Eclipse Photography Guide
Tips and techniques for safely photographing the Total Solar Eclipse

If you have been following along with the Scopedawg Eclipse Photo Guides, you now have a set of eclipse images... now what? Here are some ideas for composing sequences and a couple of additional shots you may wish to consider.

**Image Composition**

- Yes, there are other, less costly, photo editing programs out there, but Photoshop is and remains the standard. Whatever software you use all photos benefit from processing RAW images, adjusting brightness/contrast/color, etc., using layers and masks and sharpening your images.

- RAW conversion preserves image quality when saved as .tiff files. Make minimal changes to brightness. Do not convert to .jpeg, it is a destructive format.

- Layers & Masks are critical for images of the corona and for compositing sequences. High Dynamic Range (HDR) processing helps reveal details in the corona.


**Options For Composites**

- Multi-Photo Composites such as this beautiful shot by Fred Espenak from 1999 in Turkey shows the sun moving naturally through a static frame. Exposures are layered into a single frame and foregrounds can be...anything you want!

- Realistic layered composites can be constructed from pics you have already snapped and processed. This sequence of the entire eclipse was assembled from 13 separate images by Fred in Libya / 2006.

**Multi-Photo Composites**

- Whether you are planning a widefield with a foreground or a close up image with a telephoto or telescope, 3 rules apply: 1) you must determine the motion of the sun across your sensor for your location  2) frame your shot appropriately and 3) determine the interval between shots

These graphics are intended to give a general representation of sequences in which the mount and camera do not move and the sun is allowed to drift through the frame, with images taken at regular intervals. Each approximation is facing southwest, in the PM and in the east - the dashed line on the 10mm graphic represents facing southeast, in the AM and in the west.

The steeper angle of the rising sun applies to each graphic. Representations are of an APS sensor on each of the optics.

**Your goal** is to orient your field of view to the motion of the sun so the image of totality is close to the center. This requires starting the sequence off center and orienting your frame so the entire sequence, or any part of it, drifts through with totality in the middle.

- **10mm**
  - Widefields can capture landscape or staged foregrounds with eclipse
  - Entire sequences fills ~1/3 of frame
  - Intervals must be min of 5 min, 10 or 15 will work

- **50mm**
  - Max lens for getting all of the eclipse
  - It will be tight - see practice tips on back
  - 5 or 10 min intervals

- **400mm**
  - At this focal length the sun drifts through the frame in 18 minutes
  - At 3 minute intervals about 5 1/2 images fit
  - Totality could be framed by Bailey's Beads / Diamond Ring
  - OR with partial crescents
These composites offer maximum flexibility when composing your eclipse calendar shot. They utilize images you have already captured and can be put together to your specifications, whether a complete eclipse sequence or one that showcases changes during totality.

**Reality Check**: The goal is to orient and layer your still images into a realistic composite that shows a smooth transition of the unfolding eclipse. To ensure your final image does not look fake, spacing and orientation are critical.

**Layered Composites** are individual still images that are not aligned, the object of each frame being centered within the frame. A base frame large enough to encompass all of the images is created first, then the individual frames are oriented and aligned within the base. Symmetry of the images and a constant distance between them gives the composite a realistic feel.

- Composites with many images can be arranged in rows that show the entire eclipse unfolding over time
- The time frame of your sequence can display the entire sequence or just the 2 min 40 sec of totality

**Practice Makes Perfect**

*Test all equipment, especially if new to you - stability, connections, ease of motion, etc.
* The moon is a perfect test target, its size and motion is close to that of the sun, the brightness levels of a crescent moon similar to that of eclipse totality
* Let the moon drift across your frame - how fast a pic & how long a delay avoids blur?
* Check focus, mark infinity on all lenses to be used
* If using an equatorial mount, only rough align as on eclipse day to test tracking and motion of sun

**Lots of stuff to remember - a checklist helps**

- Pack extra batteries/cards, intervalometer, filters, etc
- All batteries charged, power for mount, etc
- Mounting plates, camera t-ring, tools, headlamp, etc
- Your printed exposure plan, especially if using > 1 camera
- Drinks, food, chairs, sun protection, meds, etc

Alan’s e-book covers:

* Step by step Photoshop instructions of all types of exposures & composites
* Additional ideas for composites and framing
* Practice hints sprinkled throughout the book
* Checklists, what can go wrong, testing parameters, using multiple cameras
* And much, much more!

Graphics / content by JoLo

Pics © 2006, Fred Espenak

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