

ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

Vol. 58, No. 9 – September 2010

Wednesday, September 15, 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)

**Chris McKay, Planetary Scientist
Space Science Division, NASA Ames**

"HOT AND COLD EXTREME ENVIRONMENTS"



A short summary of studies of life in extreme environments, both hot and cold, as relevant to the search for life in the Solar System.

Chris McKay, Planetary Scientist with the Space Science Division of NASA Ames. Chris received his Ph.D. in AstroGeophysics from the University of Colorado in 1982 and has been a research scientist with the NASA Ames Research Center since that time. His current research focuses on the evolution of the solar system and the

origin of life. He is also actively involved in planning for future Mars missions including human exploration. Chris been involved in research in Mars-like environments on Earth, traveling to the Antarctic dry valleys, Siberia, the Canadian Arctic, and the Atacama & Sahara deserts to study life in these Mars-like environments. He was a co-I on the Huygens probe to Saturn's moon Titan in 2005, the Mars Phoenix lander mission in 2008, and the Mars Science Laboratory mission for 2011.

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.

September 15
October 20

November 17
December 15

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

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

September 18/7:30
October 16/6:30

November 13/5:00
December 11/5:00

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).

September 4
October 2

November 6
December 4

MT TAM PUBLIC STAR PARTIES – TO BE ANNOUNCED

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.

SEPTEMBER 11 - 8: 30pm *THE GLOBE AT NIGHT: HOW AND WHY TO PRESERVE THE NIGHT SKY*
Kenneth Frank, Astronomical Society of the Pacific-Dark Sky Network

OCTOBER 9 - 8:00pm *TERRAFORMING THE SECOND HOME FOR HUMANITY*
Jim Brown, The Mars Society

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

2010 San Francisco Amateur Astronomers Lecture Series

Free & Open to the Public

sfaa-astronomy.org

Randall Museum
199 Museum Way
San Francisco
Randall Museum Theater
randallmuseum.org
7:30 p.m.

September 15th

Chris McKay, NASA Ames

“Hot and Cold Extreme Environments”. This talk centers on astrobiologist Chris McKay’s travels and his research to learn about possible life in our Solar System.

October 20th

Jennifer L. Heldmann, NASA Ames

Lunar Impact: NASA’s LCross Mission

Dr. Heldman served on the Science Team, Payload Team, and as the Observation Campaign Coordinator for NASA’s Lunar Crater Observation and Sensing Satellite (LCROSS) mission to study the permanently shadowed regions of the lunar poles. The science goals of LCROSS included investigating the presence or absence of water on the Moon as well as furthering our understanding of other species trapped in these regions.

November 17th

Lynn Cominsky, NASA Fermi & Sonoma State Astrophysics Dept.

Dr. Cominsky has been analyzing data on high energy physics and neutron star binaries from X-ray satellites for over 25 years. She will share the most recent discoveries.

Dec. 15th





John Dillon, past president of San Francisco Amateur Astronomers

John will continue with another of his insightful talks on the history of science, especially as it relates to astronomical knowledge





September 2010 Almanac for San Francisco (Pacific Daylight Time)


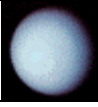
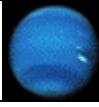
(Source: US Naval Observatory)

Sun and Moon Data:

Date	Astronomical Twilight Begins	Sunrise	Sunset	Astronomical Twilight Ends	Moon	Moonrise	Moonset
4 Sep	5:12 am	6:43 am	7:34 pm	9:05 pm		2:10 am	5:02 pm
11 Sep	5:19 am	6:49 am	7:23 pm	8:53 pm		10:49 am	9:11 pm
18 Sep	5:26 am	6:54 am	7:12 pm	8:41 pm		4:49 pm	2:33 am
25 Sep	5:33 am	7:00 am	7:02 pm	8:29 pm		7:55 pm	9:17 am

Planetary Data:

	Mercury		Venus		Mars		Jupiter	
								
	Sex (1-6) / Leo (7-28) / Vir (29-30)		Virgo (1-23) / Libra (24-30)		Virgo (1-25) / Libra (26-30)		Pisces	
Date	Rise	Set	Rise	Set	Rise	Set	Rise	Set
4 Sep	6:39 am	7:10 pm	10:30 am	9:08 pm	10:06 am	9:15 pm	8:19 pm	8:19 am
11 Sep	5:47 am	6:41 pm	10:31 am	8:51 pm	10:02 am	8:59 pm	7:49 pm	7:47 am
18 Sep	5:27 am	6:39 pm	10:28 am	8:32 pm	9:57 am	8:43 pm	7:19 pm	7:15 am
25 Sep	5:40 am	6:29 pm	10:21 am	8:10 pm	9:53 am	8:29 pm	6:49 pm	6:43 am

	Saturn		Uranus		Neptune	
						
	Virgo		Pisces		Aquarius	
Date	Rise	Set	Rise	Set	Rise	Set
4 Sep	8:32 am	8:37 pm	8:12 pm	8:14 am	6:49 pm	5:35 am
11 Sep	8:08 am	8:11 pm	7:44 pm	7:45 am	6:21 pm	5:06 am
18 Sep	7:45 am	7:46 pm	7:16 pm	7:16 pm	5:53 pm	4:38 am
25 Sep	7:22 am	7:20 pm	6:48 pm	6:47 pm	5:25 pm	4:09 am

September Phenomena:






3 Sep, 6:00 am: Mercury at inferior conjunction
 5 Sep, 1:00 pm: Mars 2.1° N of Spica
 7 Sep, 2:00 am: Regulus 4.3° N of Moon
 7 Sep, 2:00 pm: Mercury 1.5° N of Moon
 10 Sep, 4:00 pm: Spica 2.8° N of Moon
 10 Sep, 10:00 pm: Mars 4.7° N of Moon
 11 Sep, 5:00 am: Venus 0.3° N of Moon
 11 Sep, 7:00 pm: Mercury stationary
 13 Sep, 6:00 pm: Pluto stationary

13 Sep, 11:00 pm: Antares 2.1° S of Moon
 15 Sep, 7:00 pm: Pluto 5.4° N of Moon
 18 Sep, 6:00 pm: Jupiter 0.8° S of Uranus
 20 Sep, 6:00 am: Neptune 4.2° S of Moon
 21 Sep, 5:00 am: Jupiter at opposition
 21 Sep, 11:00 am: Uranus at opposition
 22 Sep, 8:09 pm: Autumnal equinox
 22 Sep, 10:00 pm: Uranus 5.7° S of Moon
 30 Sep, 5:00 pm: Saturn at conjunction





October 2010 Almanac for San Francisco (Pacific Daylight Time)



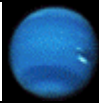
(Source: US Naval Observatory)

Sun and Moon Data:

Date	Astronomical Twilight Begins	Sunrise	Sunset	Astronomical Twilight Ends	Moon	Moonrise	Moonset
2 Oct	5:39 am	7:07 am	6:51 pm	8:18 pm		1:04 am	3:36 pm
9 Oct	5:46 am	7:13 am	6:40 pm	8:07 pm		9:37 am	7:46 pm
16 Oct	5:52 am	7:19 am	6:31 pm	7:58 pm		3:20 pm	1:24 am
23 Oct	5:58 am	7:26 am	6:21 pm	7:49 pm		6:31 pm	8:10 am
30 Oct	6:05 am	7:33 am	6:13 pm	7:42 pm		0:04 am	2:12 pm

Planetary Data:

	Mercury		Venus		Mars		Jupiter	
								
	Vir (1-24) / Lib (25-31)		Lib (1-19) / Vir (20-31)		Lib (1-26) / Sco (27-31)		Psc (1-13) / Aqr (14-31)	
Date	Rise	Set	Rise	Set	Rise	Set	Rise	Set
2 Oct	6:11 am	6:32 pm	10:06 am	7:45 pm	9:50 am	8:14 pm	6:20 pm	6:11 am
9 Oct	6:45 am	6:33 pm	9:43 am	7:17 pm	9:47 am	8:01 pm	5:50 pm	5:39 am
16 Oct	7:18 am	6:33 pm	9:08 am	6:45 pm	9:44 am	7:48 pm	5:21 pm	5:08 am
23 Oct	7:49 am	6:33 pm	8:23 am	6:11 pm	9:41 am	7:36 pm	4:51 pm	4:37 am
30 Oct	8:19 am	6:34 pm	7:32 am	5:37 pm	9:38 am	7:25 pm	4:23 pm	4:07 am

	Saturn		Uranus		Neptune	
						
	Virgo		Pisces		Aquarius	
Date	Rise	Set	Rise	Set	Rise	Set
2 Oct	6:58 am	6:55 pm	6:19 pm	6:18 am	4:57 pm	3:41 am
9 Oct	6:35 am	6:30 pm	5:51 pm	5:49 am	4:29 pm	3:13 am
16 Oct	6:12 am	6:04 pm	5:23 pm	5:20 am	4:01 pm	2:45 am
23 Oct	5:48 am	5:39 pm	4:55 pm	4:52 am	3:54 pm	2:17 am
30 Oct	5:25 am	5:13 pm	4:27 pm	4:23 am	3:06 pm	1:50 am

October Phenomena:

7 Oct, 1:00 pm: Venus stationary
 8 Oct, 3:00 am: Spica 2.7° N of Moon
 8 Oct, 4:00 am: Mercury 0.5° of Saturn
 9 Oct, 10:00 am: Venus 3.2° S of Moon
 9 Oct, 5:00 pm, Mars 3.5° N of Moon

11 Oct, 8:00 am: Antares 2.3° S of Moon
 16 Oct, 6:00 pm: Mercury at superior conjunction
 17 Oct, 0:00 am: Mercury 2.9° N of Spica
 21-22 Oct: Orionids meteor shower
 28 Oct, 6:00 pm: Venus at inferior conjunction

2010 GENERAL MEETING SNACKS SIGN-UP LIST

San Francisco Amateur Astronomers list for volunteers to bring snacks before the lectures at the Randall Museum. Plan to arrive to set up by 7:00pm.

Plan to bring “munchie” snacks and soft drinks. The Randall supplies a coffee pot to make hot water, instant coffee & tea bags, and paper supplies.

You may request reimbursement or donate your items to SFAA with thanks.

Date	Name	E-mail	Phone #
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October 20	_____		
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November 17	_____		
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December 15	_____		
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You will be contacted to confirm the month you've volunteered to bring snacks.

Thank you.



***MT TAMALPAIS STATE PARK
MT. TAMALPAIS INTERPRETIVE ASSOCIATION
2010 ASTRONOMY PROGRAMS
our 22nd season on the Mountain***

OCTOBER 9 8:00pm

***TERRAFORMING THE SECOND HOME
FOR HUMANITY***

The ultimate development of a planet as a second home for Earth life is terraforming. Why is Mars the most productive next place to settle and how can it be terraformed. Jim Brown, The Mars Society

As always the program is FREE and open to the general public. Weather permitting it will be followed by telescope viewing in the Rock Springs parking lot with the San Francisco Amateur Astronomers. Dress appropriately (June was cold!) and bring a flashlight. Please car pool if possible. If the weather is questionable you can check the hotline 415-455-5370 after 3:00pm which is updated IF there is a change.



**WHAT'S UP SEPTEMBER:
INTERNATIONAL OBSERVE THE MOON
NIGHT**

Jane Houston Jones

The countdown is on!

International Observe the Moon Night is
September 18th! There is a fantastic website
here:

<http://observethemoonnight.org/downloads/>.

My September 2010 What's Up Podcast is all about this moon and month. Many versions and a link to iTunes
<http://solarsystem.nasa.gov/news/whatsup-view.cfm?WUID=564>

Youtube <http://www.youtube.com/profile?user=JPLnews#p/u/0/wq0XfghpHH0>

If you want some NASA lunar lithographs handouts for your clubs September 18th event, send me a note with mailing address and telephone number at that address and I will send out a nice handout -I can handle 50-100 handouts. Request before the 10th and my package should arrive in time

Jane Houston Jones
Monrovia, CA

My What's Up Podcast: Sept 2010: NASA <http://is.gd/eSMhz> Youtube <http://is.gd/eSMnh>
Twitter: <http://twitter.com/jhjones> /CassiniSaturn /otastro Blog: <http://jane.whiteoaks.com/>

October 8-9, 2010 Annual SFAA NIGHT - Fremont Peak Observatory



Photo courtesy of ART ROSCH
Some previous years photos:
[05](#) [06](#) [07](#) [08](#) [09](#)

Each year for the past few years the FPOA has graciously granted us use of their 30-inch telescope 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, October 8th evening for an exclusive private gathering of members from the SFAA.

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

[Here's](#) who has signed up.

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 has long been popular as a nearby dark sky observing and astrophotography site with a excellent southern horizons, and is even mentioned as a stopping place on page 50 of the May-June 2005 issue of AAA's Via Magazine! If you're interested, contact [Doug](#).

Dr. Doris Sloan, an FPOA member 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 Those interested in joining FPOA can learn about the benefits of membership and [download an application form](#).

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 July 17th. However, please do let [Doug Brown](#) know if you're interested in coming.. The Fremont Peak Star B Q is always fun and sure to please.

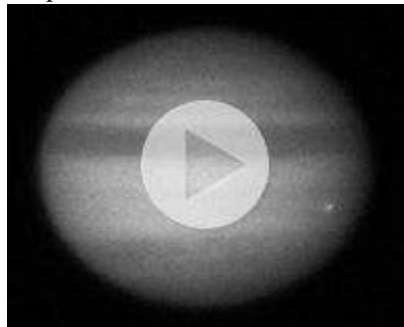
For more information about Fremont Peak Observatory, including excellent directions to Fremont Peak State Park and the Observatory, visit their web site at <http://www.fpoa.net>

Looking forward to seeing you again this year,

Ken

NASA SCIENCE NEWS-FIREBALLS LIGHT UP JUPITER

Sept. 9, 2010: In a paper published today in the *Astrophysical Journal Letters*, a group of professional and amateur astronomers announced that Jupiter is getting hit surprisingly often by small asteroids, lighting up the giant planet's atmosphere with frequent fireballs.



[View a movie](#) of the June 3rd impact recorded by Christopher Go of Cebu City, the Philippines.

"Jupiter is a big gravitational vacuum cleaner," says co-author and JPL astronomer Glenn Orton. "It is clear now that relatively small objects left over from the formation of the solar system 4.5 billion years ago still hit Jupiter frequently."

The impacts are bright enough to see through backyard telescopes on Earth. Indeed, amateur astronomers were the first to detect them, recording two fireballs in 2010 alone—one on June 3rd and another on August 20th.

Professional astronomers at NASA and elsewhere have followed up on the amateur observations, hoping to learn more about the impacting bodies. According to today's

Letter, first-authored by Ricardo Hueso of the Universidad del País Vasco in Spain, the June 3rd fireball was caused by an object some 10 meters in diameter. When it hit Jupiter, the impact released about 10^{15} Joules of energy. For comparison, that's five to ten times *less* energy than the Tunguska event of 1908, when a meteoroid exploded in Earth's atmosphere and leveled millions of trees in a remote area of Russia. Scientists continue to analyze the Aug. 20th fireball, but think it was comparable in scale to the June 3rd event.

Before amateurs spotted these fireballs, scientists were unaware collisions so small could be observed. The first hint of their easy visibility came in July 2009 when Anthony Wesley, an amateur astronomer from Australia, discovered a dark spot on Jupiter. It was clearly the swirling debris of an impact event that he had only just missed. Next time, however, his luck would improve. On June 3, 2010, he caught a fireball in action.

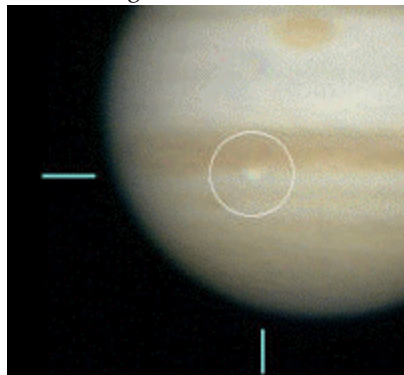


A color composite image of the June 3rd Jupiter impact flash. Credit: Anthony Wesley observing from Broken Hill, Australia. [\[more\]](#)

"I was watching real-time video from my telescope when I saw a 2.5-second-long flash of light near the edge of Jupiter's disk," says Wesley. "It was clear to me straight away it had to be an event on Jupiter."

Another amateur astronomer, Christopher Go of the Philippines, confirmed that the flash also appeared in his recordings. Professional astronomers, alerted by email, looked for signs of the impact in images

from larger telescopes, including NASA's Hubble Space Telescope, the European Southern Observatory's Very Large Telescope in Chile, and Gemini Observatory telescopes in Hawaii and Chile. Scientists saw no thermal disruptions or typical chemical signatures of debris, which allowed them to put a limit on the size of the object.



The Aug. 20th fireball recorded by Aoki Kazuo of Tokyo, Japan.

The second fireball on Aug. 20th was first detected by Japanese amateur astronomer Masayuki Tachikawa of Kumamoto city and quickly confirmed by another Japanese amateur, Aoki Kazuo of Tokyo. This one flashed for about 1.5 seconds and, like the June 3rd fireball, left no debris observable by large telescopes.

"It is interesting to note that while Earth gets smacked by a 10-meter-sized object about every 10 years on average, it looks as though Jupiter gets hit with the same-sized object [as much as] a few times each month," comments Don Yeomans, manager of the Near-Earth Object Program Office at JPL, who was not directly involved in the study.

Learning how often Jupiter is hit can tell astronomers something about the meteoroid population throughout the solar system—a matter of considerable interest right here

on Earth. Just yesterday on Sept. 8th, a 10-meter class asteroid named 2010 RF12 flew past our planet without hitting. A somewhat smaller space rock, 2008 TC3, actually burned up in the atmosphere above Sudan two years ago.

"The Jupiter impact rate is still being refined," adds Yeomans, "and studies like this one help to do just that."

To learn more about the original research, read "First Earth-based Detection of a Superbolide on Jupiter" by R. Hueso et al, in the *Ap J Letters*, 2010, 721, L129

SEPTEMBER ASTRONOMY EVENTS

Kenneth Lum

<p>EVERY Friday & Saturday 7:30pm - 10:30pm Weather Permitting FREE TELESCOPE VIEWING</p> <p>EVERY Saturday & Sunday 12:00 Noon – 5:00pm Weather Permitting DAYTIME TELESCOPE VIEWING FREE WITH GENERAL ADMISSION</p> <p>Chabot Space and Science Center 10000 Skyline Boulevard Oakland, CA 94619-2450 (510) 336-7300</p>	<p>EXPLORE THE NIGHT SKIES AT THE CHABOT OBSERVATORIES For more information: http://www.chabotspace.org/</p> <p>Free Telescope Viewing Regular hours are every Friday & Saturday evening, weather permitting: 7:30pm - 10:30pm Come for spectacular night sky viewing the best kept secret in the Bay Area and see the magnificence of our telescopes in action!</p> <p>Daytime Telescope Viewing On Saturday and Sunday afternoons come view the sun, moon, or Venus through Chabot's telescopes. Free with General Admission. (weather permitting) 12pm - 5pm: Observatories Open</p>
<p>Monday September 13 7:00 PM - 9:00 PM</p> <p>California Academy of Sciences 55 Music Concourse Dr. San Francisco, CA 94118 USA</p> <p>Cost: \$12 General, \$10 Seniors, \$6 Members</p>	<p>Benjamin Dean Lecture - Kepler: Are There Any Good Worlds Out There? The Kepler Mission began on May 12, 2009, initiating NASA's first search for Earth-like planets. Kepler released light curves for the first 43 days of observations for over 150,000 target stars and announced the identification of over 700 planetary candidates, 3000 eclipsing binaries, and five multiple transiting planet candidate systems. Jenkins will discuss the equipment, mission and how the Science Pipeline will be modified to reveal small Earth-like planets in habitable zones of their stars. Speaker: Jon Jenkins, Principal Investigator, SETI Institute & Co-investigator, Kepler Discovery Mission Seating is limited. Reserve a space online or over the phone at 800-794-7576.</p>
<p>Wednesday September 15 12 Noon</p> <p>SETI Institute Colloquium Series</p> <p>Clocktower Cafe Conference Room</p>	<p>From the Earth to Mars: Lessons for Mars Science and Exploration from the Haughton-Mars Project, Devon Island, High Arctic Pascal Lee, SETI Institute, Mars Institute, & NASA Ames Research Center</p> <p>The Haughton impact crater site on Devon Island, High Arctic, is one of the most Mars-like places on Earth. Since 1997, the Haughton-Mars Project (HMP) has been conducting science and exploration research at the site, and established the HMP Research Station, now the largest privately operated polar research station in the world. Geology and astrobiology investigations have led to the formulation of the “Mars, Always Cold, Sometimes Wet” Model. Dr. Lee will</p>

<p><u>425 N. Whisman Road</u> <u>Mountain View</u></p>	<p>describe how Haughton is being used to conduct exploration investigations which are helping pave the way towards the first human mission to Mars.</p>
<p>Friday September 17 9:00 p.m.</p> <p>Foothill Community College 12345 Moody Rd. Los Altos Hills</p>	<p>Foothill Observatory is open for public viewing every clear Friday evening from 9:00 p.m. until 11:00 p.m. Visitors can view the wonders of the universe through the observatory's 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.</p> <p>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.</p> <p>The public viewing programs at Foothill are free of charge and are open to guests of all ages. Please note that the observatory is closed when the weather is cloudy. Also note that visitor parking permits are available from the machines in the parking lots for \$2.00.</p> <p>Come to Foothill Observatory and join us in the exploration of our Universe!</p> <p>Foothill Observatory is located on the campus of Foothill College in Los Altos Hills, CA. Take Highway 280 to the El Monte Rd exit. The observatory is next to parking lot 4. Parking at the college requires visitor parking permits that are available from the machines in the parking lots for \$2.00.</p> <p>http://www.pastro.org/dnn/Observatory/FoothillObservatory.aspx</p>
<p>Saturday September 18 10:00 a.m. -12 Noon</p> <p>Foothill Community College 12345 Moody Rd. Los Altos Hills</p>	<p>Foothill College Observatory 10AM-12PM if it is clear 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.</p> <p>Foothill Observatory is located on the campus of Foothill College in Los Altos Hills, CA. Take Highway 280 to the El Monte Rd exit. The observatory is next to parking lot 4. Parking at the college requires visitor parking permits that are available from the machines in the parking lots for \$2.00.</p>
<p>Friday, September 17 Saturday, September 18 6:00 pm Weather Permitting FREE TELESCOPE VIEWING</p> <p>Chabot Space and Science Center</p>	<p>Dinner, a Movie, and the Universe at Chabot Space Center</p> <p>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).</p> <p>ADVANCED TICKETS A Movie and the Universe: Admission to Chabot includes all access to our interactive</p>

<p>10000 Skyline Boulevard Oakland, CA 94619-2450 (510) 336-7300</p>	<p>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.</p>
<p>Friday, September 17 Saturday, September 18 7:30pm - 10:30pm Weather Permitting FREE TELESCOPE VIEWING</p> <p>EVERY Saturday & Sunday 12:00 Noon – 5:00pm Weather Permitting DAYTIME TELESCOPE VIEWING FREE WITH GENERAL ADMISSION</p> <p>Chabot Space and Science Center 10000 Skyline Boulevard Oakland, CA 94619-2450 (510) 336-7300</p>	<p>EXPLORE THE NIGHT SKIES AT THE CHABOT OBSERVATORIES For more information: http://www.chabotspace.org/</p> <p>Free Telescope Viewing Regular hours are every Friday & Saturday evening, weather permitting: 7:30pm - 10:30pm Come for spectacular night sky viewing the best kept secret in the Bay Area and see the magnificence of our telescopes in action!</p> <p>Daytime Telescope Viewing On Saturday and Sunday afternoons come view the sun, moon, or Venus through Chabot's telescopes. Free with General Admission. (weather permitting) 12pm - 5pm: Observatories Open</p>
<p>Saturday September 18 NASA Ames Moffett Field Mt. View off Hwy 101 parade ground in front of Building 17</p>	<p>INTERNATIONAL OBSERVE THE MOON NIGHT</p> <p>On Saturday, September 18, 2010, International Observe the Moon Night will be celebrated at NASA Ames. The idea started at four institutions, NASA Goddard Space Flight Center in Maryland (hosted by the Lunar Reconnaissance Orbiter E/PO team), NASA Ames Research Center in California (hosted by the NASA Lunar Science Institute and the Lunar Atmosphere and Dust Environment Explorer (LADEE) mission E/PO teams), the Lunar and Planetary Institute in Texas, and NASA Marshall Space Flight Center (hosted by the Lunar Quest Program Office E/PO). The idea has quickly gained momentum with the Astronomical Society of the Pacific and the amateur astronomy associations of the NASA Night Sky Network joining in to host additional events across the country. Astronomers Without Borders has now joined the partnership and, as of August 17, events are now being held in 30 U.S. states and 22 countries. These numbers promise to continue to grow with the announcement from the Astronomical League that it will be encouraging its member organizations to participate.</p> <p>The event at Ames is scheduled to run from 7PM to 11PM. The location will be the parade ground in front of Building 17. David Morrison, former Director of the NASA Lunar Science Institute, will present a talk about Water on the Moon. Barry Blumberg, Nobel laureate and former Director of the NASA Astrobiology Institute, will give a presentation on Citizen Science and Moon Zoo. Greg Delory, Deputy Project Scientist for the LADEE Mission, will give a presentation on LADEE Science. The presentations will be streamed live to our remote event locations.</p>

	<p>Our guests at Ames will be able to conduct their own first-hand observations of the Moon through amateur telescopes. Members of the San Mateo County Astronomical Society, the San Jose Astronomical Association, and the Peninsula Astronomical Society are being asked to set up their telescopes on the parade ground to share the excitement of observing the Moon and amateur astronomy with the public. The Moon on that evening will be in the waxing gibbous phase. During numerous past public events at Ames, this opportunity to view through telescopes has proven to be an especially popular and engaging activity for the public. It is also a great way for members of the public to become familiar with their local astronomy club. We are looking to have approximately 40 telescopes set up for viewing. Amateur astronomers who would like to participate are asked to RSVP to Brian Day at Brian.H.Day@nasa.gov. We will then send you detailed information on the event.</p>
<p>Saturday September 18</p> <p>College of San Mateo Bldg. 36 Marie Curie parking lot</p> <p>Free and open to the public</p>	<p>JAZZ UNDER THE STARS – Free Observatory Event</p> <p>Visit our observatory July 17 from 8-11 pm for "Jazz Under The Stars." We'll listen to KCSM Jazz 91.1 FM, and view the moon and exciting objects of the summer sky through our telescopes. Sunset is around 8:30, and parking is free in Lot 5, Marie Curie.</p> <p>If skies are foggy or overcast, the event will not take place. Check back here for the latest forecast.</p> <p>"Jazz Under The Stars" is possible with major support from San Mateo County Astronomical Society members.</p> <p>For info or questions: 650-378-7241 or email: drumhellerd@smccd.edu</p> <p>Children are welcome and need to be attended at all times. NO food or drinks in the observatory.</p>

2010 Club Officers & Contacts

<i>President</i>	DAVE FREY	davef@SFAA-Astronomy.org
<i>Vice President</i>	Vivian White	vicepresident@sfaa-astronomy.org
<i>Secretary</i>		
<i>Treasurer</i>	Dave Wilton	treasurer1@sfaa-astronomy.org
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<i>City Star Party</i>	Stephanie Ulrey	csp@sfaa-astronomy.org
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<i>Webmaster</i>	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

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.



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

MEMBERSHIP APPLICATION

Membership is billed for each upcoming year on June 30. Between January 1 and June 30, 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