ASTRON

Netherlands Institute for Radio Astronomy

Radio Observatory Report

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Issues with Interferometric Observations

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Several system hangs over the past couple of weeks due to a variety of problems:

Correlator:
• I/O node replacement (8 March)
• Observations started but produced only 16sec of data. Cause identified and fix is under way.

Stations:
• Unable to observe using HBA_TWO (the second HBA antenna field) in core stations. Currently observations on core stations use either both or one HBA antenna field.
• Firmware upgrade (to NL stations) proved to cause more problems. All NL stations are back to the previous firmware (6.0), which the DE stations are also running.
• Various problems under investigation: CS001, CS002, CS004, CS021, CS024 (suspected 70ms clock offset), CS401 (packet rate loss), RS205 (electric fence)

Network:
PROBLEM: When an BG/P I/O node was not available, the network switched broadcasted the input data streams to all addresses, hence flooding and shutting down the network.
SOLUTION: I/O node MAC addresses programmed statically in switches.
              When I/O node not available, switch drops packets.

GOOD NEWS
Fringes from RS205 and RS306

2nd Control and Metadata Busy Week

Continue to test the flow of an observation starting with an astronomer defining a project, up to the data archive.

- MoM: Continued work on implementing beam-formed observations (incoherent and coherent tied-array). First tests in pulsar busy week (Mar 8-13).

- MoM: Can track metadata through the online processing.

- SCHEDULER interface with SAS is ready, will be tested this week.

- Framework to interface the Imaging Pipeline with SAS in place.

- Long Term Archive:

  - Tests with small datasets (to deposit and retrieve) succesful

  - Will test with a large dataset.

Priorities for near future

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- Stabilize operations:
  - Developed a suite of short test observations

    Will attempt to schedule and execute them as a block
  - Demonstrate ability to take many short observations overnight (unattended)
  - Test our data inspection programmes.
- Test multiple beam observations
- Migrate to ITRF beamserver
- Start observing early access proposals (in earnest)

Block Schedule
"http://www.astron.nl/radio-observatory/
astronomers/commissioning/commisioning-plan"

March 2010

Mon	Tue	Wed	Thu	Fri
1 Mar	2	3	4	5
8	9	10	11	12
Pulsar Busy Week				
Surveys KSP meeting		Surveys KSP use subcluster 3		
15	16	17	18	19
2nd Control & Metadata Busy week and MSSS "Dress Rehearsal"				
22	23	24	25	26
SKA2010 Meeting (Manchester)				
29	30	31	1 Apr	2
Long Baselines Working Group (planning me				Easter

April 2010

Mon	Tue	Wed	Thu	Fri
29	30	31	1 Apr	2
Long Baselines Working Group				Easter
5	6	7	8	9
◄ Easter	Transients KSP Busy Week			
12	13	14	15	16
3rd Control & Metadata BW and MSSS dress rehearsal				
19	20	21	22	23
Magnetism KSP Plenary Meeting, Dwingeloo - Cluster resources 21-23 April				
26	27	28	29	30
Imaging Busy Week (Leiden)				Queen's Day Holiday

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in Dwingeloo

Cluster resources from Leiden

Continued work on integrated operations

Planning meeting in Dwingeloo

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April 2010

BW in Dwingeloo

Continue work on integrated opera-tions & MSSS rehearsal.

Plenary meeting in Dwingeloo Cluster resources at later part of the week.

BW in Leiden Cluster resources and possibly new observations

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