Bridging Gaps in Heliospheric Radio Data Analyses

Nicolina Chrysaphi

INAF – IAPS, Rome, Italy



Alliance Meeting, Rome, Italy

20 October 2026

This work was supported by the Space It Up! project funded by the Italian Space Agency, ASI, and the Ministry of University and Research, MUR, under contract n. 2024-5-E.0—CUP n. I53D24000060005.

ORCID.org

INAF
ISTITUTO NAZIONALE
DI ASTROFISICA
nicolina.chrysaphi@inaf.it

Workshop aims

Motivation: Broader scientific use of heliospheric radio data remains limited

→ several barriers for (new) users

User challenges:

- Limited awareness of instruments, available data products, and access methods
- Quick-look plots not always available/easy to find
- Need to handle diverse range of complex data formats + metadata
- Insufficient documentation, or difficult to find

Bridging Gaps in Heliospheric Radio Data Analyses

Aim: provide solutions to improve data usability

→ Team of radio heliophysicists + scientific software developers



INAF
ISTITUTO NAZIONALE
DI ASTROFISICA
nicolina.chrysaphi@inaf.it

Workshop outputs

1. Curated a **catalogue of ground/space-based radio instruments**
   - Provides key instrument and data information
   - Links to data sources, quick-look plots, etc.

2. Surveyed + compared existing **analysis tools**
   - Identified aspects to improve → Implemented + published several improvements

3. Shared **example (Jupyter) notebooks** on handling radio data
   → Using data from different instruments + combining them

4. Produced a **roadmap for interoperable heliospheric radio data**
   → Provided recommendations for the community

5. Initiated the development of an **open-source modular data container**
   → To be integrated into SunPy

GitHub

Everything is publicly available + open source!

* Details will be published in a white paper (Chrysaphi et al. (in prep.))

INAF
ISTITUTO NAZIONALE
DI ASTROFISICA
nicolina.chrysaphi@inaf.it

Reach out + Get involved!

Website

GitHub

Chat room

We encourage any feedback, suggestions, and contributions!

→ **Anyone can contribute directly via GitHub**

https://github.com/LC-radio-workshop

+ others remotely

