Merge an RGB image with the nebula of a filter capture (e.g. CLS) using PixInsight (version 1.8) and GIMP (version 2.10)

In the workflow of this section, the color-intensive nebula from instruction 5 is to be superimposed on the RGB capturing from instruction 3.

For this process, the finished stretched image from instruction 5 is opened in the program PixInsight.

After the image has been cloned (drag the left name tab to the desktop), the process 'StarNet' is executed.

*		StarNet	×	×
		128 Create star mask		
	RGB weights file:	C:/Program Files/PixInsight/library/rgb_starnet_weights.pb	•	1
Gray	vscale weights file:	C:/Program Files/PixInsight/library/mono_starnet_weights.pb	•	1
K .		004	•	×

The star mask can be closed this time and only the nebula image is kept.

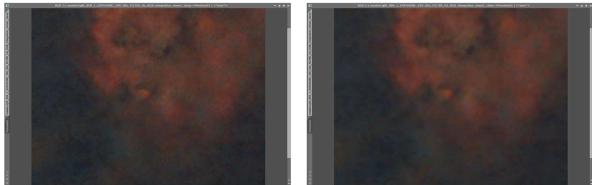


The 'Process' 'Convolution' is now applied to the nebula image in order to soften the image somewhat.

*	Convolution		x	×
Parametric Library	Image			
StdDev: 1.	50			
Shape: 2.	00 0			
Aspect ratio: 1.	00 0			
Rotation: 0.	00	11 × 11		6
			D .	×

Before:

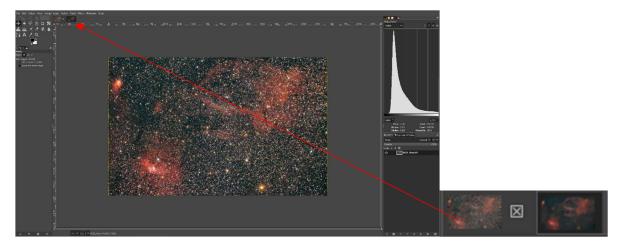
After:



Afterwards, the images are saved as a 16 bit-TIF-file in a folder, because from here on it can be further processed with the programs GIMP or Photoshop.

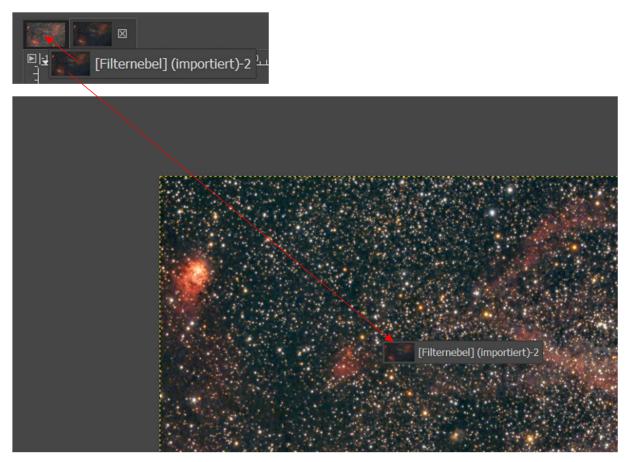
For additional processing, the free program GIMP is used here.

For this, the RGB image processed in instruction 3 and the nebula image are opened in GIMP.

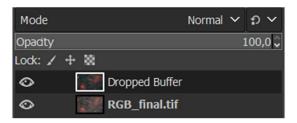


If artifacts are still visible in the fog image, these can be post-processed via 'Blur'.

To merge the images, the filter image is dragged onto the thumbnail of the RGB image with the left mouse button held down until it opens, and (with the left mouse button still held down) the image is dragged down onto the RGB image.



The filter image now appears in the right menu bar as a layer in the RGB image.



The eye icons can be used to show and hide the respective layers, and a right-click on the layer can be used to assign a name via the layer properties.

Mode		Normal 🗸	Ð 🗸
Opacity			100,0 🗘
Lock: 🖌	+ 88		
0	💓 filternebula		
\odot	RGB_final.t	tif	

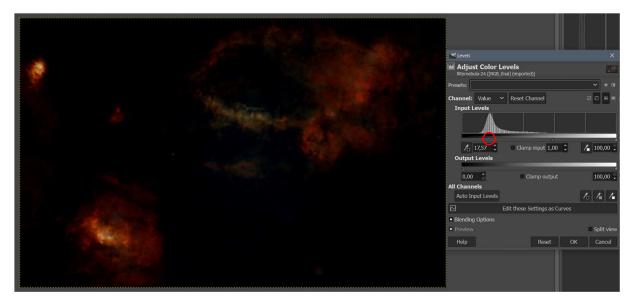
The layer with the filter image is clicked and the RGB image is hidden via the eye icon. Then the submenu 'Values' is opened via the menu item 'Colors'.

 \times

	Adjust Color Levels filternebula-24 ([RGB_final] (imported))				
	Presets:	~ + ₫			
	Channel: Value Y Reset Channel				
Colors Tools Filters Windows	Input Levels				
Color Balance					
Color Temperature 2	Second Temperature				
G Hue-Chroma	0,00 Clamp input 1,00 Clamp input	100,00 📮			
🔄 Hue-Saturation	Output Levels				
G Saturation	0,00 ¹ Clamp output	100,00			
🖾 Exposure	All Channels				
🖾 Exposure	Auto Input Levels				
Shadows-Highlights					
Brightness-Contrast	Edit these Settings as Curves				
Contrast	 Blending Options 				
🖼 Levels	× Preview	Split view			
🖂 Curves	Help Reset O	K Cancel			

Levels

The histogram curve of the image opens. Now the left slider is moved to the maximum of the curve.



The background is then completely black, and this is confirmed with 'OK'.

Now the layer with the RGB image is displayed and the 'Screen' mode is selected for the filter image:

Mode		Screen 🗸	Ð 🗸
Opacity		1	100,0 🗘
Lock: 🖌	+ 🕸		
\odot	💓 filternebula		
Ø	RGB_final	.tif	

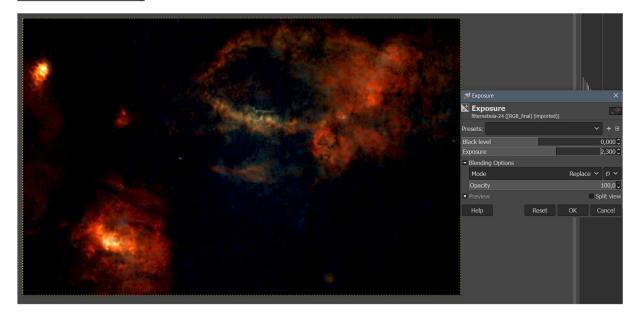
By switching the nebula layer on and off, you can observe the effect of the nebula brightening.



If the effect is not sufficient, the effect can be increased via the menu item 'Colors' 'Exposure' when the filter layer is activated. With the RGB layer switched off (via the eye icon), the effect can be tracked.

Colors Tools Filters Windows

- Color Balance...
- Color Temperature...
- G Hue-Chroma..
- 🔄 Hue-Saturation...
- G Saturation...
- Exposure...
- Shadows-Highlights...



Once the desired settings have been found, right-click on one of the layers and select 'Flatten image' to combine the layers into one image, and save the image via 'File' - 'Export as'.

