

FIRST LIGHT



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

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

Guest Speaker: Mr. Tony Cook (Griffith Park Observatory)

"How to Choose a First Scope"



Observing with the Nexstar 8 from Yucca Valley

The NexStar 8 and I were invited to a Space Camp for home-schooled students at a home on the outskirts of Yucca Valley. We were joined by nine families and 17 students on November 4-6. The parents prepared lectures on the history of space exploration, the US lunar program, the Challenger disaster and the mythology of the zodiac. There

were many hands-on activities including measuring solar heating, observing sunspots and sketching them on observation reports, sun prints, the challenges to eating and drinking in micro gravity, scaled down solar system walk that stretched more than half a mile and making sundials. Creative activities included students discovering new constellations and writing an imaginative article about their day on another planet.

Monday night was very clear with some light pollution from Yucca Valley and sky glow from Los Angeles. A spotlight from a distant neighbor's yard was a little bothersome. Tuesday had low clouds in the south and west. This was the first time I had borrowed the NexStar 8 and found that it was easy to use!

We observed 17 naked eye and deep sky objects including M57, M27, M2, NGC 7009, M15, M31 and one of its dwarf galaxies, Eta Cassiopeia, NGC 869 and 884, M34, NGC 1300, M1, M45, and M42. I wasn't sure if I really saw NGC 1300 a barred galaxy. I really wanted to believe I saw the faintest of faint gray fuzziness. We spotted Saturn and Jupiter rising between the bushes on the horizon.

The students reported seeing a few fantastic meteors while I was at the scope. From their accounts they stretched 30-40 degrees across the sky and lasted 2-3 seconds. Being under dark skies is reward enough, but hearing the oohs and aahs from the kids really made the experience special. Now I'm back to the boring light polluted skies of southern California. I miss my star friends, the ones with their feet on the ground and those that twinkle in the heavens.

- Estelle Rapp



Red Rock Canyon Status Report

On Saturday, November 16, Greg Benecke and I attended a meeting in Lancaster about the use of the land north of Red Rock Canyon State Park which is being annexed by the park, including the Inyokern Rd. site which we frequently use for dark sky observing.

We came prepared to make the case for dark skies, but as it turned out that was not necessary. In their presentation about the current use of the land, astronomy was one of the featured uses. They even had some slides of a recent star party and mentioned that Sky & Telescope Magazine called Red Rock one of the 10 best observing sites in So. CA.

They are only in the planning stage, which will take about a year, and during this time there will be at least two more sessions open to the public. Fortunately, the Parks Dept. rates parks on a scale from "Preservation" to "Recreation" and this area is near the Preservation end. So Inyokern Rd. will remain dark for at least another year, and in the meantime, we will continue to stay informed on these proceedings.

- Joe Fierstein

Your SBAS Committee

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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 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, December 9th at 7:30 PM at the home of Greg Benecke. From Crenshaw Blvd., head West on 182nd St. Shortly after going under the 405 overpass you will see a Fire Station on the right. Turn right into the cul-de-sac just after the Fire Station. From Prairie Ave., head East on 182nd St. Go one block past the second traffic light (Yukon Ave.) and make a left into the cul-de-sac just before the Fire Station. You are making the correct turn if you see a sign saying "Park Place" on the white fence on the Northwest corner next to the Fire Station. Greg's house is the first one on the left side of the cul-de-sac 18161 Patronella Ave., Torrance.

SBAS Membership Benefits

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 Schedule

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. '02 or later	\$ 0.00	\$ 0.00
Nov. '02	\$ 2.50	\$ 2.08
Oct. '02	\$ 5.00	\$ 4.17
Sept. '02	\$ 7.50	\$ 6.25
Aug. '02	\$10.00	\$ 8.33
July. '02	\$12.50	\$10.42
June '02	\$15.00	\$12.50
May '02	\$17.50	\$14.58
Apr. '02	\$20.00	\$16.67
Mar. '02	\$22.50	\$18.75
Feb. '02	\$25.00	\$20.83
Jan. '02	\$27.50	\$22.92
Dec. '01 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 Dec. 6th!)

NASA PREPARES FOR 'LAST CHANCE' METEOR SHOWER

The early morning hours of Nov. 19 may have been your last chance to see the spectacular Leonid meteor shower in its full glory, according to astronomers. "Even with the full Moon, this year's Leonids may turn out to be better than any other for the next hundred years," said Dr. Don Yeomans, an astronomer at NASA's Jet Propulsion Laboratory, Pasadena, California. NASA is taking advantage of the event for several research efforts around the world.

The Leonids are grains of dust from comet Tempel-Tuttle colliding into Earth's atmosphere. Most Leonid particles are tiny and will vaporize very high in the atmosphere due to their extreme speed (about 71 kilometers or 44 miles per second), so they present no threat to people on the ground or even in airplanes. The dust that Tempel-Tuttle shed in 1866 makes up the stream predicted to give Americans a good show this year. Last year, people in Asia saw the plentiful collisions within that stream. A dust stream from 1767 provided last year's peak hour of viewing in North America and will provide this year's peak hour of viewing in Europe. After 2002, Earth won't hit either of those streams again for decades to come, and is not predicted to encounter a dense Leonid stream until 2098 or 2131.

Researchers think meteors might have showered the Earth with the molecules necessary for life's origin. A two-aircraft campaign, led by astronomer Dr. Peter Jenniskens of the SETI Institute and NASA's Ames Research Center, Moffett Field, Calif., will investigate this possibility. "We are looking for clues about the diversity of comets and their impact on the chemistry of life's origin on Earth," Jenniskens said. "We are eager to get another chance to find clues to two puzzling questions: What material from space rains down on Earth, and what happens to the (meteor's) organic matter when it interacts with the atmosphere?" said Dr. Michael Meyer, senior scientist for astrobiology at NASA Headquarters, Washington, D.C. On Nov. 15, a team of 42 astrobiologists from seven countries will depart from southern California's Edwards Air Force Base on a mission to Spain to observe this year's two Leonid storm peaks. The DC-8 Airborne Laboratory, operated by NASA's Dryden Flight Research Center, Edwards, Calif., will carry high-speed cameras; a radio receiver to listen to upper atmosphere molecules; and a team of meteor observers, who will keep track of the meteor activity for satellite operators concerned about impact hazards.

"This final deployment of the Leonid Multi-instrument Airborne Campaign program promises an important and unique database for the development of instruments targeted at in situ sampling of cometary materials and for the future definition of comet missions," said Dr. John Hillman, lead scientist for planetary astronomy at NASA Headquarters. "It is hoped that these scientific data will provide new insights for the comparative studies of comets." Although the meteors are harmless to people, there is a slight chance that a satellite could be damaged if it was hit by a Leonid meteoroid. The meteoroids are too small to simply blow up a satellite. However, the Leonids are moving so fast they vaporize on impact, forming a cloud of electrified gas called plasma. Since plasma can carry an electric current, there is a risk that a Leonid-generated plasma cloud could cause a short circuit in a satellite, damaging sensitive electronic components.

Minimizing the threat meteoroids pose to satellites is the second major area of NASA's Leonid research. From five key points on the globe and from the International Space Station, NASA researchers will use special cameras to scan the skies and report activity around the clock during the Leonid shower. Led by Dr. Rob Suggs of the engineering directorate at NASA's Marshall Space Flight Center in Huntsville, Ala., the research is part of a long-term goal to protect spacecraft from potentially damaging meteoroids.

Using "night-vision" image-intensifier video systems and sky-watchers outfitted with Palm computer software developed to record visual counts, NASA engineers and astronomers will record their observations for later analysis. Another tool at Marshall's disposal is "forward-scatter radar" -- an early warning system built by Dr. Suggs, Dr. Jeff Anderson, also of Marshall's engineering directorate, and Dr. Bill Cooke, an astronomer at Marshall. "Our system is pretty simple," said Dr. Suggs. "We use an antenna and a computer-controlled shortwave receiver to listen for 67 megahertz signals from distant TV stations." The transmitters are over the horizon and normally out of range. When a meteor streaks overhead, the system records a brief ping -- the echo of a TV signal bouncing off the meteor's trail. Like the image-intensified cameras, this system is capable of detecting meteors too dim to see with the unaided eye.

The research data from the Leonids shower will be analyzed to help NASA engineers refine their forecasts for spacecraft; by better determining where, when and how the meteors will strike, NASA can improve protective measures to prevent or minimize damage to spacecraft.

For more information - <http://jpl.convio.net>

Leonids Spectacular?

It was a small but enthusiastic group, comprising Joe Fierstein, Greg Benecke, Bill Eisele and myself, who met at Gorman to view the Leonids meteor shower. All the reports by the "experts" promised a spectacular show around 2:30 am on Tuesday, November 12th., even though the moon would be full that night. We found a nice open spot in the Off Road Vehicle area and donned our windproof clothing and set up our cameras. We were poised and waiting to view the meteor shower that "would not be equaled for another century, with 2,000 to 6,000 meteors per hour", to quote these "experts". There were a few short bursts of meteors, but nothing spectacular. Two-thirty came and went, and still not much to report but we stuck it out. With the full moon we were not able to do much observing at all. Jupiter and the Orion nebula were the most interesting things to look at. By a little after four o'clock we were still well short of our first hundred meteors and decided to call it a night and beat the traffic through the Los Angeles area. This show was really disappointing after seeing last years' shower.

- Ron Rennie

John Dobson in Los Angeles Jan. - Feb. 2003!

John Dobson will be in Los Angeles and is available to speak to local astronomy clubs. SBAS has tentatively scheduled John to speak for us on Feb. 7th, the details to be confirmed at a later date. He will be here all of January & February and his schedule will fill up quickly. A telescope making class is also in the process of being set up while John is here. This will most likely be the last year that John teaches a telescope making class, so if any of our members are interested in building a telescope with John, now is the time to make arrangements with the Los Angeles Sidewalk Astronomers. I know that most serious amateurs don't need a class if they wish to build a telescope, but few people have built as many as John has and he definitely has a "unique" style and taking class with him is an interesting and learning experience. Our website is: www.sidewalkastronomers.com

- Donna Smith, Sidewalk Astronomers

Carlos' Observatory No. G71

We enjoyed the visit of the SBAS board members of October 14 as well as Joe's visit. This observatory is 12 x 10 feet with a roll-off roof on the telescope section and an imaging area. The telescope is a Meade LX-90, 8", f/10. It is mounted on a permanent pier with a 24x24 by 3 feet deep cement base. The pier is a telescopic Pier-Tech which can be raised 24 inches and adjusted to any height in between without losing alignment.

On the telescope and finders I have dew heaters and a dew shield for the LX90. I made a counter for the Meade focuser and have an additional fine focus using an Optec TCF temperature compensated focuser which can be controlled by my laptop. In addition I use a focal reducer (Meade f/3.3) which when used with the CCD camera and color wheel produces an actual f/4.375. I also have a Hutech light pollution filter that greatly helps with the high light pollution in this area. In addition to the finder that comes with the telescope I have a Telrad with pulser and dew shield that I find great in the initial pointing and set up. The guiding is done with a Borg 76ED telescope piggy back on the LX90. I use an SBIG STV for guiding. I recently acquired a Coronado SolarMax which I use with the Borg 76ED to also view solar flares, spots, etc. I attach the STV to the solar setup to get images. For imaging I have an SBIG ST-7E CCD camera and a color wheel with clear, red, green, blue and hydrogen alpha filters. A VAIO laptop controls the telescope (through TheSky), the focuser and CCD camera (CCDSOFT, MaximDX, or Canopus).

After I submitted the initial observations and astronomical measurement of an asteroid in October 2002, I was assigned an Observatory Code (No. G71) by the International Astronomical Union's Minor Planet Center. This is done by that organization after the first submission of observing data for evaluation of accuracy. Some of my preliminary images are on my web site: <http://members.aol.com/wb6mcw/index.htm>

- Carlos Lemmi

Schedule of Coming Events

<p>30 November 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>6 December Friday 7:30 P.M.</p>	<p>Monthly General Meeting: Mr. Tony Cook of the Griffith Park Observatory will speak on “How to Choose a First Scope”.</p>
<p>9 December Monday 7:30 P.M.</p>	<p>Monthly Planning Meeting See page 3 for location and directions.</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” 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 November 30th entry for directions to this site and instructions on weather conditions.</p>
<p>4 January Saturday Evening</p>	<p>Out-of-Town Dark Sky Observing Trip – New Moon Jan. 2nd Contact Greg Benecke to confirm scheduled date and site location.</p>
<p>10 January Friday 7:30 P.M.</p>	<p>Monthly General Meeting: UCLA Instructor, Mr. Chris Ihde, is our guest speaker on the “Cassini Mission to Saturn”.</p>
<p>13 January Monday 7:30 P.M.</p>	<p>Monthly Planning Meeting Location to be scheduled.</p>
<p>25 January Saturday Evening</p>	<p>In-Town Dark Sky Observing at Ridgecrest School – Weather Permitting. Refer to November 30th entry for directions to this site and instructions on weather conditions.</p>

Best Wishes for a Happy New Year 2003!

South Bay Astronomical Society

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

Guest Speaker: Mr. Tony Cook (Griffith Park Observatory)

“How to Choose a First Scope”

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

**** Annual Membership Renewal Schedule Included ****