

## **LOFAR Calibration & Imaging Tiger Team**

LSM Update, 18 March 2015 Tammo Jan Dijkema

## Work streams



- AWImager
- Calibration
- Selfcal
- Ionospheric phase screens
- Facet calibration + pipeline

## Status of different workstreams



### AWImager

- Based on new version of NRAO casa
  - Now 4.2, final product will work with casa 4.4 (because of unified casacore)
- Available on a branch
  - On cep2/cep3: . /opt/cep/tools/citt/lofarinit.sh
  - On flits: . /usr/local/citt-release/lofarinit.sh
- Faster gridding method: Image Domain Gridding
  - Presentation from Bas will follow
  - Better suited for modern CPUs, tests show 10x speed improvement with intel compiler
  - CITT-deliverable: imager with both standard gridding (done) and IDG (working on it)

#### Calibration

- DPPP direction independent stefcal works
  - Available in DPPP, see DPPP wiki for usage
  - Multithreaded predict + beam
  - Bug in full jones, working on it
- Elevation dependent flux scale issues in beam model
  - Working on fix in beam model

## Status of different workstreams



#### Selfcal

- Direction independent selfcal.py available on cep+flits
- Version with peeling being finalized
- Work stream will finalize this month

#### Ionospheric phase screens

- Tests have shown that this method will not perform as good as facet calibration for HBA data
- This work stream has stopped within CITT

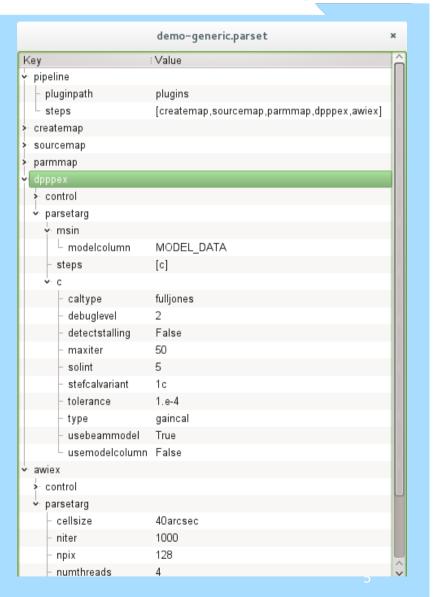
#### Facet calibration

- Method from Reinout van Weeren
- Shown to work on two fields (Reinout + Wendy Williams)
- 8 fields to be tested in Leiden workshop (April)
- CITT work: make a pipeline from this strategy

## More generic pipeline Work by Stefan Fröhlich



- Extension of LOFAR pipeline framework
- Can specify pipelines / reduction strategies from one big parset
  - No coding required to run your own pipeline
  - Parallelism handled by framework
- Will make moving pipelines to observatory easier



# Calibration & Imaging Tiger Team (CITT) Timeline, update



- August, 2013: Project start
- February, 2014: Busy week
- June 26, 2014: Progress review workshop
- August, 2014: Busy week
- November, 2014: Busy week
- April, 2015: Facet Calibration Workshop, Leiden
- June, 2015: Progress review workshop
  - Facet calibration pipeline prototype
- August, 2015: Project end
  - Facet calibration pipeline ready for experienced users