

Table 19.27 from (1995TI07): Energy levels of ^{19}Ne ^a

E_x (MeV \pm keV)	$J^\pi; T$	K^π	τ_m or $\Gamma_{c.m.}$	Decay	Reactions
0	$\frac{1}{2}^+; \frac{1}{2}$	$\frac{1}{2}^+$	$[\tau_{1/2} = 17.22 \pm 0.02 \text{ s}]$	β^+	1, 3, 4, 5, 7, 9, 10, 11, 13, 14
0.23827 \pm 0.11	$\frac{5}{2}^+$	$\frac{1}{2}^+$	$\tau_m = 26.0 \pm 0.8 \text{ ns}$ $[g = -0.296 \pm 0.003]$	γ	4, 5, 7, 10, 11, 13, 14
0.27509 \pm 0.13	$\frac{1}{2}^-$	$\frac{1}{2}^-$	$\tau_m = 61.4 \pm 3.0 \text{ ps}$	γ	4, 5, 7, 10, 13
1.50756 \pm 0.3	$\frac{5}{2}^-$	$\frac{1}{2}^-$	$\tau_m = 1.4_{-0.6}^{+0.5} \text{ ps}$	γ	4, 5, 7, 10, 13
1.5360 \pm 0.4	$\frac{3}{2}^+$	$\frac{1}{2}^+$	$\tau_m = 28 \pm 11 \text{ fs}$	γ	4, 5, 7, 10, 11, 13
1.6156 \pm 0.5	$\frac{3}{2}^-$	$\frac{1}{2}^-$	$\tau_m = 143 \pm 31 \text{ fs}$	γ	4, 5, 7, 10, 13
2.7947 \pm 0.6	$\frac{9}{2}^+$	$\frac{1}{2}^+$	$\tau_m = 140 \pm 35 \text{ fs}$	γ	4, 5, 6, 7, 9, 10, 11, 13, 14
4.0329 \pm 2.4	$\frac{3}{2}^+$		$\tau_m < 50 \text{ fs}$	α, γ	2, 5, 8, 13, 14
4.140 \pm 4	$(\frac{9}{2})^-$	$(\frac{1}{2})^-$	$\tau_m < 0.3 \text{ ps}$	γ	5, 8, 13
4.1971 \pm 2.4	$(\frac{7}{2})^-$	$(\frac{1}{2})^-$	$\tau_m < 0.35 \text{ ps}$	γ	4, 5, 8, 13
4.3791 \pm 2.2	$\frac{7}{2}^+$	$(\frac{1}{2})^+$	$\tau_m < 0.12 \text{ ps}$	α, γ	2, 5, 8, 13
4.549 \pm 4	$(\frac{1}{2}, \frac{3}{2})^-$		$\tau_m < 80 \text{ fs}$	α, γ	2, 5, 8, 13
4.600 \pm 4	$(\frac{5}{2})^+$		$\tau_m < 0.16 \text{ ps}$	γ	2, 5, 8
4.635 \pm 4	$\frac{13}{2}^+$	$\frac{1}{2}^+$	$\tau_m > 1 \text{ ps}$	γ	4, 5, 6, 7, 8, 9, 13
4.712 \pm 10	$(\frac{5}{2})^-$			α	2, 5
4.783 \pm 20					13
5.092 \pm 6	$\frac{5}{2}^+$			α, γ	2, 5, 8, 13, 14
5.351 \pm 10	$\frac{1}{2}^+$				13
5.424 \pm 7	$(\frac{7}{2})^+$	$(\frac{1}{2})^+$			4, 5, 13
5.463 \pm 20					13
5.539 \pm 9					13
5.832 \pm 9					13
6.013 \pm 7	$(\frac{3}{2}, \frac{1}{2})^-$				13
6.092 \pm 8					5, 13
6.149 \pm 20					14
6.288 \pm 7					5, 13
6.437 \pm 9					13
6.742 \pm 7	$(\frac{3}{2}, \frac{1}{2})^-$				13
6.861 \pm 7					5, 13
7.067 \pm 9					13
7.21 \pm 20					5, 13
7.253 \pm 10					13
(7.326 \pm 15)					13
(7.531 \pm 15)					13
7.616 \pm 16	$\frac{3}{2}^+; \frac{3}{2}$				4, 13, 14
7.700 \pm 10					13
(7.788 \pm 10)					13

Table 19.27 from (1995TI07): Energy levels of ^{19}Ne ^a (continued)

E_x (MeV \pm keV)	$J^\pi; T$	K^π	τ_m or $\Gamma_{c.m.}$	Decay	Reactions
7.994 \pm 15					13
8.069 \pm 12					5, 13
8.236 \pm 10					13
8.442 \pm 9					4, 5, 13
8.523 \pm 10					13
(8.810 \pm 25)					13
8.920 \pm 9	$(\frac{11}{2}^-)$				4, 5, 6, 7, 13
9.013 \pm 10					13
9.100 \pm 20					13
9.240 \pm 20					4, 13
9.489 \pm 25					13
9.81 \pm 20	$(\frac{11}{2}^+)$				4, 5, 6, 7, 8, 13
10.01 \pm 20					5
10.407 \pm 30	$\frac{3}{2}^+$		$\Gamma = 45$ keV	p, ^3He , α	3, 4, 7, 13
10.46	$\frac{1}{2}^+$		$\Gamma = 355$ keV	p, ^3He , α	3
10.613 \pm 20					13
11.08 \pm 20					4, 5, 6
11.24 \pm 20					5
11.40 \pm 20					5
11.51 \pm 50	$\frac{3}{2}^-, (\frac{1}{2}^-)$		$\Gamma = 25$ keV	^3He , α	4
12.23 \pm 50	$\frac{5}{2}^+$		$\Gamma = 200 \pm 25$ keV	^3He , α	4, 6, 7
12.40 \pm 50	$\frac{7}{2}^+$		$\Gamma = 180 \pm 25$ keV	^3He , α	3
12.56 \pm 20					5
12.69 \pm 50	$\frac{1}{2}^+$		$\Gamma = 180 \pm 40$ keV	p, ^3He	3
13.1 \pm 30					5
13.22 \pm 30					5
13.8 \pm 250			$\Gamma = 670 \pm 250$ keV	γ , ^3He	3
14.18 \pm 30					5, 6
14.44 \pm 30					5
14.78 \pm 30			$\Gamma = 620 \pm 130$ keV	γ , ^3He	3, 5
16.23 \pm 130			$\Gamma = 400 \pm 130$ keV	γ , n, ^3He	3
18.4 \pm 500			$\Gamma = 4400 \pm 500$ keV	γ , ^3He	3

^a See also [Table 19.28](#).