

## Programme:

- 1. Array status & Observatory update – E. Orru'*
- 2. MSSS Update: Flux scale and spectral indices - G. Heald*
- 3. Update from the Nearby AGN group - R. Morganti*

# Array Status



- 38 operational NL stations
  - 24 CSs
  - 14 RSs
- 8 Is
- Maintenance/Repair ongoing on several stations.

Cabinet Cleaning Activity has started. They clean the inside of the cabinets. They clean or replace the outside air filters. They place airinlet improvement components below subrack 1 and 2 (lower board temperature) on all Dutch cabinets. Check the working of the air-air exchanger fans.
- For CS004 replaced a SyncOptics receiver, that was broken after Cabinet Cleaning Activity.

Station	mode 1/2	mode 3/4	mode 5	mode 6	mode 7
CS001	08-06-12	19-05-14	11-02-14		19-05-14
CS002	17-09-14	27-05-14	11-02-14		27-05-14
CS003	17-09-14	19-05-14	11-02-14		19-05-14
CS004	17-09-14	27-05-14	11-02-14		27-05-14
CS005	17-09-14	19-05-14	11-02-14		19-05-14
CS006	17-09-14	19-05-14	11-02-14		19-05-14
CS007	17-09-14	19-05-14	11-02-14		19-05-14
CS011	17-09-14	05-08-14	11-02-14		19-05-14
CS013	17-09-14	05-08-14	11-02-14		19-05-14
CS017	17-09-14	05-08-14	11-02-14		19-05-14
CS021	17-09-14	05-08-14	11-02-14		19-05-14
CS024	17-09-14	05-08-14	11-02-14		19-05-14
CS026	17-09-14	05-08-14	11-02-14		19-05-14
CS028	17-09-14	05-08-14	11-02-14		19-05-14
CS030	17-09-14	05-08-14	11-02-14		19-05-14
CS031	01-10-12	05-08-14	11-02-14		25-06-12
CS032	17-09-14	05-08-14	11-02-14		19-05-14
CS101	17-09-14	05-08-14	11-02-14		19-05-14
CS103	17-09-14	21-03-12	11-02-14		19-05-14
CS201	17-09-14	29-11-12	11-02-14		19-05-14
CS301	17-09-14	29-11-12	11-02-14		19-05-14
CS302	25-10-12	29-11-12	11-02-14		27-05-14
CS401	17-09-14	15-10-12	28-03-13		25-06-12
CS501	17-09-14	29-11-12	11-02-14		19-05-14
RS106	17-09-14	22-07-14	11-02-14		19-05-14
RS205	17-09-14	12-11-13	11-02-14		19-05-14
RS208	17-09-14	12-11-13	11-02-14		27-05-14
RS210	17-09-14	22-07-14	11-02-14		19-05-14
RS305	17-09-14	22-07-14	11-02-14		19-05-14
RS306	18-07-12	22-07-14	11-02-14		19-05-14
RS307	17-09-14	22-07-14	12-11-13		22-07-14
RS310		22-07-14	11-02-14		19-05-14
RS406	17-09-14	12-11-13	11-02-14		19-05-14
RS407	17-09-14	22-07-14			
RS409	17-09-14		11-02-14		19-05-14
RS503	17-09-14	22-07-14	12-11-13		12-09-12
RS508	17-09-14	11-02-14	11-02-14		19-05-14
RS509	17-09-14	27-06-12	11-02-14		19-05-14
DE601		22-07-14	17-09-14		30-05-12
DE602		22-07-14	03-10-13		25-06-12
DE603		03-10-13	03-10-13		25-06-12
DE604		03-10-13	03-10-13		25-06-12
DE605		26-10-12	03-10-13		29-06-12
FR606		22-07-14	16-09-13		12-06-12
SE607		22-07-14	14-03-13		29-06-12
UK608		22-07-14	03-10-13		30-05-12

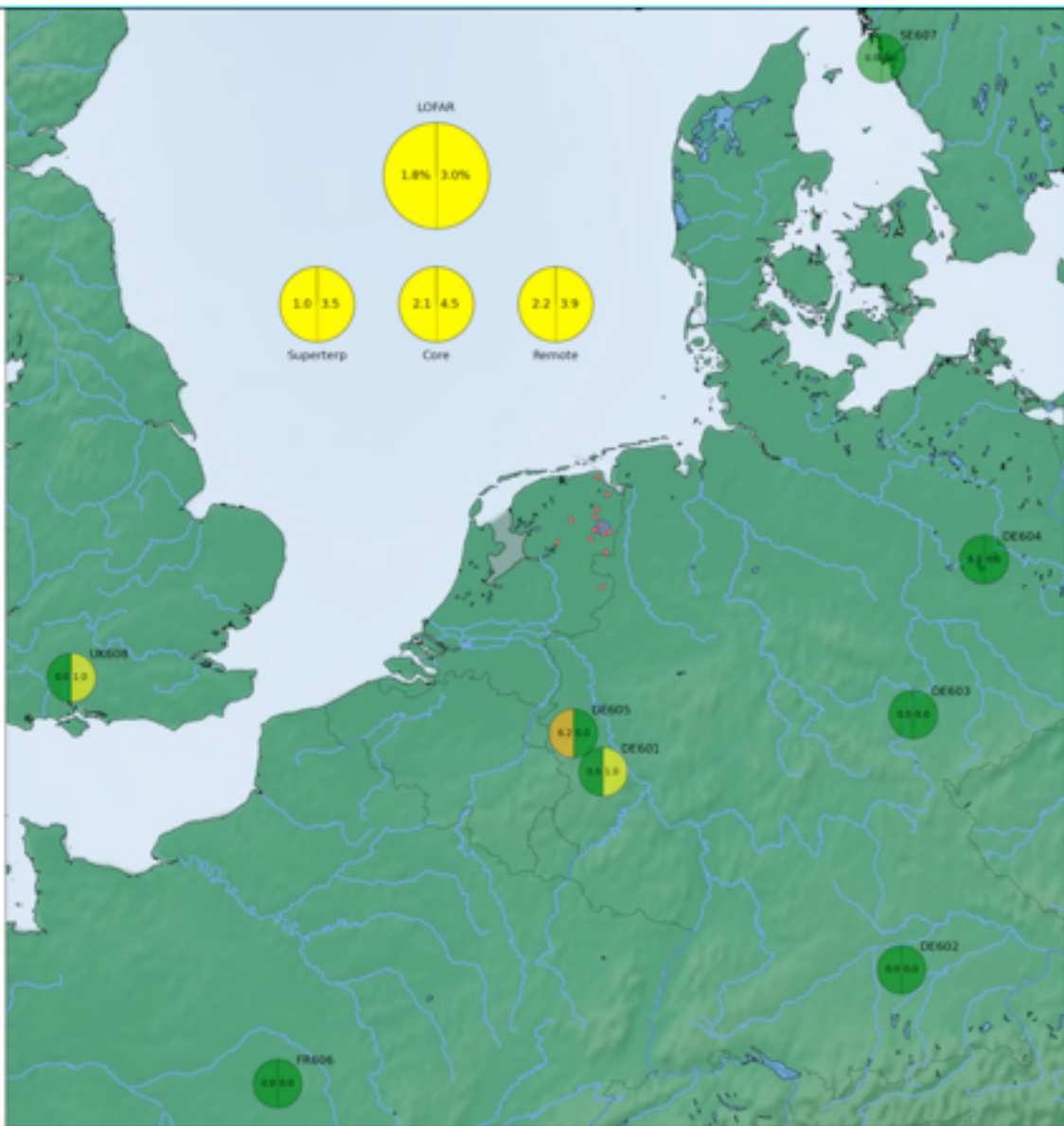
- Station calibration ongoing:
  - mode1 tables for core and remote stations installed
  - mode 5 tables in progress
  
- need to record new calibration data for DE601: mode 3, 5, 7

# Overview, including IS



LBA: 1.8%; HBA: 3.0%

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



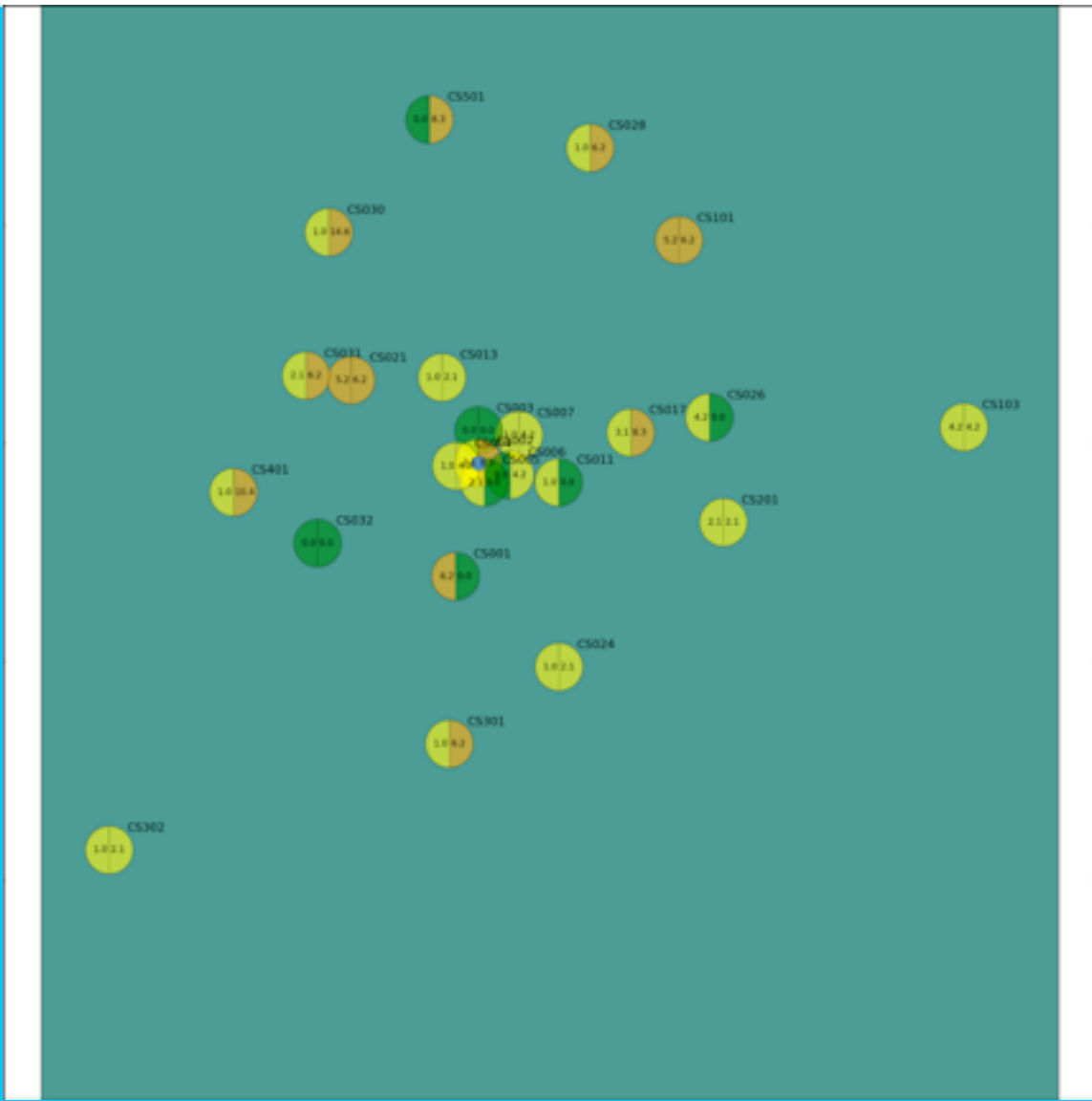
# Superterp

LBA: 1.0%; HBA: 3.5%



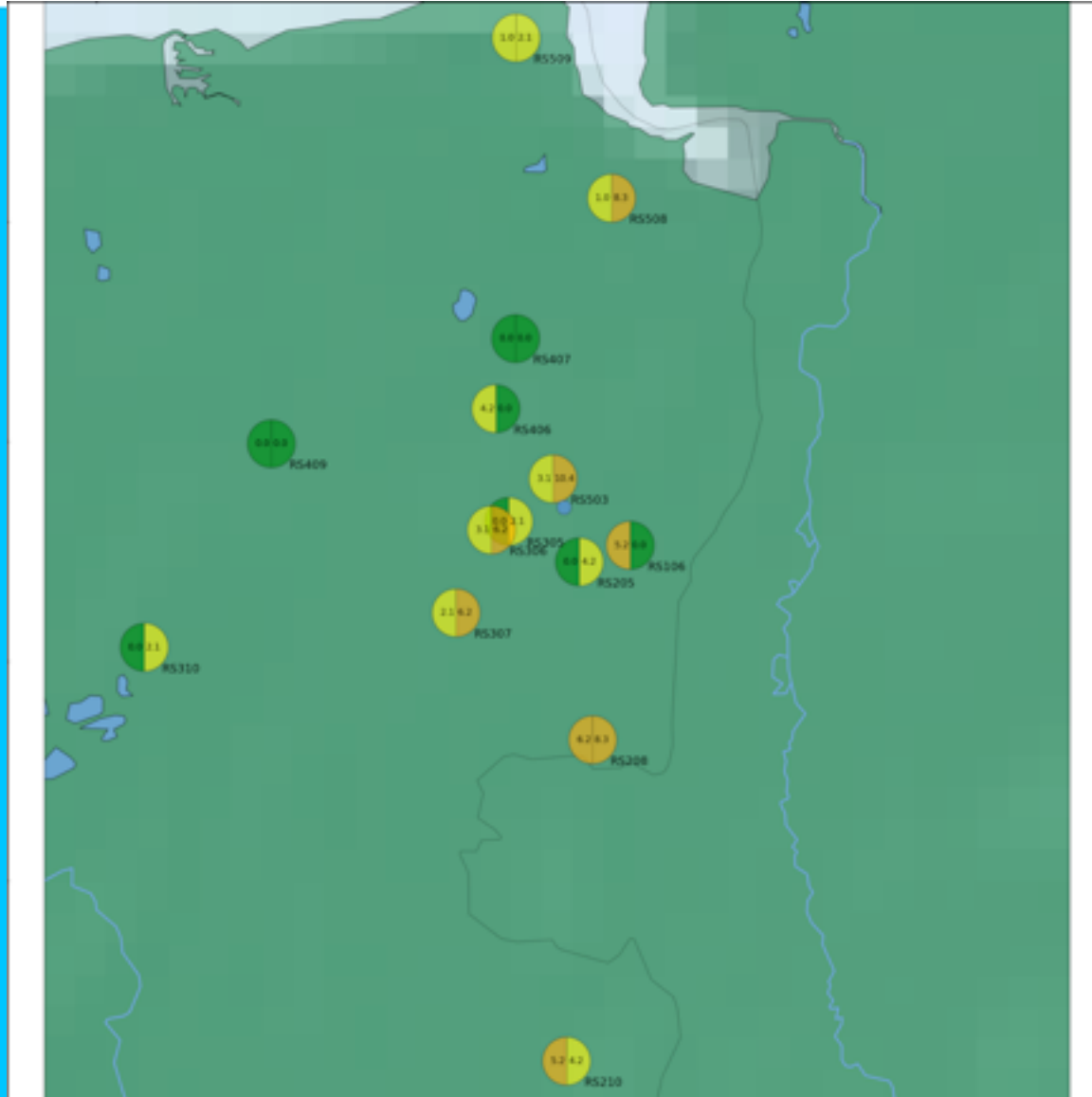
# Core Stations

LBA: 2.1%; HBA: 4.5%



# Remote Stations

LBA: 2.2%; HBA: 3.9%



# News regarding the observing system



- System performed relatively fine during the last month. COBALT was rebooted cbt007 hanging.
- Decreased observation rate due to space disk on CEP2. Situation is improved after massive PSR data archive clean up thanks to close collaboration of the PSR group.
- Pipelines: no long processing queue but processing had some delays due to the currently avoided scheduling in parallel:
  - hanging locus nodes/swapping due to NDPPP high memory usage: a memory limitation during the flagging step is now set up to 10 GB (instead of 35 GB). Monitoring is ongoing by Ger van Diepen & Tammo Jan Dijkema.
  - HBA pipeline runs with demixing of 2 sources display P/O>6, i.e. a factor >2 higher than expected. Possible causes are: the system performance/stability, the solver algorithm itself. A dedicated working group is investigating the issue.
- LTA performance: some delays with the ingest of data every time the system is down the ingest that was going on is left behind. Users can also experience problems with downloading or errors when system is down.



# News regarding Cycle2 observations



Week 39		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		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
September	22	Mon	TBB runs	LC2_003 - LST 2.3	TBB runs	LT2_003 - LOTAAS; all international stations (except DE604) switched to ILT mode at 9 UTC	Stress system runs + TBB runs		LC2_015 - Zenith Strip - 24hrs																	
	23	Tue	LC2_015 - Zenith Strip - 24hrs											Stress system runs + TBB runs	LC2_010 - LST 16	Stress system runs + TBB runs	LC2_003 - LST 20	STATIONTEST								
	24	Wed	STATIONTEST							Additional stop day - reboot COBALT systems				Stress system runs + TBB runs	LC2_019 - EoR NCP											
	25	Thu	LC2_019 - EoR NCP					LB DATASET LOFAR SCHOOL			TEST LB pipeline		LC1_014 (Commissioning) - 24hrs													
	26	Fri	LC1_014 (Commissioning) - 24hrs; all international stations switched to local mode at 9 UTC											Stress system runs + TBB runs												
	27	Sat	Stress system runs + TBB runs	LT2_003 - LOTAAS			Stress system runs + TBB runs													LC2_026 REPEAT		Stress system runs + TBB runs				
	28	Sun	Stress system runs + TBB runs								LC2_026 - RAs 09.10.11		Stress system runs + TBB runs				LC2_019 - EoR NCP									
Week 40		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		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	
October	29	Mon	LC2_019 - EoR NCP					Stress system runs + TBB runs; All international stations (except DE604) switched to ILT mode at 9 UTC											LC2_029 - 4C28.58 - 8.5hrs							
	30	Tue	LC2_029 - 4C28.58 - 8.5hrs			LC2_010 repeats																				
	1	Wed	LC2_010 repeats											LC2_037 - WISE 1741 (8.5h) - REPETITION							LC0_035 - M31 - 4hrs					
	2	Thu	LC0_035 - M31 - 4hrs		LC1_014 (Commissioning) - 24hrs													LC1_014 (Commissioning) - 24hrs								
	3	Fri	LC1_014 (Commissioning) - 24hrs											LC2_010 - Pulsar Timing												
	4	Sat	LC2_010 - Pulsar Timing								LT2_003 - LOTAAS		LC2_010 - Pulsar Timing							LC2_019 - EoR NCP						
5	Sun	LC2_010 - Pulsar Timing											LC2_019 - EoR NCP													

- Detailed Cycle 2 schedule available here:
- <https://docs.google.com/spreadsheet/pub?key=0AtnmDczhIbEtdF9TT3RnX0xOSEZ1TWtOaWdILUVIVXc&output=html>
- Changes can be applied on daily base: in case of questions/issues contact Science Support
- **\*\*Always cc sciencesupport@astron.nl and include the proposal code in the subject line\*\***

## ➤ CEP2

- In better shape. Removal of pulsar data is ongoing in cooperation with the pulsar working group.

## ➤ CEP3

- Beta-testers access the system this week.
- New policy regulating access to CEP3 and data handling available at: <http://www.astron.nl/radio-observatory/observing-capabilities/depth-technical-information/cycle-1-observing-and-processin>

## ➤ CEP1 users:

- **CEP1 will be phased out. Ultimatum was sent to BACK UP YOUR DATA FROM CEP1 (i.e. Ice, staging areas) ELSEWHERE OR GET IN TOUCH WITH SCIENCE SUPPORT AT sciencesupport@astron.nl IF YOU WOULD LIKE TO REQUEST TRANSFER OF DATA TO CEP3 AND HAVE NOT YET DONE SO.**












# Calendar LOFAR activities:

- Next Stop day : 07 October 2014
- Next LSM : 15 October 2014
- LOFAR Data Analysis School : 17-21 November, 2014
- Imaging Busy Week, to be held at ASTRON from 1-5 December.
- LOFAR news email list:  
<http://www.astron.nl/radio-observatory/subscribe-lofar-news/subscribe-lofar-news>

# RADIO OBSERVATORY LONG BASELINE PIPELINE

- RO pipelines were modified in order to reproduce the results that the LB group requested. RO pipelines were modified in order to reproduce the results that the LB group requested.
- We can currently perform 8 out of 12 steps requested.
- Starting from calibration on the external calibrator up to the transfer of the solutions phase shifting and sum of the core station is performed (March 2014).
- The remaining 4 points are at the moment under development i.e. concatenation of the SBs, conversion to circular polarization and UVFITS (September/October 2014).
- Characterization performed to asses a P/O  $\sim 4$
- Tests are on going.
- Web pages will be updated as soon as we will have a final version



<input type="checkbox"/>		LB_Test1_20140925	<input type="button" value="Add"/>	<input type="button" value="Details"/>	<input checked="" type="checkbox"/>		Long Baseline test 2014-09-25 (LongBaseline):
<input checked="" type="checkbox"/>		LBtest1/3C295/1/CO	<input type="button" value="Add"/>	<input type="button" value="Details"/>	<input checked="" type="checkbox"/>	finished	[245963] LBtest1/3C295/1/CO (Calibration Observation)
<input type="checkbox"/>		LBtest1/3C295/1/CPC	<input type="button" value="Restart"/>	<input type="button" value="Details"/>	<input checked="" type="checkbox"/>	finished	[245971] LBtest1/3C295/1/CPC (Cal Pipe Calibrator)
<input checked="" type="checkbox"/>		LBtest1/3C380/1/TO	<input type="button" value="Add"/>	<input type="button" value="Details"/>	<input checked="" type="checkbox"/>	finished	[245965] LBtest1/3C380/1/TO (Target Observation)
<input type="checkbox"/>		LBtest1/3C380/1.0/TP	<input type="button" value="Restart"/>	<input type="button" value="Details"/>	<input checked="" type="checkbox"/>	finished	[245973] LBtest1/3C380/1.0/TP (Target Pipeline)
<input type="checkbox"/>		LBtest1/3C380/1.0/LB	<input type="button" value="Restart"/>	<input type="button" value="Details"/>	<input checked="" type="checkbox"/>	finished	[245975] LBtest1/3C380/1.0/LBP (Phaseshift + adding CS stations)
<input checked="" type="checkbox"/>		LBtest1/3C295/2/CO	<input type="button" value="Add"/>	<input type="button" value="Details"/>	<input checked="" type="checkbox"/>	finished	[245967] LBtest1/3C295/2/CO (Calibration Observation)
<input type="checkbox"/>		LBtest1/3C295/2/CPC	<input type="button" value="Restart"/>	<input type="button" value="Details"/>	<input checked="" type="checkbox"/>	finished	[245977] LBtest1/3C295/2/CPC (Cal Pipe Calibrator)
<input checked="" type="checkbox"/>		LBtest1/3C380/2/TO	<input type="button" value="Add"/>	<input type="button" value="Details"/>	<input checked="" type="checkbox"/>	finished	[245969] LBtest1/3C380/2/TO (Target Observation)
<input type="checkbox"/>		LBtest1/3C380/2.0/TP	<input type="button" value="Restart"/>	<input type="button" value="Details"/>	<input checked="" type="checkbox"/>	finished	[245979] LBtest1/3C380/2.0/TP (Target Pipeline)
<input type="checkbox"/>		LBtest1/3C380/2.0/LB	<input type="button" value="Restart"/>	<input type="button" value="Details"/>	<input checked="" type="checkbox"/>	finished	[245985] LBtest1/3C380/2.0/LBP (Phaseshift + adding CS stations)