Spectral Filtering Lab

AIMS

- Identify dominant timescales using a periodogram on variables and region of interest
- Filtering for equatorial waves in zonal-wavenumber and frequency space
- Visualise filtered data (e.g., Hovmoller of equatorial averaged OLR which has been filtered for specific equatorial waves)
- Visualise the power spectrum of filtered data in wavenumber frequency space
- Make composites using climate indices (e.g., MJO phase composites using RMM indices)

GETTING STARTED

Login to are@NCI (https://are.nci.org.au/pun/sys/dashboard/)

1. Launch **Gadi Terminal** on are@NCI

   Copy the Jupyter Notebook for the Spectral Filtering Lab to your home directory:

   cp /g/data/hh5/tmp/CLEX-WinterSchool-2024/notebook/Spectral_Filtering_Lab_cleancopy.ipynb $HOME

2. Launch **JupyterLab**

   Set to the following values:

   Walltime (hours): 4
   Queue: hugemembw
   Compute Size: medium
   Project: w40 (or your project)
   Storage: gdata/hh5+scratch/w40+gdata/w40 (replace w40 with your project)

   Click on **Advanced options** and set to the following values:

   Module directories: /g/data/hh5/tmp/CLEX-WinterSchool-2024/modules/
   Modules: PyWinterSchool

   Then click on **Launch**