LOFAR Status Meeting :: 19 May 2010

Notes from the Meeting

The current status of LOFAR could be summarised by most of the work concentrates on the preparation for the LOFAR opening and the following.

Use of the offline cluster

As we are regularly making observations with a large number of stations, it has been noticed that the output data rate to the storage disks (/data1, /data2, /data3, /data4) is severely affected when other processes are accessing those disks.

We therefore ask users to refrain from actions that access these disks (for example running NDPPP) without prior communication with the radio observatory (sos@astron.nl).

Furthermore, it is planned that when observations which require high data rates are taken, the storage disks will not be NFS mounted to the compute nodes. The storage disks will be NFS mounted again, after the end of the observation so that NDPPP can compress (and edit) the data.

Processing of data that have already been compressed with NDPPP, and are stored in the compute nodes (/data/scratch/… areas) can be continued when the NFS daemons are not active.

We also want to remind users that the disk-space of the compute nodes is limited and would like to ask everyone that keeps either raw data (ie observed subbands) or large files from processed data, that are not used any longer, to clear them up as soon as possible.

Now that a lot of effort is concentrated on preparing for the LOFAR opening we expect increased demand on disk space and computing power of the post-processing cluster, and we would like again to ask everyone to bear that in mind and coordinate their activities with the radio observatory staff.

Roll-out

Roll-out is continuing and station fields in the core are prepared and antennas are placed there as well. Today, there was the first HBA tile placed in Nancay.

Pulsar Busy Week

May 10-14th saw the 8th Pulsar Busy Week. The main focus of the week was testing of the newly implemented “Single Clock”, which is distributed to the 6 Superterp stations (CS002-007). With the the Single Clock in place, it should be much easier to coherently add these stations online. A series of observations both before and after the Single Clock was turned on were crucial in understanding the behaviour of the system and what is still needed to properly calibrate. For instance, uncorrected cable delays were identified between the Concentrator Node and the various Superterp stations. These corrections were quickly added to the online processing and have already been observationally tested. With the addition of one further phase calibration between the stations, it should be possible

to at long-last form LOFAR's first “tied-array” beams. Note that the Superterp alone will provide a coherent sensitivity equivalent to 36 full Dutch stations added incoherently.

In addition to tests of the Single Clock, a slew of other observations were acquired during Pulsar Busy Week 8. These had the main purpose of preparing material for the LOFAR opening and scientific meeting.