

# ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

Vol. 57, No. 4 – April 2009

**Wednesday, April 15, 2009 – 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 3<sup>rd</sup> Wednesday of each month (except January)



**ANDISHEH MAHDAVI**

**Assistant Professor**

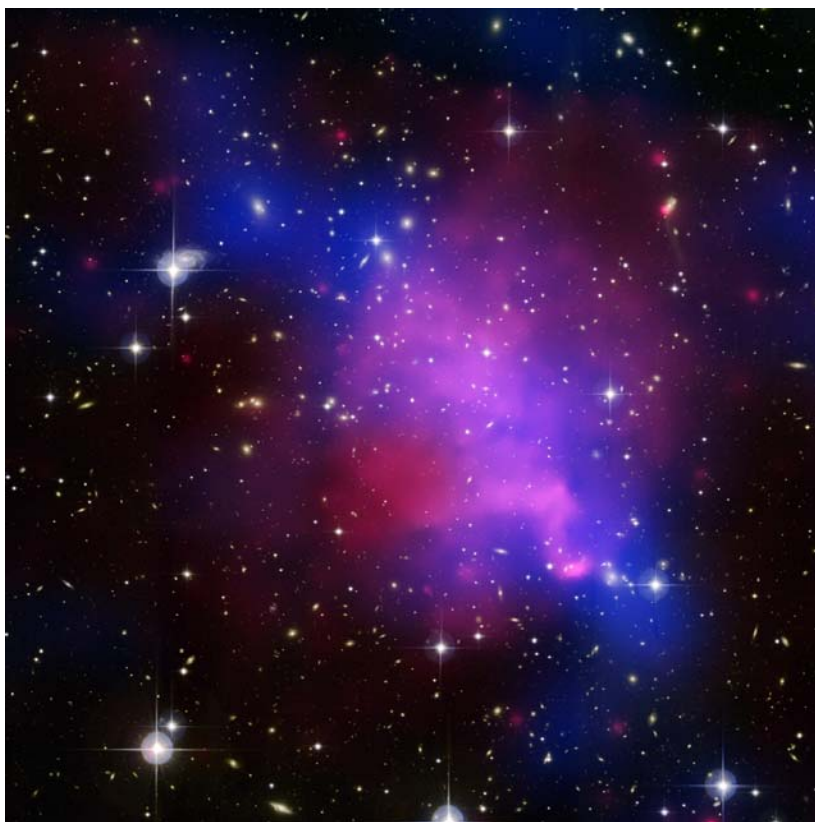
**Dept of Physics and Astronomy, San Francisco State University**  
**COSMIC ORIGINS: HOW UNSEEN FORCES LED TO THE RISE**  
**OF STARS, PLANETS, AND CARBON-BASED LIFE**

Nearly a century ago, Albert Einstein wrote down equations that allowed us to do the unthinkable: to calculate the physical conditions of the entire universe at the very beginning, and to predict its unfolding through cosmic time. When we square up these audacious calculations with data from ground- and space-based telescopes, we come to an unsettling conclusion: the evolution of matter in the universe has been governed by

gravitational agents we do not fully understand. The mysterious "Dark Energy" is tearing the universe apart, while the unseen "Dark Matter" tries to hold pieces of it together. Together these dark forces constitute 95% of the gravitational energy of the universe, and only a tiny 5% of it is made of the atoms that make up stars, planets, and people. Moreover, the destiny of the atoms depends on the properties of the dark forces. This has led to suggestions that the existence of carbon-based life is tied to the unique mixture of dark energy and dark matter in our present universe.

*Andisheh Mahdavi is an observational and computational astrophysicist focusing on clusters of galaxies, the largest gravitationally bound cosmic objects. Mahdavi specializes in marshalling data from orbiting X-ray satellites and ground-based optical and radio telescopes to understand the physics of dark and ordinary matter in clusters.*

*Mahdavi received his BA (1995) and PhD (2001) from Harvard University. He is currently Assistant Professor of Physics and Astronomy at San Francisco State University.*



## 2008 CLUB OFFICERS & CONTACTS

President	DIRK LAMMERTS	president@sfaa-astronomy.org
Vice President	Stephanie Ulrey	vicepresident@sfaa-astronomy.org
Secretary		
Treasurer	Vivian White	treasurer1@sfaa-astronomy.org
Speaker Chair	Linda Mahan	speakerchair@sfaa-astronomy.org
City Star Party	Stephanie Ulrey	csp@sfaa-astronomy.org
Bulletin Editor-in-Chief	Phil Estrin	editor@sfaa-astronomy.org
Associate Editor	Annette Gabrielli	editor@sfaa-astronomy.org
Telescope Loans	Pete Goldie	telescopes@sfaa-astronomy.org
Honorary Director and Board Member Emeritus	John Dobson	
Board Members	Jim Cottle	jimc@sfaa-astronomy.org
	John Dillon	johnd@sfaa-astronomy.org
	Dave Frey	davef@SFAA-Astronomy.org
	Kenneth Frank	ken@sfaa-astronomy.org
	Annette Gabrielli	editor@sfaa-astronomy.org
	Elan Morpurgo	elan@sfaa-astronomy.org 415 383-2247
	Jared Willson	jared@sfaa-astronomy.org
1 <sup>st</sup> Alternate	Joe Amato	wbmstr@sfaa-astronomy.org
2 <sup>nd</sup> 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](mailto: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](mailto: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](mailto:annette@sfaa-astronomy.org)
- 7) 8" f/10 Meade SCT/Stefanie Ulrey/[treasurer@sfaa-astronomy.org](mailto:treasurer@sfaa-astronomy.org)
- 8) 9.5" f/5.6 Celestron Newtonian/Ken Frank/ [ken@sfaa-astronomy.org](mailto: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>

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## 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](http://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.

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*Above the Fog* is the official bulletin of the San Francisco Amateur Astronomers. It is the forum in which club members may share their experiences, ideas, and observations. We encourage you to participate by submitting your articles, announcements, letters, photos and drawings. We would also like to hear from our new members. Tell us about yourself – what you have done in the past and what other clubs you have joined. **The deadline for the next issue is the 20th day of the month.** Send your articles to [Editor@sfaa-astronomy.org](mailto:Editor@sfaa-astronomy.org)

# IMPORTANT DATES

## SFAA GENERAL MEETINGS & LECTURES

*Wednesdays*

April 15

May 20

June 17

*7:00 p.m. Doors open. 7:30 p.m. Announcements. 8:00 p.m. Speaker  
Randall Museum, 199 Museum Way (Near 14<sup>th</sup> Street and Roosevelt)*

## BOARD MEETINGS

*Tuesdays*

April 15

May 12

June 9

*7:00-8:30 p.m.*

*Randall Museum, 199 Museum Way  
(Near 14<sup>th</sup> Street and Roosevelt)*

## CITY STAR PARTIES - TELESCOPE CLINIC ONE HOUR BEFORE SUNSET

**Lands End (Point Lobos)**

**May 9 – 8:00 p.m.**

*Weather may cancel the City Star Party*

Please note that while City Star Parties WILL ALWAYS be held on Saturdays, some will be closer to the last quarter phase of the moon, while others will be close to first quarter. This is so we can work around dates for Mt. Tam public star parties as well as our members-only events on Mt. Tam.

*Map and directions – Land's End (Pt. Lobos) <http://www.sfaa-astronomy.org/clubarchive/directions-pointlobos.php>*

## MT TAM STAR PARTIES – SPECIAL USE PERMIT – MEMBERS ONLY

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

**SATURDAYS**

April 25 – 7:55 p.m. – Gatekeepers: Pat, Woody

May 23 – 8:20 p.m. – Gatekeepers: Pat, **ADDITIONAL GATEKEEPER NEEDED**

June 20 – 8:35 p.m.



**NEW SFAA MEMBERS**

Scope City is offering to new members a \$25 credit toward the purchase of telescopes and binoculars.

Obtain a receipt for dues payment from Vivian White, Treasurer

[treasurer@sfaa-astronomy.org](mailto:treasurer@sfaa-astronomy.org).

Contact Sam Sweiss at Scope City to arrange for your discount.

## UPCOMING GUEST SPEAKERS

**May 20 - John Dillon – Curator, Randall Museum**

**Past President, San Francisco Amateur Astronomers**

### **THE AUTOPSY OF HEAVEN: GALILEO, TELESCOPES AND THE BEGINNING OF MODERN SCIENCE**

The world is about to celebrate the 400<sup>th</sup> anniversary of Galileo's telescope and the revolutionary observations he made with it. When he published his discoveries, the story goes, Galileo threw off the yoke of the ancient Greeks and challenged the authority of the Church – thus opening the way for “modern” science. John Dillon will take a longer view of the history of science and explore a subtler, more complex, relationship between Galileo, telescopes, Science and the Church.

**June 17 - Dr. Dana Backman – Stratospheric Observatory for Infrared Astronomy (SOFIA)**

**SETI Institute**

### **SPITZER OBSERVATIONS OF EPSILON ERIDANI'S DEBRIS DISK: SIGNS OF A PLANETARY SYSTEM**

Observations of the debris disk around the nearby solar-type star epsilon Eridani will be described, especially including results from the Spitzer infrared space observatory.

## OPEN SECRETARY POSITION

SFAA is seeking a new secretary. As a voting member of the board, the secretary has an active role in setting the future direction of SFAA. Primary duties include: attending monthly board meetings and recording meeting minutes, administering the SFAA Star Rewards volunteer program, preparing and mailing SFAA correspondence, sending regular event e-mail announcements to the general membership, and counting and recording votes for SFAA yearly general elections.

Total time commitment per month is approximately 3-4 hours, and regular attendance of monthly board meetings.

No prior experience in secretarial duties required, only the desire to help SFAA continue its mission of bringing great astronomy programs to its members and to the public.

If you are interested or have questions about the position, please send an e-mail to Barbara Arrighi, [secretary1@sfaa-astronomy.org](mailto:secretary1@sfaa-astronomy.org)

**EARTH HOUR**  
**Saturday, March 28, 2009**  
**Celebrated at 8:30 p.m. in each time zone worldwide**

[http://www.boston.com/bigpicture/2009/03/earth\\_hour\\_2009.html](http://www.boston.com/bigpicture/2009/03/earth_hour_2009.html)

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**MITA Award Given**

I received from the MTIA the Mt. Tamalpais Interpretive Association "Big Star" Award presented by Tinka Ross at the Annual Meeting of the MTIA on March 14th at the California Alpine Club. She did a very nice intro into astronomy and all the work I've done for the Mt. Tam program

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**AROUND THE WORLD IN 80 TELESCOPES, WHAT'S UP FOR APRIL**

For those of you who would like to go back and view some of the "Around the world in 80 telescopes" segments, the 100 Hours of Astronomy website conveniently has links to each telescope feature in a separate Ustream segment. <http://www.100hoursofastronomy.org/> easy for viewing later.

Just around "my" corner, Caltech is projecting the show on the outside walls of the new astronomy building all day today! 1216 California Boulevard in Pasadena. :-)

JPL's website has great coverage too -- right on the main page: <http://www.jpl.nasa.gov/>

And speaking of telescopes, 4 orbiting telescopes are featured in this month's new What's Up Podcast. The topic is NASA's IYA observing object of the month: The Whirlpool Galaxy.

<http://solarsystem.nasa.gov/news/whatsup.cfm>

And you can locate many of the Apollo landing areas using this nice map:

[http://solarsystem.nasa.gov/multimedia/display.cfm?IM\\_ID=804](http://solarsystem.nasa.gov/multimedia/display.cfm?IM_ID=804)

And you can imagine that little golden Saturnian dot in the sky looks like this Ian Sharp image from Wednesday night:

<http://www.astro-sharp.com/images/saturn2009/sat-2009-04-01-20-40-IDS.jpg>

Jane Houston Jones  
Senior Outreach Specialist, Cassini Program



## **SFAA Messier Marathon**

**March 28, 2009**

Charles Messier was a French astronomer whose goal was to discover as many comets as possible and was called the "Ferret of Comets" by Louis XV. He was a rock star of the times. Curiously he is known for discovering or co-discovering 103 objects that are NOT comets. Seven more objects were added later. Explaining his reason for meticulously mapping the location of these objects in 1801 roughly quoting from his journal *Connaissance des Temps*: "What caused me to undertake the catalog was the nebula I discovered above the southern horn of Taurus on September 12, 1758, while observing the comet of that year. This nebula had such a resemblance to a comet in its form and brightness that I endeavored to find others so that astronomers would not confuse these same nebulae with comets just appearing." That object was later to become known as M 1, the Crab Nebula.

The Messier Marathon was invented independently by several North American amateurs including Tom Hoffelder, Tom Reiland, perhaps one Spanish amateur astronomer and our very own Don Machholz.

On Mount Tamalpais on Saturday, March 28, 2009, French astronomer Charles Messier, made his annual apparition to initiate the mighty minions to the Marathon. We endured French pastries, attempted the mutual satisfaction of attempting to achieve our common goal, jovial jousting and conferred on how bad Saturn looked in our respective telescope eyepieces.

Monsieur Messier observed Saturn in Jared's Vixen and found it appeared to look more like a galaxy than a planet! At that point we all decided to call it quits and head down the mountain, refreshed, rejuvenated and ready to try again this fall in conjunction with the Sonoma County Astronomical Society at Lake Sonoma for the Second Annual Mini-Messier Marathon.

Submitted by Mssr. Messier



# Looking forward to the Golden State Star Party - 2009

Elan Morpurgo

Here are some pictures from last year's Golden State Star Party.

The dates for this year are: June 20-24.

Since the untimely 'demise' of the Shingletown Star Party some years ago,

It is the prime yearly star party for central and northern California.



**The Site:** is about as good as it can get; great horizons, huge, flat, with minimal dust, no rocks, and is a natural surface - all great for camping and setting up equipment.



## **Location:**

Frosty Acres Ranch near Adin in northeast California at an elevation of 4400 feet, with views of Mount Shasta 66 miles west, on-site amenities, nearby towns, and true dark sky.

Adin is about an hour and a half drive on highway 299 East of Redding.

(About 100 Miles)

Last year was the first time it was held in this new location. Reviews were mostly favorable, in spite of the less than optimal conditions due to the raging wild fires.

The surface is mostly heritage grass. It is safe for driving and provides a comfortable camping surface with a minimal



amount of dust.

Last year only a hand full of SFAA members took part. I will be attending this year again. For more specific information please check the GSSP at:

<http://goldenstatestarparty.blogspot.com>

Or call Elan at: 415 383-2247 or email to:

[elanesti@sbcglobal.net](mailto:elanesti@sbcglobal.net)



A good palce to meet up with old friends as well as to make some new ones.





Wednesday, April 22, 7:00 pm  
Silicon Valley Astronomy Lectures  
Non-Technical, Illustrated Talk

**Dr. Margaret Race**

one of the leading experts on the contamination danger and the protection of planets

## Planetary Protection and Hitchhikers in the Solar System: The Danger of Mingling Microbes

Smithwick Theater, Foothill College  
El Monte Road and Freeway 280  
Los Altos Hills, California

Free and open to the public.

Parking on campus costs \$2.

Call the series hot-line at 650-949-7888 for more information and driving directions.

No background in science will be required for this talk. Seating is first come, first served.

Scientists searching for life elsewhere have to worry about avoiding harmful cross contamination during the exploration of planets and their moons. We don't want to take Earth microbes to Mars or bring back alien microbes to Earth. In this timely talk, Dr. Race will give a behind-the-scenes view of "environmental management" planning for solar system missions, and explain the role of the Outer Space Treaty and other related national and international policies. She will also discuss the varied societal issues likely to arise from discoveries about life beyond the Earth -- issues about the meaning of life, its future evolutionary trajectory, and environmental sustainability in the universe.

Dr. Race is an ecologist at the SETI Institute who works with NASA and the international space community to develop, refine, and apply planetary protection policies to missions to the planets. She has organized and edited proceedings for a number of conferences in this field, and served on panels evaluating contamination danger for the National Research Council. She has a strong interest in communicating science to the public, having worked at both the Environmental Protection Agency and KQED Television.

The lecture is co-sponsored by:

\* NASA Ames Research Center

\* The Foothill College Astronomy Program

\* The SETI Institute

\* The Astronomical Society of the Pacific.

San Francisco Amateur Astronomers  
POB 15097  
San Francisco CA 94115

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\$75 Supporting \_\_\_\_\_

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

**MEMBERSHIP APPLICATION**

San Francisco Amateur Astronomers  
P.O. Box 15097  
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Information Hotline: (415) 289-6636

Web Page: [www.sfaa-astronomy.org](http://www.sfaa-astronomy.org)

*Sharing the Wonders of the Universe*

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