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## HOW TO USE SUNSKETCHER



Partner



## HOW TO DOWNLOAD

To download the SunSketcher app, simply go to your phone's app store and search for "SunSketcher." You should see an app tile that looks like this:



\*This is the iOS file. The Android tile has the same logo and name.

Downloading the SunSketcher app is free, with no in-app purchases required. Click "Download" or "Install" and it will appear on your home screen!

We strongly recommend reviewing the short tutorial provided. Make a note of where the app is so you can readily find it on April 8!

## USING THE APP ON THE DAY OF THE ECLIPSE IS AS EASY AS 1,2,3!

- 1.** Once you are at the location where you will be watching the eclipse, turn on the "Do Not Disturb" feature and disable the phone ringer, to avoid any vibrations that would affect the quality of the images. Then open the app and press "Start."
- 2.** Set your phone down with the back camera facing the sun. The app will do the rest!
- 3.** ENJOY THE ECLIPSE! The app needs no further instructions or input.

Once totality has ended, please wait about 5 minutes before you pick up your phone. You can then swipe through the images taken and (if you so choose) send them to us for analysis! The images will mostly be thin solar crescents or possibly just a few bright dots; they may even have overexposed bright areas. They may not look like much to you, but they are valuable to us!

## THE SCIENCE OF SUNSKETCHER

The app takes images near the times of second and third contact, when the edges of the Moon and the Sun are almost coincident. Sunlight passing through the lunar valleys form the bright "Baily's Beads," visible only for a few seconds before totality starts (2nd contact) or a full crescent Sun emerges (3rd contact).

The app automatically timestamps each image to an accuracy of a millisecond, and also records the GPS phone location. This information can be used to construct a precise model of the lunar limb, as seen from that location at that time. The timing of the appearance and disappearance of each Baily's Bead, coupled with precise knowledge of the depth of the pertinent lunar valley, allows a measurement of the solar radius at that Bead's location. Combining the millions of images from your fellow SunSketchers along the eclipse path leads to a detailed map of the complete solar shape.