



Night Photography
Kate McCarthy
SIG June 2023

Types of Night Sky Photography

- Milky Way
- Moon and Stars
- Star Trails
- Deep Space Photography
- Night Cityscapes and Architecture
- Events
- Light Painting



Basic Concepts of Night Photography

- Most DSLRs and Mirrorless Cameras have good sensors to capture light in dark and low-light situations.
- Full frame camera can handle higher ISO better, allowing more light to hit the sensor; however crop-sensor cameras can do a good job.
- Lens with an aperture of F2.8 or wider are needed. F2.0, F1.8, or F1.5 are even better.
- Start with a wide angle lens like 16-35mm, 14-35mm or a wide angle prime lens for the best results.
- A good stable tripod and a remote trigger or an intervalometer is good. A 2 to 10 second delay so you don't shake the camera during the exposure.



Other Concerns

- Set your lens on manual focus.
- Use the Live View screen for composition and focus on the brightest star.
- Turn your focus ring until the star or light is a small pinpoint.
- Take a picture.
- Zoom back in to the picture to see if the stars look like sharp pinpoints.



Moon and Star Photography

- Camera settings for Moon Photography—Shoot in RAW
- Aperture 6 to 16
- ISO 800-2500
- No slower than 1/25. Experiment.



Milky Way Photography

- Camera settings for Milky Way Photography—
Shoot in RAW
- Aperture 2.8 or wider
- ISO 3200-6400
- Shutter Speed 10-25 seconds depending on the lens.
- The 500 Rule. Divide 500 by the focal length of the lens, then set your shutter speed at that number. If you are working with a crop-sensor camera be sure to account for the crop factors (typically 1.5 for Nikon and Sony, 1.6 for Canon).



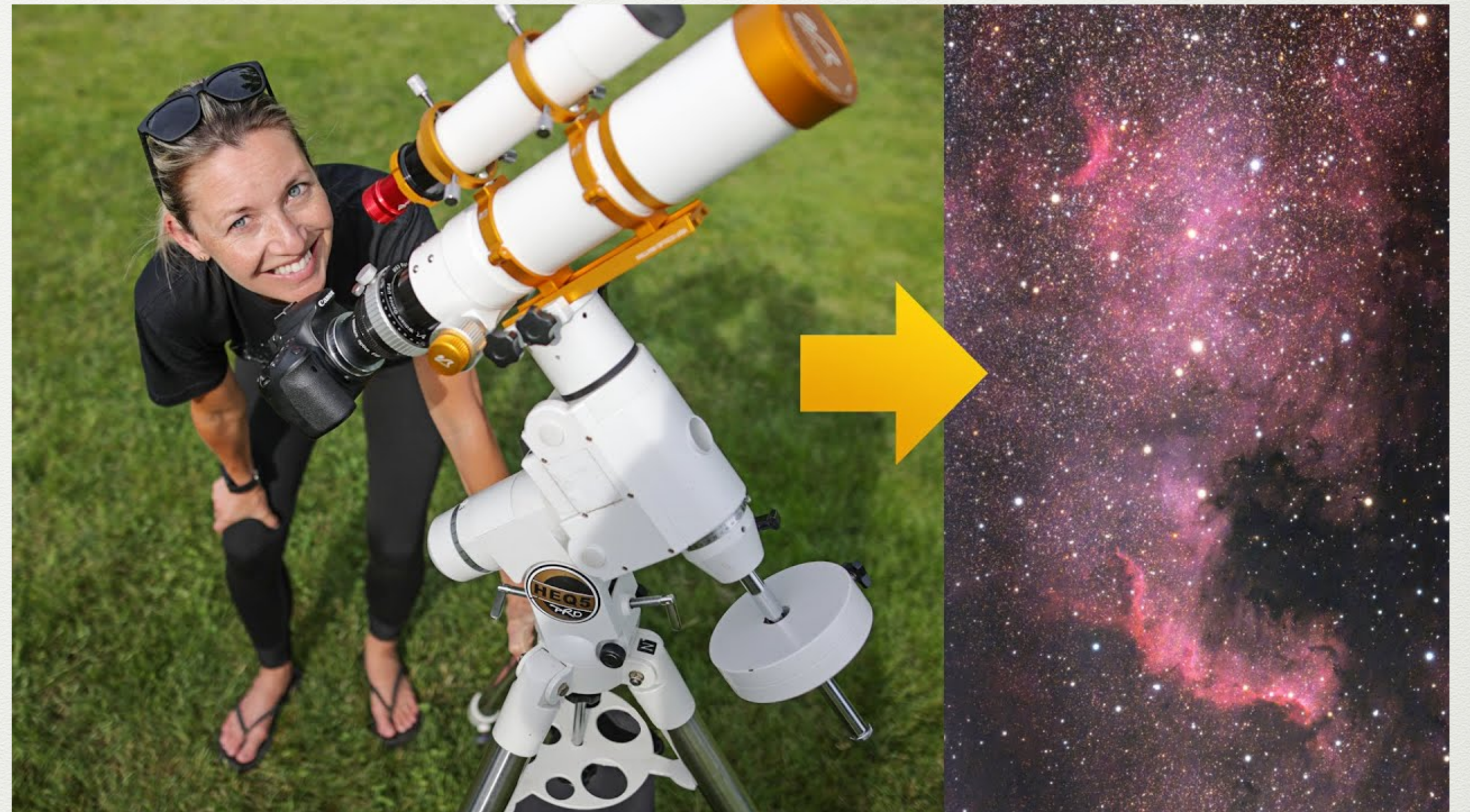
Star Trails

- Method 1: Long exposure
- Method 2: Stacking several long exposures into one photo.
- Camera Settings for Star Trail Photography—Shoot in RAW
- Aperture 5.0 or wider
- ISO 800-1200
- Shutter Speed: 30 seconds for focus stacking and longer for special effects.



Deep Space Photography

- Use of a camera, a telescope, and a star tracker.
- Foreground and landscape is not an issue.
- Space photography with a telescope and DSLR Camera: <https://www.youtube.com/watch?v=386DxYrYv30>



Where to Find Dark Skies

- It is difficult to see the Milky Way's galactic core due to light pollution, so if you want to find the darkest area near you, type in LightPollution.com
- Note the phases of the moon when you decide to shoot the galaxy and try to schedule it during a New Moon.
- Check the weather for cloud cover at ClearDarkSky.com
- Consider downloading apps like Ephemeris or Photopills and learn how to use them before you go.



Smart Phone Night Photography

- Photograph the Night Sky With Your Smart Phone: <https://www.skyatnightmagazine.com/astrophotography/astrophoto-tips/smartphone-astrophotography-use-your-phone-to-capture-the-night-sky/>



Night Shoots for CityScapes and Architecture

- **How To Create Golden Hour and Night City Photography:**
<https://iso.500px.com/cityscape-night-photography-tips/>
- **Night Photography in the City:**
<https://www.youtube.com/watch?v=P5RDWhjvdVY>



Night Shoots for Light Painting

- **Light Painting Guide:** <https://www.masterclass.com/articles/the-best-light-painting-photography-tips>
- **10 Light Painting Ideas:** <https://www.youtube.com/watch?v=m5oGA6-zJlc>
-

