

Table 19.8 from (1978AJ03): Resonances in $^{15}\text{N}(\alpha, \gamma)^{19}\text{F}$ ^a

| E_α (MeV ± keV) | $\Gamma_{\text{c.m.}}$ (keV) | $\omega\Gamma_\gamma$ (eV) | J^π | E_x (MeV ± keV) | Refs. | |
|---------------------------|---------------------------------|--|--|----------------------------------|--------------|--|
| 0.85 | | $(42.8 \pm 8.5) \times 10^{-6}$ ^b | $(6.0 \pm 1.0) \times 10^{-3}$ | $\frac{5}{2}^-$ | 4.681 ± 1 | (1972RO01) |
| 1.385 ± 3 | | | $(13 \pm 8) \times 10^{-3}$ ^c | $\frac{5}{2}^+$ | 5.105 ± 2 | (1970AI01, 1976RO07) |
| 1.678 ± 3 | | | 1.64 ± 0.16 | $\frac{1}{2}^+$ | 5.337 ± 2 | A, (1972RO33) |
| 1.790 | | | 0.42 ± 0.09 ^c | $\frac{7}{2}^-$ | 5.427 | (1970AI01) |
| 1.839 ± 2 | < 1 | | 2.5 ± 0.4 ^c | $\frac{7}{2}^+$ | 5.465 | A |
| 1.883 ± 3 | 4 ± 1 | | 4.2 ± 1.1 ^c | $\frac{3}{2}^+$ | 5.500 | A |
| 1.930 | | | 0.48 ± 0.11 ^c | $\frac{5}{2}^+$ | 5.54 | (1970AI01) |
| 2.035 ± 4 | | | 0.37 ± 0.09 | $\frac{3}{2}^-$ | 5.620 | (1972RO33) |
| 2.441 ± 4 | | | 0.53 ± 0.13 | $\frac{1}{2}^+$ | 5.938 ± 3 | (1972RO33) |
| 2.608 ± 2 | | | 2.70 ± 0.54 | $\frac{7}{2}^+$ | 6.070 ± 1 | (1972RO33) |
| 2.631 ± 4 | | | 4.50 ± 0.90 | $\frac{3}{2}^-$ | 6.088 ± 3 | (1972RO33) |
| 2.722 ± 2 | | | 2.40 ± 0.60 | $\frac{7}{2}^-$ | 6.160 ± 1 | (1972RO33) |
| 2.873 ± 3 | | | 1.0 ± 0.2 | $\frac{5}{2}^+$ | 6.282 ± 2 | (1970AI01, 1977DI08) |
| 2.935 ± 3 | | | 0.76 ± 0.15 | $\frac{7}{2}^+$ | 6.330 ± 2 | (1970AI01, 1977DI08) |
| 3.1468 ± 1.5 | | | 1.7 ± 0.3 | $\frac{3}{2}^+$ | 6.4976 ± 1.5 | (1970AI01, 1977DI08) |
| 3.1498 ± 1.5 | | | 2.3 ± 0.4 | $\frac{11}{2}^+$ | 6.5000 ± 1.5 | (1977DI08) |
| 3.183 ± 2 | | | 2.4 ± 0.4 | $\frac{3}{2}^+$ | 6.526 ± 2 | (1977DI08) |
| 3.218 ± 2 | | | 0.63 ± 0.13 | $\frac{7}{2}^-$ | 6.554 ± 2 | (1977DI08) |
| 3.267 ± 2 | | | 1.6 ± 0.3 | $\frac{9}{2}^+$ | 6.592 ± 2 | (1977DI08) |
| 3.511 ± 3 | | | 10.9 ± 1.5 | $\frac{3}{2}^-$ | 6.785 ± 2 | (1977DI08) |
| 3.576 ± 3 | | | 1.0 ± 0.2 | $\frac{5}{2}^-$ | 6.836 ± 2 | (1977DI08) |
| 3.645 ± 5 | | | 6.1 ± 1.3 | $\frac{3}{2}^-$ | 6.891 ± 4 | (1977DI08) |
| 3.688 ± 3 | | | 9.7 ± 1.4 | $\frac{7}{2}^-$ | 6.925 ± 2 | (1977DI08) |
| 3.993 ± 2 | | | 1.00 ± 0.12 | $\frac{11}{2}^-$ | 7.1662 ± 0.7 | (1973RO09, 1974UN01, 1977DI08, 1977FI06) |
| 4.465 | | | 17.0 ± 2.7 | $\frac{5}{2}^+; T = \frac{3}{2}$ | 7.538 ± 2 | A, (1976RO07) |
| 4.618 | | | 3.7 ± 0.9 | $\frac{3}{2}^+; T = \frac{3}{2}$ | 7.659 ± 2 | A, (1976RO07) |
| 4.96 ± 3 | | | 2.3 ± 0.4 | $\frac{7}{2}^+, \frac{9}{2}$ | 7.929 | A |
| 4.97 ± 3 | | | 3.1 ± 0.5 | $\frac{11}{2}^+$ | 7.937 | A |
| 5.413 ± 5 | | | 0.53 ± 0.08 | $\frac{13}{2}^-$ | 8.288 ± 2 | (1974UN01, 1977FI06) |
| 6.258 ± 5 | | | 0.91 ± 0.17 | $\frac{11}{2}^+$ | 8.957 ± 2 | (1974UN01, 1977FI06) |
| | | | | $\frac{11}{2}^+$ | 9.27 | (1977SY1A) |
| | | | | $\frac{11}{2}^-$ | 9.88 | (1977FI06) |
| 7.75 | < 3 | d | | | (10.127 ± 2) | (1972WO15) |
| 8.105 | < 1 | | 15.0 ± 3.0 | $\frac{13}{2}^+$ | 10.411 ± 3 | (1976SY01) |
| | | | | $\frac{11}{2}^+$ | 11.217 | (1977SY1A) |

A: see references listed inn [Table 19.7 of \(1972AJ02\)](#).

^a See also [Table 19.7](#) here.

^b $\Gamma_\alpha = 2.1 \pm 0.7$ meV, $\Gamma_\gamma = 40.7 \pm 8.1$ meV ([1972RO01](#)).

^c See [Table 19.7 in \(1972AJ02\)](#).

^d See ([1972WO15](#)); see also for the possibility of a neighboring resonance.