

Table 15.18 from (1981AJ01): Energy levels of ^{15}O ^a

E_x in ^{15}O (MeV \pm keV)	J^π, T	τ or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
0	$\frac{1}{2}^-; \frac{1}{2}$	$\tau_{1/2} = 122.24 \pm 0.16$ sec	β^+	1, 2, 3, 4, 5, 6, 7, 10, 11, 12, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34
5.183 ± 1	$\frac{1}{2}^+$	$\tau_m = 8.2 \pm 1.0$ fsec	γ	3, 7, 10, 12, 21, 25, 26, 28, 29, 34
5.2409 ± 0.3	$\frac{5}{2}^+$	3.25 ± 0.30 psec	γ	3, 7, 8, 10, 12, 13, 21, 22, 24, 25, 26, 28, 29
6.1763 ± 1.7	$\frac{3}{2}^-$	< 2.5 fsec	γ	7, 12, 21, 22, 25, 26, 27, 28, 29, 33, 34
6.7931 ± 1.7	$\frac{3}{2}^+$	< 28 fsec	γ	3, 7, 12, 21, 22, 25, 29
6.8594 ± 0.9	$\frac{5}{2}^+$	16.0 ± 2.5 fsec	γ	3, 7, 12, 21, 22, 25, 26, 29
7.2759 ± 0.6	$\frac{7}{2}^+$	0.70 ± 0.15 psec	γ	7, 8, 10, 12, 13, 21, 22, 25, 29
7.5565 ± 0.8	$\frac{1}{2}^+$	$\Gamma = 1.6 \pm 0.5$ keV	γ, p	12, 14, 21, 22, 25, 29
8.2840 ± 0.9	$\frac{3}{2}^+$	3.6 ± 0.7	γ, p	7, 12, 14, 21, 22, 29
8.743 ± 6	$\frac{1}{2}^+$	32	γ, p	12, 14, 29
8.922 ± 2	$\frac{5}{2}^+$	3.3 ± 0.3	γ, p	7, 12, 14, 16, 29
8.922 ± 2	$\frac{1}{2}^+$	7.5	γ, p	7, 12, 14, 16, 29
8.9821 ± 1.7	$(\frac{1}{2})^-$	3.9 ± 0.4	γ, p	7, 12, 14, 29
9.488 ± 3	$\frac{5}{2}^-$	10.1 ± 0.5	γ, p	7, 12, 14, 29
9.527 ± 17	$(\frac{3}{2})^+$	280 ± 25	γ, p	12, 14, 16, 29
9.609 ± 2	$\frac{3}{2}^-$	8.8 ± 0.5	γ, p	7, 8, 12, 14, 28, 29
9.662 ± 3	$(\frac{7}{2}, \frac{9}{2})^-$	2 ± 1	p	7, 8, 12, 16, 29
10.29^b	$(\frac{5}{2})^-$	3 ± 1	p	7, 12, 16, 29
10.30^b	$\frac{5}{2}^+$	11 ± 2	p	7, 12, 16
10.461 ± 5	$(\frac{9}{2})^+$	< 2	γ, p	7, 8, 14, 29
10.48	$(\frac{3}{2})^-$	25 ± 5	γ, p	(8), 12, 14, 16, 28, 29
(10.506)	$(\frac{3}{2})^+$	140 ± 40	γ, p	14, 16, 26
10.917 ± 12	$\frac{7}{2}^+$	90	p	16, 29
10.938 ± 3	$\frac{1}{2}^+$	99 ± 5	γ, p	14, 16, 29
11.025 ± 3	$\frac{1}{2}^-$	25 ± 2	γ, p	14, 16, 29
11.151 ± 7		< 10	p	7, 16, 29

Table 15.18 from (1981AJ01): Energy levels of ^{15}O ^a (continued)

E_x in ^{15}O (MeV \pm keV)	J^π, T	τ or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
11.218 \pm 3	$\frac{3}{2}^+$	40 \pm 4	γ, p	14, 16, 29
11.565 \pm 15		< 10	p	7, 16, 29
11.569 \pm 15	$\frac{5}{2}^-$	20 \pm 15	γ, p	7, 14, 16, 29
11.616 \pm 15	$(\frac{3}{2}, \frac{1}{2})^-$	80 \pm 50	γ, p	14, 16
11.719 \pm 8		< 10	p	7, 16
11.748 \pm 3	$\frac{5}{2}^+$	99 \pm 5	γ, p	14, 16
11.846 \pm 3	$\frac{5}{2}^-$	65 \pm 3	γ, p	14, 16
11.980 \pm 10	$\frac{5}{2}^-$	20 \pm 5	p	7, 16, 29
12.129 \pm 15	$\frac{5}{2}^+$	200 \pm 50	p	16, 29
12.222 \pm 20		100 \pm 50	p	16
12.255 \pm 13	$\frac{5}{2}^+; \frac{3}{2}$	135 \pm 15	p	33
12.295 \pm 10				7
12.471 \pm 3	$\frac{5}{2}^-(\frac{3}{2}^-)$	77 \pm 4	p	16
12.60 \pm 10				7
12.80		\approx 250	γ, p	14
12.835 \pm 3	$(\frac{1}{2}^-)$	16 \pm 1	p	7, 8, 9, 10, 16
13.008 \pm 3		215 \pm 3	p	16
13.025 \pm 3		40 \pm 30	p, (^3He)	5, 16
13.45	$(\frac{1}{2}, \frac{3}{2})^+$	\approx 1000	$\gamma, \text{p}, (\alpha)$	14, 16, 20
(13.49)	$(\frac{3}{2}^+)$		(p)	16
13.60	$\frac{5}{2}^+$		p, α	20
13.70	$\frac{3}{2}^-$		p	16
13.79	$\frac{3}{2}^-$		n, p, $^3\text{He}, \alpha$	5, 7, 16, 20
13.87		\approx 150	γ, p	14
14.03 \pm 40	$(\frac{1}{2}^-, \frac{3}{2}^-)$	160 \pm 20	n, p, ^3He	5
14.17	$\frac{5}{2}^-$		p, α	20
14.27 \pm 10	$\frac{1}{2}^+$	340 \pm 30	n, p, $^3\text{He}, \alpha$	5, 7, 15, 16, 19, 20
14.34	$\frac{5}{2}^+$	(240)	p, (^3He), α	5, 20
14.465 \pm 10	$\frac{3}{2}^+, \frac{5}{2}^+$	100 \pm 10	n, p, $^3\text{He}, \alpha$	5, 15, 16, 20
14.70 \pm 40		170 \pm 35	n, p, ^3He	5, 15

Table 15.18 from (1981AJ01): Energy levels of ^{15}O ^a (continued)

E_x in ^{15}O (MeV \pm keV)	J^π, T	τ or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
14.95 \pm 40		400 \pm 25	n, p, $^3\text{He}, \alpha$	5, 15, 16, 19, 20
15.05 \pm 10	$(\frac{13}{2}^+)$			7, 9, 10
15.1	$(\frac{1}{2}, \frac{3}{2})^+$	\approx 1000	γ, p	14
15.45 \pm 30		70 \pm 20	p, $^3\text{He}, \alpha$	5, 7, 8
15.54 \pm 10			(p, $^3\text{He}, \alpha$)	5, 7
15.60 \pm 10			(p, $^3\text{He}, \alpha$)	5, 7
15.65 \pm 10				7
15.80 \pm 10			n, ^3He	5, 7
15.90 \pm 15	$\frac{1}{2}^-, \frac{3}{2}^-$	350	$^3\text{He}, \alpha$	5, 8
16.05 \pm 20		\approx 185	n, p, $^3\text{He}, \alpha$	5, 15, 16, 20
16.10 \pm 20			(n) $^3\text{He}, \alpha$	5
16.21 \pm 20		\approx 140	(n), p, $^3\text{He}, \alpha$	5, 16, 19, 20
16.43 \pm 50	$\frac{1}{2}^+$	560 \pm 100	$^3\text{He}, \alpha$	5
16.75 \pm 50			n, ^3He	5, 29
17.04 \pm 60	$(\frac{1}{2}, \frac{3}{2})^+$	700 \pm 70	$\gamma, \text{p}, ^3\text{He}$	5, 8, 14
17.46 \pm 20				7
17.51 \pm 20	$\frac{1}{2}^-, \frac{3}{2}^-$	600	n, $^3\text{He}, \alpha$	5, 7
17.99 \pm 50	$\frac{1}{2}^-, \frac{3}{2}^-$	200	^3He	5
18.23 \pm 50			n, p, ^3He	5
18.65 \pm 60	$(\frac{1}{2}^+, \frac{3}{2}^+); \frac{1}{2}$	520 \pm 110	$\gamma, ^3\text{He}$	5
19.03 \pm 50			n, ^3He	5
19.55 \pm 80	$(\frac{1}{2}^+, \frac{3}{2}^+); \frac{1}{2}$	780 \pm 270	$\gamma, ^3\text{He}$	5
19.91 \pm 50			n, ^3He	5
20.40 \pm 70	$(\frac{1}{2}^+, \frac{3}{2}^+); \frac{1}{2}$	970 \pm 240	$\gamma, \text{p}, ^3\text{He}$	5, 14
21.61 \pm 70	$(\frac{1}{2}^+, \frac{3}{2}^+); \frac{1}{2}$	730 \pm 120	$\gamma, \text{p}, ^3\text{He}$	5, 14
(26.0)	$(\frac{13}{2}^-)$	\approx 600	^3He	5
(28.0)	$(\frac{9}{2}^-, \frac{11}{2}^-)$	\approx 2500	^3He	5
(29.0)		\approx 2500	^3He	5

^a See also [Table 15.19](#).

^b It is possible that these two are in fact a single state: see [\(1976AJ04\)](#).