```
user 800

## load data
default fitld
clint 0.25
datain “PWD:band11.idifits
outname ‘band11’
outclass ‘uvdata’
outseq 1
outdisk 1
go

## load vlbautils
run vlbautil

default uvflg
getn 2
antennas 6 10 1 3
opcode ‘FLAG’
go

## fix data
default vlbafix
getn 2
vlbafix
AIPS 2: 'YOUR DATA DID NOT NEED FIXING'

## correct for ionosphere
default vlbatecr
getn 2
vlbatecr
AIPS 1: 'CL #2 CONTAINS IONOSPHERIC CORRECTIONS'

## correct for eop
default vlbaeops
getn 2
vlbaeops
AIPS 1: 'CL #3 contains the EOP corrections'

## correct for digital sampler
default vlbaccor
getn 2
vlbaccor
AIPS 1: 'SN #1 contains sampler corrections'
```

AIPS 1: 'CL #4 adds sampler corrections'

perform amp calibration
default vlbaamp
getn 2
vlbaamp
AIPS 1: 'SN #1 contains sampler corrections'
AIPS 1: 'SN #2 contains gain corrections'
AIPS 1: 'CL #4 adds sampler corrections'
AIPS 1: 'CL #5 adds gain corrections'

correct for parallactic angle
default vlbapang
getn 2
vlbapang
AIPS 1: 'CL #6 adds parallactic angle corr1ections'

plot crpl
default vlbacrpl
getn 2
refant 5
gainuse 6
dotv 1
stokes ‘half’
solint -1
sour ‘J1316-3338’
vlbacrpl

perform delay correction
default vlbapcor
getn 2
timer 00 13 00 14 00 13 00 39
calsour ‘J1316-3338’
refant 5
opcode ‘’
gainuse 6
vlbapcor
AIPS 1: 'SN #3 contains pcal instr. phase corrections'
AIPS 1: 'CL #7 adds instr. phase corrections'

do bandpass calibration
defualt vlbabpss
calsour ‘J1316-3338’’
refant 5

```
getn 2
vlbabpss
AIPS 1: 'BP #1 bandpass table'

default fring
getn 2
calsour ‘’
refant 5
search 9 2 8 7 4
solint 0.25
doband 1
bpver 1
aparm(6) 1
aparm(9) 1
docal 1
gainuse 7
dparm(7) 1
go

LOCALH> FRING1: Writing SN table    4
LOCALH> FRING1: Found    11096 good solutions
LOCALH> FRING1: Failed on       56 solutions
LOCALH> FRING1: Appears to have ended successfully

## make cl table
default clcal
getn 2
gainver 7
gainuse 8
snver 4
interpol ‘self’
refant 5
sour ‘’
calsour ‘’
go
LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   7, writing CL table  8
LOCALH> CLCAL1: Appears to have ended successfully

## remove cross hand delays
default vlbacpol
getn 2
gainuse 8
baseline 4 5
refant 5
```

calsour ‘J2202+4216’
solint 0.25
flagver 0
timer 00 15 11 50 00 15 12 30
dparm(7) 1
dparm(8) 0
vlbacpol
AIPS 1: 'SN #5 contains cross pol. delay corrections'
AIPS 1: 'CL #9 adds cross pol. delay corrections'

split ‘J1407+2827’ for D-terms calibration
default split
getn 2
docal 2
gainuse 9
flagver 0
sour ‘J1407+2827’
bch 0
ech 0
aparm 2 0
aparm(4) 1
doband 1
bpver 0
go

AIPS 1: 1 800 J1407+2827 .SPLIT . 1 UV 17-AUG-22 11:27:46

run wrtprocs
#write to disk for difmap Img
default fitdisk
getn 1
dataout ‘PWD:
fitdisk

(img source in difmap mapsize 2048, 0.05)

#load J1407 img and data for selfcal
default fitld
clint 0.25
datain “PWD:J1407mod.uvf
outname ‘J1407mod’
outclass ‘uvdata’
outseq 1
outdisk 1

```
go
AIPS 1:     3   800 J1407MOD     .UVDATA.     1 UV 17-AUG-22 13:27:49

default fitld
datain “PWD:J1407mod.fits
outname ‘J1407’
outclass ‘imag’
outseq 1
outdisk 1
go
AIPS 1:     4   800 J1407       .IMAG  .     1 MA 17-AUG-22 13:29:23

## write CC table to disk
default tbout
getn 4
inext ‘cc’
outtext ‘PWD:CC.CC
inver 0
go

## load cc comp (2) back to disk
default tbin
outname ‘J1407’
outclass ‘IMAG’
outseq 1
intext ‘PWD:CC1.CC
go
intext ‘PWD:CC2.CC
go

## do lp cal
default lpcal
calsour ‘J1407+2827’’
cpamr 0
solint 0
getn 3
get2n 4
in2ver 2
nmaps 1
ncomp 2
cmodel ‘COMP’
cmethod ‘dft’
go
```

```
## write AN table to disk
default tbout
getn 3
inext ‘an’
inver 0
outtext PWD:D.AN
go

## load AN table back to main uvdata
default tbin
outname ‘BAND11’
outclass ‘uvdata’
outseq 1
intext ‘PWD:D.AN
go

## split ‘cen-a’ with D-terms applied
default split
getn 2
docal 2
gainuse 9
flagver 0
sour ‘cen-a’
bch 0
ech 0
aparm 2 0
aparm(4) 1
doband 1
bpver 0
dopol 3
go
AIPS 1:     5   800 CEN-A       .SPLIT .    1 UV 17-AUG-22 13:45:35
sour ‘J2202+4216’
go
AIPS 1:     6   800 J2202+4216  .SPLIT .    1 UV 17-AUG-22 13:46:01

## write cen-a split to disk for stokes i model (2048, 0.2)

## load cen-a model for selfcal
default fitld
datain “PWD:cen-a-selfcal.fits
outname ‘cenamod’
outclass ‘imag’
outseq 1
```

outdisk 1
go
AIPS 1: 7 800 CENAMOD .IMAG . 1 MA 17-AUG-22 14:16:06

selfcal cen-a split using stokes i model
default calib
getn 5
get2n 7
cmethod ‘dft’
refant 5
solint 1
solmo ‘a&p’
solty ‘l1r’
go

AIPS 1: 8 800 CEN-A .CALIB . 1 UV 17-AUG-22 14:18:19

write selfcal cen-a data to disk