Netherlands Institute for Radio Astronomy

MSSS Update

George Heald
(on behalf of the MSSS Team)
LSM, 31 October 2012

MSSS Observing Status

LOFAR Observation Database

msss.astron.nl/survey/MSSS%20LBA/

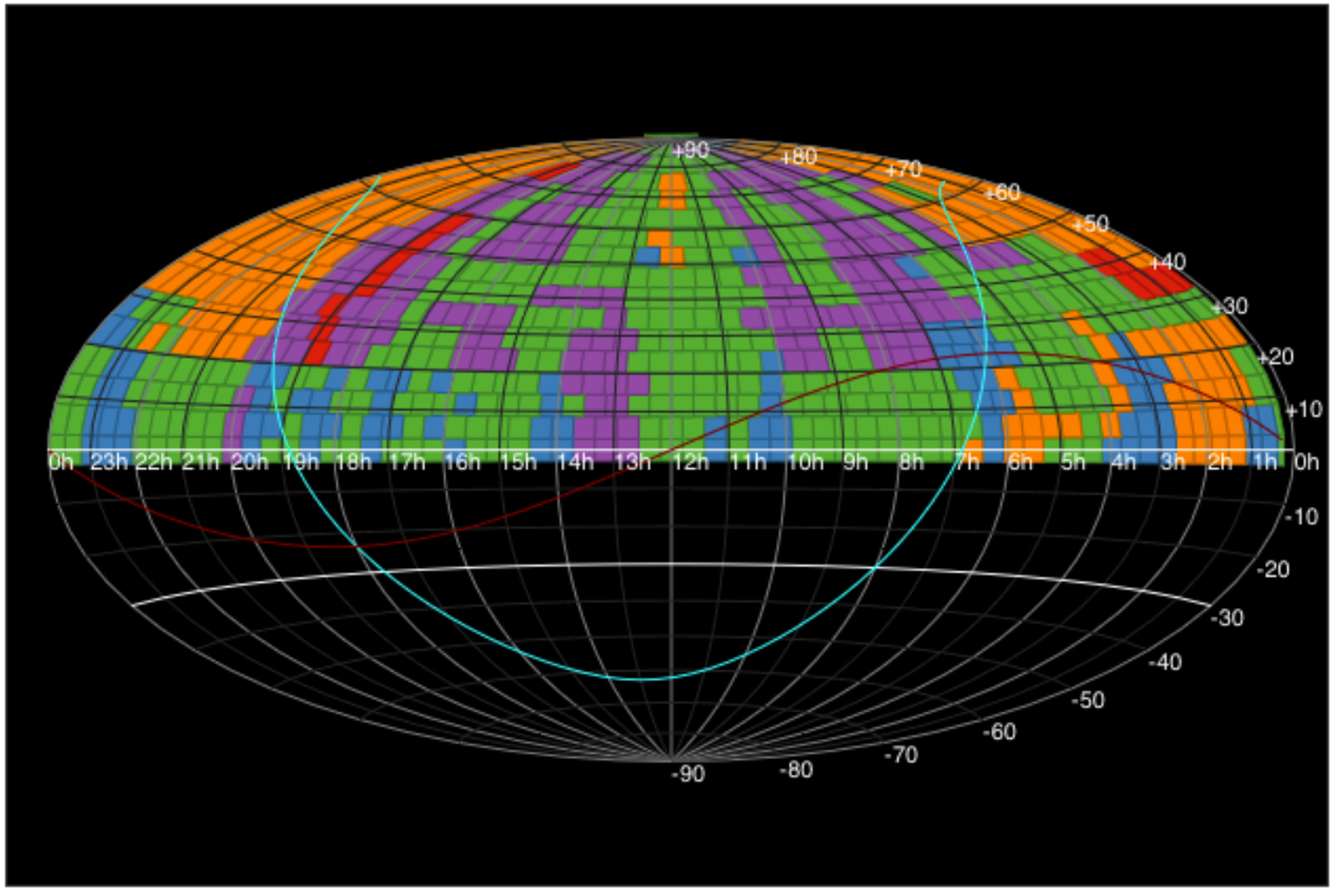
LOFAR Observation Database

MSSS LBA

Multifrequency Snapshot Sky Survey: Low Band

# Targets	661
# Calibrators	8
Start Date	4 Nov. 2011
Stop Date	16 April 2012
Completed Fields	430 (65.1%)

Show me the data »



Hammer Projection

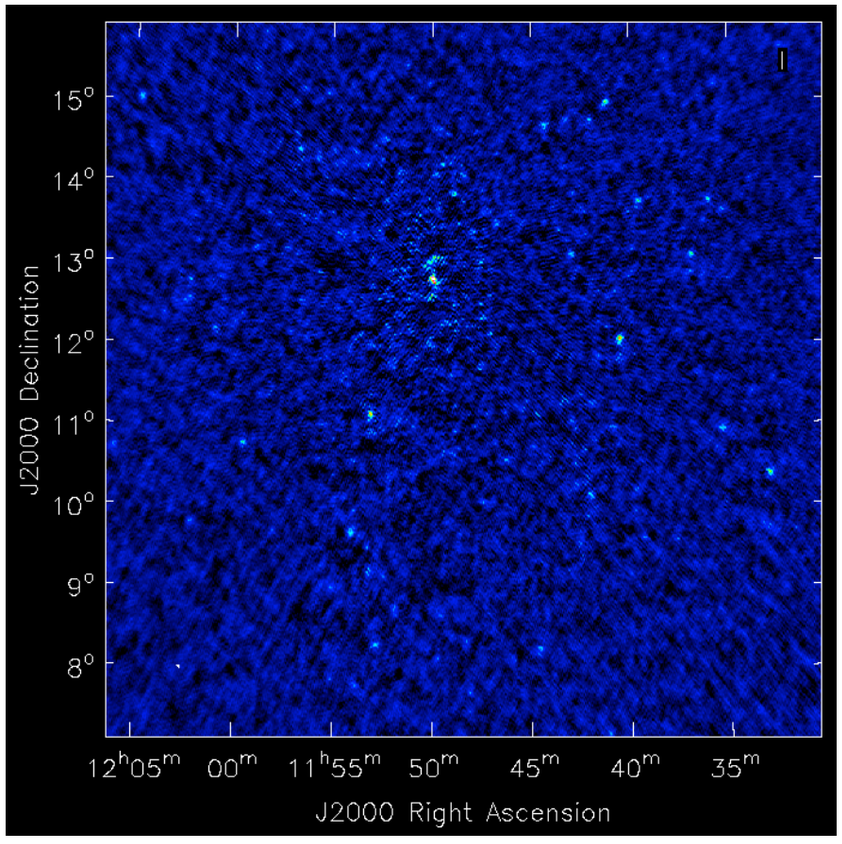
Map based on code from this project.

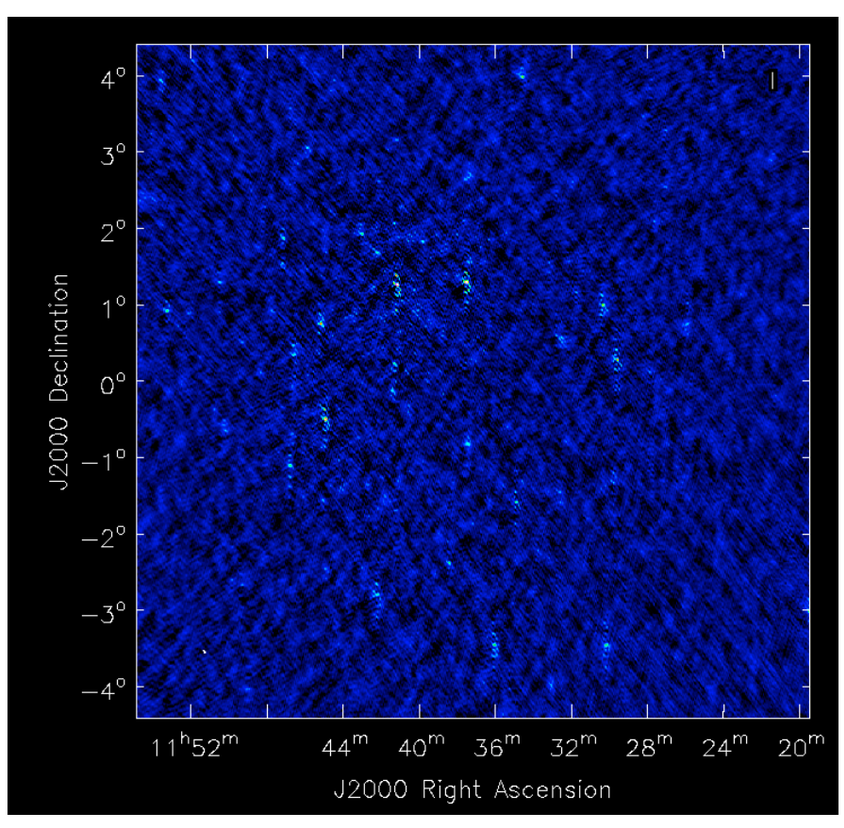
Data available on CEP (43.6%)
Data archived (21.5%)
Partial data available (12.7%)
Data missing (2.1%)
Not yet observed (20.1%)

Webpage in progress

MSSS pipeline processing

- Automated pipeline processing of MSSS-LBA data on CEP-II is continuing - 36 pairs of LBA fields processed so far
  - 3 had mom issues
  - 1 currently (re)processing (with new pipeline version 1.7)
  - 9 only with preprocessing steps (imaging step needs an update, which is under development this week)





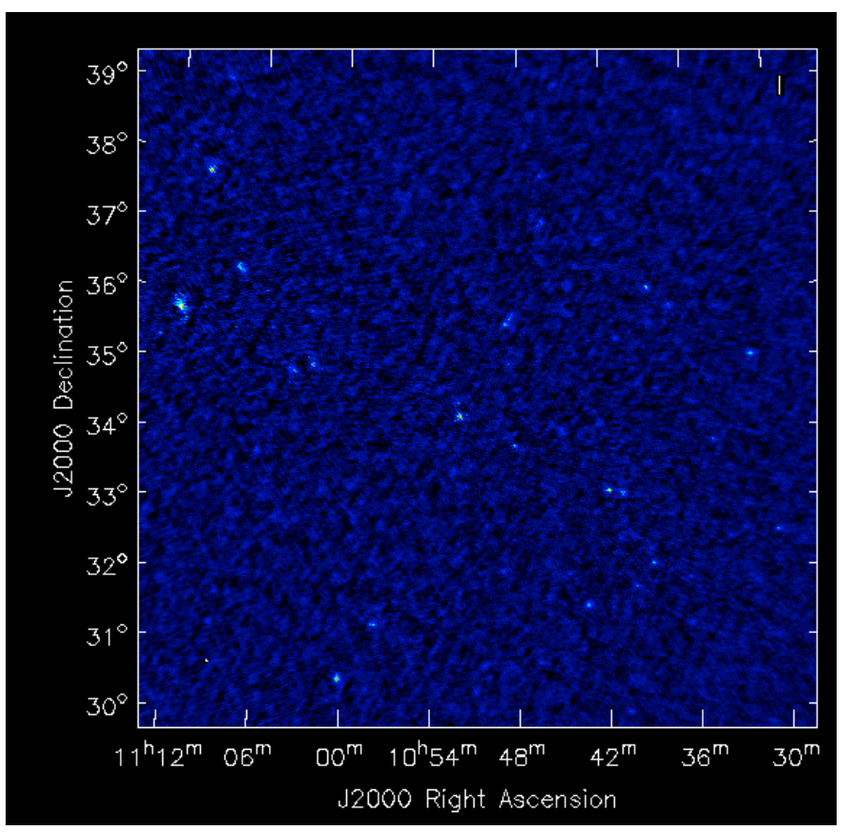
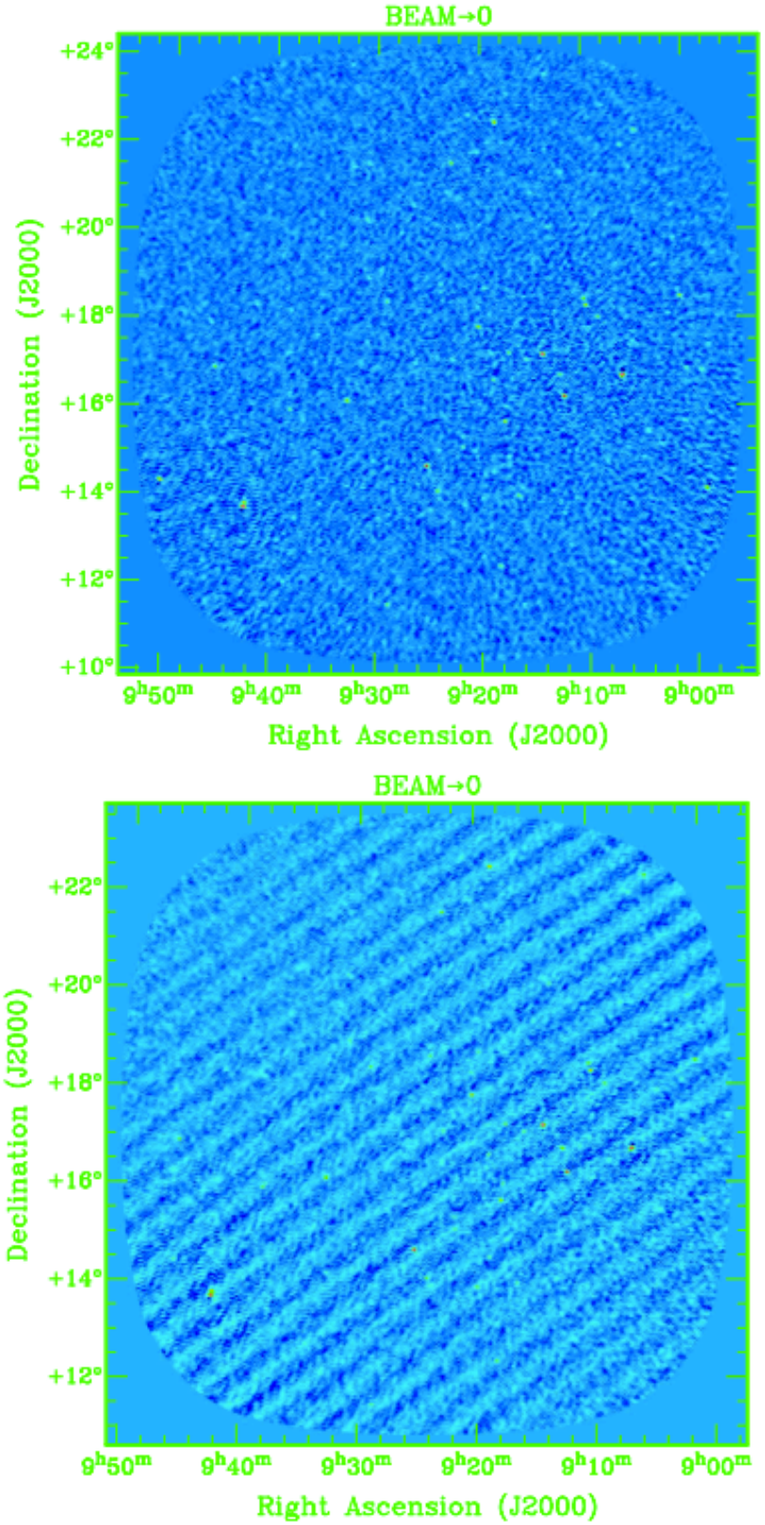
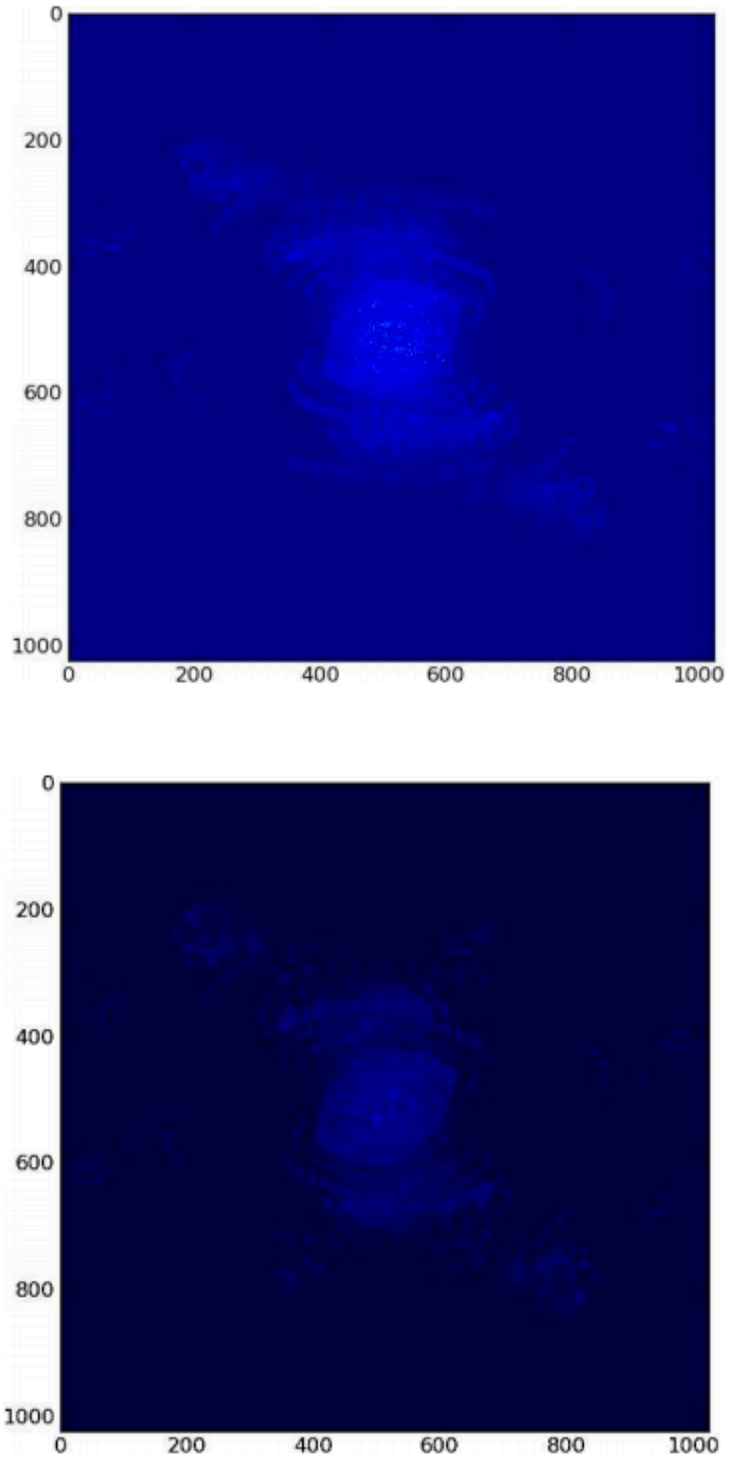
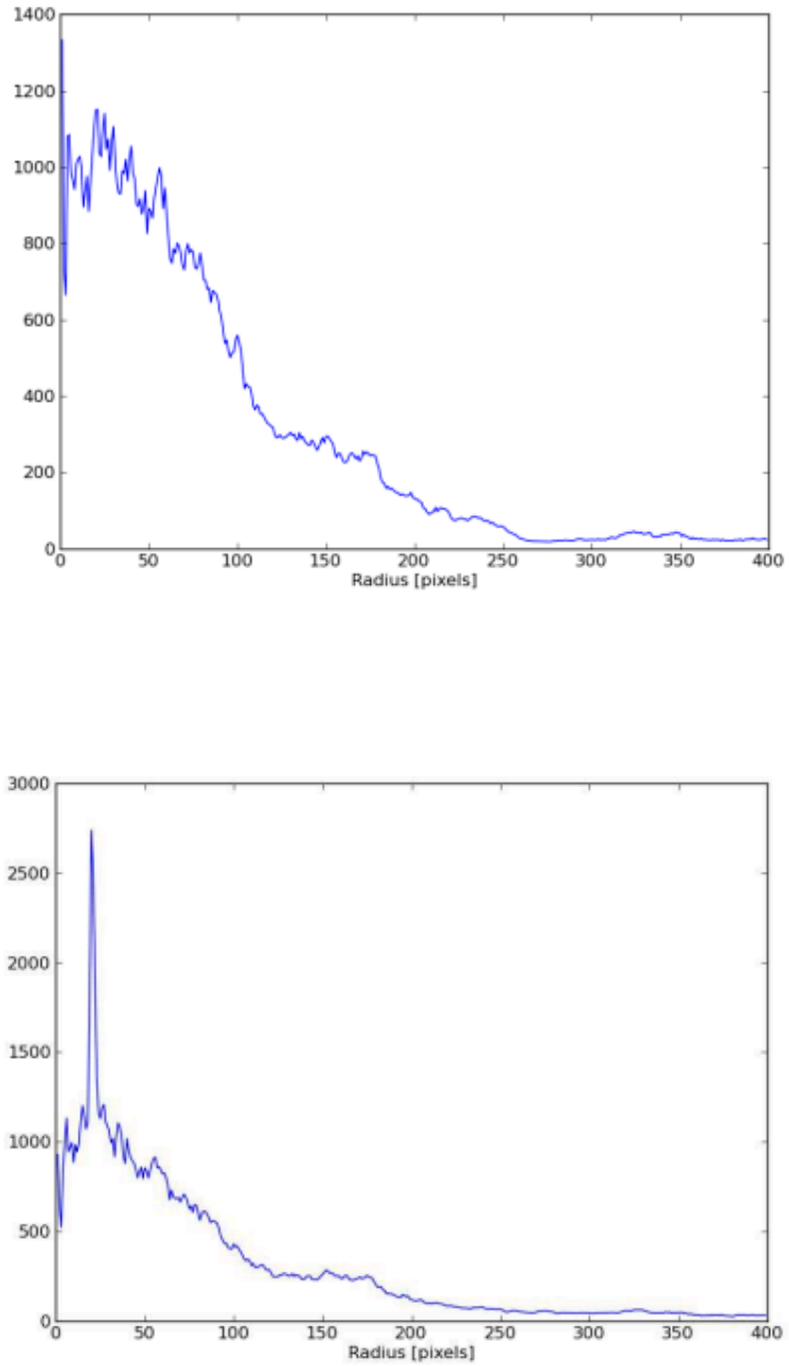


Image quality control

- Automatic stripy image detector script



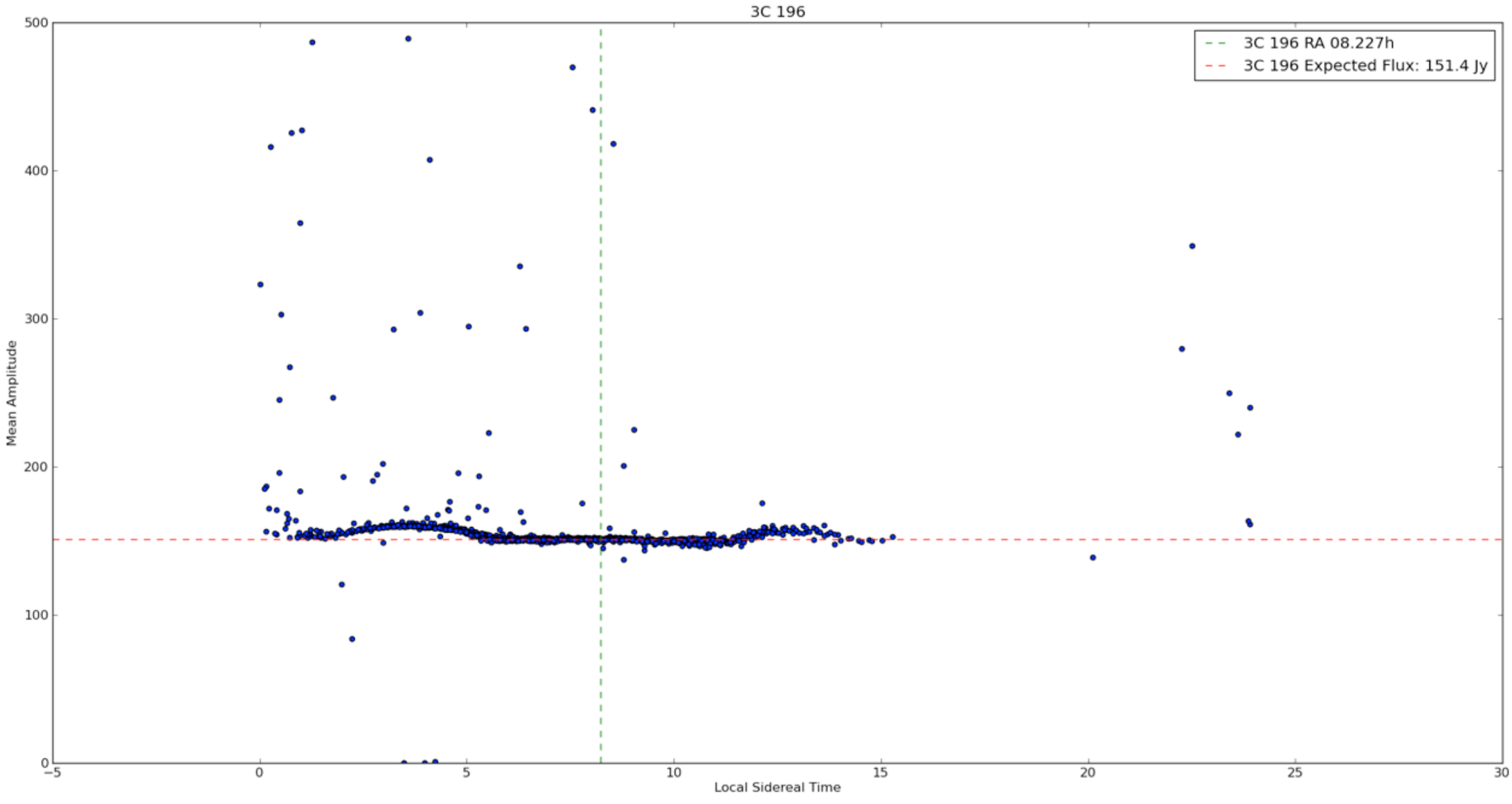




Heesen & Carbone

Calibrator fluxes

- Based on 998 cal scans (processed for NCP monitoring) 24/12/2011 - 14/4/2012



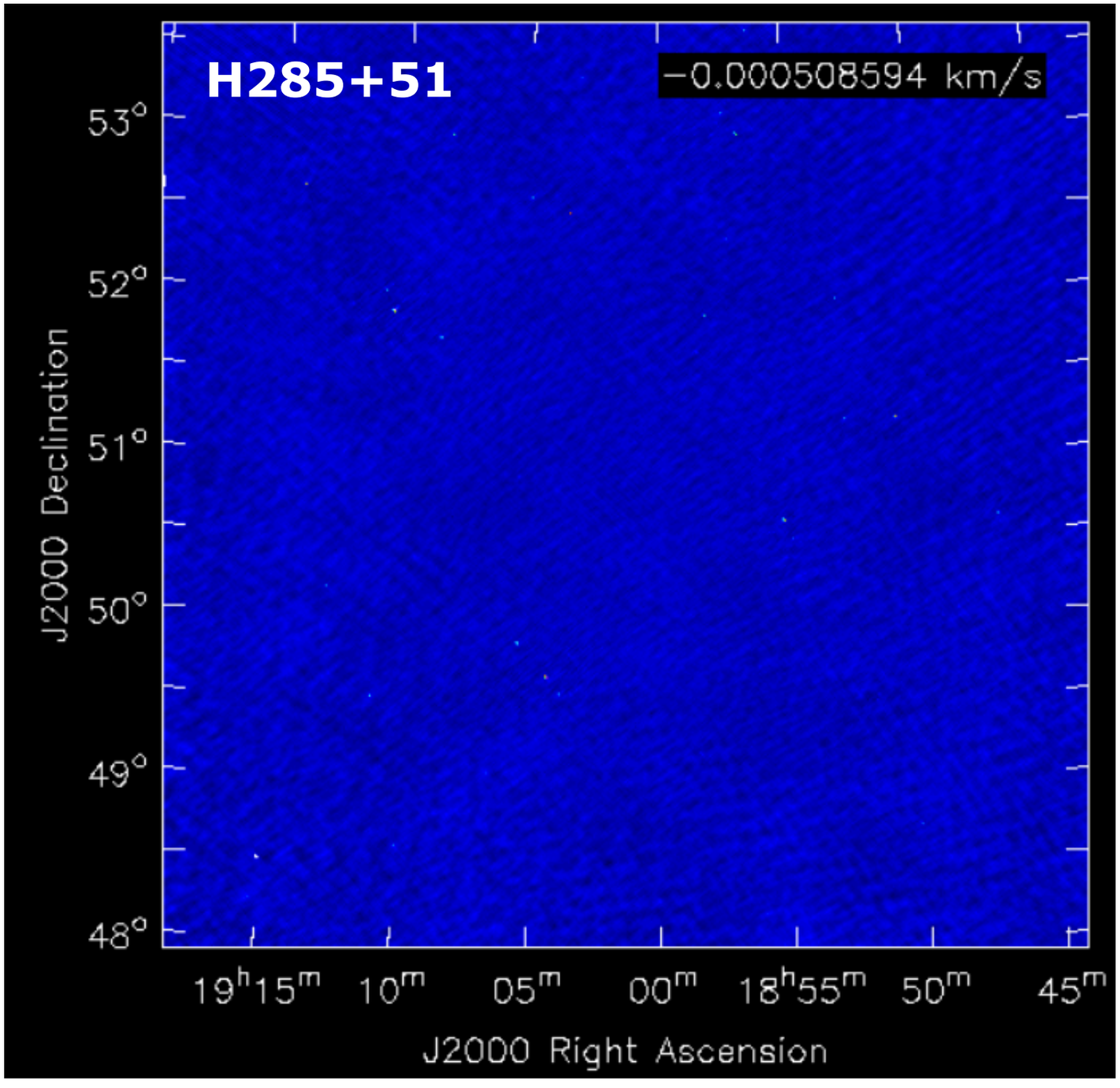
Stewart, Hassall, Scaife

Calibrator fluxes

- What we know (Stewart, Croston, Hassall, Scaife)
  - At 60 MHz, between elevations 40-60 deg, corrected fluxes 7% too high compared to calibration model
  - Also present at 37 MHz, but at the 3-4% level
  - Excluding long/short baselines does not change the effect
  - Imaged data shows the same effect
  - This effect is *NOT* present if beam is disabled in BBS
  - Simulated data, processed in same way as real data (and including the beam in BBS) give the expected fluxes
- See report on the wiki for more information & plots ....

HBA testing

- baselines <20km, 25 mJy/beam noise for the field shown here
- default demixing strategy incorrect; new calibration script now available
- Other fields do not turn out as well with auto-processing
- More work needed to assess quality of calibration solutions...



Williams