The 2017 Solar Eclipse in Georgia and the Carolinas

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SHORT EDITION
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The 2017 Solar Eclipse

- What's happening
- How to watch it safely

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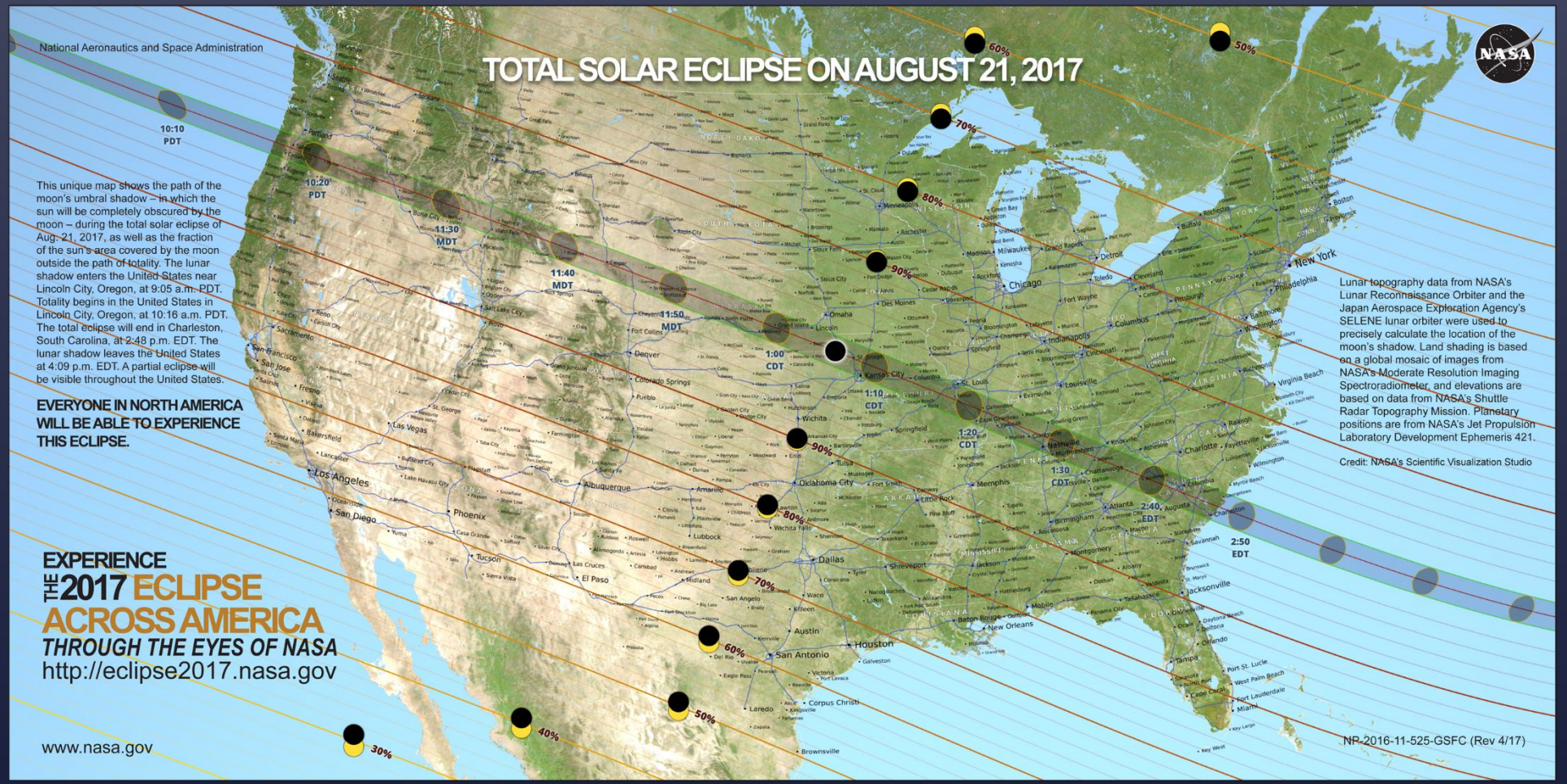
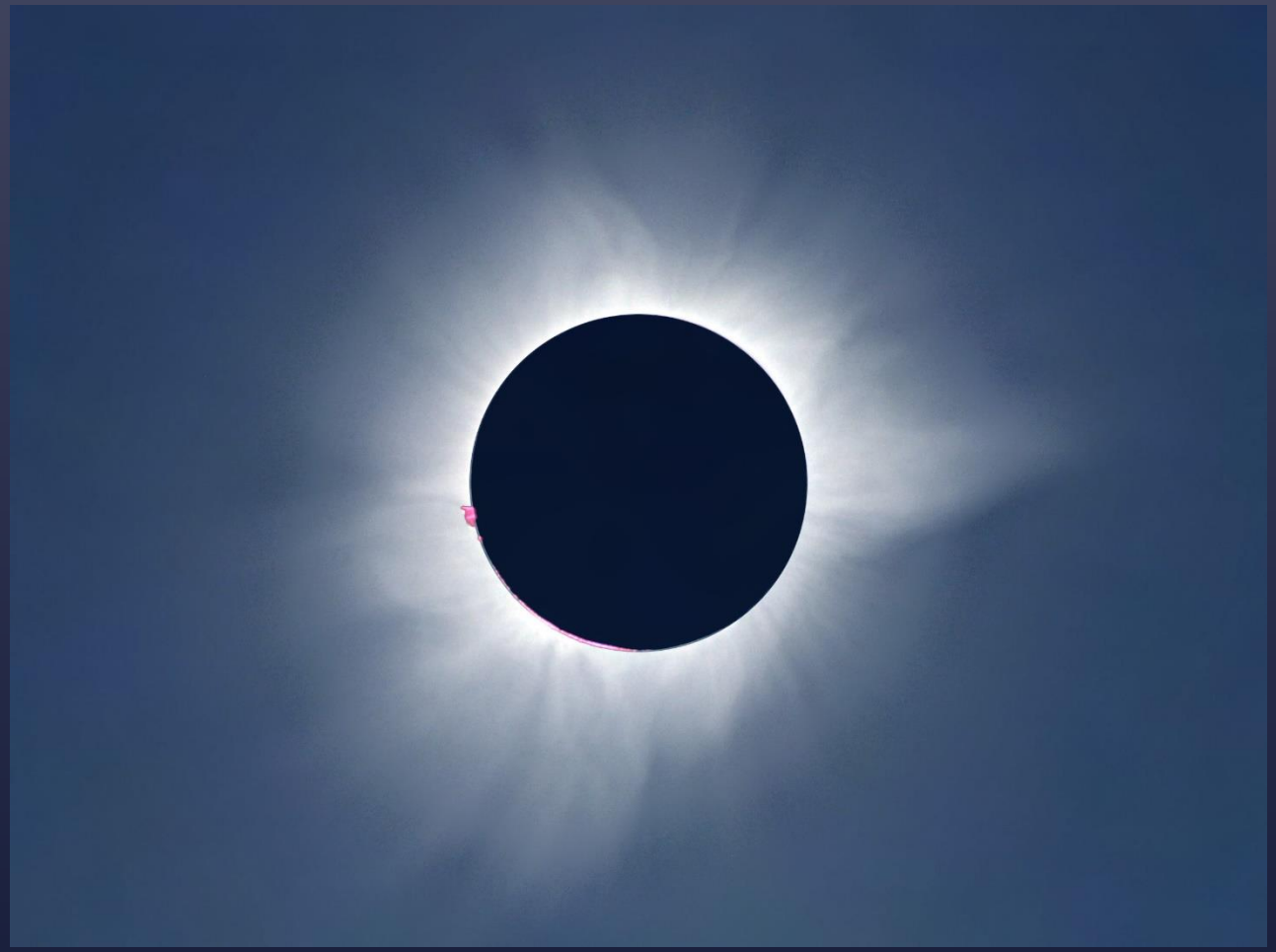
On August 21, 2017, all of North America will see an eclipse of the sun.



It will be TOTAL for up to 2½ minutes everywhere along the path of totality.



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It will be PARTIAL at all the other places and times.

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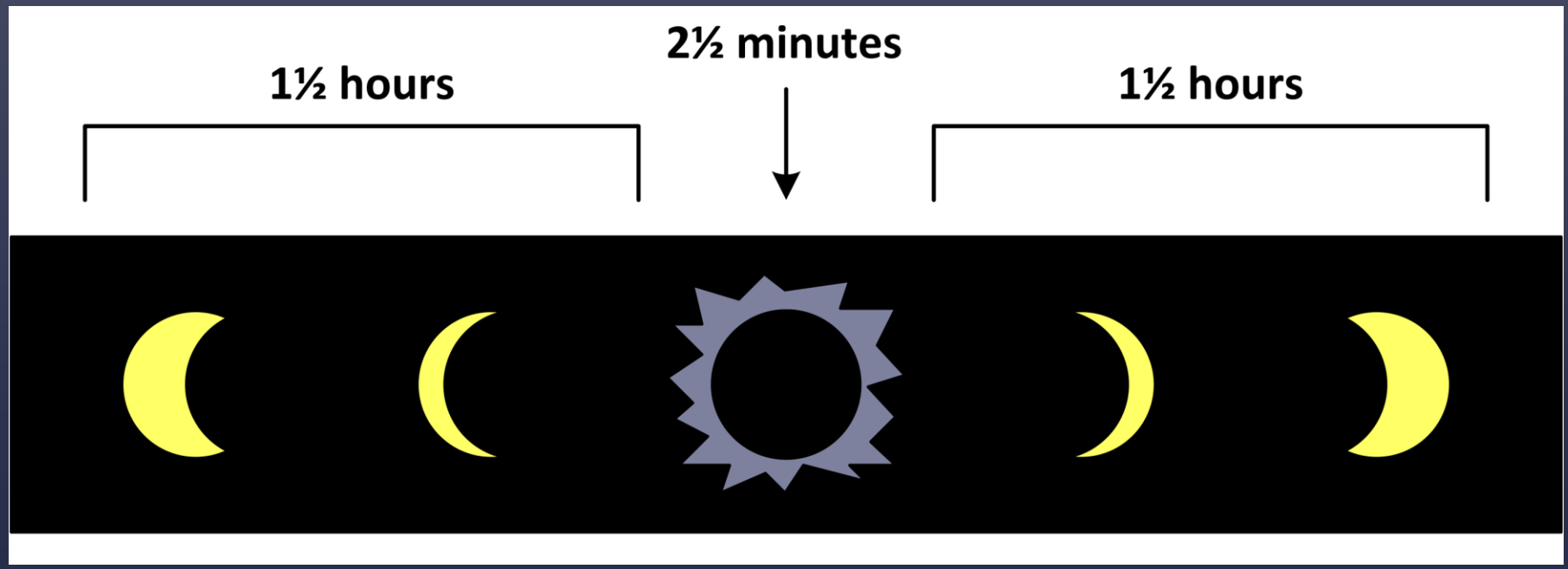
The path of totality goes through Franklin, Hiawassee, Clayton, Anderson, and Columbia.

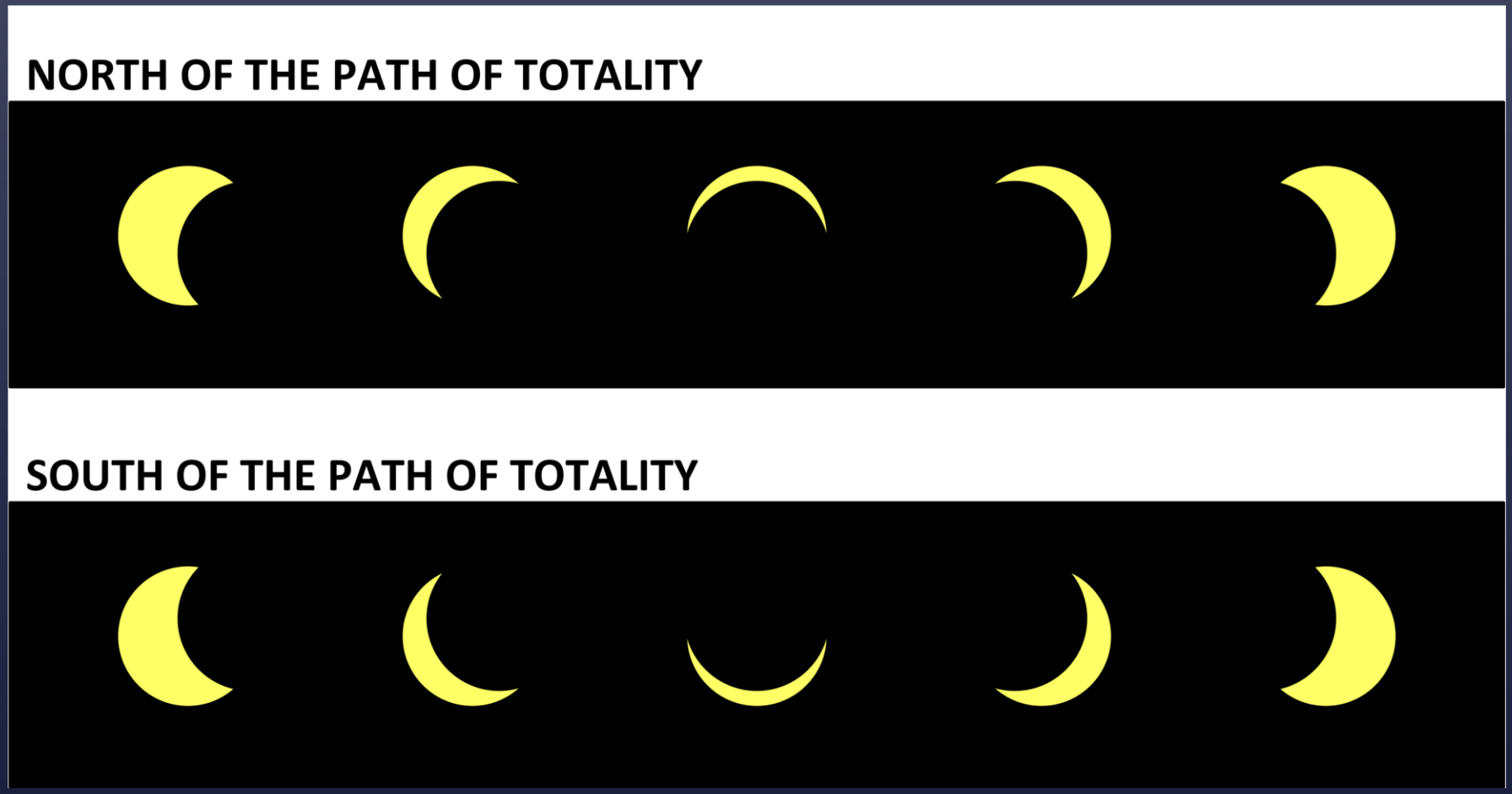
NASA

Here's what you'll see:

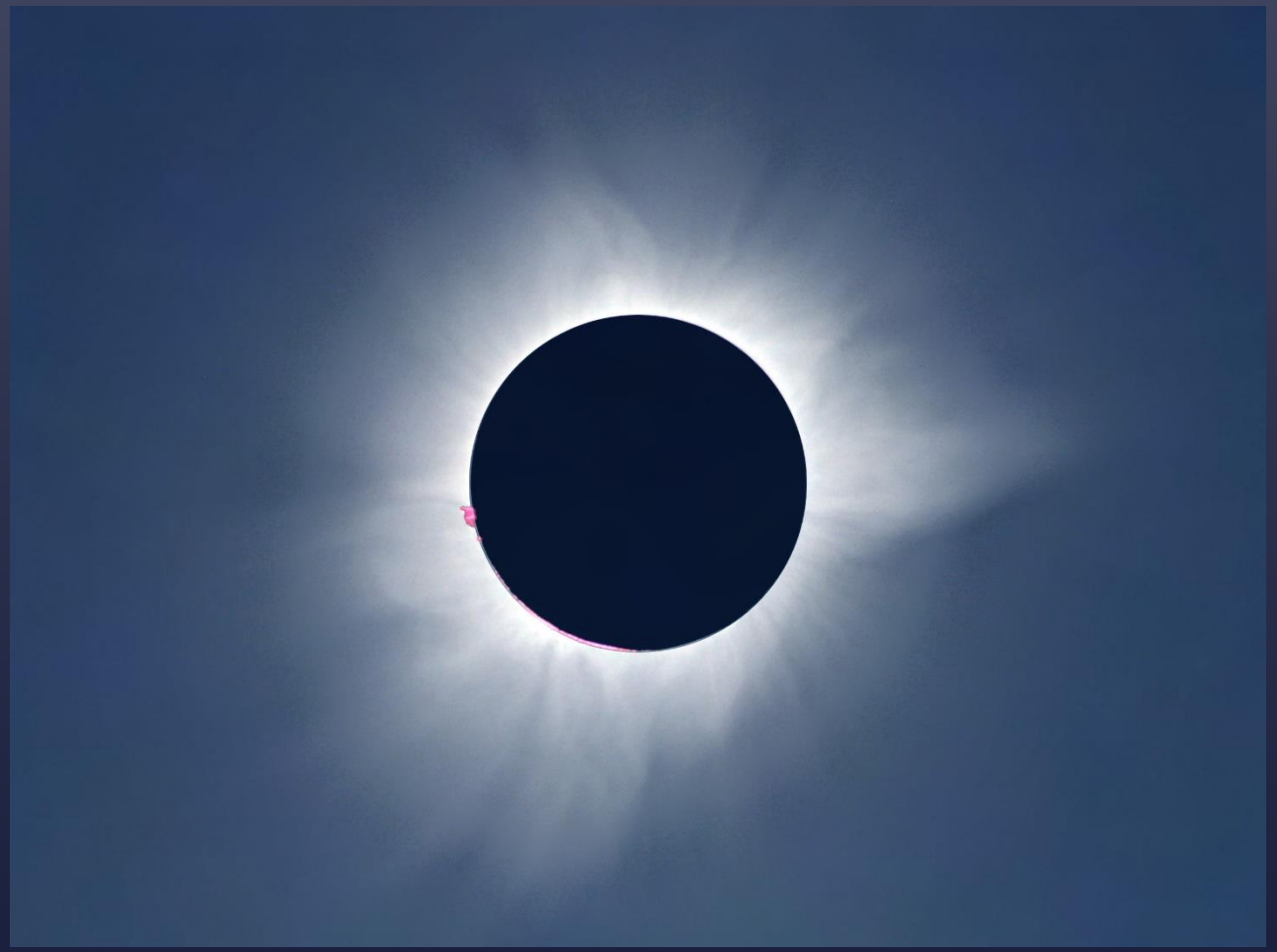


A partial eclipse, 2½ minutes of totality, and more of a partial eclipse.

If you’re not in the path of totality,
you won’t see the sun completely hidden.



If you want to see THIS, you must get into the path of totality. Being a few miles away is not good enough.



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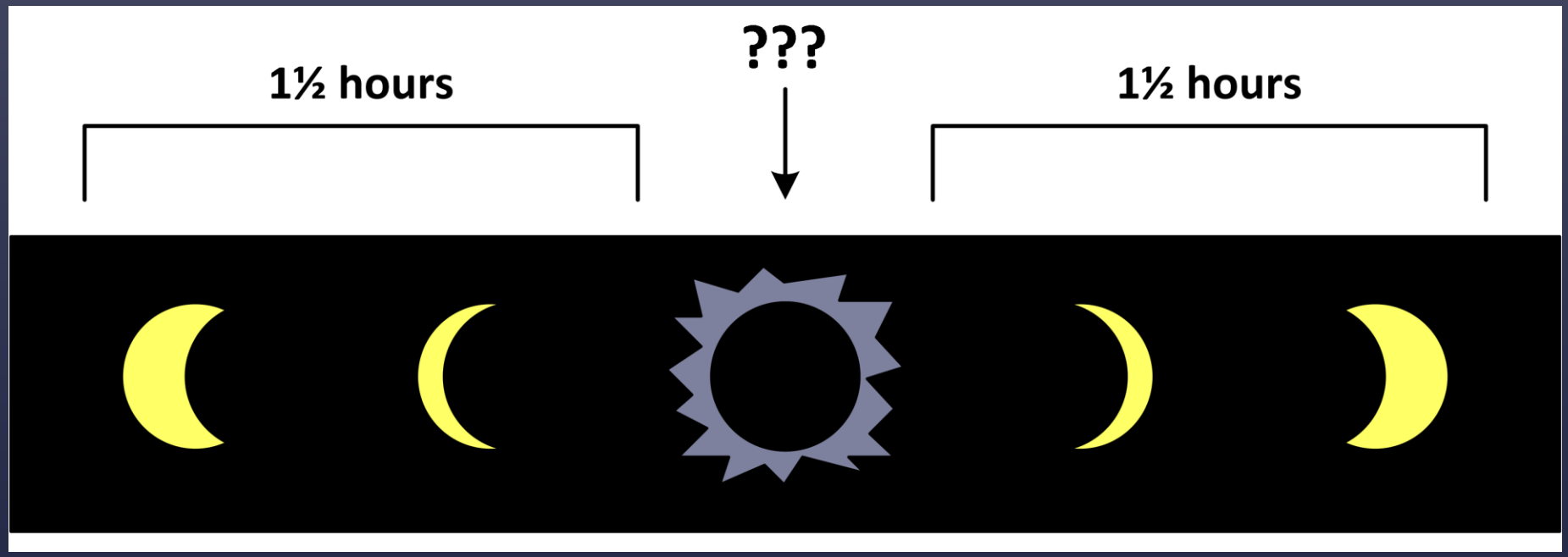
If you’re in the path, but not in the MIDDLE of the path, you won’t get your full 2½ minutes…



…so get fairly close to the middle of the 70-mile-wide path, if possible.

EXACT TIMES

	Partial eclipse begins	Totality begins	LENGTH OF TOTALITY	Partial eclipse ends
Hiawassee, GA	1:06 pm	2:35:01 pm	2m 27s	4:06 pm
Franklin, NC	1:07 pm	2:35:24 pm	2m 30s	4:07 pm
Clayton, GA	1:07 pm	2:35:46 pm	2m 35s	4:07 pm
Anderson, SC	1:09 pm	2:37:50 pm	2m 34s	4:09 pm
Columbia, SC	1:13 pm	2:41:50 pm	2m 30s	4:13 pm

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Why does safety matter?

What's dangerous about an eclipse of the sun?

Answer:

It's *always* dangerous to stare at the sun.
But eclipses are the only time people want to.

Sunlight is the same
whether or not
there's an eclipse going on.

The eclipse doesn't make the sun *more* dangerous.
It just makes people want to look at it.

Sunlight is the same
whether or not
there’s an eclipse going on.

It is not dangerous to be outdoors.

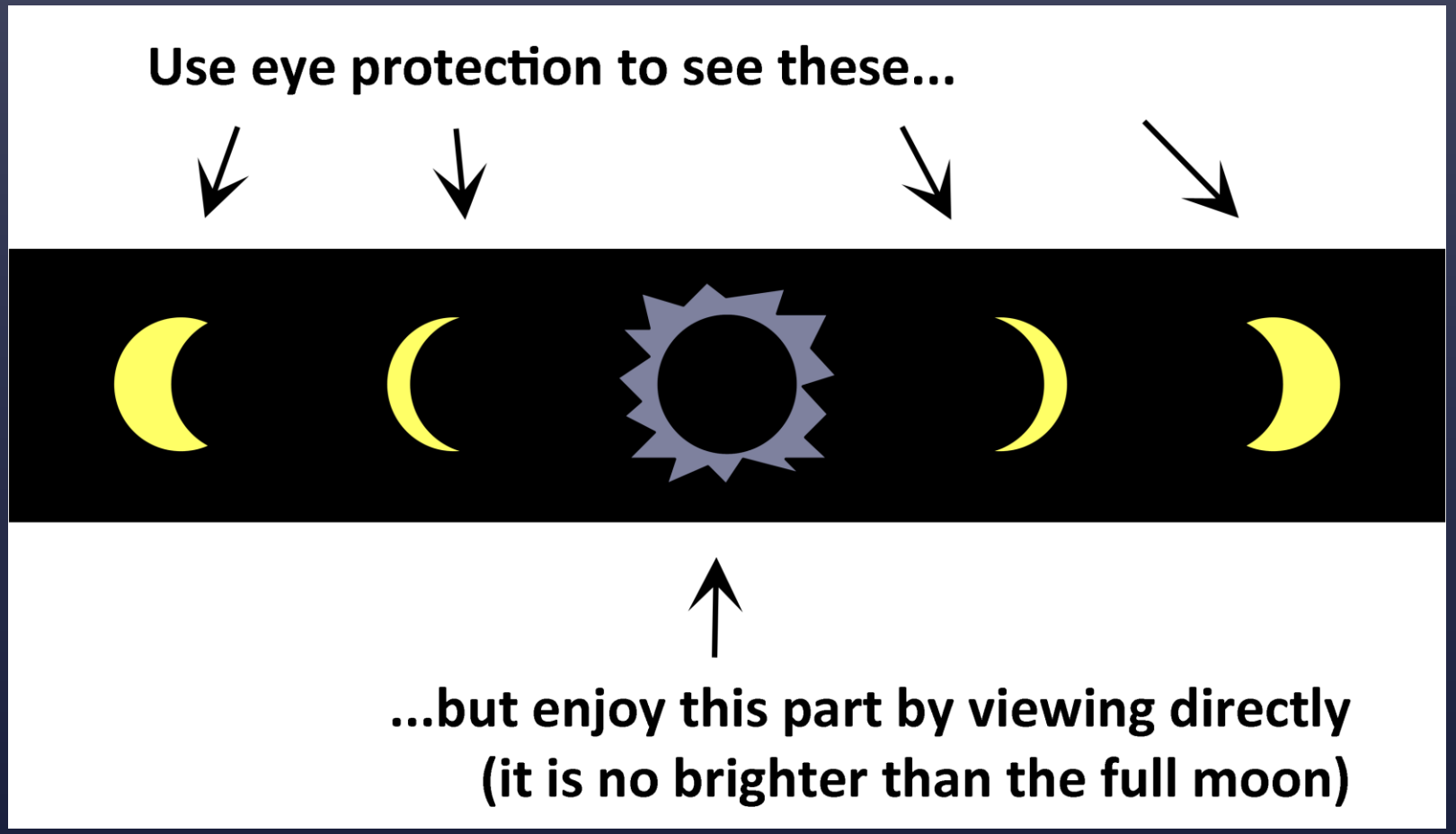
You don’t have to bring your dog, cat, or horse in.

Eye injury from staring at the sun is often painless.

It is similar to the “dazzle” from staring at a bright light except that it may never go away,
leaving permanent damage.

Don’t take chances.

Protect your eyes when looking at the sun if ANY PART of the bright surface is visible.



There are **2 ways to protect your eyes**:

METHOD 1: Using safe viewing filters

(available now, not available 50 years ago,
which is why you've been told they don't exist)

METHOD 2: Looking at a projected image
rather than directly at the sun

(amazingly easy – stand by for details!)

METHOD 1

It is safe to look at the sun through properly made eclipse glasses and handheld filters.

Eclipse glasses are not sunglasses.

They are about 1,000,000 times darker and usually have a silvery coating.

You can’t see anything but the sun through them.

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Get eclipse glasses from a reputable manufacturer and look for a safety certification.

EYE DOCTORS: The American Academy of Ophthalmology says they're safe.
See web site: https://www.aao.org/eye-health/tips-prevention/solar-eclipse-eye-safety

Eclipse glasses and viewers
must block infrared and ultraviolet light
as well as the light you can see.

That’s why some filters that
look dark enough
are not safe.

NOT SAFE:

- Sunglasses (nowhere NEAR dark enough!)
- Photographic filters not certified for solar astronomy
- Crossed polarizers
- Wratten #96 neutral-density filters
- Silvery plastic not certified for sun viewing
- Space blankets, DVDs, Pop-Tart bags
- Smoked glass
- Welding filters lighter than #14
- Filters used on the eyepiece of a telescope

CAUTION!

Any filter used with a camera, telescope,
or binoculars
MUST BE IN FRONT of all lenses.

It must be the FIRST thing the sunlight hits.

Eclipse glasses are for use by themselves,
NOT WITH TELESCOPES OR BINOCULARS.

Do not look into
an eyepiece while
wearing
eclipse glasses.

*That's not what
they're for!*

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METHOD 2

Projecting an image

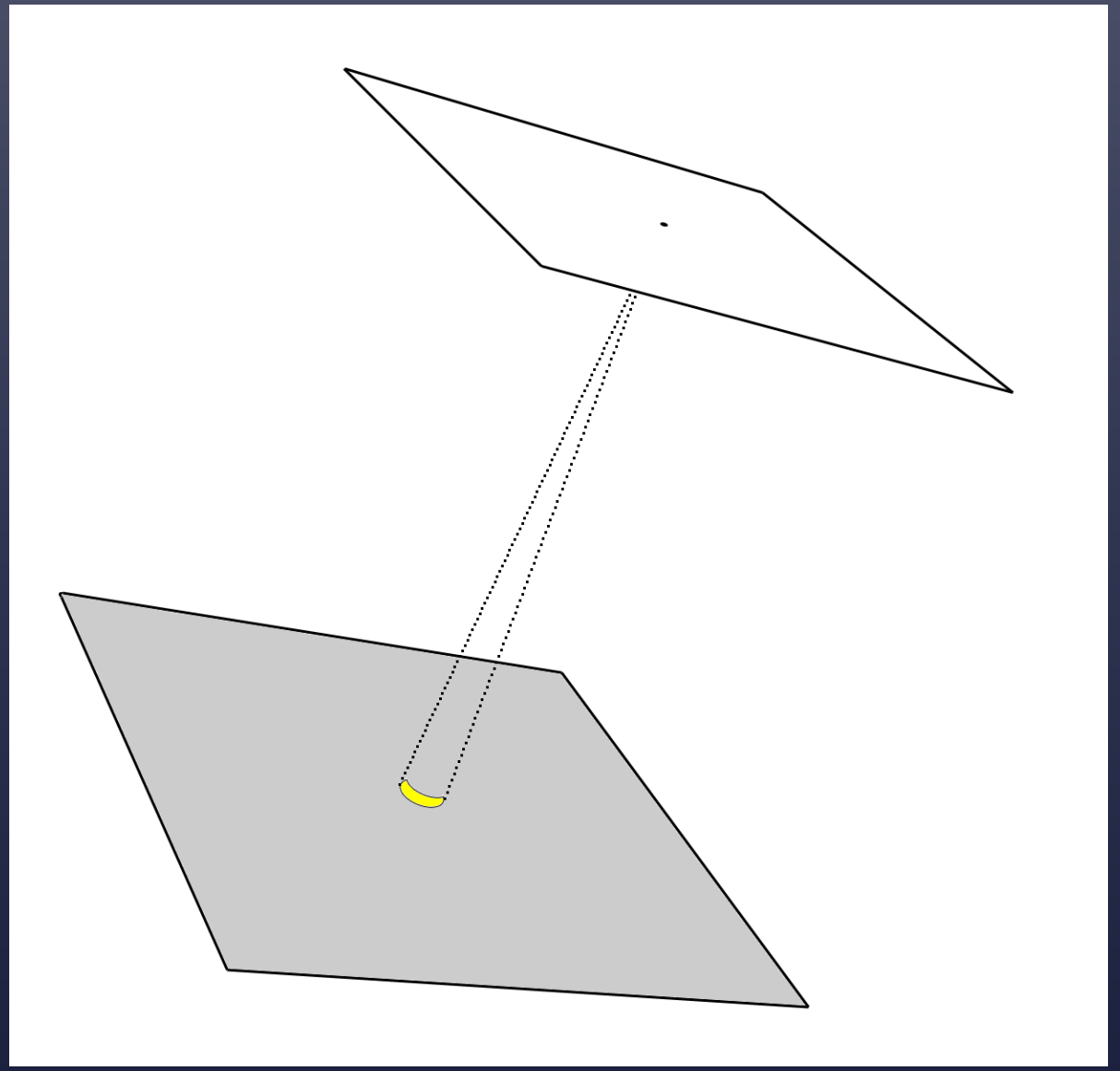
You can watch the eclipse
without looking directly at the sun
and without special equipment.

Recommended especially for school groups –
cheap, easy, and safe…

How it works

When sunlight passes through a small hole, it forms an image of the sun in the shadow.

Round on an ordinary day, crescent during an eclipse…



Make a small hole in a piece of paper.
Look at its shadow during the partial eclipse.

R. Dasher

This is called **pinhole projection**
even though the hole is bigger than a pin.

You can build it big or small.

Suggested hole sizes:
1/16 inch to put a spot 1 foot away
1/4 inch to put a spot 4 feet away

Try a 1/16-inch hole in the end of a shoebox.

You can try this out
on a day when clouds are
passing in front of the sun.

(Simulated eclipses!)

Look at natural holes that light is passing through, such as between leaves in trees...

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You can even make a hole with your thumb and forefinger, then look at the shadow of your fist on the ground.

(The hole does not have to be round!)

Pinhole projection is especially good for groups of school children…

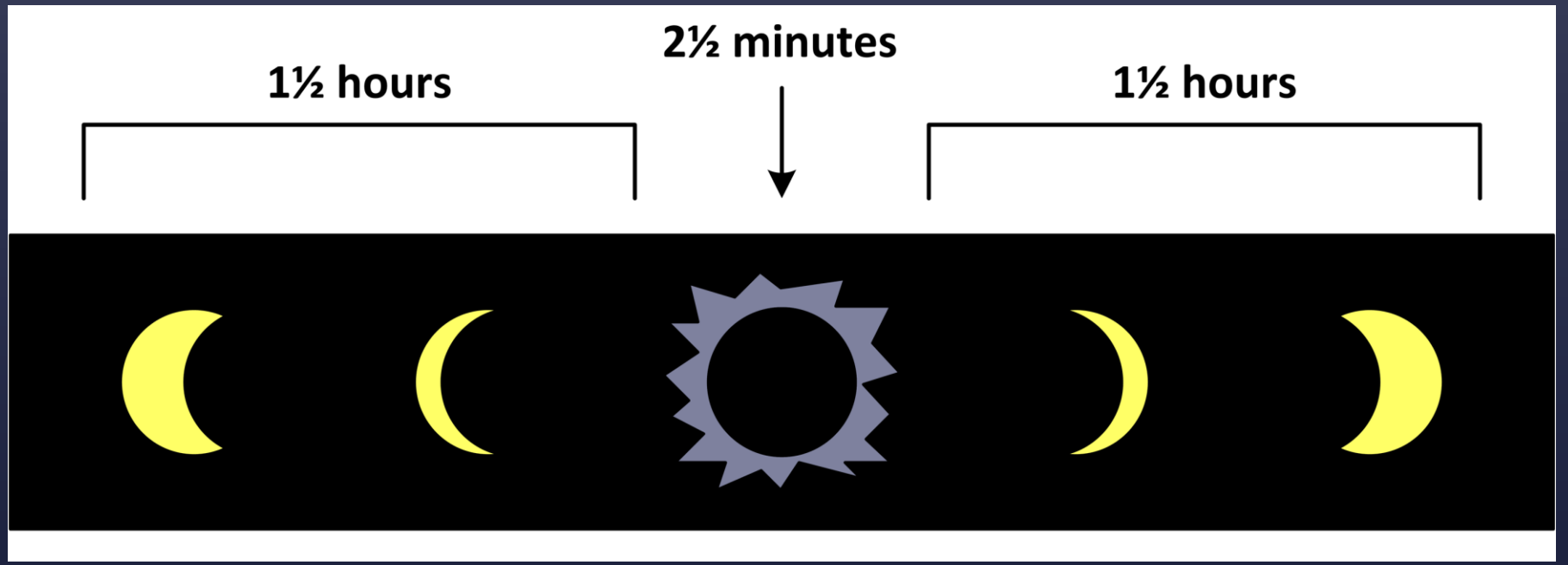
the teacher can see at a glance that they are all facing **away** from the sun!

Make sure they understand that we are not going to *look at the sun through the hole.*

That’s not how this works.

Whichever method you choose,

enjoy the eclipse!



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