



The Road to LOFAR as a service

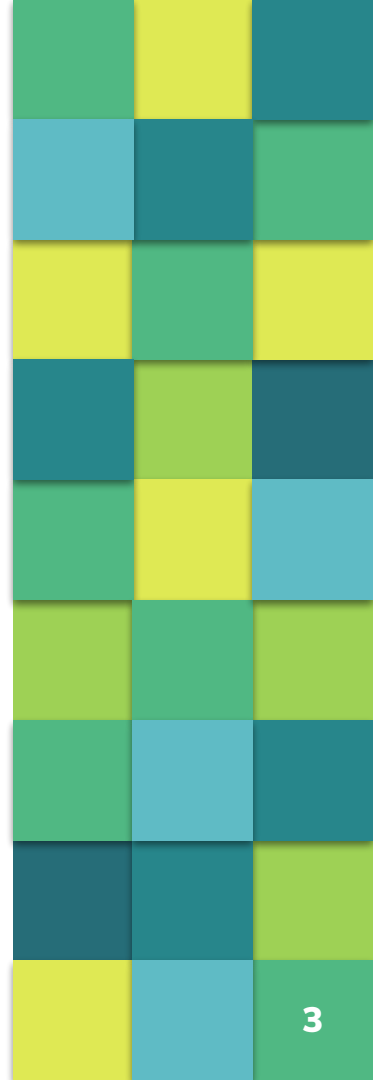
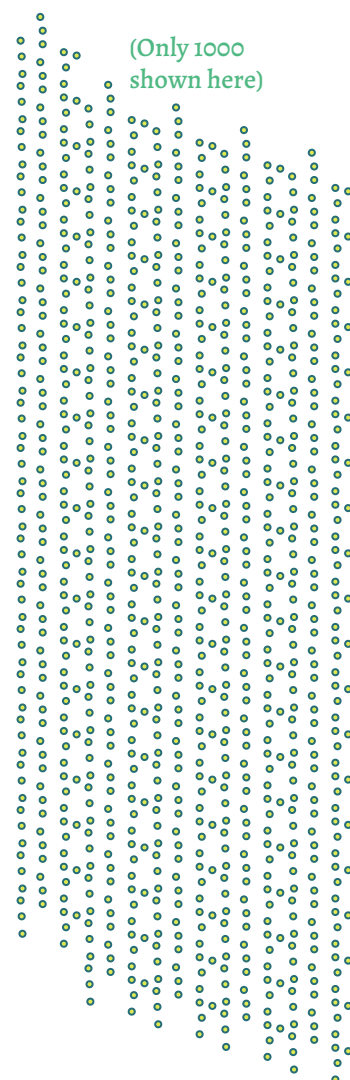
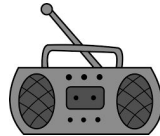
Alexandar Mechev, Leiden University

Overview

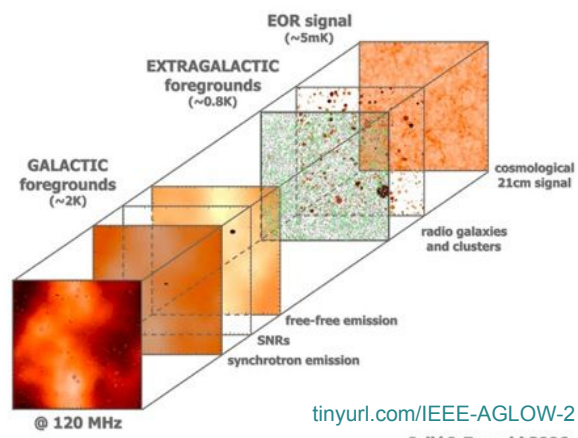
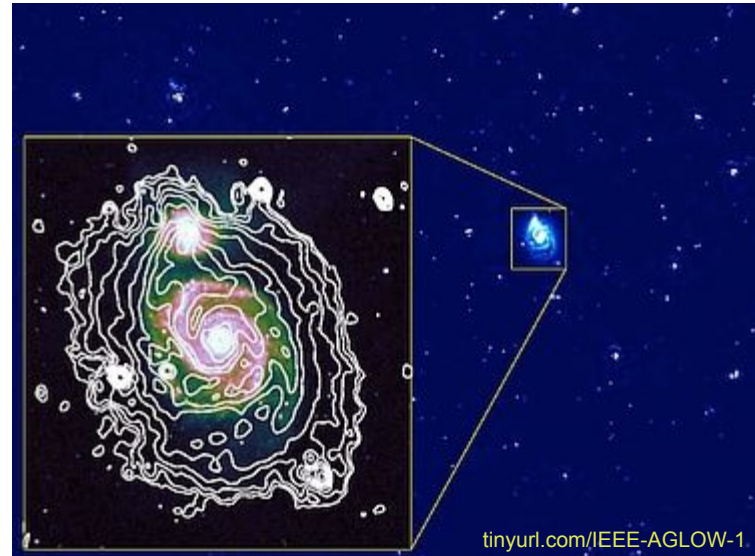
- Radio Astronomy entering new age
- LOFAR creates PB/yr
- Need for e-infrastructure
- Users need processing

LOW Frequency Array

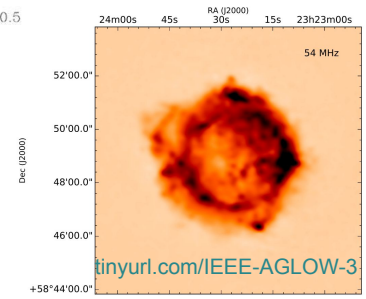
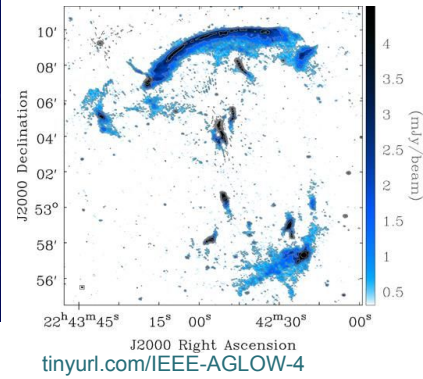
7000 Antennas
1900 km baselines
250 Gbps raw data
80 Gbps correlated
10-240 MHz



LOFAR Science



tinyurl.com/IEEE-AGLOW-2
Jelić & Zaroubi 2006



University vs e-infra

University

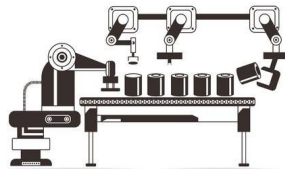
- Interactive
- Targeted
- Low throughput
- Tinkering
- Limited space
- <10 datasets



Courtesy: geogunews.com

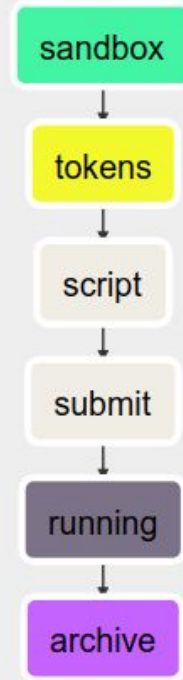
E-infra

- Automated
- Broad
- High throughput
- Fixed workflow
- More space
- >15 datasets



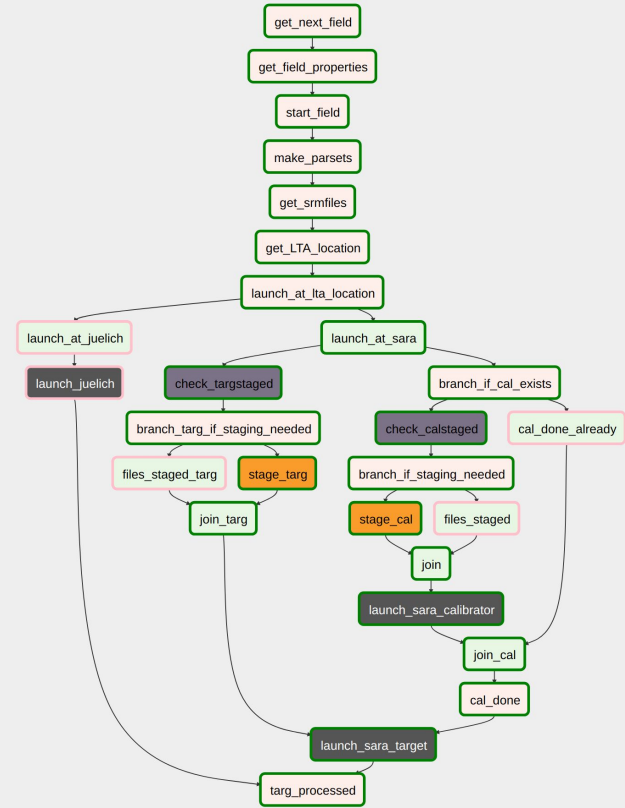
Sample Workflow 1

Compressing results and
re-uploading



Sample Workflow 3

Direction Independent Calibration at 2 clusters



Future Work

Front-end + REST API

Authentication

Deciding on parameters