

FIRST LIGHT

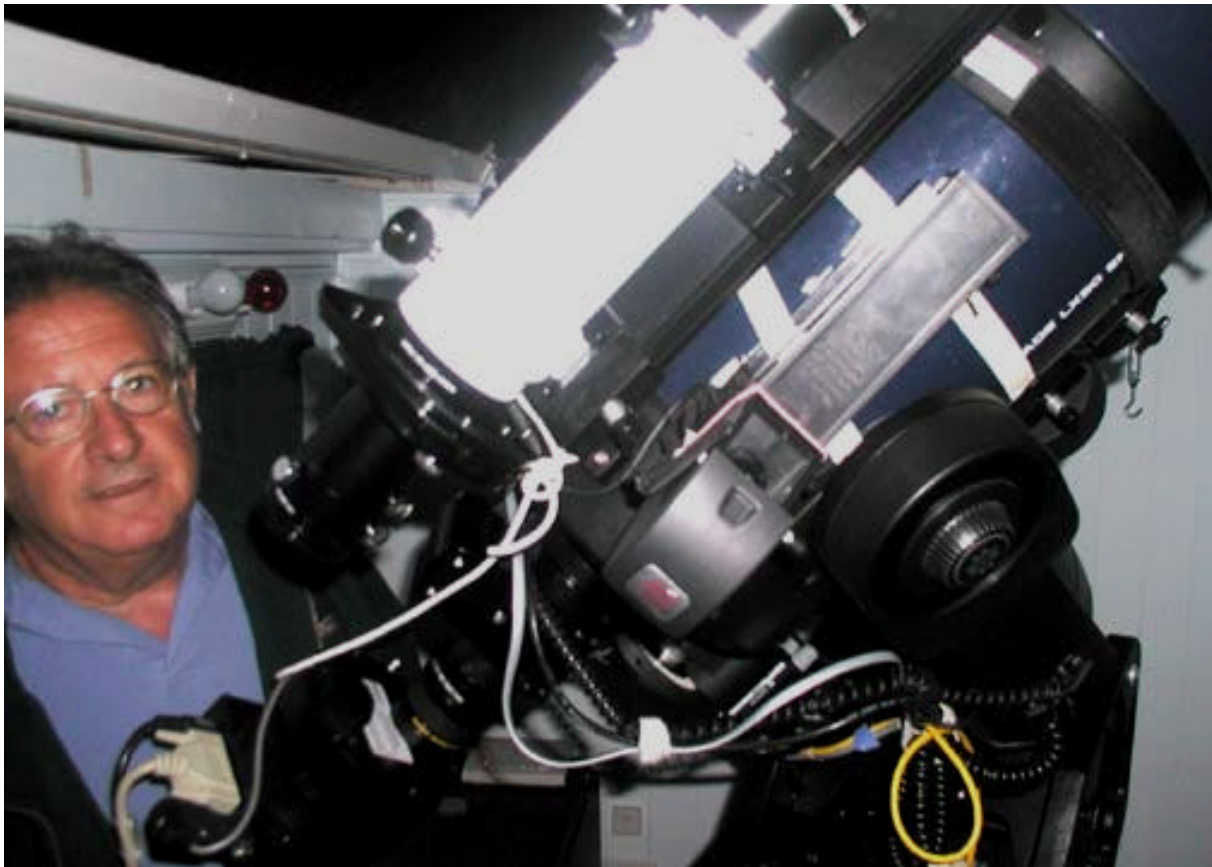


Journal of the South Bay Astronomical Society - November 2002
on line at www.geocities.com/sbas_elcamino

Monthly General Meeting: Friday, November 1st, 7:30 PM

Guest Speaker: Mr. Chris Conselice (Cal Tech)

"The Birth of Galaxies"



The Lemmi Observatory

As you know the October Planning Meeting of SBAS was held at the home of Carlos and Ronnie Lemmi in RPV. Carlos invited us not only to host the meeting, but to also give us a tour of his recently completed backyard observatory. Since I would be on vacation during that time, and since he only lives a few blocks from my house, I arranged for a preview of their operation.

Although the observatory building is small, this is a first class setup. An 8 inch Meade LX90 is mounted on an adjustable height pedestal anchored to an isolated pier sunk into the ground. The finder scope is a 3 inch Borg equipped with an SBIG 7 auto guider. The main camera is also an SBIG with the new E (blue) enhanced chip and uses dual flatteners to achieve an f3.1 focal ratio. Every thing is computer controlled from a comfortable, attached room or via a wireless communications link. While he still has some kinks to work out of the system it is an inspiration for what can be done if you have the determination.

Now if we could only get rid of that pesky marine layer it would be ideal!

- **Joe Fierstein**

“Nightfall” Star Party 2002

Dan Trimble and I had a fantastic time at "Nightfall" in Borrego Springs last new moon. I was there 2 nights with my family staying in the hotel and Dan was there 3 nights (arriving a day early). It's a great event that the Riverside Astronomical Society puts on every year at the Palm Canyon Resort, a nice hotel/RV resort, emphasizing observing vs. the speaker/vendor style events such as RTMC. The weather was perfect at 85-90 degrees during the day and probably in the mid to low 50s at night with crystal clear skies and fair to good seeing. The SBAS club doesn't seem to participate much at this event, compared to what we often do at other remote sights. It is so fantastic for weather, accomodations and lots of great folks with a wide range of scopes and set ups to see as well.

I did astrophotography with my usual set up though my 10" SCT and had some of my best results to date. See these links:

<http://home.earthlink.net/~stevelindsey/M27.html>

<http://home.earthlink.net/~stevelindsey/M33.html>

<http://home.earthlink.net/~stevelindsey/M45.html>

I also tried piggybacking Dan's Televue 85 but had some flexure problems and the stars trailed somewhat in the pictures. Dan tried out his new ST8E CCD camera with AO7 (adaptive optics) on his C14. "Man ... what a setup"!! He made a few good shots as well.

I highly recommend this event in the future. Reservations are taken in the spring each year directly through the resort and it usually sells out around RTMC time or about June. Resort phone number: (619) 767-5341.

- **Steve Lindsey**

Bond Measure E – Benefits El Camino College

Bond Measure E will be on the ballots in the South Bay cities served by the College, including Inglewood, Lennox, Torrance, Hawthorne, Manhattan Beach, Hermosa Beach, and El Segundo. Among other things if the measure passes, the Astronomy Dept. will get a new Zeiss Planetarium projector to replace the 33-year old Spitz. So, of course, the Astronomy Dept. is very much in favor of this measure!

- **Dave Pierce**

“Year In Space” Desk Calendar 2003 Available Now

These great little desk calendars will be available again for 2002 at good discount prices. For those that haven't seen them, they are spiral bound with stiff covers, one week per page for notes opposite a full page photo and it is packed with space related information. The single copy price is \$10.95, \$9.95 ea. for an order of up to nine copies, but SBAS members usually order about 15 copies at \$8.95 ea.! I will be taking orders during the Nov. 1st general meeting. Please make checks payable to Ron Rennie for \$8.95. If any price adjustments are necessary, I will make them at the time of delivery which will be at the December general meeting.

- **Ron Rennie**

Your SBAS Committee

President	Greg Benecke	217-1512	BeneckeRUs@aol.com
Treasurer			
Astronomical League Newsletter Reproduction	John Collins	-----	Jcollins@smad.com
Program Chairman	Joe Fierstein	377-9834	Yussel@aol.com
SBAS Website Webmaster	Alex Athas	-----	sbas_elcamino@yahoo.com
First Light Editor	Laura Lucas	798-7281	Ipsaloquator@aol.com
Observing Chairman	Bill Whiddon	548-8179	William.whiddon@trw.com
Astronomical League	John Collins	320-0555	Jcollins@smad.com
Executive Committee	Mark Braden	540-2810	Bradenm@fnic.com
	Ron Rennie	326-5589	Rkgrennie@yahoo.com
	Mike Mayerchak	831-9188	Mmayerchak@aol.com

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. See page 4 for temporary parking instructions.

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 who are 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, November 4th at 7:30 PM at the offices of Microcosm, 401 Coral Circle in El Segundo. Taking the 405 Fwy. north from Torrance, exit at El Segundo Blvd. and turn left. Take El Segundo Blvd. to Douglas and turn left. Take Douglas to Coral Circle and turn right. Follow Coral Circle around the bend to the left and then straight ahead. Microcosm occupies the crook of the next curve to the left and the company name is on the upper part of the building.

SBAS Membership Benefits

“Welcome” to our newest members – Genevieve Dezso and Paul Thompson!

Contact John Collins for subscriptions, at club rates, to “Sky & Telescope” at \$29.95 and \$29.00 for “Astronomy” magazines! Make your check payable to SBAS and mail 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!

“Friends of the Nexstar” is the group of members who have donated equipment or accessories for the SBAS telescope, who have been granted the privilege of a waiver of the deposit & fee for borrowing the Nexstar8.

Annual Membership Renewal

Renew your SBAS membership – Keep this amazing newsletter coming plus meetings and observing trips! Now would be a great time to renew your membership in the group that brings you great monthly programs, the company of fellow observers, and many chances throughout the year to share the excitement of the night sky with students and new friends.

If you just joined us this year, then you can renew your membership on a pro-rated basis to adjust your membership term to the standard calendar-year schedule. What a deal: you renew for less than full price. The renewal cost, as a function of when your membership expires, is as follows:

Membership Expiration	Renewal Fee Due Now	
	Individual/Family	Student
Dec. '03 or later	\$ 0.00	\$ 0.00
Nov. '03	\$ 2.50	\$ 2.08
Oct. '03	\$ 5.00	\$ 4.17
Sept. '03	\$ 7.50	\$ 6.25
Aug. '03	\$10.00	\$ 8.33
July. '03	\$12.50	\$10.42
June '03	\$15.00	\$12.50
May '03	\$17.50	\$14.58
Apr. '03	\$20.00	\$16.67
Mar. '03	\$22.50	\$18.75
Feb. '03	\$25.00	\$20.83
Jan. '03	\$27.50	\$22.92
Dec. '02 or before	\$30.00	\$25.00

To renew, check your membership expiration date in the upper right corner of the mailing label on the back page of this newsletter. This is what our records show for your membership expiration date. Please renew, according to the schedule above, by check to: South Bay Astronomical Society, c/o Microcosm, Inc., 401 Coral Circle, El Segundo, CA 90245-4622. (Payments will also be accepted at the general meeting on Nov. 1st!)

Viewing Report from Inyokern Road

Greg and I went out to the Inyokern Road site on Saturday, October 5th. The viewing was pretty good, with virtually nothing above a light breeze to disturb the telescopes. Unfortunately, the upper atmosphere was not very stable which resulted in less than optimal viewing of the planets. Another unfortunate thing was that the weather over Los Angeles was also very clear which resulted in a lot of light scatter in the water vapor in the upper atmosphere. That made it difficult to see some of the dimmer objects of the night.

Early in the evening, I located two asteroids, Ceres and Melpomene, and did a sketch of the star field. Five hours later, I returned to them and redrew the star field and verified that, yes indeed, there had been a significant change in position of one of the points of light in the field. My goal of the night was to finish as many of the objects on the Nexstar 50 Deep Sky List to be able to qualify for the certificate. This is from an online club of Nexstar owners. This night I was able to bring my total up to 47 of the 50 objects.

Greg spent the evening working on finding some of the less known deep sky objects. He had an excellent reference book that supplied the location and some background information on each object. Under the less than ideal atmospheric conditions, we could certainly see how his 8-inch scope was better at bringing out these faint fuzzy objects. Among the faint objects seen that night: NGC 891, an edge-on galaxy in Andromeda, very hard to see due to the dust lanes along the edge, and the Network Nebula, a supernova remnant in Cygnus. Saturn came up around midnight with Jupiter following a couple of hours later. Jupiter's GRS was due to transit around 3:00 AM but the atmosphere was so bad it was barely possible to make out the equatorial cloud bands.

- ***Ken Munson***

Seeking the Edge of the Solar System

In September and August, respectively, 2002, the Voyager 1 and 2 spacecraft observed their 25th anniversaries in space, continuing to perform long after their original mission to visit the Jupiter and Saturn systems. After Voyager 1's encounter with the two gas giants, it was aimed upward out of the plane of the ecliptic. Voyager 2, after its visit at Jupiter and Saturn, was given two more planetary destinations, Uranus and Neptune. It completed its "grand tour" of the outer planets in 1989. It was then aimed downward out of the ecliptic plane.

Now, at about 85 AU, Voyager 1 is the most distant human-made object. Round-trip light time is 24 hours. Voyager 2 is at about 68 AU. Their mission now is to study the heliosphere, the vast bubble of space within the Sun's influence, and the heliopause, the boundary of the solar system with interstellar space. At the heliopause, the outward pressure exerted by the solar wind balances the inward pressure of the interstellar wind. The region where solar wind particles begin piling up against the heliopause is the termination shock, where the solar wind should drop from about 1,500,000 kilometers (nearly 1,000,000 miles) per hour to 400,000 kilometers (250,000 miles) per hour. Voyager 1 is already detecting a slowing of the solar wind from the pressure of inbound interstellar particles leaking through the heliopause.

No one knows exactly how much farther Voyager 1 must travel to reach the termination shock or the heliopause. Dr. Ed Stone, Voyager Project Scientist since mission inception, estimates that the spacecraft could reach the termination shock within three years. Once there, Dr. Stone predicts it will still have about 5 billion to 8 billion kilometers (3 billion to 5 billion miles) and 10 to 15 years to go before actually crossing the heliopause into interstellar space. Because the heliosphere expands and contracts with the level of solar activity and the inward pressure of the interstellar wind is uncertain, it is very difficult for scientists to estimate the actual extent of the heliosphere.

Read more about the Voyager mission to find the heliopause at <http://voyager.jpl.nasa.gov>
For children, go to <http://spaceplace.nasa.gov> or the Spanish version at <http://spaceplace.nasa.gov/espanol> to read about the Voyagers' grand tour of the outer planets and find out the secret code they use to send pictures back from space.

Star Speeds Around Milky Way's Black Hole

After tracking its motion for 10 years, astronomers have caught a star careening around the super massive black hole at the Milky Way's center. Their observations, reported in yesterday's issue of Nature, provide definitive proof that a roughly 2.6-million-solar-mass black hole lurks at the core of our galaxy. "It's an incredible breakthrough," says team leader Reinhard Genzel (Max Planck Institute for Extraterrestrial Physics, Garching, Germany). Astronomers have long thought the Milky Way harbors such a black hole in its center. But undisputable evidence has been scarce. The beauty of the new result, says Genzel, is that the existence of the black hole is proven beyond doubt by observations of one single star. For the complete news article, http://SkyandTelescope.com/news/current/article_766_1.asp

Hunt for Planets with Dr. Geoff Marcy at W.M. Keck Observatory

The Astronomical Society of the Pacific (ASP) announces a unique fundraising auction--an observing night at the W.M. Keck Observatory in Hawaii with internationally renowned astronomer Dr. Geoff Marcy. The ASP has pledged to donate 5% of the auction proceeds to the amateur astronomy club of the winner's choice to demonstrate support for the amateur astronomy community and their important outreach and educational efforts.

The highlight of the five day/four night trip for two is a once-in-a-lifetime opportunity to spend a night in the Keck I control room with Dr. Marcy and his team during one of his scheduled observing runs. Dr. Marcy will host dinner that evening, and the winner will be able to sleep overnight at the VSQ (Visiting Scientists' Quarters), which is open only to astronomers. The auction package includes round trip airfare for two, resort accommodations, car rental, meals, and a behind-the-scenes VIP tour of the W.M. Keck Observatory conducted by a Keck staff member.

Potential bidders may visit the ASP Web site to get full information and to be notified exactly when the auction will begin. The auction will be held in January 2003 on a popular auction Web site. The winner can schedule the trip to coincide with any of Dr. Marcy's scheduled observing nights in 2003. The Keck I and II twin 10-meter telescopes are the world's largest optical telescopes, located at the summit of Mauna Kea on the Big Island of Hawaii, at an altitude of 13,796 feet. The Observatory headquarters, Visiting Scientists' Quarters, and control rooms are located in Waimea, at about 2,500 feet.

Dr. Marcy, of the University of California, Berkeley, and his research team are the world's premier planet hunters, having uncovered more than seventy of the approximately 100 extrasolar planets found to date. The team monitors the spectra of over 1,200 stars and recently found a planetary system that bears some resemblance to our own, with a planet in an orbit similar to Jupiter's orbiting a Sun-like star. "I'm looking forward to observing with the auction winner as we continue our search for extra-solar planets," said Dr. Marcy. "Every time you have the privilege to point one of the giant Keck telescopes skyward it feels like you're embarking on an epic voyage of discovery. You feel a kinship with Galileo, Tycho Brahe, Kepler, Newton, Hubble and so many others driven to explore the boundaries of the universe. On a practical level, the auction is a wonderful way to contribute to the ASP's programs that build science literacy, inspire kids, and nurture the next generation of scientists and astronomers."

<http://www.astrosociety.org>

- Astronomical Society of the Pacific

JPL / NASA's Deep Impact Mission Web Sites

Here are websites for the Deep Impact Mission <http://deepimpact.jpl.nasa.gov> which will excavate a crater seven stories high on Comet Temple 1 to expose pristine material for observation on July 4, 2005 at 6:00 AM. The comet will be less than 1 AU from Earth and it's magnitude is expected to change from 10th mag. to 5th mag. at impact. This mission includes a Small Telescope Science Program (STSP)* <http://deepimpact.umd.edu/stsp> and involvement of Amateur Observers* <http://deepimpact.umd.edu/amateurs> who should contact: Elizabeth Warner, University of Maryland at warnerem@astro.umd.edu.

Schedule of Coming Events

<p>26 October Saturday Evening</p>	<p>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!</p> <p>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 <u>not</u> drip anything you can park with your equipment. Drive with care to avoid steel pillars supporting basketball nets.</p>
<p>1 November Friday 7:30 P.M.</p>	<p>Monthly General Meeting: Mr. Chris Conselice, a post doc student at Cal Tech, will be our speaker for the evening. His topic is “The Birth of Galaxies”.</p>
<p>4 November Monday 7:30 P.M.</p>	<p>Monthly Planning Meeting See page 3 for location and directions.</p>
<p>8 – 10 November Friday - Sunday</p>	<p>ROC Group Outing The group that does the amateur rocket launching at Lucerne Valley is having a big meet this weekend. For more info. http://www.rocstock.org</p>
<p>18 November Monday</p>	<p>Leonids Meteor Shower A dark-sky session is not scheduled, even though it is expected to be better than last year, hopefully despite the full moon!</p>
<p>21 (JPL) 22 (PCC) November Thursday / Friday 7:00 P.M.</p>	<p>Theodore von Karman Lecture Series – Admission is Free! “Space & Earth Exploration – 2020” lecture is presented at the JPL von Karman Auditorium (JPL) and the Pasadena City College Forum (PCC). For more information, call JPL at (818) 354-0112.</p>
<p>30 November Saturday Evening</p>	<p>In-Town Dark Sky Observing at Ridgecrest School – Weather permitting. Refer to October 26th entry for directions to this site and instructions on weather conditions.</p>
<p>6 December Friday 7:30 P.M.</p>	<p>Monthly General Meeting: Speaker for the evening will be scheduled at a later date.</p>
<p>9 December Monday 7:30 P.M.</p>	<p>Monthly Planning Meeting Location to be scheduled.</p>
<p>12 (JPL) 13 (PCC) December Thursday / Friday 7:00 P.M.</p>	<p>Theodore von Karman Lecture Series – Admission is Free! “Predecessors on Mars” is the lecture is presented at the JPL von Karman Auditorium (JPL) and the Pasadena City College Forum (PCC). For more information, call JPL at (818) 354-0112.</p>
<p>28 December Saturday Evening</p>	<p>In-Town Dark Sky Observing at Ridgecrest School – Weather Permitting. Refer to October 26th entry for directions to this site and instructions on weather conditions.</p>

South Bay Astronomical Society

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*General Meeting at El Camino College Planetarium:
Friday, November 1st at 7:30 P.M.*

Guest Speaker: Mr. Chris Conselice (Cal Tech)

“The Birth of Galaxies”

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South Bay Astronomical Society
c/o Microcosm, Inc.
401 Coral Circle
El Segundo, CA 90245-4622