user 24

Notes: Fringe-finders: J1800+3848,J2253+1608

        Target source: V404CYG

        Phase ref source: J2025+3343

        Check source: J2023+3153

dowait=1

##load data

default fitld

clint 0.25

datain 'PWD:targetObs.idifits

outname 'target'

outclass 'uvdata'

outseq 1

outdisk 1

go

datain 'PWD:geodetic.idifits

outname 'geo'

go

AIPS 1: Catalog on disk 1

AIPS 1: Cat Usid Mapname Class Seq Pt Last access Stat

AIPS 1: 2 24 TARGET .UVDATA. 1 UV 22-MAR-22 14:55:31

AIPS 1: 3 24 GEO .UVDATA. 1 UV 22-MAR-22 14:56:05

##load vlbautil

run vlbautil

##target obs processing

##calibrate for EOP

default vlbaeops

```
getn 2
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
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'

```
##plot cross power spectrum to determine source with strong fringes
default vlbacrpl
getn 2
refant 5
gainuse 4
dotv 1
stokes 'half'
solint -1
source 'J1800+3848','J2253+1608','
vlbacrpl
```

using source J2025+3343 at timer 00 09 40 33 00 09 41 03

```
##perform delay correction using the found source
default vlbapcor
getn 2
timer 00 09 40 33 00 09 41 03
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 power spectrum with the new sol to see if its flattened out
default vlbacrpl
getn 2
stokes 'half'
```

refant 5

gainuse 6

solint -1

dotv 1

sour 'J2025+3343'

vlbacrpl

delays have flattered out nicely

##do bandpass calibration

default vlbabpss

getn 2

calsour 'J1800+3848"

refant 5

vlbabpss

AIPS 1: 'BP #1 bandpass table'

##check bandpass calibration

default possm

aparm(8) 2

dotv 1

nplot 9

go

looks good

##apply bandpass solution to calibrate amplitude

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'

##check solution using snpl

default vlbasnpl

inext 'sn'

inver 4

opty 'amp'

dotv 1

vlbasnpl

looks good

##check the cross power spectrum now using the amplitude solution

default vlbacrpl

getn 2

stokes 'half'

refant 5

gainuse 8

solint -1

dotv 1

sour 'J2025+3343"

vlbacrpl

##use editr to perform final flagging

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
```

calibrate geodetic obs

ID	Source	Qual	Calcode	RA(2000.0)	Dec(2000.0)	No. vis
1	2059+034	: 0000	V	21:01:38.8342	03:41:31.321	1595
2	1954-388	: 0000	V	19:57:59.8193	-38:45:06.356	840
3	2008-159	: 0000	V	20:11:15.7109	-15:46:40.254	1650
4	2255-282	: 0000	V	22:58:05.9629	-27:58:21.257	2430
5	2106-413	: 0000	V	21:09:33.1886	-41:10:20.605	840
6	1706-174	: 0000	V	17:09:34.3454	-17:28:53.365	840
7	1908-201	: 0000	V	19:11:09.6529	-20:06:55.109	1305
8	1936-155	: 0000	V	19:39:26.6577	-15:25:43.058	1650
9	1921-293	: 0000	V	19:24:51.0560	-29:14:30.121	812
10	2220-351	: 0000	V	22:23:05.9306	-34:55:47.177	1080
11	2351-154	: 0000	V	23:54:30.1952	-15:13:11.213	1350
12	2318+049	: 0000	V	23:20:44.8566	05:13:49.953	1650
13	0716+714	: 0000	V	07:21:53.4485	71:20:36.363	1350
14	0718+792	: 0000	V	07:26:11.7352	79:11:31.016	1305
15	1504+377	: 0000	V	15:06:09.5300	37:30:51.133	1080
16	0007+106	: 0000	V	00:10:31.0059	10:58:29.504	1595
17	0104-408	: 0000	V	01:06:45.1080	-40:34:19.960	450
18	0008-264	: 0000	V	00:11:01.2467	-26:12:33.377	1650
19	2333-415	: 0000	V	23:36:33.9851	-41:15:21.984	840
20	0307+380	: 0000	V	03:10:49.8799	38:14:53.838	1650
21	0309+411	: 0000	V	03:13:01.9621	41:20:01.183	1650
22	0738+491	: 0000	V	07:42:02.7489	49:00:15.609	1080
23	0707+476	: 0000	V	07:10:46.1049	47:32:11.143	1305
24	1039+811	: 0000	V	10:44:23.0625	80:54:39.443	1650

```
  25 0954+658      : 0000  V   09:58:47.2451  65:33:54.818   1350
  26 1637+574      : 0000  V   16:38:13.4563  57:20:23.979   1080
  27 1738+476      : 0000  V   17:39:57.1291  47:37:58.362   1080
  28 0536+145      : 0000  V   05:39:42.3660  14:33:45.562   1350
```

##calibrate for eop
default vlbaeops
getn 3
vlbaeops

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

##correct for ionosphere
default vlbatecr
getn 3
vlbatecr

AIPS 1: 'CL #3 CONTAINS IONOSPHERIC CORRECTIONS'

##correct for digital sampler
default vlbaccor
getn 3
vlbaccor

AIPS 1: 'SN #1 contains sampler corrections'
AIPS 1: 'CL #4 adds sampler corrections'

##plot cross power spectrum to determine source with strong fringes
default vlbacrpl
getn 3
stokes 'half'
refant 5

```
gainuse 4
solint -1
dotv 1
source '${name}'
vlbacrpl
```

using source 1039+811 during timer 00 12 45 47 00 12 46 45 as it was seen by all antennas. Note not all geodetic sources were seen by all antennas

```
##perform parallactic angle correction
default vlbapang
getn 3
vlbapang
```

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

```
##perfrom delay correction using the found source
default vlbapcor
getn 3
calsour '1039+811"
timer 00 12 45 47 00 12 46 45
refant 5
gainu 5
vlbapcor
```

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

```
##plot power spectrum with the new sol to see if its flattened out
default vlbacrpl
getn 3
stokes 'half'
refant 5
```

```
gainuse 6
solint -1
dotv 1
source '1039+811"
vlbacrpl


delays in the first IF looks bad but otherwise ok


##do bandpass calibration
default vlbabpss
getn 3
calsour '1039+811"
refant 5
vlbabpss


AIPS 1: 'BP #1 bandpass table'


##check bandpass calibration
default possm
aparm(8) 2
dotv 1
nplot 9
getn 3
go


##apply bandpass solution to calibrate amplitude
default vlbaamp
getn 3
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'

##check solution using snpl
default vlbasnpl
inext 'sn'
inver 4
getn 3
opty 'amp'
dotv 1
vlbasnpl

##check the cross power spectrum now using the amplitude solution
default vlbacrpl
getn 3
stokes 'half'
refant 5
gainuse 8
solint -1
dotv 1
sour '1039+811"
vlbacrpl

##flag data using editr
default editr
getn 3
docal 1
gainuse 8
crowded 1
doband 1
bpver 1
flagver 1
outfgver 1

```
antuse 5 9 2 4 8 7 3 1 10 6
source '1039+811"
go

0536+145 does not have any data at all

##perform single band fring fitting
default fring
getn 3
aparm(5) 0
timer 0
cals "
ante 0
docal 2
gainuse 8
refant 5
aparm 0
dparm 0
doband 1
bpver 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 3615 good solutions
LOCALH> FRING1: Failed on 241 solutions
LOCALH> FRING1: Appears to have ended successfully

##perfrom mbdly
default mbdly
aparm(4) 5
```

inver 5

getn 3

go

LOCALH> MBDLY1: Total number of possible fits = 241

LOCALH> MBDLY1: Total number of acceptible fits = 241

LOCALH> MBDLY1: Phase offset NOT removed from each scan

LOCALH> MBDLY1: Appears to have ended successfull

##check solution with snplt

default snplt

inext 'sn'

inver 6

opty 'mdel'

getn 3

dotv 1

go

##run delzn

default delzn

inname 'GEO'

inclass 'uvdata'

inseq 1

snver 6

aparm(2) 2

gainver 8

aparm(3) 2

aparm(4) 1

aparm(5) 1

aparm(8) 0

opty 'mdel'

prtlev 1

dotv 1

```
nplot 9
freqid=1
outfile 'PWD:GEO.MBDL
go

(could not run the above task. Hence using the mbdl file shared by James, and is located at the local
directory with name "BM421M.MBDL")

##go back to the main dataset andapply solutions
default clcor
getn 2
opcode 'atmo'
infile 'PWD:BM421M.MBDL
gainver 8
gainuse 0
clcorprm 1 0
go

LOCALH> CLCOR1: CL version input 8 output 9
LOCALH> CLCOR1: 8492 Records modified
LOCALH> CLCOR1: Appears to have ended successfully

##fring fit
default fring
refant 5
getn 2
solint 1
sour ""
cals 'J2025+3343'
gainuse 9
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 13481 good solutions
LOCALH> FRING1: Failed on 103 solutions
LOCALH> FRING1: Appears to have ended successfully

##check solution using snpl
default vlbasnpl
opty 'phas'
inext 'sn'
inver 5
dotv 1
vlbasnpl

opty 'dela'

opty 'rate'

##smooth the above sn table
default snsmo
smoty 'vlbi'
bparm 0 0 1/2 1/2 0
inver 5
getn 2
outver 6
refant 5
sampty "
cparm 0
```

```
go

##apply solution from sn table
default clcal
cals 'J2025+3343','
sour 'J2025+3343','V404CYG','
interpol 'ambg'
snver 6
ante 0
gainver 9
gainuse 10
refant 5
go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table 9, writing CL table 10
LOCALH> CLCAL1: Appears to have ended successfully

##split phase reference source
default split
getn 2
docal 2
gainuse 10
flagver 0
sour 'J2025+3343','
bch 0
ech 0
aparm 2 0
douvcomp -1
doband 1
bpver 0
go

AIPS 1: Catalog on disk 1
```

AIPS 1: Cat Usid Mapname Class Seq Pt Last access Stat

AIPS 1: 1 24 J2025+3343 .SPLIT . 1 UV 24-MAR-22 13:34:03

AIPS 1: 2 24 TARGET .UVDATA. 1 UV 24-MAR-22 13:34:03

AIPS 1: 3 24 GEO .UVDATA. 1 UV 24-MAR-22 12:47:38

##image phase referencing source

default imagr

getn 1

cellsi 1.5e-4

imsi 512

ante 0

uvwtfn 'u'

niter 2000

dotv 1

go

AIPS 1: 5 24 J2025+3343 .IBM001. 1 MA 24-MAR-22 13:36:01

AIPS 1: 6 24 J2025+3343 .ICL001. 1 MA 24-MAR-22 13:36:01

##check image noise

default imean

getn 6

go

LOCALH> IMEAN1: Mean and rms found by fitting peak in histogram:

LOCALH> IMEAN1: Mean=-7.9573E-05 Rms= 1.1584E-03 **** from histogram

LOCALH> IMEAN1: Mean and rms found by including all data:

LOCALH> IMEAN1: Mean= 4.603E-04 Rms= 1.012E-02 JY/BEAM over 262144. pixels

LOCALH> IMEAN1: Flux density = 1.5466E+00 Jy beam area = 78.02 pixels

LOCALH> IMEAN1: Minimum=-1.2658E-02 at 271 236 1 1

LOCALH> IMEAN1: Skypos: RA 20 25 10.8419247 DEC 33 43 00.211280

LOCALH> IMEAN1: Maximum= 4.2772E-01 at 256 257 1 1

LOCALH> IMEAN1: Skypos: RA 20 25 10.8421050 DEC 33 43 00.214430

self cal round 1 (phase at solint 1)

```
default calib
getn 1
get2n 6
method 'dft'
refant 5
solint 1
solmo 'P'
solty 'l1r'
go
```

LOCALH> CALIB1: Writing SN table 1

LOCALH> CALIB1: Found 13469 good solutions

LOCALH> CALIB1: Failed on 115 solutions

image after

```
tget imagr
getn 4
go
```

check image noise

```
default imean
getn 9
go
```

LOCALH> IMEAN1: Mean and rms found by fitting peak in histogram:

LOCALH> IMEAN1: Mean=-9.9501E-05 Rms= 1.4874E-03 **** from histogram

LOCALH> IMEAN1: Mean and rms found by including all data:

LOCALH> IMEAN1: Mean= 4.553E-04 Rms= 1.021E-02 JY/BEAM over 262144. pixels

LOCALH> IMEAN1: Flux density = 1.5253E+00 Jy beam area = 78.25 pixels

LOCALH> IMEAN1: Minimum=-1.1240E-02 at 223 305 1 1

LOCALH> IMEAN1: Skypos: RA 20 25 10.8425017 DEC 33 43 00.221630

LOCALH> IMEAN1: Maximum= 4.2888E-01 at 256 257 1 1

self cal round 2 (phase at solint 0.5)

```
default calib
getn 1
get2n 9
method 'dft'
refant 5
solint 0.5
solmo 'P'
solty 'l1r'
go
```

LOCALH> CALIB1: Writing SN table 2

LOCALH> CALIB1: Found 13695 good solutions

LOCALH> CALIB1: Failed on 49 solutions

LOCALH> CALIB1: Appears to have ended successfully

image after selfcal

```
tget imagr
getn 7
go
```

check image noise

```
default imean
getn 12
go
```

LOCALH> IMEAN1: Mean and rms found by fitting peak in histogram:

LOCALH> IMEAN1: Mean=-9.7015E-05 Rms= 1.4741E-03 **** from histogram

LOCALH> IMEAN1: Mean and rms found by including all data:

LOCALH> IMEAN1: Mean= 4.546E-04 Rms= 1.018E-02 JY/BEAM over 262144. pixels

LOCALH> IMEAN1: Flux density = 1.5275E+00 Jy beam area = 78.02 pixels

LOCALH> IMEAN1: Minimum=-1.0723E-02 at 223 307 1 1

LOCALH> IMEAN1: Skypos: RA 20 25 10.8425017 DEC 33 43 00.221930

LOCALH> IMEAN1: Maximum= 4.2789E-01 at 256 257 1 1

##self cal round 3 (phase at solint 1/6)

default calib

getn 1

get2n 12

method 'dft'

refant 5

solint 1/6

solmo 'P'

solty 'l1r'

go

LOCALH> CALIB1: Writing SN table 3

LOCALH> CALIB1: Found 40089 good solutions

LOCALH> CALIB1: Failed on 199 solutions

LOCALH> CALIB1: Appears to have ended successfully

##reimage

tget imagr

getn 10

go

##check image noise

default imean

getn 15

go

LOCALH> IMEAN1: Mean and rms found by fitting peak in histogram:

LOCALH> IMEAN1: Mean=-7.5544E-05 Rms= 1.3900E-03 **** from histogram

LOCALH> IMEAN1: Mean and rms found by including all data:

LOCALH> IMEAN1: Mean= 4.542E-04 Rms= 1.024E-02 JY/BEAM over 262144. pixels

LOCALH> IMEAN1: Flux density = 1.5245E+00 Jy beam area = 78.09 pixels

LOCALH> IMEAN1: Minimum=-1.0226E-02 at 223 307 1 1

LOCALH> IMEAN1: Skypos: RA 20 25 10.8425017 DEC 33 43 00.221930

LOCALH> IMEAN1: Maximum= 4.3293E-01 at 256 257 1 1

##self cal round 4 (phase at solint 10 and amp as well)

default calib

getn 1

get2n 15

cmethod 'dft'

refant 5

solint 10

solmo 'a&p'

solty 'l1r'

go

LOCALH> CALIB1: Writing SN table 4

LOCALH> CALIB1: Found 13548 good solutions

LOCALH> CALIB1: Failed on 36 solutions

##reimage

tget imagr

getn 1

inver 4

go

##fring fit on the self cal model

default fring

refant 5

getn 2

solint 1

sour "

```
cals 'J2025+3343','"

gainuse 9

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

smodel 0

doband 1

bpver 0

in2n 'J2025+3343'

in2cl 'ICL001'

in2se 5

go


LOCALH> FRING1: Determining solutions

LOCALH> FRING1: Writing SN table 7

LOCALH> FRING1: Found 13527 good solutions

LOCALH> FRING1: Failed on 57 solutions


##apply solution from sn table

default clcal

cals 'J2025+3343"

sour 'J2025+3343','V404CYG','J2023+3153','"

interpol 'ambg'

snver 7

ante 0

gainver 9

gainuse 11

refant 5

getn 2
```

go

LOCALH> CLCAL1: SN2CL: Applying SN tables to CL table 9, writing CL table 11
LOCALH> CLCAL1: Appears to have ended successfully

##copy amp solution from selfcal
default tacop
inname 'J2025+3343'
inclass 'calib'
inseq 4
inext 'sn'
inver 1
outname 'TARGET'
outclass 'UVDATA'
outseq 1
outver 8
go

(warning no tables transfered)

##zero out the phases in amp sn table (cos we want to keep phase from the fring fit)
default sncor
inclass 'TARGET'
inclass 'UVDATA'
inseq 1
opcode 'zphs'
snver 8
go
 (falied)
we can proceed as we are only interested in the source position for this project

##split v404 and check source
##split ms

```
default split
docal 2
gainver 11
flagver 0
sour 'J2025+3343','V404CYG','J2023+3153',''
douvcomp -1
doband 1
bpver 0
aparm 2 0
nchav 0
chinc 0
bch 0
ech 0
getn 2
go


AIPS 1: 1 24 J2025+3343 .SPLIT . 1 UV 24-MAR-22 13:50:44
AIPS 1: 2 24 TARGET .UVDATA. 1 UV 24-MAR-22 15:15:40
AIPS 1: 3 24 GEO .UVDATA. 1 UV 24-MAR-22 12:47:38
AIPS 1: 4 24 J2025+3343 .CALIB . 1 UV 24-MAR-22 13:40:16
AIPS 1: 7 24 J2025+3343 .CALIB . 2 UV 24-MAR-22 13:43:34
AIPS 1: 10 24 J2025+3343 .CALIB . 3 UV 24-MAR-22 14:34:52
AIPS 1: 13 24 J2025+3343 .CALIB . 4 UV 24-MAR-22 14:35:01
AIPS 1: 16 24 J2025+3343 .SPLIT . 2 UV 24-MAR-22 15:15:26
AIPS 1: 19 24 V404CYG .SPLIT . 1 UV 24-MAR-22 15:15:40
AIPS 1: 20 24 J2023+3153 .SPLIT . 1 UV 24-MAR-22 15:15:40


##image V404
default imagr
getn 19
cellsi 1.5e-4
imsi 512
```

ante 0

uvwtfn 'n'

niter 2000

dotv 1

go

default imean

getn 23

go

LOCALH> IMEAN1: Mean and rms found by fitting peak in histogram:

LOCALH> IMEAN1: Mean=-4.5941E-07 Rms= 3.1776E-05 **** from histogram

LOCALH> IMEAN1: Mean and rms found by including all data:

LOCALH> IMEAN1: Mean= 6.151E-07 Rms= 3.521E-05 JY/BEAM over 262144. pixels

LOCALH> IMEAN1: Flux density = 1.2632E-03 Jy beam area = 127.66 pixels

LOCALH> IMEAN1: Minimum=-1.4163E-04 at 226 168 1 1

LOCALH> IMEAN1: Skypos: RA 20 24 03.8186351 DEC 33 52 01.828285

LOCALH> IMEAN1: Maximum= 8.9465E-04 at 259 250 1 1

LOCALH> IMEAN1: Skypos: RA 20 24 03.8182377 DEC 33 52 01.840585

##set box

tvwin

tvwin (to set the box)

tvmax (to get the pixel max location)

AIPS 1: BLC = 245.00 232.00 1.00 1.00 1.00 1.00 1.00

AIPS 1: TRC = 273.00 267.00 1.00 1.00 1.00 1.00 1.00

##do jmfit

default fmfit

getn 23

dowidth -1

bcl 233

trc 277

go

LOCALH> JMFIT1: ********* Solution from JMFIT *******************************
LOCALH> JMFIT1:
LOCALH> JMFIT1: Component 1-Gaussian
LOCALH> JMFIT1: Peak intensity = 9.1497E-04 +/- 3.18E-05 JY/BEAM (28.79)
LOCALH> JMFIT1: Integral intensity= 9.1497E-04 +/- 3.18E-05 JANSKYS
LOCALH> JMFIT1: X-position = 258.657 +/- 0.1337 pixels
LOCALH> JMFIT1: Y-position = 249.953 +/- 0.2123 pixels
LOCALH> JMFIT1: RA 20 24 03.8182418 +/- 0.000001610
LOCALH> JMFIT1: DEC 33 52 01.840578 +/- 0.00003185
LOCALH> JMFIT1: Major axis = 15.347 +/- 0.0000 pixels
LOCALH> JMFIT1: Minor axis = 7.341 +/- 0.0000 pixels
LOCALH> JMFIT1: Position angle = 156.767 +/- 0.000 degrees
LOCALH> JMFIT1: Major axis = 0.0023020 +/- 0.0000000 asec
LOCALH> JMFIT1: Minor axis = 0.0011012 +/- 0.0000000 asec
LOCALH> JMFIT1: Position angle = 156.767 +/- 0.000 degrees
LOCALH> JMFIT1: RASHIFT= 0.000051 DECSHIFT= -0.000007 to center on pixel
LOCALH> JMFIT1: -

##image J2023+3153
default imagr
getn 20
cellsi 1.5e-4
imsi 512
ante 0
uvwtfn 'n'
niter 2000
dotv 1
go

##do jmfit
default fmfit

```
getn 25

dowidth -1

bcl 225

trc 290

go
```

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

LOCALH> JMFIT1:

LOCALH> JMFIT1: Component 1-Gaussian

LOCALH> JMFIT1: Peak intensity = 1.1429E+00 +/- 1.61E-02 JY/BEAM (71.17)

LOCALH> JMFIT1: Integral intensity= 1.1429E+00 +/- 1.61E-02 JANSKYS

LOCALH> JMFIT1: X-position = 257.500 +/- 0.0552 pixels

LOCALH> JMFIT1: Y-position = 255.125 +/- 0.0842 pixels

LOCALH> JMFIT1: RA 20 23 19.0173263 +/- 0.000000651

LOCALH> JMFIT1: DEC 31 53 02.305789 +/- 0.00001264

LOCALH> JMFIT1: Major axis = 15.064 +/- 0.0000 pixels

LOCALH> JMFIT1: Minor axis = 7.627 +/- 0.0000 pixels

LOCALH> JMFIT1: Position angle = 156.161 +/- 0.000 degrees

LOCALH> JMFIT1: Major axis = 0.0022596 +/- 0.0000000 asec

LOCALH> JMFIT1: Minor axis = 0.0011441 +/- 0.0000000 asec

LOCALH> JMFIT1: Position angle = 156.161 +/- 0.000 degrees

LOCALH> JMFIT1: RASHIFT= 0.000075 DECSHIFT= 0.000019 to center on pixel