

Table 19.21 from (1987AJ02): Energy levels of ^{19}Ne ^a

E_x (MeV \pm keV)	$J^\pi; T$	K^π	τ	Decay	Reactions
0	$\frac{1}{2}^+; \frac{1}{2}$	$\frac{1}{2}^+$	$\tau_{1/2} = 17.22 \pm 0.02$ sec	β^+	1, 3, 4, 5, 8, 9, 10, 11, 12
0.23827 \pm 0.11	$\frac{5}{2}^+$	$\frac{1}{2}^+$	$\tau_m = 26.0 \pm 0.8$ nsec $g = -0.296 \pm 0.003$	γ	4, 5, 9, 10, 11, 12
0.27509 \pm 0.13	$\frac{1}{2}^-$	$\frac{1}{2}^-$	$\tau_m = 61.4 \pm 3.0$ psec	γ	4, 5, 9, 11
1.50756 \pm 0.3	$\frac{5}{2}^-$	$\frac{1}{2}^-$	$1.4_{-0.6}^{+0.5}$ psec	γ	4, 5, 9, 11
1.5360 \pm 0.4	$\frac{3}{2}^+$	$\frac{1}{2}^+$	28 ± 11 fsec	γ	4, 5, 9, 10, 11
1.6156 \pm 0.5	$\frac{3}{2}^-$	$\frac{1}{2}^-$	143 ± 31 fsec	γ	4, 5, 9, 11
2.7947 \pm 0.6	$\frac{9}{2}^+$	$\frac{1}{2}^+$	140 ± 35 fsec	γ	4, 5, 6, 8, 9, 10, 11, 12
4.0329 \pm 2.4	$\frac{3}{2}^+$		< 50 fsec	γ	5, 7, 11, 12
4.140 \pm 4	$(\frac{9}{2})^-$	$(\frac{1}{2}^-)$	< 0.3 psec	γ	5, 7, 11
4.1971 \pm 2.4	$(\frac{7}{2})^-$	$(\frac{1}{2}^-)$	< 0.35 psec	γ	4, 5, 7, 11
4.3791 \pm 2.2	$\frac{7}{2}^+$	$(\frac{1}{2}^+)$	< 0.12 psec	γ	5, 7, 11
4.549 \pm 4	$(\frac{1}{2}, \frac{3}{2})^-$		< 80 fsec	γ	5, 7, 11
4.600 \pm 4	$(\frac{5}{2}^+)$		< 0.16 psec	γ	5, 7
4.635 \pm 4	$\frac{13}{2}^+$	$\frac{1}{2}^+$	> 1 psec	γ	4, 5, 6, 7, 8, 11
4.712 \pm 10	$(\frac{5}{2}^-)$				5
4.783 \pm 20					11
5.092 \pm 6	$\frac{5}{2}^+$			γ	5, 7, 11, 12
5.351 \pm 10	$\frac{1}{2}^+$				11
5.424 \pm 7	$(\frac{7}{2}^+)$	$(\frac{1}{2}^+)$			4, 5, 11
5.463 \pm 20					11
5.539 \pm 9					11
5.832 \pm 9					11
6.013 \pm 7	$(\frac{3}{2}, \frac{1}{2})^-$				11
6.092 \pm 8					5, 11
6.149 \pm 20					12
6.288 \pm 7					5, 11
6.437 \pm 9					11
6.742 \pm 7	$(\frac{3}{2}, \frac{1}{2})^-$				11

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E_x (MeV \pm keV)	$J^\pi; T$	K^π	τ	Decay	Reactions
6.861 \pm 7					5, 11
7.067 \pm 9					11
7.21 \pm 20					5, 11
7.253 \pm 10					11
(7.326 \pm 15)					11
(7.531 \pm 15)					11
7.616 \pm 16	$\frac{3}{2}^+; \frac{3}{2}$				4, 11, 12
7.700 \pm 10					11
(7.788 \pm 10)					11
7.994 \pm 15					11
8.069 \pm 12					5, 11
8.236 \pm 10					11
8.442 \pm 9					4, 5, 11
8.523 \pm 10					11
(8.810 \pm 25)					11
8.920 \pm 9					4, 5, 6, 11
9.013 \pm 10					11
9.100 \pm 20					11
9.240 \pm 20					4, 11
9.489 \pm 25					11
9.81 \pm 20					4, 5, 6, 7, 11
10.01 \pm 20					5
10.407 \pm 30	$\frac{3}{2}^+$		45	p, ^3He , α	3, 4, 11
10.46	$\frac{1}{2}^+$		355	p, ^3He , α	3
10.613 \pm 20					11
11.08 \pm 20					4, 5, 6
11.24 \pm 20					5
11.40 \pm 20					5
11.51 \pm 50	$\frac{3}{2}^-, (\frac{1}{2}^-)$		25	^3He , α	4
12.23 \pm 50	$\frac{5}{2}^+$		200 \pm 25	^3He , α	4, 6
12.40 \pm 50	$\frac{7}{2}^+$		180 \pm 25	^3He , α	3

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E_x (MeV \pm keV)	$J^\pi; T$	K^π	τ	Decay	Reactions
12.56 \pm 20	$\frac{1}{2}^+$		180 \pm 40	p, ^3He	5
12.69 \pm 50					3
13.1 \pm 30					5
13.22 \pm 30					5
13.8 \pm 250			670 \pm 250	γ , ^3He	3
14.18 \pm 30					5, 6
14.44 \pm 30					5
14.78 \pm 30			620 \pm 130	γ , ^3He	3, 5
16.23 \pm 130			400 \pm 130	γ , n, ^3He	3
18.4 \pm 500			4400 \pm 500	γ , ^3He	3

^a See also [Table 19.22](#).