Data Reduction

- Cotter
- Web Services
- Birli

Git repositories

- MWA Github: MWA's public code repositories can be found at this link.

Tutorials

In 2016, CIRA hosted three MWA data reduction workshops to introduce to new staff and students to working with MWA data. We have saved PDFs of all of the slides, and recorded the lecture parts of the course. The topics covered, in chronological order, were:

- An introduction to Radio Interferometry, in an MWA context (John Morgan) videoslides
- The MWA 128T system (John Morgan) videoslides
- Supercomputing at the Pawsey Centre (Paul Hancock) videoslides (needs updating for 2018)
- Widefield imaging (Natasha Hurley-Walker) videoslides
- (This is a good point to read through the workshop slides and try following along.)
- Image projections and source-finding (Paul Hancock) videoslides
- Flagging, sidelobes, weighting, and self-cal (Natasha Hurley-Walker) video (see workshop slides)
- Scheduling (John Morgan) videoslides
- Database tools (John Morgan) videoslides
- Mosaicking (Natasha Hurley-Walker) videoslides
- Flux calibration (Natasha Hurley-Walker) videoslides
- Position / direction-dependent calibration (Natasha Hurley-Walker) videoslides
- There are workshop slides (Natasha Hurley-Walker) for working through the example scripts, which are checked in to MWA_Tools /mwadr_examples/ . Due to interactive nature of the workshop, there are no videos associated with these slides, but they are hopefully self-descriptive enough to follow if you have an account on Galaxy. There is also a short gallery of "funnies" (Natasha Hurley-Walker) i.e. images with deleterious effects in them, which may help people diagnose issues with their data. If you are really keen, the unedited videos of day one and day two of the second DR workshop are also available.

Useful links

- CASA: the *Common Astronomy Software Applications* package, for post-processing radio astronomy data. The package can process both interferometric and single dish data. The CASA infrastructure consists of a set of C++ tools bundled together under an iPython interface as data reduction tasks. This structure provides flexibility to process the data via task interface or as a python script. In addition to the data reduction tasks, many post-processing tools are available for even more flexibility and special purpose reduction needs.
- NRAO Summer Synthesis Imaging 2014 talks
- ADS PDFs of the "white book" (Synthesis Imaging in Radio Astronomy II)