

Basic Post processing – The Power of the Gimp Droppers **A Step by Step Approach**

This tutorial is an endeavor to obtain a reasonable image with a quick approach. Software used is as below. All the software is available as “freeware” on the net

Registax v5

Fitswork v 4.24

Gimp v 2.6.6

Paint.Net v3.36

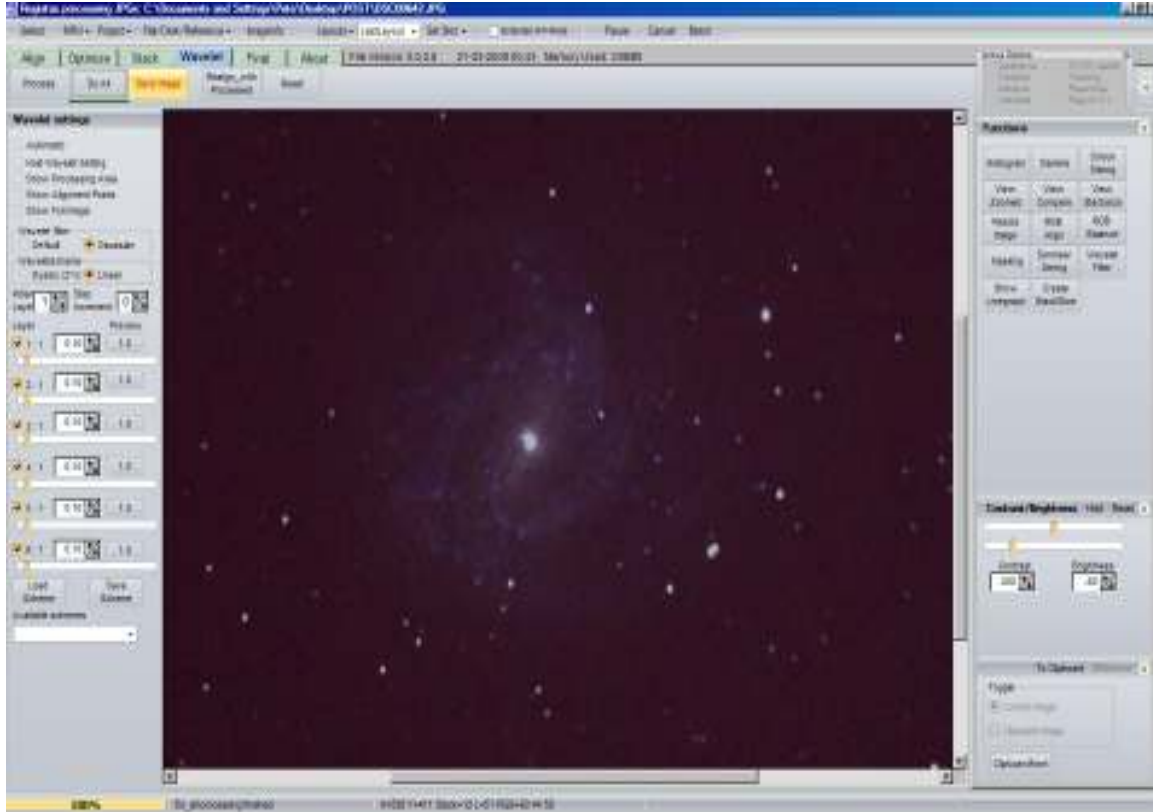
First lets look at a frame of M83. This is one of 20 ISO1600 30 sec exposures using a Sony a300 DSLR on a 10” Sky Watcher mounted on an EQ5 GOTO mount. The camera was set at 2 X zoom & positioned at prime focus. About 10 frames were rejected because of scope movement due to wind. The 10” on a EQ5 is at it’s absolute limit for good tracking.

This is what we start with.



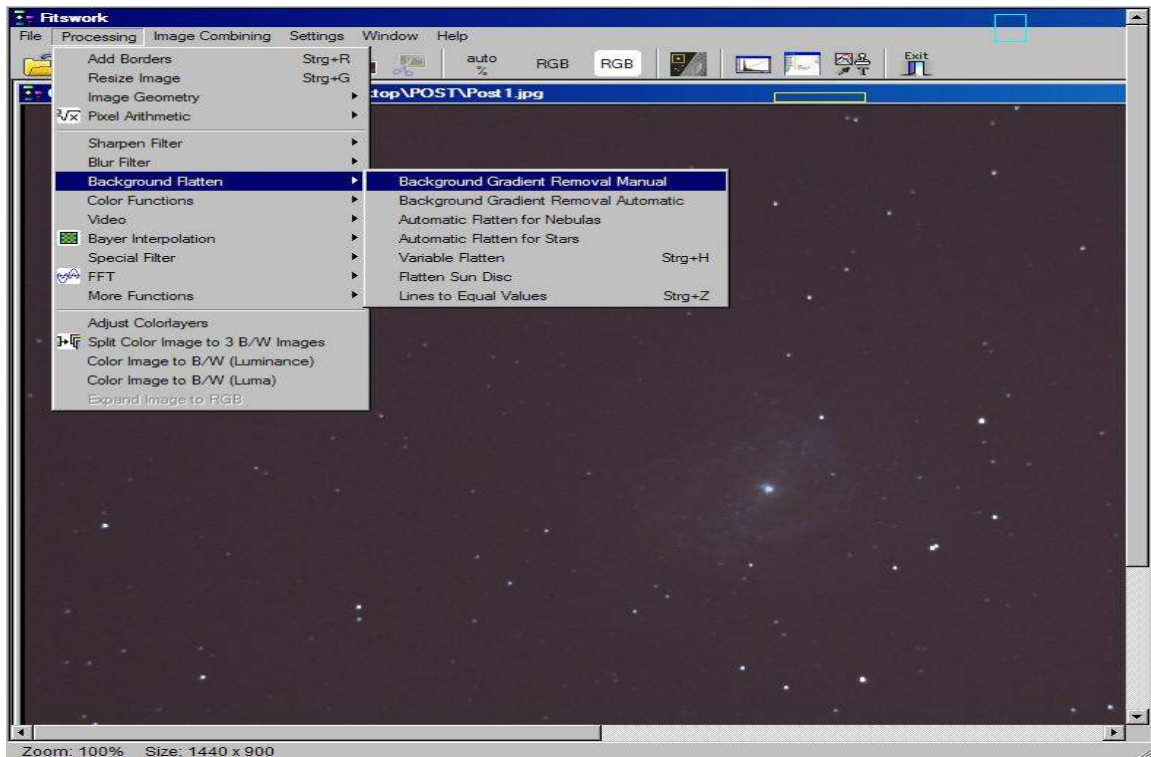
Note the dreaded red tinge from pollution and light scatter. On this night there was severe light pollution. This is a frame without filtering downloaded directly from the camera “Fine JPG”

The situation after stacking in **Registax** to improve the noise and enhance some detail. As can be seen, there is a noticeable improvement in texture and smoothness. I used the bright and contrast slides to bring out detail. (Contrast 200 bright -80). This also added a prominent red texture. We will fix this later



You will notice that there is a slight gradient vertically. The top is slight darker than the bottom. To fix this I use "**Fitswork 4.24**". This software does a great job in manipulating gradient either manually or automatically. I have tried many software packages to fix gradient and find that **Fitswork** works best for me. I use the manual method.

Now open your image in **Fitswork**. Go to **Processing, Background Flatten** and select **Background Gradient Removal Manual**. Adjust the vertical and horizontal sliders till you are satisfied that the image looks balanced with no gradient. Save. See image below

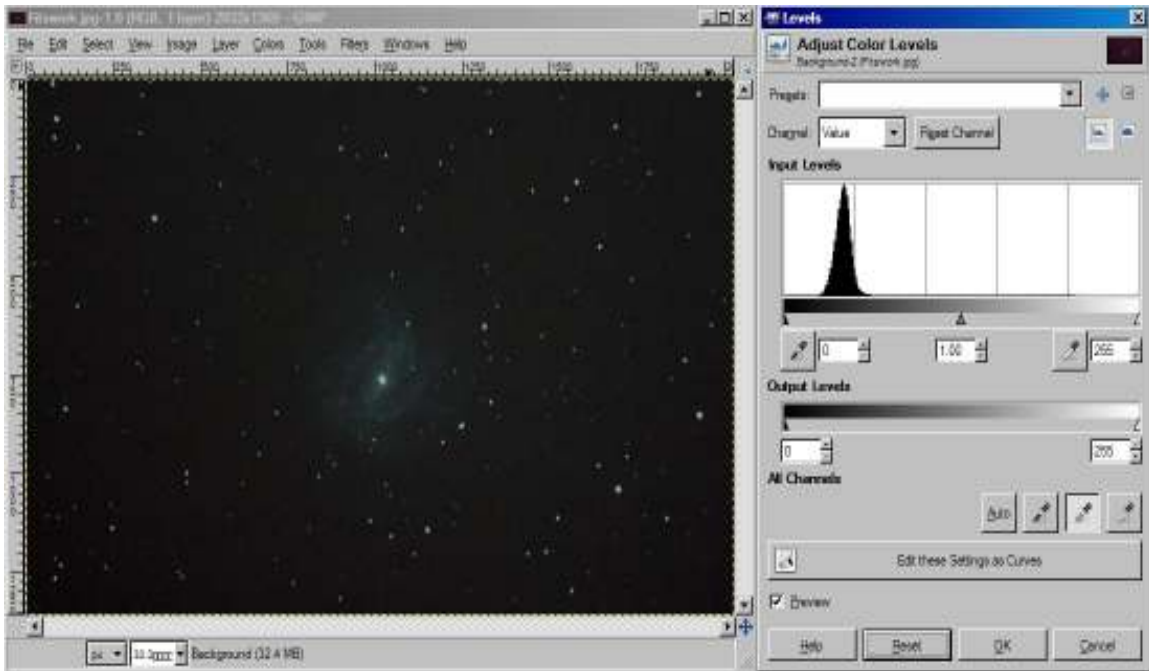


Your picture should now show a uniform gradient as below

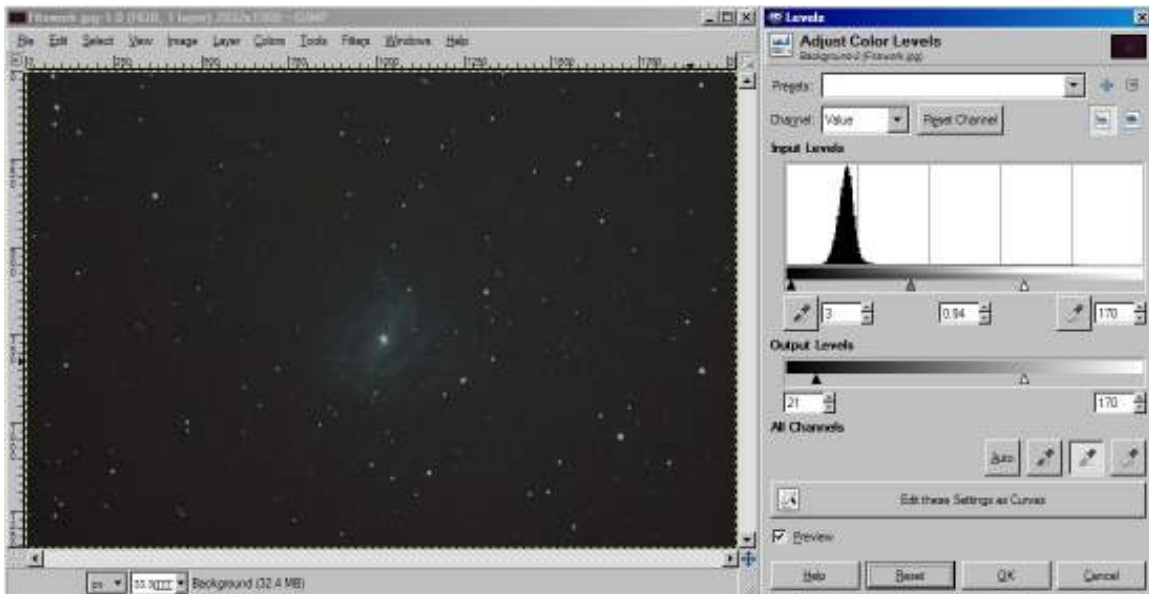


Next open your image in **GIMP**. Go to **Colours** and click on **Levels**. In the levels box you will see three droppers. Click on the center dropper "**Pick grey point**".

Select a DARK area free of stars or nebulosity and click. For this image I clicked on the dark area top right. Refer below. The red tinge disappears and the structure of M83 jumps out at you.



Now adjust the *Input* and *Output* levels till you obtain a realistic looking sky and image. Refer below



Next I use the **Gimp** stretch contrast command from *Colours, Auto*. This brightens the picture a bit. **Experiment with Gimp levels adjustments for your situation.**

The final picture is below after final level tweeking to brighten the image more & noise reduction in **Paint.Net**. I like the noise reduction capability of **Paint.Net**. For freeware this package as a whole is on par with expensive commercial software. The same goes for **Gimp**, **Registax** and the not so well known **Fitswork**. **Fitswork** has some great features.



Clear Skies

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