

PREPARING TO *SHOOT THE STARS*

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March 29, 2017

*Planning a Night or Day of Astrophotography*_____

▶ **What do you want to shoot?**

- The Milky Way
- Stars
 - Includes the sun
- Moon
- Landscape & sky

▶ **Where do you want to shoot?**

- Backyard, desert, mountains ...

Picking the Conditions for Your Shot _____

▶ Sun rise/set/full darkness

- Don't forget the blue hour
- Wait till 2 hours after sunset for full darkness

▶ Dark skies

- Light pollution
 - Amount
 - Direction

▶ Moon/visible stars/constellations/Milky Way

- Where in sky at what time

▶ What's the weather going to be

Computer Tools & Sites

▶ Location

- *Google Maps* – map & satellite views
- *Dark Sky Finder* – Jshine.net and others

▶ Location and times of sun and moon

- *The Photographer's Ephemeris* – App requires internet connection
 - <http://app.photoephemeris.com/?ll=16.768800,-3.007300¢er=16.7688,-3.0073&dt=20170215173100%2B0000>

Computer Tools & Sites – cont'd

▶ Map of stars

- Stellarium - App does NOT require internet connection
 - http://www.stellarium.org/en_CA/

▶ Others

- AstroAms – Facebook page for learning astrophotography (others too)
- LonelySpeck – web site w/tutorial on sources of noise in photos, products to help focusing ...
 - <http://www.lonelyspeck.com/how-to-find-the-best-iso-for-astrophotography-dynamic-range-and-noise/>

Tools – Android Phone _____


- ▶ **Google Maps – cell service required or save map**
- ▶ **Astrophoto Tools – no cell service required**
 - **Calculates max exposure time**
- ▶ **Compass – no cell service required**
- ▶ **Bubble Level – no cell service required**
- ▶ **Lunar Phase – no cell service required**
- ▶ **Clear Outside – take tour on their website**

Tools – Android Phone

- ▶ **Sky Guide, Sky Night, Sky Track – no cell service required**
- ▶ **Light Pollution Map – load map w/wi-fi, then no cell service required**
- ▶ **ISS Detector – requires cell service, use in planning**
 - International Space Station and Iridium tracker
- ▶ **Plan It (\$) – requires cell service for some functions**
 - General photo planning tool with sun & moon position, etc.
 - Use to plan sun/moon through natural arch, etc.

Prepping

▶ Scout the site during the daytime


- Clear view to where you want to shoot
 - Interesting horizon/objects in the foreground
 - Condition of the road
 - Places to turn around
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Prepping

► Things to bring

- Tripod with a weight
- Remote trigger
- Warm clothes
- Flashlights – red (?) and white light
- Laptop – tethering
- Paper maps – Atlas of Idaho (AAA) for dirt roads
 - Topo maps (?)

Focusing In The Dark _____

- ▶ **Use manual focus set to infinity with Live View**
 - ▶ **Center a bright star and make a 5 sec exposure**
 - ▶ **Examine the photo using Live View with extra magnification added**
 - ▶ **If the star isn't sharp, adjust focus and repeat**
 - ▶ **Once you are happy with the focus, use tape to lock the focus ring of the camera**
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- A decorative graphic consisting of several parallel white lines of varying lengths, slanted diagonally from the bottom right towards the top right, located in the lower right quadrant of the slide.

Total Solar Eclipse – Aug 21, 2017_____

- ▶ <https://eclipse2017.nasa.gov/>
- ▶ **Next total eclipse in Idaho - 2169**
- ▶ <http://www.idahostatesman.com/news/local/article125915564.html>
- ▶ **First to cross the US coast to coast in 40 years**
- ▶ **Boise will have a partial eclipse from 10:10 am through 12:50 pm**

Total Solar Eclipse – Aug 21, 2017 ---

▶ Area of totality is north of Boise

- **Centered around a line through Smith's Ferry**
 - **Center has longest duration - about 2 minutes.**
 - **Furthest south before Horseshoe Bend – very short**
- **Moving from the WNW toward the ESE.**
- **60-70 miles wide moving about 2,000 mph**
- **At the center, totality will last longer than 2 minutes in Idaho**

Total Solar Eclipse – Aug 21, 2017 _____

▶ Caution! Protect your eyes and camera sensor.

- Partial eclipse can still damage your eyes and your sensor.
 - Mirrored vs. mirrorless
- Lee expects to release a solar filter in “a few months”
- Check Amazon for other brands – (\$80-\$475)

Total Solar Eclipse – Aug 21, 2017 _____

- ▶ **Be in place by 9:00 am, setup by 9:45**
- ▶ **Careful in a canyon, sun will be 124° on the compass and 45° above the horizon**
- ▶ **Expect US 95, Hwy 55 and other roads to have standstill traffic jams**
- ▶ **Find a place to the west or east of 55**
 - Stanley Lake, Redfish Lake, etc.
- ▶ **Hotels close to path of totality are full or have raised prices 300-600% for Aug 20.**

Path of Totality





June 5, 2016





July 9 2016

