25^- \rangle$	1936.6 $\langle 29^+ \rangle$	2006.3 $\langle 27^- \rangle$	2267.7 $\langle 29^- \rangle$	2340.7 $\langle 31^+ \rangle$	2373.7 $\langle 29^- \rangle$	2503.8 $\langle 33^+ \rangle$	2542.5 $\langle 31^- \rangle$	2818.5 $\langle 33^- \rangle$	2872.1 $\langle 33^- \rangle$
2340.7(9)	$\langle 31^+ \rangle$			22(2)								
2373.7(11)	$\langle 29^- \rangle$		100									
2503.8(11)	$\langle 33^+ \rangle$			100			x					
2542.5(8)	$\langle 31^- \rangle$				100	x						
2818.5(11)	$\langle 33^- \rangle$					100						
2872.1(12)	$\langle 33^- \rangle$							100				
2919.3(11)	$\langle 35^+ \rangle$						x		x			
3108.7(11)	$\langle 35^- \rangle$									100	x	
3123.8(11)	$\langle 37^+ \rangle$								100			

(continued)

 $^{183}_{78}\text{Pt}$ 

$E^*$	$2J^\pi$	Branching ratios in percentage										
		$E_f^*$ :	1900.6	1936.6	2006.3	2267.7	2340.7	2373.7	2503.8	2542.5	2818.5	2872.1
[keV]		$2J_f^\pi$ :	$\langle 25^- \rangle$	$\langle 29^+ \rangle$	$\langle 27^- \rangle$	$\langle 29^- \rangle$	$\langle 31^+ \rangle$	$\langle 29^- \rangle$	$\langle 33^+ \rangle$	$\langle 31^- \rangle$	$\langle 33^- \rangle$	$\langle 33^- \rangle$
3396.5(15)	$\langle 37^- \rangle$										100	
3423.1(16)	$\langle 37^- \rangle$											100

Energy levels and branching ratios [92Fi02]. Part 6

 $^{183}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage									
		$E^*_f$ : $2J^\pi_f$ :	2919.3 $\langle 35^+ \rangle$	3108.7 $\langle 35^- \rangle$	3123.8 $\langle 37^+ \rangle$	3396.5 $\langle 37^- \rangle$	3423.1 $\langle 37^- \rangle$	3697.7 $\langle 39^- \rangle$	3794.8 $\langle 41^+ \rangle$	4289.7 $\langle 43^- \rangle$	4508.8 $\langle 45^+ \rangle$
3123.8(11)	$\langle 37^+ \rangle$		x								
3544.0(13)	$\langle 39^+ \rangle$		x		x						
3697.7(15)	$\langle 39^- \rangle$			100							
3794.8(15)	$\langle 41^+ \rangle$				100						
4018.5(18)	$\langle 41^- \rangle$					100					
4025.1(19)	$\langle 41^- \rangle$						100				
4289.7(18)	$\langle 43^- \rangle$							100			
4508.8(18)	$\langle 45^+ \rangle$								100		
4949.7(20)	$\langle 47^- \rangle$									100	
5257.8(21)	$\langle 49^+ \rangle$										100

Energy levels and branching ratios [89Fi11].

 $^{184}_{78}\text{Pt}$ 

$E^*$ [keV]	$J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage						
				$E^*_f$ : $J^\pi_f$ :	0.0 $0^+$	162.97 $2^+$	436 $4^+$	492 $0^+$	649 $2^+$	798 $6^+$
0.0 <sup>a</sup>	$0^+$	17.3(2) m	90Ca22							
162.97(8) <sup>a</sup>	$2^+$	403(15) ps	90Ca22		100					
435.96(11) <sup>a</sup>	$4^+$	25.3(9) ps	90Ca22			100				
491.94(15)	$0^+$			x		100				
648.77(12)	$2^+$			34(4)		66(9)				
798.42(13) <sup>a</sup>	$6^+$	6.1(3) ps	90Ca22				100			
844.11(12) <sup>h</sup>	$2^+$		90Ca22		82(9)	<14	10(3)	8.4(11)		
940.10(15)	$\langle 2 \rangle^+$					95(10)			5.2(8)	
1027.7(2)	$\langle 3 \rangle^+$					21(3)	55(7)		24(5)	
1173.3(2)	$2^+$			[47(14)]					[53(10)]	
1230.7(3)	$4^+$					36(9)	33(9)			
1230.9(3) <sup>a</sup>	$8^+$	2.15(14) ps	90Ca22							100
1234.8(2) <sup>h</sup>	$4^+$		90Ca22			39(5)	28(4)		19(2)	
1307.1(2) <sup>i</sup>	$5^+$		90Ca22				80(9)			
1462.9(2)	$\langle 4,5 \rangle^+$						26(3)			39(5)

(continued)

 **$^{184}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	$T_{1/2}$ or	Ref.	Branching ratios in percentage						
[keV]		$\Gamma_{\text{cm}}$		$E_{\text{f}}^*$ :	0.0	162.97	436	492	649	798
				$J_{\text{f}}^\pi$ :	$0^+$	$2^+$	$4^+$	$0^+$	$2^+$	$6^+$
1629.6(3)	$5^+, 6^+, 7^+$									100
1675.6(13) <sup>e</sup>	$5^-$		90Ca22				45(7)			
1706.9(7) <sup>a</sup>	$10^+$	1.2(2) ps	90Ca22							
1730.8(2) <sup>i</sup>	$7^+$		90Ca22							100
1793.7 <sup>f</sup>	$6^-$		90Ca22							
1843.8(16) <sup>c</sup>	$8^-$	1.01(5) ms	90Ca22							
1915.1 <sup>e</sup>	$7^-$		90Ca22							
2021.5 <sup>d</sup>	$9^-$		90Ca22							
2053.8(3)										
2074.8 <sup>f</sup>	$8^-$		90Ca22							
2204.4(9) <sup>a</sup>	$12^+$	1.59(14) ps	90Ca22							
2220.2 <sup>c</sup>	$10^-$		90Ca22							
2229.8 <sup>e</sup>	$9^-$		90Ca22							
2330.9(2)	$\langle 4^+ \rangle$									39(6)
2439.3 <sup>d</sup>	$11^-$		90Ca22							
2450.5 <sup>f</sup>	$10^-$		90Ca22							
2553.0(2)	$4^+$									26(3)
2592.5 <sup>b</sup>	$11^-$		90Ca22							
2612.6(3)										100
2623.6 <sup>e</sup>	$11^-$		90Ca22							
2632.4(2)							45(7)			
2638.2(3)	$2^+, 3, 4^+$					72(9)	28(4)			
2653.9(3)						100				
2677.0 <sup>c</sup>	$12^-$		90Ca22							
2726.8(13) <sup>a</sup>	$14^+$	1.39(14) ps	90Ca22							
2910.0 <sup>f</sup>	$12^-$		90Ca22							
2919	$\langle 13^- \rangle$									
2931.8 <sup>d</sup>	$13^-$		90Ca22							
3081.2 <sup>b</sup>	$13^-$		90Ca22							
3094.3 <sup>e</sup>	$13^-$		90Ca22							
3200.8 <sup>c</sup>	$14^-$		90Ca22							
3277	$\langle 15^- \rangle$									
3282(2) <sup>a</sup>	$16^+$	1.18(14) ps	90Ca22							
3433 <sup>f</sup>	$\langle 14^- \rangle$		90Ca22							
3439.8 <sup>b</sup>	$15^-$		90Ca22							
3479.8 <sup>d</sup>	$15^-$		90Ca22							
3596.0 <sup>g</sup>	$16^{\langle + \rangle}$		90Ca22							
3610.6 <sup>e</sup>	$15^-$		90Ca22							
3739	$\langle 17^- \rangle$									
3766.9 <sup>c</sup>	$16^-$		90Ca22							
3869(2) <sup>a</sup>	$18^+$	1.7(10) ps	90Ca22							
3901.7 <sup>b</sup>	$17^-$		90Ca22							
3987 <sup>f</sup>	$\langle 16^- \rangle$		90Ca22							
4057.4 <sup>d</sup>	$17^-$		90Ca22							
4171.7 <sup>g</sup>	$18^{\langle + \rangle}$		90Ca22							

(continued)

 $^{184}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	$T_{1/2}$ or	Ref.	Branching ratios in percentage						
[keV]		$\Gamma_{\text{cm}}$		$E^*_f$ : $J^\pi_f$ :	0.0 $0^+$	162.97 $2^+$	436 $4^+$	492 $0^+$	649 $2^+$	798 $6^+$
4174.8 <sup>e</sup>	17 <sup>-</sup>		90Ca22							
4276	$\langle 19^- \rangle$									
4355.9 <sup>c</sup>	18 <sup>-</sup>		90Ca22							
4438.4 <sup>b</sup>	19 <sup>-</sup>		90Ca22							
4493(2) <sup>a</sup>	20 <sup>+</sup>		90Ca22							
4562 <sup>f</sup>	$\langle 18^- \rangle$		90Ca22							
4660.8 <sup>d</sup>	19 <sup>-</sup>		90Ca22							
4788.4 <sup>e</sup>	19 <sup>-</sup>		90Ca22							
4815.4 <sup>g</sup>	20 <sup>(+)</sup>		90Ca22							
4852	$\langle 21^- \rangle$									
4981.0 <sup>c</sup>	$\langle 20^- \rangle$		90Ca22							
5013.4 <sup>b</sup>	21 <sup>-</sup>		90Ca22							
5166.8 <sup>a</sup>	22 <sup>+</sup>		90Ca22							
5314.6 <sup>d</sup>	$\langle 21^- \rangle$		90Ca22							
5454	$\langle 23^- \rangle$									
5471.2 <sup>e</sup>	21 <sup>-</sup>		90Ca22							
5510.5 <sup>g</sup>	22 <sup>(+)</sup>		90Ca22							
5614.7 <sup>b</sup>	23 <sup>-</sup>		90Ca22							
5667.7 <sup>c</sup>	$\langle 22^- \rangle$		90Ca22							
5896.8 <sup>a</sup>	24 <sup>+</sup>		90Ca22							
6035.2 <sup>d</sup>	$\langle 23^- \rangle$		90Ca22							
6099	$\langle 25^- \rangle$									
6259.1 <sup>b</sup>	25 <sup>-</sup>		90Ca22							
6685.7 <sup>a</sup>	26 <sup>+</sup>		90Ca22							
6803	$\langle 27^- \rangle$									
6962.6 <sup>b</sup>	27 <sup>-</sup>		90Ca22							
7535.1 <sup>a</sup>			90Ca22							
7733.1 <sup>b</sup>	$\langle 29^- \rangle$		90Ca22							

Additional data on this isotope can be found in [90Ca22].

9 bands (No1-8 and  $\gamma$ , marked as a-i here) were assigned to excited states of this nucleus in [90Ca22].

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

Energy levels and branching ratios [89Fi11]. Part 2

 $^{184}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E^*_\text{f}:$ $J^\pi_\text{f}:$	844.11 $2^+$	940.10 $\langle 2 \rangle^+$	1027.71 $\langle 3 \rangle^+$	1173.27 $2^+$	1230.7 $4^+$	1230.9 $8^+$	1234.83 $4^+$	1307.07	1462.86 $\langle 4,5 \rangle^+$	1629.61
1230.7(3)	$4^+$		31(13)									
1234.8(2) <sup>h</sup>	$4^+$		14(2)									
1307.1(2) <sup>i</sup>	$5^+$			10(6)		9.3(14)						
1462.9(2)	$\langle 4,5 \rangle^+$				36(15)							

(continued)

 $^{184}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	Branching ratios in percentage									
[keV]	$E^*_f$ : $J^\pi_f$ :	844.11 2 <sup>+</sup>	940.10 ⟨2⟩ <sup>+</sup>	1027.71 ⟨3⟩ <sup>+</sup>	1173.27 2 <sup>+</sup>	1230.7 4 <sup>+</sup>	1230.9 8 <sup>+</sup>	1234.83 4 <sup>+</sup>	1307.07	1462.86 ⟨4,5⟩ <sup>+</sup>	1629.61
1675.6(13) <sup>e</sup>	5 <sup>−</sup>					55(11)					
1706.9(7) <sup>a</sup>	10 <sup>+</sup>					100					
1843.8(16) <sup>c</sup>	8 <sup>−</sup>						89(14)				
2053.8(3)											100
2330.9(2)	⟨4 <sup>+</sup> ⟩		14(2)			22(4)				25(4)	
2553.0(2)	4 <sup>+</sup>			9(1)					19(2)	15(2)	8(1)
2632.4(2)								55(7)			

Energy levels and branching ratios [89Fi11]. Part 3

 $^{184}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E^*_\text{f}:$ $J^\pi_\text{f}:$	1670.6 $\langle 5 \rangle^-$	1706.9 $10^+$	1730.84 $\langle 7,8 \rangle^+$	1789.5 $\langle 6 \rangle^+$	2204.4 $12^+$	2330.87 $\langle 4^+ \rangle$	2726.8 $14^+$	2919 $\langle 13^- \rangle$	3277 $\langle 15^- \rangle$	3282.0 $16^+$
1793.7 <sup>f</sup>	$6^-$		100									
1843.8(16) <sup>c</sup>	$8^-$				11(4)	x						
2204.4(9) <sup>a</sup>	$12^+$			100								
2553.0(2)	$4^+$				5.3(6)			17(2)				
2726.8(13) <sup>a</sup>	$14^+$						100					
2919	$\langle 13^- \rangle$						100					
3277	$\langle 15^- \rangle$									100		
3282(2) <sup>a</sup>	$16^+$								100			
3739	$\langle 17^- \rangle$										100	
3869(2) <sup>a</sup>	$18^+$											100

Energy levels and branching ratios [89Fi11]. Part 4

 $^{184}_{78}\text{Pt}$ 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage									
		$E^*_f$ : $J^\pi_f$ :	3739 (17 <sup>-</sup> )	3868.6 18 <sup>+</sup>	4276 (19 <sup>-</sup> )	4493.0 20 <sup>+</sup>	4852 (21 <sup>-</sup> )	5168 22 <sup>+</sup>	5454 (23 <sup>-</sup> )	5899 24 <sup>+</sup>	6099 (25 <sup>-</sup> )
4276	(19 <sup>-</sup> )		100								
4493(2) <sup>a</sup>	20 <sup>+</sup>			100							
4852	(21 <sup>-</sup> )				100						
5166.8 <sup>a</sup>	22 <sup>+</sup>					100					
5454	(23 <sup>-</sup> )						100				
5896.8 <sup>a</sup>	24 <sup>+</sup>							100			
6099	(25 <sup>-</sup> )								100		
6685.7 <sup>a</sup>	26 <sup>+</sup>									100	
6803	(27 <sup>-</sup> )										100

Energy levels and branching ratios [95Br04, 05Wu07].

 **$^{185}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage						
				$E_f^*$ : $2J_f^\pi$ :	0.0 9 <sup>+</sup>	94.8 $\langle 11 \rangle^+$	103.4 1 <sup>-</sup>	181.0 3 <sup>-</sup>	200.9 5 <sup>-</sup>	212.1 $\langle 13 \rangle^+$
0.0 <sup>a</sup>	9 <sup>+</sup>	70.9(24) m								
94.79(4) <sup>b</sup>	$\langle 11 \rangle^+$				100					
103.41(5) <sup>e</sup>	1 <sup>-</sup>	33.0(8) m								
181.09(5) <sup>f</sup>	3 <sup>-</sup>	1.68(4) ps					100			
200.89(4) <sup>e</sup>	5 <sup>-</sup>	728(20) ns					89(16)	10.6(21)		
212.22(7) <sup>a</sup>	$\langle 13 \rangle^+$					100				
310.56(4) <sup>d</sup>	7 <sup>-</sup>			99(20)					0.9(5)	
373.2(3) <sup>b</sup>	$\langle 15 \rangle^+$					50(8)				50(4)
387.91(5)	$\langle 1 \rangle^-$							100		
424.09(5) <sup>f</sup>	$\langle 7^- \rangle$							94(19)	6.3(12)	
435.39(5) <sup>i</sup>	3 <sup>-</sup>						72(14)	25(5)	2.2(12)	
450.17(6) <sup>h</sup>	$\langle 7^- \rangle$									
451.87(5) <sup>e</sup>	$\langle 9^- \rangle$								100	
486.78(5) <sup>c</sup>	$\langle 9^- \rangle$			17(9)	11(5)					
488.41(5) <sup>g</sup>	5 <sup>-</sup>						56(11)	17(3)	25(5)	
510.08 <sup>j</sup>	5 <sup>-</sup>						5(1)	41(8)	50(10)	
521.29(5)	3 <sup>-</sup>						72(14)	21(4)	3.5(17)	
530.6(3) <sup>a</sup>	$\langle 17 \rangle^+$									74.1(16)
575.89(6) <sup>h</sup>	$\langle 9^- \rangle$									
590.71(5) <sup>i</sup>	7 <sup>-</sup>								96(20)	
593.32(5)	5 <sup>-</sup>						43(8)	33(6)	9(5)	
614.80(5)	$\langle 9 \rangle^+$			33(7)	61(12)					6(3)
615.65 <sup>j</sup>	$\langle 7^- \rangle$			73(15)					16.0(32)	
645.38(6)	1 <sup>-</sup>						x	75(19)	25(13)	
657.40(7)	$\langle 9, 11 \rangle^+$		05Wu07							
659.26(5)	3 <sup>-</sup>		05Wu07				54(10)	22(3)	10(5)	
682.38(8) <sup>d</sup>	$\langle 11 \rangle^-$			41(20)						
693.05(5)	$\langle 5 \rangle^+$			100						
699.54(6)	5 <sup>-</sup>		05Wu07						59(29)	
706.62(5)	$\langle 7 \rangle^+$			79(16)	21(4)					
723.54(5)	3 <sup>-</sup>							82(16)		
728.01(5)	$\langle 5^- \rangle$						12(6)	22(5)	66(13)	
743.69(8)	$\langle 7-11 \rangle^-$		05Wu07							
746.15(8)	X <sup>+</sup>		05Wu07	29(15)	71(35)					
746.30 <sup>j</sup>	$\langle 7, 9 \rangle^-$		05Wu07							
752.9(3) <sup>b</sup>	$\langle 19 \rangle^+$									
756.95(9)	$\langle 7, 9 \rangle^-$		05Wu07							
757.71(6)	5 <sup>-</sup>		05Wu07				24.0(49)	14(7)	42.4(85)	
767.74(7)	X <sup>+</sup>		05Wu07	52(10)	48(9)					
778.51(5)	$\langle 7^- \rangle$		05Wu07					26(5)	10(5)	
785.41(5)	5 <sup>-</sup>		05Wu07					40(8)	15(7)	
794.30(6)	7 <sup>+</sup> , 9 <sup>+</sup> , 11 <sup>+</sup>			100						
800.78(7)	$\langle 9^- \rangle$									
816.09(5)	$\langle 5^- \rangle$						11(6)	39(8)	16(3)	
817.1(6) <sup>e</sup>	$\langle 13^- \rangle$									



(continued)

 **$^{185}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage						
				$E_f^*$ : $2J_f^\pi$ :	0.0 9 <sup>+</sup>	94.8 $\langle 11 \rangle^+$	103.4 1 <sup>-</sup>	181.0 3 <sup>-</sup>	200.9 5 <sup>-</sup>	212.1 $\langle 13 \rangle^+$
846.73(7)	$\langle 7 \rangle^-$		05Wu07						79(17)	
874.38(9)	$\langle 7,9,11 \rangle^-$		05Wu07							
879.3(4) <sup>c</sup>	$\langle 13 \rangle^-$									
897.55(6)	$\langle 5^-,7,9^- \rangle$								23(11)	
914.22(7)	5 <sup>-</sup>		05Wu07		15(8)					
915.60(5)	$\langle 7 \rangle^-$		05Wu07							
938.5(4) <sup>a</sup>	$\langle 21 \rangle^+$									
942.79(6)	$\langle 7 \rangle^-$		05Wu07					11(6)	19(10)	
954.56(7)	$\langle 1 \rangle^-$									
955.49(6)	$\langle 9,11 \rangle^+$		05Wu07		39.5(193)	24.4(126)				27.7(143)
958.95(6)	3 <sup>-</sup>						30(14)			
961.51(6)	$\langle 5 \rangle^+$		05Wu07		35(17)					
968.78(7)	$\langle 5-9 \rangle^-$		05Wu07						16(8)	
972.87(11)	3 <sup>-</sup>									
996.83(6)	$\langle 5 \rangle^-$		05Wu07					44(9)	32(16)	
1015.69(11)	1 <sup>-</sup> -5 <sup>-</sup>		05Wu07							
1021.78(8)	7 <sup>-</sup>		05Wu07							
1032.05(6)	7 <sup>-</sup>		05Wu07				6(3)	23(5)	21(4)	
1032.51(6)	5 <sup>-</sup>		05Wu07							
1039.90(8)	X <sup>+</sup>		05Wu07			100				
1058.52(6)	3 <sup>-</sup>									
1060.36(6)	$\langle 7 \rangle^+$		05Wu07		45(23)	22(10)				
1065.32(9)	7 <sup>-</sup>		05Wu07						19(11)	
1068.32(9)	$\langle 7,9 \rangle^-$		05Wu07						24(12)	
1083.39(7)	$\langle 3,5 \rangle^-$									
1090.5(4) <sup>d</sup>	$\langle 15 \rangle^-$									
1097.47(9)	X <sup>-</sup>		05Wu07							
1116.40(9)	5 <sup>-</sup> -9 <sup>-</sup>		05Wu07							
1123.79(8)	$\langle 3,5 \rangle^-$		05Wu07							
1125.98(8)	$\langle 1,3 \rangle^+$		05Wu07							
1136.87(9)	$\langle 7-11 \rangle^-$		05Wu07							
1151.61(11)	$\langle 1-5^- \rangle$		05Wu07							
1158.37(12)										
1159.14(9)	$\langle 1,3,5^- \rangle$									
1161.95(11)	X <sup>+</sup>		05Wu07							
1162.41(11)	$\langle 1,3,5^- \rangle$							73.7(368)		
1179.55(9)	1 <sup>-</sup> -5 <sup>-</sup>		05Wu07							
1187.41(7)	$\langle 3-7 \rangle^-$		05Wu07					35(17)	23(12)	
1194.09(11)										
1195.93(8)	$\langle 3-7 \rangle^+$		05Wu07						50.0(250)	
1196.61(9)										
1198.49(7)	1 <sup>-</sup> -5 <sup>-</sup>									
1209.19(9)			05Wu07							
1209.91(11)	$\langle 1-5^- \rangle$									
1211.56(7)	$\langle 7,9 \rangle^-$		05Wu07							

(continued)

 **$^{185}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage						
				$E^*_f:$ $2J^\pi_f:$	0.0 9 <sup>+</sup>	94.8 $\langle 11 \rangle^+$	103.4 1 <sup>-</sup>	181.0 3 <sup>-</sup>	200.9 5 <sup>-</sup>	212.1 $\langle 13 \rangle^+$
1214.9(4) <sup>b</sup>	$\langle 23^+ \rangle$									
1216.8(4)	$\langle 3-7 \rangle^+$		05Wu07							
1223.75(7)	$\langle 5,7 \rangle^-$		05Wu07							
1226.61(6)	$\langle 3 \rangle^-$		05Wu07					29(14)	41(20)	
1233.30(11)										
1234.18(11)	$\langle 9 \rangle^-$		05Wu07							
1240.80(12)			05Wu07							
1249.60(7)	$\langle 5-9 \rangle^+$		05Wu07							
1255.35(12)	X <sup>-</sup>		05Wu07							
1256.49(11)			05Wu07							
1273.20(11)			05Wu07							
1273.4(6) <sup>e</sup>	$\langle 17 \rangle^-$									
1276.47(11)										
1283.80(7)	$\langle 1^- - 5^- \rangle$		05Wu07							
1294.20(11)			05Wu07							
1296.50(8)	$\langle 3 \rangle^+$		05Wu07							
1314.0(5) <sup>c</sup>	$\langle 17 \rangle^-$									
1314.05(9)			05Wu07							
1319.80(11)			05Wu07							
1322.69(7)	$\langle 5,7 \rangle^+$		05Wu07							
1324.62(9)	$\langle 7-11 \rangle^-$		05Wu07							
1335.78(7)	$\langle 1^- - 5^- \rangle$		05Wu07							
1345.70(11)			05Wu07							
1370.35(11)	$\langle 3-7 \rangle^+$		05Wu07							
1384.48(12)	$\langle 1-5^- \rangle$		05Wu07							
1391.74(9)	X <sup>-</sup>		05Wu07							
1406.11(7)	$\langle 3,5 \rangle^-$		05Wu07					55(27)		
1412.11(8)	7 <sup>-</sup> , 9 <sup>-</sup>		05Wu07							
1417.4(4) <sup>a</sup>	$\langle 25 \rangle^+$									
1442.80(11)			05Wu07							
1446.89(11)			05Wu07					100		
1450.20(9)	$\langle 3^- - 7^- \rangle$		05Wu07							
1505.69(7)			05Wu07					62(12)	12(7)	
1518.67(9)	$\langle 3-7 \rangle^+$		05Wu07							
1540.88(11)			05Wu07							
1552.0(5) <sup>d</sup>	$\langle 19 \rangle^-$									
1564.60(12)	X <sup>+</sup>		05Wu07							
1567.19(11)			05Wu07							
1582.41(11)			05Wu07							
1667.90(11)			05Wu07							
1733.0(4) <sup>b</sup>	$\langle 27 \rangle^+$									
1757.70(11)			05Wu07						100	
1776.28(21)			05Wu07							
1786.4(7) <sup>e</sup>	$\langle 21 \rangle^-$									
1805.4(5) <sup>c</sup>	$\langle 21 \rangle^-$									

(continued)

 **$^{185}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage						
				$E^*_f$ : $2J^\pi_f$ :	0.0 9 <sup>+</sup>	94.8 $\langle 11 \rangle^+$	103.4 1 <sup>-</sup>	181.0 3 <sup>-</sup>	200.9 5 <sup>-</sup>	212.1 $\langle 13 \rangle^+$
1940.4(5) <sup>a</sup>	$\langle 29 \rangle^+$									
1961.90(11)			05Wu07					100		
2048.8(5) <sup>d</sup>	$\langle 23 \rangle^-$									
2109.08(11)			05Wu07							
2256.3(8) <sup>e</sup>	$\langle 25 \rangle^-$									
2270.9(5) <sup>b</sup>	$\langle 31 \rangle^+$									
2314.4(5) <sup>c</sup>	$\langle 25 \rangle^-$									
2315.84(9)	$\langle 5, 7 \rangle^-$		05Wu07							
2484.39(12)	$\langle 1-5 \rangle^-$		05Wu07							
2489.9(5) <sup>a</sup>	$\langle 33 \rangle^+$									
2536.63(11)			05Wu07							
2539.77(7)			05Wu07							
2540.35(8)			05Wu07							
2548.3(6) <sup>d</sup>	$\langle 27 \rangle^-$									
2549.11(11)			05Wu07							
2559.33(9)	$\langle 3^- - 7^- \rangle$		05Wu07							
2559.96(7)	$\langle 5, 7 \rangle^-$		05Wu07							
2561.48(7)	$\langle 3^- - 7^- \rangle$		05Wu07						100	
2566.98(6)	$\langle 1^- - 5^- \rangle$		05Wu07							
2577.65(12)			05Wu07					42(21)	58(29)	
2578.43(7)			05Wu07							
2580.89(8)			05Wu07							
2586.74(7)			05Wu07						100	
2587.97(7)	$\langle 3^- - 7^- \rangle$		05Wu07							
2609.88(8)			05Wu07							
2620.11(8)	$\langle 5^+ - 9^- \rangle$		05Wu07							
2625.76(7)			05Wu07							
2649.01(11)			05Wu07							
2673.71(11)			05Wu07							
2726.2(8) <sup>e</sup>	$\langle 29 \rangle^-$									
2748.53(11)			05Wu07							
2761.33(11)	$\langle 1-5 \rangle^-$		05Wu07							
2762.31(11)			05Wu07							
2764.93(9)	$\langle 1^- - 5^- \rangle$		05Wu07							
2765.74(9)			05Wu07							
2766.45(12)			05Wu07							
2792.99(7)	$\langle 1^- - 5^- \rangle$		05Wu07							
2804.69(7)	$\langle 1^- - 5^- \rangle$		05Wu07					100		
2805.9(6) <sup>c</sup>	$\langle 29^- \rangle$									
2831.60(11)			05Wu07							
2833.1(5) <sup>b</sup>	$\langle 35 \rangle^+$									
3086.8(5) <sup>a</sup>	$\langle 37 \rangle^+$									
3131.4 <sup>k</sup>	$\langle 33^- \rangle$									
3287.2(9) <sup>e</sup>	$\langle 33 \rangle^-$									
3294.3 <sup>l</sup>	$\langle 35^- \rangle$									

(continued)

 **$^{185}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage						
				$E^*_f$ : $2J^\pi_f$ :	0.0 9 <sup>+</sup>	94.8 $\langle 11 \rangle^+$	103.4 1 <sup>-</sup>	181.0 3 <sup>-</sup>	200.9 5 <sup>-</sup>	212.1 $\langle 13 \rangle^+$
3453.5(5) <sup>b</sup>	$\langle 39 \rangle^+$									
3511.4 <sup>k</sup>	$\langle 37^- \rangle$									
3725.0 <sup>l</sup>	$\langle 39^- \rangle$									
3755.5(6) <sup>a</sup>	$\langle 41 \rangle^+$									
3872.2(9) <sup>e</sup>	$\langle 37^- \rangle$									
3990.7 <sup>k</sup>	$\langle 41^- \rangle$									
4146.7(6) <sup>b</sup>	$\langle 43 \rangle^+$									
4263.2 <sup>l</sup>	$\langle 43^- \rangle$									
4501.1(6) <sup>a</sup>	$\langle 45 \rangle^+$									
4564.6 <sup>k</sup>	$\langle 45^- \rangle$									
4902.2 <sup>l</sup>	$\langle 47^- \rangle$									
4913.6(6) <sup>b</sup>	$\langle 47 \rangle^+$									
	05Wu07		Ref.							

Additional data on this isotope can be found in [05Wu07, 98Vo01].

12 bands (A-L marked here a-l) are assigned to the excited states of this nucleus in [05Wu07].

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

Energy levels and branching ratios [95Br04, 05Wu07]. Part 2

 **$^{185}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E^*_f$ : $2J^\pi_f$ :	310.6 7 <sup>-</sup>	373.2 $\langle 15^+ \rangle$	387.8 $\langle 1 \rangle^-$	424.0 $\langle 7^- \rangle$	435.3 3 <sup>-</sup>	450.2 $\langle 7^- \rangle$	451.8 $\langle 9^- \rangle$	486.8 $\langle 9^- \rangle$	488.4 5 <sup>-</sup>	510.0 5 <sup>-</sup>
435.39(5) <sup>i</sup>	3 <sup>-</sup>				x							
450.17(6) <sup>h</sup>	$\langle 7^- \rangle$	100										
451.87(5) <sup>e</sup>	$\langle 9^- \rangle$					x						
486.78(5) <sup>c</sup>	$\langle 9^- \rangle$	72(15)										
488.41(5) <sup>g</sup>	5 <sup>-</sup>				x	1.3(6)	x					
510.08 <sup>j</sup>	5 <sup>-</sup>	4(2)										
521.29(5)	3 <sup>-</sup>	0.9(4)			0.9(4)		1.4(7)					
530.6(3) <sup>a</sup>	$\langle 17 \rangle^+$		25.9(10)									
575.89(6) <sup>h</sup>	$\langle 9^- \rangle$	81(16)						12(7)		7(3)		
590.71(5) <sup>i</sup>	7 <sup>-</sup>						1.4(8)				2.2(13)	
593.32(5)	5 <sup>-</sup>	5(3)			4(2)	5(3)						0.9(5)
615.65 <sup>j</sup>	$\langle 7^- \rangle$	1.5(8)				1.6(8)			0.8(4)			7(1)
659.26(5)	3 <sup>-</sup>	9(4)				1.2(6)						
682.38(8) <sup>d</sup>	$\langle 11^- \rangle$	27(12)								33(16)		
699.54(6)	5 <sup>-</sup>	15(8)										
723.54(5)	3 <sup>-</sup>				9(4)	5(2)	x					
743.69(8)	$\langle 7-11 \rangle^-$									100		
746.30 <sup>j</sup>	$\langle 7,9 \rangle^-$								18.0(98)			29.5(148)
752.9(3) <sup>b</sup>	$\langle 19 \rangle^+$		70.5(15)									
756.95(9)	$\langle 7,9 \rangle^-$								38(19)		62(12)	

(continued)

 **$^{185}_{78}\text{Pt}$** 

$E^*$	$2J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $2J_f^\pi$ :	310.6 $7^-$	373.2 $\langle 15^+ \rangle$	387.8 $\langle 1 \rangle^-$	424.0 $\langle 7^- \rangle$	435.3 $3^-$	450.2 $\langle 7 \rangle^-$	451.8 $\langle 9 \rangle^-$	486.8 $\langle 9 \rangle^-$	488.4 $5^-$	510.0 $5^-$
757.71(6)	$5^-$				3.5(18)	12.4(60)	3.5(18)					
778.51(5)	$\langle 7 \rangle^-$					21(4)	10(5)		3(2)	2(1)	17(3)	
785.41(5)	$5^-$		7(3)			5(3)	4(2)			4(2)	1.7(8)	6(3)
800.78(7)	$\langle 9 \rangle^-$		54(27)					16(8)		31(16)		
816.09(5)	$\langle 5 \rangle^-$		x		3(2)	7(3)	4(2)		2.0(10)			
817.1(6) <sup>e</sup>	$\langle 13^- \rangle$							100				
846.73(7)	$\langle 7 \rangle^-$					11(6)			10(5)			
874.38(9)	$\langle 7, 9, 11 \rangle^-$								60(32)			
879.3(4) <sup>c</sup>	$\langle 13 \rangle^-$									74(3)		
897.55(6)	$\langle 5^-, 7, 9^- \rangle$					14(7)			14(7)			
914.22(7)	$5^-$		78(16)									
915.60(5)	$\langle 7 \rangle^-$					37(18)	7(3)		8(4)	17(8)	7(3)	
942.79(6)	$\langle 7 \rangle^-$					62(12)			7(4)			
954.56(7)	$\langle 1 \rangle^-$				x		40(20)					
958.95(6)	$3^-$				x		14(8)					
968.78(7)	$\langle 5-9 \rangle^-$					16(8)			59(29)			
972.87(11)	$3^-$						100					
996.83(6)	$\langle 5 \rangle^-$				10(5)	14(7)					x	
1021.78(8)	$7^-$		81(15)							19(10)		
1032.05(6)	$7^-$					7(3)	x					23(5)
1058.52(6)	$3^-$				26(12)		x					27(7)
1065.32(9)	$7^-$											x
1068.32(9)	$\langle 7, 9 \rangle^-$								76(39)			
1083.39(7)	$\langle 3, 5 \rangle^-$				31(17)			69(34)				
1097.47(9)	$X^-$					26(13)			38(20)			
1116.40(9)	$5^- - 9^-$		50(26)					50(26)				
1123.79(8)	$\langle 3, 5 \rangle^-$							62(32)				
1136.87(9)	$\langle 7-11 \rangle^-$					100						
1158.37(12)								100				
1159.14(9)	$\langle 1, 3, 5^- \rangle$				34.0(180)		66.0(320)					
1162.41(11)	$\langle 1, 3, 5^- \rangle$				26.3(132)							
1179.55(9)	$1^- - 5^-$										58(29)	
1187.41(7)	$\langle 3-7 \rangle^-$		43(23)									
1195.93(8)	$\langle 3-7 \rangle^+$										50.0(250)	
1198.49(7)	$1^- - 5^-$										50(25)	
1209.19(9)					17(9)		36(19)					47(22)
1209.91(11)	$\langle 1-5^- \rangle$								47(23)	11(5)		
1223.75(7)	$\langle 5, 7 \rangle^-$					56(28)				44(22)		
1226.61(6)	$\langle 3 \rangle^-$				21(11)					9(5)		
1233.30(11)									100			
1276.47(11)							100					
1283.80(7)	$\langle 1^- - 5^- \rangle$				35(18)		65(31)					x
1314.05(9)							78(39)				22(11)	
1324.62(9)	$\langle 7-11 \rangle^-$							47(27)		53(27)		
1335.78(7)	$\langle 1^- - 5^- \rangle$				11(5)		32(17)					

(continued)

 $^{185}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	310.6 $7^-$	373.2 $\langle 15^+ \rangle$	387.8 $\langle 1 \rangle^-$	424.0 $\langle 7^- \rangle$	435.3 $3^-$	450.2 $\langle 7 \rangle^-$	451.8 $\langle 9 \rangle^-$	486.8 $\langle 9 \rangle^-$	488.4 $5^-$	510.0 $5^-$
1384.48(12)	$\langle 1-5^- \rangle$				50(25)							
1391.74(9)	$X^-$										100	
1406.11(7)	$\langle 3,5 \rangle^-$				45(21)							
1505.69(7)							19(10)					
1582.41(11)					100							
1667.90(11)						100						
2109.08(11)							100					
2315.84(9)	$\langle 5,7 \rangle^-$								100			
2536.63(11)			48(24)							52(24)		
2549.11(11)						100						
2559.33(9)	$\langle 3^- - 7^- \rangle$					100						
2559.96(7)	$\langle 5,7 \rangle^-$							40(20)		60(29)		
2566.98(6)	$\langle 1^- - 5^- \rangle$											100
2578.43(7)						72(33)				28(14)		
2587.97(7)	$\langle 3^- - 7^- \rangle$					100						
2609.88(8)			100									
2625.76(7)			100									

Energy levels and branching ratios [95Br04, 05Wu07]. Part 3

 $^{185}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	521.2 $3^-$	530.6 $\langle 17^+ \rangle$	575.9 $\langle 9^- \rangle$	590.7 $7^-$	593.3 $5^-$	614.7	615.6 $\langle 7 \rangle^-$	645.3 $1^-$	659.2 $5^-, 7^-$	660.2
659.26(5)	$3^-$		4(2)									
699.54(6)	$5^-$		26(15)									
723.54(5)	$3^-$		3.9(20)									
746.30 <sup>j</sup>	$\langle 7,9 \rangle^-$					18.0(98)			34.4(164)			
752.9(3) <sup>b</sup>	$\langle 19 \rangle^+$			29.5(8)								
778.51(5)	$\langle 7 \rangle^-$		6(3)		4(2)	2(1)						
785.41(5)	$5^-$		13(7)								2(1)	
816.09(5)	$\langle 5 \rangle^-$						8(4)		6(3)		3(1)	
874.38(9)	$\langle 7,9,11 \rangle^-$					40(20)						
897.55(6)	$\langle 5^-, 7, 9^- \rangle$					14(7)	36(18)					
914.22(7)	$5^-$										7(3)	
915.60(5)	$\langle 7 \rangle^-$						25(12)					
938.5(4) <sup>a</sup>	$\langle 21 \rangle^+$			86.7(20)								
958.95(6)	$3^-$						17(9)			28(14)	10(5)	
961.51(6)	$\langle 5 \rangle^+$							14(7)				
968.78(7)	$\langle 5-9 \rangle^-$					8(4)						
1032.05(6)	$7^-$					3(2)	5(2)			12(6)		
1058.52(6)	$3^-$	x				9(5)				19(9)	19(9)	
1065.32(9)	$7^-$					x			81(41)			

(continued)

 **$^{185}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E^*_f$ : $2J^\pi_f$ :	521.2 $3^-$	530.6 $\langle 17^+ \rangle$	575.9 $\langle 9^- \rangle$	590.7 $7^-$	593.3 $5^-$	614.7	615.6 $\langle 7^- \rangle$	645.3 $1^-$	659.2 $5^-, 7^-$	660.2
1083.39(7)	$\langle 3, 5 \rangle^-$		x									
1123.79(8)	$\langle 3, 5 \rangle^-$		38(20)									
1179.55(9)	$1^- - 5^-$										42(21)	
1187.41(7)	$\langle 3 - 7 \rangle^-$											x
1198.49(7)	$1^- - 5^-$		50(25)									
1209.91(11)	$\langle 1 - 5 \rangle^-$				43(21)							
1335.78(7)	$\langle 1^- - 5^- \rangle$						42(21)					
1384.48(12)	$\langle 1 - 5 \rangle^-$									50(25)		
1412.11(8)	$7^-, 9^-$					100						

Energy levels and branching ratios [95Br04, 05Wu07]. Part 4

 **$^{185}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E^*_f$ : $2J^\pi_f$ :	682.4 $\langle 11 \rangle^-$	693.0 $\langle 5 \rangle^+$	706.6 $\langle 7 \rangle^+$	723.4 $3^-$	728.1 $\langle 5 \rangle^-$	752.9 $\langle 19^+ \rangle$	767.7	778.5 $5^-$	794.3	817.1 $\langle 13^- \rangle$
879.3(4) <sup>c</sup>	$\langle 13 \rangle^-$		26(4)									
938.5(4) <sup>a</sup>	$\langle 21 \rangle^+$							13.3(8)				
954.56(7)	$\langle 1 \rangle^-$					60(32)						
955.49(6)	$\langle 9, 11 \rangle^+$				8.4(42)							
961.51(6)	$\langle 5 \rangle^+$			8(4)	42(8)							
996.83(6)	$\langle 5 \rangle^-$						x					
1032.05(6)	$7^-$					x	x					
1060.36(6)	$\langle 7 \rangle^+$			9(5)	6(3)				19(3)			
1090.5(4) <sup>d</sup>	$\langle 15 \rangle^-$	x										
1097.47(9)	$X^-$									36(18)		
1125.98(8)	$\langle 1, 3 \rangle^+$			100								
1161.95(11)	$X^+$			100								
1194.09(11)				30(15)	70(36)							
1214.9(4) <sup>b</sup>	$\langle 23^+ \rangle$							81(3)				
1216.8(4)	$\langle 3 - 7 \rangle^+$			100								
1223.75(7)	$\langle 5, 7 \rangle^-$						x					
1226.61(6)	$\langle 3 \rangle^-$						x					
1249.60(7)	$\langle 5 - 9 \rangle^+$			19(10)	36(17)						46(24)	
1273.4(6) <sup>e</sup>	$\langle 17 \rangle^-$											100
1322.69(7)	$\langle 5, 7 \rangle^+$			17(8)	83(42)							
1335.78(7)	$\langle 1^- - 5^- \rangle$					14(7)						
1370.35(11)	$\langle 3 - 7 \rangle^+$			100								
1505.69(7)						6(3)						
1518.67(9)	$\langle 3 - 7 \rangle^+$			59(29)							41(24)	
1564.60(12)	$X^+$										100	

Energy levels and branching ratios [95Br04, 05Wu07]. Part 5

 **$^{185}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	879.3 $\langle 13^- \rangle$	938.5 $\langle 21^+ \rangle$	1090.5 $\langle 15^- \rangle$	1214.9 $\langle 23^+ \rangle$	1273.4 $\langle 17^- \rangle$	1313.9	1417.4 $\langle 25^+ \rangle$	1552.0 $\langle 19^- \rangle$	1733.0 $\langle 27^+ \rangle$	1786.4 $\langle 21^- \rangle$
1090.5(4) <sup>d</sup>	$\langle 15 \rangle^-$		x									
1214.9(4) <sup>b</sup>	$\langle 23^+ \rangle$			19.4(7)								
1314.0(5) <sup>c</sup>	$\langle 17 \rangle^-$		100		x							
1417.4(4) <sup>a</sup>	$\langle 25 \rangle^+$			91(3)		9.1(4)						
1552.0(5) <sup>d</sup>	$\langle 19 \rangle^-$				x			x				
1733.0(4) <sup>b</sup>	$\langle 27 \rangle^+$					74(2)			26(3)			
1786.4(7) <sup>e</sup>	$\langle 21 \rangle^-$						100					
1805.4(5) <sup>c</sup>	$\langle 21 \rangle^-$							x		x		
1940.4(5) <sup>a</sup>	$\langle 29 \rangle^+$								92(3)		7.6(9)	
2048.8(5) <sup>d</sup>	$\langle 23 \rangle^-$									x		
2256.3(8) <sup>e</sup>	$\langle 25 \rangle^-$											100
2270.9(5) <sup>b</sup>	$\langle 31 \rangle^+$										76(2)	

Energy levels and branching ratios [95Br04, 05Wu07]. Part 6

 **$^{185}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	1805.4 $\langle 21^- \rangle$	1940.4 $\langle 29^+ \rangle$	2048.8 $\langle 23^- \rangle$	2256.3 $\langle 25^- \rangle$	2270.9 $\langle 31^+ \rangle$	2314.4 $\langle 25^- \rangle$	2489.9 $\langle 33^+ \rangle$	2726.2 $\langle 29^- \rangle$	2833.1 $\langle 35^+ \rangle$	3086.8 $\langle 37^+ \rangle$
2048.8(5) <sup>d</sup>	$\langle 23 \rangle^-$		x									
2270.9(5) <sup>b</sup>	$\langle 31 \rangle^+$			23.7(16)								
2314.4(5) <sup>c</sup>	$\langle 25 \rangle^-$		x		x							
2489.9(5) <sup>a</sup>	$\langle 33 \rangle^+$			89(2)			11.2(7)					
2548.3(6) <sup>d</sup>	$\langle 27 \rangle^-$				x			x				
2726.2(8) <sup>e</sup>	$\langle 29 \rangle^-$					100						
2805.9(6) <sup>c</sup>	$\langle 29 \rangle^-$							100				
2833.1(5) <sup>b</sup>	$\langle 35 \rangle^+$						65(2)		35.4(14)			
3086.8(5) <sup>a</sup>	$\langle 37 \rangle^+$								88(3)		12.4(6)	
3131.4 <sup>k</sup>	$\langle 33 \rangle^-$						100					
3287.2(9) <sup>e</sup>	$\langle 33 \rangle^-$									100		
3294.3 <sup>l</sup>	$\langle 35 \rangle^-$								100			
3453.5(5) <sup>b</sup>	$\langle 39 \rangle^+$										63(3)	37(2)
3511.4 <sup>k</sup>	$\langle 37 \rangle^-$										59(2)	
3725.0 <sup>l</sup>	$\langle 39 \rangle^-$											x
3755.5(6) <sup>a</sup>	$\langle 41 \rangle^+$											75(2)



Energy levels and branching ratios [95Br04, 05Wu07]. Part 7

**<sup>185</sup>Pt**  
**78**

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage											
		$E_f^*$ : $2J_f^\pi$ :	3131.4 ⟨33 <sup>-</sup> ⟩	3287.2 ⟨33 <sup>-</sup> ⟩	3294.3 ⟨35 <sup>-</sup> ⟩	3453.5 ⟨39 <sup>+</sup> ⟩	3511.4 ⟨37 <sup>-</sup> ⟩	3725.0 ⟨39 <sup>-</sup> ⟩	3755.5 ⟨41 <sup>+</sup> ⟩	3990.7 ⟨41 <sup>-</sup> ⟩	4146.7 ⟨43 <sup>+</sup> ⟩	4263.2 ⟨43 <sup>-</sup> ⟩	4501.1 ⟨45 <sup>+</sup> ⟩
3294.3 <sup>l</sup>	⟨35 <sup>-</sup> ⟩	x											
3511.4 <sup>k</sup>	⟨37 <sup>-</sup> ⟩	x			41(2)								
3725.0 <sup>l</sup>	⟨39 <sup>-</sup> ⟩				48(2)		52(2)						
3755.5(6) <sup>a</sup>	⟨41 <sup>+</sup> ⟩					25.3(13)							
3872.2(9) <sup>c</sup>	⟨37 <sup>-</sup> ⟩			100									
3990.7 <sup>k</sup>	⟨41 <sup>-</sup> ⟩						x	100					
4146.7(6) <sup>b</sup>	⟨43 <sup>+</sup> ⟩					54(6)			46(5)				
4263.2 <sup>l</sup>	⟨43 <sup>-</sup> ⟩							x		x			
4501.1(6) <sup>a</sup>	⟨45 <sup>+</sup> ⟩								59(6)		41(6)		
4564.6 <sup>k</sup>	⟨45 <sup>-</sup> ⟩									100		x	
4902.2 <sup>l</sup>	⟨47 <sup>-</sup> ⟩											100	
4913.6(6) <sup>b</sup>	⟨47 <sup>+</sup> ⟩										43(8)		57(18)

Energy levels and branching ratios [03Ba44].

**<sup>186</sup>Pt**  
**78**

$E^*$ [keV]	$J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Branching ratios in percentage							
			$E_f^*$ : $J_f^\pi$ :	0.0 0 <sup>+</sup>	191.53 2 <sup>+</sup>	471.51 0 <sup>+</sup>	490.33 4 <sup>+</sup>	607.16 2 <sup>+</sup>	798.48 2 <sup>+</sup>	877.50 6 <sup>+</sup>
0.0	0 <sup>+</sup>	2.08(5) h								
191.53(4)	2 <sup>+</sup>	260(12) ps		100						
471.51(18)	0 <sup>+</sup>		x		100					
490.33(9)	4 <sup>+</sup>				100					
607.16(12)	2 <sup>+</sup>			38(9)	62(2)					
798.48(12)	2 <sup>+</sup>			81(10)	x	12.3(10)	6.3(5)			
877.50(18)	6 <sup>+</sup>						100			
956.51(14)	3 <sup>+</sup>				80(4)		9.9(5)	9.9(6)		
991.50(16)	4 <sup>+</sup>				33(7)		41(7)	26(2)		
1175.99(20)	2 <sup>+</sup>			25(3)	52(5)	23(3)				
1222.54(16)	4 <sup>+</sup>				41(2)		33(2)		18(2)	
1342.88(25)	8 <sup>+</sup>									100
1362.88(22)	⟨5 <sup>+</sup> ⟩						82(6)			
1407.71(14)	3 <sup>-</sup>				60(3)		7.0(10)	<21	24(6)	
1417.89(18)	⟨3 <sup>+</sup> ⟩				61(4)		15(4)	23(2)		
1470.22(19)	⟨6 <sup>+</sup> ⟩						[47(11)]			[53(18)]
1600.26(22)	⟨6 <sup>+</sup> ⟩						≈25			75(8)
1612.2(4)							100			
1632.92(16)	4 <sup>-</sup>				10.2(9)		9.0(9)			
1671.8(5)	3 <sup>+</sup> ,4						100			
1692.73(16)	⟨5 <sup>-</sup> ⟩						65(3)			
1801.4(3)	⟨7 <sup>+</sup> ⟩									47(4)
1814.0(4)							100			
1838.05(18)	⟨4 <sup>-</sup> ⟩									

(continued)

 **$^{186}\text{Pt}$**   
**78**

$E^*$ [keV]	$J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Branching ratios in percentage							
			$E_f^*:$ $J_f^\pi:$	0.0 0 <sup>+</sup>	191.53 2 <sup>+</sup>	471.51 0 <sup>+</sup>	490.33 4 <sup>+</sup>	607.16 2 <sup>+</sup>	798.48 2 <sup>+</sup>	877.50 6 <sup>+</sup>
1858.0(4)	10 <sup>+</sup>									
1896.5(3)	2 <sup>+</sup> , 3 <sup>+</sup>							72(4)	14.9(15)	
1952.33(19)	⟨7 <sup>-</sup> ⟩	85(10) ps								46(2)
1969.62(18)	⟨6 <sup>-</sup> ⟩									8(3)
2004.35(24)	⟨8 <sup>+</sup> ⟩									26(4)
2051.4(3)	⟨7 <sup>-</sup> ⟩									100
2108.5(4)	⟨10 <sup>+</sup> ⟩									
2123.06(25)	⟨7 <sup>-</sup> , 8 <sup>+</sup> ⟩									52(7)
2159.4(3)	4 <sup>+</sup>									
2195.0(3)	⟨8 <sup>-</sup> ⟩	8.0(13) ns								
2216.2(4)	3 <sup>+</sup> , 4 <sup>+</sup>				61(6)		39(4)			
2227.6(3)	3 <sup>+</sup> , 4 <sup>+</sup>				55(4)		36(4)			
2253.95(24)	⟨8 <sup>-</sup> ⟩									
2280.1(4)	⟨9 <sup>+</sup> ⟩									
2317.0(3)	⟨8 <sup>-</sup> ⟩									
2336.2(4)	12 <sup>+</sup>	<50 ps								
2356.1(4)	⟨9 <sup>-</sup> ⟩									
2374.92(23)	⟨9 <sup>-</sup> ⟩									
2430.5(3)	⟨9 <sup>-</sup> ⟩									
2544.6(4)	⟨10 <sup>+</sup> ⟩									
2559.4(3)	⟨10 <sup>-</sup> ⟩									
2611.7(4)	⟨12 <sup>+</sup> ⟩	≤0.5 ns								
2632.91(25)	⟨10 <sup>-</sup> ⟩									
2696.4(4)	⟨10 <sup>-</sup> ⟩									
2788.0(3)	⟨11 <sup>-</sup> ⟩									
2792.1(3)	⟨11 <sup>-</sup> ⟩									
2825.1(4)	⟨14 <sup>+</sup> ⟩									
2864.4(4)	⟨12 <sup>+</sup> ⟩	≤0.5 ns								
2887.2(4)	⟨11 <sup>-</sup> ⟩									
3043.0(4)	⟨12 <sup>-</sup> ⟩									
3073.4(4)	⟨12 <sup>-</sup> ⟩									
3171.7(5)	⟨12 <sup>-</sup> ⟩									
3192.1(4)	⟨13 <sup>-</sup> ⟩									
3192.4(4)	⟨14 <sup>+</sup> ⟩	≤0.5 ns								
3269.6(4)	⟨14 <sup>+</sup> ⟩									
3299.8(4)	⟨13 <sup>-</sup> ⟩									
3310.7(4)	⟨13 <sup>-</sup> ⟩									
3394.8(5)	⟨16 <sup>+</sup> ⟩									
3421.4(5)	⟨13 <sup>-</sup> ⟩									
3530.8(5)	⟨15 <sup>-</sup> ⟩									
3566.9(5)	⟨14 <sup>-</sup> ⟩									
3599.8(4)	⟨14 <sup>-</sup> ⟩									
3664.6(5)	⟨16 <sup>+</sup> ⟩									
3701.0(6)	⟨14 <sup>-</sup> ⟩									
3873.8(5)	⟨15 <sup>-</sup> ⟩									

(continued)

 **$^{186}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Branching ratios in percentage							
			$E^*_f$ : $J^\pi_f$ :	0.0 $0^+$	191.53 $2^+$	471.51 $0^+$	490.33 $4^+$	607.16 $2^+$	798.48 $2^+$	877.50 $6^+$
3893.0(4)	$\langle 15^- \rangle$									
3963.3(5)	$\langle 16^+ \rangle$									
3983.9(5)	$\langle 17^- \rangle$									
4051.3(6)	$\langle 18^+ \rangle$									
4110.6(6)	$\langle 16^- \rangle$									
4172.6(7)	$\langle 16^- \rangle$									
4208.5(5)	$\langle 16^- \rangle$									
4258.5(6)	$\langle 18^+ \rangle$									
4393.2(6)										
4483.0(6)	$\langle 17^- \rangle$									
4518.0(5)	$\langle 17^- \rangle$									
4539.9(6)	$\langle 19^- \rangle$									
4661.1(6)	$\langle 18^+ \rangle$									
4699.0(7)	$\langle 18^- \rangle$									
4788.3(7)	$\langle 20^+ \rangle$									
4836.0(6)	$\langle 18^- \rangle$									
4938.4(7)										
4956.2(7)	$\langle 20^+ \rangle$									
5188.6(7)	$\langle 21^- \rangle$									
5321.2(8)	$\langle 20^- \rangle$									
5597.1(7)	$\langle 22^+ \rangle$									
5738.1(7)	$\langle 22^+ \rangle$									
5921.8(7)	$\langle 23^- \rangle$									
6463.8(8)	$\langle 24^+ \rangle$									
6582.5(8)	$\langle 24^+ \rangle$									
6729.8(13)	$\langle 25^- \rangle$									
7407.8(13)	$\langle 26^+ \rangle$									

Additional data on this isotope can be found in [05Mc09, 90He19].

12 bands are assigned to the excited states of this nucleus in [03Ba44].

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

Energy levels and branching ratios [03Ba44]. Part 2

 **$^{186}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E^*_f$ : $J^\pi_f$ :	956.51 $3^+$	991.50 $4^+$	1175.99 $2^+$	1222.54 $4^+$	1342.88 $8^+$	1362.88 $\langle 5^+ \rangle$	1407.71 $3^-$	1470.22 $\langle 6^+ \rangle$	1600.26 $\langle 6^+ \rangle$	1632.92 $4^-$
1222.54(16)	$4^+$	7.8(7)										
1362.88(22)	$\langle 5^+ \rangle$	18(6)										
1407.71(14)	$3^-$				9.3(7)							
1417.89(18)	$\langle 3 \rangle^+$	$\leq 6$										
1632.92(16)	$4^-$	71(3)							9.4(6)			
1692.73(16)	$\langle 5^- \rangle$			10.7(12)		17.7(11)			6.0(16)			

(continued)

 **$^{186}\text{Pt}$**   
**78**

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	956.51 3 <sup>+</sup>	991.50 4 <sup>+</sup>	1175.99 2 <sup>+</sup>	1222.54 4 <sup>+</sup>	1342.88 8 <sup>+</sup>	1362.88 ⟨5 <sup>+</sup> ⟩	1407.71 3 <sup>-</sup>	1470.22 ⟨6 <sup>+</sup> ⟩	1600.26 ⟨6 <sup>+</sup> ⟩	1632.92 4 <sup>-</sup>
<hr/>												
1801.4(3)	⟨7 <sup>+</sup> ⟩							53(3)				
1838.05(18)	⟨4 <sup>-</sup> ⟩	34(2)			5.0(5)				29(2)			33(2)
1858.0(4)	10 <sup>+</sup>					100						
1896.5(3)	2 <sup>+</sup> ,3 <sup>+</sup>		13(2)									
1952.33(19)	⟨7 <sup>-</sup> ⟩									12.4(11)	7.9(5)	
1969.62(18)	⟨6 <sup>-</sup> ⟩							55(5)				21(3)
2004.35(24)	⟨8 <sup>+</sup> ⟩						23(5)			51(5)		
2108.5(4)	⟨10 <sup>+</sup> ⟩						70(3)					
2159.4(3)	4 <sup>+</sup>	74(5)						26(5)				
2227.6(3)	3 <sup>+</sup> ,4 <sup>+</sup>	9.5(12)										
2280.1(4)	⟨9 <sup>+</sup> ⟩						[100]					
2430.5(3)	⟨9 <sup>-</sup> ⟩						x					

Energy levels and branching ratios [03Ba44]. Part 3

 **$^{186}\text{Pt}$**   
**78**

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	1692.73 ⟨5 <sup>-</sup> ⟩	1801.4 ⟨7 <sup>+</sup> ⟩	1858.0 10 <sup>+</sup>	1952.33 ⟨7 <sup>-</sup> ⟩	1969.62 ⟨6 <sup>-</sup> ⟩	2004.35 ⟨8 <sup>+</sup> ⟩	2051.4 ⟨7 <sup>-</sup> ⟩	2108.5 ⟨10 <sup>+</sup> ⟩	2123.06 ⟨7 <sup>-</sup> ,8 <sup>+</sup> ⟩	2195.0 ⟨8 <sup>-</sup> ⟩
1952.33(19)	⟨7 <sup>-</sup> ⟩	34(2)										
1969.62(18)	⟨6 <sup>-</sup> ⟩	16(2)										
2108.5(4)	⟨10 <sup>+</sup> ⟩				30(3)							
2123.06(25)	⟨7 <sup>-</sup> ,8 <sup>+</sup> ⟩					48(4)						
2195.0(3)	⟨8 <sup>-</sup> ⟩					100						
2253.95(24)	⟨8 <sup>-</sup> ⟩					83(9)	17.1(15)					
2317.0(3)	⟨8 <sup>-</sup> ⟩			<50			100					
2336.2(4)	12 <sup>+</sup>				100							
2356.1(4)	⟨9 <sup>-</sup> ⟩											100
2374.92(23)	⟨9 <sup>-</sup> ⟩					72(4)			14.9(16)		13(2)	
2430.5(3)	⟨9 <sup>-</sup> ⟩								x			
2544.6(4)	⟨10 <sup>+</sup> ⟩							100				
2559.4(3)	⟨10 <sup>-</sup> ⟩											19(7)
2611.7(4)	⟨12 <sup>+</sup> ⟩				70(4)					19(2)		
2864.4(4)	⟨12 <sup>+</sup> ⟩				48(4)							

## Energy levels and branching ratios [03Ba44]. Part 4

**<sup>186</sup>Pt**  
**78**

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $J_f^\pi$ :	2253.95 $\langle 8^- \rangle$	2317.0 $\langle 8^- \rangle$	2336.2 $12^+$	2356.1 $\langle 9^- \rangle$	2374.92 $\langle 9^- \rangle$	2430.5 $\langle 9^- \rangle$	2544.6 $\langle 10^+ \rangle$	2559.4 $\langle 10^- \rangle$	2611.7 $\langle 12^+ \rangle$	2632.91 $\langle 10^- \rangle$
2559.4(3)	$\langle 10^- \rangle$					81(7)						
2611.7(4)	$\langle 12^+ \rangle$				10.9(11)							
2632.91(25)	$\langle 10^- \rangle$			[22(4)]			[56(9)]	[22(7)]				
2696.4(4)	$\langle 10^- \rangle$			100								
2788.0(3)	$\langle 11^- \rangle$					22(2)	48(4)			30(4)		
2792.1(3)	$\langle 11^- \rangle$						76(5)			24(2)		
2825.1(4)	$\langle 14^+ \rangle$				100							
2864.4(4)	$\langle 12^+ \rangle$				12(4)				17(3)		23(4)	
2887.2(4)	$\langle 11^- \rangle$							100				
3043.0(4)	$\langle 12^- \rangle$									61(6)		
3073.4(4)	$\langle 12^- \rangle$											87(4)
3192.1(4)	$\langle 13^- \rangle$				83(12)							
3192.4(4)	$\langle 14^+ \rangle$				19(2)						51(5)	
3269.6(4)	$\langle 14^+ \rangle$				28(3)						51(5)	

## Energy levels and branching ratios [03Ba44]. Part 5

**<sup>186</sup>Pt**  
**78**

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $J_f^\pi$ :	2696.4 $\langle 10^- \rangle$	2788.0 $\langle 11^- \rangle$	2792.1 $\langle 11^- \rangle$	2825.1 $\langle 14^+ \rangle$	2864.4 $\langle 12^+ \rangle$	2887.2 $\langle 11^- \rangle$	3043.0 $\langle 12^- \rangle$	3073.4 $\langle 12^- \rangle$	3171.7 $\langle 12^- \rangle$	3192.1 $\langle 13^- \rangle$
3043.0(4)	$\langle 12^- \rangle$			24(2)	15(4)							
3073.4(4)	$\langle 12^- \rangle$		13.3(23)									
3171.7(5)	$\langle 12^- \rangle$		100									
3192.1(4)	$\langle 13^- \rangle$					17(6)						
3192.4(4)	$\langle 14^+ \rangle$					4(2)	26(3)					
3269.6(4)	$\langle 14^+ \rangle$					21(3)						
3299.8(4)	$\langle 13^- \rangle$			79(16)	21(3)							
3310.7(4)	$\langle 13^- \rangle$				70(15)				30(5)			
3394.8(5)	$\langle 16^+ \rangle$					100						
3421.4(5)	$\langle 13^- \rangle$							100				
3530.8(5)	$\langle 15^- \rangle$					72(4)						28(4)
3566.9(5)	$\langle 14^- \rangle$									100		
3599.8(4)	$\langle 14^- \rangle$								69(8)			
3701.0(6)	$\langle 14^- \rangle$										100	
3963.3(5)	$\langle 16^+ \rangle$					20(14)						

Energy levels and branching ratios [03Ba44]. Part 6

 **$^{186}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	3192.4 $\langle 14^+ \rangle$	3269.6 $\langle 14^+ \rangle$	3299.8 $\langle 13^- \rangle$	3310.7 $\langle 13^- \rangle$	3394.8 $\langle 16^+ \rangle$	3530.8 $\langle 15^- \rangle$	3566.9 $\langle 14^- \rangle$	3599.8 $\langle 14^- \rangle$	3664.6 $\langle 16^+ \rangle$	3701.0 $\langle 14^- \rangle$
3599.8(4)	$\langle 14^- \rangle$					31(5)						
3664.6(5)	$\langle 16^+ \rangle$	100										
3873.8(5)	$\langle 15^- \rangle$				100							
3893.0(4)	$\langle 15^- \rangle$					70(16)				30(8)		
3963.3(5)	$\langle 16^+ \rangle$			80(6)			x					
3983.9(5)	$\langle 17^- \rangle$						38(5)	62(5)				
4051.3(6)	$\langle 18^+ \rangle$						100					
4110.6(6)	$\langle 16^- \rangle$								100			
4172.6(7)	$\langle 16^- \rangle$											100
4208.5(5)	$\langle 16^- \rangle$									80(20)		
4258.5(6)	$\langle 18^+ \rangle$										100	

Energy levels and branching ratios [03Ba44]. Part 7

 **$^{186}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E^*_f$ : $J^\pi_f$ :	3873.8 $\langle 15^- \rangle$	3893.0 $\langle 15^- \rangle$	3963.3 $\langle 16^+ \rangle$	3983.9 $\langle 17^- \rangle$	4051.3 $\langle 18^+ \rangle$	4110.6 $\langle 16^- \rangle$	4208.5 $\langle 16^- \rangle$	4258.5 $\langle 18^+ \rangle$	4393.2	4539.9 $\langle 19^- \rangle$
4208.5(5)	$\langle 16^- \rangle$			20(6)								
4393.2(6)			100									
4483.0(6)	$\langle 17^- \rangle$		100									
4518.0(5)	$\langle 17^- \rangle$			100								
4539.9(6)	$\langle 19^- \rangle$					100						
4661.1(6)	$\langle 18^+ \rangle$				100							
4699.0(7)	$\langle 18^- \rangle$							100				
4788.3(7)	$\langle 20^+ \rangle$						100					
4836.0(6)	$\langle 18^- \rangle$								100			
4938.4(7)											100	
4956.2(7)	$\langle 20^+ \rangle$									100		
5188.6(7)	$\langle 21^- \rangle$											100

Energy levels and branching ratios [03Ba44]. Part 8

 **$^{186}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage								
		$E_f^*$ : $J_f^\pi$ :	4699.0 $\langle 18^- \rangle$	4788.3 $\langle 20^+ \rangle$	4956.2 $\langle 20^+ \rangle$	5188.6 $\langle 21^- \rangle$	5597.1 $\langle 22^+ \rangle$	5738.1 $\langle 22^+ \rangle$	5921.8 $\langle 23^- \rangle$	6463.8 $\langle 24^+ \rangle$
5321.2(8)	$\langle 20^- \rangle$		100							
5597.1(7)	$\langle 22^+ \rangle$			100						
5738.1(7)	$\langle 22^+ \rangle$				100					
5921.8(7)	$\langle 23^- \rangle$					100				

(continued)

 **$^{186}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage								
[keV]		$E_f^*$ : $J_f^\pi$ :	4699.0 $\langle 18^- \rangle$	4788.3 $\langle 20^+ \rangle$	4956.2 $\langle 20^+ \rangle$	5188.6 $\langle 21^- \rangle$	5597.1 $\langle 22^+ \rangle$	5738.1 $\langle 22^+ \rangle$	5921.8 $\langle 23^- \rangle$	6463.8 $\langle 24^+ \rangle$
6463.8(8)	$\langle 24^+ \rangle$						100			
6582.5(8)	$\langle 24^+ \rangle$							100		
6729.8(13)	$\langle 25^- \rangle$								100	
7407.8(13)	$\langle 26^+ \rangle$									100

Energy levels and branching ratios [91Fi02].

 **$^{187}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Branching ratios in percentage							
			$E_f^*:$ $2J_f^\pi:$	0.0 $3^-$	9.27 $\langle 3 \rangle^-$	25.54 $\langle 5 \rangle^-$	51.25 $\langle 1 \rangle^-$	57.11 $\langle 7 \rangle^-$	74.57 $\langle 3,5 \rangle^-$	174.40 $\langle 11 \rangle^+$
0.0	$3^-$	2.35(3) h								
9.27(7)	$\langle 3 \rangle^-$	$\leq 1$ ns		100						
25.54(11)	$\langle 5 \rangle^-$	0.7(1) ns		100						
51.25(10)	$\langle 1 \rangle^-$	0.30(8) ns		100		$\approx 0.008$				
57.11(13)	$\langle 7 \rangle^-$	18(2) ns				100				
74.57(10)	$\langle 3,5 \rangle^-$	0.50(6) n		$\approx 21$	$\approx 57$	22(3)				
174.40(15)	$\langle 11 \rangle^+$	311(15) u						100		
190.43(11)	$\langle 3 \rangle^-$			41(2)	37(2)	8.7(9)		5(1)	8.1(5)	
203.4(3)	$\langle 13^+ \rangle$									100
225.7(4)	$\langle 9^- \rangle$							100		
242.40(19)	$\langle 9 \rangle^+$	$\leq 0.5$ n						89(8)		$\approx 11$
260.50(11)	$3^-$	163(6) p		10.7(8)	27(3)	2.9(4)	12.2(10)		48(3)	
288.33(12)	$\langle 5 \rangle^-$			6.9(7)	7.3(7)	9.1(7)	38(4)		34(2)	
426.34(11)	$\langle 3 \rangle^-$			35(2)	2.6(2)	13(1)	8(1)	13(1)	15.1(8)	
426.57(22)	$\langle 9 \rangle^+$									74(7)
431.1(4)	$\langle 11^- \rangle$							x		
465.5(6)	$\langle 15^+ \rangle$									x
474.42(16)	$\langle 3^-, 5^- \rangle$			20(3)	6(2)	26(2)	20(2)	29(3)		
480.65(15)	$\langle 1,3 \rangle^-$			4.6(8)	41(3)		38(3)		16(1)	
505.7(5)	$\langle 17^+ \rangle$									
507.92(12)	$\langle 3 \rangle^-$			5.2(9)	2.6(11)	10(2)	11(2)	2.9(9)	7.5(11)	
510.42(18)	$\langle 3,5 \rangle^-$					67(5)		21(2)	11(2)	
525.05(16)	$\langle 3 \rangle^-$				24(2)	16(2)	12(2)	19(2)	12(2)	
572.80(16)	$\langle 3,5 \rangle^-$				36(2)		20(2)		5(2)	
588.1(2)	$\langle 7 \rangle^+$									51(4)
599.11(14)	$\langle 5 \rangle^-$			13(1)			10(1)	40(3)	15(2)	
620.77(14)	$\langle 3 \rangle^-$			58(3)	4.5(7)	9.7(7)			23.6(13)	
632.90(16)	$\langle 5,7 \rangle^+$									
635.02(12)	$\langle 3 \rangle^-$			36(2)	3(1)	10(1)	3(1)	8(1)	20(2)	
652.0(5)	$\langle 13^- \rangle$									
688.68(18)	$\langle 3^- \rangle$			15(4)		26(4)			43(3)	
781.28(13)	$\langle 3 \rangle^-$			7(1)	6(1)		22(2)	3.7(5)	21(3)	

(continued)

 **$^{187}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Branching ratios in percentage							
			$E_f^*$ : $2J_f^\pi$ :	0.0 $3^-$	9.27 $\langle 3 \rangle^-$	25.54 $\langle 5 \rangle^-$	51.25 $\langle 1 \rangle^-$	57.11 $\langle 7 \rangle^-$	74.57 $\langle 3,5 \rangle^-$	174.40 $\langle 11 \rangle^+$
845.0(3)										
883.21(22)	$\langle 7 \rangle^+$									
895.2(6)	$\langle 15^- \rangle$									
903.6(6)	$\langle 19^+ \rangle$									
928.5(11)	$\langle 17^+ \rangle$									
944.0(5)	$\langle 21^+ \rangle$									
968.7(3)				38(4)	62(6)					
1101.66(25)										
1115.0(3)										
1153.0(11)	$\langle 17^- \rangle$									
1179.1(5)										
1212.7(11)	$\langle 19^+ \rangle$									
1304.10(25)	$\langle 1^-, 3, 5^- \rangle$						33(3)		18(3)	
1328.29(18)	$\langle 1, 3 \rangle^+$			4.6(15)	79(4)		8.3(9)			
1335.0(4)										
1341.08(11)	$\langle 3 \rangle^+$			0.7(1)	37(2)		0.7(1)		12.6(8)	
1364.90(22)	$\langle 1^-, 3 \rangle$			16(2)	39(6)		31(5)		14(3)	
1388.07(24)				21(4)	61(6)					
1398.8(4)	$\langle 1, 3, 5 \rangle^-$									
1400.5(15)										
1433.77(14)	$\langle 3 \rangle^+$			15.0(9)	3.8(4)	56(4)			13.1(8)	
1454.3(9)	$\langle 23^+ \rangle$									
1478.02(14)	$\langle 3 \rangle^+$			5.3(6)		39(2)	13(1)		4.3(8)	
1497.6(5)	$\langle 25^+ \rangle$									
1570.7(3)										
1598.0(3)				18(5)						
1658.8(9)	$\langle 21^- \rangle$									
1840.8(13)	$\langle 25^- \rangle$									
1886.0(3)	$\langle 1, 3 \rangle$				59(8)		41(8)			
1891.3(3)	$\langle 1, 3 \rangle$			64(6)	36(6)					
1970.4(3)	$\langle 1, 3 \rangle$			30(4)	70(7)					
2016.77(13)	$\langle 3 \rangle^+$			15(1)	11(1)	23(1)				
2027.98(15)	$\langle 1^-, 3 \rangle$			8(1)		9(1)				
2038.62(15)	$\langle 3 \rangle^+$			3.1(5)			33(2)		29(2)	
2082.07(16)	$\langle 3 \rangle^+$			3.9(8)	3.4(5)	36(2)	37(2)			
2093.3(13)	$\langle 27^+ \rangle$									
2094.66(15)	$\langle 3 \rangle^+$				30(2)	11(1)			8(1)	
2144.6(11)	$\langle 29^+ \rangle$									
2158.0(4)	$\langle 1, 3, 5^- \rangle$						100			
2170.46(22)	$\langle 1, 3 \rangle$				10(3)				22(3)	
2175.8(16)	$\langle 27^- \rangle$									
2570.9(3)	$\langle 1, 3 \rangle$			58(9)	16(5)		26(5)			

3 bands are assigned to the excited states of this nucleus in [91Fi02].



Energy levels and branching ratios [91Fi02]. Part 2

 **$^{187}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	190.43 $\langle 3 \rangle^-$	203.4 $\langle 13^+ \rangle$	225.7 $\langle 9^- \rangle$	242.40 $\langle 9 \rangle^+$	260.50 $3^-$	288.33 $\langle 5 \rangle^-$	426.34 $\langle 3 \rangle^-$	426.57 $\langle 9 \rangle^+$	431.1 $\langle 11^- \rangle$	465.5 $\langle 15^+ \rangle$
242.40(19)	$\langle 9 \rangle^+$			$\approx 0.14$								
288.33(12)	$\langle 5 \rangle^-$		5(1)									
426.34(11)	$\langle 3 \rangle^-$		8.9(8)				1.3(4)	3.3(8)				
426.57(22)	$\langle 9 \rangle^+$			12.0(11)		14(4)						
431.1(4)	$\langle 11^- \rangle$				x							
465.5(6)	$\langle 15^+ \rangle$			x								
505.7(5)	$\langle 17^+ \rangle$			x								x
507.92(12)	$\langle 3 \rangle^-$		8.4(9)				52(4)					
525.05(16)	$\langle 3 \rangle^-$							16(2)				
572.80(16)	$\langle 3,5 \rangle^-$		5(1)				22(2)	12(1)				
588.1(2)	$\langle 7 \rangle^+$					34(3)				15.6(8)		
599.11(14)	$\langle 5 \rangle^-$		12(1)						10.2(6)			
620.77(14)	$\langle 3 \rangle^-$								2.2(5)			
632.90(16)	$\langle 5,7 \rangle^+$					92(6)				8.0(8)		
635.02(12)	$\langle 3 \rangle^-$		2.1(5)				13(1)		4.0(5)			
652.0(5)	$\langle 13^- \rangle$				x						x	
688.68(18)	$\langle 3^- \rangle$		16(3)									
781.28(13)	$\langle 3^- \rangle$		19(1)					6(1)	11(1)			
845.0(3)						100						
883.21(22)	$\langle 7 \rangle^+$									36(4)		
895.2(6)	$\langle 15^- \rangle$										x	
903.6(6)	$\langle 19^+ \rangle$											x
928.5(11)	$\langle 17^+ \rangle$											100
1328.29(18)	$\langle 1,3 \rangle^+$						4.9(6)		3.7(9)			
1335.0(4)									100			
1341.08(11)	$\langle 3 \rangle^+$		0.4(1)				1.6(1)		15.8(6)			
1433.77(14)	$\langle 3 \rangle^+$								2.5(3)			
1478.02(14)	$\langle 3 \rangle^+$							25(1)				
1598.0(3)									82(5)			
2016.77(13)	$\langle 3 \rangle^+$		4.0(4)				14(1)	4.9(5)				
2027.98(15)	$\langle 1^-, 3 \rangle$		10(2)				22(2)		10(1)			
2038.62(15)	$\langle 3 \rangle^+$		8(1)				14(1)	4.7(5)	5.4(7)			
2082.07(16)	$\langle 3 \rangle^+$						6.5(8)					
2094.66(15)	$\langle 3 \rangle^+$		9(1)					17(1)				
2170.46(22)	$\langle 1,3 \rangle$						68(5)					

Energy levels and branching ratios [91Fi02]. Part 3

 **$^{187}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $2J_f^\pi$ :	474.42 $\langle 3^-, 5^- \rangle$	480.65 $\langle 1, 3 \rangle^-$	505.7 $\langle 17^+ \rangle$	507.92 $\langle 3 \rangle^-$	510.42 $\langle 3, 5 \rangle^-$	525.05 $\langle 3 \rangle^-$	572.80 $\langle 3, 5 \rangle^-$	588.1 $\langle 7 \rangle^+$	599.11 $\langle 5 \rangle^-$	620.77 $\langle 3 \rangle^-$
620.77(14)	$\langle 3 \rangle^-$			2.5(5)								
781.28(13)	$\langle 3 \rangle^-$		2.4(5)				2.4(5)					
883.21(22)	$\langle 7 \rangle^+$									50(4)		
903.6(6)	$\langle 19^+ \rangle$				x							
944.0(5)	$\langle 21^+ \rangle$				100							
1115.0(3)										27(5)		
1212.7(11)	$\langle 19^+ \rangle$				100							
1304.10(25)	$\langle 1^-, 3, 5^- \rangle$											49(5)
1341.08(11)	$\langle 3 \rangle^+$					7.3(4)	0.4(1)		0.8(1)			6.6(5)
1388.07(24)			18(4)									
1398.8(4)	$\langle 1, 3, 5 \rangle^-$		100									
1433.77(14)	$\langle 3 \rangle^+$		1.9(4)						2.5(5)			
1478.02(14)	$\langle 3 \rangle^+$			1.9(6)						1.9(4)		
2016.77(13)	$\langle 3 \rangle^+$			2.3(3)		2.5(4)		7(1)			8(1)	
2027.98(15)	$\langle 1^-, 3 \rangle$			5(1)		8(1)		13(1)				
2038.62(15)	$\langle 3 \rangle^+$										2.9(5)	
2082.07(16)	$\langle 3 \rangle^+$					4.7(8)					3.9(8)	
2094.66(15)	$\langle 3 \rangle^+$					4(1)	6(1)					

Energy levels and branching ratios [91Fi02]. Part 4

 **$^{187}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $2J_f^\pi$ :	632.90 $\langle 5, 7 \rangle^+$	635.02 $\langle 3 \rangle^-$	652.0 $\langle 13^- \rangle$	688.68 $\langle 3^- \rangle$	781.28 $\langle 3 \rangle^-$	845.0	883.21 $\langle 7 \rangle^+$	895.2 $\langle 15^- \rangle$	903.6 $\langle 19^+ \rangle$	928.5 $\langle 17^+ \rangle$
883.21(22)	$\langle 7 \rangle^+$		14(4)									
895.2(6)	$\langle 15^- \rangle$				x							
1101.66(25)			82(9)					18(7)				
1115.0(3)			49(10)						24(2)			
1153.0(11)	$\langle 17^- \rangle$									100		
1179.1(5)								100				
1341.08(11)	$\langle 3 \rangle^+$		0.7(1)	8.1(5)			7.7(8)					
1400.5(15)												100
1433.77(14)	$\langle 3 \rangle^+$		1.3(4)	3.2(4)								
1454.3(9)	$\langle 23^+ \rangle$										x	
1478.02(14)	$\langle 3 \rangle^+$		2.3(6)	3.9(6)			3.8(8)					
1570.7(3)			100									
1658.8(9)	$\langle 21^- \rangle$										x	
2016.77(13)	$\langle 3 \rangle^+$		6.4(5)			2(1)						
2027.98(15)	$\langle 1^-, 3 \rangle$					8(1)						
2082.07(16)	$\langle 3 \rangle^+$		3.9(8)									
2094.66(15)	$\langle 3 \rangle^+$		5(1)						4.0(5)			

Energy levels and branching ratios [91Fi02]. Part 5

 **$^{187}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage						
		$E_f^*:$ $2J_f^\pi:$	944.0 $\langle 21^+ \rangle$	1101.66	1454.3 $\langle 23^+ \rangle$	1497.6 $\langle 25^+ \rangle$	1658.8 $\langle 21^- \rangle$	1840.8 $\langle 25^- \rangle$
1454.3(9)	$\langle 23^+ \rangle$		x					
1497.6(5)	$\langle 25^+ \rangle$		100					
1658.8(9)	$\langle 21^- \rangle$		x					
1840.8(13)	$\langle 25^- \rangle$						100	
2027.98(15)	$\langle 1^-, 3 \rangle$			6(1)				
2093.3(13)	$\langle 27^+ \rangle$				100			
2094.66(15)	$\langle 3 \rangle^+$			5(1)		x		
2144.6(11)	$\langle 29^+ \rangle$					100		
2175.8(16)	$\langle 27^- \rangle$							100

Energy levels and branching ratios [02Si10].

 **$^{188}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	$L$ (p,t)	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage						
					$E_f^*:$ $J_f^\pi:$	0.0 0 <sup>+</sup>	266 2 <sup>+</sup>	606 2 <sup>+</sup>	671 4 <sup>+</sup>	799 0 <sup>+</sup>	936 $\langle 3 \rangle^+$
0.0	0 <sup>+</sup>	0	10.2(3) d	78Ve10							
265.63(5)	2 <sup>+</sup>		72(13) ps			100					
605.69(6)	2 <sup>+</sup>					40(2)	60(2)				
671.01(6)	4 <sup>+</sup>						100				
798.76(8)	0 <sup>+</sup>	0		78Ve10	x		97(4)	2.8(7)			
936.42(6)	$\langle 3 \rangle^+$						61(2)	39(2)			
1085.18(9)	4 <sup>+</sup>						13(1)	60(4)	27(2)		
1115.24(5)	2 <sup>+</sup>					65(3)	9(3)		14(1)	12(1)	
1184.58(15)	6 $\langle + \rangle$								100		
1214.71(9)	X <sup>+</sup>					17(2)	83(6)				
1312.67(6)	2 <sup>+</sup>					41(3)	27(3)	13(2)	9(2)		7(1)
1350.03(6)	3 <sup>-</sup>						71(3)		21(1)		5.4(4)
1443.7(3)											100
1528.05(13)	2 <sup>+</sup>					23(5)	40(6)	28(4)	4(1)		5(1)
1566.00(13)	5 $\langle - \rangle$								65(3)		
1625.73(8)	1 <sup>+</sup>					14(8)	65(3)	12(4)			6(2)
1636.26(17)	6 $\langle + \rangle$								4(1)		
1674.55(22)							100				
1685.6(4)								62(26)			
1768.53(17)	7 $\langle - \rangle$		0.20(2) n								
1776.09(7)	$\langle 1^- \rangle$						35(2)	34(2)		27(2)	
1782.90(22)	8 $\langle + \rangle$										
1810.70(9)	$\langle 2 \rangle^+$						41(3)	29(3)	7(2)		10(2)
1954.27(14)								41(6)			59(8)
2171.4(4)							61(16)	39(14)			
2180.2(3)	$\langle 8^- \rangle$										
2210.2(3)							100				

(continued)

 $^{188}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	$L$	$T_{1/2}$ or	Ref.	Branching ratios in percentage						
[keV]		(p,t)	$\Gamma_{\text{cm}}$		$E_{\text{f}}^*$ : $J_{\text{f}}^\pi$ :	0.0 0 <sup>+</sup>	266 2 <sup>+</sup>	606 2 <sup>+</sup>	671 4 <sup>+</sup>	799 0 <sup>+</sup>	936 $\langle 3 \rangle^+$
2247.04(23)	8 <sup>(+)</sup>										
2295.62(12)	$\langle 1,2 \rangle$					33(5)	67(6)				
2312.9(3)	9 <sup>(-)</sup>										
2438.1(3)	10 <sup>(+)</sup>										
2446.89(22)	$\langle 1,2^+ \rangle$					100					
2457.8(3)	9 <sup>(-)</sup>										
2468.4(5)										100	
2497.52(13)							100				
2524.67(19)							100				
2588.6(3)									100		
2620.9(3)	$\langle 9^+ \rangle$										
2664.3(3)	10 <sup>(+)</sup>										
2700.9(4)	$\langle 10^- \rangle$										
2703.4(3)	10 <sup>(+)</sup>										
2703.7(4)	$\langle 10^- \rangle$										
2767.1(5)											
2773.1(4)	11 <sup>(-)</sup>										
2798.1(5)							100				
2811.0(3)	12 <sup>(+)</sup>		0.66(4) ns								
2909.6(3)	$\langle 2^+ \rangle$										
2960.3(4)	11 <sup>(-)</sup>										
2981.1(4)											
3046.75(14)							58(5)	28(5)			
3105.0(4)	12 <sup>(+)</sup>										
3139.9(4)	14 <sup>(+)</sup>										
3183.7(4)	12 <sup>(+)</sup>										
3226.4(5)	$\langle 12^- \rangle$										
3232.53(17)								54(12)			
3252.7(4)	$\langle 12^- \rangle$										
3260.67(18)							27(5)				
3326.5(4)	13 <sup>(-)</sup>										
3564.9(6)	$\langle 13^- \rangle$										
3581.9(6)	14 <sup>(+)</sup>										
3628.2(4)	16 <sup>(+)</sup>										
3704.0(5)	$\langle 14^- \rangle$										
3867.6(6)	$\langle 14^- \rangle$										
3948.4(5)	$\langle 15^- \rangle$										
4009.0(7)	$\langle 16^+ \rangle$										
4175.6(5)	$\langle 16^- \rangle$										
4237.9(7)	$\langle 15^- \rangle$										
4245.7(5)	18 <sup>(+)</sup>										
4282.7(6)											
4550.6(6)	$\langle 16^- \rangle$										
4963.5(6)	$\langle 20^+ \rangle$										

(continued)

 $^{188}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	$L$	$T_{1/2}$ or Ref.	Branching ratios in percentage						
[keV]		(p,t)	$\Gamma_{\text{cm}}$	$E^*_f$ : $J^\pi_f$ :	0.0 0 <sup>+</sup>	266 2 <sup>+</sup>	606 2 <sup>+</sup>	671 4 <sup>+</sup>	799 0 <sup>+</sup>	936 (3) <sup>+</sup>
5748.1(6)	$\langle 22^+ \rangle$									
6553.1(8)	$\langle 24^+ \rangle$									

Energy levels and branching ratios [02Si10]. Part 2

 $^{188}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E^*_\text{f}:$ $J^\pi_\text{f}:$	1085.18 4 <sup>+</sup>	1115.24 2 <sup>+</sup>	1184.58 6 <sup>(+)</sup>	1214.71 X <sup>+</sup>	1312.67 2 <sup>+</sup>	1350.03 3 <sup>-</sup>	1566.00 5 <sup>(-)</sup>	1636.26 6 <sup>(+)</sup>	1768.53 7 <sup>(-)</sup>	1776.09 <1 <sup>-</sup> >
1312.67(6)	2 <sup>+</sup>			2.9(10)								
1350.03(6)	3 <sup>-</sup>			2.5(8)								
1566.00(13)	5 <sup>(-)</sup>		15(1)		14(1)			6(1)				
1625.73(8)	1 <sup>+</sup>					2.5(3)						
1636.26(17)	6 <sup>(+)</sup>		92(5)		5(2)							
1685.6(4)						38(20)						
1768.53(17)	7 <sup>(-)</sup>				50(1)				44(2)	6		
1776.09(7)	<1 <sup>-</sup> >							4(1)				
1782.90(22)	8 <sup>(+)</sup>				100							
1810.70(9)	<2 <sup>+</sup> >		3			10(2)						
2180.2(3)	<8 <sup>-</sup> >									x	100	
2247.04(23)	8 <sup>(+)</sup>									69(3)		
2312.9(3)	9 <sup>(-)</sup>										100	
2457.8(3)	9 <sup>(-)</sup>										100	
2909.6(3)	<2 <sup>+</sup> >					100						
3046.75(14)								14(4)				
3232.53(17)								46(6)				
3260.67(18)												30(5)

Energy levels and branching ratios [02Si10]. Part 3

 $^{188}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E^*_f$ : $J^\pi_f$ :	1782.90 8 <sup>(+)</sup>	1954.27	2180.2 (8) <sup>-</sup>	2247.04 8 <sup>(+)</sup>	2312.9 9 <sup>(-)</sup>	2438.1 10 <sup>(+)</sup>	2457.8 9 <sup>(-)</sup>	2524.67	2664.3 10 <sup>(+)</sup>	2700.9 (10) <sup>-</sup>
2247.04(23)	8 <sup>(+)</sup>		31(1)									
2438.1(3)	10 <sup>(+)</sup>		100									
2620.9(3)	(9) <sup>+</sup>		100									
2664.3(3)	10 <sup>(+)</sup>		7(1)			93(5)						
2700.9(4)	(10) <sup>-</sup>								100			
2703.4(3)	10 <sup>(+)</sup>		100									
2703.7(4)	(10) <sup>-</sup>				100							

(continued)

 $^{188}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	1782.90 8 <sup>(+)</sup>	1954.27	2180.2 8 <sup>(-)</sup>	2247.04 8 <sup>(+)</sup>	2312.9 9 <sup>(-)</sup>	2438.1 10 <sup>(+)</sup>	2457.8 9 <sup>(-)</sup>	2524.67	2664.3 10 <sup>(+)</sup>	2700.9 10 <sup>(-)</sup>
2767.1(5)								100				
2773.1(4)	11 <sup>(-)</sup>						100					
2811.0(3)	12 <sup>(+)</sup>							4(1)			39(2)	
2960.3(4)	11 <sup>(-)</sup>								100			
2981.1(4)								100				
3105.0(4)	12 <sup>(+)</sup>							100				
3183.7(4)	12 <sup>(+)</sup>							100				
3226.4(5)	12 <sup>(-)</sup>											100
3260.67(18)				28(6)						15(7)		

Energy levels and branching ratios [02Si10]. Part 4

 $^{188}_{78}\text{Pt}$ 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	2703.4 10 <sup>(+)</sup>	2703.7 10 <sup>(-)</sup>	2773.1 11 <sup>(-)</sup>	2811.0 12 <sup>(+)</sup>	2960.3 11 <sup>(-)</sup>	3105.0 12 <sup>(+)</sup>	3139.9 14 <sup>(+)</sup>	3226.4 12 <sup>(-)</sup>	3252.7 12 <sup>(-)</sup>	3326.5 13 <sup>(-)</sup>
2811.0(3)	12 <sup>(+)</sup>		56(8)									
3139.9(4)	14 <sup>(+)</sup>					100						
3252.7(4)	12 <sup>(-)</sup>			100								
3326.5(4)	13 <sup>(-)</sup>				100							
3564.9(6)	13 <sup>(-)</sup>						100					
3581.9(6)	14 <sup>(+)</sup>							100				
3628.2(4)	16 <sup>(+)</sup>								100			
3704.0(5)	14 <sup>(-)</sup>										100	
3867.6(6)	14 <sup>(-)</sup>									100		
3948.4(5)	15 <sup>(-)</sup>											100

Energy levels and branching ratios [02Si10]. Part 5

 $^{188}_{78}\text{Pt}$ 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage									
		$E_f^*$ : $J_f^\pi$ :	3564.9 13 <sup>(-)</sup>	3581.9 14 <sup>(+)</sup>	3628.2 16 <sup>(+)</sup>	3704.0 14 <sup>(-)</sup>	3867.6 14 <sup>(-)</sup>	3948.4 15 <sup>(-)</sup>	4245.7 18 <sup>(+)</sup>	4963.5 20 <sup>(+)</sup>	5748.1 22 <sup>(+)</sup>
4009.0(7)	16 <sup>(+)</sup>			100							
4175.6(5)	16 <sup>(-)</sup>					100					
4237.9(7)	15 <sup>(-)</sup>		100								
4245.7(5)	18 <sup>(+)</sup>				100						
4282.7(6)								100			
4550.6(6)	16 <sup>(-)</sup>						100				
4963.5(6)	20 <sup>(+)</sup>								100		

(continued)

 **$^{188}\text{Pt}$**   
**78**

$E^*$	$J^\pi$	Branching ratios in percentage									
[keV]		$E_f^*$ :	3564.9	3581.9	3628.2	3704.0	3867.6	3948.4	4245.7	4963.5	5748.1
		$J_f^\pi$ :	$\langle 13^- \rangle$	$14^{(+)}$	$16^{(+)}$	$\langle 14^- \rangle$	$\langle 14^- \rangle$	$\langle 15^- \rangle$	$18^{(+)}$	$\langle 20^+ \rangle$	$\langle 22^+ \rangle$
5748.1(6)	$\langle 22^+ \rangle$									100	
6553.1(8)	$\langle 24^+ \rangle$										x

Energy levels and branching ratios [03Wu02].

 **$^{189}\text{Pt}$**   
**78**

$E^*$	$2J^\pi$	$L$	$C^2S$	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(p,d)	$\Gamma_{\text{cm}}$		$E_f^*$ : $2J_f^\pi$ :	0.0 $3^-$	6.4 $5^-$	45.8 $\langle 1 \rangle^-$	88.3 $3^-$	172.8 $9^-$
0.0	$3^-$	$\langle 1 \rangle$	1.07	10.87(12) h	80Ka19						
6.40(4)	$5^-$						100				
45.78(3)	$\langle 1 \rangle^-$	1	0.42		80Ka19		87(21)	12.6(19)			
88.30(3)	$3^-$	$1, \langle 3 \rangle$	0.35		80Ka19		x	x	x		
172.80(6)	$9^-$	$\langle 5 \rangle$	2.7	464(25) n	80Ka19			100			
191.5(7)	$\langle 13^+ \rangle$	6,5	3.6	143(5) u	80Ka19						100
202.8(9)	$\langle 11^+ \rangle$										
222.30(4)	$\langle 3,5 \rangle^-$						54(6)	33(5)	x	13(2)	
237.7(4)	$\langle 7 \rangle^-$							100			
261(5)	$1^-, 3^-$	1	0.38		80Ka19						
285(5)		$3^*$	1.5		80Ka19						
348.45(6)	$\langle 3,5 \rangle^-$	$1^{**}$	0.15		80Ka19		65(5)	13(3)	5(3)	8(3)	
356.7(5)	$\langle 9^- \rangle$							100			
447.67(8)	$\langle 3,5 \rangle^-$						51(7)	35(4)		4(2)	
493.3(4)	$11^-$	$3^{***}$	0.47		80Ka19						100
499.7(6)	$\langle 17^+ \rangle$										
529.62(11)	$\langle 1-5 \rangle^-$						79(14)	10(6)	10(3)		
532.0(7)	$\langle 15^+ \rangle$										
574(5)	$1^-, 3^-$	1	0.33		80Ka19						
609.2(5)	$\langle 11^- \rangle$										
654.1(7)	$\langle 15^+ \rangle$										
712.6(5)	$\langle 13^- \rangle$										x
843.7(7)	$\langle 13^- \rangle$										
902.9(7)											
944.8(7)	$\langle 17^+ \rangle$										
955.6(6)	$\langle 21^+ \rangle$										
984.1(7)	$\langle 19^+ \rangle$										
1048.5(7)	$\langle 15^- \rangle$										
1081.7(5)	$\langle 15^- \rangle$										
1160.87(14)	$3^+$						15(2)			11(2)	
1186.0(7)	$\langle 19^+ \rangle$										
1361.9(6)	$\langle 17^- \rangle$										
1414.8(9)											
1415.9(9)	$\langle 17^- \rangle$										

(continued)

 $^{189}_{78}\text{Pt}$ 

$E^*$ [keV]	$2J^\pi$	$L$	$C^2S$ (p,d)	$T_{1/2}$ or Ref. $\Gamma_{\text{cm}}$	Branching ratios in percentage					
					$E_f^*$ : $2J_f^\pi$ :	0.0 $3^-$	6.4 $5^-$	45.8 $\langle 1 \rangle^-$	88.3 $3^-$	172.8 $9^-$
1444.8(8)	$\langle 21^+ \rangle$									
1491.4(6)	$\langle 19^- \rangle$									
1512.9(7)	$\langle 21^- \rangle$									
1529.9(8)	$\langle 25^+ \rangle$									
1530.7(10)	$\langle 23^- \rangle$									
1556.3(9)	$\langle 23^+ \rangle$									
1714.7(8)	$\langle 25^- \rangle$									
1728.1(7)	$\langle 23^+ \rangle$									
2056.1(9)	$\langle 27^- \rangle$									
2190.0(10)	$\langle 29^+ \rangle$									
2220.2(10)	$\langle 27^+ \rangle$									
2292.0(9)	$\langle 29^+ \rangle$									
2689.5(11)	$\langle 31^- \rangle$									
2864.8(11)	$\langle 33^+ \rangle$									

\* Value  $L$  is uncertain;  $C^2S=0.34$  if  $L=1$  and  $C^2S=13.4$  if  $L=5$ .\*\* Value  $L$  is uncertain;  $C^2S=0.6$  if  $L=3$ ,  $C^2S=2$  if  $L=4$  and  $C^2S=4.4$  if  $L=5$ .\*\*\* Value  $L$  is uncertain;  $C^2S=0.1$  if  $L=1$  and  $C^2S=3.8$  if  $L=5$ .

Energy levels and branching ratios [03Wu02]. Part 2

 $^{189}_{78}\text{Pt}$ 

$E^*$	$2J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $2J_f^\pi$ :	191.5 $\langle 13^+ \rangle$	202.8 $\langle 11^+ \rangle$	222.30 $\langle 3,5 \rangle^-$	237.7 $\langle 7 \rangle^-$	348.45 $\langle 3,5 \rangle^-$	356.7 $\langle 9^- \rangle$	447.67 $\langle 3,5 \rangle^-$	493.3 $11^-$	499.7 $\langle 17^+ \rangle$	529.62
202.8(9)	$\langle 11^+ \rangle$		100									
348.45(6)	$\langle 3,5 \rangle^-$				5.8(8)	2.7(6)						
447.67(8)	$\langle 3,5 \rangle^-$				10(2)							
499.7(6)	$\langle 17^+ \rangle$		x									
532.0(7)	$\langle 15^+ \rangle$		x	x								
609.2(5)	$\langle 11^- \rangle$					x		x				
654.1(7)	$\langle 15^+ \rangle$		x									
843.7(7)	$\langle 13^- \rangle$							x				
902.9(7)										x		
944.8(7)	$\langle 17^+ \rangle$										x	
955.6(6)	$\langle 21^+ \rangle$										x	
984.1(7)	$\langle 19^+ \rangle$										x	
1048.5(7)	$\langle 15^- \rangle$									x		
1160.87(14)	$3^+$						27(4)		42(6)			5.1(10)
1186.0(7)	$\langle 19^+ \rangle$										x	
1361.9(6)	$\langle 17^- \rangle$										x	



Energy levels and branching ratios [03Wu02]. Part 3

**<sup>189</sup>Pt**  
**78**

$E^*$	$2J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $2J_f^\pi$ :	532.0 $\langle 15^+ \rangle$	609.2 $\langle 11^- \rangle$	654.1 $\langle 15^+ \rangle$	712.6 $\langle 13^- \rangle$	843.7 $\langle 13^- \rangle$	944.8 $\langle 17^+ \rangle$	955.6 $\langle 21^+ \rangle$	984.1 $\langle 19^+ \rangle$	1081.7 $\langle 15^- \rangle$	1186.0 $\langle 19^+ \rangle$
944.8(7)	$\langle 17^+ \rangle$		x		x							
984.1(7)	$\langle 19^+ \rangle$		x									
1081.7(5)	$\langle 15^- \rangle$			x								
1186.0(7)	$\langle 19^+ \rangle$				x							
1361.9(6)	$\langle 17^- \rangle$				x	x					x	
1414.8(9)								x				
1415.9(9)	$\langle 17^- \rangle$						x					
1444.8(8)	$\langle 21^+ \rangle$							x		x		
1491.4(6)	$\langle 19^- \rangle$								x		x	
1512.9(7)	$\langle 21^- \rangle$								x			x
1529.9(8)	$\langle 25^+ \rangle$								x			
1556.3(9)	$\langle 23^+ \rangle$									x		
1728.1(7)	$\langle 23^+ \rangle$								x			x

Energy levels and branching ratios [03Wu02]. Part 4

**<sup>189</sup>Pt**  
**78**

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage								
		$E_f^*:$ $2J_f^\pi:$	1361.9 $\langle 17^- \rangle$	1512.9 $\langle 21^- \rangle$	1529.9 $\langle 25^+ \rangle$	1530.7 $\langle 23^- \rangle$	1556.3 $\langle 23^+ \rangle$	1714.7 $\langle 25^- \rangle$	2056.1 $\langle 27^- \rangle$	2190.0 $\langle 29^+ \rangle$
1491.4(6)	$\langle 19^- \rangle$		x							
1512.9(7)	$\langle 21^- \rangle$		x							
1530.7(10)	$\langle 23^- \rangle$			x						
1714.7(8)	$\langle 25^- \rangle$			x		x				
2056.1(9)	$\langle 27^- \rangle$							x		
2190.0(10)	$\langle 29^+ \rangle$				x					
2220.2(10)	$\langle 27^+ \rangle$						x			
2292.0(9)	$\langle 29^+ \rangle$							x	x	
2689.5(11)	$\langle 31^- \rangle$								x	
2864.8(11)	$\langle 33^+ \rangle$									x

Energy levels and branching ratios [03Si05].

**<sup>190</sup>Pt**  
**78**

$E^*$ [keV]	$J^\pi$	$g$	$\sigma$ (p,t) <i>rel.</i>	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage							
						$E_f^*:$ $J_f^\pi:$	0.0 $0^+$	296 $2^+$	598 $2^+$	737 $4^+$	917 $3^+$	921 $0^+$	1128 $\langle 4^+ \rangle$
0.0	$0^+$		100	$6.5(3) \cdot 10^{11}$ yr	77Se15								
295.80(4)	$2^+$		9.6	62(3) ps	77Se15		100						
597.64(4)	$2^+$		2.4		77Se15		29(2)	71(2)					
737.04(6)	$4^+$							100					

(continued)

 **$^{190}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	$g$	$\sigma$ (p,t)	$T_{1/2}$ or	Ref.	Branching ratios in percentage							
[keV]			$rel.$	$\Gamma_{\text{cm}}$		$E^*_\text{f}$ : $J^\pi_\text{f}$ :	0.0 0 <sup>+</sup>	296 2 <sup>+</sup>	598 2 <sup>+</sup>	737 4 <sup>+</sup>	917 3 <sup>+</sup>	921 0 <sup>+</sup>	1128 <4 <sup>+</sup> >
916.62(6)	3 <sup>+</sup>							35(3)	63(3)	1.9(2)			
920.86(7)	0 <sup>+</sup>		5.2		77Se15	x		74(4)	26(1)				
1128.20(9)	<4 <sup>+</sup> >		5.6		77Se15			5(2)	73(6)	22(2)			
1203.02(8)	2 <sup>+</sup>					4(1)		30(1)	31(1)	10(1)	8(1)	16(1)	
1287.73(9)	6 <sup>+</sup>									100			
1353.35(8)	3 <sup>-</sup>		7.3		77Se15			65(6)	3(1)	28(1)			5(1)
1385.9(2)	<2 <sup>+</sup> -4 <sup>+</sup> >								31(4)		65(16)		4(2)
1395.18(9)	2 <sup>+</sup>					58(8)	24(2)	2.9(3)	3.1(3)	9(2)			
1449.9(2)	<5 <sup>+</sup> >									82(9)			18(6)
1464.54(8)	5 <sup>-</sup>									84(4)			14(1)
1543(5)	<2 <sup>+</sup> >		3.8		77Se15								
1600.7(2)	2 <sup>+</sup>					6(3)	71(11)	11(6)	11(3)				
1602.0(2)	1 <sup>+</sup> ,2 <sup>+</sup>					13(2)	29(3)	44(8)	9(1)				
1625.6(3)	<2 <sup>+</sup> -4>									21(10)	26(10)		21(5)
1628.1(1)	<2 <sup>+</sup> -4>									13(3)	58(8)		
1631.1(1)	7 <sup>-</sup>	+0.62(9)		0.79(5) ns									
1670(5)	0 <sup>+</sup>		7.2		77Se15								
1732.7(4)	<6 <sup>+</sup> >												100
1737.0(2)	1 <sup>-</sup>							68(8)	25(1)			7(1)	
1833.9(1)	<6 <sup>-</sup> >												
1842(5)			6.2		77Se15								
1876.8(1)	1 <sup>-</sup> -3 <sup>-</sup>							40(3)	51(9)				
1915.3(2)	8 <sup>+</sup>												
2043.8(2)	<7-9 <sup>-</sup> >												
2078.3(2)	8 <sup>-</sup>												
2222.6(2)	9 <sup>-</sup>												
2297.4(3)	<10 <sup>-</sup> >	-0.0016(36)		48(4) ns	06Le06								
2358.3(3)	<2> <sup>+</sup>							23(3)	77(5)				
2382.6(2)	<1> <sup>+</sup>					53(4)	12(2)	21(1)				6(1)	
2535.3(2)	10 <sup>+</sup>												
2570.7(3)	<11 <sup>-</sup> >												
2603.3(3)	10 <sup>+</sup>												
2683.4(5)	<10 <sup>-</sup> >												
2701.8(4)	<10> <sup>+</sup>												
2726.7(3)	12 <sup>+</sup>	-0.17(12)		1.39(12) ns	06Le06								
2760.9(4)	<11 <sup>-</sup> >												
2820.7(5)	<11 <sup>+</sup> >												
2821.7(5)	<12 <sup>-</sup> >												
2980.9(4)	1 <sup>-</sup>					45(9)	55(6)						
3014.0(2)	<2> <sup>-</sup>								62(6)	7(1)	29(4)		
3024.6(6)	<12 <sup>-</sup> >												
3049.2(2)	<2> <sup>-</sup>							65(7)	20(3)		15(3)		
3067.4(2)	<2,1> <sup>-</sup>							21(4)	34(6)				
3069.2(4)	<14 <sup>+</sup> >												
3111.7(4)	<13 <sup>-</sup> >												

(continued)

**<sup>190</sup>Pt**  
**78**

$E^*$	$J^\pi$	$g$	$\sigma$ (p,t)	$T_{1/2}$ or	Ref.	Branching ratios in percentage							
[keV]			<i>rel.</i>	$\Gamma_{\text{cm}}$		$E_{\text{f}}^*$ :	0.0	296	598	737	917	921	1128
						$J_{\text{f}}^\pi$ :	$0^+$	$2^+$	$2^+$	$4^+$	$3^+$	$0^+$	$\langle 4^+ \rangle$
3344.6(5)	$\langle 13^- \rangle$												
3415.0(4)	$\langle 14^+ \rangle$												
3576.5(6)	$\langle 16^+ \rangle$												
3666.2(5)	$\langle 16^+ \rangle$												
3808.0(5)	$\langle 16-18^+ \rangle$												
4083.3(6)	$\langle 16-18^+ \rangle$												
4214.3(8)	$\langle 18^+ \rangle$												
		06Le06	77Se15		Ref.								

*Abundance:* 0.014(1) %.Configurations of isomeric states and  $g$  factors are discussed in [06Le06].

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

Energy levels and branching ratios [03Si05]. Part 2

**<sup>190</sup>Pt**  
**78**

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ :	1203.02	1287.73	1353.35	1395.18	1464.54	1631.1	1915.3	2078.3	2222.6	2297.4
		$J_f^\pi$ :	2 <sup>+</sup>	6 <sup>+</sup>	3 <sup>-</sup>	2 <sup>+</sup>	5 <sup>-</sup>	7 <sup>-</sup>	8 <sup>+</sup>	8 <sup>-</sup>	9 <sup>-</sup>	$\langle 10^- \rangle$
1395.18(9)	2 <sup>+</sup>		2.2(2)									
1464.54(8)	5 <sup>-</sup>			2.0(8)								
1602.0(2)	1 <sup>+</sup> , 2 <sup>+</sup>					5						
1625.6(3)	$\langle 2^+-4 \rangle$	x			32(5)							
1628.1(1)	$\langle 2^+-4 \rangle$				29(5)							
1631.1(1)	7 <sup>-</sup>			39(2)			61(3)					
1833.9(1)	$\langle 6^- \rangle$						100					
1876.8(1)	1 <sup>-</sup> -3 <sup>-</sup>				10(1)							
1915.3(2)	8 <sup>+</sup>			100								
2043.8(2)	$\langle 7-9^- \rangle$							100				
2078.3(2)	8 <sup>-</sup>							100				
2222.6(2)	9 <sup>-</sup>							100				
2297.4(3)	$\langle 10^- \rangle$									70(8)	30(9)	
2382.6(2)	$\langle 1^+ \rangle$					7(1)						
2535.3(2)	10 <sup>+</sup>								100			
2570.7(3)	$\langle 11^- \rangle$											100
2603.3(3)	10 <sup>+</sup>								42(13)		58(21)	
2683.4(5)	$\langle 10^- \rangle$									100		
2701.8(4)	$\langle 10^+ \rangle$								100			
2760.9(4)	$\langle 11^- \rangle$										100	
2821.7(5)	$\langle 12^- \rangle$											100
3014.0(2)	$\langle 2^- \rangle$		1.9(2)									
3067.4(2)	$\langle 2,1^- \rangle$		28(6)			17(2)						

Energy levels and branching ratios [03Si05]. Part 3

 **$^{190}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $J_f^\pi$ :	2535.3 10 <sup>+</sup>	2570.7 ⟨11 <sup>-</sup> ⟩	2603.3 10 <sup>+</sup>	2726.7 12 <sup>+</sup>	2760.9 ⟨11 <sup>-</sup> ⟩	3069.2 ⟨14 <sup>+</sup> ⟩	3111.7 ⟨13 <sup>-</sup> ⟩	3415.0 ⟨14 <sup>+</sup> ⟩	3576.5 ⟨16 <sup>+</sup> ⟩	3666.2 ⟨16 <sup>+</sup> ⟩
2726.7(3)	12 <sup>+</sup>		94(8)		6(2)							
2820.7(5)	⟨11 <sup>+</sup> ⟩				100							
3024.6(6)	⟨12 <sup>-</sup> ⟩			100								
3069.2(4)	⟨14 <sup>+</sup> ⟩					100						
3111.7(4)	⟨13 <sup>-</sup> ⟩			100								
3344.6(5)	⟨13 <sup>-</sup> ⟩						100					
3415.0(4)	⟨14 <sup>+</sup> ⟩					≈54		30(3)	17(6)			
3576.5(6)	⟨16 <sup>+</sup> ⟩							100				
3666.2(5)	⟨16 <sup>+</sup> ⟩									100		
3808.0(5)	⟨16–18 <sup>+</sup> ⟩											100
4083.3(6)	⟨16–18 <sup>+</sup> ⟩											100
4214.3(8)	⟨18 <sup>+</sup> ⟩										100	

Energy levels and branching ratios [95Br38, 05Ku01].

 **$^{191}_{78}\text{Pt}$** 

$E^*$	$2J^\pi$	$L$	$S_N$	$\sigma\ (\tau, \alpha)$	$S_N$	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(p,d)	(p,d)	$\mu\text{b/sr}$	$(\tau, \alpha)$	$\Gamma_{\text{cm}}$		$E_f^*:$ $2J_f^\pi:$	0.0 3 <sup>-</sup>	9.56 ⟨5,7⟩ <sup>-</sup>	30.4 1 <sup>-</sup> , 3 <sup>-</sup>	101 ⟨9⟩ <sup>-</sup>	149 ⟨13⟩ <sup>+</sup>
0.0	3 <sup>-</sup>	1	1.0			2.80(3) d	78Be09						
9.56(2)	⟨5,7⟩ <sup>-</sup>							x					
30.40(1)	1 <sup>-</sup> , 3 <sup>-</sup>	1	0.73	<373			80Ka19	100					
100.67(2)	⟨9⟩ <sup>-</sup>	5,6	0.83			>1 $\mu\text{s}$	80Ka19		100				
149.04(2) <sup>a</sup>	⟨13⟩ <sup>+</sup>	6,5	4.05	2069	6.51	95(5) $\mu\text{s}$	80Ka19					100	
158.81(3)	1 <sup>-</sup> –5 <sup>-</sup>							100					
166.50(1)	3 <sup>-</sup> , 5 <sup>-</sup>	1,3	0.03				80Ka19	74(5)	11.0(16)	15.1(16)			
173.44 <sup>j</sup>	⟨11⟩ <sup>+</sup>		0.24				80Ka19						100
253.94(2)	⟨3,5,7⟩ <sup>-</sup>							68(5)	26(2)	5.9(5)			
277.88(2)	⟨3,5⟩ <sup>-</sup>							73(5)	19.9(15)	7.5(5)			
281.20(3)	⟨3–7⟩ <sup>-</sup>								100				
293.47(2)	⟨5⟩ <sup>-</sup>	1	0.04				80Ka19	25(2)	58(4)	13.4(9)	2.2(3)		
306.34(3)	⟨9⟩ <sup>+</sup>	4	0.73	163	0.32		80Ka19						36(4)
399.84(2)	5 <sup>-</sup> , 7 <sup>-</sup>	3	1.40	368	1.24		80Ka19	62(4)	36(2)				
451.84(3)	⟨3,5⟩ <sup>-</sup>	1	0.11				80Ka19	25(2)	11.0(10)	64(4)			
453.83(3)	⟨7⟩ <sup>+</sup>	⟨4⟩					80Ka19						
471.08(9) <sup>a</sup>	⟨17⟩ <sup>+</sup>			362			85Th02						100
487.59(2)	⟨7⟩ <sup>-</sup>	3	1.21	incl			80Ka19	20(1)	28(2)			26(2)	
529.27 <sup>j</sup>	⟨15⟩ <sup>+</sup>						05Ku01						45(4)
535.36(4)	⟨3,5,7⟩ <sup>-</sup>								50(4)				
560(4)	⟨1,3⟩ <sup>-</sup>	1	0.014				80Ka19						
574.69(4)	⟨3–7⟩ <sup>-</sup>							10(2)	28(3)	9(2)			
594.28(5)	X <sup>-</sup>												
599.3(1)	⟨15⟩ <sup>+</sup>												92(18)

(continued)

**<sup>191</sup>Pt**  
**78**

$E^*$	$2J^\pi$	$L$	$S_N$	$\sigma\ (\tau, \alpha)$	$S_N$	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(p,d)	(p,d)	$\mu\text{b/sr}$	$(\tau, \alpha)$	$\Gamma_{\text{cm}}$		$E_{\text{f}}^*$ : $2J_{\text{f}}^\pi$ :	0.0 $3^-$	9.56 $\langle 5, 7 \rangle^-$	30.4 $1^-, 3^-$	101 $\langle 9 \rangle^-$	149 $\langle 13 \rangle^+$
613.19(5)	$X^-$												
625.85(9)	$X^-$												
660.23(3)	$\langle 5, 7 \rangle^+$			131	0.40		85Th02						
662.2(1)	$X^-$			incl			85Th02						
690.0(25)		3,4	0.11				80Ka19						
732.4(1)	$1^-, 3^-$	1	0.40				80Ka19	16(3)			84(8)		
810(5)	$11^+, 13^+$	6,5	0.60	147	0.50		80Ka19						
863.93(4)	$\langle 5, 7 \rangle^+$												
885(5)	$\langle 1^-, 3^- \rangle$	1	0.06				80Ka19						
919.1(1)	$15^+, 17^+$												
929.2(2)													
951.1(1) <sup>a</sup>	$\langle 21 \rangle^+$						05Ku01						
965(10)	$11^+, 13^+$			268	0.94		85Th02						
986.46(7)													
989.5 <sup>j</sup>	$\langle 19 \rangle^+$						05Ku01						
996.2(7)													$\approx 55$
1074.03(3)	$\langle 5 \rangle^+$							0.5(1)	0.5(1)				
1113.6(1)	$\langle 5 \rangle^+$							6.8(9)					
1158.5(1)	$\langle 19^+ \rangle$												
1174.6(1)	$X^-$									27(5)			
1194(10)	$\langle 11^+, 13^+ \rangle$			128	0.88		85Th02						
1289.9(2)													
1300.9(3)													
1302.7(2)	$\langle 19^+ \rangle$												
1309.6(5)	$\langle 17^+ \rangle$												
1372*				146			85Th02						
1381.5(2) <sup>e</sup>	$\langle 21^- \rangle$						05Ku01						
1453.2(3)													
1471.5(2)													
1545.8(2) <sup>e</sup>	$\langle 25^- \rangle$					1.07(6) ns	05Ku01						
1550.4(2) <sup>a</sup>	$\langle 25^+ \rangle$						05Ku01						
1560*				604			85Th02						
1590.7(2)													
1862.8(2) <sup>f</sup>	$\langle 27^- \rangle$						05Ku01						
1925.1(4)													
1939.2(3)													
2125.2(2) <sup>e</sup>	$\langle 29^- \rangle$						05Ku01						
2151 <sup>g</sup>	$29^-$						05Ku01						
2233.4(3) <sup>a</sup>	$\langle 29^+ \rangle$						05Ku01						
2385 <sup>h</sup>	$29^-$						05Ku01						
2467 <sup>f</sup>	$31^-$						05Ku01						
2581.3(4)	$\langle 33^- \rangle$												
2608 <sup>g</sup>	$33^-$						05Ku01						
2738 <sup>e</sup>	$33^-$						05Ku01						
2825 <sup>b</sup>	$33^+$						05Ku01						

(continued)

**<sup>191</sup>Pt**  
**78**

$E^*$	$2J^\pi$	$L$	$S_N$	$\sigma\ (\tau,\alpha)$	$S_N$	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(p,d)	(p,d)	$\mu\text{b/sr}$	$(\tau,\alpha)$	$\Gamma_{\text{cm}}$		$E^*_\text{f}$ : $2J^\pi_\text{f}$ :	0.0 3 <sup>-</sup>	9.56 $\langle 5,7 \rangle^-$	30.4 1 <sup>-</sup> ,3 <sup>-</sup>	101 $\langle 9 \rangle^-$	149 $\langle 13 \rangle^+$
2826 <sup>h</sup>	33 <sup>-</sup>						05Ku01						
2890 <sup>i</sup>	33 <sup>-</sup>						05Ku01						
2940.6(4) <sup>a</sup>	$\langle 33^+ \rangle$						05Ku01						
3108 <sup>f</sup>	35 <sup>-</sup>						05Ku01						
3189 <sup>i</sup>	37 <sup>-</sup>						05Ku01						
3272 <sup>b</sup>	37 <sup>+</sup>						05Ku01						
3277							05Ku01						
3299	$\langle 37^+ \rangle$						05Ku01						
3302 <sup>g</sup>	37 <sup>-</sup>						05Ku01						
3317 <sup>c</sup>	35 <sup>+</sup>						05Ku01						
3433 <sup>e</sup>	$\langle 37^- \rangle$						05Ku01						
3452 <sup>c</sup>	39 <sup>+</sup>						05Ku01						
3679 <sup>c</sup>	43 <sup>+</sup>						05Ku01						
3685							05Ku01						
3717 <sup>i</sup>	41 <sup>-</sup>						05Ku01						
3780 <sup>f</sup>	39 <sup>-</sup>						05Ku01						
3874 <sup>b</sup>	41 <sup>+</sup>						05Ku01						
4005 <sup>d</sup>	45 <sup>+</sup>						05Ku01						
4330 <sup>c</sup>	47 <sup>+</sup>						05Ku01						
4389 <sup>i</sup>	$\langle 45^- \rangle$						05Ku01						
4419 <sup>f</sup>	43 <sup>-</sup>						05Ku01						
4516 <sup>d</sup>	49 <sup>+</sup>						05Ku01						
4588 <sup>b</sup>	45 <sup>+</sup>						05Ku01						
4630 <sup>f</sup>							05Ku01						
4992 <sup>c</sup>	51 <sup>+</sup>						05Ku01						
5297 <sup>d</sup>	53 <sup>+</sup>						05Ku01						
5366 <sup>b</sup>	49 <sup>+</sup>						05Ku01						
5438 <sup>c</sup>	55 <sup>+</sup>						05Ku01						
5577 <sup>b</sup>	53 <sup>+</sup>						05Ku01						
5883 <sup>c</sup>	59 <sup>+</sup>						05Ku01						
6122 <sup>b</sup>	57 <sup>+</sup>						05Ku01						
6149 <sup>c</sup>							05Ku01						
				85Th02	85Th02		Ref.						

Additional data on this isotope can be found in [67Jo06].

\* Unresolved multiplet in the cross section of the  $(\tau, \alpha)$  reaction measured at 20° [85Th02].

10 bands of levels (No 1-10 marked here a-j correspondently) are suggested in [05Ku01].

Energy levels and branching ratios [95Br38, 05Ku01]. Part 2

**<sup>191</sup>Pt**  
**78**

$E^*$	$2J^\pi$	Branching ratios in percentage									
[keV]		$E_f^*$ : $2J_f^\pi$ :	158.81	166.50	173.44	253.94	277.88	281.20	293.47	306.34	399.84
				$3^-$ , $5^-$	$\langle 11 \rangle^+$		$\langle 3, 5 \rangle^-$		$\langle 5 \rangle^-$	$\langle 9 \rangle^+$	$5^-$ , $7^-$
293.47(2)	$\langle 5 \rangle^-$			1.33(15)							
306.34(3)	$\langle 9 \rangle^+$				64(5)						
399.84(2)	$5^-$ , $7^-$					1.4(2)			0.7(2)		
453.83(3)	$\langle 7 \rangle^+$				77(5)					22.8(13)	
487.59(2)	$\langle 7 \rangle^-$							6(3)	19(1)		1.5(1)
529.27 <sup>j</sup>	$\langle 15 \rangle^+$				55(4)						
535.36(4)	$\langle 3, 5, 7 \rangle^-$		24(2)	26(2)							
574.69(4)	$\langle 3-7 \rangle^-$			53(7)							
594.28(5)	$X^-$					100					
599.3(1)	$\langle 15 \rangle^+$				$\approx 8$						
613.19(5)	$X^-$			52(5)		25(5)		23(3)			
625.85(9)	$X^-$		100								
660.23(3)	$\langle 5, 7 \rangle^+$									69(4)	
662.2(1)	$X^-$			100							
863.93(4)	$\langle 5, 7 \rangle^+$									33(5)	
929.2(2)								55(18)			
1074.03(3)	$\langle 5 \rangle^+$					1.1(1)		2.2(2)	0.8(1)	0.6(1)	21(2)
1113.6(1)	$\langle 5 \rangle^+$					8(1)	18.0(9)				
1174.6(1)	$X^-$					11(2)	18(2)		24(2)		
1289.9(2)						30(6)					
1300.9(3)							100				
1453.2(3)						100					

Energy levels and branching ratios [95Br38, 05Ku01]. Part 3

**<sup>191</sup>Pt**  
**78**

$E^*$	$2J^\pi$	Branching ratios in percentage									
[keV]		$E_f^*:$ $2J_f^\pi:$	453.83 $\langle 7 \rangle^+$	471.08 $\langle 17 \rangle^+$	487.59 $\langle 7 \rangle^-$	529.27 $\langle 15 \rangle^+$	535.36	574.69	594.28 X $^-$	599.3 $\langle 15 \rangle^+$	613.19 X $^-$
660.23(3)	$\langle 5,7 \rangle^+$		31(6)								
863.93(4)	$\langle 5,7 \rangle^+$		67(13)								
919.1(1)	$15^+, 17^+$			24(4)		43(4)				32(3)	
929.2(2)											$\approx 45$
951.1(1) <sup>a</sup>	$\langle 21 \rangle^+$			100							
986.46(7)			100								
989.5 <sup>j</sup>	$\langle 19 \rangle^+$			30(3)		60(5)				11(2)	
996.2(7)				$\approx 45$							
1074.03(3)	$\langle 5 \rangle^+$		3.3(3)		52(10)		2.5(4)	1.4(2)			0.7(1)
1113.6(1)	$\langle 5 \rangle^+$		7.6(9)		24(4)						
1158.5(1)	$\langle 19^+ \rangle$			59(7)						36(5)	
1174.6(1)	X $^-$								$\approx 11$		9(2)
1302.7(2)	$\langle 19^+ \rangle$			44(5)						17(3)	
1309.6(5)	$\langle 17^+ \rangle$			38(19)		33(7)				19(9)	

Energy levels and branching ratios [95Br38, 05Ku01]. Part 4

 **$^{191}_{78}\text{Pt}$** 

$E^*$	$2J^\pi$	Branching ratios in percentage									
[keV]		$E_f^*$ : $2J_f^\pi$ :	660.23 $\langle 5,7 \rangle^+$	662.2 $X^-$	863.93 $\langle 5,7 \rangle^+$	919.1	951.1 $\langle 21 \rangle^+$	989.5 $\langle 19 \rangle^+$	1158.5 $\langle 19^+ \rangle$	1302.7 $\langle 19^+ \rangle$	1381.5 $\langle 21^- \rangle$
1074.03(3)	$\langle 5 \rangle^+$		11.2(7)	0.8(2)	1.8(2)						
1113.6(1)	$\langle 5 \rangle^+$			36(3)							
1158.5(1)	$\langle 19^+ \rangle$						4.6(8)				
1289.9(2)				70(18)							
1302.7(2)	$\langle 19^+ \rangle$					12(2)	19(3)		8(2)		
1309.6(5)	$\langle 17^+ \rangle$								11(5)		
1381.5(2) <sup>e</sup>	$\langle 21^- \rangle$						29(2)	24(2)	46(3)		
1471.5(2)										100	
1545.8(2) <sup>e</sup>	$\langle 25^- \rangle$										100
1550.4(2) <sup>a</sup>	$\langle 25^+ \rangle$						100				
1590.7(2)											100

Energy levels and branching ratios [95Br38, 05Ku01]. Part 5

 **$^{191}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage						
		$E_f^*:$ $2J_f^\pi:$	1471.5	1545.8 $\langle 25^- \rangle$	1550.4 $\langle 25^+ \rangle$	1862.8 $\langle 27^- \rangle$	2125.2 $\langle 29^- \rangle$	2233.4 $\langle 29^+ \rangle$
1862.8(2) <sup>f</sup>	$\langle 27^- \rangle$			100				
1925.1(4)			100					
1939.2(3)				100				
2125.2(2) <sup>e</sup>	$\langle 29^- \rangle$			79(13)		21(4)		
2233.4(3) <sup>a</sup>	$\langle 29^+ \rangle$				100			
2581.3(4)	$\langle 33^- \rangle$						100	
2940.6(4) <sup>a</sup>	$\langle 33^+ \rangle$							100

Energy levels and branching ratios [98Ba61].

 **$^{192}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	$g$	$L$	$\sigma$ (p,t)	$\varepsilon$	$d\sigma/d\Omega$	Ref.	Branching ratios in percentage					
[keV]			(p,t)	$rel.$	(p,t)	$\mu\text{b/sr}$		$E^*_\text{f}:$ $J^\pi_\text{f}:$	0.0 0 <sup>+</sup>	316 2 <sup>+</sup>	612 2 <sup>+</sup>	785 4 <sup>+</sup>	921 3 <sup>+</sup>
0.0	0 <sup>+</sup>		0	100	5.1	971	79De25						
316.5071(2)	2 <sup>+</sup>		2	11.2	0.84	126	79De25		100				
612.4636(2)	2 <sup>+</sup>		2	1.7	0.16	16	77Se15		15.7(3)	84.3(4)			
784.5764(3)	4 <sup>+</sup>		$\langle 4 \rangle$	1.0	0.21	15	77Se15			100			
920.9188(2)	3 <sup>+</sup>									21.54(10)	77.9(4)	0.52(6)	
1132.53(22)	$\langle 1,2^+ \rangle$								[100]				
1181.71(10)	$\langle 1^+,2^+ \rangle$								[42]	[58]			
1189.11(16)	$\langle 1^+,2^+ \rangle$			2.5			77Se15		28(14)	72(4)			
1195.16(5)	0 <sup>+</sup>	0		incl	0.07	10	79De25	x		23.4(5)	76.6(11)		



(continued)

 **$^{192}\text{Pt}$**   
**78**

$E^*$	$J^\pi$	$g$	$L$	$\sigma$ (p,t)	$\varepsilon$	$d\sigma/d\Omega$	Ref.	Branching ratios in percentage					
[keV]			(p,t)	$rel.$	(p,t)	$\mu\text{b/sr}$		$E_f^*$ : $J_f^\pi$ :	0.0 0 <sup>+</sup>	316 2 <sup>+</sup>	612 2 <sup>+</sup>	785 4 <sup>+</sup>	921 3 <sup>+</sup>
1201.046(1)	4 <sup>+</sup>		$\langle 4 \rangle$			16	79De25			5.30(12)	82.3(4)	12.2(4)	0.16(9)
1277.9(4)	1,2 <sup>(+)</sup>							70(35)	x		30(12)		
1307.86(12)	$\langle 1^+, 2^+ \rangle$							58(19)	31(4)		12(4)		
1353.08(16)	$\langle 1^+ \rangle$							14.3(15)	86(15)				
1365.40(7)	6 <sup>+</sup>					4	79De25					100	
1378.003(22)	3 <sup>-</sup>			2.1		16	77Se15	1.2(3)	50.4(8)	1.3(6)		41.3(12)	
1383.95(7)	$\langle 5 \rangle^-$											97(6)	
1406.32(9)	3 <sup>+</sup>		$\langle 4 \rangle$	0.7		7	77Se15			33(4)			67(5)
1439.28(7)	$\langle 1^+ \rangle$					1	79De25	4.9(10)	91.7(15)	<5.8			<39
1481.78(8)	$\langle 5 \rangle^+$												100
1514.2(4)	1,2 <sup>(+)</sup>							$\approx 26$	74(18)	<24			
1518.34(8)	$\langle 7 \rangle^-$	+0.48(12)				2	79De25						
1546.92(9)	$\langle 0^+ \rangle$		$\langle 0 \rangle$	0.6		1	77Se15	x	5.3(21)	95(3)			
1576.39(6)	$\langle 2^+ \rangle$					4	79De25	79.0(21)	1.11(21)	12.8(6)	<2.1		5.46(21)
1628(2)	0 <sup>+</sup>		0	5	0.26	49	77Se15						
1666.53(10)	2,3,4												42(6)
1739.53(8)	$\langle 1^- \rangle$							6.4(4)	92.1(15)	<46			
1746.40(11)	$\langle 6 \rangle^-$												
1792(2)						6	79De25						
1800(2)						23	79De25						
1823.0(4)	1 <sup>+</sup> , 2 <sup>+</sup>							58(28)	42(14)				<13
1858(2)						43	79De25						
1869	$\langle 6^+ \rangle$												
1880.24(15)	$\langle 2^+ \rangle$					5	79De25	27(10)	56(17)	16.9(14)	x		
1883.33(14)	$\langle 0^+ \rangle$							x	77(12)	15.6(16)			
1894.54(17)	$\langle 1^- \rangle$					4	79De25	16(8)	x	84(6)			
1937(2)	$\langle 4^+ \rangle$		3,4	1.4	0.32	11	79De25						
1964.51(13)	$\langle 8 \rangle^-$												
1974(2)	$\langle 2^+ \rangle$		$\langle 2 \rangle$	2.8		28	79De25						
1982(2)						9	79De25						
2018.36(13)	8 <sup>+</sup>					3	79De25						
2019(3)													
2047.92(9)	1 <sup>+</sup> , 2 <sup>+</sup>		$\langle 2 \rangle$	5.2		70	77Se15		[74(4)]	[23.7]			
2074.10(18)	$\langle 2^+ \rangle$					7	79De25	63(23)	x	37(19)	$\leq 35$		
2103.22(12)	$\langle 9 \rangle^-$												
2113.20(20)	$\langle 7^+ \rangle$												
2130.04(18)	$\langle 1, 2^+ \rangle$					7	79De25	35(9)	43(9)	13(1)			
2140(2)						13	79De25						
2149.48(8)	$\langle 1^+ \rangle$					8	79De25	3.2(8)	83(9)	11.1(5)			x
2171.49(8)	$\langle 2^+ \rangle$					19	79De25	39(8)	7(3)	28.2(8)	16.4(8)		9.5(5)
2172.36(13)	10 <sup>-</sup>	-0.0012(10)											
2188(2)						7	79De25						
2200.72(8)	$\langle 2^+ \rangle$					17	79De25	x		29(2)			
2216.61(14)	$\langle 2^- \rangle$								7(3)	5(3)			x
2236.94(8)	$\langle 2^+ \rangle$							72(7)		21.7(4)			2.9(3)

(continued)

 **$^{192}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	$g$	$L$	$\sigma$ (p,t)	$\varepsilon$	$d\sigma/d\Omega$	Ref.	Branching ratios in percentage					
[keV]			(p,t)	$rel.$	(p,t)	$\mu\text{b/sr}$		$E_f^*$ : $J_f^\pi$ :	0.0 0 <sup>+</sup>	316 2 <sup>+</sup>	612 2 <sup>+</sup>	785 4 <sup>+</sup>	921 3 <sup>+</sup>
2257.33(11)	$\langle 2^- \rangle$								1.3	62(9)	18.5(7)		18.7(11)
2271(2)						18	79De25						
2295.84(14)	$\langle 1^+, 2^+ \rangle$									81(11)	11.2(11)	x	
2308(2)						25	79De25						
2313.5(6)													
2319.18(11)	$\langle 1^+, 2^+ \rangle$								35(4)	20(4)	43(1)		x
2335.58(7)	$\langle 1^+ \rangle$					1	79De25		19(2)	17(2)	35(1)		$\leq 2.6$
2352(2)						4	79De25						
2358(2)						7	79De25						
2375.38(8)	$\langle 0^+ \rangle$					2	79De25		x	21(4)	60(8)		
2389(2)						2	79De25						
2399.46(10)	$\langle 0^+ - 2^+ \rangle$								x	41(6)	52(8)		
2408.59(15)	$\langle 2^+ \rangle$					6	79De25		21(5)	30(7)	11(5)		9(3)
2423.06(12)	$\langle 2^+ \rangle$					15	79De25		48(6)	37(5)			
2444(2)						11	79De25						
2453.28(18)	$\langle 1^+, 2^+ \rangle$					9	79De25		20(5)	50(9)	25(11)		
2463.8(3)	$\langle 1^- \rangle$					13	79De25		<64	[100]			
2472.50(21)	$\langle 2^+ \rangle$									69(17)	14(6)		
2486(2)						6	79De25						
2492(2)						8	79De25						
2506(3)						1	79De25						
2511.75(23)	$\langle 11 \rangle^-$												
2518.98(16)	$\langle 10 \rangle^+$												
2526(3)						6	79De25						
2530.3(6)	$\langle 10^- \rangle$												
2533.33(16)	$\langle 1^+, 2^+ \rangle$								<5.3	13.7(18)	84(11)		
2549(3)						21	79De25						
2556(3)						11	79De25						
2575(3)						4	79De25						
2583.37(21)	$\langle 10^+ \rangle$												
2585.03(14)	$\langle 2^+ \rangle$					6	79De25			22(6)	43(16)		9(4)
2591	$\langle 8^+ \rangle$												
2605(3)						7	79De25						
2614.48(15)	$\langle 2^+ \rangle$								58(9)	25(9)			17(2)
2623.72(18)	$\langle 12 \rangle^+$	-0.18(9)				6	79De25						
2624(3)													
2626.64(24)	$\langle 12 \rangle^-$												
2629.98(17)	$\langle 2^+ \rangle$								22(7)	45(8)	x		
2646(3)						18	79De25						
2658.5(6)	$1, 2^{(+)}$					5	79De25		50(14)	38(18)			
2675.64(12)	$\langle 1^- \rangle$					3	79De25		x	10(7)			
2695(3)						4	79De25						
2704(3)						6	79De25						
2709.1(3)	$\langle 11 \rangle^-$												
2720(3)						7	79De25						

(continued)

**<sup>192</sup>Pt**  
**78**

$E^*$	$J^\pi$	$g$	$L$	$\sigma$ (p,t)	$\varepsilon$	$d\sigma/d\Omega$	Ref.	Branching ratios in percentage					
[keV]			(p,t)	$rel.$	(p,t)	$\mu\text{b/sr}$		$E_f^*$ : $J_f^\pi$ :	0.0 0 <sup>+</sup>	316 2 <sup>+</sup>	612 2 <sup>+</sup>	785 4 <sup>+</sup>	921 3 <sup>+</sup>
2729(3)						10	79De25						
2729.4	$\langle 10^+ \rangle$												
2743(3)						6	79De25						
2757.3(7)	$\langle 2^+ \rangle$					6	79De25	9(5)	26(8)			50(24)	
2780.6(8)	$\langle 1,2^+ \rangle$					5	79De25	100	<100				
2786(3)						4	79De25						
2833.70(21)	$\langle 2^+ \rangle$									66(18)	x		
2856.46(18)	$\langle 2^- \rangle$									29(8)	44(12)		10(5)
2889.57(13)	$\langle 2^+ \rangle$							2.2(8)	25(5)	8(4)			6(3)
2908.55(11)	$\langle 1^+,2^+ \rangle$							1.1(4)	2.5(16)	9(4)			
2933.02(23)	$\langle 12 \rangle^+$												
2936.37(25)	$\langle 12^+ \rangle$												
2945.89(24)	$\langle 11 \rangle^+$												
2950.2(4)													
2951.7(3)	$\langle 2^+ \rangle$							9(2)	61(9)			22(7)	
2998.23(21)	$\langle 14 \rangle^+$												
3022.26(25)	$\langle 13^- \rangle$												
3080.1(3)	$\langle 14^+ \rangle$												
3082.4(6)	$\langle 12^- \rangle$												
3145.57(17)	$\langle 1^- \rangle$							18(5)	17(4)	<26			
3156.12(15)	$\langle 1^- \rangle$							0.9(5)	35(7)	15(5)			
3225.5(3)	$\langle 13^+ \rangle$												
3357.5(6)	$\langle 13^- \rangle$												
3359.7(5)	$\langle 1^-,2^- \rangle$									32(8)	34(11)		
3400.0(5)													
3542.1(3)	$\langle 16 \rangle^+$												
3569.3(4)													
3673.8(5)													
3695.3(3)	$\langle 15 \rangle^-$												
3883.3(4)													
3923.6(3)	$\langle 17^- \rangle$												
4160.4(4)													
4204.2(4)	$\langle 18 \rangle^+$												
4320.5(4)													
4950.7(6)	$\langle 20^+ \rangle$												
		06Le06		77Se15			Ref.						

Additional data on this isotope can be found in [78Ba20].

*Abundance:* 0.782(7) %.

Configurations of isomeric states and  $g$  factors are discussed in [06Le06].

Cross section of two-neutron transfer reaction (p,t) was measured at 7° [79De25]. The enhancement

factors  $\varepsilon$  were calculated with pickup configurations  $(0p_{3/2})^2$  for  $L=0$ ,  $2p_{3/2} \otimes 1f_{7/2}$  for  $L=2$ , and  $(1f_{5/2} \otimes 2p_{3/2})$  for  $L=4$  [79De25].

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

Energy levels and branching ratios [98Ba61]. Part 2

**<sup>192</sup>Pt**  
**78**

$E^*$	$J^\pi$	$T_{1/2}$ or	Ref.	Branching ratios in percentage						
[keV]		$\Gamma_{\text{cm}}$		$E_{\text{f}}^*$ : $J_{\text{f}}^\pi$ :	1132.53 $\langle 1,2^+ \rangle$	1181.71 $\langle 1^+,2^+ \rangle$	1189.11 $\langle 1^+,2^+ \rangle$	1195.16 $0^+$	1201.05 $4^+$	1277.9 $1,2^{\langle + \rangle}$
0.0	$0^+$	Stable	79De25							
316.5071(2)	$2^+$	43.7(9) ps	79De25							
612.4636(2)	$2^+$	26.5(15) ps	77Se15							
784.5764(3)	$4^+$	4.2(2) ps	77Se15							
920.9188(2)	$3^+$	21.3(21) ps								
1132.53(22)	$\langle 1,2^+ \rangle$									
1181.71(10)	$\langle 1^+,2^+ \rangle$									
1189.11(16)	$\langle 1^+,2^+ \rangle$		77Se15							
1195.16(5)	$0^+$		79De25							
1201.046(1)	$4^+$		79De25							
1277.9(4)	$1,2^{\langle + \rangle}$									
1307.86(12)	$\langle 1^+,2^+ \rangle$									
1353.08(16)	$\langle 1^+ \rangle$									
1365.40(7)	$6^+$	1.8(7) ps	79De25							
1378.003(22)	$3^-$	61(15) ps	77Se15						5.9(9)	
1383.95(7)	$\langle 5 \rangle^-$								2.9(4)	
1406.32(9)	$3^+$		77Se15							
1439.28(7)	$\langle 1^+ \rangle$		79De25					3.4(4)		
1481.78(8)	$\langle 5 \rangle^+$									
1514.2(4)	$1,2^{\langle + \rangle}$									
1518.34(8)	$\langle 7 \rangle^-$	1.85(17) ns	79De25							
1546.92(9)	$\langle 0^+ \rangle$		77Se15							
1576.39(6)	$\langle 2^+ \rangle$		79De25					$\approx 1.7$		
1628(2)	$0^+$		77Se15							
1666.53(10)	2,3,4									
1739.53(8)	$\langle 1^- \rangle$							1.5(6)		
1746.40(11)	$\langle 6 \rangle^-$									
1792(2)			79De25							
1800(2)			79De25							
1823.0(4)	$1^+,2^+$						<19			
1858(2)			79De25							
1869	$\langle 6^+ \rangle$								100	
1880.24(15)	$\langle 2^+ \rangle$		79De25							
1883.33(14)	$\langle 0^+ \rangle$			7(2)						
1894.54(17)	$\langle 1^- \rangle$		79De25				x			
1937(2)	$\langle 4^+ \rangle$		79De25							
1964.51(13)	$\langle 8 \rangle^-$									
1974(2)	$\langle 2^+ \rangle$		79De25							
1982(2)			79De25							
2018.36(13)	$8^+$		79De25							
2019(3)										
2047.92(9)	$1^+,2^+$		77Se15							<3.8
2074.10(18)	$\langle 2^+ \rangle$		79De25							
2103.22(12)	$\langle 9 \rangle^-$									
2113.20(20)	$\langle 7^+ \rangle$									

(continued)

 **$^{192}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	$T_{1/2}$ or	Ref.	Branching ratios in percentage						
[keV]		$\Gamma_{\text{cm}}$		$E^*_\text{f}$ : $J^\pi_\text{f}$ :	1132.53 $\langle 1, 2^+ \rangle$	1181.71 $\langle 1^+, 2^+ \rangle$	1189.11 $\langle 1^+, 2^+ \rangle$	1195.16 $0^+$	1201.05 $4^+$	1277.9 $1, 2^{\langle + \rangle}$
2130.04(18)	$\langle 1, 2^+ \rangle$	280(30) ns	79De25			9(3)				
2140(2)			79De25							
2149.48(8)	$\langle 1^+ \rangle$		79De25							
2171.49(8)	$\langle 2^+ \rangle$		79De25							
2172.36(13)	$10^-$									
2188(2)			79De25							
2200.72(8)	$\langle 2^+ \rangle$		79De25							
2216.61(14)	$\langle 2^- \rangle$				3(3)					
2236.94(8)	$\langle 2^+ \rangle$						<0.75			
2257.33(11)	$\langle 2^- \rangle$									
2271(2)			79De25							
2295.84(14)	$\langle 1^+, 2^+ \rangle$					5.6(11)				
2308(2)			79De25							
2313.5(6)										
2319.18(11)	$\langle 1^+, 2^+ \rangle$									
2335.58(7)	$\langle 1^+ \rangle$		79De25					29.1(7)		
2352(2)			79De25							
2358(2)			79De25							
2375.38(8)	$\langle 0^+ \rangle$		79De25					x		<6
2389(2)			79De25							
2399.46(10)	$\langle 0^+ - 2^+ \rangle$							x		
2408.59(15)	$\langle 2^+ \rangle$		79De25			x				
2423.06(12)	$\langle 2^+ \rangle$		79De25			1.3(7)				
2444(2)			79De25							
2453.28(18)	$\langle 1^+, 2^+ \rangle$		79De25				5.1(10)			
2463.8(3)	$\langle 1^- \rangle$		79De25							
2472.50(21)	$\langle 2^+ \rangle$									
2486(2)			79De25							
2492(2)			79De25							
2506(3)			79De25							
2511.75(23)	$\langle 11 \rangle^-$									
2518.98(16)	$\langle 10 \rangle^+$									
2526(3)			79De25							
2530.3(6)	$\langle 10^- \rangle$									
2533.33(16)	$\langle 1^+, 2^+ \rangle$									
2549(3)			79De25							
2556(3)			79De25							
2575(3)			79De25							
2583.37(21)	$\langle 10^+ \rangle$									
2585.03(14)	$\langle 2^+ \rangle$		79De25							
2591	$\langle 8^+ \rangle$									
2605(3)			79De25							
2614.48(15)	$\langle 2^+ \rangle$									
2623.72(18)	$\langle 12 \rangle^+$	2.62(18) ns	79De25							
2624(3)										

(continued)

 **$^{192}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	$T_{1/2}$ or	Ref.	Branching ratios in percentage						
[keV]		$\Gamma_{\text{cm}}$		$E_{\text{f}}^*$ : $J_{\text{f}}^\pi$ :	1132.53 $\langle 1, 2^+ \rangle$	1181.71 $\langle 1^+, 2^+ \rangle$	1189.11 $\langle 1^+, 2^+ \rangle$	1195.16 $0^+$	1201.05 $4^+$	1277.9 $1, 2^{\langle + \rangle}$
2626.64(24)	$\langle 12 \rangle^-$									
2629.98(17)	$\langle 2^+ \rangle$								11.1(11)	
2646(3)			79De25							
2658.5(6)	$1, 2^{\langle + \rangle}$		79De25				<44			
2675.64(12)	$\langle 1^- \rangle$		79De25							
2695(3)			79De25							
2704(3)			79De25							
2709.1(3)	$\langle 11 \rangle^-$									
2720(3)			79De25							
2729(3)			79De25							
2729.4	$\langle 10^+ \rangle$									
2743(3)			79De25							
2757.3(7)	$\langle 2^+ \rangle$		79De25							
2780.6(8)	$\langle 1, 2^+ \rangle$		79De25							
2786(3)			79De25							
2833.70(21)	$\langle 2^+ \rangle$								6(3)	
2856.46(18)	$\langle 2^- \rangle$					6(3)				
2889.57(13)	$\langle 2^+ \rangle$			x					8(4)	
2908.55(11)	$\langle 1^+, 2^+ \rangle$									
2933.02(23)	$\langle 12 \rangle^+$									
2936.37(25)	$\langle 12^+ \rangle$									
2945.89(24)	$\langle 11 \rangle^+$									
2950.2(4)										
2951.7(3)	$\langle 2^+ \rangle$									
2998.23(21)	$\langle 14 \rangle^+$									
3022.26(25)	$\langle 13^- \rangle$									
3080.1(3)	$\langle 14^+ \rangle$									
3082.4(6)	$\langle 12^- \rangle$									
3145.57(17)	$\langle 1^- \rangle$							65(12)		
3156.12(15)	$\langle 1^- \rangle$									
3225.5(3)	$\langle 13^+ \rangle$									
3357.5(6)	$\langle 13^- \rangle$									
3359.7(5)	$\langle 1^-, 2^- \rangle$									
3400.0(5)										
3542.1(3)	$\langle 16 \rangle^+$									
3569.3(4)										
3673.8(5)										
3695.3(3)	$\langle 15 \rangle^-$									
3883.3(4)										
3923.6(3)	$\langle 17^- \rangle$									
4160.4(4)										
4204.2(4)	$\langle 18 \rangle^+$									
4320.5(4)										
4950.7(6)	$\langle 20^+ \rangle$									
			Ref.							

## Energy levels and branching ratios [98Ba61]. Part 3

 **$^{192}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E^*_f$ : $J^\pi_f$ :	1307.86 $\langle 1^+, 2^+ \rangle$	1353.08 $\langle 1^+ \rangle$	1365.40 $6^+$	1378.00 $3^-$	1383.95 $\langle 5 \rangle^-$	1406.32 $3^+$	1439.28 $\langle 1^+ \rangle$	1481.78 $\langle 5 \rangle^+$	1518.34 $\langle 7 \rangle^-$	1546.92 $\langle 0^+ \rangle$
1518.34(8)	$\langle 7 \rangle^-$				14.0(13)		86(5)					
1666.53(10)	2,3,4					58(6)						
1746.40(11)	$\langle 6 \rangle^-$						100					
1894.54(17)	$\langle 1^- \rangle$			<12								
1964.51(13)	$\langle 8 \rangle^-$										100	
2018.36(13)	$8^+$				100							
2047.92(9)	$1^+, 2^+$							[2.6]				
2103.22(12)	$\langle 9 \rangle^-$										100	
2113.20(20)	$\langle 7^+ \rangle$									100		
2149.48(8)	$\langle 1^+ \rangle$								2.28(15)			
2200.72(8)	$\langle 2^+ \rangle$					61(2)						
2216.61(14)	$\langle 2^- \rangle$								<3.2			
2236.94(8)	$\langle 2^+ \rangle$											2.57(7)
2295.84(14)	$\langle 1^+, 2^+ \rangle$								2.0(11)			
2335.58(7)	$\langle 1^+ \rangle$								<2.4			
2399.46(10)	$\langle 0^+ - 2^+ \rangle$								7.3(6)			
2408.59(15)	$\langle 2^+ \rangle$			<8				x	10(2)			
2423.06(12)	$\langle 2^+ \rangle$			3.0(10)				1.7(2)				
2453.28(18)	$\langle 1^+, 2^+ \rangle$											<15
2463.8(3)	$\langle 1^- \rangle$											x
2472.50(21)	$\langle 2^+ \rangle$							17(6)				
2533.33(16)	$\langle 1^+, 2^+ \rangle$								2.5(6)			
2585.03(14)	$\langle 2^+ \rangle$					25(2)						
2629.98(17)	$\langle 2^+ \rangle$		14(5)									
2833.70(21)	$\langle 2^+ \rangle$								13(5)			
2889.57(13)	$\langle 2^+ \rangle$					x						
2908.55(11)	$\langle 1^+, 2^+ \rangle$								<4.6			
3359.7(5)	$\langle 1^-, 2^- \rangle$		24(13)									

## Energy levels and branching ratios [98Ba61]. Part 4

 **$^{192}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E^*_f$ : $J^\pi_f$ :	1576.39 $\langle 2^+ \rangle$	1739.53 $\langle 1^- \rangle$	1823.0 $\langle 1^+, 2^+ \rangle$	1869 $\langle 6^+ \rangle$	1880.24 $\langle 2^+ \rangle$	1883.33 $\langle 0^+ \rangle$	1894.54 $\langle 1^- \rangle$	1964.51 $\langle 8 \rangle^-$	2018.36 $8^+$	2047.92 $\langle 1^+, 2^+ \rangle$
2171.49(8)	$\langle 2^+ \rangle$							x				
2172.36(13)	$10^-$									56(5)		
2200.72(8)	$\langle 2^+ \rangle$		10.2(9)									
2216.61(14)	$\langle 2^- \rangle$			84(8)	2.3(9)							
2236.94(8)	$\langle 2^+ \rangle$		0.30(15)									
2257.33(11)	$\langle 2^- \rangle$			<15								
2319.18(11)	$\langle 1^+, 2^+ \rangle$				0.9(4)							
2335.58(7)	$\langle 1^+ \rangle$							0.3(1)				

(continued)

 **$^{192}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	1576.39 $\langle 2^+ \rangle$	1739.53 $\langle 1^- \rangle$	1823.0 $\langle 1^+, 2^+ \rangle$	1869 $\langle 6^+ \rangle$	1880.24 $\langle 2^+ \rangle$	1883.33 $\langle 0^+ \rangle$	1894.54 $\langle 1^- \rangle$	1964.51 $\langle 8 \rangle^-$	2018.36 $8^+$	2047.92 $\langle 1^+, 2^+ \rangle$
2375.38(8)	$\langle 0^+ \rangle$		6.2(4)									
2408.59(15)	$\langle 2^+ \rangle$			15(3)				5(2)				
2423.06(12)	$\langle 2^+ \rangle$			8(2)								
2518.98(16)	$\langle 10 \rangle^+$										100	
2530.3(6)	$\langle 10^- \rangle$									100		
2583.37(21)	$\langle 10^+ \rangle$										58(17)	
2585.03(14)	$\langle 2^+ \rangle$	x					x					
2591	$\langle 8^+ \rangle$					100						
2614.48(15)	$\langle 2^+ \rangle$				<6							
2629.98(17)	$\langle 2^+ \rangle$			8(3)								
2658.5(6)	$1, 2^{\langle + \rangle}$						<20					
2675.64(12)	$\langle 1^- \rangle$			68(4)			7(3)					
2729.4	$\langle 10^+ \rangle$										100	
2833.70(21)	$\langle 2^+ \rangle$		15.0(9)									
2889.57(13)	$\langle 2^+ \rangle$		39(1)									
2951.7(3)	$\langle 2^+ \rangle$											4(2)
3145.57(17)	$\langle 1^- \rangle$											<12
3156.12(15)	$\langle 1^- \rangle$		32(2)	9(3)								3.9(3)

Energy levels and branching ratios [98Ba61]. Part 5

 **$^{192}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	2074.10 $\langle 2^+ \rangle$	2103.22 $\langle 9 \rangle^-$	2149.48 $\langle 1^+ \rangle$	2171.49 $\langle 2^+ \rangle$	2172.36 $\langle 10 \rangle^-$	2200.72 $\langle 2^+ \rangle$	2216.61 $\langle 2^- \rangle$	2236.94 $\langle 2^+ \rangle$	2257.33 $\langle 2^- \rangle$	2295.84 $\langle 1^+, 2^+ \rangle$
2172.36(13)	$10^-$			44(4)								
2313.5(6)				100								
2375.38(8)	$\langle 0^+ \rangle$				12.7(4)							
2511.75(23)	$\langle 11 \rangle^-$					100						
2583.37(21)	$\langle 10^+ \rangle$					42(5)						
2626.64(24)	$\langle 12 \rangle^-$					100						
2658.5(6)	$1, 2^{(+)}$								12(6)	<6		
2675.64(12)	$\langle 1^- \rangle$				15.6(13)							
2709.1(3)	$\langle 11 \rangle^-$		100									
2757.3(7)	$\langle 2^+ \rangle$							15(7)				
2833.70(21)	$\langle 2^+ \rangle$							<5				
2856.46(18)	$\langle 2^- \rangle$										6(3)	<4
2889.57(13)	$\langle 2^+ \rangle$	<4.2										
2908.55(11)	$\langle 1^+, 2^+ \rangle$				87.7(16)							
2951.7(3)	$\langle 2^+ \rangle$				<4			3.6(12)				
3359.7(5)	$\langle 1^-, 2^- \rangle$										11(5)	



Energy levels and branching ratios [98Ba61]. Part 6

 **$^{192}\text{Pt}$**   
 **$_{78}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	2319.18 $\langle 1^+, 2^+ \rangle$	2335.58 $\langle 1^+ \rangle$	2375.38 $\langle 0^+ \rangle$	2399.46	2423.06 $\langle 2^+ \rangle$	2453.28 $\langle 1^+, 2^+ \rangle$	2463.8 $\langle 1^- \rangle$	2511.75 $\langle 11 \rangle^-$	2518.98 $\langle 10 \rangle^+$	2530.3 $\langle 10^- \rangle$
2623.72(18)	$\langle 12 \rangle^+$										100	
2757.3(7)	$\langle 2^+ \rangle$			$<3$								
2856.46(18)	$\langle 2^- \rangle$						5.5(6)					
2933.02(23)	$\langle 12 \rangle^+$										100	
2945.89(24)	$\langle 11 \rangle^+$										100	
2950.2(4)										100		
3022.26(25)	$\langle 13^- \rangle$									79(20)		
3082.4(6)	$\langle 12^- \rangle$											100
3145.57(17)	$\langle 1^- \rangle$				$<4.4$	x						
3156.12(15)	$\langle 1^- \rangle$		4(1)		$<2$							
3359.7(5)	$\langle 1^-, 2^- \rangle$							$<34$	$<98$			

Energy levels and branching ratios [98Ba61]. Part 7

 **$^{192}\text{Pt}$**   
 **$_{78}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E^*_\text{f}$ : $J^\pi_\text{f}$ :	2533.33 $\langle 1^+, 2^+ \rangle$	2583.37 $\langle 10^+ \rangle$	2585.03 $\langle 2^+ \rangle$	2614.48 $\langle 2^+ \rangle$	2623.72 $\langle 12 \rangle^+$	2626.64 $\langle 12 \rangle^-$	2709.1 $\langle 11 \rangle^-$	2856.46 $\langle 2^- \rangle$	2933.02 $\langle 12 \rangle^+$	2945.89 $\langle 11 \rangle^+$
2623.72(18)	$\langle 12 \rangle^+$			<0.0020								
2889.57(13)	$\langle 2^+ \rangle$				12(1)							
2936.37(25)	$\langle 12^+ \rangle$		100									
2998.23(21)	$\langle 14 \rangle^+$					100						
3022.26(25)	$\langle 13^- \rangle$						21(3)					
3080.1(3)	$\langle 14^+ \rangle$										100	
3145.57(17)	$\langle 1^- \rangle$			<5					x			
3156.12(15)	$\langle 1^- \rangle$				<2							
3225.5(3)	$\langle 13^+ \rangle$											100
3357.5(6)	$\langle 13^- \rangle$								100			
3359.7(5)	$\langle 1^-, 2^- \rangle$	<29										

Energy levels and branching ratios [98Ba61]. Part 8

 **$^{192}\text{Pt}$**   
 **$_{78}$** 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage									
		$E_f^*$ : $J_f^\pi$ :	2998.23 $\langle 14^+ \rangle$	3022.26 $\langle 13^- \rangle$	3080.1 $\langle 14^+ \rangle$	3400.0	3542.1 $\langle 16^+ \rangle$	3695.3 $\langle 15^- \rangle$	3923.6 $\langle 17^- \rangle$	4160.4	4204.2 $\langle 18^+ \rangle$
3400.0(5)					100						
3542.1(3)	$\langle 16^+ \rangle$		100								
3569.3(4)					100						
3673.8(5)						100					
3695.3(3)	$\langle 15^- \rangle$		36(4)	64(6)							

(continued)

 **$^{192}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage								
		$E_f^*$ : $J_f^\pi$ :	2998.23 $\langle 14 \rangle^+$	3022.26 $\langle 13^- \rangle$	3080.1 $\langle 14^+ \rangle$	3400.0	3542.1 $\langle 16 \rangle^+$	3695.3 $\langle 15 \rangle^-$	3923.6 $\langle 17^- \rangle$	4160.4 4204.2 $\langle 18 \rangle^+$
3883.3(4)								100		
3923.6(3)	$\langle 17^- \rangle$						19(7)	81(7)		
4160.4(4)									100	
4204.2(4)	$\langle 18 \rangle^+$						100			
4320.5(4)										100
4950.7(6)	$\langle 20^+ \rangle$									100

Energy levels and branching ratios [98Ar07, 06Ac01].

 **$^{193}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$L$ (d,t)	$C^2S$ (p,d)	$C^2S$ (d,t)	$\sigma$ (d,t) $\mu\text{b/sr}$	$L$ ( $\tau, \alpha$ )	$C^2S$ ( $\tau, \alpha$ )	$\sigma$ ( $\tau, \alpha$ ) $\mu\text{b/sr}$	$L$ (p,t)	$\sigma$ (p,t) <i>rel.</i>	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.
0.0	$1^-$	1	1.08	1.15	2040				0	100	50(6) yr	78Be09
1.642(2)	$3^-$	1	1.10	1.20						$\langle 12 \rangle$	9.7(3) ns	78Be09
14.276(8)	$5^-$			1.70		3,4	1.31	344		$\langle 6 \rangle$	2.52(5) ns	78Be09
114.158(8)	$3^-$	1	0.07	0.03						1.9		78Be09
121.29(3)	$1^- - 5^-$	1	0.07	0.03						incl		78Be09
149.78(4) <sup>a</sup>	$13^+$	6	4.24	5.83	300	6	6.37	1870		weak	4.33(3) d	78Be09
187.81(2)	$3^-$								2	2.7		80Ro07
199.0(2) <sup>b</sup>	$\langle 11^+ \rangle$											
232.16(2)	$\langle 5 \rangle^-$	$\langle 3 \rangle$	0.03		80				2	4.9		78Be09
269.83(2)	$\langle 3 \rangle^-$	1	0.02						2	1.9		78Be09
308(3)		$\langle 4,5 \rangle$	0.14							$\langle 0.15 \rangle$		78Be09
331(10)						5,6	1.21	331				
340(3)		$\langle 4,5 \rangle$	0.16		110					2		78Be09
415(3)*	$5^-, 7^-$	3	1.06		390	3,4	0.92	247				78Be09
425(3)	$5^-, 7^-$	3	0.04		incl	incl	incl			4.6		78Be09
439.05(3)	$\langle 3 \rangle^-$	1	0.03									78Be09
459(3)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.18							2		78Be09
491.0(2) <sup>a</sup>	$\langle 17^+ \rangle$							57				
491.24(2)	$\langle 5 \rangle^-$	$\langle 3 \rangle$	0.18		120				2	0.7		78Be09
519.6(1) <sup>b</sup>	$\langle 15^+ \rangle$											
522.53(8)	$\langle 3^-, 5^- \rangle$											
530(3)	$1^-, 3^-$	1	0.03							1.8		78Be09
544(3)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.17									78Be09
563(3)	$1^-, 3^-$	1	0.02									78Be09
599(3)	$5^-, 7^-$	3	1.04		290	3	0.95	268		4.2		78Be09
603.3(1)	$\langle 15^+ \rangle$											
622(4)										0.9		80Ro07
630(5)	$5^-, 7^-$	3	0.22									78Be09
642(4)										1.2		80Ro07
665(3)	$11^+, 13^+$	6	0.39			6	0.84	219				78Be09

(continued)

**<sup>193</sup>Pt**  
**78**

$E^*$	$2J^\pi$	$L$	$C^2S$	$C^2S$	$\sigma$ (d,t)	$L$	$C^2S$	$\sigma$ ( $\tau,\alpha$ )	$L$	$\sigma$ (p,t)	$T_{1/2}$ or	Ref.
[keV]		(d,t)	(p,d)	(d,t)	$\mu\text{b/sr}$	( $\tau, \alpha$ )	( $\tau, \alpha$ )	$\mu\text{b/sr}$	(p,t)	rel.	$\Gamma_{\text{cm}}$	
692(3)	$\langle 11^+, 13^+ \rangle$	$\langle 6 \rangle$	0.55									78Be09
700	$1^-, 3^-$									0.5		80Ro07
701(5)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.08									78Be09
718(4)	$\langle 1^+ \rangle$	$\langle 0 \rangle$	0.006									78Be09
728(5)	$5^-, 7^-$	3	0.16			3,4	0.38	110		1.5		78Be09
755(5)	$5^-, 7^-$	3	0.32							3.3		78Be09
828(4)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.10		340	3,4	0.29	70		2.1		78Be09
846(5)	$3^-$	1	0.44						2	4.3		78Be09
907.4(2)	$\langle 17^+ \rangle$											
923(5)	$3^-$	1	0.11		100				2	3		78Be09
969(10)												
980.5(2) <sup>b</sup>	$\langle 19^+ \rangle$											
984(4)										1.1		80Ro07
1003.4(4) <sup>a</sup>	$\langle 21^+ \rangle$											
1014(5)		$\langle 4, 5 \rangle$	0.05									78Be09
1021(10)					60	5,6	1.73	460				85Th02
1042(5)	$11^+, 13^+$	6	1.65									78Be09
1053(8)										2.5		80Ro07
1069(10)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.05									78Be09
1099(5)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.09			3=5	0.25	57		1		78Be09
1103.5(4)	$X^{(+)}$											
1130(10)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.04									78Be09
1159.9(2)	$\langle 19^+ \rangle$											
1169(10)	$\langle 1^-, 3^- \rangle$	$\langle 1 \rangle$	0.02		90							78Be09
1182(8)	$\langle 3 \rangle^-$								2	1		80Ro07
1188(5)		1	0.13									78Be09
1219(10)						3,4	0.25	75		1.9		85Th02
1222(5)	$1^-, 3^-$	1	0.044		50							78Be09
1222(5)	$5^-, 7^-$	3	0.13		incl							78Be09
1245(5)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.22		incl					0.8		78Be09
1259(10)										2.9		80Ro07
1320(5)	$5^-, 7^-$	3	0.10		70							78Be09
1320(5)	$1^-, 3^-$	1	0.016									78Be09
1320.9(2) <sup>c</sup>	$\langle 21^- \rangle$											
1333(8)										2.8		80Ro07
1359(4)	$11^+, 13^+$	6	0.30			6	0.67	193				78Be09
1364(8)										1.9		80Ro07
1425(8)										2		80Ro07
1442(10)								42				
1454.8(3) <sup>c</sup>	$\langle 25^- \rangle$										3.2(3) ns	
1457(8)	$1^-$								0	3		80Ro07
1510.4(3)												
1534(8)	$1^-$								0	1.4		80Ro07
1557(8)	$1^-$								0	3.5		80Ro07
1561(10)						3,4		105				85Th02

(continued)

**<sup>193</sup>Pt**  
**78**

$E^*$	$2J^\pi$	$L$	$C^2S$	$C^2S$	$\sigma$ (d,t)	$L$	$C^2S$	$\sigma$ ( $\tau,\alpha$ )	$L$	$\sigma$ (p,t)	$T_{1/2}$ or	Ref.
[keV]		(d,t)	(p,d)	(d,t)	$\mu\text{b/sr}$	( $\tau,\alpha$ )	( $\tau,\alpha$ )	$\mu\text{b/sr}$	(p,t)	rel.	$\Gamma_{\text{cm}}$	
1585(8)	$1^-, 3^-$									1.6		80Ro07
1610(8)										0.9		80Ro07
1631.8(4) <sup>a</sup>	$\langle 25^+ \rangle$											
1668(10)						4,5	0.61	107				85Th02
1689.9(3) <sup>c</sup>	$\langle 27^- \rangle$											
1744(10)	$5^-, 7^-$					3	0.44	146				85Th02
1776.9(4)												
1913(10)								232				85Th02
1986.7(4)												
1992.2(3) <sup>c</sup>	$\langle 29^- \rangle$											
2237								292				85Th02
2335.2(5) <sup>a</sup>	$\langle 29^+ \rangle$											
2337(10)												
2696.2(6) <sup>a</sup>	$\langle 33^+ \rangle$											
3129.2(6) <sup>a</sup>	$\langle 37^+ \rangle$											
			78Be09		65Mu05		85Th02			80Ro07		Ref.
				78Be09								Ref.

\* Absent in [06Ac01], three bands (A,B,C here marked a,b,c) are assigned in this evaluation.

 $C^2S = (\sigma/d\Omega)/N(d\sigma/d\Omega)(DWBA)$  with  $N=2.29, 3.33$  and  $34$  for the (p,d), (d,t) and ( $\tau,\alpha$ ) reactions, respectively [98Ar07];  $\sigma$  (d,t) was measured at  $60^\circ$  [65Mu05].

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

Energy levels and branching ratios [98Ar07, 06Ac01]. Part 2

**<sup>193</sup>Pt**  
**78**

$E^*$	$2J^\pi$	Branching ratios in percentage										
		$E_f^*$ :	0.0	1.6	14.3	114	121	149.78	187.81	199.0	232.16	269.83
[keV]		$2J_f^\pi$ :	$1^-$	$3^-$	$5^-$	$3^-$		$13^+$	$3^-$	$\langle 11^+ \rangle$	$\langle 5^- \rangle$	$\langle 3^- \rangle$
1.642(2)	$3^-$		x									
14.276(8)	$5^-$			100								
114.158(8)	$3^-$		25(5)	70(5)	4.4(8)							
121.29(3)	$1^- - 5^-$			x								
149.78(4) <sup>a</sup>	$13^+$				x							
187.81(2)	$3^-$		6(3)	72(4)	21	0.8(1)						
199.0(2) <sup>b</sup>	$\langle 11^+ \rangle$							x				
232.16(2)	$\langle 5^- \rangle$		32(3)	32(3)		33(5)			3.8(3)			
269.83(2)	$\langle 3^- \rangle$		7(2)	33(3)	57(5)	2.9(7)					0.19(2)	
439.05(3)	$\langle 3^- \rangle$		55(4)	14(3)	4.3(8)	10(2)	7(2)		8(3)		2.6(6)	
491.0(2) <sup>a</sup>	$\langle 17^+ \rangle$							x				
491.24(2)	$\langle 5^- \rangle$		28(5)	9(2)	19(4)	21(3)			11(3)		8(4)	3(1)
519.6(1) <sup>b</sup>	$\langle 15^+ \rangle$							21.7(15)		78(5)		
522.53(8)	$\langle 3^-, 5^- \rangle$		15(3)	16(3)	11(3)	27(5)			13(8)		18(7)	
603.3(1)	$\langle 15^+ \rangle$							x				

Energy levels and branching ratios [98Ar07, 06Ac01]. Part 3

**<sup>193</sup>Pt**  
**78**

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage									
		$E_f^*$ : $2J_f^\pi$ :	439.05 $\langle 3 \rangle^-$	491.0 $\langle 17^+ \rangle$	519.6 $\langle 15^+ \rangle$	603.3 $\langle 15^+ \rangle$	980.5 $\langle 19^+ \rangle$	1003.4 $\langle 21^+ \rangle$	1159.9 $\langle 19^+ \rangle$	1320.9 $\langle 21^- \rangle$	1454.8 $\langle 25^- \rangle$
491.24(2)	$\langle 5 \rangle^-$		0.6(1)								
907.4(2)	$\langle 17^+ \rangle$			39(5)	33(5)	29(4)					
980.5(2) <sup>b</sup>	$\langle 19^+ \rangle$			38(3)	55(4)	6.4(8)					
1003.4(4) <sup>a</sup>	$\langle 21^+ \rangle$			x							
1103.5(4)	$X^{(+)}$					x					
1159.9(2)	$\langle 19^+ \rangle$			51(8)	15(3)	34(5)					
1320.9(2) <sup>c</sup>	$\langle 21^- \rangle$						89(9)		11.3(11)		
1454.8(3) <sup>c</sup>	$\langle 25^- \rangle$									x	
1510.4(3)										x	
1631.8(4) <sup>a</sup>	$\langle 25^+ \rangle$							x			
1689.9(3) <sup>c</sup>	$\langle 27^- \rangle$										x
1992.2(3) <sup>c</sup>	$\langle 29^- \rangle$										86(10)

Energy levels and branching ratios [98Ar07, 06Ac01]. Part 4

**<sup>193</sup>Pt**  
**78**

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage					
		$E_f^*$ : $2J_f^\pi$ :	1510.4	1631.8 $\langle 25^+ \rangle$	1689.9 $\langle 27^- \rangle$	2335.2 $\langle 29^+ \rangle$	2696.2 $\langle 33^+ \rangle$
1776.9(4)			x				
1986.7(4)					x		
1992.2(3) <sup>c</sup>	$\langle 29^- \rangle$				14(3)		
2335.2(5) <sup>a</sup>	$\langle 29^+ \rangle$			x			
2696.2(6) <sup>a</sup>	$\langle 33^+ \rangle$					x	
3129.2(6) <sup>a</sup>	$\langle 37^+ \rangle$						x

Energy levels and branching ratios [96Br26, 06Si17].

**<sup>194</sup>Pt**  
**78**

$E^*$ [keV]	$J^\pi$	$g$	$L$ ( $\tau$ ,d)	$S_N$ ( $\tau$ ,d)	$L$ (p,d)	$C^2S$ (p,d)	$L$ (p,t)	$\varepsilon$ (p,t)	$\sigma$ (p,t) <i>rel.</i>	$\sigma$ (p,t) $\mu\text{b/sr}$	$\sigma$ (p,p') $\mu\text{b/sr}$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.
0.0	$0^+$		2	0.36	1	0.430	0	3.6	100	801	$5 \cdot 10^5$	Stable	82Bl17
328.46(1)*	$2^+$		0+2	0.1+0.2	1	0.051	2	1.3	14.5	159	$5 \cdot 10^3$	41.9(6) ps	82Bl17
622.00(1)*	$2^+$		0+2	0.1+0.3	1	0.134	2	0.16	1.6	18	167	35(4) ps	82Bl17
811.27(1)*	$4^+$				$\langle 3 \rangle$	0.004	4	0.10	0.9	9	328	3.7(2) ps	81Be20
922.75(1)*	$3^+$				$\langle 3 \rangle$	0.005					26.6		81Be20
1229.49(1)*	$4^+$				3	0.215	4	0.63	2.8	30		3.8(6) ps	81Be20
1267.17(1)*	$0^+$	2		0.13	1	0.028	0	0.08	2.0	20		6.0(13) ps	82Bl17
1373.75(3)	$\langle 5^- \rangle$						$\langle 4,5 \rangle$	0.26	0.4	4			79De25
1411.81(8)*	$6^+$						6	0.10		5		1.6(5) ps	79De25

(continued)

**<sup>194</sup>Pt**  
**78**

$E^*$	$J^\pi$	$g$	$L$	$S_N$	$L$	$C^2S$	$L$	$\varepsilon$	$\sigma$ (p,t)	$\sigma$ (p,t)	$\sigma$ (p,p')	$T_{1/2}$ or	Ref.
[keV]			( $\tau$ ,d)	( $\tau$ ,d)	(p,d)	(p,d)	(p,t)	(p,t)	<i>rel.</i>	$\mu\text{b/sr}$	$\mu\text{b/sr}$	$\Gamma_{\text{cm}}$	
1422.36(9)*	$\langle 3,4 \rangle^+$				3	0.059							81Be20
1432.52(1)	$3^-$						3	1.3	2.1	12		0.15(3) ns	79De25
1479.24(1)	$0^+$		2	0.08	1	0.021	0	0.03		3			82Bl17
1485.01(16)	$\langle 7^- \rangle$	+0.26(8)	5	0.22						3		3.45(12) ns	82Bl17
1498.65(20)	$\langle 5^+ \rangle$												
1511.97(1)	$2^+$		0+2	0.02+0.1	1+3	0.01,0.01				2			82Bl17
1529(2)													
1547.25(1)*	$0^+$				1	0.003	0	0.26	6.0	46		0.178(14) ps	77Se15
1584(3)	$\langle 0^+-2^+ \rangle$				$\langle 1 \rangle$	0.001							81Be20
1592.8(3)	$\langle 5^+ \rangle$												
1622.19(1)	$2^+$		0+2	0.03+0.3	1+3	0.004,0.01							82Bl17
1670.63(1)	$2^+$		0+2	0.1+0.1	1	0.015				5			82Bl17
1737.33(1)	$\langle 3^- \rangle$												
1778.56(2)	$\langle 1^+ \rangle$				1	0.049				6			81Be20
1783.50(11)	$\langle 6^- \rangle$												
1797.35(1)	$1^-$				0+2	$\approx 0.002$							81Be20
1802.63(4)	$1^+, 2^+$												
1816.63(6)	$\langle 2 \rangle^+$				1+3	0.03,0.06				14			81Be20
1870(1)	$\langle 2^+-4^+ \rangle$				3	0.037							81Be20
1888.32(9)	$\langle 2, 3^-, 4 \rangle$												
1893.69(6)	$\langle 0 \rangle^+$				1	0.110	$\langle 0 \rangle$		2.4	5			81Be20
1911(2)	$\langle 4^+ \rangle$		0+2	0.01+0.1			$\langle 4 \rangle$	1.9	6.9	71			82Bl17
1924.26(1)	$1^+$			incl									
1925.82(7)*	$6^+$			incl								1.3(2) ps	
1930.28(2)	$\langle 2 \rangle^+$				1+3	0.11,0.16			5.5	42			81Be20
1947(2)										10			
1961.29(1)	$2^-$												
1974(2)													
1980(1)													
1984.4(3)	$\langle 6-8^+ \rangle$												
1991.66(20)	$\langle 7^- \rangle$				6	1.014	$\langle 6,7 \rangle$	3.6		9			81Be20
1999.8(3)	$\langle 8^- \rangle$									17			
2003.58(11)	$1^+, 2^+$		0+2	0.03+0.1									82Bl17
2030(1)										3			
2043.68(1)	$1^+$				1	0.255							81Be20
2047.49(17)	$\langle 9^- \rangle$												
2052.86(3)	$\langle \leq 3^+ \rangle$												
2063.75(5)	$1^+, 2^+$				1	0.300				4			81Be20
2072(2)													
2085.44(2)	$0^+$				1+3	0.10,0.36							81Be20
2099.53(12)*	$\langle 8 \rangle^+$											1.1(3) ps	
2109.09(3)	$1^+, 2^+$									16			
2114.08(2)	$1^+$				1+3	0.18,0.18							81Be20
2126(1)	$\langle 4^+ \rangle$						$\langle 4 \rangle$	0.57		37			79De25
2134.20(3)	$1^+, 2^+$				1	0.126				30			81Be20

(continued)

**<sup>194</sup>Pt**  
**78**

$E^*$	$J^\pi$	$g$	$L$	$S_N$	$L$	$C^2S$	$L$	$\varepsilon$	$\sigma$ (p,t)	$\sigma$ (p,t)	$\sigma$ (p,p')	$T_{1/2}$ or	Ref.
[keV]			( $\tau$ ,d)	( $\tau$ ,d)	(p,d)	(p,d)	(p,t)	(p,t)	<i>rel.</i>	$\mu\text{b/sr}$	$\mu\text{b/sr}$	$\Gamma_{\text{cm}}$	
2140.66(5)	$\langle 0^+-2 \rangle$					incl							81Be20
2154	$3^-$												
2157.97(3)	$1^+, 2^+$		0+2	$\approx 0.03$			$\langle 2 \rangle$	0.27		38			82Bl17
2163.73(2)	$0^+$				1	0.107							81Be20
2166(2)	$\langle 5^- \rangle$												
2184.94(4)	$1^+, 2^+$												
2190(1)	$\langle 6^-, 7^- \rangle$				6	2.12				18			81Be20
2214.47(2)	$\langle 1^+, 2^+ \rangle$				1+3	0.06,0.14				6			81Be20
2215.50(1)	$1^+$												
2223(2)										4			
2239.56(4)	$\langle 2^- \rangle$												
2246	$3^-$												
2246(2)	$\langle 4^+ \rangle$							0.43		18			
2275(2)	$\langle 2^+-4^+ \rangle$				$\langle 3 \rangle$	0.108				6			81Be20
2287.35(3)	$1^+, 2^+$									6			
2296(2)										10			
2298.11(3)	$1^+$				1+3	0.02,0.03							81Be20
2309.6(3)	$\langle 9-11^- \rangle$												
2311.88(3)	$2^+$												
2327(4)	$\langle 6^-, 7^- \rangle$				6	0.976							81Be20
2356.05(3)	$0^+$							0.87		37			
2365.88(9)	$\langle 1^+ \rangle$				$\langle 1+3 \rangle$	0.04+0.1							81Be20
2397.2(1)	$\langle 2^+ \rangle$				1+3	0.10,0.4							81Be20
2404(2)													
2412.7(1)	$\langle 1^+ \rangle$												
2423.6(5)	$\langle 6^+-8^+ \rangle$												
2427(10)													
2438.4(2)	$10^+$	-0.068(23)										6.4(8) ns	06Le06
2450(5)	$\langle 0^+-2^+ \rangle$				$\langle 1 \rangle$	0.071							81Be20
2451.1(13)	$\langle 12^+ \rangle$												06Si17
2472(5)	$\langle 0^+-2^+ \rangle$				1	0.047							81Be20
2500(10)					$\langle 1+3 \rangle$	0.07,0.26							81Be20
2517.2(4)	$1$					incl							81Be20
2537(3)	$\langle 2^+ \rangle$		0+2	0.03+0.1				0.33		28			82Bl17
2543(3)	$3^-$										609		81De12
2570(3)					$\langle 1+3 \rangle$	0.09,0.13		0.56		11			81Be20
2577.3(4)	$1$												
2595(3)										16			
2615(10)	$\langle 0^+-2^+ \rangle$				$\langle 1 \rangle$	0.061							81Be20
2638(3)	$\langle 4^+ \rangle$				$\langle 3 \rangle$	0.411		0.61		29			81Be20
2663.4(11)													
2676(3)	$\langle 0^+-2^+ \rangle$				$\langle 1 \rangle$	0.058							81Be20
2688(5)	$\langle 2^+-4^+ \rangle$				$\langle 3 \rangle$	0.20							81Be20
2689.3(1)*	$\langle 8^+ \rangle$											0.64(16) ps	
2700(2)								0.61		18			

(continued)

**<sup>194</sup>Pt**  
**<sub>78</sub>**

$E^*$	$J^\pi$	$g$	$L$	$S_N$	$L$	$C^2S$	$L$	$\varepsilon$	$\sigma$ (p,t)	$\sigma$ (p,t)	$\sigma$ (p,p')	$T_{1/2}$ or	Ref.
[keV]			( $\tau$ ,d)	( $\tau$ ,d)	(p,d)	(p,d)	(p,t)	(p,t)	rel.	$\mu\text{b/sr}$	$\mu\text{b/sr}$	$\Gamma_{\text{cm}}$	
2700.1(3)	$\langle 11^- \rangle$												
2720.2(5)	1												06Si17
2756(4)					$\langle 1+3 \rangle$	0.04,0.18				30			81Be20
2783(10)	$\langle 2^+ \rangle$				$\langle 1+3 \rangle$	0.02,0.13							81Be20
2816(3)	$\langle 2^+ \rangle$				$\langle 1+3 \rangle$	0.04,0.10				12			81Be20
2829.5(3)**	$\langle 10-12^+ \rangle$												
2840(3)										7			
2842.1(13)	$\langle 14^+ \rangle$												06Si17
2848.5(10)*	$10^+$												
2871(3)										13			
2895(3)	$\langle 2^+ \rangle$	0+2	$\approx 0.3$		$\langle 1+3 \rangle$	0.06,0.14				7			82Bl17
2908(10)						incl							
2916.6(10)*	$\langle 10^+ \rangle$												
2956(10)	$\langle 2^+ \rangle$				$\langle 1+3 \rangle$	0.10,0.36							81Be20
2982(9)													
2990.1(11)													06Si17
3000(10)	$\langle 2^+ \rangle$				$\langle 1+3 \rangle$	0.17,0.36							81Be20
3000.1(3)	1												06Si17
3014.8(3)	1												06Si17
3033(10)	$\langle 2^+ \rangle$				$\langle 1+3 \rangle$	0.05,0.12							81Be20
3057.8(11)													
3065(10)	$\langle 0^+-2^+ \rangle$				$\langle 1 \rangle$	0.108							81Be20
3078(10)	$\langle 2^+ \rangle$				$\langle 1+3 \rangle$	0.02,0.04							81Be20
3078.8(3)	1												06Si17
3100(10)	$\langle 2^+ \rangle$				$\langle 1+3 \rangle$	0.05,0.14							81Be20
3132(10)	$\langle 0^+-2^+ \rangle$				$\langle 1 \rangle$	0.022							81Be20
3141.1(4)	1												06Si17
3170(10)	$\langle 2^+ \rangle$				$\langle 1+3 \rangle$	0.03,0.07							81Be20
3198(10)	$\langle 2^+ \rangle$				$\langle 1+3 \rangle$	0.05,0.10							81Be20
3225(10)	$\langle 0^+-2^+ \rangle$				$\langle 1 \rangle$	0.028							81Be20
3351.3(3)	1												06Si17
3375.2(3)***	1												06Si17
3383.0(4)	1												06Si17
3417.1(3)	1												06Si17
3421.4(5)	1												06Si17
3427.7(4)	1												06Si17
3459.3(4)	1												06Si17
3465.2(7)	1												06Si17
3477.0(4)	1												06Si17
3497.9(6)	1												06Si17
3499.7(16)	$\langle 16^+ \rangle$												06Si17
3545.3(5)	1												06Si17
3682.7(19)	$\langle 18^+ \rangle$												06Si17
3697.4(5)	1												06Si17
3703.3(4)	1												06Si17



(continued)

**<sup>194</sup>Pt**  
**78**

$E^*$	$J^\pi$	$g$	$L$	$S_N$	$L$	$C^2S$	$L$	$\varepsilon$	$\sigma$ (p,t)	$\sigma$ (p,t)	$\sigma$ (p,p')	$T_{1/2}$ or	Ref.
[keV]			( $\tau$ ,d)	( $\tau$ ,d)	(p,d)	(p,d)	(p,t)	(p,t)	<i>rel.</i>	$\mu$ b/sr	$\mu$ b/sr	$\Gamma_{\text{cm}}$	
3717.0(4)	1												06Si17
3726.8(4)	1												06Si17
3747.1(6)	1												06Si17
3813.6(4)	1												06Si17
3890.2(4)	1												06Si17
3937.7(22)	$\langle 20^+ \rangle$												06Si17
4529.8(24)	$\langle 22^+ \rangle$												06Si17
		06Le06		82Bl17		81Be20		79De25	77Se15		81De12		Ref.

Additional data on this isotope can be found in [05Mc09, 05Jo11, 03Li02, 02VyZZ, 02Vy01, 97Te09, 96Wu07, 91Se04, 90Be37, 80Se05, 78Ve10].

*Abundance:* 32.967(99) %.

\*  $E2$  collective properties of these low-lying states were considered in [96Wu07].

\*\* Level not included in [06Si17].

\*\*\* See comments in Table 1 in [03Li02] .

Configurations of isomeric states and  $g$  factors are discussed in [06Le06].

Parameter  $S_N$  of the ( $\tau$ ,d) reaction given in the first column is defined as  $S_N = ((2J_f + 1)/(2J_i + 1))C^2S$ , where  $J_f = J$  of the level in residual nucleus and  $J_i = J$  - in target nucleus [96Br26].

Cross section of two-neutron transfer reaction (p,t) was measured at  $7^\circ$  [79De25].

The enhancement factors  $\varepsilon$  were calculated with pickup configurations  $(0p_{3/2})^2$  for  $L=0$ ,  $2p_{3/2} \otimes 1f_{7/2}$  for  $L=2$ ,  $(0i_{13/2} \otimes 1f_{7/2})$  for  $L=3$ ,  $(1f_{5/2} \otimes 2p_{3/2})$  for  $L=4$ ,  $(2p_{3/2} \otimes 0i_{13/2})$  for  $L=5$ ,  $(1f_{5/2} \otimes 1f_{7/2})$  for  $L=6$ , and  $(20p_{1/2} \otimes 0i_{13/2})$  for  $L=7$  [79De25].

Cross sections of the (d,t) and (d,d') reactions measured at  $60^\circ$  can be found in [65Mu05].

5 bands of levels were suggested in [06Si17].

$\sigma$  (p,p'), branching ratios and uncertainties in  $E^*$  are given in Supplement.

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

Energy levels and branching ratios [96Br26, 06Si17]. Part 2

**<sup>194</sup>Pt**  
**78**

$E^*$	$J^\pi$	Ratio	$I_{s,0}$	$B(M1)$	Ref.	Branching ratios in percentage						
[keV]		$(\gamma, \gamma')$	[eVb]	$[\mu_N^2]$	$E_f^*$ : $J_f^\pi$ :	0.0 0 <sup>+</sup>	328 2 <sup>+</sup>	622 2 <sup>+</sup>	811 4 <sup>+</sup>	923 3 <sup>+</sup>	1229 4 <sup>+</sup>	
0.0	0 <sup>+</sup>				82Bl17							
328.46(1)*	2 <sup>+</sup>				82Bl17	100						
622.00(1)*	2 <sup>+</sup>				82Bl17	11.7(4)	88(3)					
811.27(1)*	4 <sup>+</sup>				81Be20		100					
922.75(1)*	3 <sup>+</sup>				81Be20		15.0(5)	85(3)	0.41(13)			
1229.49(1)*	4 <sup>+</sup>				81Be20		6.1(6)	82(5)	11.8(11)			
1267.17(1)*	0 <sup>+</sup>				82Bl17	x	34(1)	66(2)				
1373.75(3)	$\langle 5^- \rangle$				79De25				99(33)		1.2(3)	
1411.81(8)*	6 <sup>+</sup>				79De25				100			
1422.36(9)*	$\langle 3,4 \rangle^+$				81Be20		19(2)			81(8)		
1432.52(1)	3 <sup>-</sup>				79De25	2.6(4)	60(2)	5.3(4)	23(2)		9(1)	

(continued)

**<sup>194</sup>Pt**  
**78**

$E^*$	$J^\pi$	Ratio	$I_{s,0}$	$B(M1)$	Ref.	Branching ratios in percentage						
[keV]		$(\gamma, \gamma')$	[eVb]	$[\mu_N^2]$		$E_f^*:$ $J_f^\pi:$	0.0 0 <sup>+</sup>	328 2 <sup>+</sup>	622 2 <sup>+</sup>	811 4 <sup>+</sup>	923 3 <sup>+</sup>	1229 4 <sup>+</sup>
1479.24(1)	0 <sup>+</sup>				82Bl17	x		99(3)	1.2(1)			
1485.01(16)	$\langle 7^- \rangle$				82Bl17							
1498.65(20)	$\langle 5^+ \rangle$										100	
1511.97(1)	2 <sup>+</sup>				82Bl17		4.3(5)	55(2)	9.3(4)	4.6(7)	25.1(7)	
1529(2)												
1547.25(1)*	0 <sup>+</sup>				77Se15	x		81(2)	19(2)			
1584(3)	$\langle 0^+-2^+ \rangle$				81Be20							
1592.8(3)	$\langle 5^+ \rangle$										100	
1622.19(1)	2 <sup>+</sup>				82Bl17		39(2)	30(2)	29(1)		2(1)	
1670.63(1)	2 <sup>+</sup>				82Bl17		8(1)	53(2)	37(2)	2.5(8)		
1737.33(1)	$\langle 3^- \rangle$										23(4)	
1778.56(2)	$\langle 1^+ \rangle$				81Be20		5(1)	35(2)	48(3)		12(4)	
1783.50(11)	$\langle 6^- \rangle$											
1797.35(1)	1 <sup>-</sup>				81Be20		5.3(2)	57(2)	17.8(5)			
1802.63(4)	1 <sup>+</sup> , 2 <sup>+</sup>						100					
1816.63(6)	$\langle 2^+ \rangle$				81Be20		7(5)	34(4)	16(2)		18(2)	
1870(1)	$\langle 2^+-4^+ \rangle$				81Be20							
1888.32(9)	$\langle 2, 3^-, 4 \rangle$											
1893.69(6)	$\langle 0^+ \rangle$				81Be20	x		100				
1911(2)	$\langle 4^+ \rangle$				82Bl17							
1924.26(1)	1 <sup>+</sup>						49(2)	44(3)	6			
1925.82(7)*	6 <sup>+</sup>									10(3)		85(17)
1930.28(2)	$\langle 2^+ \rangle$				81Be20			41(4)	27(2)	19(2)	13(4)	
1947(2)												
1961.29(1)	2 <sup>-</sup>							9(1)	10(2)		11(1)	
1974(2)												
1980(1)												
1984.4(3)	$\langle 6-8^+ \rangle$											
1991.66(20)	$\langle 7^- \rangle$				81Be20							
1999.8(3)	$\langle 8^- \rangle$											
2003.58(11)	1 <sup>+</sup> , 2 <sup>+</sup>				82Bl17			$\approx 82$			18(7)	
2030(1)												
2043.68(1)	1 <sup>+</sup>				81Be20		77(3)	15(2)	7.4(7)		0.8(8)	
2047.49(17)	$\langle 9^- \rangle$											
2052.86(3)	$\langle \leq 3^+ \rangle$							28(4)	72(6)			
2063.75(5)	1 <sup>+</sup> , 2 <sup>+</sup>				81Be20		2.0(5)	58(3)	36(3)		5(2)	
2072(2)												
2085.44(2)	0 <sup>+</sup>				81Be20	x		7.1(13)	93(7)			
2099.53(12)*	$\langle 8^+ \rangle$											
2109.09(3)	1 <sup>+</sup> , 2 <sup>+</sup>							17(1)	56(3)		27(4)	
2114.08(2)	1 <sup>+</sup>				81Be20		29(2)	44(3)	18(2)			
2126(1)	$\langle 4^+ \rangle$				79De25							
2134.20(3)	1 <sup>+</sup> , 2 <sup>+</sup>				81Be20			74(4)	26(2)			
2140.66(5)	$\langle 0^+-2 \rangle$				81Be20			21(6)	79(11)			
2154	3 <sup>-</sup>											

(continued)

**<sup>194</sup>Pt**  
**78**

$E^*$	$J^\pi$	Ratio	$I_{s,0}$	$B(M1)$	Ref.	Branching ratios in percentage						
[keV]		$(\gamma, \gamma')$	[eVb]	$[\mu_N^2]$		$\begin{smallmatrix} E_f^* \\ J_f^\pi \end{smallmatrix}$	$\begin{smallmatrix} 0.0 \\ 0^+ \end{smallmatrix}$	$\begin{smallmatrix} 328 \\ 2^+ \end{smallmatrix}$	$\begin{smallmatrix} 622 \\ 2^+ \end{smallmatrix}$	$\begin{smallmatrix} 811 \\ 4^+ \end{smallmatrix}$	$\begin{smallmatrix} 923 \\ 3^+ \end{smallmatrix}$	$\begin{smallmatrix} 1229 \\ 4^+ \end{smallmatrix}$
2157.97(3)	$1^+, 2^+$				82Bl17			93	3.4(9)	3.4(14)		
2163.73(2)	$0^+$				81Be20	x		73(5)	4.1(4)			
2166(2)	$\langle 5^- \rangle$											
2184.94(4)	$1^+, 2^+$							8(1)	83(7)		8(1)	
2190(1)	$\langle 6^-, 7^- \rangle$				81Be20							
2214.47(2)	$\langle 1^+, 2^+ \rangle$				81Be20			59(4)	34(4)		4(2)	
2215.50(1)	$1^+$						3.2(2)	25(2)	11(2)			
2223(2)												
2239.56(4)	$\langle 2^- \rangle$							32(3)	51(6)		12(6)	
2246	$3^-$											
2246(2)	$\langle 4^+ \rangle$											
2275(2)	$\langle 2^+ - 4^+ \rangle$				81Be20							
2287.35(3)	$1^+, 2^+$							81(9)	12(2)			
2296(2)												
2298.11(3)	$1^+$				81Be20		3.6(6)	56(3)	17(4)			
2309.6(3)	$\langle 9 - 11^- \rangle$											
2311.88(3)	$2^+$						39(3)	8(3)	33(7)	8(4)	3.3(8)	7(4)
2327(4)	$\langle 6^-, 7^- \rangle$				81Be20							
2356.05(3)	$0^+$					x						
2365.88(9)	$\langle 1^+ \rangle$				81Be20		56(8)		44(13)			
2397.2(1)	$\langle 2^+ \rangle$				81Be20		7(3)	28(6)	32(8)		34(5)	
2404(2)												
2412.7(1)	$\langle 1^+ \rangle$						32(6)	68(11)				
2423.6(5)	$\langle 6^+ - 8^+ \rangle$											
2427(10)												
2438.4(2)	$10^+$				06Le06							
2450(5)	$\langle 0^+ - 2^+ \rangle$				81Be20							
2451.1(13)	$\langle 12^+ \rangle$				06Si17							
2472(5)	$\langle 0^+ - 2^+ \rangle$				81Be20							
2500(10)					81Be20							
2517.2(4)	$1$	<0.35	6.0(8)	0.054(7)	81Be20							
2537(3)	$\langle 2^+ \rangle$				82Bl17							
2543(3)	$3^-$				81De12							
2570(3)					81Be20							
2577.3(4)	$1$	<0.28	7.5(10)	0.065(9)								
2595(3)												
2615(10)	$\langle 0^+ - 2^+ \rangle$				81Be20							
2638(3)	$\langle 4^+ \rangle$				81Be20							
2663.4(11)												
2676(3)	$\langle 0^+ - 2^+ \rangle$				81Be20							
2688(5)	$\langle 2^+ - 4^+ \rangle$				81Be20							
2689.3(1)*	$\langle 8^+ \rangle$											
2700(2)												
2700.1(3)	$\langle 11^- \rangle$											
2720.2(5)	$1$	<0.52	3.9(5)	0.032(4)	06Si17							

(continued)

**<sup>194</sup>Pt**  
**78**

$E^*$	$J^\pi$	Ratio	$I_{s,0}$	$B(M1)$	Ref.	Branching ratios in percentage						
[keV]		$(\gamma, \gamma')$	[eVb]	$[\mu_N^2]$		$\begin{smallmatrix} E_f^*: \\ J_f^\pi: \end{smallmatrix}$	0.0 0 <sup>+</sup>	328 2 <sup>+</sup>	622 2 <sup>+</sup>	811 4 <sup>+</sup>	923 3 <sup>+</sup>	1229 4 <sup>+</sup>
2756(4)					81Be20							
2783(10)	$\langle 2^+ \rangle$				81Be20							
2816(3)	$\langle 2^+ \rangle$				81Be20							
2829.5(3)**	$\langle 10-12^+ \rangle$											
2840(3)												
2842.1(13)	$\langle 14^+ \rangle$				06Si17							
2848.5(10)*	10 <sup>+</sup>											
2871(3)												
2895(3)	$\langle 2^+ \rangle$				82B117							
2908(10)												
2916.6(10)*	$\langle 10^+ \rangle$											
2956(10)	$\langle 2^+ \rangle$				81Be20							
2982(9)												
2990.1(11)					06Si17							
3000(10)	$\langle 2^+ \rangle$				81Be20							
3000.1(3)	1	<0.10	16.2(13)	0.122(40)	06Si17							
3014.8(3)	1	0.55	14.8(9)	0.171(13)	06Si17							
3033(10)	$\langle 2^+ \rangle$				81Be20							
3057.8(11)												
3065(10)	$\langle 0^+-2^+ \rangle$				81Be20							
3078(10)	$\langle 2^+ \rangle$				81Be20							
3078.8(3)	1	<0.15	12.0(8)	0.087(8)	06Si17							
3100(10)	$\langle 2^+ \rangle$				81Be20							
3132(10)	$\langle 0^+-2^+ \rangle$				81Be20							
3141.1(4)	1	<0.26	5.9(6)	0.042(5)	06Si17							
3170(10)	$\langle 2^+ \rangle$				81Be20							
3198(10)	$\langle 2^+ \rangle$				81Be20							
3225(10)	$\langle 0^+-2^+ \rangle$				81Be20							
3351.3(3)	1	0.27	8.5(6)	0.073(11)	06Si17							
3375.2(3)***	1	1.28	7.9(6)	0.118(12)	06Si17							
3383.0(4)	1	<0.23	6.1(6)	0.041(8)	06Si17							
3417.1(3)	1	<0.06	29.8(20)	0.196(34)	06Si17							
3421.4(5)	1	<0.18	7.4(12)	0.049(11)	06Si17							
3427.7(4)	1	<0.25	5.8(6)	0.038(7)	06Si17							
3459.3(4)	1	<0.16	9.8(7)	0.064(11)	06Si17							
3465.2(7)	1	<0.72	2.3(4)	0.015(4)	06Si17							
3477.0(4)	1	<0.36	4.6(5)	0.030(6)	06Si17							
3497.9(6)	1	<0.64	2.3(4)	0.015(4)	06Si17							
3499.7(16)	$\langle 16^+ \rangle$				06Si17							
3545.3(5)	1	<0.33	4.8(6)	0.030(6)	06Si17							
3682.7(19)	$\langle 18^+ \rangle$				06Si17							
3697.4(5)	1	<0.52	3.1(6)	0.019(5)	06Si17							
3703.3(4)	1		7.7(8)	0.047(9)	06Si17							
3717.0(4)	1	<0.36	4.4(6)	0.027(6)	06Si17							
3726.8(4)	1		4.1(7)	0.025(6)	06Si17							

(continued)

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

$E^*$	$J^\pi$	Ratio	$I_{s,0}$	$B(M1)$	Ref.	Branching ratios in percentage						
[keV]		$(\gamma, \gamma')$	[eVb]	$[\mu_N^2]$		$E_f^*$ : $J_f^\pi$ :	0.0 0 <sup>+</sup>	328 2 <sup>+</sup>	622 2 <sup>+</sup>	811 4 <sup>+</sup>	923 3 <sup>+</sup>	1229 4 <sup>+</sup>
3747.1(6)	1	<0.26	6.5(7)	0.039(8)	06Si17							
3813.6(4)	1	<0.16	10.5(10)	0.052(12)	06Si17							
3890.2(4)	1	<0.30	6.5(8)	0.038(8)	06Si17							
3937.7(22)	$\langle 20^+ \rangle$				06Si17							
4529.8(24)	$\langle 22^+ \rangle$				06Si17							
		03Li02	03Li02	03Li02	Ref.							

Energy levels and branching ratios [96Br26, 06Si17]. Part 3

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

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $J_f^\pi$ :	1267 $0^+$	1374 $\langle 5^- \rangle$	1411.86 $6^+$	1432.51 $3^-$	1479.22 $0^+$	1485.17 $\langle 7^- \rangle$	1511.94 $2^+$	1547.22 $0^+$	1622.14 $2^+$	1670.62 $2^+$
1485.01(16)	$\langle 7^- \rangle$			100								
1511.97(1)	$2^+$		1.4(3)									
1737.33(1)	$\langle 3^- \rangle$			19(4)		58(5)						
1783.50(11)	$\langle 6^- \rangle$			100								
1797.35(1)	$1^-$		4.8(2)			12.5(5)	2.2(6)			0.26(3)		
1816.63(6)	$\langle 2 \rangle^+$								25(2)			
1888.32(9)	$\langle 2, 3^-, 4 \rangle$					100						
1924.26(1)	$1^+$								0.7(4)			0.07(3)
1925.82(7)*	$6^+$			5(3)								
1961.29(1)	$2^-$					56(6)			6(1)			3.8(12)
1984.4(3)	$\langle 6-8^+ \rangle$			100								
1991.66(20)	$\langle 7^- \rangle$			15(5)				85(12)				
1999.8(3)	$\langle 8^- \rangle$							100				
2043.68(1)	$1^+$										0.61(5)	0.13(3)
2047.49(17)	$\langle 9^- \rangle$							100				
2099.53(12)*	$\langle 8 \rangle^+$			100								
2114.08(2)	$1^+$		6(2)						1.9(8)			
2214.47(2)	$\langle 1^+, 2^+ \rangle$					2.1(3)			2(1)			
2215.50(1)	$1^+$		39(2)				2.2(2)		7(1)	1.9(1)	6(1)	0.4(2)
2239.56(4)	$\langle 2 \rangle^-$					4.8(11)						
2298.11(3)	$1^+$		2.4(8)				4(1)				8(3)	0.44(12)
2356.05(3)	$0^+$								98(19)			
2423.6(5)	$\langle 6^+-8^+ \rangle$			65(3)								

Energy levels and branching ratios [96Br26, 06Si17]. Part 4

**<sup>194</sup>Pt**  
**78**

$E^*$	$J^\pi$	Branching ratios in percentage									
[keV]		$E_f^*$ : $J_f^\pi$ :	1737.35 $\langle 3^- \rangle$	1778.62 $1^+, 2^+$	1797.37 $1^-$	1817.08 $\langle 2 \rangle^+$	1924.23 $1^+$	1925.88 $\langle 6^+ \rangle$	1930.37 $\langle 2 \rangle^+$	2003.73 $\langle 1^+, 2^+ \rangle$	2043.68 $1^+$
1961.29(1)	$2^-$		1.1(1)		4.4(4)						
2114.08(2)	$1^+$						0.4(3)				
2163.73(2)	$0^+$				7.1(7)		11(1)				
2215.50(1)	$1^+$			0.23(3)	0.7(1)	0.24(6)	0.12(4)		0.9(3)	0.10(4)	1.1(1)
2287.35(3)	$1^+, 2^+$										4.8(15)
2298.11(3)	$1^+$				0.8(2)						
2689.3(1)*	$\langle 8^+ \rangle$							100			

Energy levels and branching ratios [96Br26, 06Si17]. Part 5

**<sup>194</sup>Pt**  
**78**

$E^*$	$J^\pi$	Branching ratios in percentage									
[keV]		$E_f^*$ : $J_f^\pi$ :	2047.64 $\langle 9^- \rangle$	2053.41 $\langle \leq 3 \rangle$	2063.75 $1^+, 2^+$	2099.60 $\langle 8 \rangle^+$	2109.06 $1^+, 2^+$	2114.01 $1^+$	2157.81 $1^+, 2^+$	2286.98 $1^+, 2^+$	2438.52 $\langle 10^+ \rangle$
2163.73(2)	$0^+$							4.8(13)			
2215.50(1)	$1^+$			0.42(3)	1.0(1)		0.13(3)	0.07(3)			
2287.35(3)	$1^+, 2^+$							2(1)			
2298.11(3)	$1^+$						0.49(10)		7(1)		
2309.6(3)	$\langle 9-11^- \rangle$		100								
2311.88(3)	$2^+$							1.5(3)			
2356.05(3)	$0^+$									1.8(6)	
2423.6(5)	$\langle 6^+-8^+ \rangle$					$\approx 35$					
2438.4(2)	$10^+$		39(2)			61(3)					
2700.1(3)	$\langle 11^- \rangle$		100								
2829.5(3)**	$\langle 10-12^+ \rangle$										100
2848.5(10)*	$10^+$					100					
2916.6(10)*	$\langle 10^+ \rangle$					100					

Energy levels and branching ratios [99Zh11].

**<sup>195</sup>Pt**  
**78**

$E^*$	$2J^\pi$	$L$	$S_N$	$d\sigma/d\Omega$	$L$	$C^2S$	$L$	$C^2S$	$G_{\ell j}$	$L$	$C^2S$	$\sigma(\tau, \alpha)$	$T_{1/2}$ or	Ref.
[keV]		(d,p)	(d,p)	(d,d')	(p,d)	(p,d)	(d,t)	(d,t)	(d,t)	( $\tau, \alpha$ )	( $\tau, \alpha$ )	$\mu\text{b/sr}$	$\Gamma_{\text{cm}}$	
0.0	$1^-$	1	0.27		1	0.44	1	0.30	0.781(2)				Stable	78Ya07
98.882(4)	$3^-$	1	0.34	100*	1	0.66	1	0.36	0.887(3)				0.170(19) ns	76Ya07
129.78(1)	$5^-$	3	0.76		3	2.00	3	0.78	2.092(6)	3	1.21	299	0.67(3) ns	85Th02
199.53(1)	$3^-$	1	0.02		1	0.70	1	0.06	0.128(1)				0.66(14) ns	78Be09
211.40(1)	$3^-$	1	0.09		1	0.71	1	0.10	0.206(1)				49(8) ps	78Ya07
222.22(1)	$1^-$			500					0.146(8)					65Mu05
239.27(1)	$5^-$		0.04		3	0.44	3	0.15	0.350(2)				70(9) ps	78Be09

(continued)

**<sup>195</sup>Pt**  
**78**

$E^*$	$2J^\pi$	$L$	$S_N$	$d\sigma/d\Omega$	$L$	$C^2S$	$L$	$C^2S$	$G_{\ell j}$	$L$	$C^2S$	$\sigma$ ( $\tau, \alpha$ )	$T_{1/2}$ or	Ref.
[keV]		(d,p)	(d,p)	(d,d')	(p,d)	(p,d)	(d,t)	(d,t)	(d,t)	$(\tau, \alpha)$	$(\tau, \alpha)$	$\mu\text{b/sr}$	$\Gamma_{\text{cm}}$	
259.30(8)	13 <sup>+</sup>	$\langle 6 \rangle$	0.85		6	4.2	6	1.58	3.56(25)	6	5.49	1577	4.02(1) d	78Ya07
389.16(6)	5 <sup>-</sup>								0.014(1)				9(4) ps	00Me19
419.70(1)	3 <sup>-</sup>								0.008(1)				54(8) ps	00Me19
432	$\langle 17^+ \rangle$												34	85Th02
432.20(8)	9 <sup>+</sup>		0.04	10	4	0.21	$\langle 4 \rangle$	0.08	0.448(1)					78Ya07
449.66(5)	7 <sup>-</sup>								0.015(2)					00Me19
455.20(4)	5 <sup>-</sup>						$\langle 3 \rangle$	0.02	0.015(1)				>10.5 ps	00Me19
508.08(6)	7 <sup>-</sup>	3	0.16		3	0.85	3	0.29	0.511(2)	3	0.46		9.5(22) ps	78Ya07
524.85(1)	3 <sup>-</sup>	1	0.04	10					0.008(1)					78Ya07
539(3)														
544.2(6)	5 <sup>-</sup>								0.028(1)				>2.8 ps	00Me19
547.27(11)	$\langle 11^+ \rangle$				$\langle 6 \rangle$	0.72					0.19	47		83Ve02
562.81(5)	9 <sup>-</sup>								0.314(1)				14(3) ps	00Me19
590.90(1)	3 <sup>-</sup>													
612.72(8)	7 <sup>-</sup>	3	0.10		3	0.94	3	0.22	0.514(2)		0.62	145	6(3) ps	78Ya07
630.14(1)	1 <sup>-</sup>								0.006(1)					00Me19
632.1(5)	1 <sup>-</sup> , 3 <sup>-</sup>													
664.20(1)	5 <sup>-</sup>								0.109(1)					00Me19
667.1(5)	$\langle 9^- \rangle$												16(4) ps	
678(1)	5 <sup>-</sup>				3	0.13			0.008(1)				>72.8 ps	83Ve02
695.30(6)	7 <sup>-</sup>				3	0.17	$\langle 3 \rangle$	0.05	0.106(2)					83Ve02
739.55(1)	1 <sup>-</sup>				1	0.11	1	0.05	0.110(1)					83Ve02
765.8(9)	7 <sup>-</sup>				3	0.26	3	0.07	0.148(2)					83Ve02
793(2)	13 <sup>+</sup>				6	1.88			1.309(11)	6	2.79	763		83Ve02
793.0(10)	3 <sup>-</sup>													
814.52(4)	9 <sup>-</sup>				5	1.15	$\langle 5 \rangle$		1.193(14)					83Ve02
821.85(6)	5 <sup>+</sup>								0.010(1)					00Me19
875(1)	7 <sup>-</sup>				3	0.21			0.142(2)					83Ve02
895.42(7)	9 <sup>-</sup>								0.061(4)	4,5	0.33	141		85Th02
916.0(6)	7 <sup>-</sup>								0.242(2)					00Me19
925(5)	$\langle 5^-, 7^- \rangle$				$\langle 3 \rangle$	0.30		0.04						
926.89(5)	3 <sup>-</sup>	1	0.03	30	1				0.079(1)					78Ya07
930.71(6)	$\langle 9^- \rangle$													77Sm03
971.3(8)	7 <sup>-</sup>				3	0.49	3	0.13	0.298(2)	3,4	0.36	134		83Ve02
1010.4(7)	5 <sup>-</sup>				$\langle 3 \rangle$	0.08			0.053(1)					83Ve02
1047.1(7)	7 <sup>-</sup>								0.408(2)	5,6	2.21	265		85Th02
1058(5)	5 <sup>-</sup> , 7 <sup>-</sup>				3	0.38								83Ve02
1068.8(7)	9 <sup>-</sup>								0.204(8)					00Me19
1079.7(7)	5 <sup>-</sup>								0.062(1)					00Me19
1091.8(5)	$\langle 5-13 \rangle$													
1095.8(4)	3 <sup>-</sup>	1	0.04		1	0.53	$\langle 1 \rangle$	0.13	0.344(1)			72		78Ya07
1111.2(7)	7 <sup>-</sup>								0.027(2)					00Me19
1122.66(6)	3 <sup>+</sup> , 5 <sup>+</sup>			30										65Mu05
1132.401(20)	1 <sup>-</sup>								0.033(1)					00Me19
1151(6)	1 <sup>-</sup> , 3 <sup>-</sup>				1	0.073								83Ve02

(continued)

 **$^{195}_{78}\text{Pt}$** 

$E^*$	$2J^\pi$	$L$	$S_N$	$d\sigma/d\Omega$	$L$	$C^2S$	$L$	$C^2S$	$G_{\ell j}$	$L$	$C^2S$	$\sigma(\tau, \alpha)$	$T_{1/2}$ or	Ref.
[keV]		(d,p)	(d,p)	(d,d')	(p,d)	(p,d)	(d,t)	(d,t)	(d,t)	$(\tau, \alpha)$	$(\tau, \alpha)$	$\mu\text{b/sr}$	$\Gamma_{\text{cm}}$	
1150.0(8)	$9^+$								0.012(6)					00Me19
1155.8(5)	$5^-$								0.086(2)					00Me19
1160.38(3)	$1^-, 3^-$													
1166.4(6)	$1^+, 3^+$													
1175.5(8)	$7^-$				3	0.23	$\langle 3 \rangle$	0.22	0.093(2)				$\geq 2.4$ mcV	83Ve02
1271.0(3)	$3^-$								0.034(1)					00Me19
1287.7(4)	$1^-$				1	0.11			0.026(1)					83Ve02
1288.3(9)	$5^-$								0.082(3)					00Me19
1294(1)	$1^-, 3^-$	1	0.03	40										78Ya07
1306(10)				incl						5,6	0.59	153		65Mu05
1312.7(7)	$1^+, 3^+$													
1314.1(10)	$5^-$								0.058(1)					00Me19
1320.8(4)	$3^-$								0.006(1)					00Me19
1328.1(10)	$13^+$								0.337(10)					00Me19
1334.7(4)	$1^-, 3^-$				$\langle 1+3 \rangle$	0.013								
1342.4(13)	$5^-, 7^-$								0.010(1)					00Me19
1346.9(6)	$1, 3$					0.01								
1348.2(11)	$5^+$								0.011(1)					00Me19
1372.7(4)	$3^-$				$\langle 1+3 \rangle$	0.026			0.015(1)					00Me19
1378(10)	$13^+$								0.571(11)			428		85Th02
1405.0(13)	$13^+$								0.507(10)					00Me19
1411.1(5)	$1^-, 3^-$													
1425.0(5)	$1^-, 3^-$	$\langle 1 \rangle$												78Ya07
1426.6(14)	$7^-$								0.015(1)					00Me19
1438.3(4)	$1^-$					0.10			0.013(1)					00Me19
1445.3(5)	$3^-$				$\langle 4+1 \rangle$	0.018			0.017(1)					00Me19
1455.9(14)	$7^-$								0.056(1)					00Me19
1464.7(15)	$5^-$								0.019(1)					00Me19
1473.2(15)	$3^-$								0.005(1)					00Me19
1510.7(15)												100		85Th02
1516.3(15)	$7^-$								0.034(1)					00Me19
1524.7(15)	$13^+$								0.190(10)					00Me19
1539.3(15)	$7^-$								0.038(1)					00Me19
1552.7(15)														00Me19
1559.7(17)														00Me19
1579.4(16)	$1^-, 3^-$	1	0.01											78Ya07
1592.5(17)														00Me19
1681(3)	$11^+, 13^+$									6	0.27	65		85Th02
1766(2)	$\langle 1^-, 3^- \rangle$	$\langle 1 \rangle$												78Ya07
1785(10)				40						3,4	0.41	122		65Mu05
1840(2)	$1^-, 3^-$	1	0.04											78Ya07
1872(2)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$												78Ya07
1899(1)	$\langle 9^+ \rangle$	$\langle 3, 4 \rangle$	0.85											78Ya07
1911(10)										3,4	0.41	199		85Th02
1972(3)	$1^-, 3^-$	1	0.02											78Ya07



(continued)

**<sup>195</sup>Pt**  
**78**

$E^*$	$2J^\pi$	$L$	$S_N$	$d\sigma/d\Omega$	$L$	$C^2S$	$L$	$C^2S$	$G_{\ell j}$	$L$	$C^2S$	$\sigma$ ( $\tau, \alpha$ )	$T_{1/2}$ or	Ref.
[keV]		(d,p)	(d,p)	(d,d')	(p,d)	(p,d)	(d,t)	(d,t)	(d,t)	( $\tau, \alpha$ )	( $\tau, \alpha$ )	$\mu\text{b/sr}$	$\Gamma_{\text{cm}}$	
2128(10)	11 <sup>+</sup> , 13 <sup>+</sup>									6	1.43	369		85Th02
2291(10)												329		85Th02
2330(20)				10										65Mu05
2390(20)				20										65Mu05
2437(10)												253		85Th02
2440														65Mu05
2600														65Mu05
2770														65Mu05
2860														65Mu05
2970														65Mu05
3030														65Mu05
3230														65Mu05
3370														65Mu05
3500														65Mu05
3600														65Mu05
3690														65Mu05
3790														65Mu05
3850														65Mu05
			78Ya07	65Mu05		78Be09	83Ve02	00Me19			85Th02	85Th02		Ref.
						83Ve02	76Ya07							Ref.
						77Sm03								Ref.

Additional data on this isotope can be found in [99Me19, 91Gr12, 77Sm03].

*Abundance:* 33.832(10) %.\* Cross section of the (d,d') reaction measured at 60° in  $\mu\text{b/sr}$  [65Mu05].Comparison of  $C^2S$  for the (p,d) reaction with  $2C^2S$  for (d,t) reaction can be found in [77Sm03].

Cross sections of the (d,p) and (d,t) reactions measured at 60° can be found in [65Mu05].

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

Energy levels and branching ratios [99Zh11]. Part 2

**<sup>195</sup>Pt**  
**78**

$E^*$	$2J^\pi$	Branching ratios in percentage										
		$E_f^*$ :	0.0	98.9	129.8	199.5	211	222.225	239.269	259.30	389.16	419.703
[keV]		$2J_f^\pi$ :	1 <sup>-</sup>	3 <sup>-</sup>	5 <sup>-</sup>	3 <sup>-</sup>	3 <sup>-</sup>	1 <sup>-</sup>	5 <sup>-</sup>	13 <sup>+</sup>	5 <sup>-</sup>	3 <sup>-</sup>
98.882(4)	3 <sup>-</sup>		100									
129.78(1)	5 <sup>-</sup>		55	45(5)								
199.53(1)	3 <sup>-</sup>		67(7)	33(3)								
211.40(1)	3 <sup>-</sup>		100									
222.22(1)	1 <sup>-</sup>		33(4)	67(7)								
239.27(1)	5 <sup>-</sup>		65(3)	35(2)			x					
259.30(8)	13 <sup>+</sup>				x				x			
389.16(6)	5 <sup>-</sup>		1.8(8)	66(3)	26(3)				6(1)			
419.70(1)	3 <sup>-</sup>		79(8)	12.9(15)				8.1(15)				

(continued)

**<sup>195</sup>Pt**  
**78**

$E^*$ [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*$ : $2J_f^\pi$ :	0.0 1 <sup>-</sup>	98.9 3 <sup>-</sup>	129.8 5 <sup>-</sup>	199.5 3 <sup>-</sup>	211 3 <sup>-</sup>	222.225 1 <sup>-</sup>	239.269 5 <sup>-</sup>	259.30 13 <sup>+</sup>	389.16 5 <sup>-</sup>	419.703 3 <sup>-</sup>
432.20(8)	9 <sup>+</sup>									100		
449.66(5)	7 <sup>-</sup>			9.2(13)	87(4)		1.1		2.4		x	
455.20(4)	5 <sup>-</sup>			36(4)	15(2)	17(2)	15(1)		17(2)			
508.08(6)	7 <sup>-</sup>			52(6)	45(6)		2.4(5)				≤14	
524.85(1)	3 <sup>-</sup>		38(4)	15(2)	27(3)		7(1)		13(2)			
544.2(6)	5 <sup>-</sup>		64	36.00	x		x		x			
547.27(11)	⟨11 <sup>+</sup> ⟩									91(27)		
562.81(5)	9 <sup>-</sup>				91				8.1(10)			
590.90(1)	3 <sup>-</sup>		42(4)			7(1)	12(2)	39(4)				
612.72(8)	7 <sup>-</sup>			2.1(7)			21(7)		77(21)		≈0.70	
630.14(1)	1 <sup>-</sup>		5(1)	17(5)		26(3)	27(4)	25(3)				
632.1(5)	1 <sup>-</sup> ,3 <sup>-</sup>								x			
664.20(1)	5 <sup>-</sup>				28(5)	36(4)	24(4)		11(3)			
667.1(5)	⟨9 <sup>-</sup> ⟩				16(3)				84			
678(1)	5 <sup>-</sup>								x			
695.30(6)	7 <sup>-</sup>			8(2)	9(2)	20(2)			30(2)		33	
739.55(1)	1 <sup>-</sup>		31(4)	15(2)								55(7)
793.0(10)	3 <sup>-</sup>		100									
814.52(4)	9 <sup>-</sup>				31(2)				5(1)		2(1)	
821.85(6)	5 <sup>+</sup>										13.3(36)	
895.42(7)	9 <sup>-</sup>										36.2(27)	
926.89(5)	3 <sup>-</sup>		26(7)				27(4)		46(8)			
930.71(6)	⟨9 <sup>-</sup> ⟩				24(2)				1.1(2)			
1095.8(4)	3 <sup>-</sup>		x									
1132.401(20)	1 <sup>-</sup>			44(9)					29(7)			
1160.38(3)	1 <sup>-</sup> ,3 <sup>-</sup>			37(4)	11(3)		16(3)					

Energy levels and branching ratios [99Zh11]. Part 3

**<sup>195</sup>Pt**  
**78**

$E^*$	$2J^\pi$	Branching ratios in percentage												
[keV]		$E_f^*$ : $2J_f^\pi$ :	432 $\langle 17^+ \rangle$	432.20 $9^+$	449.66 $\langle 7 \rangle^-$	455.20 $5^-$	508.08 $5^-, 7^-$	524.848 $3^-$	547.27 $\langle 11^+ \rangle$	562.81 $9^-$	612.72 $\langle 7 \rangle^-$	695.30 $\langle 7 \rangle^-$	739.546 $1^-, 3^-$	821.85 $5^+$
547.27(11)	$\langle 11^+ \rangle$			9(3)										
562.81(5)	$9^-$			0.7(5)										
814.52(4)	$9^-$	$\leq 0.8$			31(1)	15(1)	4.4		2	6(1)	5	$\leq 1$		
821.85(6)	$5^+$	87(9)												
895.42(7)	$9^-$				26(3)	12(3)	18(2)			4(2)	3(1)			
930.71(6)	$\langle 9 \rangle^-$			2.6(4)	60(4)	3.4(7)	3.0(4)		$\leq 5.40$			5.8(11)		
1091.8(5)	$\langle 5-13 \rangle$									x				
1122.66(6)	$3^+, 5^+$													100
1132.401(20)	$1^-$												27(6)	
1160.38(3)	$1^-, 3^-$					13(2)		17(2)					6(3)	

Energy levels and branching ratios [98Zh05].

**<sup>196</sup>Pt**  
**78**

$E^*$	$J^\pi$	$L$	$d\sigma/d\Omega$	$S_N$	$L$	$\sigma$ (p,p')	$L$	$C^2S$	$L$	$\varepsilon$	$d\sigma/d\Omega$	$I_{s,0}$	$\Gamma_o$	Ref.
[keV]		(t,p)	$\mu\text{b/sr}$	(d,p)	(p,p')	$\mu\text{b/sr}$	(d, $\tau$ )	(d, $\tau$ )	(p,t)	(p,t)	$\mu\text{b/sr}$	[eVb]	[meV]	
0.0	0 <sup>+</sup>	0	362(11)	0.76		569·10 <sup>3</sup>	2	0.24	0	3.7	852			81Ci01
355.684(2)	2 <sup>+</sup>		7.9(7)	0.13(2)	2	4550	2	0.21	2	2.2	272			84Ve06
688.693(5)	2 <sup>+</sup>	$\langle 2 \rangle$	5.5(6)	0.144	2	48.7	2	0.14	2	0.12	10			81Ci01
876.865(5)	4 <sup>+</sup>	$\langle 4 \rangle$	8.5(7)	0.13	4	258		$\leq 0.04$	4	0.12	13			81Ci01
1015.04(1)	3 <sup>+</sup>			$< 0.04$		9.9		$\leq 0.04$						84Ve06
1135.31(1)	0 <sup>+</sup>	0	7.4(7)	0.16				$\leq 0.02$	0	0.11	29			81Ci01
1270.21(1)	5 <sup>-</sup>		2.9(5)		5	180					7			81De12
1293.31(1)	4 <sup>+</sup>	$\langle 4 \rangle$	6.6(7)		4	269	2		$\langle 4 \rangle$	0.77	43			81Ci01
1361.58(1)	2 <sup>+</sup>		2.1(4)	$< 0.04$			2				8			84Ve06
1373.60(19)	7 <sup>-</sup>				7	104	3		6,7	0.94	15			81De12
1402.73(1)	0 <sup>+</sup>	0	6.1(6)	0.274					0	0.15	22			81Ci01
1429.74(25)	5 <sup>-</sup> , 6 <sup>+</sup>													
1447.04(1)	3 <sup>-</sup>		5.0(6)		3	1080			3	0.81	13			81De12
1525.8(5)	6 <sup>+</sup>					77.0					11			81De12
1535.8(6)	4 <sup>+</sup>		3.9(5)		4						17			81De12
1604.49(1)	2 <sup>+</sup>		1.0(6)		2	29.8			$\langle 2 \rangle$	0.09	10			81De12
1609.74(20)	$\langle 5^+ \rangle$													
1677.26(1)	2 <sup>+</sup>		3.6(10)	0.308		32.9					1			84Ve06
1679.81(20)	$\langle 6^- \rangle$					incl								
1754.65(1)	3 <sup>-</sup> , 4 <sup>+</sup>					37.7								81De12
1795.09(6)	2 <sup>+</sup>		13.1(15)								22			79De25
1802.30(1)	1 <sup>+</sup> , 2 <sup>+</sup>													
1804.76*	3.4 <sup>+</sup>													02Ta14
1820.69(24)	9 <sup>-</sup>													
1823.23(6)	0 <sup>+</sup>	0	12.5(15)			67.8			0	0.32	71			81Ci01
1825.71(1)	2 <sup>+</sup>													
1831.69*	3 <sup>+</sup>													02Ta14
1847.35(2)	2 <sup>+</sup>	$\langle 2 \rangle$	8.5(13)						$\langle 2 \rangle$	0.22	27			81Ci01
1853.66(1)	2 <sup>+</sup>													
1883.24(3)*	3 <sup>+</sup> , 4 <sup>+</sup>	$\langle 4 \rangle$	24(2)			536			$\langle 4 \rangle$	2.1	116			02Ta14
1888.14(1)	1 <sup>+</sup> , 2 <sup>+</sup>													
1901.98*	$\langle 6-8^- \rangle$													02Ta14
1918.54(4)	0 <sup>+</sup>		4.9(8)											
1932.01(11)	0 <sup>+</sup> -2 <sup>+</sup>		3.1(8)								2			79De25
1957.28*	5, 6													02Ta14
1968.91(1)	1 <sup>+</sup>		1.1(6)											
1984.93(5)	1 <sup>+</sup> , 2 <sup>+</sup>													
1988.22(1)	1 <sup>+</sup> , 2 <sup>+</sup>										5			79De25
1991.63*	3													02Ta14
1998.96(4)	2 <sup>+</sup>													
2002.36*	4 <sup>+</sup>	$\langle 4 \rangle$	26(2)		4	295					45			02Ta14
2005.97*	4 <sup>+</sup>													02Ta14
2007.85*	6 <sup>+</sup>													02Ta14
2013.88(3)	2 <sup>+</sup>													
2029.77*	3 <sup>+</sup>													02Ta14

(continued)

**<sup>196</sup>Pt**  
**78**

$E^*$	$J^\pi$	$L$	$d\sigma/d\Omega$	$S_N$	$L$	$\sigma$ (p,p')	$L$	$C^2S$	$L$	$d\sigma/d\Omega$	$I_{s,0}$	$\Gamma_o$	$B(M1)$	Ref.
[keV]		(t,p)	$\mu\text{b/sr}$	(d,p)	(p,p')	$\mu\text{b/sr}$	(d, $\tau$ )	(d, $\tau$ )	(p,t)	$\mu\text{b/sr}$	[eVb]	[meV]	$[\mu_N^2]$	
2046.99(6)	2 <sup>+</sup>	$\langle 2 \rangle$	9.0(14)											81Ci01
2055(3)	1 <sup>+</sup> , 2 <sup>+</sup>									19				79De25
2067.15*	5 <sup>-</sup> , 7 <sup>-</sup>													02Ta14
2069.29(20)	0 <sup>+</sup> –2 <sup>+</sup>													
2072	6 <sup>+</sup>								6	17				98Zh05
2084.39*	6 <sup>-</sup> , 7 <sup>-</sup>													02Ta14
2087.33(2)	3 <sup>-</sup> , 4 <sup>+</sup>													
2093.0(3)	$\langle 2^+ \rangle$	$\langle 2 \rangle$	6.8(10)							20				81Ci01
2116(2)						179				7				81De12
2124.39(2)	3 <sup>-</sup> , 4 <sup>+</sup>		5.9(9)											
2126.93(2)	2 <sup>+</sup>					291				12				87La07
2161.5(4)	9 <sup>-</sup> –11 <sup>-</sup>													
2162.70(8)	2 <sup>+</sup>									28				79De25
2170.83*	6 <sup>-</sup> , 7 <sup>-</sup>													02Ta14
2174.43(12)	0 <sup>+</sup> , 2 <sup>+</sup>		4.2(7)							9				79De25
2183.6(3)	1 <sup>+</sup> , 2 <sup>+</sup>													
2199.45(5)	0 <sup>+</sup>	0	7.5(8)							9				81Ci01
2204.43(1)	1 <sup>+</sup> , 2 <sup>+</sup>									11				79De25
2229.6(3)	2 <sup>+</sup>													
2236.42*	6, 7													02Ta14
2244.55*	3 <sup>+</sup> –5 <sup>+</sup>													02Ta14
2245.56(1)	1 <sup>+</sup> , 2 <sup>+</sup>					48.6					4.7(15)	2.7(9)	0.06(2)	81De12
2252.7(6)	8 <sup>+</sup>													
2262.43(2)	2 <sup>+</sup>	$\langle 2 \rangle$	3.1(6)							16				81Ci01
2271.10*	2 <sup>+</sup>		incl											
2277(4)	9 <sup>-</sup>								9	5				98Zh05
2280(2)	4 <sup>+</sup>				4	65.0								81De12
2296(4)	7 <sup>-</sup> , 8 <sup>+</sup>								7, 8	12				98Zh05
2309.23(4)	$\langle 2 \rangle^+$	$\langle 2 \rangle$	2.1(5)			50.0								81Ci01
2324.22(2)	1 <sup>+</sup> , 2 <sup>+</sup>		2.1(5)											
2345.3(3)	1 <sup>+</sup> , 2 <sup>+</sup>													
2365.98(2)	2 <sup>+</sup>													
2375.11(19)	1 <sup>+</sup> , 2 <sup>+</sup>									10				79De25
2383.33(6)	0 <sup>+</sup> –3 <sup>+</sup>									11				79De25
2393(2)														
2403.66(6)	2 <sup>+</sup>													
2420.4(1)	$\langle 2-4^+ \rangle$		2.3(15)											
2422.51(4)	0 <sup>+</sup> –3 <sup>+</sup>									21				79De25
2423(4)	7 <sup>-</sup>								7					98Zh05
2423.4(1)	$\langle 1^+-3^+ \rangle$													
2429.7(4)	3 <sup>-</sup>				3	541								81De12
2433.7(2)	$\langle 0-4 \rangle$													
2438.0(1)	$\langle 1^+-4^+ \rangle$													
2443.93(22)	2 <sup>+</sup>		4.1(20)							4				79De25
2454.2(3)	$\langle 7^-, 8^+ \rangle$													

(continued)

**<sup>196</sup>Pt**  
**<sub>78</sub>**

$E^*$	$J^\pi$	$L$	$d\sigma/d\Omega$	$S_N$	$L$	$\sigma$ (p,p')	$L$	$L$	$d\sigma/d\Omega$	$I_{s,0}$	$\Gamma_o$	$B(M1)$	Ref.
[keV]		(t,p)	$\mu\text{b/sr}$	(d,p)	(p,p')	$\mu\text{b/sr}$	(d, $\tau$ )	(p,t)	$\mu\text{b/sr}$	[eVb]	[meV]	$[\mu_N^2]$	
2460.1(3)	$0^+ - 2^+$								14				79De25
2468.0(3)	$10^-, 11^-$												
2469.85(17)	$1^-, 2^+$												
2488.24(2)	$1^+, 2^+$		1.3(13)										
2493.5(11)	$0^+ - 2^+$												
2505.12(5)	$2^+$												
2527.84(4)	$1^+, 2^+$								12				79De25
2529.3(3)	$2^+$		9(3)						50				79De25
2545(5)									26				79De25
2553.8(8)	$0^+, 2^+$								28				79De25
2570.8(7)	$1^+$									15(2)	14(2)	0.207(34)	96Vo11
2586.9(7)	$0^+, 2^+$	$\langle 2 \rangle$	6.0(11)										81Ci01
2599.1(9)	$\langle 0, 1^-, 2 \rangle$		incl										
2603.2(2)	$\langle 1-5 \rangle$												
2606.0(1)	$\langle 2-5 \rangle$												
2606.8(8)	$0^+, 2^+$								13				79De25
2608.0(2)	$3^-$				3	230							81De12
2614.5(7)	$0^+ - 2^+$												
2626.4(1)	$\langle 1, 2, 3 \rangle$								10				79De25
2629.9(8)	$2^+$	$\langle 2 \rangle$	10.9(15)										81Ci01
2631.1(1)	$\langle 2^+ - 4^+ \rangle$								27				79De25
2638(3)	$3^-$				3	499							81De12
2659.8(8)	$0^+ - 2^+$								12				79De25
2667.25(2)	$1^+, 2^+$		4.1(7)						11				79De25
2676(3)									20				79De25
2692.2(8)			5.2(8)										
2711.0(1)	$3^-$				3	298							81De12
2723(5)			2.8(7)										
2729	$11^-$							11					98Zh05
2736.1	$\langle 1^+ \rangle$									5.6(20)	3.6(13)	0.046(16)	96Vo11
2749.6(6)	$\langle 7^-, 8^+ \rangle$												
2757(4)			3.9(10)						13				79De25
2766(3)									23				79De25
2774(4)			6.5(11)			90.5							81De12
2779(3)									20				79De25
2797(3)						62.3							81De12
2817(6)			3.6(7)										
2824.0	$1^+$									16(2)	28(4)	0.316(48)	96Vo11
2834(5)			3.4(7)										
2875.4	$1^+, \langle 2 \rangle^+$	$\langle 2 \rangle$	5.1(8)							7.3(12)	5.2(9)	0.057(10)	81Ci01
2888.8(4)	$\langle 9^- - 11^- \rangle$												
2974	$9^-$							9					98Zh05
3044.0(9)	$\langle 10^+ \rangle$												
3124.2	1,2									4.2(12)	3.5(10)		96Vo11
3131.8	1,2									4.0(12)	3.4(10)		96Vo11

(continued)

**<sup>196</sup>Pt**  
**78**

$E^*$	$J^\pi$	$L$	$d\sigma/d\Omega$	$S_N$	$L$	$\sigma$ (p,p')	$C^2S$	$L$	$d\sigma/d\Omega$	$I_{s,0}$	$\Gamma_o$	$B(M1)$	Ref.
[keV]		(t,p)	$\mu\text{b/sr}$	(d,p)	(p,p')	$\mu\text{b/sr}$	(d, $\tau$ )	(p,t)	$\mu\text{b/sr}$	[eVb]	[meV]	$[\mu_N^2]$	
3161.9(4)	$\langle 9^- - 11^- \rangle$												
3176.3(4)	$\langle 9^- \rangle$												
3214.8(4)	$\langle 9^- \rangle$												
3298.0	$2^+$									17(1)	16(2)		96Vo11
3303.5(3)	$\langle 10, 11^- \rangle$												
3366.8	1,2									3.5(7)	3.5(7)		96Vo11
3424.3	1,2									7.0(13)	7.1(13)		96Vo11
		81Ci01	81Ci01	84Ve06		81De12	87La07		79De25		96Vo11	96Vo11	Ref.
								79De25					

Additional data on this isotope can be found in [02VyZZ, 02Ta14, 02Si20, 02Ro30, 01Kh0A, 97Jo06, 97Je06, 95Bo20, 94Al50, 93Di05, 91Se04, 90Ma37, 90Be37, 84Ve06].

*Abundance:* 25.242(41) %.

\* Level introduced in [02Ta14].

Cross section of two-neutron transfer reaction (p,t) was measured at 7° [79De25].

The enhancement factors  $\varepsilon$  were calculated with pickup configurations  $(0p_{3/2})^2$  for  $L=0$ ,  $2p_{3/2} \otimes 1f_{7/2}$  for  $L=2$ ,  $(0i_{13/2} \otimes 1f_{7/2})$  for  $L=3$ ,  $(1f_{5/2} \otimes 2p_{3/2})$  for  $L=4$ ,  $(2p_{3/2} \otimes 0i_{13/2})$  for  $L=5$ ,  $(1f_{5/2} \otimes 1f_{7/2})$  for  $L=6$ , and  $(20p_{1/2} \otimes 0i_{13/2})$  for  $L=7$  [79De25].

Spectroscopic factor  $S_N=2G$  from the (d,p) reaction [84Ve06] is derived from the absolute spectroscopic strength  $G$  extracted from the measured target thickness [98Zh05].

The proton-hole states in <sup>196</sup>Pt and <sup>195</sup>Ir were studied in [87La07].

Cross sections of the (d,p) and (d,d') reactions measured at 60° can be found in [65Mu05].

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

Energy levels and branching ratios [98Zh05]. Part 2

**<sup>196</sup>Pt**  
**78**

$E^*$	$J^\pi$	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		$\Gamma_{\text{cm}}$		$E_f^*$ : $J_f^\pi$ :	0.0 0 <sup>+</sup>	355.684 2 <sup>+</sup>	688.693 2 <sup>+</sup>	876.865 4 <sup>+</sup>	1015.04 3 <sup>+</sup>
0.0	0 <sup>+</sup>	Stable	81Ci01						
355.684(2)	2 <sup>+</sup>	34.15(15) ps	84Ve06		100				
688.693(5)	2 <sup>+</sup>	33.8(7) ps	81Ci01		<0.0005	100			
876.865(5)	4 <sup>+</sup>	3.55(5) ps	81Ci01			100			
1015.04(1)	3 <sup>+</sup>		84Ve06			4.2(9)	95(8)	1.2(4)	
1135.31(1)	0 <sup>+</sup>	4.2(+17-6) ps	81Ci01	x		72(6)	28(2)		
1270.21(1)	5 <sup>-</sup>	1.1(2) ns	81De12			0.30(5)		100	
1293.31(1)	4 <sup>+</sup>	2.6(+7-4) ps	81Ci01			13(1)	75(6)	13(4)	
1361.58(1)	2 <sup>+</sup>		84Ve06		8(1)	35(3)	44(3)	2.1(6)	10(2)
1373.60(19)	7 <sup>-</sup>	5.2(2) ns	81De12						
1402.73(1)	0 <sup>+</sup>	>1.29 ps	81Ci01	x		100	<2.4		
1429.74(25)	5 <sup>-</sup> , 6 <sup>+</sup>							100	
1447.04(1)	3 <sup>-</sup>	0.62(17) ns	81De12		10(2)	64(4)	13(4)	3.0(8)	5.5(8)
1525.8(5)	6 <sup>+</sup>	0.98(+11-5) ps	81De12					100	

(continued)

 **$^{196}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage					
				$E_f^*$ : $J_f^\pi$ :	0.0 0 <sup>+</sup>	355.684 2 <sup>+</sup>	688.693 2 <sup>+</sup>	876.865 4 <sup>+</sup>	1015.04 3 <sup>+</sup>
1535.8(6)	4 <sup>+</sup>		81De12			0.22(9)	0.18(7)		100
1604.49(1)	2 <sup>+</sup>		81De12		9(2)	47(4)	19(2)	21(4)	2(1)
1609.74(20)	(5 <sup>+</sup> )								100
1677.26(1)	2 <sup>+</sup>		84Ve06		48(6)	29(10)	10(1)	2	6(1)
1679.81(20)	(6 <sup>-</sup> )								
1754.65(1)	3 <sup>-</sup> , 4 <sup>+</sup>		81De12					33(5)	
1795.09(6)	2 <sup>+</sup>		79De25		15(4)	61(5)	24(4)		
1802.30(1)	1 <sup>+</sup> , 2 <sup>+</sup>				74(6)	9(2)	14(2)		
1804.76*	3.4 <sup>+</sup>		02Ta14						
1820.69(24)	9 <sup>-</sup>	<1 ns							
1823.23(6)	0 <sup>+</sup>		81Ci01		x	100	<0.8		
1825.71(1)	2 <sup>+</sup>				54(4)		17(5)		
1831.69*	3 <sup>+</sup>		02Ta14						
1847.35(2)	2 <sup>+</sup>		81Ci01			94(8)	5(1)		
1853.66(1)	2 <sup>+</sup>				15(2)	77(7)			
1883.24(3)*	3 <sup>+</sup> , 4 <sup>+</sup>	1.3(+8-6) ps	02Ta14						
1888.14(1)	1 <sup>+</sup> , 2 <sup>+</sup>				39(3)	28(8)	26(5)		
1901.98*	(6-8 <sup>-</sup> )		02Ta14						
1918.54(4)	0 <sup>+</sup>				x	85(8)	15(3)		
1932.01(11)	0 <sup>+</sup> -2 <sup>+</sup>		79De25			100			
1957.28*	5, 6		02Ta14						
1968.91(1)	1 <sup>+</sup>				60(8)	8(2)			
1984.93(5)	1 <sup>+</sup> , 2 <sup>+</sup>								30(8)
1988.22(1)	1 <sup>+</sup> , 2 <sup>+</sup>		79De25			67(5)			
1991.63*	3		02Ta14						
1998.96(4)	2 <sup>+</sup>				27(8)	65(5)			
2002.36*	4 <sup>+</sup>	0.77(19) ps	02Ta14						
2005.97*	4 <sup>+</sup>		02Ta14					8.2(10)	
2007.85*	6 <sup>+</sup>		02Ta14						
2013.88(3)	2 <sup>+</sup>							64(32)	
2029.77*	3 <sup>+</sup>		02Ta14						
2046.99(6)	2 <sup>+</sup>		81Ci01			22(4)	67(6)		11(2)
2055(3)	1 <sup>+</sup> , 2 <sup>+</sup>		79De25						
2067.15*	5-7		02Ta14						
2069.29(20)	0 <sup>+</sup> -2 <sup>+</sup>					100			
2072	6 <sup>+</sup>		98Zh05						
2084.39*	6 <sup>-</sup> , 7 <sup>-</sup>		02Ta14						
2087.33(2)	3 <sup>-</sup> , 4 <sup>+</sup>					32(6)	12(4)	14(3)	
2093.0(3)	(2 <sup>+</sup> )		81Ci01			70(6)	20(2)		
2116(2)			81De12						
2124.39(2)	3 <sup>-</sup> , 4 <sup>+</sup>					52(12)			
2126.93(2)	2 <sup>+</sup>		87La07			70(8)			
2161.5(4)	9 <sup>-</sup> -11 <sup>-</sup>								
2162.70(8)	2 <sup>+</sup>		79De25			46(4)	50(8)		
2170.83*	6 <sup>-</sup> , 7 <sup>-</sup>		02Ta14						

(continued)

 **$^{196}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage					
				$E_f^*$ : $J_f^\pi$ :	0.0 0 <sup>+</sup>	355.684 2 <sup>+</sup>	688.693 2 <sup>+</sup>	876.865 4 <sup>+</sup>	1015.04 3 <sup>+</sup>
2174.43(12)	0 <sup>+</sup> , 2 <sup>+</sup>		79De25			44(10)	56(12)		
2183.6(3)	1 <sup>+</sup> , 2 <sup>+</sup>				68(9)				
2199.45(5)	0 <sup>+</sup>		81Ci01		x		100		
2204.43(1)	1 <sup>+</sup> , 2 <sup>+</sup>		79De25			24(5)	26(8)		
2229.6(3)	2 <sup>+</sup>					85(9)		15(6)	
2236.42*	6, 7		02Ta14						
2244.55*	3 <sup>+</sup> –5 <sup>+</sup>		02Ta14						
2245.56(1)	1 <sup>+</sup> , 2 <sup>+</sup>	0.13(4) ps	81De12		77(5)				
2252.7(6)	8 <sup>+</sup>	0.42(+4-5) ps							
2262.43(2)	2 <sup>+</sup>		81Ci01			12(3)	56(14)		18(6)
2271.10*	2 <sup>+</sup>								
2277(4)	9 <sup>–</sup>		98Zh05						
2280(2)	4 <sup>+</sup>		81De12						
2296(4)	7 <sup>–</sup> , 8 <sup>+</sup>		98Zh05						
2309.23(4)	⟨2⟩ <sup>+</sup>		81Ci01		56(10)	8(3)	29(5)		
2324.22(2)	1 <sup>+</sup> , 2 <sup>+</sup>						75(11)		
2345.3(3)	1 <sup>+</sup> , 2 <sup>+</sup>						66(9)		34(11)
2365.98(2)	2 <sup>+</sup>								
2375.11(19)	1 <sup>+</sup> , 2 <sup>+</sup>		79De25		68(7)		27(7)		
2383.33(6)	0 <sup>+</sup> –3 <sup>+</sup>		79De25				87(20)		
2393(2)									
2403.66(6)	2 <sup>+</sup>							41(7)	
2420.4(1)	⟨2–4⟩ <sup>+</sup>	68 fs					100		
2422.51(4)	0 <sup>+</sup> –3 <sup>+</sup>		79De25			90(13)			
2423(4)	7 <sup>–</sup>		98Zh05						
2423.4(1)	⟨1 <sup>+</sup> –3 <sup>+</sup> ⟩	67(+58-24) fs				85(4)			15(4)
2429.7(4)	3 <sup>–</sup>	>166 fs	81De12					100	
2433.7(2)	⟨0–4⟩	17(+12-7) fs				100			
2438.0(1)	⟨1 <sup>+</sup> –4 <sup>+</sup> ⟩	53(+37-17) fs					19(6)		52(5)
2443.93(22)	2 <sup>+</sup>		79De25						38(9)
2454.2(3)	⟨7 <sup>–</sup> , 8 <sup>+</sup> ⟩								
2460.1(3)	0 <sup>+</sup> –2 <sup>+</sup>		79De25			100			
2468.0(3)	10 <sup>–</sup> , 11 <sup>–</sup>	<1 ns							
2469.85(17)	1 <sup>–</sup> , 2 <sup>+</sup>				50(2)	28(4)			
2488.24(2)	1 <sup>+</sup> , 2 <sup>+</sup>				24(4)	18(6)	40(9)		
2493.5(11)	0 <sup>+</sup> –2 <sup>+</sup>								
2505.12(5)	2 <sup>+</sup>				60(6)	16(6)			
2527.84(4)	1 <sup>+</sup> , 2 <sup>+</sup>		79De25		0.40		76(10)		
2529.3(3)	2 <sup>+</sup>		79De25			87(21)			
2545(5)			79De25						
2553.8(8)	0 <sup>+</sup> , 2 <sup>+</sup>		79De25						
2570.8(7)	1 <sup>+</sup>	0.021(4) ps	96Vo11		[63(10)]	[37(9)]			
2586.9(7)	0 <sup>+</sup> , 2 <sup>+</sup>		81Ci01						
2599.1(9)	⟨0, 1 <sup>–</sup> , 2⟩								
2603.2(2)	⟨1–5⟩	>66 fs							100



(continued)

**<sup>196</sup>Pt**  
**78**

$E^*$	$J^\pi$	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		$\Gamma_{\text{cm}}$		$E_f^*:$ $J_f^\pi:$	0.0 0 <sup>+</sup>	355.684 2 <sup>+</sup>	688.693 2 <sup>+</sup>	876.865 4 <sup>+</sup>	1015.04 3 <sup>+</sup>
2606.0(1)	$\langle 2-5 \rangle$	>111 fs						100	
2606.8(8)	0 <sup>+</sup> ,2 <sup>+</sup>		79De25						
2608.0(2)	3 <sup>-</sup>	31(+12-8) fs	81De12			100			
2614.5(7)	0 <sup>+</sup> ,2 <sup>+</sup>								
2626.4(1)	$\langle 1,2,3 \rangle$	83 fs	79De25				27(4)		
2629.9(8)	2 <sup>+</sup>		81Ci01						
2631.1(1)	$\langle 2^+-4^+ \rangle$	24(+14-8) fs	79De25			100			
2638(3)	3 <sup>-</sup>		81De12						
2659.8(8)	0 <sup>+</sup> ,2 <sup>+</sup>		79De25						
2667.25(2)	1 <sup>+</sup> ,2 <sup>+</sup>	0.14(+2-1) ps	79De25			15(3)	40(3)		
2676(3)			79De25						
2692.2(8)						100			
2711.0(1)	3 <sup>-</sup>	>55 fs	81De12			37(5)	63(5)		
2723(5)									
2729	11 <sup>-</sup>		98Zh05						
2736.1	$\langle 1^+ \rangle$	0.13(5) ps	96Vo11		100				
2749.6(6)	$\langle 7^-,8^+ \rangle$	0.46(+8-6) ps							
2757(4)			79De25						
2766(3)			79De25						
2774(4)			81De12						
2779(3)			79De25						
2797(3)			81De12						
2817(6)									
2824.0	1 <sup>+</sup>	7.1(13) fs	96Vo11		41(6)	43(7)	16(5)		
2834(5)									
2875.4	1 <sup>+</sup> , $\langle 2 \rangle^+$	0.088(15) ps	81Ci01		100				
2888.8(4)	$\langle 9^--11^- \rangle$								
2974	9 <sup>-</sup>		98Zh05						
3044.0(9)	$\langle 10^+ \rangle$								
3124.2	1,2	0.13(4) ps	96Vo11		100				
3131.8	1,2	0.13(4) ps	96Vo11		100				
3161.9(4)	$\langle 9^--11^- \rangle$								
3176.3(4)	$\langle 9^- \rangle$								
3214.8(4)	$\langle 9^- \rangle$								
3298.0	2 <sup>+</sup>	0.029(4) ps	96Vo11		100				
3303.5(3)	$\langle 10,11^- \rangle$								
3366.8	1,2	0.13(3) ps	96Vo11		100				
3424.3	1,2	0.064(12) ps	96Vo11		100				
			Ref.						

Energy levels and branching ratios [98Zh05]. Part 3

 **$^{196}_{78}\text{Pt}$** 

$E^*$	$J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*$ : $J_f^\pi$ :	1135.31 0 <sup>+</sup>	1270.21 5 <sup>-</sup>	1293.31 4 <sup>+</sup>	1361.59 2 <sup>+</sup>	1373.60 7 <sup>-</sup>	1402.73 0 <sup>+</sup>	1429.74 ⟨5 <sup>-</sup> ,6 <sup>+</sup> ⟩	1447.04 3 <sup>-</sup>	1525.8 6 <sup>+</sup>	1604.49 2 <sup>+</sup>
1361.58(1)	2 <sup>+</sup>		1.9(4)									
1373.60(19)	7 <sup>-</sup>			100								
1447.04(1)	3 <sup>-</sup>			5.5(15)								
1604.49(1)	2 <sup>+</sup>							2				
1677.26(1)	2 <sup>+</sup>	2				1						
1679.81(20)	⟨6 <sup>-</sup> ⟩			100								
1754.65(1)	3 <sup>-</sup> ,4 <sup>+</sup>			39(12)						28(5)		
1802.30(1)	1 <sup>+</sup> ,2 <sup>+</sup>	1(1)				2(1)						
1820.69(24)	9 <sup>-</sup>						100					
1825.71(1)	2 <sup>+</sup>	9(2)				2.3(5)		5(1)		12(2)		
1847.35(2)	2 <sup>+</sup>											1.0(5)
1853.66(1)	2 <sup>+</sup>				7.4(19)							
1888.14(1)	1 <sup>+</sup> ,2 <sup>+</sup>	5(1)				1.0(3)						
1901.98*	⟨6-8 <sup>-</sup> ⟩						100					
1968.91(1)	1 <sup>+</sup>	18(2)						14(4)				
1984.93(5)	1 <sup>+</sup> ,2 <sup>+</sup>	26(8)				44(8)						
1988.22(1)	1 <sup>+</sup> ,2 <sup>+</sup>					9(1)				23(5)		
1998.96(4)	2 <sup>+</sup>				8(2)							
2005.97*	4 <sup>+</sup>				84(3)						7.7(15)	
2013.88(3)	2 <sup>+</sup>									36(9)		
2087.33(2)	3 <sup>-</sup> ,4 <sup>+</sup>			27(3)		15(3)						
2093.0(3)	⟨2 <sup>+</sup> ⟩									8(2)		
2124.39(2)	3 <sup>-</sup> ,4 <sup>+</sup>			28(5)						20(7)		
2126.93(2)	2 <sup>+</sup>											28(8)
2162.70(8)	2 <sup>+</sup>									4(1)		
2183.6(3)	1 <sup>+</sup> ,2 <sup>+</sup>	32(9)										
2204.43(1)	1 <sup>+</sup> ,2 <sup>+</sup>	20(5)										
2245.56(1)	1 <sup>+</sup> ,2 <sup>+</sup>											12(2)
2252.7(6)	8 <sup>+</sup>						4.6(9)				80(2)	
2309.23(4)	⟨2 <sup>+</sup> ⟩					6(3)						
2324.22(2)	1 <sup>+</sup> ,2 <sup>+</sup>	22(4)										
2365.98(2)	2 <sup>+</sup>									44(5)		56(7)
2375.11(19)	1 <sup>+</sup> ,2 <sup>+</sup>											5(3)
2403.66(6)	2 <sup>+</sup>					6(2)				27(9)		
2438.0(1)	⟨1 <sup>+</sup> -4 <sup>+</sup> ⟩					29(4)						
2443.93(22)	2 <sup>+</sup>				44(9)							
2454.2(3)	⟨7 <sup>-</sup> ,8 <sup>+</sup> ⟩						8(2)		17(2)			
2469.85(17)	1 <sup>-</sup> ,2 <sup>+</sup>	17(4)										
2488.24(2)	1 <sup>+</sup> ,2 <sup>+</sup>	12(4)										
2505.12(5)	2 <sup>+</sup>					24(5)						
2527.84(4)	1 <sup>+</sup> ,2 <sup>+</sup>									14(6)		
2626.4(1)	⟨1,2,3⟩					73(4)						
2667.25(2)	1 <sup>+</sup> ,2 <sup>+</sup>	14(5)				16(1)		5(1)				4(1)
2749.6(6)	⟨7 <sup>-</sup> ,8 <sup>+</sup> ⟩						7(3)					

Energy levels and branching ratios [98Zh05]. Part 4

**<sup>196</sup>Pt**  
**78**

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage									
		$E_f^*$ : $J_f^\pi$ :	1677.26 2 <sup>+</sup>	1754.66 3 <sup>-</sup> ,4 <sup>+</sup>	1802.30 1 <sup>+</sup> ,2 <sup>+</sup>	1820.69 9 <sup>-</sup>	1847.35 2 <sup>+</sup>	1853.66 2 <sup>+</sup>	1888.14 1 <sup>+</sup> ,2 <sup>+</sup>	1918.54 0 <sup>+</sup>	1968.91 1 <sup>+</sup> ,⟨2 <sup>+</sup> ⟩
2093.0(3)	⟨2 <sup>+</sup> ⟩						2.4(10)				
2126.93(2)	2 <sup>+</sup>			1.5(7)							
2161.5(4)	9 <sup>-</sup> -11 <sup>-</sup>					100					
2204.43(1)	1 <sup>+</sup> ,2 <sup>+</sup>				17(3)				12(7)		
2245.56(1)	1 <sup>+</sup> ,2 <sup>+</sup>				11(2)						
2252.7(6)	8 <sup>+</sup>					15(2)					
2262.43(2)	2 <sup>+</sup>										14(3)
2309.23(4)	⟨2 <sup>+</sup> ⟩						1.4(3)				
2324.22(2)	1 <sup>+</sup> ,2 <sup>+</sup>							3.3(11)			
2403.66(6)	2 <sup>+</sup>		16(2)								
2422.51(4)	0 <sup>+</sup> -3 <sup>+</sup>							3.9(13)			
2454.2(3)	⟨7 <sup>-</sup> ,8 <sup>+</sup> ⟩					75(3)					
2468.0(3)	10 <sup>-</sup> ,11 <sup>-</sup>					100					
2469.85(17)	1 <sup>-</sup> ,2 <sup>+</sup>			5(2)							
2527.84(4)	1 <sup>+</sup> ,2 <sup>+</sup>								10(2)		
2529.3(3)	2 <sup>+</sup>			13(5)							
2667.25(2)	1 <sup>+</sup> ,2 <sup>+</sup>				1.1(2)					1.5(6)	2.6(5)
2749.6(6)	⟨7 <sup>-</sup> ,8 <sup>+</sup> ⟩					13(3)					
2888.8(4)	⟨9 <sup>-</sup> -11 <sup>-</sup> ⟩					1.4(4)					
3161.9(4)	⟨9 <sup>-</sup> -11 <sup>-</sup> ⟩					6.2(7)					
3176.3(4)	⟨9 <sup>-</sup> ⟩					8.3(14)					
3214.8(4)	⟨9 <sup>-</sup> ⟩					8.7(17)					
3303.5(3)	⟨10,11 <sup>-</sup> ⟩					25(2)					

Energy levels and branching ratios [98Zh05]. Part 5

**<sup>196</sup>Pt**  
**78**

$E^*$ [keV]	$J^\pi$	Branching ratios in percentage									
		$E_f^*$ : $J_f^\pi$ :	1984.93 1 <sup>+</sup> ,2 <sup>+</sup>	1998.96 2 <sup>+</sup>	2007.4 6 <sup>+</sup>	2013.88 2 <sup>+</sup>	2161.5	2252.7 8 <sup>+</sup>	2262.43 2 <sup>+</sup>	2454.2 ⟨7 <sup>-</sup> ,8 <sup>+</sup> ⟩	2468.0 10 <sup>-</sup> ,11 <sup>-</sup>
2383.33(6)	0 <sup>+</sup> -3 <sup>+</sup>					13(7)					
2403.66(6)	2 <sup>+</sup>		10(2)								
2422.51(4)	0 <sup>+</sup> -3 <sup>+</sup>			5.9(20)							
2443.93(22)	2 <sup>+</sup>					18(4)					
2488.24(2)	1 <sup>+</sup> ,2 <sup>+</sup>								6(3)		
2749.6(6)	⟨7 <sup>-</sup> ,8 <sup>+</sup> ⟩				64(7)			17(6)			
2888.8(4)	⟨9 <sup>-</sup> -11 <sup>-</sup> ⟩						50(19)				48(19)
3044.0(9)	⟨10 <sup>+</sup> ⟩							100			
3161.9(4)	⟨9 <sup>-</sup> -11 <sup>-</sup> ⟩										94(7)
3176.3(4)	⟨9 <sup>-</sup> ⟩									92(9)	
3214.8(4)	⟨9 <sup>-</sup> ⟩									91(5)	
3303.5(3)	⟨10,11 <sup>-</sup> ⟩									5.6(6)	69(2)

Energy levels and branching ratios [95Zh27, 05Hu03].

**<sup>197</sup>Pt**  
**78**

$E^*$	$2J^\pi$	$L$	$S_N$	$S_N$	$S_N$	$L$	$d\sigma/d\Omega$	$L$	$S_N$	$S_N$	$L$	$C^2S$	$L$	$C^2S$	$\sigma(\tau,\alpha)$	Ref.
[keV]		(d,t)	(d,p)	(t,d)	(t,p)	$\mu\text{b/sr}$	(d,p)	(d,p)	(d,t)	(p,d)	(p,d)	$(\tau,\alpha)$	$(\tau,\alpha)$	$\mu\text{b/sr}$		
0.0	$1^-$	1	0.39	0.26	0.29**	O	103(2)*	1	0.13	0.21	1	0.34				90Bu26
53.088(19)	$5^-$	3	1.6	1.26	1.32	2	10.1(9)	3	0.63	0.91	3	1.88	3	1.31	273	90Bu26
71.60(7)	$3^-$	1	0.42	0.28	0.26	2	2.8(5)	1	0.14	0.21	1	0.27				90Bu26
98.60(8)	$3^-$	1	0.61	0.48	0.45	2	4.0(6)	1	0.24	0.33	1	0.53				90Bu26
130.98(4)	$1^-$	1	0.23	0.16	0.18	0	20(1)	$\langle 1 \rangle$	0.08	0.13	1	0.16				90Bu26
269.11(3)	$1^-, 3^-$	1	0.02		0.01	2	1.2(3)									90Bu26
273(3)	$\langle 5^-, 7^- \rangle$									$\langle 3 \rangle$	0.08					77Sm03
299.33(4)	$5^-$	1	0.15		0.06	2	1.5(3)			0.02	3	0.14	3	0.82	22	90Bu26
371(6)	$\langle 7^+, 9^+ \rangle$									$\langle 4 \rangle$	0.09					
399.59(20)	$13^+$	6	4.7	0.60	1.02		1.0(3)	$\langle 6 \rangle$	0.30	1.40	6	2.7	6	5.36	1525	90Bu26
425.7(6)																
456.88(5)	$5^-$	3	0.19		0.06		0.9(4)			0.12	1***	0.38				90Bu26
											+3	+0.2				
483(1)	$\langle 7 \rangle^-$	3	0.27		0.14				0.02		3***	1.65				90Bu26
502.43(5)	$3^-$	1	0.17		0.03					0.10	1	0.07				90Bu26
520(5)	$7^+, 9^+$						3.8(7)						4		149	82Ci02
529(1)	$7^-$	3	0.73	0.36	0.28	$\langle 2 \rangle$	7.1(9)	3	0.18	0.36	3	0.92				90Bu26
595.31(8)	$\langle 5 \rangle^-, \langle 1^- \rangle$	3	0.08			4	2.0(5)				$\langle 3 \rangle$	0.14				90Bu26
612(10)	$\langle 13 \rangle^+$												6	0.19	53	85Th02
708.37(5)	$3^-$	1	0.08	0.08	0.07	2	2.5(10)	$\langle 1 \rangle$	0.04	0.04						90Bu26
713(10)	$5^-, 7^-$										[1]	0.08	3	0.14	27	85Th02
747.82(9)	$1^-$	1	0.09	0.02	0.03	0	30(13)	1	0.01	0.04	1	0.06				90Bu26
767(10)	$\langle 17^+ \rangle$														24	
797(5)							1.0(3)									82Ci02
810.3		1	0.02													90Bu26
825(6)	$1^-, 3^-$										1	0.01				
854(1)	$7^-$	3	0.54		0.12		1.5(5)	3		0.30			3	0.70	193	90Bu26
859(5)	$5^-$					2	2.2(5)				3	0.59				82Si02
894.8(5)	$1^-, 3^-$	1	0.03		0.02		0.9(3)				1	0.03				90Bu26
955.9(14)																
965(10)													2=4		30	85Th02
970.9(5)	$1^-, 3^-$	1	0.07													90Bu26
977.9(5)	$1^-, 3^-$		incl				2.8(7)	$\langle 1 \rangle$		0.03						90Bu26
991(8)											1	0.06				
1028(1)	$7^-$	3	0.24										3	0.24	71	90Bu26
1055(5)	$5^-, 7^-$						2.1(4)				3	0.23				82Ci02
1060.5(5)	$3^-$	1	0.11		0.04					0.06						90Bu26
1081.0(5)	$1^-, 3^-$										1	0.10				
1099(5)							5.2(8)									82Ci02
1107.7(8)	$1, 3$	3	0.15		0.23			1	0.07							90Bu26
1124(10)	$\langle 5^-, 7^- \rangle$										$\langle 3 \rangle$	<0.1				
1135.3(7)	$1^-, 3^-$	1	0.08				1.5(6)	$\langle 1 \rangle$		0.05						90Bu26
1136(10)	$\langle 13 \rangle^+$												6	2.78	761	85Th02
1158.7(5)	$\langle 1 \rangle^-$	1	0.21			$\langle 0 \rangle$	4(1)	$\langle 1 \rangle$		0.09	1	0.07				90Bu26
1175(7)											1+6***					

(continued)

 **$^{197}_{78}\text{Pt}$** 

$E^*$	$2J^\pi$	$L$	$S_N$	$S_N$	$S_N$	$L$	$d\sigma/d\Omega$	$L$	$S_N$	$S_N$	$L$	$C^2S$	$L$	$C^2S$	$\sigma$	$(\tau, \alpha)$	Ref.
[keV]			(d,t)	(d,p)	(t,d)	(t,p)	$\mu\text{b/sr}$	(d,p)	(d,p)	(d,t)	(p,d)	(p,d)	$(\tau, \alpha)$	$(\tau, \alpha)$	$\mu\text{b/sr}$		
1212(3)		1,3															90Bu26
1248(2)	$7^-$	3	0.20		0.05		1.6(5)						3	0.27	76		90Bu26
1276(5)	$5^-, 7^-$					2	1.5(8)				3	0.21					82Si02
1292(5)	$5^-$	3	0.48		0.05	4	2.7(9)						3	0.77	219		90Bu26
1297(1)	1,3							3		0.27							
1318(6)	$5^-, 7^-$										3	0.56					
1330(2)	$3^-$	1	0.13					1		0.07							90Bu26
1350(6)	$1^-, 3^-$										1	0.15					
1369(10)****	$9^-$												5	1.79	275		85Th02
1378(3)	$\langle 5^- \rangle$	$\langle 3 \rangle$	0.12														90Bu26
1397(2)	$3^-$	1	0.12														90Bu26
1412(10)											1***	0.06					
1431(10)	$\langle 13^+ \rangle$												6	0.56	153		
1439(5)							2.1(7)										82Ci02
1464(5)	$\langle 1^-, 3^- \rangle$	$\langle 1 \rangle$															90Bu26
1507(5)							3.4(9)										82Ci02
1525(5)																	
1540(5)							4.7(9)										82Ci02
1548(10)	$\langle 13^+ \rangle$												6	0.83	218		85Th02
1582(5)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$															90Bu26
1608(5)							3.2(7)										82Ci02
1632(3)	$\langle 1^-, 3^- \rangle$							$\langle 1 \rangle$	0.04								78Ya07
1657(5)		$\langle 1 \rangle$					3.4(8)										90Bu26
1687(5)							3.9(9)										82Ci02
1711(5)	$\langle 1^-, 3^- \rangle$	$\langle 1 \rangle$															90Bu26
1743(5)							2.8(6)										82Ci02
1761							incl										82Ci02
1775(10)	$\langle 13^+ \rangle$												6	0.50	91		85Th02
1792(3)	$\langle 7^- \rangle$	$\langle 3 \rangle$			1.29	$\langle 4 \rangle$	14(1)										90Bu26
1797	$\langle 9^+ \rangle$							$\langle 4 \rangle$	1.35								78Ya07
1812(5)	$X^{(-)}$	$\langle 1, 3 \rangle$		0.09			7.3(11)	$\langle 1 \rangle$	0.09								90Bu26
1861(10)	$\langle 13^+ \rangle$												6	0.45	122		85Th02
1874							3.5(7)										82Ci02
1908(5)	$7^-, 9^-$					4	4.5(7)										82Si02
1929(10)	$\langle 13^+ \rangle$												6	0.32	77		85Th02
1947(5)							3.8(7)										82Ci02
1999(5)							4.9(9)										82Ci02
2009(5)																	
2050(20)																	
2082(5)	$\langle 1^-, 3^- \rangle$	$\langle 1 \rangle$															90Bu26
2143(10)	$9^-$												5	1.91	294		85Th02
2176																	
2186(5)							7.7(18)										82Ci02
2560(20)																	
2710****																	65Mu05

(continued)

**<sup>197</sup>Pt**  
**78**

$E^*$	$2J^\pi$	$L$	$S_N$	$S_N$	$S_N$	$L$	$d\sigma/d\Omega$	$L$	$S_N$	$S_N$	$C^2S$	$L$	$C^2S$	$\sigma(\tau, \alpha)$	Ref.
[keV]			(d,t)	(d,p)	(t,d)	(t,p)	$\mu\text{b/sr}$	(d,p)	(d,p)	(d,t)	(p,d)	$(\tau, \alpha)$	$(\tau, \alpha)$	$\mu\text{b/sr}$	
2780****															65Mu05
2890****															65Mu05
2990****															65Mu05
3070****															65Mu05
3150****															65Mu05
3300****															65Mu05
3380****															65Mu05
3460****															65Mu05
3580****															65Mu05
3700****															65Mu05
3800****															65Mu05
3880****															65Mu05
3940****															65Mu05
4020****															65Mu05
4120****															65Mu05
4220****															65Mu05
			90Bu26	90Bu26			82Ci02		78Ya07		77Sm03		85Th02		Ref.
					90Bu26									85Th02	Ref.

Additional data on this isotope can be found in [01Co19, 65Mu05].

\* Cross section of two-neutron transfer (t,p) reaction was measured at 25° [82Ci02].

\*\* Relative value from  $d\sigma/d\Omega_{exp}/Nd\sigma/d\Omega_{DWBA}$  normalized to make their overall average consistent with the (d,p) results [05Hu03].\*\*\* Unresolved doublet; see [77Sm03] for the apportioned  $C^2S$  [91Zh01].

\*\*\* Not included in [05Hu03].

Values  $C^2S$  for (p,d) reaction are given by  $d\sigma/d\Omega = 3/2(C^2S)\sigma(\theta)(DWBA)/(2J+1)$ ,  $J=3/2$  assumed if  $L=1$  except for the ground state,  $J=5/2$  if  $L=3$ ,  $J=9/2$  if  $L=4$ ,  $J=13/2$  if  $L=6$  [91Zh01].  
 Values  $S_N$  for the (d,p) reaction are given by  $d\sigma/d\Omega = 2NS\sigma(\theta)_{DWBA}/(2J+1)$  with  $N=1.53$   $J=3/2$  assumed if  $L=1$  except for  $E^*=0, 481, 1109$  keV,  $J=5/2$  if  $L=3$ ,  $J=9/2$  if  $L=4$ ,  $J=13/2$  if  $L=6$ .

Cross sections of (d,p) and (d,t) reactions measured at 60° can be found in [65Mu05].

Energy levels and branching ratios [95Zh27, 05Hu03]. Part 2

**<sup>197</sup>Pt**  
**78**

$E^*$	$2J^\pi$	$T_{1/2}$ or	Ref.	Branching ratios in percentage							
[keV]		$\Gamma_{\text{cm}}$		$E_f^*$ :	0.0	53	72	99	131	269	299
				$2J_f^\pi$ :	1 <sup>-</sup>	5 <sup>-</sup>	3 <sup>-</sup>	3 <sup>-</sup>	1 <sup>-</sup>	1 <sup>-</sup> ,3 <sup>-</sup>	5 <sup>-</sup>
0.0	1 <sup>-</sup>	19.8915(19) h	90Bu26								
53.088(19)	5 <sup>-</sup>	16.58(17) ns	90Bu26		100						
71.60(7)	3 <sup>-</sup>		90Bu26		100						
98.60(8)	3 <sup>-</sup>		90Bu26		100						
130.98(4)	1 <sup>-</sup>		90Bu26		100						
269.11(3)	1 <sup>-</sup> ,3 <sup>-</sup>		90Bu26		66(6)	13(3)			21(9)		

(continued)

 **$^{197}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage							
				$E^*_f:$ $2J^\pi_f:$	0.0 1 <sup>-</sup>	53 5 <sup>-</sup>	72 3 <sup>-</sup>	99 3 <sup>-</sup>	131 1 <sup>-</sup>	269 1 <sup>-</sup> , 3 <sup>-</sup>	299 5 <sup>-</sup>
273(3)	$\langle 5^-, 7^- \rangle$		77Sm03								
299.33(4)	5 <sup>-</sup>		90Bu26		60(7)	28(8)	12(5)				
371(6)	$\langle 7^+, 9^+ \rangle$										
399.59(20)	13 <sup>+</sup>	95.41(18) m	90Bu26			100					
425.7(6)											
456.88(5)	5 <sup>-</sup>		90Bu26		82(9)	7(3)					11(6)
483(1)	$\langle 7^- \rangle$		90Bu26								
502.43(5)	3 <sup>-</sup>		90Bu26		54(4)		35(4)		4(3)	6(2)	
520(5)	7 <sup>+</sup> , 9 <sup>+</sup>		82Ci02								
529(1)	7 <sup>-</sup>		90Bu26								
595.31(8)	$\langle 5^- \rangle, \langle 1^- \rangle$		90Bu26		21(4)	39(4)	39(4)				
612(10)	$\langle 13^+ \rangle$		85Th02								
708.37(5)	3 <sup>-</sup>		90Bu26		74(4)		12(2)			14(2)	
713(10)	5 <sup>-</sup> , 7 <sup>-</sup>		85Th02								
747.82(9)	1 <sup>-</sup>		90Bu26			3.6(7)	2.9(5)	93			
767(10)	$\langle 17^+ \rangle$										
797(5)			82Ci02								
810.3			90Bu26								
825(6)	1 <sup>-</sup> , 3 <sup>-</sup>										
854(1)	7 <sup>-</sup>		90Bu26								
859(5)	5 <sup>-</sup>		82Si02								
894.8(5)	1 <sup>-</sup> , 3 <sup>-</sup>		90Bu26								
955.9(14)											
965(10)			85Th02								
970.9(5)	1 <sup>-</sup> , 3 <sup>-</sup>		90Bu26								
977.9(5)	1 <sup>-</sup> , 3 <sup>-</sup>		90Bu26								
991(8)											
1028(1)	7 <sup>-</sup>		90Bu26								
1055(5)	5 <sup>-</sup> , 7 <sup>-</sup>		82Ci02								
1060.5(5)	3 <sup>-</sup>		90Bu26								
1081.0(5)	1 <sup>-</sup> , 3 <sup>-</sup>										
1099(5)			82Ci02								
1107.7(8)	1, 3		90Bu26								
1124(10)	$\langle 5^-, 7^- \rangle$										
1135.3(7)	1 <sup>-</sup> , 3 <sup>-</sup>		90Bu26								
1136(10)	$\langle 13^+ \rangle$		85Th02								
1158.7(5)	$\langle 1^- \rangle$		90Bu26								
1175(7)											
1212(3)			90Bu26								
1248(2)	7 <sup>-</sup>		90Bu26								
1276(5)	5 <sup>-</sup> , 7 <sup>-</sup>		82Si02								
1292(5)	5 <sup>-</sup>		90Bu26								
1297(1)	1, 3										
1318(6)	5 <sup>-</sup> , 7 <sup>-</sup>										

(continued)

 **$^{197}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage							
				$E^*_f$ : $2J^\pi_f$ :	0.0 1 <sup>-</sup>	53 5 <sup>-</sup>	72 3 <sup>-</sup>	99 3 <sup>-</sup>	131 1 <sup>-</sup>	269 1 <sup>-</sup> , 3 <sup>-</sup>	299 5 <sup>-</sup>
1330(2)	3 <sup>-</sup>		90Bu26								
1350(6)	1 <sup>-</sup> , 3 <sup>-</sup>										
1369(10)****	9 <sup>-</sup>		85Th02								
1378(3)	$\langle 5^- \rangle$		90Bu26								
1397(2)	3 <sup>-</sup>		90Bu26								
1412(10)											
1431(10)	$\langle 13^+ \rangle$										
1439(5)			82Ci02								
1464(5)	$\langle 1^-, 3^- \rangle$		90Bu26								
1507(5)			82Ci02								
1525(5)											
1540(5)			82Ci02								
1548(10)	$\langle 13^+ \rangle$		85Th02								
1582(5)	$\langle 5^-, 7^- \rangle$		90Bu26								
1608(5)			82Ci02								
1632(3)	$\langle 1^-, 3^- \rangle$		78Ya07								
1657(5)			90Bu26								
1687(5)			82Ci02								
1711(5)	$\langle 1^-, 3^- \rangle$		90Bu26								
1743(5)			82Ci02								
1761			82Ci02								
1775(10)	$\langle 13^+ \rangle$		85Th02								
1792(3)	$\langle 7^- \rangle$		90Bu26								
1797	$\langle 9^+ \rangle$		78Ya07								
1812(5)	$X\langle - \rangle$		90Bu26								
1861(10)	$\langle 13^+ \rangle$		85Th02								
1874			82Ci02								
1908(5)	7 <sup>-</sup> , 9 <sup>-</sup>		82Si02								
1929(10)	$\langle 13^+ \rangle$		85Th02								
1947(5)			82Ci02								
1999(5)			82Ci02								
2009(5)											
2050(20)											
2082(5)	$\langle 1^-, 3^- \rangle$		90Bu26								
2143(10)	9 <sup>-</sup>		85Th02								
2176											
2186(5)			82Ci02								
2560(20)											
2710****			65Mu05								
2780****			65Mu05								
2890****			65Mu05								
2990****			65Mu05								
3070****			65Mu05								
3150****			65Mu05								
3300****			65Mu05								



(continued)

 **$^{197}_{78}\text{Pt}$** 

$E^*$ [keV]	$2J^\pi$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage							
				$E_f^*$ : $2J_f^\pi$ :	0.0 1 <sup>-</sup>	53 5 <sup>-</sup>	72 3 <sup>-</sup>	99 3 <sup>-</sup>	131 1 <sup>-</sup>	269 1 <sup>-</sup> , 3 <sup>-</sup>	299 5 <sup>-</sup>
3380****			65Mu05								
3460****			65Mu05								
3580****			65Mu05								
3700****			65Mu05								
3800****			65Mu05								
3880****			65Mu05								
3940****			65Mu05								
4020****			65Mu05								
4120****			65Mu05								
4220****			65Mu05								
			Ref.								
			Ref.								

Energy levels and branching ratios [02Zh04].

 **$^{198}_{78}\text{Pt}$** 

$E^*$ [keV]	$J^\pi$	$L$ (t,p)	$d\sigma/d\Omega$ $\mu\text{b/sr}$	$S_N$ (t,p)	$\sigma$ (d,d') $\mu\text{b/sr}$	$L$ (p,p')	$d\sigma/d\Omega$ $\mu\text{b/sr}$	$\beta_L$ (p,p')	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.
0.0	0 <sup>+</sup>	0	355(3)	11.8			49·10 <sup>4</sup>		Stable	81Ci01
407.22(5)	2 <sup>+</sup>		5.7(3)		470	2	3240		22.3(2) ps	81Ci01
774.72(7)	2 <sup>+</sup>	⟨2⟩	2.7(4)		10	2	55.1	-0.109(5)	27(4) ps	88Co19
914.52(21)	0 <sup>+</sup>									
985.08(8)	4 <sup>+</sup>	⟨4⟩	13.8(8)		20	4	1050	-0.030(1)	3.3(3) ps	81Ci01
1140(20)					<10					
1248.0(1)	⟨3 <sup>+</sup> ⟩				20	⟨3⟩	21.9			
1279.4(1)	2 <sup>+</sup>								9(5) ps	
1286.2(2)	4 <sup>+</sup>	⟨4⟩	14(1)			4	252	-0.026(1)	9.3(22) ps	81Ci01
1367.1(1)	⟨5 <sup>-</sup> ⟩		1.6(3)			⟨5⟩	142			81Ci01
1445.3(2)							56.6			
1481.2(2)	0 <sup>+</sup>	0	5.3(5)	0.39						81Ci01
1502.0(1)	⟨7 <sup>-</sup> ⟩					⟨7⟩	82.8		3.4(2) ns	
1517(8)			0.4(3)		<10					81Ci01
1550.4(2)	⟨2 <sup>+</sup> ⟩	⟨2⟩	3.6(5)							81Ci01
1636.9(2)	⟨2 <sup>+</sup> ⟩	⟨2⟩	5.5(9)				119			81Ci01
1656.8(2)			12(1)							81Ci01
1672.1(1)										
1680.3(1)	3 <sup>-</sup>		5.8(8)			3	845	0.050(5)		88Co19
1714.2(2)	⟨6 <sup>+</sup> ⟩								<0.7 ps	
1718(5)	⟨2 <sup>+</sup> ⟩	⟨2⟩	11(1)							81Ci01
1722(3)							25.5			
1741.2(1)										
1784.5(2)	⟨4 <sup>+</sup> ⟩		3.6(4)		<10	⟨4⟩	150	-0.019(2)		88Co19

(continued)

**<sup>198</sup>Pt**  
**78**

$E^*$	$J^\pi$	$L$	$d\sigma/d\Omega$	$S_N$	$\sigma$ (d,d')	$L$	$d\sigma/d\Omega$	$\beta_L$	$T_{1/2}$ or	Ref.
[keV]		(t,p)	$\mu\text{b/sr}$	(t,p)	$\mu\text{b/sr}$	(p,p')	$\mu\text{b/sr}$	(p,p')	$\Gamma_{\text{cm}}$	
1815(6)			2.3(6)							81Ci01
1827(4)										
1849.2(2)										
1869(5)	$0^+$	0	9.2(12)	0.23						81Ci01
1892(5)	$\langle 4^+ \rangle$	$\langle 4 \rangle$	28(2)				113			81Ci01
1944.0(3)			5.5(6)							81Ci01
1949(2)	$\langle 2^+ \rangle$	$\langle 2 \rangle$	10.7(7)							81Ci01
1979.5(3)			2.7(4)							81Ci01
1995.9(3)										
2059(6)			4.2(5)							81Ci01
2070(2)							46.6			
2083(7)	$\langle 4^+ \rangle$	$\langle 4 \rangle$	4.6(6)				74.9			81Ci01
2120(2)	$\langle 2^+ \rangle$	$\langle 2 \rangle$	5.0(6)				57.9			81Ci01
2155(2)	$\langle 4^+ \rangle$	$\langle 4 \rangle$	8.2(12)				137			81Ci01
2178(2)	$\langle 2^+ \rangle$	$\langle 2 \rangle$	2.8(5)				52.7			81Ci01
2229(6)	$\langle 2^+ \rangle$	$\langle 2 \rangle$	3.0(4)							81Ci01
2252(7)			0.4(3)							81Ci01
2289(6)	$\langle 4^+ \rangle$	$\langle 4 \rangle$	6.8(9)							81Ci01
2319(2)	$\langle 2^+ \rangle$	$\langle 2 \rangle$	4.1(7)		<10					81Ci01
2339(2)										
2356(2)	$\langle 2^+ \rangle$	$\langle 2 \rangle$	5.4(5)							81Ci01
2387(2)			3.4(3)							81Ci01
2411(2)	$\langle 2^+ \rangle$	$\langle 2 \rangle$	6.1(8)							81Ci01
2441(2)	$\langle 3^- \rangle$		8.7(10)				369	0.037(4)		88Co19
2469(2)			9.3(10)				49.9			81Ci01
2514(3)	$\langle 3^- \rangle$		13(2)		10		108	0.020(2)		88Co19
2573(3)			3.7(8)				36.3			81Ci01
2603.5(5)	$\langle 3^- \rangle$						762	0.052(5)		88Co19
2633(3)										
2666(3)*			6.2(8)				96.5			81Ci01
2726(3)			9.9(9)		20		62.3			81Ci01
2782(3)			7.3(9)							81Ci01
2796(3)	$\langle 3^- \rangle$						325	0.037(4)		88Co19
2802(7)	$0^+$	0	4.5(7)	0.23						81Ci01
2826(3)	$\langle 3^- \rangle$						385	0.041(4)		88Co19
2884(3)							38.4			
2910(3)							38.0			
3005(4)										
3018(4)										
3170(5)										

(continued)

<sup>198</sup>Pt  
78

<i>E</i> <sup>*</sup>	<i>J</i> <sup>π</sup>	<i>L</i>	<i>dσ/dΩ</i>	<i>S</i> <sub>N</sub>	<i>σ</i> (d,d')	<i>L</i>	<i>dσ/dΩ</i>	<i>β</i> <sub><i>L</i></sub>	<i>T</i> <sub>1/2</sub> or	Ref.
[keV]		(t,p)	μb/sr	(t,p)	μb/sr	(p,p')	μb/sr	(p,p')	<i>Γ</i> <sub>cm</sub>	
3197(5)			81Ci01	81Ci01	65Mu05			88Co19		Ref.

Additional data on this isotope can be found in [04Re11, 79Ci05].  
*Abundance*: 7.163(55) %.  
\* Probable doublet [81Ci01, 02Zh04].  
Cross section of the (d,d') reaction was measured at 60° [65Mu05].  
Data for this isotope are considered in vol. LB I/18C.

Energy levels and branching ratios [02Zh04]. Part 2

<sup>198</sup>Pt  
78

<i>E</i> <sup>*</sup>	<i>J</i> <sup>π</sup>	Branching ratios in percentage										
		<i>E</i> <sub>f</sub> <sup>*</sup> :	0.0	407	775	985	1248	1279.43	1286.15	1367.06	1501.96	1680.30
[keV]		<i>J</i> <sub>f</sub> <sup>π</sup> :	0 <sup>+</sup>	2 <sup>+</sup>	2 <sup>+</sup>	4 <sup>+</sup>	⟨3 <sup>+</sup> ⟩	2 <sup>+</sup>	4 <sup>+</sup>	⟨5 <sup>−</sup> ⟩	⟨7 <sup>−</sup> ⟩	3 <sup>−</sup>
407.22(5)	2 <sup>+</sup>		100									
774.72(7)	2 <sup>+</sup>		3.7(10)	96(7)								
914.52(21)	0 <sup>+</sup>			100								
985.08(8)	4 <sup>+</sup>			100								
1248.0(1)	⟨3 <sup>+</sup> ⟩				100							
1279.4(1)	2 <sup>+</sup>	18(5)		67(7)	15(5)							
1286.2(2)	4 <sup>+</sup>				90	10						
1367.1(1)	⟨5 <sup>−</sup> ⟩					100						
1445.3(2)					100							
1481.2(2)	0 <sup>+</sup>			100								
1502.0(1)	⟨7 <sup>−</sup> ⟩									100		
1550.4(2)	⟨2 <sup>+</sup> ⟩			62(5)	38(10)							
1636.9(2)	⟨2 <sup>+</sup> ⟩			100								
1656.8(2)				100		x						
1672.1(1)				28(6)	53(8)		19(6)					
1680.3(1)	3 <sup>−</sup>			24(7)		46(7)	5(3)	15(4)		10(3)		
1714.2(2)	⟨6 <sup>+</sup> ⟩					100						
1741.2(1)										100		
1784.5(2)	⟨4 <sup>+</sup> ⟩				100							
1849.2(2)							100					
1944.0(3)									100			
1979.5(3)											100	
1995.9(3)											100	
2603.5(5)	⟨3 <sup>−</sup> ⟩											x

Energy levels and branching ratios [94Ar13].

**<sup>199</sup>Pt**  
**78**

$E^*$ [keV]	$2J^\pi$	$L$ (d,p)	$S_N$ (d,p)	$S_N$ (t,d)	$\sigma$ (d,p) $\mu\text{b/sr}$	$T_{1/2}$ or $\Gamma_{\text{cm}}$	Ref.	Branching ratios in percentage		
								$E_f^*$ : $2J_f^\pi$ :	0.0 5 <sup>-</sup>	32 7 <sup>-</sup>
0.0	5 <sup>-</sup>	3	1.42	1.48	1420	30.8(2) m	90Bu26			
32(2)	7 <sup>-</sup>	1	0.87	1.08			90Bu26		100	
35.9(6)	3 <sup>-</sup>								x	
42.0(10)	1 <sup>-</sup> ,3 <sup>-</sup>									
87.4(6)	3 <sup>-</sup>	1	0.04	0.04			90Bu26			
132.5(6)	1 <sup>-</sup>	1	0.27	0.30	230		90Bu26			
351(1)	5 <sup>-</sup> ,7 <sup>-</sup>	3	0.07	0.06			90Bu26			
383.6(7)	3 <sup>-</sup>	1	0.04	0.03			90Bu26			
424(2)	13 <sup>+</sup>				140					100
431(2)										
474.5(9)	3 <sup>-</sup>	1	0.07	0.06			90Bu26			
495(1)	11 <sup>+</sup> ,13 <sup>+</sup>	6	0.98	1.12			90Bu26			
514(1)	7 <sup>-</sup>	3	0.19	0.21			90Bu26			
581(1)	7 <sup>-</sup>	3	0.09	0.06			90Bu26			
646(1)	1 <sup>-</sup> ,3 <sup>-</sup>	1		0.009			90Bu26			
888(1)	1,3									
910(1)	1 <sup>-</sup> ,3 <sup>-</sup>	1		0.020	130		90Bu26			
937(1)	1 <sup>-</sup> ,3 <sup>-</sup>				incl		65Mu05			
960(1)	1 <sup>-</sup> ,3 <sup>-</sup>	1	0.09	0.11			90Bu26			
979(2)	5 <sup>-</sup> ,7 <sup>-</sup>	3	0.13	0.11			90Bu26			
1058(2)	1 <sup>-</sup> ,3 <sup>-</sup>	1	0.10	0.13	110		90Bu26			
1161(2)										
1243(2)	5 <sup>-</sup> ,7 <sup>-</sup>	3					90Bu26			
1279(3)										
1339(2)										
1365(3)										
1403(2)										
1442(3)										
1499(4)										
1527(4)	5 <sup>-</sup> ,7 <sup>-</sup>	3					90Bu26			
1578(4)										
1604(7)										
1690(3)										
1718(3)*	5 <sup>-</sup> ,7 <sup>-</sup>	3	1.3	3.0	x		90Bu26			
1781(4)										
1923(6)										
2009(7)										
2052(4)					x		65Mu05			
2136(5)										
2164(5)					x		65Mu05			
2205(3)										
2225(10)					x		65Mu05			
2270(10)										
2297(10)										
2356(5)					x		65Mu05			

(continued)

**<sup>199</sup>Pt**  
**78**

$E^*$	$2J^\pi$	$L$	$S_N$	$S_N$	$\sigma$ (d,p)	$T_{1/2}$ or	Ref.	Branching ratios in percentage		
[keV]		(d,p)	(d,p)	(t,d)	$\mu\text{b/sr}$	$\Gamma_{\text{cm}}$		$E_f^*$ :	0.0	32
								$2J_f^\pi$ :	$5^-$	$\langle 7 \rangle^-$
2392(5)					x		65Mu05			
2438(9)					x		65Mu05			
2550					x		65Mu05			
2700					x		65Mu05			
2760					x		65Mu05			
2830					x		65Mu05			
2880					x		65Mu05			
2990					x		65Mu05			
3080					x		65Mu05			
3150					x		65Mu05			
3230					x		65Mu05			
3310					x		65Mu05			
3410					x		65Mu05			
3560					x		65Mu05			
3670					x		65Mu05			
3730					x		65Mu05			
3800					x		65Mu05			
					65Mu05		Ref.			

\* This intense peak is a multiplet; given strengths are values obtained assuming all the observed cross sections are from  $L=3$  transition [90Bu26, 94Ar13].

Cross sections of the (d,p) reaction was measured at  $60^\circ$  [65Mu05].

Energy levels and branching ratios [95Sc23, 81Ci01].

**<sup>200</sup>Pt**  
**78**

$E^*$	$J^\pi$	$L$	$S_N$	$d\sigma/d\Omega$	$T_{1/2}$ or	Ref.
[keV]		(t,p)	(t,p)	$\mu\text{b/sr}$	$\Gamma_{\text{cm}}$	
0	$0^+$	0	10.1	342(14)	12.5(3) h	81Ci01
470.10(20)	$2^+$			6.7(11)		81Ci01
867.58(25)	$\langle 2 \rangle^+$	$\langle 2 \rangle$		3.5(7)		81Ci01
1103.3(3)	$\langle 4 \rangle^+$	$\langle 4 \rangle$		16.8(13)		81Ci01
$\approx 1118$	$\langle 0^+ \rangle$					
1181.3(3)	$\langle 3 \rangle^+$					
1268.5(3)	$\langle 4 \rangle^+$	$\langle 4 \rangle$		24(2)		81Ci01
1566.9(3)	$\langle 5 \rangle^-$			2.2(8)		81Ci01
1583.1(5)	$0^+$	0	0.20	5.1(8)		81Ci01
1617(8)	$\langle 7^- \rangle$			1.6(8)	14.3(6) n	81Ci01
1692.5(4)	$X^+$			1.5(8)		81Ci01
1726(6)	$\langle 2^+ \rangle$	2		5.3(11)		81Ci01
1757(5)	$\langle 2^+ \rangle$	2		7.9(12)		81Ci01
1842(7)	$\langle 2^+ \rangle$	2		3.7(9)		81Ci01
1884.2(4)				3.9(9)		81Ci01

$^{200}_{78}\text{Pt}$ 

Additional data on this isotope can be found in [01Ca14, 00Wo13].  
 $L$  for the (t,p) reaction, branching ratios and uncertainties in  $E^*$  can be found in Supplement.  
 $T_{1/2}$  and uncertainties in  $E^*$  are given in Supplement.

$$^{200}_{78}\text{Pt}$$
Landolt-Börnstein  
New Series I/19B3

(continued)

<div><sup>200</sup>Pt</div> <div>78</div>									
<i>E</i> <sup>*</sup>	<i>J</i> <sup>π</sup>	Branching ratios in percentage							
[keV]		<i>E</i> <sub>f</sub> <sup>*</sup> :	0	470	868	1103	1181	1268	1567
		<i>J</i> <sub>f</sub> <sup>π</sup> :	0 <sup>+</sup>	2 <sup>+</sup>	⟨2⟩ <sup>+</sup>	⟨4⟩ <sup>+</sup>	⟨3⟩ <sup>+</sup>	⟨4⟩ <sup>+</sup>	⟨5⟩ <sup>−</sup>
1617(8)	⟨7 <sup>−</sup> ⟩								100
1692.5(4)	X <sup>+</sup>						40(7)	60(7)	
1884.2(4)						56(8)			44(17)
1908.1(5)	X <sup>−</sup>								100
1919.4(4)						100			
1970.3(4)	X <sup>−</sup>								100
1990.7(4)	⟨2 <sup>+</sup> ⟩					43(10)	57(7)		
2098.5(5)									100
2120.1(5)	X <sup>−</sup>								100
2258.3(5)	X <sup>−</sup>								100