

Observing Log for VLBI test of 1 Mar 2012

Participating telescopes : GMRT + Hobart + Mopra

Initial configuration done by Operator (Nilesh) :

```
rotate feeds to L-band (already at L-band);  configure for standard
1390 band and do pointing (already done);
```

Configuration at start of expt : RF band = 1390, LO-I = 1330, LO-IV = 60, [LO-V = 140 (& 165)], IF BW = 16 Note : LO-V not used in this default set-up..

Used 3c286 to check for fringes with real-time correlator (GSB in 16 MHz, 256 ch, total I mode) : fringes seen on all antennas in GSB, except C12, W02 (both having LO-I unlock) and E02 (servo problem). GSB connections : as per normal settings for all antennas.

Stopped real-time mode of GSB : hltndas.gsb Started raw voltage recording mode (as per instructions in SoP)

Did a couple of short runs of 100 blks to test the set-up.

Changed IF BW to 6 MHz for C01 and C02

Sources to be done today are from this list (all are from main GMRT source list) :

J2253+1608 (named 2253+161 in the GMRT source list) 10 Jy @ 20 cm; UVMax 7 kL J2218-0335 (named 2218-035 in the GMRT source list) 1.0 Jy @ 20 cm; no UVlimits J2225-0457 (named 2225-049 in the GMRT source list) 5.7 Jy @ 20 cm; UVMax 45 kL J2348-1631 (named 2348-165 in the GMRT source list) 2.7 Jy @ 20 cm; UVMax 15 kL J2354-1513 (named 2354-152 in the GMRT source list) 1.0 Jy @ 20 cm; UVMax 30 kL

Move to VLBI source # 1 : J2253+1608 (named 2253+161 in the GMRT source list)

Restarted real-time mode of GSB Checked fringes in real-time correlator - OK, including 6 MHz BW of C01 & C02

Changed back to raw voltage dump mode

VLBI scan #1 : on source 2253+161 for 10 mins

```
start at : 2012 03 01 09 32 09 ;  stopped at : 09 42 12
original files : raw_voltageY.vlbi_1mar12_1.nodeZ.scan0
snippet files : vlbi_1mar12_1.CXX-R
```

Changed 130 pol GSB connection of C06 and C09 to baseband signal derived from broadband RF path, by using LO @ 1390 and BB ampl + filter of 16 MHz BW

Restarted real-time mode of GSB and checked fringes - looked OK, though some evidence of phase fluctuations was seen...

Changed back to raw voltage dump mode

VLBI scan #2 : on source 2253+161 for ~8 mins

```
start at : 2012 03 01 10 09 08 ; stopped at : 10 17 09  
original files : raw_voltageY.vlbi_lmar12_2.nodeZ.scan0  
snippet files : vlbi_lmar12_2.CXX-R
```

Changed Rb to new unit

VLBI scan #3 : on source 2253+161 for ~10 mins

```
start at : 2012 03 01 10 22 10 ; stopped at : 10 32 13  
original files : raw_voltageY.vlbi_lmar12_3.nodeZ.scan0  
snippet files : vlbi_lmar12_3.CXX-R
```

Changed C10 connections such that one copy of C10 130 IF is given to 5th LO mixer and BB output connected to C11. LO-V values were set to 140 and 165, as listed in the beginning.

Changed Rb back to old unit

Restarted raw dump mode

VLBI scan #4 : on source 2253+161 for ~3 mins

```
start at : 2012 03 01 10 57 04 ; stopped at : 10 59 55  
original files : raw_voltageY.vlbi_lmar12_4.nodeZ.scan0  
snippet files : vlbi_lmar12_4.CXX-R
```

Changed source to J2218-0335 (named 2218-035 in the GMRT source list) :

VLBI scan #5 : on source 2218-035 for ~8 mins

```
start at : 2012 03 01 11 02 30 ; stopped at : 11 09 22  
original files : raw_voltageY.vlbi_lmar12_5.nodeZ.scan0  
snippet files : vlbi_lmar12_5.CXX-R
```

Changed source to J2225-0457 (named 2225-049 in the GMRT source list) :

VLBI scan #6 : on source 2225-049 for ~8 mins

```
start at : 2012 03 01 11 10 13 ; stopped at : 11 18 52  
original files : raw_voltageY.vlbi_lmar12_6.nodeZ.scan0  
snippet files : vlbi_lmar12_6.CXX-R
```

Changed source to J2348-1631 (named 2348-165 in the GMRT source list)

VLBI scan #7 : on source 2348-165 for ~9 mins

```
start at : 2012 03 01 11 21 34 ; stopped at : 11 30 13  
original files : raw_voltageY.vlbi_lmar12_7.nodeZ.scan0  
snippet files : vlbi_lmar12_7.CXX-R
```

Observing run over !

From:
<https://www.atnf.csiro.au/vlbi/dokuwiki/> - **ATNF VLBI Wiki**

Permanent link:
<https://www.atnf.csiro.au/vlbi/dokuwiki/doku.php/lbaops/lbamar2012/vt13fgmlog>

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