

Radio observatory report and current LOFAR issues

Michiel Brentjens

Radio Observatory
ASTRON, Dwingeloo, The Netherlands

LOFAR status meeting 20090715

ASTRON

- 1 Observatory status
- 2 Status of issues
- 3 First Fringe observations
- 4 Data management plan at CEP
- 5 Observation queue

System

- CS302, RS307, RS503 available
- BG/P available
- Disc space shortage

Repairs

- cable repairs RS503

Several TBB

observation103 First Fringe LBA

observation105 First Fringe HBA

- 1 Observatory status
- 2 Status of issues**
- 3 First Fringe observations
- 4 Data management plan at CEP
- 5 Observation queue

Bug list (SOLVED)

Bug list ((almost) EXPLAINED)

- 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, real fix in progress.
- 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)

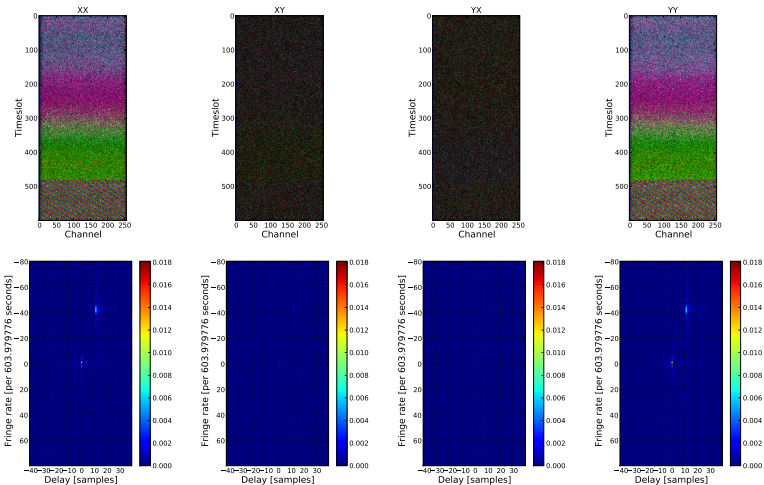
- Occasional timestamp jumps of 1 in CS302/RSP0 data sent to CEP. Due to CRC errors? (Kooistra, Romein)

Bug list (OPEN)

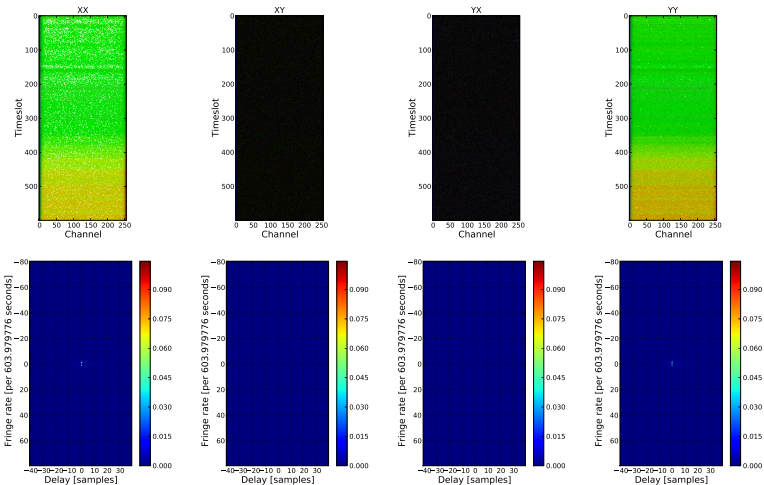
- Steps in delay w.r.t. Nancay
- Very strange, possibly internal RFI (Pandey dataset) Investigated by Harm-Jan Stiepel. Cabinets at CS1 are leaking enormous amounts of RFI. No action will be taken to mitigate this. Go and measure CS302 as soon as it is available
- TP variations/ionospheric absorption (Ger de Bruyn)
- No fringe at long baselines (James Anderson, Jean-Mathias Griessmeier, Nicolas Pradel)
- AC oscillations Pandey (nobody working on this)
- HBA AC oscillations (Wijnholds)
- AC dips (Michiel Brentjens, PSR group. Useful data taken in second psr busy week)

- 1 Observatory status
- 2 Status of issues
- 3 First Fringe observations**
- 4 Data management plan at CEP
- 5 Observation queue

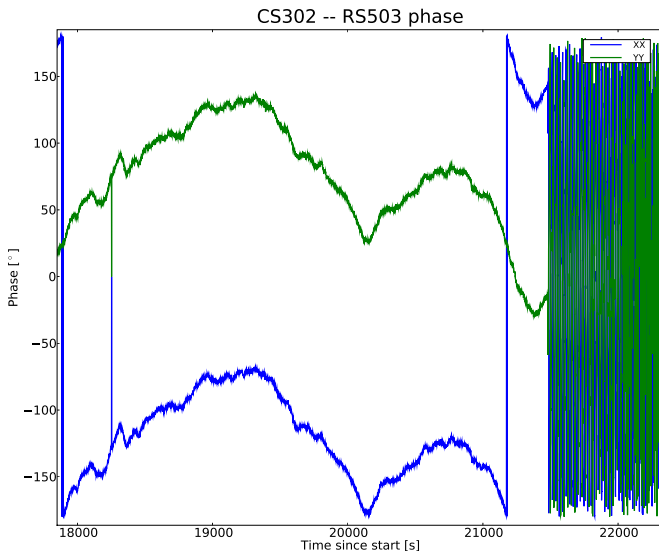
L2009_13244_SB60.MS, SB60.MS: 41.796 MHz



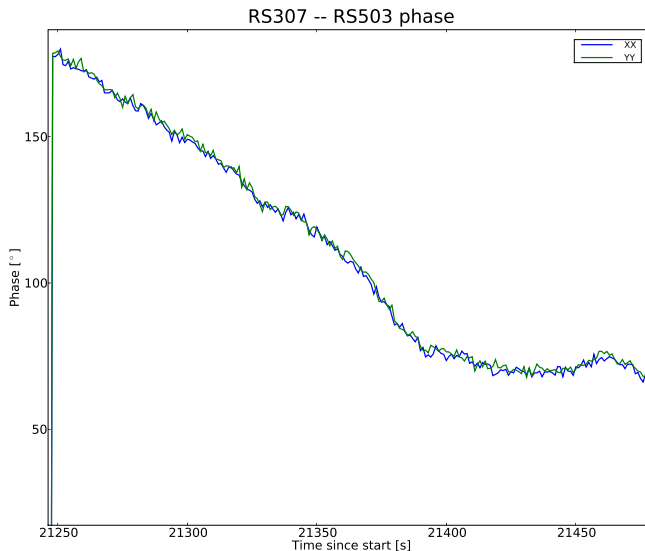
L2009_13255_SB168.MS, SB168.MS: 152.734 MHz



CS302-RS503 Phase



RS307-RS503 Phase



- 1 Observatory status
- 2 Status of issues
- 3 First Fringe observations
- 4 Data management plan at CEP**
- 5 Observation queue

- Make all four completely empty before observation
- Directly after observation, either delete datasets, or move to lifs nodes

- lifs001–lifs008: Commissioning observations
- lifs009–lifs012: R&D datasets
- fixed expiry date: 4 weeks for now
- Run DPPP by default on copying list to lifs
- before a dataset expires, indicate whether it should be stored on the grid or not.
- one can always move data offline for detailed analysis

- Allocate 1 machine to each team
- 4 machines for “normal” users and distributed experiments
- normal users will have 20 GB quota on /data partitions

- 1 Observatory status
- 2 Status of issues
- 3 First Fringe observations
- 4 Data management plan at CEP
- 5 Observation queue

See Observation Tracker.

While I am away...

Please contact Ashish Asgekar (asgekar at astron dot nl) for requests related to LOFAR operations.