

Table 12.13 from (1985AJ01):
States ^a in ¹²C from ¹¹B(d, n)¹²C and ¹¹B(³He, d)¹²C

Peak no.	E_x (MeV \pm keV)	Γ_{lab} (keV)	l_p^b	l^c	$J^\pi; T$
1	g.s.		1	1	0 ⁺ ; 0
2	4.44		1	1	2 ⁺ ; 0
3	7.65			1	0 ⁺ ; 0
4	9.629 \pm 10 ^a		2	2	3 ⁻ ; 0
5	10.84 \pm 20 ^d	330 \pm 30	0 + 2	0	1 ⁻ ; 0
6	11.16 \pm 50	550 \pm 100		(1)	(2 ⁺); 0
7	11.82 \pm 20 ^e	300 \pm 30	0 + 2	2	2 ⁻ ; 0
8	12.70 \pm 10 ^f		1	1	1 ⁺ ; 0
9	13.38 \pm 20	500 \pm 80		((0))	(2 ⁻); 0
10	(14.71 \pm 10) ^g	< 15		0	
11	15.110 \pm 3 ^h		1	1	1 ⁺ ; 1
12	16.11		1	1	2 ⁺ ; 1
13	17.23 ^{h,i}	broad	> 1		1 ⁻ ; 1
14	18.27 \pm 50 ^g	350 \pm 50		(2)	(4 ⁻ ; 0)
15	18.35 \pm 50 ^{j,k,l}	350 \pm 50		(2)	3 ⁻ ; 1 +2 ⁻ ; 0 + 1
16	19.25 ^g			(2)	(1 ⁻ ; 1)
17	19.55 \pm 50 ^j	575 \pm 60		(2)	(4 ⁻ ; 1)
18	20.62 \pm 60 ^j	525 \pm 60		(2)	(3 ⁻ ; 0)
19	22.40 \pm 80	350 \pm 50		(2)	(1 ⁻ ; 1)

^a See Table 12.14 in (1980AJ01) for the earlier references. Please note that the 1980 table also displays the S_{rel} obtained in several studies. See also the newer review by (1983NE11).

^b (d, n): see also Table 12.12 in (1968AJ02).

^c (³He, d): see also Table 12.13 in (1968AJ02).

^d There is some evidence that this state decays primarily by α_0 (1965OL01).

^e This state decays by α -emission to ⁸Be*(2.91) [90%] and to ⁸Be_{g.s.} [10%] (1965OL01).

^f Decays via α_1 to ⁸Be*(2.9) (1965OL01).

^g Not reported in (d, n): see Table 12.14 in (1980AJ01).

^h From a study of slow neutron thresholds at $E_d = 1.627 \pm 0.004$ and ≈ 4.1 MeV [$E_x = 15.107$ and 17.2 MeV (broad)]. In another study at the lower threshold [$E_d = 1.633 \pm 0.003$ MeV, $E_x = 15.112$ MeV, $\Gamma < 2$ keV] 15.1 MeV γ -rays are observed: see (1980AJ01) for references.

ⁱ Not reported in (³He, d); see Table 12.14 in (1980AJ01).

^j Strong and broad neutron groups to ¹²C*(18.35, 19.55, 20.62) have been reported by (1983NEZZ, 1983NE11): these states decay by p_0 (to ¹¹B_{g.s.}) and by α_1 decay (to ⁸Be*(2.9)). ¹²C*(18.35) also decays by α_0 : see reaction 27.

^k Decays primarily via p_0 and α_1 (1982KA1M).

^l (1983NE11) find that this group is due to unresolved states with $J^\pi; T = 3^-; 1$ and $2^-; T = 0 + 1$.