

Radio observatory report and current LOFAR issues

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LOFAR status meeting 20090204

- 1 Observatory status
- 2 Status of issues
- 3 Observation queue

System

- We are observing again!
- Upgraded Effelsberg firmware to 5.5/5.3
- Upgraded Effelsberg LCU software to svn 12285

Observations

2009-10542 : Cas A synthesis
test 24 hours

2009-10599–605,609–613 :
Frequency mosaic for
Pandey

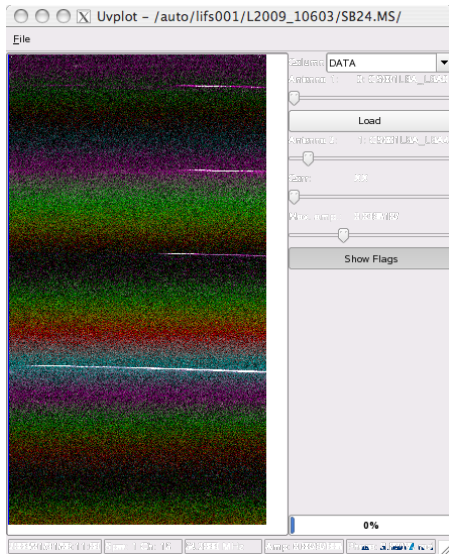
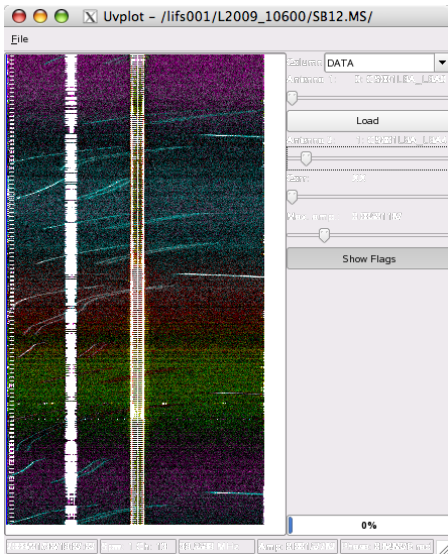
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- Low frequency RFI combs are indeed due to intermods
- `rspctl -xcangle -xcstatistics angle range`

Bug list(OPEN)

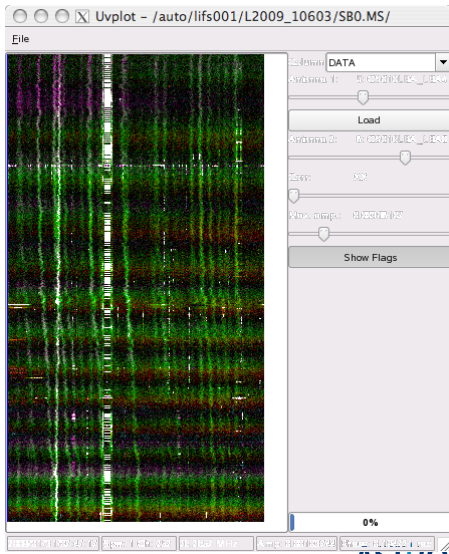
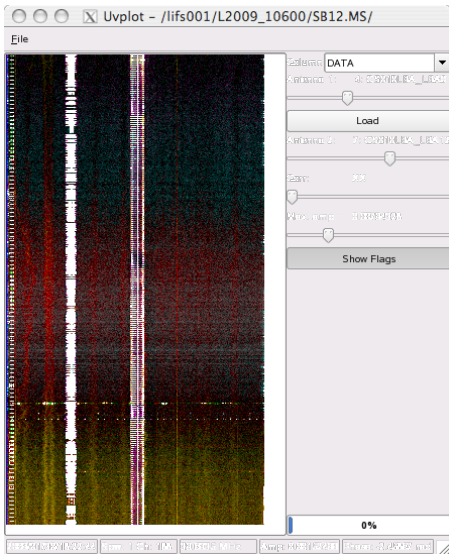
- Very strange, possibly internal RFI (Pandey dataset)
- TP variations/ionospheric absorption (Ger de Bruyn)
- No fringe at long baselines (James Anderson, Jean-Mathias Griessmeier, Nicolas Pradel)
- CS010 unreliable/needs repeated commands before settings “stick” (is this still the case?)
- Non-hermiticity in ACM at 200 MHz clock (Eric Kooistra, **180 degree phase problem still there**)
- Non-hermiticity in ACM blocks of intra-RSP board visibilities in waveform generator tests (Eric Kooistra)
- AC oscillations Pandey (nobody working on this)
- AC dips (Michiel Brentjens, useful data taken in psr busy week)

Pandey RFI CS001



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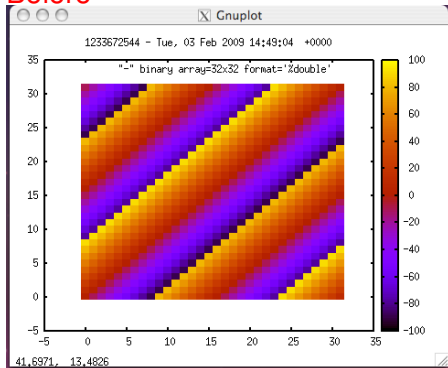
Pandey RFI CS010



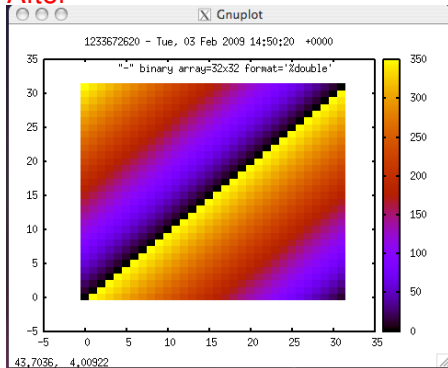
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rspctl ACM angles (Overeem, Wijnholds)

Before

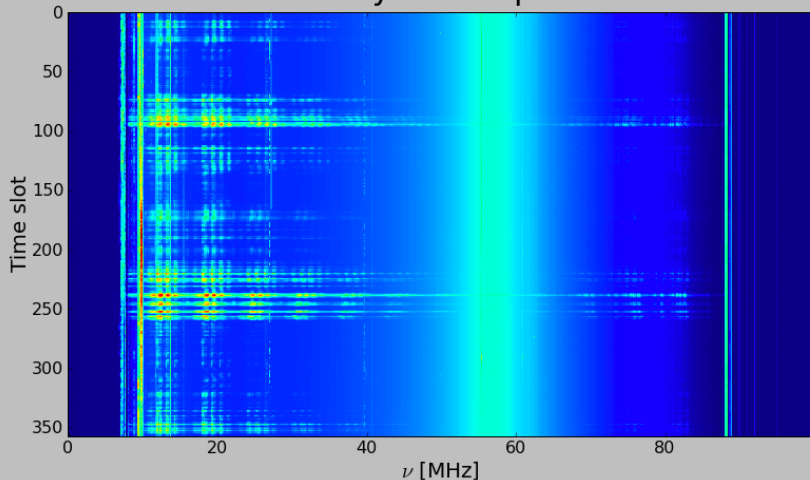


After



Low freq wide band RFI

RCU 3: dynamic spectrum



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- Effelsberg-Exloo correlations (Anderson)
- Tied array tests (Mol, Romein, pulsar group)
- Various pulsar observations (van Leeuwen, Hessels, Stappers)
- TBB RFI experiments (Eijkelboom, Boonstra)
- TBB PPF inversion test (Singh)
- Solar observations: 10 min of baseband LBA data with Effelsberg (Anderson).
- Solar observations (Wise):
 - Simultaneous low and high band BF observations of the sun
 - Track Sun for 15 mins with high and low band
 - Frequency channels chosen to cover entire low and high bands
 - Write out raw BF data
 - Repeat above with the digital filter turned off so the low band data will go down to 10 MHz.