

## Meade DSI II One Shot Color Camera Tutorial – Practical example by Pete Scully

The Meade DSI II One Shot Color camera is capable of taking breath taking images of M42 in Orion. The procedure used to obtain the image below is as follows.

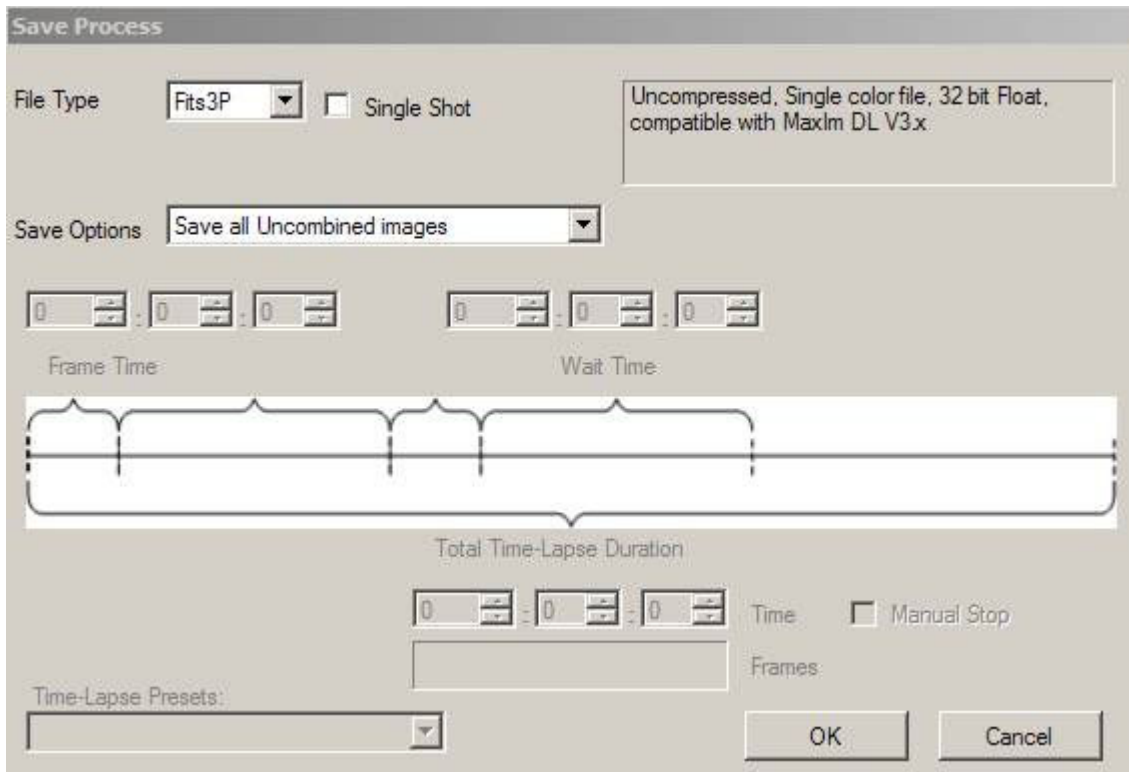


The DSI was attached to a 10" Skywatcher f4.5 Newtonian telescope at prime focus. Tracking was done via a GOTO Synscan on an EQ5 mount.

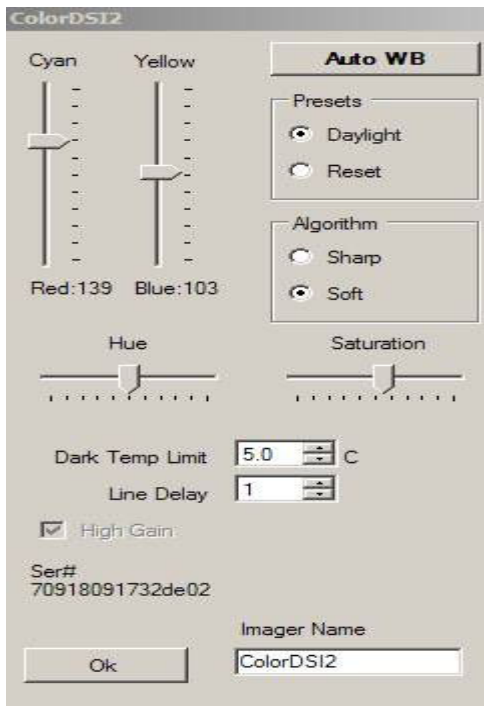
Firstly a bright star "Sirius" was located to allow focusing. M42 was then centered in the screen using the [Meade AutoStar Envisage 7.05 software](#). Settings for the capture were as follows.

**First take your DARKS, full range. This takes approximately 8 minutes.**

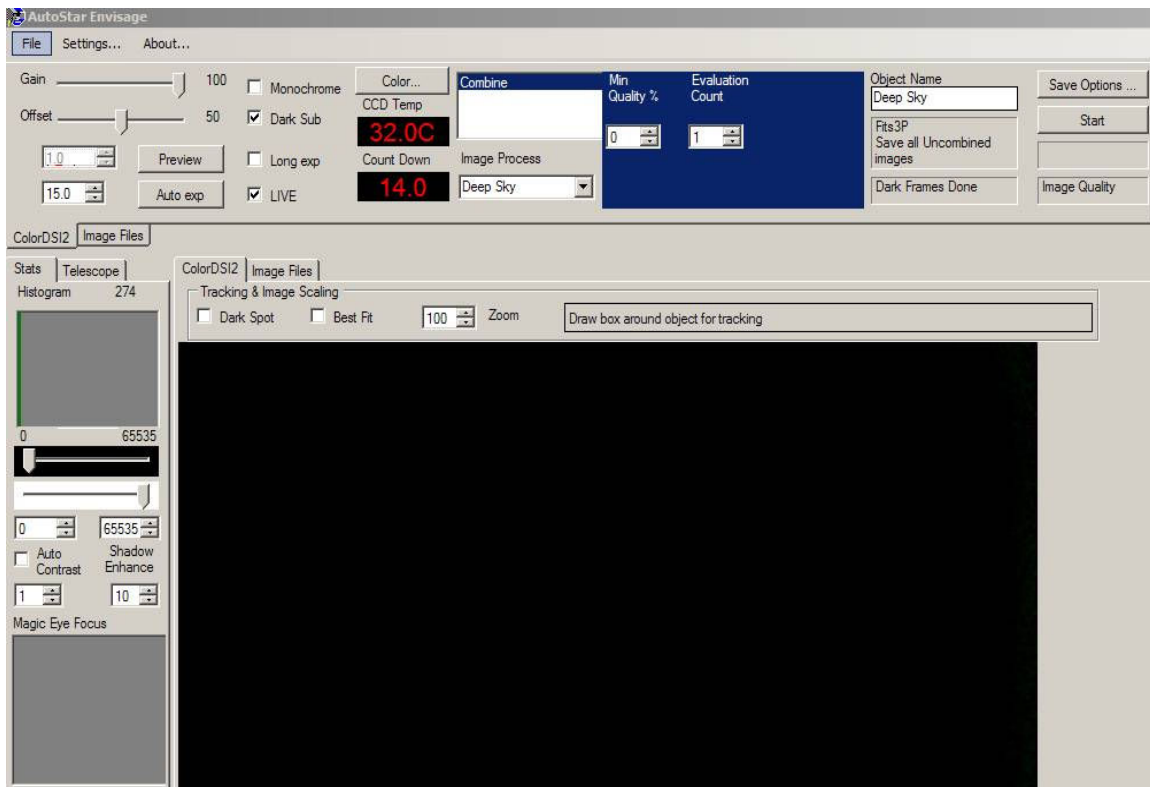
Set the save options as follows.



Set the color options as follows



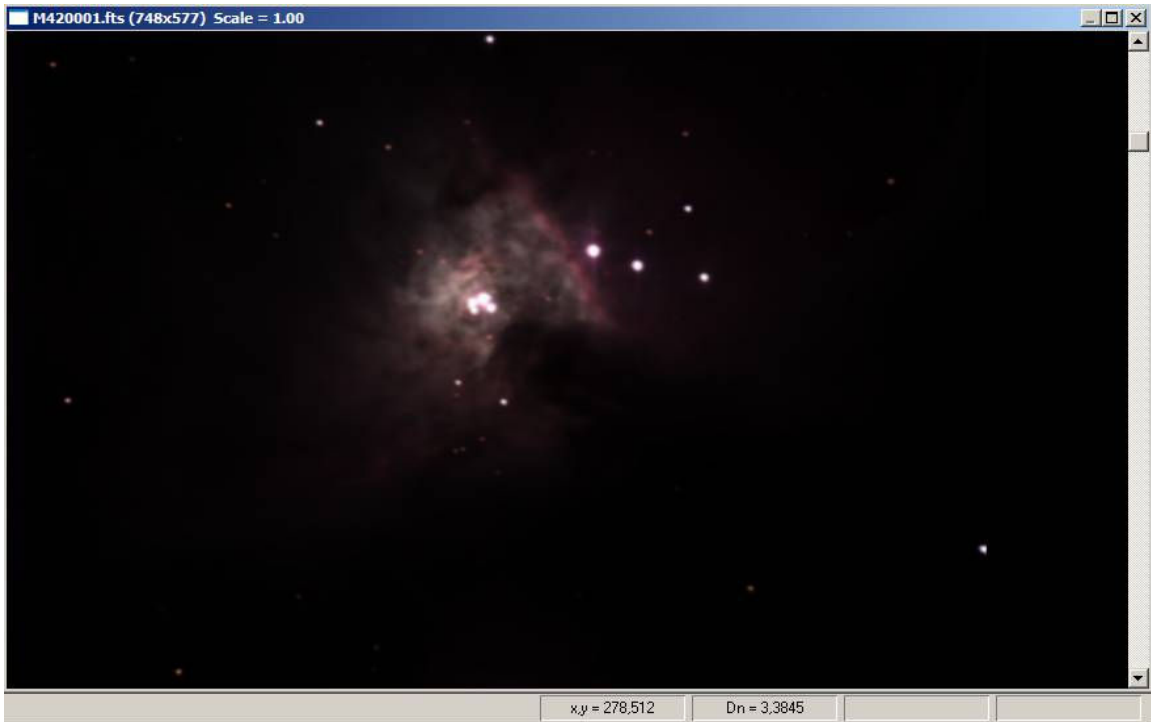
## Set your exposure options as follows



Notice that the auto contrast is un-checked, the black and white slider positions, shadow enhance set to 10, dark sub is ticked, minimum quality and evaluation count set to minimums, Gain and offset settings.

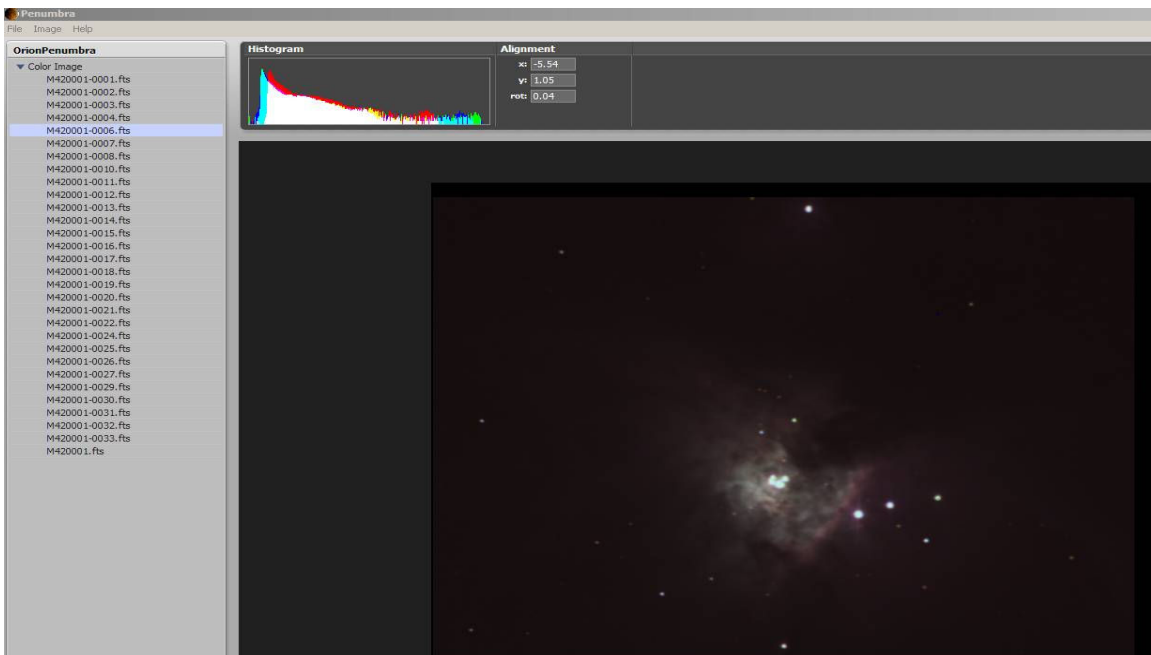
You may play around with the settings a bit, but I find them rather sensitive. The above settings work well for me. Setting the GAIN down to 95 or 90 may be necessary to avoid over exposure of the center region of M42.

You are now ready to take your set of images. For this example 30 exposures were taken. The initial appearance of each of the 30 exposures looks something like this.

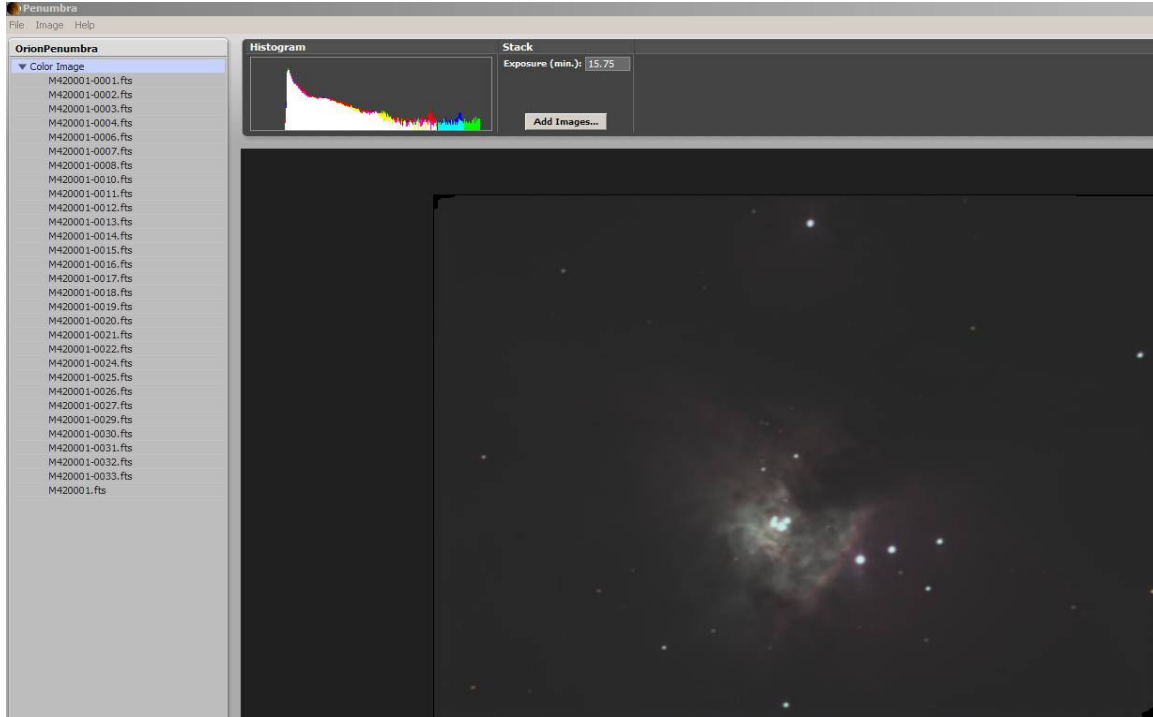


I separate the luminance fits images and only use the RGB images. These I put in a dedicated directory.

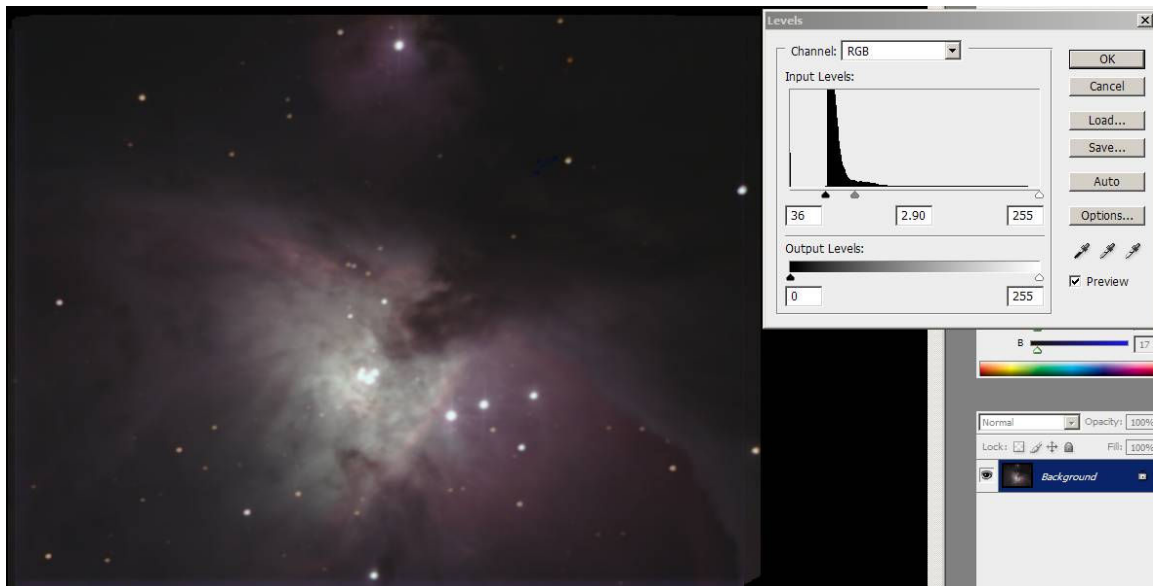
To register and stack these images I use **“Penumbra”**. This is dedicated software written specifically for the Meade DSI. The package is illustrated below. The advantage of this package is that each image can be examined and poor ones deleted. Do a Google search **“Penumbra Meade”**. This software is free for download.



The registered and stacked window looks like this

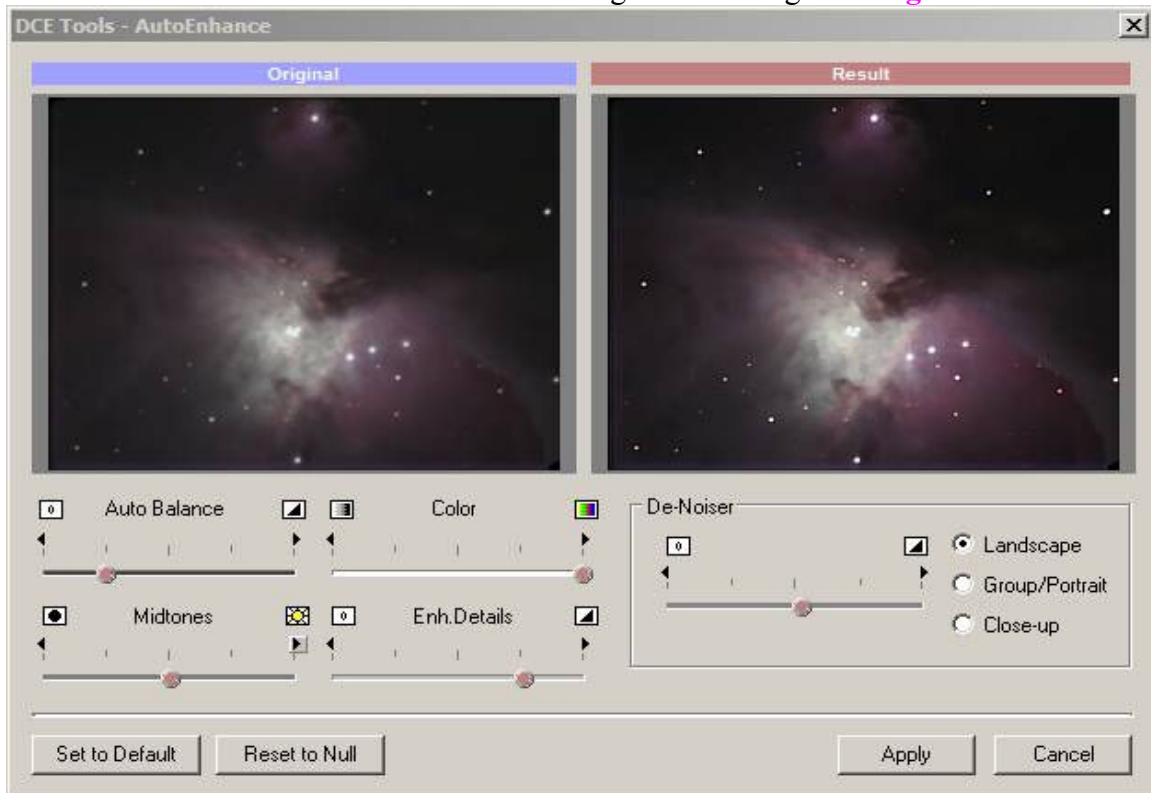


Save the color image for processing in PhotoShop. There is only one option “tif”  
Now for the enhancing process. **Firstly you must process the levels in 16 bits.** I tried “Gimp” but this only allows 8 bits, this was a disaster. I found PhotoShop CS3 ideal. Open the “tif” image in Photoshop and using the level tool, adjust the sliders as indicated below to bring out the structure.

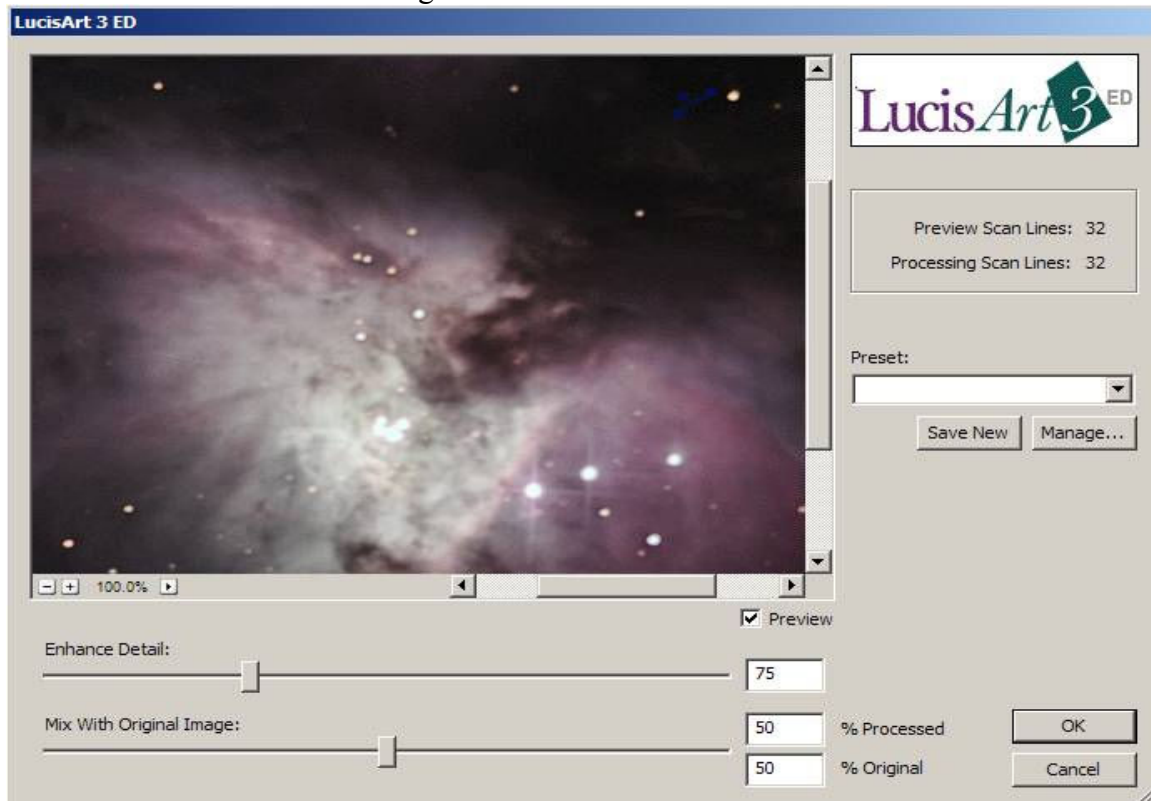


The image is now very much improved, but we can do more. I use a few Photoshop plug-ins for further enhancement.

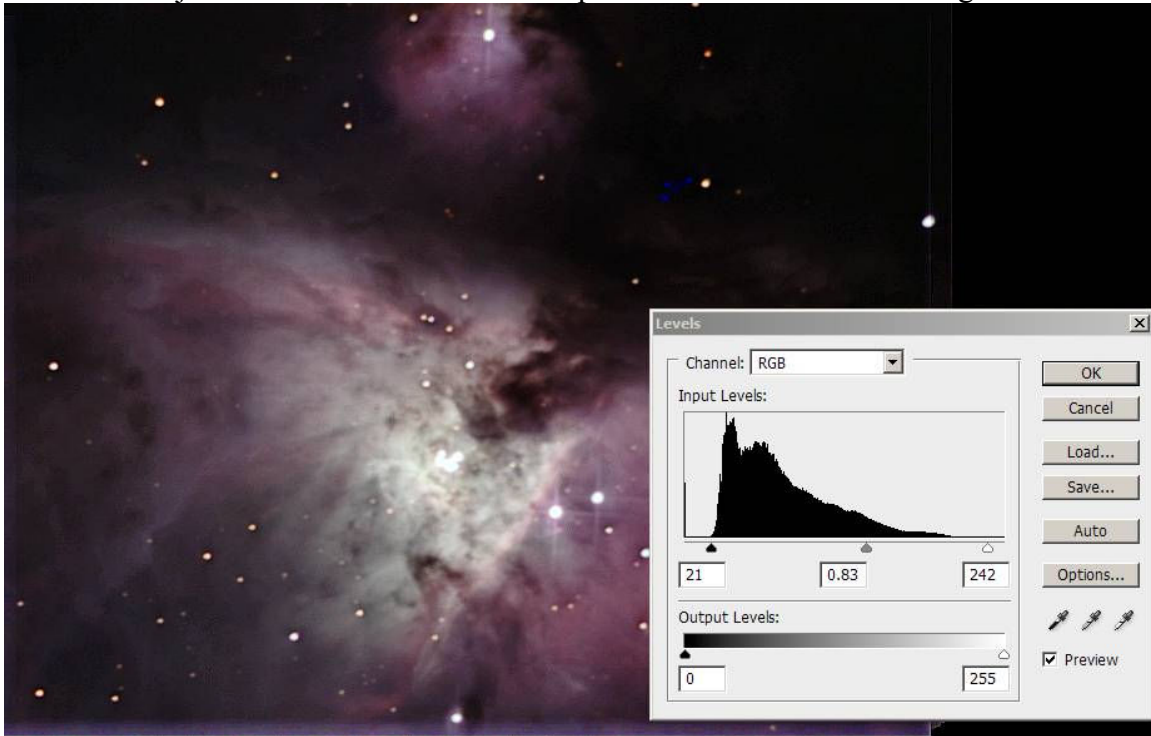
The first one is DCE Tools AutoEnhance to brighten the image. **Change to 8 bit for this**



Next I use LucisArt 3ED to bring out detail



Final level adjustments are done in Photoshop as below to darken the background.



Final Image – Cropped

