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Introduction to CASA

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CASA

- **C**ommon **A**stronomy **S**oftware **A**pplications
- Developers: NRAO, ESO, NAOJ, CSIRO & ASTRON
- Target Instruments: ALMA & VLA but works for other telescopes
- Homepage: https://casa.nrao.edu
- Documentation: https://casa.nrao.edu/casadocs
- Tutorials: https://casaguides.nrao.edu
- Latest version: v6.7.0
- We will use v6.5.4 [LINUX] & v6.6.5 [MacOS] for this school
- Start CASA by typing **casa** in the command prompt

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Finding help in CASA

- **tasklist** — to get list of available tasks
- **taskhelp** — a one-line explanation of all available tasks
- **help <taskname>** — detailed help for the specified task
- **inp <taskname>** — lists available parameters for a given task

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The Measurement Set

- Measurement Set (or **MS**) is a native casacore format
- From the terminal, an **MS** just looks like a directory (with sub-directories)
- You can think of it as a collection of tables

	ANT 1	ANT 2	UVW	DATA	CORRECTED_DATA	FLAG	…	Column N
Row 1								
Row 2								
Row 3								
…								
Row N								

- Each row corresponds to a unique **Time** and **Baseline**

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Now let’s test our casa installation…