

Table 19.25 from (1972AJ02): ^{19}Ne levels from $^{20}\text{Ne}(^3\text{He}, \alpha)^{19}\text{Ne}$

| E_x (MeV \pm keV) | | | | l_n^e | J^π^f |
|-------------------------|-------------------------|-------------------------------|-----------------------------|-------------------|--------------------------------|
| (1967GR04) ^a | (1970GA18) ^a | (1967OL05) ^b | (1972HA03) ^{a,c} | | |
| | 0 | | | 0 | $\frac{1}{2}^+$ |
| | 0.238 \pm 10 | 0.2384 \pm 0.3 ^d | 0.2397 \pm 2 ^c | 2 | $\frac{5}{2}^+$ |
| | 0.273 \pm 10 | 0.2748 \pm 0.3 ^d | 0.2766 \pm 2 ^c | 1 | $\frac{1}{2}^-$ |
| | | h | 1.5040 \pm 3 ^c | | $(\frac{5}{2}^-)$ |
| 1.521 \pm 20 | 1.524 \pm 20 | | | | |
| | | h | 1.5324 \pm 3 ^c | 2 | $(\frac{3}{2})^+$ |
| 1.620 \pm 15 | 1.615 \pm 10 | h | 1.6115 \pm 3 ^c | 1 | $(\frac{3}{2})^-$ |
| 2.778 \pm 15 | 2.793 \pm 10 | h | 2.7917 \pm 3 | 4, 5 ^g | $(\frac{9}{2}^+)^g$ |
| (3.841 \pm 15) | | | | | |
| 4.013 \pm 15 | 4.036 \pm 10 | | | 2 | $(\frac{3}{2}, \frac{5}{2})^+$ |
| 4.152 \pm 15 | 4.142 \pm 10 | 4.160 \pm 20.0 | | | |
| | 4.200 \pm 10 | | | | |
| 4.344 \pm 15 | 4.379 \pm 10 | | | | |
| 4.547 \pm 15 | 4.551 \pm 10 | | | 1 | $(\frac{1}{2}, \frac{3}{2})^-$ |
| | 4.625 \pm 10 | | | | |
| 4.689 \pm 15 | | | | | |
| | 4.712 \pm 10 | | | | |
| | 4.783 \pm 20 | | | | |
| 5.077 \pm 15 | 5.093 \pm 10 | | 5.086 \pm 10 | | |
| | 5.351 \pm 10 | | | 0 | $\frac{1}{2}^+$ |
| | 5.426 \pm 10 | | 5.423 \pm 10 | | |
| | 5.463 \pm 20 | | | | |
| | 5.545 \pm 10 | | 5.517 \pm 20 | | |
| | 5.831 \pm 10 | | 5.837 \pm 20 | | |
| | 6.012 \pm 10 | | 6.014 \pm 10 | 1 | $(\frac{3}{2}, \frac{1}{2})^-$ |
| | 6.089 \pm 10 | | 6.104 \pm 15 | | |
| | 6.149 \pm 20 | | | | |
| | 6.290 \pm 10 | | 6.289 \pm 10 | | |
| | 6.433 \pm 20 | | 6.438 \pm 10 | | |
| | 6.744 \pm 10 | | 6.741 \pm 10 | 1 | $(\frac{3}{2}, \frac{1}{2})^-$ |

Table 19.25 from (1972AJ02): ^{19}Ne levels from $^{20}\text{Ne}(^3\text{He}, \alpha)^{19}\text{Ne}$ (continued)

| E_x (MeV \pm keV) | | | | l_n ^e | J^π ^f |
|-------------------------|-------------------------|-------------------------|------------------------------|--------------------|----------------------|
| (1967GR04) ^a | (1970GA18) ^a | (1967OL05) ^b | (1972HA03) ^{a,c} | | |
| | 6.866 \pm 10 | | 6.858 \pm 10 | | |
| | 7.064 \pm 20 | | 7.068 \pm 10 | | |
| | | | (7.178 \pm 15) | | |
| | | | 7.253 \pm 10 | | |
| | | | (7.326 \pm 15) | | |
| | | | (7.531 \pm 15) | | |
| | | | 7.614 \pm 20 | | |
| | | | 7.700 \pm 10 | | |
| | | | (7.788 \pm 10) | | |
| | | | 7.994 \pm 15 | | |
| | | | 8.063 \pm 15 | | |
| | | | 8.236 \pm 10 ⁱ | | |
| | | | 8.440 \pm 10 | | |
| | | | 8.523 \pm 10 | | |
| | | | (8.810 \pm 25) | | |
| | | | 8.915 \pm 10 | | |
| | | | 9.013 \pm 10 | | |
| | | | 9.100 \pm 20 | | |
| | | | 9.240 \pm 20 | | |
| | | | 9.489 \pm 25 | | |
| | | | 9.886 \pm 50 ⁱ | | |
| | | | 10.407 \pm 30 ⁱ | | |
| | | | 10.613 \pm 20 | | |

- ^a From measurements of α -groups.
- ^b From measurements of de-excitation γ -rays.
- ^c The energy separations within each multiplet are fixed at the values determined by (1970GI09) (1972HA03).
- ^d (1970BH02) report $E_x = 238.34 \pm 0.15$ and 275.30 ± 0.2 keV for these states.
- ^e (1970GA18). Spectroscopic factors have also been calculated.
- ^f (1967OL05, 1970GA18). See also (1970AR25).
- ^g (1969BA62).
- ^h The excitation energies obtained by (1967OL05) for $^{19}\text{Ne}^*(1.51, 1.54, 1.62, 2.79)$ are superseded by those of (1970GI09): see Table 19.24.
- ⁱ Unresolved states.