

Table 20.18 from (1998TI06): Radiative decays in  $^{20}\text{Ne}$  <sup>a</sup>

$E_i$ (MeV)	$J_i^\pi; T$	$E_f$ (MeV)	Branch (%)	$\Gamma_\gamma$ (meV)
1.63	$2^+; 0$	0	100	$0.63 \pm 0.04^b$
4.25	$4^+; 0$	1.63	$\approx 100$	$7.1 \pm 0.7^b$
4.97	$2^-; 0$	0	$0.6 \pm 0.2$	$(8 \pm 3) \times 10^{-4}^b$
		1.63	$99.4 \pm 0.2$	$0.14 \pm 0.02^b$
				$\delta(M2/E1) = 0.076 \pm 0.011$
				$\delta(E3/E1) = 0.043 \pm 0.016$
5.62	$3^-; 0$	0	$7.6 \pm 1.0$	$0.018 \pm 0.006$
		1.63	$87.6 \pm 1.0$	$0.21 \pm 0.06$
		4.97	$4.8 \pm 1.6$	$0.012 \pm 0.005$
5.79	$1^-; 0$	0	$18 \pm 5$	$0.8 \pm 0.3$
		1.63	$82 \pm 5$	$3.8 \pm 0.8$
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	$0.5 \pm 0.2$	$(7 \pm 3) \times 10^{-3}^b$
		4.25	13	$0.19^b$
		4.97	64.5	$0.96^b$
		5.62	22	$0.32^b$
7.16	$3^-; 0$	4.25	$60 \pm 5$	$0.97 \pm 0.11$
		5.79	$40 \pm 5$	$0.64 \pm 0.10$
7.19	$0^+; 0$	0		$\Gamma_\pi = 3.9 \times 10^{-2}$
				$6.9 \pm 1.4 \text{ fm}^2^d$
		1.63	100	$4.35 \pm 0.75$
7.42	$2^+; 0$	0	$\leq 9.4 \pm 1.4$	$\leq 3.0 \pm 0.6$
		1.63	$\geq 90.6 \pm 1.4^f$	$29 \pm 4$
		4.25	$\leq 7.6$	
7.83	$2^+; 0$	0	$83 \pm 1$	$57 \pm 7$
		1.63	$17 \pm 1$	$11.7 \pm 1.6$
		4.25	$< 2$	$< 2$
8.45	$5^-; 0$	5.62	100	$13 \pm 3$
8.71	$1^-; 0$	0	$87 \pm 8$	$61 \pm 16$
		1.63	$13 \pm 8$	$9 \pm 6$

Table 20.18 from (1998TI06): Radiative decays in  $^{20}\text{Ne}$  <sup>a</sup> (continued)

$E_i$ (MeV)	$J_i^\pi; T$	$E_f$ (MeV)	Branch (%)	$\Gamma_\gamma$ (meV)
8.78	$6^+; 0$	4.25	100	$100 \pm 15$
9.03	$4^+; 0$	1.63	100	$340 \pm 42$
		4.25	$< 2$	$< 6.8$
9.12	$3^-; 0$	1.63	$50 \pm 5$	$13 \pm 2$
		4.97	$33 \pm 5$	$8.6 \pm 1.7$
		5.62	$17 \pm 4$	$4.4 \pm 1.1$
9.32 <sup>1</sup>	$(2^-; 0)$	1.63		
9.48	$2^+; 0$	0		$\leq 60$
		1.63	(100)	$260 \pm 100$
9.87	$3^+; 0$	0	$< 0.5$	
		1.63	78	<sup>g</sup>
		4.25	$12 \pm 3$	
		4.97	$\leq 5$	
		5.62	$\approx 7$	
		7.43	$\approx 3$	
9.94	$(1^+); 0$	1.63	$78 \pm 5$	
		4.97	$22 \pm 5$	
9.99	$4^+; 0$	0		$\leq 70$
		1.63	(100)	$900 \pm 400$
10.27	$2^+; 1$	0	$0.65 \pm 0.14$	$29 \pm 8$
		1.63	$88.9 \pm 0.5$	$4080 \pm 440$
		4.97	$1.3 \pm 0.1$	$60 \pm 8$
		5.62	$2.1 \pm 0.2$	$97 \pm 14$
		7.43	$6.9 \pm 0.4$	$310 \pm 40$
		7.83	$0.22 \pm 0.06$	$8 \pm 2$
10.61	$6^-; 0$	7.00	$95.5 \pm 1.2$	$29 \pm 9$ <sup>b</sup>
		8.46	$4.5 \pm 1.2$	$1.3 \pm 0.4$
10.69	$4^-, 3^+; 0$	4.25	$25 \pm 4$	
		4.97	$75 \pm 4$	
10.88	$3^+; 1$	1.63	$77 \pm 5$	<sup>h</sup>
		4.25	$23 \pm 5$	

Table 20.18 from (1998TI06): Radiative decays in  $^{20}\text{Ne}$  <sup>a</sup> (continued)

$E_i$ (MeV)	$J_i^\pi; T$	$E_f$ (MeV)	Branch (%)	$\Gamma_\gamma$ (meV)
11.09 <sup>c</sup>	$4^+; 1$	1.63	$0.5 \pm 0.3$	$2 \pm 1$
		4.25 <sup>i</sup>	$99.5 \pm 0.3$	$338 \pm 40$
11.26 <sup>j</sup>	$1^+; 1$	0	$84 \pm 5$	$(11.2 \pm 2.0) \times 10^3$
		1.63	$16 \pm 5$	$(2.1 \pm 0.7) \times 10^3$
11.27 <sup>c</sup>	$1^-; 1$	0	$55 \pm 2$	$390 \pm 47$
		1.63	$2.5 \pm 1.0$	$18 \pm 7$
		4.97	$6.5 \pm 1.0$	$46 \pm 9$
		8.85	$27 \pm 1.5$	$189 \pm 24$
		9.32	$9 \pm 1$	$63 \pm 10$
11.53	$3^+, 4^-; 0$	4.25	$30 \pm 3$	
		4.97	$70 \pm 3$	
		7.00	<sup>f</sup>	
11.555	$(3^+; 0)$	1.63		
		7.00		
11.558	$0^+; 0$	1.63	100	
		4.25	$< 8$	
11.65	$(3^+); 0$	1.63	$14 \pm 3$	
		4.25	$86 \pm 3$	
11.93	$4^+; 0$	1.63	$21 \pm 11$	$5.5 \pm 3.0$
		4.25	$79 \pm 11$	$20.5 \pm 5.5$
11.95	$8^+; 0$	8.78	100	$7.7 \pm 1.1$
12.22 <sup>k</sup>	$2^+; 1$	1.63	(100)	
12.26	$3^-; 1$	1.63	$63 \pm 2$	
		5.62	$37 \pm 2$	
12.40	$3^-; (1)$	0	$\approx 1$	
		1.63	$\approx 29$	80
		4.25	$\approx 70$	200
12.43	$0^+; 0$	1.63	100	$170 \pm 50$
13.48	$1^+; 1$	1.63	95	
		4.97	5	
13.88	$2^+; 1$	1.63	20	

Table 20.18 from (1998TI06): Radiative decays in  $^{20}\text{Ne}$  <sup>a</sup> (continued)

$E_i$ (MeV)	$J_i^\pi; T$	$E_f$ (MeV)	Branch (%)	$\Gamma_\gamma$ (meV)
16.73	$0^+; 2$	4.97	80	$\approx 5000$ <sup>e</sup>
		1.63	e	
		5.79	e	
		11.23	(100)	
18.43	$2^+; 2$	12.22	(100)	$\approx 300$

<sup>a</sup> For earlier references see Tables 20.19 in (1978AJ03) and 20.18 in (1983AJ101). See also Tables 20.21 and 20.24 here.

<sup>b</sup> From  $\tau_m$ : see Table 20.20 in (1978AJ03) and branching ratios.

<sup>c</sup> See also Table 20.19 in (1978AJ03).

<sup>d</sup> Monopole matrix element.

<sup>e</sup> See footnote (a) in Table 2 of (1976MA01).

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

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

<sup>h</sup>  $\Gamma_\gamma(\text{total})/\Gamma < 0.3$  (1977MA07). See also (1987FI01).

<sup>i</sup>  $\delta = +0.01 \pm 0.06$ .

<sup>j</sup> (1983BE19): see reaction 39.

<sup>k</sup> (1984CA08).

<sup>l</sup> (1987FI01).