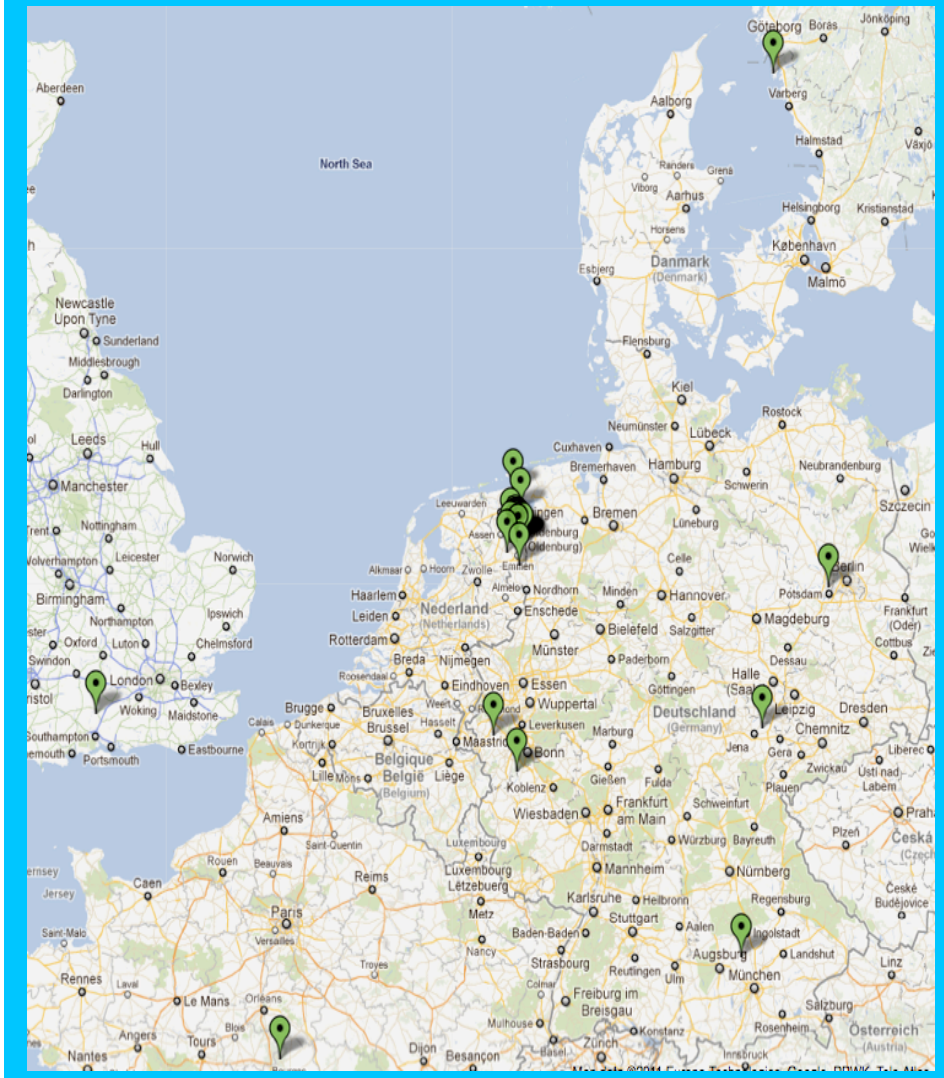
ASTRON

Netherlands Institute for Radio Astronomy

Programme:

1. *Array status – H. Munk*
2. *Observatory update – R. Pizzo*
3. *COBALT update - M. Brentjens*
4. *Imaging Tiger Team progress report - G. Heald*
5. *Cycle 0 observations of the nearby FRI radio galaxy 3C31 - V. Heesen*
6. *The nature of the low frequency emission of M51: first observations of a nearby galaxy with LOFAR - D. Mulcahy*

Array Status



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

- Automatic mode switching ILT <-> LCL for UK608
- 160<->200 MHz mode switching under test
- Feb 21: One router (BG/P – CEP-2) broken (1/4); replaced Mar 4
- Feb 24: Weather monitoring station and E-field meter installed in core
- Feb 24: CS006 flagging due to hw error
- Feb 25: DE603 flagging, due to similar problem as on CS006; workaround
- Feb 27: DE604: 2 broken RSP boards
- Mar 4: PSU testing in RS310

Network, CEP Status

Network
- Router replaced

BG/P
- Performance is nominal: no issues during stop day

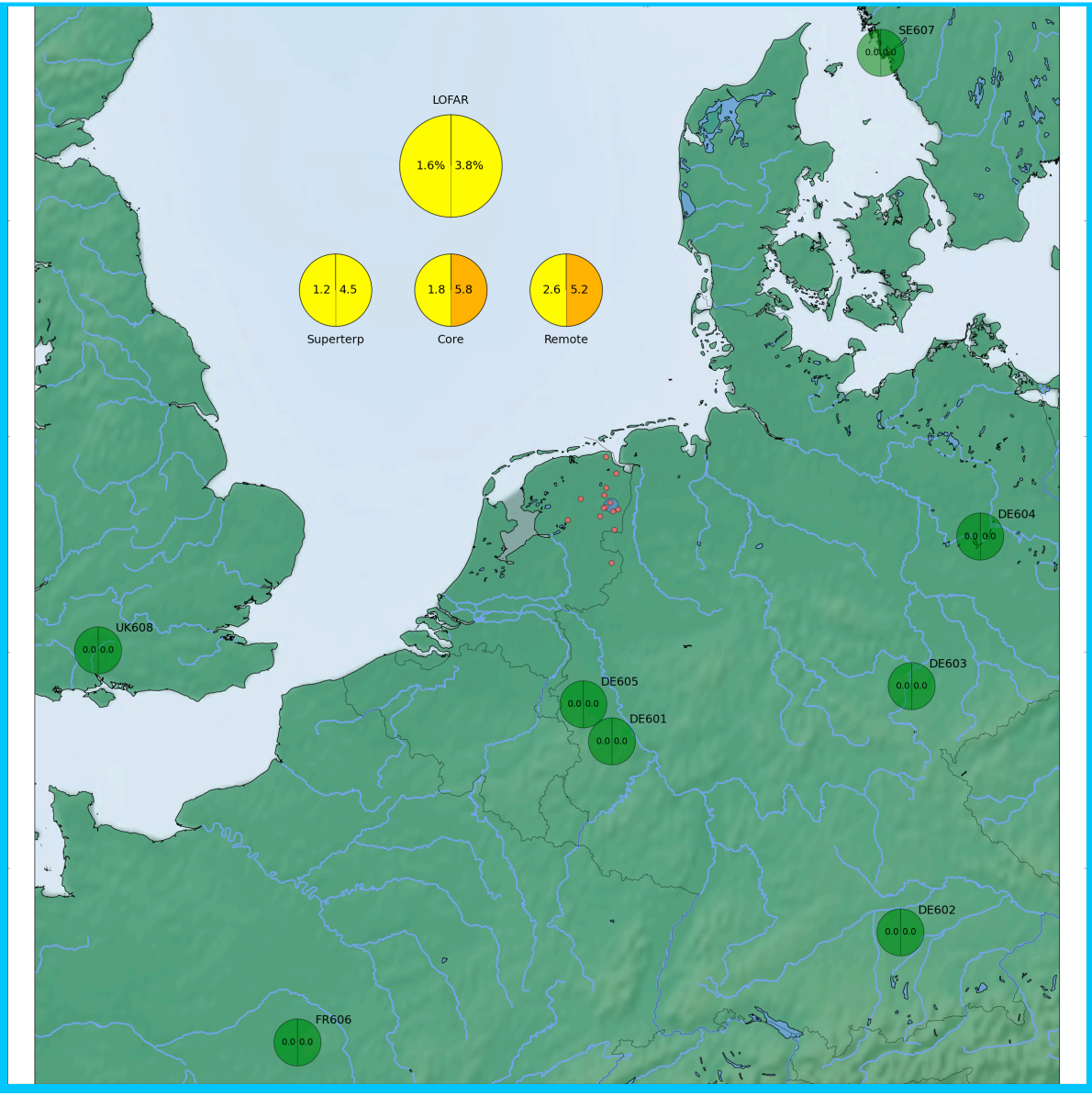
Cobalt
- Hw performance is nominal: no stop day maintenance

CEP-I
- LCE012 broken

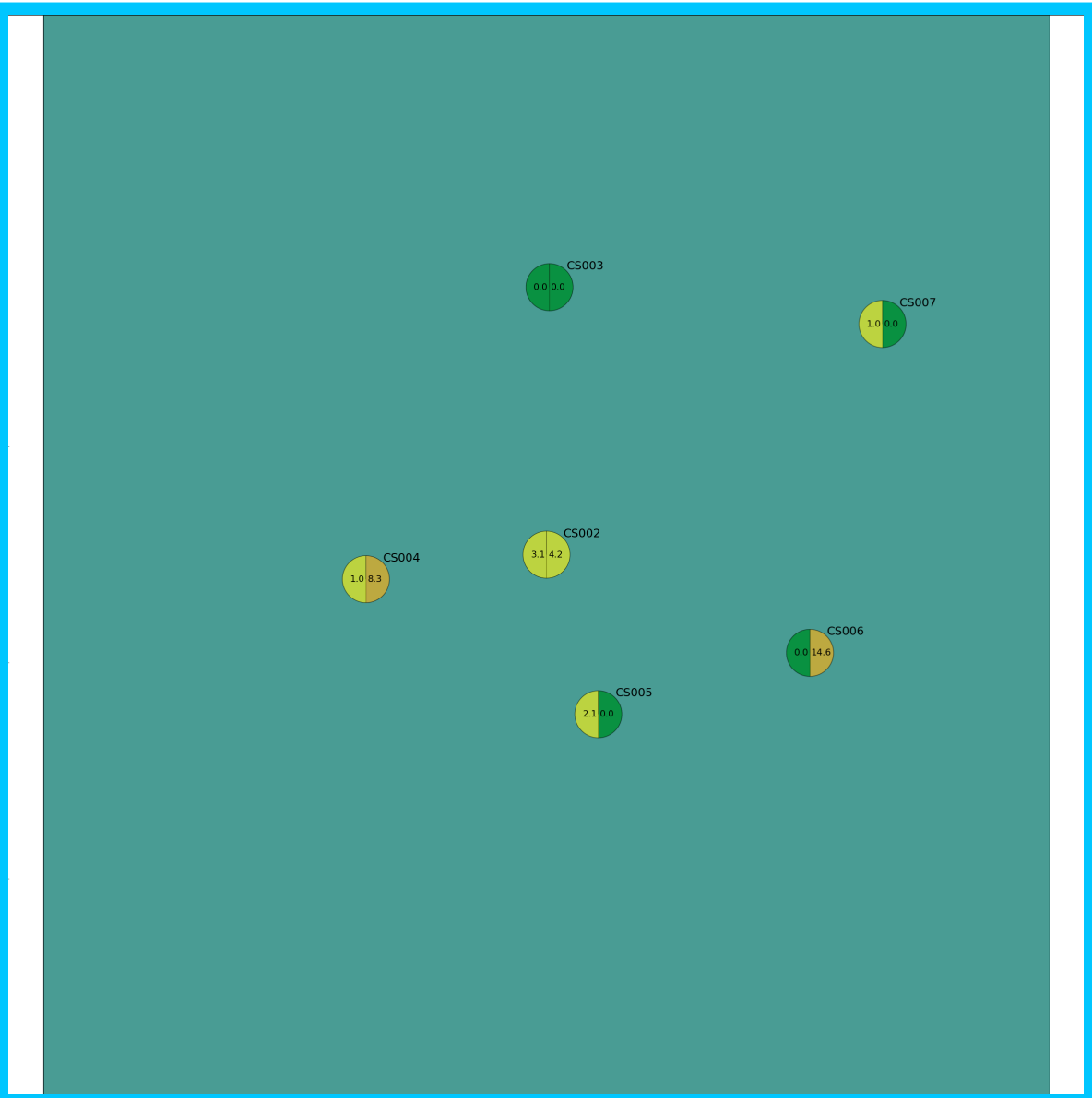
CEP-III
- Operational: expected first week of April 2014

Next stop day
- April 1, 2014

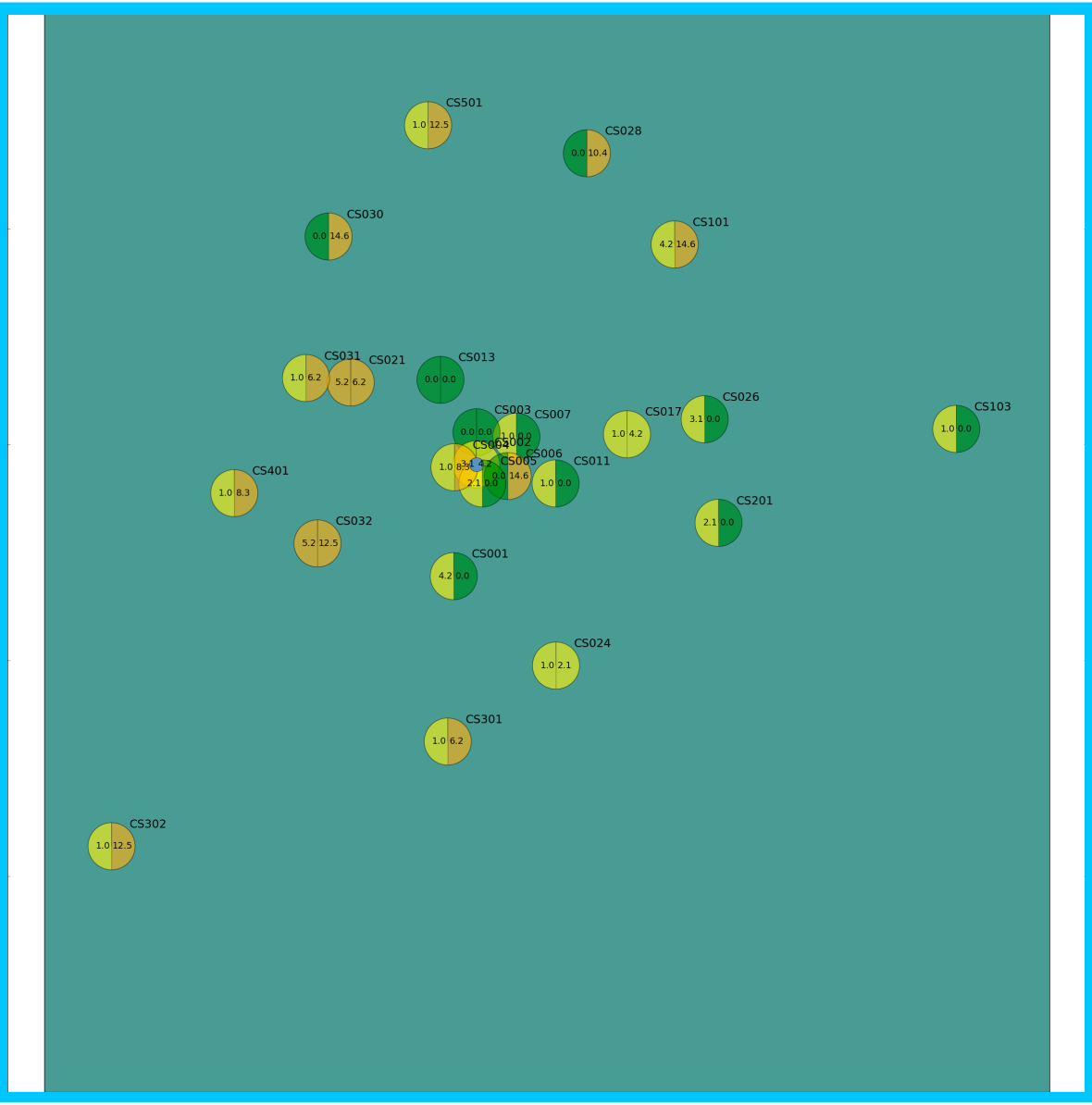
Overview, including IS



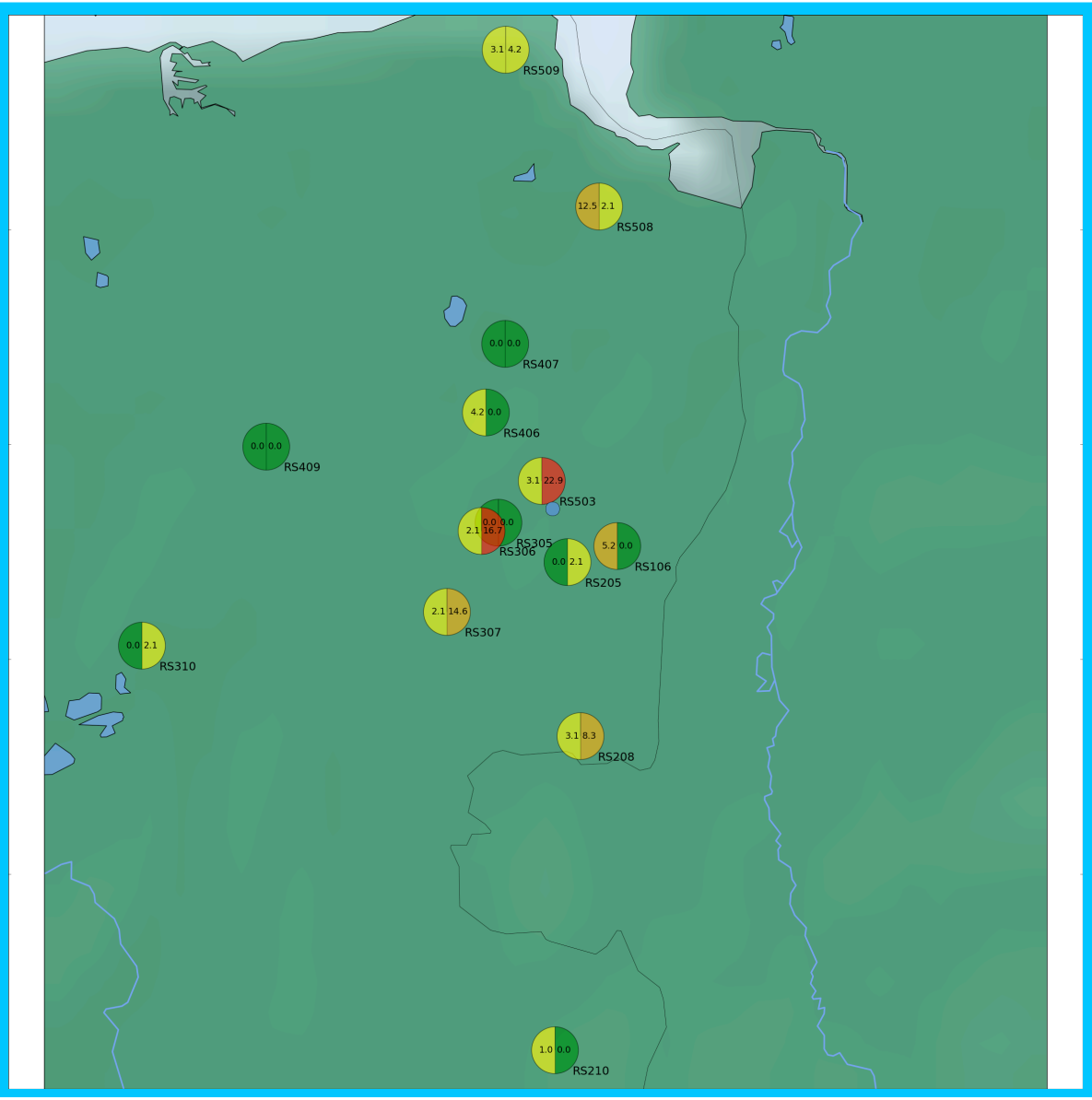
Superterp


CS003
0.0 0.0
CS007
1.0 0.0
CS002
3.1 4.2
CS004
1.0 8.3
CS006
0.0 14.6
CS005
2.1 0.0

Core Stations



Remote Stations



News regarding the observing system: Antenna elements history

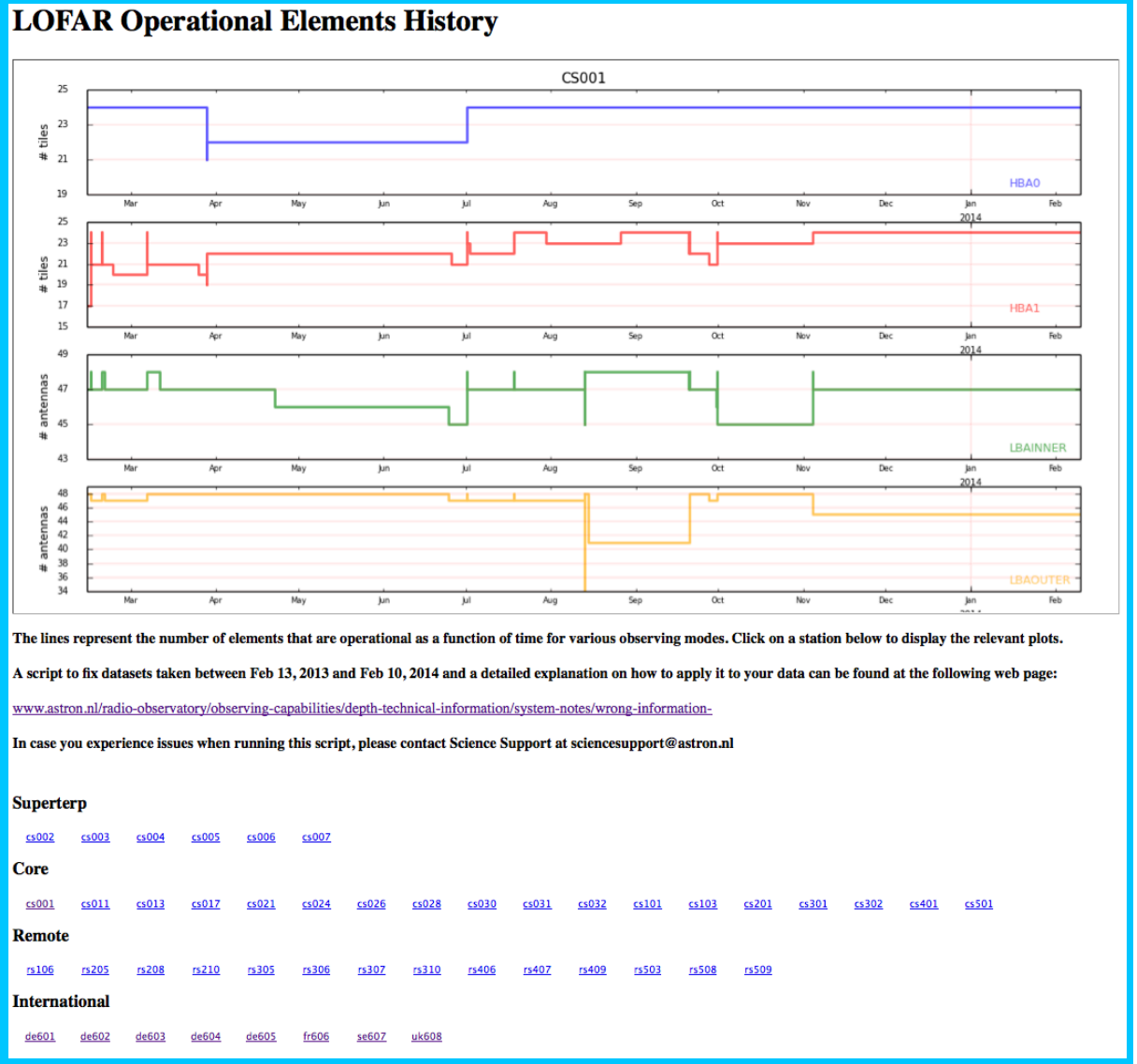
- History of operational antenna elements since February 2013 for all LOFAR stations is now available online at:

  https://proxy.lofar.eu/array_status/history/

- Info included in 'System notes' web page on the ASTRON website:

  http://www.astron.nl/radio-observatory/observing-capabilities/depth-technical-information/system-notes/wrong-information-

- The plots will be updated regularly



LOFAR Operational Elements History

The lines represent the number of elements that are operational as a function of time for various observing modes. Click on a station below to display the relevant plots.

A script to fix datasets taken between Feb 13, 2013 and Feb 10, 2014 and a detailed explanation on how to apply it to your data can be found at the following web page:

www.astron.nl/radio-observatory/observing-capabilities/depth-technical-information/system-notes/wrong-information-

In case you experience issues when running this script, please contact Science Support at sciencesupport@astron.nl

Superterp

cs002 cs003 cs004 cs005 cs006 cs007

Core

cs001 cs011 cs013 cs017 cs021 cs024 cs026 cs028 cs030 cs031 cs032 cs101 cs103 cs201 cs301 cs302 cs401 cs501

Remote

rs106 rs205 rs208 rs210 rs305 rs306 rs307 rs310 rs406 rs407 rs409 rs503 rs508 rs509

International

de601 de602 de603 de604 de605 fr606 se607 uk608

News regarding the observing system: Stability & performance

- Observations generally stable during the last two weeks
- Stop day yesterday – BF observations did not perform properly. Reset if BG/P was necessary. Things looked better afterwards, but still issues with 7 core stations.
- Recurrent issues with ILT runs involving international stations – focused effort next week to try to track down the issue
- To facilitate debugging of observations involving the full array, stand alone schedule has changed since the beginning of March. The international stations are in local mode from Fri morning till Monday morning.
- Pipelines generally stable – swapping on a few CEP2 nodes due to processes running longer than expected
- LofIm build from Tuesday 25th onward had a bug which prevented the BSS calibrate script to run properly. This has been fixed. LofIm builds from March 4th are fine.

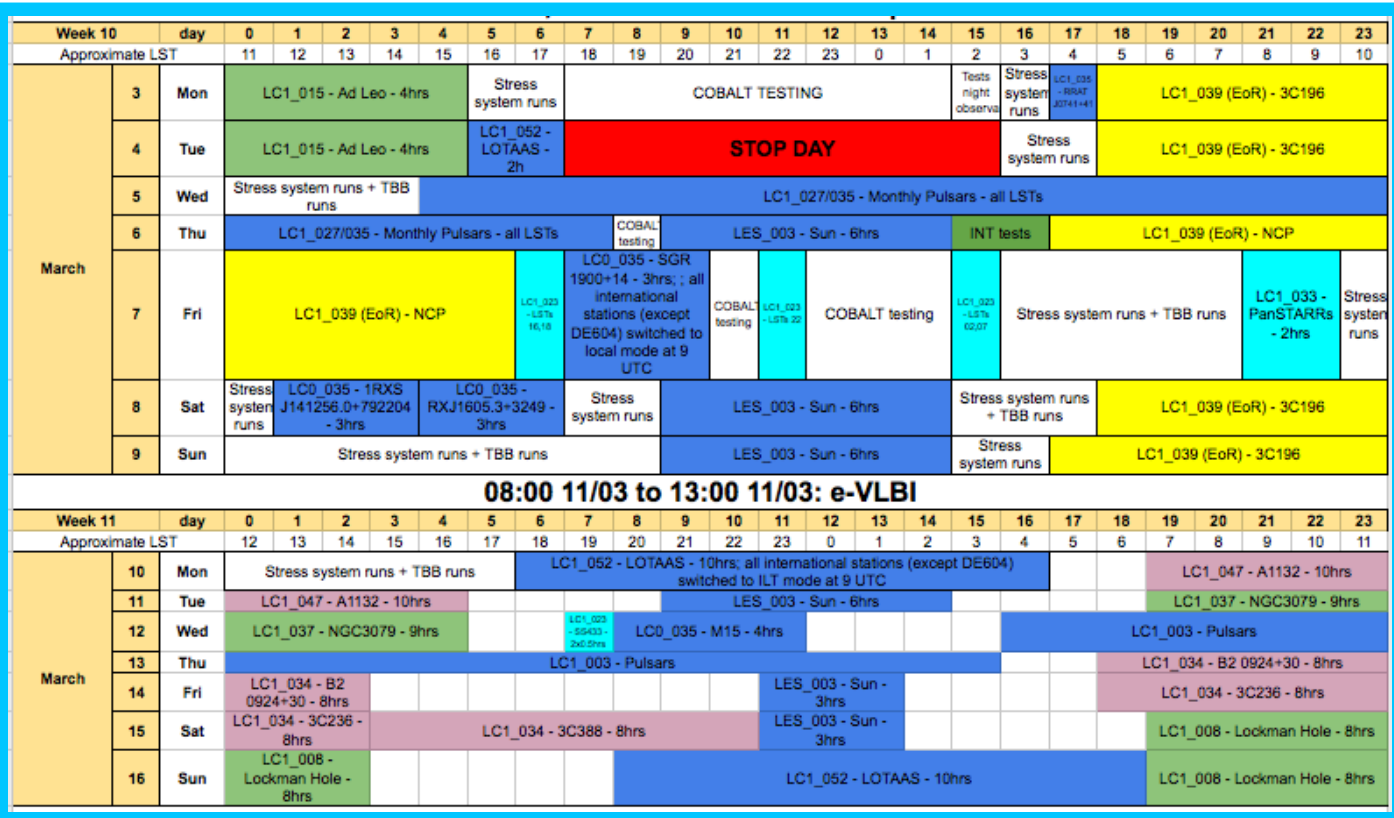
News regarding the observing system: Observations

- A few observations (LOTAAS and LC1_020) had to be postponed to later in the Cycle due to the issues with CEP2 router 1
- MSSS HBA survey *completed* – final checks to verify the final 1% of the fields.

News regarding the observing system : Archive

- Fixed bug which was preventing progress of ingest queue
- On Feb 22 lexar002 crashed - successfully restarted on Feb 25
- On Feb 24 staging at SARA had problems - fix deployed on Feb 25
- After MoM server migration on Tuesday 25 February, issue prevented ingest jobs to be successfully started from MoM. Solved on Feb 27.
- Data removal from CEP2 was slow

News regarding Cycle 1 observations



Week 10		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
Approximate LST			11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	9	10
March	3	Mon	LC1_015 - Ad Leo - 4hrs					Stress system runs		COBALT TESTING								Tests night observa	Stress system runs	LC1_035 - RRAT J0741+41	LC1_039 (EoR) - 3C196						
	4	Tue	LC1_015 - Ad Leo - 4hrs					LC1_052 - LOTAAS - 2h		STOP DAY									Stress system runs		LC1_039 (EoR) - 3C196						
	5	Wed	Stress system runs + TBB runs					LC1_027/035 - Monthly Pulsars - all LSTs																			
	6	Thu	LC1_027/035 - Monthly Pulsars - all LSTs								COBAL testing	LES_003 - Sun - 6hrs						INT tests		LC1_039 (EoR) - NCP						
	7	Fri	LC1_039 (EoR) - NCP					LC1_023 - LSTs 16,18		LC0_035 - SGR 1900+14 - 3hrs; ; all international stations (except DE604) switched to local mode at 9 UTC		COBALT testing	LC1_023 - LSTs 22	COBALT testing				LC1_023 - LSTs 02,07	Stress system runs + TBB runs				LC1_033 - PanSTARRs - 2hrs		Stress system runs
	8	Sat	Stress system runs	LC0_035 - 1RXS J141256.0+792204 - 3hrs				LC0_035 - RXJ1605.3+3249 - 3hrs		Stress system runs		LES_003 - Sun - 6hrs						Stress system runs + TBB runs		LC1_039 (EoR) - 3C196						
	9	Sun	Stress system runs + TBB runs									LES_003 - Sun - 6hrs						Stress system runs		LC1_039 (EoR) - 3C196						

08:00 11/03 to 13:00 11/03: e-VLBI

Week 11		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
Approximate LST			12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8	9	10	11
March	10	Mon	Stress system runs + TBB runs						LC1_052 - LOTAAS - 10hrs; all international stations (except DE604) switched to ILT mode at 9 UTC													LC1_047 - A1132 - 10hrs					
	11	Tue	LC1_047 - A1132 - 10hrs									LES_003 - Sun - 6hrs										LC1_037 - NGC3079 - 9hrs					
	12	Wed	LC1_037 - NGC3079 - 9hrs							LC1_023 - SS433 - 2x0.5hrs	LC0_035 - M15 - 4hrs											LC1_003 - Pulsars					
	13	Thu	LC1_003 - Pulsars																			LC1_034 - B2 0924+30 - 8hrs					
	14	Fri	LC1_034 - B2 0924+30 - 8hrs											LES_003 - Sun - 3hrs								LC1_034 - 3C236 - 8hrs					
	15	Sat	LC1_034 - 3C236 - 8hrs					LC1_034 - 3C388 - 8hrs						LES_003 - Sun - 3hrs								LC1_008 - Lockman Hole - 8hrs					
	16	Sun	LC1_008 - Lockman Hole - 8hrs								LC1_052 - LOTAAS - 10hrs											LC1_008 - Lockman Hole - 8hrs					

- Detailed Cycle 1 schedule available here:

  https://docs.google.com/spreadsheet/ccc?key=0AtnmDczhIbEtdGQ4enZicHpGREpGYm1Pc2JrQWlZWmc&usp=sharing#gid=0

- Contact Science Support in case of questions/issues
- **Always cc 'sciencesupport@astron.nl' and include the proposal code in the subject line**

CYCLE 2

- Start of Cycle 2: 15 May 2014
- 1600 observing and 2400 processing hours advertised
- **Proposal submission deadline: 7 March 2014, **12 UT****
- In case of issues, contact Science Support at sciencesupport@astron.nl

CEP news:

- CEP-3
  - Will replace CEP1 at the end of March
  - The data currently present on CEP1 (both lce nodes and staging areas) will be removed on March 24 2014, at 12 UT – back up any data you still need by then
  - In case you need CEP3 computing resources to complete your data reduction, please contact Roberto Pizzo at sciencesupport@astron.nl
  - Access to CEP3 will be granted for a limited number of weeks
  - For future Cycles, access to CEP3 should be requested in your proposals and will be granted by the LOFAR PC and the ILT director

CALENDAR LOFAR activities

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

- Cycle 2 proposal deadline : 7 March 2014, 12 UT
- Next LSM : 19 March 2014
- LOFAR Users Meeting + Third LOFAR Science collaboration Workshop + MSSS workshop : 7-11 April 2014