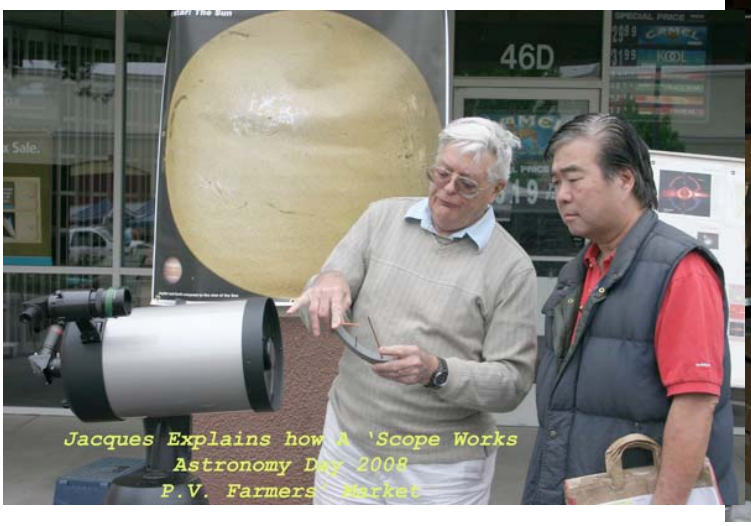
FIRST LIGHT

Journal of the South Bay Astronomical Society – June 2008
on line at www.geocities.com/sbas_elcamino

Monthly General Meeting: Friday, June 6th, 7:30 PM

Planetarium Projector Demonstration by Dr. Perry Hacking

SBAS Outreach Activities - Cornerstone School and Astronomy Day at PV Farmer's Market



The May 3 Meeting

President Ken Rossi began the meeting at 7:33, by asking guests to introduce themselves. Ron Rennie presented two Certificates of Merit to last month's award winners, Tom Bash and Greg Benecke, prompting applause from the audience. President Rossi reviewed observing sessions past and future, and Craig Gates described observing from Death Valley, including a particularly fine view of the 'Ghost of Jupiter' planetary nebula, as seen through his Celestron 14-inch telescope.

After a thirteen-minute social break, Daniel Mounsey of Woodland Hills Camera & Telescopes described some of the equipment that is available in today's marketplace, which he brought with him as a show-and-tell. He began by describing the Sky Scout, produced by Celestron, which identifies an object in the sky that the Sky Scout is pointed towards. The Vixen 80-mm apochromatic refractor which he set up has both excellent optics and is easy to adjust in altitude and azimuth. Several new eyepieces are appearing on the market, including some expensive Nagler eyepieces which Mr. Mounsey passed around to the audience (which was pretty trusting of him, I thought; they all made their way back to him by the end of the lecture!).

A red-dot finder and a planisphere were also shown, as very useful aids in finding one's way around the sky. He ended by demonstrating a flip-mirror diagonal, which is useful in positioning and focusing an object in an eyepiece, then flipping the mirror so the light enters a camera. Throughout, Mr. Mounsey answered many question about color correction, astrophotography and choice of telescopes, asked by some of the 50 people in attendance. Ken Rossi thanked the speaker, and the meeting officially ended at 9:22. Later, Mr. Mounsey set up the Vixen refractor outside, and members lined up for a look at Saturn.

- Dr. Steven Morris

RTMC

The weather forecast for this year's Riverside Telescope Makers Conference was not good. Despite this, a number of hardy or should we say fool hardy SBASers made the 200mi trip. Greg Benecke and I left his house around 9am on Friday under grey skies. On the way up the mountain we encountered intermittent rain, hail and snow. This was the pattern for most of the day though none of it was heavy enough to interfere with activities. We met with Steve Lindsey and his son Ricky and staked out a spot next to one of the lean-tos. Saturday, the day of the swap meet, dawned bright and clear. Greg and I set up a table to sell some of the club's surplus stuff from a 12.5in scope we inherited. We hoped to make a few bucks to shore up the club's Observatory fund, but after 6 hours there were no takers and we had to cart everything back home. Part of the reason was that attendance was down to 1100 compared to last year's 1600 no doubt due to weather and the cost of gas. Even vendor participation was not up to its usual.

SBAS Members Joe, Steve, Bill, Greg, & Ricky At RTMC 5/08 But Who's That Big Guy On The Left?

The Belveal Kids with the Astronomy Wizard

Shawn Belveal & Family with the Grand Prize

Saturday afternoon we took the annual club picture, but due to poor organization on my part, we missed several. Those in attendance, but missing from the photo were Shawn Belveal and his lovely family, Doug Loop, & Steve Pederson. Later in the afternoon it began to snow and dropped almost an inch. People were making snow balls and snowmen. I thought that was it as far as observing was concerned, but the evening turned out to be very clear- but cold. Nevertheless Steve and Greg set up their scopes and we had some great views of Saturn, M51, the Leo Triple and a number of open and globular clusters as well as some nice doubles. Sunday was a repeat of Sat. sunny in the morning, but cloudy in the afternoon. While Steve and Greg attended an all day photography lecture I wandered among the vendors, those that were left. All day in the dining hall there was a continuous live feed from JPL on the progress of the Phoenix Mars Lander mission. So we were the first to know of its successful landing. Sunday night was awards and door prize drawings. Marni Berendsen, coordinator of Night Sky Network in which SBAS participates, was honored for her work in Astronomy Outreach. A well deserved award. The grand door prize was won by our own Shawn Belveal, a $700 Nagler Ethos eyepiece! Congratulations Shawn. Amazingly it cleared up in the evening and the seeing was even better than Sat.- and colder, with reports of 10 deg F. Greg put his C 8 thru its paces but we cut it short at 11pm. Brrrrr! I was glad I decided to sleep in the heated dorm.

- Joe Fierstein

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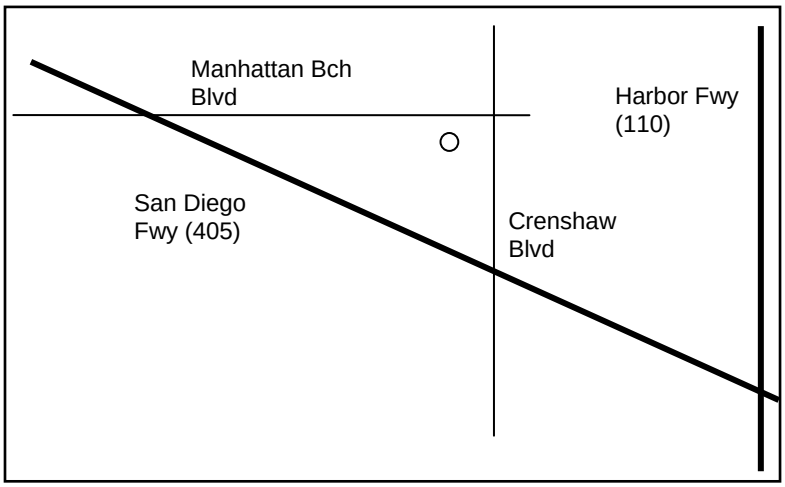
Monthly General Meetings

We normally meet on the first Friday of each month at 7:30 p.m. in the Planetarium at El Camino College (16007 Crenshaw Bl. In Torrance). If the first Friday is on or close to a holiday, we usually defer the meeting until the second Friday of the month. The Planetarium is on the south side of Manhattan Beach Blvd., one block west of Crenshaw Blvd. (near the center of the map at left).

The planetarium is the only round, domed building on campus. There is on-street parking, and we can often use campus parking: check inside to see if you need a FREE parking permit for your car.

We enjoy the planetarium facilities through the courtesy of the El Camino College Administration, and have several faculty members of the Astronomy Department as members of our Club. Our meetings always include an informal opening, when new attendees are invited to introduce themselves and let us know about their interests in astronomy. Members share their latest news and observations at this time. The rest of the evening is devoted to guest speakers, who range from amateur astronomers to professional astronomers to representatives from local aerospace companies to college professors. We are fortunate to have all these talented people in our area, willing to come and talk to us.



Monthly Planning Meeting

Committee members (and anyone else with an interest in Society activities) meet each month, usually on the Monday following the general meeting. Meetings are sometimes rescheduled due to travel and other circumstances. Exact date and time of each month's meeting will be announced in the schedule of events in FIRST LIGHT each month, and should also be verified with a committee member. The June 9th planning meeting will be held at 7:30 PM at the home of Ron and Jenn Rennie. The address is: 25911 Saddle View Road, Lomita. From the intersection of Crenshaw Blvd. and PCH take PCH South towards Long Beach. At the second traffic light Turn Right onto Pennsylvania Avenue, turn first right (Esther View Road) and follow down one block. Turn left on Saddle View Road to second house on right - No 25911.

SBAS YAHOO GROUP

Join our own YAHOO group for up-to-the-minute club news; see astro photos taken by members and be part of the growing online community of the South Bay Astronomical Society. A YAHOO userid is needed (free) then click on GROUPS and search for SBASTRO. Use the JOIN function and you will get notification from the Group's administrator that your application has been accepted. This group is limited to SBAS members. You can specify to have emails sent to your normal email address when you signup. The Executive Board is working to use this vehicle more and more this coming year to deliver information to our members. 25% of our membership has joined. Don't be left out. If you need assistance or have any questions, contact any Board member.

NexStar 8 Available to SBAS Members

All members in good standing (with at least six months of continuous membership) can borrow the club's Nexstar8 for up to 7 days. The fee of $5 for a weekend, or $10 for an entire week, is nonrefundable and will be added to the club's Accessories Fund "Wish List" for future purchases. A fully refundable deposit of $200 cash or check is required. Loss or damage is the responsibility of the borrower. A copy of the complete South Bay Astronomical Society Nexstar 8 Borrowing Rules and Agreement is available upon request. The **Accessories Fund "Wish List"** – Member contributions of any amount or donations will be appreciated, as will any suggestions for new purchases!

SBAS Membership Benefits

Contact Arnie Stodolsky for magazine subscriptions at club rates: "Sky & Telescope" $32.95 and "Astronomy" $34.00/1 year or $60.00/2 years!

Note: S&T subscribers at the club rate renew their subscriptions by mailing their renewal notice and check or calling the 800# on the renewal notice.

Only new subscribers or subscribers converting their subscription to the club rate need to contact Arnie or send a check to the PO Box. Astronomy subscriptions and renewals still go through Arnie or via the PO Box.

New Members

Welcome new club member Joseph Zirbel from Hawthorne.

Thank You, Woodland Hills Telescope

I think we all learned a lot from the visit of Daniel Mounsey from Woodland Hills Telescope who demonstrated that they sell a large range of astro-photo equipment that would be of interest to our members. By logging on to their websites at www.whtelescopes.com and www.whcameras.com you will see details of this equipment and the

generous discounts they offer. In addition they have sent me Discount Gift Certificates for a $42 off any purchase over $84 that is not discounted. I will make these certificates available to members on at regular club meetings.

- Ron Rennie

Ozone, the Greenhouse Gas

We all know that ozone in the stratosphere blocks harmful ultraviolet sunlight, and perhaps some people know that ozone at the Earth's surface is itself harmful, damaging people's lungs and contributing to smog.

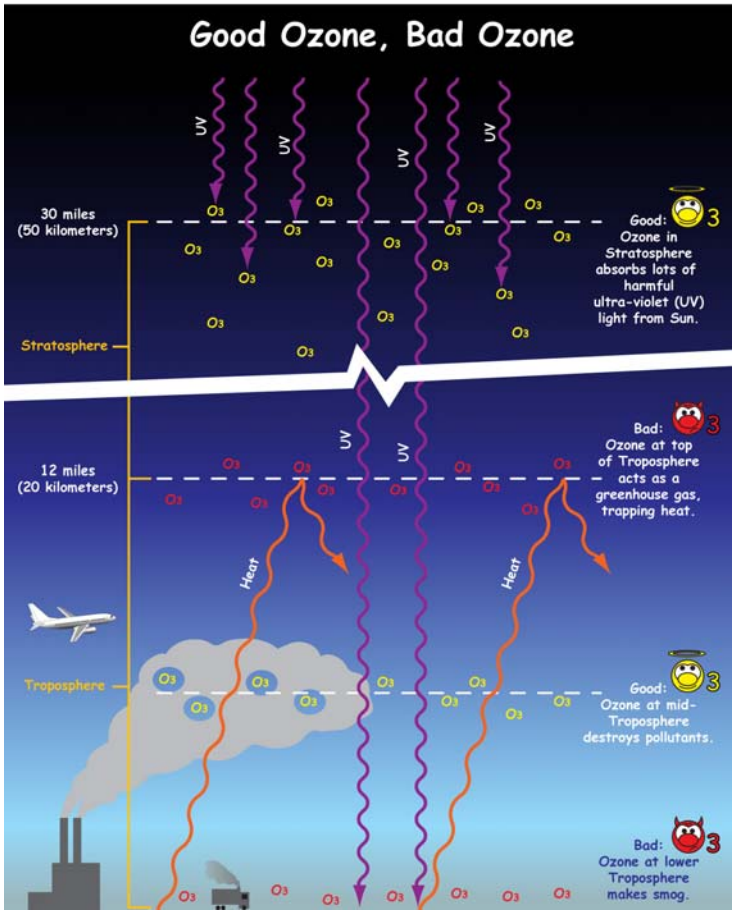
But did you know that ozone also acts as a potent greenhouse gas? At middle altitudes between the ground and the stratosphere, ozone captures heat much as carbon dioxide does.

In fact, pound for pound, ozone is about 3000 times stronger as a greenhouse gas than CO2. So even though there's much less ozone at middle altitudes than CO2, it still packs a considerable punch. Ozone traps up to one-third as much heat as the better known culprit in climate change.

Scientists now have an unprecedented view of this mid-altitude ozone thanks to an instrument aboard NASA's Aura satellite called the Tropospheric Emission Spectrometer—"TES" for short.

Most satellites can measure only the total amount of ozone in a vertical column of air. They can't distinguish between helpful ozone in the stratosphere, harmful ozone at the ground, and heat-trapping ozone in between. By looking sideways toward Earth's horizon, a few satellites have managed to probe the vertical distribution of ozone, but only to the bottom of the stratosphere.

Unlike the others, TES can measure the distribution of ozone all the way down to the heat-trapping middle altitudes. "We see vertical information in ozone that nobody else has measured before from space," says Annmarie Eldering, Deputy Principal Investigator for TES.



Ozone behaves differently at different altitudes in the atmosphere. High in the stratosphere and at mid-troposphere it has positive effects on life at the surface. At the top of the troposphere ozone is a greenhouse gas and at the surface it makes smog.

The global perspective offered by an orbiting satellite is especially important for ozone. Ozone is highly reactive. It is constantly being created and destroyed by photochemical reactions in the atmosphere and by lightning. So its concentration varies from region to region, from season to season, and as the wind blows.

Data from TES show that ozone's heat-trapping effect is greatest in the spring, when intensifying sunlight and warming temperatures fuel the reactions that generate ozone. Most of ozone's contribution to the greenhouse effect occurs within 45 degrees latitude from the equator.

Increasing industrialization, particularly in the developing world, could lead to an increase in mid-altitude ozone, Eldering says. Cars and coal-fired power plants release air pollutants that later react to produce more ozone.

"There's concern that overall background levels are slowly increasing over time," Eldering says. TES will continue to

monitor these trends, she says, keeping a careful eye on ozone, the greenhouse gas.

Learn more about TES and the science of ozone at tes.jpl.nasa.gov/. Kids can get a great introduction to good ozone and bad ozone at spaceplace.nasa.gov/en/kids/tes/gases.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

Observing Reports

Cottonwood Springs – Greg Benecke, Steve Lindsey and I made the trek out to Joshua Tree National Park for the dark sky observing session. Thanks to relatively light traffic, we all got out there well before sundown and set up, leaving some time to talk to other astronomers from other clubs. The weather was good and relatively warm, reaching only about 50 degrees at the lowest point.

This was my first opportunity to finally use my new guide-scope assembly under dark sky conditions. The breeze that was blowing at sundown was a bit of a worry but that faded as the breeze died after sundown. The performance of my Nexstar 11 with the added Onyx ED80 guide scope and counter-weights, plus the Nikon D200 DSLR camera and Meade DSI was really amazing. I was able to get a really good polar alignment very quickly and from then on, every object I went to was nearly dead-center in the FOV of the camera. Deciding to try wide-angle photography first, I rigged the Nexstar with a 6.3 focal reducer.

Using the focusing utility in the Images Plus Camera Control software was very difficult this time, compared to the first time at Ridgecrest. The unsteady seeing made it very difficult to get a good focus. I finally figured I had it as good as possible and began shooting. I started with short exposures and slowly extended the time as the breeze dropped. I did a series of 5 minute exposures on M57, the Ring Nebula. Unfortunately, that was not a fitting subject with the focal reducer in place! The best image of the night was one of M8, the Lagoon Nebula. I was able to get 30 minutes of exposure time and, after a lot of work on the post-processing, it made a decent, recognizable image of this well-know object. Not my most successful night but at least I'm learning to use my new imaging system and software.

- Ken Munson

Backyard Solar Observing – All things came together finally and I was able to test the club's Personal Solar Telescope mounted on my Nexstar 11. After getting my Losmandy dovetail plates, and counter-weights to my guide scope system, I thought it would make a more complete system if I added a piggy-back adapter for the rail for camera and/or a small telescope. It was a long wait, but the Losmandy piggy-back adapter finally came in, followed, naturally, by the usual bad weather. Memorial Day, the clouds finally cleared so I set up the scope to experiment with the PST.

Once I got the PST mounted, I did a fake alignment and then manually centered the Nexstar 11 on the sun, replacing one of the fake alignment stars with a real data point for the sun. The small targeting window on the PST showed a bright spot where the sun was, however, the PST did not naturally fall into being coaxial with the Nexstar. I had to move the Nexstar a bit which left the sun out of its FOV once it was centered in the PST. Might need to find a way to use an adjustment ring like I do with the Onyx ED80 to bring it into closer alignment with the Nexstar. One thing that made the viewing even better was using a towel and an eye patch. Covering my head with the towel and my right eye with the patch, I didn't have to strain my left eye against all the ambient light. Next time we take the PST to a daytime show, remember to bring a towel!

Having the PST on a tracking platform made getting it focused a lot easier. No more having to constantly chase the sun with a wobbly camera tripod! Once I had a precise focus, I played with the tuning ring on the PST. This ring makes small adjustments to the H-alpha filter to bring out more contrast across the face of the sun. When there are no sunspots around, the sun seems to be a very bland, featureless disk. By adjusting the tuning ring, I was able to bring out some rich detail in the H-alpha layer. Suddenly, the featureless disk became of dazzling maze or whorls, long, jagged, curving lines and even circle. Curiously, the lines I could see appeared to be tightest around a couple of large circular features, almost as if the circles were the centers of some intense magnetic field. Near the top of the solar disk, extending upwards was a single prominence, thick at the base and tapering as it climbed. It reminded me of the Eiffel Tower.

- Ken Munson

Schedule of Coming Events

31 May Saturday Night	**Out-of-Town Dark Sky Observing Session** Contact Greg Benecke to coordinate a location.
6 June Friday Night 7:30 PM	**Monthly General Meeting** Dr. Perry Hacking of El Camino College with perform a demonstration of the Planetarium Projector..
9 June Monday Night 7:30 PM	**Monthly Planning Meeting** See directions on Page 4.
19 June Thursday Night 7:00 PM	**Von Karman Auditorium at CalTech (Thursday) & Vosloh Forum at Pasadena City College (Friday)** **The Solar Wind & the Interstellar Medium** Dr. Edward J. Smith The solar corona accelerates into space to form the supersonic solar wind and push the interstellar medium out of the solar system to distances beyond 100 AU creating the Heliosphere. It also carries the Sun's dipole magnetic field into the Heliosphere filling it with magnetized plasma.
***28 June Saturday Evening ***Changed Date!!!	**In Town Dark Sky Observing Session at Ridgecrest Middle School–** 28915 NortbBay Rd. RPV, Weather Permitting**:** Please contact Greg Benecke to confirm that the gate will be opened! Take Hawthorne Blvd. south across Pacific Coast Hwy.; continue up the hill past Silver Spur and turn left at Highridge. Go one mile and turn left on Whitley Collins (3rd stop sign from Hawthorne Blvd.), up one block and turn left on Northbay Rd., the new parking lot is at the end on the left. Enter parking lot and turn left, the gate is at the east end (it should be open about 15 minutes before sunset) and a paved road leading into the playground where we have traditionally set up. If at all possible, drop your equipment off and park your car in the new parking lot (less than 200 feet away). If you are absolutely certain that your vehicle does not drip anything you can park with your equipment. Drive with care to avoid steel pillars supporting basketball nets. Note: If you a visitor, not bringing a scope, it is requested that you park in the small parking lot on Northbay Rd.
28 June Saturday Evening	**Out-of-Town Dark Sky Observing Session** Contact Greg Benecke to coordinate a location.

South Bay Astronomical Society

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General Meeting at El Camino College Planetarium:
Friday, June 6th, at 7:30 P.M.

Dr. Perry Hacking, El Camino College

Planetarium Projector Demonstration

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South Bay Astronomical Society
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