

## Offered Title: Astrophotography 2 – Point and Shoot

This week I will focus (pun intended) on a simple and inexpensive way to get into astrophotography – afocal imaging, or just aim it into the eyepiece and shoot!

If you have a smart phone, any cell phone that takes pictures, or a small digital camera, it's a start. The other equipment needed is a telescope, spotting scope, or binoculars, or a friend who has one. From now on I will refer to them as the "optic". For smart phone owners, there are accessories and apps that can take you even farther. I will cover some of them.

Let's start with your phone and an optic. The keys are getting the image in your phone's camera lens so you can see it on the screen, then holding steady enough to prevent a blurred picture. This takes practice and patience. Also, start with a very bright object such as the Moon, any phase is OK but a quarter or crescent Moon is prettiest. Brighter objects mean shorter exposure times and that equals sharper images. Wait until your phone has attained best focus, hold your breath, and take the shot. The trick is to prevent moving the phone as you touch the camera to take your picture. If your phone's camera has a self-timer, try it so you do not have to touch the camera for an exposure. Keep focus...hold your breath...and good luck. I have seen some pretty nice images taken this way so it is doable, but as you probably figured out, the above method is tricky, especially for those of us who simply aren't as steady as we used to be.

Taking it up a notch, there are adapters available to avoid blurry images. These adapters attach to your optic eyepiece and position your phone's camera over the eyepiece. Now you're ready to get serious! However, ...darn, yes I hate to do it, but by upping your phones capability this might require your optic be able to track objects. For the Moon and other bright objects, it is not a big concern, but for dimmer things that might require longer than 1/60 second exposure, tracking is essential. The longer your exposure the better your optic's tracking needs to be.

Good phone adapters can be found at Orion, iOptron, Televue, Celestron, Meade. They are also reliable sources for tracking mounts.

After getting your image, what next? There are photo apps that let you edit and enhance your shots. They include: Photo Effects Pro, Toolwiz Photos, PhotoDirector, even versions of Adobe Photoshop and Lightroom. Of course you can transfer your images to a computer and edit them.

When it comes to small digital cameras, all the above stuff applies, especially transferring images to your computer.

I recommend editing your images in a computer. But that's just me.

## What's in the Sky?

Jupiter is King! Another double shadow dance happens on Jupiter. May 18; 10:53 to 11:43 pm CDT