ORGANOMETALLICS
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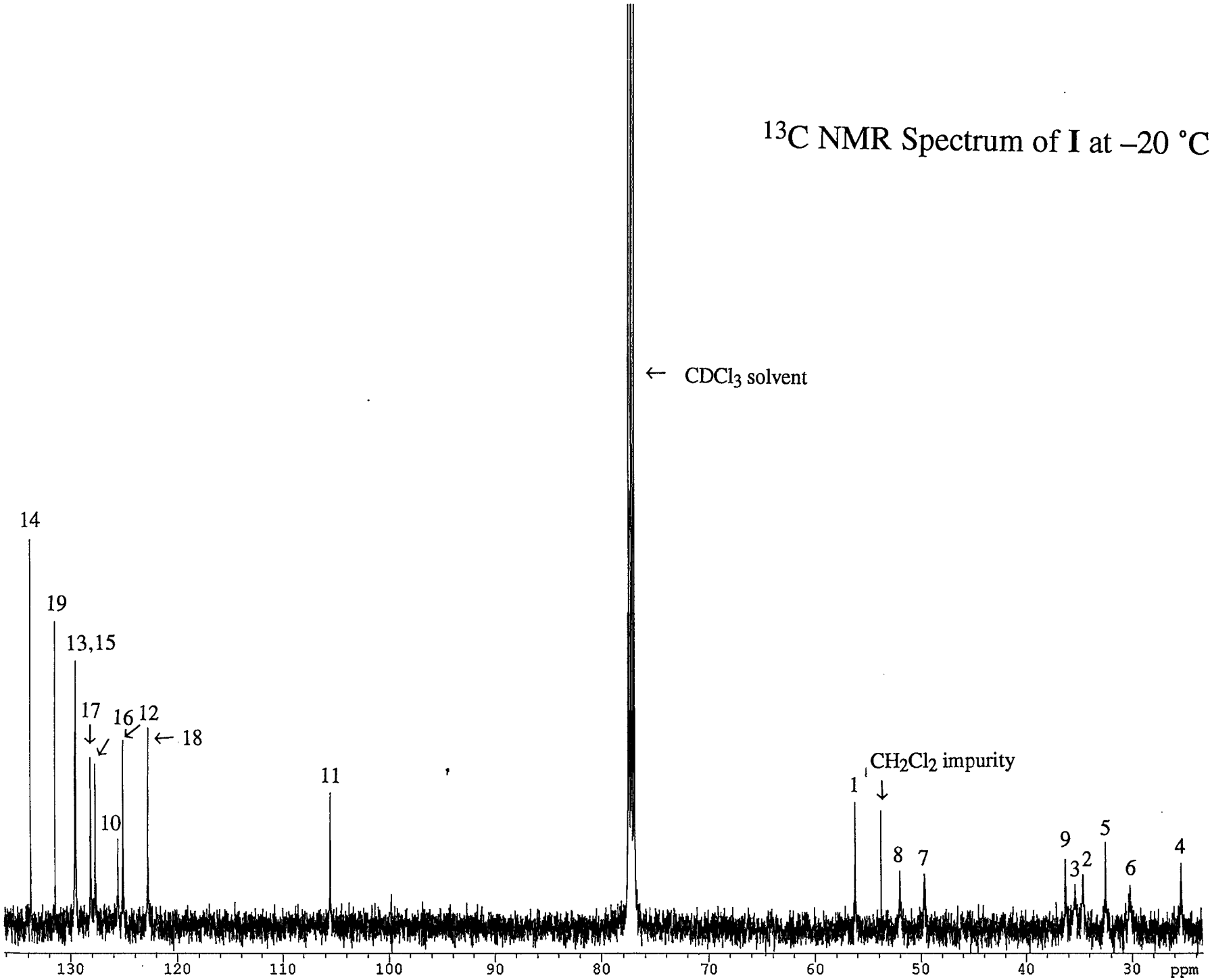
GENERAL EXPERIMENTAL DETAILS

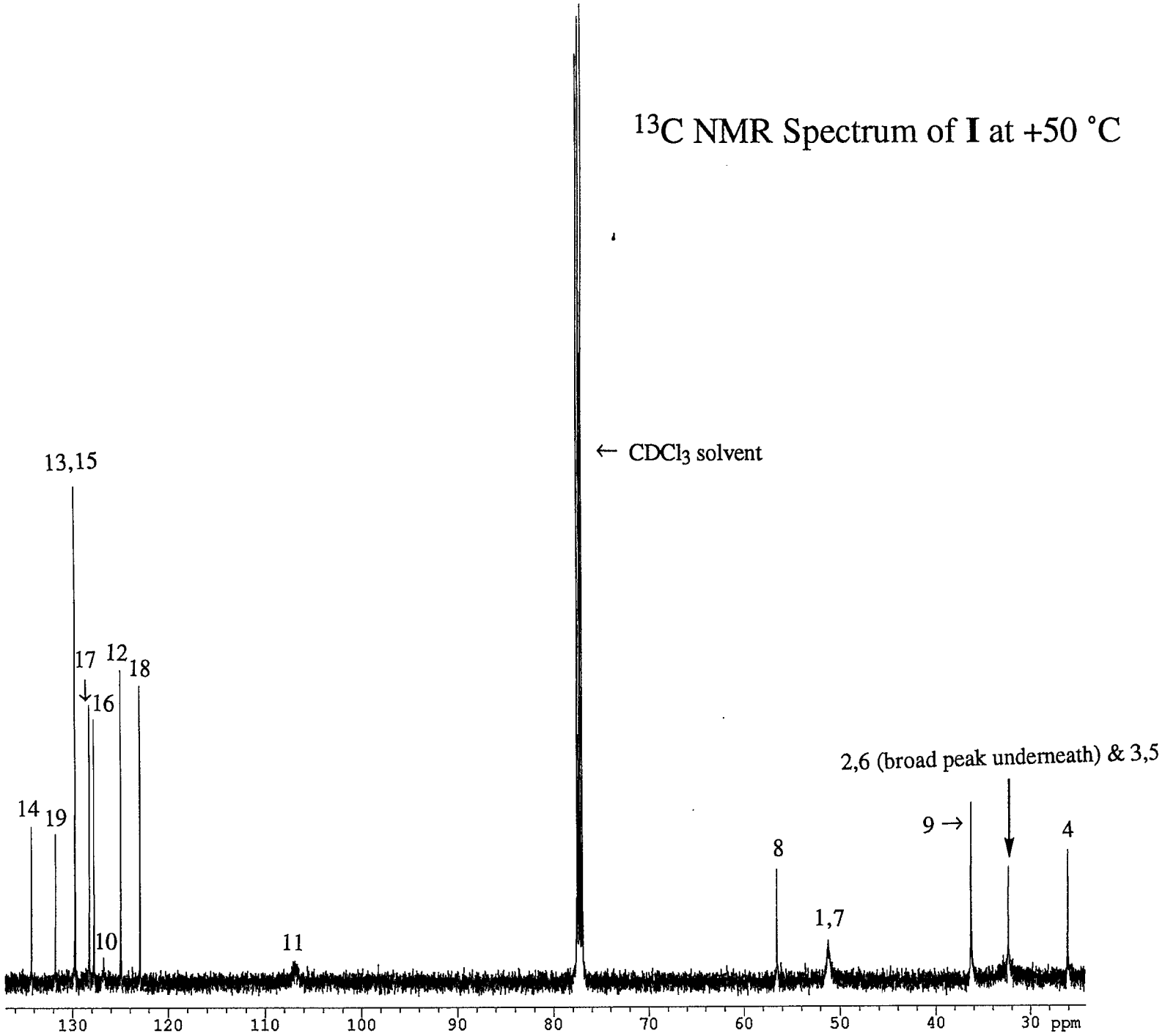
Physical Measurements. All NMR experiments, including decoupling, heteronuclear correlation, and variable temperature experiments, were recorded on a Varian Unity Plus 500 MHz FT-NMR Spectrometer in $CDCl_3$ (dried with calcium hydride and distilled before use). ^1H NMR spectra were referenced to the residual proton resonance of the solvent; ^{13}C NMR spectra to the solvent resonance ($CDCl_3$: ^1H, δ 7.26, ^{13}C, δ 77.23).

Peak Assignments. We assigned the peaks in the ^1H and ^{13}C NMR spectra of **L** and **I** in the usual way, supplemented by a combination of proton-proton decoupling (when possible) and heteronuclear correlation experiments. In addition, the reported assignments for 1-methylnaphthalene (Wilson, N. K.; Stothers, J. B. *J. Magn. Reson.* **1974**, *15*, 31-39) were used to help assign the aromatic resonances. Several assignments could not be made unequivocally, for instance the peaks due to 13 and 15 in the spectrum of **I** at –20 °C vary only by 0.1 ppm in the carbon spectrum and by 0.09 ppm in the proton spectrum. The uncertain assignments are 2/6 from 3/5, 13 from 15 and 12 from 16, all for **I** at –20 °C, but not the key resonances (8, 9, 10, 11).

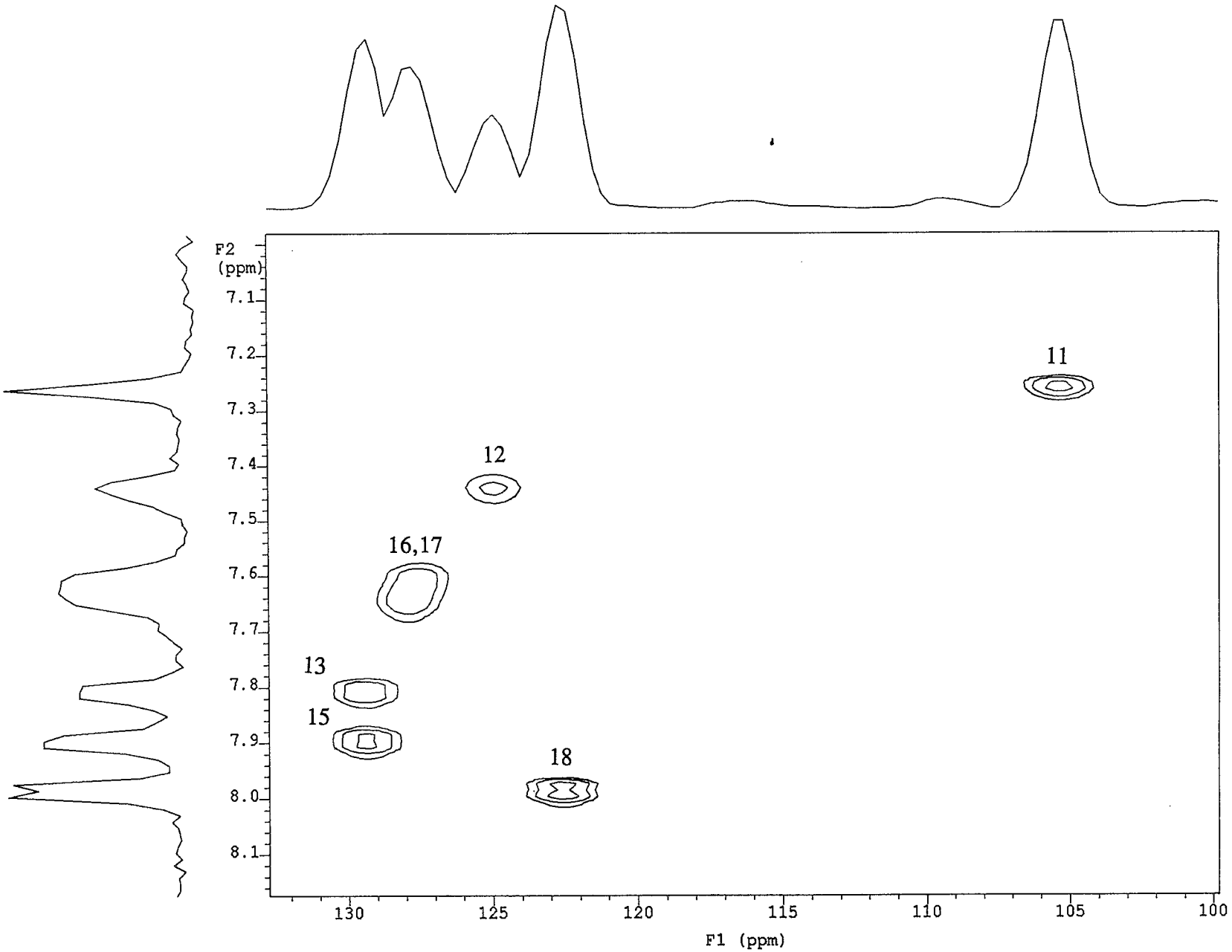


ii.

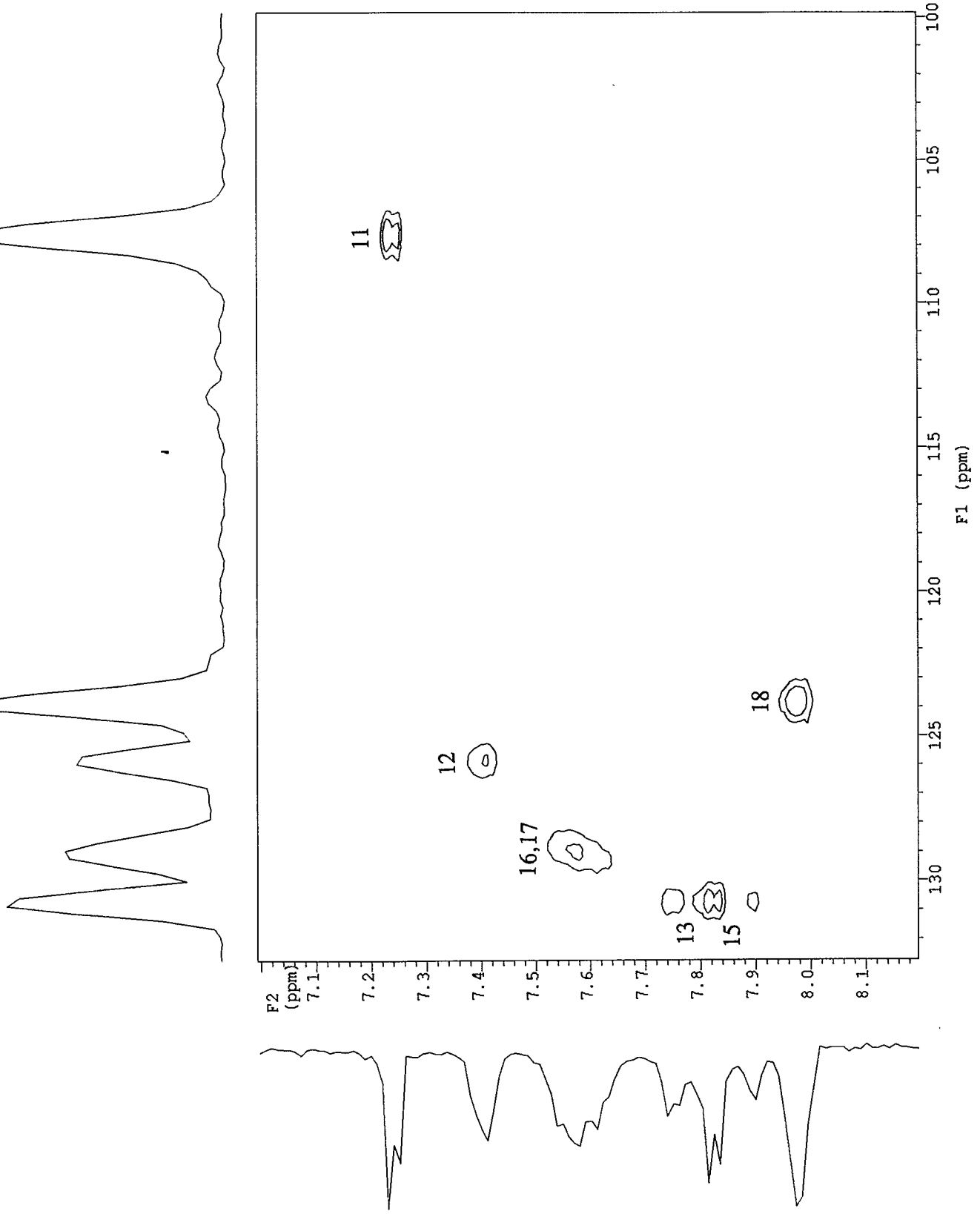
^{13}C NMR Spectrum of **I** at +50 °C



HMQC Spectrum of **I** at –20 °C
(aromatic region)



HMQC Spectrum of **I** at +50 °C
(aromatic region)



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