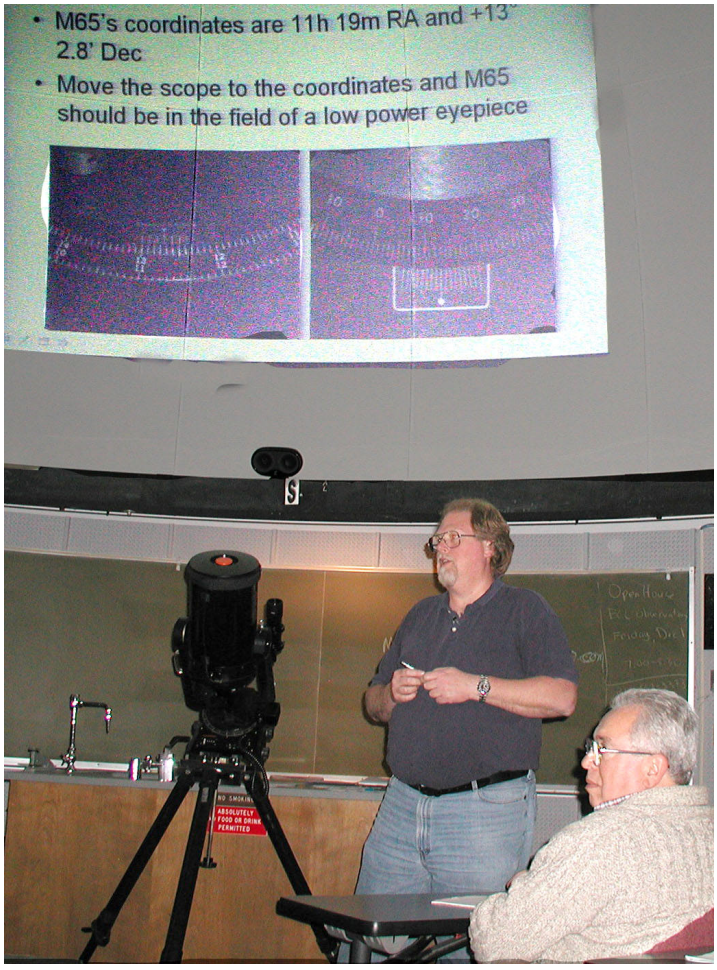
# FIRST LIGHT

***Journal of the South Bay Astronomical Society – January 2007***
**on line at www.geocities.com/sbas_elcamino**


**Monthly General Meeting: Friday, January , 12th, 7:30 PM**

***"TBD"***

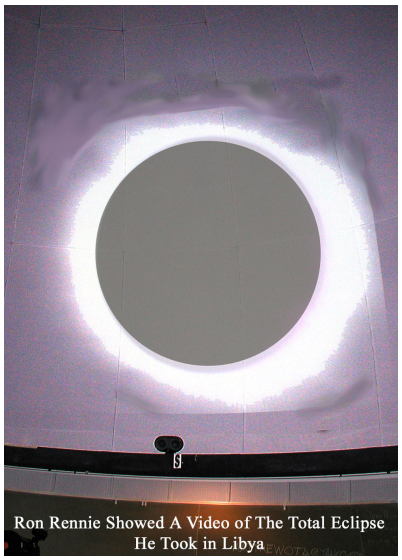
## *The December 1 Meeting*




President Ken Rossi opened the meeting at 7:43 by welcoming everyone present to the El Camino Planetarium, and he specifically welcomed the six newcomers who introduced themselves. He also introduced the new officers of the SBAS who were elected last month, and encouraged all members to become more active in the Society. He further asked the members to consider receiving the First Light newsletter as an e-mail attachment rather than a hard copy, to spare the Society the mailing and publication costs. Copies of the 2007 edition of the RASC's Observer's Handbook were distributed to those members who had ordered them.

Greg Benecke and Craig Gates reported on the latest out-of-town dark sky observing session, and Garth Magee described his recent observing experiences in northern Patagonia in Argentina, which included seeing the Magellanic Clouds and alpha and beta Centauri. Last-month's in-town Ridgecrest observing session was canceled due to bad weather, but an impromptu session held one week later experienced excellent viewing conditions. Steven Morris pointed out that the planets Mercury, Jupiter and Mars will all be within one degree of each other, very low in the morning sky on December 10.

After a 15-minute social break, three members presented short subjects. Ron Rennie screened three nicely-done videos of objects covering the Sun. The first was of the transit of Venus on June 8, 2004 as seen from England, the second was of the transit of Mercury on November 8, 2006 as seen from Fred Hesse Park, and the third was of the total solar eclipse on March 29, 2006 as seen from Libya. Greg Benecke presented "The Ancient Art of Using Manual Setting Circles". He pointed out that objects in the sky usually move in both altitude and azimuth, making them difficult to follow. An equatorial mount permits tracking along only one axis, but finding the position of an object requires accurate polar alignment. Large,




permanently-engraved circles and pointers are best, and the use of verniers increases pointing accuracy as well. Finally, Ken Munson demonstrated some of the computer freeware and interesting websites that he has come across. While computer-based observation planning and meteor-impact studies were politely received, the 40 audience members were very enthusiastic about computer simulations of planetary orbits and asteroid-belt evolution.

The meeting ended at a record-breaking 10:28 pm.

***- Dr. Steven Morris***

# The Planet in the Machine

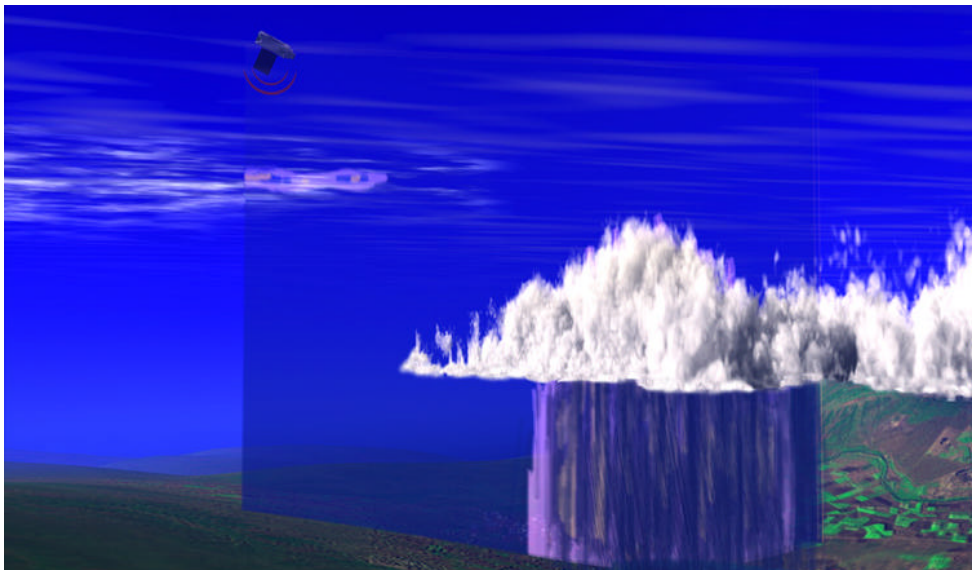
By Diane K. Fisher and Tony Phillips

The story goes that a butterfly flapping its wings in Brazil can, over time, cause a tornado in Kansas. The "butterfly effect" is a common term to evoke the complexity of interdependent variables affecting weather around the globe. It alludes to the notion that small changes in initial conditions can cause wildly varying outcomes.

Now imagine millions of butterflies flapping their wings. And flies and crickets and birds. Now you understand why weather is so complex.

All kidding aside, insects are not in control. The real "butterfly effect" is driven by, for example, global winds and ocean currents, polar ice (melting *and* freezing), clouds and rain, and blowing desert dust. All these things interact with one another in bewilderingly complicated ways.

And then there's the human race. If a butterfly can cause a tornado, what can



*CloudSat is one of the Earth observing satellites collecting data that will help develop and refine atmospheric circulation models and other types of weather and climate models. CloudSat's unique radar system reads the vertical structure of clouds, including liquid water and ice content, and how clouds affect the distribution of the Sun's energy in the atmosphere. See animation of this data simulation at www.nasa.gov/mission_pages/calipso/multimedia/cloud_calip_mm.html.*

humans cause with their boundlessly reckless disturbances of initial conditions?

Understanding how it all fits together is a relatively new field called Earth system science. Earth system scientists work on building and fine-tuning mathematical models (computer programs) that describe the complex inter-relationships of Earth's carbon, water, energy, and trace gases as they are exchanged between the terrestrial biosphere and the atmosphere. Ultimately, they hope to understand Earth as an integrated system, and model changes in climate over the next 50-100 years. The better the models, the more accurate and detailed will be the image in the crystal ball.

NASA's Earth System Science program provides real-world data for these models via a swarm of Earth-observing satellites. The satellites, which go by names like Terra and Aqua, keep an eye on Earth's land, biosphere, atmosphere, clouds, ice, and oceans. The data they collect are crucial to the modeling efforts.

Some models aim to predict short-term effects—in other words, weather. They may become part of severe weather warning systems and actually save lives. Other models aim to predict long-term effects—or climate. But, long-term predictions are much more difficult and much less likely to be believed by the general population, since only time can actually prove or disprove their validity. After all, small errors become large errors as the model is left to run into the future. However, as the models are further validated with near- and longer-term data, and as different models converge on a common scenario, they become more and more trustworthy to show us the future while we can still do something about it—we hope.

For a listing and more information on each of NASA's (and their partners') Earth data-gathering missions, visit science.hq.nasa.gov/missions/earth.html. Kids can get an easy introduction to Earth system science and play Earthy word games at spaceplace.nasa.gov/en/kids/earth/wordfind .

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

# *New SBAS Webgroup*

Thanks to Matthew Ota, SBAS now has a group site on Yahoo to use for fast-breaking information news and general information exchanges. In order to access the group, you must have a Yahoo mail account. It's easy and free to get one. Just go to www.yahoo.com and sign up for a free email account. Once you have a Yahoo account, you can navigate to the SBAS group site at http://tech.groups.yahoo.com/group/SBASTRO/ and find information sharing, links to other websites, club member astrophotos and even a club calendar.

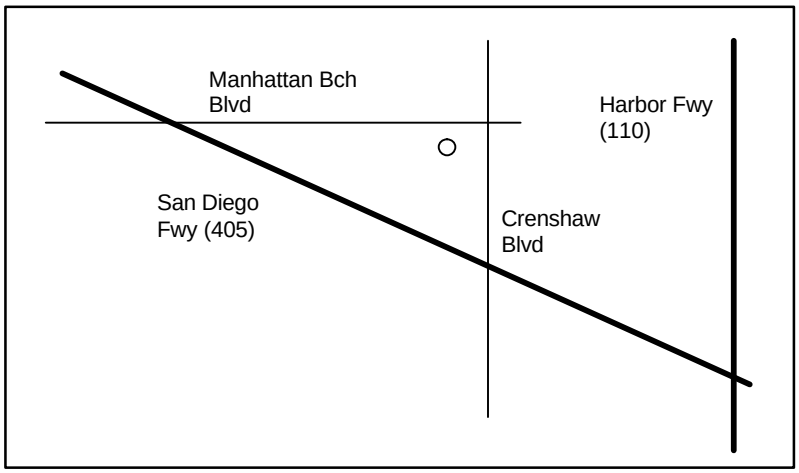
# *SBAS Executive Board*

| | | | |
|---|---|---|---|
| **President** | Ken Rossi | 515-1586 | ken_a_rossi@yahoo.com |
| **Vice-President** | Greg Benecke | 217-1512 | beneckerus@aol.com |
| **Secretary** | Deanna Chafe | 329-1371 | Martin5lynn3@sbcglobal.net |
| **Treasurer & Astronomical League Rep.** | Arnie Stodolsky | 937-0220 | astodols@ix.netcom.com |

# SBAS Committees

| | | | |
|---|---|---|---|
| **Program Chairman** | Greg Benecke | 217-1512 | beneckerus@aol.com |
| **Astronomical League Liaison** | Bill Eisele | 542-5070 | Astronomy131@msn.com |
| **Newsletter Reproduction** | John Collins | - - - | westcoast@runbox.com |
| **Publications Committee:** | | | |
| **SBAS Website Webmaster** | Alex Athas | - - - | sbas_elcamino@yahoo.com |
| ***First Light* Editor** | Ken Munson | 782-0873 | kenmunson333@sbcglobal.net |
| **Observing Committee** | Greg Benecke | 217-1512 | BeneckeRUs@aol.com |
| | Craig Gates | 376-6387 | - - - |
| **Membership Committee** | Ray Grace | 370-1913 | Rgrace1@adelphia.net |
| **Publicity Committee** | Joe Fierstein | 377-9834 | Joefiers@verizon.net |
| | Arnie Stodolsky | 937-0220 | astodols@ix.netcom.com |
| **Property Committee** | Arnie Stodolsky | 937-0220 | astodols@ix.netcom.com |
| **Outreach Committee** | Joe Fierstein | 377-9834 | Joefiers@verizon.net |

# 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).

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 January 15th planning meeting will be held 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.

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# 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! Make your check payable to SBAS and mail the payment and your subscription / renewal form directly to South Bay Astronomical Society, P.O. Box 1937, 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.

# *January – Comets & Asteroids*

**Comets Visible in September:**

| **Comet** | **Mag** | **Constellation(s)** |
|---|---|---|

None

**Asteroid Occultations:**

None

Check the JPL Ephemeris Generator page for coordinates of these objects at:
http://ssd.jpl.nasa.gov/horizons.cgi#top

# *Welcome New Members*

Everyone please welcome new members to the club: Jim Seidel, Bonnie Zrust, and Walt & Roxanne Prue.

# *Observing Reports*

***Backyard Observing –*** I set up my Nexstar 11 in the back yard as the sunset on December 3 to watch the lunar occultation of the Pleiades star cluster. By the time it got dark enough to see some stars, the occultation was already half over. Still it was quite interesting to finally see the moon moving in its orbit as it slowly approached the remaining bright stars of the cluster and covered them. With a nearly full moon, only the brightest stars above about 6$^{th}$ magnitude were visible in the near vicinity of the moon but that made for several good occultation events. There was just a tiny sliver of darkness left on the western side of the moon. The brightness of the moon made this small dark band invisible so it was neat to see a star approach the brightly lit moon only to disappear a few arcseconds in advance of the bright edge. It was even more challenging to see them appear on the fully lit eastern side! Once the occultation was over, I spent the rest of the evening using the Nexstar Observer List program to hunt down challenging binary stars. The sky was none too steady though so the ability to split close doubles was marginal at best.

***- Ken Munson***

# *Schedule of Coming Events*

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| **3 January Wednesday** | **Quadrantid Meteor Shower Peak**<br><br>The shower, originating from near the handle of the Big Dipper, often produces meteors at the rate 110 per hour. |
| **12 January Friday Night 7:30 PM** | **Monthly General Meeting**<br><br>Speaker: TBA |
| **15 January Monday Night 7:30 PM** | **Monthly Planning Meeting**<br><br>Location: See Page 4. |
| **13 January Saturday Evening** | **In Town Dark Sky Observing Session –** Weather Permitting**:** Please contact Greg Benecke to confirm that the gate will be opened!<br><br>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**. Note: If you a visitor, not bringing a scope, it is requested that you park in the small parking lot on Northbay Rd.** |
| **20 January Saturday Evening** | **Out of Town Dark Sky Observing Session**<br><br>Contact Greg Benecke to coordinate a location. |
| **20 January Saturday Evening** | **Boy Scout Troop Star Party**<br><br>A Star Party at a private residence at 1 Seacove Drive in Rancho Palos Verdes for a group of about 40 boy scouts. |
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# South Bay Astronomical Society

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***General Meeting at El Camino College Planetarium:***
***Friday, January 12th at 7:30 P.M.***

## *"TBD"*

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**South Bay Astronomical Society**
**P.O. Box 1937**
**Redondo Beach, CA 90278**