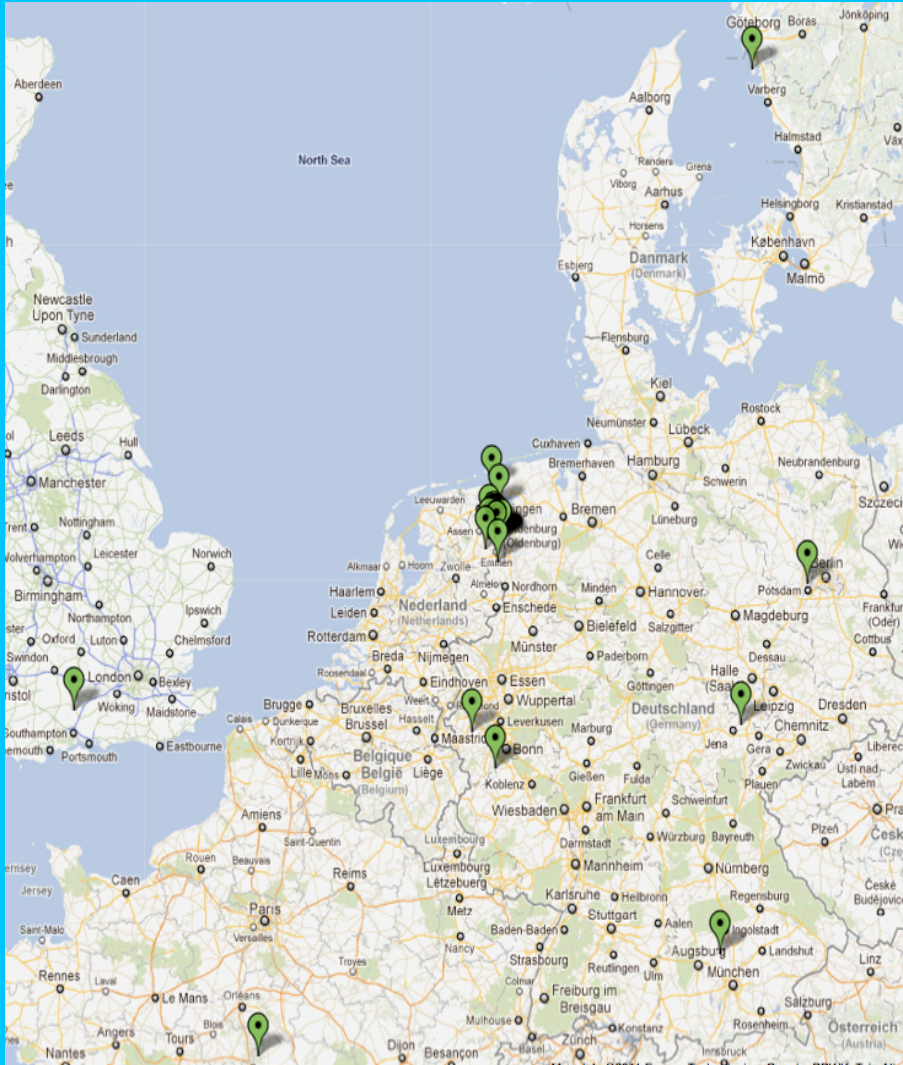# ASTRON

Netherlands Institute for Radio Astronomy

Programme

1) Array status – Harm Munk

2) Observatory update – Wilfred Frieswijk

3) COBALT update – Ronald Nijboer

4) Applying direction independent calibration in NDPPP

    – Tammo Jan Dijkema

5) Update on LC0 Pulsars projects – Jason Hessels

Array Status

Current Status:

- 38 operational NL stations
- 24 CSs
- 14 RSs
- 8 ISs

- NL stations TBB memory upgrade installation RS started: 11 done, 3 to go (in combination with cabinet cleaning)
- SE607 maintenance done

www.astron.nl/radio-observatory/astronomers/current-status

Network, CEP Status

Network
- Connection to RS210 still erratic

BG/P
- Stop day October 1st: no problems
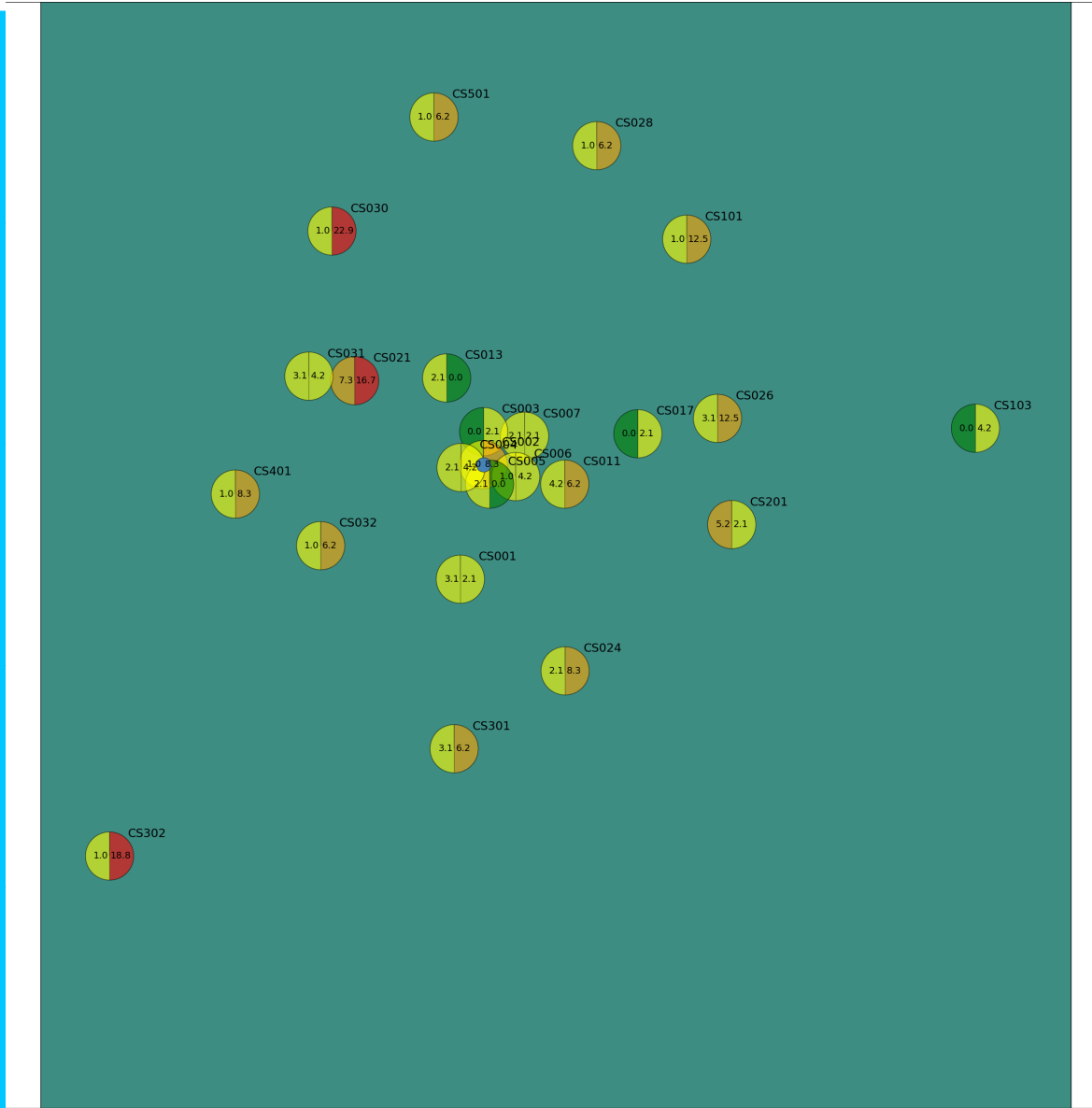
Cobalt
- Network (infiniband) drivers upgraded

CEP-I/II(/III)
- We noticed an unusual number of broken PS on CEP-I: are being refurbished
- CEP-I: One LCE node (LCE044) broken: end of life
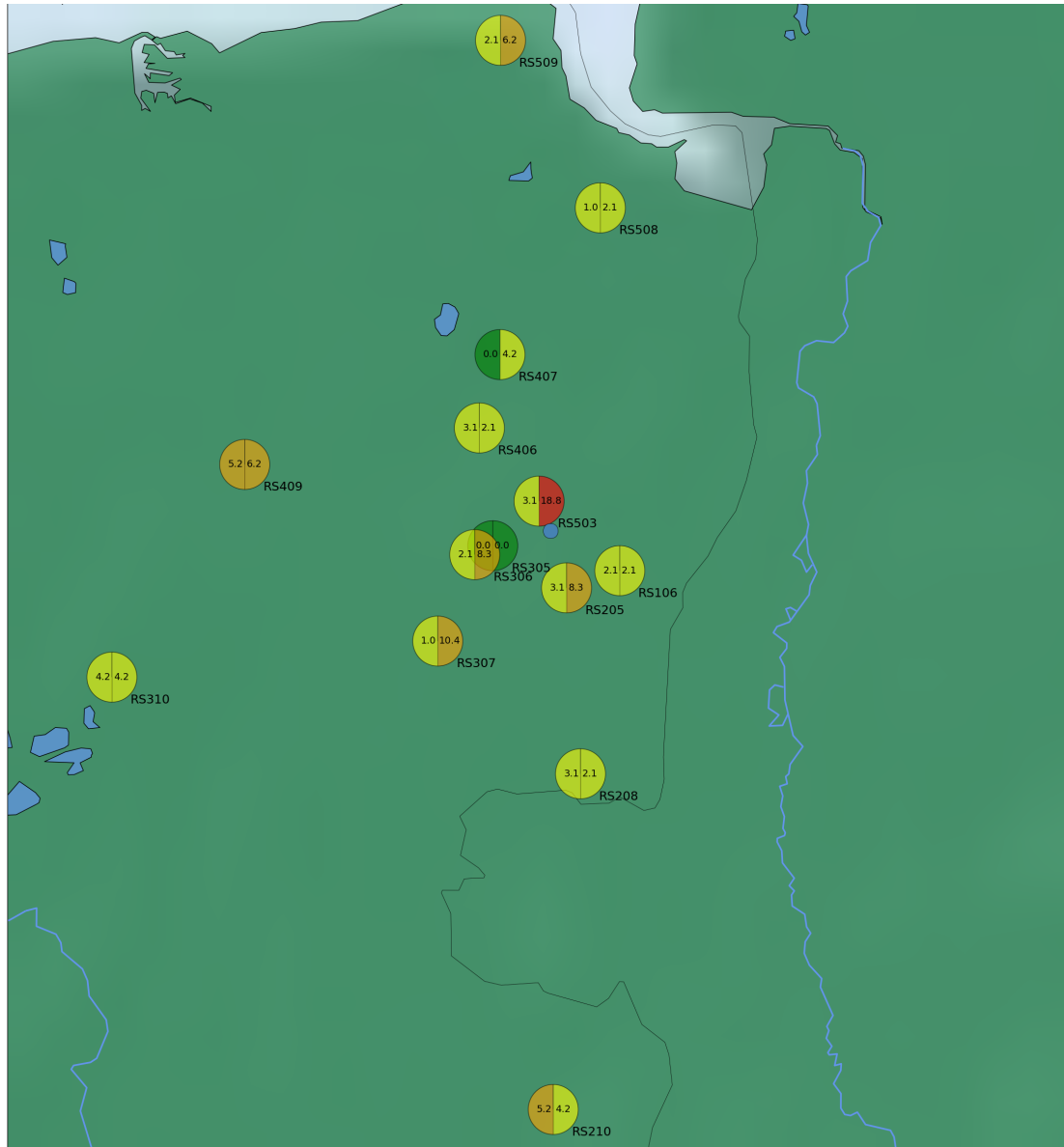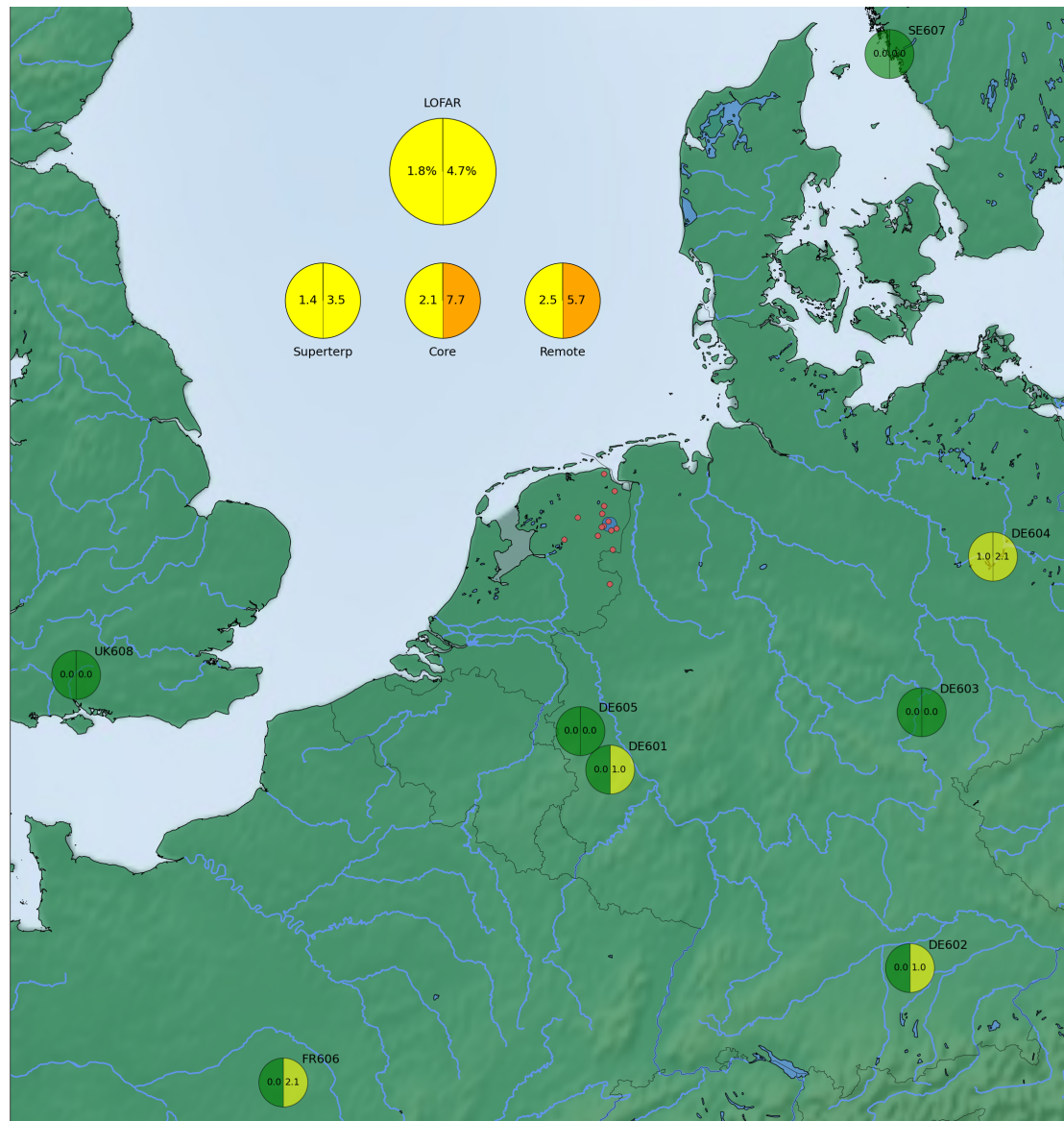- CEP-II: no major problems

Next stopday
- November 5

Core

Remote stations

International Stations

News regarding the observing system
Station calibration

- Station calibration:
  - ✓ Improved station test now available
    - more automated
    - will be implemented after testing
  - ✓ International stations: mode 3 & 5 installed tomorrow
  - ✓ Remote stations: mode 1 & 3 to be installed soon

- Updated status available at:

  - ✳ http://www.astron.nl/radio-observatory/astronomers/current-status
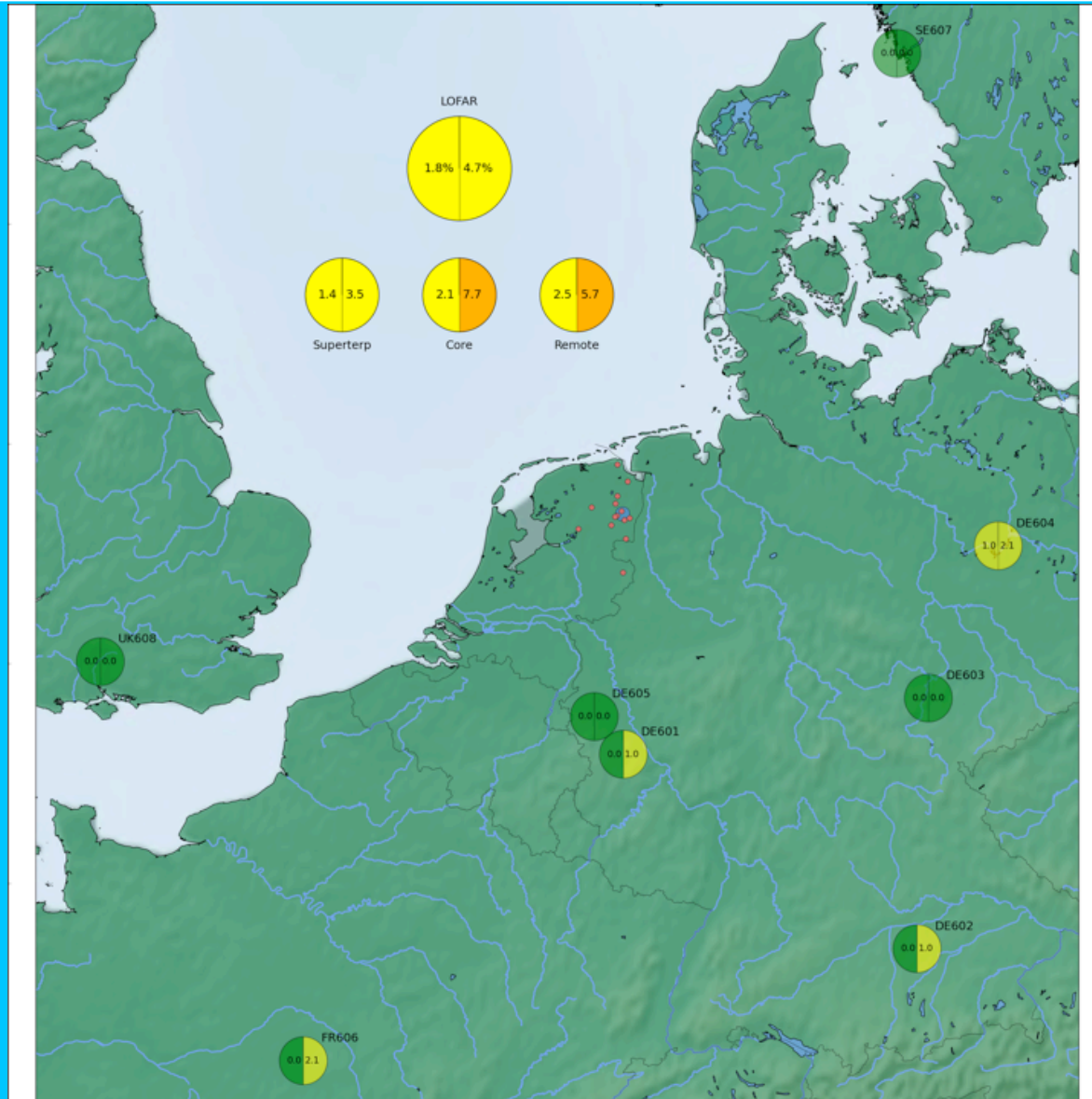
News regarding the observing system
Stability & performance

- Overall stability is ok
  - ✓ Observations stable (for the past few days)
  - ✓ Pipelines stable -- occasional swapping, too many processes

- Issues
  - ✓ Network reconfiguration
    - bandwidth issues due to optimization mostly solved
      occasional hiccup detected
  - ✓ Station failures
    - CS005 (AARTFAAC), RS307 (flagging), RS210 (RSP), RS305/310 (TBB)
  - ✓ Oscillation and noise on HBA tiles
    - ongoing monitoring campaign (station tests)
    - new tiles are identified (weather sensitive)
    - maintenance to keep a stable situation (<10%)

News regarding the observing system
LOFAR status

✳ https://proxy.lofar.eu/inspect/array_status/

- Development

  ✓ Rollout: LOFAR Release 1.17

    - International stations follow tomorrow

  ✓ next rollout Nov 4th

  ✓ Preparation of cycle 1 and Cobalt

    - XML generator, PVSS/Navigator, MoM, pipelines

- Raw/processed data ingest to LTA (LC0, DDT0) is ongoing

  ✳ Data may arrive in LTA as "unspecified"

  ✳ Incomplete/-correct metadata

- LC019 data transfer to Target cluster

  ✳ Delayed due to several issues

News regarding Cycle 0 observations

- Cycle 0 >85% done

- Detailed schedule, including Cycle 0 extension;

  ✳ contact science support in case of issues

    ALWAYS include sciencesupport@astron.nl

    and *ALWAYS* put project code in subject

Week number	week day	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23

There will be an outage on the UK608 Chilbolton 10GbE Lightpath at approximately 10.30 BST on Tuesday 1st October. SUggestion to test Lightpath during the day; Oct 3, 15 UTC DE601 to local mode; Oct 6, 11 UT- DE601 to ILT mode

40, 30th September

- Mon: LC0_009 - 3C9 - 6hrs | Station test | ROLL OUT SOFTWARE COBALT; DE601, DE602, DE603, DE605, FR606, SE607, UK608 to local mode at 9 UT | DDT_006 (B1822-09 with WSRT) - 8 hrs | MSSS - 8hrs
- Tue: MSSS - 8hrs | STOP DAY | LC0_019 (EoR) 11.5h NCP
- Wed: LC0_019 (EoR) 11.5h NCP | SYSTEM RECOVERY; DE601, DE602, DE603, DE605, FR606, SE607, UK608 to ILT mode at 9 UTC | Pulsars
- Thu: Pulsars | SYSTEM RECOVERY + AARTFAAC tests (1 hr); DE601 to local mode at 15 UTC | LC0_019 (EoR) 11.5h NCP
- Fri: LC0_019 (EoR) 11.5h NCP | SYSTEM RECOVERY | MSSS - 8hrs
- Sat: Stress system runs and TBB runs | LC0_040 - J0332+5434 - 2hrs | LC0_003 - PanSTARRS | Pulsars + stress system runs | Stress system runs and TBB runs | LC0_028 - Cygnus A - 4hrs | Stress system runs and TBB runs
- Sun: Stress system runs and TBB runs | Pulsars; stress system runs; DE601 to ILT mode at 11 UTC | DDT_006 (B1822-09 with WSRT) - 7 hrs | Stress system runs and TBB runs

https://www.astron.nl/radio-observatory/lofar/cycle-0-schedule/cycle-0-schedule

CEP news:
Stop-day October 1

- Cep-2: fairly stable

- Cep-1: degrading

  * Backup data elsewhere!

  * Staging areas cleared every week (data > 4 weeks)

- Stop-day: minor maintenance

-BGP diagnostics & updates & reboots okay
-All 10 portals updated and rebooted
-All central services lcs020-lcs029 updated and rebooted
-All mcu0xx,ccu0xx and sas0xxx rebooted
-Lfe001,lfe002 rebooted
-All lce nodes rebooted
-All lse nodes rebooted
-Ldb001,ldb002 untouched
-Lexar002 rebooted
-Lcs017 broken power supply replaced
-Lce044 Mainboard broken (End Of Life)
-Lse002, lse004, lse011 /etc/fstab bad /data2 entry
-Cobalt nodes received latest version of Infiniband drivers
-All CEP2 locus nodes and head nodes are rebooted
-The 4 router pc's are rebooted
-Fan3 of locus018 has been repaired
-Fan speed set to generic on all the remaining locus nodes
-Locus013 opened to assess the hot Areca card problem
-Former Lofar office has a new lock on its door L

http://www.lofar.org/wiki/doku.php?id=engineering:stopday_procedure

CALENDAR of requested busy weeks and other LOFAR activities

- Commissioning
    - ✓ http://www.astron.nl/radio-observatory/astronomers/commissioning/commisioning-plan

- Cycle 0
    - ✓ http://www.lofar.org/wiki/doku.php?id=operator:schedule

7-11 Oct	Imaging busy week (Hamburg)
5 Nov	CEP stop-day