The Great American Solar Eclipse





Dr. Mike Reynolds

Association of Lunar & Planetary Observers Florida State College at Jacksonville







January 24, 1925



March 7, 1970

NASA ATS-3 SATELLITE 7 MARCH 1970 ECLIPSE









1:10 pm



ATS-3 FOLLOWS THE SHADOW OF THE MOON FROM FLORIDA TO THE NORTH ATLANTIC.

1:50 pm

This Presentation...

- The General Public and the Great American Eclipse
- Science during the Great American
 Eclipse
- What's next, eclipse-wise?

STAR PARTY! • The General Public and the Great American Eclipse

Ozzy Osbourne was the headline at this year's edition of the **Moonstock**, a four-day music festival celebrating the total solar eclipse. The event took place August 18-21 at Walker's Bluff, a picturesque vineyard located in Carterville.

On August 21, people from all across the country gathered in Cartersville, Illinois to witness a total solar eclipse, something that hasn't been visible in nearly forty years. On that day, at 1:20 p.m., at the exact time totality began, **Ozzy** will played his classic song "**Bark At The Moon.**"

www.moonstock2017.com



The General Public

- A lot of interest... and a lot of anxiety
- Eclipse glasses and Amazon
- Traffic jams; *traffic jams*?
- A new generation of STEMoriented students?









Ken Poshedly iPhone 6S Plus



Totality!

The general public watches the eclipse at the Oregon State Fairgrounds

Dominic Hart NASA

| Some crazy people | Crickets! I heard crickets!! |
|---|------------------------------|
| This car went drivin There's an eclipse today? | |
| When is the next one? | ried I need a drink |
| People screaming, cheering, a touchdown at a football ga | |
| but so much better | Can we do it again? |
| What are solar glasses? | Diamond ring |



You've got to love Americans...

Some eclipse watchers reportedly put sunscreen on their eyeballs during last week's solar eclipse, in what appears to be a misguided effort to protect their eyes from sun damage.

According to KRCR, a local news outlet in Redding, California, a few patients visited a nearby clinic complaining of pain after they put sunscreen on their eyes during the eclipse on Aug. 21. They did this because they did not have protective glasses to view the eclipse, KRCR reported.

"One of my colleagues...stated yesterday that they had patients presenting at their clinic that put sunscreen on their eyeball," Trish Patterson, a nurse practitioner at Prestige Urgent Care in Redding, told KRCR. These patients had eye pain and were referred to an ophthalmologist, Patterson said.

So far, Patterson said she and her colleagues haven't seen any patients with eye damage from looking at last week's eclipse.

There are several ways to view a solar eclipse safety, but putting sunscreen on your eyeballs is not one of them. In fact, sunscreen labels usually warn users not to get the product in their eyes, because sunscreen can cause eye pain and irritation.









AND THEN: TOTALITY!

Science during the Great American Eclipse



Madras, Oregon ABC News



2017 Scott Hammonds













Keith Spring Tennessee



The Great American Eclipse 2017-08-21



Corvallis OR



Long -123.198 McMinnville OR



Long -106.327 Casper WY







Broomsdale MO



Hodges SC







Long -074.006 RegoParkNYC



Long -088.819 Starkville MS



Poughquag NY



Long -087.488 Hopkinsville KY





Totality from the NASA Gulfstream Near Columbia, SC



NASA EPIC Team NOAA's Deep Space Climate Observatory

Another Series of Eclipse Photos





• What's next, Eclipse-wise?

July 2, 2019

Maximum Eclipse: 4 minutes 32 seconds – Saros 127



December 14, 2020

Maximum Eclipse: 2 minutes 13 seconds– Saros 142



July 2, 2019







December 4, 2021

Maximum Eclipse: 1 minute 57 seconds – Saros 152





April 20, 2022 *Hybrid* Maximum Eclipse: 1 minute 21 seconds – Saros 129





The Great American Solar Eclipse

April 8, 2024

Maximum Eclipse: 4 minutes 28 seconds – Saros 139







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Then an instantaneous darkness leaped upon the world. Unearthly night enveloped all.

With an indescribable out-flashing at the same instant the corona burst forth in mysterious radiance. But dimly seen through thin cloud, it was nevertheless beautiful beyond description, a celestial flame from some unimaginable heaven. Simultaneously the whole northwestern sky, nearly to the zenith, was flooded with lurid and startlingly brilliant orange, across which drifted clouds slightly darker, like flecks of liquid flame, or huge ejecta from some vast volcanic Hades. The west and southwest gleamed in shining lemon yellow.

Least like a sunset, it was too somber and terrible. The pale, broken circle of coronal light still glowed on with thrilling peacefulness, while nature held her breath for another stage in this majestic spectacle.

Corona and Coronet: Being a narrative of the Amherst Eclipse Expedition to Japan, in Mr. James's schooner-yacht Coronet, to observe the Sun's total obscuration 9th August, 1896 Mabel Loomis Todd

Clear Skies in the Shadow!

