

Table 13.7 from (1976AJ04): Parameters of the first  $T = \frac{3}{2}$  states in  $^{13}\text{C}$  and  $^{13}\text{N}$  <sup>a</sup>

	$^{13}\text{C}^*(15.11)$	$^{13}\text{N}^*(15.07)$
$E_x$ (MeV)	$15.106 \pm 0.002$	$15.0651 \pm 0.0009$
$J^\pi$	$\frac{3}{2}^-$	$\frac{3}{2}^-$
$\Gamma_{\text{cm}}$ (keV) <sup>b</sup>	$5.0 \pm 0.7$	$1.10 \pm 0.09$
$\Gamma_{\gamma_0}$ (eV)	$22.7 \pm 2.6$ (M1)[ $0.32 \pm 0.04$ W.u.] $0.59 \pm 0.11$ (E2)[ $0.52 \pm 0.10$ W.u.]	$24.2 \pm 1.5$ (M1)[ $0.34 \pm 0.02$ W.u.] <sup>f</sup> $0.32 \pm 0.12$ (E2)[ $0.28 \pm 0.11$ W.u.] <sup>g</sup>
$\Gamma_{\gamma_1}$ (eV)	$4.12 \pm 0.74$ (E1)[ $(6.4 \pm 1.1) \times 10^{-3}$ W.u.]	$\leq (2.82 \pm 0.30)$ (E1) [ $\leq (3.7 \pm 0.4) \times 10^{-3}$ W.u.] <sup>h</sup>
$\Gamma_{\gamma_2}$ (eV)	$18.2 \pm 2.4$ (M1)[ $0.59 \pm 0.08$ W.u.] <sup>e</sup>	$19.6 \pm 1.4$ (M1)[ $0.61 \pm 0.04$ W.u.] <sup>e,i</sup>
$\Gamma_{n_0}$ or $\Gamma_{p_0}$ (keV) <sup>c</sup>	$0.35 \pm 0.10$	$0.210 \pm 0.011$
$\Gamma_{n_1}$ or $\Gamma_{p_1}$ (keV) <sup>c</sup>	$1.31 \pm 0.24$	$0.165 \pm 0.018$
$\Gamma_{n_2}$ or $\Gamma_{p_2}$ (keV) <sup>c</sup>	$0.130 \pm 0.092$	$0.058 \pm 0.017$
$\Gamma_{\alpha_0}$ (keV) <sup>d</sup>	$0.095 \pm 0.028$	$0.044 \pm 0.027$
$\Gamma_{\alpha_1}$ (keV) <sup>d</sup>		$0.035 \pm 0.035$
$\Gamma_{\alpha_2}$ (keV) <sup>d</sup>		$0.065 \pm 0.044$

<sup>a</sup> (1973AD02, 1973HU07, 1975HI07, 1975MA21). See also Table 13.8 in (1970AJ04) and reactions 13, 15 and 16 in  $^{13}\text{N}$ .

<sup>b</sup> Total  $\Gamma_{\text{cm}}$  adopted by (1973AD02).

<sup>c</sup> Widths for  $^{13}\text{C}^*(15.11) \rightarrow ^{12}\text{C}_{\text{g.s.}} + n_0$  or  $^{13}\text{N}^*(15.07) \rightarrow ^{12}\text{C}_{\text{g.s.}} + p_0$  [ $n_1, p_1$  and  $n_2, p_2$  correspond to the decays to  $^{12}\text{C}^*(4.4, 7.7)$  respectively].

<sup>d</sup> Widths for  $^{13}\text{C}^*(15.11) \rightarrow ^9\text{Be}_{\text{g.s.}} + \alpha_0$  or  $^{13}\text{N}^*(15.07) \rightarrow ^9\text{B}_{\text{g.s.}} + \alpha_0$  [ $\alpha_1$  and  $\alpha_2$  refer to the decays to  $^9\text{B}^*(1.6, 2.4)$ ].

<sup>e</sup> May contain a small component of  $\gamma_3$  (1975MA21).

<sup>f</sup>  $\delta = -0.07 \pm 0.13$  (1975MA21).

<sup>g</sup>  $\delta = 0.82_{-0.6}^{+1.2}$  (1975MA21).

<sup>h</sup>  $\delta \geq 0.83 \pm 0.29$  (1975MA21).

<sup>i</sup>  $\delta = -0.04 \pm 0.14$  (1975MA21).