

# ★ ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

VOL. 50, No. 7 – July 2002

## The 50<sup>th</sup> Anniversary Speakers Series Women In Astronomy

*New Developments in Particle Physics, and Their Implications for the Universe*

**Helen Quinn**  
Stanford Linear Accelerator Center  
July 17, 2002



“I’m a theoretical physicist with an interest in the intersection of particle physics and cosmology. I will discuss two recent discoveries in particle physics --the CP (particle-antiparticle) symmetry violation in B decays, and the fact that neutrinos have mass. I will review how these things were determined and discuss (very briefly) the cosmological implications of these results.”

Helen Quinn was born in Australia and began her education there. She received her Ph.D. from Stanford University in 1967. She has been at Stanford University and the Stanford Linear Accelerator Center since 1977. Helen has also held positions at Deutsches Elektronen Synchrotron in Germany and Harvard University. Helen also works with elementary and high schoolteachers in California to make physics fun and exciting for students to learn and use.

Honors include Fellow, American Physical Society, Fellow, Alfred Sloan Foundation 1974-78, Fellow, American Academy of Arts, and Sciences 2002 Dirac Medal with Howard Georgi and Jogesh Pati *for pioneering contributions to the quest for a unified theory of quarks and leptons and of the strong, weak, and electromagnetic interactions.*

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### Important Dates

**Board Meeting** – July 10 – 7:00 p.m.  
-- August 14 – 7:00 p.m.  
Western Addition Library, Scott & Geary Sts., SF

**SFAA General Meeting** – June 19  
July 17  
August 21

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

**Mt. Tam Star Party**  
July 13 – 8:30 p.m.  
August 10 – 8:30 p.m.

**City Star Party**  
June 15 – 8:30 p.m.  
July 20 – 8:30 p.m.  
August 17 – 8:00 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>City Star Party Coordinator</i>	Randy Taylor
<i>Membership &amp; 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>	<a href="http://www.sfaa-astronomy.org">www.sfaa-astronomy.org</a>

## 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](mailto:pg@lbin.com)) or phone (415-206-9867). Email communication is preferred and strongly recommended for a quick and accurate reply.

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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 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](mailto:lorrenlee@aol.com)

### *Search for Binary Stars*

**Jennifer Patience**

**Morrison Planetarium**

**Wednesday June 19, 2002**

Extensive surveys have revealed that binary stars are very common among nearby stars and are approximately twice as prevalent among young stars in the closest star-forming regions. The presence of a companion star may critically affect the environment around the star and the potential for planet formation. I will describe the results of several binary star searches in open clusters and star-forming regions employing the high angular resolution techniques of speckle interferometry and adaptive optics. The statistics of the binary stars are used to test binary star formation and evolution scenarios and to investigate the effects of companion stars on X-ray emission and stellar rotation.

## From Your President

The Astronomical League is having their national convention this year at the University of Utah in Salt Lake City from July 31 to August 3. The League is the publisher of The Reflector, which you receive quarterly as a benefit of your membership. It also provides the SFAA with our umbrella liability insurance policy at a better rate than could otherwise be obtained.

I attended the AL convention (ALCON) last year in Fredrick Maryland and had a wonderful time! Like last year, The Association of Lunar and Planetary Observers (ALPO) will be at the meeting. I had the opportunity to interview Walter Hass, founder of ALPO, and look forward to seeing him again. I will write about this great amateur pioneer in a future article.

On 8/1 our own Mike Bennett of the ASP will be speaking about Project SOFIA, the Boeing 747 that is being turned into a large flying observatory. Richard Blakley of the National Optical Astronomy Observatory will discuss Optical Designs That Amateur Astrophotographers and CCD Users Should Know About. In the context of our speaker's series, on 7/31 Brad Carroll of Weber State University is speaking on the topic of Five Remarkable Women at the Crossroads of Astronomy. On the same day Paul Temple will talk on Dusty Asteroids: an Amateurs Journey.

There will be many other talks and several workshops including the Fine Art of Observing on 8/1 and Pro-Amateur Collaboration on 8/2. ALPO will have several speakers on 8/3 and a retired Astronaut; Don Lind will discuss his experiences on the Space Shuttle. For more information, go to the web page [www.alcon2002.org](http://www.alcon2002.org).

The other big annual meeting is that of our own Astronomical Society of the Pacific (ASP) on September 28 & 29. David Levy will be giving a free public lecture followed by an SFAA star party. A symposium with some of the leading scientists on this planet will explore the investigation of life beyond earth. Timothy Ferris will be the awards banquet speaker, so put these dates on your calendar now. For more info, go to [www.astrosociety.org/events/meeting.html](http://www.astrosociety.org/events/meeting.html).

Bill Stepka, [Stepka@aol.com](mailto:Stepka@aol.com), and (415) 928-7105

### **50<sup>th</sup> ANNIVERSARY SPEAKER SERIES** **"Women in Astronomy and Related Sciences"**

Morrison Planetarium  
California Academy of Sciences

Wednesday August 21 – 7:00 PM

**Dr. Lynn Cominsky**

**Sonoma State University - Department of Physics & Astronomy and  
American Astronomical Society - High Energy Astrophysics Division**

Wednesday September 18 – 7:00 PM

**Dr. Virginia C. Gulick**

**NASA/Ames Research Center, Space Sciences Division**

Wednesday October 16 – 7:00 PM

**Dr. Debra Fischer**

**University of California at Berkeley, Department of Astronomy**

Wednesday November 20 – 7:00 PM

**Dr. Claire E. Max**

**Lawrence Livermore National Laboratory**

## **The ASP's 2002 Annual Meeting The Cosmic Thread: From Stars to Life**

Is life widespread through the cosmos, or is Earth a lonely oasis? The Astronomical Society of the Pacific cordially invites you to learn more about this fascinating topic by attending its 114th Annual Meeting, a series of exciting astronomy events to be held in the San Francisco Bay Area on September 28 and 29, 2002. The theme of this year's meeting is "The Cosmic Thread: From Stars to Life."

### **Event Schedule:**

On Saturday, September 28, the Society will be sponsoring a free public astronomy lecture by renowned comet discoverer and author David H. Levy. The lecture will be held at 7:30 p.m. in the amphitheater near the summit of Mt. Tamalpais in Marin County. Levy's talk is entitled "From Stars to Life: Suppose You Had to Design a Universe?" A free public star party, sponsored by the San Francisco Amateur Astronomers (SFAA), follows Levy's talk. Don't worry about bringing a telescope; SFAA members will be out in force!

On Sunday, September 29, the Society will host a full day of lectures by some of the world's leading astronomers. This lecture series is co-sponsored by the Astronomical Association of Northern California. We carefully selected this year's speaker lineup to focus on top-notch scientists who also excel at communicating their ideas and enthusiasm to the public. The lectures will run from 9:00 a.m. to 5:35 p.m. at Pimentel Hall on the University of California, Berkeley campus.

### **Scheduled speakers include:**

Alex Filippenko, ASP President, UC, Berkeley  
Geoff Marcy, University of California, Berkeley  
Chris McKay, NASA's Ames Research Center  
David Morrison, NASA's Ames Research Center

Jill Tarter, SETI Institute  
Chris Impey, University of Arizona  
Ben Zuckerman, University of California, Los Angeles  
Seth Shostak, SETI Institute

After the lectures, we will hold a panel discussion. The panel will take questions from the audience, and the various speakers will debate issues discussed during their lectures. Seating is limited for the lecture series, so we encourage early registration.

Admission for the lecture series is:

\$35 general public  
\$30 ASP members  
\$25 students

If you are an ASP member, we invite you to attend our annual member's meeting, which follows the panel discussion. Admission is free.

If that's not enough, from 7:00 to 10:00 p.m. the ASP will be hosting a reception at the UC-Berkeley Faculty Club, followed by a dinner banquet in the Heyns Room. Award-winning author and journalist Timothy Ferris will speak at the banquet. Following Ferris's talk, the ASP will present its 2002 Annual Awards, including the Society's prestigious Bruce Medal for lifetime achievement in astronomical research. Banquet seating is extremely limited, so please sign up now! Admission to the reception and banquet is \$60.00. Non-ASP members are welcome to attend the reception and banquet.

For details and registration information, please visit our website at: [www.astrosociety.org/events/meeting.html](http://www.astrosociety.org/events/meeting.html)

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**FOR SALE: CELESTRON 11 with Starbright Coatings. Vintage 1989. Price \$1600. Call Bill Cherrington at 415-752-9420**

*Editor's Correction: My deepest apologies to Betty Neall for misspelling her name.*

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San Francisco Amateur Astronomers and the  
San Francisco Morrison Planetarium, California Academy of Sciences

***Golden Jubilee 2002 Speaker Series***  
Celebrating Their 50<sup>th</sup> Anniversaries

PRESENT

*Tuesday June 25, 2002 at 7:30 PM*  
*California Academy of Sciences*

**Dr. Jill Tarter**

**Bernard M. Oliver Chair for SETI (Search for Extraterrestrial Intelligence)  
and Director, Center for SETI Research**

Aliens abound on the movie screens, but in reality we are still trying to find out if we share our universe with other sentient creatures. SETI, the search for extraterrestrial intelligence, is actually an attempt to detect evidence of another distant technology. Dr. Tarter in her talk SETI: Science Fact, Not Fiction, will speak to us about this search which is being conducted by the use of radio telescopes and more recently by looking for very short optical pulses as well.

*Thursday September 5, 2002 at 7:30 PM*  
*California Academy of Sciences*

**Timothy Ferris**

Timothy Ferris, the author of twelve books among them the bestsellers The Whole Shebang and Coming of Age in the Milky Way will be our guest speaker. He is a frequent contributor to major magazines, TV shows and TV specials. He is also a consultant to NASA.

Professor Ferris has taught in five disciplines at four universities, and is emeritus Professor at the University of California, Berkeley. He will be talking about his soon to be released book, Seeing in The Dark: How Backyard Stargazers Are Probing Deep Space, Charting Cosmic History, And Guarding the Earth from Interplanetary Peril.

***\*\* Timothy Ferris' talk will be followed by a star party,  
telescopes provided by the members of the SFAA***

Admission is \$3.00 per program - Please send a check payable to "Morrison Planetarium" indicate which talk you wish to attend and how many tickets you are purchasing and a SASE to:

Jubilee Lectures  
Morrison Planetarium  
California Academy of Sciences  
Golden Gate Park, San Francisco, CA 94118

**"The Golden Jubilee Speakers Series" is jointly presented by  
the San Francisco Amateur Astronomers and  
Morrison Planetarium of the California Academy of Sciences**

## 2002 MT TAM ASTRONOMY PROGRAMS

July 13 - 8:30 pm

**Dr. Philip Plait**  
**Sonoma State University**  
**"Bad Astronomy"**

Despite what Fox TV and other dubious sources are telling you,  
NASA really did send men to the moon.

August 10 - 8:30

**Dr. Diane Wooden**  
**NASA-Ames Research Center**  
**"Are We Stardust? Crystals, Comets and the Formation of Solar Systems"**

Follow the formation of cosmic dust grains through a possible path  
leading from the stars to interstellar space to our bodies.

September 7 - 8:00 pm

**Dr. Gibor Basri**  
**University of California Berkeley**  
**"What is a Planet?"**

The Pluto controversy, discovery of "free-floating planets" and brown dwarfs, and the ambiguous nature of some  
extrasolar "planets", have led astronomers to reconsider what we mean by the word "planet".

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**

### **Star Party Etiquette** **Jan Houston Jones**

Star parties are celebrations of the dark night sky and a few words about lighting will help you enjoy the sky at  
star parties and preserve it for others.

**Flashlights:** Bright flashlights practically blind others in the dark, so leave them at home when you attend a star  
party. A small mini-mag light with a red filter will be all you need, especially once your pupils dilate and you  
become dark adapted. You'll be able to see your way around with no flashlight at all, actually. It takes  
everybody at least a half hour to become dark adapted again after looking at a car light or white flashlight. And  
it makes everybody very grumpy.

If you do not have a red flashlight, buy a roll of red lens repair tape at your local automotive store, and place a few layers of it over the offensive white light. If you forget this tape, a piece of brown paper bag will work, red cellophane works somewhat, and so will pointing your flashlight down at the ground, with your fingers wrapped around the light. Never aim a flashlight, even a red one, at another person. Kids seem to love to point flashlights at people and things in the dark, so I like to give them their own red flashlights. You can buy red filter astronomy flashlights at Scope City in SF and Orion in Cupertino if you want the real thing.

Car Lights: Many star parties are held in parking lots, so car lights are unavoidable. Arrive before dark at a star party if possible so you can see your way around, and park in the best place for your situation, a short stay, an all night campout, etc. If you plan to stay only a few hours, park near the exit, on the road or in designated parking spots for the public. Safety is also important, so don't worry, you will not be asked to drive away with no lights on. There will be parking monitors at many of the larger public-type park star parties, and often groups of people leave at the same announced time, so those staying can shield their eyes from departing car lights. If you are a novice star party attendee, just ask someone what to do about leaving and lights. You'll be appreciated for your courtesy for asking before leaving. After one or two star parties, you'll know what I'm talking about.

More on the subject can be found here, much of it is for people bringing telescopes to star parties, but you'll get the message, I think: <http://www.seds.org/billa/psc/etiquette.html>

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**THE 2002 DAVIS STAR SHOW**  
**Veterans' Memorial Center - 203 E. 14th Street, Davis, California**  
**Friday, July 19, 5pm - 10pm & Saturday, July 20th, 9am - midnight**

The Davis Star Show, a festival of astronomy and related sciences, is a public celebration of our universe. We will have speakers talking about exciting new discoveries in astronomy, a trade show featuring instruments and accessories, an exhibit hall with displays and activities for all ages, viewing of sunspots and other solar activity, a planetarium for the kids, astronomy club booths and demonstrations, a teacher/educational literature table, workshops, a lunar observing party on the 19th and a public star party on the 20th. The festival is free to all.

**GUEST SPEAKERS INCLUDE** (Check the website for speaker times [www.DavisStarShow.com](http://www.DavisStarShow.com))

- Andreas Albrecht, University of California, Davis - "What do we know about the Universe?"
- Steven Stahler, UC Berkeley, Radio Astronomy Group - "How Stars are Made"
- Phil Plait, Sonoma State University & BadAstronomy.com - "Bad Astronomy: The Moon Hoax"
- Stephen James O'Meara, contributing editor, Sky & Telescope Magazine  
"The Trials and Tribulations of a 19th-Century Astronomer living in the 21st-Century."  
"Volcano Moon: Does the Moon's Gravity Affect Volcanic Eruptions?"
- Tony Hallas, Hallas Digital Systems - "Astrophotography from the Foothills of the Sierra"
- Robert Naeye, editor, ASP Mercury Magazine  
"Solving the Universe's Mysteries Through Extra Dimensions"
- Kent Cullers, SETI Institute - "SETI and Astronomy from DC to Daylight"

**VOLUNTEERS NEEDED**

If you own a telescope and want to volunteer with the public star party Saturday night, contact Jane Smith at [jesmith@ucdavis.edu](mailto:jesmith@ucdavis.edu) or telephone (530)758-4104 evngs/wknds. Those who would like to volunteer with any aspect of the show itself, even if only for a couple hours, contact Larry Snyder at [ldsnyder@dcn.davis.ca.us](mailto:ldsnyder@dcn.davis.ca.us).

**CONTACTS INFORMATION, QUESTIONS, AND HOTEL ACCOMMODATIONS**

All other questions email Jane Smith at [jesmith@ucdavis.edu](mailto:jesmith@ucdavis.edu), visit [www.DavisStarShow.org](http://www.DavisStarShow.org), or phone (877)713-2847. For lodging, you phone our host hotel, the Hallmark Inn, at 1-800-753-0035. Please check the Davis Star Show webpage at <http://www.DavisStarShow.org> for the latest program updates.

# Yosemite Star Party 2002

The nights of Friday July 19<sup>th</sup> and Saturday July 20<sup>th</sup>

This is a special event for the SFAA in that everyone who goes has a wonderful time. The Moon will be near first quarter and the weather should be great. Please join us for this fun event.

The rules to apply for this SFAA function are simple.

1. This trip is **open to SFAA members, their immediate families and their significant others, only**; friends, neighbors, relatives. etc. are specifically **not** invited. SFAA is providing service in astronomy to the rangers in return for free camping facilities with guaranteed reservations. It is not meant to be a free vacation for SFAA members or non-SFAA guests.
2. Each SFAA member must bring at least one astronomical grade Telescope to operate and share with the general public on both nights. The rangers and the SFAA rules prohibit tagging along without a telescope or bringing a telescope and not participating. Binoculars will not be accepted in lieu of this one telescope requirement.
3. The total number of adults permitted in the group campsite is 30. Children 15 years and under are not counted towards the 30 maximum. Please **no pets.**
4. Cut off and return the application stub below with the correct fee to save your reservation. This on a first come - first served basis with a preference for those have contributed to the trips in the past. A basic fee of \$5.00 is charged per adult (children 15 years and under are free.) The fee is not refundable. The money will go into our Yosemite General Fund. Yosemite Park fees have been waived for us during our stay.
5. Remember, camping near Glacier Point, in July, will have temperatures into the low 30's at night (3:00 AM to 5:00 AM). Prepare for this mountain environment at about 8,000 feet!! Since we can park near our tents, bring plenty of warm clothing and sleepwear, you may need it.
6. Quiet hours at Yosemite starts at 10:00 PM so we should be quiet upon returning to the campgrounds from our observing as there are other campers around us. With your cooperation this should be a fun time for all.

Cut here

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SFAA member \_\_\_\_\_ telescope \_\_\_\_\_

No. of adults at \$5.00 each..\_\_\_\_\_ Total amount enclosed \_\_\_\_\_

Make check payable to SFAA

Send to:

Allan Stern (Your Yosemite trip coordinator)  
2021 Willow Drive  
Petaluma CA 94954

Any questions?? Call Al Stern: trip coordinator at 707 769-0250.



## Bay Area Calendar of Events

<u>Date</u>	<u>Event</u>	<u>Place &amp; Time</u>
<b>July</b>		
<b>10</b>	SFAA Board Meeting - Members only	Western Addition Library 7.00 PM
<b>13</b>	Mt. Tam Star Party	Rock Springs, Mt. Tam 8.30 PM
<b>17</b>	SFAA General Meeting - Women In Astronomy Speaker Series - Helen Quinn, Stanford Linear Accelerator	Morrison Planetarium 7.30 PM
<b>20</b>	SFAA Yosemite Star Party	Glacier Point, Yosemite
<b>20</b>	City Star Party	Land's End, San Francisco 8.30 PM
<b>19 &amp; 20</b>	Davis Star Show	Davis, California
<b>August</b>		
<b>10</b>	Mt. Tam Star Party	Rock Springs, Mt. Tam 8.30 PM
<b>14</b>	SFAA Board Meeting - Members only	Western Addition Library 7.00 PM
<b>17</b>	City Star Party	Land's End, San Francisco 8.00 PM
<b>21</b>	SFAA General Meeting - Women In Astronomy Speaker Series - Check back for details	Morrison Planetarium 7.30 PM
<b>September</b>		
<b>5</b>	Golden Jubilee Speaker Series - Mr. Timothy Ferris with star party following	Morrison Planetarium 7.30 \$3.00
<b>7</b>	Mt. Tam Star Party	Rock Springs, Mt. Tam 8.00 PM
<b>11</b>	SFAA Board Meeting - Members only	Western Addition Library 7.00 PM
<b>14</b>	City Star Party	Land's End, San Francisco 7.30 PM
<b>18</b>	SFAA General Meeting - Women In Astronomy Speaker Series - Check back for details	Morrison Planetarium 7.30 PM
<b>October</b>		
<b>9</b>	SFAA Board Meeting - Members only	Western Addition Library 7.00 PM
<b>12</b>	Mt. Tam Star Party	Rock Springs, Mt. Tam 7.30 PM
<b>16</b>	SFAA General Meeting - Women In Astronomy Speaker Series - Dr. Debra Fischer, University of California at Berkeley, Department of Astronomy	Morrison Planetarium 7.30 PM
<b>19</b>	City Star Party	Land's End, San Francisco 6.30 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](http://www.sfaa-astronomy.org)

*Sharing the Wonders of the Universe*