

Get Ready for Totality

A central image showing a total solar eclipse. The sun is completely obscured by the dark disk of the moon, creating a bright, glowing ring of light (the corona) around the black circle. The year "2024" is superimposed in large, white, glowing digits over the eclipse. The background of the entire image is a dark, starry space.

2024

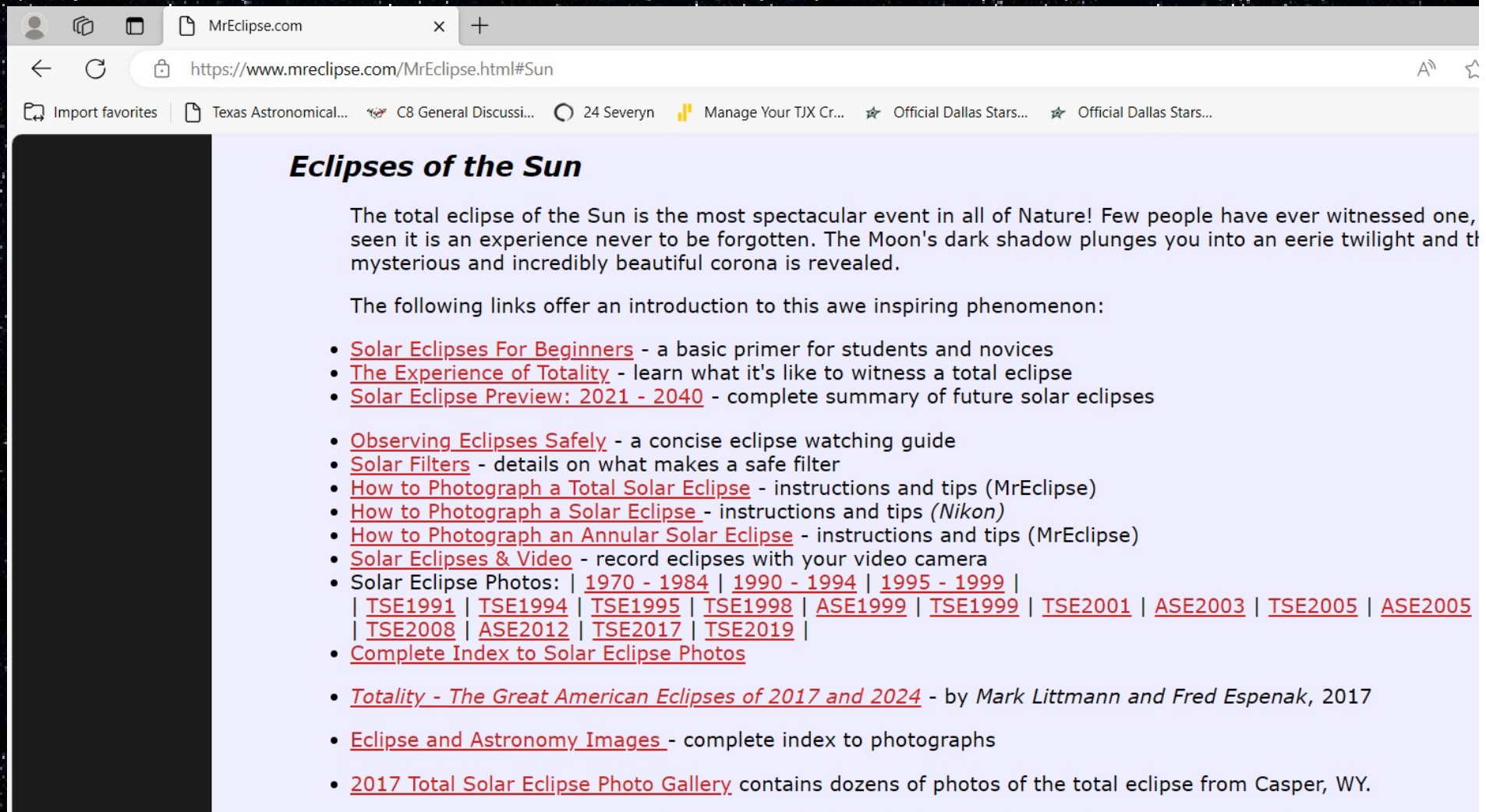
By Jason Ware

Galaxyphoto.com

April 8, 2024

- **Get ready now for an experience of a lifetime.**
- **I'm not an eclipse expert but this presentation shows what worked for me in 2017.**
- **Equipment needed.**
- **Do I travel?**
- **Enjoy the moment.**
- **My Wyoming trip in 2017.**
- **Processing the data.**
- **The results.**

Resource: mreclipse.com. Frank Espenak



The screenshot shows a web browser window with the address bar displaying <https://www.mreclipse.com/MrEclipse.html#Sun>. The page title is "Eclipses of the Sun". The content includes a paragraph about the total eclipse of the Sun, a list of links for further information, and a list of solar eclipse photos from 1970 to 2019. The page is part of a collection of resources for observing and photographing eclipses.

Eclipses of the Sun

The total eclipse of the Sun is the most spectacular event in all of Nature! Few people have ever witnessed one, seen it is an experience never to be forgotten. The Moon's dark shadow plunges you into an eerie twilight and the mysterious and incredibly beautiful corona is revealed.

The following links offer an introduction to this awe inspiring phenomenon:

- [Solar Eclipses For Beginners](#) - a basic primer for students and novices
- [The Experience of Totality](#) - learn what it's like to witness a total eclipse
- [Solar Eclipse Preview: 2021 - 2040](#) - complete summary of future solar eclipses
- [Observing Eclipses Safely](#) - a concise eclipse watching guide
- [Solar Filters](#) - details on what makes a safe filter
- [How to Photograph a Total Solar Eclipse](#) - instructions and tips (MrEclipse)
- [How to Photograph a Solar Eclipse](#) - instructions and tips (Nikon)
- [How to Photograph an Annular Solar Eclipse](#) - instructions and tips (MrEclipse)
- [Solar Eclipses & Video](#) - record eclipses with your video camera
- Solar Eclipse Photos: | [1970 - 1984](#) | [1990 - 1994](#) | [1995 - 1999](#) |
| [TSE1991](#) | [TSE1994](#) | [TSE1995](#) | [TSE1998](#) | [ASE1999](#) | [TSE1999](#) | [TSE2001](#) | [ASE2003](#) | [TSE2005](#) | [ASE2005](#) |
| [TSE2008](#) | [ASE2012](#) | [TSE2017](#) | [TSE2019](#) |
- [Complete Index to Solar Eclipse Photos](#)
- [Totality - The Great American Eclipses of 2017 and 2024](#) - by Mark Littmann and Fred Espenak, 2017
- [Eclipse and Astronomy Images](#) - complete index to photographs
- [2017 Total Solar Eclipse Photo Gallery](#) contains dozens of photos of the total eclipse from Casper, WY.

Equipment

Besides photographic equipment, here is a great list of things to bring by Fred.

earthsky.org/astronomy-essentials/total-solar-eclipse-day-checklist-what-to-bring/

(Just google “solar eclipse checklist”).

Equipment

Equipment Checklist for Viewing and/or Photographing Eclipse.

- Binoculars and/or small telescope.
- Solar filters for binoculars and/or telescope or camera lens.
- Camera equipment and tripod.
- Video camera and tripod.
- Extra batteries.

Equipment

- Sunscreen.
- Hat.
- Eclipse glasses.
- Chair.
- Drinks/snacks.

Equipment

- I would add that the solar filter should be of the slip-on type, not screw on. You want to be able to quickly remove it when totality arrives.
- Also, a sturdy tripod and a head that can point almost straight up. The sun will be high in the sky.
- A camera tracker is a bonus so you don't have to constantly adjust for drift.

Equipment

- I Used a telescope in 2017 but you can use a telephoto lens.
- My telescope was a 5" aperture, f7, 890mm focal length.
- NOTE: 1.5x magnification on a DX camera is a myth. Your lens focal length does NOT change.
- Shoot in full frame mode if you have an FX camera, you can always crop later.
- If you only have a DX camera you can still get great shots.

Slip on solar filter






Galaxyphoto.com

Different sizes with foam to adjust

astronomics - Search Filters for Solar Viewing | Filters f

<https://www.astronomics.com/filters/solar-filters.html?dir=asc&order=price>

Import favorites Texas Astronomical... C8 General Discussi... 24 Severyn Manage Your TJX Cr... Official Dallas Stars... Official Dallas Stars...

		
THOUSAND OAKS 3.25" SOLARLITE FILM SOLAR FILTER \$59.00	THOUSAND OAKS 2.75" SOLARLITE FILM SOLAR FILTER \$59.00	THOUSAND OAKS 4.00" SOLARLITE FILM SOLAR FILTER \$59.00

Different sizes with foam to adjust

Browser tabs: New tab, Joe Biden Trashed by Irish Lawm..., Sun Catcher Variable Large Apert...


Address bar: https://robert-price.myshopify.com/products/sun-catcher-full-aperture-solar-filter?variant=42408363032748&utm_source=criteo&utm_m...

Import favorites | Texas Astronomical... | C8 General Discussi... | 24 Severyn | Manage Your TJX Cr... | Official Dallas Stars... | Official Dallas Stars...

EXPLORE
SCIENTIFIC

All categories ▾ What are you looking for?

Astronomy ▾ Imaging ▾ Mounts + ▾ Microscopes ▾ Outdoor ▾ Sales & Pre-owned ▾ Kid Gear ▾ Weather & Time ▾ Solar Ec...



Sun Catcher Variable Large Aperture Solar Filter

by Explore Scientific

SKU SC14-00

BARCODE

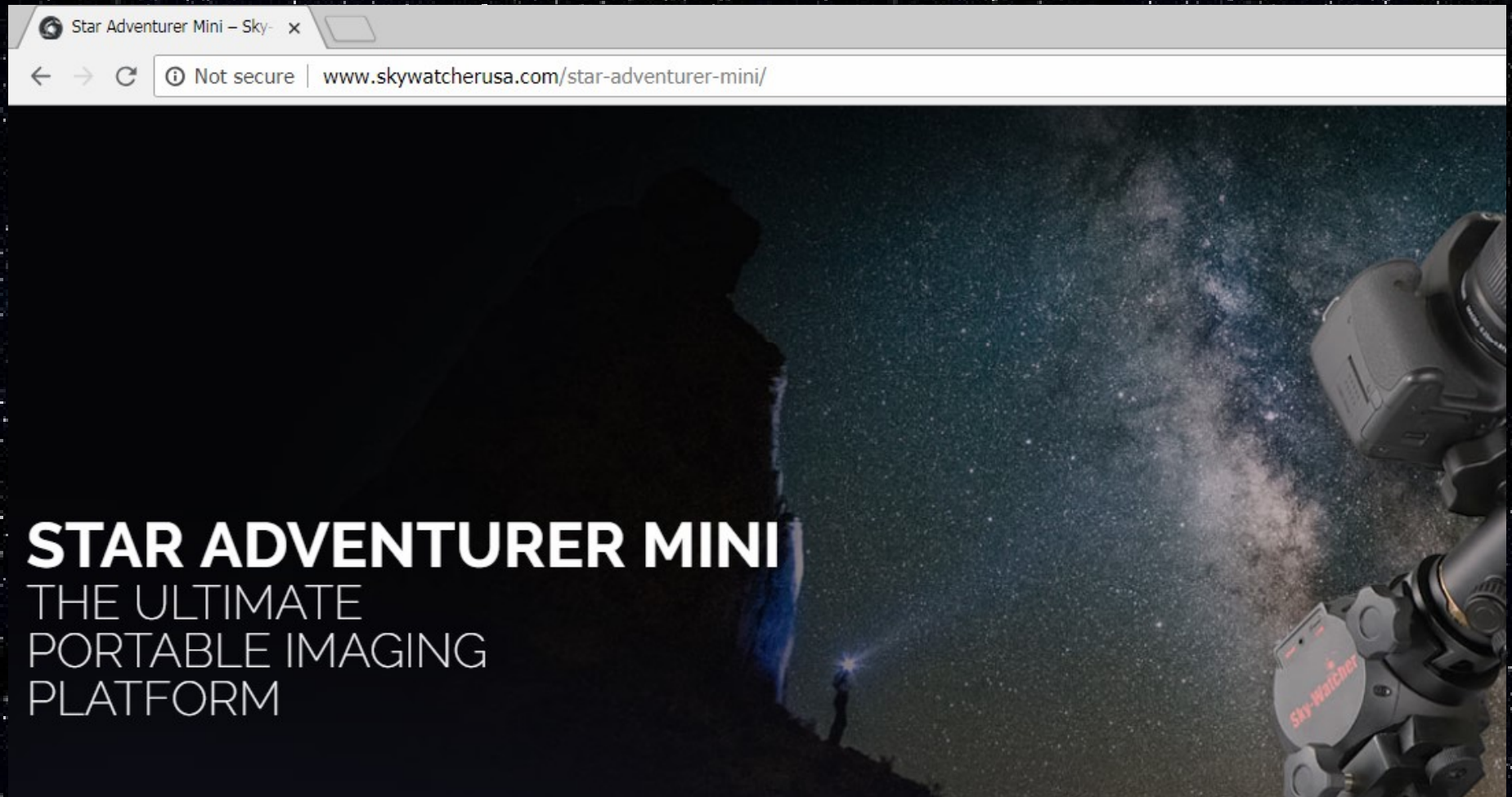
★★★★★ 2 reviews

\$ 39.99

All pricing in USD

Sun Catcher Solar Filters
Sun Catcher Solar Filter for 14" Schmidt-Cassegrai

Tracked Photos – Tripod Tracker



Should I Travel?

- This will NOT be like the annular eclipse of 2013. Not many people traveled to Texas for this.
- Over 1 million people expected to travel to Texas.
- Lodging will be hard to find and expensive.
- In 2017 I know several people who's hotel reservations were canceled last minute so they could resale at a higher price.
- Historical weather patterns predict only slightly better odds in the hill country. Mexico would be better but travel issues.

Should I Travel?

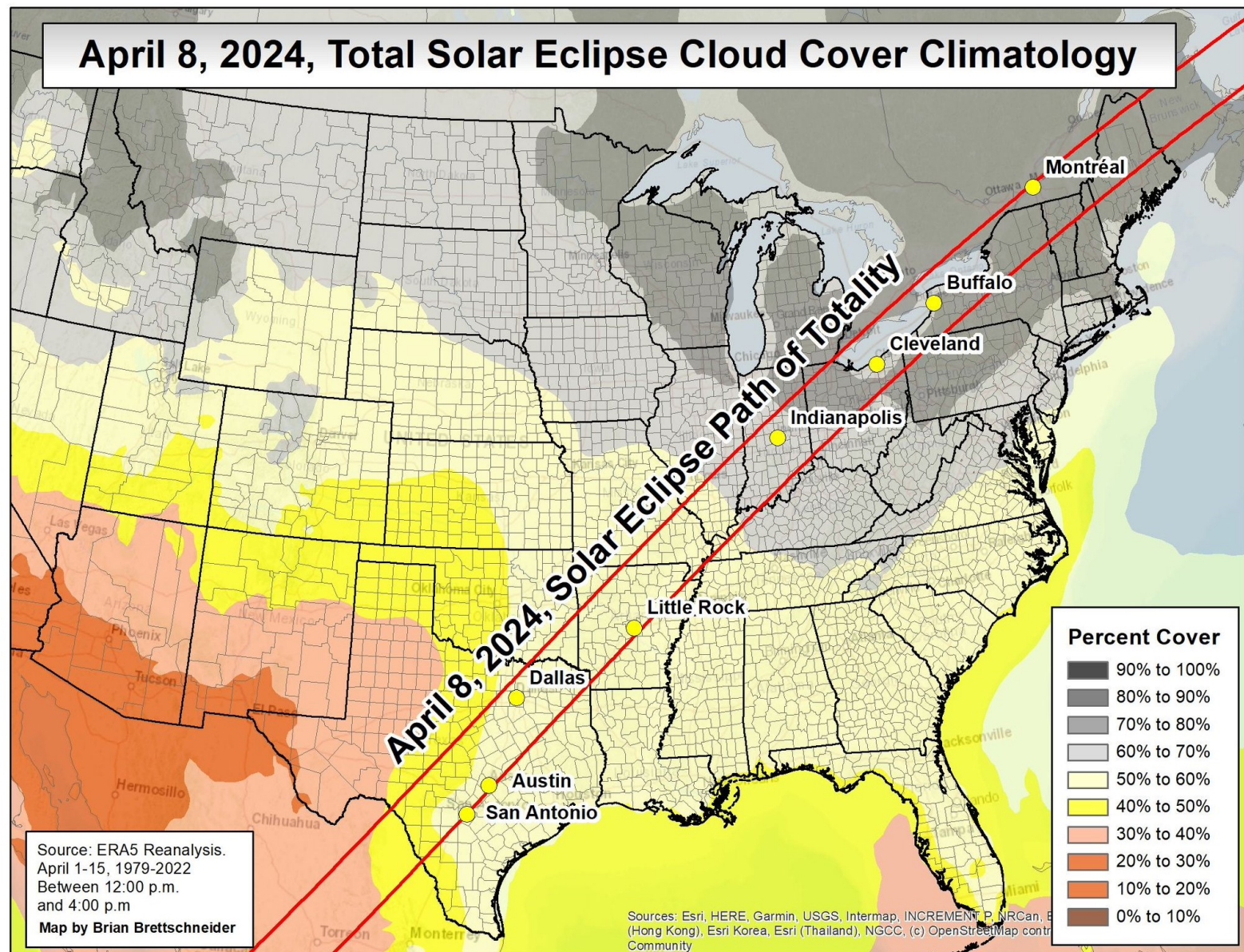
- Will it be a traffic nightmare?
- I just don't know but if you plan to travel..
 - Full tank of gas
 - Food
 - Water
 - Dog food
- Make a decision early but you may not find a place to stay overnight.
- In Wyoming some roads took 8 hours to go 20 miles.
- However DO NOT settle for even 99% partial.

2017 traffic on eclipse day



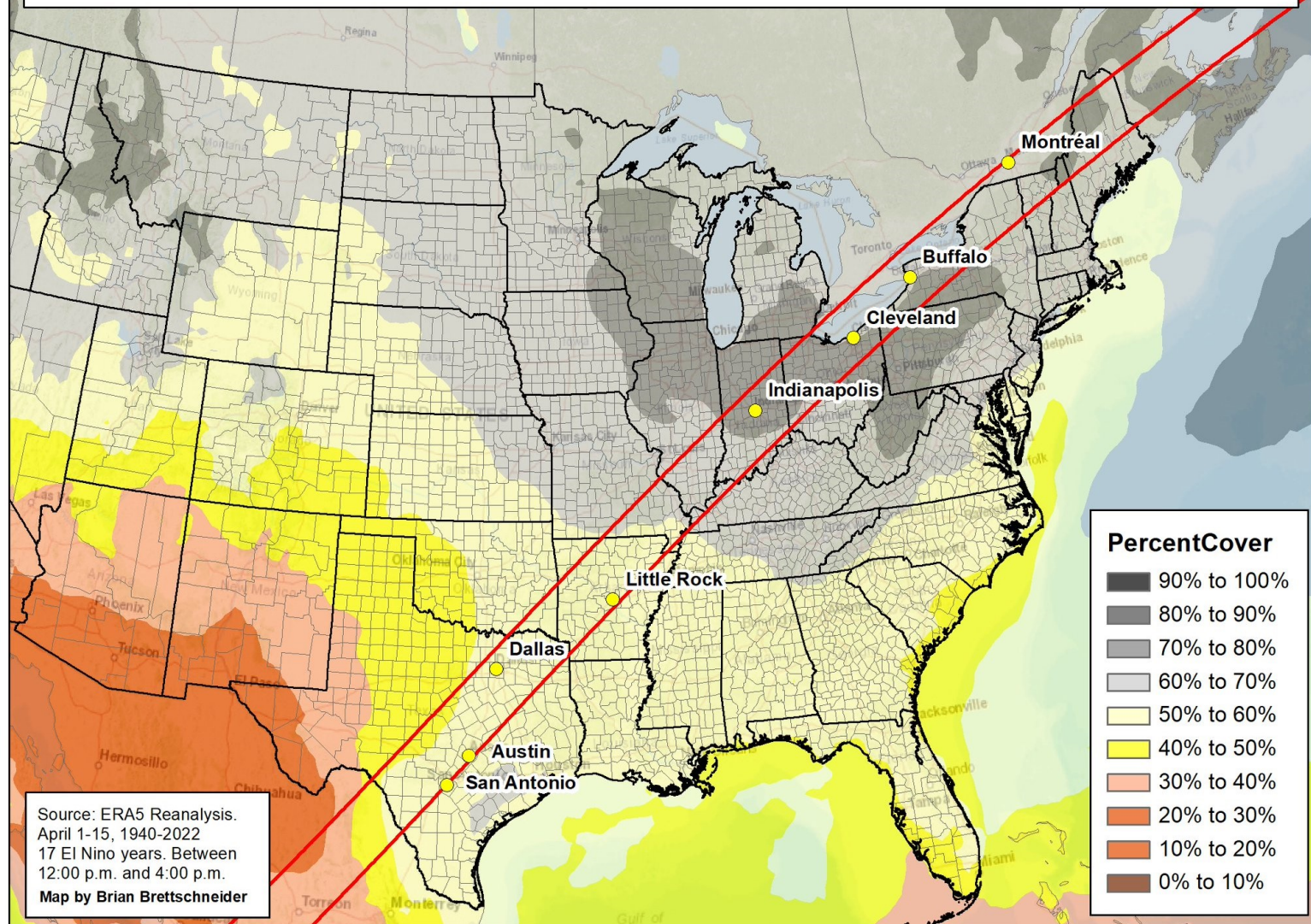
Historical data for April 8

April 8, 2024, Total Solar Eclipse Cloud Cover Climatology



Historical data, El Nino years

April 8, 2024, Total Solar Eclipse: Cloud Cover Climatology El Nino Years

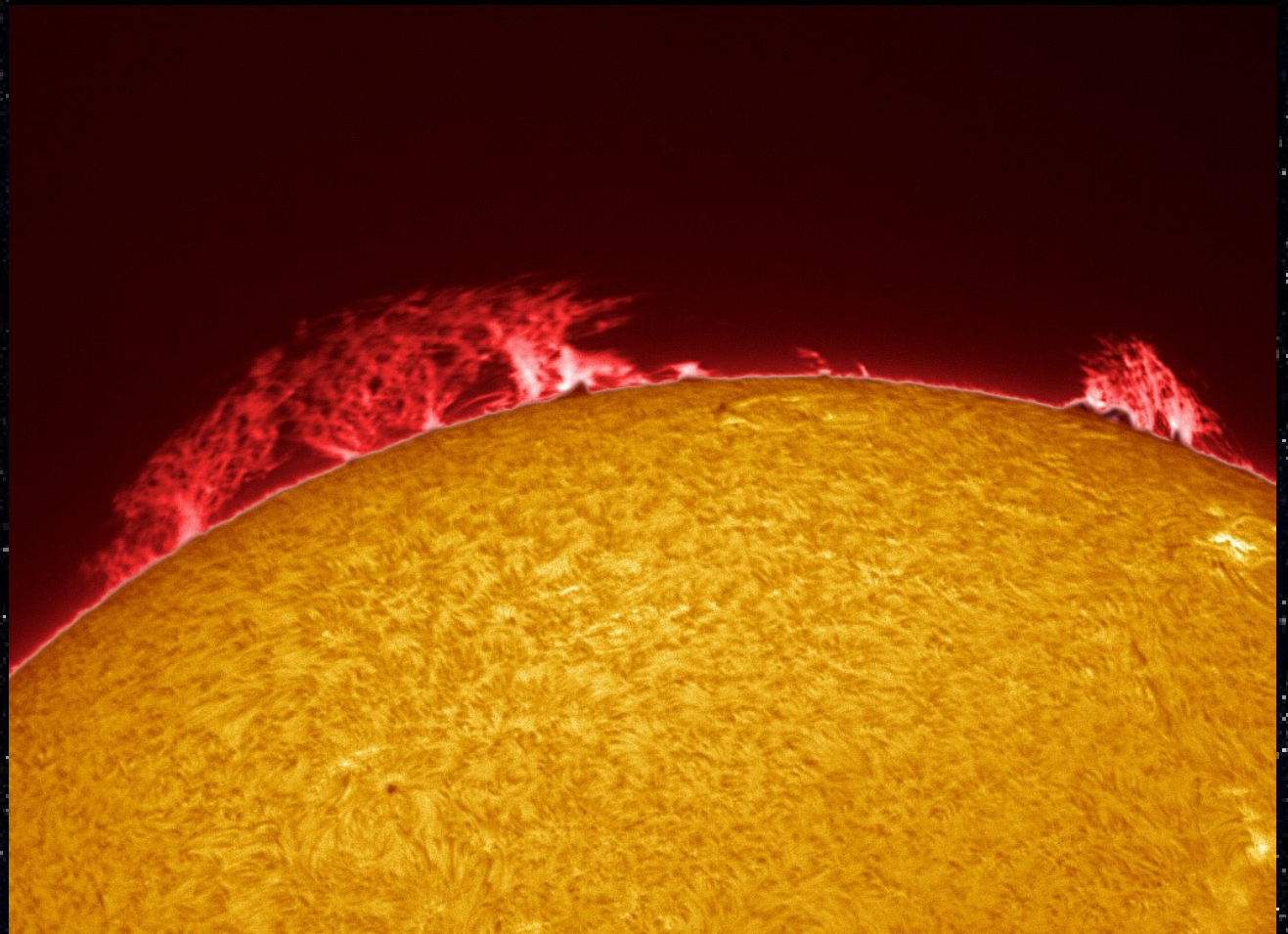


Enjoy the moment

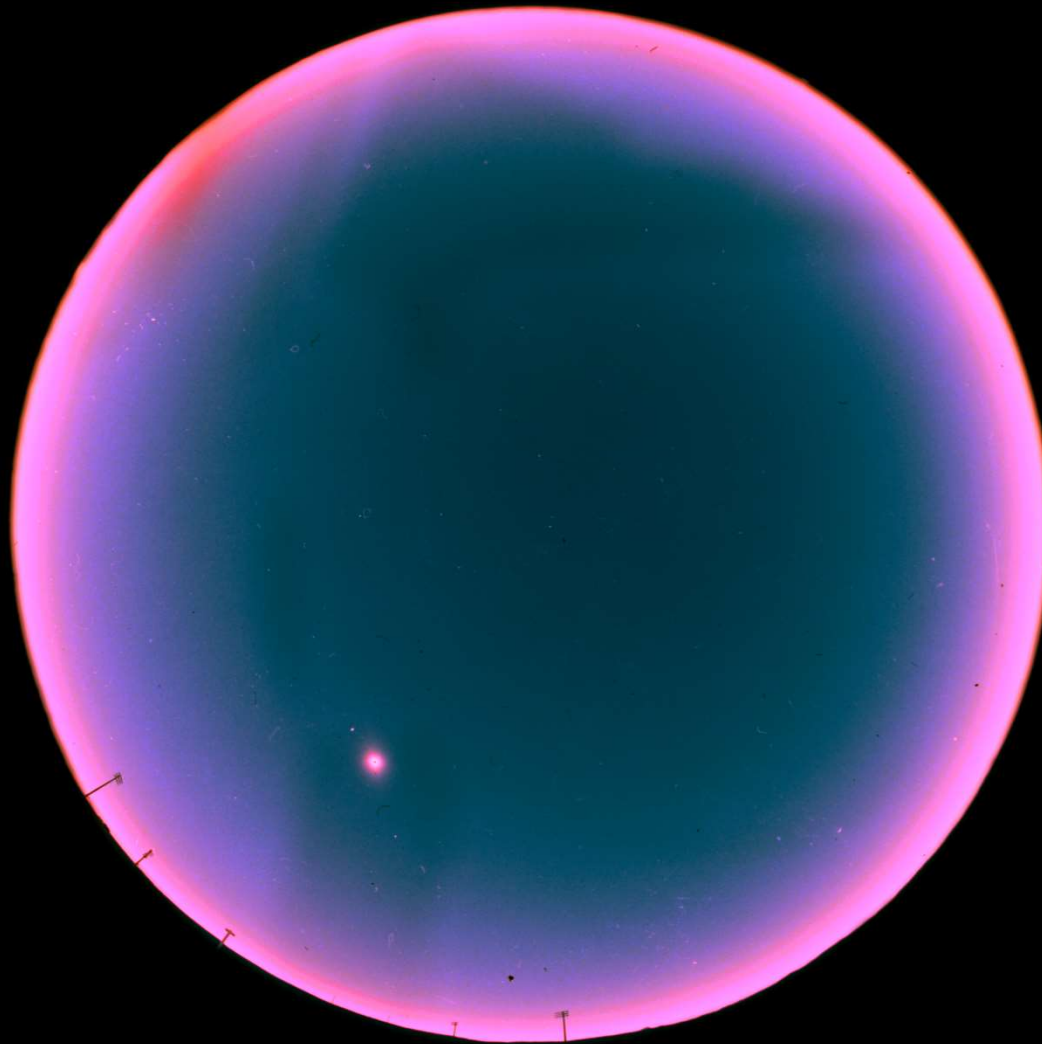
- Don't spend the whole time looking through the camera.
- Get up, look around, see the twilight all the way around the horizon.
- Look at the reactions of people around you and even animals.
- Look at sun though unfiltered binoculars (Total phase only).
- Look for stars and planets.
- Feel the temperature drop.

Dedicated solar telescope

- If you are at an event where someone has a narrow band hydrogen-alpha telescope, take a look during the partial phases.

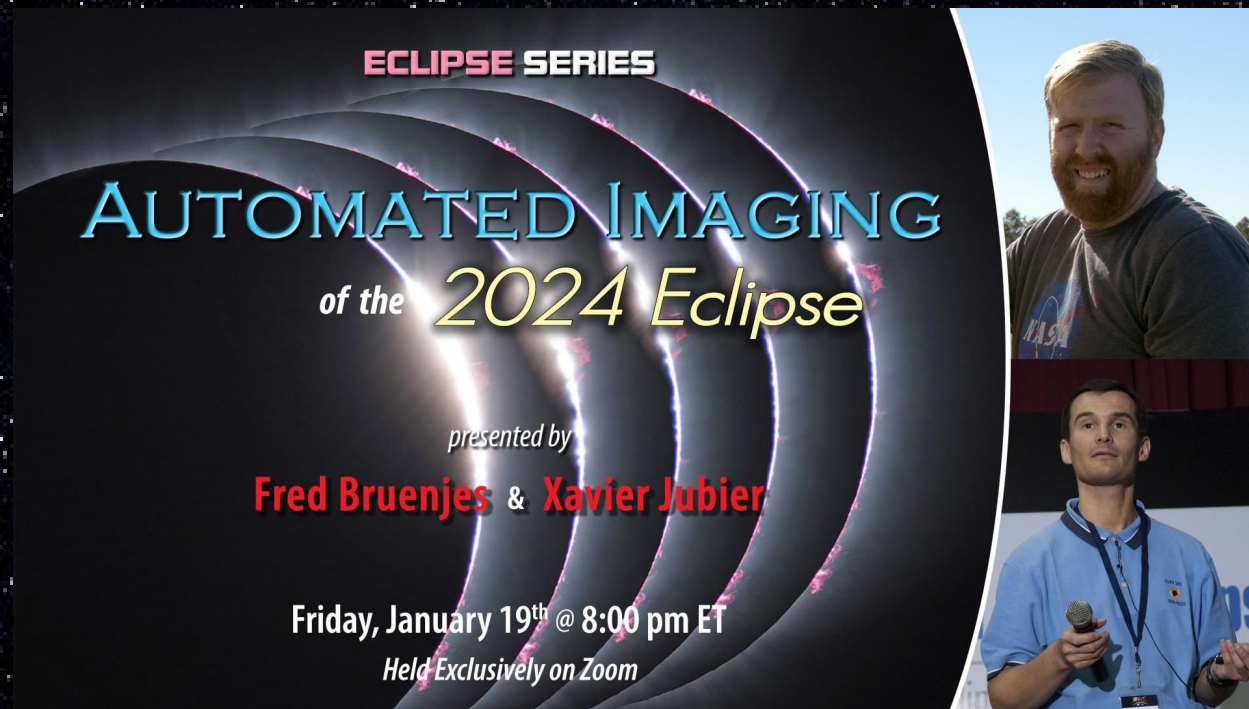


My Friend David's fisheye shot



Automation?

- Some people use automated programs to drive the camera so they can enjoy the moment.
- Automatic bracketing Start times based on eclipse events.




ECLIPSE SERIES

AUTOMATED IMAGING
of the 2024 Eclipse

presented by
Fred Bruenjes & Xavier Jubier

Friday, January 19th @ 8:00 pm ET
Held Exclusively on Zoom



Galaxyphoto.com

Automation?

- For me personally, I like to keep it simple.
- Cable release and bracket by hand.
- Go through a whole range of exposures.
- Bracket like crazy from short to long then back down.
- Then settle on a time for the diamond ring.
- PRACTICE this before hand using a solar filter and see how high the sun is.
- Can you see it through the view finder?
- Should you use live view with a tilt screen?

Wyoming Totality



August 21, 2017

By Jason Ware

Wyoming Totality - Agenda

- **Why Wyoming.**
- **Joining the Meade Team.**
- **Setting up for the public.**
- **The only goal: TOTALITY.**
- **Got good data!**
- **The results.**

Wyoming Totality





Muddy Bay
Nature Trail

Muddy Bay

Burnt Wagon

Broken Arrow

Indian Point

Goose
Islands

Glendo Reservoir

Bennett
Hill

Waters
Point

Goose Bay

Red Hills
Campground

Reno Cove
Campground

Reno Cabin
Area
(private cabins)

Custer Cove
Campground

Soldier Rock
Area

Custer Cove

Town of
Glendo
(Exit 311)

Whiskey
Entrance
Station

Whiskey Gulch
Whiskey Gulch

Meadow

Elk Horn
Area

Red Canyon

Glendo State Park

PHONE NUMBERS

- ADA
- Boat ramp
- Camping
- Dam
- Drinking Water
- Group Picnic Shelter
- Park Headquarters
- Phone
- Picnic Area
- Playground
- Restrooms
- Trailer Sanitary Station
- Viewing area
- Visitor Information
- No-vehicle area

Galaxyphoto.com

Wyoming Totality



Galaxyphoto.com



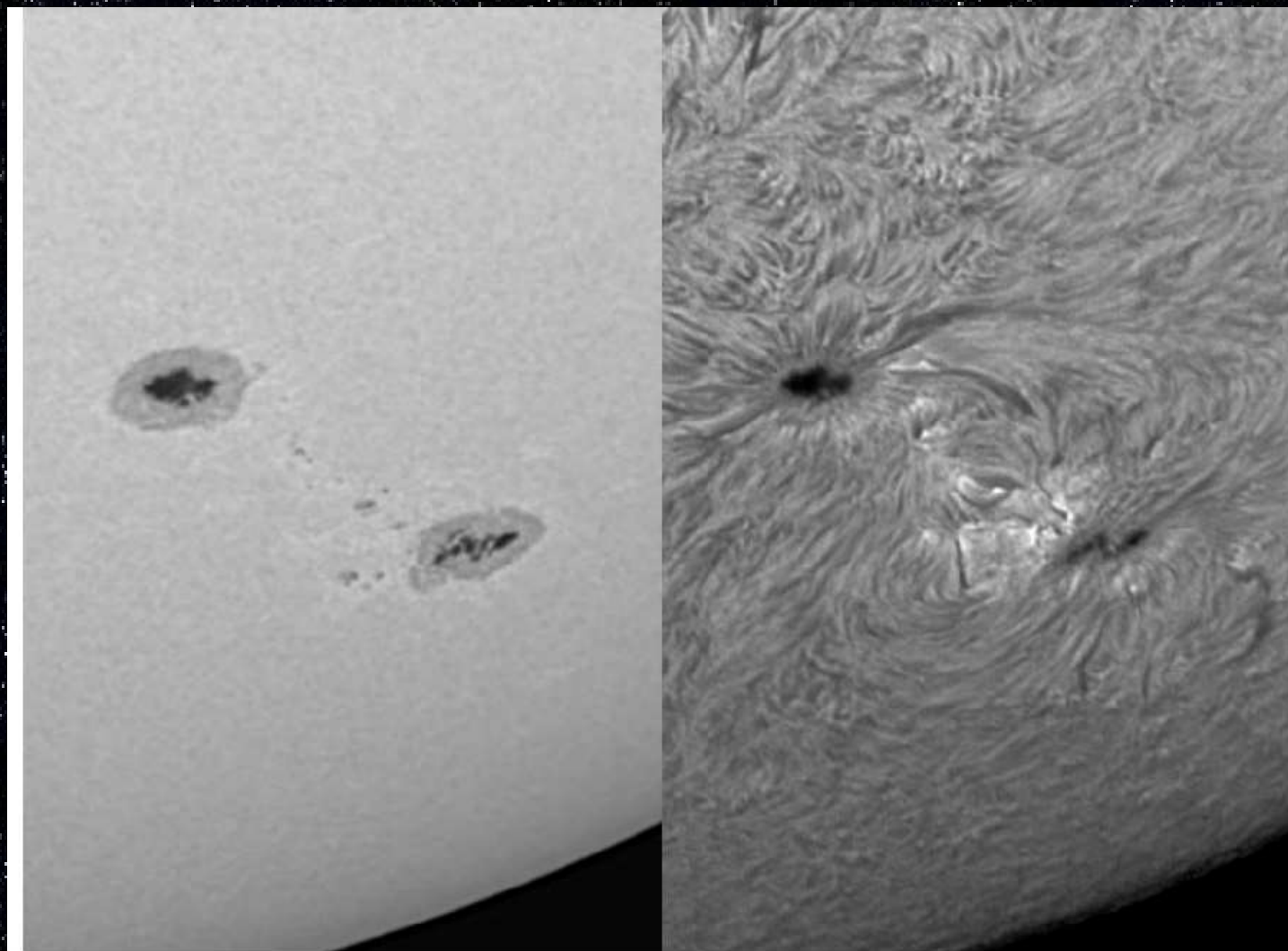


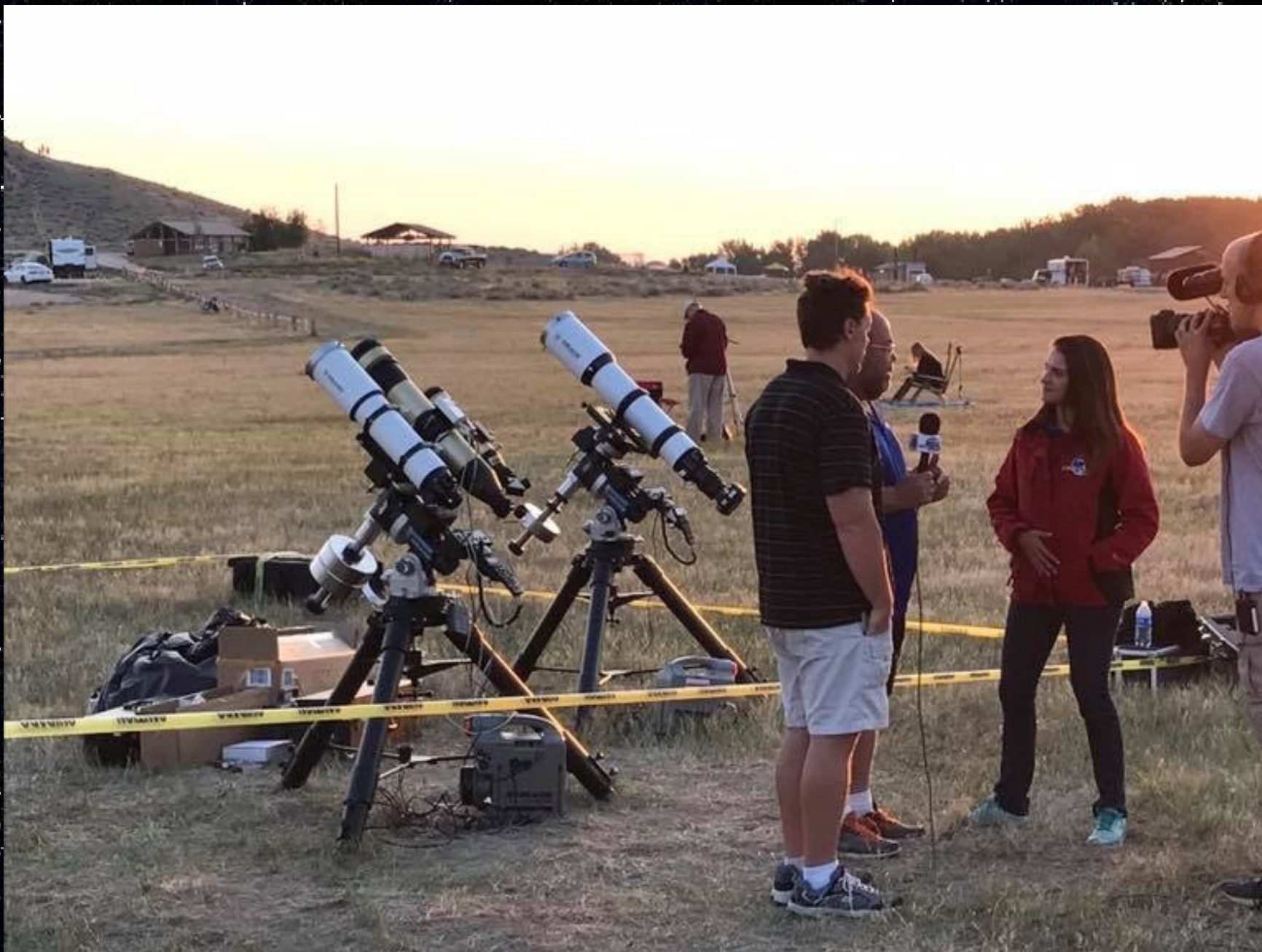
Wyoming



alaxyphoto.com

Wyoming Totality





Galaxyphoto.com



Galaxyphoto.com

Wyom



Galaxyphoto.com

Getting the shots

- **Mainly focus on getting great data in totality.**
- **Partial phases are a bonus.**
- **Getting proper focus.**
- **Exposure data.**
- **The raw data.**
- **Processing the data.**
- **The results.**
- **How it could have been better.**

Getting proper focus

- You can focus on the sun with solar filter on but have the infinity focus point marked on your lens before hand.
- Use this as a reference but it may change slightly with temperature.
- This is very useful if you don't have a solar filter and will only shoot during totality.

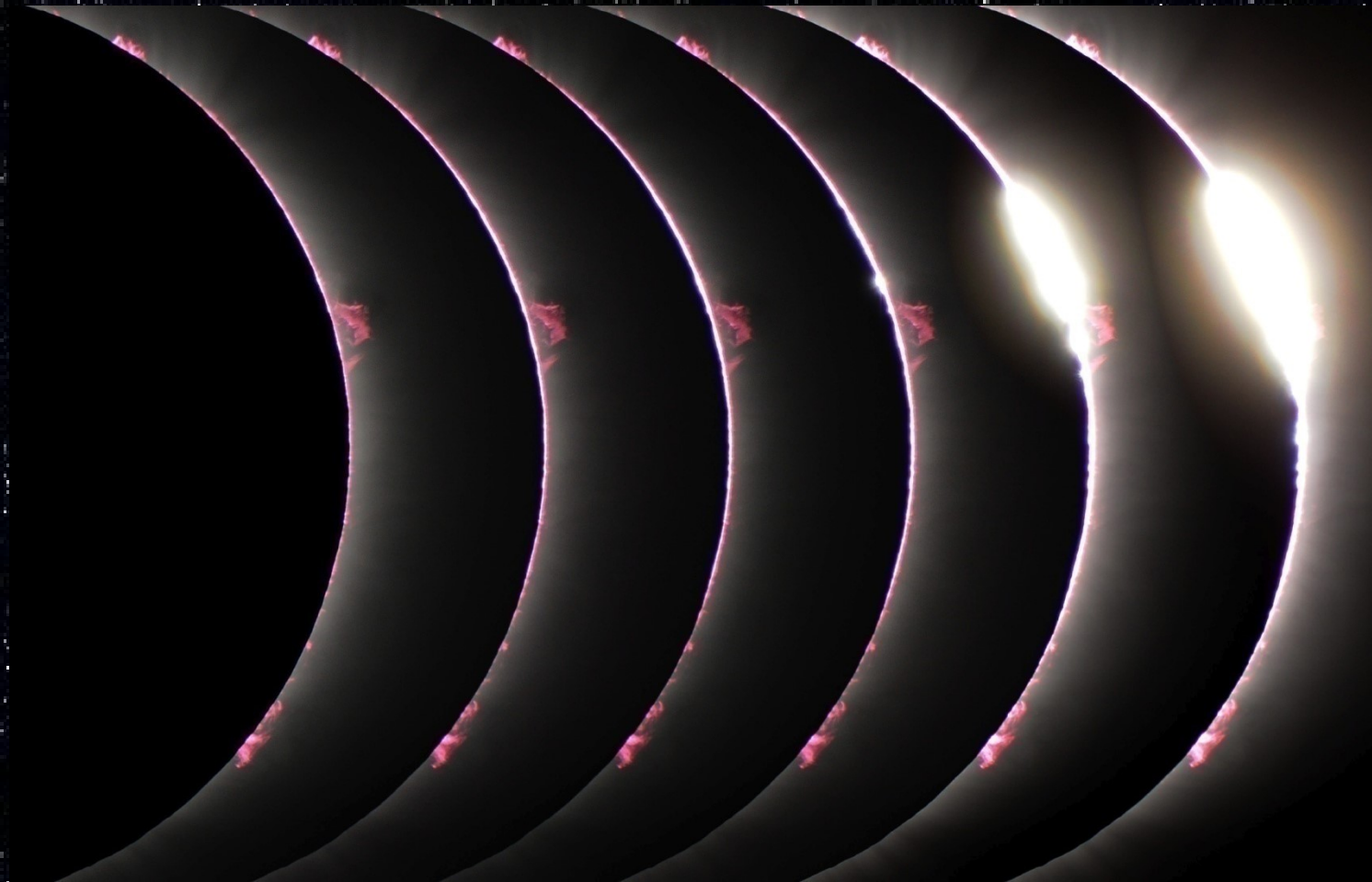
Exposure suggestions

- This worked for me @ f7:
- ISO 200.
- Bracket from 1/1600 to 20 seconds.
- Long exposure to get “earthshine”.
- Short for diamond ring.
- Need a tracker for the long exposures.
- Use manual, cable release and change shutter speed one step at a time.
- Pause a second or two between for the mount to settle and vibration dampen (solid tripod!).

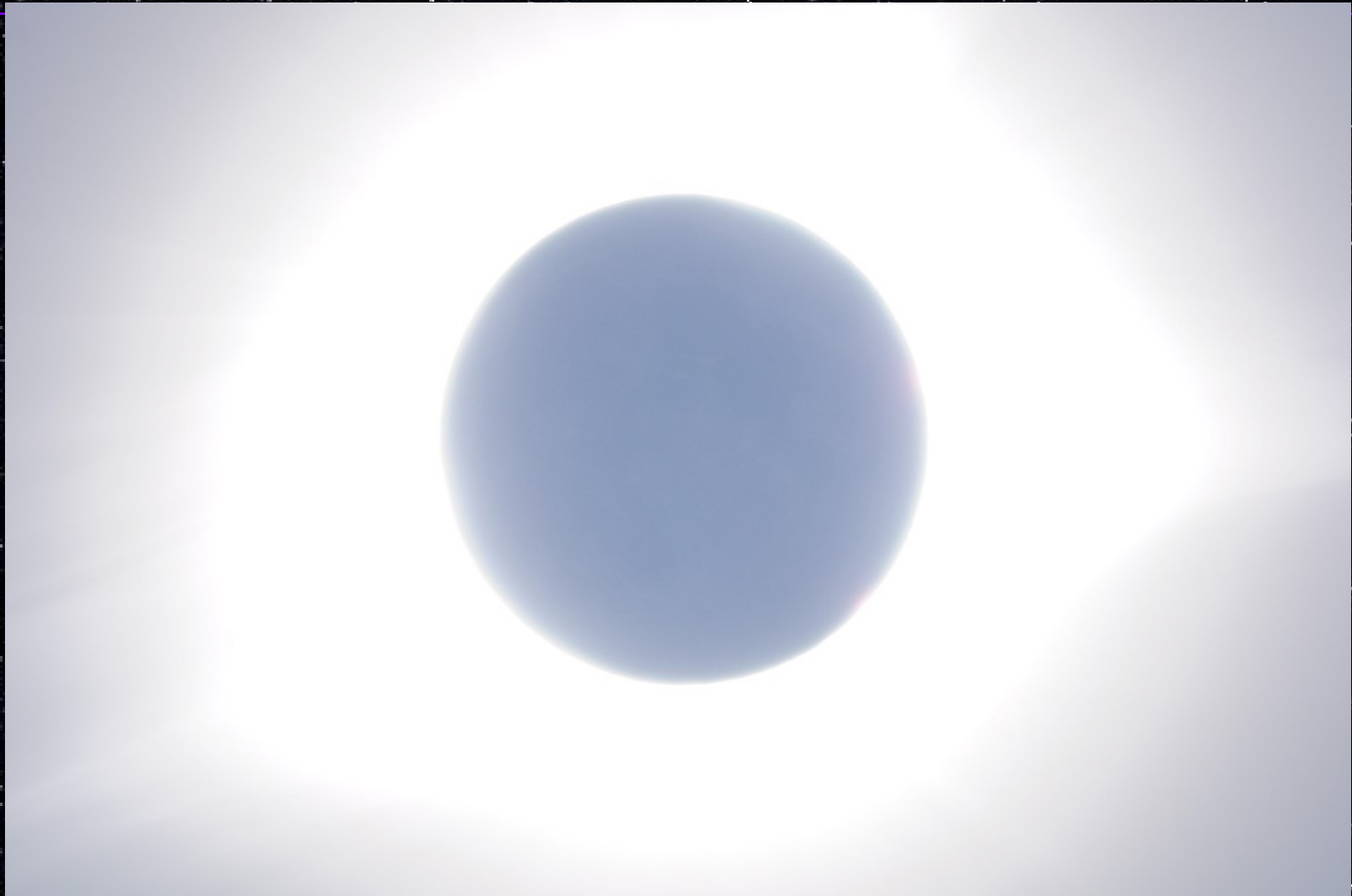
Exposure suggestions

- **Shoot in RAW, highest resolution and bit depth.**
- **Start at the fastest exposure, bracket up to 20 seconds, then back down and stop at 1/1600.**
- **Sit back and enjoy the show until the diamond ring appears then burst mode.**
- **Don't forget to remove the solar filter then replace immediately after totality ends!**

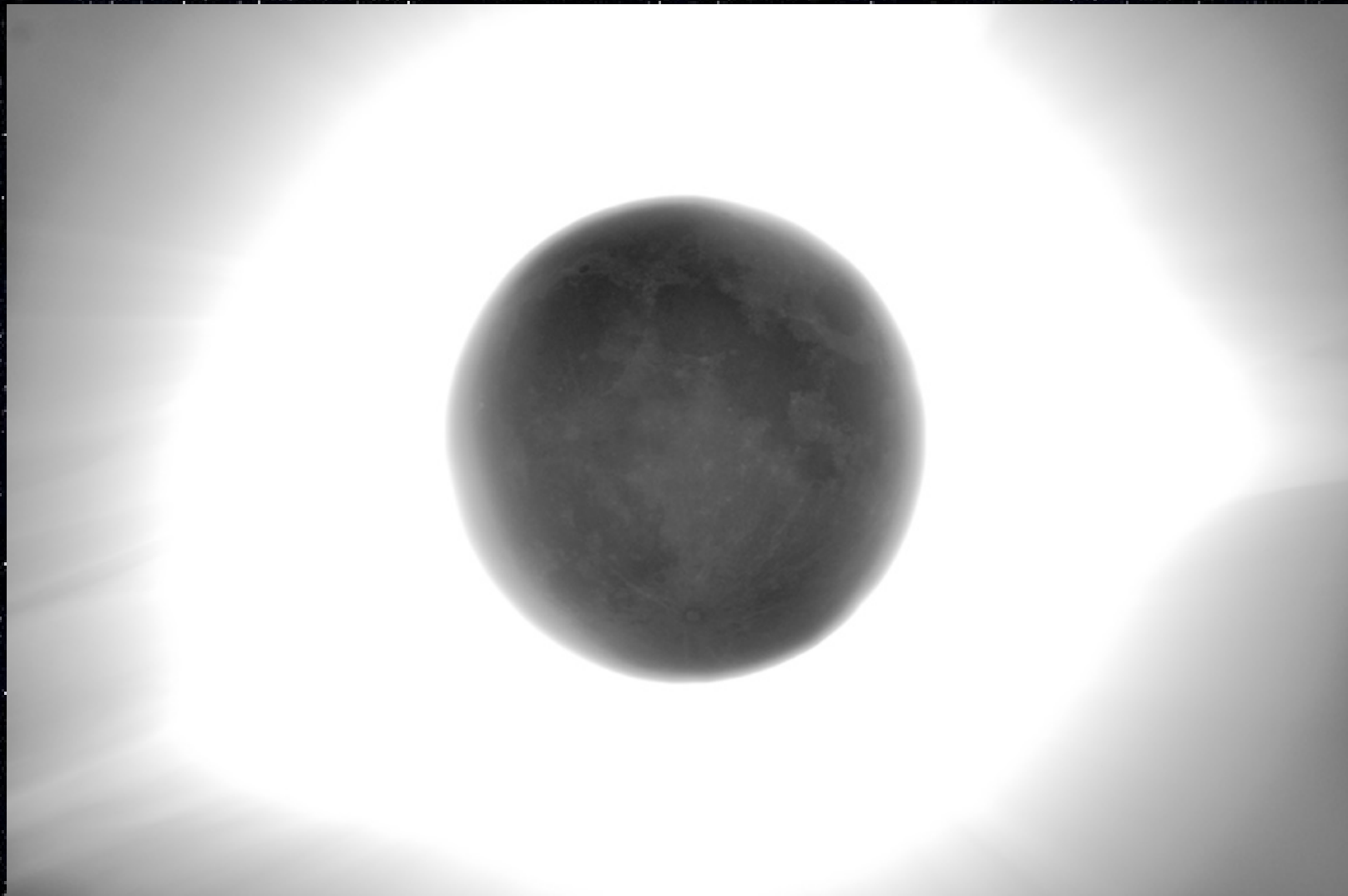
Short exposure for the diamon ring



Long Exposure



Long Exposure – stretch reveals moon



A good exposure



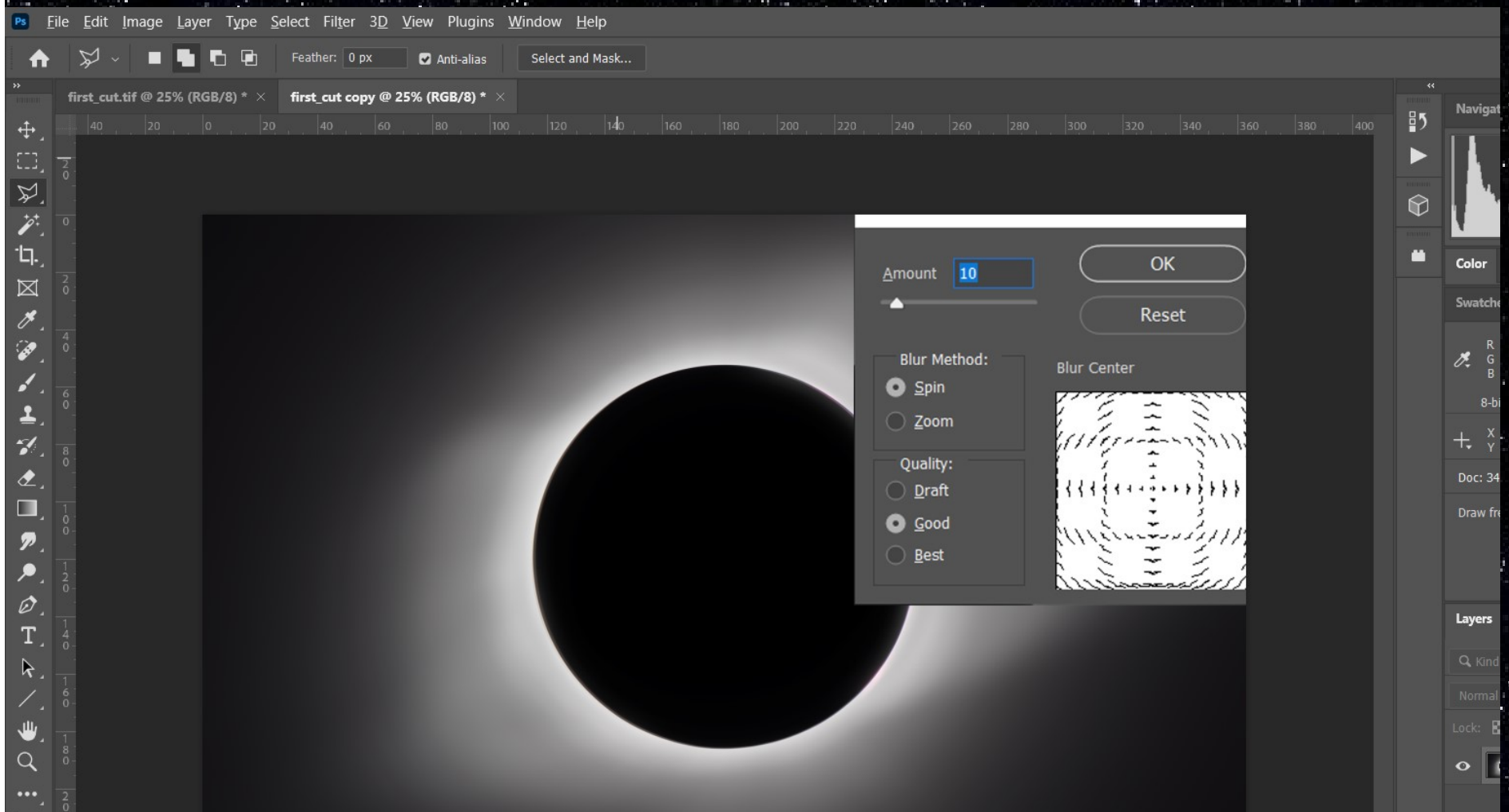
Galaxyphoto.com

Blend in a medium exposure

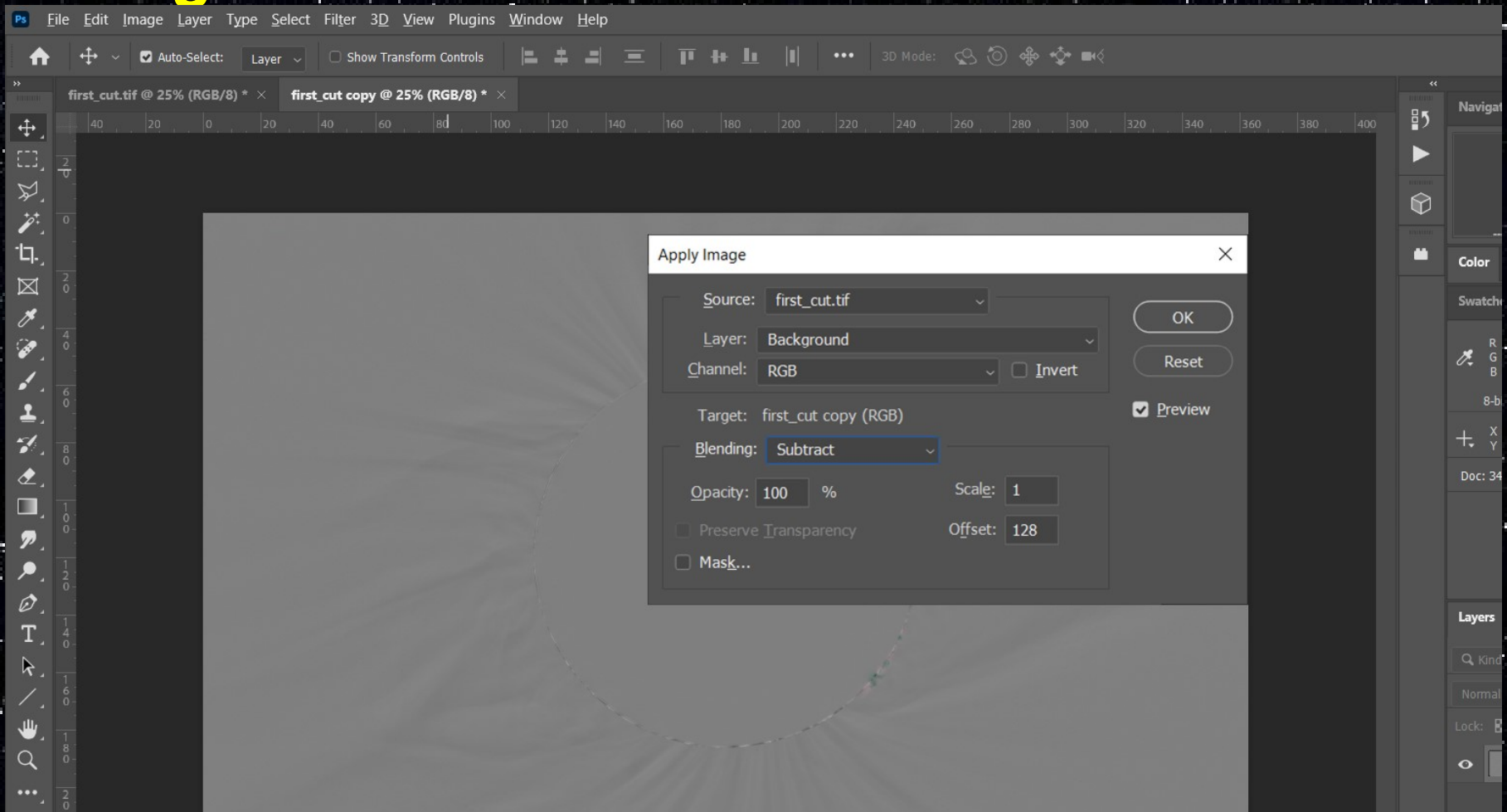


Galaxyphoto.com

Blended, copied, radial blur



Apply Image, subtract mode: makes mask with corona structure, then apply to original



Put it all together

- **Using layers and selections, blend:**

- ◆ **Prominence flares.**
- ◆ **Moon from long exposure.**

The final result.....



Galaxyphoto.com

Galaxy Photography

Astro Images by Jason Ware

And Digital Imaging

[Home](#)

[Equipment](#)

[Services](#)

[Rocketry](#)

[Order Prints](#)

[Contact](#)

[Articles](#)

Images Menu

[Images Overview](#)

Jason Ware Images

[Nebulae](#)

[Galaxies](#)

[Moon & Solar System](#)

[Star Clusters](#)

[Misc and Fuji S2](#)

Other Space Images

[Hubble Telescope](#)

[Various Images](#)

Info Links

[Equipment](#)

[Services](#)

[Rocketry, Hobbies](#)

[Order Prints](#)

#DP091 - Total Eclipse



Galaxyphoto.com

***How could it be better? If I had a FX
camera!***



JBd

Galaxyphoto.com

Totality:

**An experience of a lifetime.
Put this on you bucket list!**