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

Vol. 58, No. 5 – May 2010

Wednesday, June 16, 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)

Dr. MATE ADAMKOVICKS
UC Berkeley Astronomy Department

The Meteorology of Titan, Saturn's Largest Moon
A Presentation by Dr. Máté Ádámkovics
UC Berkeley Astronomy Dept.

Saturn's moon Titan hosts a beautifully complex atmosphere with clouds, fog, and rain, where lakes form and the surface is etched and eroded through an exotic hydrological cycle. Due to the extremely cold temperatures on this moon, the fluid agent that links the surface to the air is methane. On Titan, methane plays the role that water does on Earth, while the water there is part of the rocky regolith. Observations from the Cassini Mission have revealed a complex moon that is home to physical processes and atmospheric interactions with the surface that are more Earth-like than any other planet in the solar system, or any planet we know of beyond. Observations from ground-based telescopes have diagnosed the seasonal changes in atmospheric conditions through migrating global hazes, while close inspection of Cassini data continue to lead to new discoveries about how the atmosphere is formed and maintained. I will describe and discuss results from both the Cassini Mission and ground-based telescopes that catalog the fascinating interactions between the atmosphere and surface of a dynamic and strangely familiar world.

PRESIDENT'S MESSAGE

It's amazing what a passion for astronomy and a few volunteers can produce……..
Several weeks ago I went up to Chico CA, with my boys, to visit my sister. Around dusk, she suggested that we go for a walk in Bidwell Park. As it turned, out this was just a ruse to get us all out to the Chico Community Observatory, set next to a small lake in a beautiful location among the buttes. It has two 14" Celestron Schmidt-Cassegrain telescopes and an outdoor viewing area. It's open on every clear night, and is completely funded and staffed through volunteer efforts. Check out the website at http://www.chicoobservatory.com/index.html.

Astronomy at the National Spelling Bee: The stars weren't aligned for Neetu Chandak in her quest to win the Scripps National Spelling Bee on Friday. Neetu, of Seneca Falls, ended her run at this year's national bee after misspelling an astronomy term …….. "apogalacteum." Neetu spelled "apogalactium," missing by just one letter." Apogalacteum – Look it up! I'm desperately trying to casually use the term at work……..

In other news --

Yosemite: The response to the Yosemite Star Party this year has been tremendous. As I write, 40 people are signed up and confirmed and I have started a waiting list. If you are still interested in attending, please send me an e-mail at fiestascope@yahoo.com. No one has been turned away in the past; usually a few people cancel at the last minute. So send me an e-mail and keep your finderscopes, er I mean fingers, crossed.

Mt Tam Public Star Party: The next Mt Tam Public Star party is on June 19th. We always need volunteers to bring their telescopes and to work the gate. Check the website for gatekeeper sign ups and classes. Star party dates are always included in the "Important Dates" section of the newsletter and on our web site at http://www.sfaa-astronomy.org/starparties/ .

SFAA at Fremont Peak – October 8 and 9: If you've ever wanted to develop aperture envy, this is your chance. Looking through the 30" telescope at Fremont Peak is an awesome experience. Many other events are scheduled for the upcoming months – see information in this newsletter.

Changing of the guard:

Treasurer: As many of you know, Dave Wilton is moving to Canada to continue his education. Dave has done a great job as our treasurer and has been a fixture at the Mt Tam Star parties over the years. Luckily the skies are dark up north and he will be closer to the northern lights. You will be missed, Dave, and I think I speak for the whole club in thanking you for your volunteer efforts and the great job you have done. Good Luck!

Dave's replacement is new club member Sue-Ellen Speight. Sue-Ellen hails from the Southern Hemisphere and she misses the LMCs and Omega Centauri – but she is making up for this void by making many friends within the SFAA. Thanks Sue-Ellen for stepping up to the astronomical plate.

Web Master: After many years of keeping our web site user friendly and current, Joe Amato has retired as our webmaster. Month after month, he has tirelessly toiled away in the background every month, keeping us up-to-date and honest. Thank You, Joe, for the many years of time and effort you have given SFAA as our webmaster. We look forward to seeing and sharing time with you on the Mountain.

Mitchell Shoenbrun has volunteered to be our new webmaster. Mitchell came to us through this year's telescope making class at the Randall. He is currently working on a 12.5" mirror and we expect that he will be ready for a star test in the coming weeks. Thank You, Mitchell, for volunteering to step into Joe's spot. We all look forward to helping you implement new ideas for our web site.

Thanks everyone for volunteering your valuable time – Let's clean up those lenses, get out there and show the world the universe. You will be happy that you did!!!!!!!!!!

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.

June 16	August 18	November 17
July 21	September 15	December 15
	October 20	

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

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

June 5/8:30	August 21/7:30	November 13/5:00
July 13/8:30 Tue	September 18/7:30	December 11/5:00
	October 16/6:30	

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).

June 12	August 7	November 6
July 10	September 4	December 4
	October 2	

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/

San Francisco Amateur Astronomers Lecture Series, 2010

Free & Open to the Public sfaa-astronomy.org

Randall Museum, 199 Museum Way, S.F.
7:30pm , Randall Museum Theater randallmuseum.org

July 21st
Jack Lissauer, NASA Ames
Dr Lissauer will discuss the Kepler Mission, launched March 2009 to search for habitable planets, and the most recent discoveries.

August 18th
Bryan Mendez, UC Berkeley
We will learn about the latest discoveries from NASA's WISE (Wide Field Infrared Survey Explorer) mission.

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 To be announced.

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

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 be reimbursed, or donate your items to SFAA, with thanks.

Date Name E-mail
phone #

June
16_____

July 21_____

August 18_____

September 15_____

October 20_____

November 17_____

December15_____

You will be contacted to confirm the month you've volunteered to bring snacks.

Thank you.

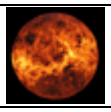
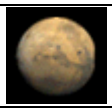
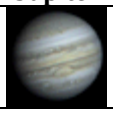
June 2010 Almanac for San Francisco (Pacific Daylight Time)

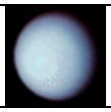
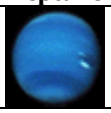
(Source: US Naval Observatory)

Sun and Moon Data:

Date	Astronomical Twilight Begins	Sunrise	Sunset	Astronomical Twilight Ends	Moon	Moonrise	Moonset
5 Jun	3:55 am	5:48 am	8:29 pm	10:22 pm		1:28 am	1:57 pm
12 Jun	3:53 am	5:47 am	8:32 pm	10:27 pm		5:49 am	9:12 pm
19 Jun	3:53 am	5:48 am	8:35 pm	10:30 pm		2:02 pm	1:26 am next day
26 Jun	3:55 am	5:40 am	8:36 pm	10:30 pm		9:03 pm	5:55 am

Planetary Data:

	Mercury		**Venus**		**Mars**		**Jupiter**	
								
	Ari (1–4) / Tau (5–24) / Gem (25–30)		Gem (1–11) / Can (12–28) / Leo (29–30)		Leo		Pisces	
Date	**Rise**	**Set**	**Rise**	**Set**	**Rise**	**Set**	**Rise**	**Set**
5 Jun	4:44 am	6:34 pm	8:17 am	11:05 pm	11:37 am	1:06 am	2:17 am	2:14 pm
12 Jun	4:49 am	7:05 pm	8:30 am	11:07 pm	11:28 am	0:48 am	1:52 am	1:51 pm
19 Jun	5:06 am	7:47 pm	8:44 am	11:06 pm	11:19 am	0:29 am	1:26 am	1:27 pm
26 Jun	5:37 am	8:31 pm	8:58 am	11:03 pm	11:11 am	0:11 am	1:01 am	1:03 pm

	Saturn		**Uranus**		**Neptune**	
						
	Virgo		Pisces		Aquarius	
Date	**Rise**	**Set**	**Rise**	**Set**	**Rise**	**Set**
5 Jun	1:57 pm	2:23 am	2:16 am	2:16 pm	0:55 am	11:41 am
12 Jun	1:30 pm	1:56 am	1:49 am	1:49 pm	0:28 am	11:14 am
19 Jun	1:03 pm	1:29 am	1:22 am	1:22 pm	0:00 am 11:56 pm	10:46 am
26 Jun	12:37 pm	1:02 am	0:54 am	12:55 pm	11:28 pm	10:18 am

June Phenomena:

3 Jun, 7:00 am: Neptune 4.2° S of Moon
5 Jun, 11:00 pm: Uranus 5.8° S of Moon
6 Jun, 9:00 pm: Mars 0.8° N of Regulus
8 Jun, 5:00 am: Jupiter 0.4° S of Uranus
8 Jun, 10:00 am: Venus 4.7° S of Pollux
10 Jun, 5:00 pm: Mercury 5.2° S of Moon
14 Jun, 10:00 pm: Venus 3.7° N of Moon
15 Jun, 10:00 am: Mercury 4.5° N of Aldebaran
16 Jun, 10:00 pm: Regulus 4.3° N of Moon
17 Jun, 7:00 am: Mars 5.3° N of Moon
20 Jun, 6:00 pm: Spica 3.1° N of Moon
21 Jun, 4:28 am: Summer solstice
24 Jun, 5:00 am: Antares 1.8° S of Moon
25 Jun, 11:00 am: Pluto at opposition
26 Jun, 3:00 am: Pluto at 5.8° N of Moon
26 Jun, 4:38 am: Partial lunar eclipse, South Pacific
28 Jun, 5:00 am: Mercury at superior conjunction
30 Jun, 3:00 pm: Neptune 4.3° S of Moon

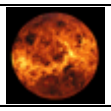
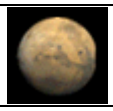
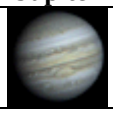
July 2010 Almanac for San Francisco (Pacific Daylight Time)

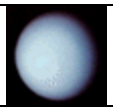
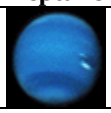
(Source: US Naval Observatory)

Sun and Moon Data:

Date	Astronomical Twilight Begins	Sunrise	Sunset	Astronomical Twilight Ends	Moon	Moonrise	Moonset
3 Jul	3:59 am	5:53 am	8:35 pm	10:29 pm		11:55 pm prev day	12:44 pm
10 Jul	4:05 am	5:57 am	8:33 pm	10:25 pm		4:35 am	7:51 pm
17 Jul	4:12 am	6:02 am	8:30 pm	10:19 pm		1:02 pm	00:01 am next day
24 Jul	4:20 am	6:07 am	8:25 pm	10:11 pm		7:40 pm	4:46 am
31 Jul	4:29 am	6:13 am	8:19 pm	10:02 pm		10:49 pm	11:33 am

Planetary Data:

	Mercury		**Venus**		**Mars**		**Jupiter**	
								
	Gem (1–7) / Can (8–18) / Leo (19–31)		Leo		Leo (1–18) / Virgo (19–31)		Pisces	
Date	**Rise**	**Set**	**Rise**	**Set**	**Rise**	**Set**	**Rise**	**Set**
3 Jul	6:17 am	9:08 pm	9:11 am	10:57 pm	11:03 am	11:50 pm	0:34 am	12:38 pm
10 Jul	6:59 am	9:30 pm	9:24 am	10:50 pm	10:55 am	11:32 pm	0:08 am	12:12 pm
17 Jul	7:36 am	9:39 pm	9:36 am	10:41 pm	10:48 am	11:14 pm	11:37 pm	11:45 am
24 Jul	8:06 am	9:39 pm	9:47 am	10:31 pm	10:41 am	10:57 pm	11:10 pm	11:18 am
31 Jul	8:27 am	9:31 pm	9:57 am	10:19 pm	10:35 am	10:39 pm	10:42 pm	10:50 am

	Saturn		**Uranus**		**Neptune**	
						
	Virgo		Pisces		Aquarius	
Date	**Rise**	**Set**	**Rise**	**Set**	**Rise**	**Set**
3 Jul	12:11 pm	0:35 pm	0:27 am	12:28 pm	11:01 pm	9:50 am
10 Jul	11:46 am	0:08 am	11:55 pm	12:00 pm	10:33 pm	9:22 am
17 Jul	11:21 am	11:38 pm	11:28 pm	11:32 am	10:05 pm	8:54 am
24 Jul	10:56 am	11:12 pm	11:00 pm	11:04 am	9:37 pm	8:25 am
31 Jul	10:31 am	10:46 pm	10:32 pm	10:36 am	9:09 pm	7:57 am

July Phenomena:

5 Jul, 5:00 pm: Uranus stationary
6 Jul, 4:00 am: Earth at aphelion
10 Jul, 4:00 am: Venus 1.0° N of Regulus
11 Jul, 2:51 pm: Total solar eclipse, South Pacific
12 Jul, 3:00 pm: Mercury 3.9° N of Moon
18 Jul, 1:00 am: Spica 3.1° N of Moon
21 Jul, 1:00 pm: Antares 1.8° S of Moon
23 Jul, 8:00 pm: Jupiter stationary
27 Jul, 2:00 pm: Mercury 0.3° S of Regulus
27 Jul, 8:00 pm: Neptune 4.2° S of Moon
28-29 Jul: Delta Aquarids meteor shower
31 Jul, 1:00 am: Mars 1.8° S of Saturn

pan shot courtesy of Mojo

SFAA Yosemite Star Party at Glacier Point
Friday, August 20 & Saturday, August 21, 2010

NEW! Check out last year's photos, thanks to Dave Frey and Dean Gustafson

For those of you unfamiliar with this event, we are given free, reserved admission to Yosemite National Park and shared camping space at Bridalveil Group Campground. The campsite is 8.5 miles away from Glacier Point. In exchange, we give two public star parties at Glacier Point, on Friday and Saturday night. We have the public (about 200 - 300 people) from twilight for a few hours, and then the rest of the night (and all day) to ourselves; this is a mighty good deal, considering how some folks come 12,000 miles to see these rocks. The National Park Service limits astronomy clubs to a maximum of 30 SFAA campers. Please do not ask if your friends can come … unless they are SFAA members.

Want to join the SFAA? This is our biggest membership magnet; come join the SFAA! You are expected to have at least one public telescope for every two people. Sign upwith Dave Frey our fearless president. Please title the e-mail Yosemite Sign-Up, let him know what telescope you're bringing and if you're solo or not. We currently have zero members on the wait list. Please let Dave know right away, so that we have an accurate count, and you don't miss out on this very special event! Here is who is on the sign-up roster as of Saturday, May 22nd. In case you have questions, thanks to Jim Van Nuland of the SJAA here's a link San Jose club members have.

Bear Alert- *Please remember we are guests at Yosemite and among those who live there are bears. Last weekend one of our intreped Sidewalk Astronomers and SFAA members (Dean Gustafson) spent time with the Santa Cruz Club at Glacier Point. Dean wants us to know that a bear with a yellow tag of # 47 helped himself to a bag of food behind the back of an SCAS member at Glacier Point while observing! Please keep all food (including gum, toothpaste, canned food, you-name-it) in the metal bear boxes and not in your car, tent or now unfortunatly, while observing.*

Observing site at Glacier Point-The observing area is mostly open, with incredible views from about NNW to the east, around to due south. The horizon from south around to the west is partly blocked by tall trees. Still, there is a lot of open sky, and typically, the seeing and transparency are excellent. It has warm temperatures of 70 to 90 during the day, and cool to chilly 40's at night, due to the elevation of 7200 feet.

Star Party-One of the rangers does a sunset talk, and then delivers the crowd to us. Following that, a member of the club will give an evening talk, (want to volunteer?) The public will have white flashlights, and we need to be tolerant of that. We will have 3 club members with red brake light tape to politely cover the offending flashlights. Expect many questions from the public. Here is an object list with corresponding finder charts and some brief information.

The Reward- By around 9:30 or so, we will have the place to ourselves, and can stay until dawn if you so choose. Scopes must be removed when we quit, then set up again on Saturday. Some of us may set up sun scopes during the afternoon, show Half Dome festooned with rock climbers, and invite people to come again after sunset.

Gastronomic Astronomic- Early Saturday eve is the traditional potluck meal and is always tons of fun. Please provide enough for ~ say 4 or 5 people. Salads, main courses, pu pu's and desserts are all welcome. Who will have the best astronomical theme of incredible edibles this year? Remember the Brown Dwarfs? Prizes will be awarded! Please remember this repast takes time. It's better to start our own gastronomic party early so there's no need to rush for set up Saturday evening on Glacier Point. Sunset Friday will be at 8:25 pm.

Check the National Weather Service for up-to-date weather info on Yosemite Park current weather and conditions. Here is a live cam of Half Dome from Ahwahnee Meadow and NPS Air Quality Cam & data.

For newbies and oldsters alike please review the directions and guidelines. See you at the campsite,

Ken & Dave

October 8-9, 2010

Annual SFAA NIGHT - Fremont Peak Observatory

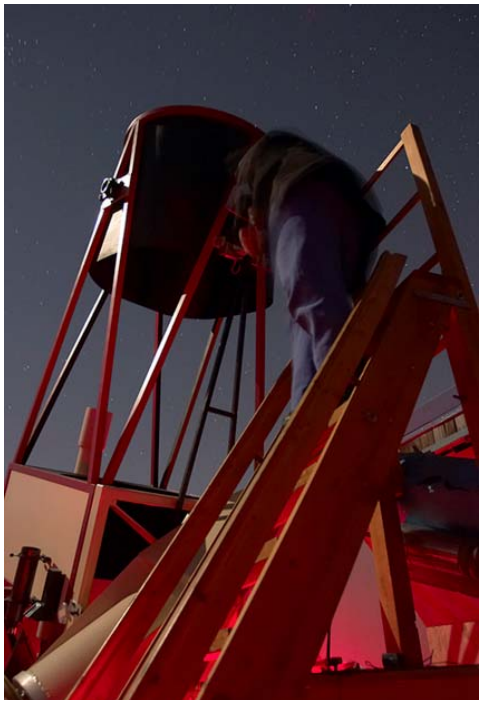


Photo courtesy of ART ROSCH
Some previous years photos:
05 06 07 08 09

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 conjuction 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

LAS GALLINAS SAVIOR

by Ken Frank

A few months ago I was approached by a new SFAA member, Michael McCrea, a former TWA pilot and resident of North Marin.
He wanted a solution to the pollution (light, that is) at the Las Gallinas Valley Sanitary District (LGVAD).

Michael had been trying for months to get the problem solved and asked for my assistance. I loaned him a Dark Sky Kit from the National Optical Astronomy Observatory
(NOAO). Fortunately for the residents of Santa Venetia near LGVAD and as an ancillary benefit, our observing on Mt. Tam, the following articles in the Independent Journal (IJ) ensued, including an editorial!

Santa Venetia residents say, let there not be light: http://www.marinij.com/ci_14980183?IADID=

Posted: 04/30/2010 01:00:00 AM PDT

Lights illuminate the Las Gallinas Valley Sanitary District wastewater treatment plant in San Rafael. (Photo Credit: Jeff Vendsel)

The Las Gallinas Valley Sanitary District is set to call in a light expert to conduct a study and help dim the district's luminous wastewater treatment plant northeast of San Rafael.

Bright lights from the plant and an adjacent parking lot have bothered some neighbors in nearby Santa Venetia, for many years. The parking lot serves both employees and visitors to popular hiking trails along the shores of district storage ponds and marshes.

A petition signed by about 100 Santa Venetia residents calling for changes has been presented to the board.

Michael McCrea, a resident of Vendola Drive since 1978, is among those urging the district board to make changes to reduce "light pollution" in the area popular with astronomy buffs to preserve the habitat for nocturnal wildlife and to explore cost-savings through more appropriate lighting.

"We used to use the plant to guide us in here more than we used the light at (San Francisco International) airport, because we could see the plant a lot more than we could see the airport," said McCrea, a retired commercial pilot.

Editorial: Las Gallinas right not to take complaints lightly
Posted: 04/29/2010 12:09:28 AM PDT

A NEIGHBOR who leaves bright outside lights on at all hours can be annoying, to say the least.

How bright? What if airline pilots were using the light display as a navigation landmark?

That's what some Santa Venetia residents who live near the Las Gallinas Valley Sanitary District plant are coping with on a nightly basis.

The sanitary district board, responding to complaints from neighbors, is looking into ways to tone down or shield the plant's security lighting from homeowners across the creek.

Good for them.

This may not be the most pressing issue facing local government, but for those residents, it's of vital interest.

Light pollution is an intrusion into the rural atmosphere that many Marin residents - even those who live in developed areas - treasure. Light pollution not only gets in the way of star-gazing, it also can intrude on habitat that borders the sprawling plant.

The district has called in a lighting expert to see what can be done to answer complaints that have generated a petition signed by 100 residents. District officials are wise to not take the issue lightly, given the number of signatures on that petition.

Russ Greenfield, a district director and a Santa Venetia resident, said, "I really think it's a win-win opportunity."

That's the right approach. And good public policy.

The district already was in the process of taking a new look at the plant's lighting. Concerns of neighbors should be taken into consideration along with security and energy efficiency.

Neighbors are already pleased with the district's responsiveness. That's a big step toward finding a solution that can everyone can live with.

Hooray for Michael!

Let's keep the proverbial lightbulb quenched here in the Bay Area.

Talk to Michael McCrea, Dave Goggin or myself to find out more how you can help.

Partial Lunar Eclipse of June 26

The first lunar eclipse of 2010 occurs at the Moon's ascending node in western Sagittarius about 3° east of the Lagoon Nebula (M8). It is visible from much of the Americas, the Pacific and eastern Asia (Figure 2). The Moon's contact times with Earth's shadows are listed below.

Penumbral Eclipse Begins: 08:57:21 UT Partial Eclipse Begins: 10:16:57 UT Greatest Eclipse: 11:38:27 UT

Partial Eclipse Ends: 12:59:50 UT Penumbral Eclipse Ends: 14:19:34 UT

At the instant of greatest eclipse, the umbral eclipse magnitude will reach 0.5368. At that time the Moon will be at the zenith for observers in the South Pacific. In spite of the fact that barely half of the Moon enters the umbral shadow (the Moon's northern limb dips 16.2 arc-minutes into the umbra), the partial phase still lasts 2 2/3 hours.

Figure 2 shows the path of the Moon through the penumbra and umbra as well as a map of Earth showing the regions of eclipse visibility. New England and eastern Canada will miss the entire eclipse since the event begins after moonset from those regions. Observers in western Canada and the USA will have the best views with moonset occurring sometime after mid-eclipse. To catch the entire event, one must be located in the Pacific or eastern Australia.

Table 3 lists predicted umbral immersion and emersion times for 15 well-defined lunar craters. The timing of craters is useful in determining the atmospheric enlargement of Earth's shadow (see *Crater Timings During Lunar Eclipses*).

The June 26 partial lunar eclipse belongs to Saros 120, a series of 83 eclipses in the following sequence: 21 penumbral, 7 partial, 25 total, 7 partial, and 23 penumbral lunar eclipses (Espenak and Meeus, 2009). Complete details for the series can be found at:

eclipse.gsfc.nasa.gov/LEsaros/LEsaros120.html

FIGURE 2

Partial Lunar Eclipse of 2010 Jun 26

Ecliptic Conjunction = 11:31:27.7 TD (= 11:30:20.8 UT)
Greatest Eclipse = 11:39:33.7 TD (= 11:38:26.8 UT)

Penumbral Magnitude = 1.5773 P. Radius = 1.1988° Gamma = -0.7091
Umbral Magnitude = 0.5368 U. Radius = 0.6743° Axis = 0.6558°

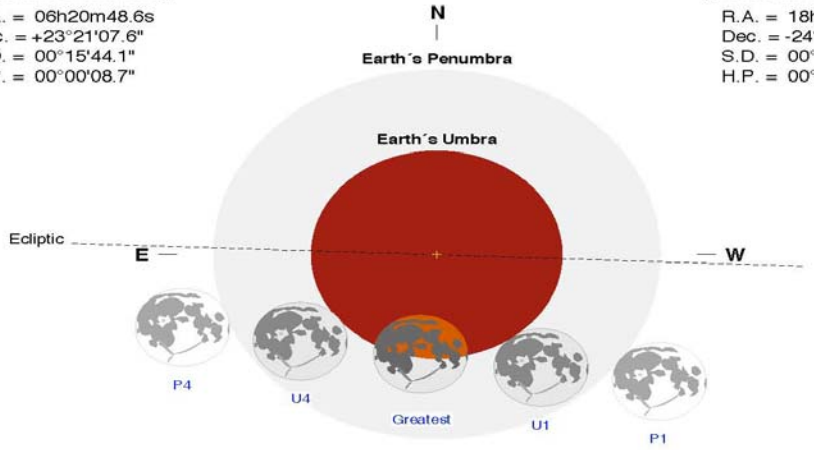
Saros Series = 120 Member = 58 of 84

Sun at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 06h20m48.6s
Dec. = +23°21'07.6"
S.D. = 00°15'44.1"
H.P. = 00°00'08.7"

Moon at Greatest Eclipse
(Geocentric Coordinates)

R.A. = 18h21m11.8s
Dec. = -24°00'06.9"
S.D. = 00°15'07.3"
H.P. = 00°55'29.7"



Eclipse Durations

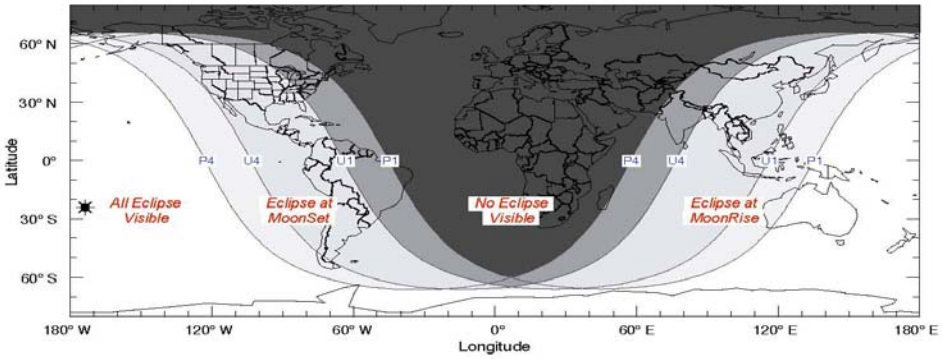
Penumbral = 05h22m13s
Umbral = 02h42m53s

ΔT = 67 s
Rule = CdT (Danjon)
Eph. = VSOP87/ELP2000-85

Eclipse Contacts

P1 = 08:57:21 UT
U1 = 10:16:57 UT
U4 = 12:59:50 UT
P4 = 14:19:34 UT

F. Espenak, NASA's GSFC
eclipse.gsfc.nasa.gov/eclipse.html



GIVE A CHILD THE UNIVERSE:
SHARE YOUR ENTHUSIASM FOR ASTRONOMY WITH A CLASSROOM NEAR YOU

Project ASTRO is looking for amateur and professional astronomers to work with teachers and students in 3rd 9th grade classrooms. This is a great opportunity to share your love of astronomy with an enthusiastic audience and help kids learn about science.

Bay Area Project ASTRO, part of a national program at the Astronomical Society of the Pacific, pairs you with a local teacher at a school convenient for you. Together, you and your teacher partner first attend a 2-day summer workshop to learn hands-on, inquiry-based astronomy activities designed to involve students in the excitement of scientific discovery.

Astronomer and teacher partners receive "The Universe at Your Fingertips," a rich curriculum resource, as well as access to books, videos, and telescopes from our lending library. Throughout the year, partners are invited to attend follow-up workshops.

Project ASTRO emphasizes ongoing partnerships that foster a nurturing environment for students to learn. To accomplish this, astronomers make at least four visits to their adopted classroom at mutually convenient times.

Project ASTRO has been operating since 1993 in the Bay Area. Previous participants often report that it is one of the most satisfying volunteer endeavors they have undertaken.

Graduate students and advanced undergraduate students majoring in astronomy are also encouraged to apply.

Astronomer applications are now being accepted for the 2010 - 2011 school year. The deadline is Friday, June 11th and space is limited. All participants are required to attend a 2-day workshop held August 6 & 7, 2010, at the San Mateo County Office of Education in Redwood City.

APPLY ONLINE by JUNE 11th:
http://www.astrosociety.org/education/astro/bayarea/volunteer.html

MORE INFORMATION:
http://www.astrosociety.org/baprojectastro.html

If you have questions, please contact
Brian Kruse, Project ASTRO Coordinator
Email: bayareaastro@astrosociety.org

____Project ASTRO, a program of the nonprofit Astronomical Society of the Pacific, began with support from the National Science Foundation and the NASA Office of Space Science. Currently, over 500 active educator-astronomer partnerships bring the excitement of scientific discovery through astronomy to over 20,000 students annually.

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Andrew Fraknoi, Chair, Astronomy Program
Foothill College, 12345 El Monte Rd.,
Los Altos Hills, CA 94022, USA

E-mail: fraknoiandrew@fhda.edu
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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

Lick Observatory Summer Programs

Summer Visitors Program

Each summer, Lick Observatory hosts a Summer Visitors Program (SVP) where the public is invited to observe through both the **36-inch Great Lick Refractor** and **Nickel 40-inch Reflecting Telescope**. Each evening also features two speakers, who present programs even if clouds or fog prohibit viewing.

Lick astronomers present multimedia lectures on their research or topics of current interest. A "History of Lick Observatory" talk is also presented. Amateur astronomer volunteers provide additional outside viewing and informal talks.

The first talk begins at sunset. Observing begins when it gets dark and continues until everyone has had the opportunity to view through both telescopes. Because of the late hours and the need for reasonable public behavior, attendance is not advisable for most children under 8 years old.

Ticket Info at: **http://www.ucolick.org/public/sumvispro.html**

Music of the Spheres Concert Series

Lick Observatory presents a variety of performers in a summer concert series to benefit the Lick Observatory Visitors Programs. Doors open and seating begins one half hour before the concert.

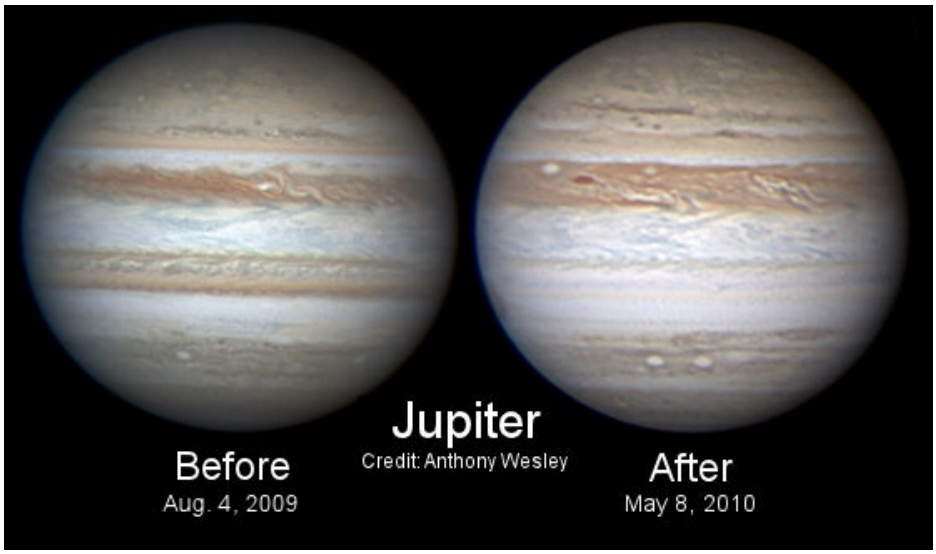
Talks by our famous research astronomers begin right after the music. Viewing through both the **36-inch Great Lick Refractor** and the **Nickel 40-inch Reflecting Telescope** follows, weather permitting. Amateur astronomer volunteers provide additional outside viewing and informal talks. Attendance not advisable for children under ten years old.

Only 160 seats are available each night. Concerts sell out quickly and ticket requests are filled in the order received.

Ticket and Performance Info at: **http://www.ucolick.org/public/music.html**

SCIENCE @ NASA - BIG MYSTERY: JUPITER LOSES A STRIPE

Lost: A giant belt of brown clouds big enough to swallow Earth twenty times over. If found, please return to Jupiter.
May 20, 2010: In a development that has transformed the appearance of the solar system's largest planet, one of Jupiter's two main cloud belts has completely disappeared. "This is a big event," says planetary scientist Glenn Orton of NASA's Jet Propulsion Lab. "We're monitoring the situation closely and do not yet fully understand what's going on."



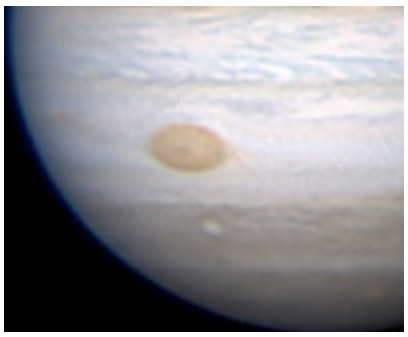
These side by side images of Jupiter taken by Australian astrophotographer Anthony Wesley show the SEB in August 2009, but not in May 2010.Individual images: Aug. 4, 2009; May 8, 2010.

Known as the South Equatorial Belt (SEB), the brown cloudy band is twice as wide as Earth and more than twenty times as long. The loss of such an enormous "stripe" can be seen with ease halfway across the solar system.

"In any size telescope, or even in large binoculars, Jupiter's signature appearance has always included two broad equatorial belts," says amateur astronomer Anthony Wesley of Australia. "I remember as a child seeing them through my small backyard refractor and it was unmistakable. Anyone who turns their telescope on Jupiter at the moment, however, will see a planet with only one belt--a very strange sight."

Wesley is a veteran observer of Jupiter, famous for his discovery of a comet hitting the planet in 2009. Like many other astronomers, he noticed the belt fading late last year, "but I certainly didn't expect to see it completely disappear," he says. "Jupiter continues to surprise."

Orton thinks the belt is not actually gone, but may be just hiding underneath some higher clouds.



Without the SEB present, Jupiter's Great Red Spot is surrounded by almost uninterrupted white. Anthony Wesley took this picture on May 18, 2010. [larger image]

"It's possible," he hypothesizes, "that some 'ammonia cirrus' has formed on top of the SEB, hiding the SEB from view." On Earth, white wispy cirrus clouds are made of ice crystals. On Jupiter, the same sort of clouds can form, but the crystals are made of ammonia (NH3) instead of water (H20).

What would trigger such a broad outbreak of "ammonia cirrus"? Orton suspects that changes in global wind patterns have brought ammonia-rich material into the clear, cold zone above the SEB, setting the stage for formation of the high-altitude, icy clouds.

"I'd love to send a probe in there to find out what's really going on."

Indeed, Jupiter's atmosphere is a mysterious place which would benefit from exploration. No one knows, for instance, why the Great Red Spot is red—or what has sustained the raging storm for so many years. Neither does theory explain why the twin equatorial belts are brown, nor why one should vanish while the other remains. "We have a long list of questions," says Orton.

This isn't the first time the SEB has faded out.

"The SEB fades at irregular intervals, most recently in 1973-75, 1989-90, 1993, 2007, 2010," says John Rogers, director of the British Astronomical Association's Jupiter Section. "The 2007 fading was terminated rather early, but in the other years the SEB was almost absent, as at present."

The return of the SEB can be dramatic.

Jupiter beckons to amateur astronomers from the pre-dawn sky. Lyle Anderson of Duluth, Minnesota, took this picture on May 19, 2010. [larger image] [sky map]

"We can look forward to a spectacular outburst of storms and vortices when the 'SEB Revival' begins," says Rogers. "It always begins at a single point, and a disturbance spreads out rapidly around the planet from there, often becoming spectacular even for amateurs eyeballing the planet through medium-sized telescopes. However we can't predict when or where it will start. On historical precedent it could be any time in the next 2 years. We hope it will be in the next few months so that everyone can get a good view.

"I'll be watching every chance I get," says Wesley. "The revival will likely be sudden and dramatic, with planet-circling groups of storms appearing over the space of just a week or so."

Indeed, says Orton, "anyone could be the first to spot the return of the SEB."

Jupiter shines in the eastern sky before dawn: sky map. Point your optics at the "morning star" and … is that *really* Jupiter? Happy hunting!

Author: Dr. Tony Phillips | Credit: Science@NASA

More Information

Anthony Wesley's images of Jupiter show the evolution of the SEB in recent months
What Hit Jupiter? -- (Science@NASA)
Juno -- NASA's next mission to Jupiter is scheduled for launch in 2011.

JUNE ASTRONOMY EVENTS

Kenneth Lum

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
Wednesday, June 16 **12:00 Noon** **SETI Institute Colloquium Series** **Aricebo Room** **515 N. Whisman Road** **Mountain View**	**SPEAKER:** Mark Marley **TOPIC: DON'T RAIN ON MY PLANET: THE IMPORTANCE OF CLOUDS AND HAZES FOR UNDERSTANDING EXOPLANETS AND BROWN DWARFS** Clouds and hazes shape the observed spectra of exoplanets and brown dwarfs. Yet we know from Earth that clouds and hazes are inherently difficult to model and are the leading source of uncertainty in terrestrial GCM forecasts of globals warming. Dr. Marley will review what we know about the chemistry and physics of clouds in substellar atmospheres and discuss some pathways to haze formation in exoplanet atmospheres. In the future determining if extrasolar earthlike planets are habitable--or inhabited--will ultimately depend on an understanding of the role clouds play in their atmospheres, so we can expect to be hearing about these issues for some time to come.
Friday, June 18 **9:00 p.m.** **Foothill Community College** **12345 Moody Road** **Los Altos Hills**	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. http://www.pastro.org/dnn/Observatory/FoothillObservatory.aspx
Friday & Saturday June 18 & 19 6:00 pm Chabot Space and Science Center 10000 Skyline Boulevard Oakland, CA 94619-2450 (510) 336-7300	**TALES OF THE 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, June 19 **10:00 a.m. - 12:00 Noon** **IF IT IS CLEAR** **Foothill Community College** **12345 Moody Road** **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.
Saturday, June 19 **9:00 a.m. - 5:00 p.m.** **Hiller Aviation Museum** **601 Skyway Rd.** **San Carlos, CA 94070**	**ANNUAL VERTICAL CHALLENGE ALL HELICOPTER AIR SHOW** Largest of its kind in the country --The Annual Vertical Challenge all Helicopter Air Show. Over 50 helicopters are on display and doing things only helicopters can do. These helicopters don't just hover around; they put on a full blown helicopter air show. There are choppers everywhere! I understand they will even give a demonstration of the Harrier jump jet!
Saturday, June 19 **11:00 a.m. - 12:00 Noon** **UC Berkeley** **Genetics & Plant Biology Building** **Berkeley, CA 94720** **Free**	**MAGNETIC STARS, SPACE WEATHER AND LIFE: STELLAR ACTIVITY AND ITS EFFECT ON PLANETS** Sunspots are some of the oldest astronomical phenomena observed by human beings. These 'freckles' on the face of our Sun may look innocuous, but they are actually the footprints of huge magnetic loops that protrude from our star. These loops sometimes twist and snap, causing spectacular solar flares that send radiation and energetic particles hurtling toward Earth. These flares are responsible for beautiful aurorae, but they can also cause the troubling disruption of satellites and other infrastructure. Similar phenomena are observed on many other stars in our Galaxy, with some stellar flares being even more powerful than those of the Sun. What is it like to be a planet around those stars? How do flares and starspots affect a

	planet's ability to support and sustain life? These are just some of the questions we will explore. Dr. Walkowicz is a Kepler Postdoctoral Fellow in the Astronomy Department at the UC Berkeley. She studies magnetic activity in the atmospheres of cool stars through both observation and theory. She is active in the development of the next generation of ground-based telescopes as Chair of the Transient Working Group for the Large Synoptic Survey Telescope, and is a member of the team working to find earth-sized planets using the new Kepler space telescope.
Saturday, June 19 **9:00 p.m.** **UC Berkeley** **Lawrence Hall of Science** **Centennial Drive** **Berkeley**	Saturday Night Stargazing — on the LHS Plaza 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**, so 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.
Saturday, June 19 **8:30 pm** **Mt Tamalpias State Park** **Rock Springs Parking Area** **Mt Tamalpias** **Cost: Free**	**WHY WE NEED TO COLONIZE SPACE** Everyone talks about colonizing space, but is it just a pipe dream? If at least some of us aren't off this planet within a half-century or so, our lifestyles are going to be less than commodious! Speaker: Dr. Seth Shostak, Seti Institute Even if the day is hot, wear layers as it can chill down at night. And don't forget your flashlights. Please car pool if at all possible. If there is any change in the program due to weather, it will be on the hot line: 415-455-5370 after 4:00pm. Directions: From Highway 101 take the Highway 1, Stinson Beach exit. At Tam Junction (the first stop light), turn left onto the Shoreline Highway (also called Highway 1). In about 2 miles turn right onto Panoramic Highway. In another 3/4 miles the road splits 3 ways. Take the middle fork. In about 5 miles the Pan Toll Ranger Station will be on your left. Turn right through the gates across the road from the station and continue for about another 1 1/2 miles to the Rock Springs parking area.
Monday, June 21 **4:15 pm** **Panofsky Auditorium** **Stanford Linear** **Accelerator Center** **575 Sand Hill Road** **Menlo Park 94025** **Open to the public**	**SPEAKER: ADRIAN BROWN** **SETI Institute and NASA Ames Research Center** ***MARS SCIENCE LABORATORY MISSION AND THE SEARCH FOR CARBONATES AND METHANE ON MARS*** The Mars Science Laboratory (named 'Curiosity') will launch to Mars next year and is loaded with new instruments and cameras to investigate the geology of a new location on Mars. Dr. Brown will talk about the exciting and scary aspects of the new Rover, and how it might just impact our understanding of the chances for life on The Red Planet. The MSL Rover will have the capability to measure atmospheric methane, and which is a possible trace gas for Martian

	volcanism or perhaps even Martian biota. Dr. Brown will discuss the recent controversy of methane, and how it is linked to the 2008 finding of carbonate on Mars.
Wednesday, June 23 **12:00 Noon** **SETI Institute** **Colloquium Series** **Aricebo Room** **515 N. Whisman Road** **Mountain View**	**SPEAKER:** Deputy Director of KIPAC, Stanford University **TOPIC:** **COSMIC MICROWAVE BACKGROUND MEASUREMENTS WITH THE QUAD EXPERIMENT** Clouds and hazes shape the observed spectra of exoplanets and brown dwarfs. Yet we know from Earth that clouds and hazes are inherently difficult to model and are the leading source of uncertainty in terrestrial GCM forecasts of globals warming. Dr. Marley will review what we know about the chemistry and physics of clouds in substellar atmospheres and discuss some pathways to haze formation in exoplanet atmospheres. In the future determining if extrasolar earthlike planets are habitable--or inhabited--will ultimately depend on an understanding of the role clouds play in their atmospheres, so we can expect to be hearing about these issues for some time to come.
Friday, June 25 **9:00 p.m.** **Foothill Community College** **12345 Moody Road** **Los Altos Hills**	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. **http://www.pastro.org/dnn/Observatory/FoothillObservatory.aspx**
Friday & Saturday June 25 & 26 7:30pm - 10:30pm Weather Permitting FREE TELESCOPE VIEWING EVERY Saturday & Sunday 12:00 Noon – 5:00pm	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

Weather Permitting DAYTIME TELESCOPE VIEWING FREE WITH GENERAL ADMISSION Chabot Space and Science Center 10000 Skyline Boulevard Oakland, CA 94619-2450 (510) 336-7300	telescopes. Free with General Admission. (weather permitting) 12pm - 5pm: Observatories Open
Saturday, June 26 **10:00 a.m. - 12:00 Noon** **IF IT IS CLEAR** **Foothill Community College** **12345 Moody Road** **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.
Saturday, June 26 **6:30 p.m. – Board Meeting** **8:00 p.m. – General Meeting** **San Jose Astronomical Society** **Houge Park** **San Jose**	Our speaker is Brian Day of NASA/Ames, who will speak on the LCROSS mission.

BEACH CHALET ATHLETIC FIELDS

1. You did it! RPD has decided to do an Environmental Impact Report!
2. Next steps in the EIR process.
3. Please contribute to legal fund.
4. Sign on to SF Gate and **vote** – add your comments!

1. The Recreation and Park Department has decided to do an EIR. This was reported in today's *SF Chronicle*. (See below.) This is the result of all of your efforts, in outreach, in gathering petition signatures, in writing letters, in calling your representatives, and in attending meetings and hearings. Also, our thanks goes out to our team of co-appellants and our skilled legal counsels for assembling a powerful CEQA appeal.

2. It may take awhile for the next step in the environmental review, but it's important to stay involved and weigh in on the EIR scoping process. We will ask for a scoping hearing, at which the focus of the EIR will be discussed and determined. You letters can be a part of this process. We will let you know more as we work through this. We are working with the same legal team to guide us through this process.

3. Therefore, we will still need contributions for our legal fund (see our website: www.sfoceanedge.org) .

4. See the SF Gate, City Insider link below. BE SURE TO SIGN ON, **VOTE**, AND IF YOU HAVE TIME, ADD YOUR COMMENTS – look for Sunset Citizen, page 2, for our statement of our goals for this project. You can vote daily.

http://www.sfgate.com/cgi-bin/blogs/cityinsider/detail?blogid=55&entry_id=62598&tsp=1

2010 Club Officers & Contacts

President	*DAVE FREY*	davef@SFAA-Astronomy.org
Vice President	Vivian White	vicepresident@sfaa-astronomy.org
Secretary		
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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***

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Sharing the Wonders of the Universe

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

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

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_____ $10 Youth/Student
_____ $25 Individual
_____ $30 Family
_____ $40 Institutional
_____ $75 Supporting

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

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