

Table 19.21 from (1972AJ02): Energy levels of  $^{19}\text{Ne}$ 

$E_x$ (MeV $\pm$ keV)	$J^\pi; T$	$\tau$ or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
0	$\frac{1}{2}^+; \frac{1}{2}$	$\tau_{1/2} = 17.40 \pm 0.04$ sec	$\beta^+$	1, 5, 7, 8, 9, 10, 12, 13
0.23833 $\pm$ 0.11	$\frac{5}{2}^+$	$\tau_m = 26.0 \pm 0.8$ nsec	$\gamma$	5, 6, 7, 8, 12, 13
0.27520 $\pm$ 0.14	$\frac{1}{2}^-$	$\tau_m = 61.4 \pm 3.0$ psec	$\gamma$	2, 5, 7, 12
1.5078 $\pm$ 0.4	$\frac{5}{2}^-$	$\tau_m = 4.1_{-1.4}^{+3.5}$ psec	$\gamma$	4, 5, 6, 7, 12
1.5362 $\pm$ 0.5	$\frac{3}{2}^+$	$\tau_m = 28 \pm 15$ fsec	$\gamma$	4, 5, 6, 7, 8, 12
1.6152 $\pm$ 0.7	$\frac{3}{2}^-$	$\tau_m = 180 \pm 60$ fsec	$\gamma$	4, 5, 6, 7, 12
2.7940 $\pm$ 1.3 (3.841 $\pm$ 15)	$\frac{9}{2}^+$	$\tau_m = 330 \pm 130$ fsec	$\gamma$	4, 5, 6, 7, 8, 12, 13 12
4.026 $\pm$ 8	$(\frac{3}{2}, \frac{5}{2})^+$			5, 6, 12, 13
4.146 $\pm$ 8	$(\frac{7}{2}^-)$		$\gamma$	5, 6, 12
4.200 $\pm$ 10	$(\frac{9}{2}^-)$			5, 12
4.368 $\pm$ 8	$(\frac{7}{2}^+)$			5, 6, 12
4.549 $\pm$ 8	$(\frac{1}{2}, \frac{3}{2})^-$			5, 6, 12
4.624 $\pm$ 10				5, 6, 12
4.710 $\pm$ 9				5, 6, 12
4.783 $\pm$ 20				5, 12
5.087 $\pm$ 6				5, 6, 12
5.351 $\pm$ 10	$\frac{1}{2}^+$			5, 12
5.425 $\pm$ 7				5, 12
5.463 $\pm$ 20				12
5.545 $\pm$ 10				12
5.832 $\pm$ 9				12
6.013 $\pm$ 7	$(\frac{3}{2}, \frac{1}{2})^-$			12
6.096 $\pm$ 7				12
6.149 $\pm$ 20				12
6.290 $\pm$ 7				12
6.437 $\pm$ 9				12
6.743 $\pm$ 7	$(\frac{3}{2}, \frac{1}{2})^-$			12
6.862 $\pm$ 7				12
7.067 $\pm$ 9				12
(7.178 $\pm$ 15)				12
7.253 $\pm$ 10				12
(7.326 $\pm$ 15)				12

Table 19.21 from (1972AJ02): Energy levels of  $^{19}\text{Ne}$  (continued)

$E_x$ (MeV $\pm$ keV)	$J^\pi; T$	$\tau$ or $\Gamma_{\text{c.m.}}$ (keV)	Decay	Reactions
(7.531 $\pm$ 15)				12
7.616 $\pm$ 16	$\frac{3}{2}^+; \frac{3}{2}$			12, 13
7.700 $\pm$ 10				12
(7.788 $\pm$ 10)				12
7.994 $\pm$ 15				12
8.063 $\pm$ 15				12
8.236 $\pm$ 10 <sup>a</sup>				12
8.440 $\pm$ 10				12
8.523 $\pm$ 10				12
(8.810 $\pm$ 25)				12
8.915 $\pm$ 10				12
9.013 $\pm$ 10				12
9.100 $\pm$ 20				12
9.240 $\pm$ 20				12
9.489 $\pm$ 25				12
9.886 $\pm$ 50 <sup>a</sup>				12
10.46	$\frac{1}{2}^+$	$\Gamma = 355$	p, $^3\text{He}$ , $\alpha$	3, 12
10.48	$\frac{3}{2}^+$	45	p, $^3\text{He}$ , $\alpha$	3, 12
10.613 $\pm$ 20				12
11.51	$\frac{3}{2}^- (\frac{1}{2}^-)$	24	$^3\text{He}$ , $\alpha$	3
12.23	$\frac{5}{2}^+$	200	$^3\text{He}$ , $\alpha$	3
12.50	$\frac{7}{2}^+$	150	$^3\text{He}$ , $\alpha$	3
12.69 $\pm$ 50	$\frac{1}{2}^+$	180 $\pm$ 40	p, $^3\text{He}$ , $\alpha$	3

<sup>a</sup> Broad or unresolved states.