

# Tutorial: How to analyse 3D astrophysical data cubes

*Thursday 17 August 2023 08:00 (1h 20m)*

Brief explanation on astrophysics behind galaxies and their neutral hydrogen (HI content). Reading in fits data cubes (3D spectral line data - HI data of a galaxy). Plotting slices of the 3D data cube and making moment maps. Downloading astronomical images from a database (for the same galaxy as the HI data). Making an overlay of the HI data onto an optical image. Calculating some basic statistics for the spectra. Averaging the spectra for the galaxy. Calculating the HI mass of a galaxy. Fitting a Gaussian to spectra

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