



Vol. 66, No. 04 – April 2018

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***** Note: SFAA Membership Process Has Changed! *****

Starting immediately, current SFAA members can create a login account to the SFAA website to edit personal profile information, view membership status, and renew membership. Members will need the email address that was used to join SFAA as the login username, and members will need to create a password the first time they login.

Instead of staggered June 30 and December 31 renewal dates that were used in the past, memberships will expire one year from the member's join or renewal date.

An auto-renewal process is also in the works to make annual renewals easier and effortless.

The process to join SFAA will also change slightly with new members prompted for their personal profile information in addition to payment details.

In the next few weeks, look for an email that will include your profile information, email address/login, and membership status.

01. SFAA PRESIDENT'S NOTE | MT. TAM PUBLIC NIGHTS

Early last month, I had the opportunity to speak with Tinka Ross, organizer with Friends of Mount Tam, of the astronomy lectures presented at the Mountain Theater every year from April to October. For many years, SFAA has partnered with the Mount Tamalpais State Park and Friends of Mount Tam, to provide this service to the public.

Over lunch, Tinka introduced me to the early history of the program, including stories of running into SF Sidewalk Astronomers while hiking on Mount Tam. The Sidewalk Astronomers, she said, "were very much into seeing stars with all kinds of visual aids, astronomical as well as herbal". Unfortunately, the park rangers frowned on these herbal aids and the Sidewalk Astronomers were often asked to leave the mountain.

Eventually, though, SFAA, another group of astronomers, started holding star parties on Mt. Tam with the park service's blessing. This led to the creation of a public outreach event combining Friends of Mount Tam's love of the mountain, with SFAA's love of sharing the skies.

This month, this joint public event will begin its 30th year, with a lecture by Alex Filippenko, Professor of Astronomy at UC Berkeley, on the subject of multi-universes: is our universe one of many universes? I bet that would be a very trippy subject for early San Francisco astronomers to ponder!

Please join us on the mountain and enjoy a night of intellectual stimulus and beautiful views of the mountain and the night sky.

Clear skies,

P.J. Cabrera
President, SFAA

SFAA Board Officers and Directors:

President	P.J. Cabrera	president@sfaa-astronomy.org
Vice President	Liz Triggs	vice-president@sfaa-astronomy.org
Treasurer	Scott Miller	treasurer@sfaa-astronomy.org
Secretary	Anthony Barreiro	secretary@sfaa-astronomy.org
Directors:	Matthew Jones, Tom Kellogg, Brian Kruse, Jessica Miller, Will Silberman, and Douglas Smith	

02. ASTRONOMY EVENTS



SAN FRANCISCO AMATEUR ASTRONOMERS EVENTS MARCH 17, 2017 – MAY 24, 2018

Details at: <http://www.sfaa-astronomy.org>

Saturday, April 14, 7:30 pm – 2:00 am
Mt. Tam Members Night

Tuesday, April 17, 7:30 pm – 9:15 pm
Meeting and Lecture, Presidio Observation Post

Saturday, April 21, 7:30 pm – 11:00 pm
Mt. Tam Public Star Party

Sunday, April 22, 7:00 pm – 10:00 pm
City Star Party, Presidio Parade Ground

Saturday, May 12, 7:30 pm – 2:00 am
Mt. Tam Members Night

Tuesday, May 15, 7:30 pm – 9:15 pm
Meeting and Lecture, Presidio Observation Post

Saturday, May 19, 7:30 pm – 11:00 pm
Mt. Tam Public Star Party

Sunday, May 24, 7:30 pm – 10:30 pm
City Star Party, Pier 17 Embarcadero

Saturday, June 9, 8:30 pm – 2:00 am
Mt. Tam Members Night

Tuesday, June 14, 7:30 pm – 9:15 pm
Meeting and Lecture, *new venue* Randall Museum

Saturday, June 16, 8:30 pm – 11:00 pm
Mt. Tam Public Star Party

Sunday, June 21, 8:00 pm – 11:00 pm
City Star Party, Presidio

BAY AREA ASTRONOMY EVENTS

Each month, long-time SFAA member Kenneth Lum assembles and sends out a list of Bay Area Astronomy events.

As each month unfolds, check the following link for information regarding additional events:

<http://tech.groups.yahoo.com/group/bayastro/?v=1&t=directory&ch=web&pub=groups&sec=dir&slk=94>

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**GET REAL, LIVE HELP
WITH YOUR TELESCOPE!**

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Are you a new telescope owner?

Or perhaps you could use some help with alignment, collimation or other adjustments?

Collimating a reflector, like playing guitar or dancing the tango, can, with great effort, be learned from reading, but it is much easier and more enjoyable to learn hands-on from somebody who already knows how to do it.

Bring your telescope to a Star Party – we'll be happy to help!

03.

SFAA NEEDS YOU: VOLUNTEER OPPORTUNITIES | ANTHONY BARREIRO AND PJ CABRERA

Volunteer Opportunities In April and May

Our Mount Tamalpais members nights, city star parties, and general meetings and lectures continue every month. Friends of Mount Tam will begin their monthly public astronomy program, which runs from April through October. In addition to our lectures and star parties, SFAA often partners with schools, museums, and other community organizations to offer astronomy-related outreach activities. We depend on our members to provide people of all ages a first-hand experience of the wonders of the universe. Outreach activities are often centered around telescope observing, but there are many ways to teach people about astronomy, and there are always roles for members at all levels of expertise, including beginners, whether or not you bring a telescope. Here are some upcoming outreach opportunities. Please help out as you're able.

The California Academy of Sciences is looking for help with the following activities. In addition to volunteers willing to help out, SFAA also needs a coordinator for each event. A coordinator needs to make a firm commitment to attending the event and will need to do some advance planning and coordination with Academy staff and other SFAA volunteers. If you're interested in helping with one or more of these events, either as a coordinator or as a volunteer, please send an email to volunteer@sfaa-astronomy.org.

Future of Space NightLife – Thursday April 19, 6 pm to 10 pm

Astronomy Day - Saturday April 21, 9 am to 4 pm

City Star Parties --

Sunday April 22, 7:00 pm to 10:00 pm, Presidio Main Parade Ground.

Sunday May 24, 7:30 pm to 10:00 pm, Pier 17, Embarcadero.

Public outreach in the sidewalk astronomy tradition, in the darker corners of San Francisco. We tend to get more visitors at Presidio star parties, because the Presidio promotes them. If you're planning to attend, please send an email to volunteer@sfaa-astronomy.org.

Mount Tamalpais Member Nights --

Saturday April 14, arrive before 7:30 pm

Saturday May 12, arrive before 7:30 pm

Please be aware that the gate is closed at sunset and the rangers have started issuing citations to SFAA members who try to drive in after sunset. Member nights provide a relaxed opportunity to meet other members, check out their telescopes, and observe from a relatively dark location.

We need a couple of contact people for April, and another couple of contact people for May. If you've been to at least a few Mt. Tam member nights and you're willing to serve as a contact person for one of these events, or if you want more information about the responsibilities of a contact person, please email volunteer@sfaa-astronomy.org

SFAA NEEDS YOU: VOLUNTEER OPPORTUNITIES (CONTINUED)

Mount Tamalpais Public Nights --

Saturday April 21, arrive before 7:30 pm

Saturday May 19, arrive before 7:30 pm

Friends of Mount Tam, in coordination with Wonderfest and SFAA, holds a public lecture and star party on Mount Tam every month from April to October. This year, new park regulations regarding arriving before sunset are in effect for public night visitors. As part of these new regulations, we are required to make sure all visitors are off the mountain by 11 pm.

We need many member telescope operators present at these events. Because of these time requirements, we will have a limited time for public viewing, so with more telescopes, we will have shorter lines, visitors will have more varied views of the night sky, which will result in happier visitors. Please consider joining us as a telescope operator on these nights.

Besides members with telescopes, we also need a couple of contact people/parking attendants for April, and another couple of contact people/parking attendants for May. If you're willing to serve for one of these events, or if you want more information about the responsibilities of a contact person/parking attendant for Mt. Tam public star parties, please email volunteer@sfaa-astronomy.org

Maker Faire 2018 - May 18-20

SFAA will be presenting Dobsonian Telescope Making and Solar Viewing at a booth at Maker Faire this year. If anyone is interested in volunteering working at the booth on some of those dates, you may email dsmith@201design.com for more details.

Snack Volunteers Needed

SFAA also needs members to volunteer to bring **light refreshments** to our monthly **meetings and lectures** at the Presidio Officers Club, on the **Third Tuesday of Each Month**. Refreshments help to create a welcoming, sociable atmosphere for members and guests. If a few members each bring something, there's less burden on any one member, and we'll have a good variety of snacks and beverages. You may donate snack items or simply provide receipts to be reimbursed for your expenses, and your fellow members will be grateful to you! If you can bring refreshments, please send an email to Linda Mahan, speakerchair@sfaa-astronomy.org

Let Linda know which month or months you can help with, and what you would like to bring.

Ongoing Opportunities to Participate in our SFAA Club

SFAA is also looking for volunteers to help in these areas:

- **Marketing** – we can use help posting SFAA event updates to SFGate, SF FunCheap, Eventful, Bay Area Science, etc.
- **Above The Fog** – submit an occasional article, astrophoto and/or serve as a member of the editorial team.

Please send an email to volunteer@sfaa-astronomy.org if you're interested.

On behalf of the board of directors and your fellow SFAA members, thank you for your willingness to help out!

04.

2018 YOSEMITE STAR PARTY: AUGUST 3-4

Come join us for our members-only yearly star part at Glacier Point in Yosemite. Members can sign up to join us for a couple days of camping, fun, and astronomy.

If you would like to join us at our group campsite provided by the park service, please email yosemite2018@sfaa-astronomy.org with your name, if you'll be bringing any family members and whether you have a telescope or not. Priority will be given to those with telescopes.

Anyone can join us at Glacier Point on those nights to view through our scopes and get a tour of our skies in a dark, beautiful area.



Photo by John Belew

How to Sign Up:

To signup, send an email to yosemite2018@sfaa-astronomy.org. Be sure to put "Yosemite Sign Up" in the subject line to reserve your campsite.

Sign up soon – It's filling up fast!

Remember, the trip is available to MEMBERS ONLY

Since this is a Public Viewing Event that the SFAA attends as guests of the National Parks, *all campers are expected to bring a telescope and be willing to host public viewing.* The club aims to bring one telescope for every two SFAA members attending.

2018 YOSEMITE STAR PARTY: AUGUST 3-4 (CONTINUED)

About the Trip

The SFAA is provided with FREE admission to Yosemite National Park as well as FREE reserved, shared campgrounds at Bridalveil Group Campground.

The campsite is 8.5 miles away from Glacier Point.

We will host two public star parties at Glacier Point, on Friday and Saturday night. We have the public (about 200 – 300 people) from twilight for a few hours, and then the rest of the night (and all day) to ourselves; this is a mighty good deal, considering how some folks come 12,000 miles to see these rocks. The National Park Service limits astronomy clubs to a maximum of 30 SFAA campers. Please do not ask if your friends can come ...unless they are SFAA members and have telescopes.

Observing site at Glacier Point

The observing area is mostly open, with incredible views from about NNW to the east, around to due south. The horizon from south around to the west is partly blocked by tall trees. Still, there is a lot of open sky, and typically, the seeing and transparency are excellent. It has warm temperatures of 70 to 90 during the day, and cool to chilly 40's at night, due to the elevation of 7200 feet.

Star Party

One of the rangers does a sunset talk, and then delivers the crowd to us. Following that, a member of the club will give an evening talk, (want to volunteer?) The public will have white flashlights, and we need to be tolerant of that. We will have 3 club members with red brake light tape to politely cover the offending flashlights. Expect many questions from the public.

Be sure to be familiar with SFAA's [Star Party Etiquette](#).

The Reward

By around 9:30 or so, we will have the place to ourselves, and can stay until dawn if you so choose. Scopes must be removed when we quit, then set up again on Saturday. Some of us may set up sun scopes during the afternoon, show Half Dome festooned with rock climbers, and invite people to come back again after sunset.

Gastronomic Astronomic

Early Saturday eve is the traditional potluck meal and is always tons of fun. Please provide enough food for ~ say 3 or 4 people. Salads, main courses, pu pu's and desserts are all welcome. The question is: Who will have the best astronomical gastronomic theme of incredible edibles this year? Remember the Brown Dwarfs? Prizes will be awarded! Please remember this repast takes time. It's better to start our own gastronomic party early so that there's no need to rush for set up Saturday evening on Glacier Point.

Check the [National Weather Service](#) for up-to-date weather info on Yosemite Park current weather and conditions.

See you at the campsite.

Dave Frey and Douglas Smith, SFAA Onsite Coordinators

06. SFAA LECTURE SCHEDULE 2018

APRIL 17TH LECTURE | “ARE RED DWARF PLANETS HABITABLE?”

THE PRESIDIO . OBSERVATION POST, BUILDING 211

211 Lincoln Boulevard, San Francisco

7:00 pm Doors Open & Light Refreshments | 7:30 pm Club Announcements | 7:45 pm

Speaker

SFAA'S GENERAL MEETINGS OCCUR ON THE 3RD TUESDAY OF EACH MONTH

“ARE RED DWARF PLANETS HABITABLE?”



GIBOR BASRI, PH.D., UNIVERSITY OF CALIFORNIA, BERKELEY, CO-INVESTIGATOR ON THE KEPLER MISSION

Most of the news about exoplanets this past year has revolved around the discovery of “Earth-sized” planets in the “habitable zone” of “red dwarf” stars. This is partly due to the fact that such planets are more easily found, partly because most stars are red dwarfs (cooler and smaller than the Sun), and partly because smaller stars apparently tend to have smaller planets. Basri will talk about these discoveries, give a background on red dwarfs, and concentrate on the current thinking about whether a planet around 2027, a red dwarf, could in fact actually harbor life. This question is still a very

active one; 15 years ago most astronomers would have just answered “no”. He will explain why, and how our thinking is evolving.

Brief Bio

Gibor Basri received a BSc in Physics from Stanford, and a PhD in Astrophysics from Univ. of Colorado. An award of a Chancellor’s Postdoctoral Fellowship brought him to UC Berkeley in 1982 and a full professorship in 1994. He originally worked on high energy observations of stellar activity, and newly forming stars, and later became an early pioneer and world expert in the study of brown dwarf planets. He is a Co-investigator on the Kepler mission, and serves on the Board of the Chabot Space and Science Center.

07. UPCOMING SFAA LECTURES 2018

THE PRESIDIO . OBSERVATION POST, BUILDING 211

211 Lincoln Boulevard, San Francisco

7:00 pm Doors Open & Light Refreshments | 7:30 pm Club Announcements | 7:45 pm

Speaker

SFAA'S GENERAL MEETINGS OCCUR ON THE 3RD TUESDAY OF EACH MONTH

MAY 15TH | MATTHEW TISCARENO, PLANETARY SCIENTIST, SETI



“CASSINI’S SPECTACULAR FINAL YEAR AT SATURN”

With its 13-year mission at Saturn now complete, Cassini takes its place as the most spectacularly successful interplanetary mission in the history of NASA. In its final 10 months (from December 2016 to September 2017), Cassini has transformed itself into a whole new mission with its Grand Finale, including 20 close flybys off the outer edge of Saturn’s rings and 22 passes between the rings and the cloud-tops of the planet, culminating into a final plunge into the depths of Saturn. The detailed new data obtained during these maneuvers has brought Saturn’s rings, its clouds, its small inner moons, and more, into sharper focus than ever before. In this lecture, Cassini rings scientist Matthew Tiscareno will review the rich harvest of the Cassini mission.

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*** Fun Links For Your Night Sky Viewing ***

SPOT THE STATION: see the International Space Station! As the third brightest object in the sky the space station is easy to see if you know when to look up.

Sighting Opportunities

Sighting Opportunities. Find your next opportunity for spotting the station.

Subscribe to Spot The Station Alerts

Subscribe to email or text notifications and get alerts when the space station will be passing overhead in your area

IRIDIUM FLARES: Most Iridium satellites are still controlled, so their flares can be predicted. The Iridium communication satellites have a peculiar shape with three polished door-sized antennas, 120° apart and at 40° angles with the main bus. The forward antenna faces the direction the satellite is traveling. Occasionally, an antenna reflects sunlight directly down at Earth, creating a predictable and quickly moving illuminated spot on the surface below of about 10 km (6.2 mi) diameter. To an observer this looks like a bright flash, or flare in the sky, with a duration of a few seconds.

Iridium Flares Sighting Schedule, courtesy of Heavens Above



Application for New or Renewing Membership

1. Memberships, with dues payment, are for one year running from the member's join or renewal date.
2. New or renewal memberships sent in via USPS mail will have membership start date based on postmark date.
3. SFAA is a 501(c)(3) nonprofit organization. Membership dues are tax-deductible, as allowed by law.

This application is for:

New

Renewing

Name: _____

Address: _____

Email: _____

Contact phone (optional): _____

Membership Type: Individual \$25.00 Family \$30.00 Student \$10.00
 Supporting \$75.00 Institutional \$40.00
(All dues tax-deductible as allowed by law.)

Please mail to me a Mt. Tamalpais Parking Permit (1 per membership)

To complete the membership process:

- A. Print and fill out this form
- B. Make check or money order payable to San Francisco Amateur Astronomers
- C. Mail this form and payment to:

Treasurer, SFAA
PO Box 15097
San Francisco, CA 94115

Both new and renewing members will receive a verifying email from the SFAA upon completion of the membership process.