Radio observatory report and current LOFAR issues

Michiel Brentjens

Radio Observatory
ASTRON, Dwingeloo, The Netherlands

LOFAR status meeting 20090304

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Outline

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Observatory status

System

- BG/P Network reworked
- Replaced RCUs 16, 30, 36, 41, 54, 58, 70
- Replaced dipole 42

Observations

L2009-10659 Spectrum analysis test in the 30–40 MHz range to investigate interference found in Pandeys frequency mosaic

now Pulsar busy week

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Outline

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Bug list (SOLVED)

- nothing that I am aware of. . .

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Bug list ((almost) EXPLAINED)

- Phase jumps in waveform generator test at 200 MHz clock (Eric Kooistra)
- Non-hermiticity in ACM blocks of intra-RSP board visibilities in waveform generator tests (Eric Kooistra)

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Bug list(OPEN)

- Signal paths of even RCUs can jump between a high and low state
- 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” with RCUs
- AC oscillations Pandey (nobody working on this)
- AC dips (Michiel Brentjens,useful data taken in previous psr busy week)

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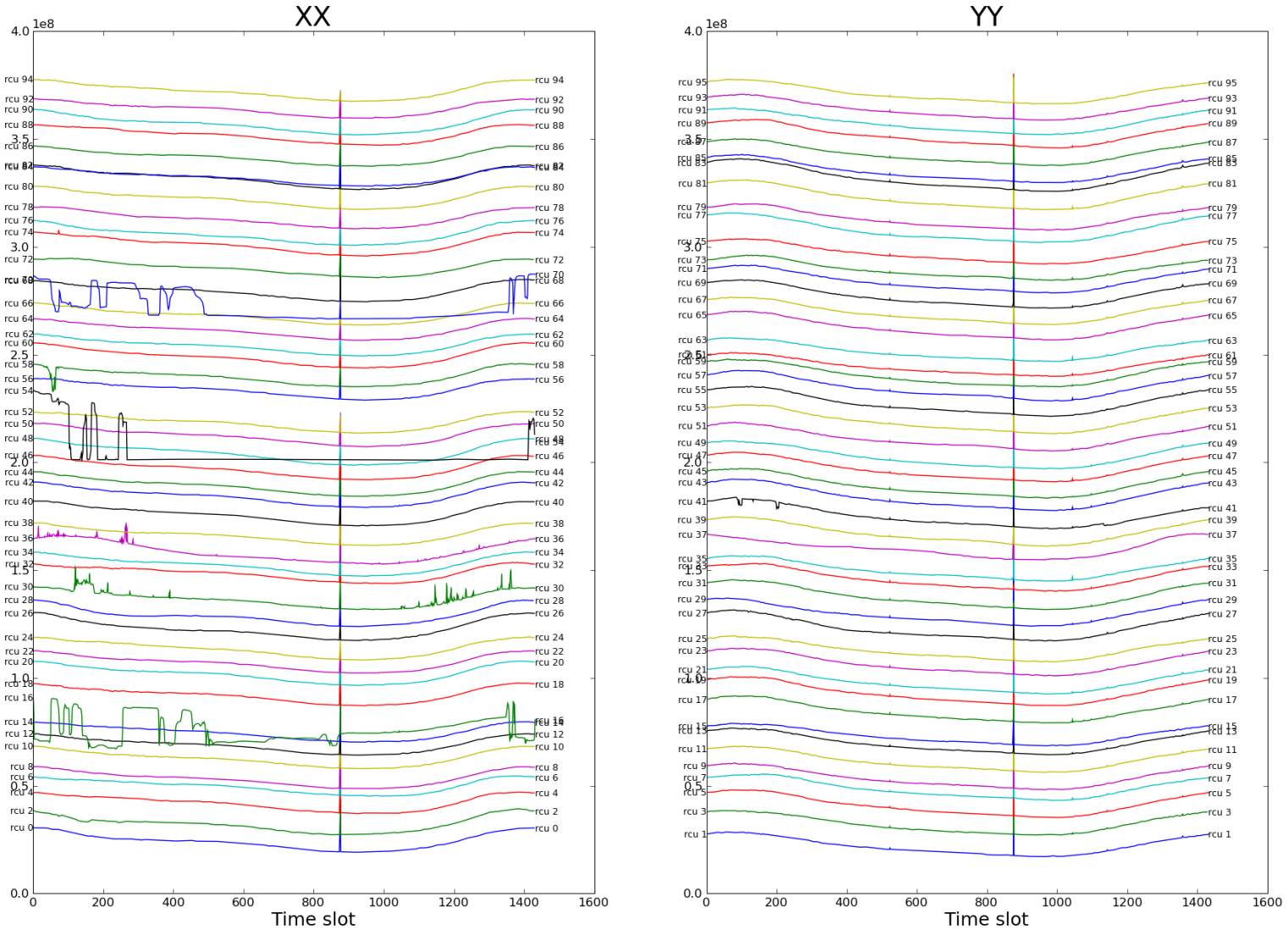
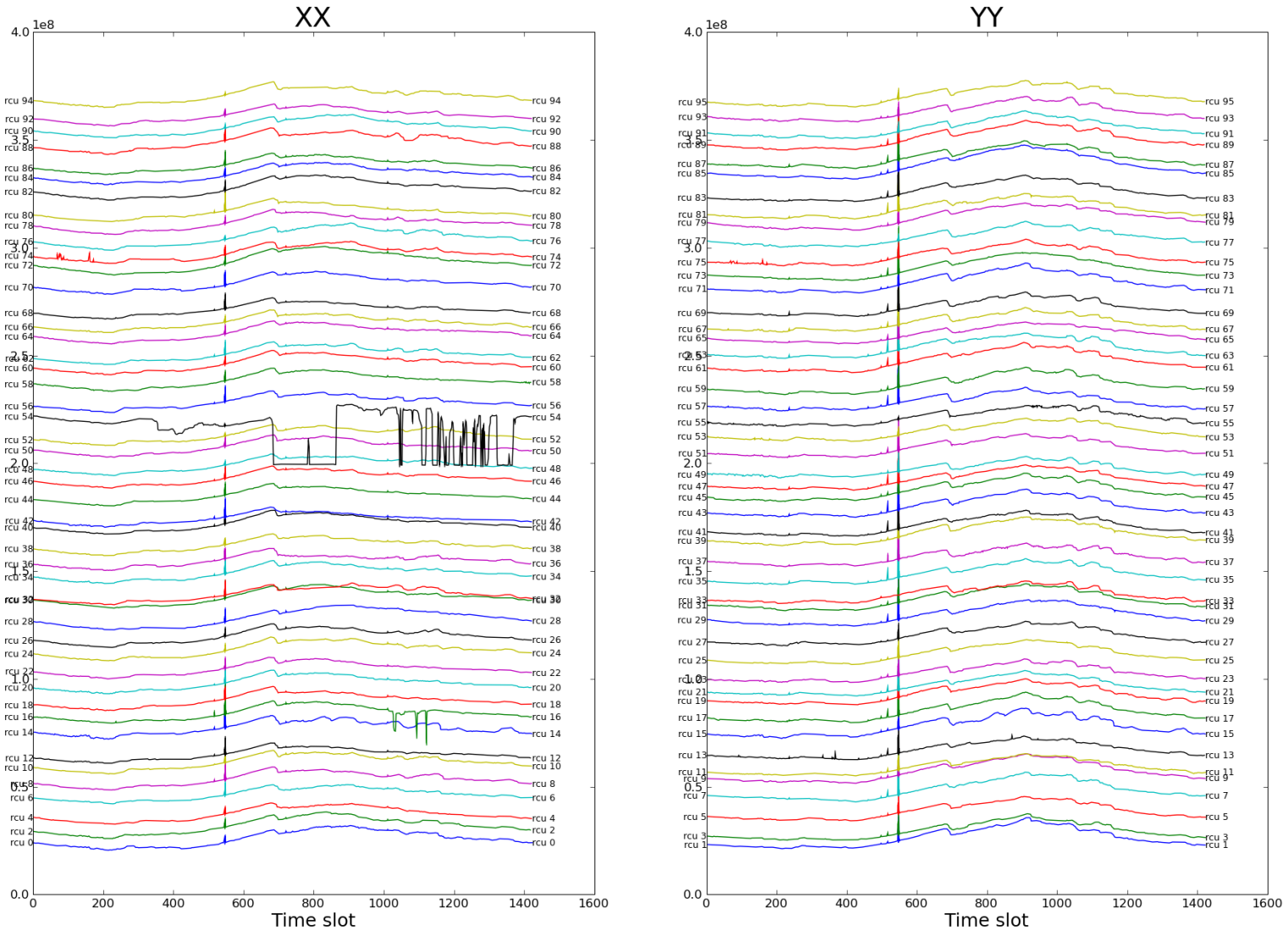
Signal path jumps (I)

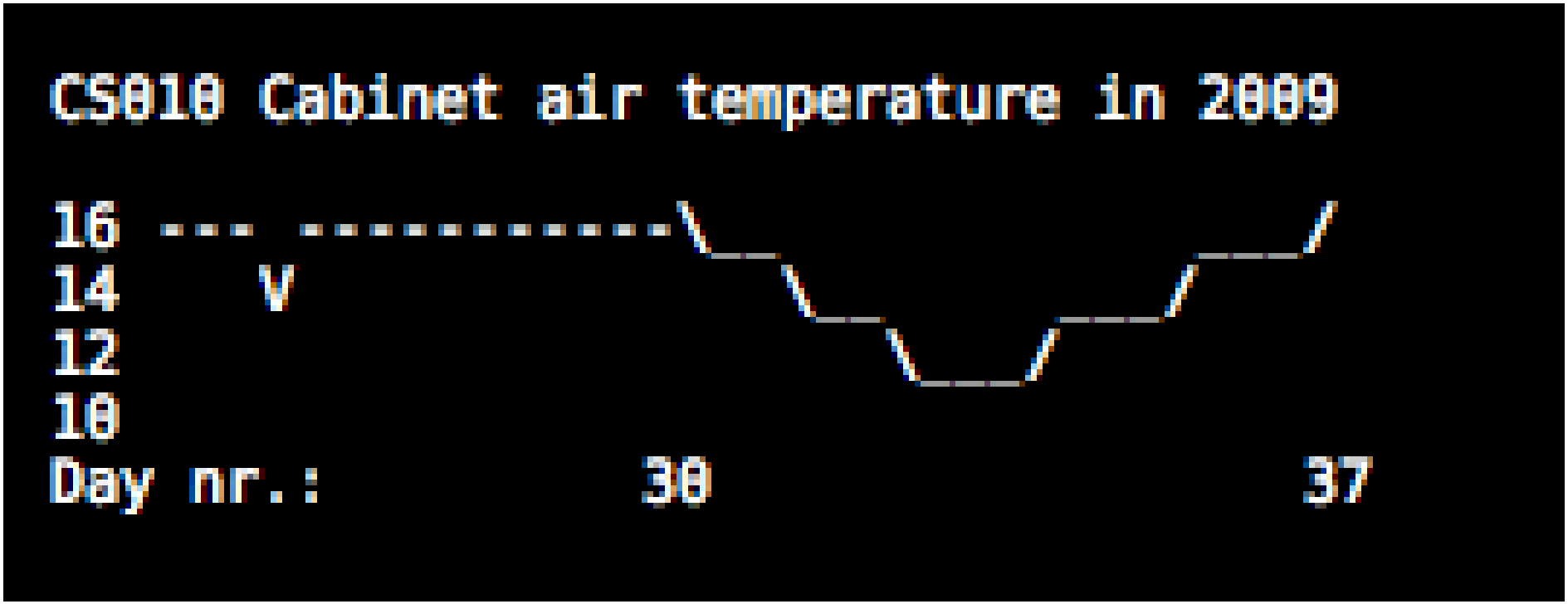
Autocorrelations



Signal path jumps (II)



CS010 commands do not stick



Outline

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Observation queue

- Effelsberg-Exloo correlations (In progress, Anderson, Griessmeier, Pradel)
- Tied array tests (In progress, Mol, Romein, pulsar group)
- TBB RFI experiments (In progress, Eijkelboom, Boonstra)
- SAS/MAC controlled observations (In progress, Schoenmakers)
- TBB PPF inversion test (Singh)
- TBB experiments (Welles)
- Repeat of frequency mosaic (Pandey)
- 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.
- Station Imaging experiments (Wijnholds).

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RS302 is wet

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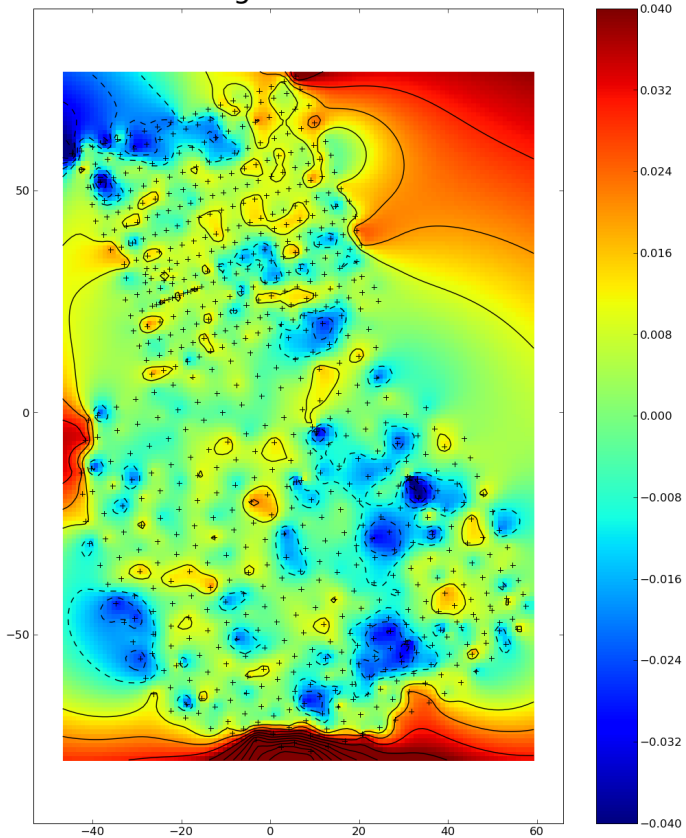
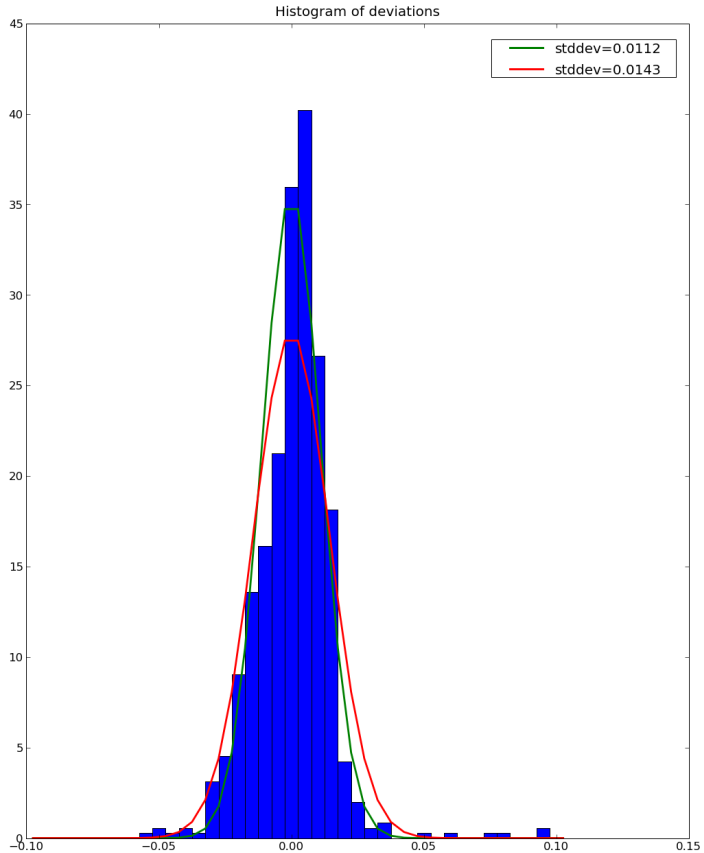
as is RS 503

but RS 106 is flat!

RS106 - Valthermond: height deviations after field flattening





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