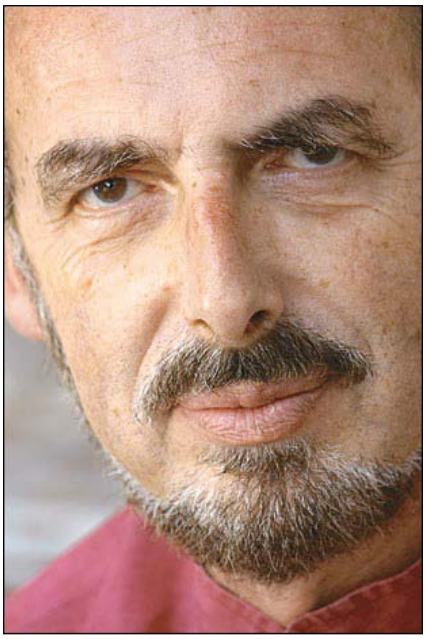
ABOVE THE FOG
• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

Vol. 58, No. 3 – March 2010

Wednesday, March 17, 2010 – General Meeting

Randall Museum . 199 Museum Way . San Francisco
7:00 pm Doors Open
7:30 pm Announcements
8:00 pm Speaker
SFAA's General Meetings take place on the 3rd Wednesday of each month (except January)

Andrew Pohorille
NASA Ames Research Center
Origins of Life in the Universe – Chance or Necessity



The new era of space exploration, which has started with a comprehensive program of missions to Mars and the discovery of exosolar planets, brings to the front stage one of the oldest questions in history of humankind – is there life beyond earth in our solar system and elsewhere in the universe? This directly leads to other, related questions that have broad philosophical implications. Was the emergence of life a predictable outcome of chemical evolution? Could evolution produce life very different from ours? Even though we are still far from definitive answers to these questions, a number of experimental and theoretical tools are now available that allow us to shift the problem from the realm of religion and speculations to the realm of rational, scientific inquiry. Starting with a notion that the emergence of life was subjected to universal constraints arising from the laws of physics and chemistry, I will discuss current views on this issue.

Andrew Pohorille received Ph.D. in theoretical physics (with specialty in biophysics) from University of Warsaw. He did his postdoctoral work at the institut de Biologie Physico-Chimique in Paris. Since 1992 he has been professor of Chemistry and Pharmaceutical Chemistry at the University of California San Francisco. In 1996 he joined the staff of NASA Ames Research Center, where he directs the NASA Center for Computational Astrobiology. He also leads the NASA Astrobiology Institute Origin of Life Focus Group.

In 2002 he was awarded Exceptional Scientific Achievement Medal. He was the 2005 Distinguished Lecturer at the Centre for Mathematical Modeling and the National Space Research Centre in the U.K. and the 2008 Maxwell Colloquium speaker at University of Edinburgh. In 2000 and 2009 he received NASA Group Awards for his contributions to astrobiology.

His main interests have been focused on modeling the origins of life, computer simulations of biomolecular systems, modeling genetic and metabolic networks, and statistical mechanics of condensed phases. Most recently, he has been working on developing concepts and designing instruments for microbiology experiments on small satellites and in the lunar environment. His other research interests are rather eclectic – in recent years he published papers in diverse areas, ranging from the structure of comets to the mechanism of anesthetic action and risky decision-making. He co-authored nearly 100 peer-reviewed publications.

PRESIDENT'S MESSAGE

Last month's Randall museum lecture, on the origins of the universe and how far back in time we are able to look, was very interesting in that the lecturer indicated that she had a slide, on her computer, that showed the ultimate fate of the universe. Now to me this was a very interesting thing, not so much that she had a computer or that there was a slide on her computer (although this is astonishing on its own), but that we live in a time in which we are able to say with a straight face that we can even contemplate the beginning and the end of existence with some degree of certainty (Luckily for us the universe is not going to end any time soon). For some reason this struck a chord with me that has been nagging at me ever since. I don't know but I found this to be a moment full of wonder and pride for how far the study of astronomy has taken us over the millennia. Every time I look through a telescope I am filled amazement, and I never cease to be astonished as to what is out there. Astronomy is so much like Art – It doesn't feed, cloth, or shelter us, but it does serve to provide perspective in an ever-increasing and complex world, and public star parties bring together people from all walks of life to share a common magical experience.

Standing in the dark,
On a mountain,
With hundreds of strangers
On a ladder in the cold
Straining to see a spiral structure in a far off galaxy

WOW
This is truly a fascinating and moving experience.

We are observers, but we also provide a conduit for others to experience the universe well beyond our daily reality.

Well anyway, enough rambling.

The new season of public astronomy programs is upon us! The messier Marathon is on March 13th and in April we have National Astronomy Day.

Mt Tam Awaits!

Our date for Yosemite has been selected and we have been contacted by National Park Service to provide public star parties up and down the Peninsula. Up thru San Francisco into north Marin and our partnership with the California Academy of Sciences continues. This is shaping up to be a banner year for our club and the services we provide. To that end, we need volunteers to coordinate events, provide telescopes and talks and I encourage all of you to become active in providing as much time as you can muster. Let's get out there and Change the world!!!!!!! (Whoa Nellie, sorry, got a little too excited there).

In other news, Doug Smith has graciously volunteered to be the club's secretary and this resolves the potential runoff situation for a seat on the board. Many thanks, Doug.

The more our telescopes are used, the more they take on a life of their own, so,
If your telescope is sitting in a corner,
Gathering dust,
Take it out and advance the human condition.

It may not be mocking you but it sure is watching you out of the corner of its diagonal.

Dave

IMPORTANT DATES

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.

March 17	June 16	September 15	December 15
April 21	July 21	October 20	
May 19	August 18	November 17	

CITY STAR PARTIES *Land's End (Point Lobos)*

Map and directions: http://www.sfaa-astronomy.org/clubarchive/directions-pointlobos.php

March 20/7:30	June 5/8:30	September 18/7:30	December 11/5:00
April 3/7:30	July 13/8:30 Tue	October 16/6:30	
May 22/8:00	August 21/7:30	November 13/5:00	

TELESCOPE CLINIC ONE HOUR BEFORE SUNSET

NOTE: While City Star Parties WILL ALWAYS be held on Saturdays, some will be close to the last quarter phase of the moon; 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 Mt. Tam members-only events.

2010 MT TAM SPECIAL USE PERMIT STAR PARTIES - MEMBERS ONLY

GATEKEEPERS NEEDED

Special Use Permit observing nights on Mount Tamalpais are private and open *only* to SFAA members. Please arrive by sunset. A permit is required for each car. We must vacate the mountain by 2:00 a.m. except on specially approved nights (such as Messier Marathon).

March 13 MESSIER MARATHON	June 12	September 4	December 4
April 10	July 10	October 2	
May 15	August 7	November 6	

MT TAM PUBLIC STAR PARTIES – TO BE ANNOUNCED

MAY THROUGH OCTOBER ANNUALLY

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/

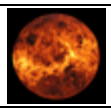
March 2010 Almanac for San Francisco (Pacific Standard/Daylight Time)

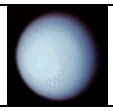
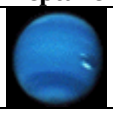
(Source: US Naval Observatory)

Sun and Moon Data:

Date	Astronomical Twilight Begins	Sunrise	Sunset	Astronomical Twilight Ends	Moon	Moonrise	Moonset
6 Mar	5:07 am	6:34 am	6:08 pm	7:36 pm		0:25 am	10:00 am
13 Mar	4:57 am	6:23 am	6:15 pm	7:43 pm		5:09 am	4:35 pm
***20 Mar**	5:46 am	7:13 am	7:22 pm	8:50 pm		9:30 am	00:41 am next day
27 Mar	5:34 am	7:02 am	7:28 pm	8:57 pm		5:08 pm	5:21 am

Planetary Data:

	Mercury		**Venus**		**Mars**		**Jupiter**	
								
	Aqr (1–14) / Psc (15–20, 22–31) / Cet (20)		Aqr (1–2) / Psc (3–12, 15–29) / Cet (13–14) / Ari (30–31)		Cancer		Aquarius	
Date	**Rise**	**Set**	**Rise**	**Set**	**Rise**	**Set**	**Rise**	**Set**
6 Mar	6:27 am	5:31 pm	7:13 am	7:10 pm	2:02 pm	4:50 am	6:28 am	5:41 pm
13 Mar	6:30 am	6:10 pm	7:06 am	7:25 pm	1:36 pm	4:21 am	6:05 am	5:22 pm
***20 Mar**	7:32 am	7:52 pm	7:59 am	8:40 pm	2:11 pm	4:54 am	6:41 am	6:02 pm
27 Mar	7:33 am	8:33 pm	7:52 am	8:56 pm	1:50 pm	4:29 am	6:18 am	5:43 pm

	Saturn		**Uranus**		**Neptune**	
						
	Virgo		Pisces		Cap (1–23) / Aqr (24–30)	
Date	**Rise**	**Set**	**Rise**	**Set**	**Rise**	**Set**
6 Mar	7:17 pm	7:33 am	7:03 am	6:53 pm	5:48 am	4:30 pm
13 Mar	6:47 pm	7:04 am	6:37 am	6:28 pm	5:21 am	4:04 pm
***20 Mar**	7:16 pm	7:35 am	7:10 am	7:02 pm	5:54 am	4:38 pm
27 Mar	6:46 pm	7:07 am	6:44 am	6:36 pm	5:27 am	4:11 pm

March Phenomena:

3 Mar, 8:00 am: Spica 3.0° N of Moon
3 Mar, 8:00 pm: Venus 0.6° S of Uranus
6 Mar, 6:00 pm: Antares 1.3° S of Moon
7 Mar, 5:00 pm: Mercury 1.1° S of Jupiter
11 Mar, 1:00 am: Mars stationary
13 Mar, 4:00 am: Neptune 3.6° S of Moon
*14 Mar, 2:00 am: Daylight Savings begins
14 Mar, 5:00 am: Mercury at superior conjunction
14 Mar, 2:00 pm: Jupiter 5.0° S of Moon
15 Mar, 2:00 pm: Mercury 0.6° S of Uranus
15 Mar, 4:00 pm: Uranus 5.4° S of Moon
16 Mar, 11:00 pm: Uranus at conjunction
20 Mar, 10:32 am: Vernal equinox
21 Mar, 5:00 pm: Saturn at opposition
25 Mar, 5:00 am: Mars 4.4° N of Moon
27 Mar, 3:00 am: Regulus 3.9° N of Moon
30 Mar, 7:00 pm: Spica 2.9° N of Moon

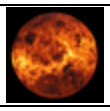
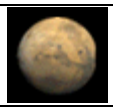
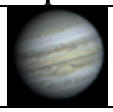
April 2010 Almanac for San Francisco (Pacific Daylight Time)

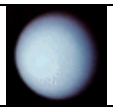
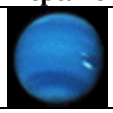
(Source: US Naval Observatory)

Sun and Moon Data:

Date	Astronomical Twilight Begins	Sunrise	Sunset	Astronomical Twilight Ends	Moon	Moonrise	Moonset
3 Apr	5:22 am	6:52 am	7:35 pm	9:05 pm		00:10 am	9:41 am
10 Apr	5:10 am	6:41 am	7:41 pm	9:13 pm		4:37 am	4:24 pm
17 Apr	4:58 am	6:31 am	7:48 pm	9:21 pm		8:16 am	11:36 pm
24 Apr	4:47 am	6:22 am	7:54 pm	9:30 pm		4:02 pm	3:51 am

Planetary Data:

	Mercury		**Venus**		**Mars**		**Jupiter**	
								
	Pisces (1) / Aries (2–30)		Ari (1–19) / Tau (20–30)		Cancer		Aquarius	
Date	**Rise**	**Set**	**Rise**	**Set**	**Rise**	**Set**	**Rise**	**Set**
3 Apr	7:31 am	9:06 pm	7:46 am	9:11 pm	1:31 pm	4:05 am	5:54 am	5:23 pm
10 Apr	7:21 am	9:19 pm	7:42 am	9:27 pm	1:13 pm	3:43 am	5:31 am	5:04 pm
17 Apr	7:01 am	9:05 pm	7:38 am	9:43 pm	12:58 pm	3:21 am	5:07 am	4:44 pm
24 Apr	6:33 am	8:24 pm	7:37 am	21:59 pm	12:43 pm	3:01 am	4:43 am	4:23 pm

	Saturn		**Uranus**		**Neptune**	
						
	Virgo		Pisces		Aquarius	
Date	**Rise**	**Set**	**Rise**	**Set**	**Rise**	**Set**
3 Apr	6:16 pm	6:38 am	6:17 am	6:11 pm	5:01 am	3:45 pm
10 Apr	5:46 pm	6:09 am	5:50 am	5:45 pm	4:34 am	3:18 pm
17 Apr	5:16 pm	5:40 am	5:24 am	5:19 pm	4:06 am	2:52 pm
24 Apr	4:47 pm	5:12 am	4:57 am	4:54 pm	3:39 am	2:25 pm

April Phenomena:

3 Apr, 4:00 am: Antares 1.5° S of Moon
6 Apr, 5:00 pm: Pluto stationary
9 Apr, 2:00 pm: Neptune 3.8° S of Moon
11 Apr, 10:00 am: Jupiter 5.5° S of Moon
12 Apr, 2:00 am: Uranus 5.4° S of Moon
15 Apr, 2:00 pm: Mercury 1.5° S of Moon
16 Apr, 3:00 am: Venus 4.0° S of Moon
18 Apr, 6:00 am: Mercury stationary
21-22 Apr: Lyrids meteor shower
22 Apr, 0:00 am: Mars 4.4° N of Moon
23 Apr, 1:00 pm: Regulus 4.1° N of Moon
27 Apr, 5:00 am: Spica 2.9° N of Moon
28 Apr, 9:00 am: Mercury at inferior conjunction
30 Apr, 2:00 pm: Antares 1.7° S of Moon

JOHN DOBSON RELOCATES TO SOUTHERN CALIFORNIA

John Dobson, the inventor of the Dobsonian mount and simple, inexpensive, practical, yet optically near perfect Newtonian telescope has relocated from his apartment in the Outer Sunset to the Vedanta Center in Hollywood.

On February 27, some of the original San Francisco Sidewalk Astronomers met with the Astronomical Society of the Pacific staff and enjoyed sunny, warm views of our nearest star with John Dobson at a going away get together.

On February 25, John Dobson gave a talk at Dean's residence on Judah Street, and added one final evening at the corner of 9th and Irving to the list of a great many where he has extended invitations to the general public to view features of the night sky through a telescope.

We have reached the end of an era and a most privileged time for sidewalk astronomy and the general public in San Francisco.

With immense appreciation and all good wishes, we bid farewell to our cherished neighbor who has devoted much of his life to focusing our eyes and minds on the wonders of the universe.

MARCH ASTRONOMY EVENTS

Kenneth Lum

Monday **March 8, 4:15 pm** **Panofsky Auditorium** **Stanford Linear Accelerator** **Palo Alto** **Event open to the public**	***A New Generation of Particle Accelerators= Eric Colby*** Particle accelerators and their associated technologies impact many aspects of our lives, from the inner workings of a microwave oven, to industrial processing of materials, to modern treatments for cancer, to keeping us safe. Tremendous technical progress in the last two decades has radically changed the landscape, transforming fantastic concepts into tangible reality. We'll take a look at how far these technologies have come, and what the future might hold. Eric Colby is the acting head of the Advanced Accelerator Research Department and a senior scientist at SLAC. Eric has worked for more than two decades on a variety of accelerator research from particle and microwave sources to advanced concepts for accelerators. He is the spokesman of E163, an experiment to demonstrate techniques for accelerating particles with light.
Monday March 8 Benjamin Dean Lecture series This is a correction from the l posting where this event was listed for Wed. 3/10. California Academy of Scienc 55 Music Concourse Dr. Golden Gate Park San Francisco	***Dean Lecture - From Galileo to the Present: 400 Years of Solar Physics*** Dr. Alan Title Stanford University & Lockheed Martin Advanced Technology Center In 1609 Galileo discovered Sunspots and measured the rotation of the Sun. These observations started a revolution in our understanding of our solar system and the Universe as a whole. Observations, computer animations, and numerical simulations provide important tools in understanding our star, the Sun. Dr. Title will review four centuries of critical scientific discoveries and even take a short peak into the future. Reservations: Adults $12, Seniors $10, Academy members $6. Seating is limited To purchase a ticket in advance, go online or call 800-794-7576.
Wednesday March 10, 12:00 Noon Aricebo Room SETI Institute 515 N. Whisman Road Mountain View	SETI Institute Colloquium Series ***Astrobiology of Basaltic Glass in the Oceanic Basins: A Source for Early Life Nutrients?*** Brad Bailey, NASA Lunar Science Institute Brad Bailey will explain how basaltic glass could be a source of energy and/or nutrients for early life. This has enormous astrobiological implications as recent work has shown that Earth's late heavy bombardment period would not have been energetic enough to completely sterilize the Earth's surface and life may have been preserved through this period by residing within the deep crust. Fresh basaltic glass contains a significant amount of reducing potential and could therefore be a primary mechanism for providing energy to biological systems in addition to being a source for limiting nutrients such as phosphates. Ultimately, understanding the interplay between biological and geological systems will help us understand water-rock interactions and the global geochemical seawater budget.

Wednesday March 10, 7:00 p.m. Foothill College 12345 El Monte Road Los Altos Hills, CA (650) 949-7777	**Silicon Valley Astronomy Lecture Series** ***The Many Mysteries of Antimatter*** As part of the 11th annual Silicon Valley Astronomy Lecture Series, Helen Quinn, Ph.D., of Stanford University, will present *The Many Mysteries of Antimatter*, an illustrated, non-technical lecture, **Wednesday, March 10, from 7 to 8:30 p.m.** in the Smithwick Theatre at Foothill College in Los Altos Hills. Admission is free and the public is invited. Seating is on a first-come, first-served basis. Arrive early to locate parking. Antimatter is just like matter with all its properties reversed. But when antimatter meets a matching amount of matter, they destroy each other, both turning suddenly into energy. Scientists think there may have been an equal amount of matter and antimatter in the early universe, yet today we have lots of matter and very little antimatter. How and when that imbalance developed is one of the great mysteries in understanding the underlying properties of the universe. The co-author of the definitive popular book on antimatter, Dr. Quinn will discuss the history of our understanding of antimatter and how we use the little bit of antimatter around today to study some of the highest energy processes among the stars and galaxies. One particularly interesting possible source of antimatter is the annihilation or decay of "dark matter" particles, mysterious material that is thought to make more of the universe than regular matter. She will also discuss ongoing antimatter experiments that are helping to put limits on the nature and behavior of dark matter. Dr. Quinn is professor of physics at the Stanford Linear Accelerator Center and assistant to SLAC's director for education and outreach. She has been elected to the National Academy of Sciences and is a former president of the American Physical Society. Her book, *The Mystery of the Missing Antimatter* (2008, Princeton University Press), is an engaging introduction to the world of particle physics. The free lecture series is sponsored by the Foothill College Astronomy Program, NASA Ames Research Center, SETI Institute and Astronomical Society of the Pacific. Past lectures from the series are available online in MP3-format. Foothill College is located on El Monte Road in Los Altos Hills off Interstate 280. Visitors must purchase a campus parking permit for $2 from yellow dispensers in parking lots. Parking lots 1, 7 and 8 provide stair and no-stair access to the theatre. For more information, access www.foothill.edu or call **(650) 949-7888**.
Friday March 12, 7:30 p.m. Foothill Community College 12345 Moody Road Rm 8402, Bldg. 8400 Los Altos Hills Next to Parking Lot 8 near th entrance to the College. Parking is $2.00	Peninsula Astronomical Society Meeting Members Night

Friday March 12 9:00 – 11:00 p.m. Foothill Observatory at Foothill Community College 12345 Moody Road Los Altos Hills Next to Parking Lot 4	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 new 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. The choice of targets for any evening's viewing depends on the season and what objects are currently in the sky. On clear, dark, moonless nights, the telescopes give visitors views into the deeper reaches of space. Star clusters, nebulae, and distant galaxies provide dramatic demonstrations of the vastness of the cosmos. 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 $2.00. Come to Foothill Observatory and join us in the exploration of our Universe! 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 $2.00.
EVERY Friday & Saturday 7:30pm - 10:30pm Weather Permitting FREE TELESCOPE VIEWING EVERY Saturday & Sunday 12:00 Noon – 5:00pm Weather Permitting DAYTIME TELESCOPE VIEWING FREE WITH GENERAL ADMISSION Chabot Space and Science Center 10000 Skyline Boulevard Oakland, CA 94619-2450 (510) 336-7300	EXPLORE THE NIGHT SKIES AT THE CHABOT OBSERVATORIES for more information: http://www.chabotspace.org/ 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! 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) 12pm - 5pm: Observatories Open
Saturday March 13 10a.m. – 12 Noon IF IT IS CLEAR Foothill Community College 12345 Moody Rd. Los Altos Hills	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. Admission is free. 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 $2.00.

Friday & Saturday March 12 & 13 6:00 p.m. Chabot Space and Science Center 10000 Skyline Boulevard Oakland, CA 94619-2450 (510) 336-7300 Don't miss the new Tales of Maya Skies!	Dinner, a Movie, and the Universe Join us for Chabot's unique evening social rendezvous. Start your night off with dinner and drinks, then cozy up in the planetarium as you're whisked to the edge of the universe and cap off the evening with telescope viewing featuring breathtaking views of the cosmos. Dinner: Buy advance tickets to ensure your dinner reservation. Purchase dinner separately at the cafe ($15). ADVANCED TICKETS A Movie and the Universe: Admission to Chabot includes all access to our interactive exhibitions, a film in the MegaDome theater AND a show in the Digital Planetarium. Purchase your advanced tickets online or call the Box Office at (510) 336-7373.
Saturday March 13 Sunset: 6:14 p.m. Weather Permitting San Mateo County Astronomical Society Star Party Crestview Park San Carlos	Star Parties At Crestview Park Come out and bring the kids for a mind-expanding look at the universe The City of San Carlos Parks and Recreation Department and the San Mateo County Astronomical Society has open Star Parties twice a month in Crestview Park. Inclement weather (clouds, excessive wind and showers) will cause the event to be canceled without notice. 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. Reasons to Attend If you have kids interested in space or planets bring them here for a real life view of planets, nebulae, 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. 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. 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. Please respect the telescopes and ask permission from the owner if you wish to touch. Parents, please watch your children. The park is residential, and adjacent to homes and backyards, please keep noise to a minimum. Astronomers arrive to set up at around sunset. Observing starts at about one hour after sunset and continues for two to three hours.

Saturday March 20 8:00 – 10:00 p.m. Weather Permitting Lawrence Hall of Science, Ma Plaza UC Berkeley	Saturday Night Stargazing: 1st and 3rd Saturday on the LHS Plaza Special Event | February 6 – March 20, 2010 every other Saturday | 8-10 p.m. | Lawrence Hall of Science, Main Plaza Sponsor: Lawrence Hall of Science (LHS) See the Moon, Planets, Stars, Galaxies and More * Stargaze through astronomical telescopes * Ask questions and talk with amateur astronomers * Learn how to use a star map to find constellations * Share in the wonder of the universe with your friends 1st and 3rd CLEAR Saturday of every month throughout the year, weather permitting * 8:00–10:00 p.m. September 15–March 31 * 9:00–11:00 p.m. April 1–September 14 Saturday Night Stargazing is a free public viewing program sponsored by LHS and Bay Area amateur astronomers. Stargazing is always weather permitting—be sure to dress warmly. Foggy and overcast skies can cancel stargazing at the last minute. For more information, join the LHS Stargazing Google Group or follow us on Twitter@LHSstargazing. Target audience: All Audiences Open to audience: All Audiences Attendance restrictions: Stargazing is always weather permitting—be sure to dress warmly. Foggy and overcast skies can cancel stargazing at the last minute.

REGISTER EARLY FOR GSSP 2010!
SATURDAY, JULY 10, TO WEDNESDAY, JULY 14

It's that time again to make your observing plans for 2010. Be sure to include this year's Golden State Star Party!

In 2010, GSSP will carry on its long tradition as California's premier dark sky star party.

This year's event will again be under the ever-friendly skies of the Frosty Acres Ranch near Adin in beautiful Northeastern California and will be held from Saturday, July 10, to Wednesday, July 14.

In addition to exceptional dark sky observing, GSSP offers a wide variety of other fun activities and features, including a door-prize raffle, memorable local community events, an excellent speaker program, kite flying, home-grown barbeques, and countless other great things to do and enjoy in the surrounding area.

The Early Registration Period began this week and will extend through March 30.
Early registration fee is $60 this year.
After March 30, the fee will increase to $70. On-site registration will be $75. Kids under 18 are free.

The more people who register early, the better we will be able to plan and provide the best possible star party for the attendees.

To register and learn more about GSSP 2010, visit our Web site at: http://www.goldenstatestarparty.org/

We'll see you there!

The GSSP Organizing Committee

2010 Club Officers & Contacts

President	*DAVE FREY*	davef@SFAA-Astronomy.org
Vice President	Vivian White	vicepresident@sfaa-astronomy.org
Secretary		
Treasurer	Dave Wilton	treasurer1@sfaa-astronomy.org
Speaker Chair	Linda Mahan	speakerchair@sfaa-astronomy.org
City Star Party	Stephanie Ulrey	csp@sfaa-astronomy.org
Bulletin Editor	Annette Gabrielli	editor@sfaa-astronomy.org
Telescope Loans	Pete Goldie	telescopes@sfaa-astronomy.org
Honorary Director and Board Member Emeritus	John Dobson	
Board Members	Jim Cottle	jimc@sfaa-astronomy.org
	John Dillon	johnd@sfaa-astronomy.org
	Kenneth Frank	ken@sfaa-astronomy.org
	Annette Gabrielli	editor@sfaa-astronomy.org
	Elan Morpurgo	elan@sfaa-astronomy.org 415 383-2247
	Doug Smith	
	Stephanie Ulrey	csp@sfaa-astronomy.org
1st Alternate	Joe Amato	wbmstr@sfaa-astronomy.org
2nd Alternate	Dave Goggin	daveg@SFAA-Astronomy.org
Webmaster	Joe Amato	wbmstr@sfaa-astronomy.org

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***

MEMBERSHIP APPLICATION

Membership is billed for each upcoming year on June 30. Between January 1 and June30, new members pay one half the amount listed below

Membership Categories (Check one):

_____ $10 Youth/Student _____ $40 Institutional

_____ $25 Individual _____ $75 Supporting

_____ $30 Family

Information:

Name(s) _____

Address _____

City _____

State _____ **Zip** _____

Home Phone _____

E-Mail _____

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

_____ **E-Mail** _____ **Hard Copy**

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

San Francisco Amateur Astronomers
POB 15097
San Francisco CA 94115

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.