

CS-1 developments: 11 April - 2 May 2007

1) General

- CDR (17-18 April) CS-1 presentation; important role
- LOFAR Press Release and AJPD with first wide-field image
- Emmen conference (23-27 April) with presentations on CS-1 results
- International enthusiasm for E-LOFAR all over Europe --> 'new applications'

2) Rollout status

HBA activities this week:

- > CS010 field being flattened
- > CS010 positions measured and staked (using GPS, accuracy ± 3 cm)
- > 6 styrofoam tiles to be delivered on May 4
- > configuration and commissioning plan (see Michiel Brentjens presentation)

Outstanding technical commissioning issues:

3) Stations

- 200 MHz mode problems: no progress
- clock issues: meeting tomorrow
- 'autocorrelation' dips in LBA/160 data
- > some interesting hints at where they might arise (see later)

4) CEP (SAS/MAC/OLAP)

- Step 2 of 5-step plan scheduled to be completed by May 15
- storage nodes crashes ?

Progress reports on observations and data analysis

5) New observations

2-day weekend 13-15 april --> some good data (L2001)

2-day weekend 20-22 april --> some good data (L2038)

3-day weekend 27-30 april --> good data (L2091, L2092, L2094)

6) Calibration:

- MeqTrees (L2092 --> see Sarod Yatawatta's presentation)

- BBS - Joris van Zwieten / Pandey to report:

--> calibration results 'agree' with MeqTrees but no succesful imaging as yet

7) Imaging

- positions issue still not 100% laid to rest

8) Noise / RFI analysis

- good fringes at in L2092,L2094 at 15, 17.5, 20, 22.5, 25 MHz

- peculiar RFI patterns in Y-polarization ??

Progress reports on modelling and simulation activities

9) Beam modeling

10) Ionospheric modeling

11) Source models (LSM, GSM, fluxscale)

12) Processing issues (convergence, speed)

13) Data quality & DR

14) RFI and intermodulation

Observing schedule and planning (2-9 May 2007)

SAS/MAC control and queue scheduling needed asap --> only weekend observations

Currently waiting in queue:

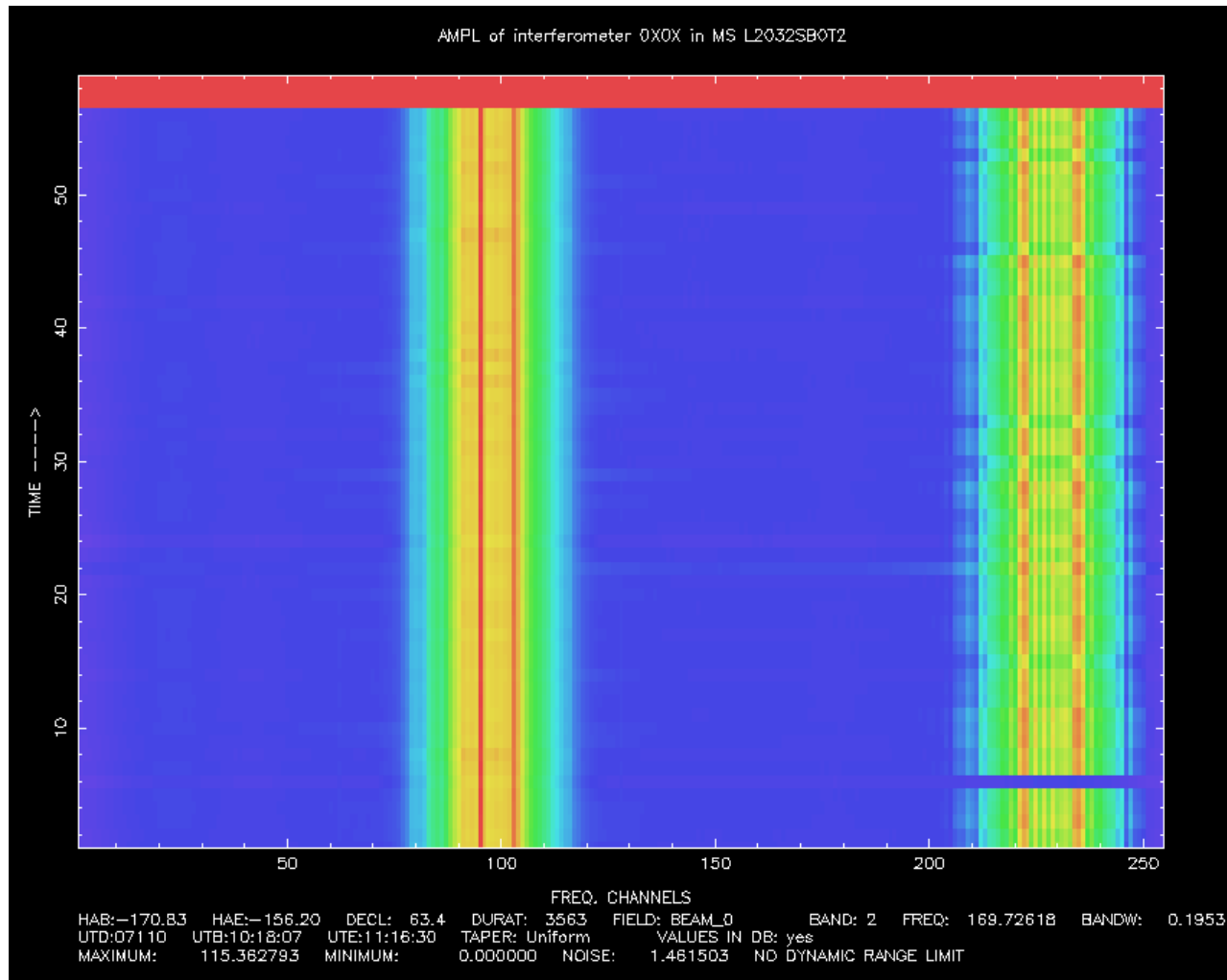
'Astronomical' commissioning:

- Pulsars with HBA/160 to allow high frequencies up to 230 MHz (Stappers)
- Transient area (Law, Miller-Jones)

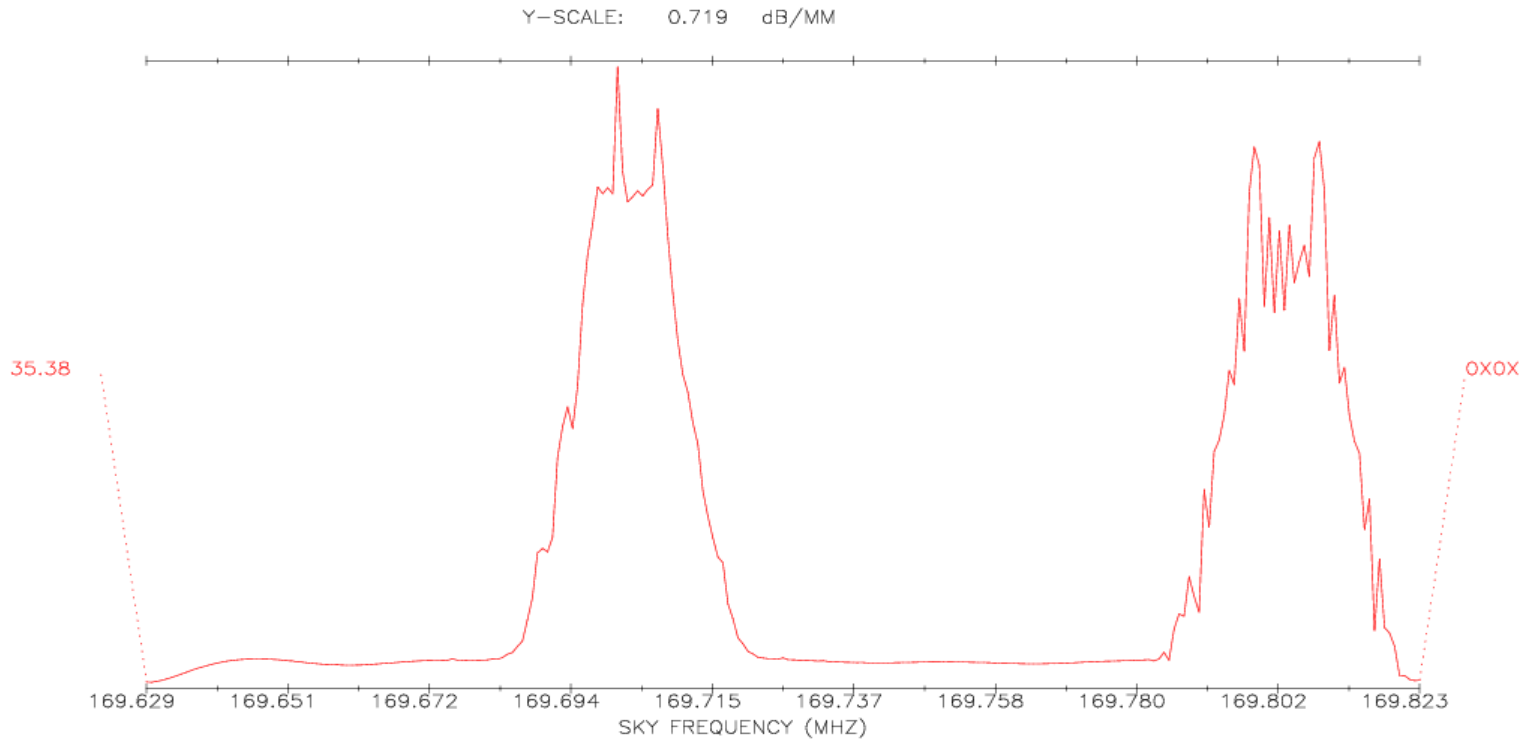
'Technical' commissioning HBA:

- HBA dipole/tile/station tests
- HBA beamformer studies
- HBA grating lobe issues
- LBA 160/200 MHz 'dip' tests

HBA spectrum around 169.75 MHz (very bright pagers!) 20 April 2007 , 1h, L2032



HBA spectrum around 169.75 MHz (very bright pagers!) 20 April 2007 , 1h, L2032



HAB:-170.83 HAE:-156.20 DECL: 63.4 DURAT: 3563 FIELD: BEAM_0
BAND: 2 FREQ: 169.72618 BANDW: 0.1953 TAPER: Uniform NR OF POINTS: 255
UTD:07110 UTB:10:17:37 UTE:11:17:00 MS: L2032SBOT2

TIME AVERAGE IN AMPL/PHASE

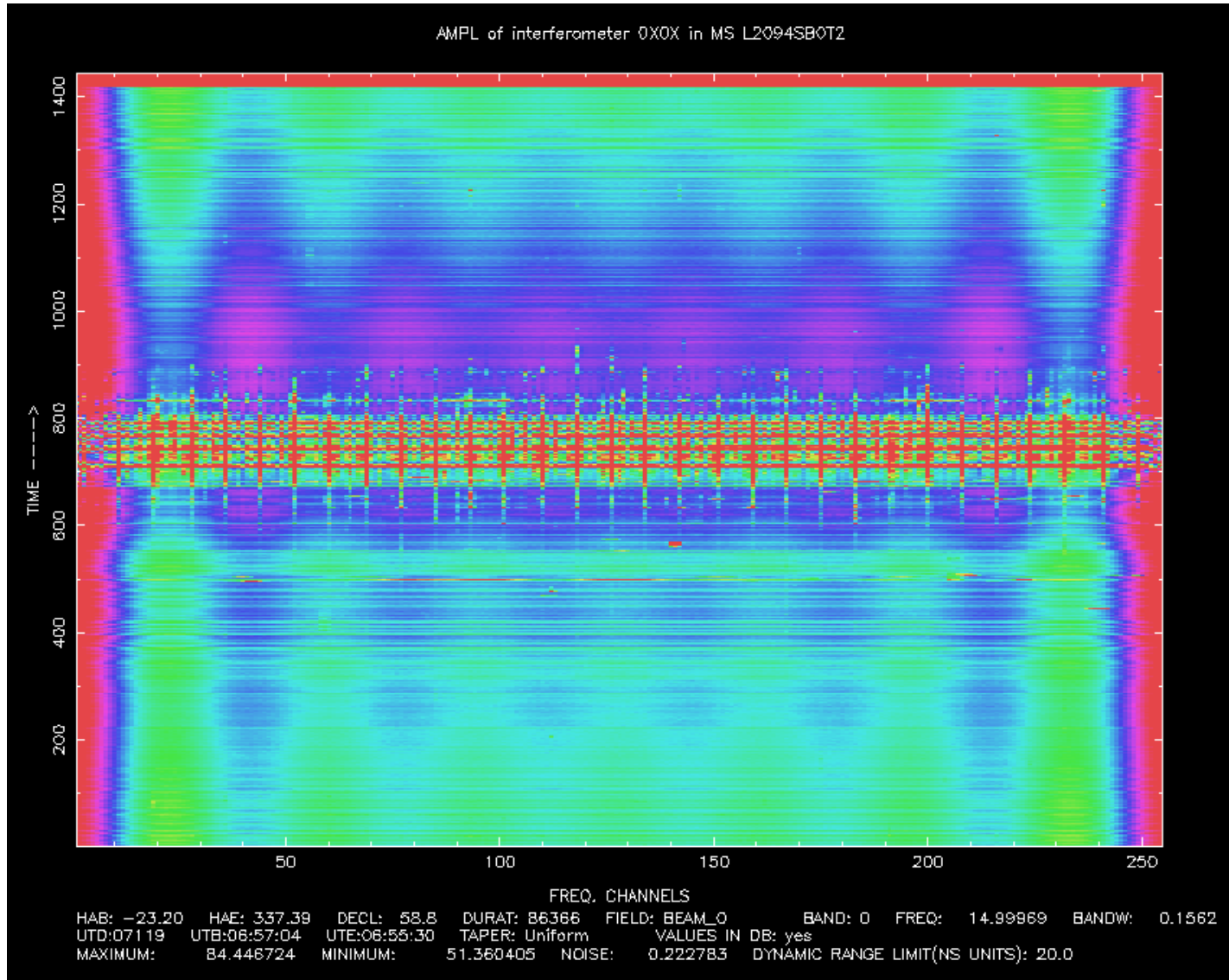
AMPL TRUE VALUES

RFI at low frequencies

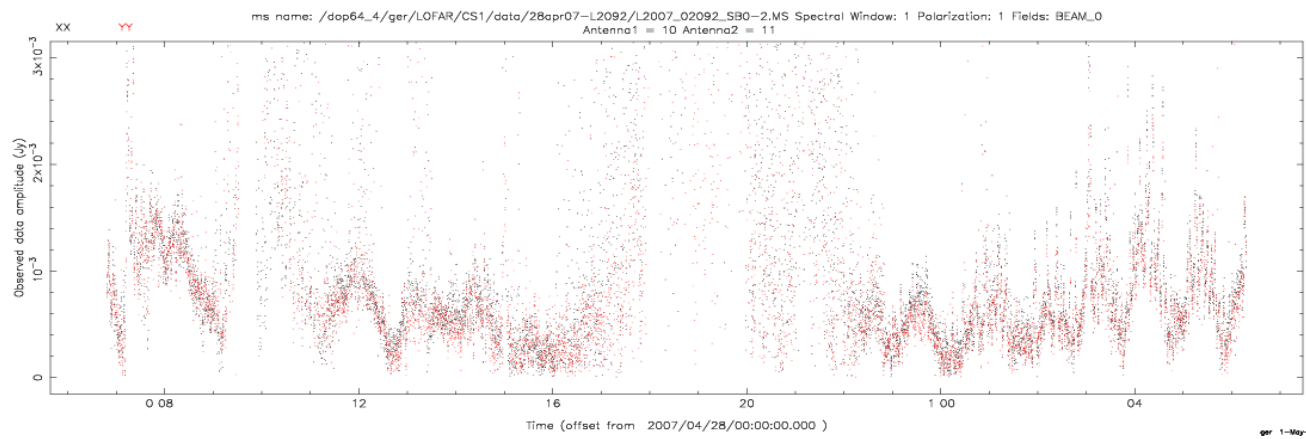
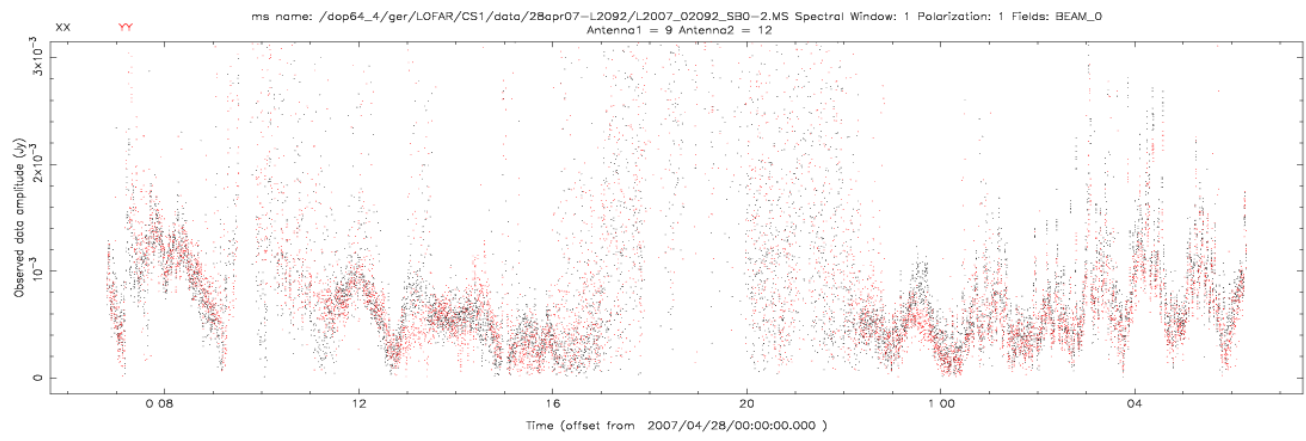
15.0 MHz

0X0X

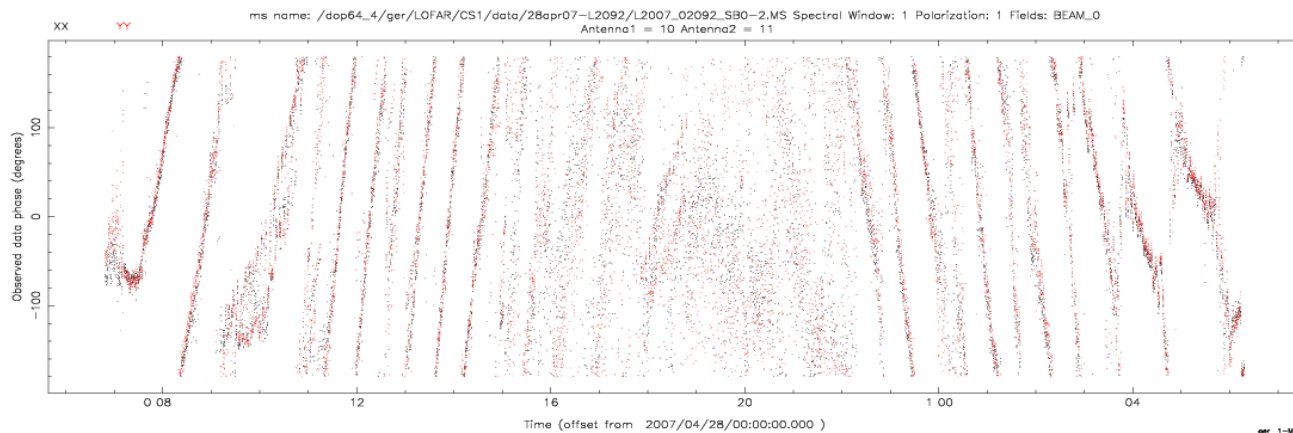
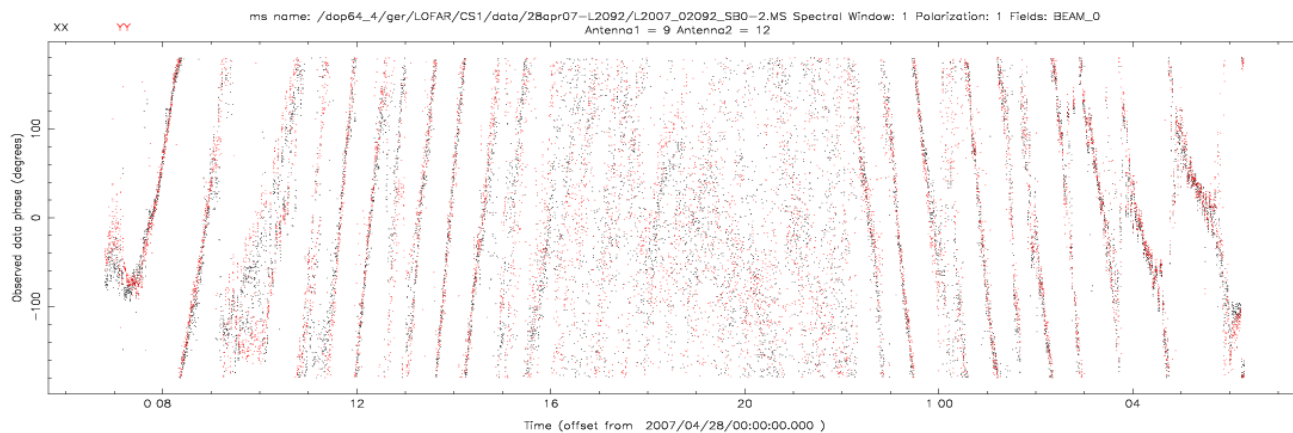
29-Apr-07, L2094, 24h



CasA fringes at 15 MHz on 350m baseline



CasA fringes at 15 MHz on 350m baseline

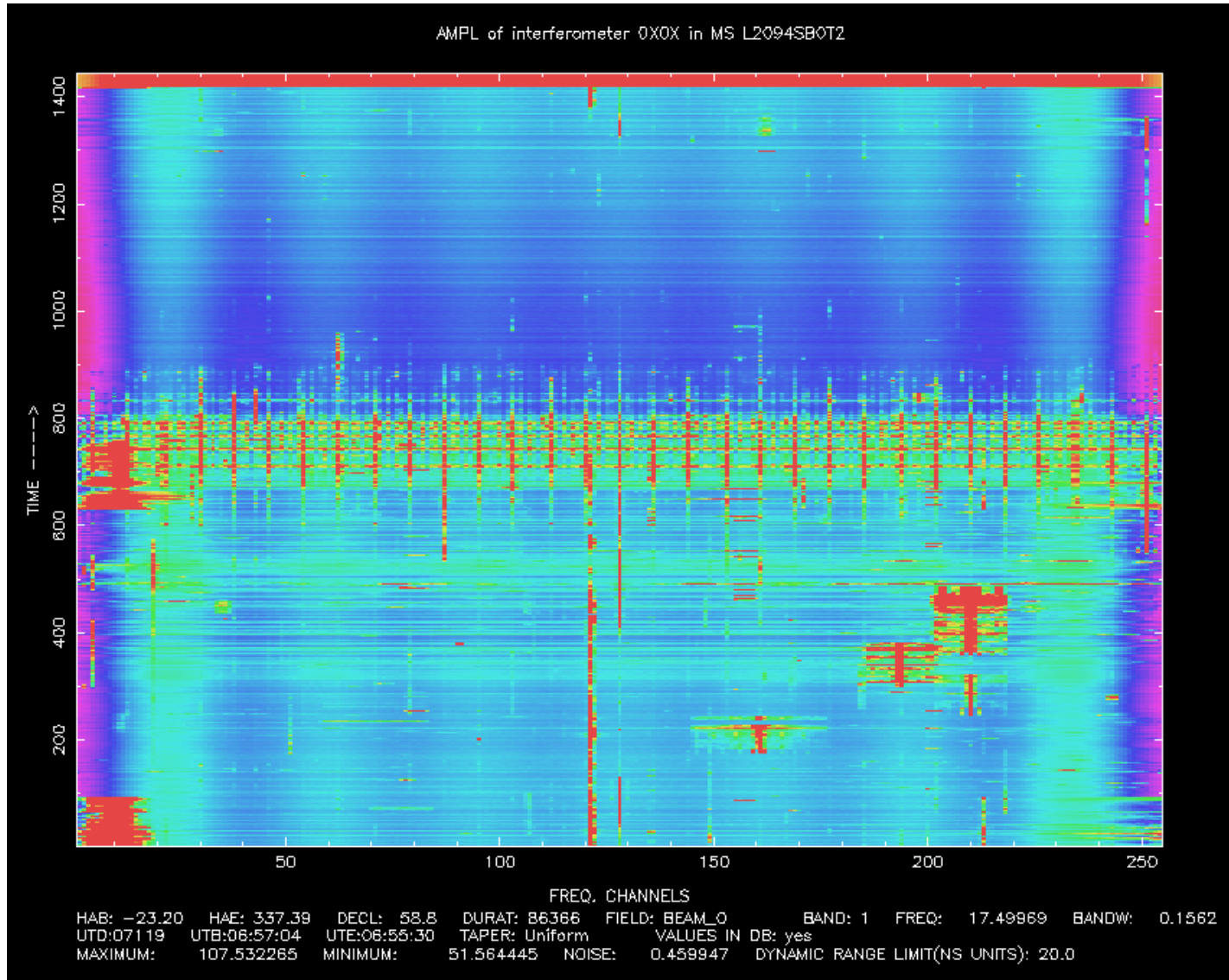


RFI at low frequencies

17.5 MHz

0X0X

29-Apr-07, L2094, 24h

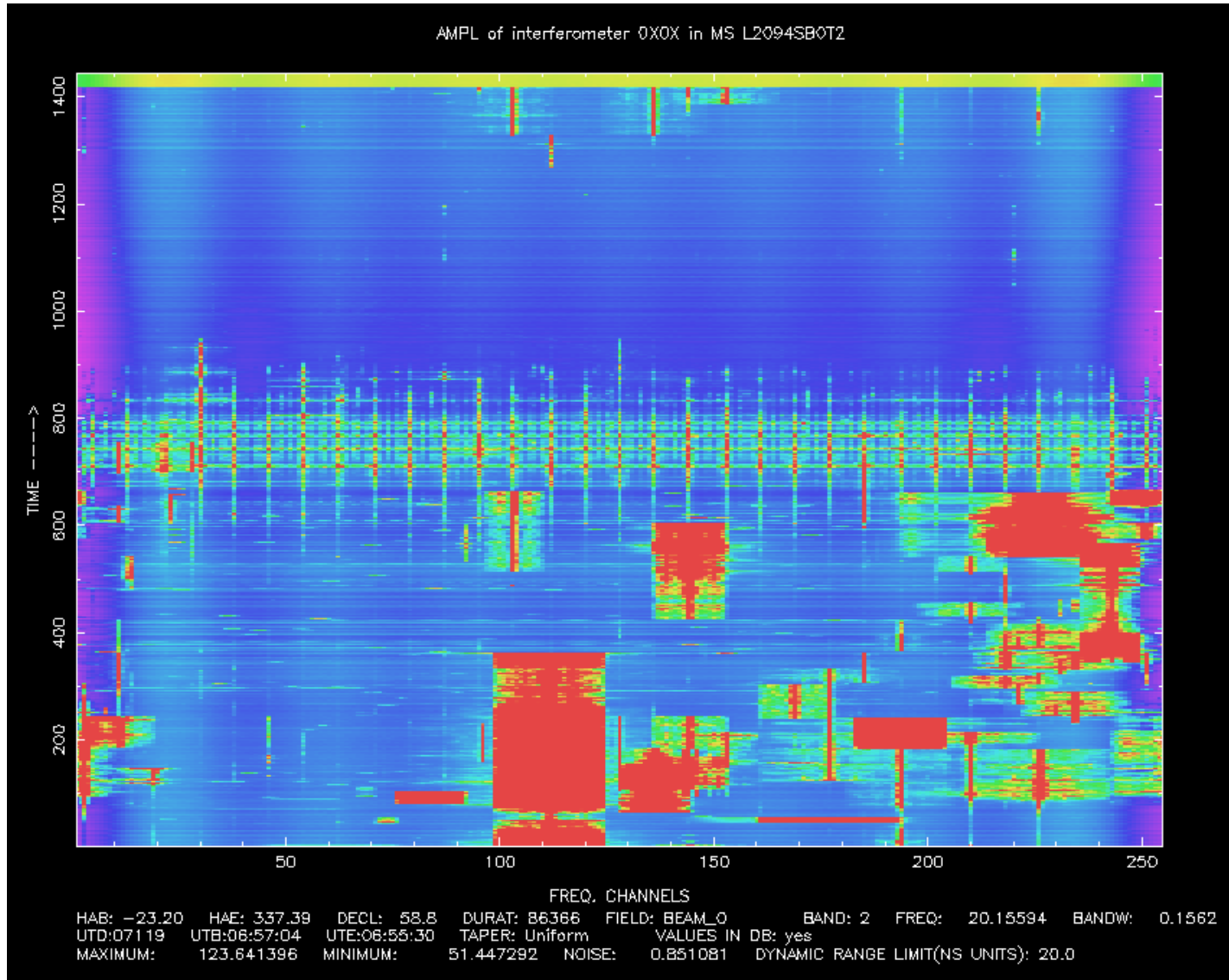


RFI at low frequencies

20.1 MHz

0X0X

29-Apr-07, L2094, 24h

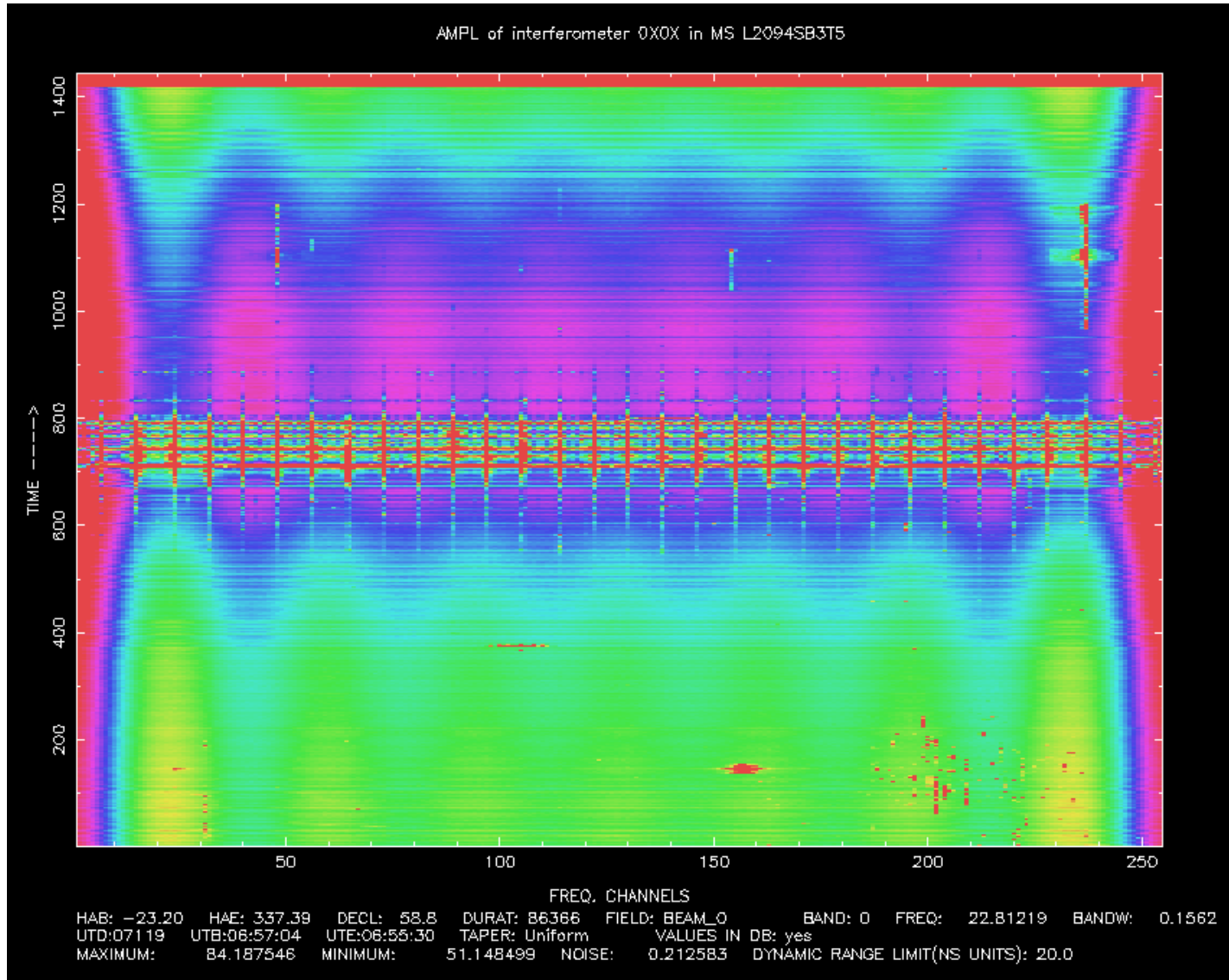


RFI at low frequencies

22.8 MHz

0X0X

29-Apr-07, L2094, 24h

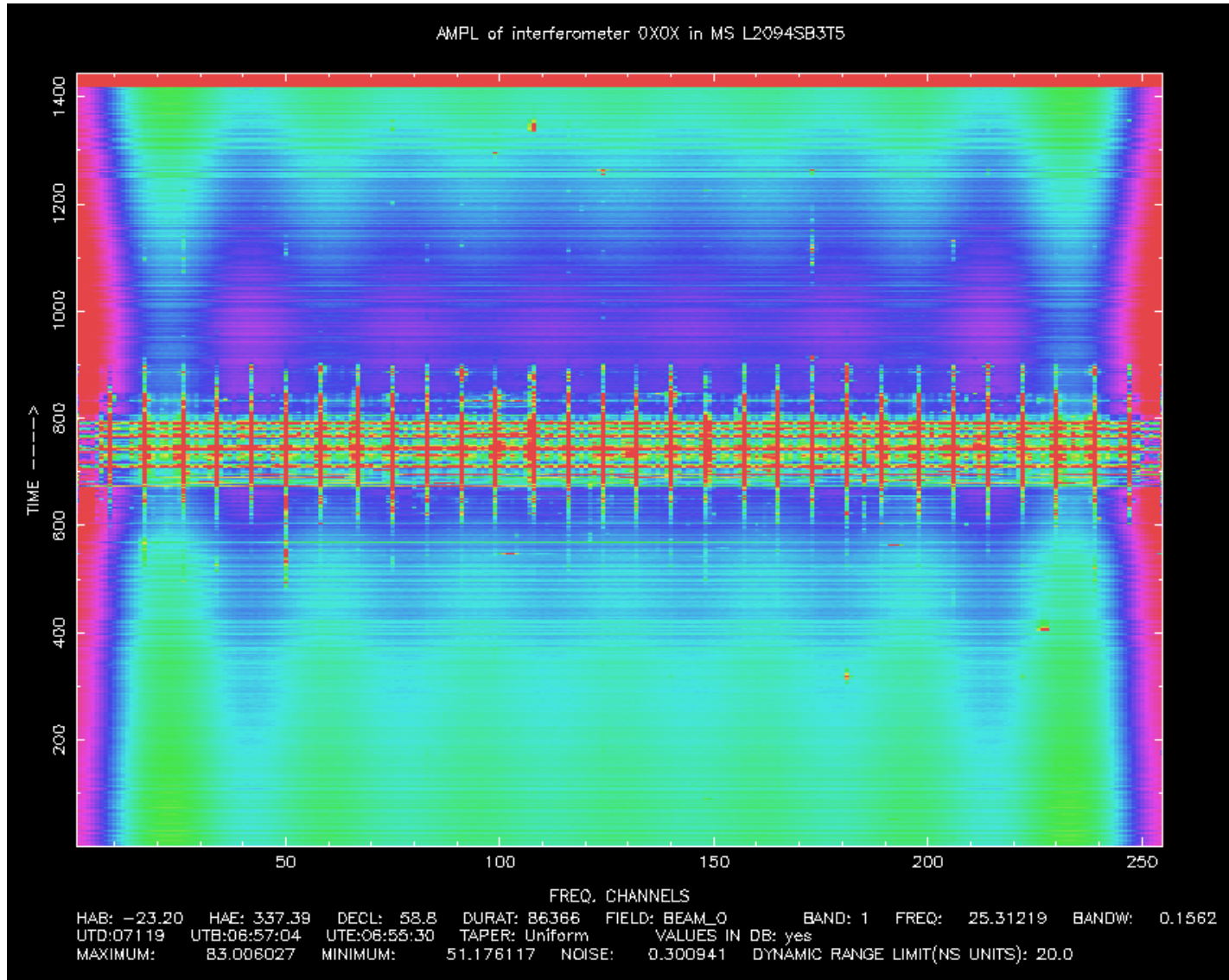


RFI at low frequencies

25.3 MHz

0X0X

29-Apr-07, L2094, 24h

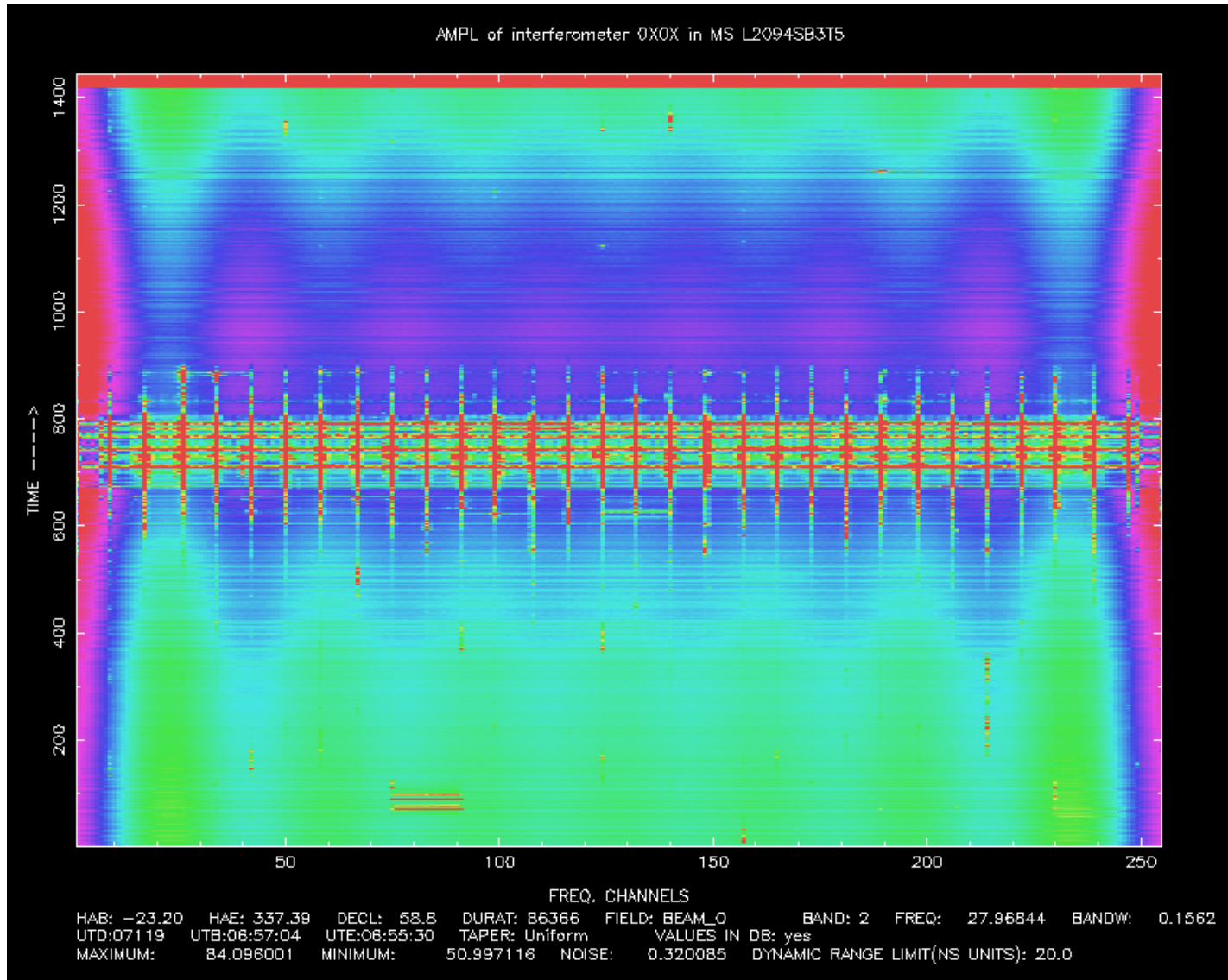


RFI at low frequencies

28.0 MHz

0X0X

29-Apr-07, L2094, 24h

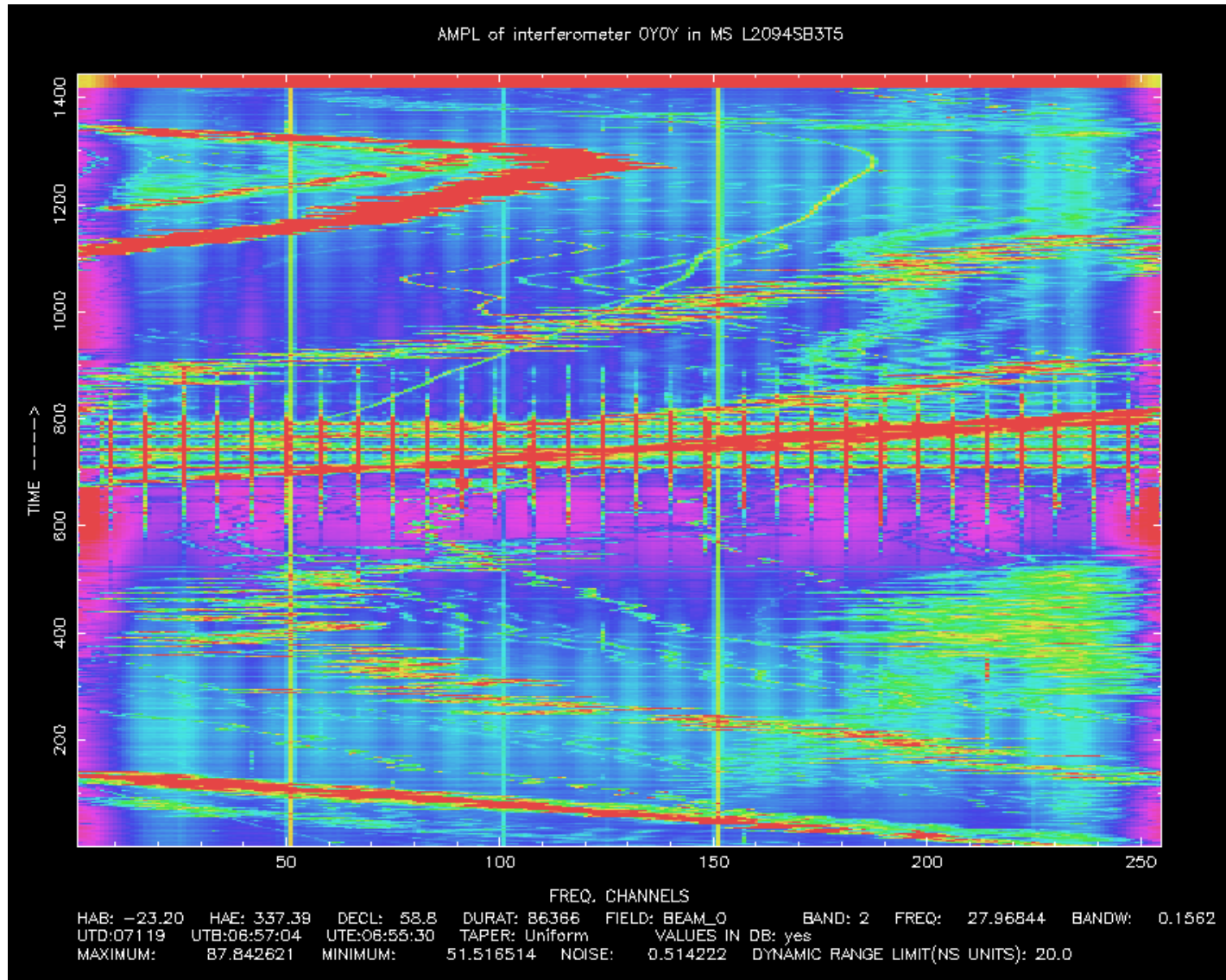


RFI at low frequencies

28.1 MHz

0Y0Y

29-Apr-07, L2094, 24h

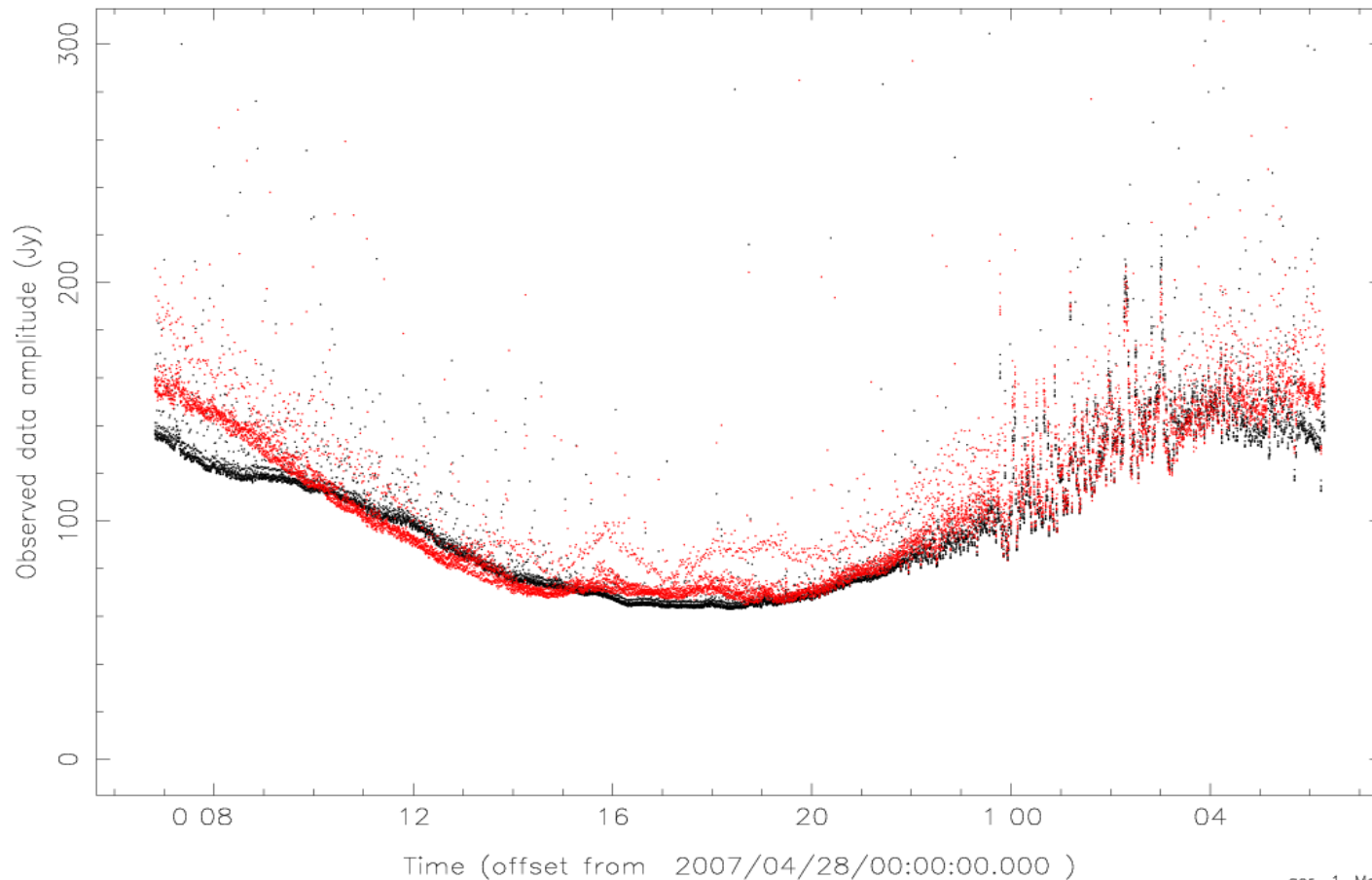


CygA scintillation at 60 MHz?

Total power ANT1 (48 dip)

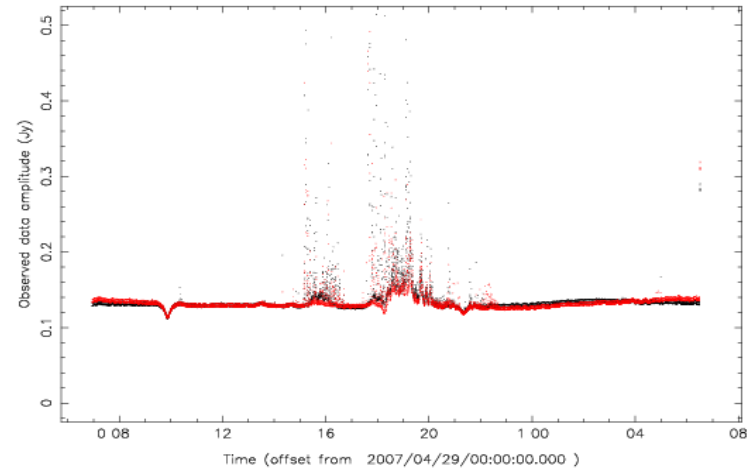
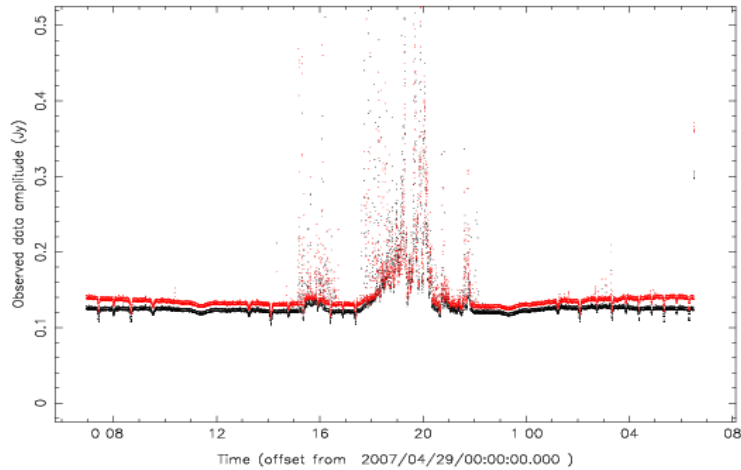
28-Apr-07, L2092, 24h

64_4/ger/LOFAR/CS1/data/28apr07-L2092/L2007_02092-SB15-17.MS Spectral Window: 1 Polarization: 1
XX YY
Antenna1 = 1 Antenna2 = 1

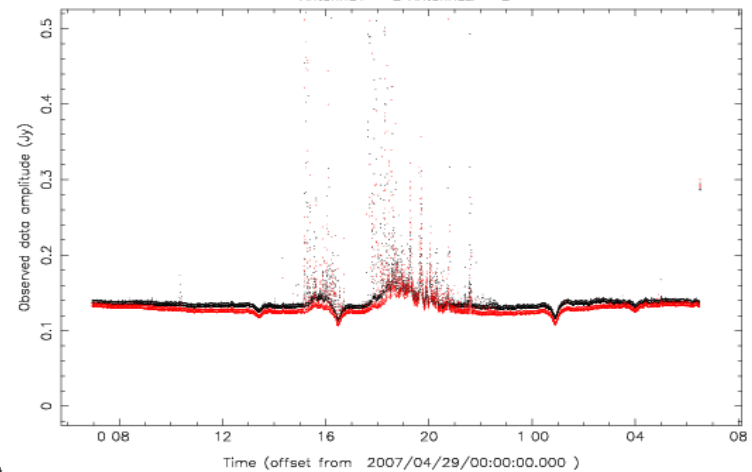
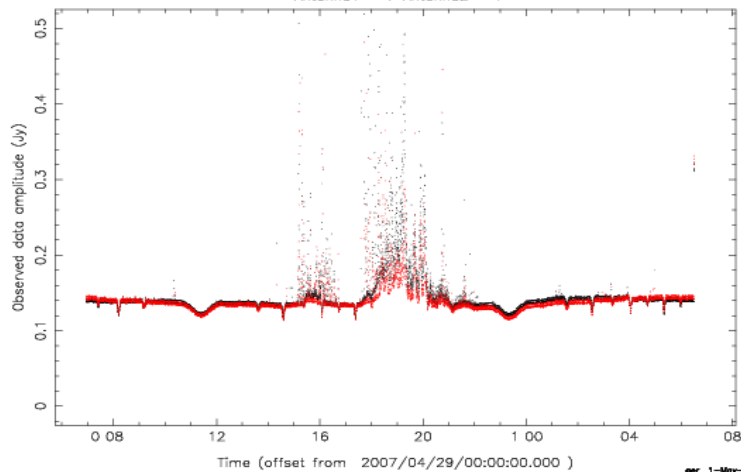


Total power at 15 MHz L2094, 24h, 29apr07

ip64_4/ger/LOFAR/CS1/data/29apr07-L2094/L2007_02094_SBO-2.MS Spectral Window: 1 Polarization: 1 F Antenna1 = 5 Antenna2 = 5
ip64_4/ger/LOFAR/CS1/data/29apr07-L2094/L2007_02094_SBO-2.MS Spectral Window: 1 Polarization: 1 F Antenna1 = 6 Antenna2 = 6

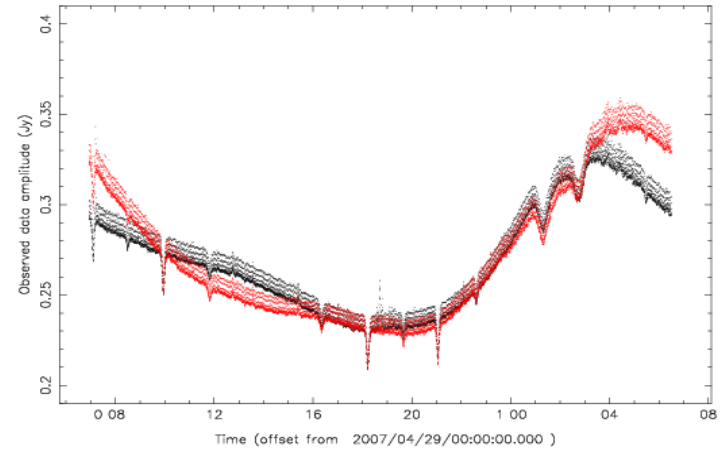
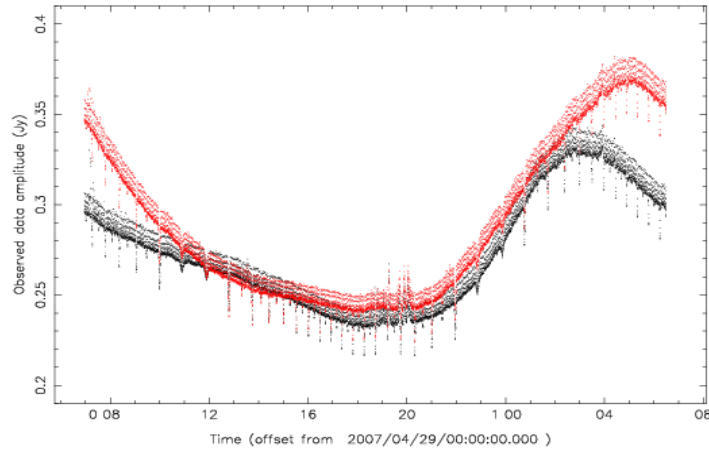


ip64_4/ger/LOFAR/CS1/data/29apr07-L2094/L2007_02094_SBO-2.MS Spectral Window: 1 Polarization: 1 F Antenna1 = 7 Antenna2 = 7
ip64_4/ger/LOFAR/CS1/data/29apr07-L2094/L2007_02094_SBO-2.MS Spectral Window: 1 Polarization: 1 F Antenna1 = 8 Antenna2 = 8

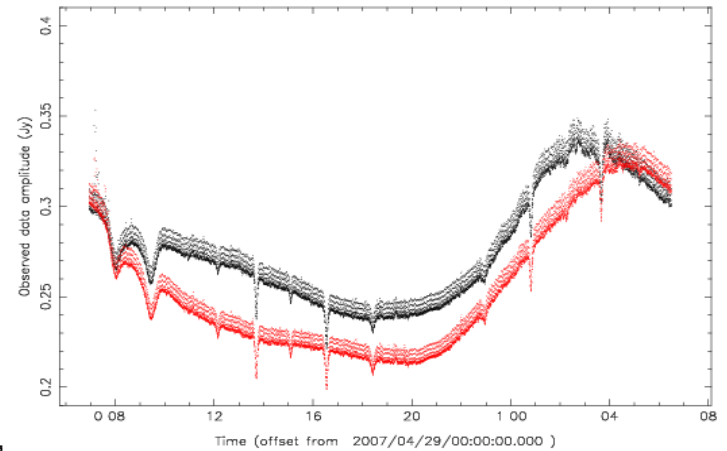
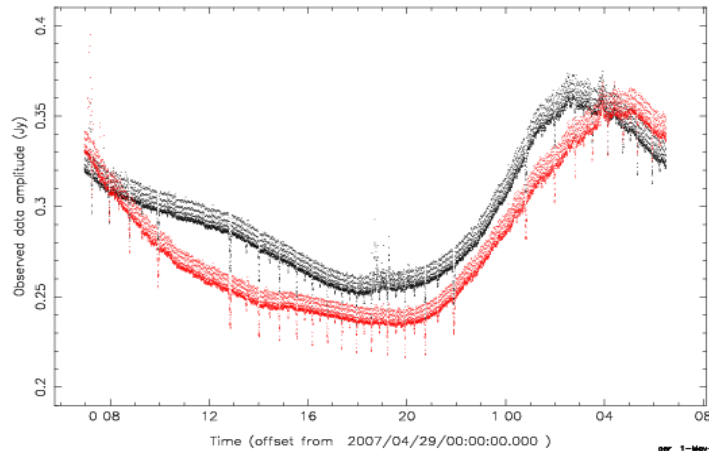


Total power at 45 MHz L2094, 24h, 29apr07

p64_4/ger/LOFAR/CS1/data/29apr07-L2094/L2007_02094_SB9-11.MS Spectral Window: 1 Polarization: 1
XX YY Antenna1 = 5 Antenna2 = 5

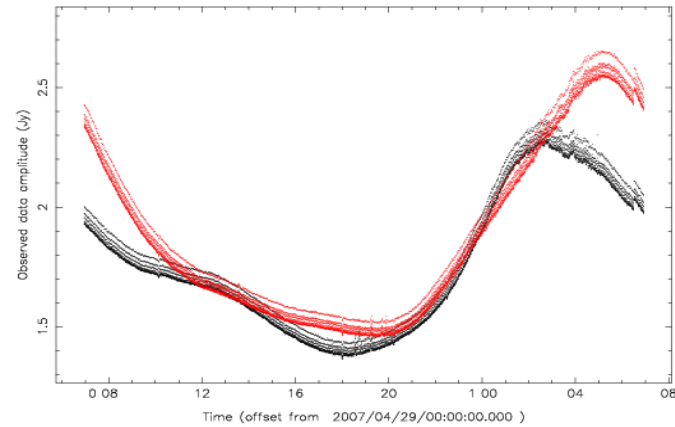
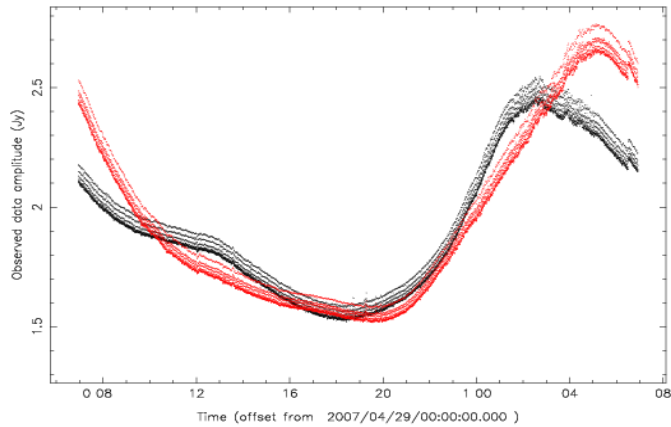


p64_4/ger/LOFAR/CS1/data/29apr07-L2094/L2007_02094_SB9-11.MS Spectral Window: 1 Polarization: 1
XX YY Antenna1 = 7 Antenna2 = 7

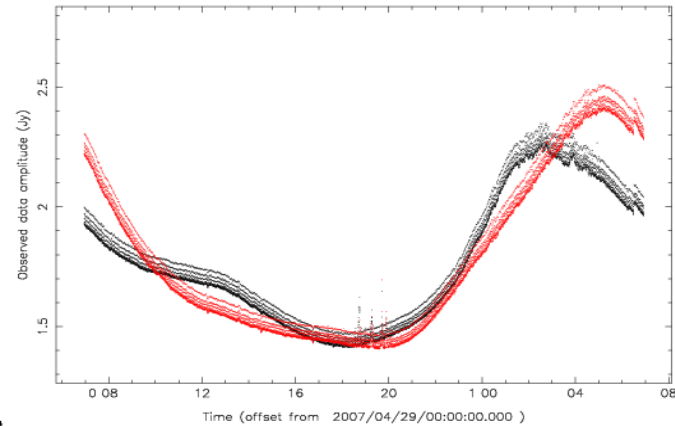
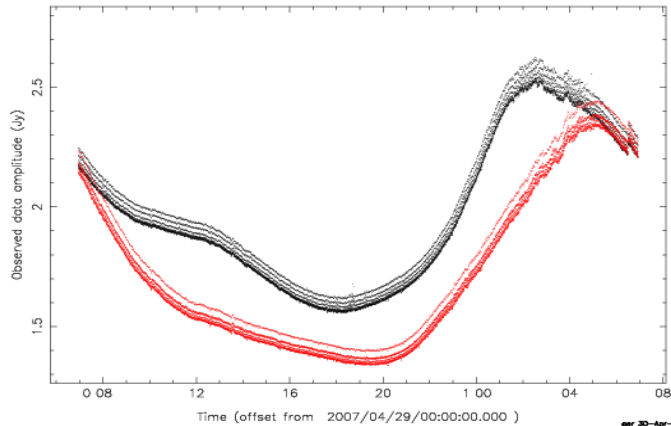


Total power at ~60 MHz L2094, 24h, 29apr07

64_4/ger/LOFAR/CS1/data/29apr07-L2094/L2007_02094_SB15-17.MS Spectral Window: 3 Polarization: 1
XX YY Antenna1 = 13 Antenna2 = 13



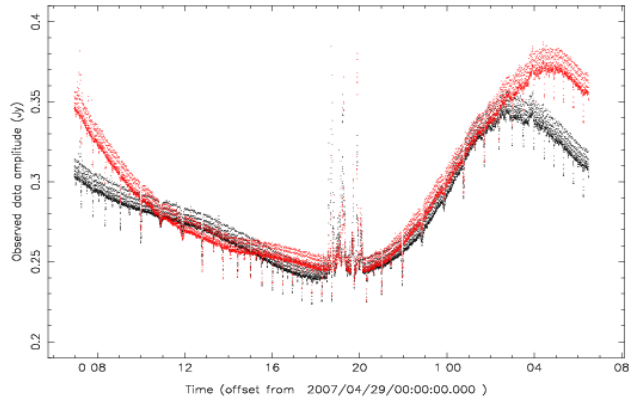
64_4/ger/LOFAR/CS1/data/29apr07-L2094/L2007_02094_SB15-17.MS Spectral Window: 3 Polarization: 1
XX YY Antenna1 = 15 Antenna2 = 15



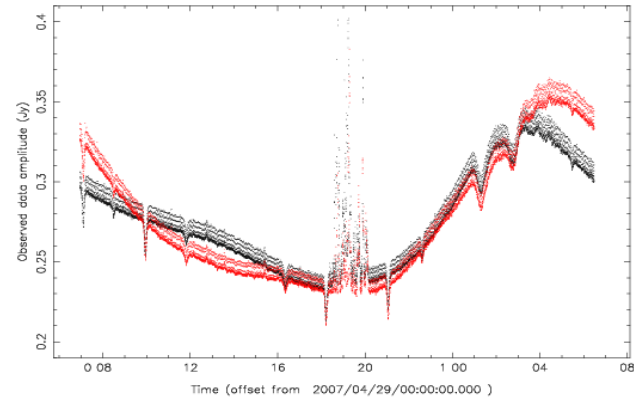
Total power at 45 MHz

CS016 L2094, 24h, 29apr07

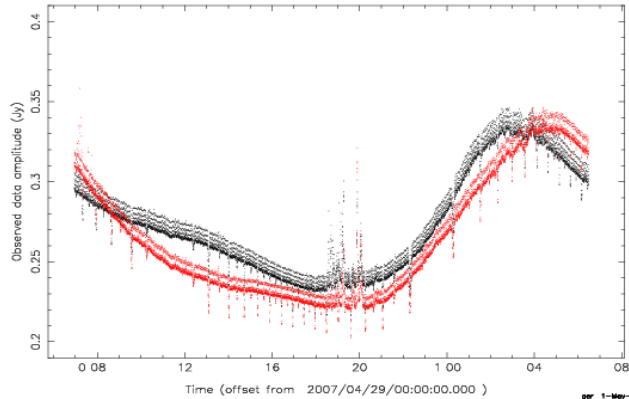
p64_4/ger/LOFAR/CS1/data/29apr07-L2094/L2007_02094_SB9-11.MS Spectral Window: 1 Polarization: 1
XX YY Antenna1 = 13 Antenna2 = 13



p64_4/ger/LOFAR/CS1/data/29apr07-L2094/L2007_02094_SB9-11.MS Spectral Window: 1 Polarization: 1
XX YY Antenna1 = 14 Antenna2 = 14



p64_4/ger/LOFAR/CS1/data/29apr07-L2094/L2007_02094_SB9-11.MS Spectral Window: 1 Polarization: 1
XX YY Antenna1 = 15 Antenna2 = 15



p64_4/ger/LOFAR/CS1/data/29apr07-L2094/L2007_02094_SB9-11.MS Spectral Window: 1 Polarization: 1
XX YY Antenna1 = 16 Antenna2 = 16

