Energy levels and branching ratios [91Aj01].

$^{13}_{7}\mathrm{N}$

E^* [keV]	$2J^\pi$	$2T$	$S_{\tau\mathrm{d}}$	$\Gamma_\circ$ [meV]	S'^{+}_{p} [keV]	σ (d,n) μb/sr	S_N (d,n)	σ (p,t) μb	σ (τ,t) μb/sr	$T_{1/2}$ or Γ_cm	Ref.
0.0	1^-	1	0.48		0.53	73000	0.34	941(20)	7800(340)	9.965(4) m	80Pe13
2364.9(6)	1^+		0.14	500(40)	0.54*		0.28	weak		31.7(8) keV	80Pe13
3502(2)	3^-			640	0.031	16000		652(25)	9320(380)	62(4) keV	75Bo35
3547(4)	5^+		0.53		0.21	68000				47(7) keV	80Pe13
6364(9)	5^+		0.007		0.0031			63(7)		11 keV	80Pe13
6886(8)	3^+		0.015		0.13					115(5) keV	80Pe13
7155(5)	7^+		<0.009		0.016					9.0(5) keV	80Pe13
7376(9)	5^-		0.024		0.069			1271(44)		75(5) keV	80Pe13
7900	3^+		0.13		0.14					≈1500 keV	80Pe13
8918(11)	1^-		<0.005		0.02			130(16)		230 keV	80Pe13
9000	9^+		<0.005							280(30) keV	80Pe13
9476(8)	3^-		<0.002		0.001					30 keV	80Pe13
10250(15)	$\langle 1^+ \rangle$									≈280 keV	
10360	5^-		<0.001							30 keV	80Pe13
10360	7^-									76 keV	
10833(9)	1^-		0.064					18(4)			80Pe13
11530(12)	5^+									430(35) keV	
11700(30)	5^-									115(30) keV	
11740(40)	3^+			≈4200						240(30) keV	
11740(50)	3^-									530(80) keV	
11860(40)	1^+							93(9)		380(50) keV	68Fl03
12130(50)	7^-									250(30) keV	
12558(23)										>400 keV	
12937(24)										>400 keV	
13500(20)	3^+									≈6500 keV	
14050(20)	3^+	1		14040						165(20) keV	
15064.6(4)	3^-	3		15000				115(11)		0.93(3) keV	68Fl03
15300(20)	$\langle 3^+ \rangle$			≥500						350(150) keV	
15990(30)	7^+									135(90) keV	
16000										≈500 keV	
17500											
18150(30)	3^+	1								320(80) keV	
18170(20)	1^-	1								225(50) keV	
18406(5)	3^+	3								66(8) keV	
18961(10)	3^-,7^+	3								23(5) keV	
19830	5^-	1								1000 keV	
19880	7^+									750 keV	
20200	5^-									1000 keV	
20900(3)	1^+									1200 keV	
21400	5^-									750 keV	
21700	3^+										
22400(5)	1^+										
23000											
23300	$\langle 3^- \rangle$									400 keV	
23830(50)	$\langle 3^- \rangle$									350(50) keV	

(continued) $^{13}_{7}$N

E^* [keV]	$2J^\pi$	$2T$	$S_{\tau \mathrm{d}}$	$\Gamma_\circ$ [meV]	S'^{+}_{p} [keV]	σ (d,n) μb/sr	S_{N} (d,n)	σ (p,t) μb	σ (τ,t) μb/sr	$T_{1/2}$ or Γ_{cm}	Ref.
23900	⟨11$^-$⟩									20 keV	
24400										700 keV	
24600										120 keV	
25600(10)	⟨3⟩$^-$									240(80) keV	
25900										1000 keV	
26840											
28000											
31000											
32000										≈2000 keV	
			80Pe13	91Aj01	91Aj01	75Bo35	84Sc04	68Fl03	91Ja04		Ref.

Additional data on this isotope can be found in [02Ra51, 91Ka12, 84Sc04, 74Ho06, 72Ma21].
* This and other values below are marked as θ in [91Aj01].
Cross sections of the proton transfer σ (d,n) [75Bo35] and cross sections of the (τ,t) reaction [91Ja04] were measured at 0°.

Energy levels and branching ratios [91Aj01]. Part 2 $^{13}_{7}$N

E^* [keV]	$2J^\pi$		Branching ratios in percentage		
		E^*_{f}:	0.0	2364.9	3502
		$2J^\pi_{\mathrm{f}}$:	1$^-$	1$^+$	3$^-$
2364.9(6)	1$^+$		100		
3502(2)	3$^-$		92.0(10)	8.0(10)	
3547(4)	5$^+$		100		
11740(40)	3$^+$		100		
13500(20)	3$^+$		100		
14050(20)	3$^+$		100		
15064.6(4)	3$^-$		56(3)	≤7	44(3)
15300(20)	⟨3$^+$⟩		100		

Energy levels and branching ratios [91Aj01]. $^{14}_{7}$N

E^* [keV]	J^π	T	ℓ_{p}	$2j$	$(2J{+}1)S^+_{\mathrm{p}}$	ℓ_{n}	$2j_{\mathrm{n}}$	C^2S (d,t)	$d\sigma/d\Omega$ μb/sr	$d\sigma/d\Omega$ μb/sr	$d\sigma/d\Omega$ μb/sr	σ (d,n) μb/sr	S_{N} (d,n)	$T_{1/2}$ or Γ_{cm}	Ref.
0.0	1$^+$	0	1	1	2.27	1	1	1.24(9)				400*	1.00	Stable	91Aj01
							3	0.10(8)							91Aj01
2312.80(1)	0$^+$	1	1	1	0.92	1	1	0.47(1)				800*	0.97	68(3) fs	91Aj01
3948.1(2)	1$^+$	0	1	3	1.10	1	1	0.18(4)				1200*	0.38	4.8(18) fs	91Aj01
							3	0.48(4)							91Aj01

(continued) $^{14}_{7}$N

E^* [keV]	J^π	T	ℓ_p	$2j$	$(2J+1)S_p^+$	ℓ_n	$2j_n$	C^2S (d,t)	$d\sigma/d\Omega$ μb/sr	$d\sigma/d\Omega$ μb/sr	$d\sigma/d\Omega$ μb/sr	σ (d,n) μb/sr	S_N (d,n)	$T_{1/2}$ or Γ_{cm}	Ref.
4915.1(14)	0^-	0	0	1	0.29	⟨0⟩	1	0.008(1)				27·10^3*	0.70	5.3(10) fs	91Aj01
5105.9(1)	2^-	0	2	5	1.79	2		0.056(7)				3100*	0.67	4.35(5) ps	91Aj01
5691.4(1)	1^-	0	0	1	0.91	2	3	0.010(1)				27·10^3*	0.79	11(6) fs	91Aj01
			2	3	0.29										
5834.2(1)	3^-	0	2	5	2.19	2	5	0.045(12)				3500*	0.87	8.30(16) ps	91Aj01
6203.5(6)	1^+	0	1	1	0.03	1	3	0.047(7)				1950*		111(14) fs	91Aj01
6446.2(1)	3^+	0	1	7	⟨0.1⟩			<0.01				800*		430(42) fs	91Aj01
7029.1(1)	2^+	0	1	3	0.31	1	3	1.11(3)				5·10^3*	0.23	3.7(4) fs	91Aj01
7966.9(5)	2^-	0		5	0.05	⟨2⟩		0.017				800*	0.12	2.5(7) eV	91Aj01
8062(1)	1^-	1	0	1	0.10							21000	0.74	23(1) keV	91Aj01
			2	3	<0.006										91Aj01
8490(2)	4^-	0	4										0.18	13.2(21) fs	
8618(2)	0^+	1	1	1	0.021							660	0.10	3.8(3) keV	91Aj01
8776(7)	0^-	1	0	1	<0.009									410(20) keV	91Aj01
8907(3)	3^-	1	2	5	3.32							18000	0.60	16(2) keV	73Bo10
8964(2)	5^+	0												73(12) fs	
8980(3)	2^+	⟨0⟩		3	<0.2							1700		8(2) keV	91Aj01
9129.0(5)	3^+	0	2	5	0.14									9(4) fs	91Aj01
9172.2(1)	2^+	1		3	<0.08	1	3	0.423(8)				500		122(8) eV	91Aj01
9388(3)	2^-	0	2	5	0.62							8300		13(3) keV	91Aj01
9509(3)	2^-	1	2	5	1.31	⟨2⟩		0.022				15000		41(2) keV	91Aj01
9522(21)						⟨2⟩		0.007							91Aj01
9703(4)	1^+	0	1	1	0.039	1	⟨3⟩	0.005				2100		15(3) keV	91Aj01
10079(10)	⟨3^+⟩			5	0.054				266	262	290			<9 keV	91Aj01
10101(15)	2^+,1^+	0				1	3	0.061						12(3) keV	91Aj01
10226(8)	$1^{\langle -\rangle}$	0		1	0.16									80(15) keV	91Aj01
10432(7)	2^+	1				1	3	0.388(13)		88				33(3) keV	91Aj01
10534(20)	⟨1^-⟩			1	0.34									140 keV	91Aj01
10812(15)	5^+	0							234	164				0.39(16) eV	
11000(30)														165(30) keV	
11050(5)	3^+							<0.02	82	64	770			1.2(4) keV	91Aj01
11070	1^+	0												100 keV	
11210(30)		1												220(30) keV	
11240(15)	3^-	0				⟨2⟩		0.016		118				11 keV	91Aj01
11270(15)	2^-	0			[0.22]				74		1510			180 keV	91Aj01
11357(15)	1^+	0												30 keV	
11513(2)	2^+,3^+				0.040			<0.01	102	65	1170			7.0(5) keV	91Aj01
11676(18)	1^-,2^-				[0.09]									150(20) keV	91Aj01
11741(6)	1^-,2^-													40(9) keV	
11761(6)	3^-,4^-					2		0.014						78(6) keV	91Aj01
11807(7)	2^-								55					119(9) keV	
11874(6)	2^-,⟨1^-⟩													101(9) keV	
12200(19)	1^-,2^-													300(30) keV	
12408(3)	⟨4^-⟩													34(3) keV	
12418(3)	3^-,4^-								68	305	2702			41(4) keV	

(continued) $^{14}_{7}\mathrm{N}$

E^* [keV]	J^π	T	ℓ_p	$2j$	$(2J{+}1)S_p^+$	ℓ_n	$2j_n$	C^2S (d,t)	$d\sigma/d\Omega$ μb/sr	$d\sigma/d\Omega$ μb/sr	$d\sigma/d\Omega$ μb/sr	σ (d,n) μb/sr	$T_{1/2}$ or Γ_{cm}	Ref.
12495(9)	$\langle 1^+\rangle$	$\langle 1\rangle$				1	3	0.13(1)					39(5) keV	91Aj01
12594(3)	3^+												48(2) keV	
12690(5)	3^-								82	286	1175		18(5) keV	
12708(9)													43(15) keV	
12789(5)	4^+									434			16(3) keV	
12813(4)	4^-								149				5(2) keV	
12826(6)													11(3) keV	
12857(6)											4960		78(10) keV	
12883(8)													134(11) keV	
12922(5)	4^+									324			22(4) keV	
13007(17)									138				120(30) keV	
13167(5)	1^+												15(5) keV	
13192(9)	3^+							<0.02	80	234			65(10) keV	91Aj01
13243(10)	2^-												92(5) keV	
13300(40)	$\langle 2^-\rangle$	1											1000(150) keV	
13656(5)	$\langle 2^+,3^+\rangle$												≈90 keV	
13714(5)	$2^-,3^+$								34	202			105(25) keV	
13740(10)	1^+	1				1	3	0.45(1)					180(20) keV	91Aj01
13770(10)	$\langle 1^+\rangle$												120 keV	
14040(30)													100 keV	
14160(30)													230 keV	
14250(50)	3^+												420(100) keV	
14300(20)													150 keV	
14560(20)									183	217			100 keV	
14590(30)													50 keV	
14660(10)	5^-	0											100(20) keV	
14730(25)	$\langle 2^-\rangle$	$\langle 1\rangle$											125 keV	
14810(25)										332				
14860(30)									189		2325		140 keV	
14920(30)						$\langle 2\rangle$	$\langle 5\rangle$	0.025		515			43(8) keV	91Aj01
15020(20)	$3^-,4^-$	1							157				≈60 keV	
15240(20)									141	540			100 keV	
15430(20)											1653		100 keV	
15700(50)						$\langle 2\rangle$	$\langle 5\rangle$	0.037	51		3530		350 keV	91Aj01
16210(20)											1830		125 keV	
16400(20)													150 keV	
16650(25)	4^+	0+1								246			240(25) keV	
16910(20)	5^-	1								297			170(25) keV	
16910(30)	4^+	0+1											290(30) keV	
16920(20)	2^+	0+1											830(170) keV	
17030(50)	3^-	0+1				$\langle 2\rangle$	$\langle 5\rangle$	0.034					245(50) keV	91Aj01
17170(30)	1^-	0+1								712	4860		300(30) keV	
17310(30)	4^+	0+1						<0.02					275(30) keV	91Aj01
17400(25)	4^+	0+1											245(25) keV	
17460	5^-	0												

(continued) $^{14}_{7}$N

E^* [keV]	J^π	T	ℓ_p	$2j$	$(2J+1)S_p^+$	ℓ_n	$2j_n$	C^2S (d,t)	$d\sigma/d\Omega$ μb/sr	$d\sigma/d\Omega$ μb/sr	σ (d,n) μb/sr	S_N (d,n)	$T_{1/2}$ or Γ_{cm}	Ref.
17850(50)	4^+	0+1											475(50) keV	
17850(50)	3^-	0+1											440(50) keV	
17930(70)	2^+	0+1				⟨2⟩	⟨5⟩	0.045					340(70) keV	91Aj01
18020(60)	3^-	0+1											570(60) keV	
18140(50)	4^+	0+1											480(50) keV	
18350(60)	1^-	0+1											560(60) keV	
18430(65)	4^+	0+1											315(65) keV	
18500(10)	5^-	0+1											62(10) keV	
18530(80)	2^+	0+1				1	3	0.043(7)					410(80) keV	91Aj01
18530(60)	3^-	0+1											310(60) keV	
18640(70)	3^-	0+1											675(70) keV	
18780(35)	1^-	0+1											315(35) keV	
18880(50)	4^+	0+1											475(50) keV	
18930(50)	$2^+,3^-$	0+1											450(50) keV	
19100(90)	3^-	0+1											870(90) keV	
19900(60)	2^+	0+1											575(60) keV	
19990(50)	1^-	0+1											510(50) keV	
20110(20)	$3^-,4^-$	0+1											120(20) keV	
20630(11)	4^+	0+1											1100(110) keV	
20650(60)	5^-	0+1											610(60) keV	
21240(50)	4^+	0+1											415(50) keV	
21510(25)	3^-	0+1											235(25) keV	
21530(75)	5^-	0+1											360(75) keV	
21680(40)	4^+	0+1											360(40) keV	
21800	4^+	0+1											650 keV	
22260(15)	4^+	0+1											65(15) keV	
22310(60)	5^-	0+1											570(60) keV	
22500	2^-	1												
23000	2^-	1											≈3000 keV	
23400(70)	5^-	0+1											640(70) keV	
24000													≈1000 keV	
					91Aj01			89Sa13	84Cl08	84Cl08	75Bo35	73Bo10		Ref.

Additional data on this isotope can be found in [02St01, 94Ga18, 89Sa13, 71Fo05, 68Ga13].
Abundance: 99.634(20) %.
* Neutron yield from the (d,n) reaction measured by time-of-flight method in number of counts per channel [75Bo35] instead of cross section of σ (d,n) reaction measured at 0° in the same work.
Only levels with known spectroscopic factors are given here for energies larger than 10 MeV.
Three separate columns of $d\sigma/d\Omega$ contain data on three reactions induced by ^{6}Li ions, namely, (^{6}Li,d),(^{6}Li,t) (^{6}Li,α) reported in [84Cl08].
From the time-of-flight measurements of the (p,n) reaction additional candidate 4^- states are identified at E^*=13.76 MeV and 19.49 MeV (T=1) and 26.61 MeV (T=2) in agreement with the results of measurements of (e,e′) reaction [94Ga18].
Data for this isotope are considered in vol. LB I/18A.

Energy levels and branching ratios [91Aj01]. Part 2 $^{14}_{7}$N

E^* [keV]	J^π	Branching ratios in percentage E_f^*: 0.0 J_f^π: 1^+	2313 0^+	3948 1^+	4915 0^-	5106 2^-	5691 1^-	5834 3^-	6203 1^+	6446.17 3^+	7029.12 2^+
2312.80(1)	0^+	100									
3948.1(2)	1^+	3.9(2)	96.1(3)								
4915.1(14)	0^-	100	<1	<0.5							
5105.9(1)	2^-	79.9(10)	19.4(12)	0.7(4)							
5691.4(1)	1^-	36.1(12)	63.9(12)								
5834.2(1)	3^-	21.3(13)				78.7(13)					
6203.5(6)	1^+	23.1(20)	76.9(20)								
6446.2(1)	3^+	70.1(15)		19.7(10)		6.5(6)		3.7(6)			
7029.1(1)	2^+	98.6(3)	0.5(1)	0.90(25)							
7966.9(5)	2^-	55(3)		45(3)							
8062(1)	1^-	80.3(6)	1.40(14)	12.7(4)	1.86(14)	0.25(14)	3.5(4)				
8490(2)	4^-					83(3)		17(3)			
8618(2)	0^+	23		24			13		40		
8776(7)	0^-	100									
8907(3)	3^-	2.9(3)				4.2(5)		84.3(9)		5.3(6)	3.3(5)
8964(2)	5^+	<1								100	
9129.0(5)	3^+	82(3)						9(3)		9(3)	
9172.2(1)	2^+	85.9(10)	0.86(9)				0.50(10)	0.62(9)		8.9(9)	3.2(3)
9509(3)	2^-	0.60(10)		6.6(5)		76(5)		16.8(15)			
9703(4)	1^+	30(8)	70(8)								
10101(15)	$2^+,1^+$	100									
10226(8)	$1^{\langle - \rangle}$		100								
10432(7)	2^+	83(3)				2.4(2)	1.6(4)			6.5(3)	6.5(3)
10812(15)	5^+									100	
11050(5)	3^+	57(10)		43(10)							

Energy levels and branching ratios [91Aj01]. $^{15}_{7}$N

E^* [keV]	$2J^\pi$	$2T$	ℓ_n	$2j_n$	S_{dp}	S' (d,p)	S_N (d,p)	S_N (e,e′p)	σ (α,d) μb	Ratio (α,d)	$S_{\tau d}$ *rel.*	S'^{+}_{p} (d,n)	σ (d,n) μb/sr	$T_{1/2}$ or Γ_{cm}	Ref.
0.0	1^-	1	1		1.45(15)		1.31(4)	1.26(1)			1.0	1.65		Stable	81Aj01
			3		0.00(4)										80Kr01
5270.15(1)	5^+		2		<0.15		0.01(4)	0.114(3)	2040	1.2	0.50	0.9		1.79(10) ps	81Aj01
5298.82(1)	1^+				<0.02		incl	0.036(2)	530	0.26	0.34	0.58		17(5) fs	87Ca15
6323.78(2)	3^-		1	1	0.07(2)		0.10(2)	2.35(2)			0.07	0.3		0.146(8) fs	80Kr01
				3	0.04(1)										81Aj01
7155.05(2)	5^+		2		0.92(7)		0.88(3)		490	0.22		0.13		12(6) fs	81Aj01
7300.83(2)	3^+		0	1	0.87(7)		0.89(4)		420	0.17		0.18		0.42(4) fs	81Aj01
			2	5	0.07(4)		0.07(5)								81Aj01
7567.1(10)	7^+		2		0.89(5)		0.87(1)	0.023(25)	1060	0.36		⟨0.7⟩		8(+8-4) fs	81Aj01
8312.62(3)	1^+		0	1	0.77(8)		1.02(4)	0.041(3)	150	0.20				1.2(8) fs	81Aj01

(continued) $^{15}_{7}\mathrm{N}$

E^* [keV]	$2J^\pi$	$2T$	ℓ_n	$2j_n$	S_{dp}	S' (d,p)	S_N (d,p)	S_N (e,e′p)	σ (α,d) μb	Ratio (α,d)	$S_{\tau d}$ *rel.*	S'^{+}_{p} (d,n)	σ (d,n) μb/sr	$T_{1/2}$ or Γ_{cm}	Ref.
			2	3	0.11(5)		0.03(6)								81Aj01
8571.4(1)	3^+		0	1	0.05(3)		0.02(1)	0.021(3)	560	0.33		0.03		0.5(5) fs	81Aj01
			2	5	0.12(5)		0.12(3)								81Aj01
9049.71(7)	1^+		0		0.30*	0.30		0.042(4)	130	0.21		0.30		0.35(6) fs	94Le02
9151.90(12)	3^-					0.13						⟨0.01⟩		0.97(25) fs	75Bo34
9154.90(3)	5^+		2		0.78*	0.78			570	0.33		⟨0.23⟩		5(+4-2) fs	84Ya03
9222.1(8)	1^-					0.09						0.11		<90 fs	75Bo34
9760(1)	5^-					0.13						⟨0.5⟩		1.8(6) fs	75Bo34
9829(3)	7^-											⟨0.6⟩		12(5) fs	75Bo34
9925.0(2)	3^-					0.17		0.133(15)				0.02		0.21(4) fs	94Le02
10066.0(2)	3^+		0		1.3*	0.60		0.222(4)	370	0.17				0.069(4) fs	94Le02
10449.7(3)	5^-					0.05						0.08		<0.5 keV	75Bo35
10533.3(5)	5^+		2		6.4*				190	0.12		0.05			84Ya03
10693.2(3)	9^+													12(6) fs	
10701.9(3)	3^-													0.2 keV	
10804(2)	3^+													<1 eV	
11235(5)	≥3											0.03		3.3 keV	75Bo35
11292.8(7)	1^-											0.03	1100	8(3) keV	75Bo35
11437.6(7)	1^+											0.09		41(1) keV	75Bo35
11615(4)	1^+	3												405(6) keV	
11763(3)	3^+													40 keV	
11876(3)	3^-													25 keV	
11942(6)	9^-													≤3.0 keV	
11965(3)	1^-													17 keV	
12095(3)	5^+							0.023(2)	370	0.19		0.05	4600	14(5) keV	75Bo35
12145(3)	3^-													41(5) keV	
12327(4)	$5^{\langle+\rangle}$								440	0.19				22 keV	84Ya03
12493(4)	5^+	1												40(5) keV	
12522(8)	5^+	3												58(4) keV	
12551(10)	9^+														
12920(4)	3^-							0.035(2)						56(11) keV	94Le02
12940(10)	5^+													81 keV	
13004(10)	11^-														
13107(15)															98Le17
13149(10)														7(3) keV	
13174(7)	⟨9⟩													7(3) keV	
13199(15)															98Le17
13362(8)	3^-													16(8) keV	
13390(10)	3^+													56 keV	
13537(10)	3^-													85(30) keV	
13608(7)	$5^{\langle+\rangle}$													18(4) keV	
13612(10)	$\langle 1^+ \rangle$													90 keV	
13713(10)														26(8) keV	
13840(30)**	3^+								450	0.28				75 keV	84Ya03
13900	1^+													930 keV	

(continued) $^{15}_{7}$N

E^* [keV]	$2J^\pi$	$2T$	ℓ_n	$2j_n$	S_{dp}	S' (d,p)	S_N (d,p)	S_N (e,e′p)	σ (α,d) μb	Ratio (α,d)	$S_{\tau d}$ *rel.*	S'^{+}_{p} (d,n)	σ (d,n) μb/sr	$T_{1/2}$ or Γ_{cm}	Ref.
13990(30)	5^+													98(10) keV	
14090(7)	$\langle 9^+,7^+\rangle$													22(6) keV	
14100(30)	3^+													≈100 keV	
14162(10)	$3^{\langle+\rangle}$													27(6) keV	
14240(40)	5^+													150 keV	
14380(40)	7^+													100 keV	
14400														≈1900 keV	
14550(20)														200(50) keV	
14647(10)														33(6) keV	
14710														750 keV	
14720(10)	5^-													110(50) keV	
14860(20)														48(11) keV	
14920(10)														12(3) keV	
15025(10)														13(3) keV	
15090(20)														80(25) keV	
15288(10)														26(6) keV	
15373(10)	13^+														
15380(20)														75(25) keV	
15430(20)														≈100 keV	
15450														750 keV	
15530(20)														≈35 keV	
15600(20)														95(25) keV	
15782(10)															
15930(20)														35(5) keV	
15944(15)														21(6) keV	
16026(10)														62(12) keV	
16190(10)	3^+													450(100) keV	
16260(20)	3^+													150(28) keV	
16320(20)														≈30 keV	
16390(20)														44(11) keV	
16460														560 keV	
16576(15)														27(15) keV	
16590(25)	3^-													490 keV	
16677(15)	1^+	1												80(20) keV	
16850(30)	5													110(50) keV	
16910														≈350 keV	
17050**															98Le17
17110															
17150(50)	$\langle 1^+,3^+\rangle$													250(60) keV	
17230(40)														≈175 keV	
17370(40)														≈250 keV	
17580(40)	3^+													450(120) keV	
17670(40)	3^+	1												600(80) keV	
17720(10)														48(10) keV	
17950(20)														167 keV	

(continued) $^{15}_{7}$N

E^*	$2J^\pi$	$2T$	ℓ_n	S_{dp}	S'	S_N	S_N	σ (α,d)	Ratio	S'^{+}_{p}	σ (d,n)	$T_{1/2}$ or	Ref.
[keV]					(d,p)	(d,p)	(e,e′p)	μb	(α,d)	(d,n)	μb/sr	Γ_{cm}	
18060(10)												19(4) keV	
18090(20)												≈40 keV	
18220												158 keV	
18270(20)												235(60) keV	
18700(20)													
18910(15)	3^+,1^+											750(70) keV	
19200(35)	⟨1^+⟩	⟨1⟩										≈130 keV	
19500	3^+	⟨3⟩										≈400 keV	
19720(40)													
20120(50)		⟨3⟩											
20500	3^+											≈400 keV	
20960(65)	3^+,1^+											1740(150) keV	
21820												≈600 keV	98Le17
22860**													98Le17
23190(60)		⟨3⟩											
23600													
24750(15)													
25500	3^-	⟨3⟩											
26800													
≈37000													
				80Kr01	72Am06		94Le02	84Ya03	84Ya03	75Bo34			Ref.
				97Ju02		69Ph02				75Bo35	75Bo35		Ref.

Additional data on this isotope can be found in [01Kr01, 98Le17, 94Li32, 91Az01, 90Pi05, 75Hs01, 67Hi06].
Abundance: 0.366(20) %.
* $(2J{+}1)S$ values are from [97Ju02] where the data on the (d,p) reaction from [69Ph02, 72Am06, 80Kr01] were evaluated for the calculation of different processes following neutron capture.
** This state has a large ^{11}B+α configuration [91Az01].
Parameters S' [72Am06] and $S_N{=}d\sigma/d\Omega(2J_i+1)/1.5(2J_f+1)\sigma(DWBA)$ [69Ph02] from the (d,p) reaction are given in two separate columns; data in the first column are from [80Kr01].
Ratio=$\sigma_{exp}/\sigma_{cal}$ similar to S_N was obtained for the σ (α,d) reaction in [84Ya03].
The state with E^*=21.5 MeV is strongly populated by the ^{14}N(p,π^+) reaction [91Az01].
Data for this isotope are considered in vol. LB I/18A.

Energy levels and branching ratios [91Aj01]. Part 2 $^{15}_{7}$N

E^*	$2J^\pi$	C^2S	C^2S	N	Ref.	Branching ratios in percentage					
						E^*_f:	0.0	5270	5299	6324	7155
[keV]		(p,α)	theor	(p,α)		$2J^\pi_f$:	1^-	5^+	1^+	3^-	5^+
0.0	1^-	0.219	0.219	2	81Aj01 80Kr01						
5270.15(1)	5^+	0.31	0.042	1	81Aj01		100				

(continued) $^{15}_{7}\mathbf{N}$

E^*	$2J^\pi$	C^2S	C^2S	N	Ref.		Branching ratios in percentage				
						$E^*_{\rm f}$:	0.0	5270	5299	6324	7155
[keV]		(p,α)	theor	(p,α)		$2J^\pi_{\rm f}$:	1^-	5^+	1^+	3^-	5^+
5298.82(1)	1^+		0.014	2	87Ca15		100				
6323.78(2)	3^-	0.67	0.438	2	80Kr01		100	<0.1	<0.05		
					81Aj01						
7155.05(2)	5^+				81Aj01		0.023(3)	[100]	<4	<0.5	
7300.83(2)	3^+				81Aj01		99.2(7)	0.6(1)	0.2(1)	<0.25	
					81Aj01						
7567.1(10)	7^+	0.32	0.37	0	81Aj01		1.3(6)	99(1)	<4	<0.6	
8312.62(3)	1^+				81Aj01		80(2)	<3	10(2)	5(1)	1.2(6)
					81Aj01						
8571.4(1)	3^+				81Aj01		32(2)	63(3)	<12	1.4(6)	3.5(5)
					81Aj01						
9049.71(7)	1^+				94Le02		91(3)	3.5(10)		4.5(10)	<10
9151.90(12)	3^-				75Bo34		100				
9154.90(3)	5^+				84Ya03		<2	11(1)	10(1)	22(2)	57(3)
9222.1(8)	1^-				75Bo34		22(5)		41(8)	34(6)	<1.0
9760(1)	5^-				75Bo34		76(3)		7.0(14)	7.0(14)	3.4(8)
9829(3)	7^-				75Bo34		<4.0	≈84	<15	2.2(9)	2.4(11)
9925.0(2)	3^-				94Le02		67.3(17)		13.3(13)	13.3(13)	4.2(11)
10066.0(2)	3^+				94Le02		92.3(6)		3.9(6)	3.9(6)	<2
10449.7(3)	5^-				75Bo35		<12	55.0(8)	<2.0	31(2)	5.2(1)
10533.3(5)	5^+				84Ya03		<0.1	38.7(2)		7.7(1)	19.4(2)
10693.2(3)	9^+							61.6(3)			2.10(10)
10701.9(3)	3^-						52.6(8)	37.4(6)	0.8(1)	3.8(1)	0.4(1)
10804(2)	3^+						51.5(4)	4.90(10)	15.5(2)	5.4(2)	7.80(10)
11235(5)	≥3				75Bo35						
11292.8(7)	1^-				75Bo35						
11437.6(7)	1^+				75Bo35						
11615(4)	1^+						91(4)	<1.0	7.4(15)	1.9(15)	
11763(3)	3^+										
11876(3)	3^-										
11942(6)	9^-										
11965(3)	1^-										
12095(3)	5^+				75Bo35						
12145(3)	3^-										
12327(4)	$5^{\langle+\rangle}$				84Ya03						
12493(4)	5^+										
12522(8)	5^+						1.1(5)	93.1(7)	<1.0	5.8(7)	
12551(10)	9^+										
12920(4)	3^-				94Le02						
12940(10)	5^+										
13004(10)	11^-										
13107(15)					98Le17						
13149(10)											
13174(7)	$\langle 9 \rangle$										
13199(15)					98Le17						

(continued) $^{15}_{7}\mathrm{N}$

E^*	$2J^\pi$	C^2S	C^2S	N	Ref.		Branching ratios in percentage				
						E^*_f:	0.0	5270	5299	6324	7155
[keV]		(p,α)	theor	(p,α)		$2J^\pi_\mathrm{f}$:	1^-	5^+	1^+	3^-	5^+
13362(8)	3^-										
13390(10)	3^+						100	<8	<8	<5	<5
13537(10)	3^-										
13608(7)	$5^{\langle+\rangle}$										
13612(10)	$\langle 1^+ \rangle$										
13713(10)											
13840(30)**	3^+				84Ya03						
13900	1^+										
13990(30)	5^+										
14090(7)	$\langle 9^+,7^+ \rangle$										
14100(30)	3^+										
14162(10)	$3^{\langle+\rangle}$										
14240(40)	5^+										
14380(40)	7^+										
14400											
14550(20)											
14647(10)											
14710											
14720(10)	5^-										
14860(20)											
14920(10)											
15025(10)											
15090(20)											
15288(10)											
15373(10)	13^+										
15380(20)											
15430(20)											
15450											
15530(20)											
15600(20)											
15782(10)											
15930(20)											
15944(15)											
16026(10)											
16190(10)	3^+										
16260(20)	3^+										
16320(20)											
16390(20)											
16460											
16576(15)											
16590(25)	3^-										
16677(15)	1^+										
16850(30)	5										
16910											
17050**					98Le17						

(continued) $^{15}_{7}N$

E^* [keV]	$2J^\pi$	C^2S (p,α)	C^2S theor	N (p,α)	Ref.	Branching ratios in percentage E_f^*: / $2J_f^\pi$:	0.0 1^-	5270 5^+	5299 1^+	6324 3^-	7155 5^+
17110											
17150(50)	⟨1^+,3^+⟩										
17230(40)											
17370(40)											
17580(40)	3^+										
17670(40)	3^+										
17720(10)											
17950(20)											
18060(10)											
18090(20)											
18220											
18270(20)											
18700(20)											
18910(15)	3^+,1^+										
19200(35)	⟨1^+⟩										
19500	3^+										
19720(40)											
20120(50)											
20500	3^+										
20960(65)	3^+,1^+										
21820					98Le17						
22860**					98Le17						
23190(60)											
23600											
24750(15)											
25500	3^-										
26800											
≈37000											
		87Ca15			Ref.						
					Ref.						

Energy levels and branching ratios [91Aj01]. Part 3 $^{15}_{7}N$

E^* [keV]	$2J^\pi$	Branching ratios in percentage E_f^*: / $2J_f^\pi$:	7301 3^+	7567 7^+	8313 1^+	8571 3^+	9050 1^+	9152 3^-	9155 5^+	9222 1^-	9829 7^-
8312.62(3)	1^+		4.5(7)								
8571.4(1)	3^+		<0.7	<2.9							
9049.71(7)	1^+		1.2(4)	<2	<0.5						
9222.1(8)	1^-		2.6(7)	<20	<5						
9760(1)	5^-		2.1(5)	<1.9	4.6(6)	<1.0	<1.9				
9829(3)	7^-		3.7(9)	7.3(10)							

(continued) $^{15}_{7}$N

E^*	$2J^\pi$		Branching ratios in percentage								
		E^*_f:	7301	7567	8313	8571	9050	9152	9155	9222	9829
[keV]		$2J^\pi_\mathrm{f}$:	3^+	7^+	1^+	3^+	1^+	3^-	5^+	1^-	7^-
9925.0(2)	3^-		<0.9	1.8(7)	<0.9	<0.9	<0.9				
10066.0(2)	3^+		<2	<2	<2	<2	<3				
10449.7(3)	5^-					3.8(6)		4.7(1)			<0.1
10533.3(5)	5^+		31.4(5)			2.40(10)		0.30(10)			
10693.2(3)	9^+			36.3(6)							
10701.9(3)	3^-		2.3(1)		0.8(1)		0.2(1)	0.2(1)		1.5(1)	
10804(2)	3^+		5.80(10)		3.60(10)		0.30(10)	0.90(10)	4.21(10)		
13390(10)	3^+		<5								

Energy levels and branching ratios [93Ti07]. $^{16}_{7}$N

E^*	J^π	L	$n\ell j$	C^2S	S_N	$T_{1/2}$ or	Ref.	Branching ratios in percentage	
							E^*_f:	0.0	120.42
[keV]		(d,τ)		(d,τ)	(d,p)	Γ_cm	J^π_f:	2^-	0^-
0.0*	2^-	1	1p1/2	0.94	0.55	7.13(2) s	78Ma16		
120.42(12)	0^-				0.46	5.25 μs	72Bo49	100	
298.22(8)	3^-	1	1p1/2	1.33	0.54	91.3(13) ps	78Ma16	100	
397.27(10)	1^-				0.52	3.90(4) ps	72Bo49	26.6(6)	73.4(16)
3353(3)	⟨1^+⟩	2	1d5/2	0.02		15(5) keV	78Ma16		
3523(3)	2^+	2	1d5/2	0.06		3 keV	78Ma16		
3963(3)	3^+	0	2s1/2	0.10		≤2 keV	78Ma16		
4320(3)	1^+					20(5) keV			
4391(3)	1^-					82(20) keV			
4760(50)	1^-					250(50) keV			
4783(3)	2^+					59(8) keV			
5054(3)	2^-					19(6) keV			
5129(7)	≥2	⟨2⟩	1d5/2	0.03		≤11 keV	78Ma16		
5150(7)	⟨3⟩$^-$	1	1p3/2	0.2		≤11 keV	78Ma16		
5230(3)	3^+					≤4 keV			
5250(70)*	2^-					320(80) keV			
5318(3)	⟨0^-,1^+⟩					260 keV			
5522(3)	3^+	0	2s1/2	0.08		≤11 keV	78Ma16		
5732(3)	⟨5^+⟩	1	1p3/2	0.40		≤11 keV	78Ma16		
6003(3)	1^-					270(30) keV			
6171(2)	⟨4^-⟩	1	1p3/2	1.20		≤11 keV	78Ma16		
6374(3)	⟨3^-⟩	1	1p3/2	0.80		30(6) keV	78Ma16		
6426(7)						300(30) keV			
6505(3)	1^+					34(6) keV			
6608(3)*	⟨4⟩					≤11 keV			
6840	≥2					>140 keV			
6845(4)						≤11 keV			
7020(20)	1^+					22(5) keV			

(continued) $^{16}_{7}$N

E^* [keV]	J^π	L (d,τ)	$n\ell j$	C^2S (d,τ)	S_N (d,p)	$T_{1/2}$ or Γ_{cm}	Ref.	Branching ratios in percentage E^*_f: 0.0 / J^π_f: 2^-	E^*_f: 120.42 / J^π_f: 0^-
7134(7)						≤11 keV			
7250(7)	≥2					17(5) keV			
7572(4)	≥3					≤11 keV			
7637(4)	⟨3–5⟩$^+$					≤11 keV			
7674(4)*		1	1p3/2	0.30		≤11 keV	78Ma16		
7877(9)	≥4					100(15) keV			
8048(9)						85(15) keV			
8199(5)	⟨3,2⟩$^+$					28(8) keV			
8282(8)						24(8) keV			
8365(8)	≥1					18(8) keV			
8490(30)	≥1					≤50 keV			
8720	≥1					40 keV			
8819(15)						≤50 keV			
9035(15)						≤50 keV			
9160(30)	≥2					100 keV			
9340(30)						≤50 keV			
9459(15)	≥2	1	1p3/2	0.25		100 keV	78Ma16		
9760(10)						15(8) keV			
9813(10)									
9928(7)	0^+					<12 keV			
10055(15)	≥3					30 keV			
10370(40)	≥2					165 keV			
10710	≥2					120 keV			
11160(40)									
11490	≥3								
11610	≥3					220 keV			
11701(7)	2^+					<12 keV			
11750(40)						<50 keV			
11920						390 keV			
12090									
12390(60)						290 keV			
12570(60)						180 keV			
12880						155 keV			
12970						175 keV			
13110(60)									
13830									
14100	⟨7^+⟩								
14360(50)	⟨3⟩$^+$					180 keV			
			78Ma16	78Ma16	72Bo49		Ref.		

Additional data on this isotope can be found in [01Gr06, 79Fo01].
* This state is clearly seen in the (α,^{2}He) reaction [78Ja10].

Energy levels and branching ratios [93Ti07]. $^{17}_{7}$N

E^* [keV]	$2J^\pi$	$2T$	L	C^2S (d,τ)	L	σ (t,p) μb/sr	$T_{1/2}$ or $\mathit{\Gamma}_{\rm cm}$	Ref.	Branching ratios in percentage $E^*_{\rm f}$: / $2J^\pi_{\rm f}$:	0.0 1^-	1374 3^-	1850 1^+	1907 5^-	2526 5^+
0.0	1^-	3	1	2.02	0	4800	4.173(4) s	93Ti07						
1373.9(3)	3^-		1	0.38	2	4400	64(24) fs	93Ti07		100				
1849.6(3)	1^+		0	0.41(14)	1	3700	28(+14-6) ps	93Ti07		86(3)	14(3)			
1906.8(3)	5^-				2	7300	7.6(14) ps	79Fo14		77(2)	23(2)			
2526.0(5)	5^+		2	0.53(17)	3	600	22.9(21) ps	93Ti07		11(1)	35(3)	12(2)	42(3)	
3128.9(5)*	7^-				4	1800	191(56) ps	79Fo14		<2	<5	<2	100	<3
3204.2(9)	3^-		1	0.05	2	720	<21 fs	93Ti07		88(4)	<4	<5	12(4)	<3
3628.7(7)*	$\langle 7,9\rangle^-$				4	2100	8.3(14) ps	79Fo14		<5	<5	<4	47(10)	<2
3663(4)	1^-				0	1000	<243 fs	79Fo14				100		
3906.0(20)	$\langle 3,5\rangle^-$				2	730	36(15) fs	79Fo14					100	
4006.4(20)	$3^{\langle +\rangle}$		⟨1⟩	0.04	⟨1⟩	330	<11 fs	93Ti07				≤24		100
4209(3)	5^+				3	610	<49 fs	79Fo14			100			
4415(3)	$\langle 3,5\rangle^-$				2	1200	<42 fs	79Fo14					100	
5170(2)	$\langle 9^+\rangle$		⟨2⟩	0.08	5	590	<42 fs	93Ti07						37(7)
5195(3)	3^+				1	incl	<66 fs					≈42	≈58	
5515(3)	3^-		1	1.83	⟨2⟩	210	<70 fs	93Ti07		≈50	≈50			
5772(3)	$1,3^+$				⟨1⟩	460	<83 fs	79Fo14			≈25		≈25	
6080(30)														
6233(8)					⟨2⟩	320		79Fo14						
6449(3)					⟨4,5⟩	210		79Fo14						
6615(19)						weak		79Fo14						
6938(15)														
6981(20)	3^-		1	0.32				93Ti07						
7013(22)														
7170(40)														
7370(40)														
7519			⟨1⟩	0.09				93Ti07						
7630(40)														
7730(40)														
8000(25)														
8140(40)														
8550(40)														
8930(40)														
9260(40)														
9740(40)														
10140	$\langle 1,3\rangle^-$		⟨1⟩	0.5				93Ti07						
				77Ma10		79Fo14		Ref.						

Additional data on this isotope can be found in [95Gu08, 71Ha48].

* This state is seen in (α,^{2}He) reaction confirming its (proton-hole)+^{18}O-core character [78Ja10].

Spectroscopic factors C^2S for the (d,τ) reaction are from [77Ma10].

Maximum cross sections for the (t,p) reaction are from [79Fo14].

Energy levels and branching ratios [93Ti07]. Part 2 $^{17}_{7}$N

E^* [keV]	$2J^\pi$		Branching ratios in percentage		
		E_f^*:	3128.9	3204.2	4006.4
		$2J_f^\pi$:	7^-	3^-	$3^{\langle+\rangle}$
3628.7(7)*	$\langle 7,9\rangle^-$		53(10)	<1	
5170(2)	$\langle 9^+\rangle$		63(7)		
5772(3)	$1,3^+$				≈50