The Night Sky By Eric Erickson

Offered Title: Astrophotography 1 – A Mixed Camera Bag

When I was first getting into astronomy one of the things that always caught my attention were those fabulous color photos of Saturn, or the great Orion Nebula on the covers of astronomy books. Then I found out how much work went into getting these images, and oh yeah, these guys and gals were professional astronomers using giant telescopes. They would literally babysit the equipment, sitting in a cage high at the scopes focus point, for hours on end, making sure the object remained in the same place. They used specially treated films and their processing labs used custom development and printing techniques. While amateurs did get into this with their own equipment, the expense, time required, and steep learning curve conspired to dissuade all but the most determined.

Not so today! With the advent of digital cameras and post processing software, anyone can be an astrophotographer. Your results are immediate so you can keep shooting until you get a good one.

The current options for shooting the sky are numerous, so I will start my series on astrophotography by describing its basic forms.

I will make every effort to keep it simple… yeah, lots of luck with that, eh? Let's start.

Afocal Imaging – just hold it up to the eyepiece, how simple is that?

Smart Phones and compact digital cameras can produce decent images just by holding them up to the telescope or spotting scope or even binocular eyepiece. Shoot the Moon or other bright objects. Better, there are brackets available to hold your phone or camera steady for you. Steady is better.

Prime Focus Imaging – using your telescope (or camera lens) coupled directly to your camera.

Dedicated astroimaging cameras are specialty cameras for imaging astronomical objects. They connect directly to a camera lens or telescope via an adapter. Most have built in cooling to reduce digital "noise". More on that later.

DSLR (digital single lens reflex) cameras, most everyone has one, can be coupled with a telescope via an adapter. Or, if you have a long telephoto lens (400mm or longer) it can be your telescope. Any camera lens can be used to take astroimages, just depends on your goal.

Eyepiece Projection Imaging – sort of afocal and prime focus, but not.

An eyepiece is used in your telescope to further enlarge the image. Your camera, without lens, is connected directly to the telescope via a special eyepiece projection adapter.

Bottom line with all of these formats: A steady tripod/telescope mount, fast shutter speed and/or a way to track the object accurately during long exposures will help you get the shot. With the Moon for example, a fast shutter speed (1/125 or faster) works.

What's in the Sky?

May 7, around 9 pm CDT, southeast: The nearly full Moon and Jupiter are close, with Spica below.

May 11, 9 pm CDT, southeast: A double shadow transit (Europa and Io) occurs on Jupiter.