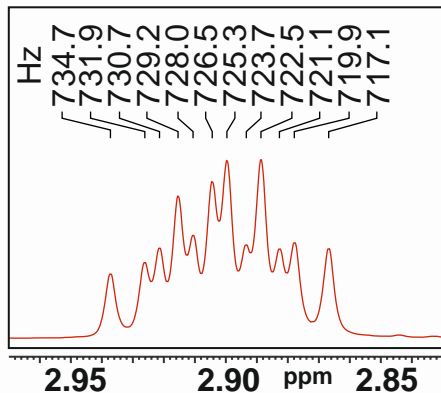
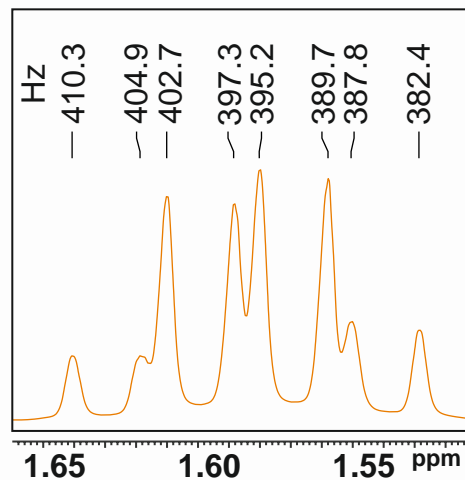
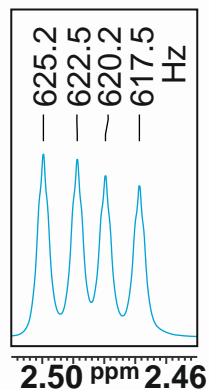
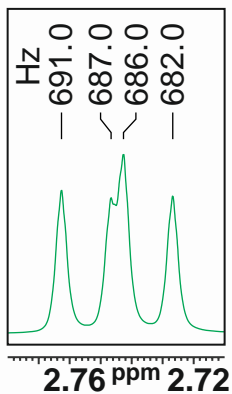


Problem of the Month:

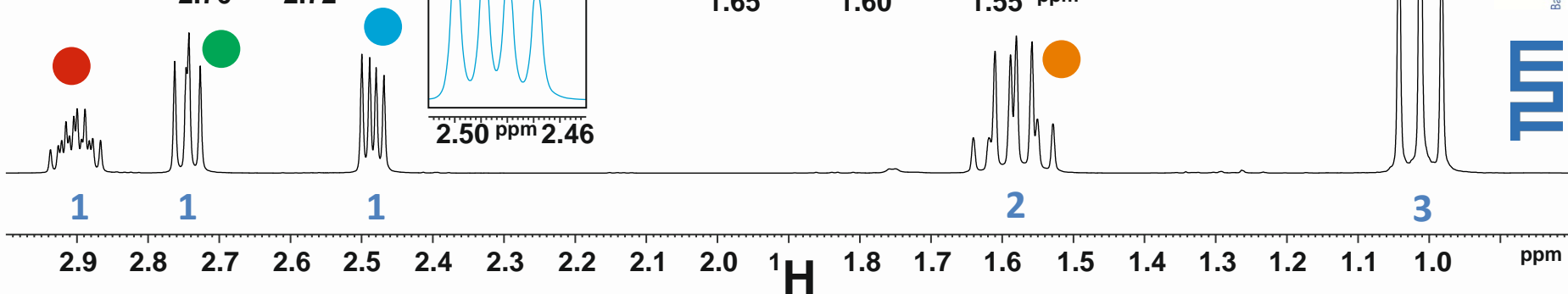
March 2020



^1H NMR spectrum
recorded at 250.13 MHz



260.7
253.3
245.8
Hz



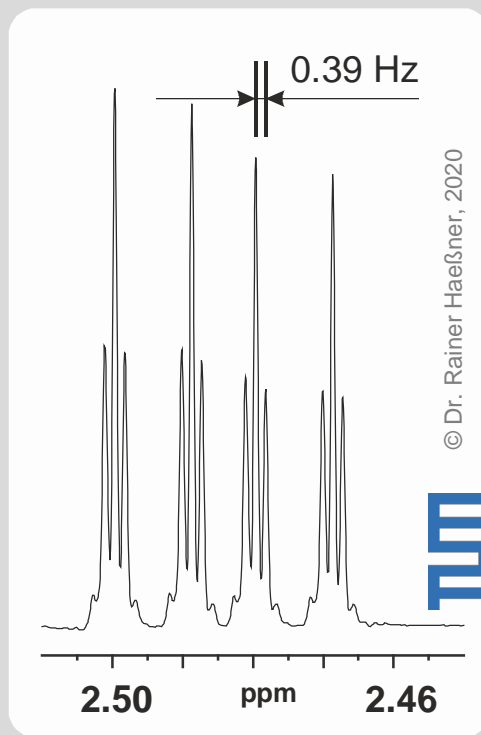
Problem of the Month:

March 2020

Goals and hints

- (1) Get the constitution, there is only one heteroatom.
 - (2) Assign all proton and carbon signals.
 - (3) Extract all homonuclear coupling constants.
 - (4) Analyze the splitting pattern of the proton signal with a chemical shift of about 2.9 ppm.
- (Hint 1) It's always helpful to calculate the degree of unsaturation (DBE) from the molecular formula.
- (Hint 2) The HSQC is the best method to find all or at least most of the building blocks

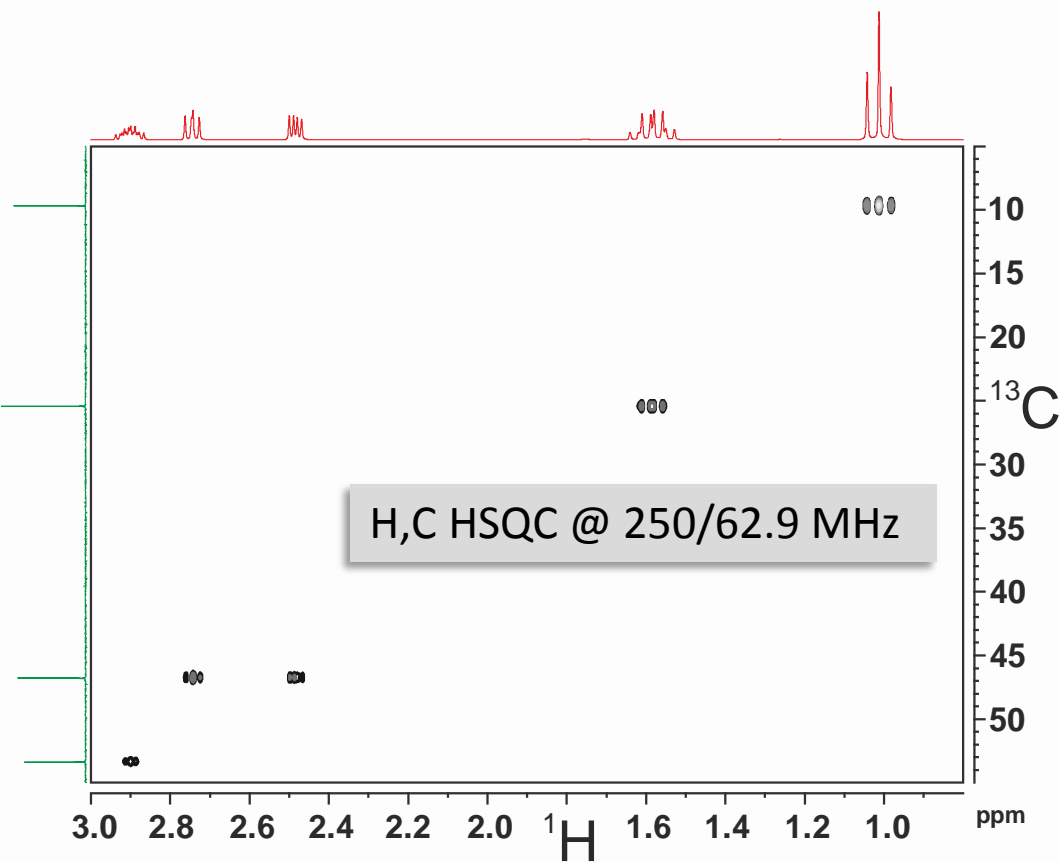
Don't worry about this processed example multiplet!



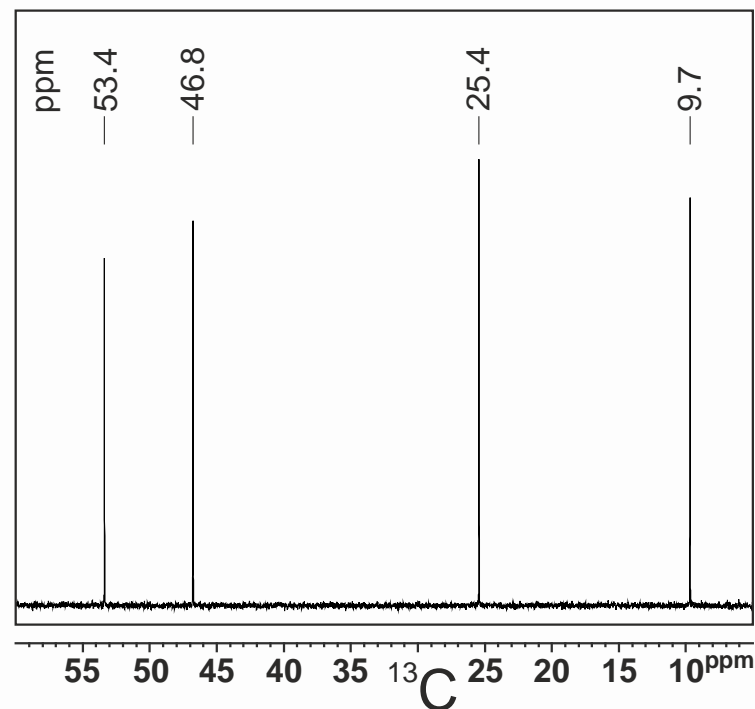
Visible only inspecting the original data carefully. All spectra here show $3J$ only.

Maybe you should have a second look for the range of the chemical shifts.
A first, cursory glance at the molecular formula could be misleading.

March 2020



$^{13}\text{C}\{^1\text{H}\}$ decoupled
NMR spectrum (62.9 MHz)



March 2020

