GMRT workshop

SKA Precursor Data Analysis Workshop

Our target audience is young researchers and students, with a group size of about 10 participants to encourage active communication between attendees and instructors. The focus will be on low-frequency (MHz band) radio observations.

Proposed Content We would like the workshop to include: - Introduction to MHz band radio astronomy - Overview of GMRT/LOFAR - Science with GMRT/LOFAR - How to access GMRT/LOFAR data - Hands-on data analysis using GMRT/LOFAR data

Data Analysis Session We would appreciate your input on the following: 1. Considering our target audience (beginners who may have experience with radio observation data but not specifically with GMRT/LOFAR), what level of analysis do you think is achievable in one day for each instrument? 2. Would you recommend assigning any pre-workshop homework to participants? 3. We can use NAOJ's analysis server for the workshop. Are there any specific software requirements we should install in advance?

Our attendees have a wide range of scientific interests, including cosmology, the Epoch of Reionization, astrophysical jets, galaxies, planets, terahertz radiation, galaxy clusters, and magnetism. Given this diversity, we understand it may be challenging to cover all these topics in depth. Therefore, we would greatly appreciate it if you could focus on teaching the fundamental knowledge and techniques required to work with LOFAR data. This approach would provide a valuable foundation for all participants, regardless of their specific research areas.

We are preparing an SKA-Precursor tutorial. We plan to have some introduction of low frequency(<1GHz) radio science and hands-on data analysis tutorial. We would like to invite you to be our instructor of the tutorial. We want you to lecture us on how to use spam.

A hands-on tutorial using the SPAM pipeline is certainly possible when carefully prepared, in combination with a lecture on the processing steps contained within the pipeline and an explanation as to why these are necessary. I've done something similar in the past. Note that the pipeline was primarily designed with the GMRT in mind, so a tutorial based on GMRT data would make most sense. VLA low-band data may also be usable.

It will be held at NAOJ Headquarters in Mitaka, Tokyo. This is an isolated event. Of course, we will provide more information about the tutorial and transportation.

16 students, 2 LOC members → 18 accounts

Rough outline:

* intro to GMRT * intro to LF radio interferometry ** special considerations: rfi, wide-field, ionosphere * ionospheric distortions * approaches to calibration

* Allegro compute system ** navigating desktop * GMRT archive * GMRT data & log file * getting SPAM (update documentation) * activating env and SPAM

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