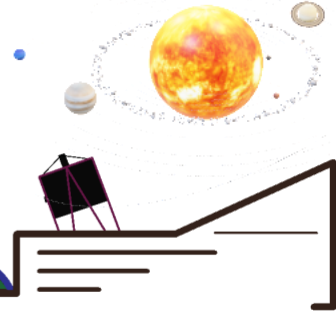


The Fremont Peak Observer

— Bringing Astronomy to the Public —



Vol. 42, No. 1

Spring 2025

President's Message



Pat Donnelly

As you read this article, the Sun is returning to the northern hemisphere on March 20, 2025, at approximately 2:01 AM PDT, when the geometric center of the Sun will coincide with the Celestial Equator. This event is called the Vernal Equinox or the First Point of Aries. When this happens, the Sun will be in the constellation Pisces. Due to the precession of the Earth's rotational axis, the Vernal Equinox has moved from Aries into Pisces. At this time Spring begins in the northern hemisphere.

In addition to this event, several other astronomical events will occur in March. There will be a total lunar eclipse on the night of March 13-14 (Thursday to Friday) with the mid eclipse occurring at approximately midnight, if you live in California. I suggest that you consult the astronomical literature for the exact times. Venus will reach inferior conjunction on March 22, and just before that event, Venus and Mercury will share the evening twilight and be less than 1 degree apart on March 11. You will most likely need a good pair of binoculars to see them together. Also, The Earth will pass through the plane of Saturn's rings in March. Unfortunately, Saturn will be too close to the Sun to witness the event. Finally, do not forget to turn your clock forward one hour, beginning on March 9.



2025 Program Dates

Saturday Evening Programs

March	22, 29 (8p)	July	19, 26
April	5, 19, 26	August	16, 23, 30
May	3, 24, 31 (8:30p)	Sept.	13, 20, 27
June	21, 28	October	18, 25

Solar Programs (2-5pm)

March	29	July	19
April	19	August	30
May	24	September	13
June	28	October	25

Board Meetings (Zoom, 1pm)

January	25	July	26
February	22	August	23
March	22	September	27
April	26	October	none
May	17	November	1
June	14		

Star-B-Que October 11

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

This year the FPOA has moved the Star-B-Que (annual meeting) to October 11. This Star-B-Que will be special because the FPOA has invited Pimol Moth's general education astronomy class to the event. Weather cooperating, we hope to conduct both a solar program in the afternoon and an evening observing program after the barbeque. The scheduled time for the barbeque has not been decided, since sunset is at 6:35 PM. We need time to clean

up before it gets dark. If you can volunteer for the event, it would be much appreciated. I am hoping this new arrangement will spark student interest in astronomy.

In astronomy news, there have been some interesting developments in the search for extraterrestrial life. Analysis of samples of asteroid Bennu, taken by the OSIRIS-Rex spacecraft, have revealed some spectacular discoveries. In addition to finding water (H₂O), Ammonia (NH₃), and formaldehyde (H₂CO), the researchers have found 14 of the 20 basic amino acids that are the basis for most of the known proteins. The five (5) nucleobases of RNA and DNA were also found. These discoveries provide additional data points to support the concept that life in the universe will probably be based on carbon.

The samples were teeming with potential building blocks for carbon life. One of the interesting finds in the samples was that there were essentially equal amounts of both left-handed and right-handed molecules. These two types of molecules are mirror images of each other. On earth almost all biologically formed organic molecules of these types are left-handed. However, the Bennu samples had equal amounts of both left-handed and right-handed molecules. Therefore, one can conclude that the molecules in the samples from the asteroid definitely came from the asteroid and not from contamination. This does bring up the following question – “Why does life on Earth only form left-handed molecules?” Stay Tuned.

Finally, on the lighter side, I have been reading some psychology papers about super intelligent people. According to the papers the super intelligent people use sarcasm often and swear frequently. I guess

it means that if you wish to sound super intelligent, use sarcasm frequently and swear often...

See you at the peak in 2025.

PD

Observations



Rob Hawley

Galaxy Season

Spring is always my favorite time of the year since it is when we can really make use of that 30” instrument available to us. Spring is galaxy season. By a quirk of fate caused by the tilt of our galaxy, many “nearby” galaxies (*Figure 1*) from 11-60 Mℓ.y. away, are visible because the Milky Way has not yet risen at this time of year.

We are embedded in a spider web of galaxies; many of them are distant and require large telescopes to tease out their details. This is largely the case in the fall. While several of the notable galaxies of fall are members of our own local group, the remaining galaxies are dim and distant. While there are a couple of standouts, most are not suitable for public programs.

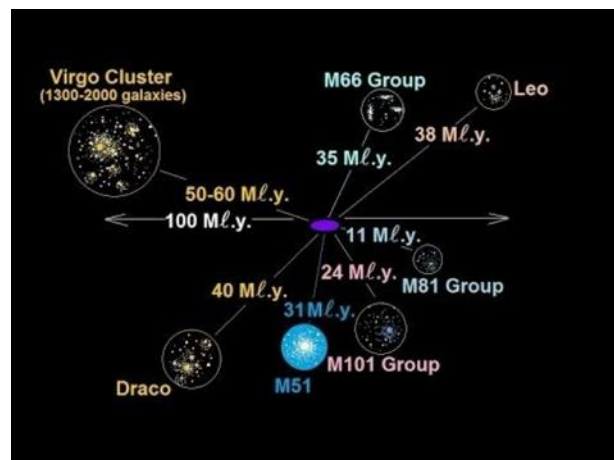


Figure 1 - Bright Spring galaxies near the Milky Way
(Click to ENLARGE)

In the summer, the Milky Way dominates. It blocks the view of anything beyond it, including what we now know is another dwarf galaxy hiding behind the brightest part of Sagittarius (which Messier designated M54). Had it been in the spring sky, we would have been treated to another visible dwarf like the Magellanic Clouds, visible now in the southern hemisphere.

In the winter, we are again pointed at the Milky Way (albeit a dimmer portion). Unfortunately, every galaxy in that direction is fairly dim or covered with the Milky Way.

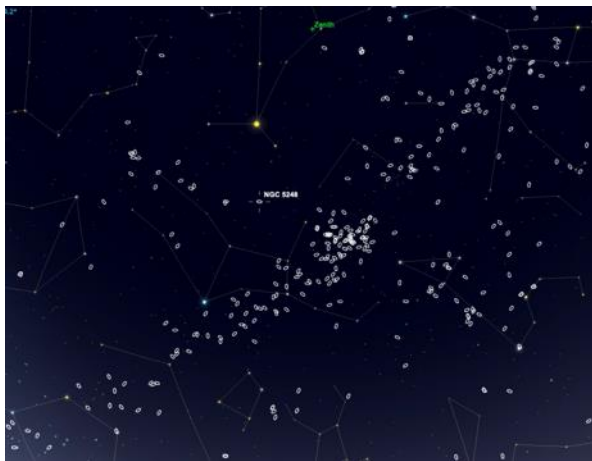


Figure 2 – a river of Spring galaxies in Virgo
(Click to ENLARGE)

So that leaves the spring sky. While finding galaxies that are reasonable for amateur viewing is tough in the other seasons, in the spring, there is literally a river of them from the southern horizon through Virgo and extending northward to Ursa Major, (Figure 2).

We are well positioned to view a number of close bright galaxies in the spring sky, (Figure 1).

For those not familiar with what is available, here is a brief introduction:

- **M 81/82**
These far north galaxies interacted in the past. This caused a great deal of star formation in M82. Unfortunately, their location precludes using the Challenger.
- **M 101**
This rather dim galaxy is a great spiral. Unfortunately, its low surface brightness makes it difficult for public viewing.
- **M 66 et.al.**
The Leo triplet is a great target. All three galaxies can be viewed in a single view if you use low power on the Challenger.
- **Downtown Virgo**
For those who want to just see as many as you can at the same time, pointing the telescope at the bowl surrounded by Virgo produces that. Markarian's Chain is an interesting asterism that starts on the two super galaxies M86 and M84 and then extends in a curve...
- **M51**
M51, the brightest and most impressive galaxy near Alkaid (the last star of the dipper), is always the star of the show. Surprisingly, it's not a single galaxy but a pair of interacting galaxies. Using the Challenger it's usually bright enough to reveal its spiral structure. However, its location far north poses a challenge for the operators, requiring careful planning to avoid crowds leaning over the telescopes or the building.

The local galactic neighborhood awaits our guests in Spring and makes for exciting viewing. There are not many seasons where we get so many opportunities to show off what 30" of glass can do.

RJH

The Observer's Dilemma - Will it Be Clear?

Rob Hawley

As an Observer member for a long time, I know how tricky it can be to plan observing trips when the weather's unpredictable. I used to love winter observing because there's so much to see, and when the skies cooperate, it's an amazing experience.

But here's the catch: the weather forecast can change in an instant, so you might not know until Friday if a Saturday night is going to be a good observing night.

As you all know, we are all Park visitors, and when we observe, we're basically in the ranger's backyard. So, the contract that lets us in says we need to be respectful and give the rangers a 48-hour heads up so the information can propagate to everyone who needs to know. But how do you, as an observer, balance the need to give advance notice with the weather being so unpredictable?

The answer is to make your reservation based on your schedule, not the weather. If you think you want to observe on Saturday and the weather looks *possible*, go ahead and make the reservation. We'll let the rangers know.

If you decide to cancel, no worries. If you let us know we will pass it along to the rangers. In any case they always know our list means you might be on the hill. They're only upset if someone shows up and they're not expecting them. RJH



Management & IT



Rob Hawley, Pat Donnelly

FPOA Transition to Google Workspace

Rob Hawley

After encountering several problems with our emails last year, FPOA decided to switch our email processing to a different platform. Google offers a free service called Google Workspace for Nonprofits, which functions similarly to the paid Google Workspace product but is provided to eligible non-profits at no cost. In early December, we successfully transitioned our email system to Google. As a member of FPOA, we hope you haven't noticed any significant changes since this was one of the project's requirements.

In addition to email, Google Workspace provides a range of other services to facilitate collaboration among our management staff. We're still exploring the full implications of these offerings, but I'd like to share what we've discovered so far.

- All of our crucial corporate records have been migrated to Workspace. We have encrypted the most sensitive records ourselves, ensuring their security but also making sure they will be available even in the event of any loss of key personnel.
- We're now collaborating on shared documents like our board records. Though it's early, it's proven valuable for tracking progress on action items.

There are some other areas where we are still trying to understand the best way forward

- This newsletter may migrate to a webpage instead of a paginated document. Since FPOA no longer publishes paper

copies, it's no longer bound by format limitations of a paper document. *Observers* can be of any length. Contents will appear as links at the top of the first page.

- We plan to use our new tools to make routine activities accessible to more staff. For instance, our Challenger calendar was hidden in a hard-to-maintain custom calendar. Now, it's visible on our [private page](#) as a table, and more staff can assist with its maintenance.

- We're considering replacing our paid Zoom service with Google Meet, part of the Google Workplace for Non-Profits.

If anyone is curious about the details, I created and actively maintain a [document](#) that describes how we're planning to use Google Workspace.

Eric Egland serves COO Duties, Jeff Shapiro fielding public inquiries

Pat Donnelly, Rob Hawley

For many years, Pat and Ron managed our most important duty, that of staffing and organizing our public programs. Several years ago, Rob gradually took over many of these duties with the exception of the schedule@ role.

It is now time to pass the core of these duties to a new generation. Starting this year Eric and Jeff will assume a larger role in the operation of FPOA.

Eric will serve us as Program Coordinator (COO) with the following tasks:

- staffing public programs
- manage task assignments during programs
- control early termination of a program
- managing the fpoa status box
- create and manage the schedule signage

Jeff will take the primary role in managing our special program calendar with Eric assisting him. Jeff also answers general public inquiries to info@.

Ron retains his duties scheduling observing reservations from schedule@ and remains as interface between our organization and the rangers. Everyone is reminded that we are required by contract to let Ron know anytime we are going to be past the gate.

Rob continues to look after our finances. Pat and Rob continue managing our contract with the state.

Facilities



Eric Egland

Work continues on the new Challenger draw tube, and for now, the building security setup and access location remains the same. I may close the upper shutter gaps with brush seals that stop and deflect wind-blown rain around the building.

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.



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 CW: Moon through the 30", a 3" storm fills the home gauge, polar aligning the Losmandy on Pad 1, Borrego clouds over SJB, Snowbells bloom at home, observatory on a clear freezing night, Venus waxing a bit gibbous in Dec. 2024; (even with a var. polarizer, I spent a little too long on Venus and had a couple temporary dead pixels in my Canon R8 sensor that resolved overnight), a little colored pencil spiffs up the new Spring schedule.





Half Moon shines over Hollister, CA on Jan 21st

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*.

Fremont Peak Observatory Association

Box 1376, San Juan Bautista, CA 95045

Inquiries *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)

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

Observatory: (831) 623-2465

Officers and Directors 2025

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Vice President, Programs	Eric Egland
Treasurer, IT, Membership	Rob Hawley
Instruments, Schedule	Ron Dammann
Secretary	Tom Kellogg
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Special Programs Coord.	Jeff Shapiro
Facilities	Eric Egland
	Chris Angelos
	Rick Mazzarella
Directors Emeritus	Kevin Medlock
	Denni Medlock
	Loren Dynnesson

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 Feb 25th, May 25th, August 25th, and November 25th in plain text or Word format.

