

Table 15.18 from (1970AJ04): Energy levels of ^{15}O ^a

E_x (MeV \pm keV)	J^π	τ_m (psec) or Γ (keV)	Decay	Reactions
0	$\frac{1}{2}^-$	$\tau_{1/2} = 122.24 \pm 0.16$ sec	β^+	1, 2, 3, 4, 6, 7, 8, 9, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29
5.181 \pm 5	$\frac{1}{2}^+$	$\tau_m < 0.1$ psec	γ	8, 9, 16, 17, 22, 24, 25, 26
5.24151 \pm 0.52	$\frac{5}{2}^+$	3.2 \pm 0.5	γ	8, 9, 16, 17, 20, 21, 22, 24, 25, 26
6.176 \pm 3	$\frac{3}{2}^-$	< 0.047	γ	8, 9, 16, 17, 21, 22, 24, 25, 26
6.788 \pm 4	$\frac{3}{2}^+$	< 0.028	γ	8, 9, 16, 17, 26
6.859 \pm 1	$\frac{5}{2}^+$	0.10 \pm 0.06	γ	8, 9, 16, 17, 21, 26
7.2760 \pm 0.6	$\frac{7}{2}^+$		γ	8, 16, 17, 21, 24, 26
7.5522 \pm 0.5	$\frac{1}{2}^+$	$\Gamma = 1.7 \pm 0.5$ keV	γ, p	9, 16, 17, 21
8.2833 \pm 1.5	$\frac{3}{2}^+$	3.6 \pm 0.7	γ, p	9, 17, 21
8.739 \pm 6	$\frac{1}{2}^+$	32	γ, p	9
8.9180 \pm 1.4	$\frac{3}{2}$	3.7 \pm 1	γ, p	8, 9, 21
8.9781 \pm 1.6	$(\frac{1}{2}, \frac{3}{2})^-$	3.9 \pm 0.4	γ, p	8, 9, 21
9.483 \pm 3	$\frac{5}{2}^-$	10.1 \pm 0.5	γ, p	8, 9, 21
9.50 \pm 40	$\frac{3}{2}^+(\frac{1}{2})^+$	280 \pm 24	γ, p	9
9.606 \pm 1.8	$\frac{3}{2}^-$	8.8 \pm 0.5	γ, p	8, 9, 21, 24
9.660 \pm 4	$\frac{1}{2}^-$	2 \pm 1	p	8, 10, 21
9.72 \pm 50	$(\frac{1}{2}, \frac{3}{2})^+$	1190 \pm 50	γ, p	9
10.278 \pm 8	+	16 \pm 4	p	10, 21
10.46 \pm 10		47	γ, p	9, 10, 21, 24
10.91 \pm 15	$\frac{7}{2}^+$	91	p	10, 21
10.939 \pm 7	$\frac{1}{2}^+$	84	γ, p	9, 10, 21
11.023 \pm 7	$\frac{1}{2}^-$	21	p	10
11.15 \pm 15		< 10	p	10
11.20 \pm 15	$(\frac{1}{2}, \frac{3}{2})^+$	36	γ, p	9, 10, 21
11.5 \pm 100	$T = \frac{3}{2}$			8
11.56 \pm 15		< 10	p	10
11.57		140	γ, p	10
11.57 \pm 15	$\frac{5}{2}^-$	25	p	9

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E_x (MeV \pm keV)	J^π	τ_m (psec) or Γ (keV)	Decay	Reactions
11.61 \pm 15	$\frac{3}{2}^- (\frac{1}{2}^-)$	25	p	10
11.71 \pm 15		< 10	p	10, 21
11.75 \pm 15	$\frac{5}{2}^+$	80	p	10
11.846 \pm 10	$\frac{5}{2}^-$	50	p	10
11.98 \pm 15	$\frac{5}{2}^-$	30	p	10
12.12 \pm 15	$\frac{5}{2}^+$	160	p	10
12.47 \pm 15	$\frac{5}{2}^- (\frac{3}{2}^-)$	60	p	10
12.8		\approx 230	γ , p	9
12.82	+	9	p	10
13.00	$\frac{5}{2}$	28	p, ^3He , α	5, 10, 15
13.1			p, d, ^3He , α	5
13.4	$\frac{3}{2}^+$	broad	(p, α)	10, 15
13.49	$(\frac{3}{2}^+)$		p	10
13.60	$\frac{5}{2}^+$		p, α	15
13.70	$\frac{3}{2}^-$		p	10
13.79	$\frac{3}{2}^-$		n, p, ^3He , α	5, 10, 15, 21
13.87		\approx 140	γ , p	9
14.03 \pm 40	$(\frac{1}{2}, \frac{3}{2})^-$	160 \pm 20	n, p, ^3He	5
14.17	$\frac{5}{2}^-$		p, α	15
14.27 \pm 40	$\frac{1}{2}^+$	340 \pm 30	n, p, ^3He , α	5, 10, 11, 15
14.34	$\frac{5}{2}^+$		p, α	15
14.460 \pm 10	$\frac{5}{2}^+$	100 \pm 10	n, p, ^3He , α	5, 11
14.69 \pm 40		170 \pm 30	n, p, ^3He	5, 11
14.95 \pm 40		400 \pm 25	n, p, ^3He	5, 11
15.43 \pm 10		65 \pm 15	p, ^3He , α	5
15.56 \pm 40	$\frac{1}{2}^+$	80 \pm 25	p, ^3He , α	5
15.84 \pm 50	$(\frac{1}{2}, \frac{3}{2})^-$	350	n, p, ^3He , α	5, 11
16.04			^3He , α	5
16.09			n, ^3He , α	5
16.19			^3He , α	5
16.43 \pm 50	$\frac{1}{2}^+$	170	^3He , α	5

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E_x (MeV \pm keV)	J^π	τ_m (psec) or Γ (keV)	Decay	Reactions
16.48 \pm 50		560 \pm 90	n, p	11
16.77 \pm 50		200	n, ^3He , α	5
17.50 \pm 50	$(\frac{1}{2}, \frac{3}{2})^-$	600	n, p, ^3He , α	5
17.99 \pm 50	$(\frac{1}{2}, \frac{3}{2})^-$	200	^3He , α	5
18.22 \pm 50			n, p, ^3He	5
19.02 \pm 50			n, ^3He	5
19.90 \pm 50			n, p, ^3He	5
\approx 21		broad	γ , p	9

^a See also Tables [15.22](#) and [15.25](#).