

CS-1 developments: 5 - 11 July 2007

- **General**

LOFAR descoping discussions going on over the summer. These do not impact CS-1 but may influence the priority and type of commissioning experiments.

2) Rollout

No major rollout issues at this moment.

Three 're-configurations' coming this summer and early autumn:

- a) rotation of the 3 'unused' LBA dipoles on the 12 microstations
- b) redistribution of the HBA antennas over the four CS-1 stations .
- c) moving HBA dipoles, and tiles ?, out to stations CS001,CS008 and CS016

Outstanding / new / **solved** 'technical' issues:

3) Stations

- 200 MHz mode problems: **gone away**
- 'autocorrelation' dips in LBA/160 data: **quantization problems in beamformer**
- Y-polarization RFI problem at low frequencies (see May 9 meeting) : **no progress**
- 8ch-periodicity in RFI signals at low frequencies (intermodulation?): **no progress**

- HBA 'switch' issues: see Menno and Michiel's talk

4) CEP (SAS/MAC/OLAP)

Hardware failures ...

Progress reports on observations and data analysis (1)

5) New observations

- weekend 5-7 July 2x24h HBA 210 - 250 MHz 1s-1kHz

This completes the coverage of the HBA 1s-1 kHz RFI inventory.

This data will be analysed in the coming months (see RFI topic below)

- new HBA pulsar observations this morning (July 11) (4 separate datastreams, lots of data!)

6) Calibration of CS-1 data in MeqTrees and BBS

- Sarod: work continues on incorporating dipole/station beams and full polarization reduction into MeqTrees data reduction
- L2339+L2412 flux scale discrepancy discussion (see de Bruyn, Omar presentations later)
- BBS progress? Speed....

Progress reports on observations and data analysis (2)

7) Imaging issues

- position analysis from observation L2339 +L2412 (Mohan, Omar et al, Leiden) suggest that there are no more position problems. It is still unclear what caused, and what action solved the problem.
- Do new deep field on NCP with LBA (36 subbands)? Change choice of frequencies ? Comparison with Nick Rees' 38 MHz Cambridge 8C-survey (see later image)

8) Noise / RFI analysis

- peculiar RFI patterns (8ch periodicity and Y-polarization) --> 'RFI team'
- analysis HBA 1s-1kHz data (Stefan de Koning + AGdB, MAB, AJB). Brief discussion.
- S/N ratio in HBA data (pulsar signal above 200 MHz dropping rapidly...)

Progress reports on modeling/simulation activities (1)

§ **Beam modeling:** Sarod, Johan

Status report?

10) Ionospheric modeling: Maaijke, Jim, Jan

Levels of 0.05 TECU reached in fitting, confirmed with independent sets of GPS receivers

- **Source models (LSM, GSM, fluxscale):** Amitesh, Niruj, Ger

Fluxscale in L2339+L2412 image: factor 4-6 missing

- Selfcal effect (# unknowns/equations) factor ~ 1.3
- Effect of 48-dipole gain favours CasA : factor ?
- Other effects: incorrect dipole beam correction ?

Progress reports on modeling/simulation activities (2)

- **Processing issues (convergence, speed):**

- no progress to report

13) Data quality & image DR:

- analysis of redundant baselines can commence only after relative calibration

Requires a corrected MS, conversion to HDF5 and further analysis. Still to be started.

14) RFI issues:

- AJ Boonstra to discuss first analysis of 8/9 April HBA data at one of the next CS-1 meetings ?

Observing schedule and planning (13-16 July 2007)

Hanno Holties: Meeting every Thursday afternoon with all involved in scheduling experiments where weekend schedule and personnel will be decided. This will be complicated over the summer

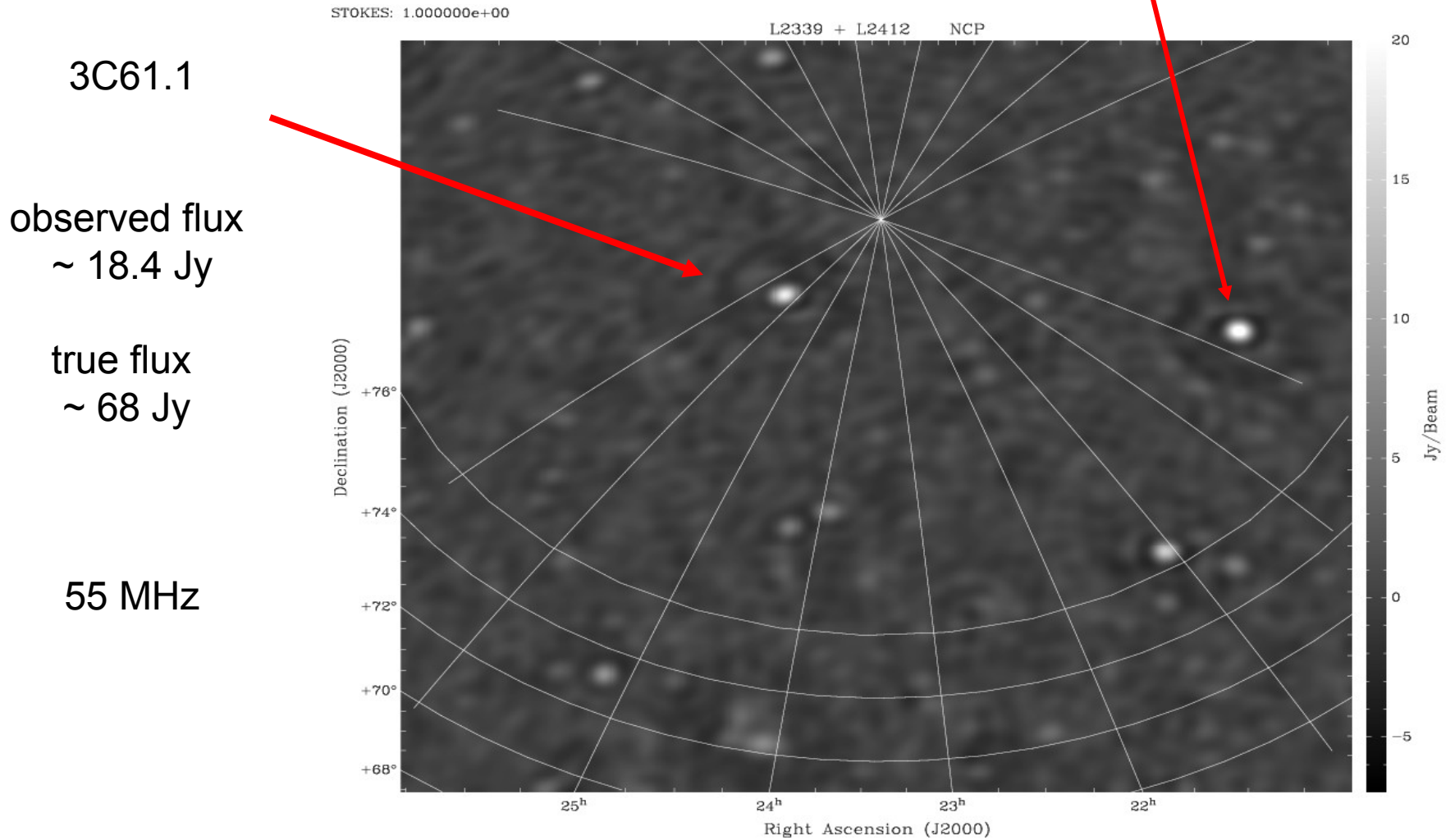
Currently waiting in queue:

- 1) 'Astronomical' commissioning:
 - More pulsars with HBA / LBA (Stappers)
 - Transient area (Law, Miller-Jones) : 5x12h done , 5 to go.
- 2) 'Technical' commissioning HBA: Michiel Brentjens HBA-tile test plan
 - LBA observations near NCP ?
Deep field, but not 'centered' at CasA or CygA
- 4) Any other ?

3C390.3

observed 23 Jy

true flux 96 Jy



STOKES: 1.000000e+00

L2339+L2412

3C48

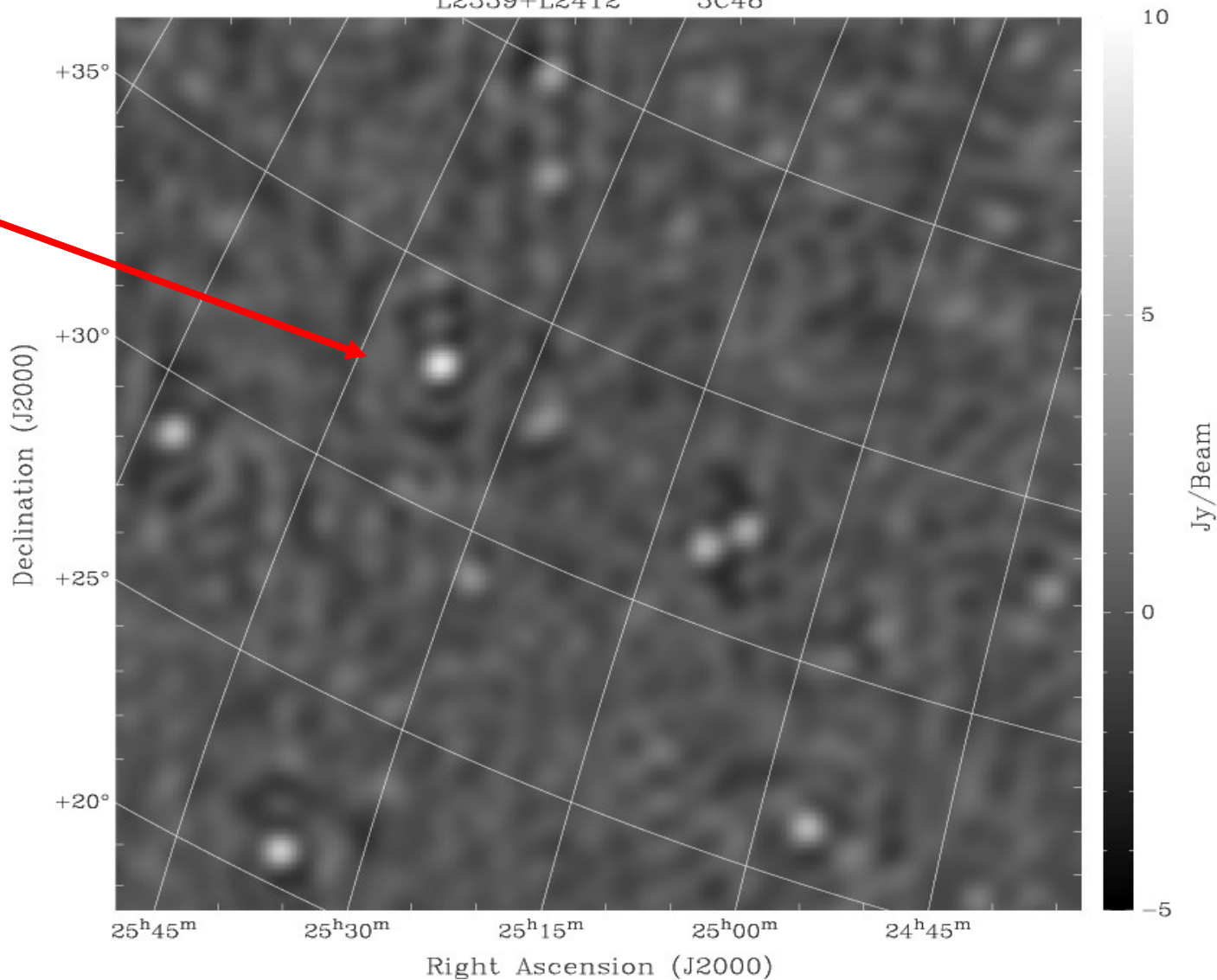
3C48

peak flux

~ 8.4 Jy

true flux
~ 55 Jy

55 MHz



L2339+L2412: residuals near CygA: note symmetry

