

Renew now for 2016. Don't let your membership expire. See page 4 for details.

President's Message

By Doug Brown

It was great to see everybody at the **Star-B-Que**. Weather was hot and the turnout was, too. Dr. Dana Backman of the SETI Institute presented science results from the SOFIA mission. We tried a silent auction this year to avoid the red tape associated with a raffle, which the State considers to be a game of chance, but most of us missed the excitement of the raffle, so it will likely return next year. Orion Telescopes and Binoculars donated a bunch of great items for the auction.

Board Updates

Three positions were up for re-election at our annual meeting held during the Star-B-Que. Loren Dynneson and Ric Babcock were both re-elected. Dave Samuels has chosen to focus on other commitments, and Chad Giles will be taking his seat on the board. I will be resigning at the end of this year, which opens up an opportunity to get involved on the FPOA Board. Please consider who might be a suitable candidate—perhaps you yourself—and send nominations to Ron Dammann at schedule@fpoa.net.

State of the Organization

Membership, finances, and our public programs continue to be on track. However, Pat, Ron, and Rob continue to shoulder a too-large share of the program load; please consider getting involved and helping out. The old west ramp is showing its age, and will need to be replaced very soon. We are already looking at options to convert it to a combination of new stairs, expanded storage, and a place to mount the projection screen we use for outdoor presentations.

2016 Proposed FPOA Program Dates

Saturday Evening Programs

Apr 2, 9, 30 May 7, 14, 28
Jun 4, 11, 25 Jul 2, 9, 30
Aug 6, 27 Sept 3, 10, 24
Oct 1, 8, 30

Solar Programs

Apr 2, 30 May 28 Jun 25
Jul 30 Aug 27 Sept 24 Oct 30

Board Meetings

Jan 9 Feb 6 Mar 12 Apr 9
May 7 Jun 4 Jul 9 Aug 6
Sept 3 Oct 1 Nov 5

Special Events

Member Appreciation Night Aug 6
Star-B-Que See Page 5

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

Chasing the Aurora

By Rob Hawley

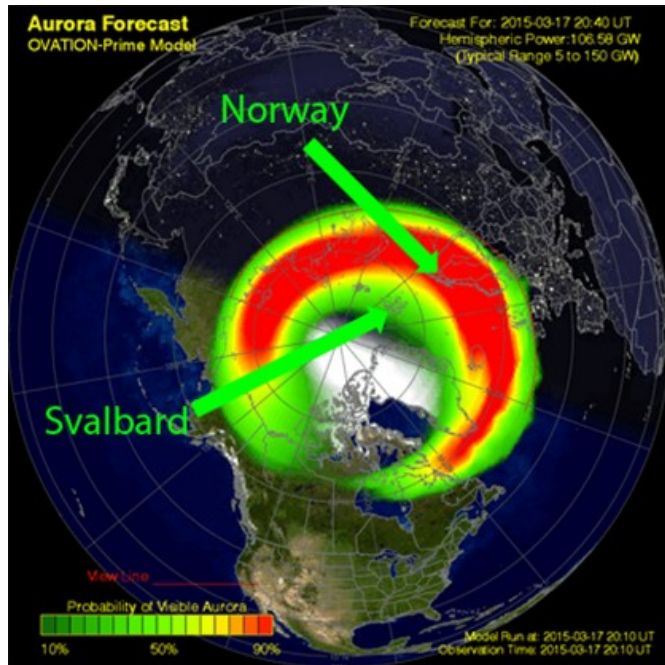
As a part of my trip to Norway I was hoping to knock off one of my bucket list items – seeing the Northern Lights. Despite living in the northern parts of the US for almost 30 years I never saw anything that came close to the typical Alaska pictures. To me the northern lights, if I saw them at all, were at something that looked like light pollution on the horizon.

Chasing the Aurora

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My dilemma is easily understood with an understanding of what they are.

The Aurora is caused by ejections from the sun hitting the magnetic fields around the earth. At the poles these particles follow the magnetic lines to the upper atmosphere. The gases in the upper atmosphere glow just as in a fluorescent tube.



The Aurora is a band circling the north (and south) Geomagnetic poles. The Geomagnetic pole is in northern Canada, which displaces the aurora toward the US. As you can see Cleveland and Boston are far from this circle.

For this trip I was going to be in the prime Aurora zone. While Svalbard was slightly north of the normal circle, the aurora should be visible in the southern sky. Coastal Norway was directly in the path of the Aurora. The only thing we needed there was clear skies and an active sun.

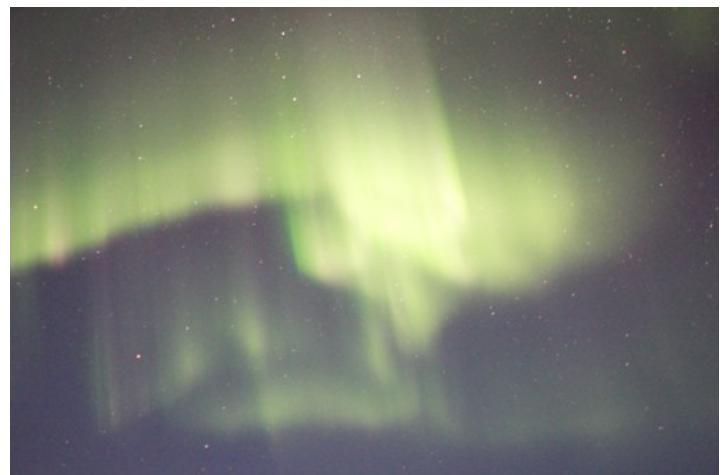
Our first attempt was the night before the Mar 20 eclipse. The trip took us to a dark site out of town (only a couple of kilometers. Longyearbyen is not Manhattan!) Since we had an early start the next day we wanted to get back to the hotel. Folks at the hotel reported seeing something, but bed is what I wanted to see.

We were out again the next night fueled on adrenaline from the eclipse. At first there was nothing. The leaders gathered us inside around a fire while they killed time telling stories. About 10 PM someone came in saying the lights were starting. It was close to -30°C out at that point. We looked and at first there was just a light pollution glow from the south. Wait! There is nothing in that direction except ice and polar bears! Soon pillars of light started shooting up over the hills. Curtains so bright they cast shadows followed this. Finally the lights were filling the entire southern sky.

Unfortunately by this point we were all freezing. I did not even try imaging due to the cold. Retreating to the buses we saw the curtains overhead instead of on the distant horizon. Thus ended our best night.

Following the eclipse we decided to stay in Norway another week and take the [Hurtigruten](#) cruise along the coast. The Hurtigruten is the local transportation along the coast stopping at towns large and small. It is a pleasant experience in its own right and March turned out to be a good time to do it (or we were lucky with the weather).

Once on the boat we were in prime Aurora territory. For three nights (dressed in our Svalbard gear) our friends and us were out looking at the Aurora. In the mean time we re-crossed the Arctic Circle. While the Aurora was not as spectacular as in Svalbard and while my pictures are not *National Geographic* quality (These are time exposures on a moving boat), they will convey some idea of what we saw. The pictures below only hint at the colors.







Time to Renew Membership

A reminder that annual membership needs to be renewed each December. FPOA relies on the continued support of our members to pay the bills. At the present time we just break even during the year. Thus, your support is critically needed.

Also those that have Observer access (whether annual members or life members) also need to be renewed. Observer membership expires in December regardless of how late in the year you renew. Please renew now. It will ensure that you have the flexibility to use the FPOA area when you want to. Your observer privileges are also a critical part of our annual budget.

Renewals are easy. 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

If you send to the FPOA mailbox it may take as long as 4 weeks to process.

If you email has changed then please be sure to include that in either the PayPal payment as a comment or slip me a note with your check.

Thanks again for helping make the skies available to the public.

Also in addition to your financial support it is equally important to have the support of volunteers. The changes to SBQ discussed elsewhere in this edition are solely due to the reduced number of people volunteering to help.

Rob Hawley

Membership Input Requested on Proposed Star-B-Que Changes

The board of the Fremont Peak Observatory Association (FPOA) is sending to you this article to ask for your input regarding the annual FPOA/AANC Star-B-Que (event). In the past few years the event has grown tremendously both in the number of activities and the overall size of the event. Also, the Star-B-Que has been opened to the public in an attempt to attract new interest in the FPOA. Our efforts to attract new interest in the FPOA have been only marginally effective. Moreover, the overall workload for the event has increased tremendously with a smaller and smaller number of FPOA personnel helping with the workload.

As such, the FPOA board IS CONSIDERING making the following proposed changes to the event in order to keep the workload to a reasonable level. The Star-B-Que and the Member Appreciation Night will be combined into one event and called FPOA Member Appreciation Night. The activities of the event not part of a normal public program will be open only to FPOA members, guests, and AANC participates. There will be no advertising of the event other than a notice in the FPOA newsletter and a message on the FPOA phone message. The biggest change is to do away with the potluck dinner, and instead inform attendees that they should bring their own food to the event, and that all attendees are expected to clean up their areas. All other aspects of the Star-B-Que will be retained (i.e. annual FPOA membership meeting & election of board members, kid's events, raffle, and trivia quiz). Relative to the raffle, the size of the raffle will be reduced in both quantity and type of prize. The public program, including the guest speaker, will begin following the annual FPOA membership meeting. The unofficial start of the event will begin approximately 5:00 PM, and the public program & guest speaker will begin at 8:00 PM.

These changes will eliminate the 1 ½ to 2 hours cleanup of the picnic area, the hours necessary to set up for the event, and allow the FPOA board members to be part of the event rather than working through the entire event and not participating. We understand that this proposal is quite radical in nature and significantly changes a long-standing tradition of the FPOA.

However, given the current limited pool of volunteers we cannot maintain an event as it has been run recently. The only two (2) viable alternatives are to

to greatly increase the number of people helping to run the event or to scale the event to the number of volunteers. Therefore, before we officially vote to implement these changes, we are asking for your input, questions, and comments so that we can proceed consistent with the desires of the FPOA membership. Your input can be sent via E-mail to info@fpoa.net or contacting any board member. Thank you.

Dwarf Planets, Plutoids & Ridiculousness (Update)

By Pat Donnelly

(This article is a reprint with some additional information.)

My favorite saying from the last five (5) years is, "A dwarf planet is a celestial object, which is not a planet..." WOW, how's that for a contradiction? Using this logic a dwarf star is a celestial object, which is not a star. I bring this to your attention because this statement accurately illustrates the ridiculousness and the convoluted logic used in the Pluto controversy. What should have been stated is – "Pluto is a planet of a different type than Earth or Saturn." Moreover, Earth is a different type of type of planet than Saturn. As it stands at the present (October 2014) Pluto is designated as a Dwarf Planet, which is the third type of planet in our solar system. The other two (2) types of planets are gas giants and rocky terrestrials.

Having established the planetary nature of Pluto, those, who say Pluto has been demoted, are not correct. If anything Pluto has been promoted. Because of Pluto a new type of planet, dwarf planet, has been established, and Pluto is the first dwarf planet. The latest research indicates that Pluto is the largest of the dwarf planets. The size of Eris has been refined and now appears to be slightly smaller than Pluto. Pluto has five (5) moons, and the largest moon is almost the same size as Pluto. In many astronomical publications both Pluto and Ceres are listed with the other eight (8) planets, which is something of a promotion. Finally, Pluto has an entire class of celestial objects named after it. All dwarf planets orbiting beyond the orbit of Neptune are considered "Plutoids." There are four known Plutoids, Pluto, Eris, Makemake, and Haumea and a list of up to 70 more potential candidates. If one wishes to consider Pluto as not special any more, the facts about Pluto would seem to suggest otherwise.

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Dwarf Planets, Plutoids & Ridiculousness

Right now Pluto is hiding up in the constellation of Sagittarius, embedded within the background of the Milky Way. I say hiding because finding a +14.1 magnitude object against the background of the Milky Way would be extremely difficult. I estimate that a good 12" or larger telescope at high power may be necessary to find Pluto.

Now that the New Horizons spacecraft has passed Pluto and Charon this article is that much more important. If one has seen the picture of the Pluto/Charon System, one would conclude that this looks very much like a double dwarf planet. With Charon about the same size as Ceres, and with the center of mass of the system outside of Pluto, how much more special can an astronomical body be. This is truly something unique in our solar system.

2016 Membership Renewal

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FPOA on the Internet

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Members Only Page: members.fpoa.net
Members List Signup: <http://fpoa.net/mailman/listinfo/fpoa-members>

EMAIL DELIVERY OF THE OBSERVER

Dear FPOA Members,
 We have been delivering the Observer via email for the past several years. This obviously saves the Association postal expenses, and assures the quickest delivery to you. However, several of you no longer have valid email addresses, due to ISP changes, moves, etc. If you would like to continue to receive, or begin to receive, notification of the Observer via email, please send your current 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.