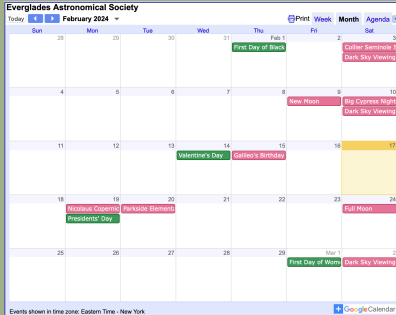
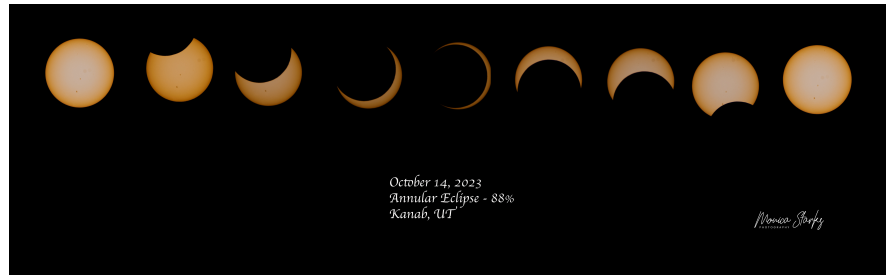


February 2024

Calendar



Monthly Notices of the Everglades Astronomical Society Naples FL



Annular Eclipse

Solar Eclipse - April 8, 2024

Solar Eclipse Preparation

Introduction

So you want to see the 2024 Solar Eclipse? Excellent! I'd like to share my experience and what I've learned. I'm a photographer and have desired to memorialize the experience by capturing images of the eclipse which adds a level of complexity to the event.

I've "intentionally" viewed 2 prior eclipses. The 2017 Total Eclipse and the 2021 Annular Eclipse. Each of those experiences has been wonderful but could have been so much better. There are some factors that you can control and some that you can't. Preparation is the key to having an enjoyable experience. Let's briefly review these experiences.

2017 Total

In 2017, the total eclipse path went through the center of the continental US. Tryon, Nebraska hosted an eclipse event which we attended because it had a high probability of clear skies and fit with our travel plans.

The skies were clear. The site was great. However, my photography was not totally successful. Lessons Learned:

- Use a fixed filter on your camera, NOT a loose piece of solar film. It's safer and less distracting.
- It takes time to find the sun with your camera on a tripod. Plus the sun moves quickly out of the field of view.
- Be prepared to remove the filter during totality and completely change your exposure settings.
- Look Up! Don't get distracted by the gear and miss the event.

2019 Annular

In 2019, the annular eclipse path went through Michigan. The eclipse was near sunrise at 5:46 am. We tried to view it from a small boat so we could see the horizon. Conditions were challenging due to the position of the sun and clouds. The site was wavy but fun. Photography was not good- too many clouds, too much motion.

Lessons Learned:

- Expect clouds. Boats are not a great platform for photography- but you have to see the horizon in an event like this.

Planning for 2024

When?

The 2024 Total Solar Eclipse occurs on Monday, April 8th. In the Midwest Totality occurs around 3pm. You can get more detailed information at [NASA](#) .

A great app for planning for eclipses (solar, lunar), meteor showers, Milky Way and Moon photography is [PhotoPills](#). It costs around \$11.

Where?

The above NASA link and the PhotoPills app have maps that show the path of Totality.

You can also download the path of Totality to [Google Maps](#). If you save a copy of this map to MyMaps in Google Maps you can plan out possible viewing sites and backups along the totality path. [Open Link/ Click Open in MyMaps/ Click the 'kebab', 3 dots and Save a Copy/ Rename/ Plan & Add your viewing sites to your new Map]

Precautions

- Double check precautions with a reputable website like NASA's safety site, [NASA](#).
- Purchase some good solar film glasses. Verify that they do not have any tears or pinholes in them.
- Only remove the glasses after Totality has been achieved. **If you are outside the path of Totality do not remove the glasses.**
- Verify your camera solar filters for damage, pinholes, tears before you go.
- If it's windy your photography will be affected.

Do This!

- Check the weather before you go and pick a clear sky site.
- Expect crowded roads and sites. Have a backup.
- Don't forget your protective glasses and filters.
- Purchase a good, firmly attached solar filter for your camera (or binoculars). Practice to determine camera settings. This image was f7.1, 1/250 sec, ISO 800.
- You will need a long focal length lens to make the



sun large enough to capture detail.

- A camera tracking mount is very useful. You will be able to center the sun and let the mount track it through the event. Practice with it.
- Sharper images- Shorter exposures are better to manage atmospheric distortion.
- During Totality you can remove the filter and change the camera settings to capture the corona.

- Chuck Dryer

ZWO SeeStar S50

Never been so easy.....

Thanks to Monica, I recently bought a Seestar S50 scope. She discussed it at our January meeting and two hours later the order was placed. Well, it is a little more than a scope. It comes in a completely integrated package with Go To mount, tripod, Sony IMX462 based camera, integrated and selectable filters (including a dual band narrow pass filter for photography in polluted light areas), dew heater, and a charging/data transmission cable. It is controlled by your smart phone or tablet and operates in the Stargazing, Solar, Lunar, Planetary and Scenery modes. Picture are selectable in either Jpeg or Raw. In the stargazing mode you can take pictures, in either the ten, twenty, or thirty second mode and the system automatically stacks them and gives you an updated real time payout.

Yes, it literally works right out of the box. All you need to do is level the system (an electronic leveling system is provided) and download a free APP to your smartphone or tablet. The self-contained rechargeable battery is good for six hours. I have used it so far for nebula, star clusters, the sun, the moon, a planet, and in landscape mode. It is somewhat underpowered for planets, but you can clearly see the bands across Jupiter.

All this for \$499 ! As with many smartphones, the manufacturer is continually adding features via software and firmware upgrades. I plan to take it to Texas in April for the upcoming eclipse. Some example photos are below. All were taken from our heavily light polluted condominium complex on Marco Island. IC405 and M78 were taken with the built in dual narrow pass IR/UV filter (15 nm at 656.3nm, H alpha; 35nm at around 495.9/500.7nm, OIII).



Note the sunspots. 91,593,000 miles away. No photoshop.



As clear as it gets - 238,900 miles away. No photoshop.



The Orion Nebular, M42 - 1300 ly away - (7600,000,000,000,000,000 miles). Very limited photoshop.

- Bob Gurnitz

CCPS STEAM EXPO

On Saturday, January 27th the CCPS STEAM EXPO was held at Aubrey Rogers HS.

I received 300 FREE SEAL solar eclipse glasses from the Dade County Library. We distributed the glasses at this event. Corey Stewart (NHS) and I would have the participants put on the glasses, be sure they could not see anything, and then switch on the bright incandescent light to view the bright light filament through the glasses. We emphasized the safety precautions when viewing the sun. The entire STEAM event was indoors.

I also received some free PUNCH cards. It is a card with different shaped pinholes. We passed them out while demonstrating the image seen when light passes through the different shaped pinholes.

The image changes depending on the distance the PUNCH card is placed from the screen.

The GREAT AMERICAN ECLIPSE 2024 umbral total solar eclipse path was continually shown on a 27 inch monitor at the event. <https://www.greatamericaneclipse.com/april-8-2024>

I received free post cards with the eclipse path from this company to distribute at the STEAM EXPO.

- Bart Thomas

Parkside February 20th!

As the Moon moves past first quarter the weather improves - fairly typical behavior this season. However, our loss is Parkside Elementary's gain! We expect a clear night on February 20th for our annual event there.

We will need all the telescopes we can get there as a large percentage of students, teachers and parents turn out for the event; so I am looking for volunteers. I don't have an official start time yet, but you can bet it will be somewhere in the vicinity of 6PM. This will be a lunar based event with viewings of Jupiter also. Stepstools will be a requirement as the children can be quite young.

Parkside is located quite close to Lely High School in East Naples, a mile or so from US 41. Please email Mike Usher if you can attend and bring your telescope.

- Mike Usher

New Newsletter Editor

Welcome to the February 2024 EAS Newsletter.

My name is Monica Starks and I would love to share your photos, stories, etc. in the field of astronomy. I'm a photography enthusiast with a passion for astrophotography that has spanned over 14 years. I have been successful not only capturing the beauty of the night sky through my telescope but

I have also dedicated myself to advancing the astrophotography skills of others through astrophotography workshops. I have immortalized several deep space objects, providing a unique and captivating perspective that enriches our understanding of the vast celestial tapestry. As I take on the role of editor within our astronomical society, I hope we can expect a blend of expertise and artistic flair that will undoubtedly elevate our exploration of the cosmos to new heights.

I recently had an opportunity to put on a presentation - Shooting Stars Astrophotography by Monica Starks. It was great having Bob Gurnitz and Mike Usher in attendance!



Please email me your photos and stories!

Letter from the President

This has been one of the oddest summers and winters in Southwest Florida, after an unusually dry summer, we have an unusually wet winter. Folks have been finding @me to get out to Big Cypress, although clouds and bug seem to be hit and miss. We had a very good meeting at Bradford Square with Dr. Ellenson of Colorado University speaking about eclipses. March 9th is a big day at Collier-Seminole State Park. In addition to Sun and Star viewing, Friends of CSSP are making this an event. There will be live music and food from the Miccosukee Tribe. They expect a large crowd.

Our next regular meeting will be March 12th at Orange Blossom.
Chris & Robyn Pritchard