

# **Vissage:**

a JVO-ALMA Desktop Application

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# Vissage stands for

VISualisation Software for Astronomical Gigantic data cubEs

A FITS browser for viewing FITS data on your  
LOCAL ENVIRONMENT

Its main aims include:

- to view FITS data cubes in a variety of expressions (cuts)
- to search for other data via JVO based on the data displayed
- to view multiple images in a free layout
- etc.

## Requirement:

- Java Runtime Environment (JRE) Version 6 or 7
- .NET (for Windows users only)

## To Launch Vissage:

- Download the tarball from JVO website:  
<http://jvo.nao.ac.jp/download/Vissage/>
- Unzip the tarball to get the executables (vissage.jar and vissage-fe.exe) together with JVO-ALMA sample FITS files

(For Windows Users)

- Put the folder containing 'vissage.jar' and 'vissage-fe.exe' anywhere you like
- Double-clicking the icon of 'vissage-fe.exe' will run vissage with an empty view.
- Drag-and-dropping FITS icon(s) onto the icon of 'vissage-fe.exe' will execute vissage and open the dropped files.

(For UNIX/Mac Users)

- Type 'java -jar /path/to/vissage.jar' to run vissage with an empty view.
- Add FITS files names after the above command to run vissage and open the given data files (ex. % java -jar vissage.jar foo.fits bar.fits baz.fits ...).

## New Features (as of 6 Nov 2013):

- Full-sized Suprime-Cam image (about 450MB) can be viewed.
- In case of memory shortage, vissage shows a warning message and does not open specified FITS images.
- **\*\*IMPORTANT\*\*** The command to set P-V cut is changed to **Shift+MouseClicked** from **Ctrl+Shift+MouseClicked (simplified)**.
- P-V diagram now available on Mac OS X.

## Functionality implemented so far:

- Integrated intensity map
- 1<sup>st</sup> / 2<sup>nd</sup> moment map
- Flipbook (as ds9 shows)
- Channel map
- P-V diagram
- Several color sets / colour scales available
- Panning and zooming
- Displaying Subaru(MOIRCS, SCam), HST(WFPC2), Chandra images
- Connect with JVO ALMA Web Quick Look Service
- Connect with JVO Subaru Image Cutout Service

## Functionality to be implemented in the near future:

- 2D view for arbitrary combination of data cube axes
- Moment maps (of arbitrary order), line ratio map
- Colourbar
- Overlaying two or more images
- Contour expression
- File output (GIF/JPEG/PDF/EPS/... + movie also?)
- etc.

# How to use:

## 1. Open FITS data after launching

- Right-click to open a menu and select 'Open FITS File', or
- Drag-and-drop FITS icon(s) on Vissage window.

## 2. Image panning

- Left single-click: the clicked point jumps to the center
- Left double-click: jump back to the original position with the center of data at the image center
- Dragging with left button: for panning

## 3. Zooming

- Push buttons '+' or '-' which appear when entering mouse pointer into image

## 4. Colour

- Colourset and scale can be changed via a right-click menu.
- Dragging with right button: for changing colours/contrast (just like ds9)
- Right double-click: reset colour/contrast

## 5. Frequency range can be changed with the two sliders at the top-right side

## 6. P-V diagram

- P-V cut can be set on any 2D viewings including moment maps and channel map.
- Select 'P-V Diagram' in the right-click menu. A new viewpanel to show P-V diagram appears.
- **Shift + mouse click** to set P-V cut and its width (changed from the previous version).

## 7. Layout of images can be changed by dragging just outside images after increasing x-/y-division of the main window (by right-click menu)

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Inquiries, requests and/or bug reports (especially for Mac, since  
vissage is not yet tested on them) are highly appreciated.

Thank you for your cooperation.