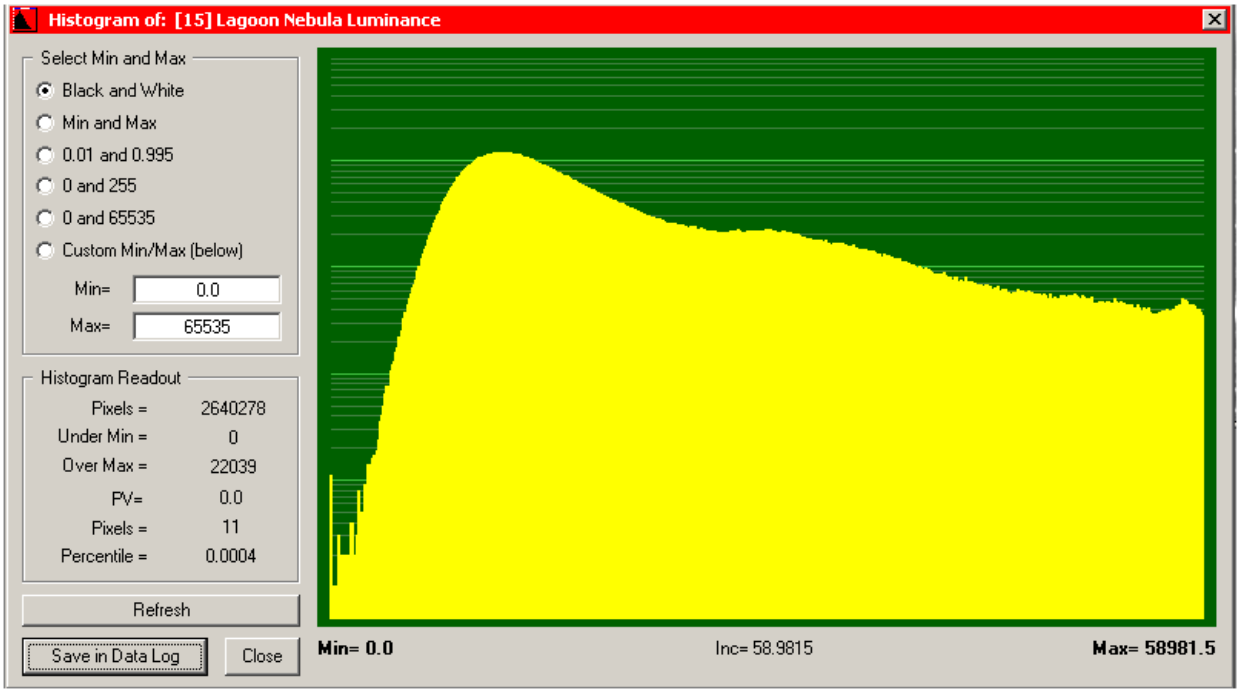
The histogram is a graph of pixel value *versus* the number of pixels having that value.



The Histogram Tool displays the histogram of the Currently Active Image. Because the image consists of floating point values, if actual pixel values were plotted it is conceivable that as many pixel values could exist as there are pixels in the image. Because of this the pixel values are sorted into bins which are evenly spread between the minimum and maximum pixel values found in the image.

Select Min and Max Allows you to select the range of values that you want to explore.
Black and White Sets the range of the histogram to the current Black and White display values. This is the default option.

Min and Max Sets the range of the histogram to the minimum and maximum values found in the image.

0.01 and 0.995 Sets the range of the histogram to pixel values determined by the 0.01 (1%) and 0.995 (99.5%) percentile values.

0 and 255 Sets the range of the histogram to 0 and 255, the standard values found in 8-bit images.

0 and 65535 Sets the range of the histogram to 0 and 65535, the standard values found in 16-bit FITS images.

Custom Min / Max (below) Sets the range of the histogram to values that you enter.

Min= The minimum pixel value of the custom histogram.
Max= The maximum pixel value of the custom histogram.

Histogram Readout Gives informatioon in response to movements of your **mouse** across the

histogram.

Pixels = Thje total number of pixels in the image.

Under Min = The number of pixel less than the minimum value, i.e., off the left side of the histogram.

Over Max = The number of pixels greater than the maximum value, i.e., off the right side of the histogram.

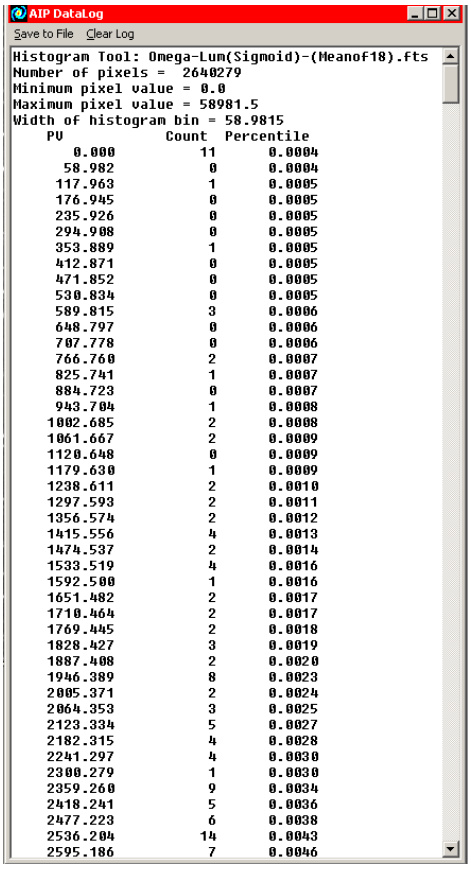
PV = The central pixel value of the bin currently under the **mouse cursor**.

Pixels = The number of pixels contained in the bin currently under the **mouse cursor**.

Percentile = The percentage of pixels with values less than the central pixel value under the **mouse cursor**.

Refresh - Updates the histogram if you change to a new Currently Active Image.

Save in DataLog Save the histogram as a table of values in the DataLog. This table can be exported to Excel or other spreadsheet software.



Note: Under the histogram, you will see the minimum, bin size, maximum values displayed.

Note: AIP4Win's Histogram display plots the logarithm of the number of pixels having each pixel value. This lets you see the full range of pixel values in the image, even if there are only a very few

pixels having those values. Before jumping to the conclusion that a small peak means that many pixels have some value, check the relative numbers. You may see that there are only a few dozen high-value pixels versus 50,000 or more pixels having low to medium values.

The histogram is a powerful tool for evaluating images. Consult the ***Handbook of Astronomical Image Processing*** for more about histograms.