

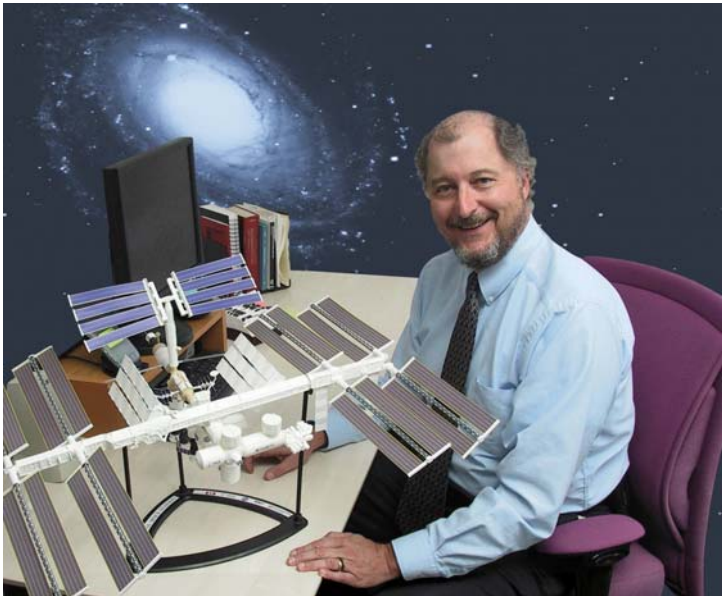
ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

Vol. 56, No. 4 – April 2008

April 16, 2008 – General Meeting
Randall Museum . 199 Museum Way . San Francisco
7:00 pm Doors Open . 7:30 pm Announcements . 8:00 pm Speaker

Dr. Nick Kanas, Professor of Psychiatry, UCSF
“Star Maps: History, Artistry and Cartography”



People have been observing and mapping the heavens since antiquity in an effort to understand their place in the universe. Dr. Nick Kanas, Professor of Psychiatry at UCSF, will trace the history of celestial cartography from the time of the classical Greeks through the Golden Age of pictorial celestial maps to modern day star atlases. He will illustrate his talk with photographs from antiquarian celestial books and prints taken from his recent book: "Star Maps: History, Artistry, and Cartography" (Springer, 2007)

Dr. Kanas is Professor of Psychiatry at the University of California, San Francisco, and he directs a NASA-funded research program on psychological issues affecting astronauts in space. He has been an amateur astronomer for over 50 years and a member of the San Francisco Amateur Astronomers since 1978. He also has collected antiquarian celestial maps, books, and prints for over 25 years, and he has given numerous talks and published articles on celestial cartography in magazines and journals such as Sky and Telescope, Mercury, and the Journal of the International Map Collectors' Society.

2008 CLUB OFFICERS & CONTACTS

<i>President</i>	DIRK LAMMERTS	president@sfaa-astronomy.org
<i>Vice President</i>	Stephanie Ulrey	vicepresident@sfaa-astronomy.org
<i>Secretary</i>	Barbara Arrighi	secretary1@sfaa-astronomy.org
<i>Treasurer</i>	Vivian White	treasurer1@sfaa-astronomy.org
<i>Speaker Chair</i>	Linda Mahan	speakerchair@sfaa-astronomy.org
<i>City Star Party</i>	Jorge Morales	csp@sfaa-astronomy.org
<i>Bulletin Editor-in-Chief</i>	Phil Estrin	editor@sfaa-astronomy.org
<i>Associate Editor</i>	Annette Gabrielli	
<i>Telescope Loans</i>	Pete Goldie	(415) 206-9867
<i>Honorary Director and Board Member Emeritus</i>	John Dobson	(415) 665-4054
<i>Board Members</i>	Joe Amato	Web-master@sfaa-astronomy.net
	Jim Cottle	
	John Dillon	(415) 332-8096
	Robert English	(415) 383-6475
		Citystarparty1@sfaa-astronomy.org
	Kenneth Frank	kennethfrank@palanitarium.net
	Elan Morpurgo	(415) 383-2247
		elanesti@sbcglobal.net
	Jorge Morales	
<i>Alternate Board Members</i>	Jared Willson	
	Lon Carter	
<i>Webmaster</i>	Joe Amato	Web-master@sfaa-astronomy.net

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 pg@lbin.com 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 president@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/agabrielli@sfaa@sbcglobal.net
- 7) 8" f/10 Meade SCT/Stefanie Ulrey/treasurer@sfaa-astronomy.org
- 8) 9.5" f/5.6 Celestron Newtonian/Ken Frank/kennethfrank@planitarium.net

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.

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 20th day of the month.** Send your articles to Editor@sfaa-astronomy.org.

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,

IMPORTANT DATES

SFAA GENERAL MEETINGS & LECTURES

Wednesdays

April 16

May 21

June 18

7:00 p.m. Doors open. 7:30 p.m. Announcements. 8:00 p.m. Speaker
Randall Museum, 199 Museum Way (Near 14th Street and Roosevelt)

BOARD MEETINGS

Tuesdays

April 8

May 13

June 10

7:00-8:30 p.m.

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

MT TAM STAR PARTIES – SPECIAL USE PERMIT – MEMBERS ONLY

Special Use Permit observing nights on Mount Tamalpais are private and open *only* to SFAA members. Please arrive by sunset (times listed below). A permit is required for each car. We must vacate the mountain by 2 am except on specially approved nights (such as Messier Marathon).

SATURDAYS

April 5 – 7:37 pm Gatekeepers: **Stephanie (One additional volunteer needed)**
May 3 – 8:02 p.m. Gatekeepers: **Robert (One additional volunteer needed)**
May 31* – 8:26 p.m. Gatekeepers: **Elan (One additional volunteer needed)**

***No New Moon weekend in June**

CITY STAR PARTIES - TELESCOPE CLINIC ONE HOUR BEFORE SUNSET

Saturday, April 12, 7:43 p.m. at Land's End (Point Lobos)

Saturday, May 24, 8:21 p.m. at Land's End (Point Lobos)

Saturday, June 21, 8:36 p.m. at the Randall Museum – Speaker: Michael Portuesi – “Exploring the Solar System”

Weather may cancel the City Star Party. Call the SFAA Hotline at (415) 289-6636 AFTER 4 PM to learn the status of the event and the location. If the hotline announces the Star Party is cancelled, the Telescope Clinic and Lecture are cancelled as well. However, if the Hotline does not cancel the Star Party, be assured that the Lecture will proceed as scheduled even given less-than-perfect telescope conditions.

Please note that while City Star Parties **WILL ALWAYS** be held on Saturdays, some will be closer to the last quarter phase of the moon, while others will be close to first quarter. This is so we can work around dates for Mt. Tam public star parties as well as our members-only events on Mt. Tam.

Map and directions – Land's End (Pt. Lobos) <http://www.sfaa-astronomy.org/clubarchive/directions-pointlobos.php>

MT TAM PUBLIC STAR PARTIES

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, approx. 11 pm-2 am. For more information go here: <http://www.sfaa-astronomy.org/starparties/>

VOLUNTEER GATEKEEPERS ARE ALWAYS NEEDED

May 10 – 8:09 p.m.



NEW SFAA MEMBERS

Scope City is offering to new members a \$25 credit toward the purchase of telescopes and binoculars.

Obtain a receipt for dues payment from

Vivian White, Treasurer,

treasurer@sfaa-astronomy.org.

Contact Sam Sweiss at Scope City
to arrange for your discount.

PRESIDENT'S COLUMN

An SFAA group led by Charles Kenneth Messier himself gathered on Mt. Tam on March 8th to engage in the noble endeavor of the Messier Marathon, the ambitious attempt to locate all 110 Messier objects in one night. Spirits were high and the skies looked promising when the sun set at 7:11pm as evidenced by the picture below.



Dense cloud covers moved in by 10pm and drove the group off the mountain sooner than planned. The star party nevertheless provided a perfect setting for Don Machholz' talk at the March General Meeting. Don provided a lot of interesting facts about Charles Messier, controversies about a few disputed object locations, statistical facts and anecdotes about Messier Marathons – including the heroic effort of conducting the marathon without charts [sic] or – and a time-lapse version of a marathon hitting all 110 objects.

Out-of-town star parties: Planning is underway for our annual event at the Fremont Peak Observatory in June and the Yosemite star party at Glacier Point in July. The SFAA website has a lot of information, contact info, and instructions for signing up for these events.

I am happy to report that Bill Cherrington, who has made very generous donations to the SFAA in the past, recently donated a set of six great planetary eyepieces. The eyepieces are from Burgess' Planetary series and range in focal length from 2.5mm to 9mm. You can check out details and specifications on Burgess' website at

www.burgessoptical.com/EPs/Planetary.html. We will make them available to the membership through our loaner program. I want to express our gratitude to Bill on behalf of the entire SFAA.

Did you always admire the entries for our annual astrophoto contest? Here is good news for aspiring imagers and those who have taken their first steps and want to hone their skills; whether you plan to use your own equipment or take images online using a robotic telescope. Michael Kran is organizing the SFAA Imaging Group! You find more details about this initiative in this newsletter.

On March 21st, NASA reported that the Swift X-ray telescope had detected a distant gamma-ray burst with the brightest afterglow ever observed. GRB 080319B had originated at a distance of 7.5 billion light years – at a time when the universe was half its current age and long before our solar system formed 5 billion years ago. Gamma-ray bursts occur when stars more massive than 25 solar masses have exhausted their nuclear fuels and blow off their outer layers in a gigantic explosion as their core collapses to form a black hole or a neutron star. A well-known remnant of such supernova explosion, dating back to the year 1054AD, is the Crab Nebula (M1). The report about GRB 080319B reminds me of a humbling realization about our own existence. The big-bang nucleosynthesis, the process through which protons and neutrons combined to form atomic nuclei within the first three to four minutes after the big bang, generated a lot of hydrogen, helium and their isotopes plus traces of lithium – but no heavier elements. Heavier elements, including carbon, oxygen, iron, and other building blocks of life on Earth and elsewhere in the Universe, were produced through nuclear fusion processes in massive stars. And these elements were eventually released into space through supernova explosions like the one that might have caused GRB 080319B only to be incorporated into planetary systems like ours. Life on Earth was seeded by “stardust”. Or, as Joseph Silk puts it in his book “The Big Bang”, “We are children of the stars”.

DIRK LAMMERTS
PRESIDE

2008 San Francisco Amateur Astronomers Lecture Series

Free & Open to the Public sfaa-astronomy.org

7:30pm , Randall Museum, Randall Museum Theater, 199 Museum Way, San Francisco randallmuseum.org

April 16th - Nick Kanas, UCSF

“Star Maps: History, Artistry and Cartography”

People have been observing and mapping the heavens since antiquity in an effort to understand their place in the universe. Dr. Kanas will trace the history of celestial cartography from the time of the classical Greeks through the Golden Age of pictorial celestial maps to modern day star atlases. He will illustrate his talk with photographs from antiquarian celestial books and prints taken from his recent book:

[Star Maps: History, Artistry, and Cartography](#)

May 21st - Andrew Westphal, Space Science Lab, U.C. Berkeley

“Stardust: The First Solid Sample Return Mission from Beyond the Moon”

In January 2006, the Stardust mission returned to Earth the first solid extra-terrestrial samples of material collected beyond the Moon. Westphal will report on the most recent surprising results from the analyses, aided by over 23,000 volunteers in the Stardust@home project.

June 18th - Janet Luhmann, U.C. Berkeley

“Space Weather”

Janet Luhmann will talk to us about our Solar dynamo, which is returning to a new solar activity cycle, and how it may affect us, our satellites and those who will venture into space. Join us for this interesting topic.

July 16th To be announced

August 20th - Lynda Williams, Santa Rosa Junior College

“Space Ecology: The Final Frontier of Environmentalism”

Lynda will survey the current space debris situation and speculate on possible future scenarios created by the deployment of space-based weapons, the private space industry and geo-engineering solutions to climate change. As Lynda likes to say: What the world needs now, before it is too late, is an environmental movement in heaven: Space Ecology.

September 17th - Dana Bachman, SOFIA, NASA Ames

“SOFIA : NASA's Stratospheric Observatory for Infrared Astronomy”

SOFIA , a 2.5-meter (100-inch) telescope mounted in a modified 747SP aircraft, is expected to begin scientific observations in spring 2009. Flying above more than 99% of Earth's atmospheric water vapor, SOFIA will have nearly the same access as a space telescope to far-infrared and sub-millimeter radiation from celestial sources. The talk will cover development and testing of SOFIA as well as prospects for some of the exciting scientific observations that SOFIA will make possible.

November 19th - Jeff Cuzzi, NASA Ames

“What Have We Learned from the Cassini/Huygens Mission to Saturn”

In this talk, Jeff Cuzzi will review the key science highlights so far on the giant planet Saturn, its spectacular rings, its small but very diverse icy moons, and its planet-sized moon, Titan.

December 17th

Member's Night Our December meeting features presentations from our SFAA members, plus the annual contests from our members of entries of astronomy art, astrophotography and astronomy literary works. Elections of our volunteers for Officers and Board Members are held on this festive evening.

Invitation to the SFAA Imaging Group

We've all been impressed with the entries to the annual SFAA astrophotography contest. The images of Robert Berta, Jared Willson, Norman Mahan, Cheryl Schudel, & Phil Lau are an inspiration to us all. How many of us have asked ourselves, "Could I even do that?" If we have, the next question is: "Where do I start?" In some cases, members may have already made an investment in equipment. In other cases, it might just be an idea for the future.

Membership in a club is already the best way for a beginning amateur astronomer to learn visual astronomy. Why not make it the best way to learn astrophotography as well?

While other local astronomy clubs do not have an astrophotography contest like SFAA, some do have an astrophotography group. In the last year, I have attended imaging special interest groups at: Eastbay Astronomical Society, Mount Diablo Astronomical Society and the Peninsula Astronomical Society. I have found it a great way to meet people with a common interest, share tips and ask about personal experiences with equipment and software techniques.

I understand in speaking with one SFAA board member, that there have been attempts to start just such a group within SFAA in the past. But things are changing, and all for the good. Every year it seems the performance of CCD imagers are improving. And there is the advent of remote, robotic astrophotography as well. There are more ways to get involved than ever before.

A Wired article from February 25, 2008, entitled, "Four Online Telescopes Serve the Stars to Interstellar Papparazzi" writes about four Internet telescopes. Three are free, and one is only \$100 a year. I have used all four, and can say there is something left to be desired in all of them. Still, it is a trend, as a higher percentage of the world's population lives under light polluted skies.

Whether you own your own equipment, are considering getting some in the future, or what to try remote astrophotography, there are compelling reasons to form a group. If you would like to join, I have formed a Yahoo Group entitled, "SFAA Imaging SIG". http://tech.groups.yahoo.com/group/SFAA_Imaging/
Or, if you prefer send me a message at michael (dot) kran (at) kran (dot) com.

First, we need to find out how many members are interested. Then we can move on to questions about the date, time and location of a monthly meeting.

Don't worry if you have nothing but your curiosity to bring to the first meeting. It is intended that this group will serve the needs of novice to intermediate level astrophotographers. At the same time, it would be of immeasurable value if some of the more experienced imagers with SFAA would be willing to occasionally present at the meetings once the group gets off the ground and has a regular attendance. Just to set expectations, if a dozen members indicate interest, and half that number show up at any one meeting, that would be a great success.

There are a lot of ways to make it of interest: a talk by an experienced astrophotographer, demos of software and hardware, a trip to a local private observatory, and the possibility of imaging up on Mt Tam as a group. We can have a target of the month, allowing us to use the same object but compare techniques and results with different equipment. Looking forward to seeing you!



M20- Trifid Nebula.

Taken my first month on a remote telescope at
New Mexico Skies.

Annual SFAA NIGHT

Fremont Peak Observatory

June 6-7, 2008

Each year for the past few years the FPOA has graciously granted us use of their 30 inch telescope



Courtesy of [Art Rosch](#)

for a Friday. In exchange, we do a public program the following day and night as a thank you. We have reserved the Observatory Friday, June 6th evening for an exclusive private gathering of members from the SFAA. . I asked Michael Portuesi if he wouldn't mind again putting together a suggested [object list](#) to view. Also for our Solar System: [Moon & Mars](#), [Venus and the Sun](#) will be very close together for those w/ solar scopes, [Saturn](#), [Jupiter](#) [Pluto](#), and your favorite UB. Let me know what you want to see so we can schedule it in.

Wanna come? It's open to all current dues paying [members](#) of SFAA. Please [email](#) your license plate # of your car, and if you're bringing a scope the type and size like you do for Yosemite.

[Here's](#) who has signed up so far. The Fremont Peak Observatory features a fine [30-inch f/4.8 Newtonian telescope](#) built by Kevin Medlock of the [Eastbay Astronomical Society](#). The telescope is mounted on an English cross-axis equatorial system. There are also 6 powered observing pads outside the observatory, where visiting astronomers (like SFAAer [Richard Crisp](#)) can set up to observe in Fremont Peak's dark skies.

From [March through October](#), Fremont Peak Observatory conducts programs for the public at least three Saturday evenings a month, excluding the Saturday closest to full moon.

[Fremont Peak State Park](#) is about 100 miles south of San Francisco, and eleven miles south east of the town of San Juan Bautista. The park features camping facilities which are available either by [reservation](#) or first come first served basis. Please be sure and pay the day or or if camping the overnight fee in the green box by the public phone. At the bottom of the hill in San Juan Bautista is the [San Juan Inn](#) for those who would like more civilized overnight amenities.

Doug Brown, President of FPOA noted that Fremont Peak being as popular as a historical stopping place is also mentioned on page 50 of May + June 2005 issue AAA's Via Magazine! If you'd like to help in maintaining the observatory, there are work parties on Saturdays. If you're interested, contact [Doug](#).

Dr. Doris Sloan, an FPOA member just wrote an article in Bay Nature Magazine about

Fremont Peak. Coincidentally the [April-June 08 article](#) is embellished with our own Michael Kran's photos as well!

For SFAA members wanting to enjoy this gorgeous telescope on their own, practically whenever they choose (with a few exceptions) and you're interested in joining FPOA and becoming qualified to use the telescope, contact [Ron Dammann](#), Director of Instruments at FPOA.

Also, if you'd like to participate in a great social activity with the FPOA folks, they are having their Star B Q in conjunction with the [AANC](#) on Saturday August 2nd. Let [Doug Brown](#) know if you're interested in coming.

For more information about Fremont Peak Observatory, including excellent directions, visit their web site at <http://www.fpoa.net>

[Here](#) are a few pix of our day and night on the Peak last year.

Looking forward to seeing you again this year. Ken

Copyright © 2008



2nd International Sidewalk Astronomy Night

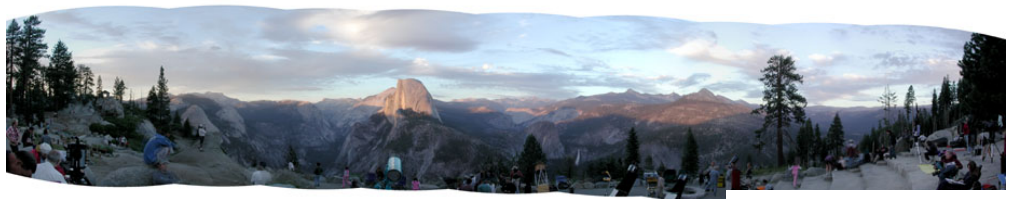
Take to the sidewalk! on International Sidewalk Astronomy Night. Just let Ken <kennethfrank at planitarium.net> know where you'll be so I can post it. Donna in LA will be sending me commemorative pins for you. Check out <http://www.sidewalkastronomy.com/> for more info.

KQED Channel 9



Quest, showing Tuesday night April 29th at 7:30 pm on KQED Channel 9 previewing the SFAA at the Randall Museum, the San Francisco Sidewalk Astronomers, interview with John Dobson and more. Ken

SFAA Yosemite Star Party at Glacier Point



panshot courtesy of Mojo

Friday, July 11 and Saturday - July 12, 2008

We have a First Quarter Moon weekend so our quota will fill up quickly. To sign up, please [email Jorge](#) with "Yosemite" in the subject line; and in the text body: your name(s), number of people, type & size of scope(s).

If you are [currently registered](#) and decide for some reason you cannot come, please let Jorge know as soon as possible so others may fill your campsite. Those on the [wait list](#) will thank you for your consideration.

A note for non-members and those not making the list: Yosemite is your national park, and you may come if you arrange your own accommodations. In this case, you would be welcome to join us at Glacier Point for the public star party and the observing afterward; however, you would not be obligated to set up for the public.

Location: The Star Party will be held at [Glacier Point](#), hosted by the National Park Service (NPS). Here are [directions and guidelines](#). Rustic camping is located at the Bridalveil Creek campground group site. There is room for several tents. Cold running water is convenient but sans showers. The campsite is 8.5 miles away from Glacier Point.

Background: For those of you unfamiliar with this event, we are given free reserved admission and camping space. In exchange, we give two public star parties at Glacier Point on Friday and Saturday night. We'll 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.

NPS limits astronomy clubs to a maximum of 30 SFAA campers. Please do not ask if your friends can come ... unless they are SFAA members. Want to [join](#) the SFAA? You are expected to have at least one public telescope for every two people.

Check the [National Weather Service](#) for up-to-date weather info on Yosemite Park current weather and conditions. Here is a live cam of Half Dome from [Ahwahnee Meadow](#).

Once confirmed, you will be given an Entrance Fee Waiver Form that needed to present to the ranger at the park entrance. They will be available at our meetings. You may be asked to show the ranger your telescope when you enter the park.

Observing site: 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. Some of the public will have white flashlights, and we need to be tolerant of that. We will have club members with red brake light tape to cover the offending flashlights.

Expect many questions from the public. Here is an [object list](#) with corresponding finder charts and some brief information.

Fun part- By around 9:30 or so, we will have the place to ourselves, and can stay until dawn. 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, and invite people to come again after sunset.

Gastronomic Astronomic: Early Saturday eve is traditionally potluck and is always fun. Please provide enough for ~ say 4 or 5. Salads, main course, pu pu's and desserts are all welcome. Let's try again for the best astronomical theme of incredible edibles. Prizes will again be awarded! Please remember this repast takes time so it's better to start our own gastronomic party early so there's no need to rush for set up Saturday evening on Glacier Point. Sunset Saturday will be at 8:25 pm.

See you there,

Jorge

Copyright © 2008

Practical Observational Astronomy from the Sierra Nevada

General Description

This is a laboratory course that emphasizes astronomical observations made from the field. Within a national forest in the mountains, far from bright city lights, the Field Campus area has the dark sky ideal for observing faint celestial objects and meteors.

The course is designed for a person who wants to learn to identify the stars and constellations and to make simple observations with the naked eye, binoculars and telescopes. Telescopes and their accessories will be studied. We stress hands-on use of telescopes to view the moon, planets, sun, stars and nebulae of our own Milky Way galaxy, and other galaxies. Students will learn how to use star charts and atlases and the setting circles of an equatorial mounting to locate faint celestial objects. It should be particularly helpful to those beginning amateur astronomers who, having purchased their first telescopes, may now be having difficulty finding anything but the moon and brighter planets to observe. Students enroll to receive a letter grade, but have the option of switching to credit-no credit grading, or to audit, at the first class meeting.

Class Schedule

The first class meeting at the SNFC will be at 2:00 PM, Sunday, July 27 and the final session will be late Thursday night (Friday morning), August 1, 2008.

The class meetings are in the afternoon and at night, leaving the mornings open for hiking.

Each class member will construct a pocket sundial and a quadrant to observe the motion of the sky. We will learn to use the sundial as a compass on a luncheon hike to beautiful Frazier Falls, an easy mile hike from the trailhead. Other daytime activities include using the moon to find the time, learning to use your star dial and doing experiments on telescope optics and on spectra. At night we drive to the Packer saddle area where we have an observation site on the Pacific Crest Trail.

Nighttime activities include naked-eye observations: constellation study, use of the quadrant to study sky motion, meteor counting, and observations of variable stars. With binoculars and telescopes we observe planets, comets, stars, nebulae, the Milky Way and other galaxies. On Thursday, the last night, the course culminates with a star party at which we show roughly a hundred vacationers and area residents the beautiful objects we have learned to observe!

For more information click on the names to visit the web sites of co-instructors Steve Gottlieb , [Jim Shields](#) and [Ray Cash](#).

Useful equipment and supplies

The sun sets at about 20:10 this time of year, and twilight ends about 22:00. Bring lots of WARM CLOTHING (hat, gloves, parka with hood) for the cold, late-night observing sessions, a DIM flashlight with a RED lens (Orion Telescope's "Adjustable Brightness Starlite LED Flashlight" is ideal), notebooks, pens and pencils, and the below texts. You are encouraged to bring your own observing equipment: telescopes, binoculars, astrolabes, cameras...

REQUIRED MATERIALS

- The July edition of "Sky & Telescope". Look in better bookstores in early July
- THE NIGHT SKY, a planisphere [Order at Amazon](#)
- The Bright Star Atlas by Wil Tirion [Order at Amazon](#)

2007-2008 MEMBERSHIP DUES

SFAA membership now comes due in June. Before now, dues were payable in the month a member first joined. Last year, the SFAA board voted to make everyone's dues payable at the same time - in June of each year. This was done for two reasons: 1) to save a great deal of work for our volunteer Treasurer, present and future, and, 2) for the convenience of members - it's easier to remember! In the past, many members forgot their due date and their membership unintentionally lapsed.

During this first year of transition: If your present membership runs past June 2007, just pay a prorated fee to extend your membership to June of 2008. Simply deduct 1/12 from this year's dues for each month already paid. For example, if you last paid your membership in September of 2006, you have a credit of three more months. Subtract 3/12 (1/4) from your annual fee and just pay that amount. We trust your math. Next year, and every year thereafter, everyone will pay only in June. Easy!

We realize this conversion process may be a bit confusing and more work for some. But this is a one-time transition and it will lessen the work and confusion for all the years to come!

N.B. for those of you who have a club discounted *Sky and Telescope* magazine subscription, you will need to renew your subscription separately. The magazine will send you a renewal notice. In the past, you had to send that renewal notice with payment to the SFAA; now you can mail your *Sky and Telescope* subscription renewal payment directly to *Sky and Telescope*. **Note: Not renewing your club membership on time may mean your magazine subscription(s) will also terminate.**

Thanks for bearing with us during this transition process -- it'll all seem worth it next year! Just complete the membership form on the last page of the newsletter and submit with your renewal check to:

San Francisco Amateur Astronomers
P.O. Box 15097
San Francisco, CA 94108

YEARLY RATES FOR MEMBERSHIP

\$10 – Youth (under 18) Student Membership	\$25 – Individual Membership
\$30 – Family or Foreign Membership	\$40 – Institutional Membership
\$75 – Supporting Membership	

MEMBER BENEFITS INCLUDE

- Subscribing to our Announcements mailing list to receive newsletter, activity and event announcements.
- Interaction with world class speakers as they present cutting edge astronomical research
- Discounts on [Sky & Telescope](#) and [Astronomy](#) magazines*
- Discounts on equipment and accessories at [local telescope retailers](#)
- Annual club Astrophotography, Literary & Art Awards
- Social events, such as our annual picnic and our awards dinner
- Club telescopes – use one of the club's loaner scopes on a month-to-month basis
- Yosemite Star Party – held at Glacier Point exclusively for SFAA members
- Access to events and resources in Northern California and beyond
- Field trips – to observatories and other locations of scientific interest, such as Mt. Wilson Observatory in Pasadena, Chabot Space and Science Center, Fremont Peak, and the Stanford Linear Accelerator Center
- Extended observing hours at the Mount Tamalpais Astronomy Program
- Access to dark sites in Northern California

San Francisco Amateur Astronomers
POB 15097
San Francisco CA 94115

Please make checks payable to San Francisco Amateur Astronomers and mail to:

_____ E-Mail
_____ Hard Copy

You can choose E-Mail (Recommended) or hard copy delivery for Above the Fog (Check one)

Information: Name(s) _____
Address _____
City _____
State _____
Home Phone _____
E-Mail _____
Zip _____

Membership Categories (Check one): _____
\$10 Youth/Student _____
\$25 Individual _____
\$75 Supporting _____
\$30 Family _____
\$40 Institutional _____

Members pay one half the amount listed below
Membership is billed for each upcoming year on June 30. Between January 1 and June 30, new

MEMBERSHIP APPLICATION

San Francisco Amateur Astronomers
P.O. Box 15097
San Francisco, CA 94115



Information Hotline: (415) 289-6636

Web Page: www.sfaa-astronomy.org

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.