

# Milkyway Photo Basics

- 1) Shoot in Raw format for best results. Info for JPEG will be noted where different from Raw.
- 2) Set camera for manual focus and exposure.
- 3) Set camera to use remote cable release if possible, set delay for 3 seconds after mirror goes up.
- 4) Use wide angle lens 10-28 mm, set for aperture of f/2.8 or faster.
- 5) Use ISO between 800-6400 depending on darkness of sky. Start using ISO 3200.
- 6) Use LCD live view for manual focusing using the moon or a bright star & zooming in by 10x.
- 7) If you can't use live view, set lens at infinity take a shot, review & adjust as required.
- 8) Turn off all noise reduction {if using JPEG leave it on}.
- 9) Use a steady tripod
- 10) To calculate exposure to get sharp stars use the following formula:  
$$400/(\text{lens focal length}) = \text{exposure time in seconds.}$$
  
For a 20mm lens  $400/20\text{mm} = 20$  seconds

This is for full frame. **If you use an APS sensor, multiply your lens focal length by 1.5 for Nikon or 1.6 for Canon.** So, a 20mm lens on a Nikon APS is  $20 \times 1.5 = 30\text{mm}$ .  
Then,  $400/30 = 13.3$  seconds

To see what you are doing in the dark, use a red flashlight, NOT a white light, which ruins night vision.

When you look at the results on your monitor they will appear to be a little dull! The image you see has not yet been processed. Post processing is necessary to get the most from your image.

**NOTE: *The exposure here was calculated using the “400” rule. For sharpest stars, some people use 500 or 600 to determine exposure. If they are for the web, 600 should be fine.***

Post Processing: Photoshop, Lightroom, etc. There are also many programs specific to processing astro-photos. At some point those interested could get together to do some post processing.

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