

Notes of the ILT TO Telephone conference 2015-02-26

Distribution list:

	Organization:	Date:
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1 Attendees

Chair	R. F. Pizzo
Notes	R. F. Pizzo
Participants	DE601: Andreas Horneffer DE602: - DE603: Matthias Hoeft DE604: Christian Vocks DE605: Arpad Miskolczi FR606: Jean-Mathias Griessmeier SE607: Henrik Olofsson, Tobia Carozzi UK608: Alan Doo DE609: Joern Kuensemoeller KAIRA: R. Fallows POLFAR: - NL: Henri Meulman, Roberto Pizzo, Klaas Stuurwold

2 Minutes of the Previous Telephone Conference

- No comments on previous minutes

3 Announcements

- The 2nd LOFAR Users Meeting and The 2015 LOFAR Science collaboration workshop will take place in Assen, on 1-3 June 2015. Registration is now open. Meetings website: <http://www.astron.nl/lofarscience2015/>
- DE609 is now operational for HBA mode observing. Network issues when using it together with the other international stations were solved on Feb 4th. Station adopted successfully in production observing since then. Daily image submitted and published on February 11th.
- Nico Ebbendorf has been ad interim Head of Operations & Maintenance of the Radio Observatory until February 1 2015. On February 9 2015, Bianca Bult started as new Interim Head of Operations & Maintenance. She is seconded by Yacht, is trained in electrical engineering and measurement and control technology, and has extensive experience in utility companies, energy technology, in a machine factory, and in the oil and gas industry. Bianca will cover the interim position for at least three months, with possible extension to allow for the recruitment for a long-term appointment. R. Pizzo will chair the ILT-TO telecons till Bianca will be able to take over.

4 Action Items

Nr	Description	Assigned to	Due date	Status
15/2	Write rationale concerning the wish of GLOW to have read access to the LOFAR switches on the GLOW stations	A. Horneffer	21/05	Open
17/4	Derek will add info on the wiki about "Hunting" for RFI caused by a controller card	D. McKay-Bukowski	29/01	Open
17/5	Plan maintenance date for FR606	Laurent / Henri	29/01	Open
18/1	Providing station health overview webpage	W.Frieswijk	29/01	Closed
18/3	Menno send Derek an E-mail about the KAIRA LBA antenna configuration question	M. Norden/Derek	29/01	Closed
18/4	In order to run station test locally, Menno will send a path with the script and documentation. Jean-Matthias will check this and get back to Menno	M. Norden/J-M. Griessmeier	29/01	Open
18/5	Andreas will add temp. mon. to iSTnMonitor	A. Horneffer	29/01	Closed
18/7	Henrik will contact Andreas directly about GLOW membership	H. Olofsson	29/01	Closed
18/8	Evaluation of local resource availability to run int. stations in single-mode during ILT time	R. Pizzo	Cycle 5	Open
19/1	Henri will send LBA spare parts to FR606 (Laurent)	H. Meulman	26/02	Open
19/2	Jean-Matthias will contact Klaas for practical network issues regarding "data-cloning"	J-M. Griessmeier	26/02	Open
19/3	Does Klaas have all GLOW network info/drawing?	N. Ebbendorf	26/02	Closed
19/4	Henri will send LBA (DE602)+ LBA repair sets (DE603 + UK608)	H. Meulman	26/02	Closed
19/5	Menno analyses Chilbolton stationtest data w.r.t. Tile #61 and #70 oscillation effects	M. Norden	26/02	Closed
19/6	Check if it is possible to make PVSS data on broken/flagged antennas available for a script running on the LCU in local mode.	R. Pizzo	26/02	Open
19/7	Roberto will clarify "Polarization leakage" issue	R. Pizzo	26/02	Closed
20/1	Wilfred/Menno to provide instructions on how to read the results of the station test available at https://proxy.lofar.eu/array_status/STATIONS/HTML	W. Frieswijk/ M. Norden	26/03	Open
20/3	W. Frieswijk to get in contact with J. M. Griessmeier regarding inconsistencies for FR606 on station health webpage	W. Frieswijk	26/03	Open
20/4	Check whether solution to polarization leakage for the ILT can be applied in single station mode	R. Pizzo	26/03	Open
20/5	Share with Laurent document on how to repair	H. Meulman	26/03	Open

ASTRON-FC-018.2.0

	LOFAR antennas			
20/6	Look into OoB (Out of Band) intranet connection issue at DE604 reported by K. Stuurwold	C. Vocks	26/03	Open

Comments

15/2: (ii) Implementing read-only access to the GLOW switches while in ILT mode requires effort from ASTRON ICT personnel; therefore, if this is implemented, it will be done after the switchover scripts have been finished, as these scripts have a higher operational necessity. A. Horneffer and K. Stuurwold will plan a phone conversation regarding this point. => *Action remains open.*

17/4: Not yet done and, given Derek's current list of priorities, it will not be done soon. If people need to have access to this info, they should directly contact the observers at KAIRA. => *Action remains Open.*

17/5: Henri is considering postponing the remote maintenance support. Laurent is not available due to high workload. Henri wants to plan a real visit this year and check the station on site and repair the defects. => *Action remains open*

18/1: views for all stations (also NL) are now available on lofar proxy web site: https://proxy.lofar.eu/array_status/STATIONS/HTML/ For the moment, this is a trial version and updates are not automatic. Wilfred will finalize it. => *Action closed.*

Jean-Mathias noted some inconsistencies on the web page related to FR606. Wilfred will get in contact with him. => *Action 20/2 open.*

18/3: e-mail was sent. No reaction from Derek received. => *Action is closed.*

18/4: some tests have been running. They were still not successful and more testing is required.
=> *Jean-Mathias will send Menno an account to log into the local machine. Jean-Mathias sent an e-mail to Menno; waiting for his reply => Action remains open.*

18/5: Done. => *Action closed*

18/7: Contact took place. => *Action closed.*

19/1: Henri wants to discuss with Laurent to understand what parts are really needed=> *Action remains open.*

19/3: Klaas has enough information about GLOW mode drawings etc.. He will go through the different settings with A. Horneffer during a telephone call later this week. At the moment the GLOW switch config (made by Klaas) is running smoothly so Klaas is confident that he has sufficient information already. => *Action closed.*

19/4: done. *Action closed.*

19/5: Menno checked recent stationtests from 12/2 and 17/2 and no sign of oscillation was found. Only summator noise T78, T92. Alan suggested to look into this when it will occur again => *Action closed*.

19/7: M. Brentjens and S. ter Veen looked into this. Their findings are reported below.

'A phase offset between the X and Y polarization will introduce leakage between polarizations. For core stations, strong offsets were introduced by the StatioCalibration table to update the phase/delay offsets of each station in July 2014. These have now been corrected (February 2015).

International stations only took polarization data for the last 8 Months. As far as Maciek Serylak could see, there is a strong leakage for certain stations (DE601 and DE603), but other stations are behaving fine (FR606). Where there is a strong leakage, there is likely a large phase offset. Currently, this is not calibrated out by the station calibration method, because this only works with unpolarized sources. There is no evidence that the amount of leakage changed during these 8 months because of software updates; it is simply stronger for some stations compared to others.' => *Action closed*.

Jean-Mathias asked to check whether the correction applied for the ILT could be adopted in single station mode => *Action 20/4 open*

Nr.	Resolution / Decision	Meeting
1	The director ILT will require a written request for data cloning. A permission from the ILT operations is required prior to each data cloning observation.	2014-12-11
2	For proposals requesting the use of the international stations in single-station mode during ILT time, it is the PI's responsibility to verify – before submitting the proposal - that local resources are available to run such projects at the international stations. In its deliberations, the LOFAR Program Committee will assume that the submission of such projects are indicating that local resources will be available to accommodate it.	2014-12-11
3	DE601, Rubidium/ Maser switchover: As long as we switch back to the Rubidium after using the Maser, this will not affect ILT operations. We will use the Maser only very infrequently, so Menno agreed that we will probably manage to remember to switch back to the Rubidium whenever we use the Maser.	2015-01-29
4	Airco unit require a complete overhaul every year including a check on the coolant level	2015-01-29

5 Station Roll Out

POLFAR

- HBA-FE's: 900 produced. 4100 waiting for f-connectors.
- LBA: prepared for production at Major (ordering component and PCB)
- SUM: "gunning" to Elect



LOFAR Project

Doc.nr.: LOFAR-ASTRON-MOM-099

Rev.: 1.0

Date: 17-07-2014

Class.: limited

6 Station statuses

6.1 Dutch Stations

- AARTFAAC installed on CS001, CS021 CS032; to be done: CS011, CS013, and CS017

6.2 DE601 Effelsberg (Andreas Horneffer)

- General Performance

No major issues came up, the stations seems to work as usual.

- GLOW Observing Network

All 6 stations are regularly switched to GLOW mode.

The connectivity between the interface computer and the LCU in DE604 still needs to be fixed.

- GLOW "Backdoor"

The "backdoor" access to DE601 on glowx (and the other glow60x) has been set up for users: stuurwold, akoers, meulman, norden, schoenma, tgrit

Our computing department needs ssh keys so that users can actually use that.

6.3 DE602 Unterweilenbach/Garching (Ado Arnolds)

- Nothing to report, everything runs smoothly form our point of view.

6.4 DE603 Tautenburg (Matthias Hoefft)

- Nothing to report, everything runs smoothly form our point of view.

6.5 DE604 Potsdam (Christian Vocks)

- Since 20 February we have an issue with an RSP board, probably RSP 6 or the connection to RSP 7, which results in data flagging. Unfortunately, our station engineer got sick, so we had to postpone the visit to the station, which was planned for Tuesday 24 February, to Friday 27 February.

- *K. Stuurwold pointed out that we are suffering for more than a year with the OoB (Out of Band) intranet connection. He cannot reach the OoB switch and he needs to do a reconfig of switch number 3 - there is no way to reach this switch without OoB. C. Vocks should look into this. => Action 20/6*

6.6 DE605 Jülich (Arpad Miskolczi)

- Stefan Fröhlich and Arpad repaired 6 LBA's that were knocked over by a storm a couple of weeks ago. One LBA was not fixed because not only the rubber band was broken, but also one dipole cable. They already received spare parts from Henri, and they will fix the remaining antenna soon.

6.7 FR606 Nançay (Jean-Mathias Griessmeier)

- We have double the storage capacity of our local back ends: We have now 4*20 TB, enough to observe continuously for 48h before processing.
- Laurent needs training or simply documented instructions on how to repair antennas Henri said that there are instructions available to repair the LBA's – he will share this with Laurent => *Action 20/4*

6.8 SE607 Onsala

- We are considering a minimal UPS solution. It's rated at 1500 VA & we intend to let it power the LCU, rubidium, and 2+1 network switches (is this enough?). Thus it's not for the whole station, but rather to avoid brown-outs or short drops in power, which have on occasions required manual intervention in the container (which is slow). Plan to install it, at the earliest, next month.

6.9 UK608 Chilbolton

- Nothing to report, everything runs smoothly from our point of view.

6.10 DE609 Hamburg/Bielefeld Station

- Got station handed over regularly for Glow mode since Feb, 6th (as promised). Handover went well, Glow server came up, out-of-band access configuration works.
- Ongoing RFI (dramatic in LBA-band, but also in HBA due to saturation). Three station visits with spectrograph / hand scanner / RFI silence during 2nd on-site investigation with spectrograph. Two electric fences and several potentially problematic broadcast sources identified, but not yet confirmed as RFI source. Some sources could be ruled out (e.g. construction site).

- Single station HBA observations on weekend of 13th (after HBA calibration tables were installed) look a lot better than before, but still show a lot more RFI than other stations (hardly usable).
- Broken rubidium clock since Feb, 21st, 17h. Spare will be sent to Hamburg.
- Fiber connection Norderstedt --> Juelich down on Feb, 24th. Solved in the evening. Not clear what caused this.
- Set up mailing lists according to common scheme, e.g. lofar-ops@physik.uni-bielefeld.de (restricted to selected domains).
- We discuss/investigate the possibility of a radio-protected zone around our station.

6.11 KAIRA (R. Fallows)

- Using the SUN coordinate system crashes the BeamServer.
- Station dipole/tile coordinates and/or rotation matrices: Some conversion or coordinate error is present which leads to a rotation error in all-sky imaging with the LBA field and we have been unable to image at all with the HBA field. Requires discussion and input from Michiel Brentjens.

7 Questions, Issues, Remarks

DE601

- I added monitoring of the temperatures of the TBB boards to a new version of iStnMonitor.
- Is there any news about increase in polarization leakage with station software 2.4.0? => see *Action Item 19/7*

FR606:

- Section 3 of the last minutes mentioned Nico Ebbendorf will be replaced at the ILTO. Any news on that? => See *'announcements' in these minutes*
- Action 18/1: Nice page! Some instructions on how to read the stationtest result would be nice. This can be at the ILTO telecon, or at the yearly face-to-face meeting, or (in the ideal case) in the form of a "repair cookbook"! => *We will discuss this internally at ASTRON and we will agree on an optimal way to document this. Action 20/1 is now open.*

DE609:

- Outcome TBB data analysis for RFI sources? Distance estimation? => *Following S. ter Veen's analysis, the signal from the West (~ 280 degrees) seems to come from within a few hundred meters from the station. Given the strength of the signal, this is to be expected. Has the farmer been contacted yet about his electric fence? We have seen such signals before with other stations from a few hundred meters. We should immediately see if, when switched off, we have an observation running with the correct TBB settings.*
- Bundesnetzagentur wants to hook own equipment to LOFAR antennas. Is that possible (at least for LBA)? => *(from H. Meulman) It is possible, but you have to know the system. They should contact Menno or me before they connect their equipment.*
- Since this whole RFI issue seems to be non-trivial: Could we please organize a 'task force telecon' (Astron+Hamburg+Bielefeld) ?(!) => *This sounds like a good idea. We will discuss this internally at ASTRON at the next OMT meeting next week Tuesday (this week, many people are absent due to School holidays).*

- Are design documents, manuals, technical descriptions etc. confidential or can we hand them to interested parties, e.g. Bundesnetzagentur? => *(from R. Vermeulen and H. van der Marel) Any design documents that should be supplied to the buyer/owner of the station are those required so that they can conduct local operations and maintenance. If in this operational context the owner of DE609 finds it necessary to share information with other entities, they can. However, I think the detailed design is not per se public information, and should not be distributed. We believe that the Bundesnetzagentur will not ask for a whole set of documents from a Lofar station. If they have specific questions, they can most likely be answered with the help of (parts of) a few documents.*
- There are a few broken antenna elements – should we go ahead and fix them ourselves? *Henri: please wait for our maintenance visit.*

8 AOB

- RP: ASTRON will be happy to host the next ILT Single Station owners and Technical Operations meetings. They will likely happen after the summer. Soon, we will start with the preparations.

Originally, Poland offered to host the next meetings, but it was eventually agreed that it would be better to wait for next year, when the Polish stations will be operational.

9 Date of next conference

Schedule for ILT telephone conferences in 2015:

- Thursday, March 26
- Thursday, April 23
- Thursday, May 21
- Thursday, June 25
- Thursday, July 23
- Thursday, August 27
- Thursday, September 24
- Thursday, October 22
- Thursday, November 26
- Thursday, December 17