SunSketcher

Our Sun is not quite a perfect sphere. Knowing our Sun's true shape would give scientists new clues about its mysterious interior and test theories of gravity. But precisely measuring the shape of this enormous, nearly-round object has been challenging - until now.

Join the SunSketcher team and help make these measurements during the total solar eclipse on April 8, 2024! The SunSketcher app on your smartphone will capture images of Baily's Beads. Baily's Beads are the last glimmers of sunlight that slip through the valleys of the Moon as it eclipses the Sun and the first rays of sunlight to sneak through the low spots on the other side of the Moon as the Sun re-appears.

Anyone in the path of totality with a smartphone is invited to participate on April 8, 2024!

What you'll do:

- Be part of an historic effort to calculate the shape of the Sun.
- Enjoy the eclipse while your smartphone collects data for science.

Requirements

- **Time:** 5-10 minutes to download app and read the instructions, plus the time you spend watching the eclipse.
- **Equipment:** An Android or Apple smartphone running the free SunSketcher app and a tripod or material to position your phone to face the Sun.
- **Knowledge:** None. The app provides instructions.

Get started!

- Visit the project website and sign up to join the team and be notified when the app is available.
- While you're there, check out the app tutorial (view full screen for best results).
- Make a plan to be in the path of totality for the April 8, 2024 eclipse - with your phone and the SunSketcher app!

Visit the project website https://sunsketcher.org (or QR code at right) to learn about:

- The science behind the SunSketcher project and
- The Heliophysics Big Year, NASA's yearlong celebration of heliophysics, the science of the Sun and how it influences Earth, space, and the planets in our solar system.

NASA Partner

Follow the QR code to the right to learn about more NASA research projects that need your help. **Everyone, regardless of citizenship status, is invited to join these projects!** science.nasa.gov/citizen- science

SunSketcher™

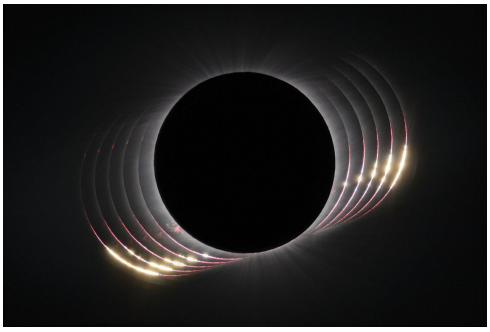
WHO: Age 13 and up

WHERE: Outside, in the path of totality for the April 8 eclipse

DIVISION: Sun

LAUNCHED: 2023

The three screenshots above are from the SunSketcher App tutorial, available on the website. They outline three key steps to follow to use your phone to contribute to the SunSketcher project. Images from https://sunsketcher.org/app-tutorial.php



This image illustrates Baily's Beads - the bright spots of light on the Moon's edge that are visible at the very beginning and the very end of totality. The Moon's surface is covered with mountains, valleys, and craters, which make the edge of the Moon bumpy. The low points are the last - and first - places where sunlight passes as the Moon eclipses the Sun. In this picture, multiple images taken in succession show that the beads disappear and appear in stages, with only the very deepest valley and craters allowing sunlight to shine through closest to totality. This illustration is composed of a series of images taken from ESO's La Silla Observatory on 2 July 2019 during a total solar eclipse by P. Horálek/ European Southern Observatory.

The SunSketcher Team includes:

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