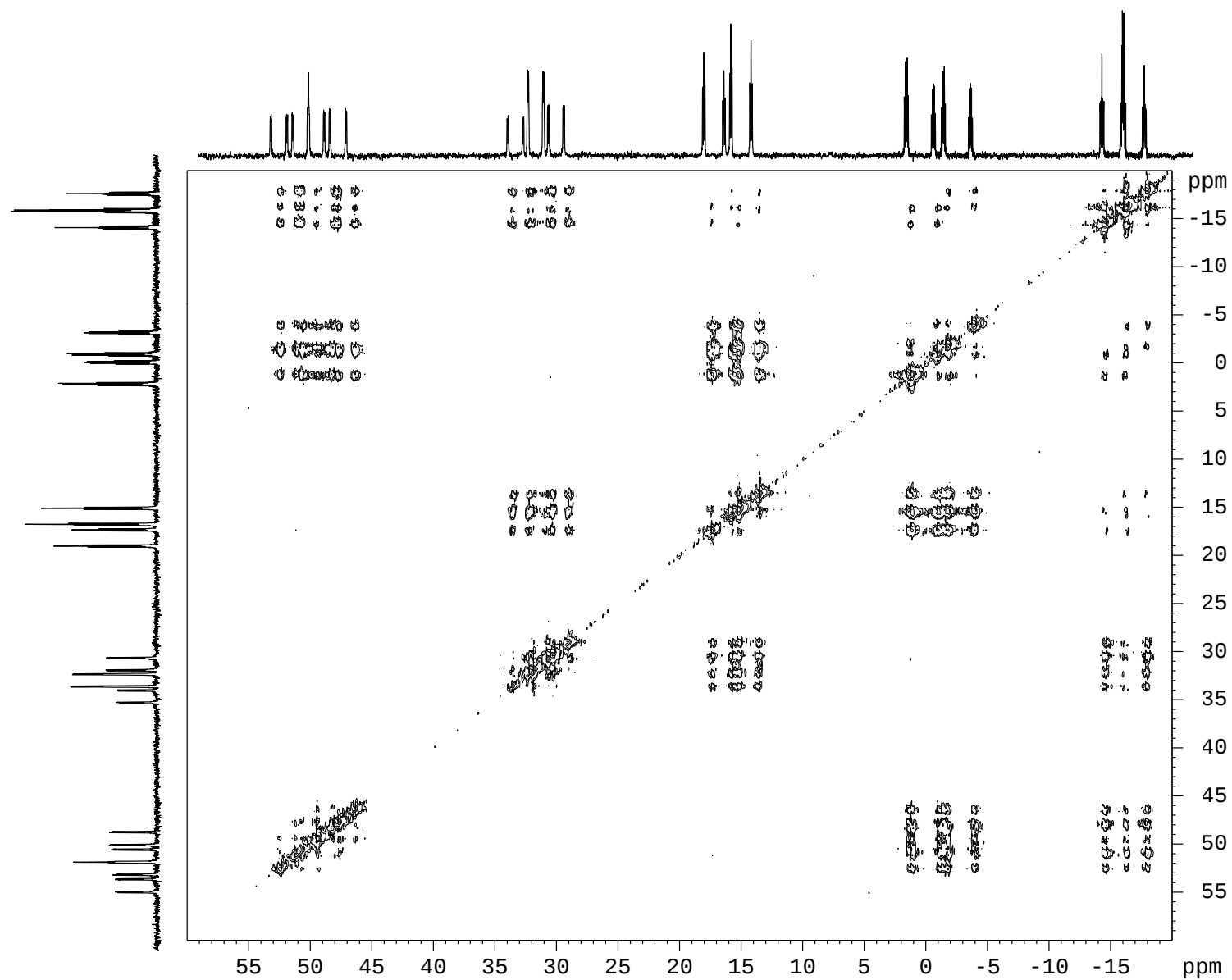
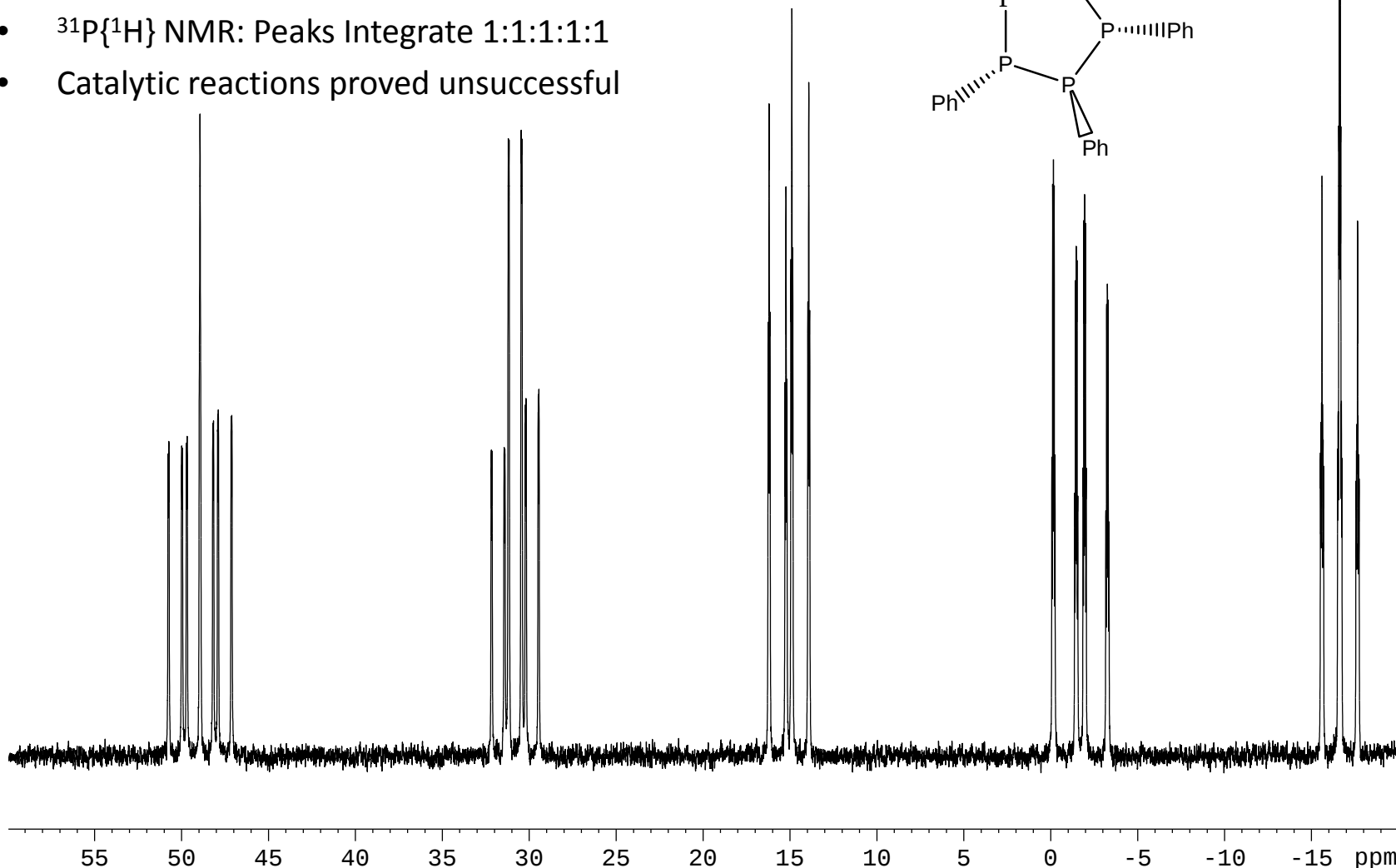
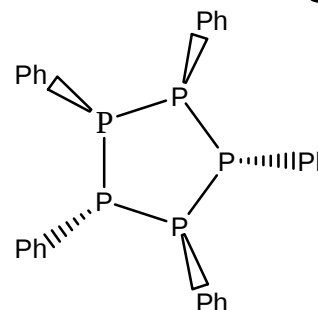


^{31}P -COSY



Stoichiometric Reaction with P_5Ph_5

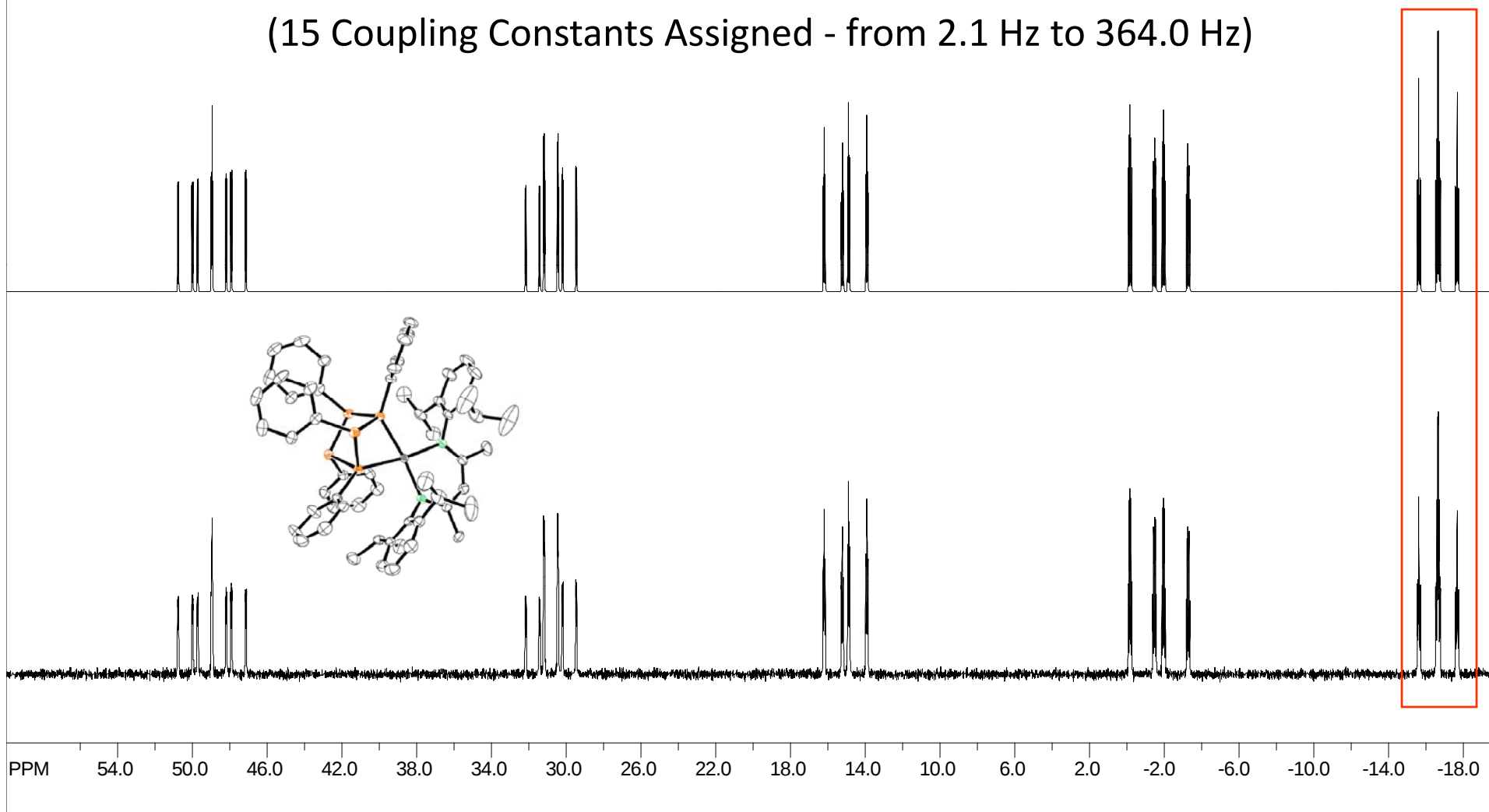
- $RhNacNac(COE)N_2 + P_5Ph_5$
- Overnight, room temperature
- $^{31}P\{^1H\}$ NMR: Peaks Integrate 1:1:1:1:1
- Catalytic reactions proved unsuccessful



SpinWorks 2.5: SJG227-3-3

^{31}P NMR Simulations

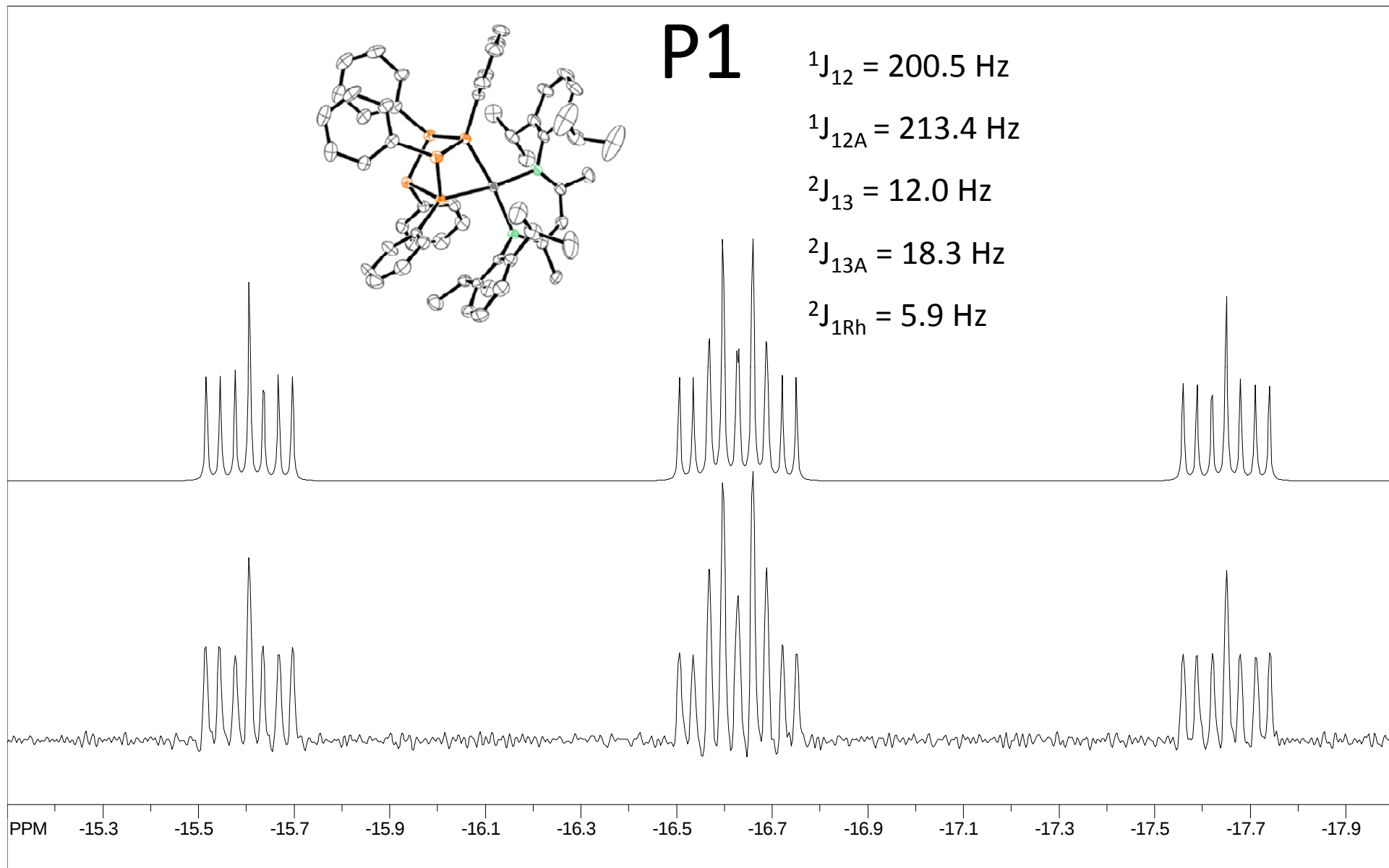
(15 Coupling Constants Assigned - from 2.1 Hz to 364.0 Hz)



file: C:\3\fid exp: <zpgp30>
transmitter freq.: 202.460312 MHz
time domain size: 16384 points
width: 16181.23 Hz = 79.922972 ppm = 0.987624 Hz/pt
number of scans: 909

freq. of 0 ppm: 202.456262 MHz
processed size: 32768 complex points
LB: 0.000 GB: 0.0000

SpinWorks 2.5: SJG227-3-3



file: C:\3\fid_expt <zpgg30>
transmitter freq.: 202.460312 MHz
time domain size: 16384 points
width: 16181.23 Hz = 79.922972 ppm = 0.987624 Hz/pt
number of scans: 909

freq. of 0 ppm: 202.456262 MHz
processed size: 32768 complex points
LB: -3.000 GB: 0.6000

SpinWorks 2.5: SJG227-3-3

P3A

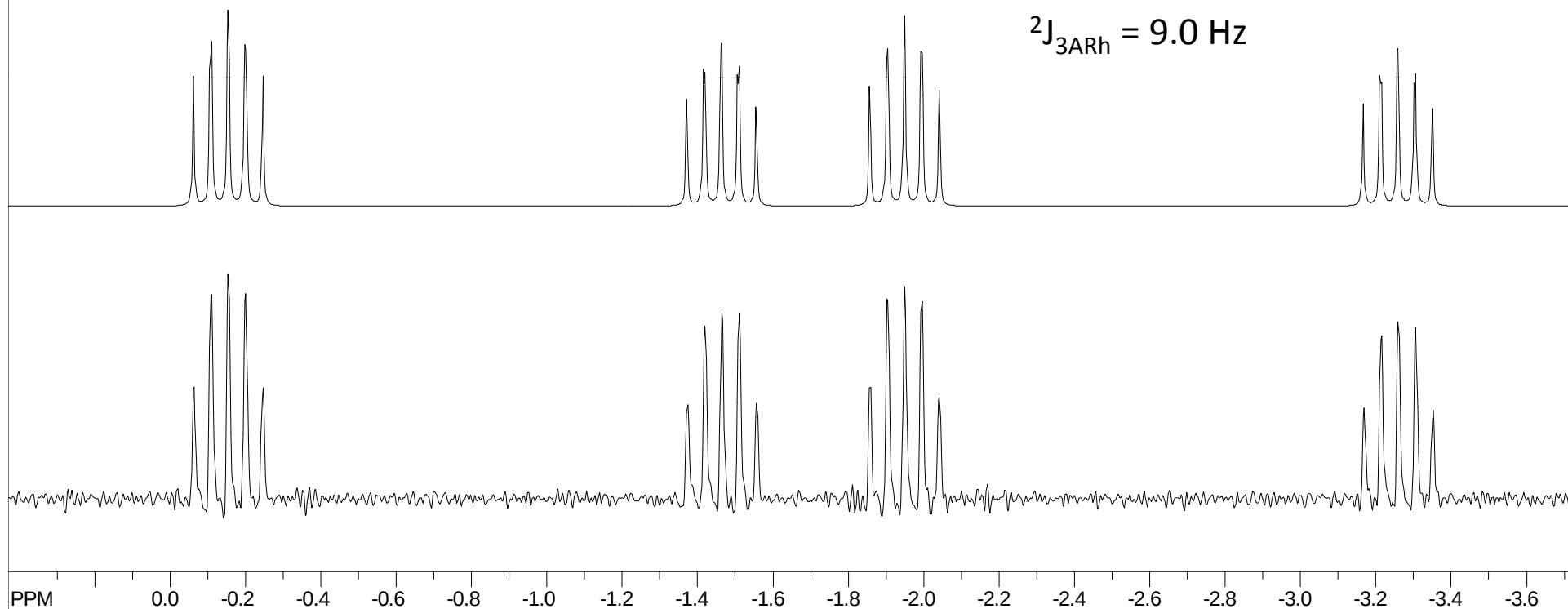
$$^1J_{3A2A} = 364.0 \text{ Hz}$$

$$^1J_{3A3} = 265.3 \text{ Hz}$$

$$^2J_{3A2} = 9.4 \text{ Hz}$$

$$^2J_{3A1} = 18.3 \text{ Hz}$$

$$^2J_{3ARh} = 9.0 \text{ Hz}$$



file: C:\3\fid exp<zpgg30>
transmitter freq.: 202.460312 MHz
time domain size: 16384 points
width: 16181.23 Hz = 79.922972 ppm = 0.987624 Hz/pt
number of scans: 909

freq. of 0 ppm: 202.456262 MHz
processed size: 32768 complex points
LB: -3.000 GB: 0.6000

SpinWorks 2.5: SJG227-3-3

P3

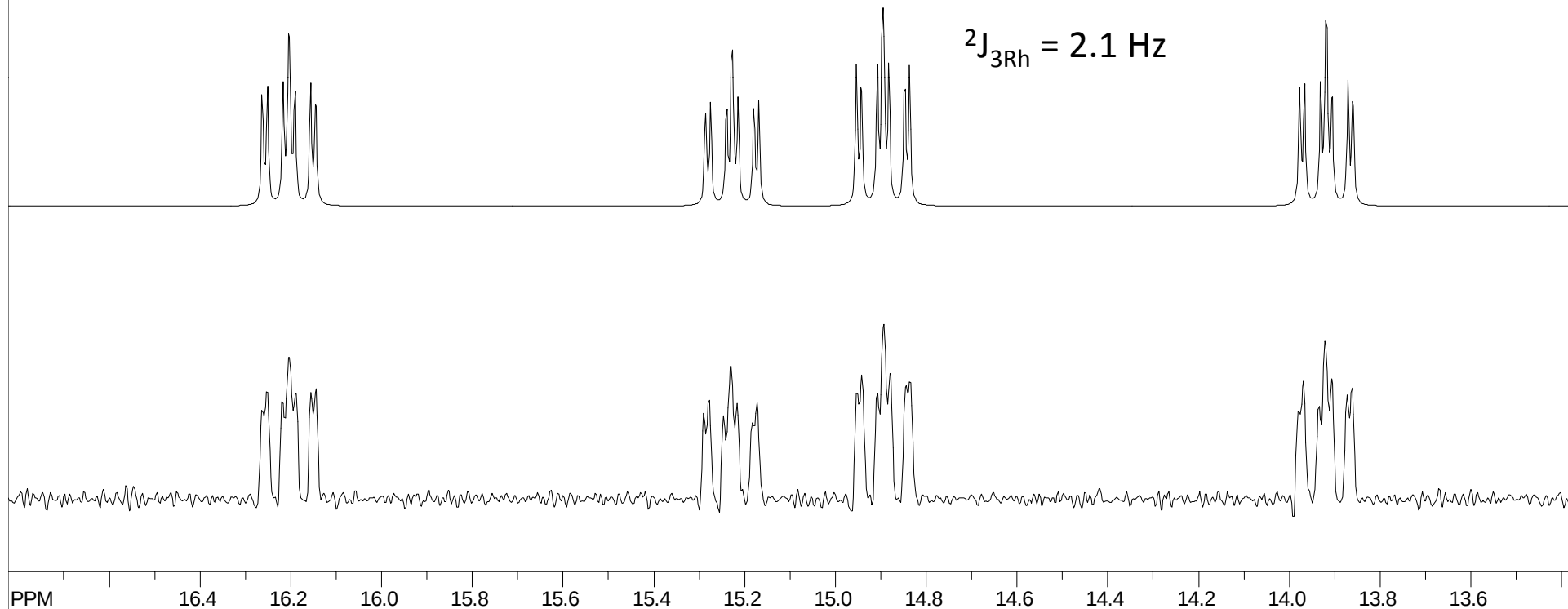
$$^1J_{32} = 198.0 \text{ Hz}$$

$$^1J_{33A} = 265.3 \text{ Hz}$$

$$^2J_{31} = 12.0 \text{ Hz}$$

$$^2J_{32A} = 8.7 \text{ Hz}$$

$$^2J_{3Rh} = 2.1 \text{ Hz}$$



file: C:\3\fid exp<zpgg30>
transmitter freq.: 202.460312 MHz
time domain size: 16384 points
width: 16181.23 Hz = 79.922972 ppm = 0.987624 Hz/pt
number of scans: 909

freq. of 0 ppm: 202.456262 MHz
processed size: 32768 complex points
LB: -3.000 GB: 0.6000

SpinWorks 2.5: SJG227-3-3

P2

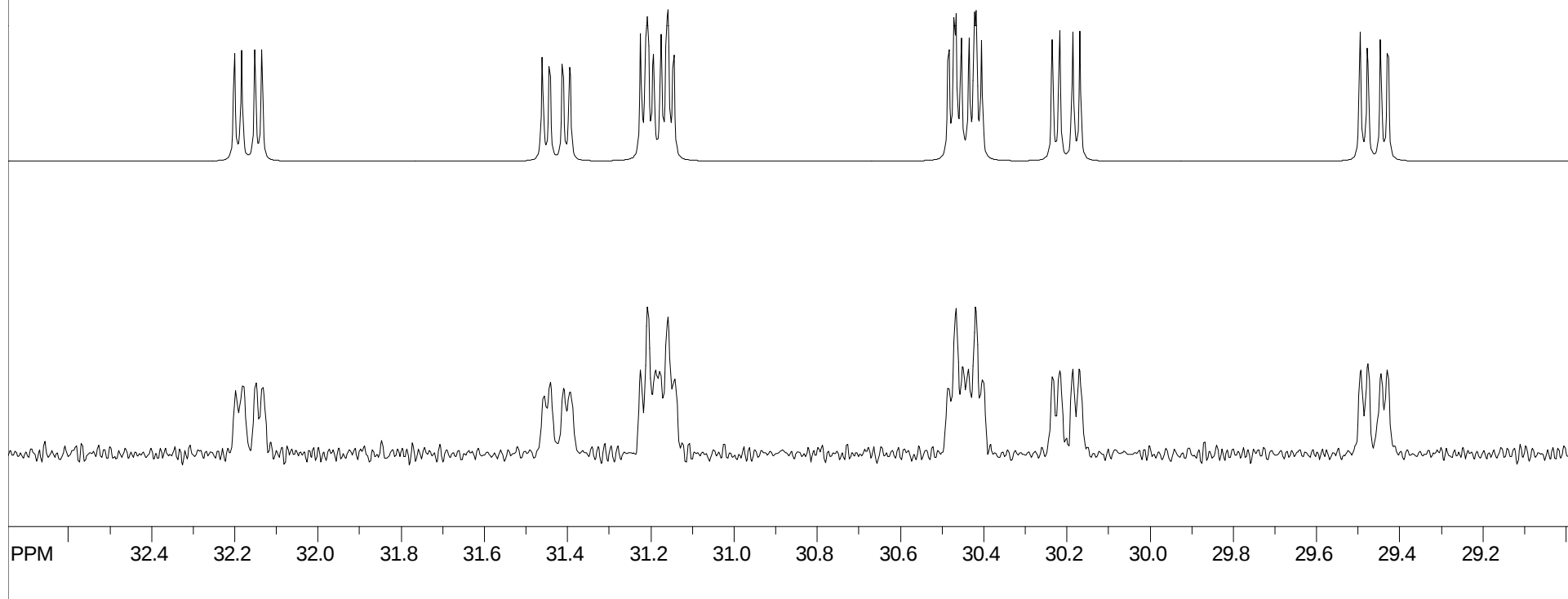
$$^1J_{21} = 200.5 \text{ Hz}$$

$$^1J_{23} = 198.0 \text{ Hz}$$

$$^1J_{2Rh} = 150.0 \text{ Hz}$$

$$^2J_{23A} = 9.4 \text{ Hz}$$

$$^2J_{22A} = 3.5 \text{ Hz}$$



file: C:\3\fid exp: <zpgg30>
transmitter freq.: 202.460312 MHz
time domain size: 16384 points
width: 16181.23 Hz = 79.922972 ppm = 0.987624 Hz/pt
number of scans: 909

freq. of 0 ppm: 202.456262 MHz
processed size: 32768 complex points
LB: -3.000 GB: 0.6000

SpinWorks 2.5: SJG227-3-3

P2A

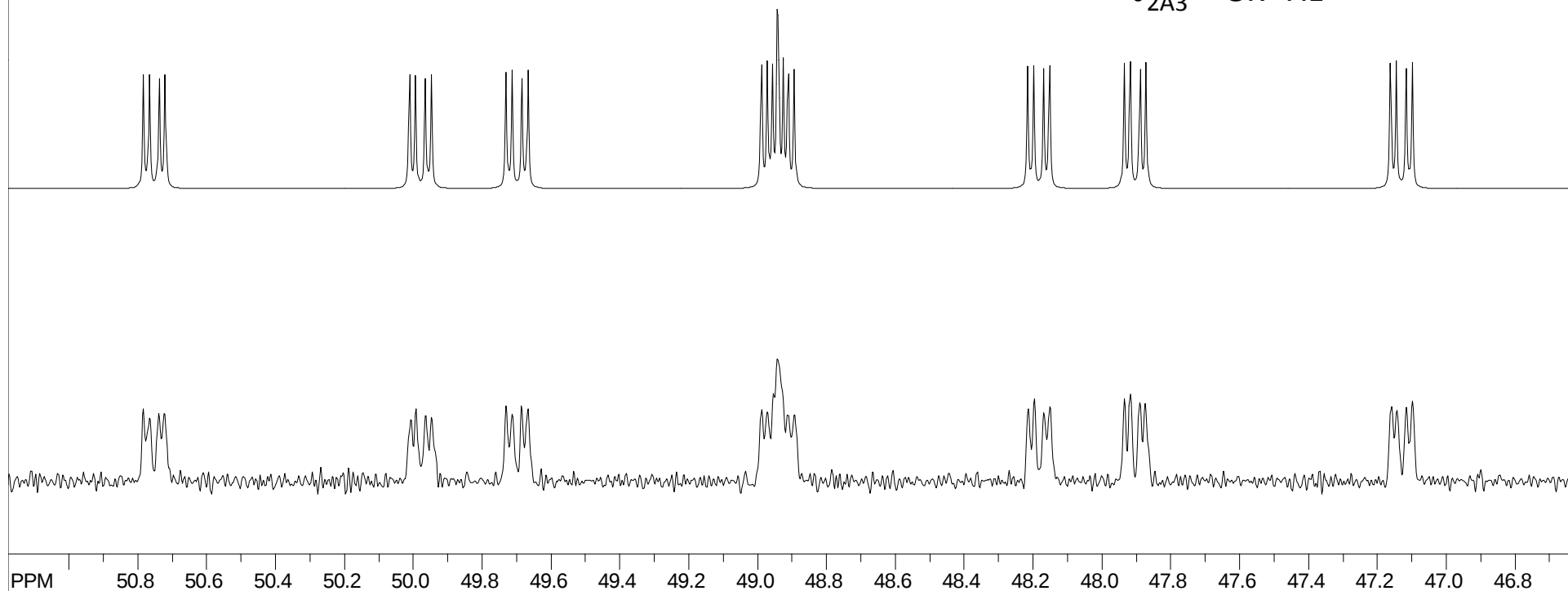
$$^1J_{2A1} = 213.4 \text{ Hz}$$

$$^1J_{2A3A} = 364.0 \text{ Hz}$$

$$^1J_{2ARh} = 156.6 \text{ Hz}$$

$$^2J_{2A2} = 3.5 \text{ Hz}$$

$$^2J_{2A3} = 8.7 \text{ Hz}$$



file: C:\3\fid exp: <zpgg30>
transmitter freq.: 202.460312 MHz
time domain size: 16384 points
width: 16181.23 Hz = 79.922972 ppm = 0.987624 Hz/pt
number of scans: 909

freq. of 0 ppm: 202.456262 MHz
processed size: 32768 complex points
LB: -3.000 GB: 0.6000