

Table 20.14 from (1987AJ02): Radiative decays in ^{20}Ne ^a

E_i (MeV)	$J_i^\pi; T$	E_f (MeV)	Branch (%)	Γ_γ (meV)
1.63	$2^+; 0$	0	100	0.63 ± 0.04^b
4.25	$4^+; 0$	1.63	≈ 100	7.1 ± 0.7^b
4.97	$2^-; 0$	0	0.6 ± 0.2	$(8 \pm 3) \times 10^{-4}^b$
		1.63	99	0.14 ± 0.02^b
				$\delta(M2/E1) = 0.076 \pm 0.011$
				$\delta(E3/E1) = 0.043 \pm 0.016$
5.62	$3^-; 0$	0	7.6 ± 1.0	0.018 ± 0.006
		1.63	87.6 ± 1.0	0.21 ± 0.06
		4.97	4.8 ± 1.6	0.012 ± 0.005
5.79	$1^-; 0$	0	18 ± 5	0.8 ± 0.3
		1.63	82 ± 5	3.8 ± 0.8
6.73	$0^+; 0$	0		$ M ^2 = 7.4 \pm 2.0 \text{ fm}^2^d$
		1.63	100	33
7.00	$4^-; 0$	1.63	0.5 ± 0.2	$(7 \pm 3) \times 10^{-3}^b$
		4.25	63.5	0.95^b
		4.97	11	0.16^b
		5.62	25	0.37^b
7.16	$3^-; 0$	4.25	60 ± 5	0.97 ± 0.11
		5.79	40 ± 5	0.64 ± 0.10
7.20	$0^+; 0$	0		$\Gamma_\pi = 3.9 \times 10^{-2}$
				$6.9 \pm 1.4 \text{ fm}^2^d$
		1.63	100	4.35 ± 0.75
7.42	$2^+; 0$	0	$\leq 9.4 \pm 1.4$	$\leq 3.0 \pm 0.6$
		1.63	$\geq 90.6 \pm 1.4^f$	29 ± 4
		4.25	≤ 7.6	
7.83	$2^+; 0$	0	83 ± 1	57 ± 7
		1.63	17 ± 1	11.7 ± 1.6
		4.25	< 3	< 2
8.46	$5^-; 0$	5.62	100	13 ± 3
8.71	$1^-; 0$	0	87 ± 8	61 ± 16
		1.63	13 ± 8	9 ± 6

Table 20.14 from (1987AJ02): Radiative decays in ^{20}Ne ^a (continued)

E_i (MeV)	$J_i^\pi; T$	E_f (MeV)	Branch (%)	Γ_γ (meV)
8.78	$6^+; 0$	4.25	100	100 ± 15
9.03	$4^+; 0$	1.63	100	340 ± 42
		4.25	< 2	< 6.8
9.12	$3^-; 0$	1.63	50 ± 5	13 ± 2
		4.97	33 ± 5	8.6 ± 1.7
		5.62	17 ± 4	4.4 ± 1.1
9.32 ¹	$(2^-; 0)$	1.63		
9.49	$2^+; 0$	0		$\lesssim 60$
		1.63	(100)	260 ± 100
9.87	$3^+; 0$	0	< 0.5	
		1.63	78	^g
		4.25	12 ± 3	
		4.97	≤ 5	
		5.62	≈ 7	
		7.43	≈ 3	
9.94	$(1^+); 0$	1.63	78 ± 5	
		4.97	22 ± 5	
9.99	$4^+; 0$	0		$\lesssim 70$
		1.63	(100)	900 ± 400
10.27	$2^+; 1$	0	0.65 ± 0.14	29 ± 8
		1.63	88.9 ± 0.5	4080 ± 440
		4.97	1.3 ± 0.1	60 ± 8
		5.62	2.1 ± 0.2	97 ± 14
		7.43	6.9 ± 0.4	310 ± 40
		7.83	0.22 ± 0.06	8 ± 2
10.61	$6^-; 0$	7.00	95.5 ± 1.2	29 ± 9 ^b
		8.46	4.5 ± 1.2	1.3 ± 0.4
10.69	$4^-, 3^+; 0$	4.25	25 ± 4	
		4.97	75 ± 4	
10.88	$3^+; 1$	1.63	77 ± 5	^h
		4.25	23 ± 5	

Table 20.14 from (1987AJ02): Radiative decays in ^{20}Ne ^a (continued)

E_i (MeV)	$J_i^\pi; T$	E_f (MeV)	Branch (%)	Γ_γ (meV)
11.09 ^c	$4^+; 1$	1.63	0.5 ± 0.25	2 ± 1
		4.25 ⁱ	99.5 ± 0.25	338 ± 40
11.26 ^j	$1^+; 1$	0	84 ± 5	$(11.2 \pm 2.0) \times 10^3$
		1.63	16 ± 5	$(2.1 \pm 0.7) \times 10^3$
11.27 ^c	$1^-; 1$	0	55 ± 2	390 ± 47
		1.63	2.5 ± 1	18 ± 7
		4.97	6.5 ± 1	46 ± 9
		8.85	27 ± 1.5	189 ± 24
		9.32	9 ± 1	63 ± 10
		11.53	$3^+, 4^-; 0$	4.25
		4.97	70 ± 3	
		7.00	^f	
11.555	$(3^+; 0)$	1.63		
		7.00		
11.558	$0^+; 0$	1.63	100	
		4.25	< 8	
11.65	$(3^+); 0$	1.63	14 ± 3	
		4.25	86 ± 3	
11.93	$4^+; 0$	1.63	21 ± 11	5.5 ± 3.0
		4.25	79 ± 11	20.5 ± 5.5
11.95	$8^+; 0$	8.78	100	7.7 ± 1.1
12.22 ^k	$2^+; 1$	1.63	(100)	
12.26	$3^-; 1$	1.63	63 ± 1.5	
		5.62	37 ± 1.5	
12.40	$3^-; (1)$	0	≈ 1	
		1.63	≈ 29	80
		4.25	≈ 70	200
12.43	$0^+; 0$	1.63	100	170 ± 50
13.48	$1^+; 1$	1.63	95	
		4.97	5	
13.88	$2^+; 1$	1.63	20	

Table 20.14 from (1987AJ02): Radiative decays in ^{20}Ne ^a (continued)

E_i (MeV)	$J_i^\pi; T$	E_f (MeV)	Branch (%)	Γ_γ (meV)
16.73	$0^+; 2$	4.97	80	$\approx 5000^e$
		1.63	^e	
		5.79	^e	
		11.23	(100)	
18.43	$2^+; 2$	12.22	(100)	≈ 300

^a For earlier references see [Tables 20.19 in \(1978AJ03\)](#) and [20.18 in \(1983AJ01\)](#). See also [Tables 20.17](#) and [20.20](#) here.

^b From τ_m : see [Table 20.20 in \(1978AJ03\)](#) and branching ratios.

^c See also [Table 20.19 in \(1978AJ03\)](#).

^d Monopole matrix element.

^e See footnote ^a in Table 2 of [\(1976MA01\)](#).

^f $\delta(E2/M1) = -8.36_{-1.5}^{+1.0}$.

^g $\Gamma_\gamma(\text{total})/\Gamma = 0.82 \pm 0.27$.

^h $\Gamma_\gamma(\text{total})/\Gamma < 0.3$ [\(1977MA07\)](#). See also [\(1987FI01\)](#).

ⁱ $\delta = +0.01 \pm 0.06$.

^j [\(1983BE19\)](#): see [reaction 35](#).

^k [\(1984CA08\)](#).

^l [\(1987FI01\)](#).