

Table 15.9 from (1981AJ01):
States of ^{15}N from $^{12}\text{C}(\alpha, p)^{15}\text{N}$, $^{12}\text{C}(^6\text{Li}, ^3\text{He})^{15}\text{N}$ and $^{12}\text{C}(^7\text{Li}, \alpha)^{15}\text{N}$

| E_x (MeV \pm keV) | | | L^a | $J\pi^a$ |
|-------------------------|--------------------------------|---|-------|--------------------|
| (1975FA07) ^a | (1975BI06) ^b | (1973TS02) ^c | | |
| 0 | | 0 | 1 | $\frac{1}{2}^-$ |
| 5.27 + 5.30 | 5.27 \pm 60 | 5.295 \pm 10 ^c 6.332 \pm 10 7.163 \pm 10 | 2 + 0 | |
| | 7.24 \pm 60 | 7.310 \pm 10 | | |
| 7.57 | 7.61 \pm 60 | 7.566 \pm 10 8.320 \pm 10 | 4 | $\frac{7}{2}^+$ |
| 8.58 | 8.59 \pm 60 | 8.580 \pm 10 ^c | 2 | $\frac{3}{2}^+$ |
| 9.15 + 9.15 | 9.17 \pm 60 9.84 \pm 60 | 9.163 \pm 10 ^c 9.828 \pm 10 ^c 9.932 \pm 10 10.072 \pm 10 10.524 \pm 10 | 1 + 2 | f |
| 10.70 | 10.73 \pm 60 ^e | 10.700 \pm 10 ^c 10.808 \pm 10 11.430 \pm 10 12.05 \pm 60 12.36 \pm 60 12.64 \pm 60 12.923 \pm 10 | 4 | $\frac{9}{2}^+$ f |
| 13.01 | | 13.004 \pm 10 ^c | 5 | $(\frac{11}{2}^-)$ |
| 13.19 | 13.15 \pm 60 ^e | 13.173 \pm 10 ^c 13.614 \pm 10 14.087 \pm 10 14.720 \pm 10 15.021 \pm 10 | 2 | |
| 15.40 | 15.49 \pm 60 ^e | 15.373 \pm 10 15.782 \pm 10 | 6 | $\frac{13}{2}^+$ f |

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| E_x (MeV \pm keV) | | | L^a | $J\pi^a$ |
|-------------------------|-------------------------|-------------------------|-------|----------|
| (1975FA07) ^a | (1975BI06) ^b | (1973TS02) ^c | | |
| | 15.88 \pm 60 | 16.026 \pm 10 | | |
| | 16.18 \pm 60 | 16.190 \pm 10 | | |
| | 16.41 \pm 60 | | | |
| | 16.74 \pm 60 | | | |
| | 18.02 \pm 60 | | | |
| | 18.82 ^g | | | |
| | 19.77 \pm 60 | | | |

^a $E_\alpha = 96.8$ MeV. E_x are nominal.

^b $E(^6\text{Li}) = 60.1$ MeV: angular distributions measured for states with $E_x < 16.2$ MeV.

^c $E(^7\text{Li}) = 35$ MeV: angular distributions have been measured for the states labeled by this footnote.

^d (1973TS02) suggest that this state is not the $T = \frac{3}{2}$ state at 12.52 MeV.

^e $\Gamma_\gamma/\Gamma = 0.9 \pm 0.2, < 0.25, < 0.25$ for $^{15}\text{N}^*(10.69, 13.15, 15.5)$ (1977KR1A).

^f See also (1979VA08).

^g (1977ZE1E); preliminary work.