Table 12.8 from (1975AJ02): Energy levels of ^{12}C [a]

E_x in ^{12}C (MeV ± keV)	$J^\pi; T$	$\Gamma_{c.m.}$ (keV)	Decay	Reactions
g.s.	$0^+; 0$		stable	4, 10, 11, 12, 13, 20, 21, 22, 23, 24, 25, 29, 30, 31, 32, 33, 34, 35, 36, 43, 45, 46, 47, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 92, 93, 94, 95, 96, 97
4.4391 ± 0.3	$2^+; 0$	10.8 ± 0.6 meV	γ	3, 4, 10, 11, 12, 20, 21, 22, 23, 24, 25, 29, 30, 31, 34, 35, 36, 43, 45, 46, 47, 49, 51, 52, 53, 55, 56, 57, 58, 59, 63, 64, 65, 66, 67, 68, 70, 73, 74, 75, 76, 77, 78, 80, 81, 83, 84, 85, 86, 88, 90, 98
7.6552 ± 0.8	$0^+; 0$	8.7 ± 2.7 eV	γ, π, α	4, 10, 11, 12, 20, 22, 25, 29, 30, 31, 35, 43, 46, 47, 49, 51, 52, 53, 55, 56, 58, 63, 66, 67, 76, 80, 84, 85
9.641 ± 5	$3^-; 0$	34 ± 5 keV	γ, α	4, 10, 11, 20, 22, 25, 29, 30, 31, 34, 43, 46, 47, 49, 51, 52, 53, 55, 56, 58, 67, 76, 84, 85, 86
10.3 ± 300	$(0^+); 0$	3000 ± 700	α	10, 35, 46, 63
10.844 ± 16	$1^-; 0$	315 ± 25	α	10, 20, 29, 30, 43, 46, 47, 53, 55, 58
(11.16 ± 50)	$(2^+); 0$	430 ± 80		30
11.828 ± 16	$2^-; 0$	260 ± 25	α	20, 22, 29, 30, 46, 47, 53, 55, 58
12.710 ± 6	$1^+; 0$	14.6 ± 2.6 eV	γ, α	20, 22, 29, 30, 31, 43, 46, 47, 49, 51, 52, 53, 55, 58, 63, 65, 66, 67, 75, 76
13.352 ± 17	$(2^-); 0$	375 ± 40 keV		20, 30, 53, 55, 58

Table 12.8 from (1975AJ02): Energy levels of ^{12}C [a] (continued)

E_x in ^{12}C (MeV ± keV)	$J^\pi; T$	$\Gamma_{c.m.}$ (keV)	Decay	Reactions
14.083 ± 15	$4^+; 0$	258 ± 15		11, 20, 43, 47, 51, 52, 53, 55, 56, 58, 75, 76, 80, 84, 86
15.110 ± 3	$1^+; 1$	42 ± 7 eV	γ, α	3, 4, 13, 20, 22, 25, 29, 30, 36, 43, 47, 49, 51, 63, 64, 65, 66, 67, 75
16.1067 ± 0.5	$2^+; 1$	6.5 ± 0.6 keV	γ, p, α	12, 20, 25, 29, 30, 36, 43, 47, 51, 65, 66, 67, 75, 80
16.58	$2^-; 1$	300	γ, p, α	20, 25, 27, 29, 43, 51
17.23	$1^-; 1$	1150	γ, p, α	25, 27, 29, 36
17.76 ± 20	$0^+; 1$	80 ± 20	p, α	12, 25, 27, 38, 65, 80
18.13	$(1^+; 0)$	600 ± 100	γ, p	25, 43
(18.27 ± 50)	$(4^-; 0)$	275 ± 40		30
18.36 ± 50	$(3^-; 1)$	210 ± 40	γ, p, α	25, 30
18.40 ± 60	$0^-; (1)$	43	p	27, 51
(18.6 ± 100)	(3^-)	300		43
18.71	$\pi = +; (1)$	100	p, α	25
18.80 ± 40	$2^+; 1$	80 ± 30	γ, n, p	25, 26, 27, 29, 47, 51, 65
19.25	$(1^-; 1)$	1100	γ, n, p, α	25, 26, 27, 30, 38, 43
19.40	$(2^+; 0)$	45	γ, p, α	25, 27
19.57 ± 40	$(4^-; 1)$	400 ± 60		30, 43, 51
19.69		180	n, p	26
20.0 ± 100	(2^+)	90	p	27, 43
20.24		170	n, p	26, 27
20.5 ± 100	$(3^+; 1)$	≈ 250	γ, n, p, α	20, 25, 26, 27, 43
20.6 ± 100	$(3^-; 1)$	200 ± 40	γ, n, p, α	25, 26, 27, 30
20.98		270	n, p	26
21.60 ± 60	3^-	1200 ± 200	γ, n, p	25, 26, 43, 47, 65
21.95 ± 150	$1^-; 1$	800 ± 100		43, 47
22.50 ± 50	$1^-; 1$	275 ± 40	γ, n, p	26, 30, 37, 40, 47, 65
22.5	$1^-; 1$	3200	γ, n, p, α	25, 37, 38, 43
23.04	$(2^-; 1)$	60	n, p	26, 27, 37

Table 12.8 from (1975AJ02): Energy levels of ^{12}C [a] (continued)

E_x in ^{12}C (MeV ± keV)	$J^\pi; T$	$\Gamma_{c.m.}$ (keV)	Decay	Reactions
23.52 ± 30	$1^-; 1$	230 ± 80	γ, n, p, α	12, 25, 26, 37, 38, 47
23.90 ± 80	$(1^-; 1)$	400 ± 100	(γ), n, p	26, 37, 43, 47
24.43		100	n, p	26
25.2 ± 150	$(1^-; 1)$	510 ± 100	γ, n, p	26, 38, 43, 47
25.24		165	n, p	26
25.5	$(1^-; 1)$	≈ 2000	γ, n, p	25, 37, 38, 43
25.9		400	γ, n, p, d, α	14, 16, 18, 26, 38, 47
26.7		270	γ, n, p, d, α	16, 25, 26, 43
27.0 ± 200	$(1^-; 1)$	1400 ± 200	γ, p	25, 47
27.611 ± 20	$0^+; T = 2$			12, 70
27.8 ± 200		≈ 350	γ, n, p, ^{3}He	5, 25, 43
28.2	$1^-; 1$	1600	γ, n, p, ^{3}He	4, 25, 37
28.83 ± 40		1540 ± 90	γ, p, ^{3}He	4, 25
29.4 ± 300		1400 ± 200	γ, n, p, t, ^{3}He	5, 6, 25, 37, 38, 42, 47
29.6 ± 100	$(2^+; T = 2)$	narrow		70
30.29 ± 30		1960 ± 150	γ, n, ^{3}He	4, 37, 43
31.16 ± 30		2100 ± 150	γ, p, ^{3}He	4, 38
32.29 ± 40		1320 ± 230	γ, n, ^{3}He	4, 37, 43
33.47 ± 210		1930 ± 50	γ, ^{3}He	4
35.7 ± 700			γ, p	38

[a] See also Tables 12.9, 12.10 and 12.12.