ASIFitsView Manual

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1. Introduction

ASIFitsView is a FITS files viewer that allows you to browse file lists, zoom and rotate images, stretch histograms and so on. It only supports 16bits fits files for now.

2. User Interface

As shown in Figure 2-1 and Figure 2-2, the user interface is divided into 4 parts :

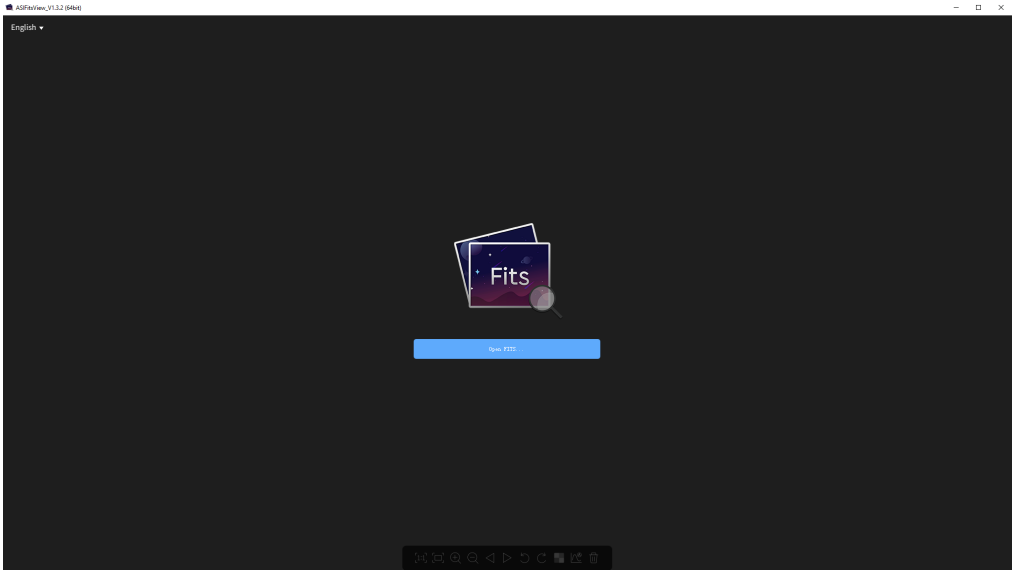

Figure 2-1

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Figure 2-2

A: Title Bar. It shows the software name, version number (bits), and image information, including image name, size, resolution and current number/total number.

B: File List. It shows the image path and all the fits files under this path.

C: Image Process Bar. It contains the functions of Zoom, Rotation, Prev/Next, Bayer Toggle, Histogram, and Delete.

D: Image Display Area.

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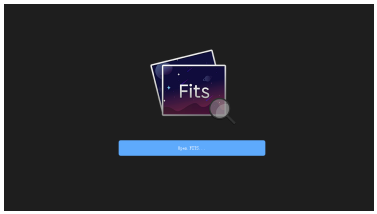

Figure 3-1

① Run ASIFitsView, and click Open FITS... button to open the FITS files. If you want to view multiple images under a path in a quicker way, just open one of the files and the other image files will be automatically imported into File List (Area B).

Figure 3-2

② After opening the file, Image Display Area (Area D) will display the picture, as shown in Figure 3-2.

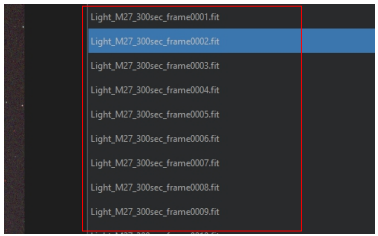

Figure 3-3

③ Click in File List Area (Area B) to switch the image displayed, as shown in Figure 3-3.

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4、Detail Description

① Image Process Bar (Area C) :

Figure 4-1

There are 11 buttons in this area. From left to right: "Set image to 100%", "Set the image to fit the window", "Zoom in", "Zoom out", "Previous", "Next", "Rotate 90 CCW", "Rotate 90 CW", "Bayer trigger", "Histogram setting", "Remove to the recycle bin".

Set image to 100%: The images will be displayed as they come (the original size). If the original size is larger than the frame of Image Display Area (Area D), then it only part of the image will be displayed on your screen.

Set the image to fit the window: Scale the image to fill the frame of Image Display Area (Area D). If the original size of the image is larger than the frame, then it will be shrunk to fit the frame.

Zoom in: Zoom in the image by 10% per time, up to 3200%.

Zoom out: Zoom out the image by 10% per time, minimize to fit the frame of the window.

Previous: Display the previous image. This button is not available when the image is already the first one in File List (Area B).

Next: Display the next image. This button is not available when the image is already the last image in File List (Area B).

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Rotate 90 CCW: Rotate the image 90° counterclockwise.

Rotate 90 CW: Rotate the image 90° clockwise.

⚠ Rotation works for all images !

Rotation does not modify the picture data.

Bayer trigger: This button has four states:

Disabled: The FITS header does not contain Bayer information. ASIFitsView cannot estimate its Bayer type. In this case, it will display mono image and this button will be disabled. If you need to display color image, go to Custom Bayer Format, this button will be available after setting.

Hide: The FITS file is a color image and it contains three channels of data. In this case ASIFitsView will display its color by default and does not provide the option to turn to mono, so it is hidden.

Available and color: The FITS image contains single-channel data and the FITS header contains Bayer information or has a user-defined Bayer type. It is currently displayed in color.

Available and Mono: The FITS image contains single-channel data and the FITS header contains Bayer information or has a user-defined Bayer type. It is currently displayed in mono.

Histogram setting: This button has two states:

Auto: Default state for the software. Open the picture, the software will automatically stretch the histogram.

Manual: It will be changed to this state when the histogram is manually adjusted. Click this button and the histogram setting window will pop up, as shown in Figure 4-2:

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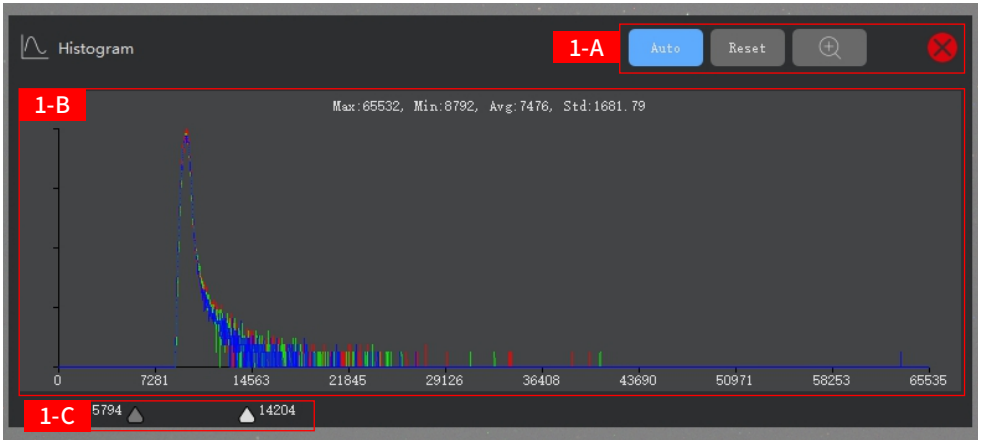

Figure 4-2

The histogram setting window is divided into three parts:

1-A: Contains "Auto", "Reset", "Zoom in"/"Zoom out" and "Close Window" buttons.

"Auto": One-click automatic stretching (using the software's built-in stretching algorithm)

"Reset": Cancel all operations and show the original image directly.

"Zoom in" / "Zoom out": is the default state, click it to zoom in the histogram statistic graph between the two sliders (Area 1-C) to fit the whole histogram window, and click again to restore.

"Close Window": Exit the histogram setting window.

1-B: Histogram display Area. The maximum, minimum, average and standard deviation of the pixel value of the image will be shown at the top.

1-C: Manual stretch slider. The one on the left is the lower limit and the one on the right is the upper limit. Two sliders are not interchangeable and can only be dragged left or right.

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All operations in this area will not change the original image data.

② File List（Area B）

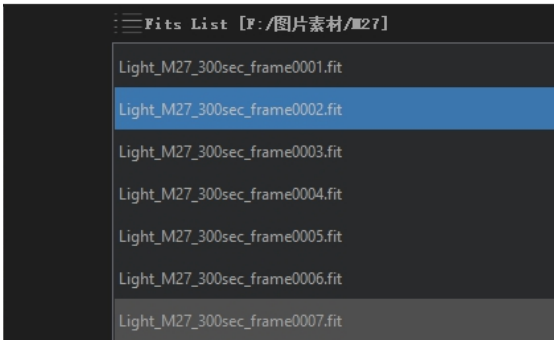

Figure 4-3

This area contains the path information of the opened image and all the FIT files under the same path. The file with blue background color is the picture currently displayed. Click to switch the picture to be displayed. You can also scroll the mouse wheel and pull the scroll bar on the right to display the whole list.

③ Image Display Area（Area D）

Double-click operation: toggle full screen display
Wheel operation: zoom in or out image
Press and hold the left mouse button to drag the display area, and the right mouse button will pop up the menu as shown in Figure 4-4:

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Figure 4-4

Open Fits: Function is equivalent to Open FITS... button.
Save As: Save the content currently displayed in Image Display Area (Area D) as a PNG image.

⚠ The rotation effects will not be remained when saving the image!

Fits Header: View the fits header of the image, as shown in Figure 4-5.

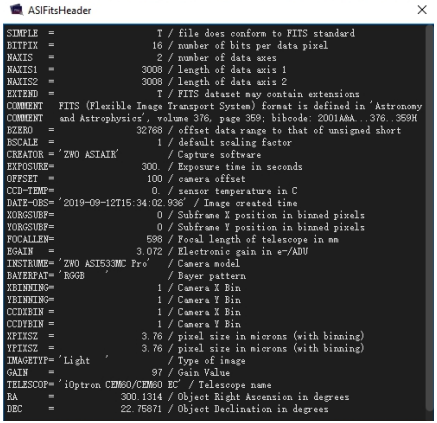

Figure 4-5

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Note the scroll bar on the right - it can be scrolled. If the layout of content is disarranged, as shown in Figure 4-6, you can adjust the layout by adjusting the width of the window.

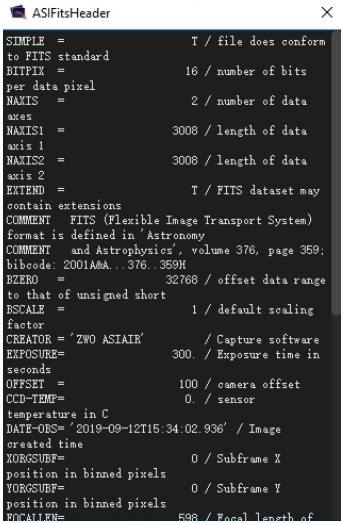

Figure 4-6

Histogram：This function is the same as the histogram setting button in Image Process Bar (Area C).

Custom Bayer Pattern：This option is only visible when the fits header doesn't contain Bayer information. You can set the custom Bayer pattern to display color image, and the pop-up window will be shown as Figure 4-7:

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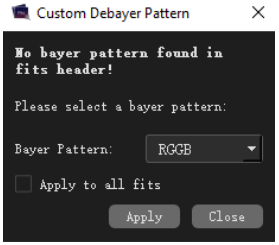

Figure 4-7

Select a Bayer pattern from the Bayer Pattern combine box and click Apply to take into effect.

⚠ Clicking Close will only close the window but will not cancel the custom Bayer pattern.

1) To convert all files in File List (Area B) into custom Bayer pattern, check the option "Apply to all fits".
2) This operation does not modify the original data of the picture.