Table 16.21 from (1971AJ02): Levels of ^{16}O from ^{15}N(p, γ)^{16}O, ^{15}N(p, p)^{15}N and ^{15}N(p, α)^{12}C

E_p (keV)	Γ_{γ_0} [a,f] (eV)	Γ_{γ_1} [a,f] (eV)	Γ_p [a] (keV)	Γ_{α_0} [a] (keV)	Γ_{α_1} [a] (keV)	Γ_{lab} (keV)	$J^\pi; T$	E_x (MeV)	Refs.
338	7 ± 1	0.12 ± 0.04	1.1	93	0.025	94	$1^-; 0$	12.443	(1952SC28, 1960HE02, 1966AD04, 1957HG01)
429 ± 1	$(21 \pm 6) \times 10^{-3}$	2.1 ± 0.2	0.020	n.r.	0.90	0.9	$2^-; 0$	12.528	(1952SC28, 1960HE02, 1968GO07)
710 ± 7			40	n.r.		40 ± 4	$0^-; 1$	12.791	(1957HA98)
897.37 ± 0.29	$(78 \pm 16) \times 10^{-3}$		1.2	n.r.	0.69 ± 0.07	2.0 ± 0.2	$2^-; 1$	12.9668	(1952SC28, 1964BO13, 1959VA04, 1969CL07, 1968GO07, 1957HA98)
1028 ± 10	31 ± 8		110	r.	r.	140 ± 10	$1^-; 1$	13.089 [b]	(1969CL07, 1957HA98, 1959BA15, 1952SC28, 1967EA02, 1957HG01, 1953WI1A, 1956WI1D)
1050 ± 150				$\Gamma_p\Gamma_{\alpha_0} = 500$ keV^2			2^+	13.1	(1966AD04)
1210 ± 3			4.1	r.	8.2 ± 1.1	22.5 ± 1	$3^-; 1$	13.260	(1969CL07, 1968GO07, 1952SC28, 1959BA15,

Table 16.21 from (1971AJ02): Levels of ^{16}O from ^{15}N(p, γ)^{16}O, ^{15}N(p, p)^{15}N and ^{15}N(p, α)^{12}C (continued)

E_p (keV)	Γ_{γ_0} [a,f] (eV)	Γ_{γ_1} [a,f] (eV)	Γ_p [a] (keV)	Γ_{α_0} [a] (keV)	Γ_{α_1} [a] (keV)	Γ_{lab} (keV)	$J^\pi; T$	E_x (MeV)	Refs.
									1957HA98, 1957HG01)
1640 ± 3			10	n.r.	59 ± 6	68 ± 3	$1^+; 0$	13.663	(1969CL07, 1952SC28, 1959VA04, 1968GO07, 1957HG01, 1959BA15, 1957HA98)
1890 ± 20				r.	(r.)	90 ± 20		13.90	(1959BA15, 1957HG01)
1979 ± 3			0.5	n.r.	r.	23 ± 2	2^-	13.980	(1959BA15, 1957HG01)
3000 ± 30			r.	r.	r.	45 ± 10	4^+	14.94	(1959BA15, 1962DE09)
3300 ± 35			r.	n.r.	r.	75 ± 15	2^-	15.22	(1959BA15, 1962DE09)
3350 ± 50	≈ 0.6		≈ 125	r.	r.	750 ± 100	$2^+; (0)$	15.26	(1959BA15, 1967EA02)
3520 ± 40			r.	r.	r.	100 ± 25	$(1 \rightarrow 4)$	15.42	(1959BA15)
(4280 ± 20)		r. [g]						(16.14)	(1970BA33)
4380 ± 20	4.5 [f]		16 [c]			31	$1(^+); 1$	16.23	(1962DE09, 1964TA06, 1967EA02, 1970BA33)
5200	r.					≈ 1500	$1^-; 1$	17.0	(1967EA02)
5350 ± 20	16		26 [d]			≈ 65	$1^-; 1$	17.14	(1962DE09,

Table 16.21 from (1971AJ02): Levels of ^{16}O from ^{15}N(p, γ)^{16}O, ^{15}N(p, p)^{15}N and ^{15}N(p, α)^{12}C (continued)

E_p (keV)	Γ_{γ_0} [a,f] (eV)	Γ_{γ_1} [a,f] (eV)	Γ_p [a] (keV)	Γ_{α_0} [a] (keV)	Γ_{α_1} [a] (keV)	Γ_{lab} (keV)	$J^\pi; T$	E_x (MeV)	Refs.
									1964TA06, 1967EA02, 1970BA33)
5490 ± 20	67		45 [e]			≈ 110	$1^-; 1$	17.27	(1962DE09, 1964TA06, 1967EA02, 1970BA33)
6320 ± 20	n.r.	≤ 5 [g]	(r.)			≤ 60	(2, 3; 1)	18.05	(1970BA33)
7330 ± 30	38	≤ 3 [g]				260	$1^-; 1$	18.99	(1962DE09, 1967EA02, 1970BA33)
7420	r.		≈ 30			≈ 130	2^+; (1)	19.07	(1962DE09, 1967EA02)
7600 ± 30	n.r.	1.5 [g]				100	(2, 3; 1)	19.25	(1970BA33)
7840 ± 30	59		(r.)			350	$1^-; 1$	19.47	(1962DE09, 1967EA02, 1970BA33)
8300 ± 20	n.r.	8 [h,i]				75	(2, 3; 1)	19.90	(1970BA33)
8830 ± 20	n.r.	47 [h,i]				150	(2, 3; 1)	20.40	(1970BA33)
9300 ± 100	170					700	$(T = 1)$	20.8	(1970BA33)
10420	r.		(r.)					21.89	(1961CO02, 1962DE09, 1967BL23)
10590	r.							(22.05)	(1967BL23)
10700 ± 100	870					700	$(T = 1)$	22.2	(1967BL23, 1970BA33)
10770	r.		(r.)					(22.21)	(1962DE01,

Table 16.21 from (1971AJ02): Levels of ^{16}O from ^{15}N(p, γ)^{16}O, ^{15}N(p, p)^{15}N and ^{15}N(p, α)^{12}C (continued)

E_p (keV)	Γ_{γ_0} [a,f] (eV)	Γ_{γ_1} [a,f] (eV)	Γ_p [a] (keV)	Γ_{α_0} [a] (keV)	Γ_{α_1} [a] (keV)	Γ_{lab} (keV)	$J^\pi; T$	E_x (MeV)	Refs.
									1967BL23)
11450 ± 50	120	27 [g]				350	$T = 1$	22.85	(1970BA33)
13400	r.							24.7	(1961CO02)
14300	r.							(25.5)	(1967BL23)
15200	r.							(26.4)	(1967BL23)

[a] n.r. = non resonant; r. = resonant.
[b] This state has a large $p^{-1}d$ component (1967EA02).
[c] $\Gamma_n = 6$ keV (1964TA06).
[d] $\Gamma_n = 19$ keV (1964TA06).
[e] $\Gamma_n = 45$ keV (1964TA06).
[f] See Tables 16.12 and 16.26.
[g] These values are for $\gamma_1 + \gamma_2$.
[h] The decay is through ^{16}O*(6.13) (A.R. Barnett and J. Lowe, private communication).
[i] There is no indication ($< 10\%$) of decay to ^{16}O*(6.92, 7.13) (1970BA33).