

The Fremont Peak Observer

— Bringing Astronomy to the Public —

Vol. 40, No. 2

Summer 2023

President's Message



Pat Donnelly

I am happy to report that the 2023 Public Program season of the Fremont Peak Observatory Association (FPOA) has begun. In May, the resident ranger at Fremont Peak State Park informed FPOA that San Juan Canyon Rd. and the Park reopened following road repairs. Our first 2023 Evening Programs followed right away on May 20 & 27 and the first Solar Program on May 27. There were approximately 30 visitors and a clear sky on May 20. However, by 11:00 p.m., humidity rose to an unacceptable level and we shut down. On May 27 the Solar Program had good weather, but high humidity drifted in for the evening program. I am hoping that the humid weather condition dries up for the summer and fall programs; we enjoy treating visitors to a full night. Please check the FPOA web site for present weather conditions at the peak before traveling. The weather seems less reliable than in the past.

On Saturday May 20, visitors to the peak were treated to a one-day old Moon. The Moon was only 2% illuminated. Earthshine became visible about ½ hour after sunset and brightened as the sky became darker. Several visitors were not familiar with earthshine and asked about the cause. One person even admitted that he had not seen the phenomenon before that evening. By the time the Moon had set

2023 Program Dates

Saturday Evening Programs

July	8, 15, 22	Sept.	9, 16, 23
Aug.	12	Oct.	7, 14, 21

Solar Programs

July	15	Sept.	9
Aug.	12	Oct.	14, 8am

Special Eclipse Program

October 14, 8am. *Volunteers, please send a reservation to [schedule@](mailto:schedule@fpoa.org) and arrive by 7am.*

Board Meetings

July	22	Sept.	16	Nov.	11
Aug.	19	Oct.	7		

Annual Meeting Star-BQ Aug. 19th

- Please send SBQ reservations to [schedule@](mailto:schedule@fpoa.org)
- Arrival times: Picnic area cleanup 2pm, Guests by 4pm, BBQ at 5pm

Please check our web [Schedule](https://www.fpoa.org) for updates

behind the trees, the earthshine was quite bright, and many of the Moon's surface features were visible in the telescopes. If you wish to observe earthshine, I recommend observing it in the spring, when the Moon is high above the Sun at sunset. This position allows for maximum time of the Moon above the horizon. Also, observe the two (2) day old Moon. This allows the Moon to be above the horizon in a dark sky and maximizes the amount of light from the Earth available to illuminate the dark part of

the Moon. It's an interesting phenomenon worth observing.

FPOA is planning a special program for the upcoming 2023 Annular Solar Eclipse. On Saturday, October 14, 2023, the Moon will partially cover Sun, as seen from Fremont Peak. At maximum coverage, approximately 80% of the Sun will be covered by the Moon. First contact occurs at 8:05 a.m. and maximum coverage is at 9:20. The eclipse ends at 10:45 a.m. Since the eclipse occurs on a Saturday, the FPOA is changing the time and date of the October Solar Program. For October 2023, the Solar Program is scheduled on the 14th from 8:00 – 11:00 a.m. to coincide with the eclipse. Because of the early hour of the eclipse, please check the weather status before heading to the peak. FPOA will provide weather updates on its website. Arrive early and watch the sunrise at 7:13 a.m. I hope to see you at the peak – bright and early.

Finally, reserve August 19, 2023. FPOA will have its annual Member's Appreciation Night (or Star-B-Que, if you prefer). Please begin to RSPV, if you are planning to attend.

PD

Observations



Rob Hawley, Eric Egland

Eclipses Heading for the US

In April, it took me more than 24 hours of travel to reach Fremantle (and another 5 hours from there). Within the next 12 months two eclipses will cross the US!

October 14 Annular

In October an Annular Eclipse will occur on a path that is almost parallel to the eclipse in 2012 (Figure 1). This time the path will be from Oregon, Nevada, Utah, New Mexico, and then Texas. The moon will be fairly far away so the annular portion (where the moon is contained within the limits of the sun) will be fairly long.

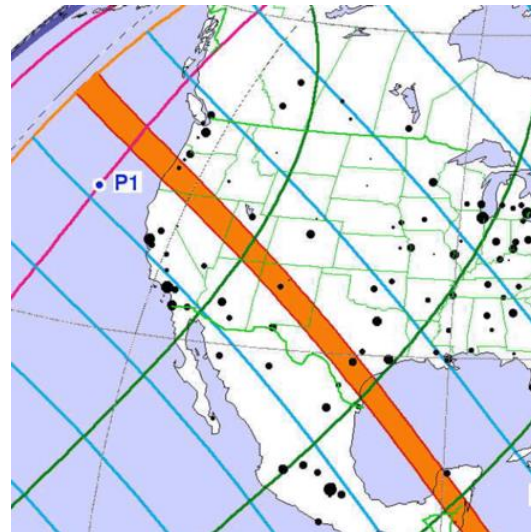
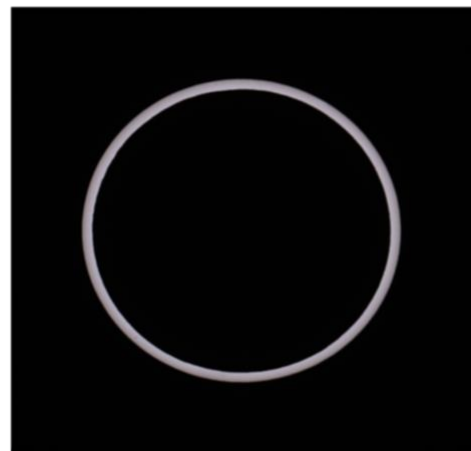


Figure 1: October 14, 2023 North American eclipse path

If you are observing from the centerline, you will see something that looks like the bullseye (in Figure 2 below) since the moon will be contained within the extent of the sun. The view this time should be similar (if you are in the right place).



While interesting, an annular eclipse is not something I would travel to Siberia to see (even if that was safe these days). Albuquerque is a non-stop flight away.

Just remember, unlike a total eclipse, it is NEVER safe to look at an annular eclipse.

FPOA decided to put on a solar program that morning. The eclipse starts fairly early Pacific time, but the sun will be 80% obscured here so it will be worth a view.

years while NY was clear. Southern Texas had the same challenge. The rest of the track was cloudy each year. To increase our chances, we will need to be mobile. On the other hand, I am placing a bet on southern Texas and hoping for the best.

The sun is entering a more active phase so expect more prominences. However, the longer duration of the eclipse will mean the

apparent size of the moon will be larger. Many of the prominences will only be visible where the moon enters and leaves the sun. Those along the edges of the sun, parallel to the moon's track, may never be visible. So, this is good/bad news. Great for enjoying the corona and looking around. Bad for views of prominences.

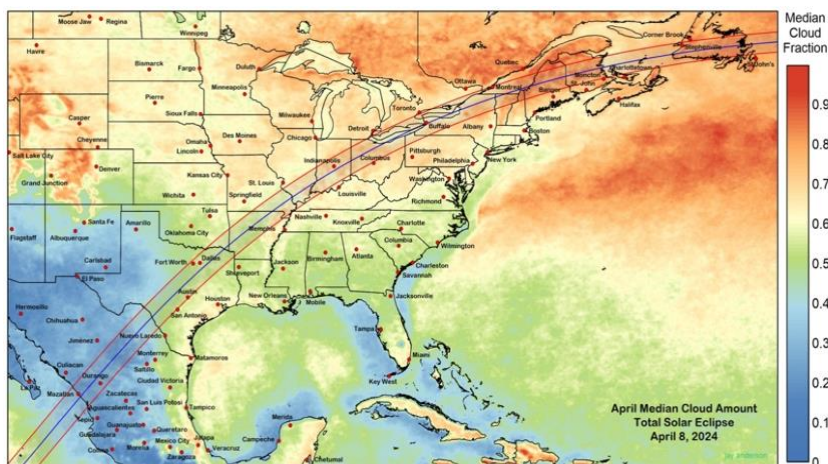


Figure 3: April 8th Climate prediction by Jay Anderson

April 8 Total

This will likely be a rerun of the hype for the 2017 “Great American Eclipse”. Unfortunately, this time it will be in April rather than August which will bring with it some weather challenges with much of the country just coming out of winter. Figure 3 maps the climate estimate from the premier eclipse forecaster. But remember Figure 3 is “Climate” not “weather”. Fred Espenak (“Mr. Eclipse”) looked at the actual weather for the last 5 years. Before you buy a ticket to Mazatlán you might wish to consider what he found.

Looking at the last 5 years of actual cloud cover, Upstate NY was competitive to Mexico. Mexico clouded out during several

I would expect very strong polar coronal plumes aka. Solar brushes. (Fig. 4)

RJH

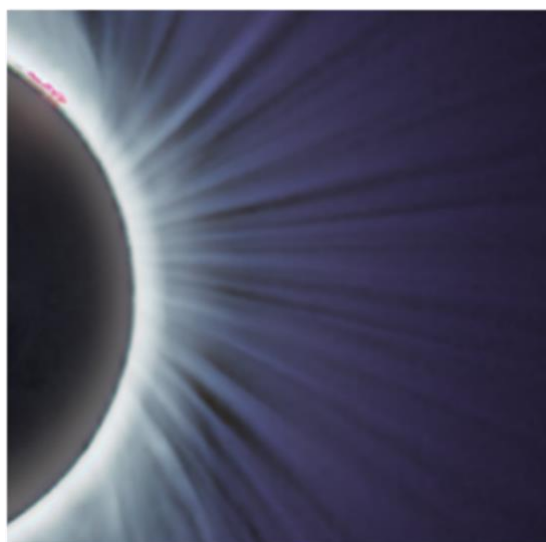


Figure 4: polar coronal plumes follow the magnetic field

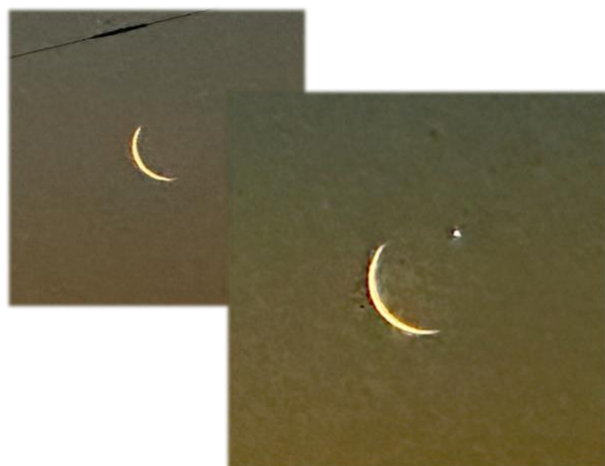
Lunar occultation of Jupiter



On May 17th, Jupiter passed behind the Moon. I sent out an observing info post the night before, but forgot all about it until, from my early a.m. bathroom vantage, a moonbeam dawned on me.

I grabbed my tripod, Astroscan, my new mobile phone, designed and used in California, and headed out to the barn for some quick grabs.

The shot above captures the early morning inversion with Jupiter already in occultation. The following quick setup frames capture the sense of celestial motion over 16 minutes; through my handheld Canon, and with my mobile through the Astroscan 25mm lens.



Facilities



Eric Eglund

Next winter looks like another El Niño. Summer road work and some fire prevention continue along San Juan Grade Rd. A large chunk of road fell away from the top of the second switchbacks. The turn is a little tighter coming down the mountain, so start from the center line slowly or you'll have to overshoot if you can't drift.



The east porch needs a repaint. We'll schedule some group time after the SBQ to scrape and prime and paint the top, then turn everything over when dry and do the bottom to seal out the fog on the shady side of the building. My painter in Monterey seals all sides for fog zone coating longevity.

The rolling roof alignment bracket sometimes gets hit by the north flashing. Top and bottom faces of the brackets should be parallel for proper alignment.



Above, we see the top bracket knocked to the south. The roof is not aligned. Knock it back parallel to the bottom and then align if out of place. I'm working on the fix.

ETE

Support



Thanks to those who renewed in 2022. FPOA receives most of its income from Memberships. Most of the annual members are now Observers.

We still need your support. Contributions cover publications, phone, insurance, etc.

Please consider volunteering, it's great fun and a service to our community. Please see the [back page](#) for details.

Membership Renewal



Rob Hawley

To join or renew, please select from the list of options on our [Membership page](#) and pay via PayPal or mail a check to:

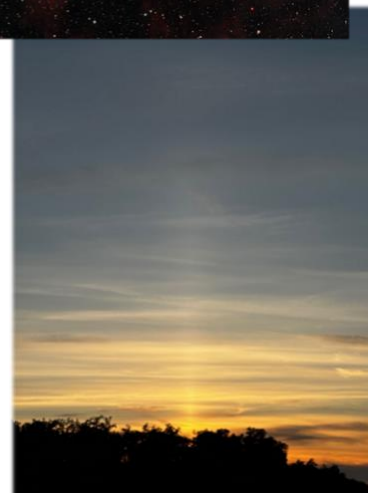
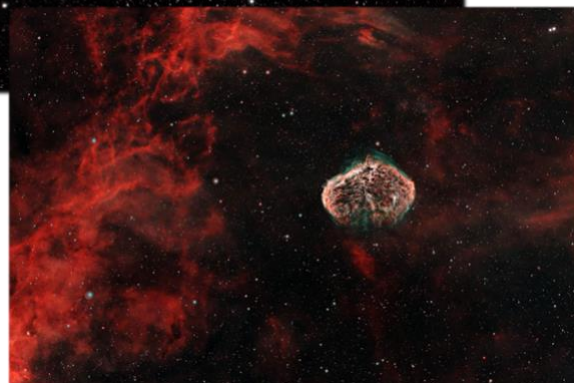
FPOA Membership
c/o Rob Hawley
1233 Hillcrest Dr.
San Jose, CA 95120



Gallery



Top to bottom: Michael Kieran: Dumbbell and Crescent Nebulae; sun pillar from FPOA; welcoming the campers





FPOA at peak bloom May 17th

Fremont Peak Observatory Association

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Phone Number: (831) 623-2465

General info *info at fpoa.net*
 Schedule *schedule at fpoa.net*
 Membership *membership at fpoa.net*
 Editor *editor at fpoa.net*
 Treasurer *treasurer at fpoa.net*

Website: fpoa.net

Facebook: [fpoa.observatory](https://www.facebook.com/fpoa.observatory)

Twitter: [fpoa_info](https://twitter.com/fpoa_info)

Observing Reservations



Please send the following information
48 hours in advance to:

schedule at fpoa.net

- Member name
- Reservation date
- Estimated arrival time
- Duration of stay
- Number in party
- Vehicle description and license plate
- Specific observing site request (pad)

**Reminder – 48-hour notice for Observer
 Access is non-negotiable**

Please, No 'last minute' requests

We lease access to the FPOA area from the State. Our agreements with the State require we give 48 hours' notice for all visitors. Observer members agree to the 48-hour notice per the liability contract.

Officers and Directors 2023

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Vice President, IT	Windell Oskay
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Instruments	Ron Dammann
Facilities	Loren Dynneson
Editor, Facilities	Eric Eglund
	Chris Angelos
	Tom Kellogg
	Jeff Shapiro

Instruments and: Schedule	Ron Dammann
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Membership and: Distribution	Rob Hawley
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Website	Rob Hawley Windell Oskay
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Directors Emeritus	Kevin Medlock Denni Medlock
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Public Program Volunteers



- Complete the updated [2022 liability waiver](#) and return to *membership at fpoa.net*.
- Also, please email name, vehicle, and the program date to *schedule at fpoa.net*.

Dates and Delivery

Members, The Observer is now sent by email and posted on our website at FPOA Observer online Please send email updates to *membership at fpoa.net*.

The *Fremont Peak Observer* publishes four times a year following Winter, Spring, Summer and Fall. We welcome articles and photos from our members. Please email those to *editor at fpoa.net* by Mar. 1, June. 1, Sept. 1 and Dec. 1 in plain text or Word format.