FIRST LIGHT

Journal of the South Bay Astronomical Society - June 2003
on line at www.geocities.com/sbas_elcamino

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

Guest Speaker: Mr. Steve Schrier (SBAS)

"Adaptive Optics"

SBAS made a strong showing at RTMC this year not only in numbers, but also in accomplishments. Two of our members won Merit Awards. Deana Chafe for her hot pink, 6 inch f/9 (her first scope) and David Lee not only for the excellent work on his 17.5 inch Dob, but also for the innovative method of loading and transporting it. Congratulations to both. They are products of Perry Hacking's telescope making class at El Camino College. I believe this is the 4th year that the class has won some kind of an award. So congratulations also to Perry for his dedication and his motivation toward excellence. To appreciate that the products coming out of his lab are not just the run of the mill scope you only had to look through the collection of scopes gathered at the El Camino site. Without a doubt these were some of the best images I had seen all evening, even through larger mirrors.

Members who made the trek to Big Bear for the event were Steve Lindsey & son Rick, Dan Trimble, Todd Ellenberger & son Sam, Joe & Miriam Fierstein, Shawn Belveal & family, Mark Braden, Mike Mayerchak, Nina & Bill

Whiddon, Bill Eisele, Greg Benecke, Steve Schrier, Jerry Gmoser, Deana Chafe & family, Perry Hacking, Dave Lee & Don Kwon. Although the daytime weather was wonderful, the evening sky was clear and moonless, but a bit unsteady. Nevertheless there was plenty to see and do. Dan Trimble and Steve Lindsey were busy with wide field photography using Dan's home made photo platform housing a Televue 85 with CCD camera + Steve's 500mm camera + guide scope. All in all it was a great experience and a lot of fine companionship and astronomy.

-Joe Fierstein

RTMC 2003

Fortunately, I ran into Joe Fierstein right away and he directed me to where he was camping with Dan Trimble, Steve Lindsey, his son Ricky, Todd Ellenberger and his son Sam. Joe's wife, Miriam, was staying in the women's dorm. They had set up for viewing at the campsite with a good view to the East and South but with trees blocking much of the North and West. A group of the El Camino Telescope Makers were set up on Telescope Alley. The best sites on Telescope Alley are taken soon after the gates open on Friday morning.

Friday night was spent observing from the campsite. The sky started out partly cloudy but improved through the night. The seeing was moderate. Joe had the club's newly upgraded Nexstar 8i out for the first serious test. Celestron had recently done the modifications at no cost to SBAS and we were eager to see how it performed. It was a completely different experience from the original Nexstar. We are glad to report that it now tracks like a champ! After setting Antares in the center of the field of view in a 19 mm eyepiece (X 100+) it was still in the field of view an hour later. Thanks Celestron!

Saturday started with the swap meet in the morning and vendors selling their wares all day long. Many of the major brands and retailers were represented. Good deals were to be had. Our own Doug Loop had quite a selection at the swap meet. I bought a heavy-duty third party wedge at a good discount to replace the stock one on my C8 Deluxe. We took an SBAS group photo in the afternoon, though not everyone remembered to be there. Talks were given all day on the theme of building observatories as well as a series aimed at beginners. An award program in the evening honoring people who have made significant contributions to amateur astronomy culminated in the awarding of door prizes. The Grand Prize that night was a Meade 14inch LX200 (WOW!), but alas, it was not won by an SBAS member. Sam and Ricky both won giant planispheres. Early after dark I wandered around the scopes in the vendor area, where there were also some huge truss tube Dobsonians, with long lines to go with them. The night was clearer than the night before, but the seeing was still only moderate. Back at the camp, I spent some time with the Virgo Cluster, took in the big Messier Globulars, and wandered trough the Summer Milky Way. The new wedge was much stiffer than the stock one, showing little shaking when focusing at high power and rapid damping. A major improvement!

Some vendors were gone but many were still selling their wares Sunday. More talks on building observatories and for beginners were presented. There was one very interesting talk on a new design for a meter class reflector using only spherical surfaces on the mirrors and corrector lenses. Sunday night's Grand Prize was a Celestron Nexstar 11 GPS, which was won by a 13 year old girl not from the club. For the third year in a row Miriam Fierstein was a winner with a pair of Solar Binoculars from Coronado Optics. The sky was not very good Sunday night with a high haze that only got worse as the night wore on. I was off by midnight to get a good night's sleep for the drive home the next day. All in all, it was an enjoyable three days.

- Greg Benecke

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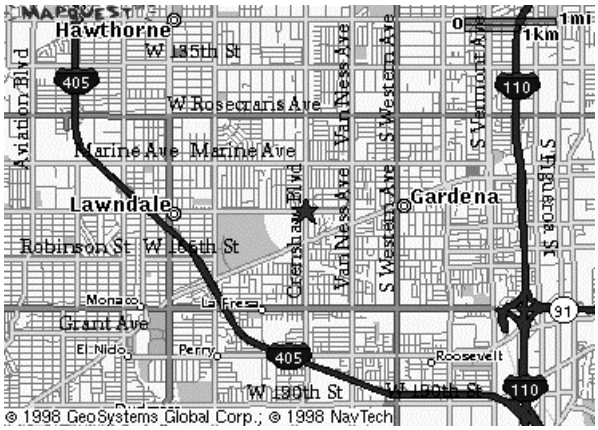
Monthly General Meetings



We normally meet on the first Friday of each month at 7:30 p.m. in the Planetarium at El Camino College. 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). Click on the map to get a display that can be zoomed out for a regional view. The zoom display appears in a separate browser window, which can be closed to return to this page.

The domed roof of the planetarium is visible from the street. 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. Park in northeast corner lot, temporarily, due to the construction project.

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 Meetings

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 by any member or visitor wishing to attend. All are welcome!

We will meet on Monday, June 9th at 7:30 PM at the home of Laura Lucas, 2005 Mathews Ave. #A, in Redondo Beach. Take Artesia Blvd., west from Hawthorne Blvd. and turn right on Aviation Way. Turn right at the stop sign onto Mathews Ave. and go down the hill. Park on the street just past Green and Laura's house is on the left side in the back past the gates.

SBAS Membership Benefits

"Welcome" to our newest SBAS Member: Nancy Miller.

Contact John Collins for magazine subscriptions at club rates: "Sky & Telescope" $29.95 and "Astronomy" $29.00! Make your check payable to SBAS and mail the payment and your subscription / renewal form directly to SBAS, c/o Microcosm, Inc. at 401 Coral Circle, El Segundo, CA 90245-4622.

Part of your SBAS membership dues goes toward membership in the Astronomical League. All paid members should be receiving the "Reflector", the league's newsletter, four times a year. As a member organization, we can participate in a number of award programs they offer. These are based on completing various observing challenges. Check out the Astronomical League website at **www.astroleague.org**

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!

Mt. Palomar Observatory Tours

Send an email to Greg Benecke if you are interested in "supervising" or attending another educational tour of the Mt. Palomar Observatory's 200-inch telescope. The tours are scheduled on the 3rd Saturday of every month. Please include suggested 1st, 2nd & 3rd choices for dates in your email, to be considered for submission to the Observatory in the application for the tour.

Viewing the Lunar Eclipse on May 15th 2003

After what had been a worrisome day with thick low clouds (precursors of our usual June Gloom, I suppose), the afternoon sky suddenly cleared and the sun and (mostly) blue sky came out. There was a lot of left over moisture in the atmosphere after a recent cold front passed through so the viewing wasn't great but it turned out to be pretty good for seeing the moon.

I took my N11 to a Columbia Park in Torrance to offer viewing to anyone who wanted a look. I should have brought a Spanish interpreter along as well. A largely Latino population frequents the park and those who came to look were very excited at what they saw. Through broken English and Spanish we all found some common ground in enjoying this spectacle. That's got to be one of, if not the, most exhilarating aspects of amateur astronomy, bringing the sky to people who've never really seen it before. One family was so excited; they went home to call friends and relatives and brought them back before the end of the show!

Here in LA, the moon rose nearly in full shadow. Low on the horizon, and partly hidden by trees on the edge of the park with steam rising from a nearby oil refinery, it was hard to find at first. In full shadow, it looked more like a crescent moon, glowing a dull red. The telescope revealed the darker full moon. As it rose above the trees and began to come out of the umbra, the view became even better. I thought the most magnificent aspect was the first moments when it began to leave the penumbra. A small strip of bright moon, a band of penumbral shadow, and the small strip of umbral shadow made a beautiful contrast. A magnificent sight!

- Ken Munson

Galaxy Mission Honors Columbia Crew with Telescope's First Light

NASA's Galaxy Evolution Explorer has gathered its first celestial images, a "first light" milestone dedicated to the crew of the Space Shuttle Columbia. The Galaxy Evolution Explorer, the first NASA mission launched, on April 28th, since the Columbia accident, made the observations using its onboard telescope. To honor the contributions of the Columbia astronauts to scientific exploration, the Galaxy Evolution Explorer observed an area of the sky in the constellation Hercules. That region was directly above Columbia when it made its last contact to NASA Mission Control on February 1st, over the skies of Texas. During the 16-day mission, the shuttle crew completed 82 science experiments.

"We're really pleased with the "first light" images captured by the telescope," said Dr. James Fanson, Galaxy Evolution Explorer project manager at NASA's Jet Propulsion Laboratory, Pasadena, Calif. The telescope has cameras tuned to two colors, the far and near ultraviolet. The two "first light" images were obtained on the mornings of May 21 and May 22, respectively. Each comprises only four minutes of observing time, yet over 400 stars and star-forming galaxies appear in the far ultraviolet image and over 1,500 in the near ultraviolet image. As more data is gathered, astronomers expect the number of galaxies visible in the Hercules field will grow to many thousands. The new images are available online at **http://photojournal.jpl.nasa.gov/mission/galex** & **http://www.gsfc.nasa.gov**

First-Ever Snapshot Released of Mother Earth from Mars

Have you ever wondered what you would see if you were on Mars looking at Earth through a small telescope? Now you can find out, thanks to a unique view of our world recently captured by NASA's Mars Global Surveyor spacecraft currently orbiting the red planet. This first-ever image of its kind not only shows Mother Earth as a tiny alien world in the vast darkness of space, but also includes a view of the giant planet Jupiter and some of its larger moons. The camera aboard Mars Global Surveyor photographed both planets in an alignment, as seen in the evening sky of Mars, at 6 a.m. Pacific Time (9 a.m. EDT) on May 8, 2003.

"From our Mars orbital-camera perspective, we've spent the last six-and-a-half years staring at Mars right in front of us," said Dr. Michael Malin, president and chief scientist of Malin Space Science Systems, of San Diego, who operates the camera aboard Mars Global Surveyor. "Taking this picture allowed us to look up from that work of exploring Mars and take in a more panoramic view. This image gives us a new perspective on that neighborhood, one in which we can see our own planet as one among many." The image is available on the Internet at: **http://www.msss.com/mars_images/moc/2003/05/22/**

The image of Earth actually shows our home as a planetary disc, in a "half-Earth" phase. The image has been specially processed to allow both Earth and the much darker Moon to be visible together. The bright area at the top of the image of Earth is cloud cover over central and eastern North America. Below that, a darker area includes Central America and the Gulf of Mexico. The bright feature near the center-right of the crescent Earth consists of clouds over northern South America.

The image shows the Earth-facing hemisphere of the Moon, since the Moon was on the far side of Earth as viewed from Mars. The slightly lighter tone of the lower portion of the image of the Moon results from the large and conspicuous ray system associated with the crater Tycho. The image also shows Jupiter and three of its four Galilean moons: Callisto, Ganymede, and Europa. At the time, Jupiter's giant red spot had rotated out of view, and Io was behind Jupiter, as seen from Mars. This image has been specially processed to show both Jupiter and its satellites, since Jupiter was much brighter than the three satellites.

Mars Global Surveyor, one of the most successful missions to Mars ever undertaken, has been orbiting the red planet since September 1997. The mission has examined the entire Martian surface and provided a wealth of information, including some stunning high-resolution imagery, about the planet's atmosphere and interior. Evaluation of landing sites for NASA's two Mars Exploration Rover missions and the British Beagle 2 lander mission has relied heavily on mineral mapping, detailed imagery and topographic measurements by Mars Global Surveyor. NASA's Mars Exploration Rovers and the European Space Agency's Mars Express mission, which carries the Beagle 2 mission, are due to launch this summer and arrive at Mars in late December 2003 and January 2004. More information about Mars Global Surveyor is available at http://mars.jpl.nasa.gov/mgs/

- NASA News Releases

Amateur Research Resources

I took several nonflash, digital photos of slides shown by John Hoot at his presentation "Amateur Research in Astronomy" at the 5/2/2003 SBAS meeting. I briefly looked at some of the sites John recommended and have included some comments.

http://adswww.harvard.edu/ads_abstracts.html Astrophysics Data System (ADS) Abstract Service hosted by Harvard-Smithsonian Center for Astrophysics. Astronomy and Astrophysics database (one of four databases) allows search of (886,405 records), including 89,069 abstracts from Planetary Sciences and Solar Physics journals - Leads to National Space Science Data Center at Goddard link at **http://nssdc.gsfc.nasa.gov/** which then leads to CD's in next image below.

http://iraf.noao.edu New page available for newer version from the Image Reduction and Analysis Facility (IRAF)- headline on the new version of this site announces IRAF V2.12.1 / X11IRAF V1.3.1 Patch and New Platform Releases. FREE download of data reduction software for Hubble. Use 35mm film and get a CD to use with this software. (I lost interest here since this program does not appear to run on my MS Windows computer.)

http://nssdc.gsfc.nasa.gov/cd-rom slide only shows part of what is available. John Hoot said CD's $6 each. Thumbnail for each CD gives a single, small sample of contents.

The JPL links are:
http://www.jpl.nasa.gov/ambassador/index.html The Solar System Ambassadors Program is a public outreach program run from JPL under NASA's outreach funding included in all programs. The website describes the program Biographies and presentation histories are included for the 295 volunteer Ambassadors, including John Hoot and Joe Fierstein.

http://tie.jpl.nasa.gov/tie/index.html TIE is Telescopes in Education- Gil Clark's Mt Wilson program. The TIE program currently utilizes a science-grade 24-inch reflecting telescope located at the Mount Wilson Observatory.

- Barry Titlebaum

Your Name Could Make a 'Deep Impact' on a Comet

People worldwide may celebrate July 4, 2005, as the day their names reach a comet. NASA is launching a campaign to send hundreds of thousands of names to comet Tempel 1. The names will be carried on board NASA's Deep Impact spacecraft, the first deep-space mission designed to really reach out and touch a comet. Mission scientists are confident an impact on a comet's nucleus will answer basic questions about the nature and composition of these celestial wanderers. "This is an opportunity to become part of an extraordinary space mission," said Dr. Don Yeomans, an astronomer at JPL and a member of Deep Impact's science team. "When the craft is launched in December 2004, yours and the names of your loved-ones can hitch along for the ride and be part of what may be the best space fireworks show in history."

Deep Impact's larger flyby spacecraft will carry a smaller impactor spacecraft to Tempel 1 for release into the comet's path for a planned collision. The flyby spacecraft will take pictures as the 370-kilogram (816 pound) copper-tipped impactor plunges into Tempel 1 at about 37,000 kilometers (22,990 miles) per hour. The impactor is expected to make a spectacular, football field-sized crater, seven to 15 stories deep, in the speeding comet. Carried aboard the impactor will be a standard mini-CD containing the names of comet, space and other enthusiasts from around the world. The collision between the impactor and Tempel 1 is not forceful enough to make an appreciable change in the comet's orbital path around the Sun. The comet poses no threat to Earth.

"This campaign will allow people from around the world to become directly involved with Deep Impact and get them thinking about the scientific reasons for the mission," said University of Maryland astronomy professor Dr. Michael A'Hearn, Deep Impact's principal investigator. "We particularly hope to capture the interest of young students, as they will become the explorers of the next generation." People may submit their names for this historic one-way mission by visiting NASA's Deep Impact Web site, now through February 2004, at
http://jpl.convio.net/site/R?i=7vAy07GUP-1O-3BCLCXxIg

- NASA News Release

Schedule of Coming Events

6 June **Friday** **7:30 P.M.**	**Monthly General Meeting:** Our speaker for the evening is Mr. Steve Schrier, of SBAS, on the topic of "Adaptive Optics".
9 June **Monday** **7:30 P.M.**	**Monthly Planning Meeting** Refer to page 3 for location.
12 (JPL) **13 (PCC)** **June** **7:00 P.M.**	**Von Karman Auditorium Lecture Series** – FREE "SIRTF: The Last of the Great Observatories" The developmental history of the Space Infrared Telescope Facility, launched in April, that will study the early universe and look for planet forming discs around other stars. For more information call: (818) 354-0112
14 June **Saturday**	**Red Rock Canyon State Park Plan – Public Meeting** The fourth meeting for the public to participate in discussions with State Park Planners on the General Plan Amendment for the Red Rock Canyon State Park – Last Chance Canyon Addition. Contact Greg Benecke for meeting location and other details.
28 June **Saturday** **Evening**	**In-Town Dark Sky Observing at Ridgecrest School** – Weather Permitting: If the weather conditions are marginal, contact Greg Benecke to confirm that he will be opening the gate! 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, 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…
11 July **Friday** **7:30 P.M.**	**Monthly General Meeting:** Dr. Gary Peterson returns, as our speaker for the evening, with a presentation on Venus.
14 July **Monday** **7:30 P.M.**	**Monthly Planning Meeting** Location will be announced in the July newsletter.
17 (JPL) **18 (PCC)** **July** **7:00 P.M.**	**Von Karman Auditorium Lecture Series** – FREE "Searching & Crawling: A Few JPL Research Robots" Robert Hogg, robotics engineer, JPL Autonomy & Control Section: All about "Urbie", a bathmat-sized robot designed to investigate potential human hazards, help search-and-rescue efforts and survey enemy territory. For more information call: (818) 354-0112
19 July **Saturday** **Evening**	**In-Town Dark Sky Observing at Ridgecrest School** – Weather Permitting. Refer to June 28th entry for directions to the site & instructions on weather conditions.
26 July **Saturday** **Evening**	**Out-of-Town Dark Sky Observing** – New Moon July 29 Contact Greg Benecke to arrange site location.

South Bay Astronomical Society

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

Guest Speaker: Mr. Steve Schrier (SBAS)

"Adaptive Optics"

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South Bay Astronomical Society
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