B600 – Prodigy Probe Experiment List in IconNMR
January 2021; Lingyang Zhu

Total: 90 experiments

Experiments	Pulse Sequence	Note
Common Experiments		
PROTON	zg30	No spinning
CMCse_1H	zg30	20 Hz spinning
C13CPD_UIUC	zgpg30	13C exp with 1H NOE+Dec, Power-gated decoupling, ns=256
F19	zg	19F exp with 90 pulse No decoupling
P31CPD	zgpg30	31P exp with 1H Noe+Dec, Power-gated decoupling
2H_observe	zg2h	2H exp, No decupling, run it with Pronated solvent
B11ZG	zg	11B exp, no decoupling
Other 1D Experiments		
P_PROTON	zg	qNMR 1H. d1=60s, ns=16, pw90. no spin
P_PROTON_fixgain	zg	qNMR 1H. d1=60s, ns=16, pw90. no spin, fixed gain (use your own gain value)
PROTONT1.1scan	t1ir	1H T1 exp with 10 t1 delays, 10 min d1=10s, ns=1
1H_11B_dec_250msAQ	zgig	1H with B11 decoupling, Aq=0.25s, d1=2. Short acqi to avoid overheating/damage probe
1H_13C_dec_250msAQ	zgig	1H with C13 decoupling, Aq=0.25s, d1=3. Short acqi to avoid overheating/damage probe
1H_31P_dec_250msAQ	zgig	1H with P31 decoupling, Aq=0.25s, d1=2. Short acqi to avoid overheating/damage probe
2H_with_1HdecIG	zgig	2H observed with Inverse-gated 1H decoupling
B11IG	zgig	11B observed with inverse-gated 1H decoupling
C13CPD	zg	13C exp with 1H NOE and 1H decoupling, ns=1024
C13GD	zg30	13C exp, no decoupling
C13IG	zgig	13C exp with inverse-gated decoupling and 30 degree pulse
C13IG.pw90	zgig	13C exp wth inverse-gated decoupling and 90 degree pulse
C13IG.pw90_fixgain	zgig	13C exp wth inverse-gated decoupling and 90 degree pulse, and a fixed gain value
13C_2H_dec	zgig2h	13C exp with 2H decoupling only. D1=5s, AQ=0.91s 2H covers only 4ppm, put **O2P** at the value of the 2H peak to be decoupled. Effective 2H decoupling covers only ~ 4ppm to avoid overheating
13C_1H2H_dec	zgigf2igf3_1H2Hdec	13C exp with both 1H and 2H decoupling. D1=5s, AQ=0.91s. 2H covers only 4ppm, put **O3P** at the value of the 2H peak to be decoupled. Effective 2H decoupling covers only ~ 4ppm to avoid overheating
C13APT	jmod	13C Attached Proton Test. CH/CH3 positive, CH2/C negative
C13DEPT135	deptsp135	DEPT135, CH/CH3 positive, CH2 negative
C13DEPT90	deptsp90	DEPT 90, CH only

C13DEPT45	deptsp45	DEPT45, CH/CH2/CH3 all positive
P31	zg30	31P exp. No decoupling
P31IG.pw90	zgig	31P exp. with inverse-gated 1H decoupling and 90 pulse
P31IG.pw90_fixgain	zgig	31P exp. with inverse-gated 1H decoupling and 90 pulse with a fixed gain value
HMQC1D	hmqcndrd1d	1D version of 1H-13C HMQC
2D experiments		
COSY_UIUC	cosygpppqf	8 mins Gradient selected COSY
dqfCOSY_UIUC	cosygpmfphpp	38 mins double quantum filtered COSY
TOCSY_UIUC	mlevphpp	20 mins phase sensitive TOCSY, ns=2, 1TD=256, mixing time (d9) =0.08s, States-TPPI
TOCSY_UIUC_NUS	mlevphpp	20 mins non-uniform sampling, ns=2, 1TD=512, mixing time (d9) =0.08s. States-TPPI
NOESY_UIUC	noesygpphpp	1.5hr phase sensitive NOESY, ns=8, 1TD=256, mixing time (d8)=0.5s. STATE-TPPI
NOESY_UIUC_NUS	noesygpphpp	1.5hr non-uniform sampling NOESY, ns=8, 1TD=512, mixing time (d8)=0.5s. STATE-TPPI
ROESYPHSW	roesyphpp.2	42 mins Phase sensitive ROESY, default mixing time (p15): 200ms. ns=4, 1TD=256. STATE-TPPI
HSQC_UIUC	hsqcedetgpsisp2.3	30 mins HSQC_EDITED, Echo-Anti-echo. ns=4, 1TD=256
HSQC_UIUC_NUS	hsqcedetgpsisp2.3	12 mins non-uniform sampling, HSQC_EDITED, Echo-Anti-echo. ns=4, 1TD=400. NUS: 50%
HMBC_UIUC	hmbcgpndqf	1hr HMBC, ns=8, 1TD=256. QF mode (magnitude mode)
HMBC_UIUC_NUS	hmbcetgpl3nd	1hr 45min non-uniform sampling HMBC with 3 fold Low-pass filters. Echo-Anti-echo. ns=16, 1TD=512. D1=2s
CMSse_HSQC	hsqcedetgpsisp.3	2hr HSQC with ns=8, 1TD=400, Echo-Anti-echo. Volume Integrals more closely match1D #H.
CMCse_HMBC	Hmbcetgpl3nd	2hr HMBC with 3 fold Low-pass filter. Echo/Anti-echo. ns=8, 1TD=512, d1=1.5s
HSQC_TOCSY_UIUC	Hsqcdietgpsisp.2	38 mins HSQC then TOCSY exp, Echo-Anti-echo. ns=4, 1TD=256, TOCSY mixing 60ms (d9). d1=2s
HMBC_31P	hmbcgpndqf	1H-31P HMBC,w/1H sw optimization. default Jnxh=18Hz (cnst13)
HMBC_31P_metal	hmbcgpndqf	1H-31P HMBC, No 1H sw optimization, choose your own 1H SW. default Jnxh=18Hz (cnst13)
HSQCETGP_15N	hsqcetgpsi2	1H-15N HSQC, No 1H sw optimization (choose your own 1H SW). Default J1xh=90Hz (cnst2)
HMBCGP_15N	hmbcgpndqf	1H-15N HMBC, w/ 1H sw opt. Default Jnxh=5Hz (cnst13)
CMCse_ADEQUATE	adeq11etgprdsp	20 hrs 1H-13C refocused 1,1-Adequate, 1H sw optimized, with ns=128, 1TD=256. Default J1xh=145 Hz (cnst2), Jcc=45 Hz (cnst3), cnst11=8 (multiplicity selection, 8 for CHn, 4 for CH)
CMCse_ADEQ_fixedSW	adeq11etgprdsp	20 hrs 1H-13C refocused 1,1-Adequate, choose your own 1H SW, with ns=128, 1TD=256. Default

		J1xh=145 Hz (cnst2), Jcc=45 Hz (cnst3), cnst11=8 (multiplicity selection, 8 for CHn, 4 for CH)
CMCse_INAD	inadphsp	58hrs 13C-13C 2D phase sensitive INADEQUATE, with d1=3s, ns=512, 1TD=128 (States-TPPI). Fixed 13C SW (1SW=2*SW). default Jcc=50 Hz (cnst3)
Water suppression 1D experiments		
ZGPR	zgpr	1H exp with pre-saturation (d1) at o1p (ppm) peak.
ZGESGP	zgesgp	Water suppression at o1p with exciting sculpting gradient (best)
Zgesgp_pulsecal	zgesgp	Water suppression at o1p with exciting sculpting gradient, pw90 calibration. For water sample only
Zgesgp_pulsecal_o1	zgesgp	Water suppression at o1p with exciting sculpting gradient, pw90 calibration, and o1p optimization, For water sample only
WATERSUP	noesygppr1d	Pre-saturation during relaxation delay and mixing time and spoil gradient at op1 peak (ppm).
P3919GP_UIUC	P3919gp	Most common Watergate suppression 3-9-19 at o1p peak (d9=0.16667ms)
MULTIPRESAT	1c1pnps	Suppress **2** tallest peaks with shaped pulsed pre-saturation
Water suppression 2D experiments		
dqfCOSY_ES_UIUC	cosydfesgpph	Double quantum filtered COSY with Solvent suppression with exciting sculpting at o1p. State-TPPI in F1. ns=16*n, choose your own SW, make 1SW=SW
TOCSY_presat_UIUC	Mlevphpr.2	TOCSY with pre-saturation at o1p peak, State-TPPI in F1. choose your own 1H SW, make 1SW=SW. ns=16*n, default mixing 0.08s (d9)
TOCSY_watergate_UIUC	dipsi2gpph19	TOCSY with Watergate solvent suppression at o1p peak, State-TPPI in F1. choose your own 1H SW, make 1SW=SW. ns=8*n, default mixing 0.08s (d9)
NOESY_watergate_UIUC	Noesygpph19	NOESY with Watergate solvent suppression at o1p peak, State-TPPI in F1. choose your own 1H SW, make 1SW=SW. ns=8*n, default mixing 0.5s (d8)
ROESY_watergate_UIUC	Roesygpph19.2	ROESY with Watergate solvent suppression at o1p peak, choose your own 1H SW, make 1SW=SW. default mixing 200ms
HSQC_fixSW_UIUC	hsqcedetgpsisp2.3	1H-13C HSQC_EDITED, Echo-Anti-echo. The pp itself effectively suppresses solvent peak. choose your own 1H SW, default J1xh=145 Hz (cnst2)
HMBC_presat_UIUC	hmbcgplpndprgf	1H-13C HMBC with pre-saturation at o1p peak, QF mode in F1. Set your own 1H SW, default Jnxh=8 Hz (cnst13)
HSQC_15N_presat_UIUC	hsqcphpr	1H-15N HSQC with presat solvent suppression at o1p peak, States-TPPI in F1. set your own 1H SW, default J1xh=90 Hz (cnst2)
HMBC_15N_presat_UIUC	hmbcgplpndprgf	1H-15N HMBC with Watergate solvent suppression at o1p peak, QF mode. set your own 1H SW, default Jnxh=5 Hz (cnst13)

HMBC_31P_presat_UIUC	hmbcgplpndprgf	1H-31P HMBC with solvent pre-saturation at o1p peak, Magnitude mode (QF) in F1. use your own 1H SW, default Jnxh=18 Hz (cnst13)
Other Nuclei		
7Li_zg	zg	7Li exp with no decoupling
N15	zg	15N exp with no decoupling
N15IG	zgig	15N exp with inverse-gated 1H decoupling. D1=10, AQ=0.54s
N15INEPT	ineptrd	15N INEPT wth 1H decoupling during acquisition. cnst11=6 (XH, XH2, XH3 all positive), cnst2=90Hz (J1xh)
NA23ZG	zg	23Na exp with no decoupling
AL27ND	zg	27Al exp with no decoupling
SI29IG	zgig	29Si exp with inverse-gated 1H decoupling
SI29_zg	zg	29Si exp with no decoupling
Cl35ZG	zg	35Cl exp with no decoupling
59Co_zg	zg	59Co exp with no decoupling
GA71ZG	zg	71Ga exp with no decoupling (not ready yet, need sample)
SE77ZG	zg	77Se exp with no decoupling
CD113ZG	zg	113Cd exp with no decoupling
115In_zg	zg	115In with no decoupling
SN119IG	zg	119Sn with inverse-gated 1H decoupling (not ready yet, need sample)
Pt195ZG	zg	195Pt with no decoupling
Multi-receiver experiments		
DR_COSYHC	dr_pansy_cosy	Dual-receive 2D H-H COSY and 2D 1H-13C HETCOR experiment (2 spectra)
DR_TOCSY_HETCOR	dr_tocsy_hetcor	Dual-receive 2D H-C HETCOR and H-H TOCSY experiment (2 spectra)
Selective 1D Experiments		
TOCSY1D_Icon	seldigpzs	1H selective 1D TOCSY, irradiation at cnst21 (ppm) peak, default mixing (d9), 0.08s
NOESY1D_Icon	selnogpzs.2	1H selective 1D NOESY, irradiation at cnst21 (ppm) peak, default mixing (d8), 0.5s
ROESY1D_Icon	selrogp	1H selective 1D ROESY, irradiation at cnst21 (ppm) peak, default mixing 200 ms