Supplementary Information to manuscript

ssNMRlib: a comprehensive library and tool box for acquisition of solid-state NMR experiments on Bruker spectrometers

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**Listing S1 : parameter naming convention in ssNMRlib**

**General naming conventions for CPs, plw, spw, cnst**

CP power levels are entered in kHz and are generally assigned to the three channels as:

30-39 : 13C  
40-49 : 1H  
50-56 : 15N  
57-63 : Midpoint ramp

Examples:

- 13C RF field for HC CP → cnst 31
- 1H RF field for HC CP → cnst 41

**Hard Pulses**

**if 1H detection**

- p1 : H 90 degree pulse (us) @ plw1
- p2 : C 90 degree pulse (us) @ plw2
- p3 : N 90 degree pulse (us) @ plw3
- p4 : 2H 90 degree pulse (us) @ plw4

**if 13C detection**

- p1 : C 90 degree pulse (us) @ plw1
- p2 : H 90 degree pulse (us) @ plw2
- p3 : N 90 degree pulse (us) @ plw3
- p4 : 2H 90 degree pulse (us) @ plw4

**CP constants**

**HN CP**

- cnst 42 : RF field on 1H (kHz)
- cnst 52 : RF field on 15N (kHz)
- cnst 62 : Midpoint of the ramp
- spnam 42 : File name for the ramp
- p 45 : CP duration (us)

**N-CO CP**

- cnst 33 : RF field on 13C (kHz)
- cnst 43 : RF field on 1H for decoupling (kHz)
- cnst 53 : RF field on 15N (kHz)
- cnst 63 : Midpoint of the ramp
- spnam 53 : File name for the ramp
- p 53 : CP duration (us)

**Simultaneous HCN CP**

- cnst 31 : RF field on 13C (kHz)
- cnst 41 : RF field on 1H (kHz)
- cnst 51 : RF field on 15N (kHz)
- cnst 61 : Midpoint of the ramp
- spnam 41 : File name for the ramp
- p 43 : CP duration (us)

**HC/HCA/HCO CP**

- cnst 31 : RF field on 13C (kHz)
- cnst 41 : RF field on 1H (kHz)
- cnst 61 : Midpoint of the ramp
- spnam 41 : File name for the ramp
- p 43 : CP duration (us)

**N-CA CP**

- cnst 34 : RF field on 13C (kHz)
- cnst 44 : RF field on 1H for decoupling
- cnst 54 : RF field on 15N (kHz)
- cnst 60 : Midpoint of the ramp
- spnam 54 : File name for the ramp
- p 35 : CP duration (us)

**HA-CA CP**

- cnst 35 : RF field on 13C (kHz)
- cnst 45 : RF field on 1H (kHz)
- cnst 57 : Midpoint of the ramp
- spnam 45 : File name for the ramp
- p 34 : CP duration (us)
**INEPT**

d 13 : INEPT delay HC (sec)
d 14 : INEPT delay HN (sec)
d 15 : INEPT delay CA-CB (sec)
d 16 : INEPT delay CO-CA, CO transverse (sec)
d 17 : INEPT delay CO-CA, CA transverse (sec)
d 53 : INEPT delay N-CO (sec)
d 54 : INEPT delay N-CA (sec)

**Transfer 13C-13C**

**13C RFDR**

cnst 20 : Spinning rate (Hz)
cnst 37 : 13C offset during RFDR
d 8 : Mixing time
p 37 : RFDR duration (us)

**DREAM CA-CB**

cnst 6 : RF field on 1H (kHz)
cnst 7 : RF of the DREAM (kHz)
cnst 17 : 13C offset for DREAM
cnst 59 : Midpoint of the ramp
p 17 : DREAM duration (us)
spnam 7 : DREAM ramp

**TOCSY / DIPSI**

cnst 15 : RF field on 13C (kHz)
d 15 : Mixing duration (sec)
cpdpreg 8 : Mixing sequence
cpdpd 5 : Pulse length for the mixing sequence

**Transfer 1H-1H**

**Bass-SD**

cnst 48 : 1H carrier during Bass-SD
cnst 49 : RF Bass-SD at midpoint (kHz)
cnst 59 : Midpoint of the Bass-SD shape
spnam 49 : Bass-SD element
p 49 : Bass-SD duration (us)
d 8 : z-filter delay (sec)

**Z-mix**

d 8 : Z-mix delay (sec)

**Transfer 15N-13C**

**TEDOR**

L1 : Loop number for TEDOR experiment

**Transfer 15N-15N**

**PDSD**

d 5 : PDSD mixing time (sec)

**DARR**

cnst 5 : RF field on 1H (kHz)
cnst 20 : Spinning rate (Hz)
d 5 : Mixing time (ms)
d 22 : Rotation period

**CP BSH CO-CA**

cnst 38 : RF field for the CO-CA (kHz)
cnst 58 : Midpoint of the ramp
p 38 : CP duration (us)
p 39 : Trim duration before BSH (us)
p 40 : Trim duration after BSH (us)
spnam 38 : BSH-CP ramp

**Alfresco**

p 50 : Alfresco chirp pulse duration (us)
cnst 50 : Alfresco RF power (kHz)
spnam 49 : chim pulse file name
spnam 50 : chim pulse file name
l4 : mixing loop

**1H RFDR**

cnst 20 : Spinning rate (Hz)
cnst 37 : 1H offset during RFDR
d 8 : Mixing time (sec)
p 37 : RFDR duration (us)
L0 : RFDR loop
**Dynamics**

**REDOR**
- \( p\ 18 : \) \( 1\text{H} \) pulse 180° (us)
- \( p\ 19 : \) \( 13\text{C} \) pulse 180° (us)
- \( \text{cnst}\ 20 : \) Spinning rate (Hz)
- \( d\ 7 : \) Redor shift delay (sec)

**R1rho**
- \( \text{cnst}\ 25 : \) R1rho field strength (kHz)
- \( p\ 18 : \) heat compensation pulse
- \( p\ 25 : \) spinlock
- \( p\ 26 : \) \( 13\text{C}/15\text{N} \) degree pulse (us)
- \( d\ 24 : \) R1rho max delay

**T2**
- \( d\ 25 : \) T2 delay

**CEST**
- \( \text{cnst}\ 17 : \) 1H decoupling (kHz) @ plw17
- \( \text{cnst}\ 27 : \) 15N RF field (Hz)
- \( \text{cnst}\ 29 : \) Set to 0 for reference experiment
- \( p\ 17 : \) Decoupling pulse length (us)
- \( d\ 31 : \) CEST delay (sec)
- \( \text{cpdprg}\ 5 : \) 1H decoupling sequence
- \( \text{cpdprg}\ 6 : \) CEST 15N sequence

**T1**
- \( d\ 25 : \) T1 delay (sec)

**EXSY**
- \( d\ 31 : \) EXSY mixing time (sec)

**Selective 13C pulses**
- \( \text{spnam}\ 10 : \) EBURP2 on-resonance CO according to p11 for the pulse duration
- \( \text{spnam}\ 11 : \) EBURP2-TR on-resonance CO according to p12 for the pulse duration
- \( \text{spnam}\ 13 : \) ISNOB 2 off-resonance CO according to p13 for the pulse duration
- \( \text{spnam}\ 14 : \) REBURP on-resonance CA according to p14 for the pulse duration
- \( \text{spnam}\ 15 : \) REBURP on-resonance CA-CB according to p15 for the pulse duration
- \( \text{spnam}\ 16 : \) EBURP2 off-resonance CO according to p16 for the pulse duration
- \( \text{spnam}\ 17 : \) EBUR2P on-resonance CA according to p17 for the pulse duration
- \( \text{spnam}\ 18 : \) ISNOB2 off-resonance CA according to p18 for the pulse duration
- \( \text{spnam}\ 19 : \) REBURP on-resonance CO according to p19 for the pulse duration

**Decoupling**

**13C decoupling during 1H detection**
- \( \text{cpdprg}\ 1 : \) sequence used for the 13C decoupling during 1H detection
- \( \text{pcpd}\ 1 : \) pulse length in decoupling sequence (us)
- \( \text{cnst}\ 11 : \) 13C decoupling power (kHz) @ plw11

**1H decoupling during 13C/15N evolution/detection**
- \( \text{cpdprg}\ 2 : \) sequence used for the 1H decoupling during evolution/detection time
- \( \text{pcpd}\ 2 : \) pulse length in decoupling sequence (us)
- \( \text{cnst}\ 12 : \) 1H decoupling power (kHz) @ plw12

**15N decoupling during 1H detection**
- \( \text{cpdprg}\ 3 : \) sequence used for the 15N decoupling during 1H detection
- \( \text{pcpd}\ 3 : \) pulse length in decoupling sequence (us)
- \( \text{cnst}\ 13 : \) 15N decoupling power (kHz) @ plw13
2H decoupling

cpdprg 5 : sequence used for the 15N decoupling during 1H detection
cpdp 5 : pulse length in decoupling sequence (us)
cnst 14 : 2H decoupling power (kHz) @ plw14

Solvent suppression

cnst 24 : 1H RF field for solvent suppression (kHz)
d 30 : duration for the solvent suppression (sec)
cpdprg 4 : decoupling sequence
cpdp 7 : pulse length for the solvent suppression (us)

Other constants

cnst 1 : 13C reference RF field (kHz), from p 21 (for calculation)
cnst 2 : 1H reference RF field (kHz), from p 21 (for calculation)
cnst 3 : 15N reference RF field (kHz), from p 21 (for calculation)
cnst 4 : 2H reference RF field (kHz), from p 21 (for calculation)
cnst 10 : Multiplier for acqt=cnst10*1u set to 1
cnst 15 : Center of CB (39 ppm)
cnst 16 : Center of CO (175 ppm)
cnst 17 : Center of CA (54 ppm)
cnst 18 : Carrier between CA and CO (100 ppm)
cnst 20 : Spinning rate (Hz)

Other delays

d 20 : rotor period (calculated from cnst 20)
d 21 : half rotor-period
Listing S2: currently implemented experiments

NMRlib tools

Template maker → Implement the current experiment to the library
Export → Export the loaded template to a folder for sharing
Import → Import an experiment from your folder to your library
Delete → Delete the loaded template from the library

Set-up experiments

KBr
Adamantane

Set pulse lengths → Set 90° pulse widths

Security → Control your experiment before to launch it

Remove Best Ramp → Remove all the best ramp in order to start a new optimisation
Recap file → Create or charge a recap file of your optimisations
Load your contents → Load selectively transfer parameters
Save your pulse program → Save your pulse program inside your experiment (not compiled version)

Proteins

Proton detection

Calibrations

O1 Calibration
Water suppression parameters

Hard Pulse

1H Calibration based on hNH CP experiment
1H Calibration based on hCH CP experiment
15N Calibration based on hNH CP experiment
13C Calibration based on hCH CP experiment
1H Direct calibration
1H Calibration based on hNH INEPT experiment
1H Calibration based on hCH INEPT experiment
15N Calibration based on hNH INEPT experiment
13C Calibration based on hNH INEPT experiment

Cross Polarization

CP HN optimization
CP HC optimization
CP HCO optimization
CP HCA optimization
CP HACA optimization
CP NCO optimization
CP NCA optimization
CP simultaneous hCH hNH optimization
BSH CO-CA optimization

**INEPT**
- hNH
- hCH
- INEPT delay COCA, CO transverse
- INEPT delay COCA, CA transverse

**1D spectra**
- Basic 1D experiment
- 1H R1

**Hetero 2Ds HN/HC CP/INEPT**

**Experiments without 2H decoupling**
- hNH CP
- hNH refINEPT
- hCH CP
- hCH refINEPT
- Simultaneous CH and NH CP

**Experiments with 2H decoupling**
- hCH CP
- hCP refINEPT
- Simultaneous CH and NH CP

**Backbone assignment**

**3D Experiments**

**Experiments without 2H decoupling**

- \( \text{hCOcaNH} \rightarrow \text{HN(i)-N(i)-CO(i)} \)
  - Scalar CO-ca
  - Scalar CO-ca semi constant-time
  - Dipolar CO-ca
- \( \text{hCONH} \rightarrow \text{HN(i)-N(i)-CO(i-1)} \)
- \( \text{hCANH} \rightarrow \text{HN(i)-N(i)-CA(i)} \)
- \( \text{hcoCacoNH} \rightarrow \text{HN(i)-N(i)-CA(i-1)} \)
- \( \text{hCAcoNH} \rightarrow \text{HN(i)-N(i)-CA(i-1)} \)
  - Dipolar CA-co
- \( \text{hcaCBcaNH} \rightarrow \text{HN(i)-N(i)-CB(i)} \)
- \( \text{hcaCBcacoNH} \rightarrow \text{HN(i)-N(i)-CB(i-1)} \)
  - Scalar ca-co
  - Dipolar ca-co
- \( \text{hNcocaNH} \rightarrow \text{HN(i)-N(i)-N(i+1)} \)
  - Scalar co-ca
  - Dipolar co-ca
- \( \text{hNcacoNH} \rightarrow \text{HN(i)-N(i)-N(i-1)} \)
  - Dipolar ca-co
Experiments with 2H decoupling

\[ h\text{COcaNH} \rightarrow \text{HN}(i)-\text{N}(i)-\text{CO}(i) \]
Scalar CO-ca

\[ h\text{caCBcaNH} \rightarrow \text{HN}(i)-\text{N}(i)-\text{CB}(i) \]

\[ h\text{caCBcacoNH} \rightarrow \text{HN}(i)-\text{N}(i)-\text{CB}(i-1) \]

4D Experiments

Experiments without 2H decoupling

\[ h\text{COCANH} \rightarrow \text{HN}(i)-\text{N}(i)-\text{CO}(i)-\text{CA}(i) \]
Scalar CO-CA
Scalar CO-CA semi constant-time
Scalar CO-CA with double semi constant-time
Dipolar CO-CA

\[ h\text{COCACoNH} \rightarrow \text{HN}(i)-\text{N}(i)-\text{CO}(i-1)-\text{CA}(i-1) \]
Scalar CO-CA
Scalar CO-CA-co semi constant-time

\[ h\text{CACONH} \rightarrow \text{HN}(i)-\text{N}(i)-\text{CA}(i-1)-\text{CO}(i-1) \]
Dipolar CA-CO

\[ h\text{CBCAcoNH} \rightarrow \text{HN}(i)-\text{N}(i)-\text{CB}(i-1)-\text{CO}(i-1) \]
Scalar ca-CO
Scalar ca-CO semi constant-time
Dipolar ca-CO

\[ h\text{CBCANH} \rightarrow \text{HN}(i)-\text{N}(i)-\text{CB}(i-1)-\text{CO}(i-1) \]
Dipolar CA-CO

\[ h\text{CONCAHA} \rightarrow \text{CO}(i-1)-\text{N}(i)-\text{CA}(i)-\text{HA}(i) \]

\[ h\text{NCOcaNH} \rightarrow \text{N}(i+1)-\text{CO}(i)-\text{N}(i)-\text{HN}(i) \]
Scalar CO-ca
Dipolar CO-ca

\[ h\text{NcoCANH} \rightarrow \text{N}(i+1)-\text{CA}(i)-\text{N}(i)-\text{HN}(i) \]
Scalar co-CA
Dipolar co-CA

\[ h\text{NcoCAnH} \rightarrow \text{HN}(i+1)-\text{N}(i+1)-\text{N}(i)-\text{HN}(i) \]
Scalar co-ca

Experiments with 2H decoupling

\[ h\text{COCANH} \rightarrow \text{HN}(i)-\text{N}(i)-\text{CO}(i)-\text{CA}(i) \]

\[ h\text{caCBcaCONH} \rightarrow \text{HN}(i)-\text{N}(i)-\text{CB}(i-1)-\text{CO}(i-1) \]

\[ h\text{caCBCANH} \rightarrow \text{HN}(i)-\text{N}(i)-\text{CB}(i-1)-\text{CO}(i-1) \]

\[ h\text{CBCAcoNH} \rightarrow \text{CB}(i-1)-\text{CA}(i-1)-\text{N}(i)-\text{HN}(i) \]
Scalar CA-co
Scalar CA-co semi constant-time

\[ h\text{CONCAHA} \rightarrow \text{CO}(i-1)-\text{N}(i)-\text{CA}(i)-\text{HA}(i) \]

\[ h\text{NCOcaNH} \rightarrow \text{N}(i+1)-\text{CO}(i)-\text{N}(i)-\text{HN}(i) \]
Scalar CO-ca
Dipolar CO-ca

\[ h\text{NcoCANH} \rightarrow \text{N}(i+1)-\text{CA}(i)-\text{N}(i)-\text{HN}(i) \]
Scalar co-CA
Dipolar co-CA

\[ h\text{NcoCAnH} \rightarrow \text{HN}(i+1)-\text{N}(i+1)-\text{N}(i)-\text{HN}(i) \]
Scalar co-ca

Side-chain assignment

Experiments without 2H decoupling

\[ h\text{CCH TOCSY} \]
\[ h\text{CCH refINEPT TOCSY} \]
Experiment with 2H decoupling
hCCH refINEPT

Dynamics

Experiments without deuterium decoupling

Dipolar couplings
- hCH REDOR
- hNH REDOR
- hCH INEPT REDOR
- hNH INEPT REDOR

Longitudinal Relaxation
- \( R1 \) hCH 13C → CP
- \( R1 \) hCONH 13CO → CP
- \( R1 \) hCANH 15N → CP
- \( R1 \) hNH 15N → CP
- \( R1 \) hCH 13C → INEPT
- \( T1 \) hCH 1H → CP
- \( T1 \) hCH 1H → INEPT

Transverse Relaxation
- \( R1_{\rho} \) hCH 1H → CP
- \( R1_{\rho} \) hCH 13C → CP
- \( R1_{\rho} \) hCONH 13CO → CP
- \( R1_{\rho} \) hCANH 15N → CP
- \( R1_{\rho} \) hNH 15N → CP
- \( T2 \) hNH 1H → CP
- \( T2 \) hCH 1H → CP

Transverse Relaxation
- hCH EXSY → CP
- hNH EXSY → CP
- Simultaneous hNH hCH EXSY → CP
- CEST hNH → CP

Experiments with deuterium decoupling
- hCH EXSY → CP
- Simultaneous hCH hNH EXSY → CP
- REDOR hCH → CP
- \( R1_{\rho} \) hCH → CP

Distance Measurements

Experiments with deuterium decoupling
- HhNH HHRFDR
- Simultaneous h(C/N)hh(C/N)H HHRFDR
- Simultaneous Hh(C/N)H HHRFDR
- Bass-SD HhCH
HhCONH Hzmix
HhCANH Hzmix

Experiments with deuterium decoupling
Simultaneous h(C/N)hh(C/N)H HHRFDR
Simultaneous Hh(C/N)H HHRFDR

Carbon detection

Calibrations

Hard Pulse
13C Calibration based on hC CP experiment
1H Calibration based on hC CP experiment
13C Direct calibration

Cross Polarization
CP HC optimization
CP HCO optimization
CP HCA optimization
CP NCO optimization
CP NCA optimization

INEPT
hC
NCO INEPT
NCA INEPT
CC INEPT

C-C transfer
CC INEPT
DREAM
DARR CO-CX duration
DARR CA-CO duration
RFDR CO-CX duration
RFDR CA-CO duration
CO-CA BSH CP
CA-CO BSH CP

1D Experiments
13C direct
CP HC
INEPT HC
hNCA → double CP
hNCO → double CP

1D Relaxation Experiments
1H T1 → via CP or INEPT
1H T2 → via CP or INEPT
13C T1 → via CP
13CA T2 → via CP
13CO T2 → via CP

2D Experiments

CC experiments
- hCC → CP DARR
- hCC → CP DREAM
- hCC → CP RFDR
- hCC → CP Alfresco
- hCOCA → CP BSH
- hChhC → CP HHmixing
- hCC → CP INEPT
- CC → Direct INEPT
- hCC → INEPT

HC experiments
- HC HETCOR → CP
- HC HETCOR → INEPT

NC experiments
- hNhhC → CP HHmixing
- hNCA → Double CP
- hNCO → Double CP
- hNCA → INEPT
- hNCO → INEPT
- hNcoCA → CP BSH
- hNcoCA → INEPT
- hNcaCO → CP BSH
- hNcaCO → INEPT

3D Experiments
- hCANCO → CP/CP/CP
- hCONCA → CP/CP/CP
- hNCACB → CP/CP/DREAM
- hCONcaCB → CP/CP/CP/DREAM
- hNCACO → CP/CP/BSH
- hNCOCA → CP/CP/BSH
- hNCOCX → CP/CP/DARR
- hNCACX → CP/CP/DARR
- hNCOCX → CP/CP/RFDR
- hNCACX → CP/CP/RFDR
- hCOCACB → CP/BSH/DREAM

4D Experiments
- hCANCOCX → CP/CP/CP/DARR
- hCONCACX → CP/CP/CP/DARR
- hCONCACB → CP/CP/CP/DREAM
Nitrogen detection

Calibrations
  Hard Pulse
    15N Calibration based on hN CP experiment
    15N Direct calibration
  Cross Polarization
    CP HN optimization
  INEPT
    hN

1D
  HN → CP or INEPT
  15N T1 → CP
  15N T2 → CP

2D
  HN HETCOR → CP or INEPT
  hNN → CP PDSD
  hNhN → CP
Listing S3 : Example of parameter file (“recap file”), which can be saved (and retrieved) from the ssNMRlib window

# System: Avance III HD 600 NMR spectrometer

MAS Probe used : B6292_00230 (PH MASDVT 600S3 TL2 CNDH 1.3mm)
Probe diameter: 1.3 mm
Spinning rate: 55.006 (kHz)
Temperature : 258.0 (K) with Gas Flow measured : 1300.000000 (lph)
Topsin data location : /home/avallet/nmrsolids/2020-06-22_PythonTest_13mm/2
Sample id in sample database : 516

1Hcal Hard_Pulse_on_1H : 3.28 (us) @ 2020-06-24 10:04:05
1H_CPdefcal Hard_Pulse_for_CP_on_1H : 3.28 (us) @ 2020-06-24 10:04:05
13Ccal Hard_Pulse_on_13C : 2.85 (us) @ 2020-06-24 10:07:09
13C_CPdefcal Hard_Pulse_for_CP_on_13C : 2.85 (us) @ 2020-06-24 10:07:09
15Ncal Hard_Pulse_on_15N : 3.40 (us) @ 2020-06-24 10:10:45
15N_CPdefcal Hard_Pulse_for_CP_on_15N : 3.40 (us) @ 2020-06-24 10:10:45

O1_calibration O1p : 4560 (Hz) @ 2020-06-24 10:03:58

Water_Suppression_Delay D 30 : 0.15 (sec) @ 2020-06-24 10:11:07
RFField_for_Water_Suppression CNST 24 : 12 (kHz) @ 2020-06-24 10:11:07

CP_HN_BestRamp Ramp used: ramp90100.100 @ 2020-06-24 10:18:05
TargetField_1H_CP_HN_ramp90100_cal CNST 42 : 84 (kHz) @ 2020-06-24 10:12:05
TargetField_15N_CP_HN_ramp90100_cal CNST 52 : 35.001 (kHz) @ 2020-06-24 10:14:21
CP_HN_duration P 45 : 800 (us) @ 2020-06-24 10:16:35

CP_HCA_BestRamp Ramp used: ramp50100.100 @ 2020-06-24 10:23:45
CP_HCA_duration P 43 : 3000 (us) @ 2020-06-24 10:18:32
TargetField_1H_CP_HCA_ramp50100_cal CNST 41 : 14.454545 (kHz) @ 2020-06-24 10:20:05
TargetField_13C_CP_HCA_ramp50100_cal CNST 31 : 39.998 (kHz) @ 2020-06-24 10:22:25

CP_HCO_BestRamp Ramp used: ramp70100.100 @ 2020-06-24 10:28:26
TargetField_1H_CP_HCO_ramp70100_cal CNST 41 : 84.000000 (kHz) @ 2020-06-24 10:23:58
CP_HCO_duration P 43 : 4750.000000 (us) @ 2020-06-24 10:25:35
TargetField_13C_CP_HCO_ramp70100_cal CNST 31 : 35.002 (kHz) @ 2020-06-24 10:27:05

CP_CN_BestRamp Ramp used: ramp90100.100 @ 2020-06-24 10:33:00
TargetField_15N_CP_CN_ramp90100_cal CNST 53 : 36.363636 (kHz) @ 2020-06-24 10:28:48
CP_CN_duration P 53 : 9368.421053 (us) @ 2020-06-24 10:30:02
TargetField_13C_CP_CN_ramp90100_cal CNST 33 : 16.999 (kHz) @ 2020-06-24 10:31:31

CP_NCA_BestRamp Ramp used: ramp90100.100 @ 2020-06-24 10:39:14
TargetField_15N_CP_NCA_ramp90100_cal CNST 54 : 38 (kHz) @ 2020-06-24 10:33:17
CP_NCA_duration P 35 : 9000.0 (us) @ 2020-06-24 10:35:09
TargetField_13C_CP_NCA_ramp90100_cal CNST 34 : 15.362636 (kHz) @ 2020-06-24 10:37:28

INEPT_delay_HN D 14 : 0.001 (sec) @ 2020-06-24 10:42:08
INEPT_delay_HC  D 13 : 0.001 (sec)  @ 2020-06-24 10:43:35
INEPT_delay_NCO  D 53 : 0.010 (sec)  @ 2020-06-24 10:45:45
INEPT_delay_NCA  D 54 : 0.01 (sec)  @ 2020-06-24 10:47:27
TargetField_BSH_CP_cal  CNST 38 : 21.741217 (kHz)  @ 2020-06-24 10:50:01
TargetField_BSH_CP_duration_cal  P 38 : 4500 (us)  @ 2020-06-24 10:51:52
DARR_COCX_duration  D 5 : 0.2 (sec)  @ 2020-06-24 10:54:02
CP_DREAM_duration  P 17 : 5000 (us)  @ 2020-06-24 10:56:05
TargetField_DREAM  CNST 7 : 6.103091 (kHz)  @ 2020-06-24 10:57:58
RFDR_COCX_duration  D 8 : 0.004 (sec)  @ 2020-06-24 10:59:24
Listing S4 : Adding an experiment in NMRIlib

Routing file :
if 1H detection experiment -> 1Hdetection
if 13C detection experiment -> hCONCaCx4D
if 15N detection experiment -> 15Ndetection

Important parameters :
Parameters that can be popup for checking during the set-up of the experiment

Experiment name
Comments :
Experiment name, reference