

ABOVE THE FOG

• BULLETIN OF THE SAN FRANCISCO AMATEUR ASTRONOMERS •

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Adventures in CCD Imaging

Jim Scala – July 16, 2003 – General Meeting



Amateur astronomy has benefited from many space technologies, but none have brought art and science together like the CCD chip. With a modest telescope and CCD camera, an amateur can take and produce images that, just a couple of decades ago, were restricted to professional observatories with large telescopes. Indeed, the same CCD camera opens opportunities in photometry, supernova, comet and asteroid searches, double star measurement and other serious scientific endeavors. However, for most amateurs CCD astronomy simply increases the pleasure of this great hobby because with a modest effort the amateur can produce outstanding images.

La Scala observatory is far beyond Jim Scala's boyhood dream because even good photographic film wasn't available when he was a boy. His observatory houses an excellent telescope and whenever weather and time permit the dome is opened. Even on rainy days and evenings it yields many hours of pleasure. Jim claims that you're always learning CCD imaging because it brings science, art and magic together. If that's not enough, celestial objects, events and phenomenon are endless and ever changing. In this illustrated talk you will visit La Scala observatory, enjoy some images, some science and laugh at some of the mistakes. Most importantly, you'll say, "I can do that," and as a result your hobby will become more abundant.

Astronomy is Jim Scala's first scientific love and his lifelong hobby. He is president of the MT. Diablo Astronomical Society, and an avid CCD imager. His backyard observatory houses a 228-mm APO refractor which can be exchanged with a 250-mm F/5 Baker Ritchey-Chretien astrograph for deep sky imaging. Jim has written many articles on imaging and amateur astronomy. He received a BA from Columbia, a Ph.D. in biochemistry at Cornell and did post doctoral studies at Harvard and he received an L.H.D. from Hofstra University recognizing his books on dietary management of chronic illness. In addition to teaching and research, Jim was nutritionist for the Voyager World Flight, three Mt. Everest Expeditions and the US Olympic Ski Team covering two Olympic Games.

2003 Club Officers & Contacts

<i>President</i>	Michael Portuesi (415) 550-9366
<i>Vice President</i>	Nancy Cox (415) 269-8259
<i>Secretary</i>	Morris Jones (415) 453-2885
<i>Treasurer</i>	Lorrie Boen
<i>Speaker Chair</i>	Bob Naeye
<i>City Star Party</i>	Randy Taylor (415) 255-8670
<i>Membership & Subscriptions</i>	Lorrie Boen
<i>Bulletin Editor</i>	Phil Estrin (415) 703-4533
<i>Telescope Loans</i>	Pete Goldie (415) 206-9867
<i>Publicity Chair</i>	Jane Houston Jones
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<i>Webmaster</i>	Joe Amato

CLUB TELESCOPES

The SFAA owns 4 club loaner telescopes, Dobsonian/Newtownian reflectors: 6" f/10, 8" f/7, 10" f/8 and a StarBlast. They 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 (<mailto:pg@lbin.com>) or phone (415-206-9867). Email communication is preferred and strongly recommended for a quick and accurate reply.

CLUB ASTRONOMY VIDEOS

The SFAA owns a series of astronomy videotapes featuring Alex Filippenko, a world-renowned professor of astronomy at UC Berkeley. The videotapes provide an introduction to astronomy and cover topics such as the Solar System, the lifecycles of stars, the nature of galaxies, and the birth of the Universe. The SFAA loans the tapes free to all members. If you are interested in viewing these tapes, you may check them out at any of the SFAA General Meetings. These tapes were kindly donated to the SFAA by Bert Katzung. Our librarian is Dan Christian.

For information on the course tapes themselves:
<http://www.teach12.com/tc/assets/coursedescriptions/180.asp>

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.

From Your President

Our field trip to Fremont Peak at the end of May was a great success. About 15 to 20 SFAA members viewed the skies through the 30-inch telescope. Springtime is galaxy time, and we had views of such objects as the M104 Sombrero and M87 galaxies in Virgo, the spectacular edge-on galaxy NGC 4565 "Berenice's Hair Pin" in Coma Berenices, and the famous M51 spiral galaxy in Canes Venatici. A few of us camped in the park overnight, and some of us stayed on even longer for a second night's observing at the Peak. All had a great time.

The June City Star Party was overcast, but nevertheless several new scope owners showed up for the Telescope Clinic. They received lessons in assembly, collimation and operation of their telescopes. Our Vice-President, Nancy Cox, presented an informative talk on star clusters for the small but enthusiastic crowd on hand.

If you are a telescope clinic "alumnus" looking for observing opportunities, you may be interested in an observing site that is very popular amongst SFAA members. Lake Sonoma is a facility run by the Army Corps of Engineers, and is a recreational park for camping, boating, hiking, horseback riding, and best of all: observing. It is about 90 miles north of San Francisco, and is about one hour and 45 minutes drive.

Lake Sonoma is not exclusive to SFAA; amateurs from around the Bay Area go there to observe, and there is no formal sponsorship or scheduling. Just go and enjoy. Lake Sonoma has two flats used by astronomers, both offering clear views of the horizon. Lone Rock Flat is used most often, and is the largest space. Grey Pine Flat is used when Lone Rock is occupied by horses. Skies are usually excellent, with only a minor bit of light pollution from nearby Santa Rosa to contend with.

SFAA members generally go to Lake Sonoma on the Saturday night nearest the 3rd quarter moon. For the rest of 2003, these dates are July 19, August 23 (but consider the SFAA Picnic on Mount Tam that same day), September 20, and October 18. Bring your telescope and join in the fun!

Keep in mind that the SFAA does not sponsor any of the activities at Lake Sonoma. It's totally an informal gathering. Being involved with event planning for SFAA, I like it that way! Stop by and say hi if I'm there. I won't be there as your President, but I'll show you the view through my telescope!

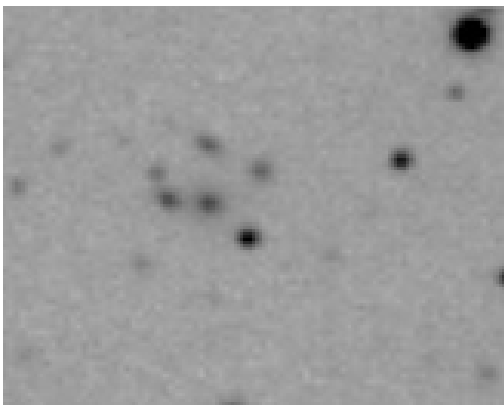
For directions and a map to Lake Sonoma, see <http://observers.org/sites/LS/> and http://www.darkhorizons.org/sites/sonoma_road_map1.htm. For sky visibility predictions, see the Clear Sky Clock for Lake Sonoma: <http://cleardarksky.com/c/SonomaCAkey.html>

Michael Portuesi

president@sfaa-astronomy.org

415-550-9366

Observing Hickson 50



Hickson 50-1 h Josef Muller, Germany

In 1755, Immanuel Kant published *Universal Natural History and Theory of the Heavens*. He noted that some nebulae have spiral structure and might be island universes. In 1877, E. M. Stephan discovered a small dense group of galaxies that now bears his name. Stephan's Quintet consists of five overlapping galaxies of unusual shape with structure of gas and stars that seem to interact with the neighboring galaxies. One large spiral in the quintet is probably a foreground object which happens to lie along the line of sight to the more distant galaxies.

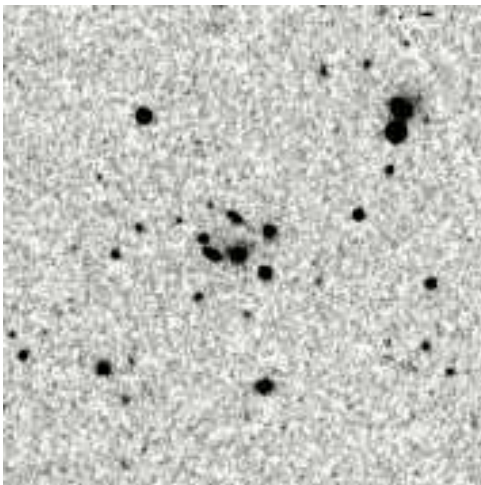
In 1918, H. D. Curtis made galaxy observations at Lick Observatory on the Crossley reflector. He observed islands of stars or spiral nebulae. In 1923 Edwin Hubble made the discovery of Cepheid variable stars in the great nebula in Andromeda. For 30 years, astronomers using the 100-inch telescope at Mount Wilson made nightly discoveries of groups and clusters of galaxies.

In 1948 Carl Seyfert, observing with the 100-inch Hooker Telescope at Mount Wilson, discovered another compact group of galaxies, now called Seyfert's Sextet. These galaxies exhibit violent tidal forces, an intergalactic plume of galactic matter. These apparent interactions led astrophysicists to the conclusion that these are compact dense systems. Geoffrey and Margaret Burbidge studied the spectra of these galaxies and discovered that

all but one of the galaxies in the two groups shared the same red shift velocity, but that discordant red shifts are found in many compact groups of galaxies.

In 1957 George Abell presented a paper with a catalogue of 2700 rich clusters of galaxies visible on the Palomar Sky Survey plates. In the early 1980's Paul Hickson, in the interest in taking a large sample of compact galaxy groups, composed a catalogue using these same Palomar Sky Survey plates. The search was intended to find a good cross section for study with the expectation of finding new examples of discordant red shifts, so he employed rigorous criteria to select 100 compact galaxy groups. This group of 100 compact galaxy groups are a popular observing project for amateur astronomers.

Hickson 50 in Ursa Major is deemed beyond the limit of almost all amateur telescopes, although it has been successfully observed in amateur telescopes ranging from 17 to 36 inches in aperture. Hickson 50 was my observing project over two recent weekends. First I attempted it May 26, 2003 at Lake Sonoma through my own 17.5 inch reflector. Next, I attempted it May 30 through the Fremont Peak 30-inch Challenger reflector. My 20 other weekend Hickson observations can be read here: <http://observers.org/tac.mailing.list/2003/May/0615.html>



HGC50domenico Andreas Domenico
Germany

May 26, 2003: 17.5 inch f/4.5 Litebox reflector. 222x 9 Nagler, 333x 6 Radian. Hickson 50 in Ursa Major 11h 17m 06.1s +54.55.07. Five components, something fuzzy seen. M97, the Owl nebula is so close to this object, at the edge of the eyepiece field of view at 125x of my 16 Nagler, 20 arc minutes away. My 125x eyepiece chart (created with SkyTools 2 charting software) website - <http://www.skyhound.com/skytools.html> - made it a snap to get the field of view in the eyepiece. A distinctive trapezoid (like the Hercules keyhole) asterism of stars led the way east of M97. Exactly one asterism further east were the pair of mag 13 stars. Directly between these two and a little north should be Hickson 50. I did get confused because the SkyTools map showed an object that I took for a cluster - a circle with a cross in the middle. It's just a second confusing galaxy symbol it turns out, and this turned out to be Hickson 50a, the brightest component of the group. I did see a smudge of something in the right spot. To me the smudge was more than one object, like two clumps a

little lighter gray than the background of the eyepiece view. The only other star in the area is a mag 17 star to the north, and I could see that star as well. These galaxies are in the 18 and 19 blue "B" magnitude range meaning they are a little brighter in the visible magnitude range.

May 30, 2003: 30-inch f/5 reflector at Fremont Peak Observatory. I noticed that Mojo had the 30-inch aimed at M97 at our SFAA night at Fremont Peak. I took over the telescope for about 45 minutes and visually moved the big scope by pushing my hands against the truss poles and peering into the eyepiece while moving the telescope and holding a paper chart in my other hand while balancing at the top of the tall ladder. Ursa Major was high over head. From M97, I changed the eyepiece from 9 Nagler (400x) back to the 31 Nagler (114x), moved the telescope past the trapezoid shaped asterism and voila, a little clump of galactic matter popped easily into view! Then I pumped up the power to 200x with the 16 Nagler, and then higher using the 9 Nagler for 400x. At each magnification change, I presented Hickson 50 to a group of about 12 members of the SFAA for their viewing pleasure. Some of the group definitely saw more than one clump. I think all were mighty impressed. I distinctly made out 4 components, roughly in a tight circle. Two of the galaxies - 50a and 50c were brighter than the others, and appeared more elliptical or round. The other two - 50b and 50d were elongated. I didn't see 50e.

The group was ready to move on to other brighter objects. I think mag 13.7 Pluto was the next target. Like Hickson 50, Pluto was also next to a distinctive asterism - shaped just like the constellation Delphinus, on this night, May 30, 2003. On the next night we observed Pluto at Fremont Peak in several telescopes for confirmation. Mike Portuesi confirmed Pluto by starhopping to it in his homemade f/7.1 10-inch dobsonian reflector. It was in a slightly different place than the night before, as compared to the mini-Delphinus star group. It was Mike's first time to find Pluto in his own telescope. If you look for Pluto tonight, it will have moved on, being a wanderer in our solar system against a background of stars in our own galaxy.

Jane Houston Jones
jane@whiteoaks.com
<http://www.whiteoaks.com>

Harriet Elizabeth "Betty" Neall ♀ September 21, 1907 • June 7, 2003

From Mark Gingrich . June 7, 2003

It is with profound sadness that I report the passing today of one of the Eastbay Astronomical Society's most remarkable members -- Harriet E. Neall, affectionately known to us as "Betty." She would've completed her 96th orbit of the Sun in September.

Betty graduated from Stanford University in the late 1920s with a degree in Educational Psychology. (An uncommon feat: At that time, fewer than 10% of the students on campus were female.) She joined the East Bay Amateur Astronomical Association (as it was then called) in the mid 1930s [1936], serving multiple terms as President over the years, and most notably during the crucial World War II period when membership ebbed as the nation's need for skilled, technical, and combat-ready people reached a critical stage.

The semi-official "raconteur laureate" of the Society, her tales of personal close conjunctions with Albert Einstein, Otto Struve, Walter Baade, to name a few, are legendary; anyone who witnessed her sprightly delivery, undiminished even when she was well into her 90s, could not fail to be charmed.

My most memorable recollection of Betty is from around 1979. It was a time when the Oakland Board of Education threatened, as they had done numerous times, to padlock the doors of Chabot Observatory -- their usual meat-axe approach to the perennial budgetary crises the District faced. In response, the EAS sprang into action: We stacked the Board of Education meetings with dozens of pro-Chabot partisans, each of whom filled out a "speaker card" (that is, an official request to address the Board on a specific issue). And on one such occasion, after the meeting dragged on interminably, it was Betty's turn at the podium. She launched into a vigorous defense of Chabot, explaining how it was special, explaining how a public observatory was relevant to both contemporary students and to the public-at-large. Then Betty ended with a flourish. In a line delivered with as much fire and brimstone as one would expect from a revivalist preacher, she exclaimed, "Your tax dollars are out there flying around Saturn!" (A reference to the just-then-successful Pioneer 11 fly-by of the ringed planet.)

The Board of Education's -- indeed, the entire audience's -- reaction was palpable: they'd never before seen so much spunk and passion from a four-foot-ten-inch-tall seventy-something-year-old lady! Chabot was voted a reprieve (well, at least until the *next* budget crisis), and the following day's recap in the _Oakland Tribune_ used Betty's final salvo about tax dollars and Saturn as a catchy pull-quote. I recall telling Kingsley Wightman afterward, "Without a doubt, Betty's our secret weapon."

Since Betty did not have any immediate family, she always considered us -- the members of the Eastbay Astronomical Society -- to be her surrogate family.

(The following prepared primarily by Don Stone)

Harriet Elizabeth "Betty" Neall (21 Sept. 1907 - 07 June 2003).

Grew up in Eureka. (It is unclear whether she was born there or in Philadelphia.)

Saw Halley's Comet in 1910 and again in 1986.

Graduated from Stanford University, c1929 B. A., Educational Psychology

EAS Member : 24,516 days (67.12 years) #1 Longest EAS membership Joined EAS April 23, 1936, Life member since 1985.

Treasurer: 1938-1944

Secretary: 1938-1949

President: 1960,61; 1973-74; 1979-80 and 1987.

More recently, Immediate Past President and Ambassador of Goodwill.

Many, many times did program director's duties with Helen M. Pillans, Betty's best friend.

WAA G. Bruce Blair Award 1986

AANC Amateur - of - the -Year Award 1977

Betty Neall Youth Award of Merit created in Betty's honor, September 12, 2003.

In 1979, Betty made a stirring oratorical speech in defense of the Chabot Observatory that led to a standing ovation and was largely responsible for persuading the OUSD to NOT close the Observatory. Cofounder of San Francisco Amateur

Astronomers

Life member of SFAA

Romantically linked with David P. Barcroft, couldn't marry because both had old mothers to care for.

SFAA Trip ☞ October 18, 2003
☞ Mount Wilson Observatory - Pasadena, California ☞

Want to look through a *really* big telescope?



October 18, 2003 is the tentative date for an SFAA trip to Mount Wilson Observatory in Pasadena, California, to observe through their historic 60-inch telescope. The 60-inch scope was built around 1900. It was the first of the large reflecting telescopes, and paved the way for many more large observatory reflectors following the same basic design. It was also the first scope designed primarily for astrophysics, in that it is intended to be used with cameras and other optical instruments, rather than for visual observation (although it's still pretty cool to look through!)

This was the scope with which Edwin Hubble and Milton Humason determined that the spiral nebulae observed by 19th-century astronomers were actually galaxies like our own Milky Way, viewed from an incredible distance. Hubble and Humason resolved the galaxies into individual stars and identified Cepheid variables within them. From that, they were able to derive their true distance, and significantly contribute to our understanding of the universe.

We need at least 15 people willing to pay approximately \$50 in advance in order to book the telescope for the evening. If bad weather closes the telescope, you will be refunded the \$50. You will be responsible for transportation to and from Pasadena, and for any hotel accommodations, if desired. If you are interested, please send mail to president@sfaa-astronomy.org.

More details will be available once plans are finalized.

Chabot Space & Science Center
"SUMMER OF MARS" Lecture Series

With Mars approaching its best view from Earth in over 10,000 years leading scientists in the field of Martian exploration will take us on journeys to the Red Planet through the latest in research.

Thursday June 26, 2003 7:30 pm	Dr. Seth Shostak • SETI Institute <i>Martians Invade Hollywood</i> Take a look at how Hollywood's quest for drama and the absurd has influenced our ideas about Martians and alien life, plus a look at what's really real in the cinematic reels.
Thursday July 10, 2003 7:30 pm	Taylor Perron • UC Berkeley <i>Water & the Martian Landscape</i> The quest for locating water on Mars is the key to understanding its past, interpreting its present and humanizing its future.
Thursday July 24, 2003 7:30 pm	Nathalie Cabrol • SETI & NASA <i>The MERS: Mars Exploration Rovers</i> Dr. Cabrol is a Planetary Geologist and a Principle Scientist with NASA's mars Exploration Rovers. She'll provide an update with the latest on the Mars Explorations Rover Missions.
Saturday August 9, 2000 7:00 pm	<i>Sponsored by the Eastbay Astronomical Society</i> Dr. Chris McKay • NASA <i>Mars: the Search for Life on the Red Planet</i> Dr. McKay is part of the team that announced the possibility that fossilized microbes exist inside Martian Meteorite ALH84001. He will tell us about the experience and what it means to our understanding of the history of the solar system.
Thursday August 21, 2003 7:30 pm	Dr. Margaret Race • SETI <i>Mars, Astrobiology and Planetary Protection</i> Hear one of the most renowned experts in planetary protection, the discipline of keeping Earth microbes from contaminating other bodies we visit. Dr. Race will tell us why such protocols are important in our plans to explore our nearest neighbors in the quest to find life.
Thursday August 28, 2003 7:30 pm	Dr. Tim McCoy & Dr. Cari Corrigan • Smithsonian Institution <i>Martian Meteorites: What They Tell Us About Mars & Life</i> Take a look through the eyes of a geo-biologist and a meteorite expert at what rocks from Mars can tell us about the formation of our solar system and the life that may have existed in those early formative periods. View Martian Meteorite ALH84001 during special public workshops Aug. 26, 27 & 28 free of charge
Saturday August 30, 6:30 pm	William Hartman <i>Travelers Guide to Mars</i> Internationally known astronomer and artist William Hartman takes us on travelogue to Red Planet in this look at what a tourist to Mars would discover.

Contacts mailing list

Contacts@aanc-astronomy.org

<http://mail.aanc-astronomy.org/mailman/listinfo/contacts>

Editors mailing list

Editors@aanc-astronomy.org

<http://mail.aanc-astronomy.org/mailman/listinfo/editors>

SFAA Annual Picnic
Saturday August 23, 2003, 4 pm
Bootjack Picnic Area, Mount Tamalpais State Park (\$4 parking fee for each vehicle)



Come to the 2003 SFAA Annual Picnic! Hamburgers and hot dogs will be provided. Any contributions of other food items will be most welcome, and gratefully devoured!

After the picnic, stay for a private SFAA-only star party at the Rock Springs parking lot, the site of our regular Mount Tamalpais Star Parties. Bring your telescope along and join in the fun!

You can do your own observing, or you can take part in a special group observing session we will be sponsoring for those interested. We will have a list of suggested targets for you to observe and the opportunity to share the views of these objects through each other's telescopes.

For directions and a map to the event, see our website at:

<http://www.sfaa-astronomy.org/sfaa/starparties/tammap.shtml>.

Also see <http://www.mttam.net/map.html> for a map that shows the Bootjack picnic area.

If you plan to attend, please send email to president@sfaa-astronomy.org.

We need to keep a count for the Mount Tam rangers

SFAA GLACIER POINT STAR PARTY AUGUST 15-16
Morris Jones - Glacier Point star party coordinator

The San Francisco Amateur Astronomers are invited again this year to spend a weekend at Yosemite National Park and provide a public star party at Glacier Point on Friday and Saturday evenings, **August 15 and 16**.

Besides being a beautiful weekend getaway, Glacier Point in Yosemite is one of the best places to do amateur astronomy in California. Our weekend this year is not the best for long evenings of deep sky observing, as a fairly large moon will be rising early in the evening. Nevertheless on Saturday evening we'll have at least an hour of full dark between the end of astronomical twilight and moonrise in which to show fabulous Milky Way objects and distant galaxies to park visitors. Even with a large moon, the clear dry air at Glacier Point makes the moonlight less of a factor for deep sky observing than back home at humid sea level.

Moonrise itself should be a spectacular event to observe as it rises over Glacier Point's very clear horizon next to Half Dome.

This year's star party has a special treat of being very close to the opposition of Mars. With Glacier Point's excellent atmospheric conditions, it could be a spectacular show. Mars will rise shortly after 8 p.m., and transit the meridian at about 2:00 a.m. during our visit.

Only SFAA members in good standing and one member of their immediate family are eligible to take advantage

of this offer. Each member who wishes to attend must agree to bring a telescope to set up at the star party and show objects to the public until at least moonrise. In exchange for providing the star party, Yosemite National Park will provide us with free entrance to the park, and free use of the group campsite at Bridal Veil campground, on the road to Glacier Point.

A sign-up form will be on the SFAA secretary's web site: <http://www.whiteoaks.com/sfaa/yosemite/>

Members who have attended previous Glacier Point star parties will advise that the space provided in the group camp is woefully inadequate for the nominal population of thirty visitors. The biggest problem is parking around the group camp. If you want to avoid issues with bear box space, tent room, and parking, and are willing to pay the \$7/night camp fee, you are strongly advised to arrive early and secure a standard campsite at the campground. It's possible but not assured that the park will waive the campground fee for star party participants not using the group campsite.

Jane and I plan to arrive around noon on Thursday the 14th to secure a private campsite and not use space in the group camp. Late arrivals aren't guaranteed of finding a parking space next to the campsite!

Hope to see you all at Glacier Point, August 15-16.
Morris Jones, mojo@whiteoaks.com/

Observing is a Starblast!

San Francisco
Amateur
Astronomers

member Kerry Sagar brought a new telescope to the SFAA monthly city star party in May - a f/4 4.5-inch Orion StarBlast reflector. I liked the crisp views of the moon and the size and portability of the telescope so much I went out and bought three of them the next day! One for me, one for the SFAA Loaner Program and one for some friends.

The telescope, which was reviewed in the June 2003 Sky and Telescope

magazine retails for \$149.00. That price includes an Orion red-dot EZ Finder reflex sight, which retails for \$34.95, and two Explorer II (Kellner) eyepieces, which retail for \$27.95 each. It also comes with a collimation cap (similar to a Rigel a-line collimation device) which fits into the focuser for easy collimation of the telescope.

The Orion catalog markets this telescope for kids, and I agree -- it is a telescope for kids of all ages. I used my StarBlast at a May 15 Project Astro Lunar Eclipse school star party, and the little scope provided great 25x and 75x views of the moon to a hundred kids and parents. Kerry Sagar also brought

his StarBlast to the same school eclipse party. Then the next weekend, May 20-23, I brought the StarBlast to Lake Sonoma for some deep sky views. For those of you who think you need more aperture to see galaxies, I wish



this 'scope. I observed 24 Messier objects, including all the Messiers in the Virgo realm of galaxies that first night. M51, the Whirlpool galaxy in Canes Venatici

you could have seen the views of many faint Messier objects though

looked awesome! Both spiral galaxies were visible. The magnitude 9 Leo Trio, M65, M66 and NGC 3628 were easy to find, and nice to look at. NGC 3628 looked like a little edge-on sliver. Spiral M65 looked like a little oval. M66 is the "fattest" of the trio of spirals, with some central bulge and a hint of spiral arm showing. Halton Arp included M66 in his catalog of peculiar galaxies as ARP 16 and this whole trio is Arp 317. The

17mm eyepiece, aimed at the Beehive cluster provided dozens of stars in pretty trios and lines.

The next weekend I thought I should share the telescope with a real kid! So Larissa Schumacher, 9 year old daughter of SFAA members Peter and Barbara

Schumacher obliged me at the SFAA Fremont Peak night. It didn't take any arm-twisting at all, either. She was hoping I would bring the little StarBlast to Fremont Peak for her to use. We set the telescope on the sturdy picnic table outside the FPOA observatory, and settled in for two hours worth of observing. The picnic table made a great observing spot, with room for observer to sit on the table next to the telescope, eyepiece box, and a star chart. Viewing was comfortable plenty



The author's 17.5-inch f/4.5 Litebox Reflector "Hagrid" and 4.5-inch f/4 Orion StarBlast "Green Flash" at Lake Sonoma.

of foot room on the bench for balance, while aiming and viewing through the 18-inch tube. Larissa enjoyed lining up a selection of three eyepieces in the StarBlast eyepiece rack, too.

As Mojo aimed the FPOA 30-inch Challenger telescope at object after object, Larissa looked at where the 30-inch was pointed and with a little help sometimes (with a green laser pointer owned by Mike Portuesi) she hopped to the same objects in the StarBlast. Some of the objects Larissa found in the StarBlast were M104, the Sombrero galaxy, M87 in Virgo, M86 and 84 in Virgo, M82 and 81 in Ursa Major. She also found the Whirlpool galaxy and Jupiter early in the evening. And easily aimed at the naked eye visible Beehive cluster, M44 and the Coma Berenices star cluster, Melotte 111. Later, she hopped to

M20 the Trifid nebula, M8, the Lagoon and the M24, the Sagittarius Star cloud and scanned other parts of the Milky Way. Oh, in scanning, she chanced upon the Swan nebula, M27. I can't remember what else she looked at, but her observing log had 13 objects on it by the time she was ready for a well deserved snooze at 11:30 p.m.

Then, I went back to my 17.5-inch f/4.5 telescope for some projects of my own. When Larissa and her family left for their Fremont Peak campsite, I pointed out the rising planet Mars to her. I'm willing to bet she'll want to use the StarBlast again!

Jane Houston Jones

jane@whiteoaks.com • www.whiteoaks.com

Important Upcoming Dates

Board Meeting – July 9 – 7:00 p.m.
August 13 – 7:00 p.m.
September 10 – 7:00 p.m.

*Western Addition Library
Scott & Geary Streets, San Francisco*

SFAA General Meeting – July 16
August 20
September 17
*Morrison Planetarium, Golden Gate Park
Refreshments at 7:00 p.m. - Speakers begin at 7:30 p.m.*

Mt. Tam Star Party
July 26 – 8:30 p.m.
August 30 – 8:00 p.m.
September 27 – 7:30 p.m.

City Star Party
July 5 – 8:30 p.m.
August 2 – 8:00 p.m.
September 6 – 7:30 p.m.
Telescope Clinic starts ½ hour before Star Party

Online services for SFAA members

The SFAA's Secretary's Web Site helps keep SFAA information together and accessible to members. The site URL is <http://www.whiteoaks.com/sfaa/>. At this site you can find such information as minutes from meetings of the Board of Directors, the SFAA official by-laws, and other information. SFAA also offers email lists to supplement the bulletin board offered at the SFAA's official web site. At present there are two email lists -- an unmoderated list for use primarily for business and discussion by the Board of Directors (but open to all members), and a moderated announcement list for all SFAA members. If you would like to be added to the SFAA-announce email list, please contact the secretary (secretary@sfaa-astronomy.org) and let him know. You can also sign up for the list yourself at this URL: <http://www.whiteoaks.com/mailman/listinfo/sfaa-announce>

Calling all Amateur Astronomers!

Take this opportunity to complete the new Astronomical Society of the Pacific (ASP) survey and have a chance to win a \$100 gift certificate to the ASP Catalog! You will be assisting ASP in developing training and materials for amateur astronomers to help the public understand concepts of astronomy. In addition, the survey is collecting your experiences with any astronomy misconceptions you have come across in your encounters with the public. Click on this link to access the survey: <http://fs8.formsite.com/astrosociety/AstroSurvey/index.html> Or from the ASP web site: <http://www.astrosociety.org/> As an added bonus, if 15 or more of your club members respond to the survey, you will receive a copy of your club's responses (no names or other identifiers will be included). This could help in planning programs for your club and can serve as a topic of discussion at a club meeting. Just have your members put your club's full name on the form where they enter their name for the drawing. We're expecting to close the survey by the end of August or September and will distribute club responses within six to eight weeks after that. To find out more about the survey and to access it, click on the following link:

<http://fs8.formsite.comastrosociety/AstroSurvey/index.html> Thank you for your participation and your contribution to research in amateur astronomy outreach! Marni Berendsen Education Project Coordinator
Astronomical Society of the Pacific and Member of Mount Diablo Astronomical Society.



Telescope Clinics from Sidewalk Astronomers and SFAA

The Sidewalk Astronomers and SFAA are pleased to offer free personal assistance to new telescope owners at the monthly City Star Party, hosted by the Golden Gate National Recreation Area at Land's End in San Francisco. Experienced amateur astronomers from the SFAA and Sidewalk Astronomers will help new telescope users with setup, optical alignment, and operation of their telescopes and mounts.

The telescope clinics are held Saturday evening, an hour before the City Star Party at Land's End, San Francisco. Future events are scheduled on June 7, July 5, August 2, and October 4.

New (or "new again") telescope owners who would like to attend the clinic are encouraged to give advance notice by sending email to http://ww.clinic@sfsidewalkastronomers.org/, or by leaving a telephone message on the Sidewalk Astronomers' hotline, (415) 289-2007. Questions are welcome at the email address.

Gatekeepers Needed at Mt. Tam Star Parties

Attention all SFAA members who attend the Mt. Tam star parties! You too can be an official gatekeeper. Help out with the park gate and traffic control and you can stay on the mountain as long as you like after the public has left. All you need to do is attend a brief (1.5 to 2 hour) orientation session with the Mount Tam Interpretive Association and the park rangers to learn about the park and fill out a few forms. These sessions usually happen infrequently, but the rangers are willing to schedule a special session for SFAA if we get enough people to volunteer. Several members have already expressed an interest, but we could use a few more! If you would like more information or to sign up to attend, contact **Mike Portuesi** (president@sfaa-astronomy.org) or **Jim Mace** (jamesmace@mac.com)

Speakers Needed for City Star Parties

Do you have some knowledge you'd like to share with other SFAA members and the general public? Do you enjoy informal public speaking? If so, perhaps you'd like to be a speaker at one of our City Star Parties. You can speak about any topic that's astronomically related. Each talk is about 15-20 minutes in length. If interested, please contact **Randy Taylor**, our CityStar Party coordinator, at (415) 255-8670 for scheduling.

!!!! Membership Dues !!!!

Check your mailing label on the back of this issue. It is the month and year through which your membership was paid. If this date is past, your membership has expired and this may be your last bulletin.

In an effort to save the club money, this will be the only notice of membership expiration in the future. Also, in an effort to save the club money, you may receive no more than one bulletin after the expiration of membership. If your membership is expiring, please renew soon.

A Special Benefit for New SFAA Members

The SFAA is pleased to announce that **Scope City** (San Francisco's only telescope and binocular retailer) has offered, as a special benefit for new item in the store. Simply bring your speak with Sam. This offer is valid for receipt must indicate this fact.



SFAA club members, a \$25 credit toward any membership receipt to the store and ask to new members only, and your membership

We encourage you to take advantage of this offer. Pick up some observing guides, a new eyepiece, or perhaps a new telescope! Scope City is well-stocked with a wide variety of products, including Celestron, Meade, Parks, Televue, Lumicon and other major brands. The people who work there are friendly and serious about astronomy, and have their own telescopes. www.scopecity.com/scopecity.htm

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, 765 Geary St., #302, San Francisco CA 94109

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:

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) 289-6636

Web Page: www.sfaa-astronomy.org

Sharing the Wonders of the Universe

Has your membership expired? Your mailing label includes the month and year through which your membership is paid. If it is past, your membership has expired and this may be your last issue.