STACKING ASTRO IMAGES WITH ASTROPIXELPROCESSOR

First Time Setup

If APP asks for Working Directory then navigate to the top level folder with image data. One that contains the Lights and Darks folder

On the left bar drag the CPU threads bar all the way to the right

Stacking

On the left bar **Untick** Multi Channel/Filter Processing and Multi-Session Processing

Under Enter Deepsky Object Name, add the name of the object

Just below this click on Light and open the Lights Folder. Select the 15 image files.

Below this do the same for the Dark and select all 5 image files in the Dark folder

Scroll the left bar to the bottom and change the sorting by time shot to sorting by Quality

Select the 6) Integrate tab on the left bar

Move the lights to stack slider to the left to 13 (92%)

Scroll the left bar to the bottom and click set Save Directory - go up one level from Darks to the main parent folder again

Click Integrate - Accept the object name you set earlier - Wait for Stacking to complete

Optional Gradient Removal

On left bar select Tools module - then click remove light pollution - answer yes to start tool

Draw 3 small boxes on the left margin of the image but do not include any stars or nebula

Draw 3 more on the right margin. If you make a mistake then just click UNDO SELECTION AREA

Click Calculate. When done click OK & SAVE

Optional Star Reduction

On left bar select Tools module - then click star reducer - answer yes to start tool

Do not click Remove Stars

Leave correction radius at 1.0

Change correct star halo to 1.2

Change star size % to 80

Change peak intensity % to 80

Scroll left bar down and click CALCULATE

To compare with and without reduction click on SHOW ORIGINAL/REDUCED

Click SAVE

Load this last image back into the viewer again by double clicking it in the bottom file manager

Click Invert Data on right menu bar to see a negative version of the image

To view it without APP stretch, on right menu bar change 15% BG, 3 Sigma, 2,5% base to No Stretch.

That's what the image truly looks like at this stage and your previous images are saved without this stretch

Close APP

PROCESSING ASTRO IMAGES WITH AFFINITY PHOTO

First time setup

In the Window menu on top bar -> Unselect all menu items except: Histogram, Layers, Navigator, Info, History

On right bar ->

      Drag Info to top section alongside Histogram

      Drag Layers to its own section on right bar below the Histogram Section

      Drag History to middle section alongside Layers

      Drag Navigator to bottom section on its own

Switch to 2x RGB Samplers

In the Info Module -> Highlight CMYK section then from 3 bar menu select "Remove Selected Sampler"

In the same Info Module -> from 3 bar menu select "Add New Sampler"

Open the Stacked Image

File -> Open -> Select the newest file in the data directory (use the image with "sr" in it to use the star reduced version)

Crop Image

Press c to crop, then drag lines as needed and press enter to complete

Convert to 16 bit Image (Optional but recommended until experienced)

Document -> Convert Format / ICC Profile -> Select Format: RGB/16 -> Convert

Remove Initial Stretching

In Layers module - drag Curves Adjustment & Levels Adjustment to Dustbin to delete

Set Light and Dark Limits

Info module, select first crosshairs next to A (luminence) and drag to centre of brightest star

Info module, select second crosshairs next to A (luminence) and drag to a very dark area

Initial Curve Stretch

In Layers Module select Adjustments icon then Curves

Click in middle of curves line and drag a little up and left - Don't let the first sample numbers reach 255

Select Merge

Adjust Image Levels

In Layers Module select Adjustments icon then Levels

Note the number for the second Sampler window (dark area sampler) (like 32/33/32)

In Levels box, drag Black Level to halfway to the picture data in histogram

Drag White Level to left until same numbers for dark area come back - avoid the first sampler numbers nearing 255 if possible

Select Merge

Repeat this step to improve the stretch effect

Create Differential Stretch (S-curve)

In Layers Module select Adjustments icon then Curves

If the RGB sampler numbers are at 255 then drag the top right point of the diagonal line a little lower to reduce to 245

Select Picker to create the S-curve

Choose a very dark area and drag down a little there

Choose a mid brightness area and drag up a little there to form an S curve

Merge

Repeat this step to improve the stretch effect

Reduce Noise

Hold down the Ctrl key and use Mouse scroll wheel to zoom in to about 400%

Drag image to show an area mixed with light and dark parts

Filters -> Noise -> Denoise

Drag the Luminence and Colours Sliders to full left

Drag Colours Slider slowly to right until uniform colours achieved (no green/blues)

Drag Luminence Slider slowly to right until coarse grain is smoothed out

Apply

Double Left Click mouse on the image to return to full size image

Adjust Vibrance

In Layers Module select Adjustments icon then Vibrance

Drag Vibrance Slider to full right (100%)

Drag Saturation Slider to right by 10%

Merge

Final Curve Stretch

In Layers Module select Adjustments icon then Curves

Click in middle of curves line and drag a little up and left

Merge

File -> Save as (saves as AF format)

File -> Export -> JPG/PNG/TIFF etc