

ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

VOL. 50, No. 4 – April 2002

The 50th Anniversary Speakers Series Women In Astronomy

“Observing with Carolyn, Williamina and Joceln”

Jane Houston Jones

April 17, 2002

You've got your Messiers, your Arps, your Hicksons. But have you observed the Carolyn Herschels yet? Yes, Carolyn Herschel discovered 14 deep sky objects in addition to the comets she is so well known for. The next time you look at the beautiful spindle galaxy in Sextans, NGC 253, tip your hat to its discoverer, Carolyn Herschel. And did you know that Carolyn also discovered M110 independently of Mr. Messier? Due to some sloppy bookkeeping on his part, Messier's discovery of this object was never recorded. Williamina Fleming discovered over 200 variable stars, including RS Ophiuchi, while Annie Jump Cannon discovered 300 variables. And the next time you observe M1, the Crab nebula, think of the pulsar spinning within, discovered by graduate student Jocelyn Bell in the 1960's. Join Jane Houston Jones on an indoor observing session featuring the discoveries of women astronomers.



Important Dates

Board Meeting – April 10 – 7:00 p.m.
-- May 8 – 7:00 p.m.
Western Addition Library, Scott & Geary Sts., SF
SFAA General Meeting – March 20
April 17
May 15
Morrison Planetarium, Golden Gate Park
Refreshments at 7:00 p.m.
Speakers begin at 7:30 p.m.

Mt. Tam Star Party
April 13 – 8:00 p.m.
May 11 – 8:30 p.m.
City Star Party
March 16 – 6:00 p.m.
April 20 – 8:00 p.m.
May 18 – 8:30 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>City Star Party Coordinator</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

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

“Scrutinizing Star Clusters with Space Observatories”

Adrienne Cool
March 20, 2002

The centers of some globular clusters are so densely packed with stars that stellar collisions are not only possible but probable. We will see how astronomers are using the Hubble Space Telescope and the Chandra X-ray Observatory to investigate the consequences of the collisions, both for the stars themselves and for the globular clusters they inhabit.

From Your President

As I ended my remarks in March with a quote from Einstein, it seems fitting to go back in time and start April with a quote from Plato: “Astronomy compels the soul to look upwards and leads us from this world to another.” Even 2,400 years in our past the stars were compelling the philosophers to look up and outside the normal path of everyday life. In this way, we also bind ourselves to our history as we see the ancient light of the night sky in a circle of the past, the present and the future.

For a look at the early practical use of Astronomy we must travel back in time 300 more years to 700 BC. Near the small village of Ascra, within the city-state of Thespieae, north of Athens in eastern Greece, there lived a farmer named Hesiod. In that time he composed a poetic manual on agriculture called “Works and Days.”

Here is line 383: “When the Pleiades, the daughters of Atlas, are rising, start the reaping; start the plowing when they are setting. Indeed they lie hidden for forty nights and days, and when the year has gone round they first appear again when the iron is being sharpened.” The iron is the sickle for cutting and he is talking of the planting of winter wheat in November and reaping it in May.

For Hesiod, watching for when Sirius was up mostly at night told him that rains would be beginning in what is our September. Arcturus rising at dawn told him that it was time to harvest Grapes. Orion’s setting came before Solstice and the time for late plowing. Arcturus rising at twilight meant it was time to prune the grape vines. So with the rhythm of the movement of the stars the early Greek farmer continued his own cycle of life.

I grew up on a farm in rural Wisconsin with deep black nights of a million stars. I saw a sky that, away from the light of the yard, was close to that of Hesiod. Whatever trouble was in my life, I could look up on a clear night and see the unaltered face of the universe. It is only when we get to see that again, do we realize what we have lost with our light polluted skies. We have lost a vital connection to our past and a source of inspiration and awe for the generations to follow.

There are resources on the web to assist with the technology of eliminating light pollution, but that is the end game. Within two generations we have changed the face of a night sky that had brought us a beauty shared throughout human history. We, as amateur astronomers, must take the time to explain this concept to our families, our friends and our communities. It is only when others get it, that they are losing something vital, that change will happen!

I have always been convinced that an essential part of being human is the need for beauty and inspiration. I can feel my sense of well being reduced in proportion to the lack of these things in my life. Whatever walk of life we come from, I have yet to meet anyone who is not awed by a truly dark night full of stars. It is free and it is as true as anything in this life. We must never forget that most of the people living in our city have never had this experience. We can start to change this, if we really want to.

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

Jane Houston Jones – A Brief Bio

Jane Houston Jones is a Sidewalk Astronomer first and foremost. She caught the astronomy bug in 1988 when she enrolled in John Dobson's telescope making class and made her first telescope, Stardust, a 10 inch f/7.3 reflector. Since then, she has been joining astronomy clubs, helping others learn the night sky, sketching, acquiring other telescopes, and enjoying visual observing from the sidewalks of San Francisco to the outback of Australia. She is also President of the Astronomical Association of Northern California, co-editor of the San Jose Astronomical Association's monthly newsletter "The Ephemeris" and is serving the second of a three year term on the board of Directors of the Astronomical Society of the Pacific. She is happily married to Morris Jones and they have two cats, six reflectors and three refractors.

SFAA 50th Anniversary SPEAKER CALENDAR 2002

Women In Astronomy & Related Sciences Series

May 15, 2002

Celebration of the SFAA's 50th Anniversary

In celebration of our 50th anniversary, the daughter of our member, Bob Berta will be playing the flute with members of her flute ensemble. They will be playing Space Music to Hubble Telescope images and other breathtaking images of space choreographed by Toney Burkhart. Then two of our founding members, Lou Epstein and Betty Neal will talk to us about their memories of the history of the SFAA. Some special edible treats will be a part of this celebration.

The Planetary Society Bay Area Volunteer Network

presents

EXTREME ENVIRONMENTS: From the Ends of the Earth to the Depths of Space

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

"Has life evolved in the extreme environments of other worlds, as it has in hostile environments on earth? And how can humans survive on other planets?"

Speakers: -Christopher P. McKay -- NASA/Ames Research Center
 -Pascal Lee -- SETI Institute; NASA/Ames Research Center
 -Rachel Whitaker -- Dept. of Plant Biology, UC Berkeley

Saturday, April 6, 2002 - 3:00 pm - Morrison Auditorium, California Academy of Sciences, Golden Gate Park

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:
 X-Environ, c/o Barbara Raskin, 1530 Bay Laurel Dr., Menlo Park, CA, 94025.
 Orders received after March 29, or without SASE, will be held at Morrison Auditorium.
 Tickets are limited and non-refundable.

The Planetary Society at <http://planetary.org> or The Bay Area Volunteer Network at <http://www.tpsbavn.org>

The Universe at Midnight

Ken Croswell

May 16, 2002, 7:30 p.m.

Chabot Space and Science Center, Oakland

Five years ago, astronomers thought the universe's expansion was slowing down; today, they think it's actually speeding up. Five years ago, they thought the universe was dominated by dark matter; today, they think dark matter actually plays second fiddle to a mysterious "antigravity" force that pervades empty space. You are invited to join Dr. Ken Croswell as he speaks about the latest observations in cosmology and uses them to offer a brand new forecast for the universe's ultimate fate.

Dr. Croswell's lectures have earned wide praise for their clarity, enthusiasm, and passion. He received his Ph.D in astronomy from Harvard University and is the author of the new cosmology book "The Universe at Midnight: Observations Illuminating the Cosmos," which New Scientist recently named the best astronomy book of the past year and which Sir Patrick Moore called "vastly entertaining and enjoyable, as well as informative." Dr. Croswell is also the author of four other critically acclaimed astronomy books: "The Alchemy of the Heavens," "Planet Quest," "Magnificent Universe," and "See the Stars."

Tickets are \$5. Call: 510-336-7373 For more information: <http://www.chabotspace.org/visit/programs/lecture.asp>

Reflective Tape

Bob Berta has found an amazing product that is perfect for intrepid amateur astronomers – an eight-hour luminescent tape that comes in two widths. Expose it to sun or light for 5 minutes and it will remain luminescent for eight hours! Orders can be placed by phone with the Safety Tape Co. at 877-964-8273.

1" x 10' - \$9.00

2" x 10' - \$14.00

Morrison Planetarium's
Benjamin Dean Lecture Series

presents

The Multi-Colored Sky

March 19

Dr. Michael Bicay, SIRF Science Center

Lifting the Cosmic Veil through Infrared Astronomy

The cosmos reveals fascinating new insights when studied with light in wavelengths longer than the human eye can see. The first infrared satellite surveyed the cosmos in 1983. What scientific results have been obtained since then and what do astronomers hope to learn in the next 15 years?

April 9

Dr. Mike Shull, University of Colorado

Next Generation Ultraviolet/Optical Telescopes in Space

Earth's atmosphere not only blurs images from space, but also block many wavelengths of light, limiting our view of the Universe. On the heels of the Hubble come the new ideas for space telescopes that will extend our view of into the ultraviolet.

May 7

Dr. Harvey Tananbaum, Harvard Center for Astrophysics

X-Ray Telescopes: Present and Future

With the launch of the Chandra X-ray Observatory in July, 1999, astronomers can now obtain high resolution images of the x-ray sky. This talk will show some recent Chandra results and will describe x-ray telescopes planned for the next two decades.

June 4

Dr. Valerie Connaughton, University of Alabama

Gamma Ray Astronomy

Gamma rays, the Universe's most energetic light, are difficult to capture in telescopes. How do astronomers study gamma rays and what do they hope to learn from them? Discover some of the stranger objects seen at this end of the spectrum.

All programs begin at 7:30 p.m. in the Planetarium - Tickets are \$3.00 each

DEAN LECTURE INFORMATION LINE at (415) 750-7141



2002 MT TAM ASTRONOMY PROGRAMS

April 13 - 8:00 pm

Dave Rodrigues

EastBay Astronomical Society

"The Amazing Space Art of Chesley Bonestell"

How one man's imagination changed our perception of outer space and helped persuade us to explore the solar system.

May 11 - 8:30 pm

Michael Bennett

Astronomical Society of the Pacific

"Astronomy from 41,000 Feet -The Story of SOFIA"

The Stratospheric Observatory for Infrared Astronomy (SOFIA), the largest airborne telescope ever built, will begin observations in late 2004.

June 8 - 8:30 pm

Dr. Jeff Moore

NASA-Ames Research Center

"The Moons of Jupiter as Revealed by the Galileo Spacecraft"

For the last 6 years the Galileo orbiter has been returning stunning images of Jupiter's moon, leading to new discoveries and theories of their nature and evolution.

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 Lau's China Bistro, 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 dinners run between \$10 and \$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**

AANC Conference
May 18, 2002 at College of San Mateo

Mark your calendars! May 18th, 2002 is the date for the annual one day conference sponsored by the AANC, the Astronomical Association of Northern California. This year the event will be held at the College of San Mateo, our co-sponsor of the event. The theme this year, Everything Under the Sun* , (*almost) will feature a speaker from the Kepler mission to search for terrestrial planets around other stars, a talk about the DART Membrane Telescope, a representative from Coronado Filters, plus others to be added.

The conference will also showcase the College of San Mateo, our AANC astronomy clubs, and give participants more time to socialize.

Activities on this day (and night) include:

- Speakers galore
- Presentation of annual AANC awards for amateur, professional, commercial and special astronomer for 2002
- Solar viewing at lunchtime, weather permitting
- Great box lunches available for \$10.00
- College of San Mateo Planetarium Shows at lunch and after the closing remarks
- Exhibits, club exchanges, workshops and social hour after closing remarks
- A Spaghetti Feed sponsored by the San Mateo County Astronomical Society, RSVP when you register, but pay at the (spaghetti) door
- A star party in the evening, telescopes courtesy of CSM, SMCAS and other local amateur astronomers, weather permitting.

Bring your family, students, or friends to hear the talks, and stay for the free star party.

Pre-registration by May 10 is \$20 for adults, \$10 for ages 10-18. Registration is available at the door for \$25. Registration form, program flyer and agenda will be available after April 1 at <http://www.aanc-astronomy.org> .

For more information about the College of San Mateo, please visit the website <http://gocsm.net/>. For directions go to The San Mateo County Astronomical Society website: <http://www.homestead.com/smcas/smcas.html>

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:

- \$ 8 enclosed, youth membership (under 18)
- \$30 enclosed, institutional membership
- \$30 enclosed, family membership
- \$30 enclosed, foreign membership
- \$25 enclosed, individual 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