

ННННННННННННННННННННННННННННННVol. 58, No. 2 – February 2010

Wednesday, February 17, 2010 – General Meeting

Randall Museum . 199 Museum Way . San Francisco 7:00 pm Doors Open 7:30 pm Announcements 8:00 pm Speaker

SFAA's General Meetings take place on the 3rd Wednesday of each month (except January)

APARNA VENKATESAN

Assistant Professor

Department of Physics and Astronomy, University of San Francisco

THE FIRST STARS IN THE UNIVERSE



I will present the role played by the first stars in the ionization and metal enrichment of the early universe. Primordial stellar objects are unique objects that strongly influenced their environment despite their brief existence. These objects can be identified through their characteristic ionizing properties and the elements created by their supernovae. By combining these two signatures with a variety of current astronomical data, we can obtain relatively strong constraints on the masses and formation epochs of the first stars. I will end with a summary of the most promising observational programs that will detect primordial stellar clusters at cosmic ages of less than a billion years.

My research interests are primarily in theoretical cosmology, including studies of the first stars and quasars in the universe, the evolution of cosmic star formation and related observational signatures, the physics and chemistry of gas in the early universe, the cosmic microwave background, and dark matter. I am currently working on the cosmic synthesis of the biogenic elements at early times in the universe, and on projects related to helium reionization and its effects on the intergalactic medium and the duration of metal-free star formation.

PRESIDENT'S MESSAGE

We all had a great time at annual SFAA dinner. Everyone was in fine form, laughing and talking about astronomy and many other things. In the background a nearly full moon was rising above the East Bay through the windows of the restaurant. I was very nervous to get up in front of everyone and talk - It's a little scary to talk in front of a group of people whom you like and respect as much I respect all of the members of our Club. Many long time members and several new members joined us along with most of the members of SFAA Board and several significant others. Five past presidents were in attendance and they all had great advice for my tenure (sort of like Bush I, Clinton, Bush II and Obama – only more humble). Dirk was there as well and handed over the reigns and the official embossed seal of the club. If I wasn't scared before, I sure am now.

Thanks to Paul Salazar, February begins our first official teaming up with the California Academy of Sciences in Golden Gate Park. On February 11th at the regular Thursday Nightlife event, Paul will be giving a talk inside and then providing guided star tours up on the roof next to the telescopes. We hope that his participation will help to boost our membership as well as introduce more of the public to the wonders of astronomy.

Other events this month are:

Feb. 13th Mt. Tamalpais Members Only Star Party

February 17th Board Meeting and General Meeting and Lecture

February 20th City Star Party, with solar viewing and telescope clinic, Lands

End in SF

Lastly, John Dobson will be in town for the last time from February 24th to the 28th. Further information is included in this newsletter. This is the end of an era but also the beginning of an opportunity to carry on his legacy through our public outreach and Enthusiasm.

I wish all of you Dark Skies, lots of sleep and, as John Dobson, says, "Your idle telescope UUUUUU<u>continues</u> to mock you!"

Dave

JOHN DOBSON RELOCATING TO SOUTHERN CALIFORNIA



The end of an era is upon us.

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

For those who would like to visit with John, he will be giving a talk upstairs at Dean's residence, at 4135 Judah Street, San Francisco 94122

Thursday February 25th 7:00 PM.

You may **join him with your telescope**, enjoying sidewalk astronomy and observing on **Friday evening at 7:00 PM** location yet to be determined although the corner of Broderick and Jackson come to mind as a fitting place. We may also meet at the usual 9th and Irving, Randall Museum, Lands End or possibly even Ghirardelli Square.

More details will be posted in a few days on the SFSA: http://www.sfsidewalkastronomers.org/

Dobson Telescope Making Class listserv: http://www.whiteoaks.com/pipermail/dobson2000/

and SA website: http://www.sidewalkastronomers.us/

Looking forward to seeing you in the dark (on the sidewalk),

Ken Frank

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.

February 17 May 19 August 18 November 17 March 17 June 16 September 15 December 15

April 21 July 21 October 20

CITY STAR PARTIES land's End (Point Lobos)

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

 February 20/7:00
 May 22/8:00
 August 21/7:30
 November 13/5:00

 March 20/7:30
 June 5/8:30
 September 18/7:30
 December 11/5:00

April 3/7:30 July 13/8:30 Tue October 16/6:30

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).

February 13 May 15 August 7 November 6
March 13 June 12 September 4 December 4
April 10 July 10 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/

February 2010 Almanac for San Francisco (Pacific Standard Time)

(Source: US Naval Observatory)

Sun and Moon Data:

Date	Astronomica l Twilight Begins	Sunrise	Sunset	Astronomica l Twilight Ends	Moon	Moonrise	Moonset
6 Feb	5:40 am	7:09 am	5:39 pm	7:08 pm		1:35 am	11:19 am
13 Feb	5:33 am	7:01 am	5:47 pm	7:15 pm		6:40 am	5:44 pm
20 Feb	5:26 am	6:53 am	5:55 pm	7:22 pm		9:48 am	00:45 am next day
27 Feb	5:17 am	6:44 am	6:02 pm	7:29 pm		5:18 pm	5:53 am

Planetary Data:

i y Data:								
	Merc	cury	Ve	nus	Mars		Jupiter	
	Sgr (1–9) / C Aqr (2		Cap (1–8) /	Aqr (9–28)	Ca	ncer	Aqu	ıarius
Date	Rise	Set	Rise	Set	Rise	Set	Rise	Set
6 Feb	5:59 am	3:43 pm	7:34 am	6:06 pm	4:23 pm	7:04 am	8:01 am	6:58 pm
13 Feb	6:08 am	4:03 pm	7:31 am	6:23 pm	3:43 pm	6:29 am	7:37 am	6:39 pm
20 Feb	6:17 am	4:28 pm	7:26 am	6:39 pm	3:06 pm	5:54 pm	7:14 am	6:19 pm
27 Feb	6:23 am	4:57 pm	7:20 am	6:54 pm	2:33 pm	5:21 pm	6:51 am	6:00 pm

	Sat	turn	Uranus Nej		Nept	otune	
	2						
	Vi	rgo	Pis	ces	Capric	ornus	
Date	Rise	Set	Rise	Set	Rise	Set	
6 Feb	9:15 pm	9:27 am	8:50 am	8:36 pm	7:35 am	6:15 pm	
13 Feb	8:46 pm	8:58 am	8:23 am	8:10 pm	7:08 am	5:49 pm	
20 Feb	8:16 pm	8:30 am	7:56 am	7:44 pm	6:42 am	5:23 pm	
27 Feb	7:47 pm	8:02 am	7:30 am	7:19 pm	6:15 am	4:57 pm	

February Phenomena:

3 Feb, 10:00 pm: Spica 3.2° N of Moon 7 Feb, 2:00 pm: Antares 1.2° S of Moon 7 Feb, 9:00 pm: Venus 1.0° S of Neptune 11 Feb, 8:00 pm: Mercury 2.2° S of Moon 13 Feb, 8:00 pm: Neptune 3.4° S of Moon 14 Feb, 12:00 pm: Venus 5.0° S of Moon 14 Feb, 3:00 pm: Neptune at conjunction 14 Feb, 5:00 pm: Jupiter 4.6° S of Moon 16 Feb, 4:00 am: Uranus 5.4° S of Moon 16 Feb, 6:00 pm: Venus 0.5° S of Jupiter 25 Feb, 7:00 pm: Mars 5.2° N of Moon 27 Feb, 5:00 am: Mercury 1.7° S of Neptune 27 Feb, 4:00 pm: Regulus 3.8° N of Moon 28 Feb, 2:00 am: Jupiter at conjunction

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

(Source: US Naval Observatory)

Sun and Moon Data:

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

Planetary Data:

1 lanctary 1								
	Merc	cury	Vei	nus	Mars		Jupiter	
	Aqr (1–14) / 22–31) /		15–29) / Ce	Psc (3–12, et (13–14) / (0–31)	Ca	ncer	Aqu	arius
Date	Rise	Set	Rise	Set	Rise	Set	Rise	Set
6 Mar	6:27 am	5:31 pm	7:13 am	7:10 pm	2:02 pm	4:50 am	6:28 am	5:41 pm
13 Mar	6:30 am	6:10 pm	7:06 am	7:25 pm	1:36 pm	4:21 am	6:05 am	5:22 pm
*20 Mar	7:32 am	7:52 pm	7:59 am	8:40 pm	2:11 pm	4:54 am	6:41 am	6:02 pm
27 Mar	7:33 am	8:33 pm	7:52 am	8:56 pm	1:50 pm	4:29 am	6:18 am	5:43 pm

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

March Phenomena:

3 Mar, 8:00 am: Spica 3.0° N of Moon 3 Mar, 8:00 pm: Venus 0.6° S of Uranus 6 Mar, 6:00 pm: Antares 1.3° S of Moon 7 Mar, 5:00 pm: Mercury 1.1° S of Jupiter

11 Mar, 1:00 am: Mars stationary 13 Mar, 4:00 am: Neptune 3.6° S of Moon

*14 Mar, 2:00 am: Daylight Savings begins 14 Mar, 5:00 am: Mercury at superior conjunction

14 Mar, 2:00 pm: Jupiter 5.0° S of Moon

15 Mar, 2:00 pm: Mercury 0.6° S of Uranus

15 Mar, 4:00 pm: Uranus 5.4° S of Moon 16 Mar, 11:00 pm: Uranus at conjunction

20 Mar, 10:32 am: Vernal equinox

21 Mar, 5:00 pm: Saturn at opposition 25 Mar, 5:00 am: Mars 4.4° N of Moon

27 Mar, 3:00 am: Regulus 3.9° N of Moon

30 Mar, 7:00 pm: Spica 2.9° N of Moon

San Francisco Amateur Astronomers Annual Awards Dinner

SFAA'S Annual Awards Dinner was held at Delancey Street Restaurant on Saturday, January 30, with approximately 20 in attendance. Our newly-elected officers for 2010 are

Dave Frey, President Vivian White, Vice-President Secretary – Position Open Dave Wilton, Treasurer Board Members

Kenneth Frank, John Dillon, Annette Gabrielli, Elan Morpurgo, Doug Smith, Stefanie Ulrey Jim Cottle*, Dave Goggin*

*Received tie votes. A run-off election at the February meeting will determine the permanent board member and the alternate.

More photos: http://www.planitarium.net/sfaa/10awards-dinner/









FEBRUARY ASTRONOMY EVENTS

Kenneth Lum

Monday February 1, 7:30 p.m.

DEAN LECTURE - COSMIC DAWN: THE FIRST STAR IN THE UNIVERSE DR. TOM ABEL, Stanford University

California Academy of Sciences Morrison Planetarium 55 Music Concourse Dr. San Francisco Supercomputer calculations reveal a universe unseen by our biggest and best telescopes—including the first luminous objects in the Universe! These ultra-massive stars shone one million times as brightly as our sun, dying quickly and seeding the cosmos with the elements necessary for life. Join Dr. Abel on a fascinating journey that uses the latest computer animations of early star formation, supernovae explosions, and the evolution of the first galaxies.

Adults \$12 Seniors \$10 Academy members \$6

Wednesday February 3 Noon

COLLOQUIUM SERIES - PRIMORDIAL ICE RESERVOIRS OF THE SOLAR SYSTEM DAVID JEWITT

Department of Earth & Space Sciences and Inst. Geophys. and Planetary Physics, UCLA

SETI Institute Arecibo Room 515 N. Whisman Road Mountain View We now know that ice in the solar system resides in at least three distinct reservoirs, known as the Oort cloud, the Kuiper belt and the main-belt comets. Dr. Jewitt will discuss the nature, distribution and significance of the ice, highlighting its connection to the formation

Thursday February 3 7:30 pm

STANFORD PIONEERS IN SCIENCE: NOBEL LAUREATE DOUGLAS OSHEROFF

epoch, in a style intended to be sweeping and broadly accessible.

Stanford University Cubberley Auditorium 485 Lasuen Mall Douglas Osheroff began tinkering with the world of physics as a boy in the basement of his home in Aberdeen, Washington. At six, he disassembled his toys to get at their electric motors, later he blew a hole in two walls with a muzzle-loading rifle he built, and nearly blinded himself when a makeshift miner's lamp exploded. But by the time he was a senior in high school, he had constructed a 110 keV Xray machine, and everybody knew there was no stopping him. Osheroff went to CalTech as an undergraduate (where he enrolled in Richard Feynman's legendary two-year course on physics) and to Cornell as a graduate student, where in 1971 he and his colleagues discovered the superfluidity in helium-3. It was for this breakthrough that Osheroff shared the Nobel Prize in Physics in 1996.

Fascinated by the wonders of the low-temperature world, Osheroff decided to stay in solid state physics after receiving his PhD in 1973, and took a research position at Bell Labs during what he calls its "golden era." Osheroff says, "I was drawn to low-temperature work because it was so counterintuitive. Who would ever expect a liquid to flow up and out of the top of a beaker?" During his fifteen years at Bell, Osheroff continued to probe the mysteries of the cold world, was awarded a MacArthur Fellowship in 1981, and was courted by numerous universities, finally accepting Stanford's offer to join the Physics department in 1987.

Osheroff is the recipient of numerous national and international awards, and is a member of the National Academy of Sciences and a Fellow of the American Physical Society and the American Academy of Arts and Sciences.

Doug Osheroff's work will be introduced by his distinguished colleague, Alexander Fetter, Professor of Physics, Emeritus, and former Director of both the Hansen Experimental Physics Laboratory and the Geballe Laboratory for Advanced Materials.

Speaker: Douglas Osheroff, J.G. Jackson and C.J. Wood Professor of Physics; Gerhard Casper University Fellow in Undergraduate Education

About Stanford Pioneers in Science:

Please join us this Winter as we continue the Stanford Pioneers in Science series. These events offer the public an opportunity to learn about the scientific contributions and lives of Stanford faculty members who have been awarded Nobel Prizes, National Medals of Science or Technology, and MacArthur Fellowships.

Each event consists of a presentation about the professional accomplishments of the featured scientist, an interview with the scientist, and QA with the audience.

This series is your chance to engage with some of the most consequential thinkers of our day—people who have helped to shape the scientific, technological, and economic fabric of our modern world.

The Stanford Pioneers in Science Series for the 2009-2010 year is sponsored by Stanford's Continuing Studies Program and by the Stanford Historical Society.

Friday
February 5, 7:30 pm
Free and open to the public

San Mateo **Astronomical Society** College of San Mateo The CSM Planetarium 1700 W. Hillsdale Blvd. San Mateo (Near Hwy 92 and Hillsdale Blvd.) The Planetarium is attached to Bldg 36, immediately adjacent to Parking Lot 7. The ISC (Integrated Science Center), Room 36-110, is just across the breezeway from the Planetarium main entrance

Map: http://www.smcas.com/events/directions/activities at csm/

CHRIS FORD, Business Director - RenderMan, Pixar Animation Sudios ASTRONOMICAL VISUALIZATION: FROM HOLLYWOOD, NASA, AND BEYOND

Witness the birth of the Moon, navigate through Saturn's rings, and take a trip on the Mars rover! Join us for this visually-rich multimedia exploration through the universe as Chris Ford discusses the little realized but strong interplay between astronomical visualization and the evolution of computer graphics in feature film special effects.

The same technology used to create alien landscapes in Star Wars or Star Trek can just as easily be used to interpret real scientific data in a manner that both explains and entertains. Today it is now possible to create astronomical simulations that are so photo-realistic that it is possible to believe that you are "really there". The same technology is also increasingly accessible to the interested amateur astronomer, and to show this Chris will apply CG visualization techniques to create 3D stereoscopic astrophotography. His talk will be illustrated with state of the art example animations and visualizations from various documentaries, planetaria, IMAX, and his own work.

Speaker Biography:

Chris Ford is currently RenderMan Business Director at Pixar Animation Studios with over 20 years experience in computer graphics (CG) software development, media production technology, product management and business development.

Prior to Pixar, Chris was Director of Product Management at Autodesk for all 3D entertainment software products between 2002 and 2005, and Senior Maya Product Manager at Alias (Silicon Graphics) between 1997 and 2002 during which Maya was introduced to market, and through subsequent releases became established as the dominant 3D software product in digital media content creation.

Chris has managed most of the primary photo-realistic CG modeling, animation, and rendering software tools used in contemporary feature film special effects, animation, broadcast, and scientific visualization including the former Alias and Wavefront product families, Maya, 3ds max, and currently Pixar's RenderMan.

Friday February 5, 7:30 pm

Foothill Community College 12345 Moody Rd. 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.

Friday & Saturday February 5 & 6

Chabot Space & Science Center 10000 Skyline Blvd Oakland (510) 336-7300 EXPLORE THE NIGHT SKIES AT THE CHABOT OBSERVATORIES

for more information: http://www.chabotspace.org/

12pm - 5pm: Observatories Open - 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)

7:30pm - 10:30pm - Free Telescope Viewing

Regular hours are every Friday & Saturday evening, weather permitting:

Come for spectacular night sky viewing the best kept secret in the Bay Area and see the magnificence of our telescopes in action!

6:00 p..m. Dinner, a Movie, and the Universe at Chabot Space Center

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
February 6
10 a.m. – 12 Noon
IF IT IS CLEAR
Foothill Community
College
12345 Moody Rd.
Los Altos Hills

Solar observing with a Hydrogen alpha solar telescope every clear Saturday morning. This allows spectacular views of solar prominences and unusual surface features on the Sun not otherwise visible with regular white light telescopes. Admission is free.

Foothill Observatory is located on the campus of Foothill College in Los Altos Hills, CA. Take Highway 280 to the El Monte Rd exit. The observatory is next to parking lot 4. Parking at the college requires visitor parking permits that are available from the machines in the parking lots for \$2.00.

Golden State Star Party 2010

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

NOTED ASTRONOMERS AND LATEST ASTRONOMICAL DISCOVERIES FEATURED IN TWO PODCAST SERIES FROM THE ASTRONOMICAL SOCIETY OF THE PACIFIC

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The web-site of the nonprofit Astronomical Society of the Pacific now provides two different series of podcasts involving interviews with and talks by leading astronomers:

1) "Astronomy Behind the Headlines" features short interviews that give you a look at the latest discoveries in astronomy and space science and provide links to related resources and activities. It is particularly designed for the staff of science museums, planetariums, and nature centers, but can be enjoyed by educators in all settings and everyone who follows astronomy.

The latest episode takes a look at the black hole at the dusty heart of the Milky Way Galaxy. We can't see it visually, but radio astronomers can spot it with their instruments. A group led by Dr. Shep Doeleman at MIT's Haystack Observatory recently made a startling measurement of the disk through which the black hole is gathering in material, and in a brief interview, Dr. Doeleman explains the meaning of his discovery.

To listen to the latest episode, access related resource and subscribe via iTunes or XML, go to: http://www.astrosociety.org/abh/

Other podcasts in the series include interviews with planetary astronomer Heidi Hammel and meteor expert and meteorite discoverer Peter Jenniskens.

2) "The Silicon Valley Astronomy Lectures" feature complete talks by noted astronomers, recorded in both audio-only and video formats. Among the scientists who have spoken recently in the series are: Paul Kalas, whose group took the first visible-light image of a planet around another star (using the Hubble Space Telescope); Lynn Rothschild, an astrobiologists who explores some of the most hostile places on Earth to find life forms that might also survive on other worlds; and Patricia Burchat, a physicist who is seeking a better understanding of the dark matter and dark energy that seem to make up most of the universe through experiments.

Recordings of past speakers include Frank Drake, the father of the experimental search for extraterrestrial intelligence, planet hunter Geoff Marcy, and Stephen Beckwith, the former Director of the Hubble.

You can find the audio podcasts, and instructions for getting to the video versions at: http://www.astrosociety.org/education/podcast/

(Founded in 1889, the Astronomical Society of the Pacific is an international scientific and educational organizations, whose primary goal is to increase the public understanding of astronomy.)

2010 CLUB OFFICERS & CONTACTS

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CLUB TELESCOPES

The SFAA owns eight very fine, easy to use, loaner telescopes well-suited for deep sky, planets, and star parties. All scopes are available to any SFAA member. The loaner custodians for the majority of our fleet are Pete & Sarah Goldie. Please contact them at telescopes@sfaa-astronomy.org for details if you are interested in borrowing a scope or if you have items you can donate for the loaner program (eyepieces, star maps/books, red flashlights, collimator, etc.). Please contact the appropriate member indicated below if you are interested in borrowing one of the telescopes.

- 1) 6" f/10.3 Dobsonian/Ken Frank ken@sfaa-astronomy.org
- 2) 8" f/7 Dobsonian/Pete Goldie
- 3) 8.5" f/6 Dobsonian/Pete Goldie
- 4) 10" f/8 Dobsonian/Pete Goldie
- 5) 114mm f/4 Newtonian StarBlast/Pete Goldie
- 6) 8" f/10 Celestron SCT/Annette Gabrielli/ annette@sfaa-astronomy.org
- 7) 8" f/10 Meade SCT/Stefanie Ulrey/treasurer@sfaa-astronomy.org
- 8) 9.5" f/5.6 Celestron Newtonian/Ken Frank/ ken@sfaa-

astronomy.org

CLUB ASTRONOMY VIDEOS

The SFAA owns a series of astronomy videotapes featuring Alex Filippenko, a world-renowned professor of astronomy at UC Berkeley. The videotapes provide an introduction to astronomy and cover topics such as the Solar System, the lifecycles of stars, the nature of galaxies, and the birth of the Universe. The SFAA loans the tapes free to all members. If you are interested in viewing these tapes, you may check them out at any of the SFAA General Meetings. These tapes were kindly donated to the SFAA by Bert Katzung. For information on the course tapes themselves:

http://www.teach12.com/ttc/assets/coursedescriptions/180.asp

MEMBERSHIP DUES

Membership is billed for each upcoming year on June 30. Members may receive no more than one bulletin after the expiration of membership.

SFAA WEBSITE AND ONLINE SERVICES

<u>The SFAA web site</u> at <u>sfaa-astronomy.org</u> is provided to our members and the general public for the sharing of club information and services. The web site contains links for club <u>star parties</u>, <u>events</u>, <u>newsletters</u>, <u>lectures</u> and <u>meetings</u>. If you wish to interact with other people who are interested in astronomy, the SFAA web site offers public and members only <u>bulletin board forums</u>. If you wish to remain up-to-date on club activities, then we encourage you to subscribe to one or both of our public <u>mailing lists</u>, 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 <u>observing location reviews</u>, member <u>astronomy photos</u>, and <u>members only telescope loans</u>. Information about SFAA's membership, organization and by-laws are available at the club's online public document <u>archive</u>. If you need to contact a representative of the SFAA, then please visit our <u>contacts</u> 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

San Francisco Amateur Astronomers POB 15097 San Francisco CA 94115

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