Table 20.15 from (1972AJ02): Energy levels of ^{20}Ne [a]

E_x (MeV $\pm$ keV)	$J^\pi; T$	K^π	τ_m or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
0	$0^+; 0$	0^+		stable	1, 2, 3, 4, 5, 6, 8, 13, 14, 16, 19, 20, 26, 27, 28, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 45, 46, 47, 48, 49, 50, 51
1.6338 ± 0.4	$2^+; 0$	0^+	$\tau_m = 1.20 \pm 0.15$ psec	γ	3, 4, 8, 13, 14, 15, 16, 18, 19, 20, 26, 27, 28, 29, 36, 37, 39, 40, 42, 43, 44, 45, 46, 47, 50
4.2473 ± 1.8	$4^+; 0$	0^+	$\tau_m = 93 \pm 9$ fsec	γ	3, 4, 8, 13, 14, 16, 18, 19, 20, 26, 27, 28, 36, 37, 39, 40, 44, 45, 46, 47, 50
4.9682 ± 0.8	$2^-; 0$	2^-	$\tau_m = 4.8 \pm 0.5$ psec	γ	3, 4, 13, 19, 20, 26, 27, 28, 29, 36, 40, 44, 45, 47, 50
5.6217 ± 2.0	$3^-; 0$	2^-	$\tau_m = 200 \pm 50$ fsec	γ, α	3, 4, 8, 13, 14, 18, 19, 20, 26, 27, 28, 36, 37, 40, 45, 47, 50
5.785 ± 3	$1^-; 0$	0^-	$\Gamma > 1.3 \times 10^{-2}$	γ, α	3, 8, 13, 14, 18, 19, 20, 27, 28, 37, 40, 45, 50
6.722 ± 3	$0^+; 0$	0^+	15 ± 7	γ, α	3, 8, 9, 13, 19, 26, 27, 28, 45
7.0055 ± 2.8	$4^-; 0$	2^-	$\tau_m = 440 \pm 90$ fsec	γ	3, 4, 13, 27, 28
7.166 ± 4	$3^-; 0$	0^-	$\Gamma = 8$	α	3, 9, 13, 14, 27, 28, 40
7.196 ± 4	$0^+; 0$		4	γ, α	3, 8, 9, 13, 14, 27, 28, 37
7.424 ± 4	$2^+; 0$	0^+	8	α	3, 9, 26, 27, 36, 43
7.834 ± 4	$2^+; 0$		2	α	3, 9, 19, 26, 36, 43
8.447 ± 3	$5^-; 0$	2^-		γ, α	3, 8
≈ 8.6	$0^+; 0$		> 800	α	9
8.72 ± 20	$1^-; 0$		2.5	α	3, 9, 43
8.7750 ± 2.2	$6^+; 0$	0^+	0.110 ± 0.025	γ, α	3, 8, 9, 13, 19, 36

Table 20.15 from (1972AJ02): Energy levels of ^{20}Ne [a] (continued)

E_x (MeV $\pm$ keV)	$J^\pi; T$	K^π	τ_m or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
≈ 8.8	$2^+; 0$		> 800	α	9
8.82	$(5^-); 0$		< 1	α	9
8.850 ± 5	$1^-; 0$		19	α	3, 9
9.040 ± 5	$4^+; 0$	0^+	≤ 3	γ, α	3, 8, 9, 19
9.117 ± 5	$3^-; 0$		3.2	α	3, 9, 26, 36
(9.34 ± 30)					3, 26
9.489 ± 9	$2^+; 0$		29 ± 15	γ, α	3, 8, 9, 43
9.950 ± 6	(1^+)		$\tau_m < 35$ fsec	γ	3, 19
9.99 ± 10	$4^+; 0$		$\Gamma = 150 \pm 50$	γ, α	8, 9, 19, 26, 36
10.257 ± 5	$5^-; 0$	0^-	141	α	9
10.26 ± 20	$2^+; 1$		$\lesssim 2$	γ, α	3, 8, 19, 26, 43
10.401 ± 5	$3^-; 0$		81	α	9
10.548 ± 5	$4^+; 0$		16	α	3, 9
10.579 ± 10	$2^+; 0$		24	α	3, 9
10.609 ± 7	$6^-; 0$	2^-	$\tau_m = 23 \pm 7$ fsec	γ	3
10.79 ± 100	$4^+; 0$		$\Gamma = 350$	α	9
10.836 ± 5	$2^+; 0$		13	α	9, 43
10.836	$3^-; 0$		45	α	9
10.853 ± 10	$(1, 2, 3)^+; 1$				19, 26
10.920 ± 7			$\tau_m < 30$ fsec	γ	3
10.97 ± 150	$0^+; 0$		$\Gamma = 580$	α	9
11.015 ± 10	$4^+; 0$		24	α	9
11.08 ± 20	$(4^+; 1)$		$\lesssim 3$	γ, α	8, 26
11.23 ± 30	$1^-; 0$		172	α	9
11.233 ± 10	$1^+; 1$			γ	20, 26, 34, 45
11.27 ± 30	2^+		$\lesssim 4$	γ, α	8, 43
11.324 ± 10	$2^+; 0$		53	α	9
11.528 ± 6	≤ 4		$\tau_m < 30$ fsec	γ, α	3, 8, 19
11.549 ± 10	$(T = 1)$				26, 34
11.871 ± 20	$2^+; 0$		$\Gamma = 46$	α	9

Table 20.15 from (1972AJ02): Energy levels of ^{20}Ne [a] (continued)

E_x (MeV ± keV)	$J^\pi; T$	K^π	τ_m or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
11.925 ± 5	$4^+; 0$		0.44 ± 0.15	α	9, 26
11.948 ± 5	$8^+; 0$	0^+	$(35 \pm 10) \times 10^{-3}$	α	3, 8, 9, 13
11.953 ± 10	$1^-; 0$		24	α	9
11.971 ± 8	$1^-; 0$		29 ± 8	α	9
12.086 ± 10	$(T = 1)$			(α)	9, 26
12.150 ± 10	$6^+; 0$		< 40		3, 26
(12.200 ± 10)	$(T = 1)$				26
12.224 ± 10	$4^+; 0$		142	α	9
12.245 ± 15	$(2^+); 1$		40 ± 16	γ, α	8, 20, 26
12.35 ± 100	$2^+; 0$			α	9
12.367 ± 10	$3^-; 0$		46 ± 16	α	9, 26
12.410 ± 5	$0^+; 0$		≤ 8	α	9, 19, 26
12.559 ± 10	$6^+; 0$		101	α	3, 9
12.61 ± 100				α	9
12.682 ± 15	$5^-; 0$		97	α	9
12.77 ± 100	$4^+; 0$		100	α	9
12.83 ± 30			55	α	9, 19
12.98 ± 75	$(4^+; 0)$		60	α	9
13.060 ± 4	2^-		1.0	p, α	32
13.086 ± 15	$(4^+; 0)$		70	α	9, 26
13.168 ± 1	$1^+; (1)$		2.3 ± 0.2	γ, p, α	20, 21, 22, 26
13.18 ± 75	$(4^+; 0)$		60	α	9
13.224	1^-		95	p, α	22
13.224	0^+		95	p, α	22
13.304 ± 1	1^+		0.9 ± 0.1	γ, p, α	20, 21, 22
13.333 ± 6	$7^-; 0$	2^-	$(80 \pm 30) \times 10^{-3}$	α	3, 9
13.342	$4^+; 0$		20	α	9
13.411	2^-		35	γ, p, α	9, 20, 21, 22
13.42 ± 140	$(4^+; 0)$		110	α	9
13.462 ± 20	1^-		190	p, α	22

Table 20.15 from (1972AJ02): Energy levels of ^{20}Ne [a] (continued)

E_x (MeV ± keV)	$J^\pi; T$	K^π	τ_m or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
13.479 ± 1.5	$1^+; 1$		7.1	γ, p, α	19, 20, 21, 22, 26
13.523	(1^-)		30	p, α	21, 22
13.541	2^+		63	p, α	22
13.584	2^+		≈ 10	p, α	21, 22
13.63 ± 30			7.9	p	19, 21
13.650 ± 15	$0^+; 1$		22	p, α	21, 22, 26
(13.66)	1^-		115	p, α	22
13.673 ± 1	2^-		4.5 ± 0.2	γ, p, α	20, 21, 22
13.699			4.6	p	21
13.7 ± 400	$(3, 7)^-$		320	α	9
(13.73)	0^+		170	p, α	22
13.733 ± 1.5	1^+		7.7 ± 0.5	γ, p, α	20, 21, 22
13.775				γ, p	20
(13.87)	(1^-)		190	p, α	22
13.88 ± 30	(6^+)		100	α	9, 13
13.882 ± 15			≈ 1	γ, p	20, 21, 26
13.903	2^+		48	p, α	32
13.924			3.5	p	21
13.946	0^+		≈ 70	p, α	22
14.017	1^-		≈ 70	p, α	21, 22
14.03	2^+		≈ 140	p, α	22
14.065			18	γ, p	20, 21
14.098			3.8	γ, p	20
14.124 ± 1.2	2^-		4.7 ± 0.7	γ, p, α	9, 20, 21, 22
14.134	2^+		51	p, α	22
14.148 ± 1.2	2^-		11.8 ± 1.0	γ, p, α	20, 21, 22
14.197	1^+		13.9 ± 1	γ, p	20, 21
14.3 ± 300	6^+		240	α	9, 13
14.373			≈ 5	p	21
14.421				p	21

Table 20.15 from (1972AJ02): Energy levels of ^{20}Ne [a] (continued)

E_x (MeV ± keV)	$J^\pi; T$	K^π	τ_m or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
14.453 ± 2			33 ± 3	p, α	21, 22
14.467	0^+		135	p, α	22
14.6 ± 300	(4^+)		240	α	9
14.604	1^-		125	p, α	22
14.695 ± 2.6	(1^+)		38 ± 10	p, α	21, 22
14.772 ± 3.0			95 ± 20	p, α	21, 22
14.85 ± 150	$(2^+, 4^+)$		≈ 100	p, α	9, 22
15.03 ± 150	(2^+)		≈ 90	p, α	9, 22
15.18 ± 40	9^-				3
15.23			28	p, α	22
15.26	(1^-)		285	p, α	13, 22
15.30	(0^+)		285	p, α	22
15.39			76	p, α	22
15.44			57	p, α	22
15.52			150	p, α	22
15.59				α	9
15.618	(8^-)	2^-			3
15.71			28	α	9, 22
15.9 ± 40	5^-			(α)	3, 9, 22
15.9 ± 40	8^+			(α)	3, 9, 22
16.02			100	p, α	22
16.24				α	9
16.34			(100)	p, α	9, 22
16.49				p, α	9, 22
16.59			125	p, α	9, 22
16.728 ± 4	$0^+; 2$		2.0 ± 0.5	γ, p, α	19, 20, 21, 22, 45
16.77			100	p, α	22
16.98			100	n, p, α	22, 23
17.08 [b]			90	n, p, α	22, 23

Table 20.15 from (1972AJ02): Energy levels of ^{20}Ne [a] (continued)

E_x (MeV ± keV)	$J^\pi; T$	K^π	τ_m or $\Gamma_{c.m.}$ (keV)	Decay	Reactions
17.30			60	n, p, α	22, 23
17.50			86	n, p, α	22, 23
17.58			38	n, p, α	22, 23
17.76			180	p, α	9, 22
18.08 ± 180	$(6^+, 7^-)$		140	n, p, α	3, 9, 23
18.31 ± 300	(6^+)		240	n, p, α	9, 23
18.426 ± 5	$2^+; T = 2$		10 ± 3	γ, n, p, α	20, 21, 22, 23, 45
18.7	(6^+)		600	α	9
19.16 ± 250	(6^+)		200	α	9
19.40 ± 350	6^+		280	α	9
19.84 ± 350	6^+		280	α	9
20.16 ± 120	7^-		250	α	9
20.4 ± 180	6^+		360	α	9
20.4 ± 100	7^-		200	α	9
20.68 ± 60	9^-		120	α	9
20.9				α	9
21.0	7^-		200	α	9
21.08 ± 40	9^-		80	α	9
21.3	7^-		300	α	9
21.8 ± 200	7^-		300	α	9
22.3 ± 200	7^-		500	α	9
22.7 ± 250	9^-		500	α	9
22.84 ± 125	9^-		250	α	9
23.4 ± 250	8^+		500	α	9
24.11 ± 150	8^+		350	α	9
25.0 ± 300	8^+		600	α	9
25.7 ± 200			400	α	9
27.2 ± 350			700	α	9
28.	8^+		1600	^{3}He, α	9, 17
28.2 ± 350			700	α	9

[a] See also Tables 20.17 and 20.18.

[b] Additional states with $E_x > 17.1$ MeV are reported in reaction 23: see Table 20.30.