

Workshops :: LOFAR Data Processing School (10.-12. Feb 2009, ASTRON, Dwingeloo)

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Who should attend?

The aim of this workshop is to introduce new members of the collaboration, who will be involved in the commissioning effort, to LOFAR. Students, postdocs, and staff are all encouraged to apply. The school will cover the many aspects of the LOFAR system from the operation of the basic station hardware to the software pipelines and science products they produce. Lectures and tutorials will be presented by members of the LOFAR project team as well as staff from the many institutions involved in the collaboration. Hands-on sessions will be provided to give attendees an opportunity to gain experience with real LOFAR data.

Presentations will be given at a level appropriate for someone new to the LOFAR system. Familiarity with the concepts of radio interferometry and standard data processing software such as CASA, AIPS, or Myriad will be useful but not required. Minimum requirements should include familiarity with scripting languages and in particular Python. Parallel sessions for more expert students are also planned.

Attendance will be limited to 35 people, so initial preference will be given to registrations from members of the LOFAR Key Science Project teams and other international partners contributing to the commissioning effort. Registrations from other applicants will be supported on a best-effort basis.

Schedule

	Tuesday, Feb. 10	Wednesday, Feb. 11	Thursday, Feb. 12
	Welcome (Vermeulen)		
9:30 AM	Introduction (Wise)	Calibration (de Bruyn)	CR Pipelines (Horneffer)
10:00 AM	System Overview (Gunst)	BBS (Pandey, van Zwieten)	CR Data (Bähren)
10:30 AM	Station Data (Brentjens)	MeqTrees (Smirnov)	LOFAR Archive (Holties)
11:00 AM	Break	Break	Summary (Wise)
11:30 AM	Imaging Pipeline (Nijboer)	Pulsar Pipeline (Stappers)	Break
12:00 PM	Data Preparation (Pandey)	Pulsar Data (Hessels)	Hands-on I <i>Cosmic Ray Data</i>
12:30 PM	Data Products (Wise)	ParseTongue, AIPS (Bell)	
1:00 PM	Lunch	Lunch	Lunch
1:30 PM			
2:00 PM	Software Tools I (Swinbank)	Hands-on IA <i>Data Inspection Pulsar Data</i>	Hands-on IB <i>Station Data</i>
2:30 PM	Software Tools II (van Diepen)		Hands-on II <i>Open Work</i>
3:00 PM	Hands-on IA <i>Station Data</i>	Hands-on IIA <i>Data Inspection BBS</i>	Hands-on IIB <i>Station Data MeqTrees</i>
3:30 PM	Hands-on IB <i>Data Inspection</i>		Hands-on III <i>Open Work</i>
4:00 PM	Hands-on IIA <i>Station Data</i>	Hands-on IIIB <i>Data Inspection AIPS</i>	Workshop Close
4:30 PM	Hands-on IIB <i>Data Inspection</i>	Hands-on IIIB <i>MeqTrees</i>	
5:00 PM	Hands-on III <i>Open Work</i>	Hands-on IV <i>Open Work</i>	
5:30 PM			
6:00 PM	End of Day I	End of Day II	
6:30 PM	Borrel	Borrel	
7:00 PM			
7:30 PM		Workshop Dinner	
8:00 PM			

Presentations

Tuesday, 10. Feb

- A. Gunst: [System overview](#)
- M. Brentjens: [Station data](#)
- R. Nijboer: [Imaging pipeline](#)
- V.N. Pandey: [Data preparation](#)
- M. Wise: [LOFAR Data Products](#)
- J. Swinbank: [Software Tools I \(Python, data access, plotting, etc\)](#)
- G. van Diepen: [Data Handling Tools \(pyrap\)](#)

Wednesday, 11. Feb

- G. de Bryun: [Calibration](#)
- B. Stappers: [Pulsar pipeline](#)
- J. Hessels: [Pulsar data](#)
- O. Smirnov: [MeqTrees Practical Session](#)

Thursday, 12. Feb

- A. Horneffer: [CR pipelines](#)
- L. Bähren: [CR Data](#)
- H. Holties: [LOFAR Archive](#)

Connecting to the cluster nodes

Logging into the cluster nodes requires passing through at least one – often two – front-end node. So in order to access the cluster nodes from a machine located at ASTRON you will have to go through the following chain of connections:

```
ASTRON -> listfen (129.125.99.50) -> lioff{021}-{029}
```

While this is the default sequence to connect to the reserved cluster nodes, the intermediate step going through the front-end-node (*lioffen*) can be spared.

Here is the procedure for connecting to the cluster nodes set aside for the data processing school:

1. @ ASTRON :

```
ssh -X <login>@129.125.99.50
```

This will establish a connection to the front-end node (**listfen**)

2. @ listfen :

```
ssh -X lioff021
```

This will establish a connection to one of the I/O cluster nodes set aside for actual processing.

To initialize your environment for a package (e.g. AIPS):

```
source /app/scripts/do<package>
```

For an overview of available initialization scripts:

```
ls /app/scripts
```

Hands-on exercises

From:
<https://www.astron.nl/lofarwiki/> - **LOFAR Wiki**

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