

¹⁹F decoupled ¹³C Spectrum on the INOVA-500 MHz Instrument

1. Put in the IDS probe, purge with N₂, cool to -90°C as usual.
2. Tune for ¹H. Shim your sample on the FID.
3. Now....tune for ⁶Li (LOCK Channel), ¹³C(X Channel) and ¹⁹F (1H Channel).

Hardware Changes

Only Ivan/Tony are authorized to do this

Set Synthesizer 1 to be Synthesizer 2

Set Synthesizer 2 to be Synthesizer 3

Set Synthesizer 3 to be Synthesizer 1

On the transmitter boards,

Synthesizer cable from Transmitter 1, MOVE TO Transmitter 2.

Synthesizer cable from Transmitter 2, MOVE TO Transmitter 3. (This one does not matter anyway)

Synthesizer cable from Transmitter 3, MOVE TO Transmitter 1.

4. Main Menu -> Setup -> Nucleus/Solvent -> ¹⁹F -> Other (when asked for solvent, enter **thf**)

5. On the command line, do the following

create(`rfchannel`, `flag`) Press Enter

rfchannel=`21` Press Enter

6. Now, acquire a ¹⁹F spectrum. Keep cursor on the peak you see. (If sample has more than one peak, keep cursor in the middle of the peaks approximately)

7. On the command line, type the following

getoffset Press Enter

this will return a positive or negative number. Note down that number. This is the decoupler offset (henceforth referred to as **dof**)

8. Now, back to the ¹³C experiment.

Main Menu -> Setup -> Nucleus/Solvent -> ¹³C -> Other (when asked for solvent, enter **thf**)

9. On the command line, type the following

dn=`F19` Press Enter

setdecpar(dn) Press Enter

dof=whatever number you noted in step 7 Press Enter

10. Start the acquisition, jump on one foot, fold your hands and pray to see the ¹³C-⁶Li couplings clearly!!!