

# DV Cheat Sheet

## 1. Setup:

- Erase previous observer settings: before logging in to XUI, check **Reset DV on login**
- A commonly used setup (see Figure) is selected in the **Display Options tab** as follows:
  - *ActiveDpy 0*, *DisplayType Image*, *Buffer A*
  - *ActiveDpy 1*: *DisplayType XLineCut*, *Buffer A*
  - *ActiveDpy 2*: *DisplayType Image*, *Buffer C*
  - *ActiveDpy 3*, choose one of:
    - *DisplayType QuickLook*, *Buffer F*: flux or S/N spectrum latest extracted A-B pair (S/N is per pixel, A-nod only).
      - *Buffer G* is for all A-B pairs combined.
    - *DisplayType Pointer*, *Buffer C*: S/N based on photon count (per resolution element, A+B nod)
      - *Buffer D* is for all A-B pairs combined.

## 2. Mouse actions:

- Draw a line: shift-[Middle Mouse Button]
- Draw a box: [Middle Mouse Button]
- Move box: [Left Mouse Button]
- Change color scale: [Right Mouse Button]

## 3. Zooming and scaling on **Display Options tab**:

- zoom in: draw box → click *Box Zoom*
- zoom out: click **Full Image**

## 4. Make cross cut of, e.g., nod **A**, using **Display Options tab**:

- *ActiveDpy 0*: *DisplayType Image*, *Buffer A*
- *ActiveDpy 0*: draw line with shift-[Middle Mouse Button]
- *ActiveDpy 1*: *DisplayType XLineCut*, *Buffer A*
- *ActiveDpy 1*: click **Set Endpoint From Line**
- determine image quality: click **Gaussian Fit** (*ActiveDpy 1*)

## 5. Move telescope using guider (Guidedog, Kyle, MORIS) images using **Offset tab**:

- draw line on image with shift-[Middle Mouse Button]
- click **Offset Telescope**

## 6. Estimate broad-band magnitude using guider (Guidedog, Kyle, MORIS) images, on **A** nod, using **Display Options tab**:

- *ActiveDpy 0*: *DisplayType Image*, *Buffer A*

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- *ActiveDpy 0*: draw small box next to star with [Middle Mouse Button]
- *ActiveDpy 1*: DisplayType **Stats**, Buffer **A**
- *ActiveDpy 1*: click **Set Sky**
- *ActiveDpy 0*: move box on top of star with [Left Mouse Button]
- *ActiveDpy 1*: read broad-band magnitude in display

The screenshot shows the IRTF Data Viewer interface with four displays and a control panel. The top-left display (0) shows an image with a white line drawn across it. The top-right display (2) shows another image. The bottom-left display (1) shows a red line plot with a yellow bar at the top. The bottom-right display (3) shows a green line plot. The control panel at the bottom has tabs for Display Options, Math, Offset, Macros, Setup, CommandIO, and About DV. The ActiveDpy buttons are 0, 2, 4, 1, 3. The DisplayType is set to XLineCut. The Buffer buttons are A, C, E, G, B, D, F, H. The Auto Scale is set to Fixed. The Set Endpoint from Line button is highlighted. The Range is set to 2600 to 4016.

Display: **0**  
DisplayType: **Image**  
Buffer: **A**  
Draw line with shift-[Middle Mouse]

Display: **2**  
DisplayType: **Image**  
Buffer: **C**

Display: **1**  
DisplayType: **XLineCut**  
Buffer: **A**

Display: **3**  
DisplayType: **Quicklook**  
Buffer: **F**

**Tab Display Options**

For cross cut on image **A**: draw line in display **0**, then click **Set Endpoint from Line** in tab display **1**

DV is highly configurable. This shows a common set-up. In this example, Display 1 is active, as indicated by the yellow bar, and the darker ActiveDpy button.