FIRST LIGHT

Journal of the South Bay Astronomical Society - June 2004
on line at www.geocities.com/sbas_elcamino

Monthly General Meeting: Friday, June 4th, 7:30 PM

Guest Speaker : John Hoot (JPL Solar System Ambassador)

"3D Tour of the Planets"

May – A Busy Month for SBAS

It started on Saturday, **May 8th**, with a star party at the Lomita Math & Science Magnet School. This was our second visit to the school where we were well received. Several "tracks" of students and parents combined to provide a very large turnout. SBAS responded in kind with a good turnout of scopes. For details see the Lomita write up.

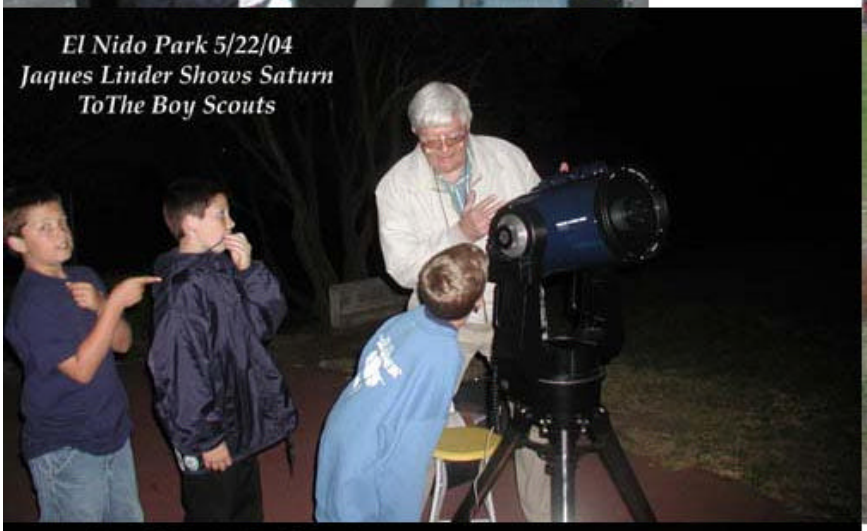
On Sunday morning **May 9th**, we made our annual visit to the Palos Verdes Farmers' Market for a "Sun Party". Nora De Muth, Bill Eisele, Ron Rennie and Joe Fierstein set up scopes with sun filters for observing sunspots. There was only one small spot visible, but it was enough of an attraction to spark lively discussions with our many visitors. Of the hundreds of people at the market 50 to 70 stopped by our display, keeping all 4 of us busy from 9AM to 1PM. Nora's enthusiasm for her "favorite star" worked like a magnet to draw people in. In addition Nora made her laptop computer available to show photos of deep sky objects taken by SBAS members and several disks of our photos were sold. We also garnered more than a dozen names of potential members; so all in all it was a successful and fun day. Thanks to all who participated!

Saturday, **May 15th** was our scheduled in-town observing session at Ridgecrest School in R.P.V. Despite the fact that 25 of our members were on a trip to Mount Wilson to observe through the 60 in. scope Mike Rivas, Bea Collu, Jim Madison and Tim Moore set up scopes for a night of viewing. We were joined early on by local visitors Shirley Gray, Sam Osofsky and his daughter Michelle and several others whose names I did not get. Later on, a dozen or more students from Dr. Palmer's El Camino class joined us. The sky was reasonably clear and the scopes were busy showing off Venus, Saturn, and Jupiter as well as deep sky objects. The highlight of the evening for me was the view of Comet Neat. Although only a hint of a tail could be seen, it was clearly a comet. Thanks guys! I left around 10pm and they were still going strong.

Saturday, **May 22nd**, a few days before our scheduled dark-sky observing trip, Greg got an email from "The Galileo Guy" requesting a star party for a group of Boy Scouts. Greg put out a broadcast request for support and Ken Munson, Nora De Muth and Joe Fierstein responded. We were told that they were expecting 100 – 200 people, quite a crowd for 3 scopes. Fortunately at the last minute Bill Eisele, Kurt Stenzel, Bea Collu and Jacques Linder joined us. The Galileo Guy is Paul Wicker, a member of the LA Astronomical Society. Paul appears as Galileo and gives talks to schools and organizations about astronomy. It's very effective (see photo). Paul was accompanied by a friend, Bob, a member of the Sidewalk Astronomers, Bob drove all the way from Burbank to be there. With Bob's 6 in Dob, there were more than enough scopes to handle the crowd. Actually, there were only about 100 people there, 35 Cub Scouts from Pack 980 plus parents and friends. The site was at El Nido Park in Torrance. Although there was some interference from trees and streetlights, we were able to show good views of the Moon, Venus, Jupiter and Saturn. In addition, we were able to use our kit from the Night Sky Network to demonstrate how astronomers discover planets outside of our solar system. Evidently, every body was pleased with the show since they donated $50 to our treasury. Not a bad performance for such short notice.

May 28 – 30: RTMC in Big Bear – See you there! ***- Joe Fierstein***

May Was A Busy Month For SBAS



All the Above - Plus
A Star Party At Lomita School
A Visit To Mt. Wilson
A Dark Sky Observing Trip
& RTMC at BIG Bear

Our SBAS Committee

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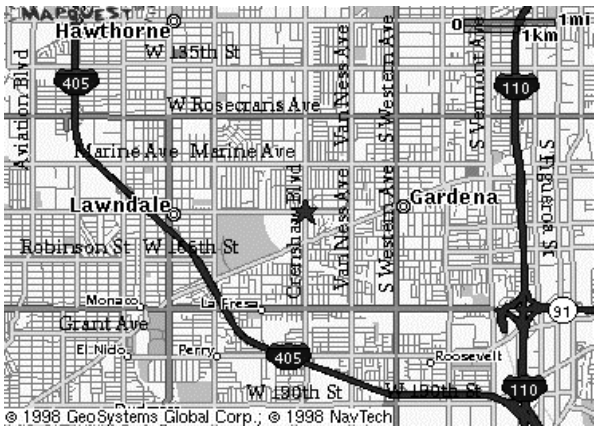
Monthly General Meetings



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, 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 7th 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 members: Sergio Fernandez, Ken and Joanne Lehmer.

Contact John Collins for magazine subscriptions at club rates: "Sky & Telescope" $32.95 and "Astronomy" $29.00! Make your check payable to SBAS and mail the payment and your subscription / renewal form directly to South Bay Astronomical Society, P.O. Box 1999, Redondo Beach, CA 90278.

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!

June - Comets & Asteroids

Comets Visible In June:

Name	Magnitude	Constellation
2002 T7	4.5 – 8	Hya-Sex
2001 Q4	4.7 – 6.7	UMa
2003 K4	10 – 9	Lyr-Her
2003 T3 (Tabur)	9.4 – 9.8	Per-Cam-Aur-Can
Howell/88P	11 – 12	Cet-Psc

Comets at Perihelion:

Date	Identification	Magnitude

No visible comets at perihelion this month.

Near-Earth Asteroid Flybys:

Date	Identification	Magnitude	Distance
14 June	2606 Odessa	14.8	1.525 AU
25 June	3356 Resnik	14.7	0.927 AU
29 June	1282 Utopia	14.9	2.382 AU

Check the JPL Ephemeris Generator page for coordinates of the objects at:
http://ssd.jpl.nasa.gov/cgi-bin/eph

- ***Ken Munson***

Congratulations to Nora De Muth

Nora, an SBAS member and Astronomy major, was granted the STRONG JPLUS AWARD for El Camino College students. The award is given each year to one outstanding ECC science student. It consists of $500 this semester and $500 next semester. In addition, her name will be engraved on the JPLUS plaque and she was invited to a banquet at JPL where she met students selected from other collages as well as JPL staff. Nora will also be given the opportunity to apply for a summer internship with a Caltech or JPL researcher. Congratulations Nora, SBAS is very proud of you! As a separate effort, Nora will be spending the summer in the state of Washington as an intern at an observatory associated with Stanford Labs. Clear * Skies Nora!

- ***Joe Fierstein***

Lomita Math and Science Magnet School Star Party

We had a good turnout of support for the Star Party at Lomita Math and Science Magnet School. I recall the following members bringing scopes or binoculars: Bee Collu, Nora DeMuth, Ron Rennie, Jim Madison, Craig Gates, Bill Eisele, Shawn Belveal, Kurt Stenzel, Ken Munson, Jacques Linder, Al Fader, and Greg Benecke. If I forgot anyone, I apologize. Many thanks to all of you for supporting our community activities. The night was clear and the crowd of about 150 people were treated to views of Venus, Saturn, Jupiter, comet NEAT Q4 and many other sights. It is always very rewarding to see the enthusiasm of the kids and parents alike, many of whom have never looked through a telescope before.

- Greg Benecke

Observing Reports

@Joshua Tree - The Clear Sky Clock web site predicted the best weather on **May 22nd** would be at Cottonwood Springs in Joshua Tree National Park. Clear skies and moderate seeing were predicted. So Steve Lindsey and his daughter, Christie, Dan Trimble, Craig Gates, his son-in-law Trent and friend Phil, Tim Moore, and I converged on the campground. As the sun set there were a few high clouds but what I really noted were the heavy contrails left by passing jets. This is indicative of high moisture content in the upper atmosphere and was, as it turned out, a bad omen. The night started out well enough. Venus was a very thin crescent and the moon was just a few days past New. The view was steady enough to use moderately high power and take in the side light details in the crescent. I swung up to Jupiter, which was pretty much overhead. The seeing was good enough to push the power up to 450. There were moments when the details just popped out with amazing clarity. We watched as Io came out of being eclipsed by Jupiter's shadow. We spent some time looking at comet NEAT Q4. The dust tail could be clearly seen, but due to an increasing upper level haze, the sky was not dark enough to see the ion tail. That haze only got worse as the night progressed. Objects that should be outstanding in my 15 inch Dob barely stood out. Patches of sky would get better and go bad. We allowed the sky to tease us until about 2:00 A.M. when only the brightest stars could be seen. It was time to admit defeat.

@Mt. Wilson Observatory - The weather prediction was for a bank of high clouds to move out after sunset and leave clear skies for the rest of the night, so we decided to go ahead with our plans for the night using the 60 inch telescope at Mount Wilson. The only catch was possible cancellation due to high pollen count. If the pollen count is too high, they will not uncover the mirror. Our docent for the night, Gail Gant, had told me that all sessions the previous weekend had been canceled for this reason. No session was scheduled for the night before, so we could not use that as a predictor. Luck was not with us, and the pollen count proved too high. As a consolation, Gail took the group over to the 100 inch telescope and let us examine this historic instrument up close. There are old naval periscopes connecting the operator's console with the viewfinders! We were also shown the structural addition that Hubble used on the end of the reflector configuration to measure the size of stars – which included mirrors that had to be cranked by hand. It is presently configured for adaptive optics and CCD camera use. He took us up to the control level on the dome catwalk and rotated the dome. Though we were on the rotating dome, we experienced a sensory illusion that the firmly mounted equatorial truss assembly was rotating. After that we walked back to the 60 inch dome and spent some time looking at the comet NEAT Q4 through binoculars. Eventually, the group trickled on home. ***Notice to paid attendees:*** I have spoken to the Mt. Wilson billing folks and we will not be charged anything for the aborted attempt even though they did have to pay the operator to come up the mountain. So everyone who paid has a full credit. We will reschedule in the next few months. Your fee can be refunded or you can ensure your slot for the rescheduled event by having SBAS retain your fee.

- Greg Benecke

New Object is 2nd Rock from the Sun

Astronomers announced Thursday the second known asteroid whose orbit is completely inside that of Earth. It supplants Venus as the second rock from the Sun. Most asteroids orbit the Sun between Mars and Jupiter, but a handful cross the path of Earth on elliptical trajectories. One had previously been found to move completely inside the annual path of our planet. The newfound rock, named 2004 JG6, is currently between Earth and Venus and orbits the Sun every six months. Its elliptical path takes it well inside the circle of Venus and even inside Mercury's path. On average, it is closer to the Sun than Venus. It's orbit goes well above and below the main plane of the solar system, in which the other planets travel around the Sun.

The object was first spotted on May 10, by Brian Skiff, as part of the Lowell Observatory Near-Earth Object Search (LONEOS) in Arizona. "I immediately noticed the unusual motion," Skiff in a statement, "so it was certain that it was of more than ordinary interest." Follow-up observations by other professional and amateur astronomers helped pin down the asteroid's trajectory. "What makes this asteroid unique is that, on average, it is the second closest solar system object orbiting the Sun," said Edward Bowell, LONEOS director. It passes within 30 million miles (48.3 million kilometers) of the Sun.

The asteroid is probably no more than 0.62 miles wide (between 500 meters and 1 kilometer). It poses no danger to Earth, astronomers said, because its path will not directly intersect that of the planet any time in the foreseeable future. There may be 50 asteroids comparable in size to 2004 JG6 orbiting entirely inside Earth's travels, but because they spend much of their time in the glare of the Sun, they are hard to find. The first one, 2003 CP20, was discovered last year.

By Robert Roy Britt
Sr. Science Writer @Space.com

Cassini-Huygens Spacecraft Approaches Saturn

As Cassini nears its rendezvous with Saturn, new details in the banded clouds of the planet's atmosphere are becoming visible. Cassini began the journey to the ringed world of Saturn nearly seven years ago and is now less than two months away from orbit insertion on **June 30th**. Dark regions are generally areas free of high clouds, and bright areas are places with high, thick clouds, which shield the view of the darker areas below. A dark spot is visible at the south pole, which is remarkable to scientists because it is so small and centered. The spot could be affected by Saturn's magnetic field, which is nearly aligned with the planet's rotation axis, unlike the magnetic fields of Jupiter and Earth.

The cloud bands move at different speeds, and their irregularities may be due to either the different motions between them or to disturbances below the visible cloud layer. Such disturbances might be powered by the planet's internal heat; Saturn radiates more energy than it receives from the Sun. Saturn currently has 31 known moons. Since launch, 13 new moons have been discovered by ground-based telescopes. Cassini will get a closer look and may discover new moons, perhaps embedded within the planet's magnificent rings.

There are 12 instruments onboard the Cassini Spacecraft orbiter, and 6 instruments onboard the Huygens Probe. These instruments are all designed to perform in-situ (on-site) studies of elements of Saturn, its atmosphere, moons, rings and magnetosphere. The instruments will study temperatures, plasma levels, neutral and charged particles, compositions of surfaces, atmospheres and rings, solar wind, and even dust grains in the Saturn system. Other instruments will also perform spectral mapping for high-quality images of the ringed planet, its moons, and rings.

The Cassini-Huygens mission is a cooperative project of NASA, the European Space Agency and the Italian Space Agency. The Jet Propulsion Laboratory, a division of the California Institute of Technology in Pasadena, manages the Cassini-Huygens mission for NASA's Office of Space Science, Washington, D.C. The Cassini orbiter and its two onboard cameras were designed, developed and assembled at JPL. For more information about the Cassini-Huygens mission visit, **http://saturn.jpl.nasa.gov** and the Cassini imaging team based at the Space Science Institute, Boulder, Colorado home page, **http://ciclops.org**

- NASA News Release

Schedule of Coming Events

4 June **Friday** **7:30 P.M.**	**Monthly General Meeting:** John Hoot, JPL Solar System Ambassador, returns for his 3rd visit, to give SBAS a 3D Tour of the Planets! 3D glasses will be provided.
7 June **Monday** **7:30 P.M.**	**Monthly Planning Meeting** Refer to page 3 for directions to Laura's house.
8 June **Tuesday**	**Venus Transits the Sun** Unfortunately, this rare event will not be visible from the Western United States.
10 JPL **11 PCC** **7:00 P.M.**	**Von Karman Auditorium Lecture Series** – FREE "Finding Planets and Searching for Life: Worthy Goals for 21st Century Science" is presented by Dr. Charles Beichman, Executive Director of Caltech Michelson Science Center. For more information call: (818) 354-0112. Current and archived webcasts can be viewed at **http://www.jpl.nasa.gov**
12 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…
13 June **Sunday** **Morning**	**Palos Verdes Library Lecture** Joe Fierstein will present his lecture on the Library's telescope-like sculpture and the Analemma.
19 June **Saturday** **Evening**	**Out-of-Town Dark Sky Observing** – New Moon June 17th Contact Greg Benecke to confirm site location.
9 July **Friday** **7:30 P.M.**	**Monthly General Meeting:** Prof. Gary Peterson, of San Diego State University, returns for his 4th visit with SBAS to present "Mercury – The Forgotten Planet".
10 July **Saturday** **Evening**	**In-Town Dark Sky Observing at Ridgecrest School** – Weather Permitting. Refer to June 12th entry for directions to the site & instructions on weather conditions.
12 July **Monday** **7:30 P.M.**	**Monthly Planning Meeting** The location of this meeting will be announced in the June Newsletter.
17 July **Saturday** **Evening**	**Out-of-Town Dark Sky Observing** – New Moon July 17th Contact Greg Benecke to confirm site location.

South Bay Astronomical Society

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General Meeting at El Camino College Planetarium:
Friday, June 4th at 7:30 P.M.

Guest Speaker: John Hoot (JPL Solar System Ambassador)

"3D Tour of the Planets"

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South Bay Astronomical Society
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