

# ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

VOL. 49, No. 8 – August 2001

## **Speaker, General Meeting, August 15**

**Art Owens**

*A view of the Sun from a special DVD video created with data from the TRACE (Transition Region And Corona Explorer) Satellite.*

Art Owens, is a longtime SFAA member (about 10 years) and our foremost Sun expert. He has done many hours of public outreach using a Hydrogen Alpha filter on his 12 inch Meade telescope and many images from the internet. He has already given us several interesting presentations on the Sun, and this one is sure be fascinating as well.

Art will present a DVD produced by the Stanford Lockheed Martin Institute for Space. The data for this DVD is from the Transition Region And Corona Explorer (TRACE) satellite. Art's presentation will include a narration of the DVD material, information about the current sun cycle and about the TRACE satellite. He will also discuss aspects of the exploration of the Sun that has taken place during the currently peaking Sun cycle.

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## **Speaker, City Star Party, August 25**

**8:00 p.m.**

Our next City Star Party will be special in that what we will have is a short introduction from each of our members. The subjects should be very interesting to hear, as Toney our City Star Party coordinator will introduce our members to the public and ask some questions about how and why we got into astronomy. If you have any topic that you would like to share with the public then this would be a great time to speck up and share it with others.

San Francisco  
Amateur Astronomers

**Web Page:**  
[www.sfaa-astronomy.org](http://www.sfaa-astronomy.org)



Sharing the Wonders  
of the Universe

**Information Hotline**  
(415) 566-2357

## 2001 Club Officers & Contacts

<i>President</i>	Al Stern (415) 929-7035	<i>City Star Party Coordinator</i>	Toney Burkhart
<i>Vice President</i>	Bill Stepka (415) 928-2367	<i>Membership &amp; Subscriptions</i>	Chelle Owens (415) 479-5313
<i>Secretary</i>	Renita Mock (415) 566-2357	<i>Bulletin Editor</i>	Lorrie Boen (415) 921-1432
<i>Treasurer</i>	Chelle Owens (415) 479-5313	<i>Telescope Loans</i>	Pete Goldie (415) 206-9867
<i>Honorary Director</i>	John Dobson	<i>SFAA Website</i>	<a href="http://www.sfaa-astronomy.org">www.sfaa-astronomy.org</a>
<i>Board Members</i>	Lorrie Boen Jason Burkhart Dan Christian	Nancy Cox Rita Nossardi Stern	Fraser Reich Dennis Tye
<i>Alt. Board Members</i>	Randy Taylor	Jim Webster	

### 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.

### Important Dates

#### **Board Meeting – August 8 - 7:00 p.m.**

Western Addition Library, Scott & Geary Sts., SF

#### **SFAA General Meeting – August 15**

Morrison Planetarium, Golden Gate Park

Refreshments at 7:00 p.m.

Speakers begin at 7:30 p.m.

#### **Mt. Tam Star Party**

July 21 at 8:30 p.m.

August 18 at 8:00 p.m.

#### **City Star Party**

July 28 at 8:00 p.m.

August 25 at 8:00 p.m.

*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)

## *From the President*

At the June SFAA general meeting, Dr. Ben Oppenheimer shared his research on dim white dwarf stars in the halo of our galaxy. Thank you Ben for joining us for dinner before hand and for a very interesting talk. The August SFAA general meeting on August 15 about the Sun by our own Art Owens will be timely due to the peaking of the Sun's 18 year sunspot cycle and interesting as well.

The Mt Tam star party was again a beautiful night. Debra Fischer gave a great talk on the exploration of new planets. Our search for an Iridium flare was unsuccessful but a bright meteor passed by at the expected time of the flare and was immediately followed by an easy to track satellite saving the experience of the moment.

The City star party was also a very pleasant one with Toney Burkhardt giving a presentation about using your eye as an observing tool. The skies were clear and an Iridium flare was successfully observed!!

Don't forget to sign up for the Yosemite star party August 24 and 25. We will again provide telescopes for the general public to view the skies from Glacier Point and have a great time doing it. This event is for SFAA club members only.

The election of officers and board members will take place at the December meeting. There are indications that several changes will occur. If you are interested in becoming a club officer or a member of the board of directors please let us know so we can put your name on the ballot. (This is helpful if you want to get elected)

Please think about participation in the Literary Award and Astronomical Art Award. Also be thinking about the picnic in Stern Grove at Sloat Blvd and 19<sup>th</sup> Ave in San Francisco on Saturday September 8, 2001.

Dinner with the speaker is something we have been working on for our club members on the night of the general meeting presentations (the third Wednesday of the month). We cannot always expect the speaker to have time to do this but we have a fun dinner either way. If you are interested in attending these, please let me know.

Al

### **SFAA SPEAKERS CALENDAR 2001**

- |                           |   |
|---------------------------|---|
| <b>September 19, 2001</b> | John Dobson, the originator of the Dobsonian telescope mount design; the guru of the side walk astronomy movement; and teacher of telescope making and cosmology classes will be answering our questions. The meeting will be a question and answer session so bring your questions for John. |
| <b>October 17, 2001</b>   | Bob Naeye, editor of the ASP's Mercury Magazine will give a presentation and then lead a discussion on the merits of Pluto being a planet and the other guys out there, where they are and what is being said about them.   |
| <b>November 14, 2001</b>  | November's meeting is the second Wednesday of the month to avoid Thanksgiving eve. Speaker to be announced.   |
| <b>December 19, 2001</b>  | Members' night. SFAA members talk about their astronomical experiences.   |

## Remarkable Galaxy

by Jane Houston Jones

NGC 2608 is one of Halton Arp's remarkable galaxies. It is known as Arp 12 in Arp's Atlas of Peculiar Galaxies. It is a small faint barred spiral galaxy elongated 1.5 x 1' ENE-WSW with brightening at the center and a stellar nucleus. The little galaxy glows at visual magnitude 12.3 with a surface brightness of 13.6. Surface brightness is derived by dividing the objects magnitude by its area. The surface brightness number gives a better indication of its visibility than magnitude alone. This is a small faint galaxy but remarkable in many ways.

Located at R.A. = 08h 35m 18.86s Decl. = +28 degrees 28' 05.8" (2000), it is a quick starhop from the beautiful deep gold and blue double star, Iota Cancr. This pretty double will more than satisfy those of you itching for Cygnus and Albireo to rise with the glorious summer Milky Way now flirting with us on the horizon in early evening.

I started my observing night Monday 5/21 by watching the sunset, and the sky darken. It is a prelude to a night of observing, this moment of quiet and relaxation. We had printed out the AAVSO Supernova Search Chart for NGC 2608, and our first target was Supernova 0829+28 SN2001bg, discovered less than two weeks earlier during a U.K. Nova/Supernova Patrol. The supernova's reported magnitude of 13.9 is well within the abilities of our two larger telescopes, and the hunt was on. We observed sinking planets, brighter objects and pretty double stars on our lists until about 10:00 p.m. when it was dark enough for our project. I did a limiting magnitude count in Leo and came up with 6.4, which is average for all the nights I've observed at Lake Sonoma.

The galaxy was soon in the eyepieces of our 14.5 inch and 17.5 inch truss tube reflectors - made by LITEBOX telescopes of Hawaii. The supernova was easy to see in both telescopes. NGC 2608 was sharply "S" shaped, nearly "Z" shaped, with the bar much brighter than the wispy arms. In fact the arms were barely visible in the 9mm Nagler at 222x of my 17.5 inch. I had to pump it up to 333 power with a Orion Lanthanum 6mm eyepiece to really get detail. The galaxy has a very bright core, and a star superimposed in the bar, and the stellar nucleus may actually be another star, according to Uranometria Deep Sky Field Guide. Near the edge of the galaxy shone the supernova, 22" east and 19" south of the center of NGC 2608. Luckily it is away from the bar itself so as not to be confused with the star or nucleus embedded therein.

We mused that if there were extra-solar planets nearby that distant star, that the explosion would have wiped them out and everything on or in it. Funny the things you think about while observing. Life and death and things like that. I sketched the galaxy and the supernova, drew in all the surrounding stars so that I could verify (to myself) the magnitude by comparing it to the surrounding stars at home using SkyMap Pro, Version 7. We are not "laptop in the field" types, preferring paper and bound books, to glaring LCD screens. The software stays at home. The AAVSO maps we brought with us gave some star magnitudes, and I noted that the star GSC1948-1486 shone at a magnitude 12.8 with a nearby 13.3 mag star. The supernova was brighter than the 13.3 star but not as bright as the 12.8 star in my opinion. Now that was a very satisfying observing project to kick off another great night of observing. Some research beforehand, easy starhopping to the galaxy, finding the supernova, then sketching it and observing it and comparing its magnitude to nearby stars. I'll bet I took at least an hour on the project.

Cancer is still high enough for some good views of the few extragalactic objects to be found within its boundaries. Over the past month we have been lucky enough to have six great nights of awesome observing at Lone Rock Flat at Lake Sonoma, four nights in a row on April 23 through 26th, and this month on May 20 and 21st. During these six forays into galaxy land I completed observing the galaxies in Cancer (18 galaxies), Leo (100 galaxies), Corvus (15 galaxies), Crater (18 galaxies), Sextans (13 galaxies) and Hydra (75 galaxies). When I say completed, I mean I observed and logged the objects shown in the Night Sky Observers Guide that I had not observed previously.

Some of these were part of the Messier, Herschel 400 or Caldwell catalog surveys or previous galaxy hunts in these constellations. There are hundreds more galaxies shown on the Uranometria and Millenium Star Atlas charts, so I am not done with these constellations yet, thank goodness!

The most remarkable objects that I observed on these combined nights (excepting the supernova in NGC 2608) were the interacting galaxies and the galaxy clusters out there beyond the Milky Way. Each of the constellations I visited had their share of incredible groups of two, three and up to 8 faint galaxies. My big scope was eating them up left and right. My very favorites were the Hercules galaxy cluster, Abell 2151 with its 15 or more galaxies visible in my 17.5 inch. Abell 2199 and 2197 also offer many bits of lumpy darkness to the keen observer.

In Corvus, NGC 4724, 4727 and an anonymous galaxy, all at the over 13 magnitude level were an awesome trio, with the brighter two connected by their haloes. In Crater, my favorite was NGC 3511 and 3513, a tiny pair at high power. Leo just has too many five-star objects to mention. If you take a look at the NSOG you'll know what I mean. My very favorite object, however was Copeland's Septet, an easy galaxy hop from Abell 1367, another galaxy cluster. These dim clusters, with barely discernable individual galaxies were just breathtaking to observe. Like the Virgo realm of galaxies, you bump into galaxies in nearly every eyepiece view. I almost forgot about Leo Minor! The 19 galaxies plotted in the NSOG were a treat to observe. NGC 3395 and 3396 interacting pair appear connected at the tops of their spiral arms. Really interesting! And a row of six galaxies called the NGC 3158 group was a real treat!

Back to Cancer, besides NGC 2608, a triple view of NGC 2560, 25632 and 2563 present a triangle of galaxies all in the same high power eyepiece. The constellation Sextans, above Hydra contains the remarkable (but bright) NGC 3115, the Spindle Galaxy. Another triple header is NGC 3166, 3169 and 3165 all in the same eyepiece view at 222 power.

Hydra is better observed in Hawaii or places farther south. Many of my observations in Hydra (including the awesome M66) have been at more southerly locales, but here at Lake Sonoma, the Ghost of Jupiter planetary and M83 looked quite nice. There are dozens of doubles and

triples, some visible here and some not. You'll just have to try them yourselves.

We looked at many of the showcase objects at the beginning and end of each night. We did the Virgo hop one night. We ended each night with Mars. Tuesday morning at 1:30 a.m. was the very best view we had. Then we'd rush home and check the Mars Previewer shareware program to identify the mare and other features we observed on the red planet.

While I was pointing low in the south, Mojo was busy pointing his 14.5" reflector up among the stars of the great bear, Ursa Major. Over these nights he completed the 124 objects listed in NSOG for Ursa Major, including M40! Perhaps the most remarkable object we studied was one we did not see in Ursa Major. Right there on page 558 of the Millennium Star Atlas, near yet another NGC galaxy was a small symbol – smaller than that of the galaxies, and on a section of the map where no other galaxies were plotted. The caption read "Hubble Deep Field."

Date: June 21, 2000 9:30pm-1:30 am PDT (0430-0800 June 22 UT)  
Location: Lake Sonoma, California  
Lat/Long: 38 42' 54.7" 123 02' 43.7"  
Altitude: 1,000 ft.  
Instrument: 17.5 " f/4.5 LITEBOX reflector  
Oculars: 9mm Nagler for 222x, 6mm Orion Lanthanum for 333x  
Seeing: Seemed very good to us.  
Transparency: LM 6.5

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## Mt. Tamalpais State Park *Star Programs*

July 21 - 8:30 p.m.

### "Starbursts Forever!"

Dr. Wil van Breugel, Lawrence Livermore National Lab

Periods of intense star formation in the center of galaxies can signal spectacular episodes in the life cycles of these galaxies.

**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

Davis Star Show - August 24 & 25  
[www.davisstarshow.com](http://www.davisstarshow.com)

California Star Party - September 13 - 15  
[www.sjaa.net/calstar2001.html](http://www.sjaa.net/calstar2001.html)



# Y2K + 1 YOSEMITE STAR PARTY

We have been fortunate to draw the August 24th & 25th weekend in Yosemite. **The moon will be at a .431 phase on Friday night and will set at 23h 39m (11:39 PM).**

The rules to apply for this SFAA function are still, very 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. The 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. **Amateur Astronomers from other astronomy groups are welcomed to participate in our star party** when our own SFAA members have not filled the quota noted in item no. 3, below.
2. Each SFAA member must **bring at least one astronomical grade telescope to operate** and share with the general public on both nights. The ranger's and the SFAA rules strictly 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, noted above.
3. The total amount of adults permitted in this group campsite is **strictly limited to 30**. Children 15 years and under are not counted towards the 30 maximum. Please, **no pets**. The SFAA may be required to present names of the participating astronomers, in advance, for posting at the entrances to the park. **Those who do not have their names posted may have to independently secure their own campsites for camping**. In the past, individuals who had "gate crashed" our campsite to join the star party, unfairly displaced our own SFAA members - these campsites do have camper limitations.
4. Camping on **Glacier Point, in August, will have temperatures into the low 40's at night (3:00 AM / 4:00 AM)**. Prepare for this mountain environment. Since we can park our cars near our tents, bring plenty of warm clothing and sleepwear; you may need it.
5. We have to be at the Glacier Point observation area, with our telescopes ready at 7:30 PM. **Since quiet hour at Yosemite begins at 10:00 PM, you will not be allowed to set up your tent or campsite after the star party concludes**. Please arrive at our campground in the early evening - early enough to set up camp before 7:30 PM or you will be required to sleep in your vehicle - no exceptions. **The SFAA will strive to be good campground neighbors in Y2K+1.**
6. Cut off and **return the application stub below** with the correct fee to save your reservation. This is on first come - first served basis with a preference for those who have contributed to our Yosemite Star Parties in the past. A basic fee of \$5.00 is charged per adult (children 15 years and under are free). This fee is not refundable. The money will go into our Yosemite General Fund. Yosemite Park entrance fees have been waived for us during our stay.

Please cut along dotted line below and send to address noted:

.....  
SFAA Member.....Telescope.....

No. of Adults @ \$5.00 ea. =.....Total Enclosed.....

MAKE CHECKS PAYABLE TO:  
SEND CHECKS TO:

**SAN FRANCISCO AMATEUR ASTRONOMERS  
BOB LEVENSON, YOSEMITE TRIP COORDINATOR  
237 BELLEVUE AVENUE  
DALY CITY, CA 94014**

Any questions?? Call Bob Levenson, Yosemite Trip Coordinator,

**(415) 584-5756**

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:

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

**Select one category:**

Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Address: \_\_\_\_\_

Email address: \_\_\_\_\_

## **San Francisco Amateur Astronomers Membership Application**

### **San Francisco Amateur Astronomers**

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

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#### **In This Issue of SFAA's Above the Fog**

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