

The Fremont Peak Observer

— Bringing Astronomy to the Public —

Vol 36 No. 1

Spring 2019

President's Message

By Patrick Donnelly

Every year during March the Sun passes from south to north across the Celestial Equator. This event is called the "Vernal Equinox." For those of us here in northern California the Vernal Equinox occurred on March 20 at 2:58 PM PDT (21:58 UT). The event, which is usually identified as a day, is actually the specific time, at which the geometric center of the Sun coincides with the Celestial Equator. The day, on which the Vernal Equinox occurs, is designated on calendars as the "Spring Equinox," because it is believed that there are 12 hours of daylight and an equal amount of night. This is actually not true. On March 20 this year there were 12 hours & 8 minutes of daylight. The reason for this apparent inconsistency is due to the Earth's atmosphere, which bends the sunlight and causes the Sun to appear to be above the horizon after the Sun had actually set geometrically. If one wished to celebrate the actual equinox (i.e. 12 hours of daylight and an equal amount of night), that day would be March 17. I guess St. Patrick's Day is more important than previously thought.

Our public programs begin this year on March 30. On this day there is both a solar program and an evening public program. In April the FPOA has scheduled two (2) program days, April 6 and April 27. There will be an evening public program on both days and a solar programme on April 27. On one or both of those days the General Astronomy Hartnell students will be conducting their field lab at the observatory. There are three (3) programs in May on May 4, 11, & 25 with the solar program on May 25. If you plan to attend any of the spring programs in March, April, or May, please bring plenty of warm clothes as the weather can change quickly. One can always remove the extra clothes or leave them in the car. However, you cannot put on extra clothes that you did not bring with you to the peak. Also, please respect the rights of other people by turning off any white light flashlights before you approach the observatory.

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2019

FPOA Program Dates

Saturday Evening Programs

Mar 30 Apr 6, 27 May 4, 11, 25
Jun 1, 8, 29 Jul 6, 27
Aug 3, 24, 31 Sept 7, 21, 28
Oct 5, 19, 26

Solar Programs

Mar 30 Apr 27 May 25 Jun 29
Jul 27 Aug 24 Sept 21 Oct 19

Board Meetings

Jan 5 Feb 2 Mar 9 Apr 6
May 4 Jun 1 Jul 6 Aug 3
Sept 7 Oct 5 Nov 2

Special Events

Annual Meeting / BBQ Aug 24

Please check <http://www.fpoa.net/schedule.html> for changes or updates to this schedule.

Thank You, FPOA

By Dr. Pimol Moth

Every Spring and Fall, the students from Dr. Pimol Moth's Astronomy Classes at Hartnell Community College in Salinas, California visit the observatory on selected Saturday evening Public Program nights to do field work in observing.

Their assignment is to observe four objects during the night, do a sketch of the object and record information about the instrument used. From the

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Thank You, FPOA

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information, they can determine the magnification used during the observation.

The following is a Thank You email from Dr. Moth thanking FPOA for hosting these observing evenings for her students. It also explains why many of us in FPOA donate endless hours to doing outreach and maintaining the observatory.

(Ron Dammann, Editor)

Email from Dr. Moth

Dear FPOA,

I'm sorry this is so late in coming. I have been kept super busy at Hartnell with several projects. But I wanted to take this time to say a big Thank You again for hosting our field trip and for volunteering your time in general to allow the public to experience the beauty of the night (and day) sky.

I thought I would share with you some notable comments from my student's journal entries that attest to how enriching this experience was for them. Please forward to the other volunteers at FPOA:

"I really enjoyed going to Fremont Peak Observatory. I hope I can visit again in the future. The volunteers were welcoming and helpful. I enjoyed looking at objects that I had only seen in textbooks or a slideshow; it felt awesome. I would totally recommend by family and friends to go to Fremont Peak Observatory."

"I am very happy to have decided to go to Fremont Peak Observatory. The experience I got during the trip was the first time. It was my first time to see a telescope and be away from home until late due to school. I am the first in my family to go to an observatory of astronomy. Learning about the stars and beyond the planet in an educational way is different from what my grandparents taught me. I told my grandparents what I saw, but they didn't believe. They do not believe that the stars are similar to our Sun and that each star can have its own planet."

"It felt like a whole new world, which reminded me of Aladdin, the song from the movie that played in my head. I was mesmerized. 'I'm king of the world' I thought to myself."

"This project really opened my eyes and made me more interested in studying space. It is very fascinating to learn about the Universe and realize we are so tiny, that we are literally just space dust."

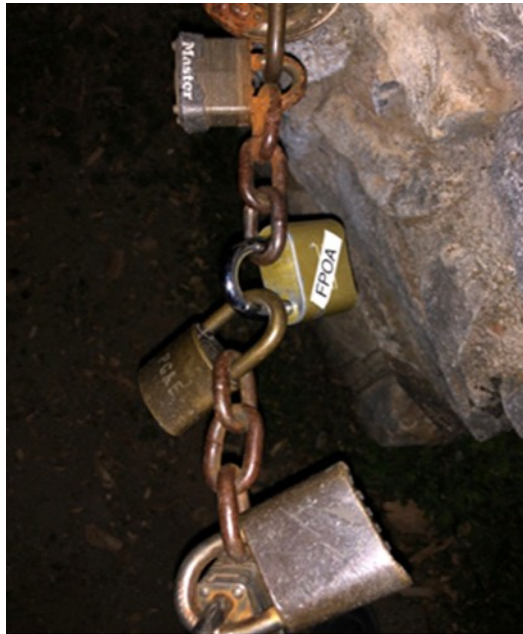
"Let's just say that the nerve-wracking drive down from the observatory during the pitch dark at night is completely WORTH it. 10 out of 10."

Thanks again and all the best until next time,
Pimol

If you feel that would like to become involved with volunteering for Public Program nights, please contact Ron Dammann at <schedule at fpoa.net>

Proper Gate Lock Procedure

By Rob Hawley



Everyone driving into the FPOA area must be aware of the proper procedure for the locks. Recently we have had some problems with members not locking the gate properly and especially not including the PG&E lock in the chain sequence. Here is the only acceptable way to lock the gate.

Note that the FPOA lock is locked to the PG&E lock.

If you find the gate locked in a different manner **then someone else did not read this**. It is **YOUR** responsibility to lock the gate correctly.

New Presentation Infrastructure

By Rob Hawley

Our projection system has become a little dated. The old system had limited resolution and poor contrast. In April the board decided to add an HDTV as an alternative means of providing lectures to our guests. This article will describe how to use the new HDTV system.

To use the new HDTV with your computer you will need to have a cable/adaptor/dongle for HDMI. If your computer is not HDMI capable then the old VGA projection system is still available and you can use that. Note that FPOA's PC is configured to use the new HDTV system.



Turning it on

Follow these steps to turn on the HDTV.

1. Turn on the power strip labeled "Shut Off" that is located on top of the computer.
2. Find the Toshiba control and press the power button.
3. A screen with HDMI selections should be visible. If it is not then press the home icon.
4. If you bring your own laptop then select HDMI 1 (outer ring of circular button then press center).
5. If you are using FPOA's PC select HDMI 2.
6. At the end of the evening be sure to shutdown the PC and then turn off the power strip.



Safety Template

FPOA requests that guest speakers include our Safety Template in their presentations

<https://fpoa.net/private/Safety-Presentation/index.html>

President's Message *From Page 1*

The FPOA has added a sign that informs you, when to turn off the flashlights. The evening public programs and the solar programs will continue through October.

The FPOA Annual Member's Meeting is scheduled for August 24 this year. The meeting activities will be the same as last year with a Bar-B-Que, election of board members, astronomical trivia test, and a raffle. Our guest speaker for the event is Mr. Robert Garfinkle. The title of his presentation is "Fly Me to the Moon." It will be an imaginary trip to our nearest celestial neighbor. I expect the observing on that Saturday night to be quite good. The Moon will not rise until after midnight and Jupiter & Saturn should be well placed for observing. I hope to see you there.

(And now back to some astronomy) The spring time in the northern hemisphere is the season of galaxies. There are several galaxy groups to explore including the Leo Group, the Virgo Group, the Ursa Major Group, the Canes Venatici Group, and the Coma Berenices Group. The public really enjoys seeing the M65 & M66 galaxies in the same field of view. The public also enjoys seeing galaxy M104. For me I like to observe the M81 & M82 galaxy pair. I can use this bright pair to locate the Seyfert Galaxy NGC3077, which is just out of the low power field of view. My friends from New Zealand want to see the face on spiral M51 and the edge on spiral NGC4565. All of these galaxies are easily visible in the Challenger telescope.

Finally, each member of the FPOA as well as the public owes it to themselves to visit the FPOA website. The website has been completely redesigned and is quite elegant. Again, I want to thank Windell Oksay and Rob Hawley for their hard work to make the redesign a reality. Three (3) new features have been to the website that I really like. First, the visible satellite picture has been replaced with the GOES-17 (West) satellite image. The GOES image is in color and a close up of the area can be viewed. Also, both the Universal Time and the observatory's local Sidereal Time are provided with the other astronomical and meteorological data. I especially like the Sidereal Time because it tells me what constellations are on the observatory's meridian. Many thanks go to Rob Hawley for adding these features.

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New Presentation Infrastructure

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These couple of slides give visitors some of our rules (e.g. no lights on dark nights), some safety info (e.g. how to use the Challenger ladder), and some instruction of how to look at objects. If you do not include these let <schedule at fpoa> know as one of the rest of us will have to give that part of the presentation. These slides are also on the FPOA PC.

2019 Membership Renewal

You can use the forms on the membership page <http://www.fpoa.net/membership.html> to pay with either PayPal or via a credit card. For those preferring paper you can just send a check (that has your current correct address) to : FPOA Membership, c/o Rob Hawley, 1233 Hillcrest Dr., San Jose CA 95120

FPOA on the Internet

Phone Number: 831-623-2465
Email Address: info at fpoa.net
Website: www.fpoa.net
Facebook: www.facebook.com/fpoa.observatory/

EMAIL DELIVERY OF THE OBSERVER

Dear FPOA Members,
The Observer is now only delivered electronically. New editions are posted on our website. If you would like to be notified when a new edition is available please be sure we have your current email address. Since most annual memberships are now renewed via PayPal we will use that address by default. If you would like us to notify you at a different address or your email changes then please send your new email address to membership at fpoa.net

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The *Fremont Peak Observer* is published four times a year (Winter, Spring, Summer, Fall). Articles from members are encouraged and should be emailed to <schedule at fpoa.net > Articles should be in plain text or MS Word format. Deadlines are Feb. 1, May 1, Aug. 1 and Nov 1, respectively.