

Table 13.15 from (1981AJ01):  
Electromagnetic transitions <sup>a</sup> in <sup>13</sup>C from <sup>13</sup>C(e, e')<sup>13</sup>C <sup>b</sup>

$E_x$ (MeV $\pm$ keV)	$J^\pi$	Mult.	$\Gamma_{\gamma_0}$ (eV)	$\Gamma_{\gamma_0}/\Gamma_W$ (W.u.)
3.08 $\pm$ 30 <sup>g</sup>	$\frac{1}{2}^+$	E1	0.68 $\pm$ 0.23	0.062
3.69 $\pm$ 20 <sup>g</sup>	$\frac{3}{2}^-$	E2	$(3.61 \pm 0.40) \times 10^{-3}$	3.52
3.85 <sup>g</sup>		M1	0.358 $\pm$ 0.047	0.339
6.85 $\pm$ 60 <sup>g</sup>	$\frac{5}{2}^+$	M2	$(6.9 \pm 3.6) \times 10^{-5}$	0.055
7.54 $\pm$ 20	$\frac{5}{2}^-$	M3	$(1.01 \times 10^{-5})$	(35)
		E2	0.115 $\pm$ 0.007 <sup>e</sup>	3.15
8.86 $\pm$ 20 <sup>d,g</sup>	$\frac{1}{2}^-$	M1	3.36 $\pm$ 0.47 <sup>f</sup>	0.230
		E0	2.09 <sup>c</sup>	
9.90 $\pm$ 30	$\frac{3}{2}^-$	E2	$(6.3 \pm 1.1) \times 10^{-3}$	0.045
		M1	0.324 $\pm$ 0.038	0.0159
11.07 $\pm$ 20	$\frac{1}{2}^-$	M1	1.02 $\pm$ 0.12	0.0359
		E0	2.62 <sup>c</sup>	
	$\frac{3}{2}^-$	E2	0.256 $\pm$ 0.047	1.03
		M1	0.172 $\pm$ 0.020	0.006
15.11 $\pm$ 20	$\frac{3}{2}^-$	E2	0.6 $\pm$ 0.1	0.50
		M1	22.4 $\pm$ 1.5	0.31

<sup>a</sup> See also Tables 13.6, 13.7 and 13.16.

<sup>b</sup> (1969WI22, 1970WI04). (1978SO1B, 1979CR1C, 1979CRZZ) also report the population of <sup>13</sup>C\*(3.85, 9.50).

<sup>c</sup> Monopole matrix element in fm<sup>2</sup>.

<sup>d</sup>  $\Gamma = 190 \pm 35$  keV.

<sup>e</sup> 0.11  $\pm$  0.015 eV (1980HO11; <sup>13</sup>C( $\gamma$ , n)).

<sup>f</sup> 5.4  $\pm$  0.5 eV (1980HO11);  $\Gamma_{\gamma_0}$  for <sup>13</sup>C\*(7.69, 8.2) are reported to be 0.6  $\pm$  0.1 and 7.0  $\pm$  0.9 eV, respectively (1980HO11).

<sup>g</sup> Observed by (1980SO1B).