

Energy levels and branching ratios [00Ta03].

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E^*	$2J^\pi$	L	σ (τ ,d)	C^2S	C^2S	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(τ ,d)	$\mu\text{b/sr}$	(τ ,d)	<i>theor</i>	Γ_{cm}		E_{f}^* : $2J_{\text{f}}^\pi$:	0.0 5 ⁺	95.7 1 ⁺	133 7 ⁺	176 3 ⁺	253 3 ⁺
0.0	5 ⁺	2	1870	0.30	0.28	2.12(1) h	79Sz05						
95.71(10)	1 ⁺	0	460	0.12	0.09	8.3(4) ns	79Sz05	100					
132.81(10)	7 ⁺	4	280	0.54	0.32	0.35(2) ns	79Sz05	100					
175.84(11)	3 ⁺	2	220	0.07	0.08	0.32(2) ns	79Sz05	64(10)	36(3)				
252.73(9)	3 ⁺					55(15) ps		97	2.4(3)			0.6(1)	
310.58(10)	5 ⁺					0.13(3) ns		66(6)	7.0(9)	13(2)	8(1)	6.4(5)	
433.56(13)	$\langle 9 \rangle^+$					9.6(4) ns		29(2)		71(5)			
445.35(11)	$\langle 7 \rangle^+$					<0.1 ns		99(9)					0.7(2)
529.30(13)	$\langle 9 \rangle^+$					<0.1 ns		59(8)		38(3)			
649.85(13)	$\langle 9 \rangle^+$					<0.1 ns		88(9)		6(3)			
748.26(16)	$\langle 11 \rangle^+$												
801.5(4)	$\langle 11^+ \rangle$										88(10)		
811.67(13)	$\langle 11 \rangle^-$	5	450	0.51	0.39	0.190(7) ns	79Sz05						
906.00(19)								38(6)		62(9)			
930.77(21)	3 ⁺ ,5 ⁺	2	1530	0.2,0.5	0.07		79Sz05	83(12)					
938.20(16)	3 ⁺ ,5 ⁺	2	1720	0.3,0.2			79Sz05	17(4)	53(6)	5(2)	20(3)	5(1)	
961.99(17)	1 ⁺ –5 ⁺	0	incl	0.20	0.10		79Sz05	19(3)	59(8)				
1006.53(17)	3 ⁺ ,5 ⁺	2	190	0.05			79Sz05	15(3)	17(3)				52(6)
1031.3(3)	$\langle 11 \rangle^+$												
1035.33(15)	3 ⁺ ,5 ⁺	2	220	0.05			79Sz05	47(6)	17(3)	5(1)			25(3)
1046.31(21)								74(9)		14(4)			
1076.81(18)	$\langle 13 \rangle^+$												
1077.47(16)	3 ⁺ ,5 ⁺							18(4)	20(4)	33(6)			17(3)
1094.16(21)								28(6)			13(2)		11(11)
1113(6)	3 ⁺ ,5 ⁺	$\langle 2 \rangle$	90	0.03			79Sz05						
1129.44(18)										81(11)			
1134.0(4)	$\langle 13 \rangle^+$												
1140(6)	3 ⁺ ,5 ⁺	2	310	0.07			79Sz05						
1186.31(21)								67(10)				24(5)	
1239.71(24)	$\langle 15 \rangle^-$					<0.1 ns							
1254.58(22)								22(7)		19(4)			
1276.56(13)	3 ⁺ ,5 ⁺	2	130	0.03			79Sz05	7(1)	14(2)				45(5)
1302.6(3)													
1326.2(3)	$\langle 11^- \rangle$					58(12) ps							
1339.32(18)								78(11)					
1385(6)	3 ⁺ ,5 ⁺	2	80	0.02			79Sz05						
1435.24(20)	$\langle 15 \rangle^+$												
1466(6)	1 ⁺	0	430	0.12			79Sz05						
1557(6)	1 ⁺	0	400	0.11			79Sz05						
1558.5(3)									18(3)			43(7)	
1575.2(5)	$\langle 15^+ \rangle$												
1607(6)	3 ⁺ ,5 ⁺	2	440	0.1			79Sz05						
1679.94(25)													44(6)
1721.7(4)	$\langle 13^- \rangle$												
1746.8(4)	$\langle 15^+ \rangle$												

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E^*	$2J^\pi$	L	σ (τ, d)	C^2S	C^2S	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(τ, d)	$\mu b/sr$	(τ, d)	<i>theor</i>	Γ_{cm}		E_f^* : $2J_f^\pi$:	0.0 5 ⁺	95.7 1 ⁺	133 7 ⁺	176 3 ⁺	253 3 ⁺
1749(6)	X ⁺	0+2	320	≈ 0.1			79Sz05						
1775(6)	3 ⁺ , 5 ⁺	2	140	0.04			79Sz05						
1780.9(4)	$\langle 19 \rangle^-$					<0.1 ns							
1793.45(21)	3 ⁺ , 5 ⁺	2	160	0.04			79Sz05						56(8)
1813.75(22)	$\langle 17 \rangle^+$					<0.1 ns							
1847.0(7)													
1852(8)	3 ⁺ , 5 ⁺	2	150	0.04			79Sz05						
1864.4(5)	$\langle 17 \rangle^+$					<0.1 ns							
1885(8)	1 ⁺	0	310	0.08			79Sz05						
0+X													
1907.65(22)												26(5)	26(9)
1919(8)	3 ⁺ , 5 ⁺	2	190	0.05			79Sz05						
1964.57(20)	3 ⁺ , 5 ⁺	2	60	0.02			79Sz05			11(3)			
2022.9(3)	3 ⁺ , 5 ⁺							34(9)	43(9)	23(6)			
2039(8)	3 ⁺ , 5 ⁺	2	50	0.02			79Sz05						
2076.86(16)								12(3)				4(1)	3(1)
2080(8)	1 ⁺	0	280	0.09			79Sz05						
2132.1(4)	$\langle 15^- \rangle$												
2188.33(23)									32(10)			49(10)	
2201.7(11)													
2218.2(3)	$\langle 19 \rangle^+$					<0.1 ns							
2220.49(18)											35(7)		
2223.69(22)												30(6)	
2286.1(7)													
2350(8)	3 ⁺ , 5 ⁺	2	90	0.03			79Sz05						
2353.0(3)	$\langle 21 \rangle$					80(12) ns							
2375(8)	3 ⁺ , 5 ⁺	2	80	0.03			79Sz05						
2376.9(4)						9.0(15) μs							
495.0+X													
2426.1(5)	$\langle 23 \rangle^-$					<0.1 ns							
2441.0(6)	$\langle 19^+ \rangle$												
2465.5(4)	3 ⁺ , 5 ⁺	2	70	0.02			79Sz05			31(7)			69(17)
2569.9(5)	$\langle 17^- \rangle$												
2588.90(18)								17(4)	5(1)			13(2)	14(4)
2621.9(5)	$\langle 19^+ \rangle$												
2641.8(3)	$\langle 21^+ \rangle$												
2684.9(11)													
2689.91(25)								5(5)				34(9)	
2728.9(5)	$\langle 21^+ \rangle$												
2739.20(23)									56(8)				6.4(13)
2762(8)	1 ⁺	0	120	0.03			79Sz05						
2777.0(9)													
2780.74(20)												9(3)	20(5)
2797.57(21)								27(4)			5(1)	24(4)	33(4)
2809.9(4)	3 ⁺ , 5 ⁺								19(6)	31(8)	28(13)		

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E^*	$2J^\pi$	L	σ (τ ,d)	C^2S	C^2S	$T_{1/2}$ or Ref.	Branching ratios in percentage					
[keV]		(τ ,d)	μ b/sr	(τ ,d)	<i>theor</i>	Γ_{cm}	E_{f}^* : $2J_{\text{f}}^\pi$:	0.0 5 ⁺	95.7 1 ⁺	133 7 ⁺	176 3 ⁺	253 3 ⁺
2822.3(4)										48(9)		52(9)
2830.6(3)								31(8)		47(9)		22(6)
2847.5(3)								11(4)	25(6)		31(8)	
2858.9(11)												
2892.8(3)										24(5)		
2904.5(3)									9(3)		9(4)	26(5)
2934(8)												
2994.1(3)								8(3)			8(3)	
3023.5(6)	$\langle 19^- \rangle$											
1124.0+X												
3067.98(22)												5(2)
3084.8(4)	$\langle 23^+ \rangle$											
3097.3(4)								8(6)		60(12)		
3105.6(6)	$\langle 23^+ \rangle$											
3112.7(3)										7(2)	12(4)	
3158.1(4)										16(6)		
3158.9(15)												
3160.0(3)								19(4)			6(2)	
3166.73(20)									5(1)	8(3)		
3194.32(19)												9(3)
3229.8(3)								11(8)		11(8)		33(11)
3248.5(6)												
3272.0(13)												
3273.5(5)	$\langle 27^- \rangle$											
3281.1(11)												
3353.9(15)												
3398.49(23)												12(3)
3438.6(8)												
3471.9(12)												
3487.2(9)	$\langle 21^- \rangle$											
3496.9(12)	$\langle 25^+ \rangle$											
3511.3(6)	$\langle 23^+ \rangle$											
3518.2(6)	$\langle 23^+ \rangle$											
3533.1(4)	$\langle 25^+ \rangle$											
3583.4(6)	$\langle 25^+ \rangle$											
3604.1(11)												
3638.9(12)												
3677.1(7)												
3684.1(11)												
3704.9(6)	$\langle 25^+ \rangle$											
3763.2(6)	$\langle 27^+ \rangle$											
1868.0+X												
3929.1(15)												
3965.6(5)	$\langle 27^+ \rangle$											
4006.6(6)	$\langle 27^+ \rangle$											

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E^*	$2J^\pi$	L	σ (τ, d)	C^2S	C^2S	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(τ, d)	$\mu b/sr$	(τ, d)	<i>theor</i>	Γ_{cm}		E_f^* :	0.0	95.7	133	176	253
								$2J_f^\pi$:	5 ⁺	1 ⁺	7 ⁺	3 ⁺	3 ⁺
4096.9(18)													
4098.9(15)													
4164.4(6)	$\langle 31 \rangle^-$												
4233.9(15)	$\langle 29^+ \rangle$												
4322.1(6)	$\langle 29^+ \rangle$												
4377.1(11)	$\langle 29^+ \rangle$												
4381.5(12)													
4436.5(12)													
4531.1(12)													
2705.0+X													
4635.9(15)													
4662.9(18)													
4676.8(6)	$\langle 31^+ \rangle$												
4921.9(21)													
5001.5(6)	$\langle 33^+ \rangle$												
5040.8(6)	$\langle 35 \rangle^-$												
5255.5(15)													
5338.3(6)	$\langle 35^+ \rangle$												
5432.6(6)	$\langle 39^- \rangle$					263(22) ps							
5655.7(6)	$\langle 37^+ \rangle$												
6245.4(6)	$\langle 41^- \rangle$												
6537.9(6)	$\langle 43^- \rangle$												
6793.2(6)	$\langle 41^+ \rangle$												
7206.0(6)	$\langle 43^- \rangle$												
7446.5(6)	$\langle 45 \rangle^+$												
7516.0(6)	$\langle 47^- \rangle$												
8135.2(6)	$\langle 49^+ \rangle$												
8776.2(7)	$\langle 51 \rangle$												
8895.2(7)	$\langle 51^- \rangle$												
9030.6(7)	$\langle 53 \rangle$												
9239.2(7)	$\langle 55^- \rangle$												
9501.0(7)													
10283.8(7)													
10471.7(7)													
10632.3(7)													
10911.9(7)													
11142.8(7)													
		79Sz05	79Sz05	79Sz05	79Sz05		Ref.						

Additional data on this isotope can be found in [93Pa16, 92Li01, 91Li18].

Six bands of levels with spins up to $2J=45$ were suggested in [92Li01].

Energy levels and branching ratios [00Ta03]. Part 2

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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	311 5 ⁺	434 (9) ⁺	445.3 (7) ⁺	529.3 (9) ⁺	649.8 (9) ⁺	748.3 (11) ⁺	801.5 (11 ⁺)	811.7 (11) ⁻	906.0	930.8 3 ⁺ ,5 ⁺
529.30(13)	(9) ⁺				2.7(5)							
649.85(13)	(9) ⁺				5.8(14)	<0.6						
748.26(16)	(11) ⁺			100								
801.5(4)	(11 ⁺)					12(4)						
811.67(13)	(11) ⁻					26(3)	74(4)					
930.77(21)	3 ⁺ ,5 ⁺				17(2)							
961.99(17)	1 ⁺ -5 ⁺				22(7)							
1006.53(17)	3 ⁺ ,5 ⁺		17(2)									
1031.3(3)	(11) ⁺				100	x						
1035.33(15)	3 ⁺ ,5 ⁺		5									
1046.31(21)					12(1)							
1076.81(18)	(13) ⁺			17(3)				83(4)				
1077.47(16)	3 ⁺ ,5 ⁺					12(1)						
1094.16(21)				48(5)								
1129.44(18)			19(2)									
1134.0(4)	(13) ⁺					61(7)			39(1)			
1186.31(21)			9(1)									
1239.71(24)	(15) ⁻									100		
1254.58(22)					59(9)							
1276.56(13)	3 ⁺ ,5 ⁺		8(2)		17(2)		2.0(5)					
1302.6(3)			58(8)		42(8)							
1326.2(3)	(11 ⁻)			<18				100				
1339.32(18)					22(2)							
1435.24(20)	(15) ⁺							25(4)				
1558.5(3)					39(11)							
1575.2(5)	(15 ⁺)								100			
1679.94(25)			28(6)									
1793.45(21)	3 ⁺ ,5 ⁺		18(3)		22(4)							
1907.65(22)			19(3)	11(2)								
1964.57(20)	3 ⁺ ,5 ⁺		6.5(17)									
2076.86(16)			10(2)		32(5)					9(2)	20(4)	
2188.33(23)			20(5)									
2220.49(18)			11(2)	13(3)		8(2)				8(2)		
2223.69(22)					24(5)		24(5)					
2588.90(18)			14(4)									
2689.91(25)			9(2)	24(5)								
2739.20(23)			18(3)								4.5(10)	
2780.74(20)				14(4)								
2904.5(3)			55(12)									
2994.1(3)					43(8)							
3067.98(22)			6(2)	24(11)		26(6)	16(3)					
3112.7(3)					30(7)		23(6)					
3158.1(4)			16(6)									
3160.0(3)			3(1)				28(7)					
3166.73(20)					6(2)	43(8)						

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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		E_f^* : $2J_f^\pi$:	311 5^+	434 $\langle 9 \rangle^+$	445.3 $\langle 7 \rangle^+$	529.3 $\langle 9 \rangle^+$	649.8 $\langle 9 \rangle^+$	748.3 $\langle 11 \rangle^+$	801.5 $\langle 11 \rangle^+$	811.7 $\langle 11 \rangle^-$	906.0	930.8 $3^+, 5^+$
3229.8(3)						44(11)						
3398.49(23)					14(4)							

Energy levels and branching ratios [00Ta03]. Part 3

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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		E_f^* : $2J_f^\pi$:	938.2 $3^+, 5^+$	962.0	1006.5 $3^+, 5^+$	1031.3 $\langle 11 \rangle^+$	1035.3 $3^+, 5^+$	1076.8 $\langle 13 \rangle^+$	1077.5 $3^+, 5^+$	1094.2	1129.4	1134.0 $\langle 13 \rangle^+$
1276.56(13)	$3^+, 5^+$			8(2)								
1435.24(20)	$\langle 15 \rangle^+$							75(1)				
1679.94(25)										28(3)		
1721.7(4)	$\langle 13^- \rangle$								<29			
1746.8(4)	$\langle 15^+ \rangle$					100						x
1813.75(22)	$\langle 17 \rangle^+$							44(8)				
1864.4(5)	$\langle 17 \rangle^+$											100
1964.57(20)	$3^+, 5^+$				83(9)							
2076.86(16)				3(1)							6(2)	
2220.49(18)				13(4)					14(2)			
2223.69(22)				12(4)	11(2)							
2588.90(18)							23(3)				4(1)	
2689.91(25)											28(5)	
2739.20(23)			15(2)									
2780.74(20)									21(4)			
2797.57(21)				9(2)							2	
2892.8(3)									40(8)			
2994.1(3)											16(6)	
3067.98(22)									11(2)			
3166.73(20)			7(2)									
3194.32(19)							7(2)		10(3)			
3398.49(23)									31(6)			

Energy levels and branching ratios [00Ta03]. Part 4

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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		E_f^* : $2J_f^\pi$:	1186.3	1239.7 $\langle 15 \rangle^-$	1254.6	1276.6 $3^+, 5^+$	1302.6	1326.2 $\langle 11^- \rangle$	1339.3	1435.2 $\langle 15 \rangle^+$	1575.2 $\langle 15^+ \rangle$	1721.7 $\langle 13^- \rangle$
1721.7(4)	$\langle 13^- \rangle$							100		<14		
1780.9(4)	$\langle 19 \rangle^-$			100								
1793.45(21)	$3^+, 5^+$				5(1)							

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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	1186.3	1239.7 $\langle 15 \rangle^-$	1254.6	1276.6 $3^+, 5^+$	1302.6	1326.2 $\langle 11 \rangle^-$	1339.3	1435.2 $\langle 15 \rangle^+$	1575.2 $\langle 15 \rangle^+$	1721.7 $\langle 13 \rangle^-$
1813.75(22)	$\langle 17 \rangle^+$									56(6)		
1847.0(7)				100								
1907.65(22)						18(2)						
2132.1(4)	$\langle 15 \rangle^-$							<17		x		100
2201.7(11)				100								
2218.2(3)	$\langle 19 \rangle^+$									44(7)		
2286.1(7)				<67								
2441.0(6)	$\langle 19 \rangle^+$										100	
2569.9(5)	$\langle 17 \rangle^-$											<25
2588.90(18)			10(1)									
2780.74(20)									18(4)			
2809.9(4)	$3^+, 5^+$								22(6)			
2847.5(3)									33(8)			
2892.8(3)						35(5)						
2994.1(3)			24(6)									
3067.98(22)									11(3)			
3097.3(4)						32(8)						
3112.7(3)					28(7)							
3166.73(20)			26(5)									
3194.32(19)						11(2)	24(5)		8(2)			
3398.49(23)						28(6)						

Energy levels and branching ratios [00Ta03]. Part 5

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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	1746.8 $\langle 15 \rangle^+$	1780.9 $\langle 19 \rangle^-$	1793.4 $3^+, 5^+$	1813.7 $\langle 17 \rangle^+$	1847.0	1864.4 $\langle 17 \rangle^+$	0+X	1907.6	1964.6 $3^+, 5^+$	2076.9
2132.1(4)	$\langle 15 \rangle^-$					<33						
2218.2(3)	$\langle 19 \rangle^+$					56(6)						
2286.1(7)							100					
2426.1(5)	$\langle 23 \rangle^-$			100								
2621.9(5)	$\langle 19 \rangle^+$		100									
2641.8(3)	$\langle 21 \rangle^+$					58(5)						
2728.9(5)	$\langle 21 \rangle^+$							100				
2777.0(9)				<67								
3158.1(4)					68(16)							
3160.0(3)												44(7)
3166.73(20)											5(1)	
3194.32(19)										9(2)	21(3)	

Energy levels and branching ratios [00Ta03]. Part 6

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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		E_f^* : $2J_f^\pi$:	2132.1 $\langle 15^- \rangle$	2188.33	2218.2 $\langle 19^+ \rangle$	2220.5	2286.1	495.0+X	2426.1 $\langle 23^- \rangle$	2441.0 $\langle 19^+ \rangle$	2569.9 $\langle 17^- \rangle$	2621.9 $\langle 19^+ \rangle$
2353.0(3)	$\langle 21 \rangle$				100							
2376.9(4)					100							
2569.9(5)	$\langle 17^- \rangle$		100									
2641.8(3)	$\langle 21^+ \rangle$				42(5)							
2777.0(9)							100					
2780.74(20)						18(2)						
3084.8(4)	$\langle 23^+ \rangle$				54(8)							
3105.6(6)	$\langle 23^+ \rangle$									100		
3248.5(6)										100		
3273.5(5)	$\langle 27^- \rangle$								100			
3398.49(23)				16(4)								
3511.3(6)	$\langle 23^+ \rangle$											100
3518.2(6)	$\langle 23^+ \rangle$											100

Energy levels and branching ratios [00Ta03]. Part 7

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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		E_f^* : $2J_f^\pi$:	2641.8 $\langle 21^+ \rangle$	2684.9	2728.9 $\langle 21^+ \rangle$	2777.0	2858.9	3023.5 $\langle 19^- \rangle$	1124+X	3084.8 $\langle 23^+ \rangle$	3105.6 $\langle 23^+ \rangle$	3273.5 $\langle 27^- \rangle$
3084.8(4)	$\langle 23^+ \rangle$		46(8)									
3496.9(12)	$\langle 25^+ \rangle$				100							
3533.1(4)	$\langle 25^+ \rangle$		60(10)							40(10)		
3583.4(6)	$\langle 25^+ \rangle$				100							
3677.1(7)											100	
4164.4(6)	$\langle 31^- \rangle$											100

Energy levels and branching ratios [00Ta03]. Part 8

¹²¹I
53

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		E_f^* : $2J_f^\pi$:	3353.9	3438.6	3471.9	3496.9 $\langle 25^+ \rangle$	3511.3 $\langle 23^+ \rangle$	3518.2 $\langle 23^+ \rangle$	3533.1 $\langle 25^+ \rangle$	3583.4 $\langle 25^+ \rangle$	3604.1	3638.9
3704.9(6)	$\langle 25^+ \rangle$						62(12)	38(12)				
3763.2(6)	$\langle 27^+ \rangle$			<100						100		
4233.9(15)	$\langle 29^+ \rangle$				100							
4377.1(11)	$\langle 29^+ \rangle$								x			
4635.9(15)												100

Energy levels and branching ratios [00Ta03]. Part 9

¹²¹I₅₃

E^*	$2J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*:$ $2J_f^\pi:$	3677.1	3704.9 $\langle 25^+ \rangle$	1868+X	3965.6 $\langle 27^+ \rangle$	4006.6 $\langle 27^+ \rangle$	4096.9	4098.9	4164.4 $\langle 31^- \rangle$	4322.1 $\langle 29^+ \rangle$	4436.5
4006.6(6)	$\langle 27^+ \rangle$			100								
4322.1(6)	$\langle 29^+ \rangle$						100					
4531.1(12)			100									
4676.8(6)	$\langle 31^+ \rangle$										100	
4921.9(21)								100				
5040.8(6)	$\langle 35^- \rangle$									100		

Energy levels and branching ratios [00Ta03]. Part 10

¹²¹I₅₃

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	4676.8 (31 ⁺)	5001.5 (33 ⁺)	5040.8 (35) ⁻	5338.3 (35 ⁺)	5432.6 (39) ⁻	5655.7 (37 ⁺)	6245.4 (41) ⁻	6537.9 (43) ⁻	6793.2 (41 ⁺)	7206.0 (43) ⁻
5001.5(6)	(33 ⁺)		100									
5338.3(6)	(35 ⁺)			100								
5432.6(6)	(39) ⁻				100							
5655.7(6)	(37 ⁺)					100						
6245.4(6)	(41) ⁻						100					
6537.9(6)	(43) ⁻						39(1)		61(2)			
6793.2(6)	(41 ⁺)						63(4)	37(2)				
7206.0(6)	(43) ⁻								100			
7446.5(6)	(45) ⁺									44(2)	35(2)	20(1)
7516.0(6)	(47) ⁻									100		

Energy levels and branching ratios [00Ta03]. Part 11

¹²¹I₅₃

E^* [keV]	$2J^\pi$	Branching ratios in percentage									
		$E_f^*:$ $2J_f^\pi:$	7446.5 (45) ⁺	7516.0 (47) ⁻	8135.2 (49 ⁺)	8776.2 (51)	8895.2 (51) ⁻	9030.6 (53)	9239.2 (55) ⁻	9501.0	10632.3
8135.2(6)	(49 ⁺)		100								
8776.2(7)	(51)				100						
8895.2(7)	(51) ⁻			100							
9030.6(7)	(53)					100					
9239.2(7)	(55) ⁻						43(2)	57(3)			
9501.0(7)									100		
10283.8(7)									100		
10471.7(7)									100		
10632.3(7)									41(2)	59(3)	
10911.9(7)									100		
11142.8(7)									100		<5

Energy levels and branching ratios [94Ta10].

 $^{122}_{53}\text{I}$

E^*	J^π	$T_{1/2}$ or Γ_{cm}
[keV]		
0.0	1^+	3.63(6) m
53.114(15)	0,1	
61.625(4)	$0^+, 1^+$	7.4(3) ns
90.596(6)	$0^+ - 2^+$	1.9(3) ns
148.612(4)	$0^+, 1^+$	≤ 80 ps
163.066(7)	$1^+ - 3^+$	
175.574(10)		
279.428(9)		
350.052(8)	1^+	
0.0+X	$\langle 7^- \rangle$	
416.675(19)	1^+	80(8) μs
0.0+Z		
184.6+X	$\langle 8^- \rangle$	
274.1+X		
485.6+X	$\langle 9^- \rangle$	
625.7+X		
825.4+X	$\langle 10^- \rangle$	
1002.5+X		
1185.2+X	$\langle 11^- \rangle$	
1408.6+X		
1565.6+X	$\langle 12^- \rangle$	
1962.6+X	$\langle 13^- \rangle$	
2382.6+X	$\langle 14^- \rangle$	

Energy levels and branching ratios [94Ta10]. Part 2

 $^{122}_{53}\text{I}$

E^*	J^π	Branching ratios in percentage										
[keV]		E_f^* : J_f^π :	0.0 1^+	53.1 0,1	61.6 $0^+, 1^+$	90.6	148.6 $0^+, 1^+$	163.1	175.6	350.1 1^+	0.0+X $\langle 7^- \rangle$	185+X $\langle 8^- \rangle$
53.114(15)	0,1		100									
61.625(4)	$0^+, 1^+$		100									
90.596(6)	$0^+ - 2^+$		100									
148.612(4)	$0^+, 1^+$		97(4)			3.3(1)						
163.066(7)	$1^+ - 3^+$		37(2)	11(1)		52(4)						
175.574(10)			100									
279.428(9)								68(2)	32(2)			
350.052(8)	1^+		86(2)		4.5(1)	0.6(2)	1.3(2)	6.1(2)	1.6(1)			
416.675(19)	1^+		82(2)		11(2)	≈ 2		5.1(6)		1.16(14)		
184.6+X	$\langle 8^- \rangle$										x	
274.1+X											x	
485.6+X	$\langle 9^- \rangle$											x
825.4+X	$\langle 10^- \rangle$											x

Energy levels and branching ratios [94Ta10]. Part 3

¹²²I
53

E^*	J^π	Branching ratios in percentage								
[keV]		$E_f^*:$ $J_f^\pi:$	274+X	486+X $\langle 9^- \rangle$	626+X	825+X $\langle 10^- \rangle$	1003+X	1185+X $\langle 11^- \rangle$	1566+X $\langle 12^- \rangle$	1963+X $\langle 13^- \rangle$
625.7+X			x							
825.4+X	$\langle 10^- \rangle$			x						
1002.5+X					x					
1185.2+X	$\langle 11^- \rangle$			x		x				
1408.6+X							x			
1565.6+X	$\langle 12^- \rangle$							x		
1962.6+X	$\langle 13^- \rangle$							x	x	
2382.6+X	$\langle 14^- \rangle$									x

Energy levels and branching ratios [93Oh12].

¹²³I
53

E^*	$2J^\pi$	L	C^2S'	σ (τ ,d)	$S_{\tau d}$	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]		(τ ,d)	(τ ,d)	μ b/sr	$rel.$	Γ_{cm}		E_f^* : $2J_f^\pi$:	0.0 5 ⁺	138 7 ⁺	149 1 ⁺	178 $\langle 3 \rangle^+$
0.0	5 ⁺	2	2.4	950	1.0	13.232(6) h	79Sz05					
138.20(12)	7 ⁺	4	4.7	770	1.31		77Li10	100				
148.92(10)	1 ⁺	0	0.3	incl	0.34	2.35(3) ns	77Li10	100				
178.02(10)	$\langle 3 \rangle^+$	2	0.37	83	0.17	0.036(2) ns	77Li10	100	0.02(1)			
302.2(1)						0.8(1) ns		100				
330.27(10)	$\langle 3 \rangle^+$			17		42(13) ps	77Li10	99(6)	1.0(2)			
474.18(16)	$\langle 7 \rangle^+$							100				
552.30(13)	9 ⁺							38(4)	62(6)			
641.25(16)	9 ⁺					0.2(1) ns		51(5)	48(5)			
670.94(14)	9 ⁺							76(8)	21(2)			
766.5(3)								100				
794.00(16)	11 ⁺								93(8)			
943.42(16)	11 ⁻	5	4.7	180	1.24	0.2(1) ns	77Li10					
972.4(3)	11 ⁺											
1011.1(1)	$\langle 3 \rangle^+$	2	1.6	740	1.30		77Li10	61(7)			5(1)	6(1)
1048.7(1)	1 ⁺	0	0.38	1100	0.48		77Li10	4.5(5)			80(8)	10(2)
1080.3(11)	$\langle 11^+ \rangle$											
1113.1(1)	$\langle 1,3 \rangle$							55(5)			19(2)	11(1)
1153.4(3)	$\langle 3 \rangle^+$	2	1.5	430	0.78		77Li10	53(5)			39(5)	
1156.3(2)	$\langle 13^+ \rangle$											
1189.9(3)	1 ⁺ -5 ⁺							31(3)			43(6)	
1242.4(2)	1 ⁺	0	0.07	190	0.11		77Li10	3(3)			77(7)	18(2)
1271(5)				40			77Li10					
1310.1(1)	$\langle 3 \rangle^+$	2	0.18	66	0.116		77Li10	23(2)			18(2)	10(1)
1315.5(3)	13 ⁺											
1338(3)	1 ⁺	0		48	0.010		77Li10					
1368(3)	3 ⁺ ,5 ⁺	2	0.11	50	0.1,0.04		77Li10					
1390.8(1)	1 ⁺ -5 ⁺			41			77Li10	9(1)			34(8)	

(continued)

¹²³I
53

E^*	$2J^\pi$	L	C^2S'	σ (τ, d)	$S_{\tau d}$	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]		(τ, d)	(τ, d)	$\mu b/sr$	<i>rel.</i>	Γ_{cm}		E_f^* : $2J_f^\pi$:	0.0 5 ⁺	138 7 ⁺	149 1 ⁺	178 (3) ⁺
1440(5)				28			77Li10					
1453.0(3)	15 ⁻											
1493(3)	1 ⁺	0	0.11	350	0.168		77Li10					
1576.5(4)	(15 ⁺)											
1583(3)	3 ⁺ , 5 ⁺	2	0.11	53	0.1, 0.04		77Li10					
1602.5(4)	(15 ⁺)											
1607.1(4)												
1629(5)				29			77Li10					
1632.4(4)	(13 ⁻)											
1657.1(3)	(3) ⁺	2	0.14	49	0.068		77Li10		69(8)		26(3)	
1690.3(4)	15 ⁺											
1718(3)	3 ⁺ , 5 ⁺	2	0.26	120			77Li10					
1744(5)				25			77Li10					
1791.3(11)	(15 ⁺)											
1808(5)				14			77Li10					
1816.0(4)												
1864.9(1)	1 ⁺	0	0.22	670			77Li10		4(1)		14(2)	44(5)
1871.5(4)	(17 ⁺)											
1928(5)	X ⁺			140			77Li10					
1934.2(2)	1 ⁺ -5 ⁺	0	0.03				77Li10		35(4)		5(1)	15(1)
		+2	+0.1				77Li10					
1956.1(2)	(3) ⁺	2	0.10	42			77Li10		4.7(10)		60(6)	4.7(5)
1983(3)	3 ⁺ , 5 ⁺	2	0.14	74			77Li10					
2000.6(4)						0.4(1) ns						
2012(5)				43			77Li10					
2016.2(4)	(17 ⁺)											
2039.8(4)	(19 ⁻)											
2048(5)	1 ⁺	0	0.02	58			77Li10					
2062.5(1)									3.8(7)		6(1)	49(6)
2082.1(4)	(17 ⁺)											
2083(5)				32			77Li10					
2110(5)				32			77Li10					
2140(5)	X ⁽⁺⁾	(0+2)	0.01+0.1	53			77Li10					
2152.4(2)									1.6(11)		41(5)	30(5)
2201.3(2)									30(6)		30(3)	
2215(10)				35			77Li10					
2250.0(2)	(3) ⁺	2	0.10	43			77Li10		3(1)		35(4)	37(4)
2265.5(4)	(17 ⁻)											
2285.5(2)	1 ⁺	0	0.09	160			77Li10				13(3)	11(3)
2322.6(3)				48			77Li10				45(7)	24(4)
2327.4(4)				incl			77Li10		42(6)		48(6)	10(6)
2339.0(5)												
2360(6)												
2361.8(4)	(19 ⁺)											
2367.8(2)				57			77Li10		3(1)		11(2)	6(2)

(continued)

¹²³I
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E^* [keV]	$2J^\pi$	L (τ, d)	C^2S' (τ, d)	σ (τ, d) $\mu\text{b/sr}$	$S_{\tau d}$ <i>rel.</i>	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage				
								E_f^* : $2J_f^\pi$:	0.0 5 ⁺	138 7 ⁺	149 1 ⁺	178 $\langle 3 \rangle^+$
2389.4(3)	$\langle 3 \rangle^+$	2	0.19	80			77Li10		4(1)			33(8)
2421(5)	$3^+, 5^+$	$\langle 2 \rangle$	0.08	41			77Li10					
2455.5(5)	$\langle 1^+ \rangle$	$\langle 0 \rangle$	0.06	62			77Li10		35(6)		23(6)	18(5)
2466.1(5)	$\langle 19^+ \rangle$											
2477(5)	$3^+, 5^+$	2	0.14	74			77Li10					
2481.6(4)												
2515(8)	1 ⁺	0	0.04	68			77Li10					
2542(8)	$3^+, 5^+$	2	0.23, 0.2	92			77Li10					
2560.3(5)									75(13)		25(8)	
2580.0(5)									50(15)		50(15)	
2614.1(4)	$\langle 23^- \rangle$											
2659.9(4)	$\langle 21^+ \rangle$					27.2(15) ns						
2712.1(5)	$\langle 21^+ \rangle$											
2732(5)				85			77Li10					
2766(8)	$\langle 1^+ \rangle$	$\langle 0 \rangle$	0.04	73			77Li10					
2807(5)	$3^+, 5^+$	2	0.18, 0.1	87			77Li10					
2846(5)				59			77Li10					
2880(8)	1 ⁺	0	0.04	190			77Li10					
2947.6(5)	$\langle 21^- \rangle$											
2963(8)	$3^+, 5^+$	2	0.25, 0.2	110			77Li10					
3001(8)				100			77Li10					
3032(8)				64			77Li10					
3059(8)	1 ⁺	0	0.02	110			77Li10					
3145(8)				52			77Li10					
3178(8)	1 ⁺	0	0.03	160			77Li10					
3207(8)	1 ⁺	0	0.03	210			77Li10					
3255(8)				37			77Li10					
3286(8)				41			77Li10					
3309(8)	$\langle 1^+ \rangle$	$\langle 0 \rangle$	0.10	180			77Li10					
3512.4(5)	$\langle 27^- \rangle$											
12108(20)	1 ⁺					51(5) keV						
12266(20)	3 ⁺					33(5) keV						
13539(20)	$\langle 3^+, 5^+ \rangle$											
13669(20)	$\langle 3^+, 5^+ \rangle$											
13867(20)	$\langle 1 \rangle$					36(5) keV						
13975(20)	$\langle 3^- \rangle$					38(5) keV						
14073(20)	$\langle 3^- \rangle$					32(7) keV						
14123(20)	$\langle 7^- \rangle$					37(6) keV						
14174(20)	$\langle 3^- \rangle$					50(10) keV						
14469(20)	$\langle 1^-, 3^- \rangle$											
14659(20)												
14829(20)	$\langle 5^-, 7^- \rangle$											
14995(20)												
15799(20)												
			77Li10	77Li10	79Sz05		Ref.					

Energy levels and branching ratios [93Oh12]. Part 2

¹²³I
53

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	330 $\langle 3 \rangle^+$	474.2 $\langle 7 \rangle^+$	552.3 9 ⁺	641.2 9 ⁺	670.9 9 ⁺	794.0 11 ⁺	943.4 11 ⁻	972.4 11 ⁺	1011.1 $\langle 3 \rangle^+$	1048.7 1 ⁺
641.25(16)	9 ⁺			0.8(1)								
670.94(14)	9 ⁺			2.5(2)	0.8(1)							
794.00(16)	11 ⁺				7.4(7)							
943.42(16)	11 ⁻				15(2)		85					
972.4(3)	11 ⁺					100						
1011.1(1)	$\langle 3 \rangle^+$		28(2)									
1048.7(1)	1 ⁺		6(1)									
1080.3(11)	$\langle 11^+ \rangle$			100								
1113.1(1)	$\langle 1,3 \rangle$		15(2)									
1153.4(3)	$\langle 3 \rangle^+$		8(3)									
1156.3(2)	$\langle 13^+ \rangle$				87(9)			13(1)				
1189.9(3)	1 ⁺ -5 ⁺		26(3)									
1242.4(2)	1 ⁺		2.3(3)									
1310.1(1)	$\langle 3 \rangle^+$		49(6)									
1315.5(3)	13 ⁺					24(3)				76(8)		
1390.8(1)	1 ⁺ -5 ⁺		58(8)									
1453.0(3)	15 ⁻								100			
1576.5(4)	$\langle 15^+ \rangle$							100				
1602.5(4)	$\langle 15^+ \rangle$									100		
1632.4(4)	$\langle 13^- \rangle$								100			
1657.1(3)	$\langle 3 \rangle^+$		5.1(14)									
1690.3(4)	15 ⁺									24(2)		
1864.9(1)	1 ⁺		22(2)								2.1(4)	5(1)
1934.2(2)	1 ⁺ -5 ⁺		27(2)									
1956.1(2)	$\langle 3 \rangle^+$		28(2)									
2062.5(1)			11(1)									9(1)
2152.4(2)			27(3)									
2201.3(2)			40(7)									
2250.0(2)	$\langle 3 \rangle^+$		6(1)									21(2)
2285.5(2)	1 ⁺										24(3)	53(8)
2322.6(3)			31(4)									
2367.8(2)			79(10)									
2389.4(3)	$\langle 3 \rangle^+$		62(8)									
2455.5(5)	$\langle 1^+ \rangle$		23(6)									

Energy levels and branching ratios [93Oh12]. Part 3

¹²³I
53

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	1080.3 $\langle 11^+ \rangle$	1113.1 $\langle 1,3 \rangle$	1153.4 $\langle 3 \rangle^+$	1156.3 $\langle 13^+ \rangle$	1242.4 1 ⁺	1310.1 $\langle 3 \rangle^+$	1315.5 13 ⁺	1390.8	1453.0 15 ⁻	1576.5 $\langle 15^+ \rangle$
1607.1(4)									100			
1690.3(4)	15 ⁺								76(7)			

(continued)

¹²³I
53

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		E_f^* : $2J_f^\pi$:	1080.3 $\langle 11^+ \rangle$	1113.1 $\langle 1,3 \rangle$	1153.4 $\langle 3 \rangle^+$	1156.3 $\langle 13^+ \rangle$	1242.4 1^+	1310.1 $\langle 3 \rangle^+$	1315.5 13^+	1390.8	1453.0 15^-	1576.5 $\langle 15^+ \rangle$
1791.3(11)	$\langle 15^+ \rangle$		100									
1864.9(1)	1^+									8(1)		
1871.5(4)	$\langle 17^+ \rangle$					100						
1934.2(2)	$1^+_{-5^+}$						18(2)					
1956.1(2)	$\langle 3 \rangle^+$			1.9(2)	0.9(2)							
2016.2(4)	$\langle 17^+ \rangle$								50(5)			
2039.8(4)	$\langle 19^- \rangle$										100	
2062.5(1)				2.3(4)	6.8(7)		4.5(7)	4.5(7)		3.8(7)		
2082.1(4)	$\langle 17^+ \rangle$								30(3)			
2265.5(4)	$\langle 17^- \rangle$										100	
2466.1(5)	$\langle 19^+ \rangle$											100

Energy levels and branching ratios [93Oh12]. Part 4

¹²³I
53

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		E_f^* : $2J_f^\pi$:	1602.5 $\langle 15^+ \rangle$	1607.1	1690.3 15^+	1871.5 $\langle 17^+ \rangle$	2000.6	2016.2 $\langle 17^+ \rangle$	2039.8 $\langle 19^- \rangle$	2082.1 $\langle 17^+ \rangle$	2361.8 $\langle 19^+ \rangle$	2614.1 $\langle 23^- \rangle$
1816.0(4)				100								
2000.6(4)					100							
2016.2(4)	$\langle 17^+ \rangle$		50(5)									
2082.1(4)	$\langle 17^+ \rangle$				70(6)							
2339.0(5)							100					
2361.8(4)	$\langle 19^+ \rangle$				60(8)			40(4)				
2481.6(4)										100		
2614.1(4)	$\langle 23^- \rangle$								100			
2659.9(4)	$\langle 21^+ \rangle$										100	
2712.1(5)	$\langle 21^+ \rangle$					100						
2947.6(5)	$\langle 21^- \rangle$								100			
3512.4(5)	$\langle 27^- \rangle$											100

Energy levels and branching ratios [97Ii01].

¹²⁴I
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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 2^-	55.48 $\langle 3^+ \rangle$	105.40	123.04	150.55 $X^{(+)}$	163.39 $X^{(+)}$	169.59 $X^{(+)}$
0.0	2^-	4.1760(3) d								
55.48(5)	$\langle 3^+ \rangle$	52(5) ns			100					
105.40(25)						100				
123.04(6)	$\langle 1^-, 2^-, 3^- \rangle$	9.6(10) ns			100					

(continued)

¹²⁴I
53

E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}	Branching ratios in percentage							
			E_f^* : J_f^π :	0.0 2 ⁻	55.48 3 ⁺	105.40	123.04	150.55 X ⁽⁺⁾	163.39 X ⁽⁺⁾	169.59 X ⁽⁺⁾
150.55(9)	X ⁽⁺⁾				100					
163.39(9)	X ⁽⁺⁾				100					
169.59(15)	X ⁽⁺⁾				100					
184.20(7)	3 ⁻			69(4)			31(3)			
213.27(25)					x	x				
246.93(13)								100		
250.55(13)				68(11)					32(11)	
255.90(11)									93(10)	
265.96(10)				8(4)	92(6)					
275.39(16)							100			
287.37(23)		1.6(3) ns					x			
289.01(13)	4				75(6)			25(3)		
291.14(16)							100			
297.03(9)				60(10)			23(5)		2.6(12)	
300.6(3)						x				
336.79(15)										
345.56(21)					100					
353.55(19)					100					
361.91(14)				77(8)			23(6)			
369.60(14)				12(6)				88(18)		
380.17(13)				39(12)					26(8)	
397.1(5)		10.0(7) ns								
404.54(20)							100			
442.76(16)										
443.34(18)										58(16)
446.87(12)	3			92(9)						
448.72(18)					85(15)					
466.8(5)										
492.94(16)										
496.69(13)	2,4			15(7)						
543.40(17)										87(10)
591.7(3)										
596.38(16)				42(14)						
604.87(17)										
609.4(4)					100					
654.19(21)					45(23)					
664.86(22)				33(19)			39(14)			
765.1(4)										
781.72(18)										
909.7(4)										46(31)
926.07(21)										
985.4(6)										

Additional data on this isotope can be found in [97DaZY].

Energy levels and branching ratios [97Ii01]. Part 2

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E^* [keV]	J^π	$E_f^*:$ $J_f^\pi:$	184.20 $\langle 3^- \rangle$	213.27	246.93	Branching ratios in percentage						289.01 $\langle 4 \rangle$	297.03	300.6
255.90(11)			7(3)											
287.37(23)									x					
297.03(9)					14(2)									
300.6(3)				x										
336.79(15)							100							
380.17(13)						35(6)								
397.1(5)														x
442.76(16)			45(27)						55(18)					
443.34(18)										42(8)				
448.72(18)										15(8)				
466.8(5)								100						
492.94(16)									84(17)	16(7)				
496.69(13)	$\langle 2,4 \rangle$		38(4)										47(17)	
596.38(16)			34(6)										24(9)	
654.19(21)									55(9)					
664.86(22)									28(7)					
781.72(18)						60(21)								
926.07(21)									62(32)					

Energy levels and branching ratios [97Ii01]. Part 3

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E^* [keV]	J^π	$E_f^*:$ $J_f^\pi:$	336.79	353.55	361.91	Branching ratios in percentage						446.87 $\langle 3 \rangle$	492.94	496.69 $\langle 2,4 \rangle$
442.76(16)														
446.87(12)	$\langle 3 \rangle$		3.4(14)			4.7(17)								
543.40(17)					13(3)									
591.7(3)				100										
604.87(17)					53(27)								47(13)	
765.1(4)				46(16)								54(8)		
781.72(18)								16(7)						24(8)
909.7(4)					54(20)									
926.07(21)								11(8)	27(6)					

Energy levels and branching ratios [97Ii01]. Part 4

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E^* [keV]	J^π	E^*_f : J^π_f :	Branching ratios in percentage 591.7	596.38
654.19(21) 985.4(6)			<15	100

Energy levels and branching ratios [99Ka26].

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E^*	$2J^\pi$	L	σ (τ ,d)	C^2S'	L	S_N	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(τ ,d)	$\mu\text{b/sr}$	(τ ,d)	(α ,t)	$rel.$	Γ_{cm}		E_f^* : $2J_f^\pi$:	0.0 5 ⁺	113 7 ⁺	188 3 ⁺	243 1 ⁺	372 3 ⁺
0.0 ^b	5 ⁺	0	940	2.6	2	1.00	59.40(1) d	79Sz05						
113.543(21) ^c	7 ⁺	4	100	4.0	4	1.70	0.61(2) ns	77Li10	100					
188.416(10)	3 ⁺	2	80	0.30	2	0.14	0.34(1) ns	77Li10	100	0.22(1)				
243.381(11)	1 ⁺	0	590	0.35	0	0.41	0.23(1) ns	77Li10	82(16)			18.4(5)		
371.99(4)	3 ⁺	2	73	0.20	2	0.07		77Li10	93(2)	7.2(8)				
453.830(24)	3 ⁺								98(2)	0.42(5)			1.57(6)	
536.11(13) ^a	7 ⁺				4	0.04		79Sz05	100					
595.54(12) ^b	9 ⁺							01Sh02	17	83				
625(4)	X ⁽⁺⁾				2,4			79Sz05						
704.32(12)	9 ⁺								80	17				
768.09(13) ^c	11 ⁺							01Sh02		96				
935.7(3) ^g	9 ⁺				4,2		0.2(1) ns	79Sz05		100				
1007.6(1)	3 ⁺	2	320	0.96	2	0.70		77Li10	47(1)			7.1(3)	2.2(5)	≈35
1066(3)	3 ⁺ ,5 ⁺	2	600	1.3				77Li10						
1082.8(8)												100		
1084.9(1) ^e	⟨11⟩ [−]	5	640	0.3*	5	<1.4	≤0.2 ns	77Li10						
1089.8(1)	⟨1⟩ ⁺	0	incl	3.3				77Li10	3.5(1)			31(1)	59(2)	0.7(1)
1150(5)			12					77Li10						
1173.1(2) ^a	⟨11 ⁺ ⟩							01Sh02						
1180.9(1)	3 ⁺								68(1)			10.2(2)	15.1(3)	0.7(1)
1198(3)	3 ⁺ ,5 ⁺	2	170	0.37	2	0.2*		77Li10						
1203.6(2) ^b	13 ⁺							01Sh02						
1254(5)	7 ⁺ ,9 ⁺	4	31		4	0.22		79Sz05						
1264.0(1)	⟨1,3⟩											72(2)	27.8(6)	
1269.8(4) ^g	11 ⁺							01Sh02						
1289(3)			15					77Li10						
1337(3)	3 ⁺ ,5 ⁺	2	190	0.47	2	0.28*		77Li10						
1365(6)														
1381.6(1)	1 ⁺ ,3 ⁺	0	580	0.24				77Li10	0.41(6)			18.0(4)	82(2)	
1392(6)	3 ⁺ ,5 ⁺	2		0.48	2	0.18		77Li10						
1442.8(1)	3 ⁺	2	95	0.30	2	0.1		79Sz05	23(2)			5(2)	13(1)	59(4)
1481(3)			11					77Li10						
1512(3)			15					77Li10						
1543(5)			23					77Li10						

(continued)

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E^* [keV]	$2J^\pi$	L (τ, d)	σ (τ, d) $\mu\text{b/sr}$	C^2S' (τ, d)	L (α, t)	S_N <i>rel.</i>	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage					
									E_f^* : $2J_f^\pi$:	0.0 5 ⁺	113 7 ⁺	188 3 ⁺	243 1 ⁺	372 3 ⁺
1554.5(2) ^c	15 ⁺							01Sh02						
1562.4(3)	1,3								23(3)				24(5)	
1580(5)	$\langle 1^+ \rangle$	$\langle 0 \rangle$	46					77Li10						
1610(5)	$\langle 1^+ \rangle$	$\langle 0 \rangle$	29					77Li10						
1616.6(4) ^g	13 ⁺							01Sh02						
1663(5)	3 ⁺ , 5 ⁺	2	94	0.20				77Li10						
1664.6(2) ^e	$\langle 15 \rangle^-$							01Sh02						
1690(5)	1 ⁺	0	300	0.13				77Li10						
1735(5)	7 ⁺ , 9 ⁺	4	31					77Li10						
1779(5)	X ⁺	0	120	0.07				77Li10						
1827(8)	X ⁺	[2]	57	0.18				77Li10						
1868.7 ^f	15 ⁻							01Sh02						
1870.9(3) ^a	$\langle 15 \rangle$							01Sh02						
1887.7(3) ^b	17 ⁺							01Sh02						
1916(5)	1 ⁺	0	510	0.20				77Li10						
1939(5)	3 ⁺ , 5 ⁺	2	220	0.60*				77Li10						
1978(5)	3 ⁺ , 5 ⁺	2	33	0.10*				77Li10						
1997.2(5) ^g	$\langle 15^+ \rangle$							01Sh02						
2031(5)	3 ⁺ , 5 ⁺	2	46	0.12*				77Li10						
2069(5)	1 ⁺	0	71	0.03				77Li10						
2130.4(3)	X ⁺													
2142(5)	1 ⁺	0	160	0.07				77Li10						
2183(5)	1 ⁺	0	140	0.07				77Li10						
2221.7								01Sh02						
2231(5)	$\langle 3^+, 5^+ \rangle$	$\langle 2 \rangle$	95	0.25*				77Li10						
2278.2(4) ^e	$\langle 19 \rangle^-$							01Sh02						
2302(5)	$\langle 3^+, 5^+ \rangle$	$\langle 2 \rangle$	44	0.09*				77Li10						
2350.6(3) ^d	17						1.6(3) ns	01Sh02						
2354(5)	$\langle 3^+, 5^+ \rangle$	$\langle 2 \rangle$	47	0.10*				77Li10						
2396.8(3) ^g	$\langle 17^+ \rangle$							01Sh02						
2399(5)	1 ⁺	0	90	0.03				77Li10						
2430.4(5)														
2438(5)	3 ⁺ , 5 ⁺	2	21	0.07*				77Li10						
2462.5(4) ^f	$\langle 17^- \rangle$							01Sh02						
2472(5)	1 ⁺	0	97	0.03				77Li10						
2502.5(4) ^c	19 ⁺							01Sh02						
2517(8)	3 ⁺ , 5 ⁺	2	51	0.12*				77Li10						
2553(8)	$\langle 3^+, 5^+ \rangle$	$\langle 2 \rangle$	71	0.16*				77Li10						
2554.6 ^d	19 ⁽⁺⁾							01Sh02						
2586.7(3)							≤ 0.2 ns							
2589(8)			78					77Li10						
2624.2								01Sh02						
2654(5)	1 ⁺	0	210	0.08				77Li10						
2694(8)	1 ⁺	0	120	0.04				77Li10						
2713.1 ^a	$\langle 19^+ \rangle$							01Sh02						

(continued)

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E^* [keV]	$2J^\pi$	L (τ, d)	σ (τ, d) $\mu\text{b/sr}$	C^2S' (τ, d)	L (α, t)	S_N <i>rel.</i>	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage					
									E_f^* : $2J_f^\pi$:	0.0 5 ⁺	113 7 ⁺	188 3 ⁺	243 1 ⁺	372 3 ⁺
2731(8)	3 ⁺ , 5 ⁺	2	140	0.34*				77Li10						
2737.7(4) ^b	21							01Sh02						
2784.1(5) ^e	$\langle 23^- \rangle$							01Sh02						
2791.1(3) ^d	21 ⁽⁺⁾						0.3(1) ns	01Sh02						
2796(8)			50					77Li10						
2814.9 ^g	$\langle 19^+ \rangle$							01Sh02						
2838(8)			50					77Li10						
2884(8)			58					77Li10						
2919.2								01Sh02						
2915.1								01Sh02						
2932(8)	1 ⁺	0	200	0.05				77Li10						
2982(8)	1 ⁺	0	460	0.14				77Li10						
3026(8)			270					77Li10						
3060(8)	1 ⁺	0	280	0.06				77Li10						
3060.0(5)														
3073.0								01Sh02						
3099.1(4) ^d	23 ⁽⁺⁾							01Sh02						
3100(8)			180					77Li10						
3149(8)	1 ⁺	0	160	0.05				77Li10						
3158.9								01Sh02						
3195(10)			70					77Li10						
3241(10)			120					77Li10						
3258.9(5) ^g	$\langle 21^+ \rangle$							01Sh02						
3284(10)			120					77Li10						
3293.5(4)														
3302.5 ^f								01Sh02						
3312(10)			140					77Li10						
3343(10)			84					77Li10						
3375(10)			55					77Li10						
3413(10)			56					77Li10						
3447(10)			32					77Li10						
3459.9								01Sh02						
3474(10)			36					77Li10						
3497.0(5) ^d	$\langle 25^+ \rangle$							01Sh02						
3500(10)			62					77Li10						
3547(10)			76					77Li10						
3574.8 ^e	27 ⁻							01Sh02						
3585(10)	1 ⁺	0	89	0.03				77Li10						
3621(10)	1 ⁺	0	89	0.03				77Li10						
3654(10)			72					77Li10						
3674.5(6)	27													
3685(10)			72					77Li10						
3728(10)	1 ⁺	0	78	0.03				77Li10						
3768(10)			53					77Li10						
3775.0(6)														

(continued)

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E^* [keV]	$2J^\pi$	L (τ ,d)	σ (τ ,d) $\mu\text{b/sr}$	C^2S' (τ ,d)	L (α ,t)	S_N <i>rel.</i>	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage					
									E_f^* :	0.0	113	188	243	372
									$2J_f^\pi$:	5 ⁺	7 ⁺	3 ⁺	1 ⁺	3 ⁺
3800(10)			52					77Li10						
3829(10)	1 ⁺	0	140	0.04				77Li10						
3859(10)	1 ⁺	0	66	0.03				77Li10						
3868.2 ^b	$\langle 25^+ \rangle$							01Sh02						
3894(10)	1 ⁺	0	96	0.03				77Li10						
3930(10)			49					77Li10						
3964(10)			53					77Li10						
4006(10)			69					77Li10						
4042(10)			80					77Li10						
4082(10)			80					77Li10						
13099(20)	1 ⁺													
13134(20)	3 ⁺													
13759(20)	$\langle 5 \rangle^+$													
13837(20)	$\langle 5^+ \rangle$													
14130(20)														
14230(20)														
14348(20)														
14638(20)	$\langle 1^+ \rangle$													
14918(20)	$\langle 7 \rangle^-$													
15032(20)	$\langle 3 \rangle^-$													
15076(20)	7 ⁻													
15122(20)	$\langle 1 \rangle^-$													
15190(20)	7 ⁻													
15361(20)	3 ⁻													
15608(20)														
15818(20)														
15975(20)														
16145(20)														
			77Li10	77Li10	79Sz05	79Sz05		Ref.						

Additional data on this isotope can be found in [01Sh42, 99Sh19].

* If $2d_{3/2}$ for $L=2$ (otherwise $d_{5/2}$), $1g_{7/2}$ for $L=4$ or $1h_{11/2}$ for $L=5$.

Value 1.00 for the ground state [79Sz05] means that it was used for the normalization.

5 bands of levels (No 1-7 marked here a-g, respectively) were suggested in [01Sh02].

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

Energy levels and branching ratios [99Ka26]. Part 2

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E^* [keV]	$2J^\pi$	Branching ratios in percentage											
		E_f^* :	453.8	536.1	595.5	704.32	768.09	935.7	1084.88	1173.10	1203.65	1269.8	
		$2J_f^\pi$:	3 ⁺	7 ⁺	9 ⁺	9 ⁺	11 ⁺	$\langle 9 \rangle$	$\langle 11 \rangle^-$	$\langle 11^+ \rangle$	13 ⁺	$\langle 11 \rangle$	
704.32(12)	9 ⁺			3									
768.09(13) ^c	11 ⁺				4.1								

(continued)

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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	453.8 3 ⁺	536.1 7 ⁺	595.5 9 ⁺	704.32 9 ⁺	768.09 11 ⁺	935.7 ⟨9⟩	1084.88 ⟨11⟩ ⁻	1173.10 ⟨11 ⁺ ⟩	1203.65 13 ⁺	1269.8 ⟨11⟩
1007.6(1)	3 ⁺		9.0(3)									
1084.9(1) ^e	⟨11⟩ ⁻				5	95						
1089.8(1)	⟨1⟩ ⁺		≈6									
1173.1(2) ^a	⟨11 ⁺ ⟩			87		13						
1180.9(1)	3 ⁺		5.5(1)									
1203.6(2) ^b	13 ⁺				68		32					
1269.8(4) ^g	11 ⁺							100				
1554.5(2) ^c	15 ⁺						100					
1562.4(3)	1,3		54(11)									
1616.6(4) ^g	13 ⁺											100
1664.6(2) ^e	⟨15⟩ ⁻							100				
1870.9(3) ^a	⟨15⟩								100			
1887.7(3) ^b	17 ⁺										100	

Energy levels and branching ratios [99Ka26]. Part 3

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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	1554.52 15	1616.6 ⟨13⟩	1664.58 ⟨15⟩ ⁻	1887.7 17 ⁺	1997.2	2130.4 X ⁺	2278.2 ⟨19⟩ ⁻	2350.6	2586.7	2737.7 21
1997.2(5) ^g	⟨15 ⁺ ⟩			100								
2130.4(3)	X ⁺					100						
2278.2(4) ^e	⟨19⟩ ⁻				100							
2350.6(3) ^d	17		57		43							
2396.8(3) ^g	⟨17 ⁺ ⟩						100					
2430.4(5)								100				
2462.5(4) ^f	⟨17 ⁻ ⟩				100							
2502.5(4) ^c	19 ⁺		100									
2586.7(3)										100		
2737.7(4) ^b	21					100						
2784.1(5) ^e	⟨23 ⁻ ⟩							100				
2791.1(3) ^d	21 ^{⟨+⟩}										100	
3060.0(5)												100

Energy levels and branching ratios [99Ka26]. Part 4

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E^* [keV]	$2J^\pi$	$E_f^*:$ $2J_f^\pi:$	2783.9 $\langle 23^- \rangle$	Branching ratios in percentage				3497.0
				2790.9	3060 1^+	3099.0		
3099.1(4) ^d	$23^{(+)}$			100				
3258.9(5) ^g	$\langle 21^+ \rangle$				100			
3293.5(4)				x		x		
3497.0(5) ^d	$\langle 25^+ \rangle$					100		
3674.5(6)	27		100					
3775.0(6)								100

Energy levels and branching ratios [02Ka66, 93Mi12].

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E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}	$E_f^*:$ $J_f^\pi:$	0.0 2^-	56.4 1^+	110.8	122.2	166.0	179.0	204.3 X^+
0.0	2^-	12.93(5) d								
56.43	1^+	15.9(14) ns		100						
110.85(4)	1^+-3^+	56(3) ns		82(4)	18(3)					
122.17(5)	1^--3^-	13.5(10) ns		100						
146(2)										
166.04(8)				67(11)	33(9)					
178.96(6)				15(3)				85(42)		
204.28(6)	X^+					100				
222.62(4)	1^+-3^+			25(9)	62(11)	12(2)				
227.78(5)	$1^+, 2^+$			3.7(11)	76(13)	20.2(8)				
237.39(6)	1^+-3^+			22(5)				78(2)		
244.79(7)								100		
311.28(6)	0^+-2^+				52(8)					31(2)
331.28(7)	X^-							30(3)		
338.49(9)	X^-							100		
343.46(5)	X^-			100						
348.43(6)	$1^+, 2^+$				78(12)					
360(10)				x						
365.49(7)						37(16)				
369.57(8)	X^-							78(10)		
373.76(6)	X^+					6(3)				
393.79(6)					47(13)					18(6)
397.56(8)	$\langle 1-3 \rangle^-$			80(8)				20(5)		
410(3)										
422.23(7)										
434.22(5)	X^+				50(8)	28(6)				
448(2)										
458.04(13)								100		
465(10)				x						
478.99(7)	$\langle 1, 2 \rangle^+$				39(6)		4(4)	29(4)		

(continued)

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E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}	Branching ratios in percentage							
			$E_f^*:$ $J_f^\pi:$	0.0 2 ⁻	56.4 1 ⁺	110.8	122.2	166.0	179.0	204.3 X ⁺
491.03(11)	X ⁺				100					
506.96(14)										
513.49(8)	X ⁺					54(12)				46(8)
535.62(8)	X ⁺				94(8)					
544.65(8)	X ⁺									
550(10)				x						
566.79(10)										
570.36(7)						43(2)				
580.64(13)								100		
591.34(7)										
617.88(11)	X ⁺					54(16)				
658.29(12)										
676.68(8)	X ⁺					29(9)				
687.92(9)	1 ⁻ -3 ⁻			75(13)						
703.14(7)	X ⁺									
714.70(7)				12(6)				11(5)	76(6)	
748.69(12)										
800.09(13)										
812.79(11)										
819.48(12)										
868.99(9)										
890.29(12)										
944.67(21)										
956.6(12)										100
979.1(3)										
1000.19(12)										
1002.57(11)										
1082.69(14)										
1102.16(13)										

Additional data on this isotope can be found in [97DaZY].

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

Energy levels and branching ratios [02Ka66, 93Mi12]. Part 2

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E^*	J^π	Branching ratios in percentage										
[keV]		$E_f^*:$ $J_f^\pi:$	222.6	227.78 1 ⁺ ,2 ⁺	237.39	244.79	311.28	331.28 X ⁻	338.49 X ⁻	343.46 X ⁻	348.43 1 ⁺ ,2 ⁺	365.49
244.79(7)					x							
311.28(6)	0 ⁺ -2 ⁺		5(2)	12(2)								
331.28(7)	X ⁻					70(3)						
348.43(6)	1 ⁺ ,2 ⁺		11.8(21)	10.2(15)								
360(10)			x									

(continued)

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E^*	J^π	Branching ratios in percentage										
[keV]		E_f^* : J_f^π :	222.6	227.78 1 ⁺ ,2 ⁺	237.39	244.79	311.28	331.28 X ⁻	338.49 X ⁻	343.46 X ⁻	348.43 1 ⁺ ,2 ⁺	365.49
365.49(7)			63(3)									
369.57(8)	X ⁻				22(5)							
373.76(6)	X ⁺			63(3)			31(4)					
393.79(6)						35(5)						
422.23(7)				100								
434.22(5)	X ⁺		12(2)	9(2)								
478.99(7)	⟨1,2⟩ ⁺					14(2)		3(2)	11(2)			
535.62(8)	X ⁺										6.0(23)	
544.65(8)	X ⁺		68(12)	32(14)								
566.79(10)												100
570.36(7)						34(10)				13(7)		
591.34(7)			83(15)	17(16)								
617.88(11)	X ⁺						46(6)					
676.68(8)	X ⁺											71(6)
703.14(7)	X ⁺			43(14)			57(14)					
748.69(12)												100
812.79(11)										100		
819.48(12)								100				
868.99(9)				26(46)		74(46)						
944.67(21)										100		
1082.69(14)									100			

Energy levels and branching ratios [02Ka66, 93Mi12]. Part 3

 $^{126}_{53}\text{I}$

E^* [keV]	J^π	Branching ratios in percentage							
		$E_f^*:$ $J_f^\pi:$	369.57 X^-	373.76 X^+	393.79	397.56	478.99 $\langle 1, 2 \rangle^+$	566.79	714.70
506.96(14)				100					
570.36(7)				10(5)					
658.29(12)					100				
687.92(9)	$1^- - 3^-$		25(7)						
800.09(13)								100	
890.29(12)					100				
979.1(3)			100						
1000.19(12)							100		
1002.57(11)									100
1102.16(13)						100			

Energy levels and branching ratios [96Ki01].

 $^{127}_{53}\text{I}$

E^*	$2J^\pi$	L	C^2S	C^2S	L	C^2S	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(τ, d)	(τ, d)	(τ, d)	(α, t)	(α, t)	Γ_{cm}		E^*_f : $2J^\pi_f$:	0.0 5 ⁺	58 7 ⁺	203 3 ⁺	375 1 ⁺	418 5 ⁺
0.0	5 ⁺	2	1.00	0.59	2	1.00	Stable	79Sz05						
57.61(1)	7 ⁺	4	1.96*	0.72	4	1.93*	1.95(1) ns	79Sz05	100					
202.86(1)	3 ⁺	2	0.17*	0.06	2	0.13*	0.39(1) ns	79Sz05	94(2)	5.9(2)				
295(4)														
374.99(1)	1 ⁺	0	0.60	0.20	0	0.21	31(8) ps	79Sz05	40(1)			60(2)		
417.99(6)	5 ⁺	2	0.20	0.12	2	0.19	3.38(13) ps	79Sz05	85(3)	12(1)	3.3(1)			
473(4)														
618.31(13)	3 ⁺						1.5(5) ps		97(10)	3				
628.69(16)	7 ⁺				$\langle 7 \rangle$	0.04*	2.2(6) ps	79Sz05	93(7)	5.5(11)	2.0			
650.92(8)	9 ⁽⁺⁾						3.9(4) ps		11(1)	89(7)				
716.50(6)	$\langle 11^+ \rangle$						3.0(6) ps			100				
744.71(8)	9 ⁽⁺⁾						2.79(18) ps		77(8)	22(3)				
831(4)														
883(4)														
990.9(1)	3 ⁺ , 5 ⁺	2	0.62*		2	0.62*		79Sz05	20(2)	4(1)	12(2)	19(2)	44(4)	
1044.1(2)	7 ⁺	4	0.26*		4	0.23*	0.28(12) ps	79Sz05	64(10)	31(1)	≈ 5			
1094.4(1)	3 ⁺ , 5 ⁺	2	1.1*		2	1.2*	0.21(7) ps	79Sz05	75(20)	13(3)				
1122.8(2)	1 ⁺	0	0.20	0.07	0	0.24		79Sz05			100			
1181.4(2)	$\langle 9^+ \rangle$									62(6)			38(2)	
1218.4(2)	$\langle 7^+ \rangle$								57(4)		43(3)			
1228.9(2)									100					
1235.1(1)	$\langle 11 \rangle^-$	5	1.7*	0.65	5	1.4*		79Sz05						
1266.6(3)	$\langle 13^+ \rangle$													
1275.0(1)	$\langle 7 \rangle^+$	4	0.43*		4	0.45*		79Sz05	15(4)		53(4)		21(3)	
1319(6)	$\langle 7^+, 9^+ \rangle$				$\langle 4 \rangle$	0.01*		79Sz05						
1342(6)	$\langle 7^+, 9^+ \rangle$				$\langle 4 \rangle$	0.02*		79Sz05						
1350.2(4)	$\langle 9^+ \rangle$									100				
1364.0(2)									18(5)	82(7)				
1375(6)														
1401.8(1)	3 ⁺ , 5 ⁺	2	0.34*		2	0.38*		79Sz05	33(5)	12(4)	9(3)	13(4)		
1413.2(2)	$\langle 9^+ \rangle$						0.49(14) ps		52(7)				48(5)	
1442.9(12)	1 ⁺ –5 ⁺	2+0	0.3*	0.22	2+0	0.24*		79Sz05	100					
1480.0(3)	$\langle 15^+ \rangle$													
1507(6)	3 ⁺ , 5 ⁺	2	0.01					79Sz05						
1516.6(2)									71(8)			29(3)		
1555.6(17)	3 ⁺ , 5 ⁺	2	0.12		2	0.10		79Sz05	100					
1569(6)	7 ⁺ , 9 ⁺				4	0.02*		79Sz05						
1654.1(2)									≈ 9				≈ 14	
1658.6(3)		2			2	0.14*		79Sz05	68(5)	32(9)				
1675.8(9)	$\langle 11^+ \rangle$													
1696(6)														
1719(6)														
1775.5(8)									75(32)				25(13)	
1792(8)	$\langle 1^+ \rangle$	$\langle 0 \rangle$	0.15	0.05	$\langle 0 \rangle$	0.20		79Sz05						
1836(8)														

(continued)

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E^*	$2J^\pi$	L	C^2S	C^2S	L	C^2S	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(τ, d)	(τ, d)	(τ, d)	(α, t)	(α, t)	Γ_{cm}		$E^*_\text{f}:$ $2J^\pi_\text{f}:$	0.0 5 ⁺	58 7 ⁺	203 3 ⁺	375 1 ⁺	418 5 ⁺
1860.4(4)		$\langle 2 \rangle$	0.07*		$\langle 2 \rangle$	0.05*		79Sz05		77(10)	23(13)			
1869.5(9)										100				
1873(8)														
1876.7(5)	$\langle 17^+ \rangle$													
1886(8)	3 ⁺ , 5 ⁺	2	0.10*		2	0.14*		79Sz05						
1894.0(10)	$\langle 15 \rangle^-$													
1909(3)	5 ⁺ –9 ⁺													
1913(8)	$\langle 1^+ \rangle$	$\langle 0 \rangle$	0.15	0.05	$\langle 0 \rangle$			79Sz05						
1978(8)														
2060(8)	[1 ⁺]			0.09				68Au01						
2072.2(9)	$\langle 13^+ \rangle$													
2075.4(8)										40(17)	60(23)			
2136(8)	$\langle 3^+, 5^+ \rangle$	$\langle 2 \rangle$	0.06*		$\langle 2 \rangle$	0.08*		79Sz05						
2168(8)	$\langle 3^+, 5^+ \rangle$	$\langle 2 \rangle$	0.05*		$\langle 2 \rangle$	0.05*		79Sz05						
2237(3)														
2264(3)														
2314(3)														
2355(3)														
2360.1(6)	$\langle 19^+ \rangle$													
2399(3)														
2412.3(9)	$\langle 15^+ \rangle$													
2431(8)														
2456(8)														
2496(8)	[1 ⁺]			0.02				68Au01						
2524(8)														
2545.8(15)	$\langle 19 \rangle^-$													
2611(8)														
2641(8)														
2689(8)														
2735(8)														
2752(8)														
2792(8)														
2810.2(12)	$\langle 21^+ \rangle$													
2816(8)														
2849(8)	[1 ⁺]			0.03				68Au01						
2894(8)														
2947(8)	[1 ⁺]			0.04				68Au01						
2975.8(18)	$\langle 23 \rangle^-$													
2997(8)														
3010(8)														
3102(8)														
3126(8)	[1 ⁺]			0.02				68Au01						
3218(8)														
3283(8)														
3335(8)														

(continued)

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E^*	$2J^\pi$	L	C^2S	C^2S	L	C^2S	$T_{1/2}$ or	Ref.	Branching ratios in percentage					
[keV]		(τ ,d)	(τ ,d)	(τ ,d)	(α ,t)	(α ,t)	Γ_{cm}		E^*_f :	0.0	58	203	375	418
									$2J^\pi_f$:	5 ⁺	7 ⁺	3 ⁺	1 ⁺	5 ⁺
3350.3(18)														
3372(8)														
3404(8)														
7727(20)														
7798(20)														
8507(20)														
8870(20)														
9100(20)														
9292(20)														
9410(20)														
9545(20)														
9632(20)														
9705(20)														
9740(20)	$\langle 7 \rangle^-$													
9847(20)	7 ⁻													
9903(20)	3 ⁻													
10083(20)														
10150(20)	1 ⁻													
10347(20)														
10423(20)														
10518(20)														
10780(20)														
11142(20)														
11421(20)														
11885(20)														
12193(20)														
68Au01								Ref.						

Abundance: 100 %.If $2d_{3/2}$ for $L=2$ (otherwise $d_{5/2}$), $1g_{7/2}$ for $L=4$ or $1h_{11/2}$ for $L=5$.

Value 1.00 for the ground state [79Sz05] means that it was used for the normalization.

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

Energy levels and branching ratios [96Ki01]. Part 2

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E^*	$2J^\pi$	Branching ratios in percentage										
		E^*_f :	618.3	628.7	650.9	716.50	744.71	1235.07	1266.6	1350.2	1480.0	1675.8
[keV]		$2J^\pi_\text{f}$:	3^+	7^+	$9^{(+)}$	$\langle 11^+ \rangle$	$9^{(+)}$	$\langle 11 \rangle^-$	$\langle 13^+ \rangle$	$\langle 9^+ \rangle$	$\langle 15^+ \rangle$	$\langle 11^+ \rangle$
744.71(8)	$9^{(+)}$			1								
1094.4(1)	$3^+, 5^+$			12(1)								
1235.1(1)	$\langle 11 \rangle^-$						100					
1266.6(3)	$\langle 13^+ \rangle$				39(4)	61(6)						
1275.0(1)	$\langle 7 \rangle^+$						11(3)					

(continued)

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E^*	$2J^\pi$	Branching ratios in percentage										
[keV]	$E_f^*:$ $2J_f^\pi:$	618.3 3 ⁺	628.7 7 ⁺	650.9 9 ⁽⁺⁾	716.50 ⟨11 ⁺ ⟩	744.71 9 ⁽⁺⁾	1235.07 ⟨11⟩ [−]	1266.6 ⟨13 ⁺ ⟩	1350.2 ⟨9 ⁺ ⟩	1480.0 ⟨15 ⁺ ⟩	1675.8 ⟨11 ⁺ ⟩	
1401.8(1)	3 ⁺ ,5 ⁺	34(4)										
1480.0(3)	⟨15 ⁺ ⟩				100							
1654.1(2)						≈77						
1675.8(9)	⟨11 ⁺ ⟩								100			
1876.7(5)	⟨17 ⁺ ⟩							100				
1894.0(10)	⟨15⟩ [−]						100					
2072.2(9)	⟨13 ⁺ ⟩								20(10)		80(20)	
2360.1(6)	⟨19 ⁺ ⟩									100		
2412.3(9)	⟨15 ⁺ ⟩										20(10)	

Energy levels and branching ratios [96Ki01]. Part 3

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E^* [keV]	$2J^\pi$	Branching ratios in percentage					
		$E_f^*:$ $2J_f^\pi:$	1876.7 <17 ⁺ >	1894.0 <15 ⁻ >	2072.2 <13 ⁺ >	2545.8 <19 ⁻ >	2975.8 <23 ⁻ >
2412.3(9)	<15 ⁺ >				80(20)		
2545.8(15)	<19 ⁻ >			100			
2810.2(12)	<21 ⁺ >		100				
2975.8(18)	<23 ⁻ >					100	
3350.3(18)							100

Energy levels and branching ratios [01Ka61].

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E^* [keV]	J^π	L	I_p	$E_\gamma^1 + E\gamma^2$ [keV]	L	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage				
								$E_f^*:$ $J_f^\pi:$	0.0 1 ⁺	27 2 ⁺	85 3 ⁺	128 <4 ⁺ >
0.0	1 ⁺	2	28.2(20)			24.99(2) m	91Sa07					
27.362(1)	2 ⁺	2	28.2(21)		2		91Sa07	100				
85.470(3)	3 ⁺		19.9(15)		0		91Sa07			100		
128.233(7)	<4 ⁺ >	2	57(4)		0,2		91Sa07				100	
133.611(1)	2 ⁻				5	12.3(5) ns	91Sa07	95(3)	4.58(24)		0.88(3)	
137.850(4)	4 ⁻	5	21.8(20)		5	0.85(2) μ s	91Sa07				100	
143.994(9)	<3 ⁻ >	5	18.5(20)		5		91Sa07					
151.642(2)	<3 ⁺ >	0	91(6)		0,2	<0.7 ns	91Sa07			98(3)	2.23(12)	
160.756(1)	1 ⁺ , 2 ⁺		83(6)		2	<0.7 ns	91Sa07	75(2)	24.6(17)			
167.367(5)	<6 ⁻ >	5	57(4)		5	175(15) ns	91Sa07					
180.377(3)	<3 ⁺ >	2	72(5)		0,2	<1.7 ns	91Sa07			94(3)	4.82(11)	
220.926(2)	1 ⁺ -3 ⁺					<0.7 ns				97.8(14)		
226.101(6)	<5-7 ⁻ >		8.3(11)		5		91Sa07					

(continued)

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E^*	J^π	L	I_p	$E_\gamma^1 + E_\gamma^2$	L	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]		(d,p)	rel.	[keV]	(d,t)	Γ_{cm}		E_f^* : J_f^π :	0.0 1 ⁺	27 2 ⁺	85 3 ⁺	128 $\langle 4 \rangle^+$
232.578(4)	4 ⁺	2	100(7)		0	<1.7 ns	91Sa07				85(3)	5.4(2)
234.487(5)	$\langle 5 \rangle^-$											
269.711(7)	$\langle 5-7 \rangle^-$	5	47(3)		5		91Sa07					
285.4(4)			20.8(19)				91Sa07					
294.357(4)	$\langle 5 \rangle^-$											
295.667(4)	$\langle 2-4 \rangle^+$		18.3(17)			<0.8 ns	91Sa07			60(2)		
344.516(4)	$\langle 2-4 \rangle^+$		13.2(12)		2	<1.2 ns	91Sa07				28(2)	
372.120(7)			56(4)		2	<0.4 ns	91Sa07			95(4)		
376.623(5)	$\langle 4 \rangle^-$	5	16(4)			<5 ns	91Sa07					
385.447(5)	2 ⁺ , 3 ⁺	0	64(5)		2	<0.3 ns	91Sa07		69(1)		10(4)	
386.593(4)	$\langle 3-6 \rangle^-$					<0.8 ns						
392.002(3)	1 ⁺ -3 ⁺				2	<0.5 ns	91Sa07		62(3)	15(2)		
416.280(3)	$\langle 2,3 \rangle^+$	$\langle 0 \rangle$	75(5)		0,2	<0.4 ns	91Sa07			26(2)	17(1)	
426.339(4)	1 ⁺ , 3 ⁺					<0.5 ns				47(8)		
434.355(14)												
435.511(4)	$\langle 2,3 \rangle^-$					<0.6 ns						
445.3(3)												
480.9(5)			7.1(8)				91Sa07					
485.422(10)						<1.4 ns				56(6)		
518.455(5)	$\langle 3,4 \rangle^-$		5.9(8)	6692		<0.2 ns	91Sa07					
521.080(15)	$\langle 4^-, 5^- \rangle$					<1.5 ns						
529.966(19)	$\langle 3^+ \rangle$		37.0(17)				91Sa07			70(10)		
536.48(9)												
549.733(18)	$\langle 3^+, 4^+ \rangle$		24.5(12)				91Sa07					
552.320(14)						<1.0 ns						
554.431(6)	$\langle 3^- \rangle$					<0.3 ns						
581.3(4)			19.3(11)				91Sa07					
589.4(9)			3.3(6)				91Sa07					
608.704(5)	4 ⁻		4.1(6)			<0.6 ns	91Sa07					
613.11(17)			3.6(6)				91Sa07					
629.7(4)			9.5(6)				91Sa07					
657.01(4)												65(18)
661.36(6)			5.3(4)				91Sa07					
676.69(9)			3.4(4)				91Sa07					
678.92(8)												
687.050(6)	3 ⁻ , 4 ⁻					<0.5 ns						
704.95(12)			1.9(3)				91Sa07			47(23)		
715.2(7)	$\langle 1^- - 3^+ \rangle$			6826			97Al29		54(20)			
724.2(5)			5.9(7)				91Sa07					
728.183(19)	X ⁻											
735.46(8)	3,5											
750.79(13)			22.0(11)				91Sa07			47(19)		
768.36(15)			2.3(3)				91Sa07					
770.7(4)												
778.62(9)												

(continued)

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E^* [keV]	J^π	L (d,p)	I_p <i>rel.</i>	$E_\gamma^1 + E_\gamma^2$ [keV]	L (d,t)	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage				
								E_f^* :	0.0	27	85	128
								J_f^π :	1 ⁺	2 ⁺	3 ⁺	$\langle 4 \rangle^+$
787.96(23)			8.3(8)				91Sa07					
791.9(5)												
794.64(20)			23.5(13)				91Sa07					
821.41(6)												
825.1(7)			10.7(9)				91Sa07					
828.1(3)				6645			97Al29					
834.61(14)												
838.9(4)	$\langle 1^- - 3^+ \rangle$			6826			97Al29	23(11)				
842.1(6)				6692			97Al29					
844.63(15)			9.3(8)				91Sa07					
848.99(8)												
856.8(8)			7.5(8)				91Sa07					
866.56(10)												
867.16(10)			4.7(8)				91Sa07					
876.2(10)			9.3(15)				91Sa07					
880.97(5)			8.5(17)				91Sa07					
910.1(7)			12.2(9)				91Sa07					
917.01(10)												
934.06(7)	$\langle 3, 4 \rangle^-$			6682			97Al29					
942.30(10)	$\langle 3^- - 5^- \rangle$			6692			97Al29					9(4)
944.75(9)			4.5(7)				91Sa07					
957.1(7)			16.8(12)				91Sa07					
985.50(64)			15.0(12)				91Sa07					
994.3(11)			3.9(10)				91Sa07					
1006.56(15)			2.5(4)				91Sa07					
1013.1(4)				6682			97Al29					
1015.88(18)			15.4(7)				91Sa07					
1024.8(5)	$\langle 3-5 \rangle$			6682			97Al29					
1032.02(14)	$2^+, 3, 4^-$			6692			97Al29					
1035.5(7)			3.4(3)				91Sa07					
1049.01(20)	1,2,3		4.2(5)				91Sa07	55(35)				
1062.0(8)											x	
1064.8(5)			10.8(6)				91Sa07					
1084.5(3)				6692			97Al29					
1091.79(9)			16.1(10)				91Sa07					
1099.8(4)			5.3(8)	6682			91Sa07					
1109.7(13)			3.0(7)				91Sa07					
1117.7(6)			5.3(5)				91Sa07					
1128.0(6)				6798			97Al29			40(19)		
1135.69(12)			2.4(4)				91Sa07					
1149.01(13)			11.2(6)				91Sa07					
1164.4(5)				6826			97Al29	36(21)				
1168.90(6)			6.0(4)				91Sa07					
1171.3(5)				6481			97Al29					
1178.48(7)			5.0(4)				91Sa07					

(continued)

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E^*	J^π	L	I_p	$E_\gamma^1 + E_\gamma^2$	L	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]		(d,p)	rel.	[keV]	(d,t)	Γ_{cm}		E_f^* : J_f^π :	0.0 1 ⁺	27 2 ⁺	85 3 ⁺	128 <4> ⁺
1197.39(14)			10.8(5)				91Sa07					
1211.45(19)				6481			97Al29					
1217.6(6)	2,3,4		1.8(4)	6798			91Sa07			34(15)		45(18)
1226.5(4)	<3,4> ⁻			6740			97Al29				28(13)	
1232.2(12)			1.8(4)				91Sa07					
1242.1(13)			2.0(5)				91Sa07					
1246.6(3)	2,3,4			6692			97Al29					
1250.29(25)	2,3,4		5.0(6)	6692			91Sa07					
1256.8(8)			6.5(7)	6682			91Sa07					
1266.43(21)	<2,3>		8.4(11)	6826			91Sa07	6(3)				
1274.2(5)			6.7(11)	6692			91Sa07					
1291.2(16)			1.3(4)				91Sa07					
1300.9(4)	2,3,4			6692			97Al29					
1303.66(13)			13.0(8)				91Sa07					
1324.9(10)			3.7(6)				91Sa07					
1329.6(5)												
1336.08(11)			3.9(6)				91Sa07					
1343.51(22)				6692			97Al29					
1348.82(19)			10.5(8)				91Sa07					
1360.10(17)	<3,4>											
1362.48(5)			4.1(6)	6798			91Sa07					
1370.1(6)				6481			97Al29					
1382.71(8)			5.1(6)				91Sa07					
1391.78(9)			9.3(8)				91Sa07					
1404.0(13)			2.0(5)				91Sa07					
1418.43(11)			5.7(7)				91Sa07					
1429.85(14)			2.9(7)				91Sa07					
1438.90(10)			6.0(8)				91Sa07					
1442.0(5)				6682			97Al29					
1454.9(7)				6798			97Al29	31(12)		69(27)		
1459.7(7)			15.6(11)				91Sa07					
1475.7(14)			3.0(7)				91Sa07					
1486.7(5)			5.7(8)	6682			91Sa07					
1498.7(5)				6798			97Al29			38(16)		
1506.2(9)			4.4(5)				91Sa07					
1528.00(24)	<2-4>			6692			97Al29					
1531.9(7)	2,3,4			6692			97Al29					
1537.2(4)			4.3(5)	6682			91Sa07					
1542.1(7)				6692			97Al29					
1553.8(7)												
1559.9(6)				6682			97Al29					
1565.8			5.0(6)				91Sa07					
1574.4(6)												
1579.93(9)			4.4(6)				91Sa07					
1598.34(11)			6.1(5)				91Sa07					

(continued)

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E^*	J^π	L	I_p	$E_\gamma^1 + E_\gamma^2$	L	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]		(d,p)	rel.	[keV]	(d,t)	Γ_{cm}		E_f^* :	0.0	27	85	128
								J_f^π :	1 ⁺	2 ⁺	3 ⁺	(4) ⁺
1615.87(5)			7.5(7)				91Sa07					
1619.3(7)				6682			97Al29					
1627.2(3)			17.0(10)	6798			91Sa07			28(9)		
1634.0(4)				6740			97Al29					
1650.96(24)			7.3(6)				91Sa07					
1664.5(6)			8.8(6)				91Sa07					
1677.4(11)			4.7(8)				91Sa07					
1691.58(14)			11.3(9)				91Sa07					
1703.1(6)			6.7(7)	6682			91Sa07					
1715.8(4)			12.6(13)	6682			91Sa07					
1717.2(10)			10.0(11)				91Sa07					
1724.2(7)	$\langle 3-5 \rangle$			6682			97Al29					
1729.60(6)			9.7(8)				91Sa07					
1732.95(24)				6798			97Al29				9(4)	
1739.0(5)				6682			97Al29					
1746.0(9)			10.7(9)				91Sa07					
1752.5(14)			3.4(10)				91Sa07					
1761.09(9)			8.4(14)				91Sa07					
1772.7(4)			6.6(13)				91Sa07					
1782.89(6)			81(6)				91Sa07					
1793.19(12)			24.4(24)				91Sa07					
1803.8(7)			38(3)				91Sa07					
1807.0(4)				6740			97Al29				30(12)	
1818.06(19)			7.2(17)				91Sa07					
1826.5(5)			3.4(16)	6740			91Sa07				28(14)	
1836.7(9)			7.5(10)				91Sa07					
1843.88(13)			11.7(13)				91Sa07					
1863.4(4)			14.3(14)				91Sa07					
1866.4(5)	$\langle 3,4 \rangle$			6692			97Al29					
1873.6(3)	2-4			6692			97Al29					
1875.87(13)			48(3)	6451			91Sa07					
1886.4(4)	$\langle 3 \rangle$		17.7(22)	6692			91Sa07		19(10)			
1893.6(8)			23.3(25)				91Sa07					
1904.2(8)			47(3)	6682			91Sa07					
1918.5(3)			6.6(12)				91Sa07					
1921.3(6)				6798			97Al29			71(29)		
1932.99(9)			98(6)				91Sa07					
1942.8(9)												
1946.91(6)			38(3)				91Sa07					
1971.72(20)			39(3)				91Sa07					
1983.3(8)	1-3		10.4(14)				91Sa07		x			
1987.57(25)												
1994.8(9)			12.8(16)				91Sa07					
2004.1(9)			10.3(15)				91Sa07					
2013.2(8)												

(continued)

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E^*	J^π	L	I_p	$E_\gamma^1 + E\gamma^2$	L	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]		(d,p)	rel.	[keV]	(d,t)	Γ_{cm}		E_f^* :	0.0	27	85	128
								J_f^π :	1 ⁺	2 ⁺	3 ⁺	$\langle 4 \rangle^+$
2025.4(8)			12.1(13)				91Sa07					
2037.51(11)			58(4)				91Sa07					
2050.76(13)			10.4(14)				91Sa07					
2067.09(6)			14(4)				91Sa07					
2070.8(7)			22(4)	6740			91Sa07				67(33)	
2082.25(10)			11.4(14)				91Sa07					
2115.40(6)			16.8(18)				91Sa07					
2130.33(23)			11.4(12)				91Sa07					
2144.1(11)	1–3		13.8(18)				91Sa07	x				
2150.37(19)			8.5(12)				91Sa07					
2161.6(7)				6481			97Al29					
2166.50(11)			19.4(17)				91Sa07					
2186.7(7)				6645			97Al29					
2191.22(11)			22.3(21)				91Sa07					
2205.0(11)			37(3)				91Sa07			x		
2206.57(10)												
2320.2(6)				6692			97Al29					
2425.4(9)				6692			97Al29					
2432.7(5)	$\langle 2-4 \rangle$			6798			97Al29			18(9)		
2454.0(5)	$\langle 3-5 \rangle$			6592			97Al29					
2567.0(7)				6740			97Al29					
2584.8(6)	2–4			6798			97Al29				34(17)	
2640.8(6)				6531			97Al29					
2684.4(7)										71(28)		
2721.0(5)	$\langle 3,4 \rangle$			6692			97Al29					
2737.2(6)				6692			97Al29					
2847.89(20)				6531			97Al29					
2900.4(5)	$\langle 2,3 \rangle$			6826			97Al29		34(16)			
2950.78(20)				6740			97Al29				10(5)	
3001.0(8)				6645			97Al29					
3075.6(5)	1,2,3			6826			97Al29		28(14)			
3182.7(5)				6740			97Al29				35(16)	
3794.3(6)	1,2,3			6826			97Al29		28(13)			
3802.6(4)				6645			97Al29					
3834.4(9)				6682			97Al29					
3846.8(4)				6682			97Al29					
3862.8(6)				6682			97Al29					
3991.6(7)				6692			97Al29					
4149.8(7)				6692			97Al29					
11944(22)	$\langle 0^+ \rangle$											
			91Sa07	97Al29			Ref.					

Additional data on this isotope can be found in [89Ma35].

Parameter $E_\gamma^1 + E\gamma^2$ is the total energy in two-step γ -transition after thermal neutron capture which involves the level with an excitation E^* [97Al29] (intensities of transitions can be found therein).

Energy levels and branching ratios [01Ka61]. Part 2

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E^*	J^π	Branching ratios in percentage										
[keV]		$E_f^*:$ $J_f^\pi:$	134 2 ⁻	137.8 4 ⁻	144.0 ⟨3⟩ ⁻	151.6 ⟨3⟩ ⁺	160.8 1 ⁺ ,2 ⁺	167.4 ⟨6⟩ ⁻	180.4 ⟨3⟩ ⁺	220.9	226.1	232.6 4 ⁺
137.850(4)	4 ⁻	x										
143.994(9)	⟨3⟩ ⁻	100										
167.367(5)	⟨6⟩ ⁻			100								
180.377(3)	⟨3⟩ ⁺						0.77(19)					
220.926(2)	1 ⁺ -3 ⁺					2.2(5)						
226.101(6)	⟨5-7⟩ ⁻							100				
232.578(4)	4 ⁺					9.43(21)			<12			
234.487(5)	⟨5⟩ ⁻			19(2)				80.6(15)				
269.711(7)	⟨5-7⟩ ⁻							100				
294.357(4)	⟨5⟩ ⁻			62(2)				21(2)			16.5(9)	
295.667(4)	⟨2-4⟩ ⁺					16(2)	15.3(7)		5.5(2)	3.3(3)		
344.516(4)	⟨2-4⟩ ⁺								60(3)			12.3(4)
372.120(7)							5.3(19)					
376.623(5)	⟨4⟩ ⁻				6.0(6)							
385.447(5)	2 ⁺ ,3 ⁺	8					8.4(7)		4.5			
386.593(4)	⟨3-6⟩ ⁻			92(2)							7.9(10)	
392.002(3)	1 ⁺ -3 ⁺						23.0(9)		<0.6			
416.280(3)	⟨2,3⟩ ⁺						30(1)		28(3)			
426.339(4)	1 ⁺ ,3 ⁺						13(2)			40(2)		
434.355(14)					100							
435.511(4)	⟨2,3⟩ ⁻	89(2)			5.3(4)							
485.422(10)							12(5)			29(3)		
518.455(5)	⟨3,4⟩ ⁻			4.7(6)	22(2)							
521.080(15)	⟨4 ⁻ ,5 ⁻ ⟩			30(6)							16(5)	
529.966(19)	⟨3 ⁺ ⟩											25(4)
549.733(18)	⟨3 ⁺ ,4 ⁺ ⟩								58(6)			42(6)
554.431(6)	⟨3 ⁻ ⟩	62(4)	30(2)									
613.11(17)						100						
657.01(4)												35(5)
678.92(8)							49(11)			12(2)		
704.95(12)										53(12)		
715.2(7)	⟨1 ⁻ -3 ⁺ ⟩				46(20)							
735.46(8)	3,5											100
750.79(13)							53(19)					
768.36(15)		100										
794.64(20)						100						
828.1(3)									68(22)			32(11)
834.61(14)		100										
838.9(4)	⟨1 ⁻ -3 ⁺ ⟩				23(10)							
842.1(6)		82(27)							18(9)			
848.99(8)		100										
866.56(10)							100					
917.01(10)		100										
942.30(10)	⟨3 ⁻ -5 ⁻ ⟩				8(3)							
1013.1(4)					87(20)				13(7)			

(continued)

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E^*	J^π	Branching ratios in percentage										
[keV]		$E_f^*:$ $J_f^\pi:$	134 2 [−]	137.8 4 [−]	144.0 ⟨3⟩ [−]	151.6 ⟨3⟩ ⁺	160.8 1 ⁺ ,2 ⁺	167.4 ⟨6⟩ [−]	180.4 ⟨3⟩ ⁺	220.9	226.1	232.6 4 ⁺
1024.8(5)	⟨3–5⟩				68(23)							
1032.02(14)	2 ⁺ ,3,4 [−]		70(37)		x							x
1084.5(3)			33(14)		30(13)							
1099.8(4)					43(14)							41(13)
1128.0(6)					60(20)							
1217.6(6)	2,3,4											20(9)
1226.5(4)	⟨3,4⟩ [−]		35(12)									
1246.6(3)	2,3,4		45(13)		29(8)							9(4)
1250.29(25)	2,3,4		33(14)	x				9(4)				
1266.43(21)	⟨2,3⟩		25(6)		38(8)							
1274.2(5)			60(16)					11(5)				
1300.9(4)	2,3,4		36(15)		25(10)							16(5)
1329.6(5)			x									
1343.51(22)				14(6)								
1360.10(17)	⟨3,4⟩		29(8)	29(6)								19(6)
1442.0(5)					64(17)							
1486.7(5)					39(17)							
1528.00(24)	⟨2–4⟩		40(11)									
1531.9(7)	2,3,4		79(34)									21(9)
1537.2(4)					62(12)							
1542.1(7)			58(22)									
1553.8(7)					x							
1559.9(6)					47(21)							
1619.3(7)					63(23)							
1627.2(3)			43(13)									
1703.1(6)					40(17)							
1715.8(4)					68(17)							
1724.2(7)	⟨3–5⟩				74(24)							
1732.95(24)					43(8)							
1739.0(5)					83(25)							
1807.0(4)												11(5)
1826.5(5)					30(13)							
1866.4(5)	⟨3,4⟩		46(16)									
1873.6(3)	2–4		25(11)		33(8)							6(3)
1886.4(4)	⟨3⟩			38(17)								
1904.2(8)					49(21)							
2013.2(8)								x				
2186.7(7)								54(24)				
2320.2(6)			69(26)									
2425.4(9)			55(21)		45(20)							
2432.7(5)	⟨2–4⟩				56(15)							
2454.0(5)	⟨3–5⟩				57(22)						19(9)	
2567.0(7)			60(26)		40(17)							
2584.8(6)	2–4		49(21)									17(8)
2684.4(7)												29(14)

(continued)

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E^*	J^π	Branching ratios in percentage										
[keV]		$E_f^*:$ $J_f^\pi:$	134 2 [−]	137.8 4 [−]	144.0 ⟨3⟩ [−]	151.6 ⟨3⟩ ⁺	160.8 1 ⁺ ,2 ⁺	167.4 ⟨6⟩ [−]	180.4 ⟨3⟩ ⁺	220.9	226.1	232.6 4 ⁺
2721.0(5)	⟨3,4⟩		66(18)									
2737.2(6)				64(29)								
2900.4(5)	⟨2,3⟩				38(14)							
3001.0(8)									39(18)			
3075.6(5)	1,2,3				38(15)				22(9)			
3182.7(5)					65(19)							
3794.3(6)	1,2,3		44(17)									
3802.6(4)									16(8)			
3834.4(9)					68(30)				32(16)			
3846.8(4)					34(11)							
3862.8(6)					37(16)							24(8)
3991.6(7)				46(20)	41(15)							13(6)
4149.8(7)			78(30)						22(10)			

Energy levels and branching ratios [01Ka61]. Part 3

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E^*	J^π	Branching ratios in percentage										
[keV]		$E_{\rm f}^*:$ $J_{\rm f}^\pi:$	234.5 $\langle 5 \rangle^-$	269.7	294.4 $\langle 5 \rangle^-$	295.7	344.5	372.1	376.6 $\langle 4 \rangle^-$	385.4 $2^+, 3^+$	386.6 $\langle 3-6 \rangle^-$	392.0
376.623(5)	$\langle 4 \rangle^-$		94(3)									
435.511(4)	$\langle 2, 3 \rangle^-$						2.2		3.4(4)			
485.422(10)												3.1(4)
518.455(5)	$\langle 3, 4 \rangle^-$		13.9(7)		48(1)						12.0(9)	
521.080(15)	$\langle 4^-, 5^- \rangle$			33(5)	21(3)							
552.320(14)				100								
554.431(6)	$\langle 3^- \rangle$								3.7(6)	3(2)		
608.704(5)	4^-		43(4)		41(3)						6.4(8)	
678.92(8)						25(7)	11(5)					
687.050(6)	$3^-, 4^-$				34(3)				15(1)		11(1)	
838.9(4)	$\langle 1^- - 3^+ \rangle$					53(18)						
934.06(7)	$\langle 3, 4 \rangle^-$								82(14)			
942.30(10)	$\langle 3^- - 5^- \rangle$		4.3(17)						6(2)			
1024.8(5)	$\langle 3-5 \rangle$		32(12)									
1084.5(3)											37(15)	
1099.8(4)						16(6)						
1164.4(5)						64(19)						
1171.3(5)							40(31)				60(29)	
1211.45(19)							81(57)					
1226.5(4)	$\langle 3, 4 \rangle^-$		13(4)			25(10)						
1250.29(25)	$2, 3, 4$										19(8)	
1266.43(21)	$\langle 2, 3 \rangle$						3(3)		13(4)		5(3)	
1343.51(22)			23(7)			51(11)				5(3)		

(continued)

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E^* [keV]	J^π	Branching ratios in percentage										
		$E^*_f:$ $J^\pi_f:$	234.5 $\langle 5 \rangle^-$	269.7	294.4 $\langle 5 \rangle^-$	295.7	344.5	372.1	376.6 $\langle 4 \rangle^-$	385.4 $2^+, 3^+$	386.6 $\langle 3-6 \rangle^-$	392.0
1360.10(17)	$\langle 3, 4 \rangle$				9(3)					8(3)		
1370.1(6)							24(18)					
1498.7(5)						43(18)				19(9)		
1506.2(9)							x					
1528.00(24)	$\langle 2-4 \rangle$								40(8)		6(3)	
1537.2(4)									18(7)		7(3)	
1619.3(7)									37(17)			
1634.0(4)							18(13)		34(11)			
1703.1(6)					60(21)							
1715.8(4)							9(7)	23(10)				
1724.2(7)	$\langle 3-5 \rangle$		26(13)									
1732.95(24)						11(4)		15(4)				
1739.0(5)											17(8)	
1746.0(9)											x	
1807.0(4)						42(12)		18(7)				
1826.5(5)						42(14)						
1866.4(5)	$\langle 3, 4 \rangle$				33(12)			21(9)				
1873.6(3)	$2-4$							19(5)		6(3)		
1886.4(4)	$\langle 3 \rangle$		17(6)									
1921.3(6)											29(14)	
2070.8(7)							33(25)					
2161.6(7)							38(28)					
2186.7(7)							46(32)					
2320.2(6)								31(11)				
2432.7(5)	$\langle 2-4 \rangle$								26(10)			
2454.0(5)	$\langle 3-5 \rangle$										24(12)	
2640.8(6)						36(15)						
2721.0(5)	$\langle 3, 4 \rangle$		14(6)									
2737.2(6)							36(26)					
2847.89(20)						19(8)	81(56)					
2900.4(5)	$\langle 2, 3 \rangle$								28(9)			
3075.6(5)	1,2,3						12(9)					
3794.3(6)	1,2,3					29(9)						
3846.8(4)							34(23)					
3862.8(6)									39(14)			

Energy levels and branching ratios [01Ka61]. Part 4

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E^* [keV]	J^π	Branching ratios in percentage							
		$E_f^*:$ $J_f^\pi:$	416.3 $\langle 2,3 \rangle^+$	434.4	435.5 $\langle 2,3 \rangle^-$	521.1 $\langle 4^-,5^- \rangle$	530.0 $\langle 3^+ \rangle$	554.4 $\langle 3^- \rangle$	608.7 4^-
529.966(19)	$\langle 3^+ \rangle$		4.2(4)						
554.431(6)	$\langle 3^- \rangle$				1.11(11)				
608.704(5)	4^-				9.8(9)				
678.92(8)								3(2)	
687.050(6)	$3^-,4^-$			9(1)	31(2)				
728.183(19)	X^-					100			
778.62(9)							100		
844.63(15)								100	
848.99(8)			x						
934.06(7)	$\langle 3,4 \rangle^-$				x				18(7)
942.30(10)	$\langle 3^-,5^- \rangle$			73(19)					
1032.02(14)	$2^+,3,4^-$				30(8)				
1049.01(20)	$1,2,3$				45(20)				
1211.45(19)				19(6)					
1246.6(3)	$2,3,4$				17(6)				
1250.29(25)	$2,3,4$				39(12)				
1256.8(8)					100				
1266.43(21)	$\langle 2,3 \rangle$				10(3)				
1274.2(5)					28(10)				
1300.9(4)	$2,3,4$				23(8)				
1343.51(22)					8(4)				
1360.10(17)	$\langle 3,4 \rangle$			5(2)					
1370.1(6)					76(24)				
1442.0(5)					36(12)				
1486.7(5)					61(19)				
1528.00(24)	$\langle 2-4 \rangle$				15(4)				
1537.2(4)					13(6)				
1542.1(7)				42(16)					
1559.9(6)					53(19)				
1574.4(6)					x				
1627.2(3)					29(9)				
1634.0(4)				48(14)					
1732.95(24)					22(6)				
1873.6(3)	$2-4$			11(4)					
1886.4(4)	$\langle 3 \rangle$				26(9)				
1904.2(8)					51(21)				
1942.8(9)					x				
2161.6(7)					62(28)				
2640.8(6)				64(24)					
2721.0(5)	$\langle 3,4 \rangle$				20(9)				
2950.78(20)					90(23)				
3001.0(8)				61(26)					
3802.6(4)					84(28)				
3846.8(4)					32(10)				

Energy levels and branching ratios [96Te01].

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E^* [keV]	$2J^\pi$	L (τ, d)	C^2S (τ, d)	L (α, t)	$d\sigma/d\Omega$ $\mu\text{b/sr}$	C^2S (α, t)	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage				
									E_f^* : $2J_f^\pi$:	0.0 7 ⁺	28 5 ⁺	278 3 ⁺	487 5 ⁺
0.0	7 ⁺	4	0.66*	4		2.06*	1.57(4)·10 ⁷ yr	79Sz05					
27.80(2)	5 ⁺	2	0.59	2		1.00	16.8(2) ns	68Au01	100				
278.38(3)	3 ⁺	2	0.07*	2		0.19*	0.104(12) ns	68Au01	60(2)	40(1)			
487.35(3)	5 ⁺	2	0.21	2		0.44	0.05 ns	68Au01	15.2(5)	83(2)	1.9(1)		
559.62(3)	1 ⁺	0	0.21	0		0.43		68Au01		35(1)	65(2)		
695.89(5)	7 ⁺ -11 ⁺								100				
729.57(3)	⟨9⟩ ⁺								96(4)	3.4(1)		0.09(1)	
768.76(3)	⟨7⟩ ⁺								9(1)	91(3)	<0.8	<0.3	
829.92(3)	3 ⁺ , 5 ⁺								3(1)	89(3)	1.7(2)	3.9(4)	
844.82(3)	⟨7⟩ ⁺			⟨4⟩		0.04*		79Sz05	27(2)	72(2)		≤0.1	
1047.35(4)	3 ⁺ , 5 ⁺	2	0.25*	2		0.96*		68Au01		25(6)	7.9(7)	67(4)	
1050.21(3)	⟨7⟩ ⁺								49(4)	47(2)	0.8(1)		
1111.65(3)	5 ⁺	2	0.25	2		0.50		68Au01	22(1)	56(2)	5.2(2)	11.0(3)	
1196.65(13)										≤8	100		
1203.61(11)	⟨5 ⁺ , 7 ⁺ ⟩								71(14)	29(14)			
1209.80(10)	1 ⁺	0	0.02	0		0.07		68Au01		36(14)	64(29)	≤71	
1260.66(3)	3 ⁺ , 5 ⁺	2	0.05*	2		0.12		68Au01	28(2)	19(1)	41(1)	0.6(4)	
1281.99(4)	⟨7⟩ ⁺			⟨4⟩		0.28*		79Sz05	10(2)	19(2)	32(6)	26(6)	
1291.94(4)	1 ⁺ -5 ⁺								0.9(1)	25(1)	4.0(9)	66(1)	
1401.43(3)	9 ⁻ , 11 ⁻	5	0.63*	5		1.31*		68Au01	2.29(6)	0.2(1)			
1483(5)	1 ⁺	0	0.21	0		0.40		68Au01					
1521(6)	⟨7-11⟩			4,5									
1566(10)	3 ⁺ , 5 ⁺	2	0.08*	2		0.08*		68Au01					
1621(10)	3 ⁺ , 5 ⁺	2	0.10*	2		0.11*		68Au01					
1741(10)		0	0.04	4+0		0.17*		68Au01					
1823(10)	1 ⁺	0	0.10					68Au01					
1861(10)	3 ⁺ , 5 ⁺	2	0.10*	⟨2⟩		0.25*		68Au01					
1909(8)													
1940(8)													
1963(10)													
2002(8)													
2012(10)	1 ⁺	0	0.04					68Au01					
2026(8)													
2050(8)													
2073(10)	3 ⁺ , 5 ⁺	2	0.19*					68Au01					
2150(8)													
2208(10)	1 ⁺	0	0.04					68Au01					
2400(10)	1 ⁺	0	0.03					68Au01					
2590(20)	1 ⁺	0	0.02					68Au01					
2790(20)	1 ⁺	0	0.02					68Au01					
2850(20)	3 ⁺ , 5 ⁺	2	0.05*					68Au01					
2910(20)	1 ⁺	0	0.02					68Au01					
2950(20)	1 ⁺	0	0.05					68Au01					
3200(20)	1 ⁺	0	0.06					68Au01					
3250(20)	1 ⁺	0	0.04					68Au01					

(continued)

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E^*	$2J^\pi$	L	C^2S	L	$d\sigma/d\Omega$	C^2S	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]		(τ ,d)	(τ ,d)	(α ,t)	$\mu\text{b/sr}$	(α ,t)	Γ_{cm}		E_f^* :	0.0	28	278	487
									$2J_f^\pi$:	7 ⁺	5 ⁺	3 ⁺	5 ⁺
3350(20)	1 ⁺	0	0.02					68Au01					
3450(20)	1 ⁺	0	0.03					68Au01					
14666(20)	3 ⁺ ,5 ⁺												
14854(20)	1 ⁺												
15643(20)	3 ⁺ ,5 ⁺												
15969(20)	3 ⁺ ,5 ⁺												
16759(20)	5 ⁻ ,7 ⁻												
16869(20)	5 ⁻ ,7 ⁻												
16915(25)	1 ⁻ ,3 ⁻												
16998(20)	1 ⁻ ,3 ⁻												
17344(20)	1 ⁻ ,3 ⁻												
17622(20)	⟨5 ⁻ ,7 ⁻ ⟩												
18409(20)	1 ⁻ ,3 ⁻												
			68Au01			79Sz05		Ref.					

* If $2d_{3/2}$ for $L=2$ (otherwise $d_{5/2}$), $1g_{7/2}$ for $L=4$ or $1h_{11/2}$ for $L=5$.Relative values C^2S for the (α ,t) reaction are from [79Sz05].

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

Energy levels and branching ratios [96Te01]. Part 2

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E^*	$2J^\pi$	Branching ratios in percentage						
		E_f^* :	560	696	730	769	829.9	844.8
[keV]		$2J_f^\pi$:	1 ⁺		⟨9⟩ ⁺	⟨7⟩ ⁺	3 ⁺ ,5 ⁺	⟨7⟩ ⁺
829.92(3)	3 ⁺ ,5 ⁺		2.1(2)					
844.82(3)	⟨7⟩ ⁺				0.21(7)	0.25(6)		
1050.21(3)	⟨7⟩ ⁺				1.7(2)	1.4(1)		
1111.65(3)	5 ⁺		0.2		0.07(3)	5.6(1)	0.17(3)	
1260.66(3)	3 ⁺ ,5 ⁺		3.3(8)			2.9(6)		1.5(6)
1281.99(4)	⟨7⟩ ⁺				13(4)			3.3(17)
1291.94(4)	1 ⁺ -5 ⁺		4.0(7)					
1401.43(3)	9 ⁻ ,11 ⁻			3.4(3)	16(6)			78(2)

Energy levels and branching ratios [01Si26].

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E^*	J^π	L	I_p	C^2S	J^π	$d\sigma/d\Omega$	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]		(d,p)	rel.	(d,p)	(p,n)	$\mu\text{b/sr}$	Γ_{cm}		E_f^* :	0.0	40	43	43.9
									J_f^π :	5+	2+	⟨X⟩+	⟨3⟩-
0.0	5 ⁺	⟨2⟩	186(13)				12.36(1) h	89Sa11					
39.952(1)	2 ⁺				2+		8.84(6) m	89Ma35		100			

(continued)

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E^*	J^π	L	I_p	C^2S	J^π	$d\sigma/d\Omega$	$T_{1/2}$ or	Ref.	Branching ratios in percentage			
[keV]		(d,p)	rel.	(d,p)	(p,n)	$\mu\text{b/sr}$	Γ_{cm}		E_f^* : 0.0	40	43	43.9
									J_f^π : 5+	2+	$\langle X \rangle +$	$\langle 3 \rangle -$
43.251(3)	$\langle 1-4 \rangle^+$	$\langle 2 \rangle$	196(18)					89Sa11			[100]	
43.936(2)	$\langle 3 \rangle^-$	$\langle 5 \rangle$	incl					89Sa11			x	
44.327(2)	$3^+, 4^+$								100		x	
48.833(1)	4^+	$\langle 0 \rangle$	326(16)					89Sa11	100			
62.2(6)			20(5)					89Sa11				
69.586(1)	$\langle 6 \rangle^-$	$\langle 5 \rangle$	23(4)				133(7) ns	89Sa11	100			
80	$\langle 2^- \rangle$				2-	840(20)		89Ma35				
82.396(2)	X^-	$\langle 5 \rangle$	117(13)				315(15) ns	89Sa11				
82.4+X							66(8) ns					
85.110(1)	$\langle 6 \rangle^-$						254(4) ns		100			
91.761(2)	$\langle 4 \rangle^-$	$\langle 5 \rangle$	331(19)					89Sa11				100
93.714(1)	3^+	$\langle 0 \rangle$	incl					89Sa11		55(6)		
111.061(1)	$\langle 5 \rangle^-$	$\langle 5 \rangle$	20(5)					89Sa11				
125.759(2)	$4^+, 5^+$								75(4)			
180.300(2)	$\langle 5-7 \rangle^-$	$\langle 5 \rangle$	19(5)					89Sa11				
209.739(2)	$2^+, 3^+$	$\langle 2 \rangle$	10(5)					89Sa11		74(4)	12(1)	
223.976(2)	3^+	$\langle 2 \rangle$	17(5)					89Sa11	3.4(4)	62(2)	0.9(1)	2.7(4)
242.4+X												
245.102(1)	$\langle 5 \rangle^-$	$\langle 5 \rangle$	24(5)					89Sa11				
251.550(2)	3^+	$\langle 2 \rangle$	65(7)					89Sa11		58(2)		
254.795(2)	1^+-3^+									100		
262.051(2)	$3^+, 4^+$	$\langle 2 \rangle$	96(15)					89Sa11	11.7(7)			
264.7(5)			18(5)					89Sa11				
296.04(1)	$\langle 4,5 \rangle^-$											0.91(10)
349.60(1)	$\langle 1-4 \rangle^+$									74(5)	26(4)	
353.73(1)	$\langle 2-5 \rangle^-$	$\langle 5 \rangle$	11(3)				<0.04 ns	89Sa11				100
374.68(1)	$\langle 2-4 \rangle^+$						<7 ns		5.0(7)	4.3(7)		
378.35(1)	$\langle 4,5 \rangle^-$	$\langle 5 \rangle$	12(4)				<0.1 ns	89Sa11				
428.6(7)			12(4)					89Sa11				
437.64(1)	2^+-4^+						<0.3 ns			33(4)	16(3)	
460.91(1)	X^-	$\langle 5 \rangle$	18(4)					89Sa11				
480.70(1)	$\langle 4,5 \rangle^-$	$\langle 5 \rangle$	18(4)				<0.1 ns	89Sa11				6.7(6)
525.88(1)	$\langle 2-4 \rangle^+$									54(5)		
531.6(7)			12(4)					89Sa11				
544.97(1)	$\langle 2-5 \rangle^+$						<0.8 ns					
593.99(1)	$\langle 3-6 \rangle^-$		6(2)					89Sa11				
606.55(1)			7(3)				<0.6 ns	89Sa11	68(3)			
642.0(7)			24(6)					89Sa11				
678.49(1)	$\langle 3-5 \rangle^-$						<0.4 ns					12(1)
682.23(1)	$\langle 3-5 \rangle^-$						<0.2 ns					39(2)
699.21(1)	$\langle 4,5 \rangle^-$						<0.3 ns					
761.52(1)	$\langle 2-5 \rangle^-$						<0.2 ns					
768.41(1)	$\langle 2-5 \rangle^-$						<0.3 ns					50(4)
783.16(1)	$\langle 4-7 \rangle^-$											
804.07(3)	3^+-5^+						<2 ns		36(8)			

(continued)

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E^*	J^π	L	I_p	C^2S	J^π	$d\sigma/d\Omega$	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]		(d,p)	rel.	(d,p)	(p,n)	$\mu\text{b/sr}$	Γ_{cm}		E_f^* :	0.0	40	43	43.9
									J_f^π :	5+	2+	$\langle X \rangle +$	$\langle 3 \rangle -$
825.02(2)	$\langle 2-5 \rangle^-$					890(40)	<1.4 ns	89Ma35					
876.26(1)	$\langle 4,5 \rangle^-$						<0.7 ns						
944.96(3)	$\langle 2^- - 5^- \rangle$						<2 ns						
1079.05(1)	$\langle 3-5 \rangle^-$						<0.9 ns						
1670						340(30)		89Ma35					
2350						1400(60)		89Ma35					
3590						780(60)		89Ma35					
4200						430(40)		89Ma35					
6200	$\langle 1^+ \rangle$					7900(400)		89Ma35					
7850	$\langle 1^+ \rangle$					3900(300)		89Ma35					
9570	$\langle 1^+ \rangle$					2740(220)		89Ma35					
			89Sa11			89Ma35		Ref.					

Energy levels and branching ratios [01Si26]. Part 2

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E^*	J^π	Branching ratios in percentage										
[keV]	(p,n)	E_f^* : J_f^π :	44.3 X+	48.8 4+	69.6 $\langle 6 \rangle^-$	82.4 X-	82.4+X	85.1 $\langle 6 \rangle^-$	91.8 $\langle 4 \rangle^-$	93.7 3+	111.1 $\langle 5 \rangle^-$	125.8 4+,5+
82.396(2)					100							
93.714(1)			14(2)	31(5)								
111.061(1)					97(11)				3.3(5)			
125.759(2)			20(1)	4.9(6)								
180.300(2)						70(4)		30(2)				
209.739(2)			13(1)	1.0(2)						1.1(1)		
223.976(2)			11.1(5)	11.5(9)					3.7(3)	4.4(4)		
242.4+X							100					
245.102(1)					4.9(3)			79(6)	15.7(11)			
251.550(2)			13(1)	7.1(9)						11.1(8)		10(2)
262.051(2)			10.5(10)	5.4(10)						72(3)		
296.04(1)									3.72(13)		94(5)	
374.68(1)			30(2)	41(2)								
378.35(1)								21(2)	79(5)			
437.64(1)			14(2)									
480.70(1)									3.1(3)		12.0(6)	
525.88(1)												17(2)
544.97(1)				30(3)								
606.55(1)												32(6)
678.49(1)											39(4)	
699.21(1)					37(2)							
768.41(1)									14(2)			
783.16(1)								24(3)			56(4)	

(continued)

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E^*	J^π	$E_f^*:$	44.3	48.8	69.6	Branching ratios in percentage						
[keV]	(p,n)	$J_f^\pi:$	X+	4+	(6)−	82.4	82.4+X	85.1	91.8	93.7	111.1	125.8
876.26(1)						X−		(6)−	(4)−	3+	(5)−	4+,5+
944.96(3)												
								39(9)				
									50(6)			

Energy levels and branching ratios [01Si26]. Part 3

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E^*	J^π	$E_f^*:$	180.3	209.7	224.0	Branching ratios in percentage						
[keV]	(p,n)	$J_f^\pi:$		2+,3+	3+	245.1	251.6	254.8	262.1	296.0	349.6	353.7
						(5)−	3+		3+,4+	(4,5)−	(1=4)+	(2=5)−
296.04(1)						1.3(2)						
374.68(1)				15(2)	1.9(4)				2.9(5)			
437.64(1)				8(1)			29(1)					
460.91(1)		100										
480.70(1)					1.4(2)	56(3)				8(3)		
525.88(1)							16(2)	13(2)				
544.97(1)				11(2)	39(2)		20(3)					
678.49(1)						22(1)	2.9(3)		2.1(4)	16(1)		3.5(1)
682.23(1)										34(2)		9(1)
761.52(1)										90(5)		
768.41(1)												36(3)
804.07(3)					33(5)						19(4)	
876.26(1)						14(2)						
944.96(3)												19(2)
1079.05(1)												28(3)

Energy levels and branching ratios [01Si26]. Part 4

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E^*	J^π	$E_f^*:$	378.3	437.6	460.9	Branching ratios in percentage						
[keV]	(p,n)	$J_f^\pi:$	(4,5)−		X−	480.7	545.0	594.0	678.5	682.2	761.5	876.3
						(4,5)−	(2=5)+	(3=6)−			(2=5)−	(4,5)−
480.70(1)			13(1)									
593.99(1)			100									
678.49(1)				0.8(2)		2.4(2)						
682.23(1)						18.3(7)						
699.21(1)					59(4)			4.4(11)				
761.52(1)						7.6(8)			2.3(3)			
783.16(1)					20(2)							
804.07(3)						12(2)						
825.02(2)		100										
876.26(1)						37(2)	8(1)			2.2(9)		

(continued)

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E^*	J^π	Branching ratios in percentage										
[keV]	(p,n)	E_f^* : J_f^π :	378.3 $\langle 4,5 \rangle^-$	437.6	460.9 X-	480.7 $\langle 4,5 \rangle^-$	545.0 $\langle 2=5 \rangle^+$	594.0 $\langle 3=6 \rangle^-$	678.5	682.2	761.5 $\langle 2=5 \rangle^-$	876.3 $\langle 4,5 \rangle^-$
944.96(3)			17(2)			14(3)						
1079.05(1)											60(3)	12(2)

Energy levels and branching ratios [94Se10].

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E^*	$2J^\pi$	L	C^2S	L	$d\sigma/d\Omega$	C^2S	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]		(τ ,d)	(τ ,d)	(α ,t)	$\mu\text{b/sr}$	(α ,t)	Γ_{cm}		E_f^* : $2J_f^\pi$:	0.0 7+	150 5+	493 X+	602 X+
0.0	7+	4	0.64*	4			8.02 d	68Au01					
149.71(1)	5+	2	0.53	2			0.95(5) ns	68Au01	100				
492.66(1)	3+,5+	2	0.07*	2				68Au01	87.3(3)	12.7(1)			
602.04(1)	3+,5+	2	0.47*	2				68Au01	18.6(1)	81.1(2)	0.3(1)		
773.66(2)	9+,11+								100				
852.21(2)	9+								98(2)	1.85(9)			
876.72(1)	1+	0	0.21					68Au01	34.3(5)	66(1)	≤ 0.5		
1005.77(2)									9(4)	86(4)		4(3)	
1059.71(2)	9(+)								32(1)	67(1)			
1098.26(1)	3,5								6.6(3)	86(1)	4.5(3)	1.3(3)	
1146.95(1)	3+,5+	2	0.26*	2				68Au01	48(1)	32.5(1)	15(1)	4.1(1)	
1148.98(2)	5+,-9+								61(7)	27(7)		6(1)	
1283.9(3)										20(10)		80(20)	
1298.22(2)	3+,5+	2	0.25*	2				68Au01	1	23(1)	3(1)	37(3)	
1315.17(2)	5+,-9+								14(1)	3		29(3)	
1346.48(5)	1+,-5+	[0,2]									81(4)	6(3)	
1376.8(4)									100	≤ 18			
1403.9(1)	3+,5+			2				79Sz05	20(14)	47(7)		33(14)	
1427.1(1)	3+,5+	2	0.10*	2				68Au01	7.9(3)	8(1)	65(1)	2(1)	
1444.1(1)	1,3,5									41	28	17	
1500.6(1)	3+,5+			2				79Sz05	9.3(3)	4.9(3)	65(1)	11.1(6)	
1547.8(1)									7(1)				
1556.1(1)	X+												
1596.4(1)	X+												
1622.6(2)													
1646.0(1)	11-	5	0.70*	5				68Au01	7.1(2)	0.3(1)			
1677.4(1)	1-5									91(5)	9(4)		
1697.1(1)									4(1)				
1718(6)	1+	0	0.31	0				68Au01					
1757.9(1)	1-5										14(4)	12(6)	
1761.5(1)													
1797.10(1)	9-,-13						5.9(2) ns		≤ 0.05				
1800.60(1)	3+,5+	2	0.05*					68Au01	5(1)	17(1)	9(1)	7(2)	
1831(8)													

(continued)

¹³¹I
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E^* [keV]	$2J^\pi$	L (τ, d)	C^2S (τ, d)	L (α, t)	$d\sigma/d\Omega$ $\mu b/sr$	C^2S (α, t)	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage				
									E_f^* : $2J_f^\pi$:	0.0 7 ⁺	150 5 ⁺	493 X ⁺	602 X ⁺
1880.25(10)										89(11)			
1887.68(5)	9–13									83(2)			
1899.13(2)	9 [−] –13 [−]												
1915													
1924.56(2)	11 [−]									0.1(1)			
1931.923(24)													
1936.14(7)										50(6)			37(6)
1974.25(20)													
1980.262(17)	9 [−] –13 [−]									0.1	0.02(1)		
1985													
2001.087(23)	9,11									37(1)			
2011.032(23)	9–13												
2040.83(10)	3,5									52(5)	21(10)	7(4)	
2063.30(15)	9–13												
2072.73(8)	3 ⁺ , 5 ⁺									26(6)	14(3)	34(3)	
2114.20(3)	9–13												
2134													
2168.45(4)	9–13									36(2)			
2170.72(4)	9–13												
2175(10)	1 ⁺	0	0.05					68Au01					
2176.6(1)	9–13												
2241.7(1)	9–13												
2270.6(1)	9–13									65(3)			
2308(10)	1 ⁺	0	0.09					68Au01					
2329													
2332.7(4)										4.2(6)			
2346(10)	1 ⁺	0	0.03					68Au01					
2408(10)	3 ⁺ , 5 ⁺	2	0.15*					68Au01					
2444(10)													
2567													
2595													
2638													
2699(20)													
2744(20)	1 ⁺	0	0.07					68Au01					
2807(20)	1 ⁺	0	0.02					68Au01					
2854													
2870(20)													
2894													
2940(20)	1 ⁺	0	0.07					68Au01					
2985													
3040(20)	1 ⁺	0	0.07					68Au01					
3090													
3170(20)													
3700(20)	1 ⁺	0	0.06					68Au01					
7974(14)	3 ⁺						50(3) keV						

(continued)

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E^*	$2J^\pi$	L	C^2S	L	$d\sigma/d\Omega$	C^2S	$T_{1/2}$ or	Ref.	Branching ratios in percentage				
[keV]		(τ ,d)	(τ ,d)	(α ,t)	$\mu\text{b/sr}$	(α ,t)	Γ_{cm}		E_f^* :	0.0	150	493	602
									$2J_f^\pi$:	7 ⁺	5 ⁺	X ⁺	X ⁺
8278(14)	1 ⁺						55(2) keV						
10205(14)	7 ⁻						79(2) keV						
10451(14)	3 ⁻						61(12) keV						
10507(14)	3 ⁻						63(6) keV						
10906(14)	1 ⁻						120(12) keV						
			68Au01	79Sz05				Ref.					

* If $2d_{3/2}$ for $L=2$ (otherwise $d_{5/2}$), $1g_{7/2}$ for $L=4$ or $1h_{11/2}$ for $L=5$.

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

Energy levels and branching ratios [94Se10]. Part 2

¹³¹I
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E^*	$2J^\pi$	Branching ratios in percentage											
[keV]		E_f^* :	774	852	876.7	1005.8	1059.71	1098.26	1146.95	1148.99	1283.9		
		$2J_f^\pi$:	X ⁺	9 ⁺	1 ⁺		9 ⁽⁺⁾	3,5	3 ⁺ ,5 ⁺	5 ⁺ ,7,9 ⁺			
852.21(2)	9 ⁺		0.1										
1059.71(2)	9 ⁽⁺⁾			0.8(3)		0.03(1)							
1098.26(1)	3,5				1.3(2)								
1146.95(1)	3 ⁺ ,5 ⁺			≤ 0.05		0.27(5)							
1148.98(2)	5 ⁺ -9 ⁺			7(5)									
1298.22(2)	3 ⁺ ,5 ⁺								36(13)				
1315.17(2)	5 ⁺ -9 ⁺	2	37(1)			8(1)	6						
1346.48(5)	1 ⁺ -5 ⁺				13(5)								
1427.1(1)	3 ⁺ ,5 ⁺			3(1)	2(1)	3(1)			1(1)	7(1)			
1444.1(1)	1,3,5				9	0.6(3)		1	4				
1500.6(1)	3 ⁺ ,5 ⁺					6.1(6)		0.6(3)	1.5(3)	1.9(3)			
1547.8(1)			53(7)	40(3)									
1556.1(1)	X ⁺		100										
1596.4(1)	X ⁺		79(1)	21(1)									
1622.6(2)			100										
1646.0(1)	11 ⁻		0.6(1)	80(1)			11.3(5)				0.5(2)		
1697.1(1)			31(6)	42(10)			≤ 8						
1757.9(1)	1-5				74(12)								
1761.5(1)			100										
1797.10(1)	9 ⁻ -13		0.4										
1800.60(1)	3 ⁺ ,5 ⁺							10(7)					
1880.25(10)				11(5)									
1887.68(5)	9-13		0.7(2)	7(1)		2(1)				4(1)			
1899.13(2)	9 ⁻ -13 ⁻		55(1)										
1924.56(2)	11 ⁻		23(2)	0.8(1)				7(1)					
1936.14(7)						13(8)							
1980.262(17)	9 ⁻ -13 ⁻		31(1)	3			3.8(2)						
2001.087(23)	9,11		≤ 0.1	28(6)		1.6(3)	14			7(4)			

(continued)

¹³¹I
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E^*	$2J^\pi$	Branching ratios in percentage								
[keV]	$E_f^*:$ $2J_f^\pi:$	774 X ⁺	852 9 ⁺	876.7 1 ⁺	1005.8	1059.71 9 ⁽⁺⁾	1098.26 3,5	1146.95 3 ⁺ ,5 ⁺	1148.99 5 ⁺ ,7,9 ⁺	1283.9
2011.032(23)	9–13	26(1)								
2040.83(10)	3,5				21(16)					
2063.30(15)	9–13		15(3)			7(4)				
2072.73(8)	3 ⁺ ,5 ⁺				26(14)					
2114.20(3)	9–13	6(1)								
2168.45(4)	9–13	11(1)	10(4)		3(1)	2(1)				
2170.72(4)	9–13		8(2)							
2241.7(1)	9–13		4(1)			3(2)				

Energy levels and branching ratios [94Se10]. Part 3

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E^*	$2J^\pi$	Branching ratios in percentage									
[keV]		$E_f^*:$ $2J_f^\pi:$	1315.17 5 ⁺ ,7,9 ⁺	1376.8	1403.86 3 ⁺ ,5 ⁺	1500.62 3 ⁺ ,5 ⁺	1547.80	1556.15 X ⁺	1596.44 X ⁺	1622.6	1645.99 11 ⁻
1646.0(1)	11 ⁻		0.18(6)	≤0.62			0.08(2)				
1697.1(1)							21(5)				2
1797.10(1)	9 ⁻ -13							50	49(1)		0.5(2)
1800.60(1)	3 ⁺ ,5 ⁺				52(6)						
1887.68(5)	9-13		2(2)								
1899.13(2)	9 ⁻ -13 ⁻					1.0(1)	2(1)	0.2(1)			3.2(1)
1924.56(2)	11 ⁻		4.9(6)								62(1)
1931.923(24)								1.3(5)	16(2)		
1974.25(20)									≤50		
1980.262(17)	9 ⁻ -13 ⁻		13.8(2)			2.1(1)		0.7(1)		0.06(2)	30
2001.087(23)	9,11		2.8(2)		0.9(4)					≤1	4.2(2)
2011.032(23)	9-13										46(6)
2063.30(15)	9-13		4(2)								66(5)
2114.20(3)	9-13							1			18(2)
2170.72(4)	9-13										29(3)
2176.6(1)	9-13								38(11)		52(10)

Energy levels and branching ratios [94Se10]. Part 4

¹³¹I
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E^*	$2J^\pi$	Branching ratios in percentage								
[keV]	$E_f^*:$ $2J_f^\pi:$	1697.10	1761.49	1797.07	1880.25	1887.68 9,11,13	1899.13	1924.56 11 [−]	1931.92	1936.14
1887.68(5)	9−13		0.3(2)							
1899.13(2)	9 [−] −13 [−]		0.4(2)	38(1)						
1924.56(2)	11 [−]	0.6(4)		0.8(2)		0.4(1)				

(continued)

¹³¹I
53

E^*	$2J^\pi$	Branching ratios in percentage									
[keV]		$E_f^*:$ $2J_f^\pi:$	1697.10	1761.49	1797.07	1880.25	1887.68 9,11,13	1899.13	1924.56 11 ⁻	1931.92	1936.14

1931.923(24)					83(2)						
1974.25(20)				15(5)	85(15)						
1980.262(17)	9 ⁻ -13 ⁻		1.2(1)		0.5(1)	0.23(1)		13			
2001.087(23)	9,11		0.7(1)		0.4(1)		0.2(1)	3.1(3)			0.1
2011.032(23)	9-13				16(1)			1.2(3)	5.7(1)	4.9(1)	
2114.20(3)	9-13								29(2)	43(11)	
2168.45(4)	9-13						4(2)	≤11			10(1)
2170.72(4)	9-13										3(3)
2176.6(1)	9-13				10(4)						
2241.7(1)	9-13						22(10)				
2270.6(1)	9-13								16(5)		
2332.7(4)									96(48)		

Energy levels and branching ratios [94Se10]. Part 5

¹³¹I
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E^* [keV]	$2J^\pi$	Branching ratios in percentage							
		$E_f^*:$ $2J_f^\pi:$	1974.25	1980.26	2001.09 9,11	2011.03 9,11,13	2063.30 9,11,13	2114.20 9,11,13	2168.45 9,11,13
2063.30(15)	9-13				8.7(5)				
2114.20(3)	9-13					3			
2168.45(4)	9-13			22(1)			3		
2170.72(4)	9-13			25(3)	7(2)	27(3)			
2241.7(1)	9-13		4(3)	4(1)		54(3)			8(1)
2270.6(1)	9-13			13(2)				6(4)	

Energy levels and branching ratios [92Se04].

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E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}
0.0	4 ⁺	2.295(13) h
≈22	⟨5 ⁺ ⟩	
49.720(10)	3 ⁺	7.14(14) ns
≈120	⟨8 ⁻ ⟩	1.387(15) h
161.52(7)	2 ⁺	3.57(7) ns
277.86(6)	1 ⁺	1.42(2) ns

Additional data on this isotope can be found in [99Da03].

Energy levels and branching ratios [92Se04]. Part 2

¹³²I
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E^*	J^π	Branching ratios in percentage			
[keV]		$E_f^*:$ $J_f^\pi:$	0.0 4 ⁺	22 ⟨5 ⁺ ⟩	49.720 3 ⁺
≈22	⟨5 ⁺ ⟩		100		
49.720(10)	3 ⁺		100		
≈120	⟨8 ⁻ ⟩			100	
161.52(7)	2 ⁺				100
277.86(6)	1 ⁺				98(2)
					2.18(6)

Energy levels and branching ratios [95Ra12].

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53

E^*	$2J^\pi$	$T_{1/2}$ or Γ_{cm}
[keV]		
0.0	7 ⁺	20.8(1) h
312.073(3)	⟨5 ⁺ ⟩	
719.77(2)	⟨5 ⁺ ⟩	
786.922(8)	⟨3 ⁺ ⟩	
912.67(2)	⟨11 ⁺ ⟩	
914.75(1)	⟨9 ⁺ ⟩	
1239.83(2)	⟨3 ⁺ –7 ⁺ ⟩	
1307.18(2)	⟨7 ⁺ ⟩	
1312.80(1)	⟨3 ⁺ , 5 ⁺ ⟩	
1333.22(2)	⟨5 ⁺ ⟩	
1334.0(10)		
1373.68(1)	⟨1 ⁺ , 3 ⁻ ⟩	
1454.92(6)	⟨7 ⁺ , 9 ⁺ ⟩	
1516.26(6)	⟨9 ⁺ ⟩	
1560.14(2)	⟨15 ⁺ ⟩	
1564.14(2)	⟨1 ⁺ –5⟩	
1634.17(2)	⟨19 ⁻ ⟩	9(2) s
1646.64(2)	⟨11 ⁺ ⟩	
1671.42(2)	⟨3 ⁺ , 5⟩	
1704.41(7)	⟨9 ⁺ , 7 ⁻ ⟩	
1707.44(14)		
1717.626(8)	⟨5 ⁺ ⟩	
1729.16(2)	⟨15 ⁻ ⟩	≈170 ns
1776.62(2)	⟨13 ⁻ ⟩	
1797.46(2)	⟨11 ⁺ , 9 ⁻ ⟩	
1798.57(2)	⟨9 ⁻ , 11 ⁺ ⟩	
1816.68(3)		
1885.52(2)	⟨9 ⁺ , 11 ⁺ ⟩	
1893.04(2)	⟨11 ⁺ , 9 ⁻ ⟩	
1942.64(2)		
1945.78(20)		

(continued)

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E^*	$2J^\pi$	$T_{1/2}$ or Γ_{cm}
[keV]		
1974.65(2)	$\langle 11^+ \rangle$	
1990.79(2)	$\langle 11^- - 15^+ \rangle$	
2005.12(4)	$\langle 9^+ \rangle$	
2025.43(4)	$\langle 3^+, 5 \rangle$	
2040.44(18)		
2049.57(4)	$\langle 9, 11^+ \rangle$	
2053.50(4)	$\langle 3^+, 5 \rangle$	
2136.42(3)	$\langle 5^+ \rangle$	
2141.87(4)	$\langle 9 - 13^+ \rangle$	
2193.60(3)	$\langle 3^+, 5^+ \rangle$	
2205.30(22)		
2209.82(6)	$\langle 3^+, 5^+ \rangle$	
2211.90(4)	$\langle 9^- - 13 \rangle$	
2225.06(4)	$\langle 5^+ \rangle$	
2248.55(3)		
2250.1(10)		
2255.08(6)	$\langle 3^+, 5^+ \rangle$	
2261.63(2)		
2266.47(9)		
2283.77(19)		
2363.78(21)		
2371.63(2)		
2372.93(6)		
2393.29(23)		
2417.40(7)	$\langle 3^+, 5^+ \rangle$	
2419.23(10)		
2426.55(21)		
2445.56(10)		
2467.26(3)		
2467.31(6)		
2482.62(24)		
2493.05(7)		
2500.24(5)		
2505.98(6)		
2516.40(7)		
2525.68(10)		
2541.74(3)	$\langle 3^+, 5^+ \rangle$	
2551.76(12)		
2556.30(4)	$\langle 13^- \rangle$	
2595.88(2)	$\langle 11^- \rangle$	
2597.45(11)	$\langle 5^+ \rangle$	
2661.0(4)		
2686.04(5)		
2768.20(5)		
2783.64(7)		

(continued)

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E^*	$2J^\pi$	$T_{1/2}$ or Γ_{cm}
[keV]		
2795.9(3)		
2807.99(9)		
2808.34(11)		
2825.31(12)		
2826.49(22)		
2866.29(7)		
2880.51(14)		
2935.83(15)		
2968.1(4)		
2974.7(7)		
3028.49(13)	$\langle 9^--13^+ \rangle$	
3051.28(8)	$\langle 9^- \rangle$	

Energy levels and branching ratios [95Ra12]. Part 2

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E^*	$2J^\pi$	Branching ratios in percentage										
[keV]		$E_f^*:$ $2J_f^\pi:$	0.0 7 ⁺	312 (5 ⁺)	720 (5 ⁺)	787 (3 ⁺)	913 (11 ⁺)	915 (9 ⁺)	1240	1307 (7 ⁺)	1313 (X ⁺)	1333 (5 ⁺)
312.073(3)	(5 ⁺)		100									
719.77(2)	(5 ⁺)		25(2)	75.2(9)								
786.922(8)	(3 ⁺)		85(1)	13.8(5)	1.7(5)							
912.67(2)	(11 ⁺)		100									
914.75(1)	(9 ⁺)		100	0.15(5)								
1239.83(2)	(3 ⁺ –7 ⁺)		23(6)	57(7)	5(2)	14(7)						
1307.18(2)	(7 ⁺)		33(2)	42(3)	6(1)	1(1)	2(1)	15(2)				
1312.80(1)	(3 ⁺ , 5 ⁺)		18(1)	74(1)	3.6(7)	4.7(5)						
1333.22(2)	(5 ⁺)		74(1)	19.6(2)	2.2(3)	3.6(2)		0.18(4)				
1334.0(10)			100									
1373.68(1)	(1 ⁺ , 3 [–])			56(6)	15(2)	29(1)						
1454.92(6)	(7 ⁺ , 9 ⁺)		31(7)	57(10)				12(5)				
1516.26(6)	(9 ⁺)		78(10)	14(4)				8(1)				
1560.14(2)	(15 ⁺)						100					
1564.14(2)	(1 ⁺ –5)			28(1)	65(1)	4(1)			1.0(3)		0.6(3)	0.4(1)
1646.64(2)	(11 ⁺)		12(5)				75(5)	11(5)				
1671.42(2)	(3 ⁺ , 5)		10(2)	6(1)	13(2)	43(3)			7(2)		5(1)	16(1)
1704.41(7)	(9 ⁺ , 7 [–])		52(4)	8(4)			8(8)	32(8)				
1707.44(14)							91(23)	9(9)				
1717.626(8)	(5 ⁺)		30(1)	5.5(5)	9.8(5)	36(1)		0.6(2)	3.6(3)	8.8(6)	2.5(5)	2.6(3)
1776.62(2)	(13 [–])						99(2)					
1797.46(2)	(11 ⁺ , 9 [–])		4(1)				21(4)	47(4)				
1885.52(2)	(9 ⁺ , 11 ⁺)		28(3)				16(5)	9(5)				
1893.04(2)	(11 ⁺ , 9 [–])		2.2(6)				21(3)	69(3)				

(continued)

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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	0.0 7^+	312 $\langle 5^+ \rangle$	720 $\langle 5^+ \rangle$	787 $\langle 3^+ \rangle$	913 $\langle 11^+ \rangle$	915 $\langle 9^+ \rangle$	1240	1307 $\langle 7^+ \rangle$	1313 $\langle X^+ \rangle$	1333 $\langle 5^+ \rangle$
1942.64(2)							35(5)					
1945.78(20)				100								
1974.65(2)	$\langle 11^+ \rangle$		1.3(4)				58(6)	2(2)				
1990.79(2)	$\langle 11^- - 15^+ \rangle$						1.9(13)					
2005.12(4)	$\langle 9^+ \rangle$		72(5)	0.2(1)				2.4(12)		20(4)		
2025.43(4)	$\langle 3^+, 5 \rangle$		5(1)	21(4)	15(2)	7(4)				6(3)	11(4)	
2040.44(18)					7(4)	5(2)					12(9)	
2049.57(4)	$\langle 9, 11^+ \rangle$		50(4)				12(7)	14(4)		16(4)		
2053.50(4)	$\langle 3^+, 5 \rangle$		12(3)	12(1)	7(3)	17(3)			11(3)	10(3)	16(3)	11(5)
2136.42(3)	$\langle 5^+ \rangle$		52(3)	17(2)	5.5(10)	4(2)		0.8(3)	2(1)	4(1)	3(1)	5.5(8)
2141.87(4)	$\langle 9 - 13^+ \rangle$						15(8)	12(8)				
2193.60(3)	$\langle 3^+, 5^+ \rangle$		25(2)	54(2)	14(2)					1.9(11)	3(2)	3(2)
2205.30(22)				100								
2209.82(6)	$\langle 3^+, 5^+ \rangle$		46(4)	7.2(4)	8(2)					12(2)		
2211.90(4)	$\langle 9^- - 13 \rangle$						7(5)					
2225.06(4)	$\langle 5^+ \rangle$		19(2)	10(1)	6(3)	1(1)		12(2)			5(2)	
2250.1(10)				100								
2255.08(6)	$\langle 3^+, 5^+ \rangle$		16(2)	6(1)	17(2)	4(2)			10(4)		25(5)	10(5)
2261.63(2)							30(1)					
2266.47(9)			51(7)						12(4)			27(15)
2283.77(19)					30(8)						20(12)	
2363.78(21)			18(9)						45(32)		36(14)	
2371.63(2)							2.5(8)	2(2)				
2393.29(23)			11(6)	56(17)								
2417.40(7)	$\langle 3^+, 5^+ \rangle$		34(10)	18(4)	11(4)	4(2)		6(4)		23(10)		
2419.23(10)							45(18)					
2467.26(3)								5(3)				
2467.31(6)			61(5)	4(3)		14(8)			17(3)			
2482.62(24)			12(4)				20(10)			68(20)		
2493.05(7)				11(5)	38(11)	17(11)						
2500.24(5)							62(7)					
2525.68(10)			7(3)	56(10)		13(7)			7(3)			
2541.74(3)	$\langle 3^+, 5^+ \rangle$		23(3)	40(3)	10(1)	2			2(1)			8(2)
2556.30(4)	$\langle 13^- \rangle$						7(2)					
2595.88(2)	$\langle 11^- \rangle$						24(1)					
2597.45(11)	$\langle 5^+ \rangle$		20(7)	3.4(12)				49(9)		7(4)	9(4)	
2661.0(4)			42(11)	5(3)								
2686.04(5)							24(2)					
2768.20(5)				24(2)	4(1)						14(5)	
2783.64(7)							43(9)					
2808.34(11)				45(6)								
2825.31(12)			100		≤ 64							
2826.49(22)			16(4)				6(5)					
2866.29(7)				75(8)		20(4)						
2880.51(14)							18(6)					

(continued)

¹³³I
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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	0.0 7 ⁺	312 <5 ⁺ >	720 <5 ⁺ >	787 <3 ⁺ >	913 <11 ⁺ >	915 <9 ⁺ >	1240	1307 <7 ⁺ >	1313 <X ⁺ >	1333 <5 ⁺ >
2935.83(15)				72(14)		20(10)						
2968.1(4)			100									
2974.7(7)							31(9)					
3051.28(8)	<9 ⁻ >		22(1)									

Energy levels and branching ratios [95Ra12]. Part 3

¹³³I
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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	1373.7 <1 ⁺ ,3 ⁻ >	1454.9 <7 ⁺ ,9 ⁺ >	1516.3 <9 ⁺ >	1560.1 <15 ⁺ >	1564.1 <19 ⁻ >	1634.2 <11 ⁺ >	1646.6 <11 ⁺ >	1671.4 <3 ⁺ ,5>	1704.4 <9 ⁺ ,7 ⁻ >	1707.4
1564.14(2)	<1 ⁺ -5>		1.1(5)									
1634.17(2)	<19 ⁻ >					100						
1646.64(2)	<11 ⁺ >					1.9(2)						
1717.626(8)	<5 ⁺ >		0.6(3)									
1729.16(2)	<15 ⁻ >					64(1)		36.1(7)				
1797.46(2)	<11 ⁺ ,9 ⁻ >			11(1)	2(1)			7(2)				
1798.57(2)	<9 ⁻ ,11 ⁺ >						100					
1885.52(2)	<9 ⁺ ,11 ⁺ >				3(1)							6(3)
1893.04(2)	<11 ⁺ ,9 ⁻ >				3(1)							
1974.65(2)	<11 ⁺ >			10(4)	4(2)							
2025.43(4)	<3 ⁺ ,5>						35(7)					
2040.44(18)			51(15)							26(13)		
2049.57(4)	<9,11 ⁺ >										9(7)	
2053.50(4)	<3 ⁺ ,5>		5(3)									
2136.42(3)	<5 ⁺ >		5(2)									
2209.82(6)	<3 ⁺ ,5 ⁺ >					26(3)						
2225.06(4)	<5 ⁺ >		27(3)							5(2)		
2255.08(6)	<3 ⁺ ,5 ⁺ >					11(2)						
2266.47(9)						10(6)						
2283.77(19)			50(25)			≤25						
2371.63(2)								1.7(8)				
2393.29(23)										17(11)		
2419.23(10)						18(9)						
2445.56(10)						75(13)						
2493.05(7)							34(19)					
2500.24(5)											5(5)	5(5)
2505.98(6)						65(12)						
2525.68(10)										17(8)		
2541.74(3)	<3 ⁺ ,5 ⁺ >						6(3)					
2551.76(12)				67(17)	33(17)							
2556.30(4)	<13 ⁻ >					8(6)						
2595.88(2)	<11 ⁻ >				3(1)				4(1)		6(1)	5(1)

(continued)

¹³³I
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E^*	$2J^\pi$	Branching ratios in percentage										
[keV]		E_f^* : $2J_f^\pi$:	1373.7 $\langle 1^+, 3^- \rangle$	1454.9 $\langle 7^+, 9^+ \rangle$	1516.3 $\langle 9^+ \rangle$	1560.1 $\langle 15^+ \rangle$	1564.1	1634.2 $\langle 19^- \rangle$	1646.6 $\langle 11^+ \rangle$	1671.4 $\langle 3^+, 5 \rangle$	1704.4 $\langle 9^+, 7^- \rangle$	1707.4
2597.45(11)	$\langle 5^+ \rangle$		2.2(12)									
2807.99(9)											17(8)	
2808.34(11)							18(6)			30(14)		
2826.49(22)				32(13)								
2866.29(7)		5(3)										
2935.83(15)						8(4)						
3028.49(13)	$\langle 9^- - 13^+ \rangle$			36(13)								
3051.28(8)	$\langle 9^- \rangle$								8(4)			

Energy levels and branching ratios [95Ra12]. Part 4

¹³³I
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E^*	$2J^\pi$	Branching ratios in percentage										
[keV]		$E^*_\text{f}:$ $2J^\pi_\text{f}:$	1717.6 $\langle 5^+ \rangle$	1729.2 $\langle 15^- \rangle$	1776.6 $\langle 13^- \rangle$	1797.5	1798.6	1816.7	1885.5	1893.0	1942.6	1974.6 $\langle 11^+ \rangle$
1776.62(2)	$\langle 13^- \rangle$			1.4(1)								
1797.46(2)	$\langle 11^+, 9^- \rangle$				8							
1816.68(3)					100		x					
1885.52(2)	$\langle 9^+, 11^+ \rangle$					37(1)						
1893.04(2)	$\langle 11^+, 9^- \rangle$				4(1)							
1942.64(2)				62(2)						2(2)		
1974.65(2)	$\langle 11^+ \rangle$				6(4)	8(2)				11.2(6)		
1990.79(2)	$\langle 11^- - 15^+ \rangle$			89.8(13)		6.8(4)				1.5(3)		
2005.12(4)	$\langle 9^+ \rangle$								2.4(12)	2.2(9)		
2141.87(4)	$\langle 9 - 13^+ \rangle$									2.3(8)		
2211.90(4)	$\langle 9^- - 13 \rangle$				53(7)		29(3)					
2225.06(4)	$\langle 5^+ \rangle$	12(2)										
2248.55(3)					34(4)				21(2)	27(2)		
2261.63(2)				17(1)		6(3)		40(2)		2(1)	4(2)	
2371.63(2)				13(2)		18(1)		1.7(8)		14(3)	33(2)	11(1)
2372.93(6)									71(14)			
2445.56(10)								25(8)				
2467.26(3)										22(3)		24(3)
2500.24(5)					12(5)					7(5)		
2516.40(7)					31(8)	42(13)				14(5)		
2556.30(4)	$\langle 13^- \rangle$			11(2)	36(3)					2(1)		10(2)
2595.88(2)	$\langle 11^- \rangle$				1(1)			4(1)	14(1)	4(1)	3(1)	
2661.0(4)		35(25)										
2686.04(5)									39(10)			
2783.64(7)					52(13)							
2826.49(22)												13(6)
2974.7(7)					69(34)							
3028.49(13)	$\langle 9^- - 13^+ \rangle$				43(13)							21(7)

Energy levels and branching ratios [95Ra12]. Part 5

¹³³₅₃I

E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	1990.8	2005.1 $\langle 9^+ \rangle$	2025.4 $\langle 3^+, 5 \rangle$	2040.4	2049.6 $\langle 9, 11^+ \rangle$	2053.5 $\langle 3^+, 5 \rangle$	2209.8 $\langle 3^+, 5^+ \rangle$	2211.9	2225.1 $\langle 5^+ \rangle$	2248.5
2141.87(4)	$\langle 9-13^+ \rangle$		46(4)	11(3)			14(3)					
2211.90(4)	$\langle 9^--13 \rangle$		11(2)									
2225.06(4)	$\langle 5^+ \rangle$				3(1)							
2248.55(3)			18(2)									
2371.63(2)							1.7(8)					
2372.93(6)				29(7)								
2393.29(23)									17(11)			
2417.40(7)	$\langle 3^+, 5^+ \rangle$								4(2)			
2419.23(10)				18(9)								
2426.55(21)												100
2467.26(3)				48(7)								
2467.31(6)											5(2)	
2500.24(5)				8.4(9)								
2516.40(7)			14(5)									
2541.74(3)	$\langle 3^+, 5^+ \rangle$							4(2)	6(2)			
2556.30(4)	$\langle 13^- \rangle$		1.4(6)							15(2)		
2595.88(2)	$\langle 11^- \rangle$		7.4(3)							1(1)		3.8(3)
2597.45(11)	$\langle 5^+ \rangle$				9(4)							
2661.0(4)						18(7)						
2686.04(5)							8(4)			4(2)		
2768.20(5)					29(6)						12(6)	
2783.64(7)							6(3)					
2795.9(3)			100									
2880.51(14)			29(6)									29(12)

Energy levels and branching ratios [95Ra12]. Part 6

¹³³₅₃I

E^*	$2J^\pi$	Branching ratios in percentage											
[keV]		$E_f^*:$ $2J_f^\pi:$	2261.6	2283.8	2371.6	2445.6	2467.3	2467.3	2500.2	2516.4	2556.3 (13^-)	2595.9 (11^-)	2597.4 (5^+)
2371.63(2)		1.3(3)											
2419.23(10)		18(5)											
2505.98(6)		35(6)											
2556.30(4)	(13^-)	5(1)			3(1)					2.3(5)			
2595.88(2)	(11^-)	19(1)			1.0(3)								
2686.04(5)					14(2)	12(4)							
2768.20(5)				5(2)			3(2)						9(3)
2807.99(9)									42(8)		42(8)		
2808.34(11)								7(3)					
2826.49(22)									32(13)				
2880.51(14)												24(12)	
3051.28(8)	(9^-)									70(8)			

Energy levels and branching ratios [94Se07, 81Se18].

 $^{134}_{53}\text{I}$

E^*	J^π	$T_{1/2}$ or
[keV]		Γ_{cm}
0.0	$\langle 4 \rangle^+$	52.5(2) m
44.4(2)	$\langle 5 \rangle^+$	<10 ns
79.46(1)	$\langle 3 \rangle^+$	1.62(10) ns
180.872(12)	$\langle 2,3 \rangle^+$	<0.1 ns
210.457(15)	$\langle 2,3 \rangle^+$	<0.15 ns
316.49(22)	$\langle 8 \rangle^-$	3.60(10) m
645.471(13)	$\langle 2,3 \rangle^+$	
846.688(16)	1^+	
923.432(14)	1^+	
1106.466(23)	1^+	

Energy levels and branching ratios [94Se07, 81Se18]. Part 2

 $^{134}_{53}\text{I}$

E^*	J^π	Branching ratios in percentage							
		E_{f}^* :	0.0	44.4	79.5	180.9	210.5	645.5	846.7
[keV]		J_{f}^π :	$\langle 4 \rangle^+$	$\langle 5 \rangle^+$	$\langle 3 \rangle^+$	$\langle 2,3 \rangle^+$	$\langle 2,3 \rangle^+$	$\langle 2,3 \rangle^+$	1^+
44.4(2)	$\langle 5 \rangle^+$		100						
79.46(1)	$\langle 3 \rangle^+$		100						
180.872(12)	$\langle 2,3 \rangle^+$		97(4)	0.5(4)	2.0(5)				
210.457(15)	$\langle 2,3 \rangle^+$		99(6)		0.8(3)	<0.13			
316.49(22)	$\langle 8 \rangle^-$		<0.6	100					
645.471(13)	$\langle 2,3 \rangle^+$		2.1(2)		43(2)	11.0(7)	44(2)		
846.688(16)	1^+				72(3)	2.9(4)	4.1(5)	21.5(7)	
923.432(14)	1^+				2.8(7)	36(1)	11(1)	50(2)	0.64(6)
1106.466(23)	1^+				3.3(10)	11.3(12)	3.3(10)	74(4)	3.3(7)
									4(2)

Energy levels and branching ratios [98Se07].

 $^{135}_{53}\text{I}$

E^*	$2J^\pi$	$S_{\text{d}\tau}$	$S_{\text{d}\tau}$	$T_{1/2}$ or	Ref.
[keV]		<i>mod.</i>	<i>stand</i>	Γ_{cm}	
0.0	7^+	2.74	1.82	6.57(2) h	71Wi04
603.68(3)	$\langle 5 \rangle^+$	0.34	0.17		71Wi04
870.52(4)	$\langle 5 \rangle^+$	0.12	0.06		
1009.9(2)					
1133.2(2)	$\langle 11^+ \rangle$				
1183.9(2)	$\langle 9^+ \rangle$				
1421.2	$\langle 15^+ \rangle$				
1516.8(3)					

(continued)

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E^*	$2J^\pi$	$S_{d\tau}$	$S_{d\tau}$	$T_{1/2}$ or	Ref.
[keV]		<i>mod.</i>	<i>stand</i>	Γ_{cm}	
1709.8(3)					
1857.0(5)					
1993.2	$\langle 17^+ \rangle$				
2027.2(4)					
2069.2(2)					
2157.0(5)					
2312.6(4)					
3046.4(7)	$\langle 7, 9 \rangle$				
3357.0(7)					
3653.9	$\langle 19^- \rangle$				
3688.1	$\langle 23^- \rangle$				
3766.1	$\langle 21^- \rangle$				
4240.4	$\langle 19^+ \rangle$				
4313.5(6)	$\langle 7, 9 \rangle$				
4378.5	$\langle 21^+ \rangle$				
4463.8(5)	$\langle 7^-, 9^- \rangle$				
4772.7(5)	$\langle 5^-, 9^- \rangle$				
4774.0	$\langle 23^+ \rangle$				
5326.6	$\langle 25^+ \rangle$				
5574.8	$\langle 27^+ \rangle$				
		71Wi04	71Wi04		Ref.

Additional data on this isotope can be found in [97Zh14, 96Zh21, 73Bo42].

Two values $S_{d\tau} = d\sigma/d\Omega_{\text{exp}}/N(d, \tau)d\sigma/d\Omega_{DWBA}$ were given in [71Wi04] as "the standard" (*stand*, the second) and "the modified" (*mod.*) parameters (see definitions therein).

Energy levels and branching ratios [98Se07]. Part 2

¹³⁵I
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E^*	$2J^\pi$	Branching ratios in percentage										
[keV]		E_f^* : $2J_f^\pi$:	0.0 7 ⁺	604 $\langle 5 \rangle^+$	870 $\langle 5 \rangle^+$	1010	1133 $\langle 11^+ \rangle$	1184 $\langle 9^+ \rangle$	1421 $\langle 15^+ \rangle$	1710	1857.0	1993.2 $\langle 17^+ \rangle$
603.68(3)	$\langle 5 \rangle^+$		100									
870.52(4)	$\langle 5 \rangle^+$		43(1)	57(1)								
1009.9(2)			34(2)	17(4)	49(4)							
1133.2(2)	$\langle 11^+ \rangle$		100									
1183.9(2)	$\langle 9^+ \rangle$		81(3)		14(2)	5(1)						
1421.2	$\langle 15^+ \rangle$						100					
1516.8(3)			34(5)	35(3)	30(4)							
1709.8(3)			53(3)	47(7)								
1857.0(5)			42(10)	58(13)								
1993.2	$\langle 17^+ \rangle$								100			
2027.2(4)			88(7)	12(1)								
2069.2(2)				37(1)	63(3)							

(continued)

¹³⁵I
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E^* [keV]	$2J^\pi$	Branching ratios in percentage										
		$E_f^*:$ $2J_f^\pi:$	0.0 7 ⁺	604 ⟨5 ⁺ ⟩	870 ⟨5 ⁺ ⟩	1010	1133 ⟨11 ⁺ ⟩	1184 ⟨9 ⁺ ⟩	1421 ⟨15 ⁺ ⟩	1710	1857.0	1993.2 ⟨17 ⁺ ⟩
2157.0(5)			87(9)	13(3)								
2312.6(4)			10(6)		55(2)						35(4)	
3046.4(7)	⟨7,9⟩				40(6)		26(5)			33(6)		
3357.0(7)				21(6)	79(12)							
3653.9	⟨19 ⁻ ⟩											100
3688.1	⟨23 ⁻ ⟩											100
3766.1	⟨21 ⁻ ⟩											100
4240.4	⟨19 ⁺ ⟩											100
4313.5(6)	⟨7,9⟩			20(4)	66(6)		14(1)					
4378.5	⟨21 ⁺ ⟩											x
4463.8(5)	⟨7 ⁻ ,9 ⁻ ⟩		65(3)				16(1)	19(1)				
4772.7(5)	⟨5 ⁻ -9 ⁻ ⟩		10(2)	42(7)	37(3)							

Energy levels and branching ratios [98Se07]. Part 3

¹³⁵I
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E^* [keV]	$2J^\pi$	$E_f^*:$ $2J_f^\pi:$	Branching ratios in percentage							
			2157.0	3653.9 ⟨19 ⁻ ⟩	3688.1 ⟨23 ⁻ ⟩	3766.1 ⟨21 ⁻ ⟩	4240.4 ⟨19 ⁺ ⟩	4378.5 ⟨21 ⁺ ⟩	4774.0 ⟨23 ⁺ ⟩	5326.6 ⟨25 ⁺ ⟩
4378.5	⟨21 ⁺ ⟩			x	x		x			
4772.7(5)	⟨5 ⁻ -9 ⁻ ⟩		11(2)							
4774.0	⟨23 ⁺ ⟩					x		x		
5326.6	⟨25 ⁺ ⟩				x			x	x	
5574.8	⟨27 ⁺ ⟩								x	x

Energy levels and branching ratios [02So05].

¹³⁶I
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E^* [keV]	J^π	$T_{1/2}$ or Γ_{cm}
0	⟨1 ⁻ ⟩	83.4(10) s
86.73(7)	⟨0 ⁻ ,1 ⁻ ,2 ⁻ ⟩	0.4(1) ns
222.10(7)	⟨0 ⁻ ,1,2 ⁻ ⟩	
333.97(6)	⟨0 ⁻ ,1⟩	
578.77(3)	⟨0 ⁻ ,1,2 ⁻ ⟩	
630.53(16)	⟨0 ⁻ ,1⟩	
640(110)	⟨6 ⁻ ⟩	46.9(10) s
0+X	⟨7 ⁻ ⟩	
738.21(19)	⟨0 ⁻ ,1,2 ⁻ ⟩	
1111.0+X	⟨9 ⁻ ⟩	

(continued)

¹³⁶I
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E^*	J^π	$T_{1/2}$ or Γ_{cm}
[keV]		
1372.0+X	$\langle 11^- \rangle$	≈ 4 ns
1614.9+X	$\langle 12^- \rangle$	
2656.42(22)	1^+	
2441.0+X	$\langle 12^- \rangle$	
3137.1(5)	1^+	
3235.2(3)	1^+	
2834.7+X	$\langle 12^+ \rangle$	
2899.2+X	$\langle 13^+ \rangle$	
3016.5+X	$\langle 14^+ \rangle$	
3076.7+X		
4074.5+X		

Additional data on this isotope can be found in [97Bh06].

Energy levels and branching ratios [02So05]. Part 2

¹³⁶I
53

E^*	J^π	E_{f}^* :	0	86.7	222.1	334.0	578.8	630.5	0+X
[keV]		J_{f}^π :	$\langle 1^- \rangle$			$\langle 0^-, 1 \rangle$		$\langle 0^-, 1 \rangle$	$\langle 7^- \rangle$
86.73(7)	$\langle 0^-, 1^-, 2^- \rangle$		100						
222.10(7)	$\langle 0^-, 1, 2^- \rangle$			100					
333.97(6)	$\langle 0^-, 1 \rangle$		100						
578.77(3)	$\langle 0^-, 1, 2^- \rangle$		81	10	9				
630.53(16)	$\langle 0^-, 1 \rangle$		79	17		4			
738.21(19)	$\langle 0^-, 1, 2^- \rangle$		100						
1111.0+X	$\langle 9^- \rangle$								100
2656.42(22)	1^+		≈ 2	40			58		
3137.1(5)	1^+			48		52			
3235.2(3)	1^+		69				≈ 3	6	

Energy levels and branching ratios [02So05]. Part 3

¹³⁶I
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E^*	J^π	E_{f}^* :	738.2	1111+X	1372+X	1615+X	2835+X	2899+X	3017+X
[keV]		J_{f}^π :		$\langle 9^- \rangle$	$\langle 11^- \rangle$	$\langle 12^- \rangle$	$\langle 12^+ \rangle$	$\langle 13^+ \rangle$	$\langle 14^+ \rangle$
1372.0+X	$\langle 11^- \rangle$			100					
1614.9+X	$\langle 12^- \rangle$				100				
2441.0+X	$\langle 12^- \rangle$				100				
3235.2(3)	1^+		22						
2834.7+X	$\langle 12^+ \rangle$				100				

$${}_{53}^{136}\text{I}$$
[illegible]