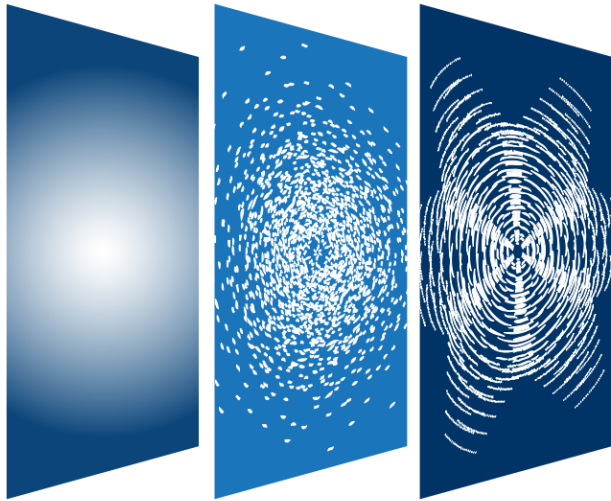


Installing CASA

Stefanie Mühle
March 2019

The background of the slide features several thick, light gray, wavy lines that flow from the bottom left towards the top right, creating a sense of movement and depth.

What is CASA?



CASA

Common Astronomy
Software Applications

- software for data reduction and analysis of *next generation* radio astronomical data
- Tools written in C++
- interactive iPython interface
- developed by **NRAO (USA)**, ESO (Europe), NAOJ (Japan), ASIAA (Taiwan), CSIRO (Australia), ASTRON (Netherlands)

Installing CASA

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About CASA

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About CASA

CASA, the *Common Astronomy Software Applications* package, is being developed with the primary goal of supporting the data post-processing needs of the next generation of radio astronomical telescopes such as [ALMA](#) and [VLA](#). 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.

CASA is developed by an international consortium of scientists based at the National Radio Astronomical Observatory (NRAO), the European Southern Observatory (ESO), the National Astronomical Observatory of Japan (NAOJ), the Academia Sinica Institute of Astronomy and Astrophysics (ASIAA), the CSIRO division for Astronomy and Space Science (CASS), and the Netherlands Institute for Radio Astronomy (ASTRON) under the guidance of NRAO.

CASA
Common Astronomy Software Applications

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1) go to the CASA homepage:
<https://casa.nrao.edu/>

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2) go to the section “Download”
and scroll down ...

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News

Feb 15, 2019: [CASA 5.4.1-32 and 5.4.0-70 patch-releases are now available](#) for general use and pipeline processing. VLA users are encouraged to use CASA 5.4.1-32 for data processing, while ALMA users should rely on 5.4.0-70. More information on these patch-releases can be found below.

June 11, 2018: [CASA Docs](#), the official CASA documentation, now includes all tasks descriptions plus general pages on data reduction in CASA.

Obtaining the CASA Release

Supported Operating Systems

The latest CASA release 5.4.1 is available for the following operating systems:

- Linux
 - Red Hat 7
 - Red Hat 6
- Mac OS X
 - macOS 10.13 (High Sierra)

[CASA Docs](#): Official documentation now includes all [tasks](#)!

Help us improve CASA: short [user survey](#)

Installing CASA

Downloads

Please follow these links for downloading the CASA system. Installation instructions are provided in this page.





















CASA *Pre-releases* are code under development. They are less tested and not well documented.

Warning pipeline use: The ALMA and VLA pipelines are supported. *These pipeline-supported versions show the correct CASA pipeline version!* The correct pipeline version is shown below.

ALMA 5.4.0-70 and VLA 5.4.1-32 patches are

available for download below. Compared to the original 5.4.1 and 5.4.0 releases, these new patches contain a fix to a bug that affected mostly mosaic images with limited number of integrations per pointing, in that the signal-to-noise in the first pointing (typically a corner) could be noticeably higher than in the rest of the image. Details can be found in the [CASA Docs 5.4.1 Release Notes](#) and the [CASA Docs 5.4.0 Release Notes](#)

... to get the latest version
according to your operating system
Release = stable version
Pre-release = development version

	CASA		Pipelines	
	CASA Release 5.4.1-32	CASA Pre-releases	ALMA 5.4.0-70	VLA 5.4.1-32
Linux Packages	Installation			
Red Hat 7	 	 	 	 
Red Hat 6	 	 	 	 
Mac OS X Packages	Installation			
OS X 10.14 (Mojave)		 		
OS X 10.13 (High Sierra)	 	 	 	 
OS X 10.12 (Sierra)	 	 	 	 

Installing CASA

Older Releases

[RedHat 7 \(CASA 4.7+\)](#)

[RedHat 6 \(CASA 4.3+\)](#)

[RedHat 5 \(CASA 4.3 - 4.6\)](#)

[RedHat \(CASA <=4.2.2\)](#)

[MacOS 10.13 \(CASA 5.3+\)](#)

[MacOS 10.12 \(CASA 5.0+\)](#)

[MacOS 10.11 \(CASA 4.6+\)](#)

[MacOS 10.10 \(CASA 4.4 - 4.7\)](#)

[MacOS 10.9 \(CASA 4.4 - 4.5\)](#)

[MacOS 10.8 \(4.3\); OSX 10.8 \(<=4.2.2\)](#)

[MacOS 10.7](#)

[MacOS 10.6](#)

[MacOS 10.5](#)

- [Release information](#) previous casa versions

Scroll down even further to get one of the older CASA versions

Linux users

Mac users

Other Links

[CASA Source Code](#) -- [\(Notes\)](#).

[Contributed CASA scripts](#)

If you need additional help, please consult our [NRAO helpdesk](#) or [ALMA helpdesk](#)

Installing CASA

Location:

Name	Last modified	Size
Parent Directory		-
casa-release-5.4.1-32.el6.tar.gz.md5	15-Feb-2019 11:05	67
casa-release-5.4.1-32.el6.tar.gz	15-Feb-2019 11:05	581M
casa-release-5.4.1-31.el6.tar.gz.md5	10-Dec-2018 13:45	67
casa-release-5.4.1-31.el6.tar.gz	10-Dec-2018 13:44	578M
casa-release-5.4.0-70.el6.tar.gz.md5	11-Feb-2019 11:18	67
casa-release-5.4.0-70.el6.tar.gz	11-Feb-2019 11:18	580M
casa-release-5.4.0-68.el6.tar.gz.md5	01-Oct-2018 11:14	67
casa-release-5.4.0-68.el6.tar.gz	01-Oct-2018 11:13	577M
casa-release-5.3.0-143.el6.tar.gz.md5	01-Jun-2018 10:40	68
casa-release-5.3.0-143.el6.tar.gz	01-Jun-2018 10:40	802M
casa-release-5.1.2-4.el6.tar.gz.md5	18-Jan-2018 19:28	66
casa-release-5.1.2-4.el6.tar.gz	18-Jan-2018 19:28	1.0G
casa-release-5.1.1-5.el6.tar.gz.md5	18-Oct-2017 10:10	66
casa-release-5.1.1-5.el6.tar.gz	18-Oct-2017 10:09	870M
casa-release-5.1.0-74.el6.tar.gz.md5	25-Sep-2017 10:45	67
casa-release-5.1.0-74.el6.tar.gz	25-Sep-2017 10:45	810M
casa-release-5.0.0-218.el6.tar.gz.md5	11-Jul-2017 09:46	68
casa-release-5.0.0-218.el6.tar.gz	11-Jul-2017 09:46	725M
casa-release-4.7.1-el6.tar.gz.md5	08-Feb-2017 12:15	64

In class, we will use CASA version 5.1.1-5

Installing CASA

Installation overview:

- No root or sudo permissions required!
- go to https://casa.nrao.edu/casa_obtaining.shtml
- download CASA release 5.1.1-5
- [optional: check download with md5sum]
- follow the installation instructions on the following slides according to your operating system
- all executables will be in `<yourpath>/<yourrelease>/bin`

Installing CASA

Linux installation:

- select CASA release **5.1.1-5** for your operating system (for Ubuntu and other Debian-derivatives use RedHat 6)
- save `casa-release-5.1.1-5.el<n>.tar.gz` to your software directory (<n> = 6 or 7, depending on your operating system)
- **`tar xzvf casa-release-5.1.1-5.el<n>.tar.gz`**
- add the executables to your PATH
 - bash: **`export PATH = $PATH: <yourpath> casa-release-5.1.1-5.el<n>/bin`**
 - csh: **`set path = ($path <yourpath> casa-release-5.1.1-5.el<n>/bin)`**
- check that it worked by typing **`which casa`** in a new terminal

Installing CASA

Mac installation:

- select CASA release **5.1.1-5 for your OS version**
- download CASA disk image to disk (self-contained Mac application)
- [open the disk image file, if your browser does not do so automatically]
- drag the CASA application to your Applications folder
- eject the CASA disk image
- double-click the CASA application to run it for the first time
- optional: create symbolic links to the CASA version and its executables (administrator privileges required), which will allow you to run `casa`, `casaviewer`, `casaplotms`, etc. from any terminal command line. To do so, run `!create-symlinks` from a CASA prompt.

Further reading

- <https://casa.nrao.edu>
in particular:
- https://casa.nrao.edu/casa_obtaining.shtml (and links on that page)

CASA User Reference and Cookbook:

- https://casa.nrao.edu/ref_cookbook.shtml
- https://casa.nrao.edu/casa_gettingstarted.shtml
- <https://casa.nrao.edu/using.shtml>