

★ ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

VOL. 52, No. 2 – FEBRUARY 2004

FEBRUARY 18, 2004 – GENERAL MEETING



PYTHAGORAS

ANCIENT GREEK ASTRONOMY

THE FIRST SCIENCE

JOHN DILLON

Long before there were telescopes there was a Science of Astronomy. 2000 years before Galileo pointed his "optick stick" towards the heavens, Greek astronomers were dismissing the mythologic ideas of their predecessors and neighbors and calculating the sizes, distances, orbital mechanics and material makeup of celestial bodies. They devised theories, subject to intense peer review, that required keen reasoning and sophisticated mathematics, not miracles, to understand. Even today, their theoretical insights and careful observations remain impressive.

Science began with the ancient Greeks and the ancient Greeks began with astronomy.

John Dillon did his graduate work in Zoology and Philosophy at Duke University then worked at the California Academy of Sciences before becoming Natural Science Curator at the Randall Museum. He teaches History and Philosophy of Science at the California Academy and at the University of California Berkeley Extension and has spent the past five summers pursuing these subjects at Cambridge University. John also leads international tours (including four solar eclipses) for museums and environmental groups. This summer he will be lecturing on ancient Greek astronomy to a group observing the transit of Venus in the Greek Isles.

2003 CLUB OFFICERS & CONTACTS

President	Michael Portuesi	(415) 550-9366
Vice President	Nancy Cox	(415) 269-8259
Secretary	James Mace	
Treasurer	Lorrie Boen	
Speaker Chair	Linda Mahan	
City Star Party	Randy Taylor	(415) 255-8670
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Telescope Loans	Pete Goldie	(415) 206-9867
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Board Members	Jim Webster	
	Steve Bryson	
	Danny Christian	
	Cheryl Schudel	
	Ken Frank	
	Slava Evanikoff	
	Randy Taylor	
Alt. Board Members	John Dillon	
	Phil Estrin	
Webmaster	Joe Amato	

MEMBERSHIP DUES

The mailing label on the back of this issue shows the month and year through which your membership was paid. If the date has passed, your membership has expired. Members may receive no more than one bulletin after the expiration of membership.

Please renew soon if your membership is expiring.

ONLINE SERVICES FOR SFAA MEMBERS



The SFAA's Secretary's Web Site helps keep SFAA information together and accessible to members. The site URL is <http://www.whiteoaks.com/sfaa/>. At this site you can find such information as minutes from meetings of the Board of Directors, the SFAA official by-laws, and other information. SFAA also offers email lists to supplement the bulletin board offered at the SFAA's official web site. At present there are two email lists -- an unmoderated list for use primarily for business and discussion by the Board of

Directors (but open to all members), and a moderated announcement list for all SFAA members. If you would like to be added to the SFAA-announce email list, please contact the secretary (secretary@sfaa-astronomy.org) and let him know. You can also sign up for the list yourself at this URL:

<http://www.whiteoaks.com/mailman/listinfo/sfaa-announce>

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 seventh day of the month. Send your articles to pestrin@dir.ca.gov.

CLUB TELESCOPES

The SFAA owns 4 club loaner telescopes, Dobsonian/Newtownian reflectors: 6" f/10, 8" f/7, and 10" f/8 and a Starblast. They are available for extended periods (30 days or more) to SFAA members. These are generally very fine scopes, easy to use and well-suited for deep sky, planets, and star parties. The loaner custodians are Pete Goldie & Sarah Szczechowicz, located in San Francisco. If you are interested in borrowing a scope, or if you have items you can donate for the loaner program (eyepieces, star maps/books, collimator, etc.) please contact them via email (<mailto:pg@lbin.com>) or phone (415-206-9867). Email communication is preferred and strongly recommended for a quick and accurate reply.



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. Our librarian is Dan Christian.



For information on the course tapes themselves:

<http://www.teach12.com/ttc/assets/courseDescriptions/180.asp>

FROM YOUR PRESIDENT

As you may be aware, SFAA has scheduled private star parties on New Moon weekends at Mount Tam for this coming summer. We did this to provide more observing opportunities for members, and to provide a local dark-sky observing event following the move of the public Mount Tam star parties to First Quarter weekends.

When we chose the dates for the events, the State Parks department assured us the dates were available. I had made the mistake of assuming this meant our event planning with respect to the State Parks department was secure.

Unfortunately, this is not the case. Shortly after the beginning of the year, the State Parks department contacted me regarding the fees they would be charging us for each event. Use of the Rock Springs parking lot is \$75 per event. Since the star parties take place outside normal park hours, we must pay the State Parks to hire a second ranger to monitor the event during setup, while the other park staff (usually just one ranger) closes the park for the evening. That is estimated to cost \$272 per event.

Toss in \$25 to process the paperwork, and one year of private star parties at Mount Tam will cost SFAA \$2,454. We can't afford this cost; in fact, we don't even have that much money in our checking account. At the January Board Meeting, we decided to cancel all the private New Moon events except for September 11, the date of our annual picnic.

Why is the State Parks department charging us such onerous fees? Part of it has to do with new management at the park and, with that, a firm policy to treat all groups who use the park equally with regards to fees and park rules. But part of it also has to do with state budget cuts, which makes the Parks Department motivated to collect what fees they can, rather than waive them for groups which have supported them in the past. And the fees are going up in July, I'm told.

Though our New Moon star parties will not happen, there will still be observing opportunities at Lake Sonoma Recreation Area, near Cloverdale. For driving directions, see <http://observers.org/sites/LS/>. It's not an official SFAA event, but you will likely see several SFAA members there. It's a longer drive, but an easy one compared to driving up the hill to Mount Tam.

And don't forget the regular Mount Tam public star parties on First Quarter Moon weekends! They aren't going away, and the Moon generally sets about the time the public departs, or not long after. Besides, the Moon is great to observe.

Finally, there is another training session for Mount Tam gatekeepers coming this Saturday, February 7. Those who have attended training are entitled to operate the Mount Tam gates, and stay on the mountain all night after public events. To attend, call Sarah Davis at 415-924-7887 and let her know you are planning on attending.

MICHAEL PORTUESI
president@sfaa-astronomy.org,
415-550-9366

SPIRIT NIGHT AT JPL

MORRIS JONES



MOJO POSES IN FRONT OF A MARS SANDBOX WITH A FULLY-DEPLOYED ROVER MODEL.

January 3, 2004, 7:30 p.m. -- Wouldn't it be fun to be in the media room at JPL on the night of a landing on Mars? I am part of the media this Saturday night, complete with a seat at a table, a net connection for my laptop, and the privilege of asking questions of JPL management at press briefings. My media connection? I'm a reporter for the SJAA Ephemeris, and correspondent to member clubs of the Astronomical Association of Northern California.

Earlier today I filled out a security form that specified my addresses and employers for the past five years,

presented my driver's license and passport, and was rewarded with an official PRESS badge with the label "Restricted, no escort required." (If you're foreign press, you have to be escorted. There's a small army of JPL employee volunteers acting as foreign press escorts over the weekend.)

Of course it has been an eventful Saturday evening here at JPL, but I dove right in to my role. At an afternoon press conference, everyone was focused on the potential failure of the landing. I decided to ask a somewhat lighter question to the four program managers.

"What time will it be in Gusev crater when Spirit lands? And what will the days be like for the engineers and scientists during operation of the mission?"

There I was live on NASA-TV sitting next to a reporter from the Associated Press asking my fun little question. I think the managers really enjoyed the question because it took them away from this focus on Mars failures.



THE LONG WAIT: MEMBERS OF THE MEDIA WAIT PATIENTLY FOR THE "SIX MINUTES FROM HELL" TO BEGIN.



RANDII WESSEN OF JPL EXPLAINING MARS EXPLORATION ROVER GYRATIONS TO QUESTIONING MEMBERS OF THE MEDIA.

They answered that it would be about 2 in the afternoon, Gusev crater time, when Spirit lands. And during the operation there are two shifts of engineers and scientists working the mission -- a Martian day shift, and a Martian night shift. Both teams are tied to the Martian sol clock, so their shifts would begin about forty minutes later every day. It's torturous on your body clock, but nobody really minds.

The other interesting fact they pointed out is that Opportunity would land in a spot about 12 hours (martian time) away from Spirit, so the operation teams will be in completely opposite phase.

As I write this, I'm enjoying the NASA-TV theater of "polling" flight controllers prior to EDL -- entry, descent, and landing. It seems absurd to me, since there's no way to abort the landing and "go around" if some system isn't nominal, but it makes for good drama. After all, they're watching events that took place nine minutes ago, and can't issue a command to the spacecraft that would be received for nine minutes. Eighteen minutes round trip is impossible reaction time when events change so quickly during EDL.

But now it's time to wait for word of the landing.

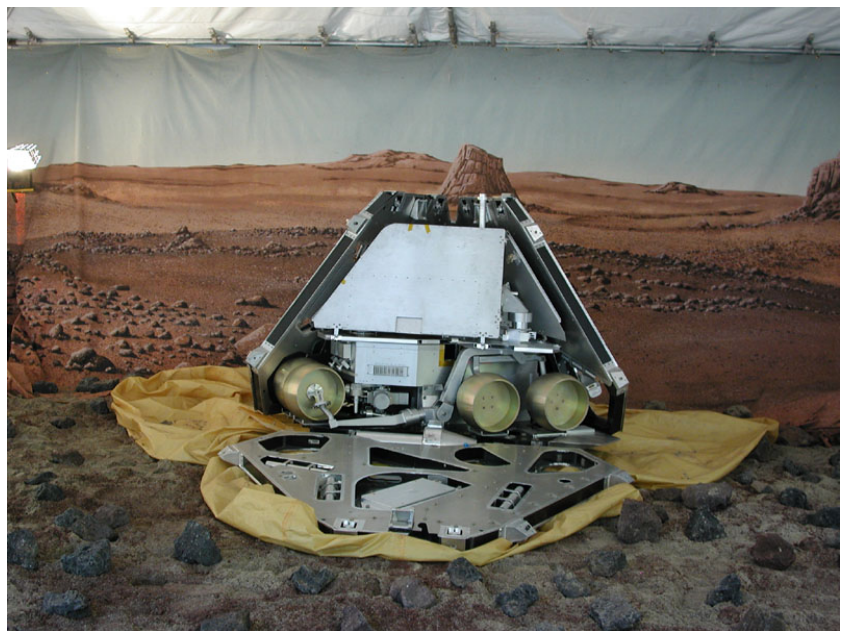
11:00 p.m. -- Perfect landing! It was certainly a thrilling hour, and a treat to get to sit in the briefing room with all those illuminati sharing the celebration.

By the time this is published, Spirit's mission should be well under way, and we'll all know if Opportunity has been able to duplicate Spirit's success.

While there really wasn't much difference between being here and watching NASA-TV from home, being here and reporting first hand was very special.

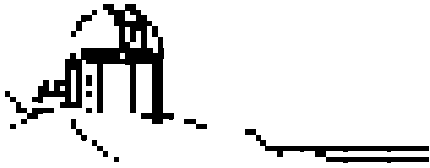
Signing off, live from NASA JPL in Pasadena. Sleep well, Spirit.

MORRIS JONES



A FULL-SIZE MODEL OF THE MARS EXPLORATION ROVER WITH ONE PETAL DEPLOYED.

SAN JOSE ASTRONOMICAL ASSOCIATION



**AUCTION
APRIL 4, 2004 -12:00 NOON
HOAGIE PAR
NO ENTRY FEE**

TELESCOPE CLINICS FROM SIDEWALK ASTRONOMERS AND SFAA



The Sidewalk Astronomers and SFAA are pleased to offer free personal assistance to new telescope owners at the monthly City Star Party, hosted by the Golden Gate National Recreation Area at Land's End in San Francisco. Experienced amateur astronomers from the SFAA and Sidewalk Astronomers will help new telescope users with setup, optical alignment, and operation of their telescopes and mounts.

The telescope clinics are held Saturday evening, an hour before the City Star Party at Land's End, San Francisco. Future events are scheduled on **February 28** and **March 27**.

New (or "new again") telescope owners who would like to attend the clinic are encouraged to give advance notice by sending email to <http://www.clinic@sfsidewalkastronomers.org/>, or by leaving a telephone message on the Sidewalk Astronomers' hotline, (415) 289-2007. Questions are welcome at the email address.



FAMILY ASTRO WORKSHOP FEBRUARY 21, 2004

The Astronomical Society of the Pacific's Family ASTRO program is offering our next workshop on our ever-popular (and often requested) Moon Mission kit.

The workshop will be held at the ASP offices on Saturday, February 21, from 8:30-12:30. Light snacks will be provided at no cost. Please pre-register by completing and submitting the application included in this article. Space is limited – submit your application in soon. Only the first 20 applicants will be accepted.

Moon Mission guides families through survival adventures on the Moon, creates an understanding of phases of the Moon, addresses multi-cultural lore surrounding the Moon, as well as fun family activities focusing on scale and gravity.

Thanks to our National Science Foundation grant, Family ASTRO will give each event leader 10 free family kits and a leader kit for participating in the workshop and agreeing to facilitate your own family activities and provide programmatic feedback.

Free Family Astronomy Leader Training

Saturday, February 21, 2004

8:30 a.m. - 12:30 p.m.

**Astronomical Society of the Pacific's Office
(390 Ashton Ave., San Francisco)**

Moon Mission

What is Family ASTRO?

Family ASTRO is about making science fun! No previous astronomy knowledge is necessary!

Our goal is to train teachers, astronomers, and museum and community group educators to help children and adults explore astronomy together. Participants will learn to lead family astronomy events focusing on the Moon.

At the February 21st "Moon Mission" Event Leader training you will:

- **learn hands-on astronomy activities that are fun for the whole family**
- **find out how to organize and lead a successful family workshop**
- **receive a free leader kit and 10 free activity kits for families about the Moon**
- **meet other Bay Area educators with similar interests**

To apply for the February 21st workshop, fill out the attached application and return to Kristin Nelson,

Bay Area Family ASTRO Coordinator, ASP, 390 Ashton Ave.,
San Francisco, CA 94112. Fax: (415) 337-5205.

Space is limited, so please submit your application by Monday, February 9, 2004.

(Late applications accepted only if space is available)

If you have any questions, please call Kristin at (415) 337-1100 ext 101 or e-mail knelson@astrosociety.org.

The Astronomical Society of the Pacific is an international, nonprofit organization of professional and amateur astronomers, science educators of all levels, and people who want to know more about our amazing universe. The Society works to increase the public understanding and appreciation of astronomy. Founded in 1889 in San Francisco and still located there today, the ASP has members nationwide and in 70 countries around the world.

Event Leader Training Application Form

Fax to Kristin Nelson (415) 337-5205, email to knelson@astrosociety.org or send to Family ASTRO, Astronomical Society of the Pacific, 390 Ashton Avenue, San Francisco, CA 94112

Applications are due by Monday, February 9, 2004.
(Late applications may be accepted, if space allows.)

Contact Information

Name _____ School/Organization _____

Address (street/city/zip): _____

Phone: _____ E-mail: _____

- I am new to your project I have been involved with Project ASTRO.
 I have attended a Family ASTRO training event before and learned to facilitate the following kit(s)
(circle all that apply): Race To The Planets Moon Mission
 Night Sky Adventure Cosmic Decoder

I am a (please check all that apply):

<input type="checkbox"/> elementary school teacher	<input type="checkbox"/> middle school teacher	<input type="checkbox"/> high school teacher
<input type="checkbox"/> amateur astronomer	<input type="checkbox"/> professional research astronomer	<input type="checkbox"/> retired research astronomer
<input type="checkbox"/> graduate student / Post Doc		<input type="checkbox"/> community/youth group leader
<input type="checkbox"/> museum/planetarium educator		<input type="checkbox"/> other _____

Are you bilingual? What languages do you speak?

Why are you interested in participating in this program? What goals related to Family ASTRO do you have?

Where do you think you will lead Family ASTRO Events (please be specific)?

By signing this form and attending the leader training, I agree to lead at least two family events within the next 12 months, and to work with Family ASTRO staff to help evaluate the program.

If I am a teacher, I certify that I have the approval of my principal or other administrator to participate in this activity.

Light snacks will be provided.

Signature _____ Date _____

SAN FRANCISCO AMATEUR ASTRONOMERS

FUTURE SPEAKERS

LINDA MAHAN



RANDALL MUSEUM

MARCH 17, 2004
JOHN E. WESTFALL
 AUTHOR OF: *ATLAS OF THE LUNAR TERMINATOR*.

John's background as a cartographer and his love and knowledge of the Moon will provide a timely talk. Because of the winter weather and the frequent availability of the Moon as our most prominent viewing target, this talk will inspire and inform us. Invite an interested guest for this talk.

APRIL 21, 2004
CHUCK PULLEN - AAVSO

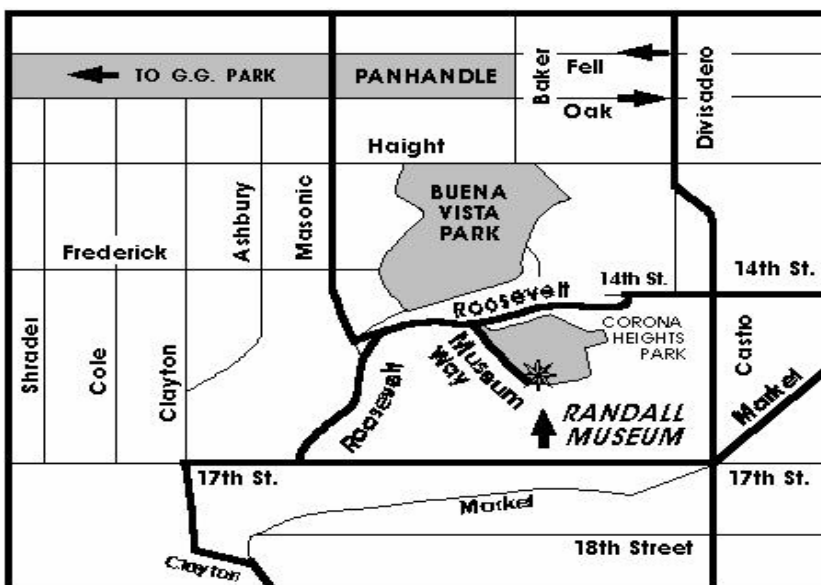
Chuck will show us how to enjoy viewing Variable Stars. Note that variable stars can be viewed with the naked eye or binoculars. Chuck will teach us how to keep a log and be experienced for long summer night viewing. This is another talk to which you may want to invite a potential SFAA Member to join you.

(DATES TO BE ANNOUNCED)

PHIL PLAIT
 "THE BAD ASTRONOMER"

Ken will talk on Barnard Schmidt and the Schmidt camera. Ken will also talk about his appreciation and knowledge of antique telescopes and his travels to see them.

KEN LUM
 PENINSULA ASTRONOMERS SPEAKER COORDINATOR



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If you have suggestions on topics or speakers you would like for our meetings, please contact Linda Mahan at (415) 383-7916, or doublestar@ix.netcom.com



SAN FRANCISCO AMATEUR ASTRONOMERS

2004 CALENDAR

JANUARY

- 14 - 7 PM Board Meeting
- 24 - Awards Dinner
 - 6 PM Open Bar
 - 7 PM Dinner
- 31 - 4:30 PM Telescope Clinic
- 31 - Sunset 5:32 PM City Star Party (CSP)

FEBRUARY

- 11 - 7PM Board Meeting
- 18 - 7PM General Meeting
- 28 - 5PM Telescope Clinic (CSP)
- 28 - Sunset 6:02 pm City Star Party

MARCH

- 10 - 7PM Board Meeting
- 17 - 7PM General Meeting
- 27 - Sunset 6:29 PM City Star Party
- 27 - Mount Tam Telescope Clinic
- 27 - Mount Tam Public Star Party

APRIL

- 14 - 7PM Board Meeting
- 21 - General Meeting 7 pm
- 24 - Mount Tam Telescope Clinic
- 24 - Mount Tam Public Star Party

MAY

- 12 - 7PM Board Meeting
- 19 - 7PM General Meeting
- 22 - Mount Tam Telescope Clinic
- 22 - Mount Tam Public Star Party

JUNE

- 9 - 7PM Board Meeting
- 16 - 7PM General Meeting
- 26 - Mount Tam Telescope Clinic
- 26 - Mount Tam Public Star Party

JULY

- 14 - 7PM Board Meeting
- 21 - 7PM General Meeting
- 24 - Mount Tam Telescope Clinic
- 24 - Mount Tam Public Star Party

AUGUST

- 11 - 7 PM Board Meeting
- 18 - 7PM General Meeting
- 21 - Mount Tam Telescope Clinic
- 21 - Mount Tam Public Star Party

SEPTEMBER

- 8 - 7PM Board Meeting
- 11 - Sunset 7:23 PM Mount Tam SFAA-only Star Party

- 15 - 7PM General Meeting

- 18 - Mount Tam Telescope Clinic
- 18 - Mount Tam Public Star Party

OCTOBER

- 13 - 7PM Board Meeting
- 16 - Mount Tam Telescope Clinic
- 16 - Mount Tam Public Star Party
- 20 - 7PM General Meeting
- 23 - Sunset 6:21 PM City Star Party

NOVEMBER

- 10 - 7PM Board Meeting
- 17 - 7PM General Meeting
- 20 - 4PM Telescope Clinic (CSP)
- 20 - Sunset 4:55 PM City Star Party

DECEMBER

- 8 - 7PM Board Meeting
- 15 - 7PM General Meeting/Member's Night
- 18 - 4PM Telescope Clinic (CSP)
- 18 - Sunset 4:53 PM City Star Party

Founded in September 1952, the San Francisco Amateur Astronomers (SFAA) is an association of people who share a common interest in astronomy and other related sciences. Our membership consists of people from all walks of life, educational backgrounds and ages. Many SFAA members own their own telescopes; some have been made by hand in local telescope-making classes and vary in size from 6 to 25 inches.

Treasurer, SFAA, 765 Geary St., #302, San Francisco CA 94109

make checks payable to **San Francisco Amateur Astronomers** and mail to:

- \$10 enclosed, youth/student membership
- \$25 enclosed, individual membership
- \$30 enclosed, family or foreign membership
- \$40 enclosed, institutional membership
- \$75 enclosed, supporting membership

Select one category:

Email address:

Address:

Name: Telephone:

San Francisco Amateur Astronomers Membership Application

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



Information Hotline: (415) 289-6636

Web Page: 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.