

Table 15.15 from (1991AJ01): Radiative widths from  $^{15}\text{N}(\gamma, \gamma')$  and  $^{15}\text{N}(e, e')$  <sup>a</sup>

$E_x$ (MeV $\pm$ keV)	$J^\pi$	Mult.	$\Gamma_{\gamma_0}$ (eV)
5.27	$\frac{5}{2}^+$	C3	$(4.2 \pm 0.3) \times 10^{-6}$
		M2	$(1.2 \pm 0.7) \times 10^{-4}$
5.30	$\frac{1}{2}^+$	C1	$2.2 \pm 2.3$
$6.323 \pm 1$ <sup>b</sup>	$\frac{3}{2}^-$	C2	$0.050 \pm 0.004$
		M1	$1.9 \pm 0.4$ <sup>c</sup>
		M1 + E2	$3.12 \pm 0.18$ <sup>b, d, e</sup>
7.16	$\frac{5}{2}^+$	C3	$(0.86 \pm 0.10) \times 10^{-5}$
$7.301 \pm 1$ <sup>b</sup>	$\frac{3}{2}^+$	C1	$2.6 \pm 1.0$
		M2	$(0.3 \pm 0.2) \times 10^{-5}$
		E1 + M2	$1.08 \pm 0.08$ <sup>b</sup>
7.57	$\frac{7}{2}^+$	C3	$(1.84 \pm 0.16) \times 10^{-5}$
$8.310 \pm 4$ <sup>b</sup>	$\frac{1}{2}^+$	E1	$0.3 \pm 0.2$ <sup>b</sup>
$8.575 \pm 4$ <sup>b</sup>	$\frac{3}{2}^+$	E1 + M2	$0.3 \pm 0.3$ <sup>b</sup>
$9.048 \pm 1$ <sup>b</sup>	$\frac{1}{2}^+$	E1	$1.2 \pm 0.2$ <sup>b</sup>
$9.150 \pm 1$ <sup>b</sup>	$\frac{3}{2}^-$	C2	$0.095 \pm 0.005$ <sup>f</sup>
		M1	$0.2 \pm 0.8$
		M1 + E2	$0.47 \pm 0.12$ <sup>b, g</sup>
$9.760 \pm 1$ <sup>b</sup>	$\frac{5}{2}^-$	C2	$0.20 \pm 0.05$
		E2	$0.21 \pm 0.07$ <sup>b</sup>
$9.924 \pm 1$ <sup>b</sup>	$\frac{3}{2}^-$	M1	$1.6 \pm 0.2$ <sup>b</sup>
$10.064 \pm 1$ <sup>b</sup>	$\frac{3}{2}^+$	E1	$6.3 \pm 0.4$ <sup>b</sup>
10.8	$\frac{3}{2}^+$	M2	$(1.8 \pm 0.8) \times 10^{-2}$
11.88	$\frac{3}{2}^-$	C2	$0.44 \pm 0.10$
		M1	$4.4 \pm 3.8$
12.5	$\frac{5}{2}^+$	M2	$(5.2 \pm 2.0) \times 10^{-2}$
(13.98)			
14.7	$\frac{5}{2}^-$	C2	$1.8 \pm 0.2$
20.10			
23.25			

<sup>a</sup> For references and  $B(\lambda)\uparrow$  see [Table 15.17 in \(1981AJ01\)](#). See also [Tables 15.5 and 15.6](#) here. Form factors have also been measured to  $^{15}\text{N}^*(9.23, 11.29$  [both  $\frac{1}{2}^-$ ],  $10.45$  [ $\frac{5}{2}^-$ ],  $12.1$ [u],  $12.9$ [u]) ([1987DE1Q](#)) [unpublished Ph.D. thesis].

<sup>b</sup> ([1981MO09](#)):  $(\gamma, \gamma)$ .

<sup>c</sup> See note added in proof in ([1975MO28](#)).

<sup>d</sup>  $\delta(\text{E2/M1}) = 0.137 \pm 0.005$ . See, however, [Table 15.5](#).

<sup>e</sup> Using  $\delta(\text{E2/M1}) = 0.132 \pm 0.004$  [see [Table 15.5](#)]  $\Gamma_{\gamma_0} = 3.07 \pm 0.18$  eV (M1) and  $(5.34 \pm 0.44) \times 10^{-2}$  eV (E2) (D.J. Millener, private communication.)

<sup>f</sup>  $\delta(\text{E2/M1}) > 0.3$ .

<sup>g</sup> Mixing ratio is very small [see [Table 15.5](#)] and the transition is almost purely M1 (D.J. Millener, private communication).