



VOL. 50, No. 12 – December 2002

Member's Night

There is no scheduled speaker for the general meeting on December 18, 2002. This is your night to regale your fellow members with a short presentation on any astronomical subject that personally inspires you. If there is a particular topic in which you have done research, feel free to share it with us all. Please contact our club president, Bill Stepka, at (415) 928-7105.

The Astronomical Arts Award

This contest is open to all members and will be judged by the membership at the December General Meeting. We had several fine entries at the inaugural competition last year. Any art related to astronomy is welcome. Your drawings of astronomical objects are worth sharing with other club members, as is craftwork, sculpture, jewelry, and paintings. There are almost no restrictions here. Size is a consideration since we have to fit all entries, and club members, in the Planetarium, alongside the Astrophotography Award entries. Please bring your entries to the Meeting on December 18, 2002. Any questions can be directed to club officers, listed on page two in this bulletin.

Astrophotography Award

Members are encouraged to submit astrophotographs (up to three entries per member) for judging in the astrophotography award. Submissions are accepted October, November or at the December general meeting. All entries will be exhibited at the December meeting and voted upon by the general membership. Entries must have been taken this year (2002) and be of an astronomical theme. Size should be reasonable (11' x 14' or less), mounted or unmounted.

Literary Award

The entries for the Literary Award are a supplement to this issue. The deadline for voting the best entries is December 18. You can cast your vote by mail or bring it to the meeting.

Observer of the Year Award

The Observer of the Year Award is given for noteworthy observing accomplishments during the year, such as qualifying for the Messier Award, the Herschel Club, observing all the planets, getting articles or photographs published, etc. Nominations will be accepted in October and November. Members may submit their own name or the names of anyone they feel is qualified. Candidates should prepare a list of their observing accomplishments in 2002 for judging by the December meeting.

Election Voting Deadline

The ballot for club officers and board members is later in this edition. Please take the time to cast your vote. You can return the ballot to the club address or bring it to the meeting.

2002 Club Officers & Contacts

<i>President</i>	Bill Stepka (415) 928-7105
<i>Vice President</i>	Nancy Cox (415) 826-2217
<i>Secretary</i>	Jason Burkhart
<i>Treasurer</i>	Chelle Owens (415) 479-5313
<i>Speaker Chair</i>	Robert Naeye
<i>City Star Party</i>	Randy Taylor
<i>Membership & Subscriptions</i>	Chelle Owens (415) 479-5313
<i>Bulletin Editor</i>	Phil Estrin (415) 703-4533
<i>Telescope Loans</i>	Pete Goldie (415) 206-9867
<i>Honorary Director</i>	John Dobson
<i>Board Members</i>	Lorrie Boen Dan Christian Art Owens Michael Portuesi Al Stern Dennis Tye Jim Webster
<i>Alt. Board Members</i>	Rita Nossardi Stern Randy Taylor

CLUB TELESCOPES

The SFAA owns 3 club loaner telescopes, Dobsonian/Newtownian reflectors: 6" f/10, 8" f/7, and 10" f/8. These 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 (pg@lbin.com) or phone (415-206-9867). Email communication is preferred and strongly recommended for a quick and accurate reply.

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 Phil Estrin at pestrin@dir.ca.gov.

ASP Needs Help Evaluating Telescope

In the late 1980s, the Astronomical Society of the Pacific purchased a 14-inch Celestron Schmidt-Cassegrain telescope. For the last several years, the ASP has loaned this telescope to the Lawrence Berkeley Hall of Science. Recently, the telescope was returned to the ASP. The telescope and its fork mount appear to be in excellent condition. However, the fork mount is large and very heavy. Because the mount is so cumbersome, it is unlikely that the ASP will ever use this telescope, and we are considering the possibility of selling the telescope. Before doing so, we would like someone who is adept at using telescopes to set up the Celestron and evaluate its performance and worth. If there are any SFAA members who would like to try it out, please contact SFAA member and Mercury magazine editor Robert Naeye at editor@astrosociety.org or 415-337-1100 x108. I think it could be a fun telescope to play around with!

SFAA ANNUAL AWARDS DINNER
Saturday, January 11, 2003
Dinner begins at 7:30 p.m.

Basque Cultural Center
599 Railroad Ave, South San Francisco
(650) 583-8091

Banquet Menu

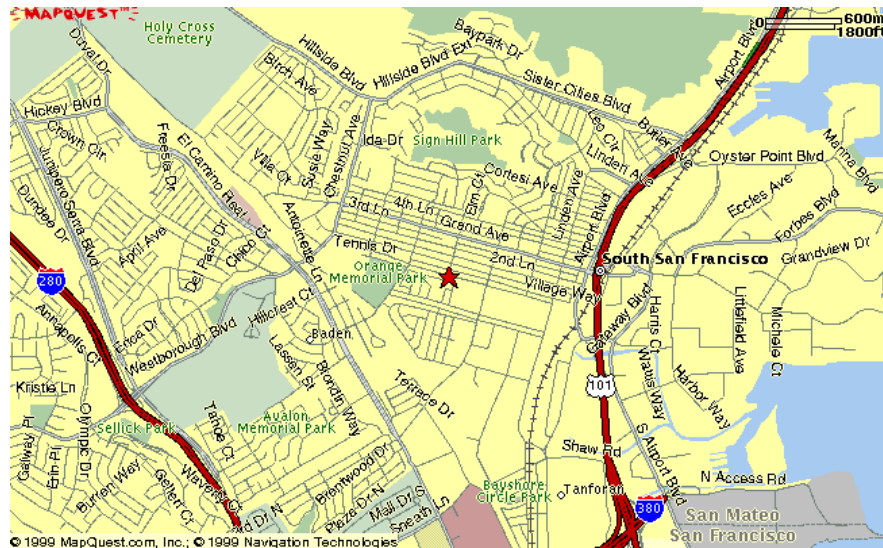
Prime Rib with Scalloped Potatoes & Vegetables (\$27.00)
Breast of Chicken Chasseur with Vegetables & Rice (\$22.00)
Vegetarian Pasta (\$18.50)

All meals include Soup, Salad, Bread & Butter, Ice Cream and Coffee. Price includes tax and gratuity.

Please send a check or money order, along with your choice of entrée, to Lorrie Boen at 765 Geary Street #302, San Francisco, CA 94109 by **January 4, 2002**. Any requests received after this date cannot be guaranteed.

Directions to the Basque Cultural Center from Highway 280 coming from San Francisco

Take the Westborough exit near South San Francisco. Turn left at the light. (heading toward San Francisco Bay). Turn right at El Camino proceeding South. Two or three blocks later turn left onto West Orange heading toward San Francisco Bay. Go for some distance (what would be about 5 blocks except there are almost no side streets) Turn right onto Railroad Ave. Drive a few blocks and then turn right into the parking lot of The Basque Cultural Center at 599 Railroad Ave.



Storms from the Sun

Illustrated talk by Michael Carlowicz and Ramon Lopez, Sunday, December 8, 2002, 2:00 p.m.
Lawrence Hall of Science -- Free to AANC members

What does space weather mean for us on Earth? What does it mean for future exploration and colonization of distant worlds? Michael Carlowicz and Ramon Lopez, authors of a new book, "Storms from the Sun-The Emerging Science of Space Weather" will reveal some secrets of the solar system.

Alan Gould, Planetarium Director University of California Lawrence Hall of Science
Berkeley, California 94720-5200 agould@uclink.berkeley.edu 510-643-5082 642-1055 (fax)

HUNT FOR PLANETS WITH DR. GEOFF MARCY AT W.M. KECK OBSERVATORY

The Astronomical Society of the Pacific (ASP) announces a unique fundraising auction -- an observing night at the W.M. Keck Observatory in Hawai'i with internationally renowned astronomer Dr. Geoff Marcy.

The ASP has pledged to donate 5% of the auction proceeds to the amateur astronomy club of the winners choice.

The highlight of the five-day/four-night trip for two is a once-in-a-lifetime opportunity to spend a night in the Keck I control room with Dr. Marcy and his team during one of his scheduled observing runs. Dr. Marcy will host dinner that evening, and the winner will be able to sleep overnight at the VSQ (Visiting Scientists' Quarters), which is open only to astronomers. The auction package includes round-trip airfare for two, resort accommodations, car rental, meals, and a behind-the-scenes VIP tour of the W.M. Keck Observatory conducted by a Keck staff member.

Potential bidders may visit the ASP Web site at <http://www.astrosociety.org> immediately to get full information and to be notified exactly when the auction will begin. The auction will be held in January 2003 on a popular auction Web site. The winner can schedule the trip to coincide with any of Dr. Marcy's scheduled observing nights in 2003.

The Keck I and II twin 10-meter telescopes are the world's largest optical telescopes, located at the summit of Mauna Kea on the Big Island of Hawai'i, at an altitude of 13,796 feet. The Observatory headquarters, Visiting Scientists' Quarters, and control rooms are located in Waimea, at about 2,500 feet.

Dr. Marcy, of the University of California, Berkeley, and his research team are the world's premier planet hunters, having uncovered more than seventy of the approximately 100 extrasolar planets found to date. The team monitors the spectra of over 1,200 stars and recently found a planetary system that bears some resemblance to our own, with a planet in an orbit similar to Jupiter's orbiting a Sun-like star.

"I'm looking forward to observing with the auction winner as we continue our search for extra-solar planets," said Dr. Marcy. "Every time you have the privilege to point one of the giant Keck telescopes skyward it feels like you're embarking on an epic voyage of discovery. You feel a kinship with Galileo, Tycho Brahe, Kepler, Newton, Hubble and so many others driven to explore the

boundaries of the universe. And, on a practical level, the auction is a wonderful way to contribute to the ASP's programs that build science literacy, inspire kids, and nurture the next generation of scientists and astronomers."

The auction is a fundraising event for the ASP's nationwide education programs. These include The Universe in the Classroom, a free, web-based newsletter for teachers, the Society's web site with extensive resources for educators, Project ASTRO astronomer/teacher partnerships in cities around the country, and the Society's public information program, which responds to thousands of information requests every year from students of all ages.

"The ASP wishes to express its gratitude to Dr. Marcy and to the staff of the W.M. Keck Observatory for making this unique fundraising event possible. We simply can't thank them enough," said Michael Bennett, ASP Executive Director.

"Furthermore, the ASP is pleased to donate five percent of the winning bid to the amateur astronomy club of the winner's choice," added Bennett. "We want to demonstrate our support for the amateur astronomy community and their important outreach and educational efforts."

Founded in 1889, the non-profit Astronomical Society of the Pacific (ASP) has grown far beyond the regional institution implied in its name to become the world's largest general astronomy organization, with members in all 50 states and over 70 countries. Bringing together professional astronomers, amateur astronomers and science educators over the last 114 years, the ASP has become an acknowledged leader in astronomy education at all levels and a respected source of astronomical information for the general public. The ASP produces several important general, technical, and educational publications, including the bimonthly Mercury magazine for all ASP members, the technical journal Publications of the Astronomical Society of the Pacific, the ASP Conference Series, The Universe in the Classroom teachers' newsletter, and others. In furtherance of its mission in astronomy education, the ASP developed the NSF-funded Project ASTRO, a nationwide program that partners amateur and professional astronomers with teachers and classrooms. The Society also produces an extensive catalog of astronomy-related products for educators, amateur astronomers, and the public.

Michael Bennett
Executive Director
Astronomical Society of the Pacific
390 Ashton Ave.
San Francisco, CA 94112

mbennett@astrosociety.org
415-337-1100 ext 111

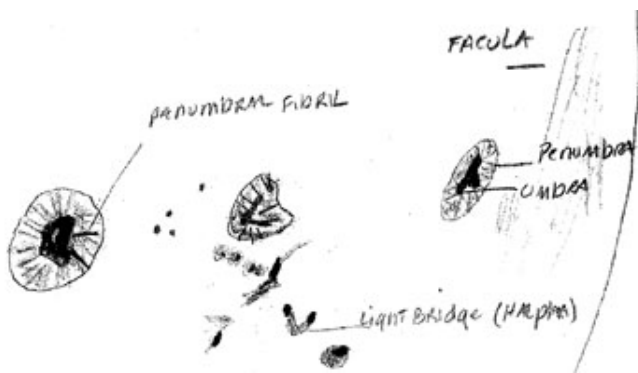
A Month of Sun Days

Observing and Sketching the Sun

Jane Houston Jones

I love observing the sun and sketching sunspots but have never really tracked the rotation over an extended period of time. I decided completing the Astronomical League's Sunspotter Club would be a way for me to improve my knowledge of our nearest star. First, I ordered the Astronomical League's booklet "Observe and Understand the Sun" by ALPO Solar coordinator Richard E. Hill. I used the solar disk and sunspot forms for my sketches. These forms are also available free of charge on the Astronomical League's Sunspotter club website. <http://www.astroleague.org/al/obsclubs/sunspot/sunspotcl.html>.

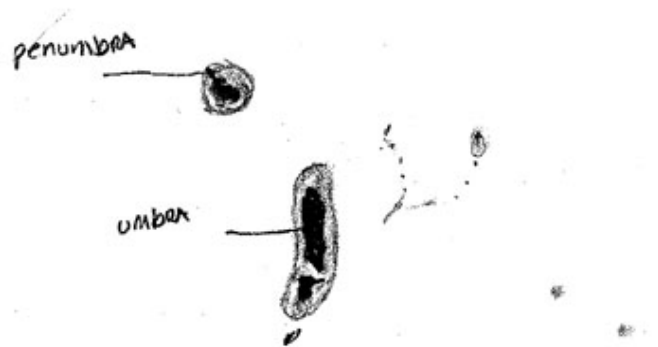
On a sunny sun day in October, I set up my homemade f/9 6-inch Dobsonian solar scope on the back deck and had a 54 power look at the sun. I saw 9 active regions -- regions with more than one sunspot (there were actually 12 but I didn't see some of them) and I counted 26 spots (actually 51) for a Wolf sunspot number of 171. My count using this method was 116. Wolf chose to compute his sunspot number by adding 10 times the number of groups to the total count of individual spots, because neither quantity alone completely captured the level of activity. <http://www.ngdc.noaa.gov/stp/SOLAR/SSN/ssn.html>



1021 sunspot - Flare-producing sunspot group 162
Sketched 10/21/02 by the author

Each day I sketched the sun's disk and any active regions that caught my fancy. After sketching them, I used Hill's booklet to classify the spots. The most interesting regions (to me) were the D, E and F classes of sunspots because they produce flares. On days when there were flare-producing spots visible, I also set up our F/6.8 70mm Televue Ranger fitted with a Coronado SolarMax60 H-Alpha filter. I often sketched these h-alpha views too.

New spots rotated on to the eastern limb and others rotated off the western limb. One particularly active region, AR0177, a DK1 flare-producing region, first showed its spots on October 31. "D" for a bipolar group with penumbra on both ends and a length of less than 10 degrees. "K" means the largest spot in the region is an asymmetric spot with a diameter greater than 2.5 degrees. And the "I" means numerous umbral spots lie between leader and follower spots. To put this big "K" spot in perspective, 2.5 degrees spans 12,000 miles and the diameter of earth is 7,900 miles. This means the big spot was 1 1/2 times the diameter of the earth...and growing! On November 6 it split in two! Of course that was the first day of our first winter storm, and it rained all day. :- (This sunspot group is still visible today, November 10th, as I write this article! The sketch of 177 was made on November 5th.



1105 sunspot - Sunspot group 177's biggest spot split
in two 2 days after the sketch was made on 11/05/02

On October 19, two other amazing active regions caught my eye -- AR0162 and 0165. These regions were visible to the naked eye! AR162 spanned 22 degrees - which is over 13 earth diameters. A few days later it was even bigger, at 27 degrees or 16 earth diameters - comprising over 60 sunspots before it started to decay. Classified FKC -- "F" for bipolar group greater than 15 degrees in length, "K" for the humongous spot larger than 2.5 degrees, and "C" for compact distribution of spots containing many spots with some having their own penumbra. It was visible until November 1st, and I sketched details almost every day. The sketch here was made on October 21st and includes these features:

Faculae: relatively large (greater than an arc minute) irregularly shaped light area; sometimes serpentine in shape. Sunspots are usually located in Facula.

Granulation: fine grain structure of the solar photosphere. Grains appear to be one to two arc-seconds in diameter.

Light bridge: a bright ribbon or band that may appear to connect two sunspots.

Penumbra: a gray area which frequently, but not always, appears around an individual sunspot or group of sunspots.

Penumbral fibril: fiber like lines that may appear to radiate out from an umbra into the surrounding penumbra.

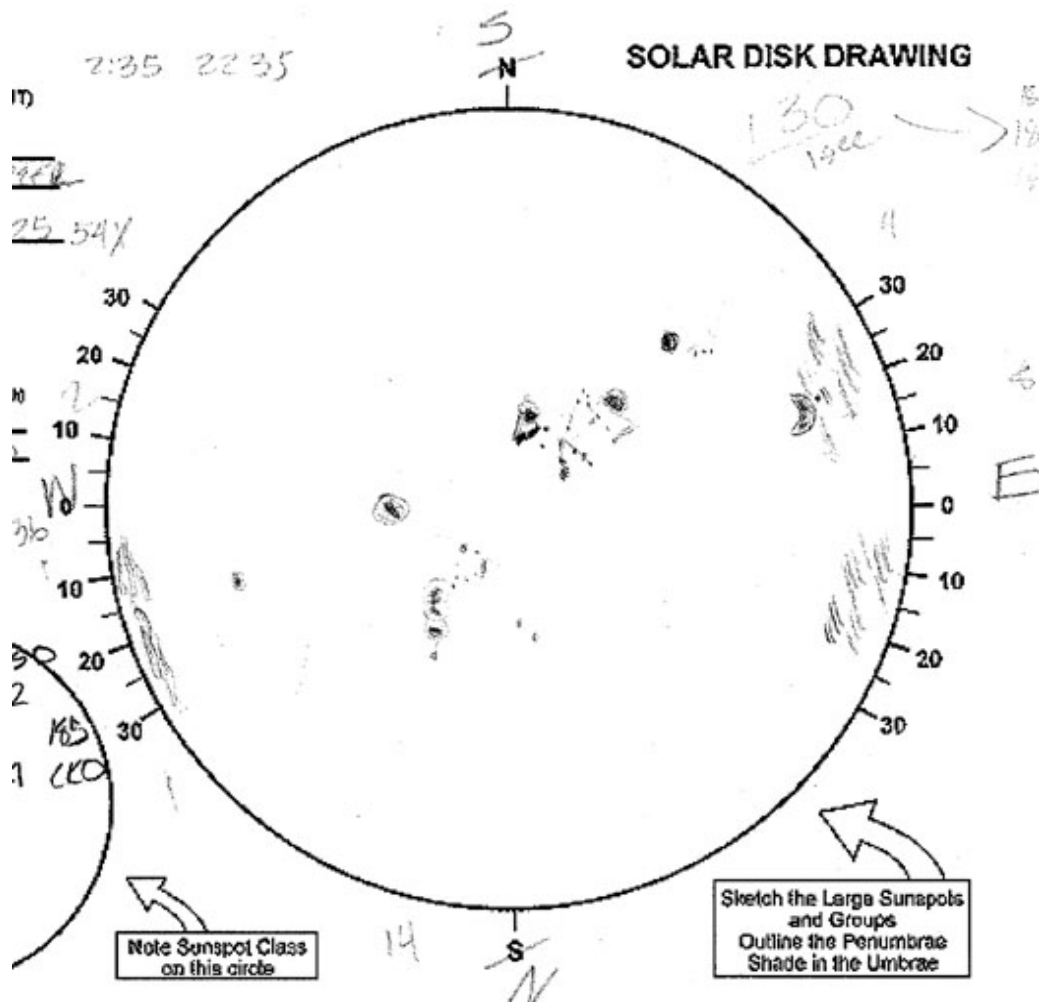
Penumbral grain: granular or small patchy structure that may be visible in the penumbra.

Umbra: The dark black area of a Sunspot.

So far I have observed and sketched the sun for 29 of the required 60 days - or two solar rotations. I've had only two rain-outs. Here are two websites I look at on a daily basis to verify my observations, or in the case of a cloud-out, to get my solar fix for the day. I think you'll enjoy them as much as I do.

The NOAA Active Regions,
including a solar activity report
http://www.bbso.njit.edu/arm/20021107/w1_fd.html
Latest Solar Images
<http://sprg.ssl.berkeley.edu/shine/suntoday.html>

Jane Houston Jones, jane@whiteoaks.com



1105 solardisk - 11/05 sunspot activity - 8 active regions and 56 spots counted by the author

Morrison Planetarium's
Benjamin Dean Lecture Series

Presents

Dissecting Solar Systems
Fall 2002

Dr. Greg Laughlin, University of California at Santa Cruz
Explaining the Diversity of Extra-solar Systems

December 10, 2002

Process of planetary migration and dynamical interaction might explain the bizarre variety of planetary systems orbiting nearby stars.

Dr. Jack Lissauer, NASA-Ames Research Center
Earthlike Planets: How They Form and How We Can Find Them

January 21, 2002

NASA's Kepler Mission is being designed to detect earthlike planets in extra-solar planetary systems.

All programs begin at 7:30 p.m. in the Planetarium - Tickets are \$3.00 each
DEAN LECTURE INFORMATION LINE at (415) 750-7141



NCHALADA LXIII

The sixty-third meeting of the Northern California Historical Astronomy Luncheon and Discussion Association will be held at the Chabot Space and Science Center on Saturday, February 1, 2003 starting at 10 AM.

The morning session topic will be History of Astronomy on the Internet, chaired by Bruce R. Mehlman. The topic should be read as resources on the internet for the history of astronomy.

In the afternoon Celeste Burrows of the Chabot Space and Science Center will lead a discussion on Astronomical Instruments from 200 BCE to 1600 CE. This will cover everything from the first serious instruments to just before the invention of the telescope.

Please forward this mail to anyone who would be interested in these subjects, or in the history of astronomy in general.

To be added to (or removed from) this list, please contact me, Bruce R. Mehlman, at mehlman@earthlink.net.

For more information about the group, please contact Norm Sperling, nsperling@california.com.

The NCHALADA web site is at www.nchalada.org

SFAA 2003 Calendar

JANUARY

- 8 Board Meeting
7:00 p.m.
- 11 Annual Awards Dinner
6:30 p.m.

FEBRUARY

- 8 City Star Party
5:30 p.m.
- 12 Board Meeting
7:00 p.m.
- 19 General Meeting
& Lecture
7:00 p.m.

MARCH

- 8 City Star Party
6:00 p.m.
- 12 Board Meeting
7:00 p.m.
- 19 General Meeting
& Lecture
7:00 p.m.

APRIL

- 5 Mt. Tam Star Party
7:00 p.m.
- 9 Board Meeting
7:00 p.m.
- 12 City Star Party
7:30 p.m.
- 16 General Meeting
& Lecture
7:00 p.m.

MAY

- 3 Mt. Tam Star Party
8:30 p.m.
- 10 City Star Party
8:00 p.m.
- 14 Board Meeting
7:00 p.m.
- 21 General Meeting
& Lecture
7:00 p.m.
- 31 Mt. Tam Star Party
8:30 p.m.

JUNE

- 7 City Star Party
8:30 p.m.
- 11 Board Meeting
7:00 p.m.
- 18 General Meeting
& Lecture
7:00 p.m.
- 28 Mt. Tam Star Party
8:30 p.m.

JULY

- 5 City Star Party
8:30 p.m.
- 9 Board Meeting
7:00 p.m.
- 16 General Meeting
& Lecture
7:00 p.m.
- 26 Mt. Tam Star Party
8:30 p.m.

AUGUST

- 2 City Star Party
8:00 p.m.
- 13 Board Meeting
7:00 p.m.
- 20 General Meeting
& Lecture
7:00 p.m.
- 30 Mt. Tam Star Party
8:00 p.m.

SEPTEMBER

- 6 City Star Party
7:30 p.m.
- 10 Board Meeting
7:00 p.m.
- 17 General Meeting
& Lecture
7:00 p.m.
- 27 Mt. Tam Star Party
7:30 p.m.

OCTOBER

- 4 City Star Party
6:30 p.m.
- 8 Board Meeting
7:00 p.m.
- 15 General Meeting
& Lecture
7:00 p.m.

NOVEMBER

- 12 Board Meeting
7:00 p.m.
- 19 General Meeting
& Lecture
7:00 p.m.

DECEMBER

- 10 Board Meeting
7:00 p.m.
- 17 General Meeting,
Elections &
Member's Night
7:00 p.m.



San Francisco Amateur Astronomers

c/o Morrison Planetarium
California Academy of Sciences
Golden Gate Park, San Francisco, CA 94118
Tel: (415) 566-2357

BALLOT OFFICERS AND BOARD OF DIRECTORS 2003

OFFICERS

- | | | |
|----------------|--------------------------|------------------|
| President | <input type="checkbox"/> | Michael Portuesi |
| Vice-President | <input type="checkbox"/> | Nancy Cox |
| Secretary | <input type="checkbox"/> | |
| Treasurer | <input type="checkbox"/> | Lorrie Boen |

Write-ins
Write-ins



BOARD OF DIRECTORS

- | | | |
|--------------------------|----------------|--------------------------|
| <input type="checkbox"/> | Cheryl Schudel | <input type="checkbox"/> |
| <input type="checkbox"/> | Bill Stepka | <input type="checkbox"/> |
| <input type="checkbox"/> | Randy Taylor | <input type="checkbox"/> |
| <input type="checkbox"/> | Dennis Tye | <input type="checkbox"/> |
| <input type="checkbox"/> | Jim Webster | |

Write-ins
 Write-ins

VOTING INSTRUCTIONS

The club members listed **above** are candidates for Officers and Board of Directors of SFAA for the year 2003. Please vote for a total of four officers and a total of seven board of directors including write-ins. Voting for more than four officers or for more than seven board members per ballot will invalidate the entire ballot. Family memberships must submit a separate ballot for each voting family member. Write-ins for officers must include the candidate's name and office for which he or she is nominated.

All candidates, including write-ins, must have committed to attending at least seven board meetings and may not miss more than two consecutive meetings during the calendar year for which they are nominated.

The seven board of directors' candidates who receive the highest number of votes will become regular board members. The two candidates receiving the next highest number of votes will become alternate board members. The new Officers and Board of Directors will be installed at the Annual Awards Dinner in January 2003.

Please return your ballots to: SFAA Secretary, c/o Morrison Planetarium at the address **above**. Ballots must be received no later than the general meeting on Wednesday, December 18, 2002.

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.

make checks payable to **San Francisco Amateur Astronomers** and mail to:
Treasurer, SFAA, 13 Mabry Way, San Rafael, CA 94903

- \$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:

Name: _____ Telephone: _____

Address: _____

Email address: _____

San Francisco Amateur Astronomers Membership Application

San Francisco Amateur Astronomers
c/ Morrison Planetarium
California Academy of Sciences
Golden Gate Park, San Francisco, CA 94118



Information Hotline: (415) 566-2357

Web Page: www.sfaa-astronomy.org

Sharing the Wonders of the Universe