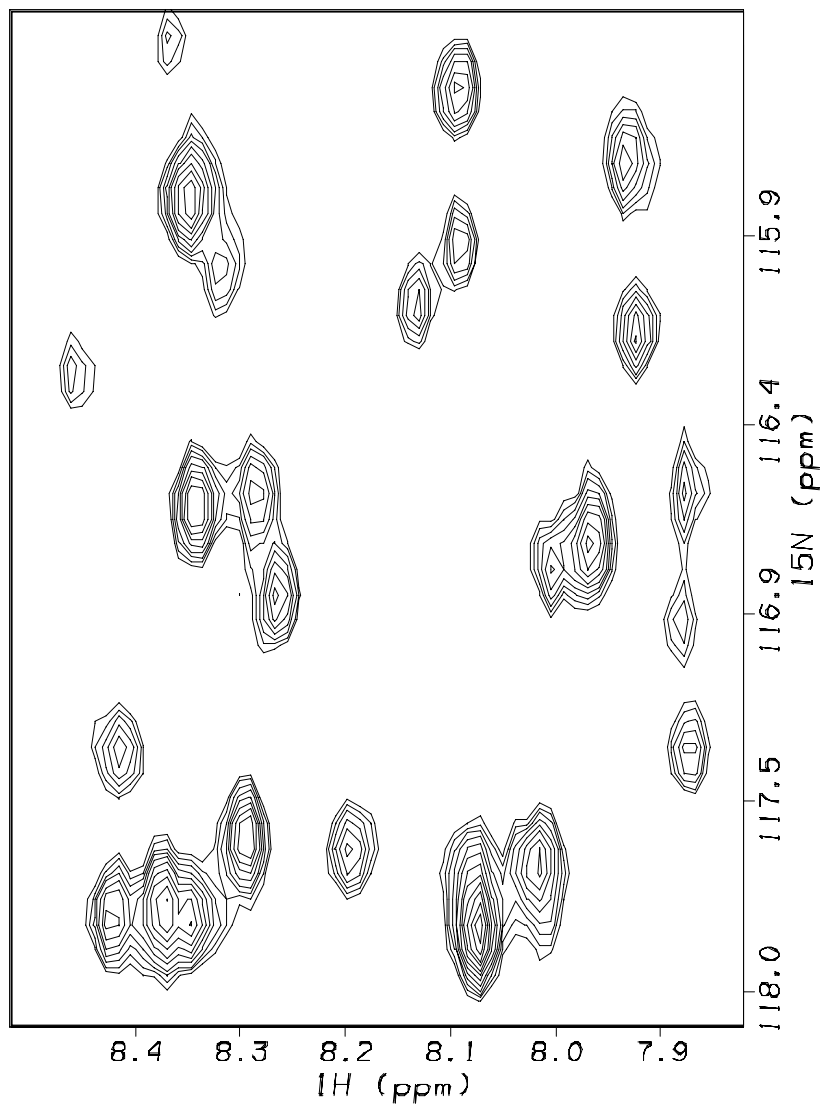
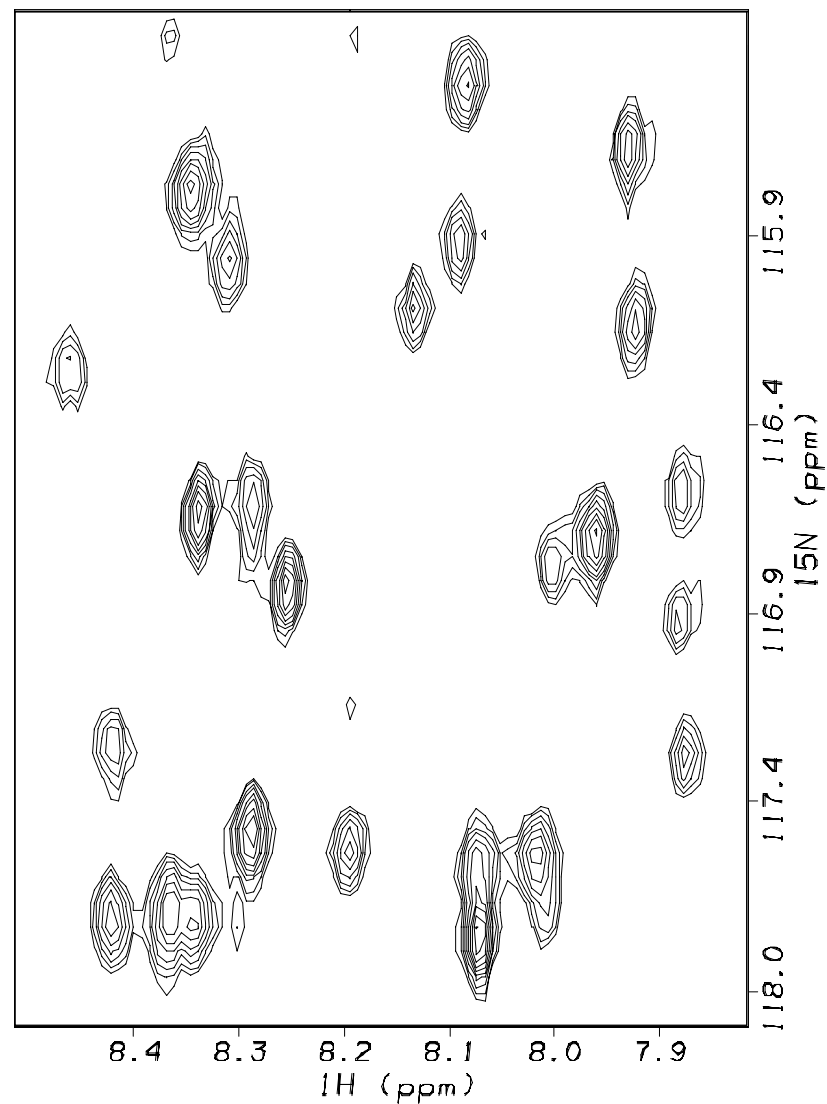


# HSQC of a 35 kDa Protein at 600 MHz and 900MHz

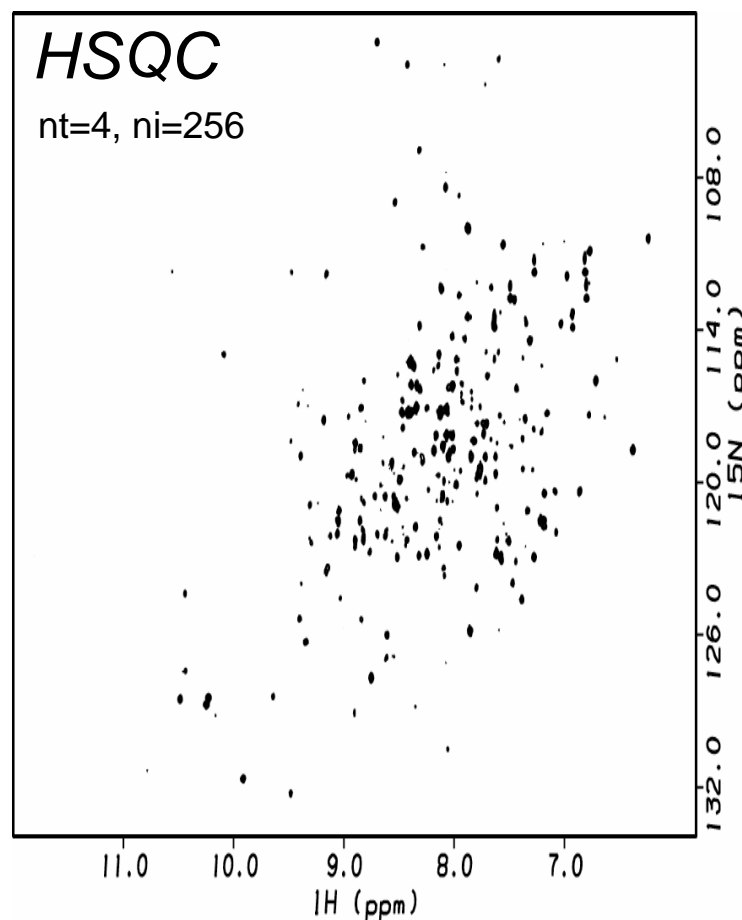
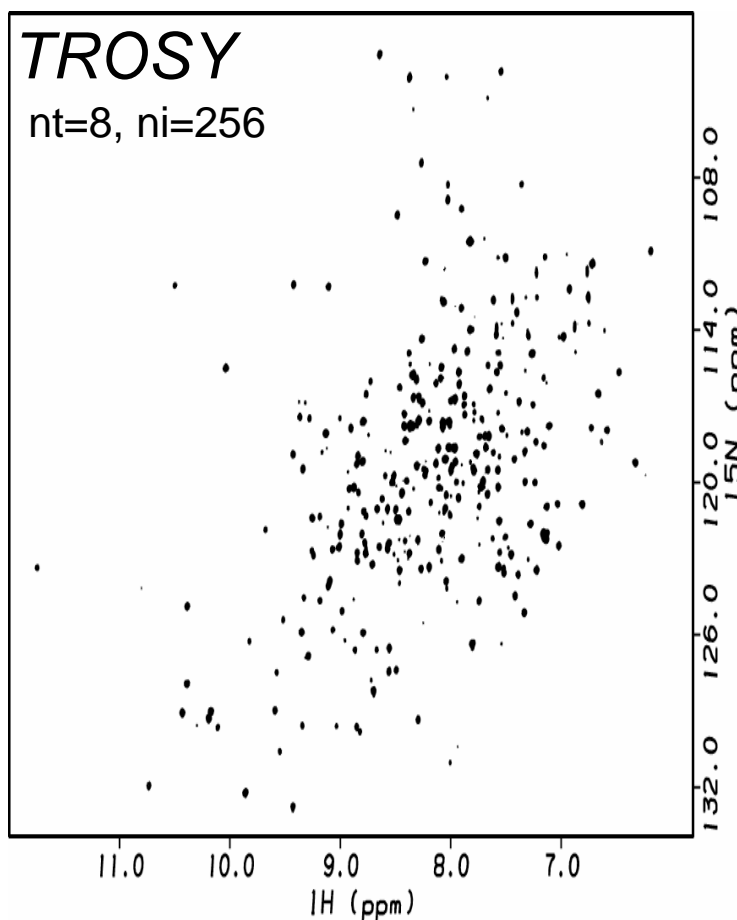


**600 MHz**



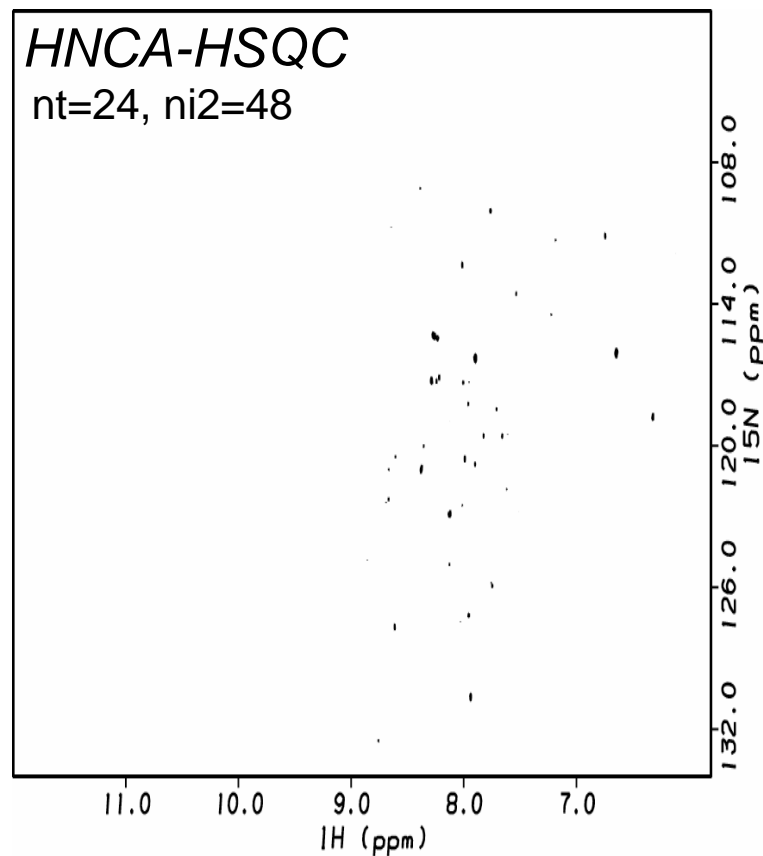
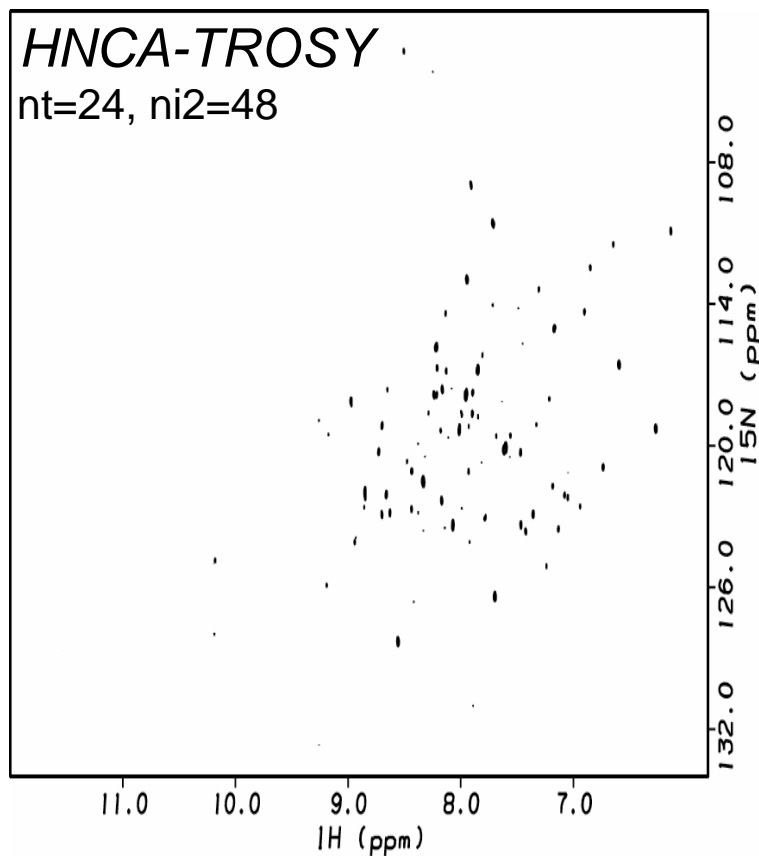
**900 MHz**

# Resolution and Sensitivity at 900 MHz



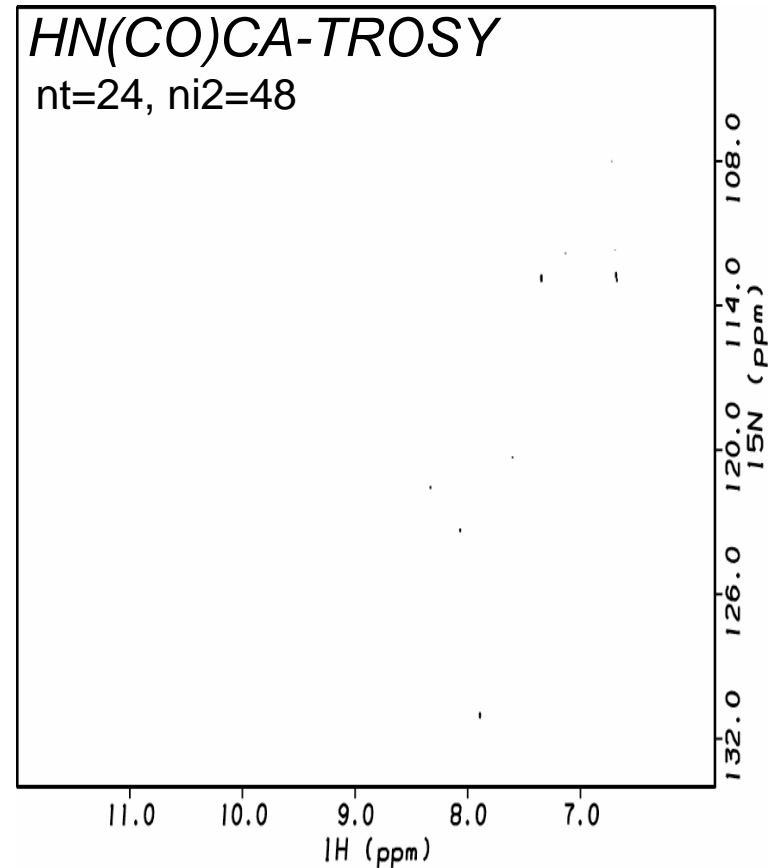
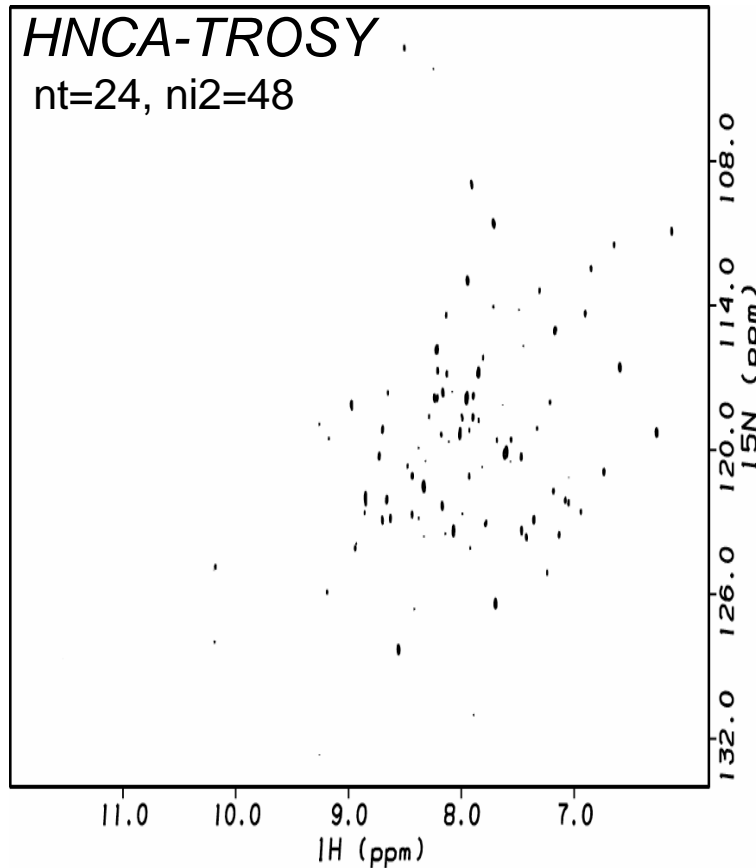
- At 900 MHz, TROSY spectrum shows significant improvements in spectral resolution and sensitivity
- Both spectra were recorded on a 0.2 mM,  $^2\text{H}$ ,  $^{13}\text{C}$  and  $^{15}\text{N}$  labeled ~35 kDa protein

# HNCA at 900 MHz



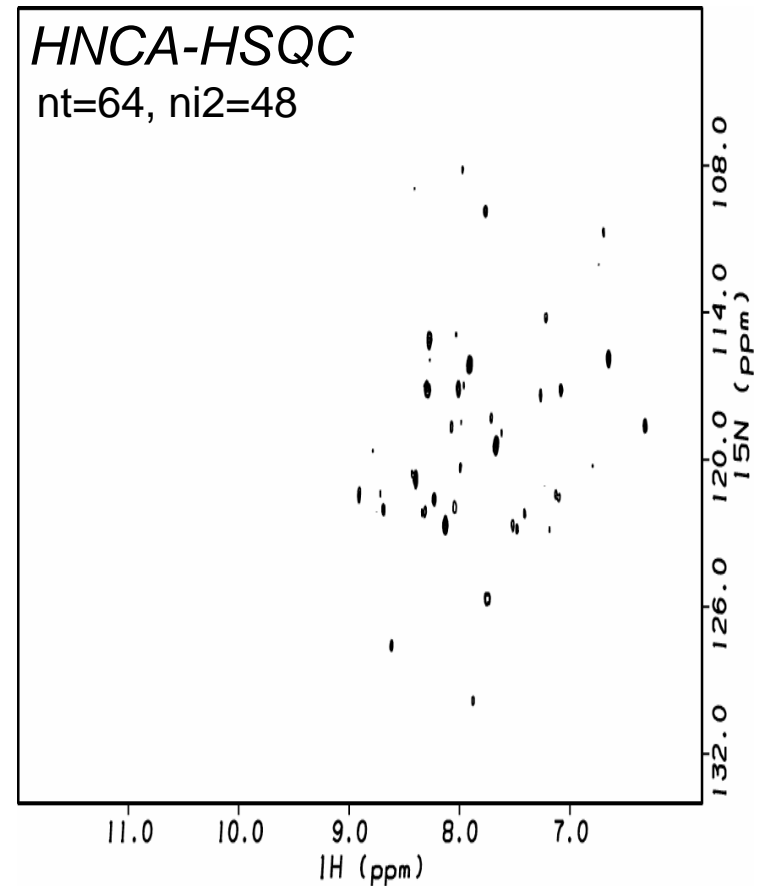
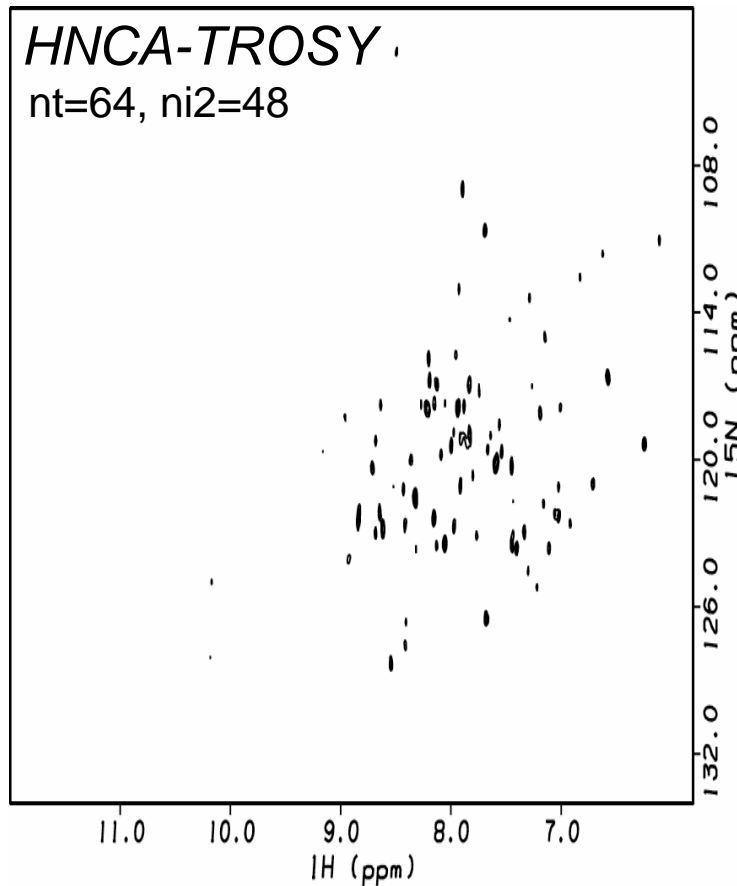
- Triple resonance experiments such as HNCA which employ long delays with the  $^{15}\text{N}$  magnetization in the transverse plane benefit tremendously from the high field TROSY effect.
- Both 2D  $^{15}\text{N}$ - $^1\text{H}$  plane of HNCA spectra were recorded on a 0.2 mM,  $^2\text{H}$ ,  $^{13}\text{C}$  and  $^{15}\text{N}$  labeled  $\sim 35$  kDa protein in  $\sim 40$  minutes.

# HNCA and HN(CO)CA at 900 MHz



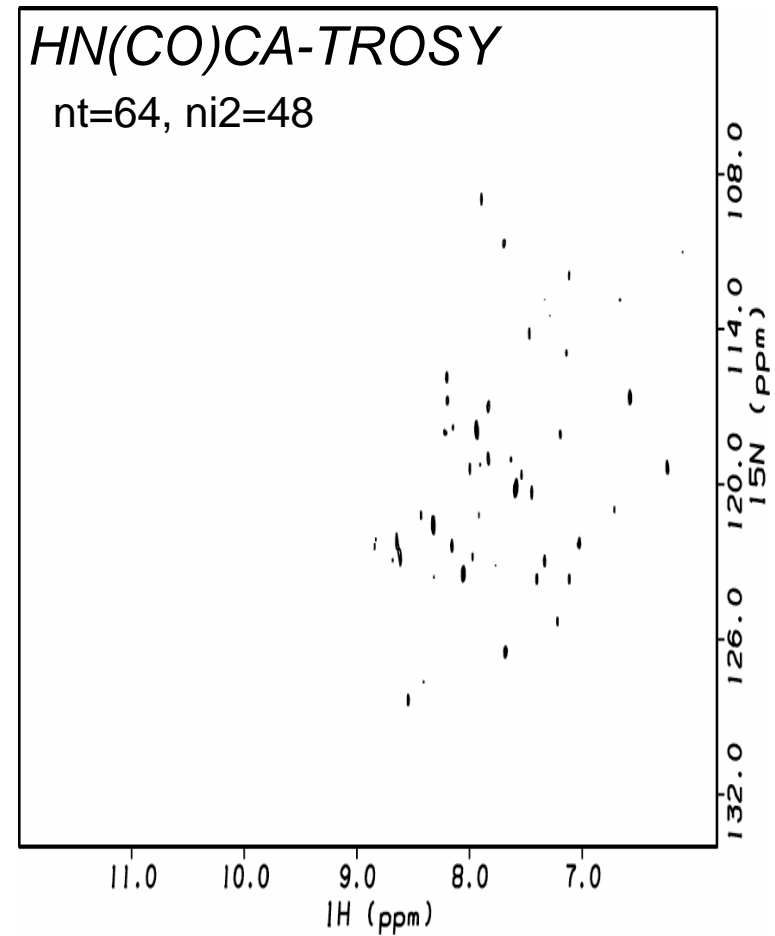
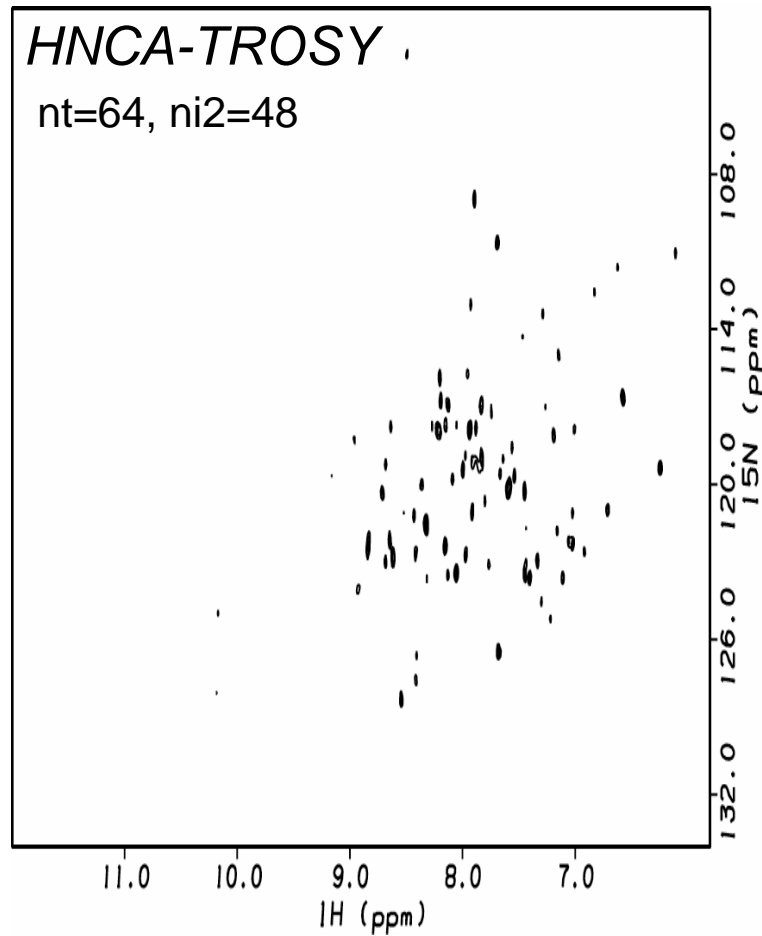
- Experiments such as HN(CO)CA which relay the magnetization through carbonyl carbon suffer from the increased CSA induced relaxation.
- Both spectra were recorded on a 0.2 mM <sup>2</sup>H, <sup>13</sup>C and <sup>15</sup>N labeled ~35 kDa protein in ~ 40 minutes.

# HNCA at 600 MHz with coldprobe



\* Both 2D  $^{15}\text{N}$ - $^1\text{H}$  plane of HNCA spectra were recorded on a 0.2 mM,  $^2\text{H}$ ,  $^{13}\text{C}$  and  $^{15}\text{N}$  labeled ~35 kDa protein in ~ 100 minutes.

# HNCA and HN(CO)CA at 600 MHz



\* Both spectra were recorded on a 0.2 mM,  $^2\text{H}$ ,  $^{13}\text{C}$  and  $^{15}\text{N}$  labeled ~35 kDa protein in ~ 100 minutes.