

Table 17.6 from (1977AJ02): Energy levels of ^{17}O

E_x in ^{17}O (MeV \pm keV)	$J^\pi; T$	τ_m or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
0	$\frac{5}{2}^+; \frac{1}{2}$		stable	1, 2, 5, 6, 7, 8, 13, 14, 15, 16, 18, 19, 20, 21, 22, 30, 31, 32, 40, 41, 42, 43, 44, 45, 46, 48, 49, 50, 52, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 70, 71, 72, 73, 74
0.87081 ± 0.22	$\frac{1}{2}^+$	$\tau_m = 258.6 \pm 2.6$ psec ^b	γ	1, 2, 5, 6, 7, 13, 14, 15, 16, 18, 19, 20, 21, 22, 30, 31, 32, 40, 41, 45, 46, 47, 48, 49, 50, 58, 61, 62, 63, 69, 70, 71, 72, 73, 74
3.0552 ± 0.3	$\frac{1}{2}^-$	$\tau_m = 120^{+80}_{-60}$ fsec ^c	γ	5, 6, 7, 13, 14, 18, 21, 22, 30, 32, 41, 45, 50, 52, 61, 71, 72, 74
3.841 ± 3	$\frac{5}{2}^-$	$\tau_m \leq 25$ fsec ^c	γ	5, 6, 7, 13, 14, 18, 21, 22, 30, 31, 40, 41, 45, 52, 61, 62, 71, 72
4.553 ± 2	$\frac{3}{2}^-$	$\Gamma = 40 \pm 5$	n	5, 6, 7, 13, 14, 21, 22, 30, 31, 34, 41, 45, 50, 52, 61, 62, 72
5.086 ± 2	$\frac{3}{2}^+$	95 ± 5	n	6, 7, 13, 14, 21, 22, 30, 34, 41, 61, 62
5.215 ± 5	$(\frac{9}{2}^-)$	< 0.1		6, 13, 14, 21, 22, 30, 31, 41, 52, 61, 72
5.380 ± 2	$\frac{3}{2}^-$	28 ± 7	n	21, 22, 30, 32, 34, 41, 50, 52, 61, 62, 72
5.698 ± 2	$\frac{7}{2}^-$	3.4 ± 0.3	n	6, 13, 14, 21, 22, 30, 31, 34, 41, 52
5.734 ± 2		< 1	n	5, 6, 13, 14, 21, 22, 34, 41, 72
5.870 ± 2	$\frac{3}{2}^+$	6.6 ± 0.7	n	6, 14, 21, 22, 30, 34, 41, 72

Table 17.6 from (1977AJ02): Energy levels of ^{17}O (continued)

E_x in ^{17}O (MeV \pm keV)	$J^\pi; T$	τ_m or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
5.940 ± 4	$\frac{1}{2}^-$	32 ± 3	n	5, 6, 14, 21, 22, 30, 34, 41, 50, 52, 72
6.357 ± 8	$\frac{1}{2}^+$	124 ± 12	n	5, 21, 30, 34
6.863 ± 2	$(\frac{1}{2}^-)$	< 1	n	5, 6, 13, 14, 21, 22, 30, 34, 41, 52, 72
6.973 ± 2		< 1	n	6, 13, 14, 21, 22, 30, 34, 72
7.1687 ± 1.5	$\frac{5}{2}^-$	1.5 ± 0.2	n, α	5, 6, 9, 13, 14, 21, 30, 34, 39, 52
7.202 ± 10	$\frac{3}{2}^+$	280 ± 30	n, α	34, 39
7.3831 ± 1.5	$\frac{5}{2}^+$	0.6 ± 0.2	n, α	5, 6, 9, 13, 14, 21, 30, 31, 34, 39
7.3860 ± 1.5	$\frac{5}{2}^-$	0.9 ± 0.3	n, α	5, 9, 21, 30, 31, 34, 39, 52
7.560 ± 20	$\frac{3}{2}^-$	500 ± 50	n, α	34, 39, 41
7.577 ± 2	$\frac{7}{2}^-$	≤ 1	n, α	5, 6, 9, 13, 14, 21, 30, 34, 52
7.690 ± 4	$\frac{7}{2}^-$	18 ± 2	n, α	5, 6, 9, 14, 30, 34, 39
7.75 ± 20	$\frac{11}{2}^-$			13, 14, 23, 30, 31, 32, 52
7.956 ± 6	$\frac{1}{2}^+$	90 ± 9	n, α	9, 30, 34, 39
7.99 ± 50	$\frac{1}{2}^-$	270 ± 30	n, α	34, 39
8.070 ± 10	$\frac{3}{2}^+$	85 ± 9	n, α	9, 30, 34, 39
(8.18 ± 20)	$\frac{1}{2}^-$	69 ± 7	n, α	34, 39
8.200 ± 7	$\frac{3}{2}^-$	60	n, α	9, 30, 31, 34, 39
8.352 ± 4	$\frac{1}{2}^+$	9 ± 3	n, α	9, 30, 34, 39
8.410 ± 3	$\frac{5}{2}^+$	4 ± 3	n, α	6, 9, 13, 14, 30, 34, 39
8.474 ± 3	$\frac{7}{2}^+$	7 ± 3	n, α	5, 6, 9, 13, 14, 31, 39
8.508 ± 3	$\frac{5}{2}^-$	5 ± 3	n, α	6, 9, 13, 14, 30, 34, 39
8.700 ± 5	$\frac{3}{2}^-$	50 ± 3	n, α	9, 30, 34, 39
8.898 ± 8	$\frac{3}{2}^+$	101 ± 3	n, α	6, 9, 13, 14, 30, 31, 34, 39

Table 17.6 from (1977AJ02): Energy levels of ^{17}O (continued)

E_x in ^{17}O (MeV \pm keV)	$J^\pi; T$	τ_m or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
8.972 \pm 4	$\frac{7}{2}^-$	21 \pm 3	n, α	6, 9, 14, 30, 34, 39
9.148 \pm 4	$\frac{1}{2}^-$	4 \pm 3	n, α	6, 9, 14, 34
9.15 \pm 20	$\frac{9}{2}^-$			23, 30, 31, 32
9.187	$\frac{7}{2}^-$	3	n, α	9, 34
9.201 \pm 4	$\frac{5}{2}^+$	5.5 \pm 1	n, α	9, 34
9.422	$\frac{3}{2}^-$	120	n	34
9.493 \pm 4	$\frac{5}{2}^-$	15 \pm 1	n, α	5, 9, 14, 30
9.720 \pm 5	$\frac{7}{2}^+$	16 \pm 1	n, α	9, 14, 30, 34
9.775 \pm 15	$\frac{3}{2}^+$	\approx 25	n, α	9, 34
9.865 \pm 5		14	n, α	9, 14, 30, 34
9.878 \pm 15		\approx 10	n, α	9, 34
9.977 \pm 20	$\frac{5}{2}^+$	\approx 80	n, α	9
10.046 \pm 20		\approx 100	n, α	9
10.178 \pm 5	$\frac{7}{2}^-$	40	n, α	9, 34
10.337 \pm 15	$\frac{5}{2}^+, \frac{7}{2}^-$	150	n, α	9, 30
10.429 \pm 7		14 \pm 3	n, α	9
10.49	$\frac{5}{2}^+, \frac{7}{2}^-$	75 \pm 30	n, α	9
10.563 \pm 10	$(\frac{7}{2}^-)$	47 \pm 15	n, α	9, 30, 34, 35
10.773 \pm 10	$\frac{1}{2}^+, \frac{7}{2}^-$	80 \pm 20	n, α	9, 14, 30, 35
10.910 \pm 7	$\frac{5}{2}^-$	57 \pm 15	n, α	9, 30, 34, 35
11.030 \pm 4	$T = \frac{1}{2}$	45 \pm 10	n, α	9, 30
11.076 \pm 4 ^a	$\frac{1}{2}^-, \frac{3}{2}^-$	5 \pm 1	n, α	9, 30, 35, 63
11.229 \pm 10		100 \pm 30	n, α	5, 9
11.52	$(\frac{3}{2}, \frac{5}{2})$	190	n	34, 35
11.619 \pm 10		120 \pm 30	n, α	9
11.752 \pm 10		40 \pm 25	n, α	9
11.817 \pm 15		12 \pm 3	n, α	9, 14
12.006 \pm 15	$\geq \frac{3}{2}$	270	n, α	9, 34, 35
12.11 \pm 20		150 \pm 50	n, α	9, 35
12.275 \pm 15		100 \pm 30	n, α	9

Table 17.6 from (1977AJ02): Energy levels of ^{17}O (continued)

E_x in ^{17}O (MeV \pm keV)	$J^\pi; T$	τ_m or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
12.39 \pm 20		130	n, α	9, 34
12.421 \pm 15			n, α	9, 35
12.464 \pm 5	$(\frac{3}{2})^-; \frac{3}{2}$	8 \pm 2	n, α	9, 35, 63
12.596 \pm 15		75 \pm 30	n, α	9
(12.656)		95	n	34, 35
12.670 \pm 15		\approx 5	n, α	9, 35
12.81 \pm 25			n, α	9
12.93 \pm 20		\gtrsim 150	n, α	9, 35
12.946 \pm 5	$\frac{1}{2}^+; \frac{3}{2}$	6 \pm 2	n, α	9, 63
12.993 \pm 5	$T = \frac{3}{2}$	\leq 3	n, α	9, 63
13.077 \pm 15		16 \pm 4	n, α	9
13.485 \pm 15		\approx 120	n, α	9
13.610 \pm 15		250 \pm 100	n, α	9
13.640 \pm 5	$(\frac{5}{2})^+; \frac{3}{2}$			63
(13.672)		400	n	34
14.219 \pm 8	$T = \frac{3}{2}$			63
14.282 \pm 12	$T = \frac{3}{2}$			63
14.621		340	n	34
(14.98)	$\frac{5}{2}^+$	\approx 150	n, d, α	28, 34
15.101 \pm 8	$T = \frac{3}{2}$			63
(15.15)	$(\frac{5}{2}, \frac{7}{2})^-$	\approx 200	p, d	26
(15.5)		broad	p, d α	26, 28
20.45			γ , t	20
21.7 \pm 100	$\frac{5}{2}^+$	750	γ , d, ^3He , α	16, 17, 24
22.1 \pm 100	$\frac{7}{2}^-$	750	γ , n, d, ^3He , α	16, 17, 24
22.5 \pm 200	$\frac{3}{2}^-$	\approx 1000	γ , d, ^3He	16, 24, 51
23.0 \pm 100	$\frac{1}{2}^+$	\approx 400	γ , d, ^3He	16, 17, 24
23.5 \pm 100			γ , ^3He	16
24.4 \pm 100			γ , ^3He	16

^a See also [Table 17.11](#).

^b See [Table 17.7 in \(1971AJ02\)](#).

^c See [\(1964AL11\)](#).