

The Fremont Peak Observer

— Bringing Astronomy to the Public —

Vol. 41, No. 2

Summer 2024

President's Message



Pat Donnelly

I am happy to report that the FPOA public program season has started. Volunteers have held several evening programs and two (2) solar programs so far. Because of the weather, attendance at our programs has been a bit light, but that could change anytime. We've also hosted several special programs. On April 27, the Hartnell astronomy class attended an evening program. It was challenging because of humidity and some overcast, but everyone seemed to enjoy the visit. There has been an unprecedented number of requests for special programs this spring. I would like to thank all of the members who volunteered for these programs, especially those who volunteered for programs not on a public night. The high number of special programs requested resulted in a hold on special programs before early June. We're successful!

I would like to welcome Zenaida Arreguin as a 2024 intern. Zenaida heard about FPOA through her Hartnell introductory astronomy instructor. We appreciate her help with public programs and hope she will have fun becoming more acquainted with the sky and its sights.

FPOA has a new Orion finder scope installed on the Challenger. The new finder's larger field of view makes finding objects in the southeastern sky much easier. Rob Hawley did most of the work to

2024 Program Dates

Evening Public Programs

June	1, 8, 15, 29	Sept.	7, 21, 28
July	6, 13, 27	October	5, 12, 26
August	3, 10, 31		

Solar Programs

June	1, 29	September	28
July	27	October	26
August	31		

Board Meetings

June	8	September	21
July	6	October	19
August	17	November	16

Annual Meeting Star-B-Q: August 24th
SBQ prep. board meeting: August 17th

Please check our web [Schedule](#) and [status](#) for updates before heading up.

get the finder installed. Good work Rob!! I have used the new finder to help find globular cluster M5.

And now some Astronomy,

This time of the year is the best time to observe due to the (relatively) cooperative weather and the plethora of objects to observe. This is the season of the galaxies and the beginning of the globular cluster season. There are several bright galaxies that are well placed for observation. My favorites are M51, M104, (the pair) M81 &

M82, and (the pair) M65 & M66. Also, most of the brighter globular clusters are also visible from the observatory. Omega Centauri makes a brief appearance in the far southern sky, and M22, M5, M13, and M3 are also visible.

In case you missed it, the recent month provided an unusual astronomical phenomenon. On May 10 of this year Tom Kellogg and his associates were able to see the Aurora Borealis (Northern lights) from the observatory. On the same night Eric Eglund was able to photograph the Northern Lights from his home in San Juan Bautista.

Unfortunately, I did not see them. The visibility of the Northern Lights from northern California is quite rare. A very massive solar storm hit the Earth on May 10, which enlarged the auroral ring to our local latitude. You can stay informed of any possible auroral activity by visiting the FPOA website > Members Page > Space Weather. Alerts of any and all potential auroral activity will be given.

Let me conclude this article by describing an interesting star formation I found last Saturday. In the process of looking for M104, I found triple star $\Sigma 1659$. This triple star is part the Stargate Cluster. It forms a small isosceles triangle with two (2) mag +8 stars and one mag +11 star separated from each other by approximately 30". This triangle of stars is enclosed in another larger triangle of sixth magnitude stars to give the appearance of a stargate. Because of its proximity to M104 it should be easy to find. While you're in the neighborhood, check out multiple star system $\Sigma 1604$, called the celestial hockey stick. It is visible in the same low power field with M104. If you find the hockey stick, note that it points at M104.

PD

April 2024 Eclipse



Rob Hawley, Lenore Edman, Windell Oskay, Tom Kellogg

April 8, 2024 Eclipse Introduction

Rob Hawley

As anticipated, this eclipse drew even more attention than the 2017 eclipse since its track flew over more populated areas. However, this eclipse was in April. April is not known for having the best weather prospects. But this eclipse turned those prospects on their head. Areas that were unlikely to see totality were the premium sites. In contrast those areas which had the best chances (albeit 50/50) such as the Texas hill country were largely clouded out. Even many places in Mexico had high clouds instead of clear skies.

To explain this weird result, it helps to look this satellite image taken right before the eclipse began. Several things are happening...



- First, a band of high clouds almost exactly follows the eclipse track starting in Mexico and continuing into almost Indiana.
- An anticipated weather system moved into upstate New York from the west.

- Finally, a strong onshore flow from the Gulf of Mexico filled the skies in Texas. Clear skies were a matter of chance. Rain began that afternoon in some areas followed by thunderstorms and tornados the following day. One tornado touched down in the Houston suburb where we spent the night after the eclipse.

If you either: were lucky in Texas; chased clear skies in Mexico; or changed plans and flew to supposedly most unlikely Montreal; then you got quite a show.

The following will relate several people's stories of their experiences on eclipse day.

Eclipse from Kerrville, TX

I was invited to join a group of folks which I had shared at least one past eclipse experience (Libya 2006) on a trip nominally sponsored by Griffith Observatory. They chose Kerrville in Texas hill country. This was a unique place for this eclipse as it was also in the track of the October annular. It was also one of the locations where NASA set up their broadcast feeds.

The plan was a good one. They arranged for us to use the soccer field in return for a series of group lectures. The only one that generated a lot of student interest was Tim Russ (from Star Trek) who spent most of his lecture talking about his interest in an automated telescope.

Kerrville had one of the best weather prospects in the entire US. But by "best" I mean it was 50/50.

About a week before the eclipse, I started looking at the weather models and they looked grim. Rain was forecast for the area although the day before would have been clear. Many of our group decided to camp and that forecast (along with a drive

from LA) caused most campers to bail. I decided to go for it instead of doing what Michael did and change my plans.

The night before I pulled up the weather forecasts. Two forecasts showed the clouds were supposed to at least thin during the eclipse (I am told that eclipse effects were considered in the models). With the nearest high probability clear skies over in Arkansas, we decided to take our chances locally.

Unfortunately, the day dawned with low clouds that only got worse. Here is what the sky looked like just before totality (*below*)



It was a total loss. We saw less than 2 seconds of totality (not even enough time to raise my *binos*). Score a big X over this event location.

But views were spotty. The NASA event which was located only about a mile away saw the eclipse through clouds. One of our board members saw the eclipse in nearby Fredericksburg, but another event in the same city only saw clouds. Those that relocated near Dallas had better luck

CaptureEclipse Scores a Success

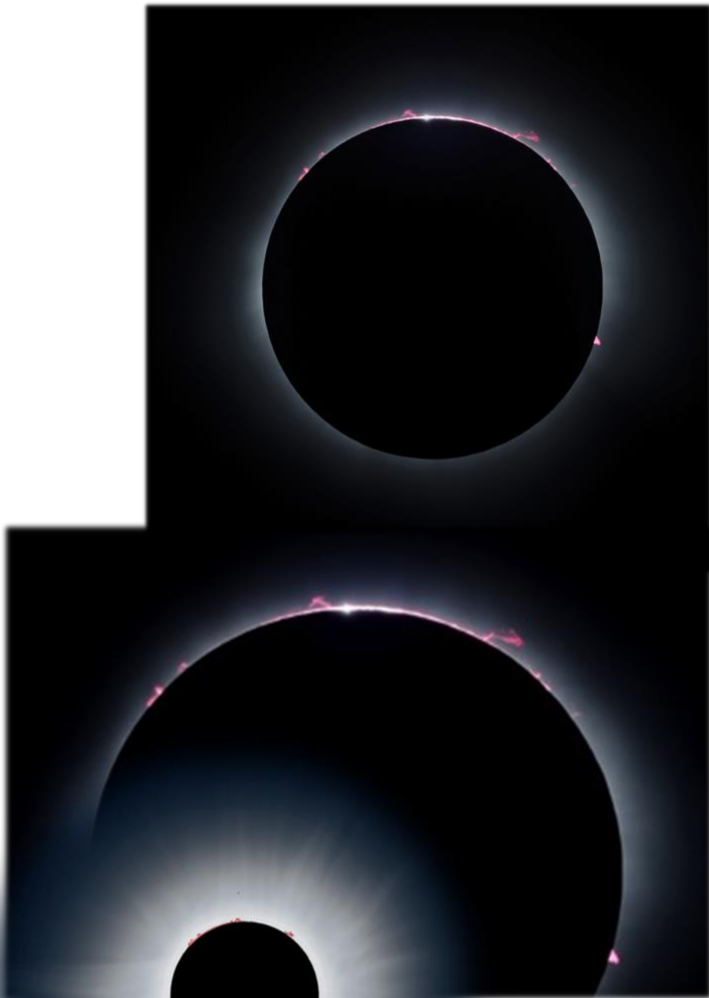
This was the first total eclipse where I publicly advertised CaptureEclipse for use using Facebook. Over 1000 people downloaded it to evaluate it. I don't know

how many actually used it, but the feedback I received was that everyone was satisfied. The two third party photos I am contributed were both taken using it.

The Apple TestFlight for Version 2.0 will be available sometime in June and addresses some of the comments I received from folks before this eclipse. Another version is scheduled for release in 2025.

Fellow observer photos

This is an HDR image that was constructed from the data furnished to me by Michael Kieran. (*prominences in H- α , corona*)



RJH

The 2024 Eclipse from New York

Lenore Edman, Windell Oskay



With our move to New York early this year, we didn't make any advance eclipse plans. As the date got closer and it became clear that we were awfully close to the best weather for the band of totality, we decided to make a last-minute road trip.

We packed the car and left at 6 AM on Monday morning to our chosen spot: Elizabethtown, New York, which had been marked in the previous day's weather report as "safe from clouds". Traffic was steady, but not too congested. The rest stops were quite crowded, though, with bathroom lines all the way out of the building. We got to Elizabethtown at about 10 AM and saw an inbound band of high clouds and a lovely 22-degree halo.



We checked the weather: “increasing afternoon clouds” was not promising. It seemed that the further north and east we went, the better our odds would be. A few minutes later we were on our way to Enosburgh Falls, Vermont, another 90 minutes east.

We crossed Lake Champlain, passing viewers sitting in parking areas with their cameras and telescopes at the ready.



The high clouds followed us, but Enosburgh Falls was definitely ready for us.

The whole town was out in the park, ready with colanders, pin hole projectors, solar glasses, and telescopes. The sound system on the bandstand was playing every sun and moon related song.

We signed our names and hometowns on a big chalkboard. We weren't the only eclipse chasers in town.



Everyone was enjoying looking at the eclipse in various ways



They turned off the music about five minutes before totality so everyone could experience the eclipse with all their senses.

There were just enough clouds to make a 22-degree halo (*next page*) possible both before and after totality, but every moment of our three and a half minutes of totality was phenomenal. The magenta of the prominences was vivid even without

binoculars. The corona was luminous and expansive.



It was great to be able to change our plans in the moment, but we did end up with a very slow drive home, getting in around 2 am. The folks in Enosburgh Falls were great and we even were given a sticker to commemorate the event.



LE, WO

April 8, 2024 total eclipse in Texas

Tom Kellogg

48 minutes is a very long time with mostly 100% cloud cover and the partially eclipsed sun peeking through for a few seconds now and then. Then totality darkened the world and the corona showed through beautifully for the full 4 minutes and 12 seconds. We even got a glimpse of Venus. Then the sun was again buried behind the clouds for most of the partial eclipse following totality.

I was in Fredericksburg, Texas with 230 fellow Sky and Telescope “tourists” with senior S&T editor Kelly Beatty. It was my first trip with S&T and it was Kelly that sold me on joining. He retired 8 years ago after 44 years with S&T and I always enjoyed his writing. Then in the spring of 1990 he called me at work to tell me that my article on sidewalk astronomy would be published in the August issue. Kelly has seen many eclipses in the past half century. At the dinner with all attendees following the eclipse he said it was his favorite eclipse ever. I think the drama of us all thinking we would see nothing but clouds right up until totality created an emotional experience for everyone.

Anthony Barreiro of the San Francisco Amateur Astronomers had told me about the group so I signed up and enjoyed time with him during the 5 days in Austin. I enjoyed meeting amateur astronomers from all over the world. We had some (not too many) excellent lectures and a surprising guest talk by astronaut Don Pettet who had some fun stories. Twice he witnessed a total solar eclipse from the space station. Also, he has a patent that first came to him while in space. He invented a cup design that allows one to drink liquid from a cup while weightless.

TK



Local eclipse maximum in SJB, Eric Egland

Facilities



Eric Eglund

As of printing, we have a new desk light, and a new finder scope installed on the Challenger. I'll let Rob describe his finder scope in the next edition. The new gooseneck desk light matches the style of the other and replaces the old blue extension light from the 80's.

A painting party will be held later this summer if the foggy weather lets us have a dry spell. We need to refinish the exterior shutter guards and bench. EE

Support



Thanks to those who renewed. FPOA receives most of its income from our memberships. Most annual members are now Observers. We still need your support. Contributions cover publications, phone, insurance, rent, etc.

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

Please send Fall 2024 Observer articles to the [editor](#) by September 1st.

Membership Renewal



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



From top: A fogbow at the peak in polarized light; the compact new desk light; more foggy conditions; members enjoy a break; volunteers share views of a galaxy cluster during a summer evening program.





May 10 aurora from San Juan Bautista, Eric Egland

Fremont Peak Observatory Association

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

Observatory: (831) 623-2465

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.

Public Program Volunteers

- Complete the updated [2023 liability waiver](#) and return to *membership at fpoa.net*.
- Also, please email name, vehicle, and the program date to *schedule at fpoa.net*.

Officers and Directors 2024

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Dates and Delivery

Members, The Observer is now sent by email and posted on our website at FPOA.Observator.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.

