

# The Solar Eclipse of August 21, 2017 in Kentucky and Tennessee

Michael A. Covington, Senior Research Scientist Emeritus, The University of Georgia  
[www.covingtoninnovations.com/eclipse](http://www.covingtoninnovations.com/eclipse)

With thanks to NASA, Amer. Astronomical Socy.(AAS), and Richard Dasher for maps and pictures used by permission

## On August 21, 2017, all of North America will see an eclipse of the sun.



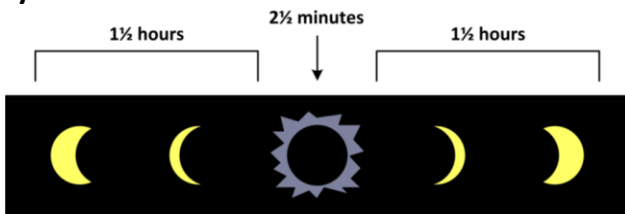
The eclipse will be **TOTAL** →  
 for about **2 ½ minutes**  
 along a narrow track  
 from Oregon to South Carolina



and **PARTIAL** →  
 at all other  
 times and places.



In the middle of the path of totality,  
 you will see this:



Near the edges of the path, you get less than  
 2 ½ minutes, so get in the middle if possible.

Outside of the path, you **ONLY** see a **PARTIAL**  
 eclipse. So get in the path if possible.

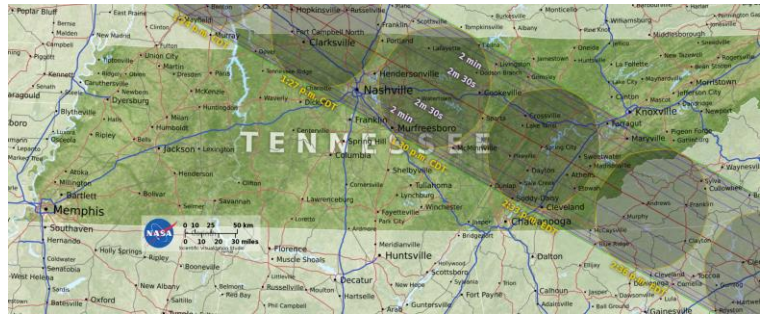
**NORTH OF THE PATH OF TOTALITY**



**SOUTH OF THE PATH OF TOTALITY**



## Path of totality



Totality is around 1:25 p.m. CDT, 2:25 p.m. EDT. Check [www.eclipse2017.org](http://www.eclipse2017.org) for exact time at your site.

## How to see it safely

### Why safety matters

It is always dangerous to look directly at the sun.  
 Eclipse eye injury can be painless and permanent.

Sunlight is the same during the eclipse as at any other time.  
 The eclipse doesn't make the sun emit dangerous rays;  
 the sun already does that. The eclipse makes people look.

Protect your eyes **WHENEVER ANY PART** of the bright  
 surface of the sun is visible.

### Method 1: Safety-certified filters or eclipse glasses



New for 2017, these  
 have an ISO  
 safety  
 certification.

Approved by Amer. Acad. of Ophthalmology  
<https://www.aao.org/eye-health/tips-prevention/solar-eclipse-eye-safety>

Use eye protection to see these...



...but enjoy this part by viewing directly  
 (it is no brighter than the full moon)

### Method 2: Projection through a small hole



Make a hole in a piece of paper; look at the shadow.  
 It will show you the shape of the eclipsed sun.  
 (It's easy to supervise school groups doing this;  
 all the children face away from the sun!)

**WHAT'S NOT SAFE:** sunglasses, smoked glass,  
 photographic filters not certified for solar  
 astronomy, silvery plastic not certified as safe,  
**ANY filter used at the EYEPIECE of a telescope.**