# Results of the MKSP Busy Days 2010 April 21--23

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On behalf of the LOFAR collaboration
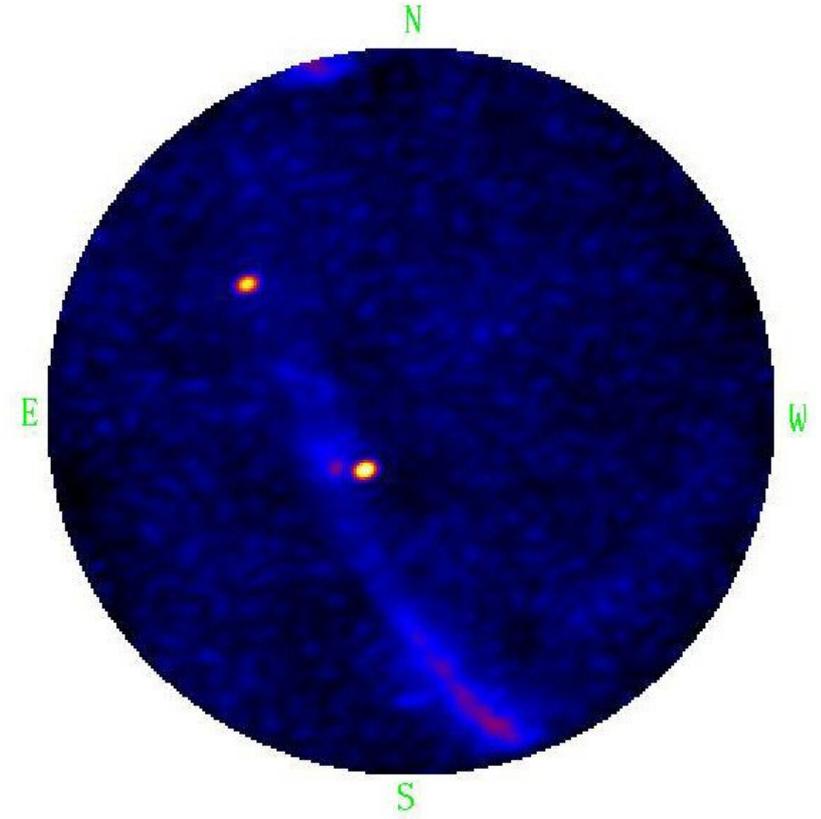
Max-Planck-Institut für Radioastronomie
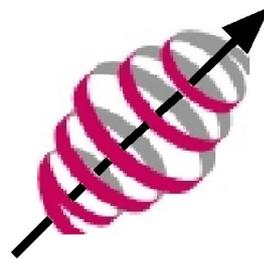
LOFAR

MAX-PLANCK-GESELLSCHAFT

First, A Few Announcements

- Bridge night a success

- The Pannekoekenschip closes early

- Kart racing a moderate success

The Busy Days Group

Timeline (from discussions in February)

- 2010 March — Polarized Pulsar Catalog Survey

- 2010 March End--April — RM Synthesis Subband Optimization: Pulsars

- 2010 April Mid — RM Synthesis Software Testing

- 2010 April (MKSP Meeting?) RM Synthesis Subband Optimization: Fan Region

- 2010 May — RM Synthesis Software Testing

- 2010 May — Long Baseline Pulsar Calibrator Survey

- 2010 June — RM Synthesis Software Testing

- 2010 June — Jupiter Circular Polarization
  - Waiting for June for the Solar elongation to be > 60 degrees for good calibration

- 2010 June — RM Synthesis Subband Optimization: AGN
  - Waiting for a sufficient number of LBA + HBA international stations

- 2010 ??? — Long Baseline MS[3]

Activities for the Rest of This Week

- Crab dataset
  - Find polarization from visibility data (work with George)
  - Once calibrated, image the region in full Stokes,dump out pencil beam for RM Synthesis by hand

- New pulsar datasets
  - Similar to Crab, but also do beamformed data analysis

- BBS/CImager
  - Test performance making image cubes at MKSP frequency resolutions
  - Full Stokes output, running parameters
  - Produce test dataset in LOFAR format
  - Confirm operational speed, get running parameters into cookbook

- RM Synthesis
  - Get software into LOFAR svn
  - Get to work on test dataset

Crab Data Reduction

- Main goal: Confirm detection of polarized emission by LOFAR

- Participants: George, Anna, Ger

- Result:

    - No confirmation as of yet

    - Polarization seen, but has rotation measure of 0, which is nowhere near the rotation measure of the Crab pulsar

    - Apparent polarized emission is probably instrumental problem

New Pulsar Datasets

- Main goal: Confirm detection of polarized emission in beamformed pulsar observations

- Participants: Aris, Masaya

- Observations: Problems with Blue Gene for most of the week, apparently good observations were made by the middle of the week
  - Combined beamformed and interferometry data
  - Other groups interested in analysis of same datasets?

- Results:
  - No confirmation yet
  - Working on software to correct instrumental polarization for beamformed data

NDPPP/BBS/CImager

- Main goal: test imaging pipeline for channelization needed by polarization imaging measurements (RM Synthesis)
    - Need to have many channels per subband
    - Test performance of each task separately, as a function of the number of channels per subband used during the processing to measure performance

- Participants: Jess, Marijke, Jana, Alice, Rainer, Rene, Rosita, Emano, Joern

- Results:
    - Bugs in many parts of the pipeline process do not allow anything other than 1 channel per subband to be processed. The bugs are (some have been?) worked on
    - Some NDPPP results available

NDPPP Initial Results
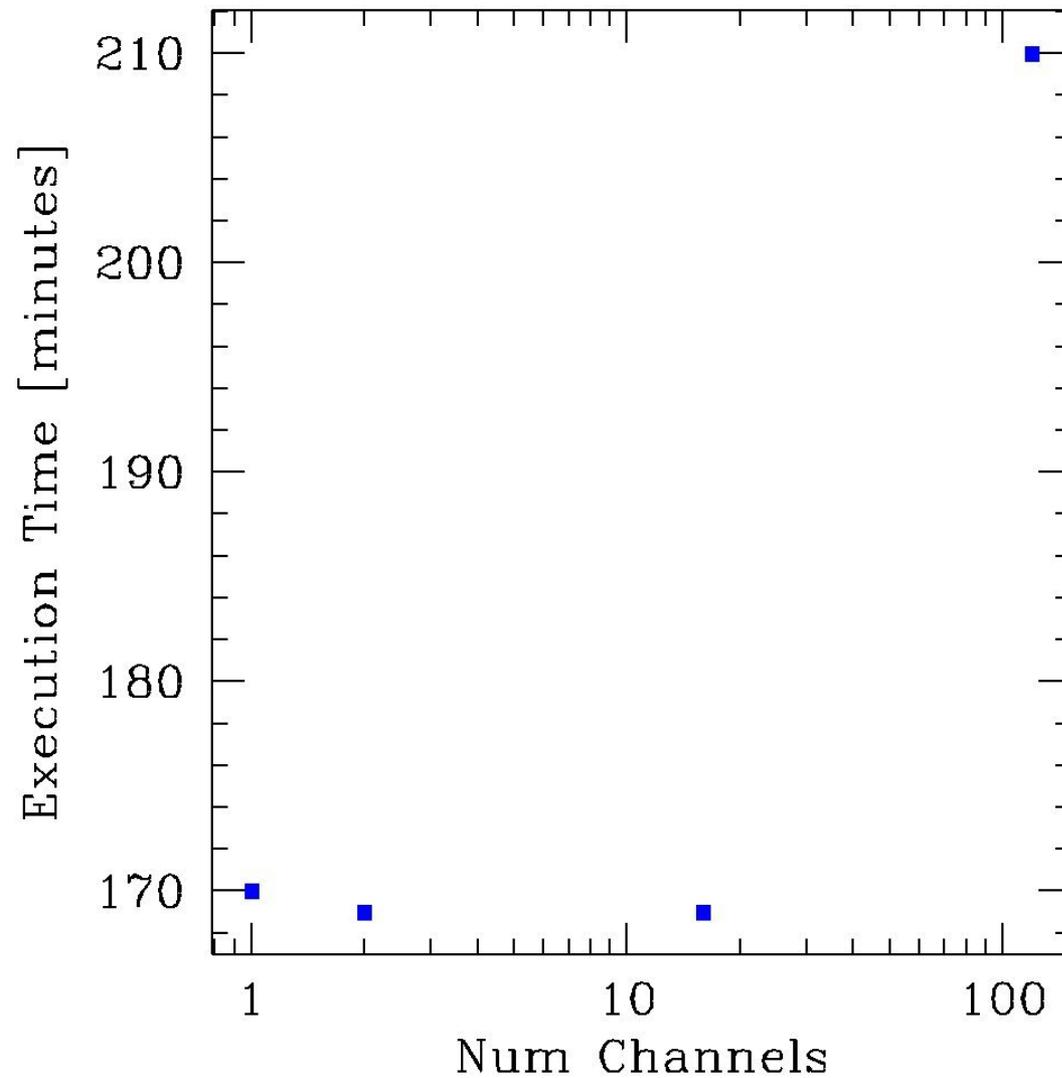
RM Synthesis Software

- Main goal: Get RM Synthesis software into the USG SVN

- Participants: Thomas, James

- Results:
  - RM Synthesis output requires new ICD, being worked on
  - Initial integration of new RM Synthesis software into SVN
  - Discussions on subroutine requirements for DAL access to/from LOFAR RM synthesis/Image cubes

The End