

Energy levels and branching ratios [94Pe15].

⁹⁹Pd
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E^* [keV]	$2J^\pi$	$T_{1/2}$ or Γ_{cm}	Branching ratios in percentage							
			$E_f^*:$ $2J_f^\pi:$	0.0 $\langle 5 \rangle^+$	220 $\langle 3 \rangle^+$	264 $\langle 7 \rangle^+$	464 $\langle 3^+ \rangle$	687 $\langle 5 \rangle^+$	815 $\langle 7 \rangle^+$	832 $\langle 9 \rangle^+$
0.0	$\langle 5 \rangle^+$	21.4(2) m								
219.75(9)	$\langle 3 \rangle^+$			100						
264.26(4)	$\langle 7 \rangle^+$			100						
463.79(6)	$\langle 3^+ \rangle$			74(9)	26(4)					
555.4(10)	$\langle 5, 7 \rangle$				100					
686.92(5)	$\langle 5 \rangle^+$			85(5)	15(3)	x				
815.25(5)	$\langle 7 \rangle^+$			95(18)	x	5.4(9)				
832.37(4)	$\langle 9 \rangle^+$			78(3)		22.2(8)				
1069.66(11)	$\langle 11 \rangle^+$					100				
1102.72(5)	$\langle 9 \rangle^+$			56(2)		36(2)			9(2)	
1182.78(20)	$\langle 3, 5 \rangle^+$			33(13)	67(8)					
1419.8						100				
1423.48(16)	$\langle 5^-, 7, 9^+ \rangle$			33(17)		67(17)				
1468.32(6)	$\langle 11 \rangle^+$					39(2)			16(9)	28(2)
1540.38(5)	$\langle 9 \rangle^+$			21(3)		37(9)	8(1)	8(1)	12(1)	9(1)
1649.7(7)	$\langle 13 \rangle^+$									100
1696.61(10)	$\langle 9^+ \rangle$			11(3)	18(5)	42(3)	9(2)	14(2)	6(1)	x
1718.83(23)	$\langle 15 \rangle^+$									
1849.65(15)	$\langle 7, 9^+ \rangle$			26(7)		74(26)				
1853.92(21)	$\langle 9^+ \rangle$									
1911.56(19)	$\langle 7, 9, 11 \rangle$									
2007.06(18)	$\langle 7, 9 \rangle$									100
2017.6(7)	$11^{\langle - \rangle}$									x
2062.5										100
2137.64(10)	$\langle 7^+ - 11^+ \rangle$					68(3)				18(7)
2145.29(20)	$\langle 11 \rangle$					x				
2171.50(14)	$\langle 7^+ - 11^+ \rangle$					45(2)			24(2)	32(4)
2205.7(11)	$\langle 11 \rangle^+$									
2239.8(5)	$\langle 7, 9, 11^+ \rangle$					100				
2263.53(17)	$\langle 7, 9^+ \rangle$			4(3)				42(6)	54(8)	
2268.9(7)	$\langle 7^+ \rangle$									x
2332.75(21)	$\langle 7, 9, 11^+ \rangle$					40(4)				
2426.3										
2437.3										
2481.7(13)										
2486.17(23)	$\langle 7^+ - 11^+ \rangle$									
2509.3(13)	$\langle 17 \rangle^+$									
2599.3(6)	$\langle 19 \rangle^+$									
2601.57(15)	$\langle 7^+ - 11^+ \rangle$									
2740.0										
3209.4(4)	$\langle 7^+ - 11^+ \rangle$					100				
3307.0(11)	$\langle 19^+ \rangle$									
3446.1(4)	$\langle 7^+ - 11^+ \rangle$					100				
3510.1(6)	$\langle 23 \rangle^+$									
3515.3(12)	$\langle 17^+ \rangle$									

(continued)

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E^* [keV]	$2J^\pi$	$T_{1/2}$ or Γ_{cm}	Branching ratios in percentage							
			$E_f^*:$ $2J_f^\pi:$	0.0 $\langle 5 \rangle^+$	220 $\langle 3 \rangle^+$	264 $\langle 7 \rangle^+$	464 $\langle 3^+ \rangle$	687 $\langle 5 \rangle^+$	815 $\langle 7 \rangle^+$	832 $\langle 9 \rangle^+$
3572.4										
3594.3(10)	$\langle 7^+ - 11^+ \rangle$					100				
4003.8(6)	$\langle 25^+ \rangle$									
4037.5(12)	$\langle 23 - 27 \rangle^+$	<4 ns								
4517.8(12)	$\langle 27 \rangle^+$									

Energy levels and branching ratios [94Pe15]. Part 2

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E^* [keV]	$2J^\pi$	$E_f^*:$ $2J_f^\pi:$	1070 $\langle 11 \rangle^+$	1102.7 $\langle 9 \rangle^+$	1182.8 $\langle 3, 5 \rangle^+$	1423.5	1468.3 $\langle 11 \rangle^+$	1540.4 $\langle 9 \rangle^+$	1649.7 $\langle 13 \rangle^+$	1718.8 $\langle 15 \rangle^+$	2007.1 $\langle 7, 9 \rangle$
1468.32(6)	$\langle 11 \rangle^+$		16(1)								
1540.38(5)	$\langle 9 \rangle^+$			5(1)							
1649.7(7)	$\langle 13 \rangle^+$		x								
1718.83(23)	$\langle 15 \rangle^+$		100								
1853.92(21)	$\langle 9^+ \rangle$			x			x				
1911.56(19)	$\langle 7, 9, 11 \rangle$					36(9)	36(9)	27(9)			
2017.6(7)	$11^{\langle - \rangle}$		x								
2137.64(10)	$\langle 7^+ - 11^+ \rangle$			11.0(18)	2.6(10)						
2145.29(20)	$\langle 11 \rangle$		x								
2205.7(11)	$\langle 11 \rangle^+$									100	
2268.9(7)	$\langle 7^+ \rangle$							x			
2332.75(21)	$\langle 7, 9, 11^+ \rangle$					27(6)					33(6)
2426.3			45(7)							55(5)	
2437.3										x	
2481.7(13)									x		
2486.17(23)	$\langle 7^+ - 11^+ \rangle$		100								
2509.3(13)	$\langle 17 \rangle^+$								100		
2599.3(6)	$\langle 19 \rangle^+$									100	
2601.57(15)	$\langle 7^+ - 11^+ \rangle$		100								
2740.0										100	

Energy levels and branching ratios [94Pe15]. Part 3

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E^* [keV]	$2J^\pi$	$E_f^*:$ $2J_f^\pi:$	2599.3 $\langle 19 \rangle^+$	2601.6	3510.1 $\langle 23 \rangle^+$	4003.8 $\langle 25^+ \rangle$
3307.0(11)	$\langle 19^+ \rangle$			100		
3510.1(6)	$\langle 23 \rangle^+$		100			

(continued)

⁹⁹Pd₄₆

E^* [keV]	$2J^\pi$	Branching ratios in percentage				
		$E_f^*:$ $2J_f^\pi:$	2599.3 $\langle 19 \rangle^+$	2601.6	3510.1 $\langle 23 \rangle^+$	4003.8 $\langle 25^+ \rangle$
3515.3(12)	$\langle 17^+ \rangle$		100			
3572.4			100			
4003.8(6)	$\langle 25^+ \rangle$				100	
4037.5(12)	$\langle 23-27 \rangle^+$					100
4517.8(12)	$\langle 27 \rangle^+$				100	

Energy levels and branching ratios [97Si09].

¹⁰⁰Pd₄₆

E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}	Branching ratios in percentage							
			$E_f^*:$ $J_f^\pi:$	0.0 0^+	665 2^+	1416 4^+	1926 $\langle 4^+ \rangle$	2056	2189 6^+	2279
0.0	0^+	3.6(1) d								
665.56(15)	2^+			100						
1416.25(20)	4^+				100					
1523.6(3)	$\langle 1, 2^+ \rangle$			100						
1587.87(15)	$\langle 1, 2^+ \rangle$			42(10)	58(14)					
1926.08(18)	$\langle 4^+ \rangle$				100	x				
2056.17(22)	$\langle 4, 5, 6^+ \rangle$					100				
2189.41(22)	6^+					100				
2278.76(22)	$\langle 4, 5, 6^+ \rangle$					62(5)	18(1)	20(5)		
2350.86(22)	$\langle 4^+ \rangle$				100					
2359.5(4)	$\langle 1^+ - 3^+ \rangle$				100					
2470.08(22)	$\langle 4^+ - 6^+ \rangle$					61(5)			37(2)	2.0(2)
2505.3(4)	$\langle 5^- \rangle$					100				
2532.1(3)	$\langle 2^+, 3 \rangle$					100				
2621.7(4)	$\langle \leq 4 \rangle$				100					
2679.3(11)	$\langle \leq 4 \rangle$				100					
2694.3(3)	$\langle 4, 5, 6^+ \rangle$					100				
2783.7(5)	$\langle 1^+ - 3^+ \rangle$				100					
2821.6(3)	$\langle 4 - 6^+ \rangle$					100				
2879.74(23)	$\langle 4^+ \rangle$				36(6)		3(1)			
2920.26(22)	$\langle 4^+ - 6^+ \rangle$					31(4)			20(1)	
2988.0(3)	8^+								100	
3079.69(23)	$\langle 4^+ - 6 \rangle$								46(3)	
3177.8(4)	8^-	0.9(2) ns							42(3)	
3231.1(5)	$\langle 7^- \rangle$									
3235.9(4)						69(35)				
3311.57(25)	$\langle 4 - 6 \rangle$									
3439.1(8)										
3823.8(4)	$\langle 4 - 6 \rangle$							100		
3869.3(3)	10^+									
4053.5(5)	$\langle 9^- \rangle$									

(continued)

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E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}	Branching ratios in percentage							
			E_f^* : J_f^π :	0.0 0 ⁺	665 2 ⁺	1416 4 ⁺	1926 4 ⁺	2056	2189 6 ⁺	2279
4093.2(6)	⟨9 ⁻ ⟩									
4146.5(6)	⟨10 ⁺ ⟩									
4761.2(4)	⟨12 ⁺ ⟩									
4862.9(5)	⟨11 ⁻ ⟩									
5452.6(5)										
5668.3(5)	⟨13 ⁻ ⟩									
5706.6(6)	⟨14 ⁺ ⟩									
5919.7(6)										
6459.0(8)	⟨15 ⁺ ⟩									
6704.2(6)	⟨15 ⁻ ⟩									
6938.6(8)	⟨16 ⁺ ⟩									
7644.4(6)	⟨17 ⁻ ⟩									
8715.4(8)	⟨19 ⁻ ⟩									
9915(1)										
10103(1)	⟨21 ⁻ ⟩									
11210(2)	⟨22 ⁻ ⟩									
11425(2)										
12593(2)	⟨23 ⁻ ⟩									
13161(2)										
13202(2)	⟨24 ⁻ ⟩									

Additional data on this isotope can be found in [01Zh26].

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

Energy levels and branching ratios [97Si09]. Part 2

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E^* [keV]	J^π	Branching ratios in percentage										
		E_f^* : J_f^π :	2351 4 ⁺	2470.08	2505.3 5 ⁻	2621.7 ≤4	2988.0 8 ⁺	3177.8 8 ⁻	3231.1 7 ⁻	3439.1	3869.3 10 ⁺	4053.5 9 ⁻
2879.74(23)	4 ⁺		61(6)									
2920.26(22)	4 ⁺ -6 ⁺		2.0(1)	47(3)								
3079.69(23)	4 ⁺ -6 ⁺			54(5)								
3177.8(4)	8 ⁻						58(7)					
3231.1(5)	7 ⁻				100							
3235.9(4)						31(15)						
3311.57(25)	4-6		100									
3439.1(8)								x				
3869.3(3)	10 ⁺					100						
4053.5(5)	9 ⁻							x	x	x		
4093.2(6)	9 ⁻								100			
4146.5(6)	10 ⁺							42(2)			58(3)	
4761.2(4)	12 ⁺										100	
4862.9(5)	11 ⁻											x

Energy levels and branching ratios [97Si09]. Part 3

¹⁰⁰Pd₄₆

E^*	J^π	Branching ratios in percentage										
[keV]		E_f^* : J_f^π :	4093.2 ⟨9 [−] ⟩	4146.5 ⟨10 ⁺ ⟩	4761.2 ⟨12 ⁺ ⟩	4862.9 ⟨11 [−] ⟩	5452.6	5668.3 ⟨13 [−] ⟩	5706.6 ⟨14 ⁺ ⟩	5919.7	6459.0 ⟨15 ⁺ ⟩	6704.2 ⟨15 [−] ⟩
4862.9(5)	⟨11 [−] ⟩		x	x								
5452.6(5)					100							
5668.3(5)	⟨13 [−] ⟩				x	x						
5706.6(6)	⟨14 ⁺ ⟩				100							
5919.7(6)							100					
6459.0(8)	⟨15 ⁺ ⟩								x	x		
6704.2(6)	⟨15 [−] ⟩							100		x		
6938.6(8)	⟨16 ⁺ ⟩								x		x	
7644.4(6)	⟨17 [−] ⟩											100

Energy levels and branching ratios [97Si09]. Part 4

¹⁰⁰Pd₄₆

E^* [keV]	J^π	Branching ratios in percentage							
		E_f^* : J_f^π :	7644.4 ⟨17 ⁻ ⟩	8715.4 ⟨19 ⁻ ⟩	9915	10103 ⟨21 ⁻ ⟩	11210 ⟨22 ⁻ ⟩	11425	12593 ⟨23 ⁻ ⟩
8715.4(8)	⟨19 ⁻ ⟩		100						
9915(1)				x					
10103(1)	⟨21 ⁻ ⟩			x					
11210(2)	⟨22 ⁻ ⟩					x			
11425(2)					x				
12593(2)	⟨23 ⁻ ⟩						x		
13161(2)								x	
13202(2)	⟨24 ⁻ ⟩								x

Energy levels and branching ratios [98Bl03].

¹⁰¹Pd₄₆

E^*	$2J^\pi$	L	S_N	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(d,t)	Γ_{cm}		$E_{\text{f}}^*:$ $2J_{\text{f}}^\pi:$	0.0 5 ⁺	80.3 ⟨3⟩ ⁺	261.0 7 ⁺	274.7 ⟨7,9 ⁺ ⟩	588.0 ⟨7 ⁺ ⟩
0.0	5 ⁺	2	2.43	8.47(6) h	80Sc23						
80.3(1)	⟨3⟩ ⁺			4.8(5) ns			100				
261.0(1)	7 ⁺	4	4.68		80Sc23		100	0.5(2)			
274.7(2)	⟨7,9 ⁺ ⟩						100				
400(15)	1 ⁺	0	0.08		80Sc23						
588.0(2)	⟨7 ⁺ ⟩						72(4)	14(4)	14(1)		
600(15)	3 ⁺ ,5 ⁺	2	0.22,0.16		80Sc23						
623.6(2)	⟨7 ⁺ ⟩						25(2)	75(5)			
667.3(2)	9 ⁺	5,4	0.65,0.91		80Sc23		93(3)		6.6(8)		
730(15)	1 ⁺	0	0.15		80Sc23						

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E^*	$2J^\pi$	L	S_N	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(d,t)	Γ_{cm}		$\frac{E_f^*}{2J_f^\pi}$:	0.0 5 ⁺	80.3 (3) ⁺	261.0 7 ⁺	274.7 (7,9 ⁺)	588.0 (7 ⁺)
734.7(2)	(7 ⁺)						63(5)	30(2)		7(1)	
745(1)									100		
938.9(2)	11 ⁺								95(10)		
980(15)	3 ⁺ ,5 ⁺	2	0.17,0.14		80Sc23						
1081.7(5)	3 ⁺ ,5 ⁺	2	0.14,0.11		80Sc23					29(9)	71(14)
1173.9(2)	(7 ⁺) ⁺						51(2)	15(1)	3.3(3)	2.8(3)	6(2)
1199.3(2)									51(4)		24(3)
1205.3(2)	(7 ⁺)						40(2)	6(1)	18(2)	5(1)	2(1)
1250(15)	3 ⁺ ,5 ⁺	2	0.22,0.18		80Sc23						
1265.6(3)	(11 ⁺)										61(5)
1337.4(1)	11 ⁻	5	0.54		80Sc23						
1380(15)	1 ⁺	0	0.08		80Sc23						
1403.5(2)	13 ⁺										
1534.5(2)	(7 ⁺)							41(7)			
1560.5(3)	(7 ⁺ -11 ⁺)								37(3)		
1614.6(6)									100		
1816.6(2)	15 ⁺										
1823.6(6)											
1892.9(2)	15 ⁻										
1932.9(6)									100		
1981.7(9)											
2041.6(3)	(7 ⁺ -11 ⁺)						35(2)				
2050(15)	1 ⁻ ,3 ⁻	1	0.17,0.14		80Sc23						
2063.0(5)	(15 ⁺)										
2120(15)		(4,5)	0.27,0.54		80Sc23						
2141(2)	(15 ⁺)										
2207.5(2)	17 ⁺										
2220.3(4)	(7 ⁺ ,9 ⁺)	4	1.44,0.72		80Sc23				34(11)		66(22)
2221(2)	7 ⁺ -11 ⁻										
2245.4(8)	(13)										
2265.3(6)	(7 ⁺ -11 ⁺)										
2290(15)	1 ⁻ ,3 ⁻	1	0.46,0.38		80Sc23						
2291(1)	(17)										
2300.2(6)											
2393.4(9)	9 ⁺	4	4.1,2.0		80Sc23				63(13)		10(5)
2512.0(9)	(15)										
2641.1(3)	19 ⁻										
2641.2(3)	(7 ⁺ -11 ⁺)										100
2721.0(10)	19 ⁺										
2802.8(5)											
2864.6(2)	21 ⁺										
2891.0(5)											
2895.8(5)	(7 ⁺ -11 ⁺)								32(5)		68(12)
2960.1(5)	(7 ⁺ -11 ⁺)								100		
2983(1)	(19 ⁻)										

(continued)

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E^*	$2J^\pi$	L	S_N	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(d,t)	Γ_{cm}		E_{f}^* :	0.0	80.3	261.0	274.7	588.0
						$2J_{\text{f}}^\pi$:	5^+	$\langle 3 \rangle^+$	7^+	$\langle 7,9^+ \rangle$	$\langle 7^+ \rangle$
3034.6(7)											
3227.5(5)	$\langle 21^+ \rangle$										
3304.7(9)	$\langle 7^+ - 11^+ \rangle$										
3327.1(8)											
3404.3(8)	$\langle 7^+ - 11^+ \rangle$								100		
3532.2(3)	23^-										
3625.4(3)	$\langle 23^+ \rangle$										
3812.0(3)	25^+										
4443.0(6)	27^-										
4896.4(5)	$\langle 29^+ \rangle$										
5414.5(6)	$\langle 31^- \rangle$										
6488.2(10)											
			80Sc23		Ref.						

Additional data on this isotope can be found in [00Pa43].

Energy levels and branching ratios [98Bl03]. Part 2

¹⁰¹Pd
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E^*	$2J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*:$ $2J_f^\pi:$	623.6 $\langle 7^+ \rangle$	667.3 9^+	734.7 $\langle 7^+ \rangle$	938.9 11^+	1174 $\langle 7 \rangle^+$	1265.6 $\langle 11^+ \rangle$	1337.4 11^-	1403.5 13^+	1816.6 15^+	1892.9 15^-
938.9(2)	11^+			5(3)								
1173.9(2)	$\langle 7 \rangle^+$		2.2(3)	3.3(6)	16.3(6)							
1199.3(2)			13(2)	12(2)								
1205.3(2)	$\langle 7^+ \rangle$		3(1)	21(1)	5(1)							
1265.6(3)	$\langle 11^+ \rangle$			32(2)		7(1)						
1337.4(1)	11^-			94(8)		5.7(21)						
1403.5(2)	13^+			90(9)		8(3)		1.9(2)				
1534.5(2)	$\langle 7^+ \rangle$		6(2)	26(6)	27(2)							
1560.5(3)	$\langle 7^+ - 11^+ \rangle$			44(4)	10(2)		9(1)					
1816.6(2)	15^+					100						
1823.6(6)										100		
1892.9(2)	15^-								94(9)	6.0(7)		
1981.7(9)										100		
2041.6(3)	$\langle 7^+ - 11^+ \rangle$		24(5)		41(6)							
2063.0(5)	$\langle 15^+ \rangle$							88(9)		12.0(12)		
2207.5(2)	17^+									94(8)	6(3)	
2221(2)	$7^+ - 11^-$			100								
2245.4(8)	$\langle 13 \rangle$								100			
2265.3(6)	$\langle 7^+ - 11^+ \rangle$		19(4)			81(12)						
2291(1)	$\langle 17 \rangle$									100		
2300.2(6)				100								
2393.4(9)	9^+			6(3)		16(5)				5(3)		

(continued)

 $^{101}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	623.6 $\langle 7^+ \rangle$	667.3 9^+	734.7 $\langle 7^+ \rangle$	938.9 11^+	1174 $\langle 7 \rangle^+$	1265.6 $\langle 11^+ \rangle$	1337.4 11^-	1403.5 13^+	1816.6 15^+	1892.9 15^-
2512.0(9)	$\langle 15 \rangle$											x
2641.1(3)	19^-											100
2721.0(10)	19^+										100	
2802.8(5)										100		
2891.0(5)										100		
2983(1)	$\langle 19^- \rangle$											100
3304.7(9)	$\langle 7^+ - 11^+ \rangle$									100		

Energy levels and branching ratios [98Bl03]. Part 3

 $^{101}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage									
		$E_f^*:$ $2J_f^\pi:$	2207.5 17^+	2641.1 19^-	2641.2	2721.0 19^+	2864.6 21^+	3532.2 23^-	3812.0 25^+	4443.0 27^-	5414.5 $\langle 31^- \rangle$
2864.6(2)	21^+		100								
3034.6(7)							100				
3227.5(5)	$\langle 21^+ \rangle$	x					x				
3327.1(8)				100							
3532.2(3)	23^-				100						
3625.4(3)	$\langle 23^+ \rangle$					100					
3812.0(3)	25^+						100				
4443.0(6)	27^-							100			
4896.4(5)	$\langle 29^+ \rangle$								100		
5414.5(6)	$\langle 31^- \rangle$									100	
6488.2(10)											100

Energy levels and branching ratios [98De15].

 $^{102}_{46}\text{Pd}$

E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}	Branching ratios in percentage							
			$E_f^*:$ $J_f^\pi:$	0 0^+	556 2^+	1276 4^+	1534 2^+	1593 0^+	1919	2111 6^+
0	0^+	Stable								
556.43(4)	2^+	11.5(8) ps		100						
1275.87(7)	4^+	2.04(10) ps			100					
1534.47(11)	2^+	0.65(5) ps		51(5)	49(4)	x				
1593.13(22)	0^+	14.5(4) ns		x	x		x			
1658.1(5)	0^+	0.87(22) ps		x	100					
1715.0						100				
1919.0							100			
1944.45(25)	2^+	1.9(7) ps		19	81			x		

(continued)

 $^{102}_{46}\text{Pd}$

E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}	Branching ratios in percentage							
			$E^*_f:$ $J^\pi_f:$	0 0 ⁺	556 2 ⁺	1276 4 ⁺	1534 2 ⁺	1593 0 ⁺	1919	2111 6 ⁺
2111.35(8)	6 ⁺					100				
2111.65(8)	3 ⁺				100					
2138.02(8)	4 ⁺	0.52(13) ps			89(8)	x	11(4)		x	x
2248.7(4)	$\langle 2,3 \rangle$				100					
2294.53(8)	$\langle 4 \rangle^-$	1.1(1) ns				52(15)				
2301.27(8)	$\langle 4 \rangle^+$				80(7)	20(2)				
2342.94(21)	$\langle 3^- \rangle$				100					
2391.1(3)	$\langle 1,2 \rangle^+$				100					
2431.5(7)					78		22			
2474.33(7)	5 ⁻					16.7(8)				
2480.2(10)					100					
2489.9(10)					100					
2533.0(3)	$\langle 4 \rangle^+$					100				
2546.2(7)					47		53			
2553.5(10)						100				
2574.3(4)	$\langle 1,2 \rangle$				100					
2582.9(10)						100				
2606.5(5)						100				
2610.73(25)	$\langle 1,2 \rangle^+$		15		85(14)			x		
2651.30(11)	$\langle 4^+ \rangle$					74				26
2660.7(7)					71		29			
2675.0(10)					100					
2695.9(10)	$\langle 1,2 \rangle$		100							
2716.3(3)	$\langle 1,2 \rangle^+$		27(9)		73(13)					
2737.0(4)						100				
2769.0(4)						100				
2798.9(4)	$\langle 4^+ \rangle$				27(12)	73(19)				
2914.03(9)	6 ⁻									
2977.3(3)	4 ⁽⁺⁾ -6 ⁽⁺⁾									
3003.2(3)	4 ⁺ ,5 ⁺ ,6 ⁺									
3008.78(15)	$\langle 4 \rangle$						100			
3013.06(9)	8 ⁺									100
3040.0(10)					100					
3076.02(24)	4 ⁺ ,5 ⁺ ,6 ⁺					53(8)				
3123.3(4)	1 ⁺ ,2 ⁺ ,3 ⁺				40(26)		60(20)			
3166.5(4)	4,5,6					45(18)				55(37)
3188.13(10)	7 ⁻									
3238.15(25)	1 ⁺ ,2 ⁺		74(16)		26(10)			x		
3340.28(9)	8 ⁺									17(2)
3389.66(23)	7 ⁻									100
3670.54(11)	8 ⁻									
3727.76(10)	9 ⁻									
3889.33(14)	$\langle 9^- \rangle$									
3992.71(10)	10 ⁺									
4033.1(8)										

(continued)

¹⁰²Pd
₄₆

E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}	Branching ratios in percentage						
			$E_f^*:$ $J_f^\pi:$	0 0 ⁺	556 2 ⁺	1276 4 ⁺	1534 2 ⁺	1593 0 ⁺	1919 2111 6 ⁺
4317.72(11)	10 ⁻								
4328.73(17)	⟨10 ⁺ ⟩								
4432.73(10)	11 ⁻								
4646.04(25)	⟨11 ⁻ ⟩								
4747.2(3)									
4836.9									
4944.71(18)	⟨11 ⁻ ⟩								
5055.10(11)	12 ⁺								
5094.03(12)	12 ⁻								
5260.64(19)	⟨12 ⁺ ⟩								
5325.88(13)	13 ⁻								
5577.1(4)	⟨13 ⁻ ⟩								
5984.8(3)	14 ⁻								
6138.63(19)	14 ⁺								
6179.8(5)	14 ⁺								
6222.7	⟨14 ⁺ ⟩								
6344.98(16)	15 ⁻								
6539.0(5)	⟨15 ⁻ ⟩								
6988.09(19)	16 ⁻								
7428.8(6)	16 ⁺								
7461.28(19)	17 ⁻								
7585.6(6)	⟨17 ⁻ ⟩								
8063.2(4)	18 ⁻								
8707.0(7)	18 ⁺								
8737.5(10)	19 ⁻								
8778.7(11)	⟨19 ⁻ ⟩								
9214.1(7)	20 ⁻								
9892.7	20 ⁺								
10178.1(13)	21 ⁻								
10223.0(8)	20 ⁺								
10540.1(11)	22 ⁻								
11227.5	⟨22 ⁺ ⟩								
11886.1(9)	22 ⁺								
12025.2(15)	24 ⁻								
13592.9(10)	24 ⁺								
15414.3(12)	⟨26 ⁺ ⟩								

Additional data on this isotope can be found in [02Za04].

Abundance: 1.02(1) %.

8 bands of levels with spins up to 20⁺ (9786 keV), 32⁺ (18825 keV), 42⁺ (28111 keV) and others are considered in [97Gi10, 97Gi15].

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

Energy levels and branching ratios [98De15]. Part 2

 $^{102}_{46}\text{Pd}$

E^*	J^π	Branching ratios in percentage									
[keV]		$E^*_{\text{f}}:$ $J^\pi_{\text{f}}:$	2112 3 ⁺	2138.02 4 ⁺	2294.5 $\langle 4 \rangle^-$	2301.3 $\langle 4 \rangle^+$	2474.3 5 ⁻	2914.0 6 ⁻	3013.1 8 ⁺	3188.1 7 ⁻	3340.3 8 ⁺
2294.53(8)	$\langle 4 \rangle^-$		36(8)	12(5)							
2474.33(7)	5 ⁻			42(8)	24(4)	18(4)					
2651.30(11)	$\langle 4^+ \rangle$			x			x				
2914.03(9)	6 ⁻				25(3)		75(10)				
2977.3(3)	4 ⁽⁺⁾ -6 ⁽⁺⁾	100									
3003.2(3)	4 ⁺ ,5 ⁺ ,6 ⁺	100									
3013.06(9)	8 ⁺				x						
3076.02(24)	4 ⁺ ,5 ⁺ ,6 ⁺		26(5)	21(5)							
3188.13(10)	7 ⁻						74(11)	26(5)			
3340.28(9)	8 ⁺								83(9)		
3670.54(11)	8 ⁻							72(9)		28(3)	
3727.76(10)	9 ⁻								54(5)	23(2)	13(2)
3889.33(14)	$\langle 9^- \rangle$									100	
3992.71(10)	10 ⁺								100		
4033.1(8)									x		
4328.73(17)	$\langle 10^+ \rangle$										53(6)

Energy levels and branching ratios [98De15]. Part 3

 $^{102}_{46}\text{Pd}$

E^*	J^π	Branching ratios in percentage									
[keV]		$E_f^*:$ $J_f^\pi:$	3389.7	3670.5	3727.8	3889.3	3992.7	4033.1	4317.72	4328.73	4432.73
			7 ⁻	8 ⁻	9 ⁻	⟨9 ⁻ ⟩	10 ⁺		10 ⁻	⟨10 ⁺ ⟩	11 ⁻
3727.76(10)	9 ⁻		10.2(8)								
4317.72(11)	10 ⁻			62(5)	10(2)	28(2)					
4328.73(17)	⟨10 ⁺ ⟩							47(7)			
4432.73(10)	11 ⁻				94			6(1)			
4646.04(25)	⟨11 ⁻ ⟩					100					
4747.2(3)					100						
4836.9										100	
4944.71(18)	⟨11 ⁻ ⟩							100			
5055.10(11)	12 ⁺							62(2)	38(12)		
5094.03(12)	12 ⁻								76(7)		24(2)
5260.64(19)	⟨12 ⁺ ⟩									55(6)	
5325.88(13)	13 ⁻										100

Energy levels and branching ratios [98De15]. Part 4

 $^{102}_{46}\text{Pd}$

E^* [keV]	J^π	Branching ratios in percentage									
		E^*_f : J^π_f :	4646.04 $\langle 11^- \rangle$	4747.2	4944.71 $\langle 11^- \rangle$	5055.10 12^+	5094.03 12^-	5260.64 $\langle 12^+ \rangle$	5325.88 13^-	5577.1 $\langle 13^- \rangle$	5984.8 14^-
5055.10(11)	12^+				x						
5260.64(19)	$\langle 12^+ \rangle$			45(6)							
5577.1(4)	$\langle 13^- \rangle$		100								
5984.8(3)	14^-						84(8)		16(3)		
6138.63(19)	14^+					100					
6179.8(5)	14^+					100					
6222.7	$\langle 14^+ \rangle$							100			
6344.98(16)	15^-								100		
6539.0(5)	$\langle 15^- \rangle$									100	
6988.09(19)	16^-										79(6)

Energy levels and branching ratios [98De15]. Part 5

 $^{102}_{46}\text{Pd}$

E^* [keV]	J^π	Branching ratios in percentage									
		E^*_f : J^π_f :	6179.8 14^+	6344.98 15^-	6539.0 $\langle 15^- \rangle$	6988.09 16^-	7428.8 16^+	7461.28 17^-	7585.6 $\langle 17^- \rangle$	8063.2 18^-	8707.0 18^+
6988.09(19)	16^-			21(3)							
7428.8(6)	16^+		100								
7461.28(19)	17^-			100							
7585.6(6)	$\langle 17^- \rangle$				100						
8063.2(4)	18^-					88(10)		12(3)			
8707.0(7)	18^+						100				
8737.5(10)	19^-							100			
8778.7(11)	$\langle 19^- \rangle$								100		
9214.1(7)	20^-									100	
9892.7	20^+										100
10223.0(8)	20^+										100

Energy levels and branching ratios [98De15]. Part 6

 $^{102}_{46}\text{Pd}$

E^* [keV]	J^π	Branching ratios in percentage							
		E^*_f : J^π_f :	8737.5 19^-	9214.1 20^-	9892.7 20^+	10223.0 20^+	10540.1 22^-	11886.1 22^+	13592.9 24^+
10178.1(13)	21^-		100						
10540.1(11)	22^-			100					
11227.5	$\langle 22^+ \rangle$				100				
11886.1(9)	22^+					100			
12025.2(15)	24^-						100		

(continued)

¹⁰²Pd₄₆

E^*	J^π	Branching ratios in percentage							
[keV]		E_f^* : J_f^π :	8737.5 19 ⁻	9214.1 20 ⁻	9892.7 20 ⁺	10223.0 20 ⁺	10540.1 22 ⁻	11886.1 22 ⁺	13592.9 24 ⁺
13592.9(10)	24 ⁺							100	
15414.3(12)	$\langle 26^+ \rangle$								100

Energy levels and branching ratios [01De37].

¹⁰³Pd₄₆

E^*	$2J^\pi$	L	S_N	σ (d,t)	L	C^2S	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(d,p)	$\mu\text{b/sr}$		(d,t)	Γ_{cm}		E_f^* : $2J_f^\pi$:	0.0 5 ⁺	118.7 3 ⁺	244 7 ⁺	267 5 ⁺	499 $\langle 1^+ \rangle$
0.0	5 ⁺	2	2.96	800	2	2.09	16.991(19) d	73RiZL						
118.736(17)	3 ⁺	2	0.09	40			0.70(3) ns	73RiZL	100					
243.959(16)	7 ⁺	4	3.82	130	4	4.28		73RiZL	98(5)	2.0(2)				
266.861(17)	5 ⁺	2	0.08	70	2	0.21		73RiZL	34(1)	66(1)				
498.948(20)	$\langle 1^+ \rangle$	0	1.00	320	0	0.32		73RiZL	10(1)	90(4)				
504.24(7)	$\langle 3 \rangle^+$					incl			24(1)	67(3)			9.0(5)	
531.972(22)	7 ⁺				2	0.13		80Sc23	85(8)		6(1)	9(3)		
535(5)	3 ⁺ ,5 ⁺	2	0.35					73RiZL						
625.637(25)	3 ⁺ ,5 ⁺	2	0.91	90	2	0.4,0.3		73RiZL	95(6)				5(1)	
698.746(22)	5 ⁺	2	0.12		2	0.61		73RiZL	14(1)	69(3)	≈ 5	10(1)		
718.02(5)	9 ⁺			390					74(2)		9.7(6)	5(1)		
727.31(13)	1 ⁺	0	0.19	incl	$\langle 0 \rangle$	0.69*		73RiZL	17(4)	83(12)				
784.79(10)	11 ⁻	5	6.54		5	1.05	25(2) ns	73RiZL			21(4)			
815(2)	3 ⁺ ,5 ⁺				2	0.16,0.13		80Sc23						
884.67(5)	3 ⁺ ,5 ⁺	2	0.40		2			73RiZL	51(3)	28(3)				
900.0(1)	9 ⁺			40					61(9)		15(2)	18(2)		
904.12(20)	11 ⁺			incl							93(14)			
913.41(15)	3 ⁻ -7 ⁻	1,3	0.55	incl				73RiZL	56(4)		17(2)	27(2)		
1043.61(4)	3 ⁺ ,5 ⁺	2	0.49		2	0.24,0.20		73RiZL	70(3)		20(2)	10(1)		
1069.05(14)	$\langle 3^+, 5^+ \rangle$	2	0.16		2			73RiZL		12(1)		88(9)		
1155.36(10)	$\langle 3, 5 \rangle^+$								41(4)		33(8)	26(2)		
1182.92(5)	$\langle 5 \rangle^+$	2	0.72		2	0.16		73RiZL	44(2)	20(1)	18(1)		2(1)	
1261.50(11)	15 ⁻													
1273.97(4)	$\langle 5 \rangle^+$				2	0.09*	52(+10-7) fs	01De37	46(2)	14.9(3)	6.4(2)	15.8(5)	0.4(1)	
1277.0(5)	5 ⁺	2	0.23				45(+10-7) fs	73RiZL	30(3)	70(8)				
1280(15)	$\langle 11 \rangle^-$				5	0.40		80Sc23						
1308.9(4)	$\langle 9 \rangle^+$										37(6)			
1328.94(15)	$\langle 11 \rangle^+$													
1386.12(8)	$\langle 5 \rangle$						24(+7-4) fs		53(3)	18(4)	16(1)	13(2)		
1527.04(7)	13 ⁺													
1547.11(13)	$\langle 5^+, 7^+ \rangle$								25(2)	7(1)	10(1)	30(4)		
1570(15)	3 ⁺ ,5 ⁺				2	0.20,0.16		80Sc23						
1581.33(14)	5 ⁺						42(+10-7) fs		34(3)		66(5)			
1592.38(8)	$\langle 5^+ - 9^+ \rangle$						194(+62-42) fs		9.2(9)			54(2)		

(continued)

 $^{103}_{46}\text{Pd}$

E^*	$2J^\pi$	L	S_N	σ (d,t)	L	C^2S	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(d,p)	$\mu\text{b/sr}$		(d,t)	Γ_{cm}		E_f^* : $2J_f^\pi$:	0.0 5 ⁺	118.7 3 ⁺	244 7 ⁺	267 5 ⁺	499 $\langle 1^+ \rangle$
1595(2)		0	0.05		0	0.29		73RiZL						
1604.72(13)	5						55(+14-7) fs			45(30)	24(2)			
1641(2)	1 ⁺				0	0.08		80Sc23						
1676(2)														
1679.0(4)	$\langle 7 \rangle$						14(+4-3) fs							
1689.93(24)	$\langle 3-7 \rangle$									18(2)		18(4)	27(4)	
1750(15)	3 ⁺ , 5 ⁺				2	0.08, 0.07		80Sc23						
1775.65(14)	$\langle 5^+ \rangle$						97(+17-10) fs			33(2)				
1777.18(21)	15 ⁺													
1781.2(7)												67(29)	33(6)	
1820(15)	1 ⁺				0	0.07		80Sc23						
1833(2)	3 ⁺ , 5 ⁺	2	0.35					73RiZL						
0+X														
1886(2)		0	0.27					73RiZL						
1900(15)	1 ⁻ , 3 ⁻				1	0.10, 0.08								
1953.5(3)	$\langle 5 \rangle$	2	0.17		2	0.11, 0.1	48(+10-7) fs	73RiZL		100				
1964.32(14)	7						73(+17-14) fs			23(1)	45(3)			
1974.91(16)	19 ⁻													
2100(15)	1 ⁻ , 3 ⁻				1	0.19, 0.17		80Sc23						
2178	15 ⁺													
2180(15)	1 ⁻ , 3 ⁻				1	0.08, 0.07		80Sc23						
2233.6(5)	$\langle 5^+ \rangle$						21(+5-4) fs			44(3)				
2275.42(24)	7 ⁺ , 9 ⁺	4	0.60, 0.30					80Sc23		33(2)	24(4)			
453+X	$\langle 53 \rangle$													
2343.13(24)	5 ⁺ -9 ⁺									18(7)		18(3)		
2408.30(20)	5 ⁺ -9 ⁺									16(2)		17(4)	40(4)	
2417.6(4)	5 ⁺ -9 ⁺									17(6)	83(12)			
2446.5(4)	5 ⁺ -9 ⁺									30(5)			26(9)	
2464.7(10)	5 ⁺ -9 ⁺										100			
2468	17 ⁺													
2486.5(8)	7 ⁺ , 9 ⁺				4	0.82, 0.42		80Sc23				100		
2511.5(8)	5 ⁺ -9 ⁺											100		
2600(15)	7 ⁺ , 9 ⁺				4	2.26, 1.14		80Sc23						
2601	15 ⁺													
2660(15)	7 ⁺ , 9 ⁺				4	1.51, 0.75		80Sc23						
2760(15)	1 ⁻ , 3 ⁻				1	0.24, 0.22		80Sc23						
2764.38(23)	19 ⁺													
2822.01(19)	23 ⁻													
2834	17 ⁺													
2880(15)	1 ⁻ , 3 ⁻				1	0.26, 0.24		80Sc23						
2924														
3020.38(17)	$\langle 21^+ \rangle$													
3071	19 ⁺													
3382	21 ⁺													
3714	23 ⁺													

(continued)

¹⁰³Pd
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E^*	$2J^\pi$	L	S_N	σ (d,t)	L	C^2S	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(d,p)	$\mu\text{b/sr}$		(d,t)	Γ_{cm}		E_f^* :	0.0	118.7	244	267	499
									$2J_f^\pi$:	5 ⁺	3 ⁺	7 ⁺	5 ⁺	$\langle 1^+ \rangle$
1912+X	$\langle 57 \rangle$													
3792.10(19)	27 ⁻													
2045+X														
4056	25 ⁺													
4160	25 ⁺													
4587	27 ⁺													
4886.4(3)	31 ⁻													
5025	29 ⁺													
3439+X	$\langle 61 \rangle$													
5458	31 ⁺													
5983	33 ⁺													
6048.3(4)	35 ⁻													
6452	35 ⁺													
5003+X	$\langle 65 \rangle$													
7056	37 ⁺													
7316	39 ⁻													
7593	39 ⁺													
8212	41 ⁺													
6662+X	$\langle 69 \rangle$													
8668	43 ⁻													
8831	43 ⁺													
9442	45 ⁺													
10119	47 ⁻													
10190	47 ⁺													
8449+X	$\langle 73 \rangle$													
10741	49 ⁺													
11638	51 ⁻													
11643	51 ⁺													
12208	53 ⁺													
10359+X	$\langle 77 \rangle$													
13240	55 ⁺													
13798	57 ⁺													
12377+X	$\langle 81 \rangle$													
14932	59 ⁺													
15487	61 ⁺													
14636+X	$\langle 85 \rangle$													
17357	65 ⁺													
			73RiZL	63Cu02		80Sc23		Ref.						

Additional data on this isotope can be found in [93Re13, 93Je02, 90An21].

* Data from unpublished work [73RiZL] are considered in [01De37] as secondary source.

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

Energy levels and branching ratios [01De37]. Part 2

 $^{103}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage									
		$E_f^*:$ $2J_f^\pi:$	504 $\langle 3 \rangle^+$	532 7^+	699 5^+	718.0 9^+	727.3 1^+	784.8 11^-	884.7 $3^+, 5^+$	900.0 9^+	904.1 11^+
698.746(22)	5^+			3(1)							
718.02(5)	9^+			11(1)							
784.79(10)	11^-					79(9)					
884.67(5)	$3^+, 5^+$		16(1)		5.1(4)						
900.0(1)	9^+			0.5(1)	5.6(4)						
904.12(20)	11^+					7(7)					
1182.92(5)	$\langle 5 \rangle^+$		2(1)	3(1)	6(1)		≈ 1		4(1)		
1261.50(11)	15^-							100			
1273.97(4)	$\langle 5 \rangle^+$			12.4(3)	3.7(2)		0.21(4)		0.50(12)		
1308.9(4)	$\langle 9 \rangle^+$			28(5)	34(8)						
1328.94(15)	$\langle 11 \rangle^+$			47(6)		23				30(6)	
1527.04(7)	13^+					80(11)					
1547.11(13)	$\langle 5^+, 7^+ \rangle$		18(1)			10(2)					
1592.38(8)	$\langle 5^+ - 9^+ \rangle$					37(3)					
1604.72(13)	5			31(4)							
1679.0(4)	$\langle 7 \rangle$			78(5)		22(2)					
1689.93(24)	$\langle 3 - 7 \rangle$		21(11)	16(5)							
1775.65(14)	$\langle 5^+ \rangle$		61(18)		6(1)						
1777.18(21)	15^+										100
1964.32(14)	7								32(3)		
2233.6(5)	$\langle 5^+ \rangle$			56(2)							
2275.42(24)	$7^+, 9^+$			21(2)		9(1)					
2343.13(24)	$5^+ - 9^+$		43(4)	22(3)							
2408.30(20)	$5^+ - 9^+$				26(3)						
2446.5(4)	$5^+ - 9^+$				43(17)						

Energy levels and branching ratios [01De37]. Part 3

 $^{103}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage									
		$E_f^*:$ $2J_f^\pi:$	1261.5 15^-	1328.9 $\langle 11 \rangle^+$	1527.0 13^+	1581.3 5^+	1777.2 15^+	0+X	1974.9 19^-	2178 15^+	453+X $\langle 53 \rangle$
1527.04(7)	13^+			20(4)							
1974.91(16)	19^-		100								
2178	15^+			100							
2275.42(24)	$7^+, 9^+$					13(1)					
2468	17^+				100						
2601	15^+				x						
2764.38(23)	19^+						100				
2822.01(19)	23^-								100		
2834	17^+		x		x		x			x	
2924							x				

(continued)

 $^{103}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage									
		E_f^* : $2J_f^\pi$:	1261.5 15 ⁻	1328.9 $\langle 11 \rangle^+$	1527.0 13 ⁺	1581.3 5 ⁺	1777.2 15 ⁺	0+X	1974.9 19 ⁻	2178 15 ⁺	453+X $\langle 53 \rangle$
3382 1912+X	21 ⁺ $\langle 57 \rangle$								x		
								x			x

Energy levels and branching ratios [01De37]. Part 4

 $^{103}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage									
		E_f^* : $2J_f^\pi$:	2468 17 ⁺	2601 15 ⁺	2764.4 19 ⁺	2822.0 23 ⁻	2834 17 ⁺	2924	3020.4 $\langle 21^+ \rangle$	3071 19 ⁺	3382 21 ⁺
2834	17 ⁺		x	x							
2924			x	x							
3020.38(17)	$\langle 21^+ \rangle$		x		x			x			
3071	19 ⁺			x			x	x			
3382	21 ⁺						x	x	x	x	
3714	23 ⁺							x	x	x	x
3792.10(19)	27 ⁻					100					
4056	25 ⁺								x		
4160	25 ⁺					x					x

Energy levels and branching ratios [01De37]. Part 5

 $^{103}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage									
		E_f^* : $2J_f^\pi$:	3714 23 ⁺	1912+X $\langle 57 \rangle$	3792.1 27 ⁻	2045+X	4056 25 ⁺	4160 25 ⁺	4587 27 ⁺	4886.4 31 ⁻	5025 29 ⁺
4160	25 ⁺		x								
4587	27 ⁺		x				x	x			
4886.4(3)	31 ⁻				100						
5025	29 ⁺				x		x	x			
3439+X	$\langle 61 \rangle$			x		x					
5458	31 ⁺								x		x
5983	33 ⁺									x	x
6048.3(4)	35 ⁻									100	

Energy levels and branching ratios [01De37]. Part 6

 $^{103}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage									
		$E_f^*:$ $2J_f^\pi:$	3439+X $\langle 61 \rangle$	5458 31^+	5983 33^+	6048.3 35^-	6452 35^+	5003+X $\langle 65 \rangle$	7056 37^+	7316 39^-	7593 39^+
6452	35^+			x							
5003+X	$\langle 65 \rangle$		x								
7056	37^+				x	x					
7316	39^-					x					
7593	39^+						x				
8212	41^+								x		
6662+X	$\langle 69 \rangle$							x			
8668	43^-									x	
8831	43^+										x

Energy levels and branching ratios [01De37]. Part 7

 $^{103}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage									
		$E_f^*:$ $2J_f^\pi:$	8212 41^+	6662+X $\langle 69 \rangle$	8668 43^-	8831 43^+	9442 45^+	10119 47^-	10190 47^+	8449+X $\langle 73 \rangle$	10741 49^+
9442	45^+		x								
10119	47^-				x						
10190	47^+					x					
8449+X	$\langle 73 \rangle$			x							
10741	49^+						x				
11638	51^-							x			
11643	51^+								x		
12208	53^+										x
10359+X	$\langle 77 \rangle$									x	

Energy levels and branching ratios [01De37]. Part 8

 $^{103}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage							
		$E_f^*:$ $2J_f^\pi:$	11643 51^+	12208 53^+	10359+X $\langle 77 \rangle$	13240 55^+	13798 57^+	12377+X $\langle 81 \rangle$	15487 61^+
13240	55^+		x						
13798	57^+			x					
12377+X	$\langle 81 \rangle$				x				
14932	59^+					x			
15487	61^+						x		
14636+X	$\langle 85 \rangle$							x	
17357	65^+								x

Energy levels and branching ratios [84Bl13, 91Bl09].

¹⁰⁴Pd
46

E^* [keV]	J^π	L	S_N (d,t)	σ (d,t) $\mu\text{b/sr}$	L (p,t)	σ (p,t) $\mu\text{b/sr}$	L (p, α)	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage				
										E_f^* : 0.0 J_f^π : 0 ⁺	556 2 ⁺	1323 4 ⁺	1334 0 ⁺	1342 2 ⁺
0.0	0 ⁺	2	0.35	1180	0	645	1	Stable	69Di15					
555.81(4)	2 ⁺	2	0.52	1518	2	72	1	9.9(5) ps	69Di15	100				
1323.6(1)	4 ⁺	2+4	0.05,0.1	97+19	4	11,2		1.5(2) ps	69Di15		100			
1333.6(1)	0 ⁺	2	0.03	68	0	13.3	1	5.2(5) ps	69Di15	x	100			
1341.7(1)	2 ⁺	2+0	0.03	75+68	2	8.9		1.60(4) ps	69Di15	46(3)	54(3)			
1792.9(1)	0 ⁺	2	0.07	125		5.8	1	<0.3 ps	69Di15		91(5)			8.6(8)
1794.3(5)	2 ⁺			weak		incl		<1.4 ps	77Kr02	9(1)	88(5)		4(1)	
1820.6(2)	3 ⁺	0	0.02	89			1		69Di15		50(5)	38(4)		12(2)
1941.2(5)				weak								100		
1999.1(4)	1,2									100				
2082.4(1)	4 ⁺	2	0.13	190	4	29		1.2(12) ps	69Di15		30(3)	36(2)		34(2)
2103(2)	0 ⁺													
2125.5(1)		2+4	0.04,0.1	57+6					69Di15					
2138.7(10)	0 ⁺			incl	0	8.3			77Kr02		100			
2181.6(1)	4 ⁺	2+4	0.4,0.5	520+66	⟨3⟩	62			69Di15		31(3)	62(6)		7(2)
2193.4(6)	⟨4 ⁺ ⟩			weak	⟨4⟩	67.9			77Kr02		100			
2244.9(3)	2 ⁺	2	0.39	555	2	28			69Di15		91(9)			9(2)
2249.5(5)	6 ⁺											100		
2265.3(1)	4 ⁺	2+4	0.1,0.4	150+44					69Di15		3(1)	71		20(2)
2276.5(3)	1 ⁺ ,2 ⁺	2	0.04	55					69Di15	53(4)	37(4)			10(1)
2298.9(3)	4 ⁻									x		38(8)		
2337.9(3)	1 ⁺ ,2 ⁺	2+4	0.03,0.1	39+12	2	5,6			69Di15	26(5)	60(12)			14(2)
2351.6(9)												100		
2444.5(3)	4 ⁺ -6 ⁺	4+2	0.6,0.05	70					69Di15		12(2)	13(2)		
2456.6(4)	⟨1-3⟩	2+4	0.1,0.4	120					69Di15		53(5)	47(5)		
2465(5)		2	0.064	810					69Di15		17(7)		83(8)	
2479.0(6)	1,2					6.2			77Kr02	50	50			
2491.4(5)	5 ⁻											80(4)		
2492.0(5)											100			
2521.4(4)	2 ⁺				2	45			77Kr02		25(5)			75(8)
2533.4(5)	⟨1-3⟩	0	0.06	165					69Di15		83(8)			17(5)
2570.3(4)	4 ⁺	2	0.38	450	4	56			69Di15			100		
2572.5											45(6)			55(10)
2613.4(5)	2 ⁺ ,3 ⁺	0	0.04	98					69Di15	x				x
2622.2(5)	⟨1-3⟩					21			77Kr02			100		
2626.9(4)	⟨1,2 ⁺ ⟩									x	x			
2642.6(5)	4 ⁺			44							x	75(8)		25(8)
2667.7(2)	5 ⁻	3+5	0.2,0.15						69Di15			100		
2677.8(4)	4 ⁺	4	0.60	58	4	20			69Di15			100		
2695.0(5)	2 ⁺	2	0.08	86	⟨6⟩	10			69Di15		100			
2714.8(6)	⟨4-6⟩	2+4	0.08,0.1	89	2	57			69Di15		28(8)	19(8)	28(8)	25(8)
2760.3(4)	⟨4-6⟩													100
2767.0(4)	4 ⁺	4	1.0		4	17			69Di15		3			97
2771.5(5)				96							100			
2774.5(4)	4 ⁺										7(5)	93(15)		

(continued)

 $^{104}_{46}\text{Pd}$

E^*	J^π	L	S_N	σ (d,t)	L	σ (p,t)	L	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]			(d,t)	$\mu\text{b/sr}$	(p,t)	$\mu\text{b/sr}$	(p, α)	Γ_{cm}		E_f^* : 0.0	556	1323	1334	1342
										J_f^π : 0 ⁺	2 ⁺	4 ⁺	0 ⁺	2 ⁺
2784(6)	X ⁺	2+4	0.1,0.2	128					69Di15					
2800.5(6)	4 ⁺	2	0.08	58	4	30			69Di15		100			
2803.7(2)									01Be26					
2810.0(5)	2 ⁺ ,3 ⁺	0	0.14	365					69Di15					
2868.4(7)												100		
2875.2(5)	$\langle 4-6 \rangle$	2+4	0.4,0.5	423					69Di15			100		
2900.8(2)	6 ⁻													
2918.3(4)	$\langle 1-3 \rangle^+$	2+4	0.2,0.5	240	2	15			69Di15		100			
2924.2(3)	$\langle 4-6 \rangle^+$	2	0.23	236					69Di15			69(12)		
2933(6)		2	0.08	79					69Di15					
2958.9(3)	4 ⁻ -6 ⁻													
2960.5(7)	$\langle 2^+,3 \rangle$											100		
2975.5(5)	$\langle 1-3 \rangle$	0	0.04	104					69Di15		100			
2988.4(2)	7 ⁻													
2993.6(8)	4 ⁺	0+2	0.02,0.06	69					69Di15		25(2)			75(4)
3000.3(5)		2+4	0.06,0.8	577					69Di15	35(13)		65(13)		
3008.3(5)	$\langle 1,2^+ \rangle$			69						100	x			
3013.5(9)				105						100				
3020.3(9)		2+4	0.1,0.5	incl					69Di15			100		
3034.0(5)	$\langle 1,2^+ \rangle$			incl						100				
3078.5(5)	2 ⁺ ,3 ⁺	0	0.05	112					69Di15		100			
3084(6)	$\langle 2^+-5^+ \rangle$	2+4	0.1,0.25	79					69Di15					
3092(6)	$\langle 2^+,3^+ \rangle$	0+2	0.02,0.1	50					69Di15					
3097.8(5)	1,2			150						50	50			
3105.0(4)	4 ⁺	2+4	0.2,0.4	incl					69Di15		1(1)	61(11)		12(4)
3112.8(6)	5 ⁺ ,6 ⁺	2	0.25						69Di15			1(1)		
3113.3(6)	$\langle 1-3 \rangle$										100			
3115.6(5)												100		
3116.5(5)	1,2 ⁽⁺⁾			219						100				
3136.9(4)	4 ⁺	2+0	0.1,0.1	93					69Di15		3(3)	61(12)		
3151.8(2)	8 ⁻													
3157.9(4)	4 ⁺											1(1)		
3179.3(4)				144							100			
3182.6(3)									01Be26					
3193.3(6)	$\langle 3^-,4^- \rangle$			incl								100		
3213.5(4)	1 ⁺ -3 ⁺	2+4	0.2,0.2						69Di15	82(11)	18(2)			
3220.7(2)	8 ⁺													
3280.5(6)	4 ⁺									44(12)	56(19)	x		
3285.4(6)	4 ⁺										100			
3309.6(5)	4,5,6											100		
3333.8(4)	$\langle 3^-,4^- \rangle$										23			77
3362(5)	4 ⁺													
3368.1(2)	9 ⁻													
3408.0(4)	1 ⁺ -3 ⁺									72	16(2)			12(2)
3421.8(5)	$\langle 8^+ \rangle$													

(continued)

¹⁰⁴Pd
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E^*	J^π	L	S_N	σ (d,t)	L	σ (p,t)	L	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(d,t)	$\mu\text{b/sr}$	(p,t)	$\mu\text{b/sr}$	(p, α)	Γ_{cm}		E^*_f :	0.0	556	1323	1334	1342
										J^π_f :	0 ⁺	2 ⁺	4 ⁺	0 ⁺	2 ⁺
3474.4(5)	4 ⁺										35(3)	65(13)			
3501.8(5)	$\langle 9^- \rangle$														
3590.2(5)													100		
3608.5									01Be26						
3666(5)	4 ⁺														
3726(5)	$\langle 4^+ \rangle$														
3738(5)	4 ⁺														
3769.5(5)	10 ⁻														
3787(5)	4 ⁺														
3934(5)	4 ⁺														
4009.2(5)	1 ⁺ -3 ⁺									3					
4023.1(3)	10 ⁺														
4029.7(5)	1 ⁺ -3 ⁺												100		
4047.9(3)	11 ⁻														
4202.4(4)	$\langle 11^- \rangle$														
4635.0(3)	12 ⁺														
4648.5(3)	12 ⁻														
4963.1(3)	13 ⁻														
5432.1(3)	14 ⁺														
5681.2(4)	14 ⁻														
6021.8(4)	15 ⁻														
6358.3(6)	16 ⁺														
7422.4(6)	18 ⁺														
8616	$\langle 20^+ \rangle$														
9873	$\langle 22^+ \rangle$														
11237	$\langle 24^+ \rangle$														
12707	$\langle 26^+ \rangle$														
12707+X	$\langle 24 \rangle$														
13970+X	$\langle 26 \rangle$														
15351+X	$\langle 28 \rangle$														
16862+X	$\langle 30 \rangle$														
18500+X	$\langle 32 \rangle$														
20263+X	$\langle 34 \rangle$														
22182+X	$\langle 36 \rangle$														
24261+X	$\langle 38 \rangle$														
			69Di15	69Di15		77Kr02	69Di15		Ref.						

Additional data on this isotope can be found in [00Jo11, 95Ch27, 92Pi08, 92Ri02, 90Pi14, 90An21].

Abundance: 11.14(8) %.

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

Energy levels and branching ratios [84B113, 91B109]. Part 2

 $^{104}_{46}\text{Pd}$

E^* [keV]	J^π	Branching ratios in percentage										
		E_f^* : J_f^π :	1793 0 ⁺	1821 3 ⁺	2082 4 ⁺	2181.56 4 ⁺	2249.5 6 ⁺	2265.31 4 ⁺	2298.9 4 ⁻	2491.4 5 ⁻	2626.9 <1,2 ⁺ >	2667.7 5 ⁻
2125.5(1)			100									
2265.3(1)	4 ⁺			5(1)	1(1)							
2298.9(3)	4 ⁻				36(1)	26(4)						
2444.5(3)	4 ⁺ -6 ⁺			39(7)	20(4)	16(2)		1				
2491.4(5)	5 ⁻				2.8(2)	6(2)			10(2)			
2900.8(2)	6 ⁻						20(1)		23(1)	49(3)		8(2)
2924.2(3)	<4-6> ⁺							31(6)				
2958.9(3)	4 ⁻ -6 ⁻									100		
2988.4(2)	7 ⁻						87(4)			10(2)		3(1)
2993.6(8)	4 ⁺				x							
3105.0(4)	4 ⁺			15(2)	11(2)							
3112.8(6)	5 ⁺ ,6 ⁺							99(13)				
3136.9(4)	4 ⁺					36(6)						
3157.9(4)	4 ⁺				30(5)		62(8)	6(1)				
3220.7(2)	8 ⁺						100					
3421.8(5)	<8 ⁺ >						75(4)					
4009.2(5)	1 ⁺ -3 ⁺										97	

Energy levels and branching ratios [84B113, 91B109]. Part 3

 $^{104}_{46}\text{Pd}$

E^* [keV]	J^π	Branching ratios in percentage										
		E_f^* : J_f^π :	2900.8 6 ⁻	2988.4 7 ⁻	3151.8 8 ⁻	3220.7 8 ⁺	3368.1 9 ⁻	3421.8 <8 ⁺ >	3501.8 <9 ⁻ >	3769.5 10 ⁻	4023.1 10 ⁺	4047.9 11 ⁻
3151.8(2)	8 ⁻		76(4)	24(5)								
3368.1(2)	9 ⁻			87	13(2)							
3421.8(5)	<8 ⁺ >					25(2)						
3501.8(5)	<9 ⁻ >				100							
3769.5(5)	10 ⁻				89(4)		11(2)					
4023.1(3)	10 ⁺					85(4)		15(2)				
4047.9(3)	11 ⁻						100					
4202.4(4)	<11 ⁻ >								100			
4635.0(3)	12 ⁺										100	
4648.5(3)	12 ⁻									100		
4963.1(3)	13 ⁻											100

Energy levels and branching ratios [84Bl13, 91Bl09]. Part 4

 $^{104}_{46}\text{Pd}$

E^*	J^π	Branching ratios in percentage										
[keV]		E_f^* : J_f^π :	4635.0 12 ⁺	4648.5 12 [−]	4963.1 13 [−]	5432.1 14 ⁺	6358.3 16 ⁺	7422.4 18 ⁺	8616 ⟨20 ⁺ ⟩	9873 ⟨22 ⁺ ⟩	11237 ⟨24 ⁺ ⟩	12707+X ⟨24⟩
5432.1(3)	14 ⁺		100									
5681.2(4)	14 [−]			100								
6021.8(4)	15 [−]				100							
6358.3(6)	16 ⁺					100						
7422.4(6)	18 ⁺						100					
8616	⟨20 ⁺ ⟩							100				
9873	⟨22 ⁺ ⟩								100			
11237	⟨24 ⁺ ⟩									100		
12707	⟨26 ⁺ ⟩										100	
13970+X	⟨26⟩											100

Energy levels and branching ratios [84Bl13, 91Bl09]. Part 5

 $^{104}_{46}\text{Pd}$

E^* [keV]	J^π	Branching ratios in percentage						
		E_f^* : J_f^π :	13970+X <26>	15351+X <28>	16862+X <30>	18500+X <32>	20263+X <34>	22182+X <36>
15351+X	<28>		100					
16862+X	<30>			100				
18500+X	<32>				100			
20263+X	<34>					100		
22182+X	<36>						100	
24261+X	<38>							100

Energy levels and branching ratios [93De15, 05De52].

 $^{105}_{46}\text{Pd}$

E^*	$2J^\pi$	L	$(2J+1)S$	$(2J+1)S$	σ (d,p)	σ (d,t)	L	C^2S'	S_N	C^2S'	L	C^2S	$T_{1/2}$ or	Ref.
[keV]		(d,p)	(d,p)	(d,p)	$\mu\text{b/sr}$	$\mu\text{b/sr}$		(p,d)	(p,d)	(d,t)	(d,t)	(d,t)	Γ_{cm}	
0.0	5 ⁺	2	0.97	1.24	1600	1110	2	1.78	2.0	1.85	2	2.05	Stable	83Ao01
280.51(22)	3 ⁺	2	0.07		80		2	0.44					67(14) ps	75An06
306.25(3)	7 ⁺		4.21	5.22		200	4	2.52		5.46	4	4.54	>69 ps	75An06
319.22(2)	5 ⁺	<2>	0.10		340	240	2	0.36			2	0.56	39(2) ps	75An06
344.51(2)	1 ⁺	0			3240	530	0	0.31		0.70			0.88(5) ns	75An06
442.38(4)	<7> ⁺					40							3.71(9) ps	63Cu02
447	3 ⁺ , 5 ⁺					incl	<2>	0.04		0.07				75An06
489.14(4)	11 ⁻	5			370	100	5	0.85		1.63			36.1(4) μs	75An06
≈ 535										0.11				
560.75(3)	3 ⁺	2			300								1.9(5) ps	63Cu02
644.53(4)	7 ⁻									0.70			126(2) ps	

(continued)

**¹⁰⁵Pd
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E^*	$2J^\pi$	L	$(2J+1)S$	$(2J+1)S$	σ (d,p)	σ (d,t)	L	C^2S'	S_N	C^2S'	L	C^2S	$T_{1/2}$ or	Ref.
[keV]		(d,p)	(d,p)	(d,p)	$\mu\text{b/sr}$	$\mu\text{b/sr}$		(p,d)	(p,d)	(d,t)	(d,t)	(d,t)	Γ_{cm}	
650.70(3)	$\langle 3 \rangle^+$	2			2270	330	2	0.61						75An06
673.17(3)	1^+						0	0.05		0.15			>2 ps	75An06
696.66(15)	$\langle 7^+ \rangle$	$\langle 4 \rangle$				190								63Cu02
727.22(4)	$\langle 5 \rangle^+$	2			170	150	2	0.47		0.52	2			75An06
781.94(4)	9^+						4	0.54		0.14			1.5(3) ps	75An06
787(8)	$\langle 1^+ \rangle$	0			80	50								63Cu02
≈ 808										0.05	2			
901.98(12)	$5^+ - 9^+$													
921.00(9)														
929.13(8)	5^+						2	0.14		0.15	2			75An06
939(8)	$\langle 1^+ \rangle$	$\langle 0 \rangle$			250	130								63Cu02
961.4(4)														
962.38(4)	$\langle 1,3 \rangle^+$	2			1020	140	0	0.09		0.34	2			75An06
970.15(7)	$\langle 15 \rangle^-$													
≈ 972														
1011.55(21)	$\langle 7^- - 11^+ \rangle$													
1011.71(6)	$\langle 11 \rangle^+$													
1072.2(5)	$\langle 5,7,9^+ \rangle$													
1074.4(4)														
1075(8)	$\langle 1^+ \rangle$	0			160	40								63Cu02
1087.96(4)	3^-									0.08	1			
1098.42(20)	$\langle 5-9 \rangle^+$													
1102.1(4)	$3^+, 5^+$	2			170	30								63Cu02
1125.33(11)														
1140.81(14)	$\langle 1^+ \rangle$	0			70	40								63Cu02
1142.35(14)														
1177.7(3)														
1201.6(4)	$3^+, 5^+$	2			60	30								63Cu02
1259.11(20)														
1263(8)	$\langle 1^+ \rangle$	0			90	20								63Cu02
1271.44(7)	$\langle 11 \rangle^+$													
1324.30(17)	$\langle 11^+ \rangle$													
1405.1(3)					370	40						[0.9]		63Cu02
1411.03(16)	$\langle 13^+ \rangle$													
1520.5(8)	$3^+, 5^+$	2			150									63Cu02
1601.3(5)	$3^+, 5^+$	2			190									63Cu02
1650.4(16)					140									63Cu02
1671.19(10)	$\langle 13 \rangle^+$													
1700.6(8)					150									63Cu02
1741.98(9)	$\langle 19 \rangle^-$													
1749.68(19)	$\langle 13 \rangle^+$													
1763.30(13)	$\langle 15 \rangle^-$													
1774.6(5)					310									63Cu02
1854.21(19)	$\langle 13^+ \rangle$													
1865.5(4)	$3^+, 5^+$	2			130									63Cu02

(continued)

¹⁰⁵Pd
₄₆

E^*	$2J^\pi$	L	$(2J+1)S$	$(2J+1)S$	σ (d,p)	σ (d,t)	L	C^2S'	S_N	C^2S'	L	C^2S	$T_{1/2}$ or Γ_{cm}	Ref.
[keV]		(d,p)	(d,p)	(d,p)	$\mu\text{b/sr}$	$\mu\text{b/sr}$		(p,d)	(p,d)	(d,t)	(d,t)	(d,t)		
1874.02(17)	$\langle 15^+ \rangle$													
1902.02(15)	$\langle 15 \rangle^+$													
1922.9(3)	1^+	0			270									63Cu02
1961.53(8)	$\langle 17 \rangle^-$													
1988.4(4)	$\langle 3,5 \rangle^+$	2			610									63Cu02
2064.5(7)	$\langle 3,5 \rangle^+$	2			150									63Cu02
2101.4(7)					140									63Cu02
2197.19(19)	$\langle 15 \rangle^+$													
2280.76(21)	$\langle 17 \rangle^-$													
2344.73(15)	$\langle 19 \rangle^-$													
≈ 2420														
2491.1(3)	$\langle 19^- \rangle$													
2552.15(14)	$\langle 17 \rangle^+$													
2565.07(12)	$\langle 17 \rangle^+$													
2613(8)					180									63Cu02
2700.40(13)	$\langle 23 \rangle^-$													
2704.08(18)	$\langle 19^- \rangle$													
2756.04(16)	$\langle 19 \rangle^+$													
2775.75(12)	$\langle 21^- \rangle$													
2806.70(14)	$\langle 19 \rangle^+$													
2900.92(13)	$\langle 21^- \rangle$													
3072.99(15)	$\langle 21 \rangle^+$													
3119.36(16)	$\langle 21 \rangle^+$													
3153.46(18)	$\langle 23 \rangle^-$													
3294.89(14)	$\langle 23 \rangle^+$													
≈ 3320														
3468.74(22)	$\langle 23 \rangle^+$													
3527.80(17)	$\langle 25 \rangle^+$													
≈ 3570														
≈ 3690														
3694.54(20)	$\langle 25^- \rangle$													
3800.65(16)	$\langle 27^- \rangle$													
3873.16(20)	$\langle 27 \rangle^+$													
≈ 4000														
≈ 4110														
4254.6(3)	$\langle 29 \rangle^+$													
≈ 4510														
4668.4(4)	$\langle 31^+ \rangle$													
≈ 4690														
≈ 4840														
4953.3(3)	$\langle 31^- \rangle$													
5255.5(4)	33^+													
5683	$\langle 35^+ \rangle$													
6073	$\langle 35^- \rangle$													05De52
6861	$\langle 39^+ \rangle$													05De52

(continued)

¹⁰⁵Pd₄₆

E^*	$2J^\pi$	L	$(2J+1)S$	$(2J+1)S$	σ (d,p)	σ (d,t)	L	C^2S'	S_N	C^2S'	L	C^2S	$T_{1/2}$ or	Ref.
[keV]		(d,p)	(d,p)	(d,p)	$\mu\text{b/sr}$	$\mu\text{b/sr}$		(p,d)	(p,d)	(d,t)	(d,t)	(d,t)	Γ_{cm}	
7193	$\langle 39^- \rangle$													05De52
8128	$\langle 43^+ \rangle$													05De52
8410	$\langle 43^- \rangle$													05De52
9441	$\langle 47^+ \rangle$													05De52
10876	$\langle 51^+ \rangle$													05De52
		63Cu02		96Me17	63Cu02		75An06					80Sc23		Ref.
			96Me17			63Cu02		83Ao01	75An06					Ref.

Additional data on this isotope can be found in [96Me17].

Abundance: 22.33(8) %.

5 bands are assigned to excited states of this nucleus in [05De52].

The first two columns contain theoretical and experimental spectroscopic factor for (d,p) reaction as given in the review [96Me17].

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

Energy levels and branching ratios [93De15, 05De52]. Part 2

¹⁰⁵Pd₄₆

E^*	$2J^\pi$	Branching ratios in percentage											
		E_f^* :	0.0	280	306	319	344	442	489	561	644.5	650.7	
[keV]		$2J_f^\pi$:	5^+	3^+	7^+	5^+	1^+	$\langle 7 \rangle^+$	11^-	3^+	7^-	$\langle 3 \rangle^+$	
280.51(22)	3^+		100										
306.25(3)	7^+		100										
319.22(2)	5^+		99.9	0.12(1)									
344.51(2)	1^+		80(1)	20(2)									
442.38(4)	$\langle 7 \rangle^+$		100										
489.14(4)	11^-				100								
560.75(3)	3^+		96(6)				3.8(6)						
644.53(4)	7^-		95(5)			1.4(4)		0.11(5)	3.8(3)				
650.70(3)	$\langle 3 \rangle^+$		34.4(2)	9.9(6)		56(3)				0.19(4)			
673.17(3)	1^+		33(2)	62(3)			5(2)			0.71(10)			
696.66(15)	$\langle 7^+ \rangle$		40(14)	15(6)				37(11)		9(3)			
727.22(4)	$\langle 5 \rangle^+$		25(2)	25(12)	21(2)	8(1)	0.9(4)	19(10)					
781.94(4)	9^+		57(2)					43(2)					
901.98(12)	$5^+ - 9^+$				60(4)	39(4)		0.7(1)					
921.00(9)			61(13)				39(9)						
929.13(8)	5^+		52(12)	13(9)		13(1)		22(6)					
961.4(4)			15(3)	12(3)						73(5)			
962.38(4)	$\langle 1,3 \rangle^+$		7.4(6)	2.7(4)			68(3)			10.3(8)		3.6(4)	
970.15(7)	$\langle 15 \rangle^-$								100				
1011.55(21)	$\langle 7^- - 11^+ \rangle$				76(5)				24(5)				
1011.71(6)	$\langle 11 \rangle^+$				96(3)								
1072.2(5)	$\langle 5,7,9^+ \rangle$		66(20)					34(15)					
1074.4(4)				71(14)	29(14)								

(continued)

 $^{105}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	0.0 5^+	280 3^+	306 7^+	319 5^+	344 1^+	442 $\langle 7 \rangle^+$	489 11^-	561 3^+	644.5 7^-	650.7 $\langle 3 \rangle^+$
1087.96(4)	3^-		22(1)	6.7(4)			3.3(2)			0.58(6)	61(3)	1.5(2)
1098.42(20)	$\langle 5-9 \rangle^+$		90(20)					10(4)				
1102.1(4)	$3^+, 5^+$			100								
1125.33(11)			21(5)	68(8)						10(9)		
1140.81(14)	$\langle 1^+ \rangle$			21(9)			21(9)			59(24)		
1142.35(14)			36(3)							59(3)		5(2)
1177.7(3)			100									
1201.6(4)	$3^+, 5^+$			32(4)						68(4)		
1259.11(20)			36(3)	21(3)	43(3)							
1271.44(7)	$\langle 11 \rangle^+$							51(3)				
1324.30(17)	$\langle 11^+ \rangle$								45(23)			
1405.1(3)			9(2)		72(4)							
1520.5(8)	$3^+, 5^+$			38(9)				62(13)				
1601.3(5)	$3^+, 5^+$		12(6)									
1650.4(16)								52(14)	48(12)			
1700.6(8)						35(19)						
1763.30(13)	$\langle 15 \rangle^-$								29(4)			
1774.6(5)						100						
1865.5(4)	$3^+, 5^+$			100								
2064.5(7)	$\langle 3, 5 \rangle^+$			21(10)		79(16)						

Energy levels and branching ratios [93De15, 05De52]. Part 3

 $^{105}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	673.2 1^+	727.2 $\langle 5 \rangle^+$	781.9 9^+	902.0	921.0	929.1 5^+	961.4	970.1 $\langle 15 \rangle^-$	1011.5	1011.7 $\langle 11 \rangle^+$
962.38(4)	$\langle 1, 3 \rangle^+$		8(3)									
1011.71(6)	$\langle 11 \rangle^+$				3.9(7)							
1087.96(4)	3^-		1.66(15)	2.9(2)			0.09(5)	0.13(3)				
1271.44(7)	$\langle 11 \rangle^+$				36(3)						14(5)	
1324.30(17)	$\langle 11^+ \rangle$											55(16)
1411.03(16)	$\langle 13^+ \rangle$				26(8)						53(16)	
1671.19(10)	$\langle 13 \rangle^+$				74(5)							
1700.6(8)				65(16)								
1741.98(9)	$\langle 19 \rangle^-$									100		
1749.68(19)	$\langle 13 \rangle^+$					100						
1763.30(13)	$\langle 15 \rangle^-$									71(8)		
1854.21(19)	$\langle 13^+ \rangle$										32(10)	
1874.02(17)	$\langle 15^+ \rangle$										17(5)	
1902.02(15)	$\langle 15 \rangle^+$											100
1961.53(8)	$\langle 17 \rangle^-$									100		
1988.4(4)	$\langle 3, 5 \rangle^+$								38(6)			

(continued)

 $^{105}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		E^*_f : $2J^\pi_f$:	673.2 1^+	727.2 $\langle 5 \rangle^+$	781.9 9^+	902.0	921.0	929.1 5^+	961.4	970.1 $\langle 15 \rangle^-$	1011.5	1011.7 $\langle 11 \rangle^+$
2280.76(21)	$\langle 17 \rangle^-$									100		
2491.1(3)	$\langle 19^- \rangle$									58(11)		
2552.15(14)	$\langle 17 \rangle^+$									15(5)		

Energy levels and branching ratios [93De15, 05De52]. Part 4

 $^{105}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		E^*_f : $2J^\pi_f$:	0+X $\langle 43^+ \rangle$	1098.4	1142.3	1271.4 $\langle 11 \rangle^+$	1324.3 $\langle 11^+ \rangle$	1411.0 $\langle 13^+ \rangle$	1671.2 $\langle 13 \rangle^+$	1742.0 $\langle 19 \rangle^-$	1749.7 $\langle 13 \rangle^+$	1763.3 $\langle 15 \rangle^-$
1405.1(3)					18(4)							
1411.03(16)	$\langle 13^+ \rangle$					21(8)						
1601.3(5)	$3^+, 5^+$				88(9)							
1671.19(10)	$\langle 13 \rangle^+$					26.0(16)						
1854.21(19)	$\langle 13^+ \rangle$					45(14)	23(8)					
1874.02(17)	$\langle 15^+ \rangle$					69(8)	5(3)	9(3)				
1988.4(4)	$\langle 3, 5 \rangle^+$			62(7)								
2197.19(19)	$\langle 15 \rangle^+$					100						
2344.73(15)	$\langle 19 \rangle^-$									72(6)		28(6)
2491.1(3)	$\langle 19^- \rangle$									42(7)		
2552.15(14)	$\langle 17 \rangle^+$								67(8)			
2565.07(12)	$\langle 17 \rangle^+$								66(3)		26(3)	
2700.40(13)	$\langle 23 \rangle^-$									100		
2704.08(18)	$\langle 19^- \rangle$									100		
2756.04(16)	$\langle 19 \rangle^+$									15(3)		
2775.75(12)	$\langle 21^- \rangle$									67(5)		
2900.92(13)	$\langle 21^- \rangle$									68(5)		
3072.99(15)	$\langle 21 \rangle^+$									31(4)		
3119.36(16)	$\langle 21 \rangle^+$									28(7)		

Energy levels and branching ratios [93De15, 05De52]. Part 5

 $^{105}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		E^*_f : $2J^\pi_f$:	1902.0 $\langle 15 \rangle^+$	1961.5 $\langle 17 \rangle^-$	2197.2 $\langle 15 \rangle^+$	1209+X $\langle 47^+ \rangle$	2344.73 $\langle 19 \rangle^-$	2552.1 $\langle 17 \rangle^+$	2565.1 $\langle 17 \rangle^+$	2700.4 $\langle 23 \rangle^-$	2756.0 $\langle 19 \rangle^+$	2775.7 $\langle 21^- \rangle$
2552.15(14)	$\langle 17 \rangle^+$		17(5)									
2565.07(12)	$\langle 17 \rangle^+$				8.2(16)							
2756.04(16)	$\langle 19 \rangle^+$		85(3)									
2775.75(12)	$\langle 21^- \rangle$			33(7)								
2806.70(14)	$\langle 19 \rangle^+$		20(3)					75.5(17)	4.9(17)			

(continued)

 $^{105}_{46}\text{Pd}$

E^*	$2J^\pi$	Branching ratios in percentage										
[keV]		E_f^* : $2J_f^\pi$:	1902.0 $\langle 15 \rangle^+$	1961.5 $\langle 17 \rangle^-$	2197.2 $\langle 15 \rangle^+$	1209+X $\langle 47^+ \rangle$	2344.73 $\langle 19 \rangle^-$	2552.1 $\langle 17 \rangle^+$	2565.1 $\langle 17 \rangle^+$	2700.4 $\langle 23 \rangle^-$	2756.0 $\langle 19 \rangle^+$	2775.7 $\langle 21 \rangle^-$
2900.92(13)	$\langle 21^- \rangle$			32(9)								
3072.99(15)	$\langle 21 \rangle^+$								64(5)	5.1(13)		
3153.46(18)	$\langle 23 \rangle^-$						63(8)			37(4)		
3294.89(14)	$\langle 23 \rangle^+$										100	
3694.54(20)	$\langle 25^- \rangle$									47(9)		53(9)
3800.65(16)	$\langle 27^- \rangle$									100		

Energy levels and branching ratios [93De15, 05De52]. Part 6

 $^{105}_{46}\text{Pd}$

E^*	$2J^\pi$	Branching ratios in percentage										
[keV]		E_f^* : $2J_f^\pi$:	2806.7 $\langle 19 \rangle^+$	3073.0 $\langle 21 \rangle^+$	3119.4 $\langle 21 \rangle^+$	3294.9 $\langle 23 \rangle^+$	2491+X $\langle 51^+ \rangle$	3527.8 $\langle 25 \rangle^+$	3800.6 $\langle 27^- \rangle$	3873.2 $\langle 27 \rangle^+$	4254.6 $\langle 29 \rangle^+$	4668.4 $\langle 31^+ \rangle$
3119.36(16)	$\langle 21 \rangle^+$		72(4)									
3468.74(22)	$\langle 23 \rangle^+$				100							
3527.80(17)	$\langle 25 \rangle^+$			95(4)		5.0(12)						
3873.16(20)	$\langle 27 \rangle^+$					100						
4254.6(3)	$\langle 29 \rangle^+$							100				
4668.4(4)	$\langle 31^+ \rangle$									100		
4953.3(3)	$\langle 31^- \rangle$								100			
5255.5(4)	33^+										100	
5683	$\langle 35^+ \rangle$											100

Energy levels and branching ratios [94De15].

 $^{106}_{46}\text{Pd}$

E^*	J^π	L	$(2J+1)S$	L	σ (p,t)	L	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(d,p)	(p,t)	$\mu\text{b/sr}$	(p, α)	Γ_{cm}		E_{f}^* : J_{f}^π :	0.0 0^+	511.8 2^+	1128 2^+	1134 0^+	1229 4^+
0.0	0^+	2	0.33	0	557	1	Stable	69Di14						
511.851(23)	2^+	2	0.12	2	78	1	12.1(3) ps	69Di14	100					
1128.01(3)	2^+	2	0.15		7.2		3.12(25) ps	69Di14	35.2(5)	65(2)				
1133.77(4)	0^+	0	0.03		27	1	6.8(15) ps	69Di14	x					
1229.25(4)	4^+	$\langle 2 \rangle$	0.03	4	12.3	$\langle 3 \rangle$	1.34(18) ps	77Kr02			100			
1557.65(4)	3^+										67(3)	30(1)		2.6
1562.25(4)	2^+	2	0.21	2	7.7	1		77Kr02	9.0(1)	86(2)	1.1(1)	3.9(1)		
1706.39(5)	0^+			0	6.4	1		77Kr02		87(1)	13.1(10)			
1904.31(10)	$2^-, 3^-$			$\langle 3 \rangle$	4.6			77Kr02			[100]			
1909.45(9)	2^+	$\langle 0 \rangle$	0.01		incl	$\langle 3 \rangle$		69Di14	25(3)	73(1)	2.0(7)			
1932.28(6)	4^+	2	0.05		19.1			69Di14		0.2(1)	72(3)			26(1)
2001.49(5)	0^+			0	7.9			77Kr02	x	0.7(1)	97(1)			

(continued)

¹⁰⁶Pd
46

E^* [keV]	J^π	L	$(2J+1)S$ (d,p)	L (p,t)	σ (p,t) $\mu\text{b/sr}$	L (p, α)	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage				
									E_f^* : 0.0 J_f^π : 0 ⁺	511.8 2 ⁺	1128 2 ⁺	1134 0 ⁺	1229 4 ⁺
2076.29(6)	6 ⁺			$\langle 4 \rangle$	83			77Kr02					100
2076.63(4)	4 ⁺	2	0.03		incl			69Di14		5.0(6)	10(2)		85(28)
2083.86(5)	3 ⁻	5	0.03	3	incl		1.2(3) ps	77Kr02	0.32(6)	92(7)	6.6(11)		
2242.49(4)	2 ⁺	0	0.17	2	5.4			77Kr02	5.2(2)	5.9(4)	33(2)	16(1)	
2278.11(9)	0 ⁺									72(1)	6.4(4)		
2282.94(5)	4 ⁺			4	29			77Kr02		4.0(7)			96(14)
2305.56(5)	4 ⁻				4.1		2.0(5) ns	77Kr02		0.13(5)	0.7(1)		0.18(6)
2308.81(5)	2 ⁺	2	0.10		incl			69Di14	≤ 5.8	64(1)	34(1)		
2350.81(5)	4 ⁺			4	4.6			77Kr02		13(2)	44(2)		3.6(4)
2365.96(5)	5 ⁺												5.3(6)
2397.5(3)	$\langle 5 \rangle^-$	5	0.05	$\langle 5 \rangle$	9.0			77Kr02					100
2401.4(2)	2 ⁻ , 3 ⁻									34(8)	66(8)		
2439.10(7)	2 ⁺	2	0.04	2	6.1			77Kr02	21(1)	71(2)		6.1(6)	2.0(5)
2472.7(3)	1 ⁺ , 2 ⁺	2	0.20					69Di14		55(9)			
2484.66(20)	$\langle 1^- \rangle$								83(6)	17(9)			
2495(1)	1 ⁻												
2500(4)	2 ⁺	0+2	0.04	2	90			77Kr02					
2500.31(8)	2 ⁻									91(1)	7.2(6)		
2578.42(24)	$\langle 4^- \rangle$				5.1			77Kr02					67(7)
2580(5)	5 ⁻												
2591.2(4)	$\langle 2, 3 \rangle^+$												
2624.40(5)	0 ⁺									39(2)	25(1)		
2626.87(9)	$\langle 2, 3 \rangle^+$	2	0.12					69Di14		[80]			
2648.9(6)	4 ⁺	2	0.05	4	35			77Kr02					
2699.36(16)	$\langle 6 \rangle^-$						0.5(1) ns						
2705.30(8)	$\langle 1 \rangle^+$								28(1)	55(3)	12(2)	2.1(2)	
2712(5)	$\langle 4^+ \rangle$	0	0.12					69Di14					
2713.6(20)	2 ⁺ , 3 ⁺	2	0.33					69Di14		17(3)			28(4)
2717.56(21)													
2741.0(5)	$\langle 1, 2^+ \rangle$	2	0.10		47			69Di14	66(19)	34(9)			
2746(5)	4 ⁺				incl								
2748.2(4)	2, 3 ⁻									100			
2757.00(4)	5 ⁺	2+4	0.1+0.05				<3.6 ns	69Di14					18(5)
2774.9(3)	$\langle 4^+ \rangle$	2+0	0.3+0.1		26			69Di14		24(4)			14(2)
2783.78(21)	2 ⁺				incl					90(14)	7(1)		3.3(9)
2793.2(3)	$\langle 7^- \rangle$												
2820.97(9)	2 ⁺	0	0.09					69Di14	17(1)	59(2)	9(2)	8(2)	
2828.29(9)	0 ⁺				4.6			77Kr02		86(1)			
2847(5)	$\langle 4^+ \rangle$	2	0.08					69Di14					
2850.4(5)	2 ⁺ , 3 ⁺	0	0.04					69Di14					100
2861.0(4)	X ⁽⁺⁾												34(8)
2877.92(7)	0 ⁺	2	0.11					69Di14		87(1)			
2879(5)	$\langle 1^- \rangle$												
2886.5(7)	X ⁽⁻⁾									100			
2897.8(8)	$\langle 1^-, 4^- \rangle$												100

(continued)

¹⁰⁶Pd
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E^*	J^π	L	$(2J+1)S$	L	σ (p,t)	L	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]			(d,p)	(p,t)	$\mu\text{b/sr}$	(p, α)	Γ_{cm}		E_f^* : 0.0	511.8	1128	1134	1229
									J_f^π : 0 ⁺	2 ⁺	2 ⁺	0 ⁺	4 ⁺
2902.48(10)	2 ⁺	0	0.15					69Di14	0.8(3)	83(2)	16(2)		
2908.7(7)	$\langle 1^- \rangle$									100			
2917.86(8)	2 ⁺	2+0	0.1+0.06		27			69Di14	4.9(2)	78(2)		2.3(6)	
2930(5)	4 ⁺												
2936.0(6)	$\langle 2^-, 3^- \rangle$									100			
2951.78(6)	5 ⁺	4+2	0.04+0.04				<2.0 ns	69Di14					15(3)
2962.5(6)	8 ⁺												
2968.68(20)	3 ⁻				21			77Kr02		100			
2977.4(20)	X ⁺	4+2	0.04+0.05		incl			69Di14					
2977.63(21)	$\langle 7^- \rangle$												
2998.72(16)	$\langle 8^- \rangle$				incl		<0.2 ns						
3026(3)	X ⁺	2	0.37					69Di14					
3037.32(17)	1,2								38(2)	8(2)	54(4)		
3042.7(25)	4 ⁺	2	0.27					69Di14					
3054.96(9)	1 ⁺	0	incl					69Di14	3(1)	30(1)			
3069(5)	2 ⁺												
3069.9(6)	$\langle 2, 3 \rangle^-$									100			
3083.52(14)	0									89(4)	11(3)		
3097(3)	$\langle 2 \rangle^+$	2	0.17					69Di14					
3120.0(10)	2 ⁺ , 3 ⁺	0	0.21					69Di14		100			
3123(5)	$\langle 6^+ \rangle$	2	0.36					69Di14					
3144(3)	2 ⁺ , 3 ⁺	0	0.24					69Di14					
3161.1(5)	2 ⁺									81(15)			
3166.2(10)	$\langle 1, 2^+ \rangle$	0	0.12					69Di14	x	x			
3173.8(6)	$\langle 2^+, 3^+ \rangle$	2	0.16					69Di14			52(12)		
3176.68(20)	$\langle 8^- \rangle$												
3217(5)	3 ⁻												
3221.37(25)	0 ⁺			$\langle 0 \rangle$	13			77Kr02		91(25)	9(2)		
3249.9(5)	2 ⁺								100				
3252.0(4)	2 ⁺			$\langle 2 \rangle$	21			77Kr02		100			
3273.5(7)	1,2								100				
3275(5)	3 ⁻												
3289.60(16)	$\langle 9^- \rangle$						0.2(1) ns						
3299.2(7)										100			
3320.5(3)	0 ⁺									74(4)		26(7)	
3321(5)	5 ⁻												
3359(5)	$\langle 5^-, 6^+ \rangle$												
3397(5)	4 ⁺												
3414(5)	3 ⁻												
3449(5)	2 ⁺												
3461.78(20)	9 $\langle^- \rangle$						0.25(10) ns						
3490(5)	2 ⁺												
3532(5)	$\langle 5^- \rangle$												
3532.96(16)	10 ⁺												
3575(5)	5 ⁻												

(continued)

¹⁰⁶Pd
46

E^*	J^π	L	$(2J+1)S$	L	σ (p,t)	L	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(d,p)	(p,t)	$\mu\text{b/sr}$	(p, α)	Γ_{cm}		E_{f}^* :	0.0	511.8	1128	1134	1229
									J_{f}^π :	0 ⁺	2 ⁺	2 ⁺	0 ⁺	4 ⁺
3607(5)	$\langle 3^- \rangle$													
3647(5)	2 ⁺													
3654.11(20)	10 \langle^-													
3708(5)	$\langle 5^- \rangle$													
3761(5)	3 ⁻													
3805(5)	$\langle 3^- \rangle$													
3825(5)	3 ⁻													
3874.72(12)	$\langle 10^- \rangle$													
3879(5)	3 ⁻													
3903(5)	3 ⁻													
3938(5)	2 ⁺													
3948.6(4)	$\langle 10^+ \rangle$													
3998(5)	4 ⁺													
4021.68(18)	11 \langle^-													
4042(5)	4 ⁺													
4054(5)	2 ⁺													
4088.18(23)	12 ⁺													
4106(5)	4 ⁺													
4134(5)	3 ⁻													
4156(5)	3 ⁻													
4193(5)														
4224(5)	4 ⁺													
4259.7(3)	$\langle 11^- \rangle$													
4640.2(4)	$\langle 12^- \rangle$													
4721.29(23)	12 \langle^+													
4752.2(4)	$\langle 12^- \rangle$													
4893.3(3)	14 ⁺													
4990.1(4)	$\langle 13^- \rangle$													
5106.1(5)	$\langle 12^+ \rangle$													
5403.5(3)	$\langle 14^+ \rangle$													
5894.5(5)	$\langle 16^+ \rangle$													
		69Di14	77Kr02	77Kr02	69Di14			Ref.						

Additional data on this isotope can be found in [00Jo11, 95Sv01, 92Pi08, 90Pi14, 87Fo20].

Abundance: 27.33(3) %.

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

Energy levels and branching ratios [94De15]. Part 2

¹⁰⁶Pd
46

E^* [keV]	J^π	Branching ratios in percentage										
		E_f^* : J_f^π :	1558 3 ⁺	1562 2 ⁺	1706 0 ⁺	1932.28 4 ⁺	2001.5 0 ⁺	2076.3 6 ⁺	2076.6 4 ⁺	2083.9 3 ⁻	2242.5 2 ⁺	2282.9 4 ⁺
1932.28(6)	4 ⁺		1.5(2)									
2001.49(5)	0 ⁺			2.8(5)								
2083.86(5)	3 ⁻			1.2(3)								
2242.49(4)	2 ⁺		14(1)	26(5)								
2278.11(9)	0 ⁺			21(1)								
2305.56(5)	4 ⁻		70(2)						7.1(3)	22.4(8)		
2308.81(5)	2 ⁺		2.5(5)									
2350.81(5)	4 ⁺		37(2)			2.3(4)						
2365.96(5)	5 ⁺		93(5)			2.0(8)						
2472.7(3)	1 ⁺ , 2 ⁺				45(4)		x					
2500.31(8)	2 ⁻		2.0(5)									
2578.42(24)	⟨4 ⁻ ⟩		33(5)									
2591.2(4)	⟨2,3⟩ ⁺					100						
2624.40(5)	0 ⁺			36.1(5)								
2626.87(9)	⟨2,3⟩ ⁺			[20]								
2648.9(6)	4 ⁺			100								
2705.30(8)	⟨1⟩ ⁺						3(2)					
2713.6(20)	2 ⁺ , 3 ⁺		56(7)									
2717.56(21)			100									
2757.00(4)	5 ⁺		12(1)			17.0(4)			1.70(9)			1.03(6)
2774.9(3)	⟨4 ⁺ ⟩		38(6)								24(3)	
2793.2(3)	⟨7 ⁻ ⟩							45(3)				
2820.97(9)	2 ⁺			8(1)								
2828.29(9)	0 ⁺			14(1)								
2861.0(4)	X ⁽⁺⁾		66(18)									
2877.92(7)	0 ⁺			13(1)								
2917.86(8)	2 ⁺		11.9(3)	3(1)								
2951.78(6)	5 ⁺		19(2)			13(1)			4.2(5)			
2962.5(6)	8 ⁺								100			
2977.63(21)	⟨7 ⁻ ⟩								100			
3054.96(9)	1 ⁺		67(4)									
3161.1(5)	2 ⁺		19(10)									
3173.8(6)	⟨2 ⁺ , 3 ⁺ ⟩		48(15)									

Energy levels and branching ratios [94De15]. Part 3

¹⁰⁶Pd
46

E^* [keV]	J^π	Branching ratios in percentage										
		E_f^* : J_f^π :	2305.6 4 ⁻	2350.8 4 ⁺	2366.0 5 ⁺	2397.5 ⟨5⟩ ⁻	2578.4 ⟨4 ⁻ ⟩	2699.4 ⟨6⟩ ⁻	2757 5 ⁺	2793.2 ⟨7 ⁻ ⟩	2963 8 ⁺	2977.6 ⟨7 ⁻ ⟩
2699.36(16)	⟨6⟩ ⁻		12(2)			88(3)						
2757.00(4)	5 ⁺		31.0(7)	14.8(3)	4.1(2)		0.06(2)					
2793.2(3)	⟨7 ⁻ ⟩					55(1)						

(continued)

 ^{106}Pd

E^*	J^π	Branching ratios in percentage									
[keV]	$E_f^*:$ $J_f^\pi:$	2305.6 4 ⁻	2350.8 4 ⁺	2366.0 5 ⁺	2397.5 ⟨5 ⁻ ⟩	2578.4 ⟨4 ⁻ ⟩	2699.4 ⟨6 ⁻ ⟩	2757 5 ⁺	2793.2 ⟨7 ⁻ ⟩	2963 8 ⁺	2977.6 ⟨7 ⁻ ⟩
2951.78(6)	5 ⁺	18(1)	20(1)	5.7(5)				4.0(4)			
2998.72(16)	⟨8 ⁻ ⟩						49(5)		51(3)		
3176.68(20)	⟨8 ⁻ ⟩						30(6)		48(6)		22(4)
3289.60(16)	⟨9 ⁻ ⟩								61(3)		
3461.78(20)	9 ^{⟨-⟩}								43(6)		18(4)
3532.96(16)	10 ⁺									100	
3948.6(4)	⟨10 ⁺ ⟩									100	

Energy levels and branching ratios [94De15]. Part 4

 ^{106}Pd

E^* [keV]	J^π	Branching ratios in percentage											
		$E_f^*:$ $J_f^\pi:$	2998.7 $\langle 8 \rangle^-$	3176.7 $\langle 8 \rangle^-$	3289.6 $\langle 9 \rangle^-$	3461.8 9 $\langle - \rangle$	3533.0 10 ⁺	3654.1 10 $\langle - \rangle$	3874.7 $\langle 10 \rangle^-$	4021.7 11 $\langle - \rangle$	4088.2 12 ⁺	4721.3 12 $\langle + \rangle$	4893.3 14 ⁺
3289.60(16)	$\langle 9 \rangle^-$		39(1)										
3461.78(20)	9 $\langle - \rangle$		28(4)	12(4)									
3654.11(20)	10 $\langle - \rangle$		100										
3874.72(12)	$\langle 10 \rangle^-$		25(15)	57(5)		17(5)							
4021.68(18)	11 $\langle - \rangle$				93(6)			7(2)					
4088.18(23)	12 ⁺					100							
4259.7(3)	$\langle 11 \rangle^-$					100							
4640.2(4)	$\langle 12 \rangle^-$							100					
4721.29(23)	12 $\langle + \rangle$					50(8)					50(12)		
4752.2(4)	$\langle 12 \rangle^-$								100				
4893.3(3)	14 ⁺										100		
4990.1(4)	$\langle 13 \rangle^-$									100			
5106.1(5)	$\langle 12 \rangle^+$										100		
5403.5(3)	$\langle 14 \rangle^+$										43(7)	57(7)	
5894.5(5)	$\langle 16 \rangle^+$												100

Energy levels and branching ratios [00Bl05].

 ^{107}Pd

E^*	$2J^\pi$	L	S_N	σ (d,p)	L	S_N	σ (d,t)	S_{dt}/S_{dp}	σ (d,p)	σ (d,t)	C^2S	S_N	S_N	$T_{1/2}$ or	Ref.
[keV]			(d,p)	$\mu\text{b/sr}$		(d,t)	$\mu\text{b/sr}$		$\mu\text{b/sr}$	$\mu\text{b/sr}$	(d,t)	(p,d)	(p,d)	Γ_{cm}	
0.0	5 ⁺	2	0.21	1500	2	1.388	3425	6.61	1590	990	1.62	1.85	1.388	6.5(3)·10 ⁶ yr	67Co24
115.74(12)	1 ⁺	0	0.39	3480	0	0.37	1900	0.95	3340	530	0.20	0.35	0.370	0.85(10) μs	67Co24
214.6(3)	11 ⁻	5	2.9	320	5	1.67	205	5.8	440	90	2.70	1.47	1.67	21.3(5) s	67Co24
302.78(15)	5 ⁺	2	0.10	75	2	0.157	340	16							67Co24
312.20(10)	7 ⁺	4	0.26	225	$\langle 4 \rangle$	2.78	360	11	100	200	3.75				67Co24

(continued)

¹⁰⁷Pd
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E^*	$2J^\pi$	L	S_N	σ (d,p)	L	S_N	σ (d,t)	S_{dt}/S_{dp}	σ (d,p)	σ (d,t)	C^2S	S_N	S_N	$T_{1/2}$ or Γ_{cm}	Ref.
[keV]			(d,p)	$\mu\text{b/sr}$		(d,t)	$\mu\text{b/sr}$		$\mu\text{b/sr}$	$\mu\text{b/sr}$	(d,t)	(p,d)	(p,d)		
348.18(13)															
366.8(5)	7 ⁺	4	0.45	380	$\langle 4 \rangle$	1.82	234	4.1		230					67Co24
381.80(13)	3 ⁺	2	0.29	1300	2	0.569	922	1.9	2500	230					67Co24
392.42(13)	7 ⁺														
412(7)	1 ⁺	0	0.04	370	0	0.148	680	3.6							67Co24
471.21(24)	$\langle 3 \rangle^+$	2	0.14	660	2	0.387	600	2.8	900	120					67Co24
567.67(14)	5 ⁺	2	0.06	500	2	0.323	620	3.8	540	250					67Co24
670.06(10)	5 ⁺	2			2	0.438	795	36		270					70Di05
685			0.01	≈ 40											67Co24
686.79(24)	15 ⁻														
696.0(5)	1 ⁺	0	0.06	540	0	0.066	268	1.1	740	90					67Co24
696.33(9)	9 ⁺														
759(7)	$\langle 3^+ \rangle$	2	0.04	190	2	0.02	27	0.5	360						67Co24
781(7)	1 ⁻ , 3 ⁻	1	0.01	225	1	0.038	116								67Co24
809(7)	$\langle 5^+ \rangle$		0.02	78	2	0.148	250	12		100					67Co24
889(7)	1 ⁺	0	0.02	170	0	0.044	162		190	60					67Co24
954.85(17)	11 ⁺								140	20					
1023(7)	3 ⁺ , 5 ⁺	2	0.02	120	2	0.091	103	3.8	170	50					67Co24
1063.3(6)	$\langle 13^- \rangle$														
1071(7)	$\langle 5^+ \rangle$	2	0.03	96	2	0.203	300	14	100	100					67Co24
1102.0(2)	$\langle 7^+ \rangle$									90					
1113(10)	3 ⁺ , 5 ⁺	2	0.02	92											67Co24
1120(9)	1 ⁺				0	0.069	228	≥ 8.6							70Di05
1148.5(6)															
1160(10)	3 ⁺ , 5 ⁺	2	0.06	310					740	80					67Co24
1167(9)	1 ⁺				0	0.008	27								70Di05
1214(7)	3 ⁺ , 5 ⁺	$\langle 2 \rangle$	0.02	115	2	0.097	100	4.4							67Co24
1221(7)	7 ⁺ , 9 ⁺	4	0.07	72											67Co24
1267(9)	3 ⁺ , 5 ⁺				2	0.041	54	> 24							70Di05
1340.3(5)	13 ⁺														
1347(7)	7 ⁺ , 9 ⁺	4	0.08	83											67Co24
1353(7)	3 ⁺ , 5 ⁺	2	0.04	240											67Co24
1373.8(1)	13 ⁺								360	30					
1402(7)	3 ⁺ , 5 ⁺			29	2				130	10					70Di05
1443.1(2)	19 ⁻														
1451(7)				38											
1472.0(6)	$\langle 3^- \rangle$	1	0.01	52					130						67Co24
1509(7)	1 ⁺	0	0.03	260	0				260	80					67Co24
1532(7)	1 ⁻ , 3 ⁻	1	0.01	190											67Co24
1539(7)	3 ⁺ , 5 ⁺	2	0.02	140	2				220	30					67Co24
1572(10)	5 ⁻ , 7 ⁻	3	0.009	72											67Co24
1590(100)	3 ⁺ , 5 ⁺				2										70Di05
1615(7)	3 ⁺ , 5 ⁺	2	0.042	250	2				420	30					67Co24
1670(7)	1 ⁺	0	0.008	72	1				190	50					67Co24
1676.36(19)	15 ⁺														

(continued)

 $^{107}_{46}\text{Pd}$

E^*	$2J^\pi$	L	S_N	σ (d,p)	L	S_N	σ (d,t)	S_{dt}/S_{dp}	σ (d,p)	σ (d,t)	C^2S	S_N	S_N	$T_{1/2}$ or Γ_{cm}	Ref.
[keV]			(d,p)	$\mu\text{b/sr}$		(d,t)	$\mu\text{b/sr}$		$\mu\text{b/sr}$	$\mu\text{b/sr}$	(d,t)	(p,d)	(p,d)		
1702(7)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.012	96											67Co24
1742.05(24)	$\langle 15^+ \rangle$														
1754									140	30					63Cu02
1763.4(11)	$\langle 15^+ \rangle$														
1790(7)	$1^-, 3^-$	1	0.10	215					170						67Co24
1866(7)	$3^+, 5^+$	2	0.026	155											67Co24
1879(7)	$3^+, 5^+$	2	0.024	145											67Co24
1954(7)		1	0.010	225											67Co24
1987(7)	$5^-, 7^-$	$\langle 3 \rangle$	0.04	96											67Co24
2006(7)	$5^-, 7^-$			320											
2014(7)	1^+	0	0.02	220											67Co24
2072(7)	$3^+, 5^+$	2	0.02	120											67Co24
2119(7)	1^+	0	0.02	175											67Co24
2146.38(23)	17^+														
2173(7)	$3^+, 5^+$	2	0.02	100											67Co24
2220(7)	$5^-, 7^-$	3	0.01	100											67Co24
2257(7)	$1^-, 3^-$	1	0.017	370											67Co24
2276(7)	1^+	0	0.008	80											67Co24
2283(7)	$3^+, 5^+$	2	0.028	185											67Co24
2323(7)	$5^-, 7^-$	3	0.018	165											67Co24
2336(7)	$5^-, 7^-$	$\langle 3 \rangle$	0.013	120											67Co24
2348.30(24)	23^-														
2373.26(23)	19^+														
2377(7)	$1^-, 3^-$	1	0.004	88											67Co24
2412(7)	$5^-, 7^-$	$\langle 3 \rangle$	0.008	75											67Co24
2491(7)				125											
2516(7)	$1^-, 3^-$	1	0.006	135											67Co24
2557.12(23)	21^+														
2678(7)	$1^-, 3^-$	1	0.024	520											67Co24
2729(7)	$1^-, 3^-$	1	0.007	155											67Co24
2751(7)	$1^-, 3^-$	1	0.005	115											67Co24
2776(7)	$1^-, 3^-$	1	0.006	120											67Co24
2799(7)	$5^-, 7^-$	3	0.008	92											67Co24
2812(7)	$5^-, 7^-$	3	0.017	190											67Co24
2832(7)	$1^-, 3^-$	1	0.005	120											67Co24
2875(7)	$5^-, 7^-$	3	0.013	145											67Co24
2888.11(24)	23^+														
3009.35(24)	25^+														
3048.8(4)	23^+														
3305.0(3)	27^-														
3505.19(24)	27^+														
3699.5(5)	27^+														
3709.3(3)	29^+														
4250.8(3)	31^-														
4335.7(3)	31^+														

(continued)

¹⁰⁷Pd
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E^*	$2J^\pi$	L	S_N	σ (d,p)	S_N	σ (d,t)	S_{dt}/S_{dp}	σ (d,p)	σ (d,t)	C^2S	S_N	S_N	$T_{1/2}$ or	Ref.
[keV]			(d,p)	$\mu\text{b/sr}$	(d,t)	$\mu\text{b/sr}$		$\mu\text{b/sr}$	$\mu\text{b/sr}$	(d,t)	(p,d)	(p,d)	Γ_{cm}	
4562.3(5)	31 ⁺													
4735.6(3)	33 ⁺													
5234.3(4)	35 ⁻													
5439.5(8)	$\langle 35^+ \rangle$													
5602.9(5)	$\langle 35^+ \rangle$													
6344.4(5)	$\langle 39^- \rangle$													
6730.6(8)	$\langle 39^+ \rangle$													
7637.0(6)	$\langle 43^- \rangle$													
9082.6(7)	$\langle 47^- \rangle$													
10676.3(7)	$\langle 51^- \rangle$													
			67Co24	67Co24	70Di05		70Di05	63Cu02	63Cu02		83Ao01			Ref.
										80Sc23		83Ao01		Ref.

Parameter of (d,p) reaction S_N is defined [67Co24] as
 $(d\Sigma/d\Omega)(exp)=1.5(2J+1)S_N(d\sigma/d\Omega)(DWBA)$.
 Data for this isotope are considered in vol. LB I/18B.

Energy levels and branching ratios [00Bl05]. Part 2

¹⁰⁷Pd
46

E^*	$2J^\pi$	Branching ratios in percentage									
[keV]		E_f^* : $2J_f^\pi$:	0.0 5 ⁺	115.7 1 ⁺	214.6 11 ⁻	302.8 5 ⁺	312.2 7 ⁺	348.2	381.8 3 ⁺	392.4 7 ⁺	471.2 $\langle 3 \rangle^+$
115.74(12)	1 ⁺		100								
214.6(3)	11 ⁻		100								
302.78(15)	5 ⁺		100								
312.20(10)	7 ⁺		100								
348.18(13)			91(6)	9(1)							
366.8(5)	7 ⁺		100								
381.80(13)	3 ⁺		70(6)	30(2)							
392.42(13)	7 ⁺		99(7)				0.6(1)				
471.21(24)	$\langle 3 \rangle^+$		100								
567.67(14)	5 ⁺		63(4)	28(3)			5(1)			4(1)	≈ 0.5
670.06(10)	5 ⁺		24(2)	0.8(1)		21(1)	4	24(2)	8(1)	18(1)	0.4(1)
686.79(24)	15 ⁻				100						
696.0(5)	1 ⁺					100					
696.33(9)	9 ⁺		65(16)				35(5)				
954.85(17)	11 ⁺						76(4)			21.2(7)	
1102.0(2)	$\langle 7^+ \rangle$		5(1)				39(3)	6(1)	6(1)	33(3)	
1148.5(6)			50(5)			32(4)	19(4)				
1472.0(6)	$\langle 3^- \rangle$					100					

Energy levels and branching ratios [00Bl05]. Part 3

 $^{107}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage									
		$E_f^*:$ $2J_f^\pi:$	567.7 5 ⁺	670.1 5 ⁺	686.8 15 ⁻	696.0 1 ⁺	696.3 9 ⁺	954.8 11 ⁺	1340.3 13 ⁺	1373.8 13 ⁺	1443.1 19 ⁻
670.06(10)	5 ⁺		≈0.2								
954.85(17)	11 ⁺						2.6(6)				
1063.3(6)	⟨13 ⁻ ⟩				100						
1102.0(2)	⟨7 ⁺ ⟩			11(3)							
1340.3(5)	13 ⁺					100					
1373.8(1)	13 ⁺						100				
1443.1(2)	19 ⁻				100						
1676.36(19)	15 ⁺							100			
1742.05(24)	⟨15 ⁺ ⟩								67(7)	33(7)	
1763.4(11)	⟨15 ⁺ ⟩ ⁺							100			
2146.38(23)	17 ⁺								20(6)	80(8)	
2348.30(24)	23 ⁻										100
2557.12(23)	21 ⁺										79(5)

Energy levels and branching ratios [00Bl05]. Part 4

 $^{107}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage									
		$E_f^*:$ $2J_f^\pi:$	1676.4 15 ⁺	2146.4 17 ⁺	2348.3 23 ⁻	2373.3 19 ⁺	2557.1 21 ⁺	2888.1 23 ⁺	3009.3 25 ⁺	3048.8 23 ⁺	3305.0 27 ⁻
2373.26(23)	19 ⁺		100								
2557.12(23)	21 ⁺			20.5(13)							
2888.11(24)	23 ⁺					52(5)	48(14)				
3009.35(24)	25 ⁺				10(3)		90(4)				
3048.8(4)	23 ⁺					100					
3305.0(3)	27 ⁻				100						
3505.19(24)	27 ⁺							57(19)	43(5)		
3699.5(5)	27 ⁺								50(10)	50(6)	
3709.3(3)	29 ⁺								100		
4250.8(3)	31 ⁻										100

Energy levels and branching ratios [00Bl05]. Part 5

 $^{107}_{46}\text{Pd}$

E^*	$2J^\pi$	Branching ratios in percentage												
		E_f^* :	3505.2	3699.5	3709.3	4250.8	4335.7	4562.3	4735.6	5234.3	5602.9	6344.4	7637.0	9082.6
[keV]		$2J_f^\pi$:	27 ⁺	27 ⁺	29 ⁺	31 [−]	31 ⁺	31 ⁺	33 ⁺	35 [−]	⟨35 ⁺ ⟩	⟨39 [−] ⟩	⟨43 [−] ⟩	⟨47 [−] ⟩
4335.7(3)	31 ⁺		68(11)		32(5)									
4562.3(5)	31 ⁺			100										
4735.6(3)	33 ⁺				100									
5234.3(4)	35 [−]					100								

(continued)

 $^{107}_{46}\text{Pd}$

E^*	$2J^\pi$	Branching ratios in percentage													
		E_f^* :	3505.2	3699.5	3709.3	4250.8	4335.7	4562.3	4735.6	5234.3	5602.9	6344.4	7637.0	9082.6	
[keV]		$2J_f^\pi$:	27 ⁺	27 ⁺	29 ⁺	31 ⁻	31 ⁺	31 ⁺	33 ⁺	35 ⁻	35 ⁺	39 ⁻	43 ⁻	47 ⁻	
5439.5(8)	35 ⁺					75(19)			25(10)						
5602.9(5)	35 ⁺						100								
6344.4(5)	39 ⁻									100					
6730.6(8)	39 ⁺										100				
7637.0(6)	43 ⁻											100			
9082.6(7)	47 ⁻												100		
10676.3(7)	51 ⁻													100	

Energy levels and branching ratios [00Bl21].

 $^{108}_{46}\text{Pd}$

E^*	J^π	L	ε	L	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(t,p)	(d, τ)	Γ_{cm}		E_f^* : J_f^π :	0 0 ⁺	434 2 ⁺	931 2 ⁺	1048 4 ⁺	1053 0 ⁺
0	0 ⁺	0	2.37	1	Stable	77An01						
433.938(5)	2 ⁺	2	0.30	1	23.9(7) ps	77An01		100				
931.14(4)	2 ⁺	2	0.044	1	6.2(4) ps	77An01		19(1)	81(1)			
1048.25(5)	4 ⁺				2.8(3) ps				100	0.0004		
1052.78(5)	0 ⁺	0	0.214	1	4.0(4) ps	77An01		x	100	0.027		
1314.22(7)	0 ⁺				>25 ps				83	17(2)		
1335.22(7)	3 ⁺					00Wa14			50(2)	50(4)		
1441.18(5)	2 ⁺				4.8(1) ps			16(3)	63(3)	13(3)	<3	8(3)
1539.96(5)	$\langle 1^+, 2^+ \rangle$							24(3)	46(3)	16(2)		
1625.2(10)	$\langle 4^+ \rangle$				1.69(20) ps				<6.4	82(9)	18(2)	
1771.161(12)	6 ⁺				0.88(10) ps						100	
1957(1)	4 ⁺	4	0.021		4.7(18) ps	77An01				x	x	
1989.86(12)	$\langle 4^+ \rangle$	$\langle 4 \rangle$	0.016			77An01			8(2)	10(2)	50(4)	
2015(10)												
2046.65(14)	3 ⁻	3	0.263		<1 ps	77An01			91	9(9)	<22	
2083.3	$\langle 5^+ \rangle$					03La23						
2098.67(24)	$\langle 1, 2^+ \rangle$							65(8)	35(5)			
2141(10)	$\langle 0^+ \rangle$	$\langle 0 \rangle$	0.050			77An01						
2218.01(12)	2 ⁺	2	0.102			77An01			52(5)	7(1)		4(1)
2259.3	$\langle 6^+ \rangle$					03La23						
2281.21(15)									64(7)	36(3)		
2282.49(12)	4 $\langle^- \rangle$					00Wa14					17(2)	
2324.8(8)	5 ⁻	5	0.060			77An01					100	
2362(10)	$\langle 2^+ \rangle$	$\langle 2 \rangle$	0.036			77An01						
2391.4(2)	2 ⁺	2	0.097			77An01		20(4)	30(5)	50(5)		
2397.5(5)	$\langle 8^+ \rangle$											
2404.1(3)									100			
2418(10)												
2422(1)	$\langle 6^+ \rangle$				1.0(1) ps							

(continued)

¹⁰⁸Pd
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E^*	J^π	L	ε	L	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(t,p)	(d, τ)	Γ_{cm}		E_{f}^* : J_{f}^π :	0 0 ⁺	434 2 ⁺	931 2 ⁺	1048 4 ⁺	1053 0 ⁺
2466(10)	4 ⁺	4	0.029			77An01						
2477.57(25)	$\langle 2^+ \rangle$						47(5)	16(4)			37(5)	
2531(10)	4 [−] , 5 [−]			4		79FrZT						
2536.4(3)								100				
2540.2(3)	4 ⁺	4	0.133			77An01		70(8)	30(6)			
2548.4(1)	8 ⁺				0.44(5) ps							
2578(10)												
2637(10)	4 ⁺	4	0.112			77An01						
2709.5	$\langle 6^- \rangle$	$\langle 5 \rangle$	0.056			03La23						
2720.0(3)	2 ⁺	2	0.107			77An01		100				
2762.2(4)	7 ^{$\langle - \rangle$}											
2790(20)												
2842.5	$\langle 7^- \rangle$					03La23						
2863.61(18)	5 ⁺					00Wa14						
2888.3(4)								52(9)	48(9)			
2953.3	$\langle 8^+ \rangle$					03La23						
2969(20)	4 [−] , 5 [−]			4		79FrZT						
3089.0	$\langle 8^- \rangle$					03La23						
3100.0	$\langle 8^- \rangle$					03La23						
3256.41(23)	10 ⁺											
3280.6(4)	9 ^{$\langle - \rangle$}											
3350.5(4)	10 ⁺											
3726.7	$\langle 10^- \rangle$					03La23						
3792.5	$\langle 10^- \rangle$					03La23						
3797.31(25)	12 ⁺											
3962.8(8)	$\langle 11^- \rangle$											
4158.3(10)	$\langle 12^+ \rangle$											
4491.7	$\langle 12^- \rangle$					03La23						
4639.8(5)	14 ⁺											
4776.1(9)	$\langle 13^- \rangle$											
4976.7(12)	$\langle 14^+ \rangle$											
5688.7(9)	16 ⁺											
6821.7(9)	$\langle 18^+ \rangle$											
			77An01	79FrZT		Ref.						

Additional data on this isotope can be found in [03La23, 00Jo11, 97Re08, 95Sv01, 92Pi08, 90Pi14].

Abundance: 26.46(9) %. $\varepsilon = (d\sigma/d\Omega)_{\text{exp}} / N(d\sigma/d\Omega)_{\text{DWBA}}$ with N=218 was calculated in [77An01, 00Bl21].

6 bands of levels are considered in [03La23].

Energy levels and branching ratios [00Bl21]. Part 2

¹⁰⁸Pd₄₆

E^* [keV]	J^π	Branching ratios in percentage										
		E_f^* : J_f^π :	1314 0 ⁺	1335 ⟨3 ⁺ ⟩	1441 2 ⁺	1539.96 ⟨1 ⁺ ,2 ⁺ ⟩	1625.2 ⟨4 ⁺ ⟩	1771.16 6 ⁺	2282.49	2324.8 5 ⁻	2536.4	2548.4 8 ⁺
1539.96(5)	⟨1 ⁺ ,2 ⁺ ⟩		8(1)	6.3(7)								
1625.2(10)	⟨4 ⁺ ⟩				x							
1957(1)	4 ⁺						x					
1989.86(12)	⟨4 ⁺ ⟩			14(2)	18(2)							
2218.01(12)	2 ⁺					37(3)						
2282.49(12)	4 ^{⟨-⟩}			83(3)								
2397.5(5)	⟨8 ⁺ ⟩							100				
2422(1)	⟨6 ⁺ ⟩						100					
2548.4(1)	8 ⁺							100				
2762.2(4)	7 ^{⟨-⟩}							64(7)		36(4)		
2863.61(18)	5 ⁺							6(3)	86(6)		7.6(13)	
3256.41(23)	10 ⁺											100
3350.5(4)	10 ⁺											100

Energy levels and branching ratios [00Bl21]. Part 3

¹⁰⁸Pd₄₆

E^* [keV]	J^π	Branching ratios in percentage									
		E_f^* : J_f^π :	2762.2 7 ^{⟨-⟩}	3256.41 10 ⁺	3280.6 9 ^{⟨-⟩}	3350.5 10 ⁺	3797.31 12 ⁺	3962.8 ⟨11 ⁻ ⟩	4158.3 ⟨12 ⁺ ⟩	4639.8 14 ⁺	5688.7 16 ⁺
3280.6(4)	9 ^{⟨-⟩}		100								
3797.31(25)	12 ⁺			100							
3962.8(8)	⟨11 ⁻ ⟩				100						
4158.3(10)	⟨12 ⁺ ⟩					100					
4639.8(5)	14 ⁺						100				
4776.1(9)	⟨13 ⁻ ⟩							100			
4976.7(12)	⟨14 ⁺ ⟩								100		
5688.7(9)	16 ⁺									100	
6821.7(9)	⟨18 ⁺ ⟩										100

Energy levels and branching ratios [99Bl07, 06Bl02].

¹⁰⁹Pd₄₆

E^*	$2J^\pi$	L	S'	S_N	σ (d,p)	σ (d,p)	C^2S	L	S_N	σ (d,t)	S_{dt}/S_{dp}	$T_{1/2}$ or	Ref.
[keV]			(d,p)	(d,p)	$\mu\text{b/sr}$	$\mu\text{b/sr}$	(d,t)		(d,t)	$\mu\text{b/sr}$		Γ_{cm}	
0	5 ⁺	2	1.06	0.176	1390	1340	1.30	2	1.16	3473	6.6	13.701(2) h	70Di05
113.400(10)	1 ⁺	0	0.60	0.30	2680	2700	0.29	0	0.43	2481	1.4	380(50) ns	67Co24
188.990(10)	11 ⁻	5	3.36	0.28	330	230	3.42	5	2.6	367	9.1	4.696(3) m	67Co24
245(5)	7 ⁺ ,9 ⁺	4	3.52	0.44	390			4	2.3	366	5.3		67Co24
245.08(1)	7 ⁻ ,5 ⁻												

(continued)

¹⁰⁹Pd
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E^*	$2J^\pi$	L	S'	S_N	σ (d,p)	σ (d,p)	C^2S	L	S_N	σ (d,t)	S_{dt}/S_{dp}	$T_{1/2}$ or	Ref.
[keV]			(d,p)	(d,p)	$\mu\text{b/sr}$	$\mu\text{b/sr}$	(d,t)		(d,t)	$\mu\text{b/sr}$		Γ_{cm}	
266.34(1)	1 ⁺	0	0.11	0.055	500			0	0.156	868	2.8		67Co24
276.29(1)	7 ⁺				64								
287.25(1)	9 ⁻												
291.43(1)	3 ⁺	2	1.32	0.33	1500	2210		2	0.60	1216	1.8		67Co24
325.29(1)	3 ⁺	2	0.18	0.001	80			2	0.063	126	1.4		67Co24
326.87(1)	5 ⁺	2		0.045	210							0.57(15) ns	
339.53(1)	5 ⁻									48			
370(5)	1 ⁻ ,3 ⁻	$\langle 1 \rangle$	0.008	0.002	40				<0.002		<0.7		67Co24
382(5)	1 ⁺ -5 ⁺	0,2	0.006	0.009	40				<0.003		<0.5		67Co24
404(5)	1 ⁺	0	0.008	0.004	36								67Co24
426.14(1)	7 ⁺	4	1.6	0.20	180	170	3.89	4	4.0	587	20		67Co24
433.56(1)	3 ⁺												
491.59(1)	3 ⁺	2	0.416	0.104	520	470		2	0.28	528	2.7		67Co24
540.68(1)	5 ⁺	2	0.162	0.027	240	incl		2	0.47	1100	17		67Co24
597.1(5)	7 ⁺ ,9 ⁺					150		4	0.4	68	≥ 13		70Di05
604.51(1)	5 ⁻												
623.48(1)	1 ⁺	0	0.106	0.053	490	610		0	0.056	280	1.1		67Co24
625(1)	$\langle 15^- \rangle$					180							
645.9(5)	7 ⁺ ,9 ⁺	4	0.96	0.12	110			4	0.46	61	3.8		67Co24
673.49(1)	3 ⁻	1	0.038	0.01	190			1	0.049	189	5.9		67Co24
712(4)	7 ⁺ ,9 ⁺							$\langle 4 \rangle$	0.2	30	≥ 5		70Di05
718(1)	$\langle 13^- \rangle$												
722.043(10)	3 ⁺ ,5 ⁺	2	0.068	0.017	88								67Co24
729(4)	3 ⁺ ,5 ⁺							2	0.035	59	≥ 12		70Di05
742(4)	1 ⁺	0	0.012	0.006	56								67Co24
791.426(10)	5 ⁺ ,3 ⁺	2	0.212	0.053	280			2	0.179	378	4.4		67Co24
810.595(10)	3 ⁺	2	0.132	0.022	200	340		2	0.27	565	12		67Co24
846.1(5)	5 ⁺	2	0.248	0.062	330	370		$\langle 2 \rangle$	0.10	160	1.6		67Co24
883(4)	9 ⁻ ,11 ⁻							5	0.31	35			70Di05
911.303(22)	5 ⁺	2	0.90	0.015	145			2	0.195	390	13		67Co24
941.100(10)	3 ⁻	1	0.056	0.014	280								67Co24
944.967(10)	1 ⁺					100		0	0.034	150			70Di05
954.163(10)	1 ⁺	0	0.021	0.010	96			$\langle 0 \rangle$	0.050	218	>12		67Co24
981.755(10)	5 ⁺			0.008	64	390		2	0.122	235	15		70Di05
1006(4)					40								
1053.63(2)	3 ⁺	2	0.10	0.025	135	150		2	0.092	130	3.7		67Co24
1065.8(5)	1 ⁺					90		0	0.046	190	>11		70Di05
1091.0(5)	5 ⁺	2	0.64	0.016	88			2	0.079	143	6.4		67Co24
1111.8(5)	1,3												
1134.70(1)	1,3												
1147.7(5)	3 ⁺	2	0.26	0.066	380	280		2	0.073	98	1.1		67Co24
1176(4)	5 ⁻ ,7 ⁻	3	0.053	0.007	48								67Co24
1232.80(5)	1 ⁺	0	0.018	0.009	80	90		0	0.022	83	2.5		67Co24
1241(5)	5 ⁻ ,7 ⁻	3	0.052	0.006	48								67Co24
1243.9(5)	1,3												

(continued)

**¹⁰⁹Pd
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E^*	$2J^\pi$	L	S'	S_N	σ (d,p)	σ (d,p)	C^2S	L	S_N	σ (d,t)	S_{dt}/S_{dp}	$T_{1/2}$ or	Ref.
[keV]			(d,p)	(d,p)	$\mu\text{b/sr}$	$\mu\text{b/sr}$	(d,t)		(d,t)	$\mu\text{b/sr}$		Γ_{cm}	
1269.5(5)	5 ⁺ ,3 ⁺	2	0.035	0.009	52			2	0.114	188	17		67Co24
1289(1)	$\langle 19^- \rangle$												
1308(4)					32								
1318.0(5)													
1328.4(5)	5					810							
1329(5)	1 ⁻ ,3 ⁻	$\langle 1 \rangle$	0.12	0.031	650	incl							67Co24
1347.7(5)	1 ⁺	0	0.042	0.021	190			0	0.033	120	1.57		67Co24
1359.41(1)	1,3												
1361(1)	$\langle 17^- \rangle$					160							
1371.1(5)	5 ⁺			0.005				2	0.076	98	15		70Di05
1399.0(5)	1,3												
1448(4)	3 ⁺ ,5 ⁺							2	0.058	85			70Di05
1478.7(5)	1 ⁺	0	0.022	0.011	105			0	0.043	145	3.9		67Co24
1484.9(5)	1,3,5 ⁺	2	0.06	0.016	96								67Co24
1499(4)					32								
1537.3(5)	1 ⁺							0	0.049	162	>12		70Di05
1540.3(5)	3	$\langle 2 \rangle$	0.044	0.008	68								67Co24
1561(4)					48	130							67Co24
1601.7(5)	$\langle 1^+ \rangle$							$\langle 0 \rangle$	0.009	29			70Di05
1615.8(5)	1,3,5												
1623.9(5)	1,3,5												
1644.6(5)	$\langle 3^+ \rangle$				32	190		$\langle 2 \rangle$	0.012	16	≥ 1.5		70Di05
1647.8(5)	1,3,5												
1656(4)	$\langle 1^+ \rangle$							$\langle 0 \rangle$	0.006	19	>2		70Di05
1664(4)		2	0.084	0.021	130								67Co24
1684.5(5)	1 ⁺	0	0.068	0.034	330	290							67Co24
1692(4)	1 ⁺					incl		0	0.017	50	>8		70Di05
1710.2(5)	1,3												
1737(4)		2	0.068	0.017	105								67Co24
1773(4)	5 ⁻ ,7 ⁻	3	0.037	0.005	40								67Co24
1785(4)	1 ⁺					100		0	0.006	16	>1.2		70Di05
1791(4)	[3]	1,2	0.02	0.005	110			$\langle 2 \rangle$	0.006	18	≈ 1		67Co24
1800(4)	1 ⁺	0	0.018	0.009	80								67Co24
1819(4)					56	100							67Co24
1836(4)	5 ⁻ ,7 ⁻	3	0.058	0.007	64								67Co24
1846(4)	[3]	1,2	0.03	0.008	175								67Co24
1848(4)	1 ⁺							0	0.04	110	>5		70Di05
1863(4)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.05	0.006	56								67Co24
1877(4)	1 ⁻ ,3 ⁻	1	0.030	0.008	160								67Co24
1878(4)	3 ⁺ ,5 ⁺							2	0.03	27			70Di05
1915(4)	1 ⁻ ,3 ⁻	1	0.035	0.009	190								67Co24
1925(4)	1 ⁻ ,3 ⁻	1	0.088	0.022	480			1	0.056	118			67Co24
1941(4)	5 ⁻ ,7 ⁻	3	0.144	0.018	160								67Co24
1954(4)					48								67Co24
1972(4)	5 ⁻ ,7 ⁻	3	0.24	0.030	280								67Co24

(continued)

¹⁰⁹Pd₄₆

E^*	$2J^\pi$	L	S'	S_N	σ (d,p)	σ (d,p)	C^2S	L	S_N	σ (d,t)	S_{dt}/S_{dp}	$T_{1/2}$ or	Ref.
[keV]			(d,p)	(d,p)	$\mu\text{b/sr}$	$\mu\text{b/sr}$	(d,t)		(d,t)	$\mu\text{b/sr}$		Γ_{cm}	
1977(4)	$1^-, 3^-$							1	0.063	138			70Di05
1999(4)								$\langle 1,2 \rangle$	0.018	37			70Di05
2014(4)	1^+							0	0.052	133	>5		70Di05
2021(4)	$1^-, 3^-$	1	0.006	0.014	300								67Co24
2053(4)					≈ 80								67Co24
2091(4)	$3^+, 5^+$	2	0.12	0.030	190								67Co24
2101(4)	$\langle 3^+, 5^+ \rangle$							$\langle 2 \rangle$	0.029	31	>2.9		70Di05
2103	$\langle 23^- \rangle$												
2117(4)	$1^-, 3^-$	1	0.072	0.018	410								67Co24
2120(4)	1^+							0	0.046	108	>3		70Di05
2135(4)	$\langle 1^-, 3^- \rangle$	$\langle 1 \rangle$	0.018	0.004	96								67Co24
2155(1)	$\langle 21^- \rangle$												
2160(4)	$1^-, 3^-$	1	0.064	0.016	340								67Co24
2174(4)	$3^+, 5^+$							2	0.025	24			70Di05
2188(4)	1^+							0	0.011	25	>1.3		70Di05
2209(4)	$5^-, 7^-$	3	0.144	0.018	175								67Co24
2240(4)	$\langle 3^+, 5^+ \rangle$			$\langle 0.02 \rangle$				$\langle 2 \rangle$	0.030	29	1.6		70Di05
2245(4)	$1^-, 3^-$	1	0.044	0.011	240								67Co24
2259(4)	$1^-, 3^-$	1	0.038	0.010	190								67Co24
2280(4)	$3^+, 5^+$	2	0.084	0.021	120								67Co24
2282(4)	1^+							0	0.018	37	>2		70Di05
2295(4)	$1^-, 3^-$							1	0.063	104			70Di05
2301(4)	$\langle 1^-, 3^- \rangle$	$\langle 1 \rangle$	0.004	0.004	80								67Co24
2320(4)	$3^+, 5^+$			0.012				2	0.033	30	2.7		70Di05
2346(4)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.112	0.014	110								67Co24
2357(4)	$\langle 1^-, 3^- \rangle$	$\langle 1 \rangle$	0.038	0.010	210								67Co24
2371(4)	$5^-, 7^-$	3	0.168	0.021	210			2	0.029	25	1.5		67Co24
2372(4)	$3^+, 5^+$												
2380(4)	1^+							0	0.014	27	>7		70Di05
2391(4)	$5^-, 7^-$	3	0.088	0.011	110								67Co24
2415(4)	$1^-, 3^-$	1	0.030	0.007	160								67Co24
2465(4)	$5^-, 7^-$	3	0.224	0.028	300								67Co24
2473(4)	$1^-, 3^-$	1	0.072	0.018	390			1	0.038	55			67Co24
2493(4)	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.176	0.022	220								67Co24
2522(4)	$3^+, 5^+$	2	0.088	0.022	130								67Co24
2541(4)		$\langle 3,0 \rangle$		0.012	130								67Co24
3030(1)	$\langle 27^- \rangle$												06Bl02
3975(1)	$\langle 31^- \rangle$												06Bl02
4958(1)	$\langle 35^- \rangle$												06Bl02
6153(1)	1^+												06Bl02
			84Bl11	67Co24	67Co24	63Cu02	80Sc23		70Di05		70Di05		Ref.

Additional data on this isotope can be found in [06Bl02, 99Ho25, 98Ku22].

Two bands are assigned to excited states of this nucleus in [06Bl02].

Values $(2J+1)S$ for (d,p) reaction calculated [84Bl11] from S_N can be found in Supplement.

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

Energy levels and branching ratios [99Bl07, 06Bl02]. Part 2

 $^{109}_{46}\text{Pd}$

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	0 5 ⁺	113 1 ⁺	189 11 ⁻	245 7 ⁻	266 1 ⁺	276 7 ⁺	287 9 ⁻	291 3 ⁺	325.285 3 ⁺	326.869 5 ⁺
113.400(10)	1 ⁺		100									
188.990(10)	11 ⁻		100									
245.08(1)	7 ⁻ , 5 ⁻		100									
266.34(1)	1 ⁺		22(4)	78								
276.29(1)	7 ⁺		100									
287.25(1)	9 ⁻				100							
291.43(1)	3 ⁺		47(3)	53								
325.29(1)	3 ⁺		64	36(4)								
326.87(1)	5 ⁺		100									
339.53(1)	5 ⁻		77(8)			23(2)						
426.14(1)	7 ⁺		93(9)					7(1)				
433.56(1)	3 ⁺		64(6)	30(3)							5.3(6)	1.1(2)
491.59(1)	3 ⁺		19(3)	53(5)						24(3)	4(2)	
540.68(1)	5 ⁺		7(2)			4(1)	1(1)	4(1)		59(6)	20(2)	5(1)
604.51(1)	5 ⁻		6(1)			77(8)			2.0(5)			
623.48(1)	1 ⁺		23(2)				2	7(1)		11(2)	45(5)	
625(1)	⟨15 ⁻ ⟩				100							
673.49(1)	3 ⁻		1.2(4)			23(2)						0.7(1)
718(1)	⟨13 ⁻ ⟩				x				x			
722.043(10)	3 ⁺ , 5 ⁺		35(4)				19(2)				26(2)	7.3(10)
791.426(10)	5 ⁺ , 3 ⁺		24(4)	11(2)			10(2)	40(6)				11(2)
810.595(10)	3 ⁺		65(10)								23(3)	
911.303(22)	5 ⁺		35(6)							47(8)	13(3)	4(2)
941.100(10)	3 ⁻					5(1)	7(1)			1		
944.967(10)	1 ⁺			82(12)			8(2)			6(2)		
954.163(10)	1 ⁺			40(8)							23(4)	
981.755(10)	5 ⁺							9(3)		50(5)		21(4)
1053.63(2)	3 ⁺						30(6)					70(7)
1232.80(5)	1 ⁺						61(6)					

Energy levels and branching ratios [99Bl07, 06Bl02]. Part 3

 $^{109}_{46}\text{Pd}$

E^*	$2J^\pi$	Branching ratios in percentage											
[keV]		E_f^* : $2J_f^\pi$:	339.530 5 ⁻	426.140 7 ⁺	433.562 3 ⁺	491.590 3 ⁺	604.513 5 ⁻	623.482 1 ⁺	625 ⟨15 ⁻ ⟩	673.491 3 ⁻	718 ⟨13 ⁻ ⟩	722.043 3 ⁺ ,5 ⁺	1134.70 1,3
<hr/>													
604.51(1)	5 ⁻		15(2)										
623.48(1)	1 ⁺			2	10(1)								
673.49(1)	3 ⁻		75(8)										
722.043(10)	3 ⁺ ,5 ⁺				5.5(7)	7(1)							
791.426(10)	5 ⁺ ,3 ⁺			4(2)									
810.595(10)	3 ⁺				8.0(14)			4.5(5)					
941.100(10)	3 ⁻		35(4)				47(5)			5(1)			

(continued)

¹⁰⁹Pd₄₆

E^*	$2J^\pi$	Branching ratios in percentage											
		E_f^* :	339.530	426.140	433.562	491.590	604.513	623.482	625	673.491	718	722.043	1134.70
[keV]		$2J_f^\pi$:	5 ⁻	7 ⁺	3 ⁺	3 ⁺	5 ⁻	1 ⁺	⟨15 ⁻ ⟩	3 ⁻	⟨13 ⁻ ⟩	3 ⁺ ,5 ⁺	1,3
944.967(10)	1 ⁺											4(1)	
954.163(10)	1 ⁺				37(5)								
981.755(10)	5 ⁺			20(3)									
1134.70(1)	1,3					17(2)				83(8)			
1232.80(5)	1 ⁺				39(5)								
1289(1)	⟨19 ⁻ ⟩								x				
1359.41(1)	1,3		20(2)			43(4)				36(4)			0.9(2)
1361(1)	⟨17 ⁻ ⟩								x		x		

Energy levels and branching ratios [99Bl07, 06Bl02]. Part 4

¹⁰⁹Pd₄₆

E^* [keV]	$2J^\pi$	Branching ratios in percentage					
		$E_f^*:$ $2J_f^\pi:$	1289 ⟨19 ⁻ ⟩	1361 ⟨17 ⁻ ⟩	2103 ⟨23 ⁻ ⟩	3030 ⟨27 ⁻ ⟩	3975 ⟨31 ⁻ ⟩
2103	⟨23 ⁻ ⟩		100				
2155(1)	⟨21 ⁻ ⟩			100			
3030(1)	⟨27 ⁻ ⟩				100		
3975(1)	⟨31 ⁻ ⟩					100	
4958(1)	⟨35 ⁻ ⟩						100

Energy levels and branching ratios [00De11].

¹¹⁰Pd₄₆

E^*	J^π	L	ε	L	β_L	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(t,p)	(t,p)	(α, α')	fm	Γ_{cm}		E^*_f : J^π_f :	0.0 0 ⁺	374 2 ⁺	814 2 ⁺	921 4 ⁺	947 0 ⁺
0.0	0 ⁺	0	2.52			Stable	77An01						
373.80(6)	2 ⁺	2	0.29	2	1.15(6)	46.5(16) ps	77An01	100					
813.61(7)	2 ⁺	2	0.09			17.7(8) ps	77An01	27(2)	73(4)				
920.77(10)	4 ⁺	4	0.01			4.09(4) ps	77An01		100	x			
946.73(11)	0 ⁺	0	0.11			7.9(7) ps	77An01		100	x			
1170.66(11)	0 ⁺	0	0.07				77An01		68(5)	32(2)			
1212.24(11)	$\langle 3^+ \rangle$	$\langle 2 \rangle$	0.02				77An01		34(6)	59(6)	6.2(5)		
1214.42(16)	2 ⁺					9.1(6) ps		47(3)	29(7)	13(6)	x		11(2)
1398.24(15)	4 ⁺					5.1(6) ps			x	62(4)	38(6)		
1470.07(10)	2 ⁺							14(1)	46(3)	32(2)	x		x
1574.04(17)	6 ⁺					1.40(14) ps					100		
1584(1)													
1641(10)	$\langle 0^+ \rangle$												
1719.06(15)	4 ⁺					2.2(2) ps			22(2)	78(5)	x		

(continued)

¹¹⁰Pd
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E^*	J^π	L	ε	L	β_L	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(t,p)	(t,p)	(α, α')	fm	Γ_{cm}		E_f^* : J_f^π :	0.0 0 ⁺	374 2 ⁺	814 2 ⁺	921 4 ⁺	947 0 ⁺
1759.2	$\langle 5^+ \rangle$						03La23						
1858(2)	2 ⁺												
1864(1)	2 ⁺												
1889.67(21)	2 ⁺	$\langle 2 \rangle$	0.04				77An01	x		92(8)	5(2)	x	3(1)
1900.18(15)	2 ⁺									36(4)		16(4)	
1934.47(19)	4 ⁺	$\langle 4 \rangle$	0.02				77An01			21(3)	17(3)	18(5)	
1956(2)	4 ⁺												
1988(1)	4 ⁺									100			
2015(2)	$\langle 4^+ \rangle$												
2037.67(18)	3 ⁻	3	0.27	3	0.58(3)		92Ri02			83(8)	17(2)		
2061	6 ⁺											x	
2089	$\langle 4^+ \rangle$									x	x	x	
2095(1)													
2125.3(3)	1 ⁻								87(9)	13(3)			
2140(1)	2 ⁺	2	0.11				77An01	x					
2141.7	$\langle 4^+ \rangle$									x	x	x	
2193.0(3)	2 ⁻									37(4)	63(10)		
2194(1)	$\langle 6^+ \rangle$												
2259(1)													
2276.1(3)	3 ⁻										83(8)	17(4)	
2293.3(3)	5 ⁻	5	0.13				77An01			100			
2295(2)	$\langle 4^+ \rangle$												
2296.3(15)	8 ⁺						03La23						
2322.06(25)	4 ⁺								5(2)	5(2)		11(2)	79(9)
2332(1)	6 ⁺											x	
2369.7(5)									49(11)		38(10)	13(6)	
2422(2)	6 ⁺												
2428(1)													
2431(7)	4 ⁺	4	0.12				77An01						
2446.54(24)	4 ⁺											22(12)	
2461(10)													
2474.2(4)	1 ⁻								52(7)	30(7)			
2490(1)		3	0.09				77An01						
2498.7(4)	2 ⁺											39(11)	
2512(2)	4 ⁺												
2517(2)	2 ⁺	2	0.06				77An01						
2536(2)	2 ⁺												
2548(10)	$\langle 2^+ \rangle$	$\langle 2 \rangle$	0.03				77An01						
2558(2)	$\langle 3^- \rangle$												
2563.8(4)	3 ⁻									100			
2576(2)													
2580(2)													
2602(2)													
2608(3)	1 ⁻												
2617(2)	$\langle 5^- \rangle$												

(continued)

¹¹⁰Pd
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E^*	J^π	L	ε	L	β_L	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(t,p)	(t,p)	(α, α')	fm	Γ_{cm}		E^*_f : J^π_f :	0.0 0 ⁺	374 2 ⁺	814 2 ⁺	921 4 ⁺	947 0 ⁺
2637(10)	$\langle 4^+ \rangle$	$\langle 4 \rangle$	0.04				77An01						
2644(2)	$\langle 2^+ \rangle$												
2649(2)	$\langle 2^+ \rangle$												
2650.5	$\langle 8^+ \rangle$						03La23						
2658(3)	1 ⁻												
2672(2)	4 ⁺	2	0.11				77An01						
2686.6(4)									65(7)		35(10)		
2691(3)	2 ⁺	4	0.14				77An01						
2695(2)													
2714.6(9)									64(20)		36(17)		
2721(2)	4 ⁺												
2737(2)													
2745.6	$\langle 7^- \rangle$						03La23						
2759(2)	$\langle 3^- \rangle$												
2764(3)	1 ⁻												
2775	8 ⁺												
2784.5	$\langle 7^- \rangle$						03La23						
2790.70(21)	4 ⁺											6(2)	
2792(2)	3 ⁻												
2804.96(20)												9(25)	
2805.2(3)													13(4)
2807(2)													
2818(2)	2 ⁺												
2827(2)	$\langle 2^+, 5^- \rangle$												
2845(3)	1 ⁻												
2862(2)	2 ⁺												
2871(2)	2 ⁺												
2889(2)	$\langle 2^+ \rangle$												
2893(5)	3 ⁻												
2897(2)	3 ⁻												
2903(10)													
2908(2)	$\langle 2^+ \rangle$												
2912(3)	1 ⁻												
2923.9							03La23						
2932(2)	$\langle 2^+ \rangle$												
2937(2)													
2948(2)	$\langle 4^+ \rangle$												
2955(2)	$\langle 2^+ \rangle$												
2972(3)	4 ⁺												
2991.7	$\langle 8^- \rangle$						03La23						
2994(3)	3 ⁻												
2998(2)													
3002(2)													
3009(2)													
3023(3)	4 ⁺												

(continued)

¹¹⁰Pd
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E^*	J^π	L	ε	L	β_L	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(t,p)	(t,p)	(α, α')	fm	Γ_{cm}		E_f^* :	0.0	374	814	921	947
								J_f^π :	0 ⁺	2 ⁺	2 ⁺	4 ⁺	0 ⁺
3036(3)													
3050(2)													
3056(2)	3 ⁻												
3062(2)													
3070.3	$\langle 10^+ \rangle$						03La23						
3075(2)	$\langle 4^+ \rangle$												
3079(2)	$\langle 2^+ \rangle$												
3089(3)	4 ⁺												
3097(2)	$\langle 3^- \rangle$												
3102(2)	2 ⁺												
3109	$\langle 8^+ \rangle$												
3110(2)	$\langle 2^+, 5^- \rangle$												
3119(3)	3 ⁻												
3123(2)													
3127(2)													
3131	10 ⁺												
3151(2)	3 ⁻												
3169(2)	1 ⁻												
3181(2)	$\langle 4^+ \rangle$												
3192(2)	3 ⁻												
3195.9	$\langle 10^+ \rangle$						03La23						
3232(2)	$\langle 1, 2^+, 3^- \rangle$												
3240(2)	$\langle 1, 2^+, 3^- \rangle$												
3246.1	$\langle 9^- \rangle$						03La23						
3259(3)	3 ⁻												
3262(2)	$\langle 3^- \rangle$												
3271(2)	$\langle 2^+ \rangle$												
3280(3)	1 ⁻												
3288(2)	$\langle 2^+, 6^+ \rangle$												
3303(3)	$\langle 4^+ \rangle$												
3320(2)	$\langle 4^+ \rangle$												
3327.0	$\langle 9^- \rangle$						03La23						
3333(2)	$\langle 4^+ \rangle$												
3353(2)	$\langle 2^+, 4^+ \rangle$												
3368(2)													
3374(3)	2 ⁺												
3380(2)													
3386(2)	$\langle 2^+ \rangle$												
3407(3)	4 ⁺												
3413(2)													
3419(2)	$\langle 2^+, 5^- \rangle$												
3427(2)													
3431(2)													
3435(2)													
3445(2)	$\langle 2^+, 5^- \rangle$												

(continued)

¹¹⁰Pd
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E^*	J^π	L	ε	L	β_L	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(t,p)	(t,p)	(α, α')	fm	Γ_{cm}		E_f^* :	0.0	374	814	921	947
								J_f^π :	0 ⁺	2 ⁺	2 ⁺	4 ⁺	0 ⁺
3455(2)													
3458(2)													
3471(2)													
3484(3)	3 ⁻												
3489(2)													
3501(2)													
3511(3)	3 ⁻												
3525(2)	⟨2 ⁺ ⟩												
3529(4)	⟨2 ⁺ ⟩												
3535(2)	⟨3 ⁻ ⟩												
3543	⟨10 ⁺ ⟩												
3561(2)	2 ⁺												
3570(2)	⟨2-6⟩												
3575(2)	⟨4 ⁺ ⟩												
3592(2)	⟨1,2 ⁺ ,3 ⁻ ⟩												
3607(2)	⟨1,2 ⁺ ⟩												
3614(2)	3 ⁻												
3624.2	⟨10 ⁻ ⟩						03La23						
3642(4)	4 ⁺												
3653(2)	⟨2 ⁺ ⟩												
3669(4)	4 ⁺												
3679(2)	⟨4 ⁺ ⟩												
3687(2)													
3694(2)	⟨2 ⁺ ,5 ⁻ ⟩												
3700(2)	⟨3 ⁻ ⟩												
3718.1	⟨12 ⁺ ⟩						03La23						
3730(2)													
3738(4)	⟨4 ⁺ ⟩												
3769(4)	3 ⁻												
3789(4)	3 ⁻												
3799(4)	3 ⁻												
3826(4)	⟨3 ⁻ ⟩												
3854(4)	⟨3 ⁻ ⟩												
3869(4)	3 ⁻												
3916(4)	3 ⁻												
3955(4)	⟨3 ⁻ ⟩												
3968	⟨10 ⁺ ⟩												
4001(5)	4 ⁺												
4030	12 ⁺												
4031.0	⟨11 ⁻ ⟩						03La23						
4037(5)	4 ⁺												
4065(5)	4 ⁺												
4154(5)	3 ⁻												
4239(5)	4 ⁺												

(continued)

¹¹⁰Pd
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E^*	J^π	L	ε	L	β_L	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(t,p)	(t,p)	(α, α')	fm	Γ_{cm}		E_f^* :	0.0	374	814	921	947
								J_f^π :	0 ⁺	2 ⁺	2 ⁺	4 ⁺	0 ⁺
4484.2	$\langle 14^+ \rangle$						03La23						
		77An01			92Ri02		Ref.						

Additional data on this isotope can be found in [00Wa14, 00Jo11, 99Ho25, 93He13, 92Pi08, 89Mi10].

Abundance: 11.72(9) %.

6 bands of levels are considered in [03La23].

Systematics of ^{106,108,110}Pd-levels was discussed in [00Wa14].

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

Energy levels and branching ratios [00De11]. Part 2

¹¹⁰Pd
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E^*	J^π	Branching ratios in percentage										
		E_f^* :	1171	1212	1214	1398.24	1470.07	1574.04	1719.06	1900.18	1934.47	2061
[keV]		J_f^π :	0 ⁺	$\langle 3^+ \rangle$	2 ⁺	4 ⁺	2 ⁺	6 ⁺	4 ⁺	2 ⁺	4 ⁺	6 ⁺
1214.42(16)	2 ⁺		x									
1398.24(15)	4 ⁺			x	x							
1470.07(10)	2 ⁺		8(1)		x	x						
1574.04(17)	6 ⁺					x						
1719.06(15)	4 ⁺				x	x	x	x				
1889.67(21)	2 ⁺		x			x	x		x			
1900.18(15)	2 ⁺		15(4)	33(4)								
1934.47(19)	4 ⁺		x	17(2)	x	x	27(3)	x	x			
2061	6 ⁺					x		x	x		x	
2089	$\langle 4^+ \rangle$			x	x	x	x	x	x			
2141.7	$\langle 4^+ \rangle$					x		x	x			
2296.3(15)	8 ⁺							x				x
2332(1)	6 ⁺					x		x	x			x
2446.54(24)	4 ⁺					78(13)				x		
2474.2(4)	1 ⁻					18(6)						
2498.7(4)	2 ⁺			61(11)								
2775	8 ⁺							x				x
2790.70(21)	4 ⁺			22(11)		18(3)		12(6)		43(7)		
2804.96(20)				14(3)		12(6)		20(10)		46(4)		
2805.2(3)				76(9)		11(4)						
3109	$\langle 8^+ \rangle$											x

Energy levels and branching ratios [00De11]. Part 3

¹¹⁰Pd
46

E^* [keV]	J^π	Branching ratios in percentage							
		E_f^* : J_f^π :	2293.3 5 ⁻	2296.0 8 ⁺	2332 6 ⁺	2775 8 ⁺	2903	3109 (8 ⁺)	3131 10 ⁺
2332(1)	6 ⁺		x						
3109	(8 ⁺)			x	x	x			
3131	10 ⁺			x					
3543	(10 ⁺)			x					x
3968	(10 ⁺)							x	
4030	12 ⁺						x		x

Energy levels and branching ratios [03B110].

¹¹¹Pd
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E^* [keV]	$2J^\pi$	L	S_N (d,p)	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage					
						E_f^* : $2J_f^\pi$:	0.0 5 ⁺	72 1 ⁺	172 11 ⁻	191 X ⁺	195 X ⁺
0.0	5 ⁺	2	0.13	23.4(2) m	74M1ZZ						
72.2(2)	1 ⁺	0	0.36				100				
172.18(8)	11 ⁻	5	0.37	5.5(1) h	74M1ZZ		100				
191.3(3)	X ⁺	0+2	0.14+0.38		74M1ZZ		100				
195.1(2)	X ⁺						47	53			
230.8(3)	7 ⁺ ,9 ⁺	4	0.14		74M1ZZ		100				
259.3(2)								[100]			
275.3(3)	(3 ⁺ ,5 ⁺)	(2)	0.006,0.011		74M1ZZ		100				
384.2(3)	3 ⁺ ,5 ⁺	2	0.05,0.10		74M1ZZ			76			24
411.8(2)	7 ⁺ ,9 ⁺	4	0.18		74M1ZZ		74			11	
450.4(2)	3 ⁻ -7 ⁻	3,1	0.021,0.020		74M1ZZ		[50]				[50]
508	1 ⁺	0	0.074		74M1ZZ						
523.8(2)							62				
534	5 ⁻ ,7 ⁻	3	0.026		74M1ZZ						
567	(7 ⁺ ,9 ⁺)	(4)	0.079		74M1ZZ						
585	(15 ⁻)								x		
587	1 ⁻ ,3 ⁻	1	0.026		74M1ZZ						
603											
663.8(5)	3 ⁺ ,5 ⁺	2	0.028,0.055		74M1ZZ		28				
715	3 ⁺ ,5 ⁺	2	0.060,0.12		74M1ZZ						
740	3 ⁺ ,5 ⁺	2	0.078,0.15		74M1ZZ						
788.9(2)							47				19
866											
887	(7 ⁺ ,9 ⁺)	(4)	0.084		74M1ZZ						
929	1 ⁺	0	0.014		74M1ZZ						
1000	1 ⁻ ,3 ⁻	1	0.071		74M1ZZ						
1020											
1082.8(2)										36	
1090.2(2)											19
1117	(1 ⁺)	(0)	0.036		74M1ZZ						

(continued)

¹¹¹Pd
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E^*	$2J^\pi$	L	S_N	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]			(d,p)	Γ_{cm}		E_f^* : $2J_f^\pi$:	0.0 5 ⁺	72 1 ⁺	172 11 ⁻	191 X ⁺	195 X ⁺
1133	X ⁻	3,1	0.025,0.019		74MIZZ						
1204	$\langle 19^- \rangle$										
1207.2(3)											
1356	$\langle 1^-, 3^- \rangle$	$\langle 1 \rangle$	0.013		74MIZZ						
1453	$\langle 5^-, 7^- \rangle$	$\langle 3 \rangle$	0.011		74MIZZ						
1493	1 ⁺	0	0.049		74MIZZ						
1521	1 ⁻ , 3 ⁻	1	0.041		74MIZZ						
1600	1 ⁻ , 3 ⁻	1	0.029		74MIZZ						
1624	5 ⁻ , 7 ⁻	3	0.018		74MIZZ						
1673	5 ⁻ , 7 ⁻		0.017		74MIZZ						
1713	1 ⁻ , 3 ⁻	1	0.016		74MIZZ						
1808	5 ⁻ , 7 ⁻	3	0.018		74MIZZ						
1928	$\langle 1^-, 3^- \rangle$	$\langle 1 \rangle$	0.010		74MIZZ						
1981	$\langle 23^- \rangle$										
2018	5 ⁻ , 7 ⁻	3	0.028		74MIZZ						
2878	$\langle 27^- \rangle$										
3831	$\langle 31^- \rangle$										
			74MIZZ		Ref.						

Additional data on this isotope can be found in [99Ho25,98Ku22, 67Li15].

$J^\pi=7/2^-$, $3/2^-$ respectively assumed for $L=3,1$; $L=5$ is assumed to be $h_{11/2}$, $L=4$ $g_{7/2}$, $L=3$ $f_{7/2}$ and $L=1$ $p_{3/2}$; $L=2$ is assumed to be $d_{5/2}$ for the ground state and $d_{3/2}$ for the 192 level; otherwise the pairs of values correspond to $d_{5/2}, d_{3/2}$, respectively.

Energy levels and branching ratios [03Bl10]. Part 2

¹¹¹Pd
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E^*	$2J^\pi$	Branching ratios in percentage									
[keV]		E_f^* : $2J_f^\pi$:	230.8 7 ⁺ , 9 ⁺	259.3	275.3 $\langle 3^+, 5^+ \rangle$	411.8 7 ⁺ , 9 ⁺	585 $\langle 15^- \rangle$	1204 $\langle 19^- \rangle$	1981 $\langle 23^- \rangle$	2878 $\langle 27^- \rangle$	
411.8(2)	7 ⁺ , 9 ⁺		8		7						
523.8(2)			38								
663.8(5)	3 ⁺ , 5 ⁺				72						
788.9(2)			20	7	7	≤5					
1082.8(2)			14		50						
1090.2(2)			25	19	38	≤9					
1204	$\langle 19^- \rangle$						x				
1207.2(3)			20		80						
1981	$\langle 23^- \rangle$							x			
2878	$\langle 27^- \rangle$								x		
3831	$\langle 31^- \rangle$										x

Energy levels and branching ratios [96De55].

¹¹²Pd
₄₆

E^*	J^π	L	σ (t,p)	$T_{1/2}$ or	Ref.	Branching ratios in percentage						
[keV]		(t,p)	$\mu\text{b/sr}$	Γ_{cm}		E^*_f : J^π_f :	0.0 0 ⁺	349 2 ⁺	737 $\langle 2 \rangle^+$	883 $\langle 4^+ \rangle$	1097 $\langle 3^+ \rangle$	1363
0.0 ^a	0 ⁺	0	1060	21.03(5) h	72Ca10							
348.8(2) ^a	2 ⁺	2	330	84(14) ps	72Ca10		100					
737.1(2) ^b	$\langle 2 \rangle^+$	[4]	48		72Ca10		31(3)	69(5)				
883.5(2) ^a	$\langle 4^+ \rangle$	[2]	40		72Ca10			100				
890.4(4)	$\langle 0^+ \rangle$							100				
928			29		72Ca10							
1096.8(2) ^b	$\langle 3^+ \rangle$				98Lh04			47(4)	51(6)	1.8(5)		
1126.3(4)	0 ⁺	0	45		72Ca10	x		[100]				
1140.4(4)	$\langle 2^+ \rangle$							100				
1363.2(3) ^b								4	61(8)	36(4)		
1369.0(4)										100		
1402.7	2 ⁺				98Lh04							
1423.4(3)	2 ⁺				01Kr08			34(7)	66(7)			
1551.3(4) ^a	$\langle 6^+ \rangle$				93Ar05					100		
1716.3(4) ^g									100			
1759.7(4) ^b	$\langle 5^+ \rangle$										100	
1887	$\langle 4^+ \rangle$				01Kr08							
1951.6	$\langle 4^+ \rangle$				98Lh04							
2004.0(4) ^b	$\langle 6^+ \rangle$											100
2195.3(3) ^f					01Kr08					16(2)	84(6)	
2269 ^c	$\langle 5^- \rangle$											
2319.8 ^a	8 ⁺				93Ar05							
2355.0(4)					01Kr08					100		
2483 ^b	7 ⁽⁺⁾											
2578 ^d	$\langle 6^- \rangle$											
2614 ^e	$\langle 6^- \rangle$											
2638 ^b	$\langle 8^+ \rangle$											
2692	8 ⁺				01Kr08							
2704 ^c	$\langle 7^- \rangle$											
2710 ^f	$\langle 7^- \rangle$											
2755.7(3) ^f	$\langle 4 \rangle$										8(1)	
2898 ^d	$\langle 8^- \rangle$											
3045 ^e	$\langle 8^- \rangle$											
3051.5 ^a	10 ⁺				93Ar05							
3054 ^e	$\langle 10^- \rangle$											
3085 ^b	$\langle 9^+ \rangle$											
3137 ^c	$\langle 9^- \rangle$											
3174 ^h												
3264 ^f	$\langle 9^- \rangle$				01Kr08							
3327 ^b	$\langle 10^+ \rangle$											
3447 ^d	$\langle 10^- \rangle$											
3597 ^a	$\langle 12^+ \rangle$											
3625 ^b	$\langle 11^+ \rangle$											
3744 ^c	$\langle 11^- \rangle$											
3950 ^f	$\langle 11^- \rangle$											

(continued)

¹¹²Pd₄₆

<i>E</i> [*]	<i>J</i> ^π	<i>L</i>	<i>σ</i> (t,p)	<i>T</i> _{1/2} or	Ref.	Branching ratios in percentage						
[keV]		(t,p)	μb/sr	<i>Γ</i> _{cm}		<i>E</i> _f [*] :	0.0	349	737	883	1097	1363
						<i>J</i> _f ^π :	0 ⁺	2 ⁺	⟨2⟩ ⁺	⟨4 ⁺ ⟩	⟨3 ⁺ ⟩	
4045 ^{<i>h</i>}												
4085					01Kr08							
4116 ^{<i>d</i>}	⟨12 [−] ⟩											
4321 ^{<i>a</i>}	⟨14 ⁺ ⟩											
4327 ^{<i>b</i>}	⟨13 ⁺ ⟩											
4391 ^{<i>e</i>}	⟨12 [−] ⟩											
4477 ^{<i>c</i>}	⟨13 [−] ⟩											
4747 ^{<i>f</i>}	⟨13 [−] ⟩											
4931 ^{<i>h</i>}												
5221 ^{<i>a</i>}	⟨16 ⁺ ⟩											
			72Ca10		Ref.							

Additional data on this isotope can be found in [01Kr08, 00KrZX, 00Wa14, 99Ho25, 93Ar05].
8 bands of levels (1-8 marked here a-h) are considered in [01Kr08].
Data for this isotope are considered in vol. LB I/18B.

Energy levels and branching ratios [96De55]. Part 2

¹¹²Pd₄₆

<i>E</i> [*]	<i>J</i> ^π			Branching ratios in percentage			
		<i>E</i> _f [*] :	1369	1551	1759.7	2195.3	2355.0
[keV]		<i>J</i> _f ^π :		⟨6 ⁺ ⟩			
2755.7(3) ^{<i>f</i>}	⟨4⟩		5(1)	3.6(6)	2.9(6)	75(6)	6.3(8)