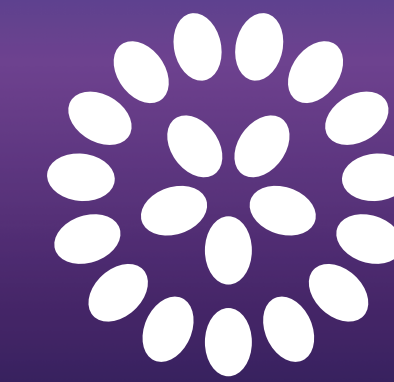


COPLI – Creating a FAIR Open Science Pipeline for high-resolution LOFAR Imaging



OSCARs
Open Science Clusters' Action
for Research & Society

COPLI is a project focused on Creating a FAIR Open Science Pipeline for high-resolution imaging using the LOFAR radio telescope. By processing extensive datasets, COPLI aims to produce high-quality radio images that enhance our understanding of galaxy formation and evolution.



ESCAPE
Astronomy, Nuclear and Particle
Physics

Challenge

The lack of automated pipelines for processing the vast data volume of deep radio images with sub-arcsecond resolution has hindered the utilisation of all available LOFAR stations, resulting in images with significantly lower resolution and sensitivity.

Solution

A, FAIR, interoperable and sustainable processing pipeline for widefield high-resolution LOFAR imaging, capable of running in a (largely) automated fashion on large-scale computing infrastructures. All science-ready data products will be ingested into a FAIR and trusted repository that is federated with EOSC.

Scientific Impact

The availability of the images to the entire community will facilitate numerous other radio and multi-wavelength astronomical studies. Moreover, COPLI will serve as an inspiring example of how Open Science can contribute to advancing research and knowledge in the field of astronomy.

Partners

Leiden University