

# Radio observatory report and current LOFAR issues

Michiel Brentjens

Radio Observatory  
ASTRON, Dwingeloo, The Netherlands

LOFAR status meeting 20090916

- 1 Observatory status
- 2 Status of issues
- 3 Effelsberg Fringes?
- 4 Observation queue

## System

- RSP/RCU firmware and MAC software upgrade past Thursday on all stations
- TBB firmware upgrade yesterday on all NL stations. Effelsberg will be upgraded today/tomorrow
- Problems on RSP board 3 of CS302 (headers of packets are wrong)
- All other stations operating nominally

## Modify your scripts!

- All config names on station will be changed to conform to SAS names, i.e. LBINNER  $\Rightarrow$  LBA\_INNER, ..., HBA0  $\Rightarrow$  HBA\_ONE, HBA1  $\Rightarrow$  HBA\_TWO
- From now on, only use rspctl for clock changes. All other station settings are handled by beamctl if operating in swlevel 3.

## Repairs

- AntennaArrays.conf RS208 changed: exchanged LBA and HBA field centres. This caused considerable phase winding as a function of time on baselines involving this station.

SAS/MAC/SHM busy week

observation108 Solar observations

various TBB experiments

various pencil beamformer experiments

L2009\_14319 Effelsberg fringe test on 3C196 (observation158)

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# Bug list (SOLVED)

- field rotation due to uvw mislabelling in DPPP (except very small 5–6 s one?)
- Very strange, possibly internal RFI (Pandey dataset) Investigated by Harm-Jan Stiepel. Cabinets at CS1 are leaking enormous amounts of RFI. No action will be taken to mitigate this. Go and measure CS302 as soon as it is available. **Not seen anymore, considered fixed**
- CS010 unreliable/needs repeated commands before settings “stick” with RCUs. Possibly problem in rspctl. Also observed in CS001 and CS302 (Overeem). hba-write command may not be in same second as rspctl rcu commands. hba update to 10 seconds. **Did not show up after automatic full-station test by Menno Norden past Friday**

# Bug list ((almost) EXPLAINED)

- Signal paths of even RCUs can jump between a high and low state (LBL/LBH switch broken (by ESD?)). New RCU: ESD diode, and no trafo's. Needs more research. Switches are of same type as faulty HBA delay boards. Why only even RCUs: unexplained.
- Phase jumps in waveform generator test at 200 MHz clock (Eric Kooistra, Brentjens) Test observation in queue.
- Non-hermiticity in ACM blocks of intra-RSP board visibilities in waveform generator tests (Overeem, Kooistra, will be fixed in RSPDriver)
- No fringe at long baselines (James Anderson, Jean-Mathias Griessmeier, Nicolas Pradel)
- HBA AC oscillations (Wijnholds)

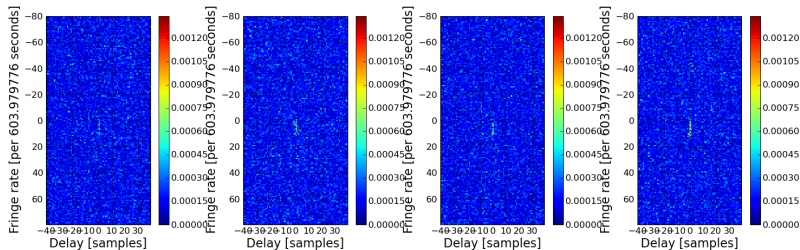
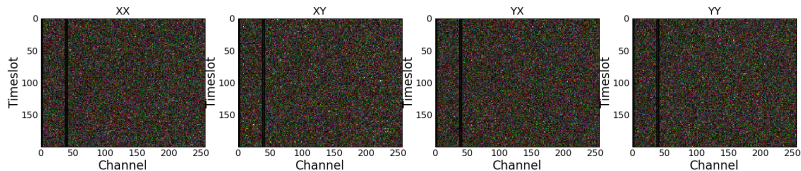


# Bug list (OPEN)

- Occasional timestamp jumps of 1 in CS302/RSP0 data sent to CEP. Due to CRC errors? (Kooistra, Romein)
- Steps in delay w.r.t. Nancay
- TP variations/ionospheric absorption (Ger de Bruyn)
- AC oscillations Pandey (nobody working on this)
- AC dips (Michiel Brentjens, PSR group. Useful data taken in second psr busy week)

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SB48.MS, : 49.218 MHz



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# Observation queue

ID	Title	PI	Begin (UTC)	End (UTC)
<b>scheduled</b>				
150	SAS/MAC/SHM/Navigator Busy week	schoenmakers	2009-09-14.00:00:00	2009-09-19.14:00:00
157	JJJobs (Joint International Jupiter Observation)	griessmeier	2009-09-17.18:00:00	2009-09-17.21:00:00
151	Pulsar Busy Week (Sept 2009)	asgekar	2009-09-20.23:00:00	2009-09-25.15:00:00
<b>in-progress</b>				
163	1 RCU (HBA) data of TBB and Beam Correlator	terveen	2009-09-16.08:00:00	2009-09-16.09:00:00