user 30
dowait=1

————————————————————————Epoch A——

load data
default fitld
clint 0.25
datain 'PWD:bm399a.idifits
outname 'epocha'
outclass 'uvdata'
outseq 1
outdisk 1
go

flag low elevations (<23)
default uvflg
getn 2
baseline 0
ante 0
opcode 'FLAG'
aparm 0 23
go

flag 1 hr from sunrise and sunset (check spreadsheet for flagtimes)
#ant sc
default uvflg
getn 2
antennas 10
timer 00 21 46 31 00 22 10 37
outfgver 1
go

#hk
default uvflg
getn 2
antennas 3
timer 00 21 46 31 00 21 58 28
outfgver 1
go

#nl
default uvflg
getn 2

```
antennas 7
timer 00 21 46 31 00 23 16 14
outfgver 1
go

## fd
default uvflg
getn 2
antennas 2
timer 00 23 13 06 00 23 16 14
outfgver 1
go

## la
default uvflg
getn 2
antennas 5
timer 00 23 07 13 00 23 16 14
outfgver 1
go

## br
default uvflg
getn 2
antennas 1
timer 00 23 04 49 00 23 16 14
outfgver 1
go

## calibrate for eop
default vlbaeops
getn 2
vlbaeops

AIPS 1: 'CL #2 contains the EOP corrections'

## check cl table using snplt
default snplt
getn 2
inext 'cl'
inver 2
opty 'phas'
nplot 8
dotv 1
```

```
go

##correct for ionosphere
default vlbatecr
getn 2
vlbatecr
AIPS 1: 'CL #3 CONTAINS IONOSPHERIC 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 parallactic angle correction
default vlbapang
getn 2
vlbapang
AIPS 1: 'CL #5 adds parallactic angle corrections'

##perform delay correction using the found source
default vlbapcor
getn 2
timer 00 21 46 32 00 21 51 08
calsour 'J2025+3343"
refant 9
opcode "
gainuse 5
vlbapcor

AIPS 1: 'SN #2 contains pcal instr. phase corrections'
AIPS 1: 'CL #6 adds instr. phase corrections'

## plot crpl
default vlbacrpl
getn 2
refant 9
gainuse 6
dotv 1
```

```
stokes 'half'
solint -1
source 'J2025+3343'
vlbacrpl
```

#delays have flattened but MK is scattered (not wrapping)

##do bandpass calibration

default vlbabpss

getn 2

calsour 'J2025+3343'

refant 9

vlbabpss

AIPS 1: 'BP #1 bandpass table'

##check bandpass calibration

default possm

aparm(8) 2

dotv 1

getn 2

nplot 9

go

looks good

perform amplitude calibration

default vlbaamp

getn 2

vlbaamp

AIPS 1: 'SN #3 contains sampler corrections'

AIPS 1: 'SN #4 contains gain corrections'

AIPS 1: 'CL #7 adds sampler corrections'

AIPS 1: 'CL #8 adds gain corrections'

```
tget vlbacrpl
gianuse 8
vlbacrpl

## use editr to flag
default editr
getn 2
docal 1
gainuse 8
crowded 1
doband 1
bpver 1
flagver 1
outfgver 1
antuse 1 2 3 4 5 6 7 8 9 10
sour 'J2025+3343'
go
sour 'V404CYG'
go
sour 'J2023+3153'
go

## fring fit on phase ref source
default fring
refant 9
getn 2
solint 1
sour ''
calsour 'J2025+3343'
gianuse 8
timer 0
docal 2
search 4 8 2 5 7 1 6 3 10
```

aparm(9) 1

dparm 1 400 60 0 0 0 1

go

LOCALH> FRING1: Writing SN table   5
LOCALH> FRING1: Found   3735 good solutions
LOCALH> FRING1: Failed on   41 solutions
LOCALH> FRING1: Appears to have ended successfully

##snedit outliers
default snedt
getn 2
inver 5
dodela 1
crowded 1
antuse 1 2 3 4 5 6 7 8 9 10
go

SN table 9 created

run snsmo
default snsmo
getn 2
inver 9
timer 0
antenna 0
refant 9
smoty 'vlbi'
outver 10
bparm 0 0 ½ ½ 0
cpamr 0
sampty ''
go

sn table 10 created

check using vlbasnpl
delay looks good

make cl table
default clcal
cals 'J2025+3343''
sour ''
interpol 'ambg'

```
snver 10
ante 0
gianver 8
gainuse 9
refant 9
go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table  9
LOCALH> CLCAL1: Appears to have ended successfully

## split phase ref source
default split
getn 2
docal 2
gainuse 9
flagver 0
sour 'J2025+3343'
bch 0
ech 0
aparm 2 0
douvcomp -1
doband 1
bpver 0
go

AIPS 1:    1    30 J2025+3343  .SPLIT .    1 UV 21-JUN-22 16:48:12

sour 'V404CYG'
go

AIPS 1:    3    30 V404CYG     .SPLIT .    1 UV 21-JUN-22 16:58:04

sour 'J2023+3153'
go
AIPS 1:    4    30 J2023+3153  .SPLIT .    1 UV 21-JUN-22 16:58:39
————————————————————————————Epoch B————————————————————————————————————————————————

## load data
default fitld
clint 0.25
datain 'PWD:bm399b.idifits
outname 'epochB'
outclass 'uvdata'
outseq 1
```

outdisk 1

go

flag low elevations (<23)

default uvflg

getn 6

baseline 0

ante 0

opcode 'FLAG'

aparm 0 23

go

none of these antennas obs during sunrise or sunset

calirate for eop

default vlbaeops

getn 6

vlbaeops

AIPS 1: 'CL #2 contains the EOP corrections'

chekc cl table

default snplt

getn 6

inext 'cl'

inver 2

opty 'phas'

nplot 8

dotv 1

go

correct for ionospher

default vlbatecr

getn 6

vlbatecr

AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'

correct for digital samper
default vlbaccor
getn 6
vlbaccor
AIPS 1: 'SN #1 contains sampler corrections'
AIPS 1: 'CL #4 adds sampler corrections'

perform parallactic angle correction
default vlbapang
getn 6
vlbapang
AIPS 1: 'CL #5 adds parallactic angle corrections'

delay calibration
default vlbapcor
getn 6
timer 00 18 51 49 00 18 56 25
calsour 'J2025+3343'
refant 5
opcode ''
gainuse 5
vlbapcor
AIPS 1: 'SN #2 contains pcal instr. phase corrections'
AIPS 1: 'CL #6 adds instr. phase corrections'

check if delays have flattneed
default vlbacrpl
getn 6
refant 5
gainuse 6

```
dotv 1
stokes 'half'
solint -1
sour 'J2025+3343'
vlbacrpl
#delays have flattened by MK is scattered

## do bandpass calibration
default vlbabpss
getn 6
calsour J2025+3343'
refant 5
vlbabpss
AIPS 1: 'BP #1 bandpass table'

## check bandpass calibration
default possm
aparm(8) 2
dotv 1
getn 6
nplot 9
go
looks good

## amp calibration
default vlbaamp
getn 6
vlbaamp
AIPS 1: 'SN #3 contains sampler corrections'
AIPS 1: 'SN #4 contains gain corrections'
AIPS 1: 'CL #7 adds sampler corrections'
AIPS 1: 'CL #8 adds gain corrections'
```

```
tget vlbacrpl
gainuse 8
vlbacrpl
MK still scattered

## use editr to flag
default editr
getn 6
docal 1
gainuse 8
crowded 1
doband 1
bpver 1
flagver 1
outfgver 1
antuse 1 2 3 4 5 6 7 8 9 10
sour 'J2025+3343"
go
sour 'V404CYG'
go
sour 'J2023+3153'
go

## fring fit on phase reference source
default fring
refant 5
getn 6
soint 1
sour "
calsour 'J2025+3343"
gainuse 8
timer 0
docal 2
```

```
search  9 2 4 8 1 7 3 6 10
aparm(9) 1
dparm 1 400 60 0 0 0 1
ante 0
flagver 0
go
LOCALH> FRING1: Writing SN table    5
 LOCALH> FRING1: Found     4796 good solutions
LOCALH> FRING1: Failed on      580 solutions
LOCALH> FRING1: Appears to have ended successfully

#snedt outliers
default snedt
getn 6
inver 5
dodela 1
crowded 1
antuse 1 2 3 4 5 6 7 8 9 10
go

## run snsmo
default snsmo
getn 6
inver 6
timer 0
antenna 0
refant 5
smoty 'vlbi'
outver 7
bparm 0 0 ½ ½ 0
cpamr 0
sampty "
go
```

check sn table using vlbasnpl
default vlbasnpl
getn 6
inext 'sn'
inver 7
opty 'delay'
dotv 1
vlbasnpl

looks good

#make cl table
default clcal
cals 'J2025+3343'
sour ''
interpol 'ambg'
snver 7
ante 0
gainver 8
gainuse 9
refant 5
getn 6
go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 9
LOCALH> CLCAL1: Appears to have ended successfully

#split phase ref source
default split
getn 6
docal 2
gainuse 9
flagver 0

sour 'J2025+3343'

bch 0

ech 0

aparm 2 0

douvcomp -1

doband 1

bpver 0

go

AIPS 1:   5   30 J2025+3343 .SPLIT .   2 UV 21-JUN-22 17:45:58

sour 'V404CYG'

go

AIPS 1:   7   30 V404CYG   .SPLIT .   2 UV 21-JUN-22 17:46:44

sour 'J2023+3153'

go

AIPS 1:   8   30 J2023+3153 .SPLIT .   2 UV 21-JUN-22 17:47:30

—-------------------------------Epoch C—--

load data

default fitld

clint 0.25

datain 'PWD:bm399c.idifits

outname 'epochC'

outclass 'uvdata'

outseq 1

outdisk 1

go

AIPS 1:   10   30 EPOCHC   .UVDATA.   1 UV 22-JUN-22 09:16:21

flag low elevations (<23)

default uvflg

getn 10

baseline 0

ante 0

```
opcode 'FLAG'

aparm 0 23

go


## flag sunrise/sunset

default uvflg

getn 10

antennas 6

timer 00 16 44 27 00 17 25 10

outfgver 1

go


## calibrate for eop

default vlbaeops

getn 10

vlbaeops

AIPS 1: 'CL #2 contains the EOP corrections'


## check cl table using snplt

default snplt

inext 'cl'

inver 2

opty 'phas'

nplot 8

dotv 1

getn 10

go


## correct for ionosphere

default vlbatecr

getn 10

vlbatecr

AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'
```

correct for digital samper

```
default vlbaccor
getn 10
vlbaccor
AIPS 1: 'SN #1 contains sampler corrections'
AIPS 1: 'CL #4 adds sampler corrections'
```

perform parallactic angle correction

```
default vlbapang
getn 10
vlbapang
AIPS 1: 'CL #5 adds parallactic angle corrections'
```

delay correction

```
default vlbapcor
getn 10
timer 00 16 44 28 00 16 49 05
calsour 'J2025+3343"
refant 5
opcode "
gainuse 5
vlbapcor
AIPS 1: 'SN #2 contains pcal instr. phase corrections'
AIPS 1: 'CL #6 adds instr. phase corrections'
```

plot delays to see if flattened

```
default vlbacrpl
getn 10
refant 5
gainuse 6
dotv 1
stokes 'half'
solint -1
```

```
sour 'J2025+3343"
vlbacrpl
LA is still slightly scattered

## do bandpass calibration
default vlbabpss
getn 10
calsour 'J2025+3343"
refant 5
vlbabpss
AIPS 1: 'BP #1 bandpass table'

## check bandpass solution
default possm
aparm(8) 2
dotv 1
nplot 9
getn 10
go

## perform amplitude calibration
default vlbaamp
getn 10
vlbaamp
AIPS 1: 'SN #3 contains sampler corrections'
AIPS 1: 'SN #4 contains gain corrections'
AIPS 1: 'CL #7 adds sampler corrections'
AIPS 1: 'CL #8 adds gain corrections'

tget vlbacrpl
gainuse 8
vlbacrpl
```

use editr to perform final flagging
default editr
getn 10
docal 1
gainuse 8
crowded 1
doband 1
bpver 1
flagver 1
outfgver 1
antuse 1 2 3 4 5 6 7 8 9 10
sour 'J2025+3343"
go
sour 'V404CYG'
go
sour 'J2023+3153'
go

fring fit on phase ref source
default fring
refant 5
getn 10
solint 1
sour "
calsour 'J2025+3343"
gainuse 8
timer 0
docal 2
search 9 2 4 8 1 7 3 6 10
aparm(9) 1
dparm 1 400 60 0 0 0 1
flagver 0
go

LOCALH> FRING1: Writing SN table   5

LOCALH> FRING1: Found   4951 good solutions

LOCALH> FRING1: Failed on   9 solutions

LOCALH> FRING1: Appears to have ended successfully

snedt outliers

default snedt

getn 10

inver 5

dodela 1

crowded 1

antuse 1 2 3 4 5 6 7 8 9 10

go

run snsmo

default snsmo

getn 10

inver 6

timer 0

antenna 0

refant 5

smoty 'vlbi

outver 7

bparm 0 0 ½. ½ 0

cparm 0

sampty "

go

check sn 7 with vlbasnpl

looks good

apply solution from above sn table

default clcal

cals 'J2025+3343"

sour "

interpol 'ambg'

snver 7

ante 0

gainver 8

gainuse 9

refant 5

getn 10

go

 LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 9

LOCALH> CLCAL1: Appears to have ended successfully

split phase ref source from obs

default split

getn 10

docal 2

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

douvcomp -1

doband 1

bpver 0

go

AIPS 1:   9   30 J2025+3343 .SPLIT .   3 UV 22-JUN-22 09:50:36

sour 'V404CYG'

go

AIPS 1:   11   30 V404CYG   .SPLIT .   3 UV 22-JUN-22 09:51:17

sour 'J2023+3153'

go

AIPS 1:   12   30 J2023+3153 .SPLIT .   3 UV 22-JUN-22 09:52:11

—---Epoch D—--

load data

default fitld

clint 0.25

datain 'PWD:bm399d.idifits'

outname 'epochD'

outclass 'uvdata'

outseq 1

outdisk 1

go

AIPS 1:   14   30 EPOCHD   .UVDATA.   1 UV 22-JUN-22 09:57:02

flag low elevations

default uvflg

getn 14

baseline 0

ante 0

opcode 'FLAG'

aparm 0 23

go

flag sunrise and sunset

#hk

dfault uvflg

getn 14

antennas 3

timer 00 11 12 17 00 11 35 06

outfgver 1

go

nl

```
dfault uvflg
getn 14
antennas 7
timer 00 11 32 22 00 12 42 01
outfgver 1
go

## fd
dfault uvflg
getn 14
antennas 2
timer 00 12 33 25 00 12 42 01
outfgver 1
go

## la
default uvflg
getn 14
antennas 5
timer 00 12 37 37 00 12 42 01
outfgver 1
go

## calibrate for eop
default vlbaeops
getn 14
vlbaeops
AIPS 1: 'CL #2 contains the EOP corrections'

## check cl table
default snplt
getn 14
inext 'cl'
```

```
inver 2
opty 'phas'
nplot 9
dotv 1
go

## correct for ionosphere
default vlbatecr
getn 14
vlbatecr
AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'

## correct for digital sampler
default vlbaccor
getn 14
vlbaccor
AIPS 1: 'SN #1 contains sampler corrections'
AIPS 1: 'CL #4 adds sampler corrections'

## perform parallactic angle correction
default vlbapang
getn 14
vlbapang
AIPS 1: 'CL #5 adds parallactic angle corrections'

## perform delay correction
default vlbapcor
getn 14
timer 00 11 12 18 00 11 16 55
calsour 'J2025+3343'
refant 9
opcode "
gainuse 5
```

vlbapcor

AIPS 1: 'SN #2 contains pcal instr. phase corrections'

AIPS 1: 'CL #6 adds instr. phase corrections'

check delays vlbacrpl

default vlbacrpl

getn 14

refant 9

gainuse 6

dotv 1

stokes 'half'

solint -1

source 'J2025+3343'

vlbacrpl

br and ov are a little scattered

do bandpass calibration

default vlbabpss

getn 14

calsour 'J2025+3343"

refant 9

vlbabpss

AIPS 1: 'BP #1 bandpass table'

check bp

default possm

getn 14

aparm(8) 2

dotv 1

nplot 9

go

perform amp calibration

```
default vlbaamp
getn 14
vlbaamp
AIPS 1: 'SN #3 contains sampler corrections'
AIPS 1: 'SN #4 contains gain corrections'
AIPS 1: 'CL #7 adds sampler corrections'
AIPS 1: 'CL #8 adds gain corrections'

tget vlbacrpl
gainuse 8
vlbacrpl

## use editr to flag
default editr
getn 14
docal 1
gainuse 8
crowded 1
doband 1
bpver 1
flagver 1
outfgver 1
antuse 1 2 3 4 5 6 7 8 9 10
sour 'J2025+3343"
go
sour 'V404CYG'
go
sour 'J2023+3153'
go

## fring fit on phase ref source
default fring
refant 9
```

```
getn 14
solint 1
sour "
calsour 'J2025+3343"
gainuse 8
timer 0
docal 2
search 4 8 2 5 7 1 6 3 10
aparm(9) 1
dparm 1 400 60 0 0 0 1
go
LOCALH> FRING1: Writing SN table    5
LOCALH> FRING1: Found     3847 good solutions
LOCALH> FRING1: Failed on      137 solutions
LOCALH> FRING1: Appears to have ended successfully

##snedit outliers
default snedt
getn 14
inver 5
dodela 1
crowded 1
antuse 1 2 3 4 5 6 7 8 910
go

## run snsmo
default snsmo
getn 14
inver 6
timer 0
antenna 0
refant 9
smoty 'vlbi'
```

outver 7

bparm 0 0 ½ ½ 0

cparm 0

sampty ''

go

##chech sn7 using vlbasnpl

create cl table from above sn table

default clcal

cals 'J2025+3343'

sour ''

interpol 'ambg'

snver 7

ante 0

gainver 8

gainuse 9

refant 9

getn 14

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 9

LOCALH> CLCAL1: Appears to have ended successfully

split sources

default split

getn 14

docal 2

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

dourvcomp -1

doband 1

bpver 0

go

AIPS 1:   13   30 J2025+3343 .SPLIT .   4 UV 22-JUN-22 10:29:25

sour 'V404CYG'

go

AIPS 1:   15   30 V404CYG   .SPLIT .   4 UV 22-JUN-22 10:29:48

sour 'J2023+3153'

go

AIPS 1:   16   30 J2023+3153 .SPLIT .   4 UV 22-JUN-22 10:30:23

—----------------------------------Epoch E—--

load data

defafult fitld

clint 0.25

datain 'PWD:bm399e.idifits'

outname 'epochE'

outclass 'uvdata'

outseq 1

outdisk 1

go

AIPS 1:   18   30 EPOCHE   .UVDATA.   1 UV 22-JUN-22 13:09:38

flag low elevations

default uvflg

getn 18

baseline 0

ante 0

opcode 'FLAG'

aparm 0 23

go

flg sunrise/sunset

```
## ov
default uvflg
getn 18
antennas 8
timer 00 14 16 35 00 14 23 19
outfgver 1
go

## br
default uvflg
getn 18
antennas 1
timer 00 14 16 35 00 14 23 03
outfgver 1
go

## calibrate for eop
default vlbaeops
getn 18
vlbaeops
AIPS 1: 'CL #2 contains the EOP corrections'

## check cl table
default snplt
getn 18
inext 'cl'
inver 2
opty 'phas'
nplot 8
dotv 1
go

## correct for ionospher
```

default vlbatecr

getn 18

vlbatecr

AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'

correct for digital sampler

default vlbaccor

getn 18

vlbaccor

AIPS 1: 'SN #1 contains sampler corrections'

AIPS 1: 'CL #4 adds sampler corrections'

perform parallactic angle correction

default vlbapang

getn 18

vlbapang

AIPS 1: 'CL #5 adds parallactic angle corrections'

perform delay correction

default vlbapcor

getn 18

timer 00 14 16 35 00 14 21 13

calsour 'J2025+3343'

refant 5

opcode ''

gainuse 5

vlbapcor

AIPS 1: 'SN #2 contains pcal instr. phase corrections'

AIPS 1: 'CL #6 adds instr. phase corrections'

check delays

default vlbacrpl

getn 18

refant 5

gainuse 6

dotv 1

stokes 'half'

solint -1

sour 'J2025+3343'

vlbacrpl

delays are flat

do bandpass calibration

default vlbabpss

getn 18

calsour 'J2025+3343''

refant 5

vlbabpss

AIPS 1: 'BP #1 bandpass table'

check bp table

default possm

getn 18

aparm(8) 2

dotv 1

nplot 9

go

perform amp calibration

default vlbaamp

getn 18

vlbaamp

AIPS 1: 'SN #3 contains sampler corrections'

AIPS 1: 'SN #4 contains gain corrections'

AIPS 1: 'CL #7 adds sampler corrections'

AIPS 1: 'CL #8 adds gain corrections'

tget vlbacrpl

gainuse 8

vlbacrpl

use editr to flag

default editr

getn 18

docal 1

gainuse 8

crowded 1

doband 1

bpver 1

flagver 1

outfgver 1

antuse 1 2 3 4 5 6 7 8 9 10

sour 'J2025+3343"

go

sour 'V404CYG'

go

sour 'J2023+3153'

go

fring fit on phase ref source

default fring

refant 5

getn 18

solint 1

sour "

calsour 'J2025+3343'

gainuse 8

timer 0

docal 2

search 9 2 4 8 1 7 3 6 10

aparm(9) 1

dparm 1 400 60 0 0 0 1

ante 0

flagver 0

go

LOCALH> FRING1: Writing SN table   5

LOCALH> FRING1: Found   4656 good solutions

LOCALH> FRING1: Appears to have ended successfully

snedt outliers

default snedt

getn 18

inver 5

dodela 1

crowded 1

antuse 1 2 3 4 5 6 7 8 9 10

go

#run snsmo

default snsmo

getn 18

inver 6

timer 0

antenna 0

refant 5

smoty 'vlbi'

outver 7

bparm 0 0 ½ ½ 0

cparm 0

sampty "

go

apply the solution from above sn table
default clcal
cals 'J2025+3343'
sour "
interpol 'ambg'
snver 7
ante 0
gainver 8
gainuse 9
refant 5
getn 18
go
LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 9
LOCALH> CLCAL1: Appears to have ended successfully

split phase ref source from obs
default split
getn 18
docal 2
gainuse 9
flagver 0
sour 'J2025+3343"
bch 0
ech 0
aparm 2 0
douvcomp -1
doband 1
bpver 0
go

AIPS 1:   17   30 J2025+3343 .SPLIT .   5 UV 22-JUN-22 13:31:44

sour 'V404CYG'

go

AIPS 1:   19   30 V404CYG   .SPLIT .   5 UV 22-JUN-22 13:32:16

sour 'J2023+3153 '

go

AIPS 1:   20   30 J2023+3153 .SPLIT .   5 UV 22-JUN-22 13:32:42

—--Epoch F—---

load data

default fitld

clint 0.25

datain 'PWD:bm399f.idifits

outname 'epochF'

outclass 'uvdata'

outseq 1

outdisk 1

go

AIPS 1:   22   30 EPOCHF   .UVDATA.   1 UV 22-JUN-22 13:36:30

flag low elevations

default uvflg

getn 22

baseline 0

ante 0

opcode 'FLAG'

aparm 0 23

go

flag sunrise/sunset

##sc

default uvflg

getn 22

```
antennas 10
timer 00 09 52 07 00 10 56 23
outfgver 1
go

#hk
default uvflg
getn 22
antennas 3
timer 00 09 52 07 00 10 59 35
outfgver 1
go

#nl
default uvflg
getn 22
antennas 7
timer 00 10 54 30 00 11 21 48
outfgver 1
go

## calibrate for eop
default vlbaeops
getn 22
vlbaeops
AIPS 1: 'CL #2 contains the EOP corrections'

## chck cl table
default snplt
getn 22
inext 'cl'
inver 2
opty 'phas'
```

nplot 8

dotv 1

go

calibrate for ionosphere

default vlbatecr

getn 22

vlbatecr

AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'

correct for digital sampler

default vlbaccor

getn 22

vlbaccor

AIPS 1: 'SN #1 contains sampler corrections'

AIPS 1: 'CL #4 adds sampler corrections'

perform parallactic angle correction

default vlbapang

getn 22

vlbapang

AIPS 1: 'CL #5 adds parallactic angle corrections'

do delay correction

default vlbapcor

getn 22

timer 00 09 52 07 00 09 56 43

calsour 'J2025+3343"

refant 5

opcode "

gainuse 5

vlbapcor

AIPS 1: 'SN #2 contains pcal instr. phase corrections'

AIPS 1: 'CL #6 adds instr. phase corrections'

check delays
default vlbacrpl
getn 22
refant 5
gainuse 6
dotv 1
stokes 'half'
solint -1
sour 'J2025+3343"
vlbacrpl
delays are flat

do bandpass calibration
default vlbabpss
getn 22
calsour 'J2025+3343'
refant 5
vlbabpss
AIPS 1: 'BP #1 bandpass table'

check bp sol
default possm
getn 22
aparm(8) 2
dotv 1
nplot 9
go

perform amp calibation
default vlbaamp
getn 22

```
vlbaamp
AIPS 1: 'SN #3 contains sampler corrections'
AIPS 1: 'SN #4 contains gain corrections'
AIPS 1: 'CL #7 adds sampler corrections'
AIPS 1: 'CL #8 adds gain corrections'

tget vlbacrpl
gainuse 8
vlbacrpl

## use editr to flag
default editr
getn 22
docal 1
gainuse 8
crowded 1
doband 1
bpver 1
flagver 1
outfgver 1
antuse 1 2 3 4 5 6 7 8 9 10
sour 'J2025+3343"
go
sour 'V404CYG'
go
sour 'J2023+3153'
go

## fring fit on phase ref soruce
default fring
refant 5
getn 22
solint 1
```

sour "

calsour 'J2025+3343"

gainuse 8

timer 0

docal 2

search 9 2 4 8 1 7 3 6 10

aparm(9) 1

dparm 1 400 60 0 0 0 1

flagver 0

go

LOCALH> FRING1: Writing SN table   5

LOCALH> FRING1: Found   3033 good solutions

LOCALH> FRING1: Failed on   71 solutions

LOCALH> FRING1: Appears to have ended successfully

##snedt outliers

default snedt

getn 22

inver 5

dodela 1

crowded 1

antuse 1 2 3 4 5 6 7 8 9 10

go

##run snsmo

default snsmo

getn 22

inver 6

timer 0

antenna 0

refant 5

smoty 'vlbi'

outver 7

bparm 0 0 ½ ½ 0

cparm 0

sampty "

go

apply solution to cl table

default clcal

getn 22

cals 'J2025+3343'

sour "

interpol 'ambg'

snver 7

ante 0

gainver 8

gainuse 9

refant 5

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 9

LOCALH> CLCAL1: Appears to have ended successfully

split phase reference source

default split

getn 22

docal 2

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

dourcomp -1

doband 1

bpver 0

```
go
AIPS 1:   21   30 J2025+3343  .SPLIT .   6 UV 22-JUN-22 13:57:46
sour 'V404CYG'
go
AIPS 1:   23   30 V404CYG    .SPLIT .   6 UV 22-JUN-22 13:58:14
sour 'J2023+3153'
go
AIPS 1:   24   30 J2023+3153  .SPLIT .   6 UV 22-JUN-22 13:58:59
```

—--Epoch G—--

```
## load data
default fitld
clint 0.25
datain 'PWD:bm399g.idifits
outname 'epochG'
outclass 'uvdata'
outseq 1
outdisk 1
go
AIPS 1:   26   30 EPOCHG     .UVDATA.   1 UV 22-JUN-22 15:07:35

## flag low elevations
default uvflg
getn 26
baseline 0
ante 0
opcode 'FLAG'
aparm 0 23
go

## flag sunrise/sunset
## sc
```

```
default uvflg
getn 26
antennas 10
timer 00 10 18 58 00 10 53 48
outfgver 1
go

##hk
default uvflg
getn 26
antennas 3
timer 00 10 18 58 00 10 48 20
outfgver 1
go

## nl
default uvflg
getn 26
antennas 7
timer 00 10 41 15 00 11 48 39
outfgver 1
go

## calibrate for eop
default vlbaeops
getn 26
vlbaeops
AIPS 1: 'CL #2 contains the EOP corrections'

## check cl tbale using splnt
default snplt
getn 26
inext 'cl'
```

```
inver 2
opty 'phas'
nplot 8
dotv 1
go

## correct for ionospher
default vlbatecr
getn 26
vlbatecr
AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'

## correct for digital samper
default vlbaccor
getn 26
vlbaccor
AIPS 1: 'SN #1 contains sampler corrections'
AIPS 1: 'CL #4 adds sampler corrections'

## perform parralctic angle correction
default vlbapang
getn 26
vlbapang
AIPS 1: 'CL #5 adds parallactic angle corrections'

## do delay correction
default vlbapcor
getn 26
timer 00 10 18 58 00 10 23 35
calsour 'J2025+3343"
refant 5
opcode "
gainuse 5
```

vlbapcor

AIPS 1: 'SN #2 contains pcal instr. phase corrections'

AIPS 1: 'CL #6 adds instr. phase corrections'

tget vlbacrpl

gainuse 6

getn 26

vlbacrpl

delays are flat

do bandpass calibration

default vlbabpss

getn 26

calsour 'J2025+3343'

refant 5

vlbabpss

AIPS 1: 'BP #1 bandpass table'

check bandpass sol

default possm

getn 26

aparm(8) 2

dotv 1

nplot 9

go

perform amp calibration

default vlbaamp

getn 26

vlbaamp

AIPS 1: 'SN #3 contains sampler corrections'

AIPS 1: 'SN #4 contains gain corrections'

AIPS 1: 'CL #7 adds sampler corrections'

AIPS 1: 'CL #8 adds gain corrections'

tget vlbacrpl

gainuse 8

vlbacrpl

edit vis using editr

default editr

getn 26

docal 1

gainuse 8

crowded 1

doband 1

bpver 1

flagver 1

outfgver 1

antuse 1 2 3 4 5 6 7 8 9 10

sour 'J2025+3343"

go

sour 'V404CYG'

go

sour 'J2023+3153'

go

fring fit on phase ref source

default fring

refant 5

getn 26

solint 1

sour "

calsour 'J2025+3343"

gainuse 8

timer 0

docal 2

flagver 0

search 9 2 4 8 1 7 3 6 10

aparm(9) 1

dparm 1 400 60 0 0 0 1

go

LOCALH> FRING1: Writing SN table   5

LOCALH> FRING1: Found   4366 good solutions

LOCALH> FRING1: Failed on   82 solutions

LOCALH> FRING1: Appears to have ended successfully

#snedt outliers

default snedt

getn 26

inver 5

dodela 1

crowded 1

antuse 1 2 3 4 5 6 7 8 9 10

go

##snsmo

default snsmo

getn 26

inver 6

timer 0

antenna 0

refant 5

smoty 'vlbi'

outer 7

bparm 0 0 ½ ½ 0

cparm 0

sampty "

```
go

## create cl table
default clcal
getn 26
cals 'J2025+3343"
sour "
interpol 'ambg'
snver 7
ante 0
gainver 8
gainuse 9
refant 5
go
LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table  9
LOCALH> CLCAL1: Appears to have ended successfully

## split phase ref source
default split
getn 26
docal 2
gainuse 9
flagver 0
sour 'J2025+3343"
bch 0
ech 0
aparm 2 0
douvcomp -1
doband 1
bpver 0
go
AIPS 1:   25   30 J2025+3343  .SPLIT .   7 UV 22-JUN-22 15:36:03
sour 'V404CYG'
```

go

AIPS 1:   27   30 V404CYG   .SPLIT .   7 UV 22-JUN-22 15:36:25

sour 'J2023+3153'

go

AIPS 1:   28   30 J2023+3153 .SPLIT .   7 UV 22-JUN-22 15:36:52

—--EpochH—---

load data

default fitld

clint 0.25

datain 'PWD:bm399h.idifits

outname 'epochH'

outclass 'uvdata'

outseq 1

outdisk 1

go

AIPS 1:   30   30 EPOCHH   .UVDATA.   1 UV 22-JUN-22 15:44:39

flag low elevations

default uvflg

getn 30

baseline 0

ante 0

opcode 'FLAG'

aparm 0 23

go

flag sunrise or sunset

nl

default uvflg

getn 30

antennas 7

timer 00 11 03 55 00 12 05 11

```
outgver 1
go

## fd
antennas 2
timer 00 11 57 15 00 12 33 37
go

## la
antenna 5
timer 00 11 53 14 00 12 33 37
go

## pt
antenna 9
timer 00 12 04 43 00 12 33 37
go

## kp
antenna 4
timer 00 12 24 40 00 12 33 37
go

## br
antenna 1
timer 00 12 04 19 00 12 33 37
go

## calibrate for eop
default vlbaeops
getn 30
vlbaeops
AIPS 1: 'CL #2 contains the EOP corrections'
```

correct for ionoshpere

default vlbatecr

getn 30

vlbatecr

AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'

perform digital sampler corr

default vlbaccor

getn 30

vlbaccor

AIPS 1: 'SN #1 contains sampler corrections'

AIPS 1: 'CL #4 adds sampler corrections'

perform parralactic angle correction

default vlbapang

getn 30

vlbapang

AIPS 1: 'CL #5 adds parallactic angle corrections'

do delay cal

default vlbapcor

getn 30

timer 00 11 03 56 00 11 08 33

calsour 'J2025+3343"

refant 8

opcode "

gainuse 5

vlbapcor

AIPS 1: 'SN #2 contains pcal instr. phase corrections'

AIPS 1: 'CL #6 adds instr. phase corrections'

check delays

tget vlbacrpl

gainuse 6

getn 30

vlbacrpl

delays are flat

bandpass

default vlbabpss

getn 30

calsour 'J2025+3343"

refant 8

vlbabpss

AIPS 1: 'BP #1 bandpass table'

default possm

getn 30

aparm(8) 2

dotv 1

nplot 9

go

amp calibration

default vlbaamp

getn 30

vlbaamp

AIPS 1: 'SN #3 contains sampler corrections'

AIPS 1: 'SN #4 contains gain corrections'

AIPS 1: 'CL #7 adds sampler corrections'

AIPS 1: 'CL #8 adds gain corrections'

tget vlbacrpl

gainuse 8

vlbacrpl

fd is scattered

flag using editr
tget editr
getn 30
sour 'J2025+3343"
go
sour 'V404CYG'
go
sour 'J2023+3153'
go

fring fit on phase ref source
default fring
refant 8
getn 30
solint 1
sour "
calsour 'J2025+3343"
gainuse 8
timer 0
docal 2
search 9 2 4 5 1 7 3 6 10
aparm(9) 1
dparm 1 400 60 0 0 0 1
go
LOCALH> FRING1: Writing SN table   5
LOCALH> FRING1: Found   3650 good solutions
LOCALH> FRING1: Failed on   126 solutions
LOCALH> FRING1: Appears to have ended successfully

##snedt outliers
default snedt

```
getn 30
inver 5
dodela 1
crowded 1
antuse 1 2 3 4 5 6 7 8 9 10
go

## snsmo
default snsmo
getn 30
inver 6
timer 0
antenna 0
refant 8
smoty 'vlbi'
outer 7
bparm 0 0 ½ ½ 0
cparm 0
sampty "
go

## make cl table
default clcal
cals 'J2025+3343"
sour "
interpol 'ambg'
snver 7
ante 0
gainver 8
gainuse 9
getn 30
refant 8
go
```

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 9

LOCALH> CLCAL1: Appears to have ended successfully

split phase ref source

default split

getn 30

docal 2

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

douvcomp -1

doband 1

bpver 0

go

AIPS 1:   29   30 J2025+3343 .SPLIT .   8 UV 22-JUN-22 18:14:18

sour 'V404CYG'

go

AIPS 1:   31   30 V404CYG   .SPLIT .   8 UV 22-JUN-22 18:14:39

sour 'J2023+3153'

go

AIPS 1:   32   30 J2023+3153 .SPLIT .   8 UV 22-JUN-22 18:15:17

—---Epoch I—--

load data

default fitld

cling 0.25

datain 'PWD:bm399i.idifits

outname 'epochI'

outclass 'uvdata'

outseq 1

```
outdisk 1
go
AIPS 1:   34   30 EPOCHI     .UVDATA.   1 UV 22-JUN-22 18:19:08

## flag low elevations
default uvflg
getn 34
baseline 0
ante 0
opcode 'FLAG'
aparm 0 23
go

## flag sunrise/sunset
## sc
default uvflg
getn 34
antennas 10
timer 00 09 57 05 00 10 59 16
go

## hk
antenna 3
timer 00 09 57 05 00 10 49 51
go

##nl
antenna 7
timer 00 10 41 43 00 11 26 49
go

## calibrate for eop
default vlbaeops
```

```
getn 34
vlbaeops
AIPS 1: 'CL #2 contains the EOP corrections'

tget snplt
getn 34
go

## correct for ionosphere
default vlbatecr
getn 34
vlbatecr
AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'

## correct for digital samper
default vlbaccor
get 34
vlbaccor
AIPS 1: 'SN #1 contains sampler corrections'
AIPS 1: 'CL #4 adds sampler corrections'

## perform parractic angle correction
default vlbapang
getn 34
vlbapang
AIPS 1: 'CL #5 adds parallactic angle corrections'

## perform delay correction
default vlbapcor
getn 34
timer 00 09 57 05 00 10 01 43
calsour 'J2025+3343"
refant 5
```

```
opcode "

gainuse 5

vlbapcor

AIPS 1: 'SN #2 contains pcal instr. phase corrections'

AIPS 1: 'CL #6 adds instr. phase corrections'


tget vlbacrpl

gainuse 6

getn 34

refant 5

vlbacrpl

delays are flat


## do bandpass calibration

default vlbabpss

getn 34

calsour 'J2025+3343"

refant 5

vlbabpss

AIPS 1: 'BP #1 bandpass table'


## check bandpass calibration

default possm

getn 34

aparm(8) 2

dotv 1

nplot 9

go


not very good. Use the check source for bandpass calibration


tget vlbabpss

calsour 'J2023+3153'
```

vlbabpss

AIPS 1: 'BP #2 bandpass table'

tget possm

go

this is a better solution. Proceeding to use bp2

do amplitude calibration

default vlbaamp

getn 34

vlbaamp

AIPS 1: 'SN #3 contains sampler corrections'

AIPS 1: 'SN #4 contains gain corrections'

AIPS 1: 'CL #7 adds sampler corrections'

AIPS 1: 'CL #8 adds gain corrections'

tget vlbacrpl

gainuse 8

vlbacrpl

use editr to flag

default editr

getn 34

docal 1

gainuse 8

crowded 1

bpver 0

flagver 1

outgver 1

antuse 1 2 3 4 5 6 7 8 9 10

sour 'J2025+3343"

go

```
sour 'V404CYG'
go
sour 'J2023+3153'
go

## firng fit on phase ref source
default fring
refant 5
getn 34
solint 1
sour "
calsour 'J2025+3343"
gainuse 8
timer 0
docal 2
flagver 0
search 9 2 4 8 1 7 3 6 10
aparm(9) 1
dparm 1 400 60 0 0 0 1
go
LOCALH> FRING1: Writing SN table    5
LOCALH> FRING1: Found    4416 good solutions
LOCALH> FRING1: Appears to have ended successfully

#snedt outliers
default snedt
getn 34
inver 5
dodela 1
crowded 1
antuse 1 2 3 4 5 6 7 8 9 10
go
```

```
##snsmo
default snsmo
getn 34
inver 6
timer 0
antuse 0
refant 5
smoty 'vlbi'
outver 7
bparm 0 0 ½ ½ 0
cparm 0
sampty "
go

## make cl table
default clcal
cals 'J2025+3343"
sour "
interpol 'ambg'
snver 7
ante 0
gainver 8
gainuse 9
refant 5
getn 34
go
LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table  9
LOCALH> CLCAL1: Appears to have ended successfully

## split phase ref source
default split
getn 34
docal 2
```

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

douvcomp -1

doband 1

bpver 0

go

AIPS 1:   33   30 J2025+3343 .SPLIT .   9 UV 22-JUN-22 18:36:30

sour 'V404CYG'

go

AIPS 1:   35   30 V404CYG   .SPLIT .   9 UV 22-JUN-22 18:36:57

sour 'J2023+3153'

go

AIPS 1:   36   30 J2023+3153 .SPLIT .   9 UV 22-JUN-22 18:37:18

—--Epoch J—---

load data

default fitld

clint 0.25

datain 'PWD:bm399j.idifits

outname 'epochj'

outclass 'uvdata'

outseq 1

outdisk 1

go

AIPS 1:   38   30 EPOCHJ   .UVDATA.   1 UV 22-JUN-22 18:40:25

flag low elevation

default uvflg

```
getn 38

baseline 0

ante 0

opcode 'FLAG'

aparm 0 23

go


## flag sunrise and sunset

## sc

default uvflg

getn 38

antennas 10

timer 00 09 54 40 00 10 47 30

go


##hk

antennas 3

timer 00 09 26 18 00 10 47 30

go


## calibrate for eops

default vlbaeops

getn 38

vlbaeops

AIPS 1: 'CL #2 contains the EOP corrections'


## correct for ionospher

default vlbatecr

getn 38

vlbatecr

AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'


## correct for digital samper
```

default vlbaccor

getn 38

vlbaccor

AIPS 1: 'SN #1 contains sampler corrections'

AIPS 1: 'CL #4 adds sampler corrections'

perform parractic angle correction

default vlbapang

getn 38

vlbapang

AIPS 1: 'CL #5 adds parallactic angle corrections'

do delay correction

default vlbapcor

getn 38

timer 00 09 17 46 00 09 22 24

calsour 'J2025+3343"

refant 5

opcode "

gainuse 5

vlbapcor

AIPS 1: 'SN #2 contains pcal instr. phase corrections'

AIPS 1: 'CL #6 adds instr. phase corrections'

tget vlbacrpl

getn 38

gianuse 6

vlbacrpl

KP is scattered

do bandpass calibration

default vlbabpss

getn 38

```
calsour 'J2025+3343"
refant 5
vlbabpss
AIPS 1: 'BP #1 bandpass table'

default possm
getn 38
aparm(8) 2
dotv 1
nplot 9
go
looks good

## amp cal
default vlbaamp
getn 38
vlbaamp
AIPS 1: 'SN #3 contains sampler corrections'
AIPS 1: 'SN #4 contains gain corrections'
AIPS 1: 'CL #7 adds sampler corrections'
AIPS 1: 'CL #8 adds gain corrections'

tget vlbacrpl
gainuse 8
vlbacrpl
```

editr flagging
default editr
getn 38
docal 1
gainuse 8
crowded 1
doband 1
bpver 1
flagver 1
outfgver 1
antuse 1 2 3 4 5 6 7 8 9 10
sour 'J2025+3343'
go
sour 'V404CYG'
go
sour 'J2023+3153'
go

fring fit on phase ref source
default fring
refant 5
getn 38
solint 1
sour "
calsour 'J2025+3343"
gainuse 8
timer 0
docal 2
saerch 9 2 4 8 1 7 3 6 10
aparm(9) 1
flagver 0
dparm 1 400 60 0 0 0 1
go

LOCALH> FRING1: Writing SN table   5

LOCALH> FRING1: Found   3966 good solutions

LOCALH> FRING1: Failed on   530 solutions

LOCALH> FRING1: Appears to have ended successfully

#snedt outliser

default snedt

getn 38

inver 5

dodela 1

crowded 1

antuse 1 2 3 4 5 6 7 8 9 10

go

##snsmo

default snsmo

getn 38

inver 6

timer 0

antenna 0

refant 5

smoty 'vlbi'

outver 8 (accidentally created 7 in snedt)

bparm 0 0 ½ ½ 0

cparm 0

sampty "

go

make cl table

default clcal

cals 'J2025+3343"

sour "

interpol 'ambg'

snver 8

ante 0

gainver 8

gainuse 9

refant 5

getn 38

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 9

LOCALH> CLCAL1: Appears to have ended successfully

split phase ref source

default split

getn 38

docal 2

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

douvcomp -1

bpver 0

go

AIPS 1:   37   30 J2025+3343 .SPLIT .   10 UV 22-JUN-22 18:59:35

sour 'V404CYG'

go

AIPS 1:   39   30 V404CYG   .SPLIT .   10 UV 22-JUN-22 18:59:55

sour 'J2023+3153'

go

AIPS 1:   40   30 J2023+3153 .SPLIT .   10 UV 22-JUN-22 19:00:21

(NOTE the topmost SN table is 8 and not 7, due to accidentally creating one more in snedt)

—---Epoch K—--

```
## load data
default fitld
cling 0.25
datain 'PWD:bm399k.idifits
outname 'epochK'
outclass 'uvdata'
outseq 1
outdisk 1
go
AIPS 1:   42   30 EPOCHK      .UVDATA.   1 UV 22-JUN-22 19:08:18

## flag low elevations
default uvflg
getn 42
baseline 0
ante 0
opcode 'FLAG'
aparm 0 23
go

## calibrate for eop
default vlbaeops
getn 42
vlbaeops
AIPS 1: 'CL #2 contains the EOP corrections'

## check cl table using snplt
default snplt
getn 42
inext 'cl'
inver 2
opty 'phas'
nplot 8
```

```
dov 1
go

## correct for ionosphere
default vlbatecr
getn 42
vlbatecr
AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'

## correct for digital sampler
default vlbaccor
getn 42
vlbaccor
AIPS 1: 'SN #1 contains sampler corrections'
AIPS 1: 'CL #4 adds sampler corrections'

## perform parallactic angle corrections
default vlbapang
getn 42
vlbapang
AIPS 1: 'CL #5 adds parallactic angle corrections'

## perform delay correction using the found source
default vlbapcor
getn 42
timer 00 07 04 46 00 07 09 22
calsour 'J2025+3343'
refant 8
opcode "
gainuse 5
vlbapcor
AIPS 1: 'SN #2 contains pcal instr. phase corrections'
AIPS 1: 'CL #6 adds instr. phase corrections'
```

```
tget vlbacrpl

getn 42

gainuse 6

vlbacrpl


baseline to br (LL) is very scattered. Flag LL for br

default uvflg

getn 42

ante 1

timer 0

stokes 'll'

go


tget vlbacrpl

vlbacrpl

delays are flat


## do bandpass calibration

default vlbabpss

getn 42

calsour 'J2025+3343"

refant 8

vlbabpss

AIPS 1: 'BP #1 bandpass table'


## check bandpass calibration

default possm

getn 42

aparm(8) 2

dotv 1

nplot 9

go

good
```

```
## perform amplitude calibration
default vlbaamp
getn 42
vlbaamp
AIPS 1: 'SN #3 contains sampler corrections'
AIPS 1: 'SN #4 contains gain corrections'
AIPS 1: 'CL #7 adds sampler corrections'
AIPS 1: 'CL #8 adds gain corrections'

tget vlbacrpl
gainuse 8
vlbacrpl

## flag using editr
default editr
getn 42
docal 1
gainuse 8
crowded 1
doband 1
bpver 1
refant 8
flagver 1
outfgver 1
antuse 1 2 3 4 5 6 7 8 9 10
sour 'J2025+3343"
go
sour 'V404CYG'
go
sour 'J2023+3153"
go

## fring fit on phase ref source
```

default fring

refant 8

getn 42

solint 1

sour "

calsour 'J2025+3343"

gainuse 8

timer 0

docal 2

search 5 2 4 7 1 6 3 9

aparm(9) 1

dparm 1 400 60 0 0 0 1

go

LOCALH> FRING1: Writing SN table   5

LOCALH> FRING1: Found   4760 good solutions

LOCALH> FRING1: Failed on   280 solutions

LOCALH> FRING1: Appears to have ended successfully

#snedt outliers

default snedt

getn 42

inver 5

dodela 1

crowded 1

antuse 1 2 3 4 5 6 7 8 9 10

go

#snsmo

default snsmo

getn 42

inver 6

timer 0

antenna 0

refant 8

smoty 'vlbi'

outver 7

bparm 0 0 ½ ½ 0

cparm 0

sampty "

go

make cl table

default clcal

cals 'J2025+3343'

sour "

interpol 'ambg'

snver 7

ante 0

gainver 8

gainuse 9

refant 8

getn 42

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 9

LOCALH> CLCAL1: Appears to have ended successfully

split phase ref source

default split

getn 42

docal 2

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

douvcomp -1

doband 1

bpver 0

go

AIPS 1: 41   30 J2025+3343 .SPLIT . 11 UV 22-JUN-22 19:29:32

sour 'V404CYG'

go

AIPS 1: 43   30 V404CYG   .SPLIT . 11 UV 22-JUN-22 19:30:14

sour 'J2023+3153'

go

AIPS 1: 44   30 J2023+3153 .SPLIT . 11 UV 22-JUN-22 19:30:37

—--Epoch L—--

load data

default fitld

clint 0.25

datain 'PWD:bm399l.idifits

outname 'epochL'

outclass 'uvdata'

outseq 1

outdisk 1

go

AIPS 1: 46   30 EPOCHL   .UVDATA.   1 UV 22-JUN-22 19:36:54

flag low elevations

default uvflg

getn 46

baseline 0

ante 0

opcode 'FLAG'

aparm 0 23

go

calibrate for eops

default vlbaeops

getn 46

vlbaeops

AIPS 1: 'CL #2 contains the EOP corrections'

correct for ionosphere

default vlbatecr

getn 46

vlbatecr

AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'

correct for digital sampler

default vlbaccor

getn 46

vlbaccor

AIPS 1: 'SN #1 contains sampler corrections'

AIPS 1: 'CL #4 adds sampler corrections'

perform parallactic angle correctoin

default vlbapang

getn 46

vlbapang

AIPS 1: 'CL #5 adds parallactic angle corrections'

do delay correction

default vlbapcor

getn 46

timer 00 08 00 46 00 08 05 23

calsour 'J2025+3343"

refant 9

opcode "

gainuse 5

vlbapcor

AIPS 1: 'SN #2 contains pcal instr. phase corrections'

AIPS 1: 'CL #6 adds instr. phase corrections'

tget vlbacrpl

getn 46

gainuse 6

refant 9

vlbacrpl

MK is scattered

do bandpass

default vlbabpss

getn 46

calsour 'J2025+3343"

refant 9

vlbabpss

do amp calibration

default vlbaamp

getn 46

vlbaamp

AIPS 1: 'SN #3 contains sampler corrections'

AIPS 1: 'SN #4 contains gain corrections'

AIPS 1: 'CL #7 adds sampler corrections'

AIPS 1: 'CL #8 adds gain corrections'

tget vlbacrpl

gainuse 8

vlbacrpl

use editr to flag

default editr

```
getn 46

docal 1

gainuse 8

crowded 1

doband 1

bpver 1

flagver 1

outfgver 1

antuse 1 2 3 4 5 6 7 8 9 10

sour 'J2025+3343"

go

sour 'V404CYG'

go

sour 'J2023+3153'

go


## firng fit

default fring

getn 46

solint 1

sour "

calsour 'J2025+3343"

gianuse 8

refant 9

timer 0

docal 2

search 5 2 4 8 1 7 3 6 10

aparm(9) 1

dparm 1 400 60 0 0 0 1

flagver 0

go

LOCALH> FRING1: Writing SN table    5

LOCALH> FRING1: Found    5146 good solutions
```

LOCALH> FRING1: Failed on   6 solutions

LOCALH> FRING1: Appears to have ended successfully

```
#snedt outliers
default snedt
getn 46
inver 5
dodela 1
crowded 1
antuse 1 2 3 4 5 6 7 8 9 10
go

#snsmo
default snsmo
getn 46
inver 6
timer 0
antenna 0
refant 9
smoty 'vlbi'
outver 7
bparm 0 0 ½ ½ 0
cparm 0
sampty "
go

## make cl table from sn table
default clcal
cals 'J2025+3343'
sour "
interpol 'ambg'
snver 7
ante 0
```

gainver 8

gainuse 9

refant 9

getn 46

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 9

LOCALH> CLCAL1: Appears to have ended successfully

split

default split

getn 46

docal 2

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

douvcomp -1

doband 1

bpver 0

go

AIPS 1:   45   30 J2025+3343 .SPLIT .   12 UV 22-JUN-22 19:59:51

sour 'V404CYG'

go

AIPS 1:   47   30 V404CYG   .SPLIT .   12 UV 22-JUN-22 20:00:13

sour 'J2023+3153'

go

AIPS 1:   48   30 J2023+3153 .SPLIT .   12 UV 22-JUN-22 20:00:33

(The check source looks split. Try making new copies of the check source split without 1 ant each)
From Difmap analysis of the check source, the split structure disappeared and the source looked
more symmetric when Ant NL was flagged. Hence, we make one more split of the phase ref source,
V404, and check source but with NL flagged

flag NL (ant 7)

default uvflg

getn 46

antennas 6

timer 0

outfgver 0

opcode 'FLAG'

go

split

default split

getn 46

docal 2

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

douvcomp -1

doband 1

bpver 0

go

AIPS 1:   49   30 J2025+3343 .SPLIT . 13 UV 23-JUN-22 09:33:10

sour 'V404CYG'

go

AIPS 1:   50   30 V404CYG   .SPLIT . 13 UV 23-JUN-22 09:34:11

sour 'J2023+3153'

go

AIPS 1:   51   30 J2023+3153 .SPLIT . 13 UV 23-JUN-22 09:34:35

STEEVVVVEEE YOU HAVE FLAGGED MK INSTEAD OF NL. UNFLAG MK AND FLAG NL.

#unflag MK

default uvflg

getn 49

antenna 6

timer 0

outfgver 0

opcode 'UFLG'

go

#flag NL

default uvflg

getn 46

antennas 7

timer 0

outfgver 0

opcode 'FLAG'

go

##flag low elevations again (just in case, MK had few low elevations initially flagged that got unflagged in the prev step)

flag low elevations

default uvflg

getn 46

baseline 0

ante 0

opcode 'FLAG'

aparm 0 23

go

split

default split

getn 46

docal 2

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

douvcomp -1

doband 1

bpver 0

go

AIPS 1:   52   30 J2025+3343 .SPLIT .   14 UV 23-JUN-22 09:42:52

sour 'V404CYG'

go

AIPS 1:   53   30 V404CYG   .SPLIT .   14 UV 23-JUN-22 09:43:09

sour 'J2023+3153'

go

AIPS 1:   54   30 J2023+3153 .SPLIT .   14 UV 23-JUN-22 09:43:26

Still looks like the unflagging of MK has not worked. Exdest the FG table and recreate one using the flagging steps (uvflg and editr)

default extdest

getn 46

inext 'FG'

go

flag low elevations

flag low elevations

default uvflg

getn 46

baseline 0

ante 0

opcode 'FLAG'

```
aparm 0 23
go

## flag NL
default uvflg
getn 46
antennas 7
timer 0
outfgver 0
opcode 'FLAG'
go

## use editr to flag
default editr
getn 46
docal 1
gainuse 8
crowded 1
doband 1
bpver 1
flagver 1
outfgver 1
antuse 1 2 3 4 5 6 7 8 9 10
sour 'J2025+3343"
go
sour 'V404CYG'
go
sour 'J2023+3153'
go

## split
default split
getn 46
```

docal 2

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

douvcomp -1

doband 1

bpver 0

go

AIPS 1:   55   30 J2025+3343 .SPLIT .   15 UV 23-JUN-22 10:36:24

sour 'V404CYG'

go

AIPS 1:   56   30 V404CYG   .SPLIT .   15 UV 23-JUN-22 10:36:49

sour 'J2023+3153'

go

AIPS 1:   57   30 J2023+3153 .SPLIT .   15 UV 23-JUN-22 10:37:18

—--Epoch M—---

load data

default fitld

clint 0.25

datain 'PWD:bm399m.idifits

outname 'epochM'

outclass 'uvdata'

outseq 1

outdisk 1

go

AIPS 1:   59   30 EPOCHM   .UVDATA.   1 UV 23-JUN-22 13:10:39

flag low elevations

default uvflg

```
getn 59

baseline 0

ante 0

opcode 'FLAG'

aparm 0 23

go


## calibrate for eops

default vlbaeops

getn 59

vlbaeops

AIPS 1: 'CL #2 contains the EOP corrections'


## correct for ionosphere

default vlbatecr

getn 59

vlbatecr

AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'


## correct for digital sampler

default vlbaccor

getn 59

vlbaccor

AIPS 1: 'SN #1 contains sampler corrections'

AIPS 1: 'CL #4 adds sampler corrections'


## perform parallactic angle correction

default vlbapang

getn 59

vlbapang

AIPS 1: 'CL #5 adds parallactic angle corrections'


## do delay correction
```

```
default vlbapcor
getn 59
timer 0 8 22 30 0 8 23 0
refant 9
calsour 'J2025+3343'
opcode "
gainuse 5
vlbapcor
AIPS 1: 'SN #2 contains pcal instr. phase corrections'
AIPS 1: 'CL #6 adds instr. phase corrections'

## plot crpl to see if delays are flat
default vlbacrpl
getn 59
refant 9
gainuse 6
dotv 1
stokes 'half'
solint -1
sour 'J2025+3343'
vlbacrpl

delays are flat

## flag ant 5 IF 4
default uvflg
getn 59
ante 5 0
bif 4
eif 4
reason 'spiky amp'
go
```

```
## do bandpass calibration
default vlbabpss
getn 59
calsour 'J2025+3343'
refant 9
vlbabpss
AIPS 1: 'BP #1 bandpass table'

## check bp solution
default possm
getn 59
aparm(8) 2
dotv 1
nplot 9
go
looks good

## perform amp calibration
default vlbaamp
getn 59
vlbaamp
AIPS 1: 'SN #3 contains sampler corrections'
AIPS 1: 'SN #4 contains gain corrections'
AIPS 1: 'CL #7 adds sampler corrections'
AIPS 1: 'CL #8 adds gain corrections'

## flag data using editr
default editr
getn 59
docal 2
gainuse 8
crowded 1
refant 9
```

```
doband 1

bpver 1

flagver 1

outfgver 1

antuse 1 2 3 4 5 6 7 8 9 10

sour 'J2025+3343'

go

sour 'V404CYG'

go

sour 'J2023+3153'

go


## fring fit on phase ref source

default fring

refant 9

getn 59

solint 1

sour "

calsour 'J2025+3343'

gainuse 8

timer 0

docal 2

search 5 2 4 8 1 7 3 6 10

aparm(9) 1

dparm 1 400 60 0 0 0 1

ante 0

flagver 0

go

LOCALH> FRING1: Writing SN table    5

LOCALH> FRING1: Found     4730 good solutions

LOCALH> FRING1: Failed on      70 solutions

LOCALH> FRING1: Appears to have ended successfully
```

```
#snedt outliers
default snedt
getn 59
inver 5
dodela 1
crowded 1
antuse 1 2 3 4 5 6 7 8 9 10
go

#snsmo
default snsmo
getn 59
inver 6
timer 0
antenna 0
refant 9
smoty 'vlbi'
outver 7
bparm 0 0 ½ ½ 0
cparm 0
sampty "
go

## create cl table
default clcal
cals 'J2025+3343'
sour "
interpol 'ambg'
snver 7
ante 0
gainver 8
gainuse 9
refant 9
```

getn 59

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 9

LOCALH> CLCAL1: Appears to have ended successfully

split phase ref source

default split

getn 59

docal 2

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

douvcomp -1

doband 1

bpver 0

go

AIPS 1:   58   30 J2025+3343 .SPLIT .   16 UV 23-JUN-22 13:30:09

sour 'V404CYG'

go

AIPS 1:   60   30 V404CYG   .SPLIT .   16 UV 23-JUN-22 13:30:41

sour 'J2023+3153'

go

AIPS 1:   61   30 J2023+3153 .SPLIT .   16 UV 23-JUN-22 13:31:05

From Difmap inspection of the check source, the source looks split. However, the secondary split disappears once Ant NL is flagged. Re-make the splits by flagging NL.

flag NL

default uvflg

getn 59

antennas 7

timer 0

outfgver 0

opcode 'FLAG'

go

split phase ref source

default split

getn 59

docal 2

gainuse 9

flagver 0

sour 'J2025+3343"

bch 0

ech 0

aparm 2 0

douvcomp -1

doband 1

bpver 0

go

AIPS 1:   62   30 J2025+3343 .SPLIT .   17 UV 23-JUN-22 13:46:31

sour 'V404CYG'

go

AIPS 1:   63   30 V404CYG   .SPLIT .   17 UV 23-JUN-22 13:46:56

sour 'J2023+3153'

go

AIPS 1:   64   30 J2023+3153 .SPLIT .   17 UV 23-JUN-22 13:47:12

------------------------------Stack the Phase Ref splits of all epochs to create a glob model—-----------------------

default dbcon

getn 1

getn2n 5

outname 'comb1'

go

AIPS 1:   65   30 COMB1   .DBCON .   1 UV 23-JUN-22 14:04:24

getn 65
get2n 9
outname 'comb3'
go
AIPS 1:   66   30 COMB3   .DBCON .   1 UV 23-JUN-22 14:05:02
(note I have accidentally skipped comb2)

getn 66
get2n 13
outname 'comb4'
go
AIPS 1:   67   30 COMB4   .DBCON .   1 UV 23-JUN-22 14:06:21

getn 67
get2n 17
outname 'comb5'
go
AIPS 1:   68   30 COMB5   .DBCON .   1 UV 23-JUN-22 14:06:55

getn 68
get2n 21
outname 'comb6'
go
AIPS 1:   69   30 COMB6   .DBCON .   1 UV 23-JUN-22 14:07:36

getn 69
get2n 21
outname 'comb7'
go
AIPS 1:   70   30 COMB7   .DBCON .   1 UV 23-JUN-22 14:08:15

getn 70

get2n 25

outname 'comb8'

go

AIPS 1:   71   30 COMB8   .DBCON .   1 UV 23-JUN-22 14:09:07

getn 71

get2n 29

outname 'comb9'

go

AIPS 1:   72   30 COMB9   .DBCON .   1 UV 23-JUN-22 14:09:41

getn 72

get2n 33

outname 'comb10'

go

AIPS 1:   73   30 COMB10   .DBCON .   1 UV 23-JUN-22 14:10:35

getn 73

get2n 37

outname 'comb11'

go

AIPS 1:   74   30 COMB11   .DBCON .   1 UV 23-JUN-22 14:11:16

getn 74

get2n 41

outname 'comb12'

go

AIPS 1:   75   30 COMB12   .DBCON .   1 UV 23-JUN-22 14:11:53

getn 75

get2n 55

outname 'comb13'

go

AIPS 1:   76   30 COMB13   .DBCON .   1 UV 23-JUN-22 14:12:34

getn 76

get2n 62

outname 'comb14'

go

AIPS 1:   77   30 COMB14   .DBCON .   1 UV 23-JUN-22 14:13:12

#write comb14 to disk (for selfcal in difmap)

default fitdisk

getn 77

dataout 'PWD:

fitdisk

—---------------------------------Fringfit all epochs on glob model—---

load glob model

default fitld
datain 'PWD:PR_cal.fits
outname 'prglob'
outclass 'IMAG'
outseq 1
outdisk 1
go
AIPS 1:   78   30 PRGLOB   .IMAG .   1 MA 23-JUN-22 16:35:33

EPOCH A

#fring fit

default fring

refant 9

getn 2

solint 1

sour "

calsour 'J2025+3343'

gainuse 8

timer 0

docal 2

search 4 8 2 5 7 1 6 3 10

aparm(9) 1

dparm 1 400 60 0 0 0 1

ante 0

flagver 0

smodel 0

doband 1

bpver 0

get2n 78

go

LOCALH> FRING1: Writing SN table   11

LOCALH> FRING1: Found   3730 good solutions

LOCALH> FRING1: Failed on   46 solutions

LOCALH> FRING1: Appears to have ended successfully

default snedt

default snedt

getn 2

inver 11

dodela 1

crowded 1

antuse 1 2 3 4 5 6 7 8 9 10

go

snsmo

default snsmo

getn 2

inver 12

timer 0

```
antenna 0
refant 9
smoty 'vlbi'
outver 13
bparm 0 0 ½ ½ 0
cparm 0
sampty "
go

## make cl table
default clcal
cals 'J2025+3343"
sour "
interpol 'ambg'
snver 13
gainver 8
gainuse 10
refant 9
ante 0
getn 2
go
LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10
LOCALH> CLCAL1: Appears to have ended successfully

#split targets
default split
getn 2
docal 2
gainuse 10
flagver 0
sour 'V404CYG'
bch 0
ech 0
```

aparm 2 0

douvcomp -1

doband 1

bpver 0

go

AIPS 1:   79   30 V404CYG   .SPLIT .   18 UV 23-JUN-22 19:16:36

sour 'J2023+3153'

go

 AIPS 1:   80   30 J2023+3153 .SPLIT .   18 UV 23-JUN-22 19:17:08

EPOCH B

#fring fit

tget fring

refant 5

getn 6

go

LOCALH> FRING1: Writing SN table   8

LOCALH> FRING1: Found   4748 good solutions

LOCALH> FRING1: Failed on   628 solutions

LOCALH> FRING1: Appears to have ended successfully

default snedt

tget snedt

getn 6

inver 8

go

snsmo

tget snsmo

getn 6

inver 9

refant 5

outver 10

go

make cl table

tget clcal

snver 10

gainver 8

gainuse 10

refant 5

getn 6

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10

LOCALH> CLCAL1: Appears to have ended successfully

#split targets

tget split

getn 6

docal 2

gainuse 10

sour 'V404CYG'

go

AIPS 1:   81   30 V404CYG   .SPLIT .   19 UV 23-JUN-22 19:27:56

sour 'J2023+3153'

go

AIPS 1:   82   30 J2023+3153 .SPLIT .   19 UV 23-JUN-22 19:28:17

EPOCH C

#fring fit

tget fring

refant 5

getn 10

go

LOCALH> FRING1: Writing SN table   8

LOCALH> FRING1: Found   4715 good solutions

LOCALH> FRING1: Failed on   245 solutions

LOCALH> FRING1: Appears to have ended successfully

default snedt

tget snedt

getn 10

inver 8

go

snsmo

tget snsmo

getn 10

inver 9

refant 5

outver 10

go

make cl table

tget clcal

snver 10

gainver 8

gainuse 10

refant 5

getn 10

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10

LOCALH> CLCAL1: Appears to have ended successfully

#split targets

tget split

getn 10

gainuse 10

sour 'V404CYG'

go

AIPS 1:   83   30 V404CYG   .SPLIT .   20 UV 23-JUN-22 19:34:28

sour 'J2023+3153'

go

AIPS 1:   84   30 J2023+3153 .SPLIT .   20 UV 23-JUN-22 19:35:07

EPOCH D

#fring fit

tget fring

refant 9

getn 14

go

LOCALH> FRING1: Writing SN table   8

LOCALH> FRING1: Found   3848 good solutions

LOCALH> FRING1: Failed on   136 solutions

LOCALH> FRING1: Appears to have ended successfully

default snedt

tget snedt

getn 14

inver 8

go

snsmo

tget snsmo

getn 14

inver 9

refant 9

outver 10

go

make cl table

tget clcal

snver 10

gainver 8

gainuse 10

refant 9

getn 14

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10

LOCALH> CLCAL1: Appears to have ended successfully

#split targets

tget split

getn 14

gainuse 10

sour 'V404CYG'

go

AIPS 1:   85   30 V404CYG   .SPLIT .   21 UV 23-JUN-22 19:54:46

sour 'J2023+3153'

go

AIPS 1:   86   30 J2023+3153 .SPLIT .   21 UV 23-JUN-22 19:55:07

EPOCH E

#fring fit

tget fring

refant 5

getn 18

go

LOCALH> FRING1: Writing SN table   8

LOCALH> FRING1: Found   4560 good solutions

LOCALH> FRING1: Failed on   96 solutions

LOCALH> FRING1: Appears to have ended successfully

default snedt

tget snedt

```
getn 18
inver 8
go

## snsmo
tget snsmo
getn 18
inver 9
refant 5
outver 10
go

## make cl table
tget clcal
snver 10
gainver 8
gainuse 10
refant 5
getn 18
go
LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10
LOCALH> CLCAL1: Appears to have ended successfully

#split targets
tget split
getn 18
gainuse 10
sour 'V404CYG'
go
AIPS 1:   87   30 V404CYG    .SPLIT .   22 UV 23-JUN-22 20:00:05
sour 'J2023+3153'
go
AIPS 1:   88   30 J2023+3153  .SPLIT .   22 UV 23-JUN-22 20:00:28
```

EPOCH F

#fring fit

tget fring

refant 5

getn 22

go

LOCALH> FRING1: Writing SN table   8

LOCALH> FRING1: Found   3037 good solutions

LOCALH> FRING1: Failed on   67 solutions

LOCALH> FRING1: Appears to have ended successfully

default snedt

tget snedt

getn 22

inver 8

go

snsmo

tget snsmo

getn 22

inver 9

refant 5

outver 10

go

make cl table

tget clcal

snver 10

gainver 8

gainuse 10

refant 5

getn 22

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10

LOCALH> CLCAL1: Appears to have ended successfully

#split targets

tget split

getn 22

gainuse 10

sour 'V404CYG'

go

AIPS 1:   89   30 V404CYG   .SPLIT .   23 UV 23-JUN-22 20:05:49

sour 'J2023+3153'

go

AIPS 1:   90   30 J2023+3153 .SPLIT .   23 UV 23-JUN-22 20:06:07

EPOCH G

#fring fit

tget fring

refant 5

getn 26

go

LOCALH> FRING1: Writing SN table   8

LOCALH> FRING1: Found   4386 good solutions

LOCALH> FRING1: Failed on   62 solutions

LOCALH> FRING1: Appears to have ended successfully

default snedt

tget snedt

getn 26

inver 8

go

```
## snsmo
tget snsmo
getn 26
inver 9
refant 5
outver 10
go

## make cl table
tget clcal
snver 10
gainver 8
gainuse 10
refant 5
getn 26
go
LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10
LOCALH> CLCAL1: Appears to have ended successfully

#split targets
tget split
getn 26
gainuse 10
sour 'V404CYG'
go
AIPS 1:   91   30 V404CYG     .SPLIT .   24 UV 23-JUN-22 20:10:49
sour 'J2023+3153'
go
AIPS 1:   92   30 J2023+3153  .SPLIT .   24 UV 23-JUN-22 20:11:09
```

EPOCH H
```
#fring fit
tget fring
```

refant 8

getn 30

go

LOCALH> FRING1: Writing SN table   8

LOCALH> FRING1: Found   3644 good solutions

LOCALH> FRING1: Failed on   132 solutions

LOCALH> FRING1: Appears to have ended successfully

default snedt

tget snedt

getn 30

inver 8

go

snsmo

tget snsmo

getn 30

inver 9

refant 8

outver 10

go

make cl table

tget clcal

snver 10

gainver 8

gainuse 10

refant 8

getn 30

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10

LOCALH> CLCAL1: Appears to have ended successfully

```
#split targets
tget split
getn 30
gainuse 10
sour 'V404CYG'
go
AIPS 1:   93   30 V404CYG    .SPLIT .   25 UV 23-JUN-22 20:15:33
sour 'J2023+3153'
go
AIPS 1:   94   30 J2023+3153  .SPLIT .   25 UV 23-JUN-22 20:15:51
```

EPOCH I

```
#fring fit
tget fring
refant 5
getn 34
go
LOCALH> FRING1: Writing SN table    8
LOCALH> FRING1: Found     4416 good solutions
LOCALH> FRING1: Appears to have ended successfully

## default snedt
tget snedt
getn 34
inver 8
go

## snsmo
tget snsmo
getn 34
inver 9
refant 5
outver 10
```

go

make cl table

tget clcal

snver 10

gainver 8

gainuse 10

refant 5

getn 34

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10

LOCALH> CLCAL1: Appears to have ended successfully

#split targets

tget split

getn 34

gainuse 10

sour 'V404CYG'

go

AIPS 1:   95   30 V404CYG   .SPLIT .   26 UV 23-JUN-22 20:20:12

sour 'J2023+3153'

go

AIPS 1:   96   30 J2023+3153 .SPLIT .   26 UV 23-JUN-22 20:20:41

EPOCH J

#fring fit

tget fring

refant 5

getn 38

go

LOCALH> FRING1: Writing SN table   9

LOCALH> FRING1: Found   3913 good solutions

LOCALH> FRING1: Failed on   583 solutions

LOCALH> FRING1: Appears to have ended successfully

```
## default snedt
tget snedt
getn 38
inver 9
go

## snsmo
tget snsmo
getn 38
inver 10
refant 5
outver 11
go

## make cl table
tget clcal
snver 11
gainver 8
gainuse 10
refant 5
getn 38
go
```

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10
LOCALH> CLCAL1: Appears to have ended successfully

```
#split targets
tget split
getn 38
gainuse 10
sour 'V404CYG'
```

go

AIPS 1:   97   30 V404CYG   .SPLIT .   27 UV 23-JUN-22 20:26:11

sour 'J2023+3153'

go

AIPS 1:   98   30 J2023+3153 .SPLIT .   27 UV 23-JUN-22 20:26:30

EPOCH K

#fring fit

tget fring

refant 8

getn 42

go

LOCALH> FRING1: Writing SN table   8

LOCALH> FRING1: Found   4759 good solutions

LOCALH> FRING1: Failed on   281 solutions

LOCALH> FRING1: Appears to have ended successfully

default snedt

tget snedt

getn 42

inver 8

go

snsmo

tget snsmo

getn 42

inver 9

refant 8

outver 10

go

make cl table

```
tget clcal
snver 10
gainver 8
gainuse 10
refant 8
getn 42
go
LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10
LOCALH> CLCAL1: Appears to have ended successfully

#split targets
tget split
getn 42
gainuse 10
sour 'V404CYG'
go
AIPS 1:   99   30 V404CYG    .SPLIT .   28 UV 23-JUN-22 20:31:42
sour 'J2023+3153'
go
AIPS 1:  100   30 J2023+3153  .SPLIT .   28 UV 23-JUN-22 20:32:04

EPOCH L
#fring fit
tget fring
refant 9
getn 46
go
LOCALH> FRING1: Writing SN table   8
LOCALH> FRING1: Found    4590 good solutions
LOCALH> FRING1: Failed on      2 solutions
LOCALH> FRING1: Appears to have ended successfully

## default snedt
```

```
tget snedt

getn 46

inver 8

go


## snsmo

tget snsmo

getn 46

inver 9

refant 9

outver 10

go


## make cl table

tget clcal

snver 10

gainver 8

gainuse 10

refant 9

getn 46

go
LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10
LOCALH> CLCAL1: Appears to have ended successfully


#split targets

tget split

getn 46

gainuse 10

sour 'V404CYG'

go
AIPS 1:   101   30 V404CYG     .SPLIT .   29 UV 23-JUN-22 20:36:45
sour 'J2023+3153'

go
```

EPOCH M

#fring fit

tget fring

refant 9

getn 59

go

LOCALH> FRING1: Writing SN table 8

LOCALH> FRING1: Found   4170 good solutions

LOCALH> FRING1: Failed on   70 solutions

LOCALH> FRING1: Appears to have ended successfully

default snedt

tget snedt

getn 59

inver 8

go

snsmo

tget snsmo

getn 59

inver 9

refant 9

outver 10

go

make cl table

tget clcal

snver 10

gainver 8

gainuse 10

refant 9

getn 59

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table   8, writing CL table 10

LOCALH> CLCAL1: Appears to have ended successfully

#split targets

tget split

getn 59

gainuse 10

sour 'V404CYG'

go

AIPS 1:   103   30 V404CYG   .SPLIT .   30 UV 23-JUN-22 20:41:29

sour 'J2023+3153'

go

AIPS 1:   104   30 J2023+3153 .SPLIT .   30 UV 23-JUN-22 20:41:51

—------------------------------image and JM fit V404 and phase ref source--

Epoch A

default imagr

getn 79

cellsi 1.5e-4

imsi 512

ante 0

uvwtfn 'n'

niter 2000

dotv 1

go

Very faint (probs about 3 sigma)

Even the check source is very faint

Epoch B

V404

tget imagr

getn 81

go

AIPS 1: 113   30 V404CYG   .ICL001.   4 MA 24-JUN-22 09:20:30

AIPS 1: BLC = 240.00 233.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 278.00 276.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 113

dowid -1

bcl 240 233

trc 278 276

go

LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 2.2442E-04 +/- 2.93E-05 JY/BEAM (7.67)

LOCALH> JMFIT1: Integral intensity= 2.2442E-04 +/- 2.93E-05 JANSKYS

LOCALH> JMFIT1: X-position   =   256.866 +/- 0.9437 pixels

LOCALH> JMFIT1: Y-position   =   253.838 +/- 1.3829 pixels

LOCALH> JMFIT1:   RA 20 24 03.8188038 +/- 0.000011366

LOCALH> JMFIT1:   DEC 33 52 01.851038 +/-   0.00020743

LOCALH> JMFIT1: Major axis   = 25.462 +/- 0.0000 pixels

LOCALH> JMFIT1: Minor axis   = 16.312 +/- 0.0000 pixels

LOCALH> JMFIT1: Position angle   = 165.344 +/- 0.000 degrees

LOCALH> JMFIT1: Major axis   = 0.0038193 +/- 0.0000000 asec

LOCALH> JMFIT1: Minor axis   = 0.0024467 +/- 0.0000000 asec

LOCALH> JMFIT1: Position angle   = 165.344 +/- 0.000 degrees

LOCALH> JMFIT1: RASHIFT= 0.000020 DECSHIFT= -0.000024 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.000   0.000   0.000

LOCALH> JMFIT1:   Minor ax   0.000   0.000   0.000

LOCALH> JMFIT1:   Pos ang   0.000   0.000   0.000

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.000000 0.000000 0.000000

LOCALH> JMFIT1:   Minor ax   0.000000 0.000000 0.000000

LOCALH> JMFIT1:   Pos ang   0.000000 0.000000 0.000000

LOCALH> JMFIT1: Component appears unresolved, use peak as total flux

LOCALH> JMFIT1: -

Check source

tget imagr

getn 82

go

AIPS 1: 115   30 J2023+3153 .ICL001.   1 MA 24-JUN-22 09:24:38

AIPS 1: BLC = 225.00 216.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 287.00 286.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 115

dowid 1

bcl 225 216

trc 287 286

go

LOCALH> JMFIT1: ********* Solution from JMFIT *******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 7.8953E-01 +/- 2.60E-02 JY/BEAM   (30.39)

LOCALH> JMFIT1: Integral intensity= 1.6204E+00 +/- 7.49E-02 JANSKYS

LOCALH> JMFIT1: X-position   =   256.283 +/- 0.3514 pixels

LOCALH> JMFIT1: Y-position   =   253.410 +/- 0.4905 pixels

LOCALH> JMFIT1:   RA 20 23 19.0173407 +/- 0.000004139

LOCALH> JMFIT1:   DEC 31 53 02.305531 +/- 0.00007358

LOCALH> JMFIT1: Major axis   = 35.358 +/- 1.1634 pixels

LOCALH> JMFIT1: Minor axis   = 24.793 +/- 0.8158 pixels

LOCALH> JMFIT1: Position angle   =   9.654 +/- 3.678 degrees

LOCALH> JMFIT1: Major axis   = 0.0053037 +/- 0.0001745 asec

LOCALH> JMFIT1: Minor axis   = 0.0037189 +/- 0.0001224 asec

LOCALH> JMFIT1: Position angle   =   9.654 +/- 3.678 degrees

LOCALH> JMFIT1: RASHIFT= -0.000042 DECSHIFT= 0.000061 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   26.767   24.247   29.163

LOCALH> JMFIT1:   Minor ax   15.042   11.880   17.657

LOCALH> JMFIT1:   Pos ang   26.066   15.275   35.794

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.004015   0.003637   0.004374

LOCALH> JMFIT1:   Minor ax   0.002256   0.001782   0.002649

LOCALH> JMFIT1:   Pos ang   26.065947 15.274823 35.794044

LOCALH> JMFIT1: Component appears resolved, use integral as total flux

LOCALH> JMFIT1: -

Epoch C

V404

tget imagr

getn 83

go

AIPS 1: 117   30 V404CYG   .ICL001.   5 MA 24-JUN-22 09:33:11

AIPS 1: BLC = 231.00 219.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 287.00 265.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 117

dowid 1

```
bcl 231 219

trc 287 265

go

LOCALH> JMFIT1: ********* Solution from JMFIT ****************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1:  Peak intensity   = 1.8211E-04 +/- 2.72E-05 JY/BEAM  ( 6.70)

LOCALH> JMFIT1:  Integral intensity= 2.5035E-04 +/- 5.85E-05 JANSKYS

LOCALH> JMFIT1:  X-position      =   253.779 +/-  1.7294 pixels

LOCALH> JMFIT1:  Y-position      =   242.571 +/-  1.5032 pixels

LOCALH> JMFIT1:             RA 20 24 03.8188409  +/-  0.000020828

LOCALH> JMFIT1:             DEC 33 52 01.849348  +/-   0.00022548

LOCALH> JMFIT1:  Major axis      = 32.735 +/-  4.8847 pixels

LOCALH> JMFIT1:  Minor axis      = 15.362 +/-  2.2923 pixels

LOCALH> JMFIT1:  Position angle   = 128.707 +/-  7.276 degrees

LOCALH> JMFIT1:  Major axis       = 0.0049102 +/- 0.0007327 asec

LOCALH> JMFIT1:  Minor axis       = 0.0023042 +/- 0.0003438 asec

LOCALH> JMFIT1:  Position angle   = 128.707 +/-  7.276 degrees

LOCALH> JMFIT1:  RASHIFT=   0.000033 DECSHIFT=  -0.000064 to center on pixel

LOCALH> JMFIT1:  - - - - - - - - - - - - - - - - - - - - - - - - - - - -

LOCALH> JMFIT1:           Deconvolution of component in pixels

LOCALH> JMFIT1:              Nominal    minimum    maximum

LOCALH> JMFIT1:   Major ax       20.639     0.000    30.754

LOCALH> JMFIT1:   Minor ax        0.000     0.000    15.420

LOCALH> JMFIT1:   Pos ang        104.302    77.688   140.317

LOCALH> JMFIT1:           Deconvolution of component in asec

LOCALH> JMFIT1:              Nominal    minimum    maximum

LOCALH> JMFIT1:   Major ax       0.003096  0.000000  0.004613

LOCALH> JMFIT1:   Minor ax       0.000000  0.000000  0.002313

LOCALH> JMFIT1:   Pos ang        104.302109  77.687500  140.316528

LOCALH> JMFIT1:  Component may be unresolved or resolved, use caution

LOCALH> JMFIT1:  - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

Check Source

tget imagr

getn 84

go

AIPS 1: 119   30 J2023+3153 .ICL001.   2 MA 24-JUN-22 09:36:08

AIPS 1: BLC = 225.00 204.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 285.00 281.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 119

dowid 1

bcl 225 204

trc 285 281

go

LOCALH> JMFIT1: ********* Solution from JMFIT ********************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 9.1325E-01 +/- 1.68E-02 JY/BEAM   (54.50)

LOCALH> JMFIT1: Integral intensity= 1.6015E+00 +/- 4.30E-02 JANSKYS

LOCALH> JMFIT1: X-position   =   256.473 +/- 0.1866 pixels

LOCALH> JMFIT1: Y-position   =   247.557 +/- 0.2526 pixels

LOCALH> JMFIT1:   RA 20 23 19.0173384 +/- 0.000002198

LOCALH> JMFIT1:   DEC 31 53 02.304654 +/-   0.00003789

LOCALH> JMFIT1: Major axis   = 35.061 +/- 0.6433 pixels

LOCALH> JMFIT1: Minor axis   = 19.881 +/- 0.3648 pixels

LOCALH> JMFIT1: Position angle   = 152.451 +/- 1.243 degrees

LOCALH> JMFIT1: Major axis   = 0.0052592 +/- 0.0000965 asec

LOCALH> JMFIT1: Minor axis   = 0.0029822 +/- 0.0000547 asec

LOCALH> JMFIT1: Position angle   = 152.451 +/- 1.243 degrees

LOCALH> JMFIT1: RASHIFT= -0.000071 DECSHIFT= -0.000066 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   19.753   17.972   21.455

LOCALH> JMFIT1:   Minor ax   11.826   9.386   13.726

LOCALH> JMFIT1:   Pos ang   3.745   -5.983   14.192

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.002963   0.002696   0.003218

LOCALH> JMFIT1:   Minor ax   0.001774   0.001408   0.002059

LOCALH> JMFIT1:   Pos ang   3.744539 174.016510 14.191939

LOCALH> JMFIT1: Component appears resolved, use integral as total flux

LOCALH> JMFIT1: -

Epoch D

V404

tget imagr

getn 85

go

AIPS 1: 121   30 V404CYG   .ICL001.   6 MA 24-JUN-22 09:39:10

AIPS 1: BLC = 240.00 205.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 278.00 263.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 121

dowid 1

bcl 240 205

trc 278 263

go

LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 2.7535E-04 +/- 2.72E-05 JY/BEAM (10.13)

LOCALH> JMFIT1: Integral intensity= 4.0932E-04 +/- 6.19E-05 JANSKYS

LOCALH> JMFIT1: X-position   =   257.187 +/- 0.7094 pixels

LOCALH> JMFIT1: Y-position   =   240.379 +/- 1.0781 pixels

LOCALH> JMFIT1:   RA 20 24 03.8187999 +/- 0.000008544

LOCALH> JMFIT1:   DEC 33 52 01.849019 +/- 0.00016171

LOCALH> JMFIT1: Major axis   = 27.365 +/- 2.7003 pixels

LOCALH> JMFIT1: Minor axis   = 14.132 +/- 1.3944 pixels

LOCALH> JMFIT1: Position angle   = 23.444 +/- 5.630 degrees

LOCALH> JMFIT1: Major axis   = 0.0041048 +/- 0.0004050 asec

LOCALH> JMFIT1: Minor axis   = 0.0021198 +/- 0.0002092 asec

LOCALH> JMFIT1: Position angle   = 23.444 +/- 5.630 degrees

LOCALH> JMFIT1: RASHIFT= -0.000028 DECSHIFT= 0.000057 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   13.146   5.920   20.014

LOCALH> JMFIT1:   Minor ax   9.049   0.000   11.689

LOCALH> JMFIT1:   Pos ang   27.031   -10.287   70.717

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.001972   0.000888   0.003002

LOCALH> JMFIT1:   Minor ax   0.001357   0.000000   0.001753

LOCALH> JMFIT1:   Pos ang   27.030703 169.713135 70.717331

LOCALH> JMFIT1: Component appears resolved, use integral as total flux

LOCALH> JMFIT1: -

Check Source

tget imagr

getn 86

go

AIPS 1: 125   30 J2023+3153 .ICL001.   4 MA 24-JUN-22 09:41:32

AIPS 1: BLC = 236.00 212.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 278.00 277.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 125

dowid 1

bcl 236 212

trc 278 277

go

LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 7.3083E-01 +/- 1.51E-02 JY/BEAM   (48.29)

LOCALH> JMFIT1: Integral intensity= 1.5221E+00 +/- 4.41E-02 JANSKYS

LOCALH> JMFIT1: X-position   =   255.451 +/- 0.1445 pixels

LOCALH> JMFIT1: Y-position   =   247.755 +/- 0.2723 pixels

LOCALH> JMFIT1:   RA 20 23 19.0173505 +/- 0.000001702

LOCALH> JMFIT1:   DEC 31 53 02.304683 +/-   0.00004085

LOCALH> JMFIT1: Major axis   = 31.647 +/- 0.6553 pixels

LOCALH> JMFIT1: Minor axis   = 15.092 +/- 0.3125 pixels

LOCALH> JMFIT1: Position angle   = 13.531 +/- 1.036 degrees

LOCALH> JMFIT1: Major axis   = 0.0047470 +/- 0.0000983 asec

LOCALH> JMFIT1: Minor axis   = 0.0022638 +/- 0.0000469 asec

LOCALH> JMFIT1: Position angle   = 13.531 +/- 1.036 degrees

LOCALH> JMFIT1: RASHIFT= -0.000068 DECSHIFT= -0.000037 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   21.995   20.686   23.273

LOCALH> JMFIT1:   Minor ax   11.032   10.258   11.710

LOCALH> JMFIT1:   Pos ang   8.303   4.853   12.508

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.003299   0.003103   0.003491

LOCALH> JMFIT1:   Minor ax   0.001655   0.001539   0.001756

LOCALH> JMFIT1:   Pos ang   8.302894   4.852814 12.508152

LOCALH> JMFIT1: Component appears resolved, use integral as total flux

LOCALH> JMFIT1: -

Epoch E

V404

tget imagr

getn 87

go

AIPS 1: 127 30 V404CYG   .ICL001. 7 MA 24-JUN-22 09:44:04

AIPS 1: BLC = 238.00 207.00 1.00 1.00 1.00 1.00 1.00

AIPS 1: TRC = 286.00 267.00 1.00 1.00 1.00 1.00 1.00

default jmfit

getn 127

dowid 1

bcl 238 207

trc 286 267

go

LOCALH> JMFIT1: ********* Solution from JMFIT *******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 4.5821E-04 +/- 2.86E-05 JY/BEAM (16.01)

LOCALH> JMFIT1: Integral intensity= 4.9070E-04 +/- 5.19E-05 JANSKYS

LOCALH> JMFIT1: X-position   =   260.032 +/- 0.3683 pixels

LOCALH> JMFIT1: Y-position   =   240.172 +/- 0.6437 pixels

LOCALH> JMFIT1:   RA 20 24 03.8187656 +/- 0.000004436

LOCALH> JMFIT1:   DEC 33 52 01.848988 +/-   0.00009655

LOCALH> JMFIT1: Major axis   = 25.266 +/- 1.5783 pixels

LOCALH> JMFIT1: Minor axis   = 11.961 +/- 0.7472 pixels

LOCALH> JMFIT1: Position angle   = 161.536 +/- 3.088 degrees

LOCALH> JMFIT1: Major axis   = 0.0037899 +/- 0.0002368 asec

LOCALH> JMFIT1: Minor axis   = 0.0017942 +/- 0.0001121 asec

LOCALH> JMFIT1: Position angle   = 161.536 +/- 3.088 degrees

LOCALH> JMFIT1: RASHIFT= -0.000005 DECSHIFT= 0.000026 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   5.483   1.996   8.997

LOCALH> JMFIT1:   Minor ax   0.000   0.000   9.600

LOCALH> JMFIT1:   Pos ang   159.905   115.212   201.067

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.000822 0.000299 0.001350

LOCALH> JMFIT1:   Minor ax   0.000000 0.000000 0.001440

LOCALH> JMFIT1:   Pos ang   159.904678 115.211578 21.066422

LOCALH> JMFIT1: Component may be unresolved or resolved, use caution

LOCALH> JMFIT1: -

Check Source

tget imagr

getn 88

go

AIPS 1: 129   30 J2023+3153 .ICL001.   5 MA 24-JUN-22 09:46:17

AIPS 1: BLC = 234.00 211.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 285.00 282.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 129

dowid 1

bcl 234 211

trc 285 282

go

LOCALH> JMFIT1: ********* Solution from JMFIT *******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 9.9552E-01 +/- 2.31E-02 JY/BEAM   (43.12)

LOCALH> JMFIT1: Integral intensity= 1.7641E+00 +/- 5.97E-02 JANSKYS

LOCALH> JMFIT1: X-position   =   256.087 +/- 0.1673 pixels

LOCALH> JMFIT1: Y-position   =   249.097 +/- 0.3080 pixels

LOCALH> JMFIT1:   RA 20 23 19.0173430 +/- 0.000001971

LOCALH> JMFIT1:   DEC 31 53 02.304885 +/- 0.00004619

LOCALH> JMFIT1: Major axis   = 32.092 +/- 0.7442 pixels

LOCALH> JMFIT1: Minor axis   = 15.382 +/- 0.3567 pixels

LOCALH> JMFIT1: Position angle   = 165.154 +/- 1.169 degrees

LOCALH> JMFIT1: Major axis   = 0.0048138 +/- 0.0001116 asec

LOCALH> JMFIT1: Minor axis   = 0.0023073 +/- 0.0000535 asec

LOCALH> JMFIT1: Position angle   = 165.154 +/- 1.169 degrees

LOCALH> JMFIT1: RASHIFT= -0.000013 DECSHIFT= 0.000015 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   19.334   17.514   21.056

LOCALH> JMFIT1:   Minor ax   10.297   8.943   11.335

LOCALH> JMFIT1:   Pos ang   176.393   167.915   182.700

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.002900   0.002627   0.003158

LOCALH> JMFIT1:   Minor ax   0.001545   0.001341   0.001700

LOCALH> JMFIT1:   Pos ang   176.393036 167.915039   2.699966

LOCALH> JMFIT1: Component appears resolved, use integral as total flux

LOCALH> JMFIT1: -

Epoch F

V404

tget imagr

getn 89

go

AIPS 1: 135   30 V404CYG   .ICL001.   10 MA 24-JUN-22 09:49:07

AIPS 1: BLC = 248.00 208.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 278.00 252.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 135

dowid 1

bcl 248 208

trc 278 252

go

LOCALH> JMFIT1: ********* Solution from JMFIT *******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 3.1195E-04 +/- 4.49E-05 JY/BEAM   (6.95)

LOCALH> JMFIT1: Integral intensity= 2.9634E-04 +/- 7.52E-05 JANSKYS

LOCALH> JMFIT1: X-position   =   261.352 +/- 0.6312 pixels

LOCALH> JMFIT1: Y-position   =   236.791 +/- 1.5498 pixels

LOCALH> JMFIT1:   RA 20 24 03.8187497 +/- 0.000007601

LOCALH> JMFIT1:   DEC 33 52 01.848481 +/- 0.00023247

LOCALH> JMFIT1: Major axis   = 25.554 +/- 3.6793 pixels

LOCALH> JMFIT1: Minor axis   = 9.799 +/- 1.4109 pixels

LOCALH> JMFIT1: Position angle   = 7.905 +/- 5.245 degrees

LOCALH> JMFIT1: Major axis   = 0.0038331 +/- 0.0005519 asec

LOCALH> JMFIT1: Minor axis   = 0.0014699 +/- 0.0002116 asec

LOCALH> JMFIT1: Position angle   = 7.905 +/- 5.245 degrees

LOCALH> JMFIT1: RASHIFT= -0.000053 DECSHIFT= -0.000031 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   4.006   0.000   11.635

LOCALH> JMFIT1:   Minor ax   0.000   0.000   12.289

LOCALH> JMFIT1:   Pos ang   8.887   -33.158   53.051

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.000601   0.000000   0.001745

LOCALH> JMFIT1:   Minor ax   0.000000   0.000000   0.001843

LOCALH> JMFIT1:   Pos ang   8.886888 146.842407   53.050941

LOCALH> JMFIT1: Component appears unresolved, use peak as total flux

LOCALH> JMFIT1: -

Check Source

tget imagr

getn 90

go

AIPS 1: 137   30 J2023+3153 .ICL001.   6 MA 24-JUN-22 09:51:12

AIPS 1: BLC = 244.00 211.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 271.00 282.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 137

dowid 1

bcl 244 211

trc 271 282

go

LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 8.7998E-01 +/- 3.78E-02 JY/BEAM   (23.27)

LOCALH> JMFIT1: Integral intensity= 1.1855E+00 +/- 8.03E-02 JANSKYS

LOCALH> JMFIT1: X-position   =   256.789 +/- 0.2042 pixels

LOCALH> JMFIT1: Y-position   =   248.271 +/- 0.6177 pixels

LOCALH> JMFIT1:   RA 20 23 19.0173347 +/- 0.000002405

LOCALH> JMFIT1:   DEC 31 53 02.304761 +/-   0.00009265

LOCALH> JMFIT1: Major axis   = 33.989 +/- 1.4604 pixels

LOCALH> JMFIT1: Minor axis   = 10.771 +/- 0.4628 pixels

LOCALH> JMFIT1: Position angle   = 5.402 +/- 1.226 degrees

LOCALH> JMFIT1: Major axis   = 0.0050983 +/- 0.0002191 asec

LOCALH> JMFIT1: Minor axis   = 0.0016156 +/- 0.0000694 asec

LOCALH> JMFIT1: Position angle   =   5.402 +/- 1.226 degrees

LOCALH> JMFIT1: RASHIFT=   0.000032 DECSHIFT=   0.000041 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   14.734   9.596   18.806

LOCALH> JMFIT1:   Minor ax   6.083   3.425   7.101

LOCALH> JMFIT1:   Pos ang   7.655   -19.345   31.110

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.002210   0.001439   0.002821

LOCALH> JMFIT1:   Minor ax   0.000912   0.000514   0.001065

LOCALH> JMFIT1:   Pos ang   7.654607 160.655151 31.109676

LOCALH> JMFIT1: Component appears resolved, use integral as total flux

LOCALH> JMFIT1: -

Epoch G

V404

tget imagr

getn 91

go

AIPS 1: 139   30 V404CYG   .ICL001.   11 MA 24-JUN-22 09:53:57

AIPS 1: BLC = 247.00 205.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 280.00 266.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 139

dowid 1

bcl 247 205

trc 280 266

go

LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 3.0269E-04 +/- 2.10E-05 JY/BEAM (14.43)

LOCALH> JMFIT1: Integral intensity= 2.6781E-04 +/- 3.35E-05 JANSKYS

LOCALH> JMFIT1: X-position   =   264.023 +/- 0.2650 pixels

LOCALH> JMFIT1: Y-position   =   237.294 +/- 0.7107 pixels

LOCALH> JMFIT1:   RA 20 24 03.8187176 +/- 0.000003191

LOCALH> JMFIT1:   DEC 33 52 01.848556 +/-   0.00010660

LOCALH> JMFIT1: Major axis   = 24.261 +/- 1.6813 pixels

LOCALH> JMFIT1: Minor axis   =   8.697 +/- 0.6027 pixels

LOCALH> JMFIT1: Position angle   =   5.914 +/- 2.310 degrees

LOCALH> JMFIT1: Major axis   = 0.0036392 +/- 0.0002522 asec

LOCALH> JMFIT1: Minor axis   = 0.0013046 +/- 0.0000904 asec

LOCALH> JMFIT1: Position angle   =   5.914 +/- 2.310 degrees

LOCALH> JMFIT1: RASHIFT= -0.000003 DECSHIFT=   0.000044 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.000   0.000   8.706

LOCALH> JMFIT1:   Minor ax   0.000   0.000   2.038

LOCALH> JMFIT1:   Pos ang   0.000   0.000   178.125

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.000000   0.000000   0.001306

LOCALH> JMFIT1:   Minor ax   0.000000   0.000000   0.000306

LOCALH> JMFIT1:   Pos ang   0.000000   0.000000 178.125290

LOCALH> JMFIT1: Component appears unresolved, use peak as total flux

LOCALH> JMFIT1: -

Check Source

tget imagr

getn 92

go

AIPS 1: 141   30 J2023+3153 .ICL001.   7 MA 24-JUN-22 09:55:51

AIPS 1: BLC = 246.00 214.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 272.00 277.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 141

dowid 1

bcl 246 214

trc 272 277

go

LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 8.9947E-01 +/- 1.55E-02 JY/BEAM   (57.94)

LOCALH> JMFIT1: Integral intensity= 1.3463E+00 +/- 3.55E-02 JANSKYS

LOCALH> JMFIT1: X-position   =   257.181 +/- 0.0728 pixels

LOCALH> JMFIT1: Y-position   =   249.972 +/- 0.2235 pixels

LOCALH> JMFIT1:   RA 20 23 19.0173301 +/- 0.000000857

LOCALH> JMFIT1:   DEC 31 53 02.305016 +/-   0.00003352

LOCALH> JMFIT1: Major axis   = 30.490 +/- 0.5262 pixels

LOCALH> JMFIT1: Minor axis   = 9.920 +/- 0.1712 pixels

LOCALH> JMFIT1: Position angle   = 0.761 +/- 0.509 degrees

LOCALH> JMFIT1: Major axis   = 0.0045734 +/- 0.0000789 asec

LOCALH> JMFIT1: Minor axis   = 0.0014880 +/- 0.0000257 asec

LOCALH> JMFIT1: Position angle   = 0.761 +/- 0.509 degrees

LOCALH> JMFIT1: RASHIFT= -0.000027 DECSHIFT= -0.000004 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   18.339   17.165   19.474

LOCALH> JMFIT1:   Minor ax   5.396   4.880   5.833

LOCALH> JMFIT1:   Pos ang   178.878   176.988   181.177

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.002751   0.002575   0.002921
LOCALH> JMFIT1:   Minor ax   0.000809   0.000732   0.000875
LOCALH> JMFIT1:   Pos ang   178.877899 176.987640   1.176865
LOCALH> JMFIT1: Component appears resolved, use integral as total flux
LOCALH> JMFIT1: -

Epoch H

V404

tget imagr

getn 93

go

AIPS 1: 143   30 V404CYG   .ICL001.   12 MA 24-JUN-22 09:57:38

AIPS 1: BLC = 246.00 202.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 293.00 270.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 143

dowid 1

bcl 246 202

trc 293 270

go

LOCALH> JMFIT1: ********* Solution from JMFIT *******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 3.4665E-04 +/- 2.68E-05 JY/BEAM   (12.96)

LOCALH> JMFIT1: Integral intensity= 3.6807E-04 +/- 4.82E-05 JANSKYS

LOCALH> JMFIT1: X-position   =   267.407 +/-   0.5956 pixels

LOCALH> JMFIT1: Y-position   =   238.987 +/-   0.8458 pixels

LOCALH> JMFIT1:   RA 20 24 03.8186768 +/- 0.000007173

LOCALH> JMFIT1:   DEC 33 52 01.848810 +/-   0.00012688

LOCALH> JMFIT1: Major axis   = 29.425 +/- 2.2713 pixels

LOCALH> JMFIT1: Minor axis   = 11.407 +/- 0.8805 pixels

LOCALH> JMFIT1: Position angle   = 148.575 +/- 2.853 degrees

LOCALH> JMFIT1:   Major axis   = 0.0044138 +/- 0.0003407 asec

LOCALH> JMFIT1:   Minor axis   = 0.0017110 +/- 0.0001321 asec

LOCALH> JMFIT1:   Position angle   = 148.575 +/- 2.853 degrees

LOCALH> JMFIT1:   RASHIFT= -0.000061 DECSHIFT= -0.000002 to center on pixel

LOCALH> JMFIT1:   -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   7.783   0.000   12.672

LOCALH> JMFIT1:   Minor ax   0.000   0.000   15.317

LOCALH> JMFIT1:   Pos ang   6.454   -28.231   46.230

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.001167   0.000000   0.001901

LOCALH> JMFIT1:   Minor ax   0.000000   0.000000   0.002297

LOCALH> JMFIT1:   Pos ang   6.454403 151.768921 46.230450

LOCALH> JMFIT1:   Component appears unresolved, use peak as total flux

LOCALH> JMFIT1:   -

Check Source

tget imagr

getn 94

go

AIPS 1: 145   30 J2023+3153 .ICL001.   8 MA 24-JUN-22 09:59:50

AIPS 1: BLC = 232.00 214.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 285.00 290.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 145

dowid 1

bcl 232 214

trc 285 290

go

LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 9.5380E-01 +/- 2.66E-02 JY/BEAM (35.79)

LOCALH> JMFIT1: Integral intensity= 1.5555E+00 +/- 6.48E-02 JANSKYS

LOCALH> JMFIT1: X-position   =   256.137 +/- 0.2217 pixels

LOCALH> JMFIT1: Y-position   =   251.617 +/- 0.3880 pixels

LOCALH> JMFIT1:   RA 20 23 19.0173424 +/- 0.000002611

LOCALH> JMFIT1:   DEC 31 53 02.305263 +/- 0.00005820

LOCALH> JMFIT1: Major axis   = 34.820 +/- 0.9729 pixels

LOCALH> JMFIT1: Minor axis   = 14.360 +/- 0.4012 pixels

LOCALH> JMFIT1: Position angle   = 157.854 +/- 1.125 degrees

LOCALH> JMFIT1: Major axis   = 0.0052231 +/- 0.0001459 asec

LOCALH> JMFIT1: Minor axis   = 0.0021541 +/- 0.0000602 asec

LOCALH> JMFIT1: Position angle   = 157.854 +/- 1.125 degrees

LOCALH> JMFIT1: RASHIFT= -0.000021 DECSHIFT= -0.000057 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   17.810   14.971   20.376

LOCALH> JMFIT1:   Minor ax   7.817   3.594   9.949

LOCALH> JMFIT1:   Pos ang   179.775   166.745   190.313

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.002671   0.002246   0.003056

LOCALH> JMFIT1:   Minor ax   0.001173   0.000539   0.001492

LOCALH> JMFIT1:   Pos ang   179.774780 166.744644 10.313034

LOCALH> JMFIT1: Component appears resolved, use integral as total flux

LOCALH> JMFIT1: -

Epoch I

V404

tget imagr

getn 95

go

AIPS 1: 147   30 V404CYG   .ICL001. 13 MA 24-JUN-22 10:02:46

AIPS 1: BLC = 249.00 209.00 1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 287.00 266.00 1.00   1.00   1.00   1.00   1.00

default jmfit

getn 147

dowid 1

bcl 249 209

trc 287 266

go

convergence was not achive. Try dowid -1

LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 2.4371E-04 +/- 2.65E-05 JY/BEAM   (9.20)

LOCALH> JMFIT1: Integral intensity= 2.4371E-04 +/- 2.65E-05 JANSKYS

LOCALH> JMFIT1: X-position   =   267.850 +/-   0.7613 pixels

LOCALH> JMFIT1: Y-position   =   236.928 +/-   1.2757 pixels

LOCALH> JMFIT1:   RA 20 24 03.8186715 +/- 0.000009169

LOCALH> JMFIT1:   DEC 33 52 01.848501 +/-   0.00019136

LOCALH> JMFIT1: Major axis   = 29.791 +/- 0.0000 pixels

LOCALH> JMFIT1: Minor axis   = 12.183 +/- 0.0000 pixels

LOCALH> JMFIT1: Position angle   = 155.857 +/- 0.000 degrees

LOCALH> JMFIT1: Major axis   = 0.0044687 +/- 0.0000000 asec

LOCALH> JMFIT1: Minor axis   = 0.0018274 +/- 0.0000000 asec

LOCALH> JMFIT1: Position angle   = 155.857 +/- 0.000 degrees

LOCALH> JMFIT1: RASHIFT= 0.000023 DECSHIFT= -0.000011 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.000   0.000   0.000

LOCALH> JMFIT1:   Minor ax   0.000   0.000   0.000

LOCALH> JMFIT1:   Pos ang   0.000   0.000   0.000

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.000000   0.000000   0.000000

LOCALH> JMFIT1:   Minor ax   0.000000   0.000000   0.000000

LOCALH> JMFIT1:   Pos ang   0.000000   0.000000   0.000000

LOCALH> JMFIT1: Component appears unresolved, use peak as total flux

LOCALH> JMFIT1: -

Check Source

tget imagr

getn 96

go

AIPS 1:   151   30 J2023+3153 .ICL001.   10 MA 24-JUN-22 10:05:31

AIPS 1: BLC =   227.00 208.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC =   284.00 285.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 151

dowid 1

bcl 227 208

trc 284 285

go

LOCALH> JMFIT1: ********* Solution from JMFIT *******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 8.3431E-01 +/- 2.37E-02 JY/BEAM   (35.20)

LOCALH> JMFIT1: Integral intensity= 1.7020E+00 +/- 6.80E-02 JANSKYS

LOCALH> JMFIT1: X-position   =   256.510 +/- 0.2574 pixels

LOCALH> JMFIT1: Y-position   =   252.085 +/- 0.4237 pixels

LOCALH> JMFIT1:   RA 20 23 19.0173380 +/- 0.000003031

LOCALH> JMFIT1:   DEC 31 53 02.305333 +/- 0.00006356

LOCALH> JMFIT1: Major axis   = 36.035 +/- 1.0236 pixels

LOCALH> JMFIT1: Minor axis   = 19.763 +/- 0.5614 pixels

LOCALH> JMFIT1: Position angle   = 164.532 +/- 1.805 degrees

LOCALH> JMFIT1: Major axis   = 0.0054052 +/- 0.0001535 asec

LOCALH> JMFIT1: Minor axis   = 0.0029645 +/- 0.0000842 asec

LOCALH> JMFIT1: Position angle   = 164.532 +/- 1.805 degrees

LOCALH> JMFIT1: RASHIFT= 0.000073 DECSHIFT=   0.000013 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   22.731   20.170   25.130

LOCALH> JMFIT1:   Minor ax   13.289   10.410   15.417

LOCALH> JMFIT1:   Pos ang   7.088   -5.124   17.980

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.003410   0.003025   0.003769

LOCALH> JMFIT1:   Minor ax   0.001993   0.001561   0.002313

LOCALH> JMFIT1:   Pos ang   7.087902 174.875702 17.979725

LOCALH> JMFIT1: Component appears resolved, use integral as total flux

LOCALH> JMFIT1: -

Epoch J

V404

tget imagr

getn 97

go

AIPS 1: 155   30 V404CYG   .ICL001. 15 MA 24-JUN-22 10:08:21

AIPS 1: BLC = 247.00 203.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 296.00 273.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 155

dowid 1

bcl 247 203

trc 296 273

go

LOCALH> JMFIT1: ********* Solution from JMFIT *******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 2.8592E-04 +/- 3.27E-05 JY/BEAM   (8.73)

LOCALH> JMFIT1: Integral intensity= 4.1370E-04 +/- 7.31E-05 JANSKYS

LOCALH> JMFIT1: X-position   =   271.033 +/- 0.6769 pixels

LOCALH> JMFIT1: Y-position   =   235.413 +/- 1.4450 pixels

LOCALH> JMFIT1:   RA 20 24 03.8186332 +/- 0.000008152

LOCALH> JMFIT1:   DEC 33 52 01.848274 +/-   0.00021675

LOCALH> JMFIT1: Major axis   = 29.730 +/- 3.4053 pixels

LOCALH> JMFIT1: Minor axis   = 13.867 +/- 1.5883 pixels

LOCALH> JMFIT1: Position angle   = 177.464 +/- 5.533 degrees

LOCALH> JMFIT1: Major axis   = 0.0044596 +/- 0.0005108 asec

LOCALH> JMFIT1: Minor axis   = 0.0020801 +/- 0.0002383 asec

LOCALH> JMFIT1: Position angle   = 177.464 +/- 5.533 degrees

LOCALH> JMFIT1: RASHIFT= -0.000005 DECSHIFT=   0.000062 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   16.685   0.000   24.418

LOCALH> JMFIT1:   Minor ax   0.000   0.000   15.508

LOCALH> JMFIT1:   Pos ang   30.411   -2.224   60.222

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.002503 0.000000 0.003663

LOCALH> JMFIT1:   Minor ax   0.000000 0.000000 0.002326

LOCALH> JMFIT1:   Pos ang   30.410969 177.776489 60.221909

LOCALH> JMFIT1: Component may be unresolved or resolved, use caution

LOCALH> JMFIT1: -

Check Source

```
tget imagr

getn 98

go

AIPS 1:  159   30 J2023+3153 .ICL001.  11 MA 24-JUN-22 10:13:16

AIPS 1: BLC =  236.00  224.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC =  276.00  279.00   1.00   1.00   1.00   1.00   1.00


default jmfit

getn 159

dowid 1

bcl 236 224

trc 276 279

go

LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1:  Peak intensity   = 7.9321E-01 +/- 3.11E-02 JY/BEAM  ( 25.54)

LOCALH> JMFIT1:  Integral intensity= 1.2600E+00 +/- 7.41E-02 JANSKYS

LOCALH> JMFIT1:  X-position      =   256.136 +/-  0.2587 pixels

LOCALH> JMFIT1:  Y-position      =   253.449 +/-  0.5121 pixels

LOCALH> JMFIT1:             RA 20 23 19.0173424  +/-  0.000003047

LOCALH> JMFIT1:             DEC 31 53 02.305537  +/-   0.00007681

LOCALH> JMFIT1:  Major axis     = 31.399 +/-  1.2293 pixels

LOCALH> JMFIT1:  Minor axis     = 14.317 +/-  0.5605 pixels

LOCALH> JMFIT1:  Position angle   = 167.397 +/-  1.826 degrees

LOCALH> JMFIT1:  Major axis     = 0.0047098 +/- 0.0001844 asec

LOCALH> JMFIT1:  Minor axis     = 0.0021475 +/- 0.0000841 asec

LOCALH> JMFIT1:  Position angle   = 167.397 +/-  1.826 degrees

LOCALH> JMFIT1:  RASHIFT= -0.000020 DECSHIFT=   0.000067 to center on pixel

LOCALH> JMFIT1:  - - - - - - - - - - - - - - - - - - - - - - - - - - - -

LOCALH> JMFIT1:             Deconvolution of component in pixels

LOCALH> JMFIT1:               Nominal    minimum    maximum

LOCALH> JMFIT1:   Major ax        17.232    13.743    20.302
```

LOCALH> JMFIT1:   Minor ax   7.322   0.000   9.988

LOCALH> JMFIT1:   Pos ang   8.302   -8.078   21.126

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.002585 0.002061 0.003045

LOCALH> JMFIT1:   Minor ax   0.001098 0.000000 0.001498

LOCALH> JMFIT1:   Pos ang   8.301496 171.922104 21.125959

LOCALH> JMFIT1: Component appears resolved, use integral as total flux

LOCALH> JMFIT1: -

Epoch K

V404

tget imagr

getn 99

go

AIPS 1: 161   30 V404CYG   .ICL001. 17 MA 24-JUN-22 10:15:18

AIPS 1: BLC = 252.00 206.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 295.00 267.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 161

dowid 1

bcl 252 206

trc 295 267

go

 LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 4.0158E-04 +/- 2.95E-05 JY/BEAM (13.62)

LOCALH> JMFIT1: Integral intensity= 5.6975E-04 +/- 6.49E-05 JANSKYS

LOCALH> JMFIT1: X-position   =   271.070 +/- 0.5548 pixels

LOCALH> JMFIT1: Y-position   =   233.352 +/- 0.9785 pixels

LOCALH> JMFIT1:   RA 20 24 03.8186327 +/- 0.000006681

```
LOCALH> JMFIT1:                DEC 33 52 01.847965  +/-  0.00014677
LOCALH> JMFIT1:  Major axis     =  31.407 +/-  2.3059 pixels
LOCALH> JMFIT1:  Minor axis     =  17.754 +/-  1.3034 pixels
LOCALH> JMFIT1:  Position angle   = 177.362 +/-  4.942 degrees
LOCALH> JMFIT1:  Major axis     = 0.0047111 +/- 0.0003459 asec
LOCALH> JMFIT1:  Minor axis     = 0.0026630 +/- 0.0001955 asec
LOCALH> JMFIT1:  Position angle   = 177.362 +/-  4.942 degrees
LOCALH> JMFIT1:  RASHIFT= -0.000011 DECSHIFT=  0.000053 to center on pixel
LOCALH> JMFIT1:  - - - - - - - - - - - - - - - - - - - - - - - - - - - -
LOCALH> JMFIT1:             Deconvolution of component in pixels
LOCALH> JMFIT1:              Nominal    minimum    maximum
LOCALH> JMFIT1:   Major ax      13.747     0.000     20.611
LOCALH> JMFIT1:   Minor ax       9.880     0.000     19.014
LOCALH> JMFIT1:   Pos ang       143.486    98.535    187.352
LOCALH> JMFIT1:             Deconvolution of component in asec
LOCALH> JMFIT1:              Nominal    minimum    maximum
LOCALH> JMFIT1:   Major ax      0.002062  0.000000   0.003092
LOCALH> JMFIT1:   Minor ax      0.001482  0.000000   0.002852
LOCALH> JMFIT1:   Pos ang       143.486130  98.535400   7.351990
LOCALH> JMFIT1:  Component may be unresolved or resolved, use caution
LOCALH> JMFIT1:  - - - - - - - - - - - - - - - - - - - - - - - - - - - -

check Source
tget imagr
getn 100
go
AIPS 1:  163   30 J2023+3153 .ICL001.  12 MA 24-JUN-22 10:17:28
AIPS 1: BLC =  235.00 214.00   1.00   1.00   1.00   1.00   1.00
AIPS 1: TRC =  277.00 285.00   1.00   1.00   1.00   1.00   1.00

default jmfit
getn 163
dowid 1
```

bcl 235 214

trc 277 285

go

LOCALH> JMFIT1: ********* Solution from JMFIT *****************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 1.0544E+00 +/- 2.19E-02 JY/BEAM   (48.11)

LOCALH> JMFIT1: Integral intensity= 1.7409E+00 +/- 5.38E-02 JANSKYS

LOCALH> JMFIT1: X-position   =   256.751 +/- 0.1571 pixels

LOCALH> JMFIT1: Y-position   =   252.976 +/- 0.3083 pixels

LOCALH> JMFIT1:   RA 20 23 19.0173352 +/- 0.000001851

LOCALH> JMFIT1:   DEC 31 53 02.305466 +/-   0.00004625

LOCALH> JMFIT1: Major axis   = 34.930 +/- 0.7261 pixels

LOCALH> JMFIT1: Minor axis   = 17.797 +/- 0.3700 pixels

LOCALH> JMFIT1: Position angle   = 0.604 +/- 1.159 degrees

LOCALH> JMFIT1: Major axis   = 0.0052395 +/- 0.0001089 asec

LOCALH> JMFIT1: Minor axis   = 0.0026696 +/- 0.0000555 asec

LOCALH> JMFIT1: Position angle   = 0.604 +/- 1.159 degrees

LOCALH> JMFIT1: RASHIFT=   0.000037 DECSHIFT= -0.000004 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1: Major ax   20.884   19.219   22.508

LOCALH> JMFIT1: Minor ax   11.598   10.618   12.394

LOCALH> JMFIT1: Pos ang   176.999   172.341   183.687

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1: Major ax   0.003133 0.002883 0.003376

LOCALH> JMFIT1: Minor ax   0.001740 0.001593 0.001859

LOCALH> JMFIT1: Pos ang   176.998947 172.340652 3.686646

LOCALH> JMFIT1: Component appears resolved, use integral as total flux

LOCALH> JMFIT1: -

Epoch L

V404

tget imagr

getn 101

go

AIPS 1: 167   30 V404CYG   .ICL001. 19 MA 24-JUN-22 10:19:58

AIPS 1: BLC = 261.00 205.00 1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 296.00 248.00 1.00   1.00   1.00   1.00   1.00

default jmfit

getn 167

dowid -1

bcl 261 205

trc 296 248

go

LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 1.6180E-04 +/- 3.18E-05 JY/BEAM (5.09)

LOCALH> JMFIT1: Integral intensity= 1.6180E-04 +/- 3.18E-05 JANSKYS

LOCALH> JMFIT1: X-position   =   276.984 +/- 1.5109 pixels

LOCALH> JMFIT1: Y-position   =   227.131 +/- 2.1070 pixels

LOCALH> JMFIT1:   RA 20 24 03.8185615 +/- 0.000018197

LOCALH> JMFIT1:   DEC 33 52 01.847032 +/-   0.00031604

LOCALH> JMFIT1: Major axis   = 29.214 +/- 0.0000 pixels

LOCALH> JMFIT1: Minor axis   = 10.558 +/- 0.0000 pixels

LOCALH> JMFIT1: Position angle   = 147.327 +/- 0.000 degrees

LOCALH> JMFIT1: Major axis   = 0.0043821 +/- 0.0000000 asec

LOCALH> JMFIT1: Minor axis   = 0.0015836 +/- 0.0000000 asec

LOCALH> JMFIT1: Position angle   = 147.327 +/- 0.000 degrees

LOCALH> JMFIT1: RASHIFT= 0.000002 DECSHIFT=   0.000020 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.000   0.000   0.000

LOCALH> JMFIT1:   Minor ax   0.000   0.000   0.000

LOCALH> JMFIT1:   Pos ang   0.000   0.000   0.000

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.000000   0.000000   0.000000

LOCALH> JMFIT1:   Minor ax   0.000000   0.000000   0.000000

LOCALH> JMFIT1:   Pos ang   0.000000   0.000000   0.000000

LOCALH> JMFIT1: Component appears unresolved, use peak as total flux

LOCALH> JMFIT1: -

check Source

tget imagr

getn 102

go

AIPS 1:   171   30 J2023+3153 .ICL001.   14 MA 24-JUN-22 10:22:09

AIPS 1: BLC =   235.00 213.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC =   291.00 280.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 171

dowid 1

bcl 235 213

trc 291 280

go

LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1: Peak intensity   = 7.3007E-01 +/- 3.01E-02 JY/BEAM   (24.24)

LOCALH> JMFIT1: Integral intensity= 2.3073E+00 +/- 1.22E-01 JANSKYS

LOCALH> JMFIT1: X-position   =   259.482 +/- 0.4751 pixels

LOCALH> JMFIT1: Y-position   =   248.713 +/- 0.6777 pixels

LOCALH> JMFIT1:   RA 20 23 19.0173030 +/- 0.000005596

LOCALH> JMFIT1:   DEC 31 53 02.304827 +/-   0.00010165

LOCALH> JMFIT1: Major axis   = 39.033 +/- 1.6100 pixels

LOCALH> JMFIT1: Minor axis   = 26.626 +/- 1.0982 pixels

LOCALH> JMFIT1: Position angle   = 169.530 +/- 4.264 degrees

LOCALH> JMFIT1: Major axis   = 0.0058550 +/- 0.0002415 asec

LOCALH> JMFIT1: Minor axis   = 0.0039939 +/- 0.0001647 asec

LOCALH> JMFIT1: Position angle   = 169.530 +/- 4.264 degrees

LOCALH> JMFIT1: RASHIFT= -0.000072 DECSHIFT= -0.000043 to center on pixel

LOCALH> JMFIT1: -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   30.472   26.978   33.847

LOCALH> JMFIT1:   Minor ax   16.582   10.455   21.236

LOCALH> JMFIT1:   Pos ang   21.598   10.191   35.066

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.004571   0.004047   0.005077

LOCALH> JMFIT1:   Minor ax   0.002487   0.001568   0.003185

LOCALH> JMFIT1:   Pos ang   21.598358 10.191466 35.065662

LOCALH> JMFIT1: Component appears resolved, use integral as total flux

LOCALH> JMFIT1: -

Epoch M

V404

tget imagr

getn 103

go

AIPS 1: 175   30 V404CYG   .ICL001.   21 MA 24-JUN-22 10:26:09

AIPS 1: BLC = 252.00 195.00   1.00   1.00   1.00   1.00   1.00

AIPS 1: TRC = 315.00 253.00   1.00   1.00   1.00   1.00   1.00

default jmfit

getn 175

dowid 1

bcl 252 195

trc 315 253

go

LOCALH> JMFIT1: ********* Solution from JMFIT ******************************

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component   1-Gaussian

LOCALH> JMFIT1:   Peak intensity   = 5.3425E-04 +/- 3.50E-05 JY/BEAM   (15.28)

LOCALH> JMFIT1:   Integral intensity= 8.8909E-04 +/- 8.63E-05 JANSKYS

LOCALH> JMFIT1:   X-position   =   279.374 +/- 0.7343 pixels

LOCALH> JMFIT1:   Y-position   =   226.398 +/- 0.7622 pixels

LOCALH> JMFIT1:   RA 20 24 03.8185327 +/- 0.000008844

LOCALH> JMFIT1:   DEC 33 52 01.846922 +/- 0.00011434

LOCALH> JMFIT1:   Major axis   = 33.465 +/- 2.1903 pixels

LOCALH> JMFIT1:   Minor axis   = 18.172 +/- 1.1894 pixels

LOCALH> JMFIT1:   Position angle   = 136.964 +/- 4.084 degrees

LOCALH> JMFIT1:   Major axis   = 0.0050197 +/- 0.0003285 asec

LOCALH> JMFIT1:   Minor axis   = 0.0027258 +/- 0.0001784 asec

LOCALH> JMFIT1:   Position angle   = 136.964 +/- 4.084 degrees

LOCALH> JMFIT1:   RASHIFT= -0.000056 DECSHIFT=   0.000060 to center on pixel

LOCALH> JMFIT1:   -

LOCALH> JMFIT1:   Deconvolution of component in pixels

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   15.826   0.000   21.994

LOCALH> JMFIT1:   Minor ax   12.097   3.692   20.395

LOCALH> JMFIT1:   Pos ang   102.497   58.418   147.436

LOCALH> JMFIT1:   Deconvolution of component in asec

LOCALH> JMFIT1:   Nominal   minimum   maximum

LOCALH> JMFIT1:   Major ax   0.002374   0.000000   0.003299

LOCALH> JMFIT1:   Minor ax   0.001815   0.000554   0.003059

LOCALH> JMFIT1:   Pos ang   102.496704 58.417603 147.436295

LOCALH> JMFIT1: Component may be unresolved or resolved, use caution

```
LOCALH> JMFIT1:  - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
check Source
tget imagr
getn 104
go
AIPS 1:  177    30 J2023+3153 .ICL001.   15 MA 24-JUN-22 10:28:16
AIPS 1: BLC =  230.00 213.00   1.00   1.00   1.00   1.00   1.00
AIPS 1: TRC =  292.00 281.00   1.00   1.00   1.00   1.00   1.00


default jmfit
getn 177
dowid 1
bcl 230 213
trc 292 281
go
LOCALH> JMFIT1: ********* Solution from JMFIT ******************************
LOCALH> JMFIT1:
LOCALH> JMFIT1: Component   1-Gaussian
LOCALH> JMFIT1:  Peak intensity   = 8.7115E-01 +/- 1.98E-02 JY/BEAM   ( 43.99)
LOCALH> JMFIT1:  Integral intensity= 1.7140E+00 +/- 5.53E-02 JANSKYS
LOCALH> JMFIT1:  X-position      =   261.543 +/-  0.2517 pixels
LOCALH> JMFIT1:  Y-position      =   247.297 +/-  0.3225 pixels
LOCALH> JMFIT1:              RA 20 23 19.0172787  +/-  0.000002964
LOCALH> JMFIT1:              DEC 31 53 02.304614  +/-   0.00004838
LOCALH> JMFIT1:  Major axis      = 36.880 +/-  0.8384 pixels
LOCALH> JMFIT1:  Minor axis      = 20.880 +/-  0.4746 pixels
LOCALH> JMFIT1:  Position angle   = 149.082 +/-  1.535 degrees
LOCALH> JMFIT1:  Major axis      = 0.0055320 +/- 0.0001258 asec
LOCALH> JMFIT1:  Minor axis      = 0.0031319 +/- 0.0000712 asec
LOCALH> JMFIT1:  Position angle   = 149.082 +/-  1.535 degrees
LOCALH> JMFIT1:  RASHIFT=  0.000069 DECSHIFT=   0.000044 to center on pixel
LOCALH> JMFIT1:  - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
LOCALH> JMFIT1:           Deconvolution of component in pixels
```

```
LOCALH> JMFIT1:                 Nominal    minimum    maximum
LOCALH> JMFIT1:   Major ax      21.736    19.474    23.864
LOCALH> JMFIT1:   Minor ax      14.454    11.980    16.339
LOCALH> JMFIT1:   Pos ang      175.546   162.467   188.138
LOCALH> JMFIT1:          Deconvolution of component in asec
LOCALH> JMFIT1:                 Nominal    minimum    maximum
LOCALH> JMFIT1:   Major ax      0.003260  0.002921  0.003580
LOCALH> JMFIT1:   Minor ax      0.002168  0.001797  0.002451
LOCALH> JMFIT1:   Pos ang     175.546432 162.466705   8.138351
LOCALH> JMFIT1:  Component appears resolved, use integral as total flux
LOCALH> JMFIT1:  - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```