

16 (R²=Ph) ROESY

Yadav67/cdc13 roesy

Current Data Parameters
 USER NAME qiao
 EXPNO 70004v1
 PROCNO 4

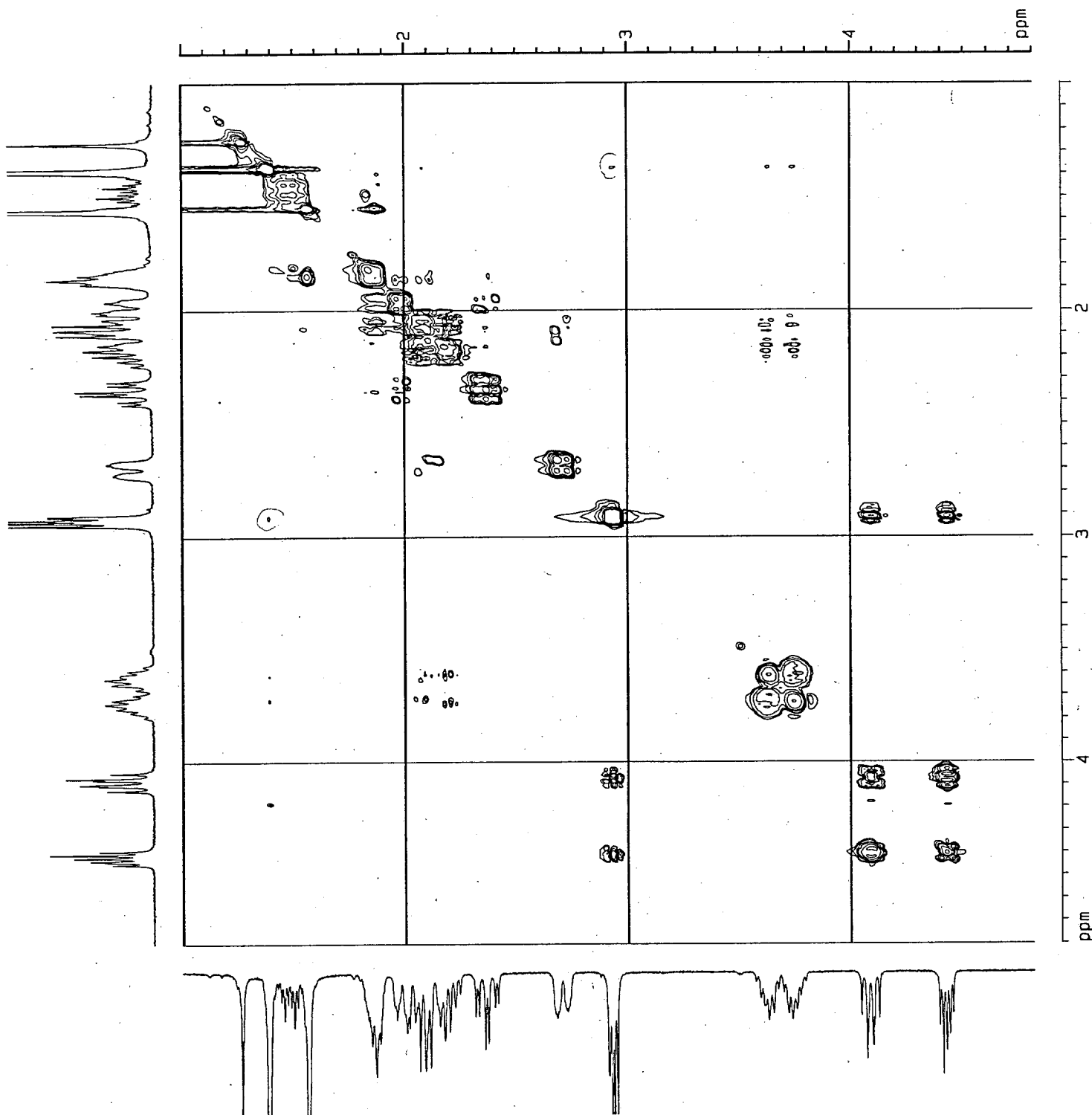
F2 - Acquisition Parameters
 Date_ 970504
 Time 18.47
 INSTRUM amx300
 PROBHD 5 mm Multinu
 PULPROG roesy1p
 TO 1024
 SOLVENT cdc13
 NS 56
 DS 4
 SWH 2101.723 Hz
 FIDRES 2.052464 Hz
 AQ 0.2440854 sec
 RG 8192
 CW 237.900 usec
 DE 339.86 usec
 TE 300.0 K
 HL1 0 dB
 D1 1.5000000 sec
 D12 0.000200 sec
 P1 5.80 usec
 D13 0.000040 sec
 D0 0.000030 sec
 HL4 30 dB
 P15 400000.00 usec
 DE 339.86 usec
 SF01 300.1362668 MHz
 NUCLEUS 1H
 IN0 0.0002399 sec

F1 - Acquisition parameters
 ND0 2
 TO 512
 SF01 300.1362 MHz
 FIDRES 4.103452 Hz
 SW 7.000 ppm

F2 - Processing parameters
 SI 1024
 SF 300.1370059 MHz
 NS 2
 SSB 0
 LB 0
 GB 0
 PC 1.40
 SR 509.95 Hz

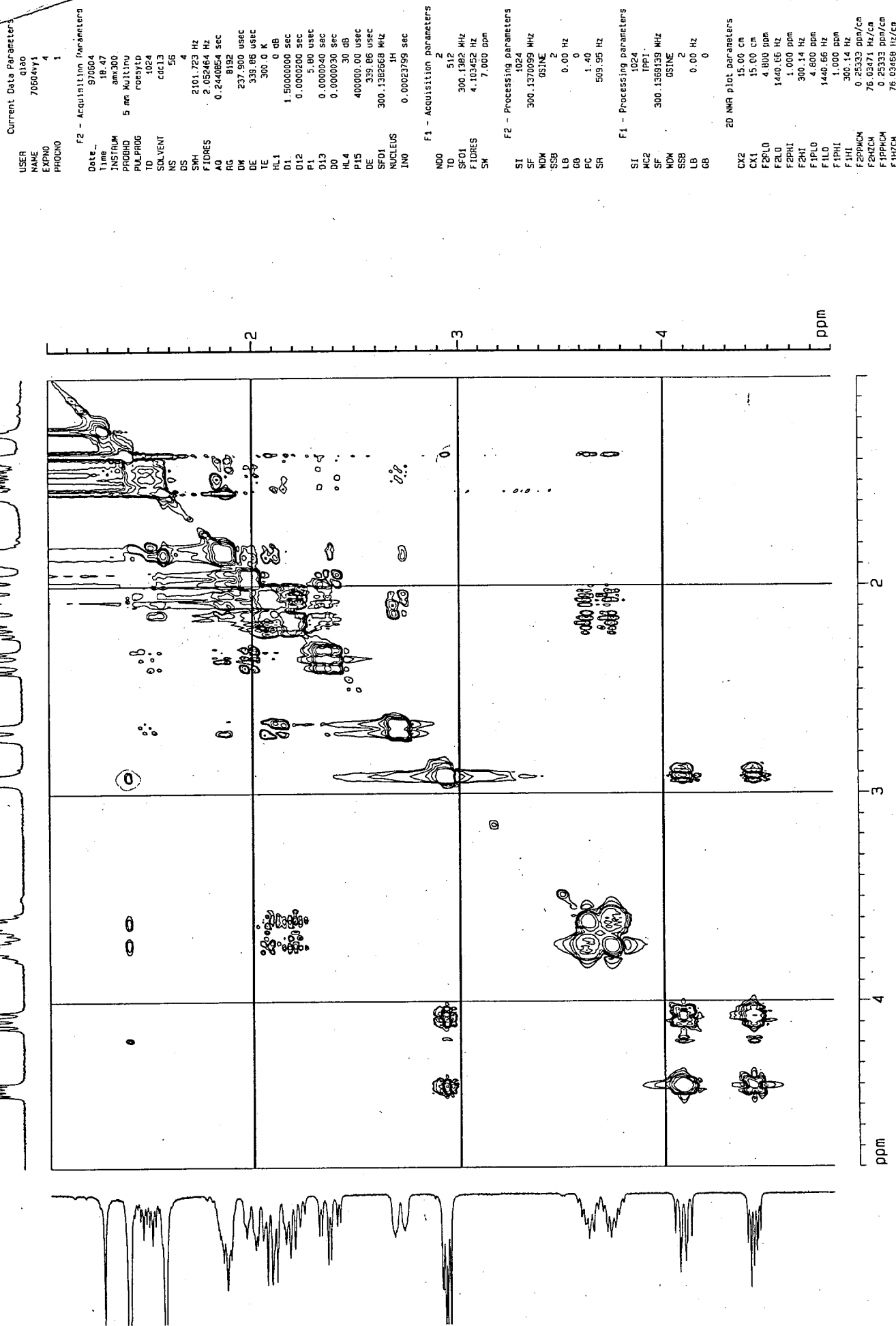
F1 - Processing parameters
 SI 1024
 MC2 1024
 SF 300.1369139 MHz
 NS 2
 SSB 0
 LB 0
 GB 0

2D NMR plot parameters
 CX2 15.00 cm
 CX1 15.00 cm
 F2PL0 4.803 ppm
 F2L0 1441.59 Hz
 F2PH1 0.994 ppm
 F2H1 298.37 Hz
 F1PL0 4.802 ppm
 F1L0 1441.32 Hz
 F1PH1 0.995 ppm
 F1H1 298.51 Hz
 F2PMON 0.25393 ppm/Ca
 F2H2CA 76.21464 Hz/Ca
 F1PMON 0.25384 ppm/Ca
 F1H2CA 76.18742 Hz/Ca



16 (REF) ROESY

Yadav67/cdc13 roesy

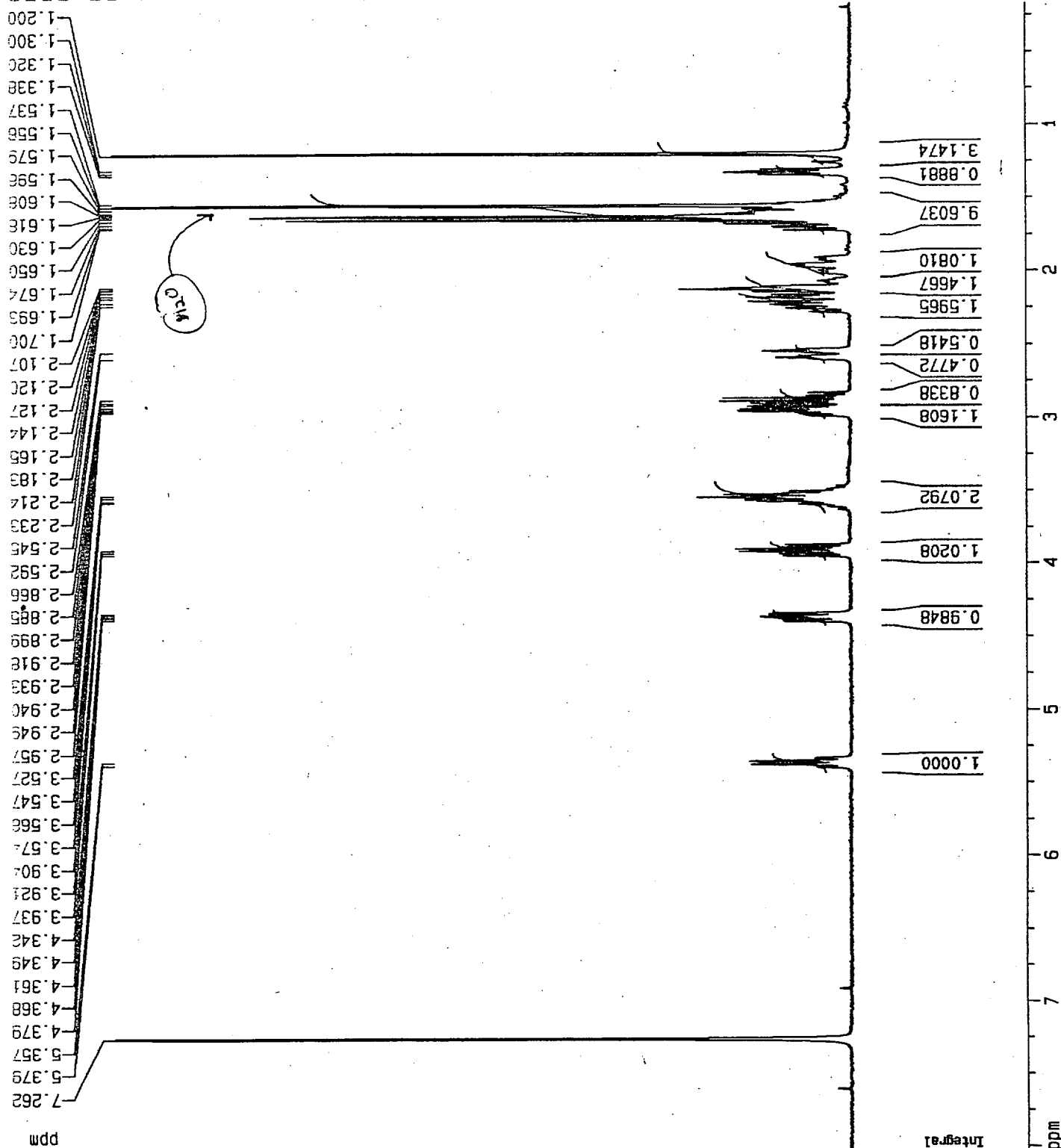


Current Data Parameters
NAME J63.ha
EXPNO 1
PROCNO 1

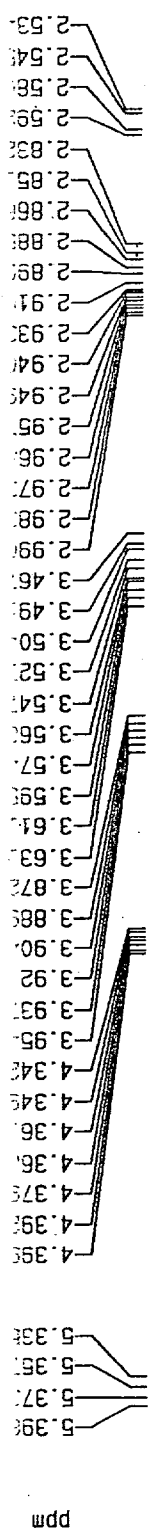
F2 - Acquisition Parameters
Date 970401
Time 10.14
PULPROG zg
SOLVENT CDC13
AQ 3.4015260 s
FIDRES 0.147002 Hz
DM 103.8 us
RG 674.7
NUCLEUS 1H
D1 3.0030000 s
P1 6.9 us
DE 4.5 us
SF01 300.1318393 MHz
SWH 4816.95 Hz
TD 32769
NS 16
DS 0

18 (R=Me)

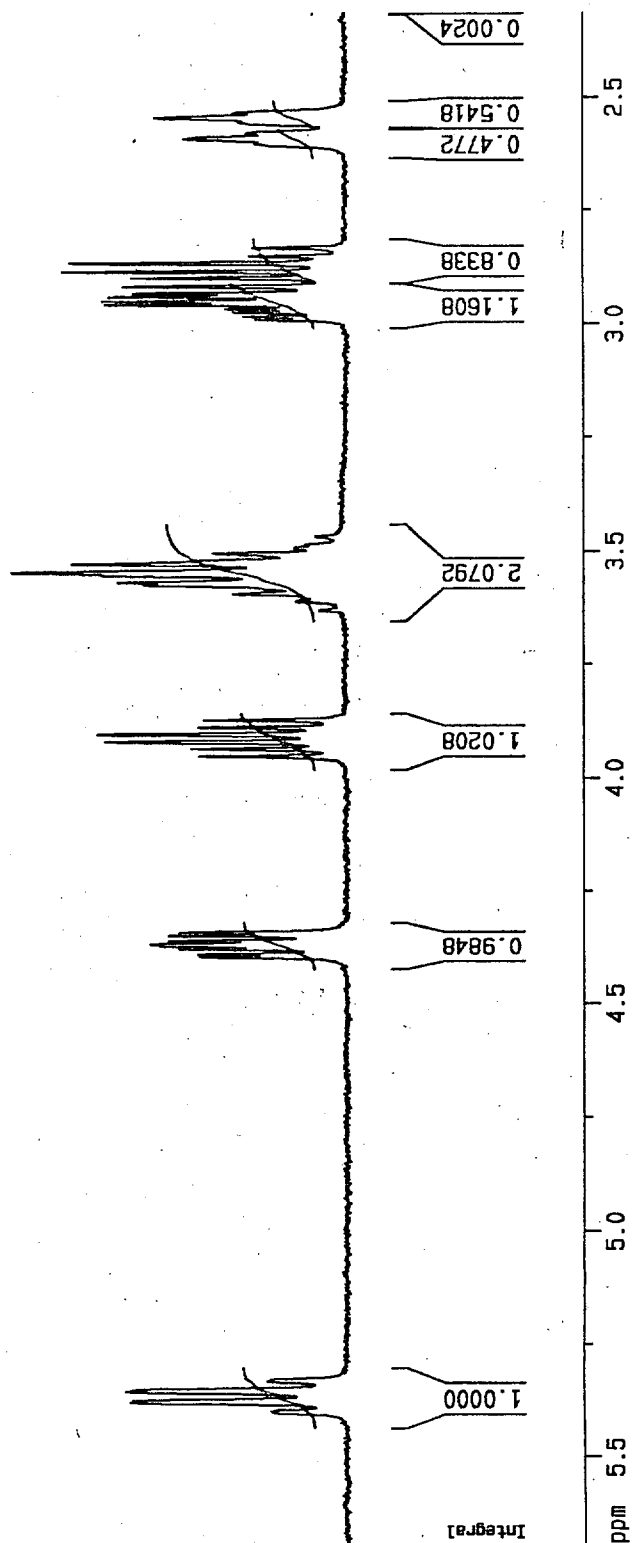
H₁



89

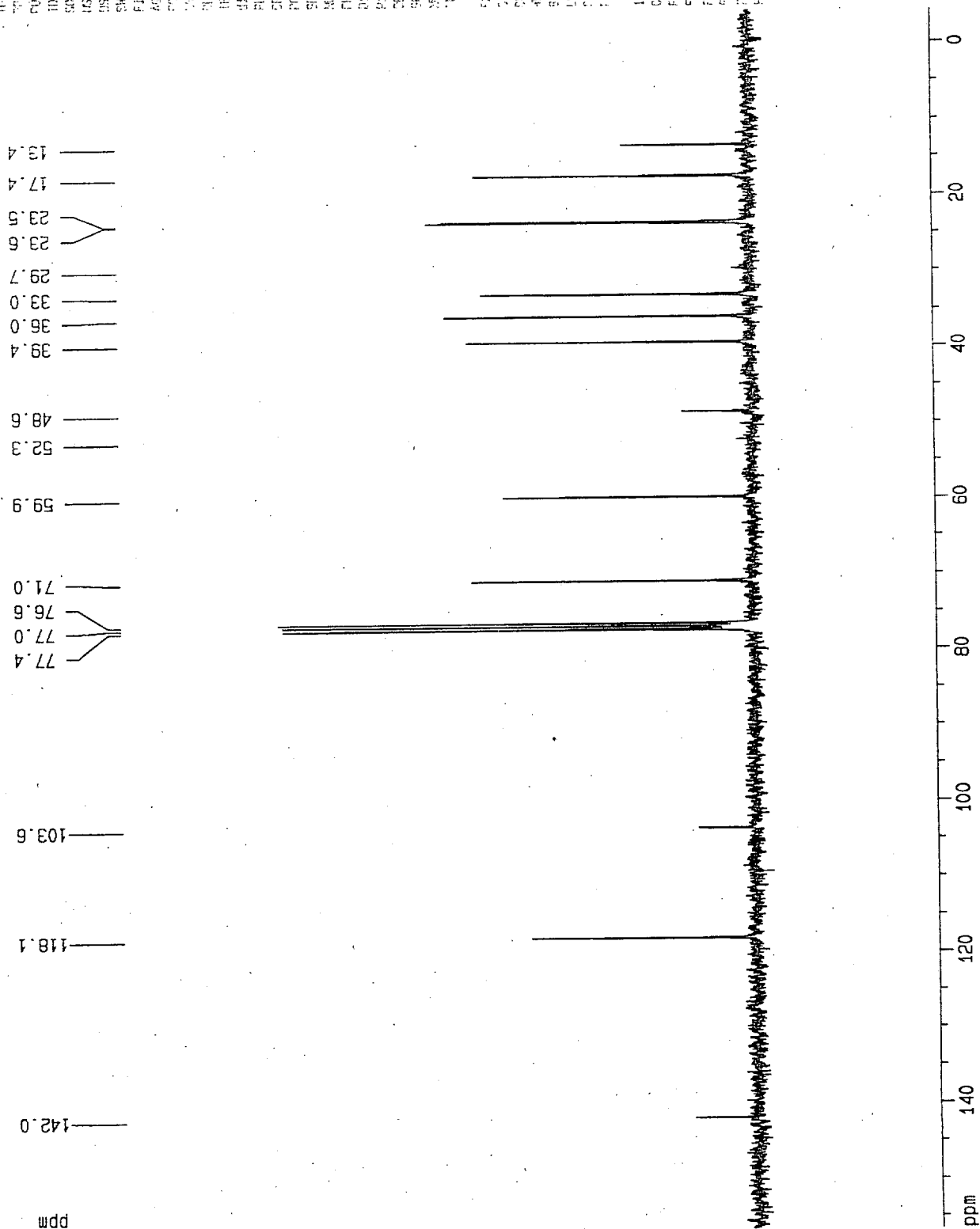


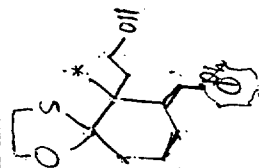
18 (R=Me)
H₁



13C

SP - Acquisition Parameters
 Date: 07/07/97
 Time: 10:37
 Operator: J-68
 Sample: 5 mg/mL in CDCl₃
 PULPROG: zgpg30
 INSTRUM: spect
 FIDRES: 0.091337 Hz
 AQ: 0.00000000
 RG: 327.68
 SI: 327.68
 SF: 125.761 MHz
 DS: 4
 SSF: 31.440 MHz
 HMQC: 13C-13C
 HMB: 13C-13C
 F1F2: 0.00000000
 F2: 125.761 MHz
 F2 - Processing parameters
 SI: 327.68
 SF: 125.761 MHz
 DS: 4
 SSF: 31.440 MHz
 HMQC: 13C-13C
 HMB: 13C-13C
 F1F2: 0.00000000
 F2: 125.761 MHz
 ID: 13C NMR parameters
 CX: 125.761 MHz
 FID: 125.761 MHz
 F1: 125.761 MHz
 F2: 125.761 MHz
 J-68
 PSIC NO. 9568202 F
 007 00000 F





V Yadav Sample: J-82/cdcl3
d1=5s

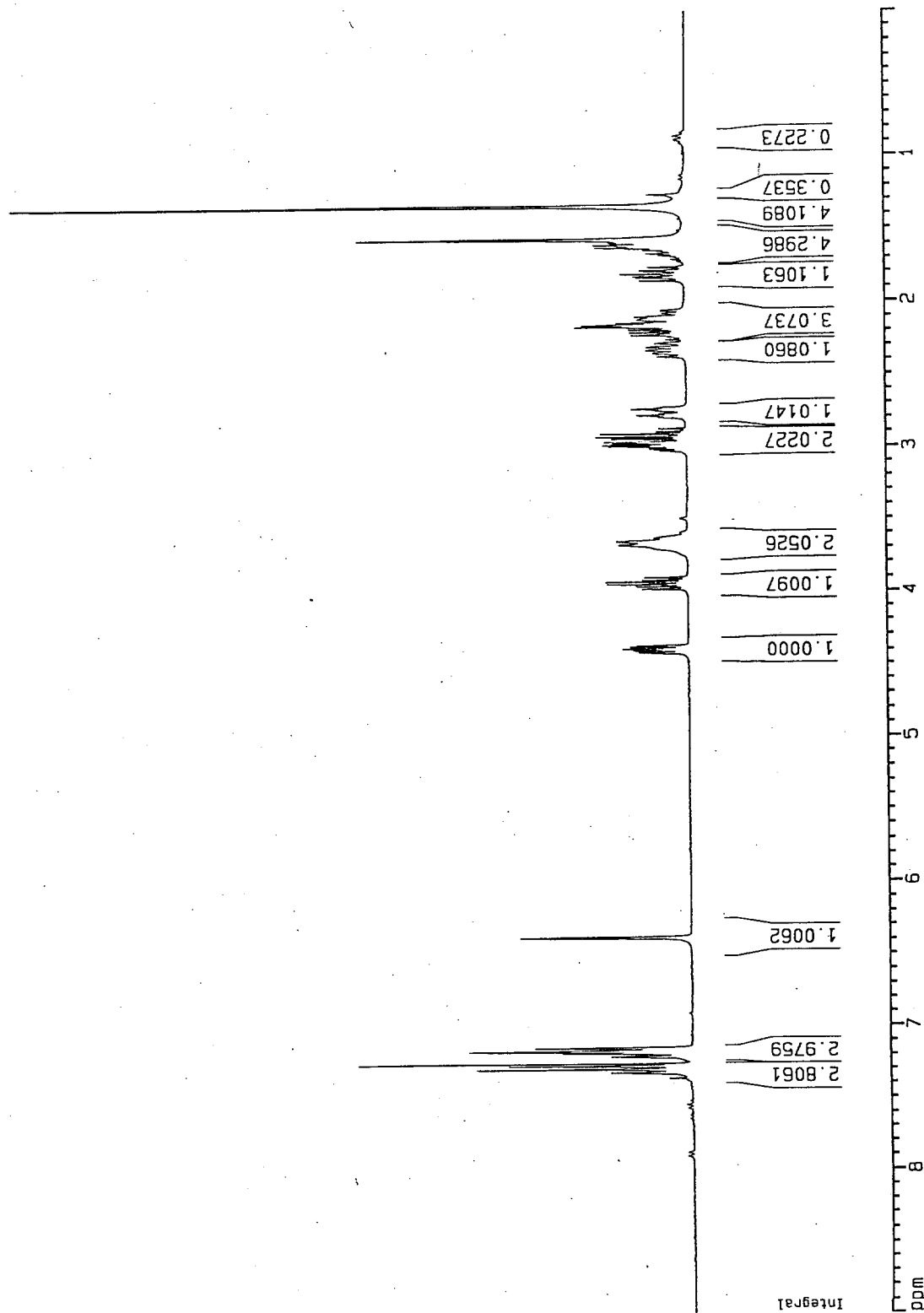
18 (R=Ph)

H

Current Data Parameters
USER qiao
NAME 70805vy1
EXPNO 2
PROCNO 1

F2 - Acquisition Parameters
Date_ 970805
Time 10.59
INSTRUM amx300
PROBHD 5 mm Multinu
PULPROG zg30
TD 16384
SOLVENT CDCl3
NS 64
DS 2
SWH 4202.034 Hz
FIDRES 0.256472 Hz
AQ 1.9499340 sec
RG 2048
DW 118.990 usec
DE 148.74 usec
TE 300.0 K
HL1 0 dB
D1 5.0000000 sec
P1 5.80 usec
DE 148.74 usec
SF01 300.1383000 MHz
NUCLEUS (1H)

F2 - Processing parameters
SI 16384
SF 300.1370059 MHz
WDW no
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
SR 505.91 Hz
1D NMR plot parameters
CX 20.00 cm
F1P 9.000 ppm
F1 2701.23 Hz
F2P 0.000 ppm
F2 0.00 Hz
PPMCM 0.45000 ppm/cm
HZCM 135.06165 Hz/cm



18 (R=Ph)

13C

V YADAV/J-82/CDC13

Current Data Parameters
 USER: qina
 NAME: 70805vy1
 EXPNO: 6
 PROCNO: 1

F2 - Acquisition Parameters

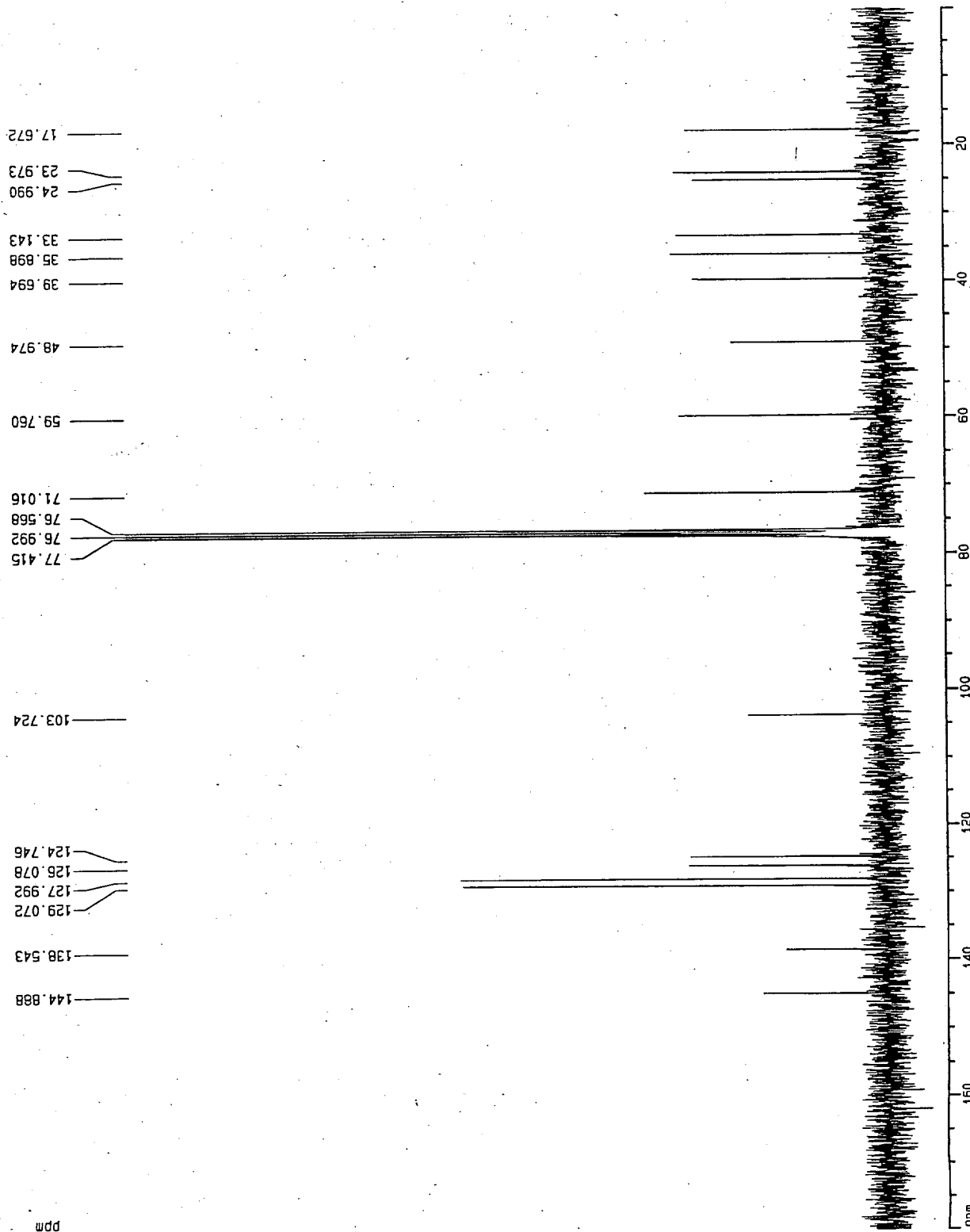
Date_: 970813
 Time: 13.18
 INSTRUM: amx300
 PROBD: 5 mm Multinu
 PULPROG: zgpg30
 TD: 32768
 SOLVENT: CDCl3
 NS: 4349
 DS: 0
 SWH: 18115.941 Hz
 FIDRES: 0.552855 Hz
 AQ: 0.9044520 sec
 RG: 32768
 DW: 27.600 usec
 DE: 100.00 usec
 TE: 300.0 K
 D11: 0.0300000 sec
 CPDPRG: waltz16
 P31: 72.00 usec
 S2: 22 dB
 HL1: 1 dB
 D1: 2.0000000 sec
 P1: 7.80 usec
 DE: 100.00 usec
 SF01: 75.4776863 MHz
 NUCLEUS: ¹³C

F2 - Processing parameters

SI: 32768
 SF: 75.4695111 MHz
 WDW: EM
 SSB: 0
 LB: 1.00 Hz
 GB: 0
 PC: 1.40
 SR: 158.13 Hz

1D NMR plot parameters

CX: 20.00 cm
 F1p: 180.000 ppm
 F1: 13584.51 Hz
 F2p: 0.000 ppm
 F2: 0.00 Hz
 PPMCM: 9.00000 ppm/cm
 HZCM: 679.22559 Hz/cm



18 (R=Ph)

COSY

V Yadav Sample: J-82/COC13
COSY45

Current Data Parameters

USER qiao
NAME 708054Y1
EXPNO 3
PROCNO 1

F2 - Acquisition Parameters

Date_ 970805
Time 11:29
INSTRUM amx300
PROBHD 5 mm Multinu
PULPROG zgpg30
TD 512
SOLVENT COC13
NS 48
DS 2
SWH 2251.238 Hz
FIDRES 4.356550 Hz
AQ 0.1141594 sec
RG 2048
DM 222.100 usec
DE 317.29 usec
TE 300.0 K
HL1 0 dB
D1 1.00000000 sec
P1 5.80 usec
DD 0.000030 sec
DE 317.29 usec
SFO1 300.136220 MHz
NUCLEUS 1H
INQ 0.00044424 sec

F1 - Acquisition parameters

NO0 1
TD 256
SFO1 300.1363 MHz
FIDRES 8.79316 Hz
SN 7.500 dpm

F2 - Processing parameters

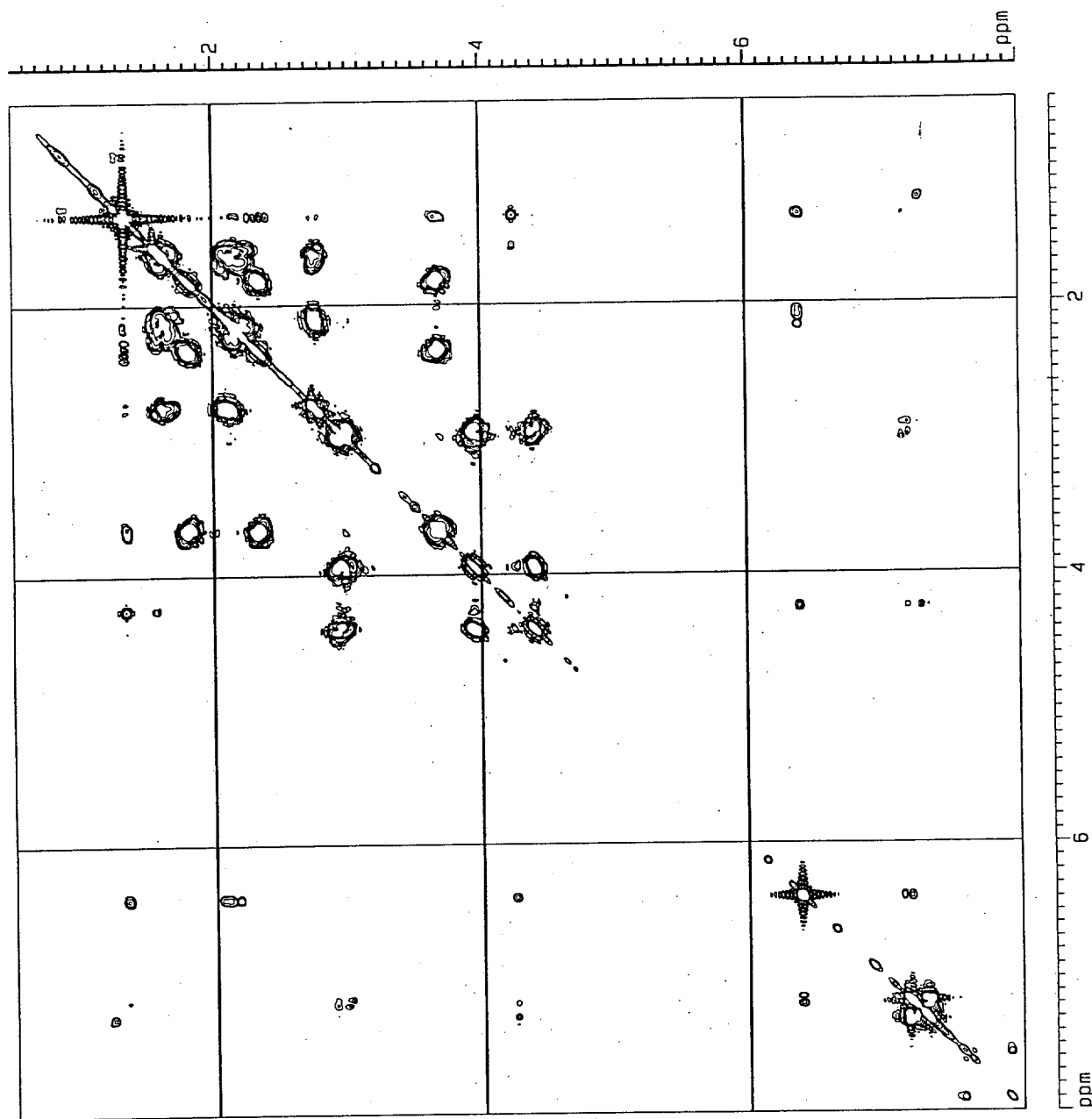
SI 1024
SF 300.1370064 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
SR 506.40 Hz

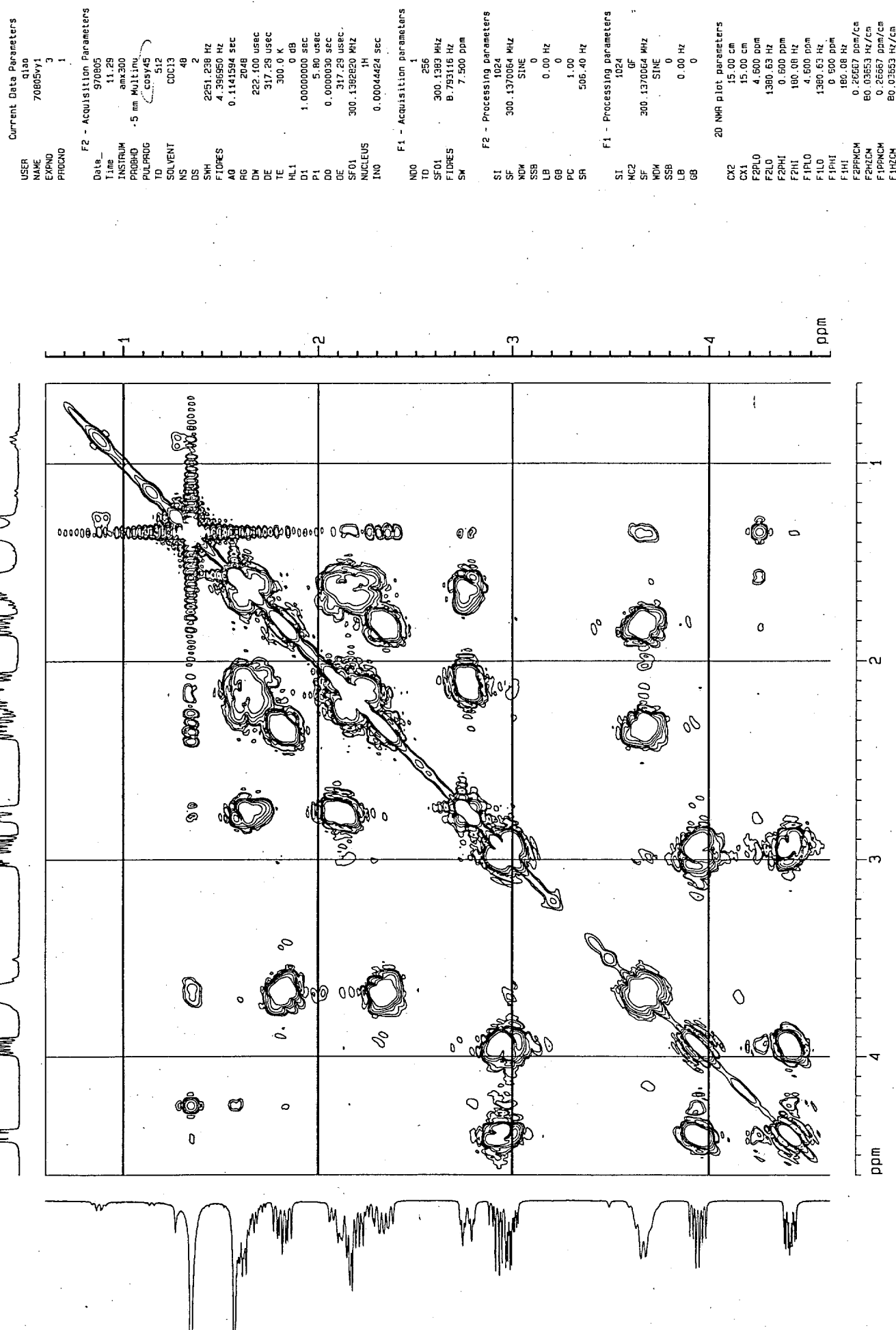
F1 - Processing parameters

SI 1024
SF 300.1370064 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0

2D NMR plot parameters

CX2 15.00 cm
CX1 15.00 cm
F2PL0 8.000 dpm
F2L0 2401.22 Hz
F2PHI 0.500 dpm
F2PI 149.99 Hz
F1PL0 8.000 dpm
F1L0 2401.12 Hz
F1PHI 0.500 dpm
F1PI 150.09 Hz
F2PNCM 0.50005 dpm/cm
F2HCM 150.08253 Hz/cm
F1PNCM 0.50000 dpm/cm
F1HCM 150.05917 Hz/cm



18 (R=Ph)
COSYV Yadav Sample: J-82/COC13
COSY45

18 (R=Ph)
COSYV Yadav Sample: J-82/CCl₃
COSY45

Current Data Parameters

USER qlao
NAME 70805vy1
EXPNO 3
PROCNO 1

F2 - Acquisition Parameters

Date_ 970805
Time 11.29
INSTRUM emx300
PROBHD 5 mm Multinu
PULPROG zgpg30
TO 512
SOLVENT CCl₃
NS 48
DS 2
SWH 2251.238 Hz
FIDRES 4.396950 Hz
AQ 0.1141594 sec
RG 2048
DN 222.100 usec
DE 317.29 usec
TE 300.0 K
HL1 0 dB
D1 1.00000000 sec
P1 5.80 usec
D0 0.0000030 sec
DE 317.29 usec
SF01 300.1382820 MHz
NUCLEUS 1H
IN0 0.0004424 sec

F1 - Acquisition parameters

NO0 1
TD 256
SF01 300.1383 MHz
FIDRES 8.793116 Hz
SW 7.500 ppm

F2 - Processing parameters

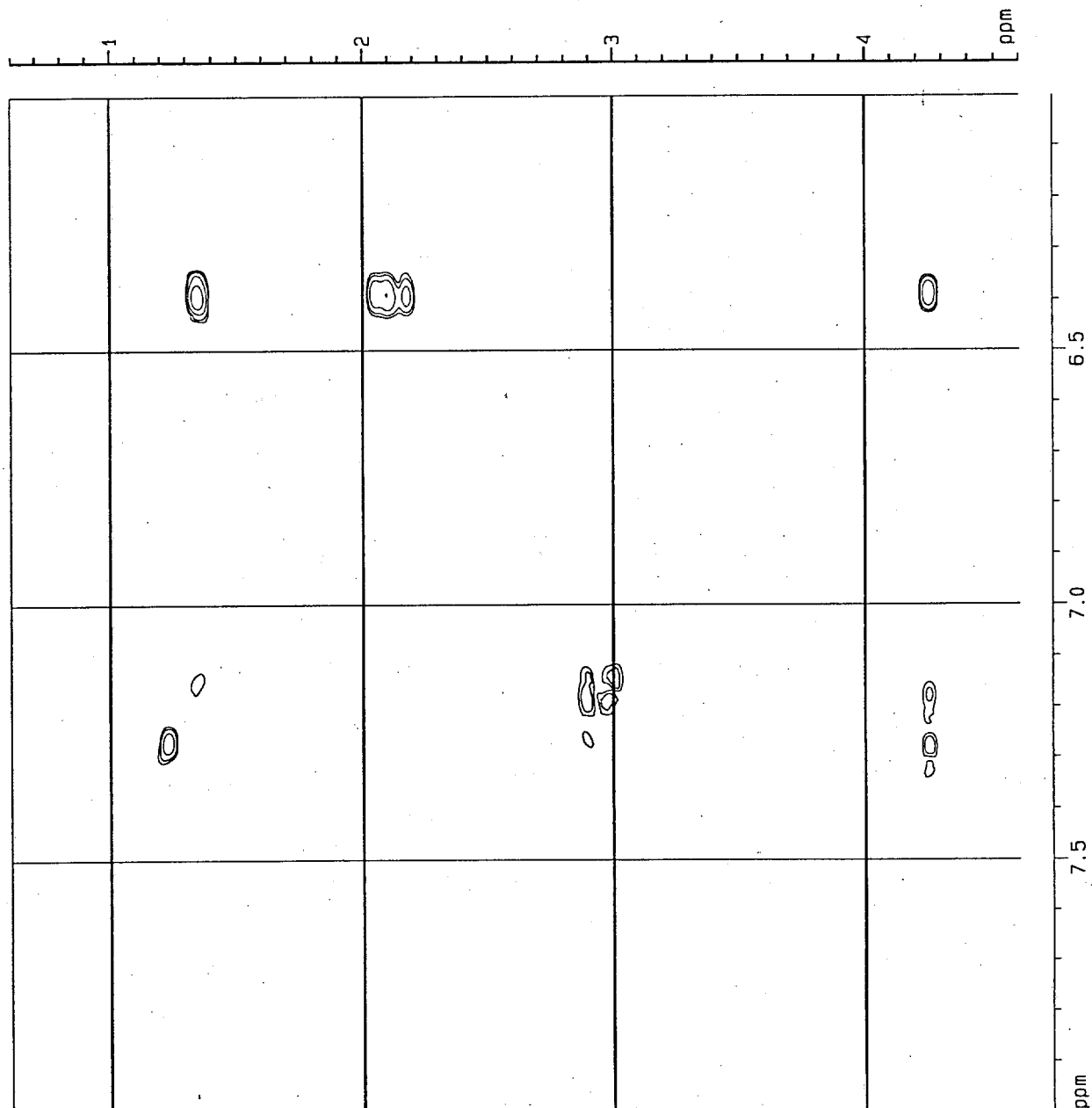
SI 1024
SF 300.1370064 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
SR 506.40 Hz

F1 - Processing parameters

SI 1024
MC2 GF
SF 300.1370064 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0

2D NMR plot parameters

CX2 15.00 cm
CX1 15.00 cm
F2PLO 8.000 ppm
F2LO 2401.10 Hz
F2PHI 6.060 ppm
F2H1 1000.82 Hz
F1PLO 4.600 ppm
F1LO 1360.63 Hz
F1PHI 0.600 ppm
F1H1 180.08 Hz
F2PNCM 0.13333 ppm/cm
F2H2CM 40.01926 Hz/cm
F1PNCM 0.26567 ppm/cm
F1H2CM 80.03553 Hz/cm



18 ($R=Ph$)
COSY

V Yadav Sample: J-82/COC13
COSY45

Current Data Parameters
USER Q180
NAME 70805VY1
EXPNO 3
PROCNO 1

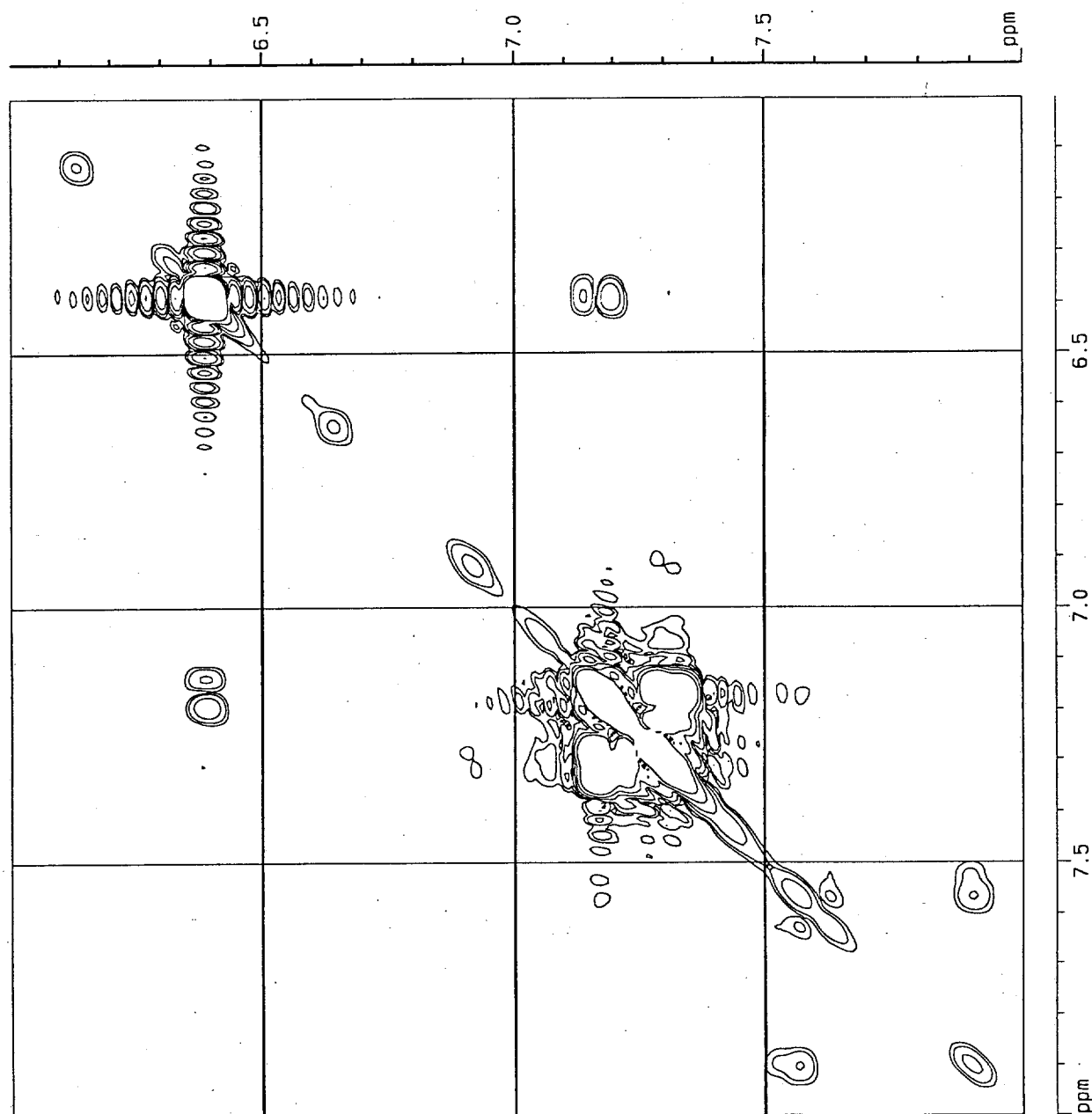
F2 - Acquisition Parameters
Date_ 970805
Time 11.28
INSTRUM amx300
PROBHD 5 mm Multinu
PULPROG (cosy45)
TO 512
SOLVENT COC13
NS 48
DS 2
SWH 2251.238 Hz
FIDRES 4.395550 Hz
AQ 0.1141594 sec
RG 2048
DM 222.100 usec
DE 317.29 usec
TE 300.0 K
HL1 0 dB
O1 1.00000000 sec
P1 5.80 usec
DD 0.0000030 sec
DE 317.29 usec
SFO1 300.1362820 MHz
NUCLEUS 1H
INQ 0.00044624 sec

F1 - Acquisition parameters
ND0 1
TD 256
SFO1 300.1363 MHz
FIDRES 8.793116 Hz
SW 7.500 ppm

F2 - Processing parameters
SI 1024
SF 300.1370064 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0
PC 1.00
SC 506.40 Hz
SR

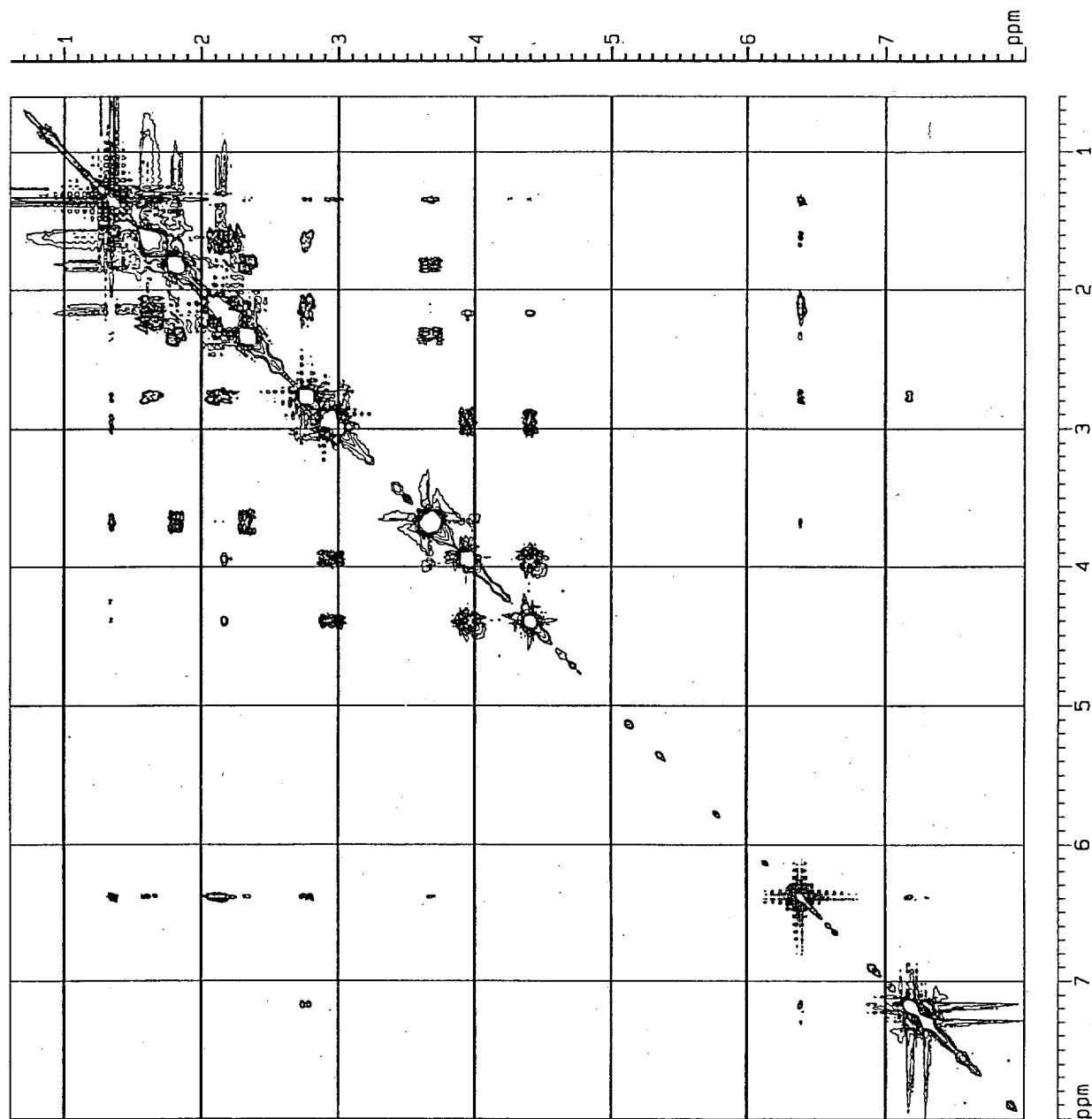
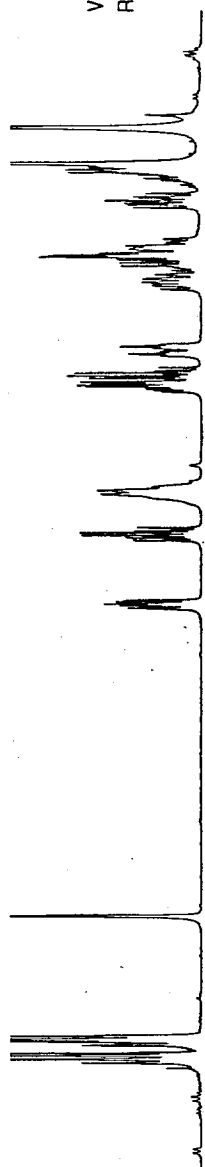
F1 - Processing parameters
SI 1024
MC2 GF
SF 300.1370064 MHz
WDW SINE
SSB 0
LB 0.00 Hz
GB 0

2D NMR plot parameters
CX2 15.00 cm
CX1 15.00 cm
F2PLO 8.000 ppm
F2LO 2401.10 Hz
F2PHI 6.000 ppm
F2H1 1800.82 Hz
F1PLO 8.000 ppm
F1LO 2401.10 Hz
F1PHI 6.000 ppm
F1H1 1800.82 Hz
F2PPMCH 0.13333 ppm/cm
F2HZCM 40.01826 Hz/cm
F1PPMCH 0.13333 ppm/cm
F1HZCM 40.01826 Hz/cm



18 (R=Ph)
ROESY

V Yadav Sample: J-82/CDC13
ROESY



Current Data Parameters
USER d180
NAME 70805v1
EXPNO 4
PROCNO 1

F2 - Acquisition Parameters
Date_ 970805
Time 15.31
INSTRUM ana300
PROBHD 5 mm Multinv
PULPROG zgpg30
TD 1024
FIDRES 0.2278746 sec
RG 4096
DE 222.100 usec
TE 317.29 usec
300.0 K
HL1 0 dB
D1 1.50000000 sec
D12 0.0000200 sec
P1 5.80 usec
D13 0.0000040 sec
D0 0.0000030 sec
HL4 30 dB
P15 400000.00 usec
DE 317.29 usec
SFO1 300.1382820 MHz
NUCLEUS 1H
IN0 0.0002212 sec

F1 - Acquisition Parameters
ND0 2
TD 512
SFO1 300.1383 MHz
FIDRES 4.396556 Hz
SW 7.500 ppm

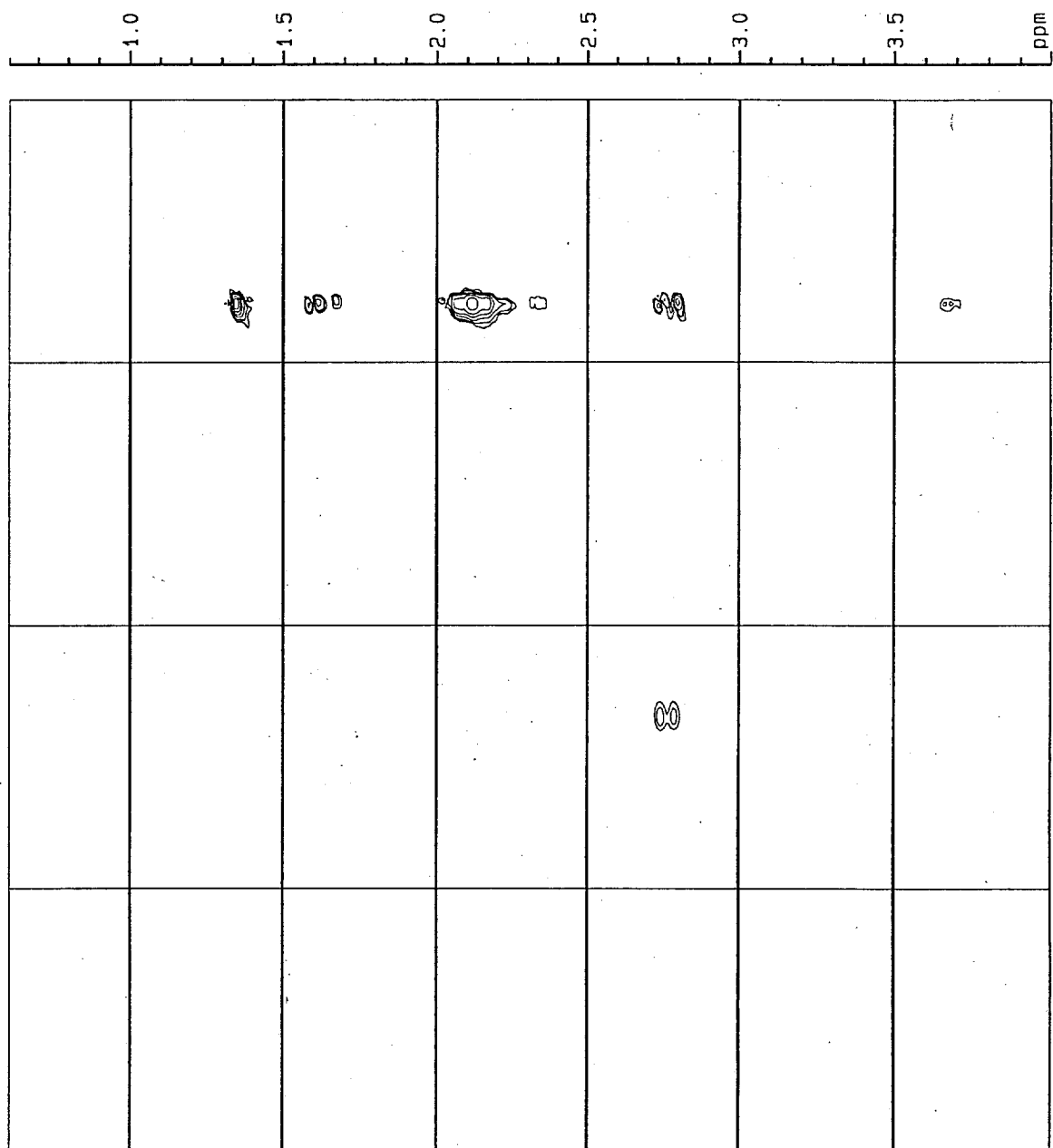
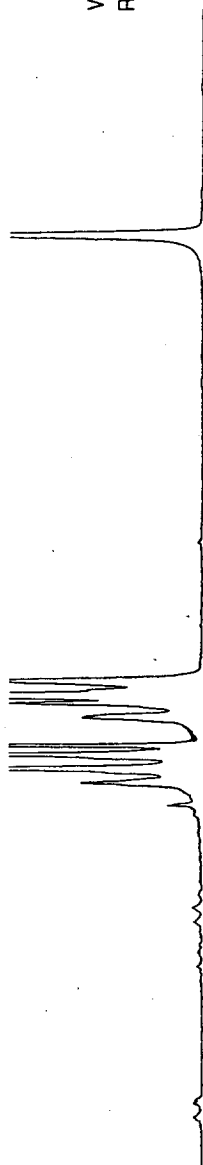
F2 - Processing parameters
SI 1024
SF 300.1370064 MHz
WDW OSINE
SSB 2
LB 0.00 Hz
GB 0
PC 1.40
SR 506.40 Hz

F1 - Processing parameters
SI 1024
AC2 TPPI
SF 300.1370064 MHz
WDW OSINE
SSB 2
LB 0.00 Hz
GB 0

2D NMR plot parameters
CX2 15.00 cm
CX1 15.00 cm
F2PLO 8.000 ppm
F2LO 2401.22 Hz
F2PHI 0.600 ppm
F2H1 180.09 Hz
F1PLO 8.000 ppm
F1LO 2401.12 Hz
F1PHI 0.600 ppm
F1H1 180.09 Hz
F2PMCH 0.493316 ppm/cm
F2H2CM 148.07608 Hz/cm
F1PMCH 0.493314 ppm/cm
F1H2CM 148.05935 Hz/cm

18 (R=Ph)
ROESY

V Yadav Sample: J-82/COC13
ROESY



Current Data Parameters
USER q1ao
NAME 70805v1
EXPNO 4
PROCNO 1

F2 - Acquisition Parameters

Date_ 970605
Time 15:31
INSTRUM am300
PROBHD 5 mm Multinu
PULPROG zgpg30
TD 1024
SOLVENT dms-d6
NS 56
DS 4
SWH 2251.238 Hz
FIDRES 2.198475 Hz
AQ 0.2276746 sec
RG 4096
OW 222.100 usec
DE 317.29 usec
TE 300.0 K
HL1 0 dB
D1 1.5000000 sec
D12 0.000200 sec
P1 5.80 usec
D13 0.000040 sec
D14 0.000030 sec
HL4 30 dB
P15 400000.00 usec
DE 317.29 usec
SF01 300.136260 MHz
NUCLEUS 1H
IN0 0.0002212 sec

F1 - Acquisition Parameters

ND0 2
TD 512
SF01 300.1363 MHz
FIDRES 4.365556 Hz
SR 7.500 ppm

F2 - Processing parameters

SI 1024
SF 300.1370064 MHz
USINE
2
LB 0.00 Hz
GB 0
PC 1.40
SR 506.40 Hz

F1 - Processing parameters

SI 1024
MC2 1024
SF 300.1370064 MHz
USINE
2
LB 0.00 Hz
GB 0

2D NMR plot parameters

CX2 15.00 cm
CX1 15.00 cm
F2P0 8.000 ppm
F2L0 2401.22 Hz
F2PH 6.000 ppm
F2H1 1800.82 Hz
F1P0 4.000 ppm
F1L0 1200.55 Hz
F1PH 0.900 ppm
F1H1 100.08 Hz
F2PHCM 0.13336 ppm/cm
F2H1CM 40.02676 Hz/cm
F1PHCM 0.22667 ppm/cm
F1H1CM 68.03105 Hz/cm

V Yadav Sample: J-84/CDC13

Current Data Parameters
 USER qlb0
 NAME 70811vy1
 EXPNO 2
 PROCNO 1

F2 - Acquisition Parameters

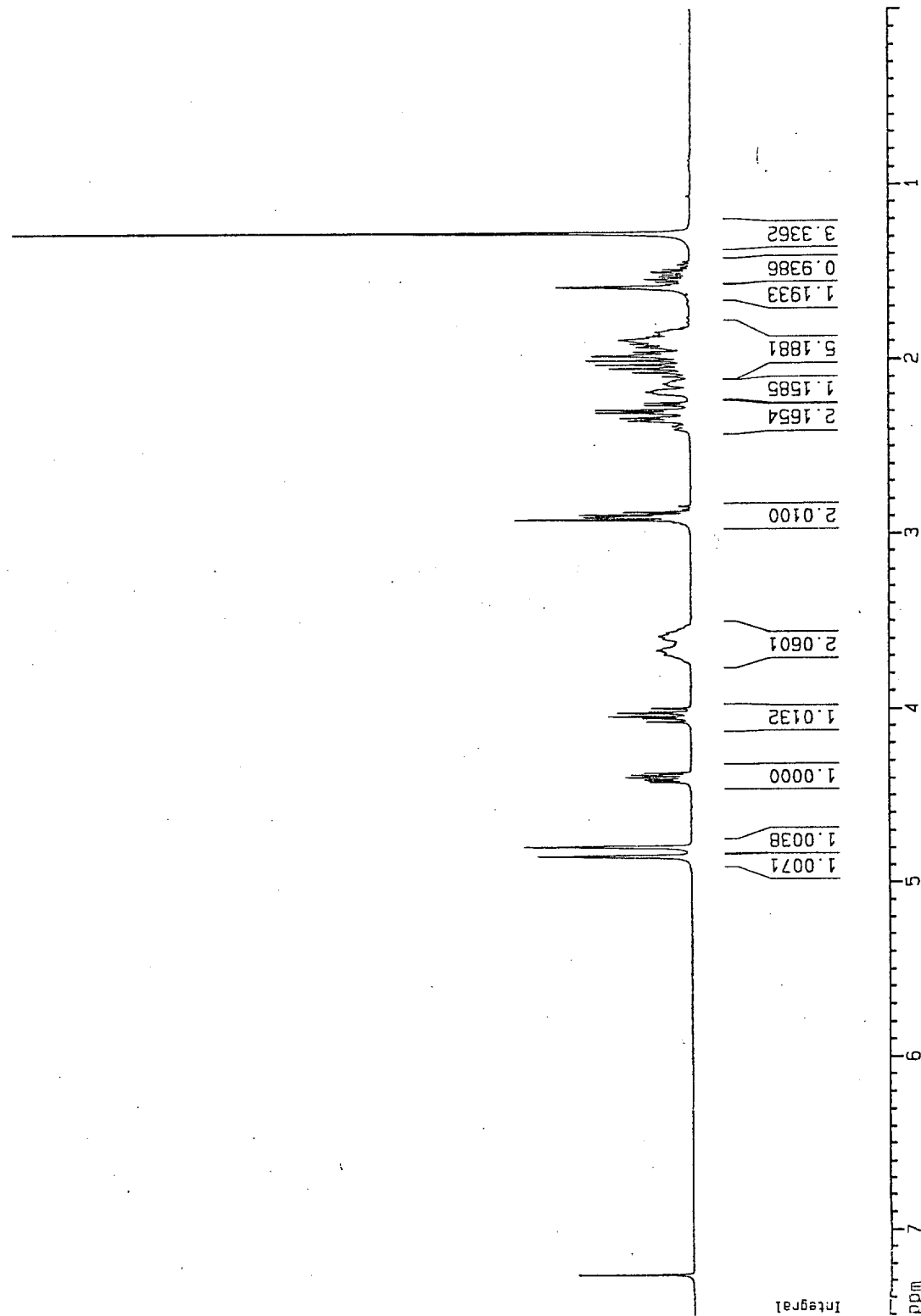
Date_ 970811
 Time 13.59
 INSTRUM amx300
 PROBHD 5 mm Multinu
 PULPROG zg30
 TD 16384
 SOLVENT CDC13
 NS 16
 DS 2
 SWH 4202.034 Hz
 FIDRES 0.256472 Hz
 AQ 1.9499340 sec
 RG 2048
 DW 118.990 usec
 DE 100.00 usec
 TE 300.0 K
 HL1 0 dB
 D1 0.50000000 sec
 P1 5.80 usec
 DE 100.00 usec
 SF01 300.1303000 MHz
 NUCLEUS ¹H

F2 - Processing parameters

SI 16384
 SF 300.1370062 MHz
 WDW no
 SSB 0
 LB 0.00 Hz
 GB 0
 PC 1.00
 SR 506.17 Hz

1D NMR plot parameters

CX 20.00 cm
 F1P 7.500 ppm
 F1 2251.03 Hz
 F2P 0.000 ppm
 F2 0.00 Hz
 PPMCH 0.37503 ppm/cm
 HZCM 112.55138 Hz/cm



20

¹H

20
13c

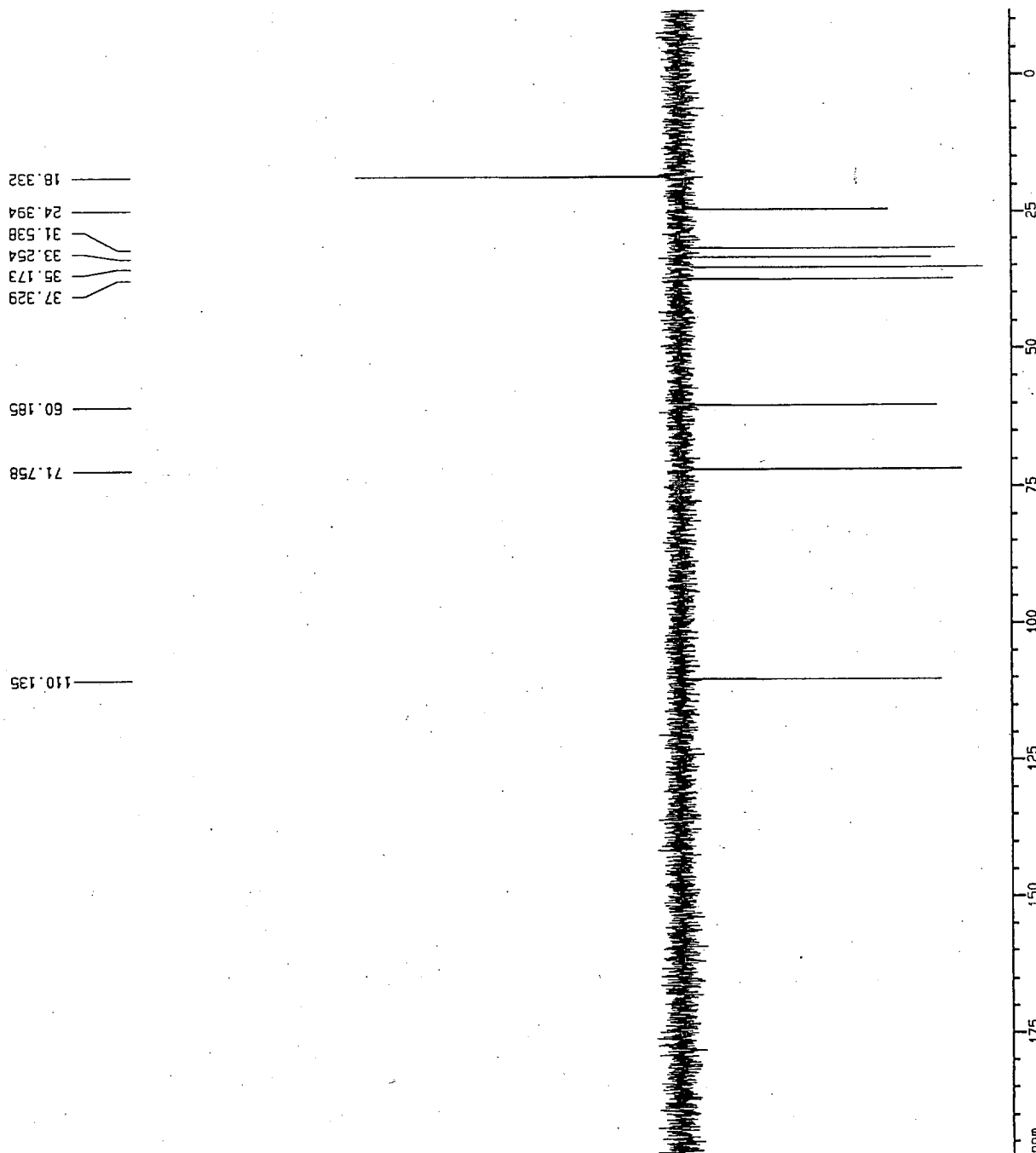
V YADAV : J-84/CDC13

Current Data Parameters
 USER qiao
 NAME 70811vy1
 EXPNO 5
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 970813
 Time 18.54
 INSTRUM amx300
 PROBHD 5 mm Multinu
 PULPROG zgpg30
 TO 32768
 SOLVENT CDC13
 VS 5000
 JS 0
 SMH 18115.941 Hz
 FIDRES 0.552855 Hz
 AQ 0.9044520 sec
 RG 32768
 CM 27.600 usec
 DE 34.50 usec
 TE 300.0 K
 D1 7.60 usec
 D3 5.60 usec
 CNST2 145.000000
 FL1 22 dB
 S1 1.00000000 sec
 S1 0 dB
 SF02 300.1383008 MHz
 DECNUC 1H
 D2 0.0034483 sec
 D4 11.6 usec
 D2 15.6 usec
 D13 0.0000040 sec
 S2 22 dB
 DE 34.50 usec
 SF01 75.4753595 MHz
 NUCLEUS (13C)
 CPDPRG waltz16
 D31 72.00 usec

F2 - Processing parameters
 SI 32768
 SF 75.4695100 MHz
 WDW EM
 SSB 0
 -B 1.00 Hz
 GB 0
 GC 1.40
 SR 157.03 Hz

1D NMR plot parameters
 CX 20.00 cm
 F1P 228.338 ppm
 F1 17232.58 Hz
 F2P -11.705 ppm
 F2 -883.35 Hz
 DPMCM 12.00216 ppm/cm
 FZCM 905.73705 Hz/cm



V YADAV : J-84/CDC13

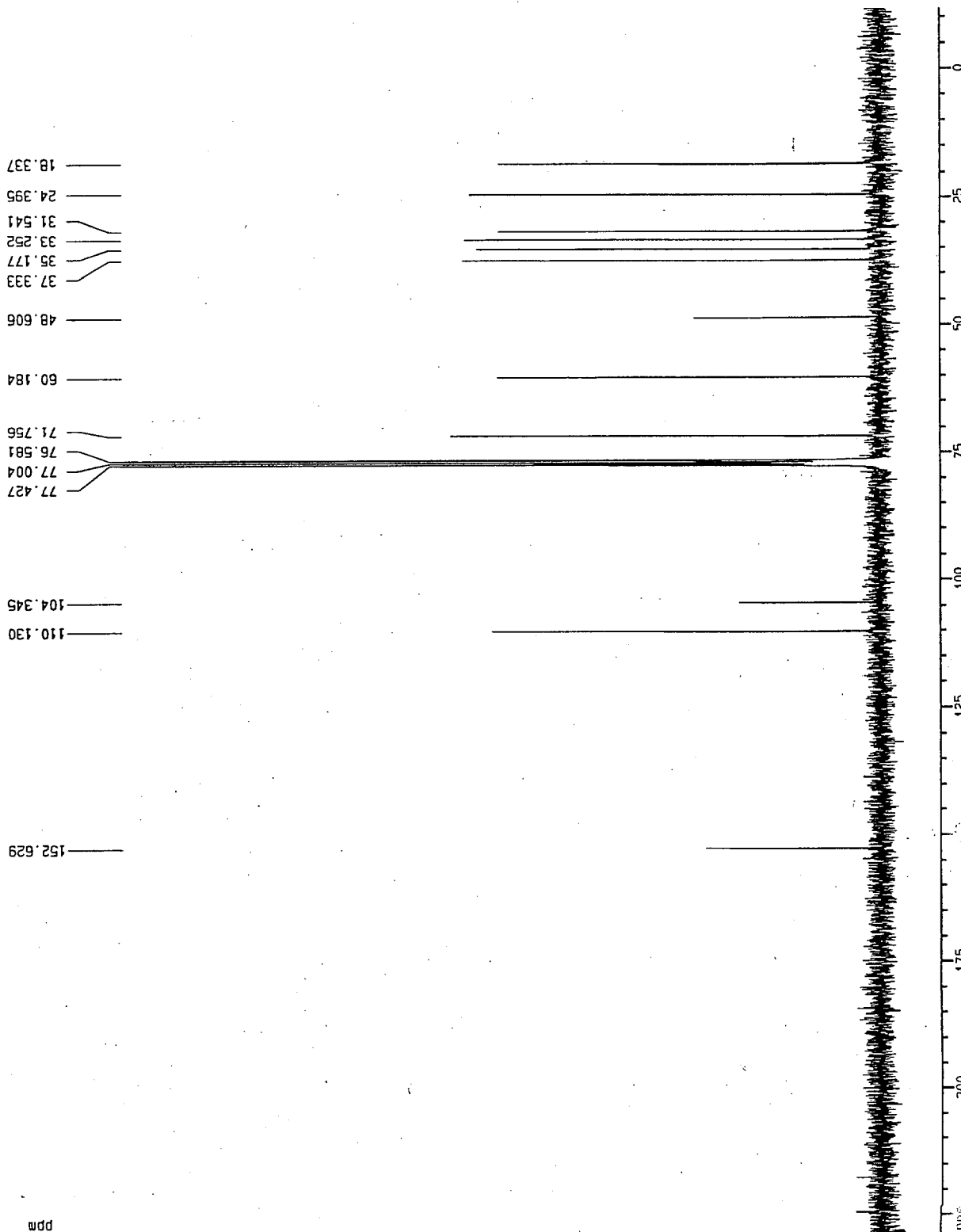
20
130

Current Data Parameters
USER qiao
NAME 70811vy1
EXPNO 6
PROCNO 1

F2 - Acquisition Parameters
Date_ 970814
Time 4.53
INSTRUM amx300
PROBHD 5 mm Multinu
PULPROG zgpg30
TD 32768
SOLVENT CDC13
NS 18581
DS 0
SMH 18115.941 Hz
FIDRES 0.552855 Hz
AQ 0.9044520 sec
RG 32768
DW 27.600 usec
DE 100.00 usec
TE 300.0 K
D11 0.0300000 sec
CPDPRG waltz16
P31 72.00 usec
S2 22 dB
HL1 1 dB
D1 2.0000000 sec
P1 7.80 usec
DE 100.00 usec
SF01 75.4776863 MHz
NUCLEUS ¹³C

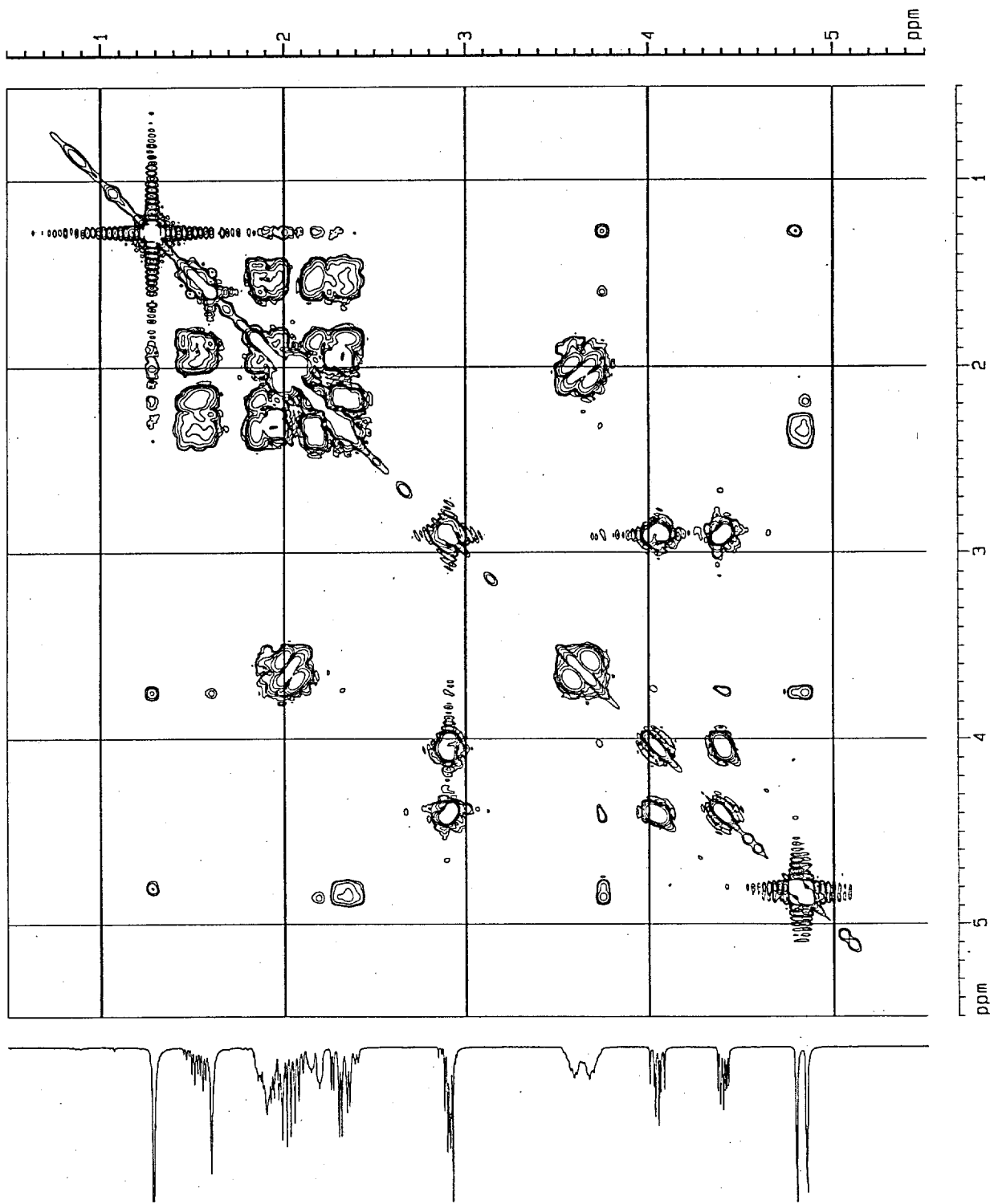
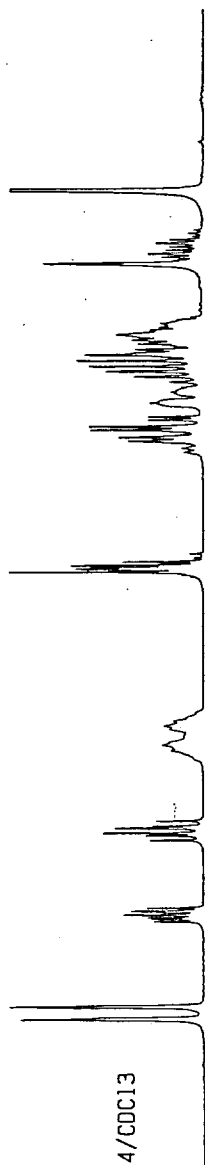
F2 - Processing parameters
SI 32768
SF 75.4695100 MHz
WDW EM
SSB 0
LB 1.00 Hz
GB 0
PC 1.00
SR 157.03 Hz

1D NMR plot parameters
CX 20.00 cm
F1P 228.360 ppm
F1 17234.24 Hz
F2P -11.683 ppm
F2 -881.70 Hz
PPHMC 12.00215 ppm/cm
HZCM 905.79706 Hz/cm



20
COSY

V Yadav Sample: J-B4/CDC13



Current Data Parameters
USER olao
NAME 70811YV1
EXPNO 3
PROCNO 1

F2 - Acquisition Parameters
Date_ 970811
Time 14.14
INSTRUM am300
PROBHD 5 mm Multinu
PULPROG zgpg30
TD 65536
SOLVENT CDCl3
NS 32
DS 2
SWH 2252.252 Hz
FIDRES 4.396930 Hz
AQ 0.1141080 sec
RG 1024
DM 222.000 uSBC
DE 317.14 uSBC
TE 300.0 K
HL1 0 dB
D1 1.00000000 sec
P1 5.80 uSBC
DO 0.000030 sec
DE 317.14 uSBC
SFO1 300.138137 MHz
NUCLEUS 1H
IN0 0.0004424 sec

F1 - Acquisition Parameters
N00 1
TD 256
SFO1 300.1381 MHz
FIDRES 8.793116 Hz
SN 7.500 ppm

F2 - Processing parameters
SI 1024
SF 300.1370062 MHz
SSB SINE
LB 0
GB 0.00 Hz
PC 1.00
SR 506.20 Hz

F1 - Processing parameters
SI 1024
MC2 GF
SF 300.1370062 MHz
SSB SINE
LB 0
GB 0.00 Hz

2D NMR plot parameters
CX2 15.00 cm
CX1 15.00 cm
F2PLO 5.500 ppm
F2LO 1650.75 Hz
F2PHI 0.500 ppm
F2HI 150.07 Hz
F1PLO 5.500 ppm
F1LO 1650.75 Hz
F1PHI 0.500 ppm
F1HI 150.07 Hz
F2PRCM 0.33333 ppm/cm
F2TICM 100.04566 Hz/cm
F1PRCM 0.33333 ppm/cm
F1TICM 100.04566 Hz/cm

20 ROESY

V Yadav Sample: J-84/COC13

Current Data Parameters
 USER Q180
 NAME 70811v1
 EXPNO 4
 PROCNO 1

F2 - Acquisition Parameters
 Date_ 970811
 Time 16.56
 INSTRUM amx300
 PROBHD 5 mm Multinu
 PULPROG zgpg30
 TO 1024
 SOLVENT COC13
 NS 48
 DS 4
 SWH 2251.238 Hz
 FIDRES 2.198475 Hz
 AQ 0.2278746 sec
 RG 1024
 DW 222.100 usec
 DE 317.20 usec
 TE 300.0 K
 HL1 0 dB
 D1 1.50000000 sec
 D12 0.0002900 sec
 P1 5.90 usec
 D13 0.0000040 sec
 D0 0.0000030 sec
 HL4 30 dB
 P15 400000.00 usec
 DE 317.25 usec
 SF01 300.1381317 MHz
 NUCLEUS 1H
 INO 0.00022212 sec

F1 - Acquisition Parameters
 N00 2
 TO 512
 SF01 300.1381 MHz
 FIDRES 4.356556 Hz
 SM 7.500 ppm

F2 - Processing Parameters
 SI 1024
 SF 300.1370062 MHz
 MDW 0.00 Hz
 SSB 2
 LB 0.00 Hz
 GB 0
 PC 1.40
 SC 506.17 Hz
 SR

F1 - Processing Parameters
 SI 1024
 MC2 IPPI
 SF 300.1370062 MHz
 MDW 0.00 Hz
 SSB 2
 LB 0.00 Hz
 GB 0

2D NMR plot parameters
 C2 15.00 cm
 CX1 -15.00 cm
 F2P0 5.500 ppm
 F2L0 1650.75 Hz
 F2PH1 0.500 ppm
 F2H1 150.07 Hz
 F1P0 5.500 ppm
 F1L0 1650.75 Hz
 F1PH1 0.500 ppm
 F1H1 150.07 Hz
 F2PMCM 0.33333 ppm/cm
 F1ZCM 100.04566 Hz/cm
 F1PMCM 0.33333 ppm/cm
 F1HZCM 100.04566 Hz/cm

