

Protocol for ¹³C DEPT and APT NMR at AM400 (AV III HD 400 NanoBay)

Version 001

June 15, 2022 set up by Fu Chen

Book time and log in computer as usual

Procedure:

Open Topspin 3.6.1

run H-1 NMR prior to C-13 NMR (Ah1)

run C-13 NMR with/out H-1 decoupling

run C-13 DEPT NMR

run C-13 APT NMR

A. Under "Start",

1. rerun H-1 NMR
2. create four datasets: name; exp #; pro #; solvent; directory (for example: D:\Chem471\user last name\yrmo)
3. (**rpar Ac13***) for each dataset (select Ac13cpd; Ac13dept135; Ac13dept90; Ac13APT)

B. Under "Acquire",

4. no eject sample/no insert sample
5. no lock
6. tune (**atma**) in any dataset
7. no spinning
8. no shim
9. for each dataset:
 - prosol (**getprosol**)
 - gain (**rga**)
 - check: (**ns**) (for example: 1k scans for Ac13cpd; then ½ scans of 1k for DEPT & APT experiments will be enough to elucidate the C groups), (**ds**), (**d1**)
10. (**multizg**); type (**4**)

C. Under "Process",

11. for each dataset
 - check spectrum: (**tr;efp;apk**); if the spectrum is enough, type (**halt;efp;apk**)
 - or wait until experiments finish, type (**efp;apk**)
 - adjust phase if necessary
 - calibrate spectrum
 - pick peaks

D. Under "Analyse"

12. eject sample (**ej**); take sample; (**ij**) to turn off air
13. close topspin
14. log off
15. **put cap back on magnet**