Smarter Every Day

ECLIPSE CHECKLIST

STEP 1: Get in the totality plane

This 2017 Total Eclipse Interactive Google Map by Xavier Jubier can help you decide where to go. goo.gl/cxaL1N

STEP 2: Plan your times

Downloading Dr. Telepun's Solar Eclipse Timer App will put everything in easy mode. It has a "talking" timer designed specifically for total solar eclipses. The app features are designed around real eclipse experiences — to help you observe, enjoy and photograph the total solar eclipse. Go to solareclipsetimer.com to learn more or click on these buttons to download. Be sure to use the practice video to understand how the app works. (Settings>Play a Practice Eclipse Movie)

Download on the App Store GET IT ON Google Play

STEP 3: Get your gear together

EVERYONE

- Solar eye glasses
- White cardboard and object(s) with pinholes (straw hat, colander or cooking spoon) if you are in a partial-eclipse zone
- Hat and sunglasses (not for viewing eclipse)
- Sunscreen
- Bug repellent
- First aid kit
- Cooler (with food and beverages)
- Roll of toilet paper (for emergencies)
- Accurate clock (digital watch/phone)
- Digital camera
- Extra batteries and/or power supplies
- Your Eclipse Day Notes (next page)

IF YOU PLAN TO VIDEO THE ECLIPSE

- Video camera
- Zoom lens or 2x converter
- Tripod (be sure it can point high enough)
- Solar filter (metalized glass, recommended)
- Transparency plastic, tape, and metallic sharpie (if you want to use the drift method (see step 4))

IF YOU WANT TO TRY FOR SHADOW BANDS

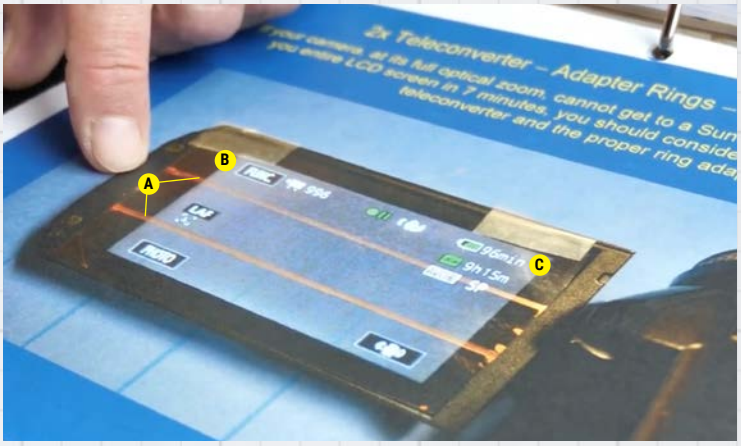
- Additional video camera with manual exposure
- King-size white sheet (or large, white poster board or plastic)

Modified from original checklist by Fred Espenak goo.gl/vyN8sT

STEP 4: Test your video gear (for drift method)

This is important to do as far ahead as you can, and should be repeated on the day before the eclipse at the same time and location that you plan to record the event on eclipse day (https://youtu.be/twhZPxYVOe4).

1 Tape a piece of transparency plastic on your video camera's LCD screen. Draw two lines across it with a metallic sharpie (**A**).



2 Use those guidelines to help you position your camera to follow the track of the sun. Record details about the positioning in your notes (next page). NOTE: You will have to tweak these settings on the day before the event if you are traveling.

3 Set camera to maximum optimal zoom. Time how long it takes the sun to go from the left side (**B**) of your LCD screen to the right side (**C**).

4 Adjust the zoom on your camera so that the sun's path on your LCD takes 7 minutes. Record your settings in your notes (next page).

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ECLIPSE DAY NOTES

IMPORTANT NOTES:

LOCATION: _____

TIMES C1: _____

C2: _____

C3: _____

C4: _____

ZOOM LEVEL FOR DRIFT METHOD: _____

CAMERA ANGLE FOR SUN'S PATH: _____

VIDEO TIMING NOTES: (or use the app!)

START VIDEO (C1 - 2min): _____

REMOVE SOLAR FILTER (C2 - 20sec): _____

REPLACE SOLAR FILTER (C3): _____

SHADOW BANDS (SNAKES)

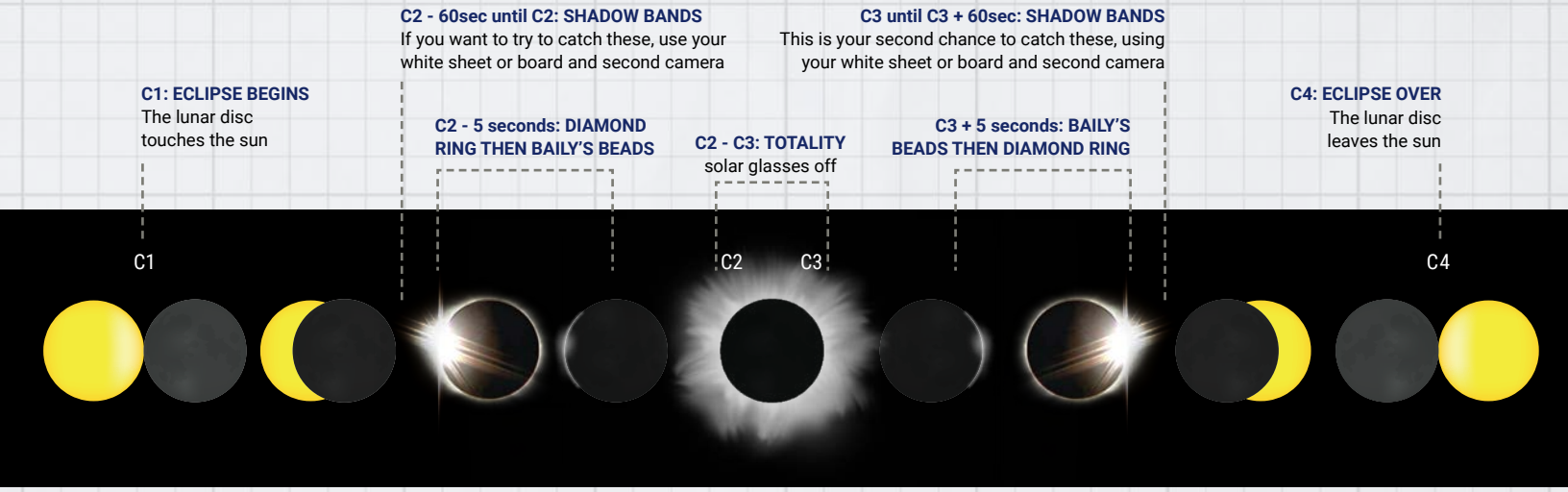
(C2 - 60sec): _____ — (C2): _____

(C3): _____ — (C3 + 60sec): _____

ECLIPSE DAY VIDEO — DRIFT METHOD

Your gear is tested and you are ready to roll. Use the Solar Eclipse Timer app or your notes to ensure you capture the event as you want to.

1. Use your notes to position your camera to record the correct angle for the sun's 7 minute trek across your LCD screen.
2. 15 minutes before C2, make sure to put your electronic devices in silent mode.
3. With the solar filter on, start recording two minutes before the beginning of totality (C2).
4. Remove the solar filter 20 seconds before C2.
5. During totality (C2-C3), bump up the exposure slightly.
   (If you are in the totality plane, this is also the only window of time that it is safe to remove your solar glasses.)
6. At C3 (end of totality), replace the solar filter, return exposure to your previous setting and continue recording for two more minutes.



C1 - C2 BEFORE TOTALITY

- Temperature decreases
- Animals freak out
- Starts to get dark

C2 - C3 DURING TOTALITY

- This can last several minutes if you are at the center of the totality plane
- At the maximum point, scan the horizon — it should look like a 360° sunrise

C3 - C4 AFTER TOTALITY

- Temperature increases
- Animals calm down
- Starts getting brighter

TWEET ME YOUR RESULTS @smartereveryday! I WOULD LOVE TO SEE A PICTURE OF YOU AND YOUR FRIENDS/FAMILY AT THE ECLIPSE!