

★ ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

Vol. 61, No. 10 - July 2013

GENERAL MEETING – OCTOBER 16, 2013

Randall Museum . 199 Museum Way . San Francisco

7:00 pm Doors Open . 7:30 pm Announcements . 8:00 pm Speaker

SFAA's General Meetings occur on the 3rd Wednesday of each month (except January)

The Birth of Star Clusters

a presentation by

Steven Stahler, UC Berkeley



In the Milky Way groups of stars range from sparse collections of only a few dozen stars, to massive globular clusters with a million members. Dr. Stahler will explain the basic reason why Nature forms stars in groups and why different regions of space create such vastly different entities. This talk will outline a new and comprehensive theory for the origin of star clusters based on observations, not only of the clusters themselves, but also of the diffuse gas clouds that create all stars.

Steven Stahler is an astrophysicist at the University of California, Berkeley. Raised in Maryland, he attended graduate school at Berkeley in physics. He was a professor at MIT before returning to the Bay Area in

*1992. His research centers on the problem of star formation, which he has attacked from many different perspectives. He is the author, along with Francesco Palla, of *The Formation of Stars* (Wiley, 2004), the first comprehensive text in this field. Steve especially enjoys the esthetic aspect of his research, which he tries to convey in his public talks and articles. Not coincidentally, he is also an accomplished artist.*

PRESIDENT'S MESSAGE

Greetings SFAA'ers,

In case you didn't check out the September edition of Above the Fog, I want to make a special mention of Anthony Barreiro's article on staying warm while observing at night. Thanks to Anthony for contributing to our newsletter and passing along his advice. He covered most of the tricks that my husband Doug and I have picked up over the years, plus some. Annette, our newsletter editor and I welcome and encourage our members to share knowledge. Bridging the gap between beginners and non-beginners is an important function for an astronomy club.

Thanks to those of you who responded to our member survey as well. Sunil is still working on his Google-style analysis of the results for us, but reading through the results in rough form I noticed many requests for facilitation in socializing. If you notice an increase in announcements for member socials or request for help with them, see members putting out nametags or setting up "ice-breaker" events, it's likely because of the survey feedback.

My housekeeping-of-the month item is to pass along a set of club guidelines for star party etiquette. If you attend our star parties, please read through them. Most amateur astronomy clubs have their own sets of etiquette, and our club's seemed to have become buried somewhere over the years. Our guidelines were crafted and approved by the Board this year. In some cases I find them to read like a garden-variety astronomy club rules and in other cases I find them to be slightly more relaxed, leaning towards a social atmosphere. The guidelines are a living document that can be updated periodically so that we can keep them relevant and improve upon them. Please feel free to give me your feedback if there are guidelines that just are not realistic, do not sound sensible for some reason, and especially if there are items of safety that you think should be added (sfaapresident@gmail.com).

On the skywatching front, as we head towards Thanksgiving we'll be on watch for activity with comet ISON. You may see updates from Board Member Paul over the next couple of months.

On a personal note, if this month's Above the Fog is issued late, after our General Meeting, blame me. I'm now a first time mom with a newborn, and I am so sleep deprived I can barely remember which of my portable devices has my productivity software with my schedule and to-do list. While amateur astronomy has given me practice in staying up late observing, sleeping during the day, the new baby doesn't let me rest up during Full Moon.

Wishing you beautiful winter skies while staying warm!

ANGIE TRAEGER
President
San Francisco Amateur Astronomers
2013

IMPORTANT DATES & UPCOMING SFAA VIEWING EVENTS

SFAA GENERAL MEETINGS & LECTURES

Randall Museum, 199 Museum Way (Near 14th Street and Roosevelt)

Third Wednesday of each month: 7:00 p.m. Doors open. 7:30 p.m. Announcements. 8:00 p.m. Speaker

SFAA BOARD MEETINGS IMMEDIATELY PRECEDE GENERAL MEETINGS AND BEGIN AT 6:00 P.M.

October 16, November 20, December 18

CITY STAR PARTY

http://www.sfaa-astronomy.org/star_parties/city/

MT TAM SPECIAL USE PERMIT STAR PARTIES MEMBERS ONLY

SPECIAL USE PERMIT observing nights on Mount Tamalpais are private, open *only* to SFAA members. Please arrive by sunset. SFAA/Mt. Tam permit required for each car.

We must vacate the mountain by 2:00 a.m. except on specially approved nights (such as Messier Marathon).

ALWAYS ON A SATURDAY

August 31, **October 26 (changed from October 5)**, November 2, November 30

MT TAM PUBLIC STAR PARTIES (April through October)

Public nights on Mount Tamalpais start with a lecture in the Mountain Theatre followed by public viewing in the Rock Springs parking lot.

SFAA members may view privately after crowd departs from approx. 11 pm-2 am.

For more information: <http://www.sfaa-astronomy.org/starparties/>

Aug 10, Sept 7 and Oct 12

UPCOMING LECTURES

November 18 - THE DIVERSITY OF HABITABLE ZONES AND THEIR PLANETS STEPHEN KANE



The field of exoplanets has rapidly expanded from the exclusivity of exoplanet detection to include exoplanet characterization. A key step towards this characterization is the determination of which planets occupy the Habitable Zone (HZ) of their host stars. Thanks to increasing orbital period and mass/size sensitivity of both radial velocity and Kepler data, many exoplanets are now known pass through or remain in the HZ, some of which are terrestrial in nature. In this talk I will describe the properties of the HZ, the dependence on the spectral type, and the time dependence that results from binary star systems. I will describe the diversity of exoplanets which are known to occupy the HZ of their stars, including planets in highly eccentric orbits, super-Earths, and potential analogs to the planet Venus.

Dr. Stephen R. Kane is an astrophysicist and professor at San Francisco State University. His interests lie primarily in the area of extra-solar planet detection and characterization, a topic in which he has more than 140 refereed journal publications. Originally from Australia, he graduated with a Bachelor of Science (Honours) from Macquarie University, Sydney in 1995. His postgraduate studies were undertaken at the Space Telescope Science Institute in Baltimore, USA and he received his Doctorate of Philosophy from the University of Tasmania in 2000. He has over 18 years of experience in the field of exoplanets and is proficient with many different approaches to the detection of exoplanets. He is the Principle Investigator of numerous exoplanet-related projects, including a photometric survey of known planet-hosting stars to search for transit signatures called TERMS (Transit Ephemeris Refinement and Monitoring Survey). He is the creator and maintainer of the Habitable Zone Gallery (www.hzgallery.org) which tracks Keplerian planetary orbits and provides habitable zone information for known exosystems

December 18 – NuSTAR’S EXTREME UNIVERSE STEPHEN KANE



NuSTAR is NASA’s newest eye on the X-ray sky, focusing X-rays at higher energies than the Chandra X-ray Observatory. Since launch in June 2012, NuSTAR has been uncovering black holes hidden deep within gaseous galaxies, including studies of the black hole at the center of our own Milky Way. It has also mapped out elements from supernovae, revealing details of the processes that create the “starstuff” from which we are made. In this talk, Prof. Cominsky will explain the technological advances that made the NuSTAR mission possible, and will present several of its latest scientific discoveries.

Lynn Cominsky is the Chair of the Physics and Astronomy Department at Sonoma State University (SSU), where she has been on the faculty for over twenty years. She is an author on over 60 research papers in refereed journals, and the Principal Investigator on over \$12 million of grants to SSU. Prof. Cominsky is the founder and director of SSU’s Education and Public Outreach Group, which supports several different NASA high-energy astrophysics missions. The group excels at K-12 teacher training, curriculum development, and the development of interactive web activities for students that teach math and science. In the past, she has served as the scientific director for the PBS NOVA television program “Monster of the Milky Way” and accompanying planetarium show “Black Holes: The Other Side of Infinity.” In 1993, Prof. Cominsky was named SSU’s Outstanding Professor, and the California Professor of the Year by the Council for the Advancement and Support of Education. In 2007, she was named a Fellow of the California Council on Science and Technology, in 2009, a Fellow of the American Physical Society and in 2013, a Fellow of the American Association for the Advancement of Science.

REQUESTS FROM RANGER RYEN FOR OUR MT. TAM OBSERVING NIGHTS

Greetings Mt. Tam observers! During a meeting with Ranger Ryen and Tinka Ross, Ranger Ryen passed along a few requests for our membership. One of them was completely news to me (Item #2 below), but after his explanation it makes perfect sense.

1. Display your parking placard BEFORE the rangers stop by to inspect our dashboards. The rangers are supposed to issue citations if we don't display a parking pass, and when they chase us down to ask for the passes they are only trying to be friendly and do us a favor. If you happen to forget to display your pass and the ranger asks you to display it, do so quickly. Stop your conversation, equipment setup, etc. and head to your car to get your parking pass.

To assist the rangers in speeding up their checks, you may find board members walking around during our members-only nights to remind folks to display passes. We'll also check for passes at the orange cone line during the Public Nights. (If you need to get your pass updated see the instructions on this page: <http://www.sfaa-astronomy.org/membership/>)

2. Please don't drive around the half closed Pantoll Gate, where the exit is open and the entrance is closed. (Yep, this is news to me -- Doug and I used to drive through the exit all of the time!) While the gate is half closed, the rangers are in the process of closing the park. Driving around the gate technically is a violation of some sort and the rangers protocol is to perform a "traffic stop" on anyone doing so. This takes up the rangers' time and is unnecessary.

If you encounter the gate half closed, wait at the bottom of the hill until the ranger comes back to close and fully lock up the gate. You can then show your parking pass and enter. Best practice is to arrive at Rock Springs before sunset.

3. For the Mt. Tam Public Nights, it is helpful to put small dim red led markers or glowy tape on the base of telescopes, especially on tripod legs. Both Ranger Ryen and Tinka report that the public is sometimes nervous about approaching a telescope because they can't see where the telescope is. When looking at the ground there is no sky to silhouette the equipment, like there is for navigating around people or an eyepiece at night time. Placing little markers on the legs or bottoms of the scope helps the public avoid having to use bright red lights in order to get around.

Some helpful advice can be found on this page from the SF Sidewalk Astronomers: <http://www.sfsidewalkastronomers.org/index.php?page=organizing-a-public-star-party>, particularly a link to the glow-in-the-dark-tape. http://www.scopestuff.com/ss_glot.htm.

Board members are currently researching glowing marker products that the club could potentially provide and/or sell in small quantities to club members.

4. For the Mt. Tam Public Nights, Ranger Ryen and Tinka thought it would be very nice if we could wear glowing name badges or a glowing club logo pin of some sort, so that the public knows who the "owner" of a scope is. Sometimes as the telescope owner we stand amongst members of the public, and it makes it easier for the public to ask us a question if we stand out from the crowd.

Board members are researching glowing badges -- we want to make something available that is not *too* bright. Stay tuned for an evening demo of badge samples in July or August.

Thanks all!

S.F.A.A. Guidelines

S.F.A.A. General Star Party Etiquette_Mt. Tamalpais_Yosemite

Owner: SFAA Treasurer & Officers	Last Revision Date: 17 April 2013
Initial Approval & Effective Date: June 2013	Last Review/Approval Date: July 2013
Related Regulations:	Next Review Date: January 2016

Overview

This set of etiquette guidelines is designed to ensure harmonious interactions between S.F.A.A. members and others at various star party observing events as well as following established regulations of observing venues. The first section outlines general etiquette guidelines that should be followed at any event regardless of location. Etiquette for specific locations is listed later in this document. By following these simple Guidelines that acknowledge responsible and courteous behavior between members and the public and among members, these exceptional opportunities will be enhanced for everyone.

Please keep in mind that the public views any member of the S.F.A.A. as a representative of the S.F.A.A. and your behavior toward the public will be taken as officially sanctioned by and indicative of our organization. Consider that you are more than an individual with a telescope: you are perceived by the general public to be knowledgeable on astronomy, experienced in explaining matters with which the public is not familiar, and even though the term amateur is in our name, you are seen to be something of a mature professional in handling people and addressing their questions however stated. Also keep in mind that any member of the public that you may interact with may also be a future member of the S.F.A.A. and/or in the case of children and young adults, a future astronomer who may be influenced by their experience with you.

1. General Etiquette Guidelines

1.1. Designated Area

Please observe and follow venue established rules for observing areas including parking and arrival and departure times.

1.2. Arrival and Departure

Plan to arrive at least a half hour before sunset. This will allow plenty of time to set up while it is still light, allow your eyes to gradually become dark-adapted and get acquainted with your observing neighbors. If you arrive after dark the headlights of your vehicle will disrupt everyone's night vision which can take up to a half hour to regain. Use red lights. Ideally use a dim red light, letting your eyes dark adapt. If using a bright red light, especially a headlamp while breaking down equipment, do not point the light directly towards another observer, and be mindful of pointing it towards shiny materials where it might reflect towards another observer.

Upon departure please use every consideration regarding your vehicle's white lights, exterior and interior, so as to not disrupt others night vision.

The last people at the event should sweep the area with their flashlights to see if anyone accidentally dropped something important. If you find anything left behind, contact the club President the next day and then bring the item with you to the next meeting to be re-united with its owner.

1.3. Parking Your Vehicle A good idea is to back your vehicle in at the start of the evening so that when you leave, you can pull straight out and thereby minimize disruption and the dreaded headlights destruction of everyone's night vision. It will also make unloading and loading your equipment much easier.

1.4. Preserving Night Vision

Don't use white lights! Use red light. If for some reason you must use a white light, kindly inform your neighbors and give them a chance to close camera shutters and eyes. Each person should have a red flashlight for use at the site. It is easy to modify a regular flashlight by covering the lens with a red filter of various materials - automobile brake light repair tape works very well.

1.5. Workable Space between Observers

As you set up your telescope be sure to put it at least several yards away from your closest neighbor. Many people need room for star chart tables, chairs, power supplies, cables, etc.. If members of the public are present there may be long lines for a view at the eyepiece of everyone's telescope so having plenty of workable space between telescopes will be particularly important.

1.6. Laser Pointers

Please be extremely cautious when using a laser pointer or to align your telescope. Keep laser pointers upward and not horizontal. A misdirected beam of laser light can blind by causing retina damage. When showing constellations or objects in the sky make sure to keep the beam away from any aircraft as the range of the laser is far more than you may realize.

1.7. Smoking

While attending observing events where smoking is permitted please smoke downwind of other observers or smoke far away from the observing area. It is far easier for a smoker to re-locate him or herself, than it is for an observer to pick up equipment to re-locate in order to avoid the smoke. If you are smoking please ask folks nearby if your smoke is bothering them. If you are a non-smoker and/or are bothered by someone's smoke, don't be afraid to ask the smoker to re-locate. If smoking is not permitted be considerate enough to strictly observe the local rules.

1.8. Music

Please respect everyone's observing concentration and enjoy your music via headphones. What is music to your ears may be obnoxious and distracting noise to others. If you do wish to play music or the radio out loud check first with the entire observing group, and be prepared to turn it off if it becomes annoying to someone. Some people want to escape to the mountain to escape the drone of the city, to enjoy some peace and quiet.

1.9. Children

If you do bring a child make sure that he/she acts like an adult so as to not disturb or irritate observing neighbors. Do not allow them to run about the observing area as this is not a playground. Children should always be supervised to insure they do not run into or trip over astronomical gear, hurting themselves and/or others. Close supervision of children will help ensure you do not wind up paying to replace some expensive equipment or deal with personal injury.

1.10. Pets

For events where dogs are permitted, keep them away from equipment. For the sake of your dog, please also keep leashes short as they are difficult to see in the dark and folks may accidentally get caught up walking through the leash.

1.11. Ask before Touching

Never touch anyone else's equipment without permission and never touch any glass optical surface. Some astronomers may be adjusting their equipment or doing delicate astrophotography. But, don't be afraid to ask if you can view what they are observing or any questions you may have about their equipment. On the other hand, observers should be accommodating to other astronomer's or members of the public inquiries - a warm welcome and thoughtful responses to questions may stimulate a lifelong curiosity and enthusiasm toward astronomy. Also, please keep food and drinks away from equipment.

1.12. No Litter

Do not litter. Everything you bring to the event you must take with you when you leave. It may be helpful to bring your own trash bag to properly store your waste to dispose of at home.

1.13. Emergencies

Any emergency, such as a medical condition, should be immediately reported via 911 and subsequently to the S.F.A.A. event leader or designated authority.

1.14. Local Rules and Regulations

Honor facility rules. At any SFAA event, abide by rules established for the location. For example, smoking, alcohol, or pets may be prohibited. Not following the facility rules puts us at risk for not being able to use the location.

2. Mt. Tamalpais State Park / Rock Springs Parking Lot

2.1. Designated Area

Our Special Use Permit (S.U.P.) is specific to the Rock Springs parking lot located at the intersection of Ridgecrest Boulevard and Pantoll Road. For public star parties our area of telescope set-up is the western half of the parking lot defined approximately by the wooden Rock Springs parking lot sign on the east, to the end of the lot on the west. On public nights the Friends of Mt. Tam will set up safety cones to help identify our area of operation. For members only parties we have access to the entire lot but typically set up in the same area as the public nights.

On either public or members only nights, upon arrival you must display your current year California State Parks (C.S.P.) Parking Pass on the dashboard of your vehicle. This pass distinguishes you from the public attendees as a current member of the S.F.A.A. and covered under our S.U.P. By not displaying the permit you may be subject to a fine by Park Rangers for unauthorized presence in the Park after closing hours.

2.2. Arrival and Departure

Plan to arrive at Rock Springs at least a half hour before sunset. This will allow plenty of time to set up while it is still light, allow your eyes to gradually become dark-adapted and get acquainted with your observing neighbors.

Every Mt. Tam event, public or members only, will have an assigned Designee (per the S.U.P.) who will be responsible for coordinating departures. At the beginning of the evening, the Designee will facilitate with attendees departure times structured on an on-the-hour basis (e.g. some combination of 11:00 PM, 12:00 AM, 1:00 AM, and if necessary the final 2:00 AM) so as to maintain the integrity of the gate lock combination; allow efficient and safe departures; give individual attendees the ability to allow plenty of take-down time for their equipment; ensure that no one is left behind a locked gate to which combination they do not know!

Upon departure please use every consideration regarding your vehicle's white lights, exterior and interior, so as to not disrupt others night vision.

2.3. Workable Space between Observers

Typically on Public nights there will be long lines for a view at the eyepiece of everyone's telescope so having plenty of workable space between telescopes will be particularly important.

2.4. Smoking

Our SUP stipulates no smoking. This stems from the safety issue of fire danger – we are in a heavily wooded and dry grassy park. In addition, it can be quite irritating to other observers and public in the entire area so the SFAA supports this rule and any member who lights up will be advised to put it out.

2.5. Pets

Our SUP stipulates that dogs will not be permitted in the park after closing hours which occurs at sunset.

2.6. Emergencies

All emergencies that occur shall be reported via land line telephone to Park Dispatch at: 1-866-227-4181 or 911. **If using a cell phone do not dial 911 – Dial 415-472-0911 for fast response.**

3. Yosemite National Park

3.1. General

The San Francisco Amateur Astronomers (S.F.A.A.), along with other amateur astronomy organizations, have obtained an Entrance Fee Waiver to Yosemite National Park in exchange for providing park visitors an interpretive program on astronomy offering observing opportunities through our telescopes, answering questions, giving explanations and, in general, offering an introduction to astronomy. In addition to the park visitor interpretive program, after midnight when the program for visitors ends, members are free to observe the night sky on their own and utilize the dark and dry skies available in Yosemite. This set of etiquette guidelines is intended to preserve the privilege of the entrance fee waiver for current and future members of the S.F.A.A. and ensure the ability of the club to offer members the extraordinary experience of night sky observing at Yosemite National Park.

3.2. Park and Camp Area Rules and Regulations

Please respect and follow any park campground rules with regard to pets, smoking, and quiet hours. Yosemite Park rules, along with these guidelines, will be distributed to attendees well in advance of the event.

In particular, be aware and follow rules for storing food away from bears.

Please clean up after yourself at the campground, being mindful to use bear-proof trash receptacles.

Quiet hours -- Keep in mind that some folks will take advantage of late-night observing at 7000ft, and may want to sleep in. If an observer stays up viewing through astronomical twilight at 4am, then packs up and heads back to camp, they'll need to sleep until 10am in order to get 5 hours of sleep. If you are a late night observer, keep in mind that many of the folks in the campground are not late-night observers -- this event is not as "hard core" as one like GSSP or CalStar. You may want to bring earplugs, an eye mask, or whatever will help you sleep late into the morning.

Camping, including sleeping in your vehicle, at the Glacier Point observing site is not permitted.

3.3. Observing and Outreach Area Guidelines

All vehicles must be moved to the parking lot immediately after unloading equipment at the observing site. This is a safety measure and a way to keep the public from parking in the observing area. We may begin to set-up our telescopes no earlier than 7:00 PM and no later than 8:30 PM.

Emergencies – Please follow park instructions to call for help in case of an emergency. Also notify club event organizers or Park Rangers if available of issues.

NIGHT SKY NETWORK

October 2013 - THE EVENING SKY

October Sky Map: <http://skymaps.com/skymaps/tesmn1310.pdf>

October Sky Calendar: <http://skymaps.com/articles/n1310.html>

BAY AREA ASTRONOMY EVENTS

Kenneth Lum

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

BAY AREA REGULARLY SCHEDULED EVENTS

<p>EVERY FRIDAY NIGHT 7:00 PM – 10:00 PM excluding major holidays</p> <p>The Telescope Makers' Workshop</p> <p>CHABOT SPACE AND SCIENCE CENTER 10000 Skyline Boulevard Oakland, CA 94619-2450</p>	<p>THE TELESCOPE MAKERS' WORKSHOP is held every Friday night from 7pm - 10pm, excluding major holidays (e.g. Christmas Day and New Year's Day) that fall on Fridays. The Workshop is always closed on Memorial Day Weekend. Attendance every Friday night is not mandatory, and members work at their own pace. The Workshop meets at Chabot Space & Science Center, 10000 Skyline Blvd., Oakland. Contact us for more specific details:</p> <p>Contact: E-mail Richard Ozer (rozer@pacbell.net) or (510) 406-1914</p>
<p>EVERY FRIDAY & SATURDAY EVENING, weather permitting 7:30 PM – 10:30 PM</p> <p>CHABOT SPACE AND SCIENCE CENTER 10000 Skyline Boulevard Oakland CA 94619-2450 (510) 336-7300</p>	<p>EXPLORE THE NIGHT SKIES AT THE CHABOT OBSERVATORIES For more information: http://www.chabotspace.org/</p> <p>Free Telescope Viewing Regular hours are every Friday & Saturday evening, weather permitting: 7:30pm -10:30pm Come for spectacular night sky viewing the best kept secret in the Bay Area and see the magnificence of our telescopes in action!</p> <p>Daytime Telescope Viewing On Saturday and Sunday afternoons come view the sun, moon, or Venus through Chabot's telescopes. Free with General Admission. (weather permitting)</p> <p>12pm - 5pm: Observatories Open</p>
<p>Sunset – 5:11 PM (TWICE MONTHLY)</p> <p>Inclement weather (clouds, excessive wind and showers) will cause the event to be canceled without notice.</p> <p>SAN MATEO COUNTY ASTRONOMICAL SOCIETY STAR PARTY</p>	<p>STAR PARTIES AT CRESTVIEW PARK, SAN CARLOS</p> <p>Come out and bring the kids for a mind expanding look at the universe</p> <p>The City of San Carlos Parks and Recreation Department and the San Mateo County Astronomical Society has open Star Parties twice a month. These events are held in Crestview Park, San Carlos California. Note that inclement weather (clouds, excessive wind and showers) will cause the event to be canceled without notice.</p> <p>For more information call Bob Black, (650)592-2166, or send an email to SMCAS@live.com or call Ed Pieret at (650)862-9602.</p> <p>Reasons to Attend If you have kids interested in space or planets bring them here for a real life view of planets, nebula, star clusters and galaxies. If you are thinking of buying a telescope or want help using a telescope you own, come here to talk with experienced users. If you think you might have an interest in astronomy come and talk to experienced amateur astronomers.</p> <p>Cautions Dress warmly and wear a hat. Visitors should park on the street and walk into the park so your headlights don't affect the observer's dark adaptation.</p>

	<p>Only park in the parking lot if you are arriving before dark and plan to stay until the end of the event. You shouldn't need lights but if you feel you do, only bring a small flashlight with the lens covered using red cellophane or red balloon.</p> <p>Please respect the telescopes and ask permission from the owner if you wish to touch.</p> <p>Parents, please watch your children.</p> <p>The park is residential, and adjacent to homes and backyards, please keep noise to a minimum.</p> <p>Schedule Time</p> <p>Astronomers arrive to set up at around sunset. Observing starts at about one hour after sunset and continues for two to three hours.</p>
<p>EVERY CLEAR SATURDAY MORNING OBSERVATORY 10:00 AM – 12:00 PM</p> <p>FOOTHILL COMMUNITY COLLEGE 12345 Moody Road Los Altos Hills</p> <p>Cost: Free</p>	<p>Solar observing with a Hydrogen alpha solar telescope every clear Saturday morning. This allows spectacular views of solar prominences and unusual surface features on the Sun not otherwise visible with regular white light telescopes.</p> <p>Admission is free.</p> <p>Foothill Observatory is located on the campus of Foothill College in Los Altos Hills, CA. Take Highway 280 to the El Monte Rd. exit. The observatory is next to parking lot 4. Parking at the college requires visitor parking permits that are available from the machines in the parking lots for \$ 3.00.</p>
<p>EVERY CLEAR FRIDAY EVENING 9:00 PM – 11:00 PM</p> <p>FOOTHILL COMMUNITY COLLEGE OBSERVATORY 12345 Moody Road Los Altos Hills</p> <p>Cost: Free</p>	<p>Foothill Observatory is open for public viewing every clear Friday evening from 9:00 p.m. until 11:00 p.m. Visitors can view the wonders of the universe through the observatory's computer-controlled 16-inch Schmidt-Cassegrain telescope. Views of objects in our solar system may include craters and mountains on the moon, the moons and cloud-bands of Jupiter, the rings of Saturn, etc. Deep space objects including star clusters, nebulae, and distant galaxies also provide dramatic demonstrations of the vastness of the cosmos. The choice of targets for Any evening's viewing depends on the season and what objects are currently in the sky.</p> <p>The public viewing programs at Foothill are free of charge and are open to guests of all ages. Please note that the observatory is closed when the weather is cloudy. Also note that visitor parking permits are available from the machines in the parking lots for \$3.00.</p> <p>Come to Foothill Observatory and join us in the exploration of our Universe!</p> <p>Foothill Observatory is located on the campus of Foothill College in Los Altos Hills, CA. Take Highway 280 to the El Monte Rd exit. The observatory is next to parking lot 4. Parking at the college requires visitor parking permits that are available from the machines in the parking lots for \$3.00.</p>
<p>BAY AREA EVENTS – OCTOBER 2013</p> <p>http://tech.groups.yahoo.com/group/bayastro/?v=1&t=directory&ch=web&pub=groups&sec=dir&slk=94</p>	



**San Francisco Amateur Astronomers
Application for New or Renewing Membership**

1. Memberships, with dues payment, are for one year running from standard renewal dates of 1 July to 30 June and 1 January to 31 December.
2. Submitting appropriate dues in April, May, June, July, August, September, membership will run to 30 June of the next year.
3. Submitting appropriate dues in October, November, December, membership will run to 31 December of the next year; submitting appropriate dues in January, February or March, membership will run to 31 December of the same year.
4. Renewals are maintained at the original membership date unless the renewal is made later than the original cutoff date (e.g. September or March as described in 3). In such cases the membership date is shifted to the next renewal date 30 June or 31 December.
5. New or renewal memberships sent in via USPS mail will have membership start date based on postmark date.

This application is for:

- New
 Renewing

Name: _____

Address: _____

Email: _____

Home Telephone (optional): _____

Cell Phone (optional): _____

Membership Type: Individual \$25.00 / Family \$30.00 / Student \$10.00 / Supporting \$75.00

Please mail to me a Mt. Tamalpais Parking Permit

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**

New members will be entered onto the SFAA roster on the Night Sky Network (NSN) and will receive a verifying email from the NSN with username and password for the NSN. Renewing members will have their information updated but will not receive an email from the NSN. Both new and renewing members will receive a verifying email from the SFAA Treasurer upon completion of the membership process.

2013 CLUB OFFICERS & CONTACTS

<i>President</i>	ANGIE TRAEGER	sfaapresident@sfaa-astronomy.org
<i>Vice President</i>	Matt Jones	vicepresident@sfaa-astronomy.org
<i>Secretary</i>	Douglas Smith	
<i>Treasurer</i>	Michael Patrick	treasurer1@sfaa-astronomy.org
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<i>City Star Party</i>		
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<i>Telescope Loans</i>	Anhil Chopra	telescopes@sfaa-astronomy.org
<i>Honorary Director and Board Member Emeritus</i>	John Dobson	
<i>Board Members</i>	Anhil Chopra Bob Haberman Sunil Nagaray Paul Salazar Mitchell Schoenbrun George Teiber	
<i>1st Alternate</i>	Suzanne Huang	
<i>2nd Alternate</i>	Joe Heavey	
<i>Webmaster</i>	Matthew Jones	

CLUB TELESCOPES

The SFAA owns eight very fine, easy to use, loaner telescopes well-suited for deep sky, planets, and star parties. All scopes are available to any SFAA member. The loaner custodians for the majority of our fleet are Pete & Sarah Goldie. Please contact them at telescopes@sfaa-astronomy.org for details if you are interested in borrowing a scope or if you have items you can donate for the loaner program (eyepieces, star maps/books, red flashlights, collimator, etc.). Please contact the appropriate member indicated below if you are interested in borrowing one of the telescopes.

- 1) 6" f/10.3 Dobsonian/Ken Frank ken@sfaa-astronomy.org
- 2) 8" f/7 Dobsonian/Pete Goldie
- 3) 8.5" f/6 Dobsonian/Pete Goldie
- 4) 10" f/8 Dobsonian/Pete Goldie
- 5) 114mm f/4 Newtonian StarBlast/Pete Goldie
- 6) 8" f/10 Celestron SCT/Annette Gabrielli/ annette@sfaa-astronomy.org
- 7) 8" f/10 Meade SCT/Stefanie Ulrey/treasurer@sfaa-astronomy.org
- 8) 9.5" f/5.6 Celestron Newtonian/Ken Frank/ ken@sfaa-astronomy.org

CLUB ASTRONOMY VIDEOS

The SFAA owns a series of astronomy videotapes featuring Alex Filippenko, a world-renowned professor of astronomy at UC Berkeley. The videotapes provide an introduction to astronomy and cover topics such as the Solar System, the lifecycles of stars, the nature of galaxies, and the birth of the Universe. The SFAA loans the tapes free to all members. If you are interested in viewing these tapes, you may check them out at any of the SFAA General Meetings. These tapes were kindly donated to the SFAA by Bert Katzung. For information on the course tapes themselves:

<http://www.teach12.com/ttc/assets/courseDescriptions/180.asp>

MEMBERSHIP DUES

Membership is billed for each upcoming year on June 30. Members may receive no more than one bulletin after the expiration of membership.

SFAA WEBSITE AND ONLINE SERVICES

The SFAA web site at sfaa-astronomy.org is provided to our members and the general public for the sharing of club information and services. The web site contains links for club [star parties](#), [events](#), [newsletters](#), [lectures](#) and [meetings](#). If you wish to interact with other people who are interested in astronomy, the SFAA web site offers public and members only [bulletin board forums](#). If you wish to remain up-to-date on club activities, then we encourage you to subscribe to one or both of our public [mailing lists](#), which will allow you to receive our newsletter and/or club announcements via email. Other useful and interesting information and services are available on the site such as [observing location reviews](#), member [astronomy photos](#), and [members only telescope loans](#). Information about SFAA's membership, organization and by-laws are available at the club's online public document [archive](#). If you need to contact a representative of the SFAA, then please visit our [contacts](#) page to help in finding the right person to answer your questions.

Above the Fog is the official bulletin of the San Francisco Amateur Astronomers. It is the forum in which club members may share their experiences, ideas, and observations. We encourage you to participate by submitting your articles, announcements, letters, photos and drawings. We would also like to hear from our new members. Tell us about yourself – what you have done in the past and what other clubs you have joined. **The deadline for the next issue is the 25th day of the month.** Send your articles to Editor@sfaa-astronomy.org

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Sharing the Wonders of the Universe

Has your membership expired? Your mailing label includes the month and year through which your membership is paid. If it is past, your membership has expired and this may be your last issue.