The LOFAR Users Committee updates on activities and feedback from the RO

Annalisa Bonafede

on behalf of the Lofar Users Committee

The committee

- Annalisa Bonafede (chair)
- Jess Broderick,
- Emilio Enriquez,
- Francesco de Gasperin,
- Mary Knapp
- Javier Moldon,
- Diana Morosan,
- David Mulcahy
- Andre’ Offringa,
- Raymond Oonk,
- Dan Stinebring

LUC main goals

- Collect user experiences
- Feedback to the Radio Observatory in improving performance of the facility and maximising the usage of LOFAR

Points for discussion

1) LOFAR is an instrument for experts.

Actions that could help widening the users community:

- Support
- Data analyst (as JIVE/ ALMA,
- Documentation (LOFAR manual?)
- Software

This can’t be done by Postdocs

Points for discussion

1) LOFAR is an instrument for experts.

Actions that could help widening the users community:

- Products that could be offered by the RO
  - pre-factor pipeline - Direction independent calibration could be sufficient for some science cases

Points for discussion

1) LOFAR is an instrument for experts.

Actions that could help widening the users community:

- Exploit existing infrastructure

-grid: net time on for 16 TB data set (from archive all the way through prefactor) is about 2-3 h.

- Different science groups could benefit from the same reduction steps

BUT coordination in required, and human resources to manage it are missing

Points for discussion

2) Official pipelines for each observing mode

-Pulsar and transient mode: good progress over the last year (e.g. responsive telescope for transient triggers)

-One dedicated pipeline for each (major) observing mode, providing trustworthy output products.

- Official pipelines should be established and led by RO

provides trustworthy and astronomer-accepted output products.

- Documentation on usage and installation also on generic computing clusters (troubles with HPC)

Points for discussion

3) Quality control

- RFI monitoring (weekly?)
- Station calibration monitoring
- LBA: bad stations - cause?
- Bandpass stability
- ionosphere

Info can be derived by inspection plots?

These plots should be stored somewhere and made accessible to everyone for more than 1 week

Points for discussion

4) Technical points requiring attention

-Beam model
-New RFI in HBA low (strong in 120-140 MHz)
-External, but often necessary, software
-Bandpass response issue identified and understood —> needs to be fixed
- Geometrical delays on the Core Stations
- DAB mitigation needs continued work