

## Programme:

- 1. Array status & Observatory update – M. Iacobelli*
- 2. Long-baseline Busy Week update - N. Jackson*
- 3. LOFAR LBA survey: first results - F. de Gasperin*
- 4. Fastest spinning Galactic pulsar - C. Bassa*

## International LOFAR Telescope (ILT)

- 50 operational stations: 24 CSs / 14 RSs / 12 Is  
+ new station upcoming in Ireland
- CS103 two HBA tile covers blown out of two tiles.
- CS301 broken coax cable for GPS antenna  
new heat exchangers with speed monitor and control  
+ All 38 NL stations will receive this update this and next year.
- RS508 new Rubidium clock
- SE607 RSP5 replaced causing high amplitude problem lane 2
- Found 20 rubbers broken, probably due to animals; few LBA's down and repaired.
- Oscillating tiles and noisy elements detected and deactivated from several stations.



# Overview, including IS

LBA: 4.7%; HBA: 5.6%

see [https://proxy.lofar.eu/array\\_status/](https://proxy.lofar.eu/array_status/)

## ➤ Color coding of non-operational components per stations:

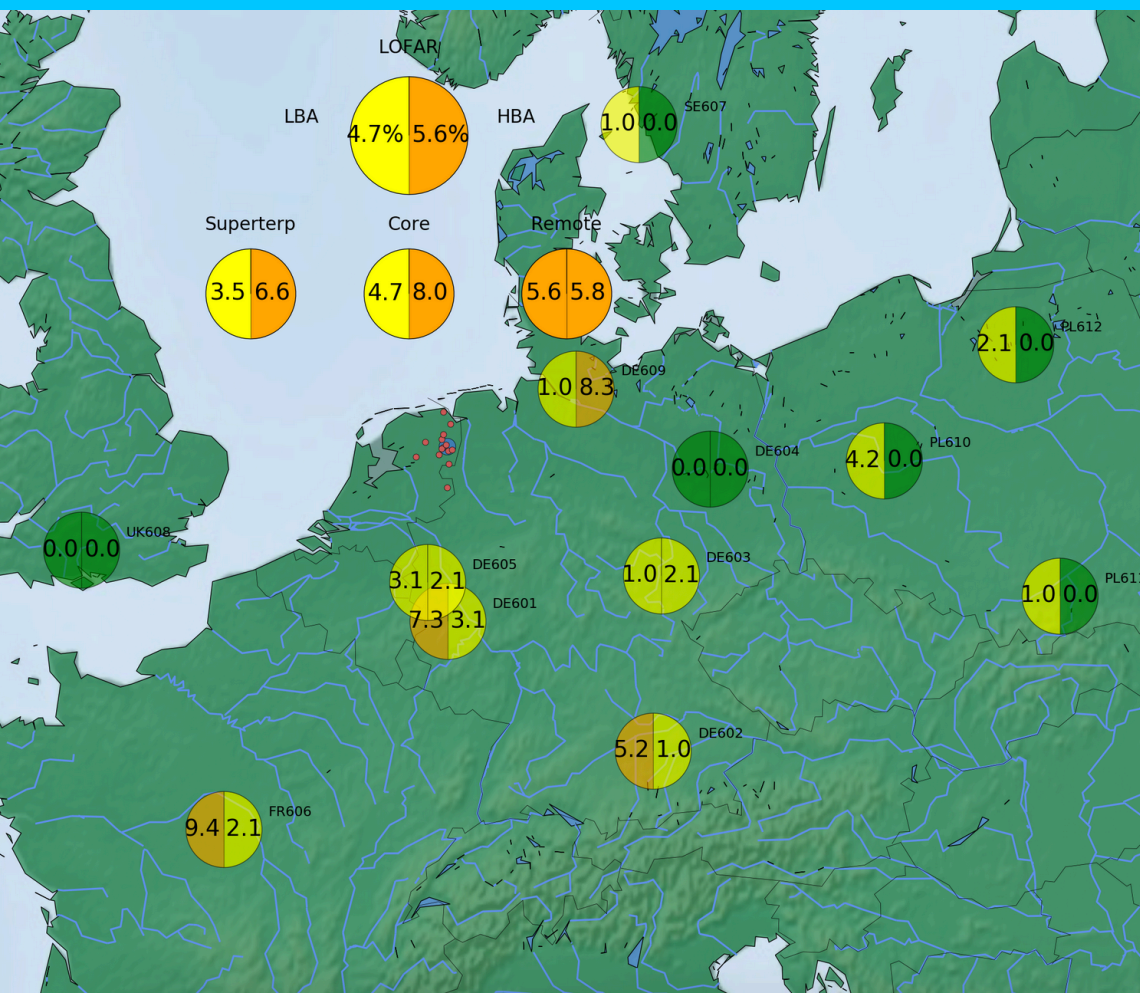
- all operational
- <5% non-operational
- <15% non-operational

**HBA:** CS002, CS004, CS005, CS006, CS017, CS021, CS030, CS031, CS032, CS101, CS301, RS205, RS210, RS307, DE609

**LBA:** CS001, CS002, CS004, CS005, CS011, CS013, CS021, CS030, CS032, CS103, CS201, CS301, CS401, CS501, RS106, RS205, RS210, RS306, RS406, RS407, DE601, DE602, FR606

- >15% non-operational

**HBA:** CS302, CS401, RS306, RS406



# News regarding the observing system



- Minor delay with processing. Minor issues with the ingest.
  - Issues with email server: missing LTA notifications data staging/ retrieval
- Stop Day Feb 7<sup>th</sup> 2017
  - Phase-out ldb002 (postgres, GSM). Changed DNS alias.
  - wsclean 2.2 now available on CEP3
- Software rollout Feb 13<sup>th</sup> (release of LOFAR 2.20)
- Station sensitivities issue when observing using HBA mode.
  - Cobalt geographical delays offset now documented in the system notes at:  
<http://www.astron.nl/radio-observatory/observing-capabilities/depth-technical-information/system-notes/cobalt-geographica>
- Station calibration status:  
Overview available at: <http://www.astron.nl/radio-observatory/astronomers/current-status>
  - New calibration tables HBA low / high installed on IS and RS in December.
  - Data for CS in HBA low / high collected and reduction is in progress.

# News regarding Cycle 7 observations

Week 6		UT	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			9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	0	1	2	3	4	5	6	7	8
February	6	Mon	DDT7_002 - PSRJ0952-06 - 2hrs LBA	TBB + tests								all international stations to ILT mode at 9 UT	TBB + tests					1CS 1RS 1INT stations for software tests + test upcoming run setup	TBB + tests		(t) LC7_015 - V830Tau(int1) - 100min HBA	A: LC7_022 - 3C196 - HBA				
	7	Tue	A: LC7_022 - 3C196 - HBA			(t) LT5_004 - LOTAAS - 4hrs HBA			STOP DAY										TBB + tests			A: LC7_022 - 3C196 - HBA				
	8	Wed	A: LC7_022 - 3C196 - HBA	FE S/N monitoring	STATIONTEST			TBB + tests							A: LC6_007 - planet b ph=180 - 30min HBA CEP3 - repetition - 23-00 LST	TBB + tests	(t) LT5_004 - LOTAAS - 4hrs HBA		(t) LC7_015 - V830Tau(bf1) - 100min HBA	TBB + tests						
	9	Thu	(c) A: LC7_024 - P208+62 & P198+67 - 8hrs HBA								TBB + tests										(c) DDT7_001 - S255NIRS3 8hrs HBA					
	10	Fri	(c) DDT7_001 - S255NIRS3 8hrs HBA	(t) LT5_004 - LOTAAS - 4hrs HBA				TBB + tests			all international stations to local mode at 9 UT	TBB + tests	A: LC6_007 - planet c ph=0 - 3hrs LBA repetition			TBB + tests					A: LC7_022 - 3C196 - HBA					
	11	Sat	A: LC7_022 - 3C196 - HBA	TBB + tests	(t) B: LC7_013 - Jupiter - 3hrs LBA			TBB + tests			LC7_019* - CygX - 4hrs LBA4			TBB + tests							A: LC7_022 - 3C196 - HBA					
	12	Sun	A: LC7_022 - 3C196 - HBA	FE S/N monitoring	A: LC7_018 - grade A LST 12-17 - HBA				LBA sparse ODD - 24 hrs CS only calibration run																	

- Cycle 7 observing program ongoing (~37% completed):

Minor impact of CEP4 commissioning

Detailed Cycle 7 schedule available here: <http://www.tiny.cc/LC7>

- Changes can be applied on daily base: in case of questions/issues contact Science Support at sciencesupport@astron.nl and include the proposal code in the subject line

## ➤ CEP4

- Initial performance characterization complete, with results available on ASTRON RO webpages.
- The P/O of standard pipelines is decreased by 20% up to 50%.
- Pre-processing of observing set-up up to 256 channels is available and granted based on a proper scientific justification.
- Slurm and/or pipelines optimization needed to reach a more efficient use of processing resources.

## ➤ CEP4

- Some issues with docker images & PSR pipeline.
- Investigations data loss ongoing. Test runs so far restricted to LOTAAS-like observations. Mitigating actions:
  - 1) avoid deletion of data during observations
  - 2) do not fill up the cluster disk space beyond 70%

## ➤ CEP3

- Disk space of CEP3 head nodes (/data and /home) concerning!
- CEP3 info, new policy and users schedule available at:  
<http://www.lofar.org/operations/doku.php?id=cep3:start> and  
<http://www.astron.nl/radio-observatory/observing-capabilities/depth-technical-information/cep-and-lta-computing-facilitie>
- CEP3 major upgrade in May 15-31

# Calendar LOFAR activities:

- Next LSM : 26 February 2017 (volunteers welcome)
- GLOW LOFAR Data Reduction Workshop : 2-3 March MPIfR (Bonn)  
email Andreas Horneffer at [ahorneffer@mpifr-bonn.mpg.de](mailto:ahorneffer@mpifr-bonn.mpg.de)
- Cycle 8 proposal call [submission deadline](#) : 8 March 2017, 12 UT
- LOFAR science session @ NAM : 2-6 July 2017 (University of Hull, UK)  
Please see <https://nam2017.org/science-programme>  
or email David Mulcahy at [david.mulcahy@manchester.ac.uk](mailto:david.mulcahy@manchester.ac.uk)
- The Broad Impact of Low Frequency Observing  
& the 4th LOFAR Users Meeting : 19-23 June 2017, Bologna (Italy)  
Please see <http://www.astron.nl/lowfrequencyobserving2017>  
or email [lowfrequency2017@astron.nl](mailto:lowfrequency2017@astron.nl)



# Useful LOFAR links:

- Calendar LOFAR activities:

[\*http://astron.nl/radio-observatory/calendar-lofar-activities/calendar-lofar-activities\*](http://astron.nl/radio-observatory/calendar-lofar-activities/calendar-lofar-activities)

- LOFAR Papers:

<http://www.astron.nl/radio-observatory/lofar-science/lofar-papers/lofar-papers>

- All accepted LOFAR DDT projects list:

<http://www.astron.nl/radio-observatory/cycles/accepted-ddt-projects/accepted-ddt-projects>

- LSM presentations list & users suggestions:

[http://www.lofar.org/operations/doku.php?id=public:lsm\\_new:start](http://www.lofar.org/operations/doku.php?id=public:lsm_new:start)

- LOFAR news email list:

[\*http://www.astron.nl/radio-observatory/subscribe-lofar-news/subscribe-lofar-News\*](http://www.astron.nl/radio-observatory/subscribe-lofar-news/subscribe-lofar-News)