

^{19}F NMR on DRX 500 in Malott B042

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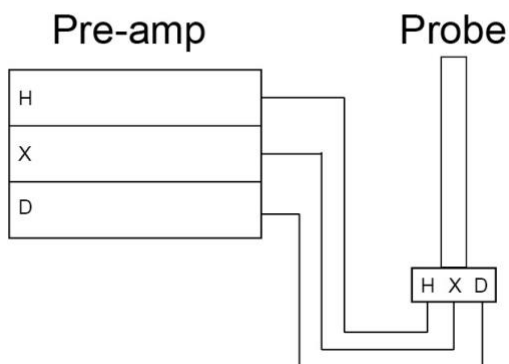
Special Note:

Please don't try this experiment if you have not been trained by Justin or Sarah

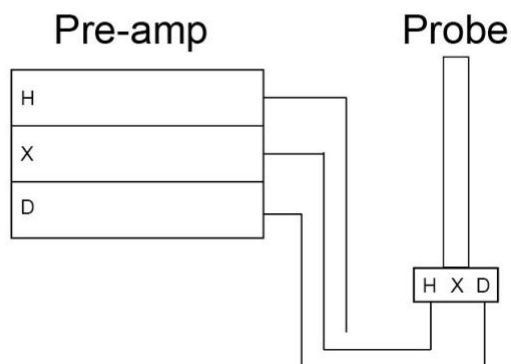
How to re-cable and tune the DRX 500 for ^{19}F

1. Load your sample, lock, shim and acquire a 1D ^1H NMR spectrum. It is always valuable to record a 1D ^1H to check the quality of your sample. Furthermore, the 1D ^1H spectrum is an efficient way to assess the shimming. If your solvent is not deuterated, be sure to turn off the "sweep" button on BSMS keypad as you will not lock.
2. Create a new experiment by typing "edc" in the Topspin command line. Choose "F19" for the experiment. Type "getprosol" to load probe-specific acquisition parameters.
3. You must re-cable the spectrometer. The issue is that even though the outer coil (normally ^1H) can be tuned to ^{19}F , the ^1H preamplifier is incompatible with ^{19}F . The X preamplifier is compatible with ^{19}F , so we must connect the ^1H channel to X channel preamp. See Figure below:

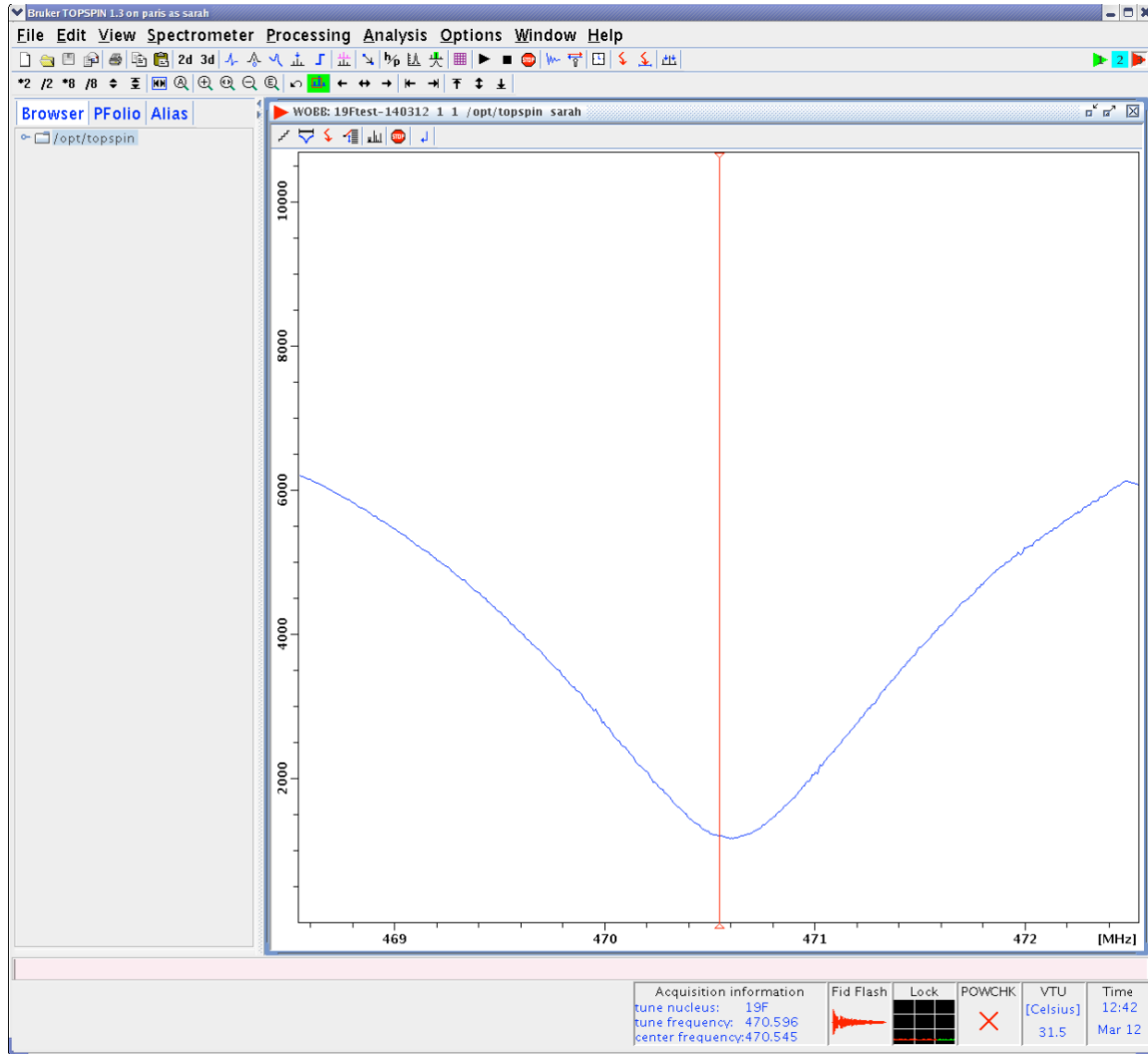
Normal Configuration



^{19}F configuration




4. Type “wobb” at Topspin command line. Go to the probe. You’ll have to tune the probe to 19F by turning the silver screw labeled “T” ~four turns **to the right**. If you have it tuned correctly it should look like the following:



5. Acquire and process the 19F experiment using the commands: rga, zg, ef, apk, abs n

6. When you are finished, it is critical to re-cable and re-tune for ^1H . Put a sample in CDCl_3 in the magnet, re-cable. Load "PROTON" experiment and turn "T" screw back ~4 turns **to the left**.

If you cannot get the dip centered on the red line, click the  button and set width to 20 MHz to see a larger sweep window. Use the "T" screw to center the dip on the red line.