

★ ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

Vol. 56, No. 9 – September 2008

Wednesday, September 17, 2008 – General Meeting

Randall Museum . 199 Museum Way . San Francisco

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



DANA E. BACKMAN, PH.D.
SOFIA USRA E/PO & SETI Institute
NASA Ames Research Center, Moffett Field

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. This talk will cover development and testing of SOFIA as well as prospects for some of the exciting scientific observations that SOFIA will make possible.

Dr. Dana Backman, a native of Hartford, Connecticut, received a bachelor's degree in physics from MIT and a Ph.D. in astrophysics from the University of Hawaii. He worked as a post-doctoral research fellow at Kitt Peak National Observatory in Tucson, Arizona, and at NASA's Ames Research Center in Mountain View, California, and was a professor of physics and astronomy at Franklin & Marshall College in Lancaster, Pennsylvania for 12 years. Dr. Backman joined the staff of the SETI Institute in 2003 to direct the education and public outreach program for the SOFIA project at NASA-Ames. He also teaches introductory astronomy at Santa Clara University and in Stanford University's adult Continuing Education program. Dr. Backman is co-author, with Mike Seeds of F&M College, of two college introductory astronomy textbooks: "Perspectives" and "Horizons".



NASA Dryden Flight Research Center Photo Collection

<http://www.dfrc.nasa.gov/Gallery/Photo/index.html>

NASA Photo: ED08-0153-1 Date: June 2008 Photo By: USRA/Patrick Waddell

Two USRA technicians at NASA Ames Research Center are reflected in the coated SOFIA telescope main mirror suspended above them in the mirror coating facility.

2008 CLUB OFFICERS & CONTACTS

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

IMPORTANT DATES

SFAA GENERAL MEETINGS & LECTURES

Wednesdays
September 17
October 15
November 19

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
September 9
October 14
November 11

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 2:00 a.m. except on specially approved nights (such as Messier Marathon).

SATURDAYS - GATEKEEPERS NEEDED

September 27 ANNUAL STAR-B-QUE (Bootjack Picnic area) at 4:00 p.m. followed by SUP event (Rock Springs Parking Area) at 6:58 p.m.
October 25 – 6:18 p.m.
November 29 – 4:51 p.m.

CITY STAR PARTIES - TELESCOPE CLINIC ONE HOUR BEFORE SUNSET

Saturday, September 20, 7:09 p.m. at Randall Museum
October 18 – 6:27 p.m. at Land's End (Point Lobos)
November 8 – 5:04 p.m. at Land's End (Point Lobos)

Weather may cancel the City Star Party

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

VOLUNTEER GATEKEEPERS ARE ALWAYS NEEDED

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/>

October 4 – 6:47 p.m.

Dr. Joel Primack & Nancy Abrams, UC Santa Cruz

"The View From the Center of the Universe: Discovering Our Extraordinary Place in the Cosmos"



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

I would like to begin this month's President's Column by highlighting SFAA Star Rewards, a special program we created and announced at our August General Meeting. The intent behind Star Rewards is to recognize your contributions to our club activities and to encourage even broader volunteer participation in SFAA activities.



The way this program basically works is that volunteers collect Star Rewards points for providing their time and initiative to conduct and help with SFAA events from a list of qualifying activities. This list includes all our main events like Mt. Tam star parties and also our big presence at the California Academy of Sciences Grand Opening weekend later this month. Please see this newsletter for additional details about the program including what we are planning for you to redeem your Star Rewards points.

I am sure you have heard by now that the California Academy of Sciences will reopen its doors for the public in a beautiful new setting on September 27-28.



The Academy is expecting more than 50,000 visitors during the weekend and you can be part of the historic reopening of the Academy and the Morrison

Planetarium. The SFAA is supporting the Grand Opening with astronomical activities throughout the weekend. We will have our own booth and we need your help organizing solar observing, telescope demonstration, SFAA brochure hand out, planet and galaxy distance demonstration, and providing general astronomy information. Please contact the Organizing Committee at academyevent@sfaa-astronomy.org or leave a message on the SFAA hotline voicemail at 415-289-6636 to find out how you can be a part of this great event. Please visit the Academy website at www.calacademy.org for details on the new Academy of Sciences and for information on all the other activities at the Grand Opening.

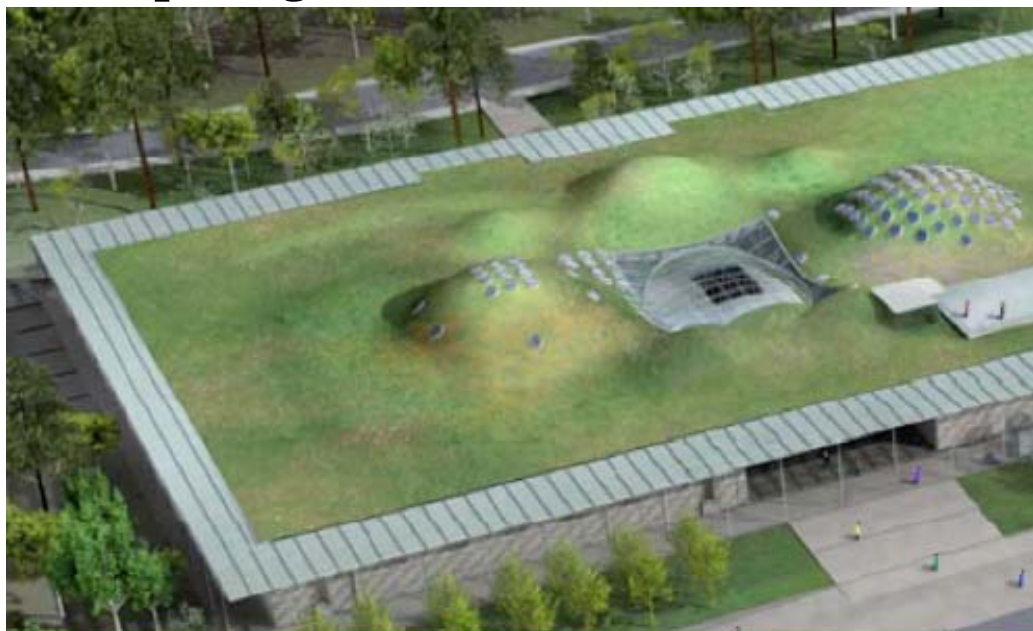
That weekend will be a busy weekend as we are also having our annual Star-B-Q at Mt. Tam's Bootjack picnic area on Saturday, September 27th. Followed by our monthly Members Only Star Party at the usual location at Rock Springs.

September also has a Public Star Party on Mt. Tam on Saturday, September 6th – there will only be one more Public Star Party in October for the rest of this year, our General Meeting with a lecture on NASA's infrared telescope "SOFIA: NASA's Stratospheric Observatory for Infrared Astronomy" on Wednesday, September 17th, and a City Star Party on Saturday, September 20th – this time not at Land's End but at the Randall Museum.

There is a lot going on this month and we hopefully offer something special for all our members, whether you most enjoy a scientific lecture and discussion, public outreach activities, a social gathering at the picnic, or just observing on Mt. Tam. I hope to see many of you at this month's activities, including in an active role helping make all these events enjoyable and successful.

DIRK LAMMERTS
PRESIDENT

Opening Weekend at the California Academy of Sciences



Grand Opening
September 27, 2008

55 Music Concourse Drive
Golden Gate Park
San Francisco, CA 94118

For information, call
(415) 379-8000

On the weekend of September 27-28, the California Academy of Sciences will reopen its doors to the public for the first time. Join the Academy for a weekend-long celebration of historic proportions in San Francisco's Golden Gate Park - with family-friendly activities, delicious food, and entertainment all day long. The festivities on Saturday will begin at 8:30 AM, when Architect Renzo Piano, Executive Director Greg Farrington, Mayor Gavin Newsom and other officials commemorate the completion of the new Academy with an opening ceremony. For updates and details, visit www.calacademy.org

CALL FOR VOLUNTEERS - You Can Be a Part of the Historic Reopening of the Academy and the Morrison Planetarium!

The SFAA is supporting the opening with astronomical activities throughout the weekend. We will have our own booth and we need your help!!! Please sign up for one or more time slots listed below to help conduct our activities. Please note that the afternoon and evening slots on Saturday overlap with our annual picnic and Mt. Tam SUP star party – sign up for times after 3pm on Saturday only if you know for sure that you will not attend the picnic or star party.

Here are some activities to choose from: solar observing, telescope demonstration, SFAA brochure hand out, planet and galaxy distance demonstration, and general astronomy information. But you can also add more to the list if you want to organize your own activity.

This is your chance to represent the club you love. And this will be the biggest and most prominent event that the SFAA is participating in this year. Over 50,000 visitors are expected to attend the opening event! This is an excellent time for us to reconnect with the Academy and show our support. Demonstrate that by volunteering. We can only make this a success with your help.

Please send an email to academyevent@sfaa-astronomy.org and indicate the time slots (more than one will get you extra credit) and the activities you would like to support or organize. Time slots are:

Saturday	8:30am-11am	11am-1pm	1pm-3pm	3pm-5pm	5pm-7pm	7pm-9pm
Sunday	8:30am-11am	11am-1pm	1pm-3pm	3pm-5pm		

Thank you for your support!
Dirk Lammerts



**Saturday . September 27 2008 . 4:00 p.m.
2008 SAN FRANCISCO AMATEUR ASTRONOMERS
ANNUAL STAR-B-QUE**

**MT. TAMALPAIS STATE PARK
BOOTJACK PICNIC AREA**

The 2008 SFAA Annual Star-B-Que in the Bootjack picnic area immediately precedes the members-only SUP event in the Rock Springs parking area.

THE STAR-B-Q STARTS WITH A PICNIC AT BOOTJACK. SFAA SUPPLIES THE BASIC MAIN COURSE PROTEIN (HAMBURGERS, HOT DOGS) - YOU BRING WHATEVER YOU LIKE TO DRINK AND SHARE. IMMEDIATELY FOLLOWING, THE GROUP REPAIRS TO OUR ROCK SPRINGS PERMIT AREA BEHIND LOCKED GATES FOR A NIGHT OF MEMBERS-ONLY STARGAZING.

ON OR BEFORE SEPTEMBER 20, LET ANNETTE GABRIELLI AT EDITOR@SFAA-ASTRONOMY.ORG KNOW IF YOU'RE COMING BY (WITH BOOTJACK IN THE SUBJECT LINE) -- AND PLEASE SHOW UP THIS TIME! WITH THAT SAID, IF YOU NEED TO CANCEL, LET ANNETTE KNOW FOR OBVIOUS REASONS, LIKE HAVING SIX MONTHS' WORTH OF HOT DOG BUNS IN THE FREEZER! THANKS

PLEASE CHECK THE WEBSITE AT [HTTP://WWW.SFAA-ASTRONOMY.ORG/CALENDAR.PHP?DRAWEVENT:792](http://www.sfaa-astrometry.org/calendar.php?drawevent:792) BEFORE THE EVENT AND MONITOR YOUR E-MAIL FOR CONFIRMATION OF DATE, TIME AND LOCATION OR FOR LAST MINUTE CHANGES.



SFAA Proudly Announces STAR REWARDS!

Volunteers make SFAA activities possible – This program is for you!

All SFAA activities and events are planned and organized by volunteers. We instituted this program to recognize your contributions and to encourage broader participation in conducting future SFAA activities.

How do I earn STAR REWARDS points?

You earn STAR REWARDS points by volunteering for SFAA activities. Qualifying activities will be published in the “Above the Fog” newsletter or via email announcement. The program will start on September 1, 2008. The initial list of qualifying activities is printed below. This list will be updated from time to time. We will announce at a later date how STAR REWARDS points will be handed out and administered.

SFAA STAR REWARDS Qualifying Activities (updated: 08/17/08)

Event	Qualifying activity	Points
Academy of Sciences Opening	SFAA booth per 2 or 2.5 hour time slot	1
Annual Star-B-Q	Volunteer (officially signed up)	1
Mt. Tam public star party	Gatekeeper (officially signed up)	1
Mt. Tam SUP star party	Gatekeeper (officially signed up)	1
CSP	Speaker at quarterly CSP at Randall	1
General meeting	Providing refreshments	1

What can I use STAR REWARDS points for?

SFAA will conduct a raffle drawing at the December General Meeting with, for example, astronomy or telescope gadgets, books, etc. as prizes. Your STAR REWARDS points can be exchanged for raffle tickets. The more points you enter, the more tickets you will receive, and the higher your chance of taking one of these prizes home. In addition, we might offer members to redeem STAR REWARDS points to secure a spot at special SFAA sponsored or subsidized events.

STAR REWARDS points earned through June 30, 2009 will expire December 31, 2009. STAR REWARDS points can be earned or redeemed by SFAA members in good standing only. STAR REWARDS points are transferable between SFAA members. Additional terms and conditions might apply. Terms and conditions for the SFAA STAR REWARDS program subject to change upon notice.

2008 SAN FRANCISCO AMATEUR ASTRONOMERS LECTURE SERIES

7:30pm. . Free & Open to the Public . sfaa-astronomy.org

Randall Museum - Randall Museum Theater, 199 Museum Way, San Francisco .
randallmuseum.org

October 15th - Christopher W. Mauche – “The X-Ray Universe”

The speaker will give a general overview of the many different --- but (almost) always extremely hot, violent, and variable --- sources that populate the X-ray sky: our Sun and other stars, X-ray binaries, supernova remnants, galaxies, clusters of galaxies, and million- to billion-solar-mass black holes

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.

MEMBERSHIP DUES



July, was time to renew your membership to the San Francisco Amateur Astronomers. Did you know that you are a member of the club the SF Weekly paper voted 2008's "Best Local Nerds"?! It's been a great year so far and there are many upcoming events you can attend. To make sure you don't miss out on all the fun to be had, please mail your payment to the following address, or bring it with you to a general meeting. If your address, email, or phone has changed, please include a note letting us know. Thanks!

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

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

For Astronomy magazine subscriptions that need to be renewed, please include an additional \$34 (or \$68 for 2 years) and a note with your membership renewal. Sky and Telescope can now be renewed directly at the same price when the notice comes to you, without going through SFAA, or at: <http://www.skyandtelescope.com/>

Vivian, SFAA Treasurer



ANNUAL AWARDS

THE TIME IS NEARING

Astrophotography



Members are encouraged to submit astrophotographs (up to three entries per member) for judging. All entries will be accepted and exhibited at the December meeting and voted upon by the general membership. Entries must have been taken this year (2008) and be of an astronomical theme. Size should be reasonable (11' x 14' or less), mounted or unmounted.

Astronomical Arts



This contest is open to all members and will be judged by the membership at the December General Meeting. Any art related to astronomy is welcome. Your drawings of astronomical objects are worth sharing with other club members, as well as craftwork, sculpture, jewelry, and paintings -- there are almost no restrictions here. Size is a consideration since we have to fit all entries, and club members, in the museum, alongside the Astrophotography Award entries. Also, no living critters, please. The museum may frown upon any living, breathing things that are not part of official exhibits. Live acts are restricted to the human kind. Please bring your entries to the December meeting. Any questions can be directed to club officers listed on page two in this bulletin.

Literary



Submissions may be fact or fiction, humor or opinion. You may have a favorite story about an observing experience, a trip, or about people who have crossed your astronomical path in one memorable way or another. Share the stories of your astronomy observing and/or travel experiences, maybe an article you have written, and enable us to appreciate them with you.

Prizes for first, second and third place winners will be awarded. E-mail your submission to: Editor@sfaa-astronomy.org

Saturday, October 4, 8:00pm - FINAL 2008 ASTRONOMY PROGRAM
MOUNT TAMALPAIS ASTRONOMY PROGRAMS
MOUNT TAMALPAIS MOUNTAIN THEATER

All of our programs are free and open to the general public. Youth are encouraged to attend.

Dr. Joel Primack & Nancy Abrams – University of California, Santa Cruz

“The View From the Center of the Universe: Discovering Our Extraordinary Place in the Cosmos”

The final Mt Tam Astronomy Program of 2008 will be **Sat, Oct 4 at 7:30pm** in the Mountain Theatre. The speakers, **Dr. Joel Primack** and **Nancy Abrams**, developed and have co-taught a course in "Cosmology and Culture" at UC Santa Cruz since 1996. Their talk will be a multimedia presentation, in which Joel presents new cosmological ideas and Nancy discusses their meaning and relevance, performs her own songs, and leading the audience in guided contemplations to help them visualize the ideas. This will be a very exciting program to end the season. Come and be inspired by "*The View from the Center of the Universe: Discovering Our Extraordinary Place in the Cosmos*".

Followed by telescope viewing in the Rock Springs Parking Lot, weather permitting.

Note the earlier starting time! Car pool if possible and bring a flashlight.

Oct is usually one of our warmer months, but dress in layers in case the fog comes in.

Hot line after 3:00pm before heading up the mountain if the weather is questionable.: 415-289-NOFOG.

The 2009 Astronomical Pocket Diary has arrived and will be on sale at the program for \$10. Or send in your order (add \$1 per calendar for handling and postage) to Mt Tam Astronomy Programs, c/o Tinka Ross, 89 Dominican Drive, San Rafael, CA 94901.

Thank you for sharing this information with others. See you on the Mountain! Tinka



From Rob Hawley, President
San Jose Astronomical Association --
CALSTAR 2008 September 25th thru 27th

SJAA is pleased to announce that registration for this year's CalStar is open. CalStar is the traditional fall dark sky party, located at Lake San Antonio County park in San Luis Obispo County (near Paso Robles). By driving the approximately 3 hours to the site you will be rewarded with some of the darkest skies around.

The CalStar website will give you up-to-date information on the event such as food, suggestions for first time attendees, directions, a tour of the various areas, things to do during the day, and even allow you to tour the site so you can select where you want to set up at:<http://www.sjaa.net/calstar>

CalStar offers two options that allow you to tailor your experience: The serious observers prefer the dark enforced area where stricter light rules preserve everyone's eyes so you can see that elusive glob. Or a less formal Casual area is also available with somewhat less rigorous rules.

One big change in 2008 will be food. We decided not to contract with the caterer this year. The meals were simply too expensive and less than 1/4 of the attendees participated previously. We are currently considering alternatives. I hope we can find something that preserves an important social event.

NB Roads in the dark and casual areas will be closed to all traffic after 8 PM. We ask you to respect the road closures and use the Late Arrival Entrance we provide (or arrive before 8).

Showers and flush toilets are available at the nearby campground.

I hope you decide to join us,
Rob Hawley

BENJAMIN DEAN LECTURE SERIES

Jewish Community Center of San Francisco, 3200 California Street (at Presidio Avenue)

The Fall Benjamin Dean Lecture Series in Astronomy features exciting information about some of the newest telescopes and spacecraft exploring space. While the California Academy of Sciences is reopening to the public on September 27, the fall Dean Series will still be held at the Jewish Community Center at 3200 California Street in San Francisco. Tickets are \$5 each, and are available [online](http://www.calacademy.org/events/index.php) at <http://www.calacademy.org/events/index.php> or at the door. Parking is available across the street in the UCSF Laurel Heights campus parking lot or in the JCCSF garage. The #1 California, #3 Jackson, #4 Sutter, and #43 Masonic MUNI lines stop directly in front of the building. The #38 Geary and #24 Divisadero stop four to five blocks away.

The lectures will return to Golden Gate Park to take up their permanent home in the new Morrison Planetarium in January with the first lecture of the 20th Anniversary Benjamin Dean Lecture Series. Speakers will be Fellows of the California Academy of Sciences, and will include cosmologist Alex Filippenko, planet hunter Geoff Marcy, SETI Director Jill Tarter, and astrobiologists David Morrison and David Des Marais.

**Monday, September 22, 7:30 p.m.,
Dr. Richard Pogge, Ohio State University
"Both Eyes Wide Open—The Large Binocular Telescope"**

After more than a decade of construction, the Large Binocular Telescope (LBT) opened both of its massive eyes on the night sky for the first time earlier this year. Located high atop Mount Graham in southeastern Arizona, the LBT is the first of a new generation of extremely large optical telescopes. Its two 8.4-meter diameter primary mirrors are mounted side-by-side, giving it a light gathering power equivalent to a single 11.8-meter circular mirror, making it currently the world's most powerful optical telescope. This talk will introduce the LBT and its suite of powerful instruments, highlight some of the early scientific results, and describe its future capabilities.

Monday, October 27, 7:30 p.m.

**Peter Smith, University of Arizona
"The Phoenix Mars Lander"**

Peter Smith is the Principal Investigator for the Phoenix Mars Mission, and will be sharing the latest images from Phoenix's Surface Stereo Imager and Robotic Arm Camera as well as various geological findings from the Lander's "summer on Mars."

Monday, November 3, 7:30 p.m.

**Dr. Rachel Street, Las Cumbres Observatory affiliated with UC Santa Barbara
"Discovering New Worlds"**

Humans have wondered about the existence of other planets since ancient times. We live in an exciting era when we are discovering planets in other star systems. These systems are turning out to be far more diverse and extraordinary than we ever expected. This talk will follow the timeline of discovery, tracking the search for extra-solar planets from the early false starts to the outstanding successes of recent years. How can these elusive objects be found, what have we learned about them so far and what may forthcoming space missions tell us?

Monday, December 15, 7:30 p.m.

**Dr. Robert Gold, Applied Physics Laboratory, Johns Hopkins University
"The MESSENGER Mission to Mercury"**

The MESSENGER spacecraft is on its way to orbit Mercury, a planet of extremes. Mercury has the greatest temperature variation, the highest density, and the most Earth-like magnetosphere of any planet. Despite Mercury often being the closest planet to Earth, very little was known about it because it is very difficult to observe and study. It has taken 30 years to mount an orbital mission to this terrestrial planet. MESSENGER has already flown by the planet twice. It has revealed exciting new information about Mercury's structure and the geological processes that have shaped it. This lecture will cover the challenges of developing a spacecraft to deal with the extreme environment at Mercury and show some of the amazing scientific results from the MESSENGER flybys.

MARS HOAX – Jane Houston Jones

That darn "Mars will be bigger than the moon" email is circulating again this month. Grrrr. Every year I update my Mars in August web page in case people google around for help determining if it is fact or fallacy. <http://www.otastro.org/Mars2005/> note the angry red font. ;-)

Yesterday our web server stats went astronomical - lots of people were looking at my Mars page. Lo and behold, I discovered that my page was linked to an MNSBC article, titled Mars Hoax Lasts Five Years. Here's the article - it is a really well written one:
<http://cosmiclog.msnbc.msn.com/archive/2008/08/26/1294160.aspx>

If anyone asks you about Mars, you can refer them to the article.

Saturday, September 6, 3:00 p.m. to 9:00 p.m.

RETURN TO THE MOON FAMILY NIGHT

Telescope viewing available until 10:00 p.m.

NASA Ames Research Center, Hwy 101 at Moffett Blvd., Moffett Field CA

Learn how NASA will impact a polar region of the Moon in search of water ice.

Meet and talk with the scientists and engineers leading this exciting effort.

- Hourly Presentations • Kid's Activities
- Videos & Animations • Telescope Viewing of Moon
- Moon Rock Display • LCROSS Items on Sale
- Robotic Rover Demos • And Much More!

LCROSS LRO LPRP flyer and info:

http://lcross.arc.nasa.gov/familynight08/FamNite_Flyer-Fall08.pdf

To volunteer for the Star Party please sign up with Jim Parsons at: jimw_parsons@yahoo.com

September 26-28

2ND ANNUAL SIERRA SUMMER STAR PARTY

The 2nd Annual Sierra Summer Star Party will be held on September 26-28 at the Alpine County Airport in the Eastern Sierras south-east of Lake Tahoe.

For Star Gazing Programs please visit: <http://www.sierrastar.org>

Silicon Valley Astronomy Lectures
Wednesday, October 1, 7:00 p.m.
Smithwick Theater, Foothill College
El Monte Road and Freeway 280, Los Altos Hills, California.

PHYSICIST LEONARD SUSSKIND, Stanford University
THE BLACK HOLE WARS: MY BATTLE WITH STEPHEN HAWKING

Physicist Leonard Susskind of Stanford University will give a non-technical, illustrated talk on "The Black Hole Wars: My Battle with Stephen Hawking" as part of the Silicon Valley Astronomy Lectures. in the

Free and open to the public. Parking on campus costs \$2. Call the series hot-line at 650-949-7888 for more information and driving directions. No background in science will be required for this talk. Seating is first come, first served.

Black holes, the collapsed remnants of the largest stars, provide a remarkable laboratory where the frontier concepts of our understanding of nature are tested at their extreme limits. For more than two decades, Professor Susskind and a Dutch colleague have had a running battle with Stephen Hawking of Cambridge University about the implications of black hole theory for our understanding of reality -- a battle that he has described in his well-reviewed book *The Black Hole Wars*.

In this popular talk, without mathematics, Dr. Susskind tells the story of these wars, explains the ideas that underlie the conflict, and recounts how he got Hawking to retract some of his claims. What's at stake is nothing less than our understanding of space, time, matter and information!

Leonard Susskind is Felix Bloch Professor of theoretical physics at Stanford University and the author of two popular books and many articles on recent developments in science and their meaning. He teaches a popular "continuing studies" course at Stanford on modern physics and has won the American Institute of Physics science writing prize for an article explaining black holes. His research focuses on particle physics, quantum theory, and the nature of gravity. He has a rare knack for explaining the most advanced scientific ideas in everyday terms.

The lecture is co-sponsored by:

- * NASA Ames Research Center
- * The Foothill College Astronomy Program
- * The SETI Institute
- * The Astronomical Society of the Pacific

This talk kicks off the 2008-2009 series of Silicon Valley Astronomy Lectures. A unit of credit (Astronomy 36.01) is available from Foothill College for those who attend all six Wednesday evening lectures and write a short paper on an astronomy topic of their choice. You may register in advance at: www.foothill.edu/reg or get the paperwork at the Oct. 1 lecture by coming a little bit early.

Past Silicon Valley Astronomy Lectures are now available in MP3 format at:

<http://www.astrosociety.org/education/podcast/index.html>

2008-2009 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.

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

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- 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
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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.