

# DE609: Norderstedt

## Report of the Bielefeld-Hamburg LOFAR station

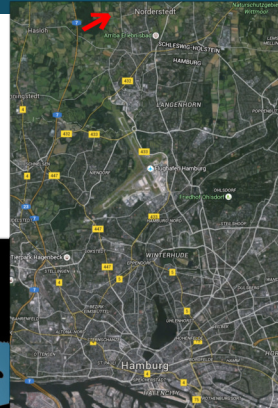
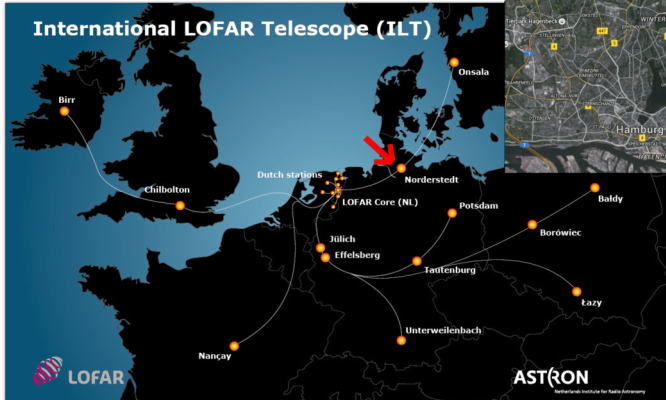


Jörn Künsemöller,  
Nils Böhmer, and Christian Martens

Nov 6th, 2019

# DE609?

- ▶ Construction: Late 2014
- ▶ First Light: January 20, 2015
- ▶ In Production since February 04, 2015





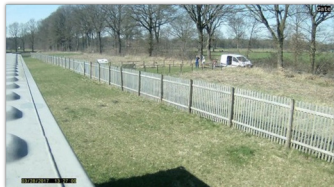
## Station Features: Electronics

- ▶ GLOW interface server  
(For central single station use  
of GLOW stations)
- ▶ UPS for the clock
- ▶ 3 webcams + archive
- ▶ Monitoring server  
and sensor board  
(based on old LCU)

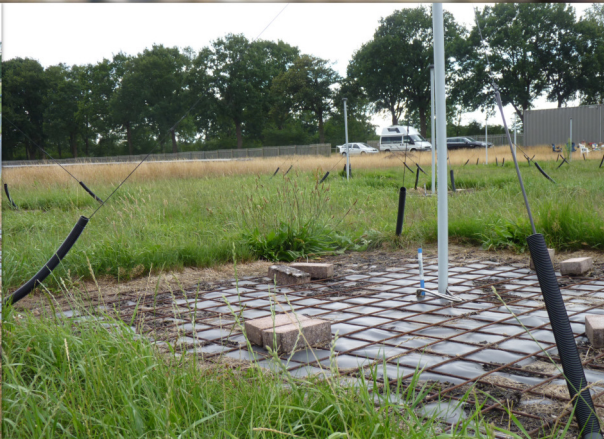


## Station Features: Pest Control

- ▶ Rodents (Mice and Rabbits)
  - ▶ 'Julen' to attract predatory birds
  - ▶ Bricks on LBA groundplanes
  - ▶ Smaller mesh for airco grid
  - ▶ Tubing for LBA strings
  - ▶ New in 2019: Cats!
- ▶ Larger animals (Deer and Humans)
  - ▶ Wooden station fence
  - ▶ Information boards
  - ▶ Regular checks by security firm



09-23-2016 15:43:47



# Maintenance Report

## Regular maintenance:

- ▶ Hands on station: Nils Böhmer  
New in 2019: Christian Martens  
→ repairs, airco checks, ...
- ▶ Grass mowing by landlord
- ▶ In 2019: ASTRON on site



# Maintenance Report

## Station damages / defects:

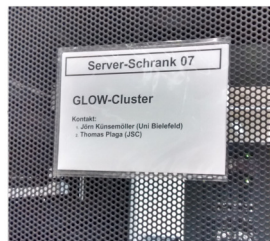
- ▶ Network downtimes (planned and broken optics)
- ▶ Water in container: condensation water from airco
- ▶ Bird pick holes in HBA
- ▶ Some rodent damage
- ▶ Some decay (wooden fence)
- ▶ Some vegetation (small trees in HBA)





# Observing System: GLOW Mode

- ▶ Interface server in each station
- ▶ Two backends
  - ▶ GLOW cluster (hosted in Jülich)  
2019: added 5 nodes  
→ now serves all 6 GLOW stations
  - ▶ Bonn Backend (lofarXN)
- ▶ (Largely) automated scheduling, observing, and preprocessing
- ▶ 2019: Web-based GUI, triggered observations, automated handover
- ▶ Observations with all 6 German stations
  - ▶ Mainly pulsar timing: monitoring 110 pulsars, 20 MSP
  - ▶ For GLOW and as service for ILT



# Other Activities

- ▶ GLOW website: [www.glowconsortium.de](http://www.glowconsortium.de)
- ▶ Applied for further funding: D-LOFAR 2.0
- ▶ Collaborations:
  - ▶ D-MeerKAT
  - ▶ National Research Data Infrastructure (Astro-NFDI)
  - ▶ Bielefeld Center for Data Science (BiCDaS)
  - ▶ Verein für datenintensive Radioastronomie (VdR)

The screenshot shows the homepage of the German Long Wavelength Consortium (GLOW). The header features the GLOW logo and navigation links. The main content area includes a section titled "The German Long Wavelength Consortium" with a sub-header "Multi-wavelength radio astronomy in Germany". Below this, there are several text blocks and logos. On the left, there is a logo for "The German Long Wavelength Consortium GLOW". To the right, there is a paragraph of text about the consortium's mission and a list of "Recent News Articles". At the bottom, there are logos for "LOFAR" and "SKA" (South African Radio Astronomy Observatory).

The logo for BiCDaS (Bielefeld Center for Data Science) features a stylized cluster of colorful dots in shades of blue, green, and red, arranged in a roughly circular pattern. Below the dots, the text "BiCDaS" is written in a large, bold, sans-serif font, with the "i" in "Bi" and "Da" in "CDaS" being green. Underneath "BiCDaS", the full name "Bielefeld Center for Data Science" is written in a smaller, black, sans-serif font.



That's all. Thanks!

# GLOW Observatory

- Info
- GLOW Stations
- Scheduling
- Observing
- Processing
- Data Inspection
- Hardware Monitoring
- Frontend Settings

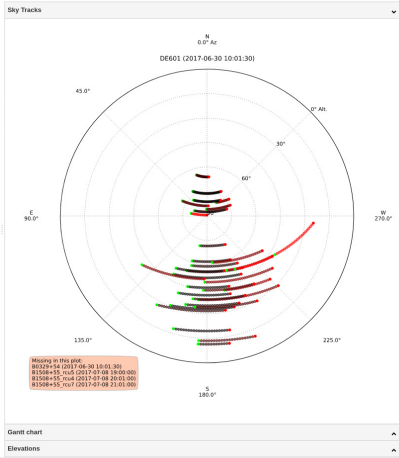
SCHEDULER - "2017-07-07\_DE605" (LOCALHOST)

Input list:  and   
 Optimize for:

split long observations

Week: **Fi-Mo** 7 Jul 2017 - 10 Jul 2017

File 07	Sat 08	Sun 09	Mon 10
	02:59 - 05:56 J2248-0101 (PSRdefault)	02:47 - 04:45 J0330-2000 (PSRdefault)	02:12 - 04:27 J0257+5909 (PSRdefault)
	05:58 - 07:45 J0001+0423 (PSRdefault)	04:46 - 06:44 J0030+0451 (PSRdefault)	04:29 - 06:44 J0034-0934 (PSRdefault)
	07:47 - 10:06 J0407+1607 (PSRdefault)	04:45 - 07:53 J0139+5814 (PSRdefault)	06:46 - 08:45 J0304+1932 (PSRdefault)
10:07 - 11:49 J0614+2229 (PSRdefault)	10:57 - 12:53 J0700+8418 (PSRdefault)	08:43 - 11:00 J0540+3207 (PSRdefault)	
11:51 - 13:49 J0823+0159 (PSRdefault)	12:54 - 14:56 J0943+1631 (PSRdefault)	11:02 - 12:59 J0814+7429 (PSRdefault)	
13:50 - 16:09 J1012+9307 (PSRdefault)	14:57 - 16:57 J0943+1631 (PSRdefault)	13:01 - 14:38 J0922+0636 (PSRdefault)	
16:11 - 18:34 J1300+1240 (PSRdefault)	16:58 - 18:58 J0943+1631 (PSRdefault)	14:49 - 17:22 J1022+1903 (PSRdefault)	
		17:24 - 19:56 J0943+1631 (PSRdefault)	



This is still an alpha version, handle with care!

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## OBSERVING DAEMONS

STATION	ONLINE	BACKEND	SCHEDULE	DAEMON ON/OFF	DAEMON BUSY
DE601	■ No	MPRR Bonn	Select Schedule...	<input type="checkbox"/>	■ No
DE602	■ No	MPRR Bonn	Select Schedule...	<input type="checkbox"/>	■ No
DE603	■ No	MPRR Bonn	Select Schedule...	<input type="checkbox"/>	■ No
DE605	■ No	MPRR Bonn	2017-07-DE605	<input checked="" type="checkbox"/>	■ No
DE604	■ No	FZ Juelich	Select Schedule...	<input type="checkbox"/>	■ No
DE609	■ No	FZ Juelich	test	<input type="checkbox"/>	■ No

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