

## Part 5 - Introduction To Post-Processing

By Pete Scully

Although capturing your images and using techniques as outlined in Part 4 – Pre-Processing, post-processing can be a daunting task. There are many applications out there for this important step. I name those that I know of and are proven to be good. In the long run, it's a matter of personal liking.

Photoshop (paid) – Very Popular

Affinity Photo (Paid) – Not Well Known

Pixinsight (Paid) – Popular with Professionals.

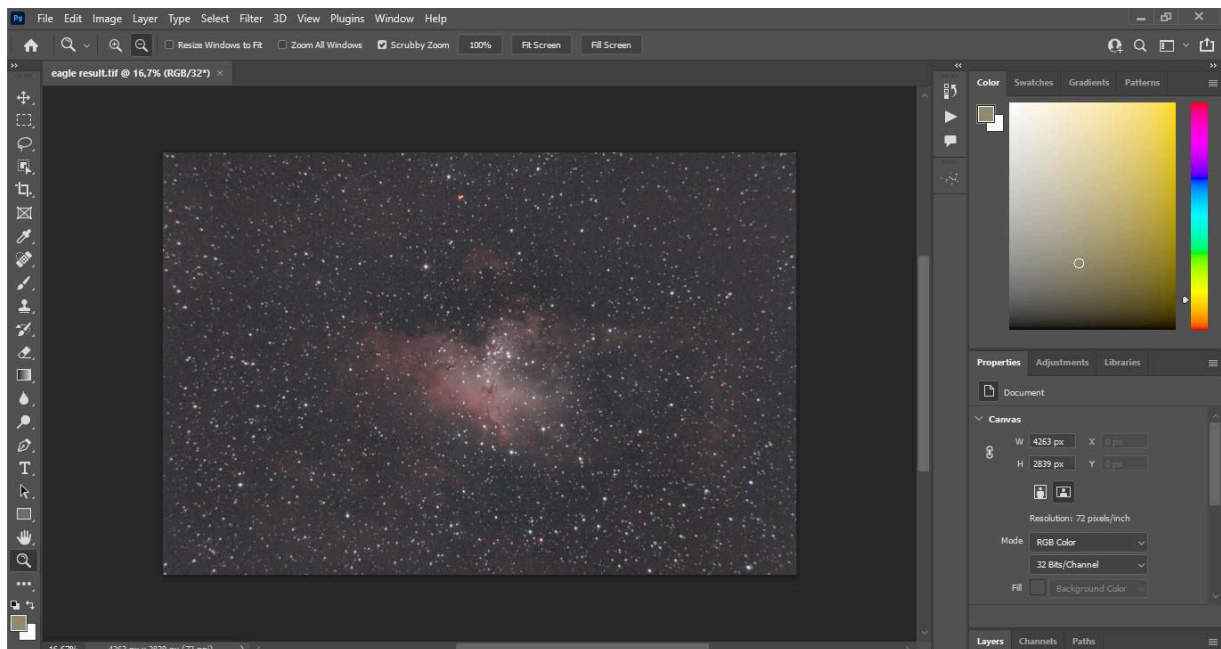
GIMP (Free) – Quite Popular

Siril (Free) – Getting Support

Let's take each of these and go through some basic steps.

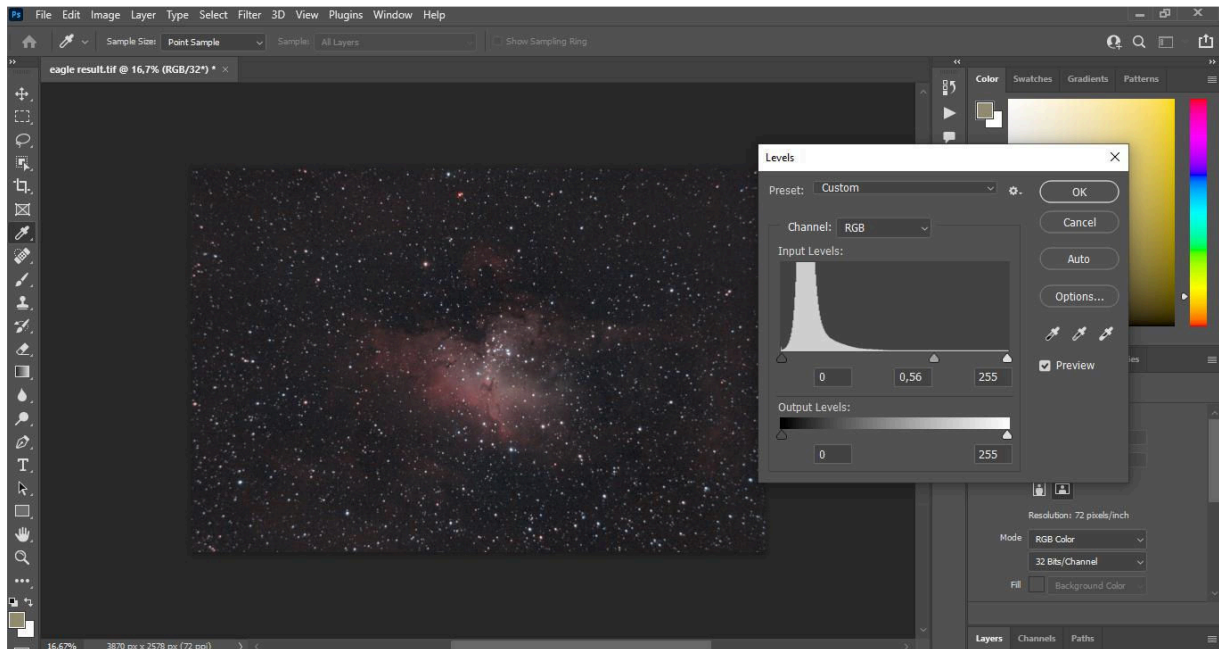
Firstly **Photoshop** (an excellent application and used by most astro photographers)

Load the stacked pre-processed image into PS. Remember it **MUST BE UN-COMPRESSED**. **16 bit tiff format is recommended.** This will be the case for all applications.



This is a stacked image of 15 lights taken with a stock Canon 1300 (60 sec-ISO 1600). As this series is an Intro, we will cover only the basics.

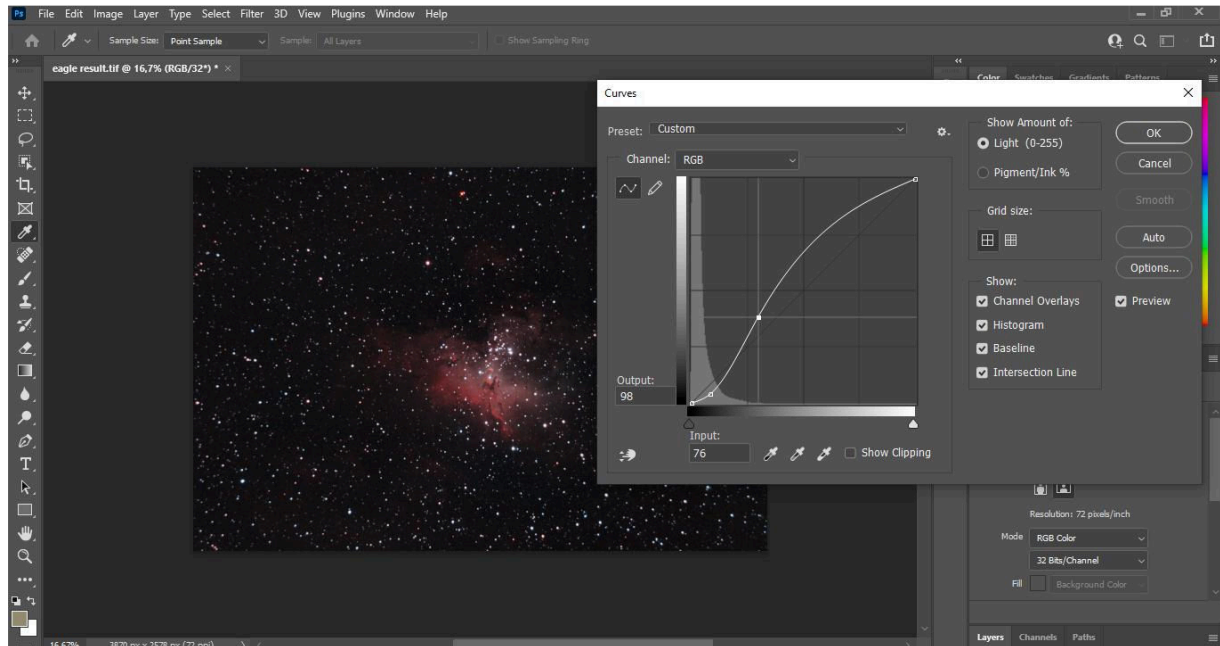
Firstly we will crop it slightly to remove any side stacking artefacts. Then we will apply a levels adjustment – (Image – Adjustments - Levels). Refer below. Always do small level adjustments rather than one large single adjustment. **DO SEVERAL SMALL LEVEL ADJUSTMENTS.**



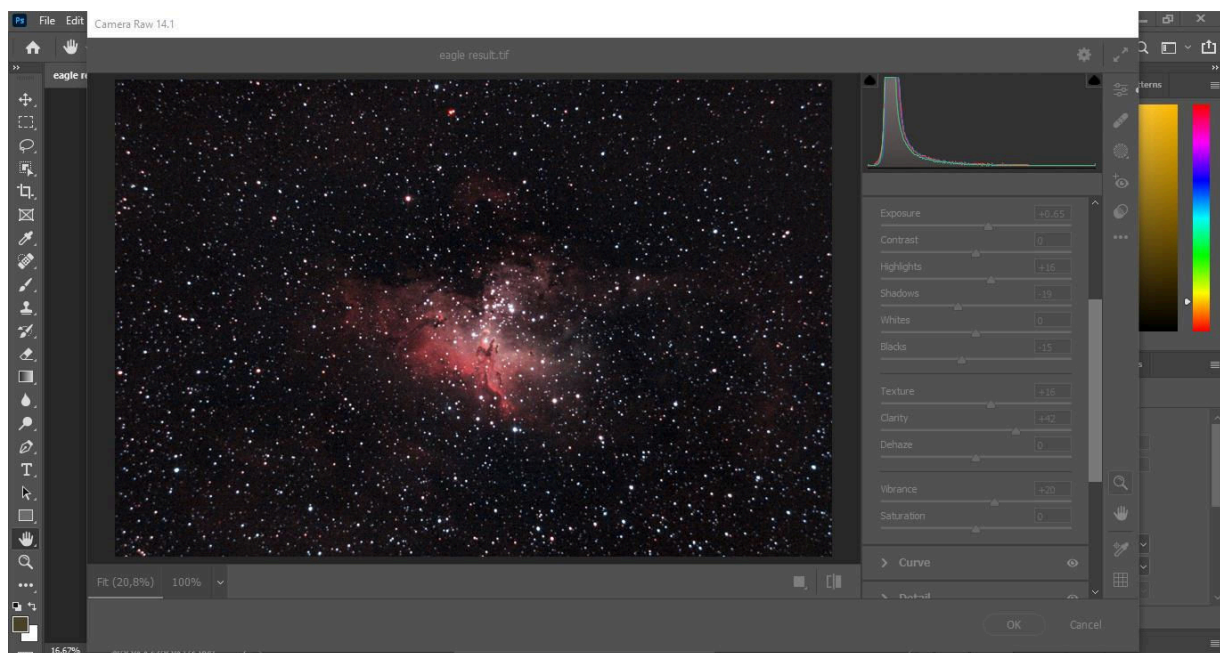
Now let's do a curves adjustment. (Image – Adjustments – Curves). Adjust curve to form a “S” curve. See Below

[http://www.markshelley.co.uk/Astronomy/Processing/Colour\\_Preserving\\_Stretch/colour\\_preserving\\_stretch.html](http://www.markshelley.co.uk/Astronomy/Processing/Colour_Preserving_Stretch/colour_preserving_stretch.html)

The above link deals with curves in detail and you can also download a series of Arcsinh curves. Curves are a very powerful tool for “Stretching” your image.



Finally for more processing, open camera raw (Filter – Camera Raw) and adjust as required. Before opening Camera Raw ensure that you flatten your image. (Layer – Flatten Image). Camera Raw is a powerful tool.



A link for Astropanel Panel Pro is shown below. This is a Photoshop Plug-in that works very well. Well worth experimenting with <https://godownloads.net/astro-panel-pro-6-0-for-photoshop-free-download/>

A useful PS plug-in to remove green is Hasta-La-Vista-Green, ensure you use the 64bit version.



the link is <http://www.deepskycolors.com/archive/2010/04/26/hasta-La-Vista-Green.html>

Next is **SIRIL**. A very worthwhile application. Although primarily used for pre-processing, it has some excellent post processing features. Let's explore this package. <https://siril.org/>

Notice that the image may be in mono colour. Siril displays the Red, Green, Blue and RGB channels. For colour select RGB. NOTE – Crop the image slightly as below to remove side stacking artefacts. (Right click and drag on red image. Right click – crop).

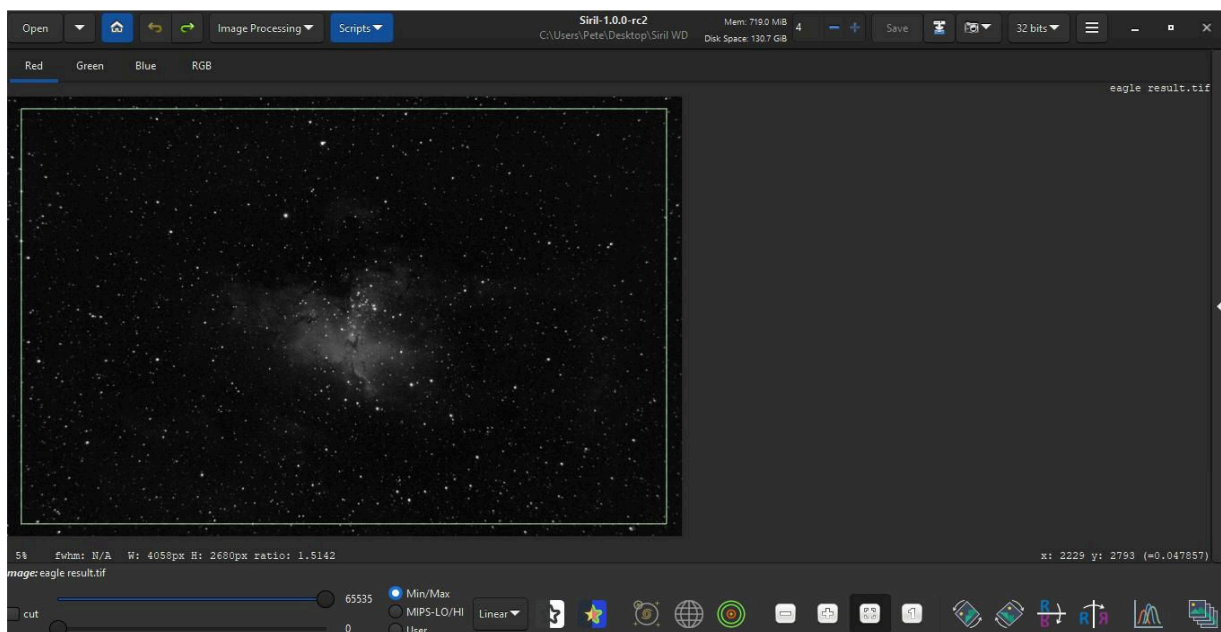
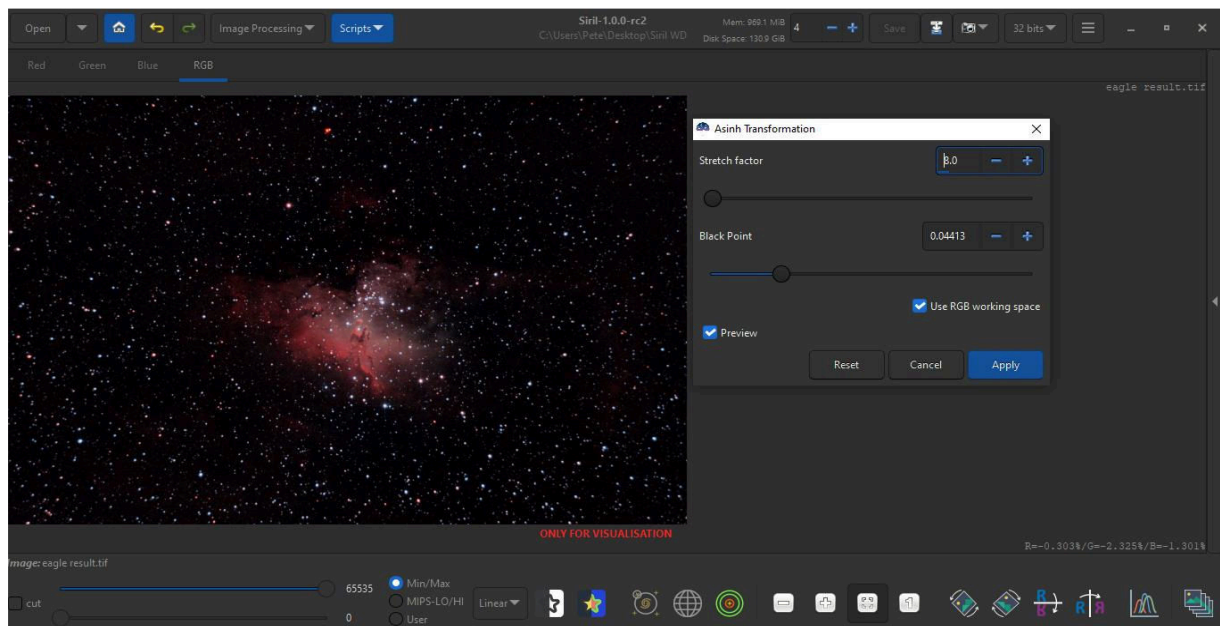


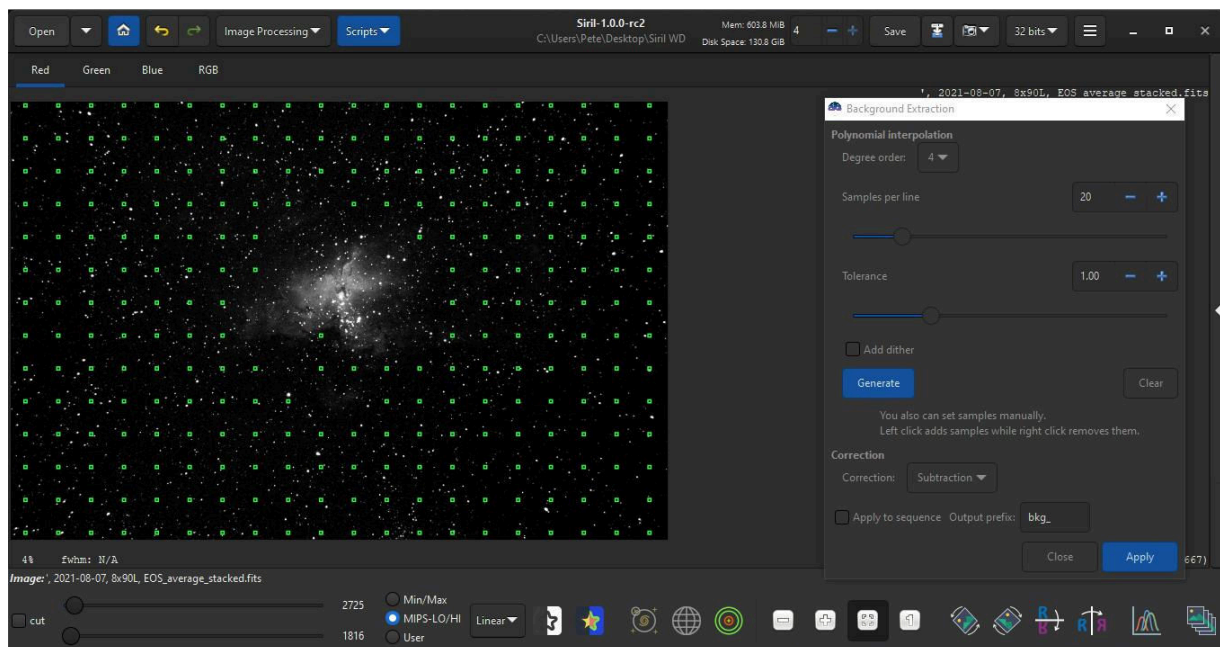


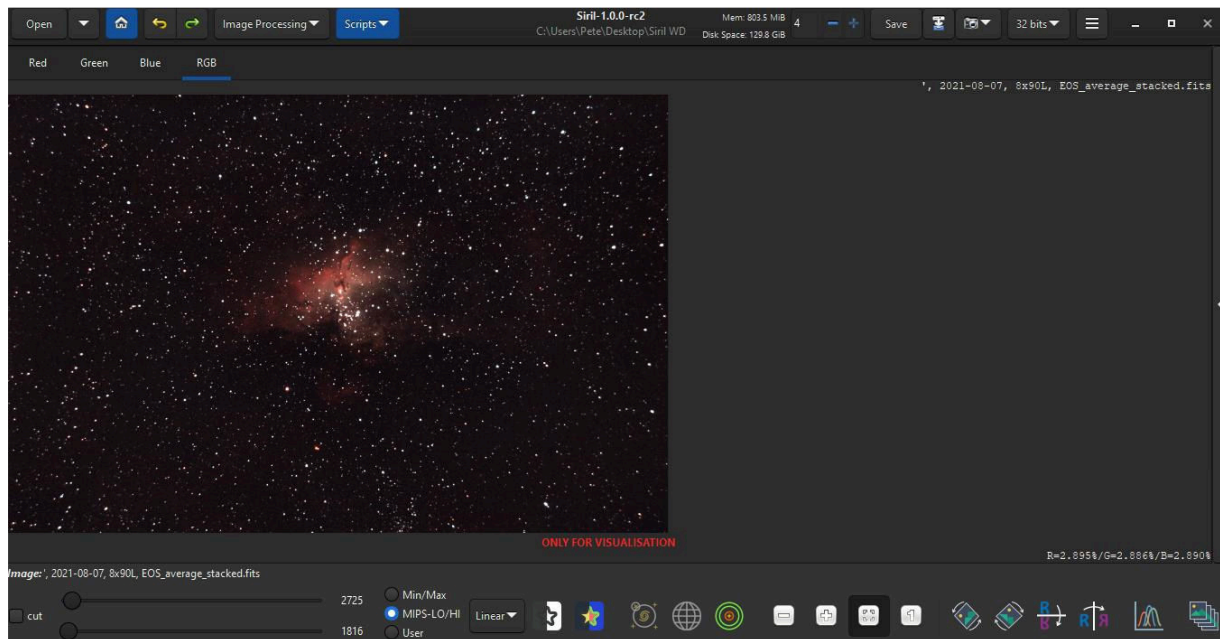
Image below after crop and asinh stretch. (Image Processing – Asinh Transformation)



A great advantage with Siril is the tool to remove Gradients/Vignette. This does the same job as the PAID version of “GradientXTerminator” Photoshop Plug-in and Dynamic Back-ground Extraction in PixInSight.

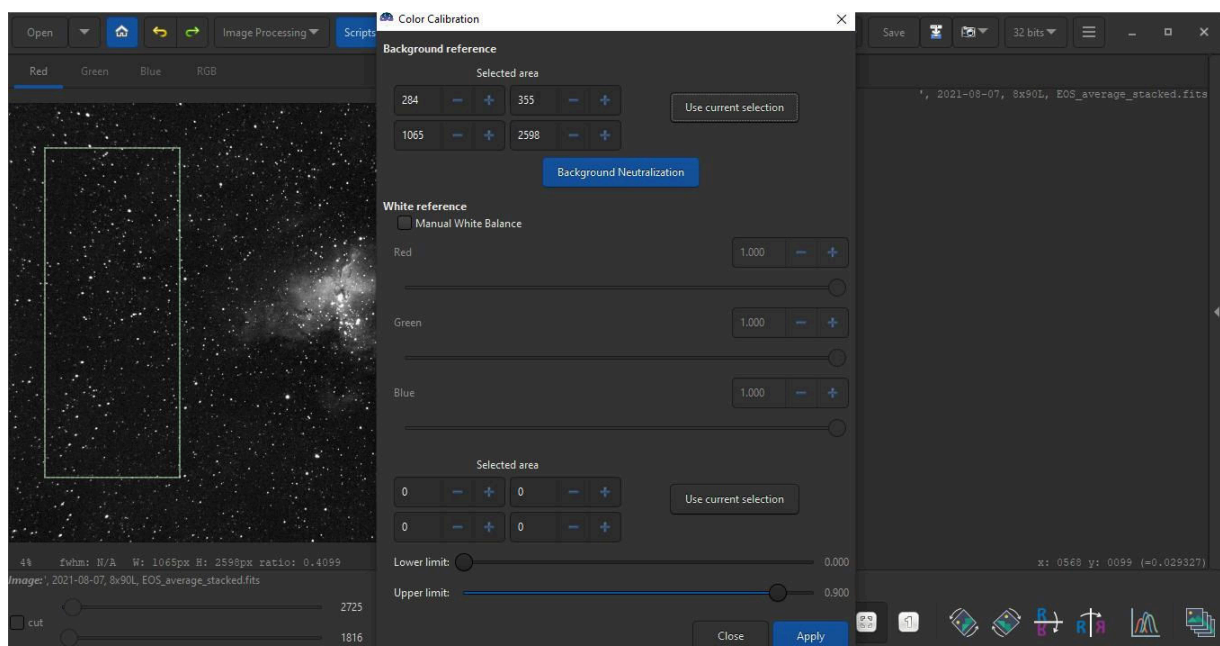
Refer Image below.





This particular image has a slight red/brown color casting in the background sky. With Siril's Color Calibration this is easily removed. Select a channel other than RGB in this case Red. Left click on an area and draw a rectangle. Goto Image Processing and select color calibration, **color calibration (repeat?)**. Select "Use current selection". Click Background Neutralization. We now have a flat image with no **colour** casting in the dark sky.

Because of the functions in SIRIL and that it is a FREE application, I would strongly recommend it. Especially for those who are new to Astrophotography.





Moving onto the remaining applications:

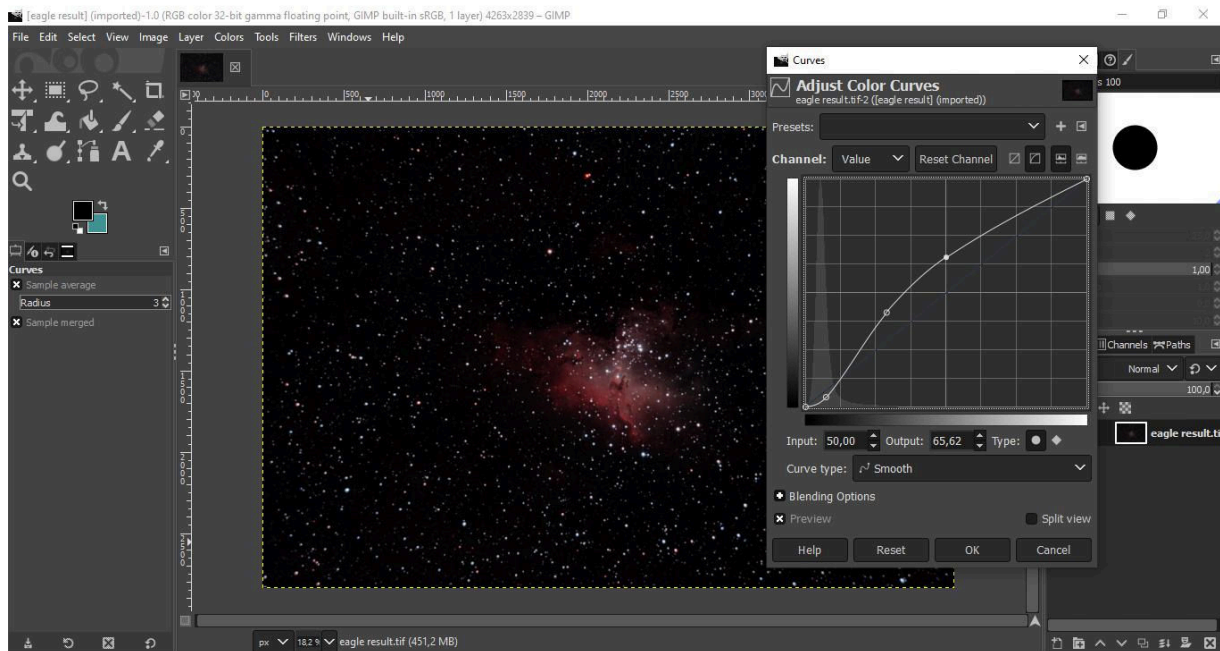
**Pixinsight** is considered the KING of applications. Apart from the high cost, it also has a very steep learning curve. Certainly not suited as an introduction to Astrophotography.

**GIMP** is a FREE application. <https://www.gimp.org/downloads/>

It is similar to Photoshop with many similar functions. Quite popular with many astro photographers. I have no experience with it and cannot comment. The image below was loaded into GIMP and a curves adjustment made to illustrate the similarity with Photoshop.

The available functions are powerful and on par with Photoshop.



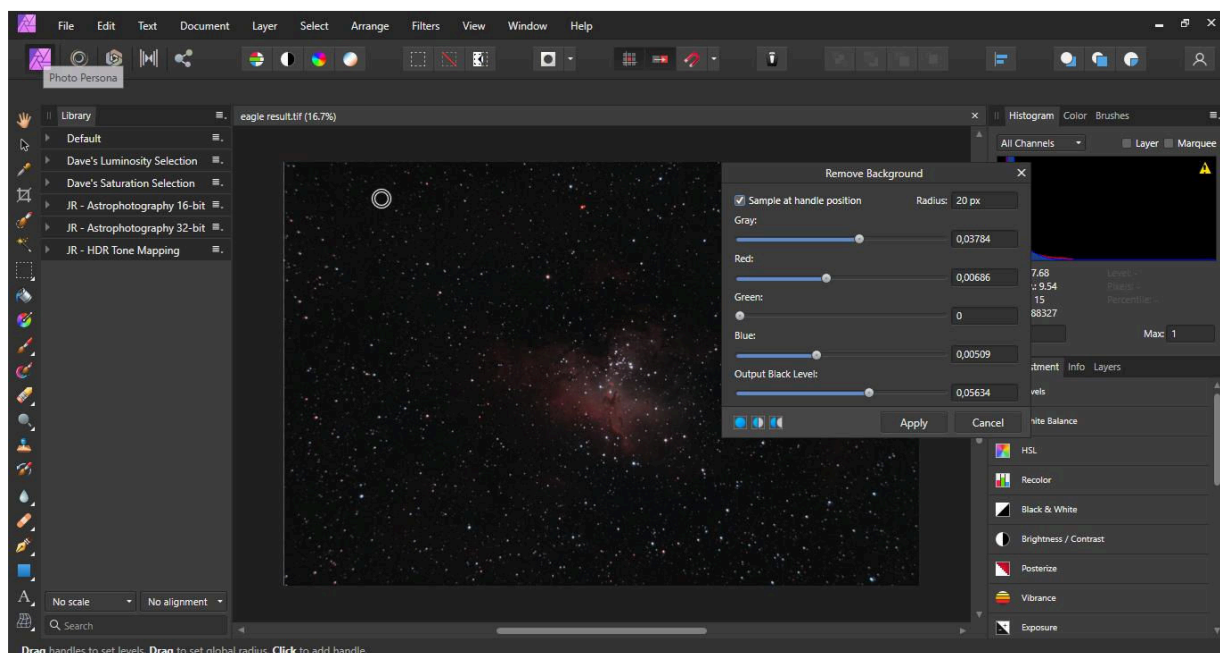


Finally we have **Affinity Photo**. NOT FREE. Very similar to Photoshop. It has some specific astro functions namely “Filters – Astrophotography – Remove Background”. Does a reasonable job. James Ritson has written quite a few Macros for AF. <https://jamesritson.co.uk/resources.html>

Affinity Photo links below.

<https://affinity.serif.com/en-gb/photo/>

<https://store.serif.com/en-gb/update/windows/photo/1/>





**This concludes the 5 Part series “Introduction To Astrophotography”.**

**Certainly not the end.**

**My intension is to write specific in depth tutorials on all aspects of this fascinating hobby.**

Suggestions are welcome. Will do my best to accommodate.

I don't profess to be Mr. Know All. After 45 years in this game, I'm still learning. This is what **makes** Astrophotography so interesting, it does not get boring.

Any comments/suggestion, drop me a line [cpscully@absamail.co.za](mailto:cpscully@absamail.co.za)