

<html><head></head><body><pre style="word-wrap: break-word; white-space: pre-wrap;">To work with an image in IRAF you will first need to start the ds9 program and the IRAF program. Any line beginning with '\$' is what you should type at the command line (without the '\$'). Lines beginning with some letters followed by a '>', e.g. 'ecl>' indicate that you are in IRAF. Comments will be preceded by a '#':

```
$ds9&#amp;#          #starts ds9 in the background.
```

From within ds9 go to File->Open and navigate to the location of your image.

ds9 makes a mapping of pixel value to screen intensity value. The default is to scale linearly between the min and maximum value. You can click and drag with the right mouse button to change the stretch on the image. To change the mapping of pixel value to intensity you can go to the Scale menu and choose a different option. The ones with percentage only plot the central XX% of the pixel values and zscale tries to plot the the pixels with the most information.

Play around with all the different options in DS9 a bit.

If you click on the center mouse button you can center the image at that position.

then

```
$cd                #changes your directory to /Users/&lt;yourlogin&gt;
$xdterm -sb        #starts an xdterm window, which is how you run IRAF
$cl                #starts IRAF: if IRAF ever gets hung, type Ctrl-C and then 'flpr
&lt;ENTER&gt;' (two times) to get it back to normal.
ecl&gt;cd &lt;Imagepath&gt; #changes to whatever the directory is that hosts your images
ecl&gt;imexam         #opens a interactive cursor in ds9. Move cursor into ds9 window.
Typing m gives image statistics wherever your cursor is. Typing 'a' or 'r' give
information about the source that the pixel is located over. 's' gives a surface plot.
Read the imexam man page in IRAF using 'phelp imexam' for more information. Type 'q' in
ds9 to quit IRAF
ecl&gt;imstat &lt;imagename&gt; #gives a set of statistics about the image.

lpar &lt;task&gt;        #lists all of the parameters for &lt;task&gt;
epar &lt;task&gt;        #you can change the parameters, e.g. the fields that are
printed. To edit a line without deleting it, go to that line and type Esc CTRL-k
Once you have edited the parameters type ':wq&lt;ENTER&gt;' to exit the editor.
```

more IRAF docs are available at <http://iraf.noao.edu/docs/>

</pre></body></html>