

## The Low Frequency Array: operational challenges and lessos learned

LOFAR combines signals from 51 phased array antenna stations distributed in The Netherlands and across Europe up to a maximum baseline of about 2000 kilometers. It covers the largely unexplored low-frequency range from 10-240-MHz and provides several unique observing capabilities. Every second, tens of gigabytes of data flow through a massive ICT infrastructure from the stations to the correlation facility located in the north of The Netherlands. The post-correlator raw data is further processed on a supercomputer through a variety of processing pipelines. Final data products are shared with the community through a distributed long-term archive system, which hosts the largest astronomical data collection to date. In order to exploit the new frequency regime with unprecedented resolution and sensitivity, LOFAR faces several non-trivial technical and operational challenges. These are presented and discussed in this talk, along with the important lessons learned which will be important reference for next generation observing facilities, such as SKA.

### Suggested duration

20 min + questions

**Primary author:** Dr PIZZO, Roberto (ASTRON)

**Presenter:** Dr PIZZO, Roberto (ASTRON)

**Session Classification:** Science Operations II

**Track Classification:** Science Operations