

## Protocol for <sup>13</sup>C NMR (BBO probe) at NMR400 (AV NEO 400)

Version 001

October 30, 2020 set up by Fu Chen

Book time and log in computer as usual

### Ac13cpd (BBO probe)

30 degree pulse angle for routine C-13 with H-1 decoupling

Procedure:

#### Open Topspin 4.0.6

**run H-1 NMR prior to C-13 NMR (Ah1):** follow the basic procedure from your basic H1 training.

#### run C-13 NMR with H-1 decoupling

A. Under "Start",

1. create dataset: name; exp #; pro #; solvent; directory (D:\group name\user name\yrmo)
2. Read a parameter set (**rpar Ac13\***) (select Ac13cpd)

B. Under "Acquire",

3. no eject sample/no insert sample
4. no lock
5. tune (**wobb**): manual (13C: 7964/994)
6. no spinning
7. no shim
8. prosol (**getprosol**)
9. gain (**rga**)
10. check: **ns, ds, d1**
11. go (**zg**)

C. Under "Process",

12. (**efp;apk**)
13. adjust phase if necessary
14. calibrate spectrum
15. pick peaks
16. integrate
17. advanced if necessary

D. Under "Analyse"

18. eject sample (**ej**); take sample; (**ij**) to turn off air
19. close topspin
20. log off

d1 is relaxation time in seconds

ds is dummy scans for warming up the spin system

ns is number of scans

Remark:

" lock and shim well

" tune probe

" no spinning

" no pulse cal in automation

" optimize offset (**o1p**) and spectral width (**SW**) for advanced applications