

Table 19.2 from (1995TI07): Energy Levels of  $^{19}\text{O}$  <sup>a</sup>

$E_x$ (MeV $\pm$ keV)	$J^\pi; T$	$\tau$ or $\Gamma_{\text{c.m.}}$ <sup>b</sup>	Decay	Reactions
0	$\frac{5}{2}^+; \frac{3}{2}$	$[\tau_{1/2} = 26.91 \pm 0.08 \text{ s}]$	$\beta^-$	1, 2, 3, 4, 5, 7, 8, 9, 10
$0.0960 \pm 0.5$	$\frac{3}{2}^+$	$\tau_m = 2.00 \pm 0.07 \text{ ns}$ $[g = -0.48 \pm 0.06]$	$\gamma$	3, 4, 7, 8, 9, 10
$1.4717 \pm 0.4$	$\frac{1}{2}^+$	$\tau_m = 1.27 \pm 0.17 \text{ ps}$	$\gamma$	3, 4, 7, 8
$2.3715 \pm 1.0$	$\frac{9}{2}^+$	$\tau_m > 3.5 \text{ ps}$	$\gamma$	3, 4, 7
$2.7790 \pm 0.9$	$\frac{7}{2}^+$	$\tau_m = 93 \pm 19 \text{ fs}$	$\gamma$	3, 4, 7, 8
$3.0674 \pm 1.6$	$(\frac{3}{2}^+)^d$	$\tau_m \geq 1 \text{ ps}$	$\gamma$	3, 4, 7, 8
$3.1535 \pm 1.7$	$\frac{5}{2}^+$	$(\tau_m \geq 1 \text{ ps})$	$\gamma$	3, 4, 7, 8
$3.2316 \pm 2.3$	$(\frac{1}{2}, \frac{3}{2}^-)^d$			3, 4, 7, 8
$3.9449 \pm 1.4$ <sup>c</sup>	$\frac{3}{2}^-$		$\gamma$	3, 4, 7
$4.1093 \pm 1.9$	$\frac{3}{2}^+$	$\Gamma < 15 \text{ keV}$		3, 4, 7
$4.3281 \pm 2.4$	$\frac{3}{2}, \frac{5}{2}$	$\Gamma < 15 \text{ keV}$		3, 4, 7
$4.4025 \pm 2.7$	$\frac{3}{2} \rightarrow \frac{7}{2}$	$\Gamma < 15 \text{ keV}$		3, 4, 7
$4.5820 \pm 4.6$	$\frac{3}{2}^-$	$\Gamma = 52 \pm 3 \text{ keV}$	n	3, 4, 5, 7
$4.7026 \pm 2.7$	$\frac{5}{2}^+$	$\Gamma < 15 \text{ keV}$		3, 4, 7, 8
$4.9683 \pm 5.5$	$\frac{5}{2}, \frac{7}{2}$			3
$5.0070 \pm 4.5$	$\frac{3}{2}, \frac{5}{2}$	$\Gamma < 15 \text{ keV}$		3, 4, 7
$5.0820 \pm 5.4$	$\frac{1}{2}^-$	$\Gamma = 49 \pm 5 \text{ keV}$	n	3, 5
$5.1484 \pm 3.2$	$\geq \frac{5}{2}^+$	$\Gamma = 3.4 \pm 1.0 \text{ keV}$	n	3, 4, 5, 7
$5.3840 \pm 2.8$	$(\frac{9}{2} \rightarrow \frac{13}{2})$			3
$5.5035 \pm 3.1$ <sup>c</sup>		$\Gamma < 15 \text{ keV}$		3, 4, 7
5.54	$\frac{3}{2}^+$	$\Gamma \approx 490 \text{ keV}$	n	5
$5.7046 \pm 4.3$ <sup>c</sup>	$\frac{7}{2}^-$	$\Gamma = 7.8 \pm 1.4 \text{ keV}$	n	3, 4, 5, 7, 8
$6.1196 \pm 3.2$ <sup>c</sup>	$\frac{3}{2}^+$	$\Gamma \approx 110 \text{ keV}$	n	3, 5
$6.1916 \pm 5.5$				3
$6.2693 \pm 2.6$	$\frac{7}{2}^-$	$\Gamma = 19.2 \pm 2.4 \text{ keV}$	n	3, 4, 5, 7, 8
$6.4058 \pm 3.1$ <sup>c</sup>				3
$6.4662 \pm 4.8$	$(\frac{7}{2} \rightarrow \frac{11}{2})$		(n)	3, 5, 7
$6.583 \pm 6$ <sup>c</sup>				3, 7
$6.903 \pm 8$				3, 7
$6.988 \pm 9$				3, 7

Table 19.2 from (1995TI07): Energy Levels of  $^{19}\text{O}$  <sup>a</sup> (continued)

$E_x$ (MeV $\pm$ keV)	$J^\pi; T$	$\tau$ or $\Gamma_{\text{c.m.}}$ <sup>b</sup>	Decay	Reactions
7.118 $\pm$ 10				3, 7
7.242 $\pm$ 8				3, 7
7.508 $\pm$ 10				3
8.048 $\pm$ 20				3
8.132 $\pm$ 20				3
8.247 $\pm$ 20				3
8.450 $\pm$ 20				3
8.561 $\pm$ 20				3
8.591 $\pm$ 20				3
8.916 $\pm$ 20				3
8.923 $\pm$ 20				3
9.022 $\pm$ 20				3
9.064 $\pm$ 20				3
9.253 $\pm$ 20				3
9.324 $\pm$ 20				3
9.43				3
9.56				3
9.6	$\frac{7}{2}^-$		n	3, 5
9.9	$\frac{7}{2}^-$		n	3, 5
9.93				3
9.98				3
10.21	$\frac{7}{2}^-$		n	5
10.66	$\frac{7}{2}^-$		n	5
11.25 $\pm$ 50		$\Gamma = 240$ keV	n, $\alpha$	6
11.58 $\pm$ 50		$\Gamma = 330$ keV	n, $\alpha$	6

<sup>a</sup> See also Tables 19.3 and 19.7.

<sup>b</sup> See also reaction 1 and Table 19.2 in (1978AJ03).

<sup>c</sup> See footnotes to Table 19.4.

<sup>d</sup> (1987AJ02) gave  $J^\pi = \frac{3}{2}^+$  for these levels. Assignments have been revised based on arguments presented in (1988WA17).