

## **Phantom of the Opera, photo by club member Tom Engwall**

This is Sh2-173, otherwise known as Phantom of the Opera, for obvious reasons. Yes, this is actually up there located in the constellation Cassiopeia about 8000 light years away and is an emission nebula about 77 light years across.

I found this to be a very difficult image to process and am not totally satisfied with it yet. One of the problems is that it is hidden behind a dense star field. I had to deemphasize the stars but getting the balance right was tricky. Too few stars and it does not look natural - too many stars and it just looks like a star field. I settled on this balance using a new tool in Pixinsight called Starnet 2. It was an improvement over the original Starnet and allowed me to separate the stars from the nebula, so I could process the nebula by itself (making it brighter) and then add back the stars at 65% rate.

This image was captured by my setup located at PixelSkies observatory in Southern Spain and operated remotely by me over the internet. It consists of the following:

Blue 160 x 180 seconds

Green 160 x 180 seconds

Red 160 x 180 seconds

Ha 150 x 180 seconds

Total 31.75 hours, in October and November of 2021.