

★ ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

VOL. 50, No. 10 – October 2002

The 50th Anniversary Speakers Series Women In Astronomy

Debra Fischer

University of California at Berkeley, Department of Astronomy
October 16, 2002



Dr. Debra Fischer is an astronomer at the University of California, Berkeley. Since 1997, she has been a member of the planet-hunting team led by Geoff Marcy and Paul Butler. Together, this team has discovered or co-discovered about 70 of the 100 known planets orbiting stars other than the Sun, making it the most prolific planet-hunting team in history. While Marcy and Butler observe primarily at Keck, Dr. Fischer conducts the planet search at nearby Lick Observatory, where she observes 400 stars with the 3-meter Shane Telescope and the 1-meter Coude Auxiliary Telescope.

In 1999, she made headlines by discovering the first exoplanetary system around a solar-type star with her identification of the second and third planets around Upsilon Andromedae. "When I look up at the stars now at night I can imagine easily that every one of them has planet around them," Debra Fischer said at the time.

In June of 2002, it was announced that 55 Cancri, a star about 41 light years away, had a planetary system similar to our own. It will be a place of particular interest to astronomers as they look for an Earth-like planet. "This planetary system will be the best candidate for direct pictures when the Terrestrial Planet Finder is launched later this decade," said Dr. Fischer.

Important Dates

Board Meeting – October – 7:00 p.m.
-- November 13– 7:00 p.m.
Western Addition Library, Scott & Geary Sts., SF

SFAA General Meeting – September 18
October 16
November 20

Morrison Planetarium, Golden Gate Park
Refreshments at 7:00 p.m. - Speakers begin at 7:30 p.m.

Mt. Tam Star Party
October 12 – 7:30 p.m.

City Star Party
September 14 – 7:30 p.m.
October 19 – 6:30 p.m.

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>	Lorrie Boen (415) 921-1432
<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
<i>SFAA Website</i>	www.sfaa-astronomy.org

"Return to the Red Planet: A New Era of Mars Exploration"

Dr. Virginia C. Gulick

NASA/Ames Research Center, Space Sciences Division

September 18, 2002

Dr. Virginia Gulick, a research scientist at NASA's Ames Research Center at Moffett Field, is employed by the SETI Institute. Her research interests focus on understanding the role water has played in shaping the surfaces of Earth and Mars and its implications for climate change. She is a member of the Mars Landing Site Steering Group, a group that is charged with helping to select the locations for the next two robotic rovers to explore the surface of Mars. She is also a team member on the high resolution camera that will fly on next Mars orbiter mission. The camera will be able to image beach ball-sized features on the surface of Mars when it arrives at the planet in 2006.

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 Lorrie Boen at 765 Geary Street #302, San Francisco, CA 94109 or at lorrenlee@aol.com

From Your President

We have a lending library of Astronomy and Physics videotapes that are available, thanks to the donation of our member Bert Katzung. The Astronomy tapes are a lecture series by the current ASP President and University Distinguished Teacher Alex Filippenko. Students compete to get into his classes at UC Berkeley and you can hear him for free!

I did not bring the tapes to the last meeting and no one has returned their copies in a while. Here is the deal, for those of you with videos out (we have your names), bring them to the next meeting and I will bring the rest and we will give new people a chance to learn. Spread the wealth of learning to your fellow SFAA members!

Speaking of learning, there is another meeting of NCHALADA – Northern California History of Astronomy Luncheon and Discussion Association on October 12th from 10 AM to 5 PM at the Chabot Space and Science Center. This is a true discussion group with a morning and afternoon topic. The discussion is lead by a group member with a particular interest in that topic.

The morning topic for October 12th will be Notable Gentleman Astronomers of the past by John Westfall. The afternoon topic is the History of Near Earth Asteroids by myself. Come and help choose the next topics and perhaps lead a discussion your self. It is a fun and educational experience with a continuous pun making challenge as the day progresses.

I write this having come back from the very enjoyable talk given by Timothy Ferris for our joint Golden Jubilee. If you did not see his talk and terrific slide show, be sure to check out his new book “Seeing In the Dark”. It is a very enjoyable account of amateur and amateur turned professional Astronomers.

An SFFA member asked after the talk asked if we had any plans for the group to go back to Mt. Wilson to observe on the 60” Telescope again. We will start thinking about forming a spring/summer trip to rent that great instrument if you would be interested. Let us know at the meetings and through email if you would like to make a trip of 20 people at \$45.00 each or a smaller group at the proportional higher cost?

Once again, I remind you to think about any role you can play as an officer or board member of the SFAA. I cannot run for another term as President, due to a time heavy volunteer communications role with the Red Cross. I will stay to help on the Board. We need your help there and in filling the President and Secretaries position, with Jason off to an MBA program on the east coast. Think not what the SFAA can do for you, but what you can do for the SFFA to help us carry on another fifty years!

Bill Stepka, Stepka@aol.com, and (415) 928-7105

50th ANNIVERSARY SPEAKER SERIES **“Women in Astronomy and Related Sciences”**

Morrison Planetarium
California Academy of Sciences

Wednesday November 20 – 7:00 PM

Dr. Claire E. Max
Lawrence Livermore National Laboratory

Still looking for: One more brave soul to be Co-Editor of the SFAA monthly bulletin. No experience as an editor is required, but knowledge of MS Word and Powerpoint, and access to the Internet, is recommended. And, you won’t be alone! We already have one volunteer to share the responsibility. There is also a printer that has been working with me on the bulletin for more than two years and understands what we need. Please contact me if you are interested at lorrenlee@aol.com.

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

Our 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.

SFAA Annual Picnic



September 14, 2002

Pine Lake Park at Stern Grove
10:30 a.m. to 3:00 p.m.

(at the east end of Laguna Puerca)

access the park by Vale off Crestlake on the south side
the BBQ area is about 100 yards west of the parking area

Hamburgers and Hot Dogs will be provided.
Please bring a side dish to share!!!

Important Notice for SFAA Members

On the evening of September 28, the Astronomical Society of the Pacific and SFAA are hosting a free public lecture and star party near the summit of Mt. Tamalpais in Marin County. The lecture will be given by renowned astronomer and author David H. Levy and will start at 7:30 p.m. in the Mountain Theater. The star party will take place in the Rock Spring Parking Area, just below the Mountain Theater, and will begin right after the lecture.

Because Mt. Tamalpais State Park is concerned about the limited parking, and the possibility of overflow crowds, they are asking the public to pre-purchase \$5.00 parking permits. However, SFAA members who are planning to bring telescopes for public viewing will have free parking. To obtain a free parking permit, please contact SFAA member Robert Naeye at rnaeye@astrosociety.org, rnaeye@aol.com, 415-337-1100 x108, or 650-756-0430, or come to the September 18 SFAA meeting. Remember, if you request a free parking permit, you will be expected to bring a telescope for public viewing.

If you want to attend the lecture and star party but do not plan to bring a telescope, and you plan to bring a vehicle, you can purchase a parking permit by sending a self-addressed stamped envelope and check for \$5.00 (payable to MTIA) to: Tinka Ross, 89 Dominican Drive, San Rafael, CA 94901.

The ASP and SFAA are also looking for volunteers to help with parking on Saturday night. Volunteers will receive a free parking pass and a box dinner. If you are interested in volunteering, please contact Tinka Ross at tinka@ix.netcom.com or 415-454-4715.

Thank you, and we look forward to seeing you at this very special event!

Robert Naeye and Tinka Ross

2002 MT TAM ASTRONOMY PROGRAMS

October 12 - 7:30 pm

Tinka Ross
California Academy of Sciences
"Astronomy is Women's Work"

Historically some extraordinary women were able to overcome societal pressures and lack of opportunities to make significant contributions in astronomy.

Dinners with the speakers: at Mill Valley Wok, Tam Junction, 252 Almonte Boulevard, Mill Valley, 2 1/2 hours before the scheduled talk. To participate, call the restaurant at (415) 389-8868, and add your name to the "Mt Tam Party." The no-host dinner is usually \$15, including tax and tip.

Information: **Telephone: (415) 455-5370, (415) 388-2070 Same day Hotlines: (415) 566-2357, (415) 455-5370 (messages after 4:00 pm)** Mailing Address: **MTIA/Astronomy Programs, P.O. Box 3318, San Rafael, CA 94912**

The Planetary Society Bay Area Volunteer Network presents

"COSMOS 1: Attempts to Fly the First Solar Sail Spacecraft"

co-sponsored by Morrison Planetarium of the California Academy of Sciences

Featured Speaker: Louis D. Friedman, Executive Director, The Planetary Society
Sunday, September 22, 2002 at 3:00 pm, Morrison Auditorium, California Academy of Sciences

TICKETS: Advance orders by mail: \$3.00. (At the door: \$5.00)

Send a check payable to The Planetary Society, and a self-addressed stamped envelope to:
Solar Sail, c/o Barbara Raskin, 1530 Bay Laurel Dr., Menlo Park, CA, 94025.

Orders received after Sept. 15, or without SASE, will be held at Morrison Auditorium. Tickets are limited and non-refundable.

On the web, visit The Planetary Society at <http://planetary.org> and The Bay Area Volunteer Network at <http://www.tpsbavn.org>

Seeing Doubles
By Linda Mahan

On a recent long, warm night of observing I had the pleasure of seeing some of my favorite sights: two astronomical objects in the same eyepiece at the same time. Most observers are familiar with the Perseus Double Cluster, and the galaxies M81 and M82, and finding a bumper crop of close galaxies in Virgo is always a thrill.

Here is my list of doubles, arranged by constellation. Use low power eyepieces, approx 50-70x. magnitude.

Andromeda

The "Hidden Galaxy", so called because it is 6.5' NW from the glare of Beta Andromedae.
NGC 404 10.3 magnitude
01h 09.4' +35 43'

Camelopardalis

IC 3568 planetary nebula, 12 magnitude, forms one apex of an isosceles triangle with two stars.
12h 32.9' +82 33'

Cassiopeia

Find open cluster NGC 7788, and go 10' SE to see open cluster NGC 7790 These 9th magnitude clusters are separated by less than the moon's diameter.
23h 56.7' +61 24'

Cepheus

"The Distant Duck", NGC 6939, a 7.8 magnitude irregularly shaped faint patch of tiny stars. This can be seen in the same view with NGC 6946, a large, 8.8 mag. face-on and faint but obvious galaxy. These lovely objects are only 2/3 degree apart.
NGC 6939 20h 31.4' +60 38'
NGC 6946 20h 34.8' +60.09'

Cygnus

"The Fairy Ring" This asterism is not listed in the NGC, and can be found near the "spine" of the Swan. The view of several moderately wide double stars with one wide pair in the center fills the eyepiece beautifully.

20h 4' +38 20' 700 light years distant.

Cygnus

IC 4996 A 7.3 magnitude compact open cluster, contains Burnham 442, a beautiful triple star, easily visible in the cluster's center.
20h 16.5' +37 38

Cygnus

NGC 6871 A 5.2 magnitude bright, highly irregular open cluster includes several attractive double stars in the field.
20h 05.9' +35 47'

Gemini

M35, a beautiful open cluster with yellow and blue double star Otto Struve 134 on the NE edge. The doubles are 7.3 & 9.1, at 31" separation.
06h 08.9' +24 20'

Hercules

M13. This great 5.7 magnitude globular cluster may be seen with NGC 6207, an 11.6 mag. edge-on spiral galaxy. Go 40' NNE of M13, and see both at low power. Also, look 20'NW of the galaxy to see a double star.
16h 43.1' +36 50'

Lyra

"The Other Double-Double". One of my favorites. This is a pair of Struve doubles that almost mirror each other in size, separation and orientation. A real delight.
Struve 2470, 6.6 & 8.6 at 13.4" separation
19h08.8' +34 46' (whiter pair)
Struve 2474, 6.7 & 8.8 at 16.2" separation
19h 09.1" +34.36'

Monoceros

NGC 2353 A 7.1 magnitude irregular open cluster that contains a conspicuous double of 9th magnitude stars, 20" apart., and located near the southern edge.
07h14.6' -10 18'

Puppis

M46 A rich open cluster of uniformly faint stars that is rare to see with a planetary nebula (NGC 2438) on the NE edge. The bluish planetary is a foreground object.
07h 41.8' -14 49'

Sagittarius

NGC 6522 An 8.6 magnitude globular cluster with a small, bright core, in the same view with NGC 6528, a smaller and fainter globular cluster. Find it 16' east of NGC 6522. A dark dust cloud obscures the glow of the Milky Way, giving a beautiful view.
NGC 6522 18h 03.6' -30 02'
NGC 6528 18h 04.8' -30 03'

Scutum

IC 1295 A rather large, diffuse planetary nebula located less than half a degree ESE of 8.2 magnitude moderately faint globular cluster NGC 6712. Try staring at the planetary to reveal the white dwarf, or use an OIII filter to see nebula detail. A very nice view.

IC 1295 18h 54.6 -08 50'
NGC 6712 18h 53.1 -08 42'

My information was compiled from "NSOG", the most helpful two volume set of books by George Kepple & Glen Sanner: THE NIGHT SKY OBSERVERS GUIDE.

It was a pleasure to field test these "doubles", and I would like to hear from you about these and other views you have discovered. Maybe we could start a SFAA list of objects, put them on the Club site, and just keep adding to them.

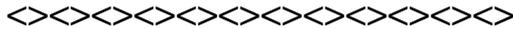
Linda Mahan doublestar@ix.netcom.com

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.

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.



SFAA 2002 Literary Award

All entries are due by September 30, 200. They will be distributed to the membership in October, with the ballots to be returned by the December General Meeting. Awards presented at the SFAA Annual Awards Banquet in January 2003.

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 well as craftwork, sculpture, jewelry, and paintings.

Once again, the Literary Award is being sponsored by Orion Telescopes, for which we are most grateful!

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. Also, no living critters, please. The Academy may frown on any living, breathing things that are not part of official exhibits. Live acts are restricted to the human kind.



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.

Morrison Planetarium's
Benjamin Dean Lecture Series

Presents

Dissecting Solar Systems
Fall 2002

Dr. Gibor Basri, University of California at Berkeley

The Substellar Zoo

September 17, 2002

Astronomers are forming a surprising picture of brown dwarfs and giant planets based on their observed numbers, masses, locations & orbits.

Dr. Imke de Pater, University of California at Berkeley

Planets and Satellites in our Solar System: Special Focus on Io and Titan

October 22, 2002

Recent images, obtained from the Galileo spacecraft and by using Adaptive Optics on the Keck Telescope in Hawaii, are giving us a new understanding of our solar system.

Dr. Alan Boss, Carnegie Institution of Washington

A Heretic's Approach to Solar System Formation

November 12, 2002

Did our Solar System's giant planets form slowly by Planetesimal collisions in a quiet dark cloud, or rapidly through a gas disk instability in a region of massive star formation?

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



Bay Area Calendar of Events

<u>Date</u>	Event	Place & Time
October		
9	SFAA Board Meeting - Members only	Western Addition Library 7:00 PM
12	Mt. Tam Star Party	Rock Springs, Mt. Tam 7:30 PM
16	SFAA General Meeting - Women In Astronomy Speaker Series - Dr. Debra Fischer, University of California at Berkeley, Department of Astronomy	Morrison Planetarium 7:00 PM
19	City Star Party	Land's End, San Francisco 6:30 PM
November		
13	SFAA Board Meeting - Members only	Western Addition Library 7:00 PM
20	SFAA General Meeting - Women in Astronomy Speaker Series - Dr. Claire E. Max, Lawrence Livermore National Laboratory	Morrison Planetarium 7:00 PM
December		
11	SFAA Board Meeting - Members only	Western Addition Library 7:00 PM
18	SFAA General Meeting – Members' Night, Art Award, Astrophotography Award & Election of Officers	Morrison Planetarium 7:00 PM
2003		
January		
8	SFAA Board Meeting - Members only	Western Addition Library 7:00 PM
11	SFAA Annual Awards Dinner	Basque Cultural Center
February		
12	SFAA Board Meeting - Members only	Western Addition Library 7:00 PM
19	SFAA General Meeting	Morrison Planetarium 7:00 PM

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, 13 Mabry Way, San Rafael, CA 94903

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
 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