

Demystifying Radio Astronomy: Fundamentals And Data Exploration

Krittika Summer Projects

Week 5

Radio astronomy observation basics

This week, we will try to image the protoplanetary disk TW Hydra. The data that will be used for this task was obtained from the interferometer Atacama Large Millimeter Array (ALMA).

- The imaging will be carried out in CASA. Please use the following link to download the data and follow the instructions to image the source of interest: https://casaguides.nrao.edu/index.php?title=First_Look_at_Imaging_CASA_6.4
- Once you are done with the imaging process, look into the CASA tasks `imstat` and `imfit`. These tasks help you to calculate the RMS and flux density of a source in the image. Try to calculate the flux density and the error in the flux density. You can reach out on Slack if you are stuck with this.