

## Offered Title: Astrophotography 7 – Post...What?

Now that I've scratched the surface and maybe peeked someone's interest in astrophotography, we'll scratch the surface of turning your image file into a photo. Termed 'post processing' (post), it is a fancy way of saying working on your image file with an app. Sounds easy enough...yeah, right! While capturing the image data seems a little daunting, especially when using a dedicated imaging camera, post can be downright frustrating. It might seem so complex it makes you wonder if it's a plot! It can be frustrating yes, but it's not a plot. Getting a beautiful photo from your raw image file takes specialty software, time, patience, and maybe help from someone who has been there. There are free tutorials available on the web as well. Once you have some experience the post process opens a universe of options.

Here are some tidbits to consider.

Your raw image requires manipulation, yes that's right manipulation and I'm talking lots of it. Your astro imaging data file is going to be a bit light on content so details need to be coaxed and teased out to shine. Workflow examples:

**Stacking.** You will be stacking multiple frames of the same thing together to improve its signal-to-noise ratio. You are looking for more signal, less noise. By stacking multiple images of the same thing, image data gets amplified more than noise. This is done with single shot color, as well as monochrome where multiple frames of each filter are taken.

**Sensor Noise Reduction.** All sensors have inherent noise, dead pixels, hot spots. It is of low order but will affect your image as you work to bring it to life. To mitigate these potential issues, you will import the dark, light, bias, and flat frames taken before capture occurred. They will be used in your app to selectively remove those sensor issues.

**Manipulation.** This is where the magic happens and gets pretty time consuming. Within the app you will be using tools to improve contrast, bring out faint areas/details, sharpen, adjust and enhance color. You will be eliminating gradients, reducing noise elements (yes noise still exists), improving the 'roundness' of stars, and cleaning up the image. When you're done you should have a beautiful photo.

DSLR/MILC cameras do not depend on using dark, light, bias, and flat frames, but you still need a good app to bring out your image.

Some commonly used apps: Stellarium (planning), TheSky (planning, capture), Backyard EOS (Canon cameras, capture), FITS Liberator (FIT to TIFF file converter), DeepSky Stacker (stacking), Registax (for planetary video stacking, processing), PixInsight (post), Star Tools (post), Adobe Photoshop (post), Adobe Lightroom (post), MaximDL (planning, capture, post). There are many others and many to come.

## What's in the Sky?

June 19: Jupiter gets double shadowed starting around 9:05 pm CDT

June 20: Summer solstice occurs at 11:24 pm CDT

Saturn is up and closest for this year so check it out.