FIRST LIGHT

Journal of the South Bay Astronomical Society – March 2008
on line at www.geocities.com/sbas_elcamino

Monthly General Meeting: Friday, March 7th, 7:30 PM

Guest Speaker: Dr. Michelle Thaller

"The Spitzer Telescope and Exoplanets"

Star Party in Culver City

Last summer, on a Saturday evening when Saturn and Venus were passing within 1 degree of each other, I set my telescope up in the front yard and invited neighbors and passers-by over to see them. One of the viewers was a neighbor, Amy Maldonado, who happens to be a 1st grade teacher at Linwood E. Howe Elementary School in Culver City. She was so amazed and excited at seeing such a thing that we spent a lot of time talking. When I mentioned that SBAS did star parties for schools she was greatly interested and took the idea to her Principal who immediately saw this as a great opportunity to bring some practical science experience to the children.

February 6th was the date scheduled for the star party. It started off with a daytime lecture and solar viewing. Club members Joe Fierstein and Ken Munson arrived at 10. As Ken set up, Joe provided a lecture to the students in the cafeteria. The solar viewing was made difficult by the clouds that kept getting in the way. We kept switching from the Sun to Venus and back and finally had to settle on a flag pole a couple of blocks away. Comments from the kids as they saw the Sun or Venus ranged from "That's just weird!" to "Wow! That's so awesome!" One little boy was almost in tears when he found out he wouldn't be able to see Venus in daytime. I told him to come back with his family in the evening and I'd do everything I could to let him see Mars.

Surprisingly, the clouds cleared up after sunset and a very successful star party. Two hundred or more people came by during the two hours allotted. Seven or eight club members showed up with their telescopes and treated the children and their families to views of Mars, double stars and even a galaxy. The little boy finally got his chance to see a planet. The joy was obvious in his voice as he left the telescope, smiling proudly, saying "Mommy! I saw Mars!"

- Ken Munson

The February 1 Meeting

The meeting began at 7:35 with President Ken Rossi asking newcomers to introduce themselves. Jim and Linda Sloan, Seth Potter and Phil Turek did so, and were welcomed. President Rossi described the recent SBAS star nights, and Ken Munson reported on one of his own recent dark-sky observing sessions. The Mt. Wilson observing session on April 5-6 will cost $60 per person. Please pay Arnie Stodolsky if you have signed up.

Other upcoming star nights were also discussed, including the lunar eclipse session planned for February 20. Another member reported observing the recent flyby of asteroid 2007 TU24. We then watched a seven-minute DVD about an upcoming NASA mission, called LCROSS (the Lunar CRater Observation and Sensing Satellite). While watching it, I wondered idly if NASA had ever canceled a satellite in its planning stages because they couldn't come up with a good acronym. Built by Northrop Grumman, the LCROSS will crash into a crater at the lunar south pole, raising a fountain of ejecta that should be visible from North America through moderate-sized telescopes. Studies of

this plume from Earth and from sensors that will crash into the Moon a few minutes later should determine whether water exists on the Moon, in polar craters that have floors permanently shielded from sunlight. Launch is planned for mid-February of next year.

After a fifteen-minute social break, the evening's lecture was given by Gene Rogers, who is Chief Technologist of the Advanced Network & Space Systems of Boeing Company, on "The Road Not Taken ... Yet". Discoveries by astronomers such as Tycho, Galileo, Kepler and Newton allowed visionaries such as Jules Verne to conceive of launching humans into space. In "From the Earth to the Moon", Verne imagined launching the spaceship Columbiad as a projectile fired from a vertically-pointed cannon.

By 1985, American and Russian successes had raised hopes that we could return humans to the Moon by the year 2000. Subsequent disasters and other difficulties have delayed such goals, and we now hope to reach the Moon by 2020 and Mars by 2030. Thirteen Shuttle missions are planned for the next couple of years, but after that we will be able to reach the Space Station only by using the Russian Soyuz rockets. Privately-funded spaceships are also being sent high into the upper atmosphere, but are not yet competitive with the government-funded programs of NASA and Russia.

What will the future bring? NASA is currently working on less expensive rockets fueled by liquid oxygen and kerosene, and on smaller 'nano-satellites' which weigh between 25 and 100 pounds. If a propellant depot could be established in low Earth orbit, rocket systems could be redesigned to reach this depot, and then transfer propellant into the spacecraft before continuing. A solar array in space could beam energy to Earth, possibly reducing the energy crisis.

Even Jules Verne's idea of launching a rocket as a projectile is under serious review. The summit of Mount Chimborazo in Ecuador is the point on the Earth's surface farthest from the center of the Earth, due to the Earth's oblateness, and a launch from its summit could also take advantage of the rotational speed of the Earth in boosting a rocket into space. A magnetically-levitated spacecraft given a huge acceleration on a horizontal track could be sent upwards at an enormous speed, greatly reducing the amount of rocket fuel required to reach orbit.

Gene Rogers ended his lecture by looking even farther into the future. We might be able to send a spacecraft to the nearest star by the middle of the 22nd century, if current trends in technology continue. First, though, we have to work our way through our present difficulties within the Solar System. President Rossi then thanked the speaker for his efforts and presented him with a certificate of appreciation, as the 50 people in the audience applauded. The meeting ended at 9:38.

- Dr. Steven Morris

April General Meeting

The April meeting will be a member participation event in which members are invited to make a short presentation of their own astro-photos and describe the objects and/or the technique used to produce them. In order to make this more interesting Certificates of Merit will be awarded for Best Presentation and Best Astro-Photo . Three judges will be appointed to judge the entries. No person can win more than one award.

This is something new for our club, that I hope we can expand upon in the future, but there are a number of unknowns at this point, not the least of which is the number of entries. This will affect the length of time available for each presentation, which my best estimate should be limited to ten to fifteen minutes. It would be helpful if intending participants would let me know at vidron@sbcglobal.net roughly what they will be showing and how long it will take.

I encourage all our astrophotographers to take part and put on a good show for us.

- Ron Rennie, Program Chairman

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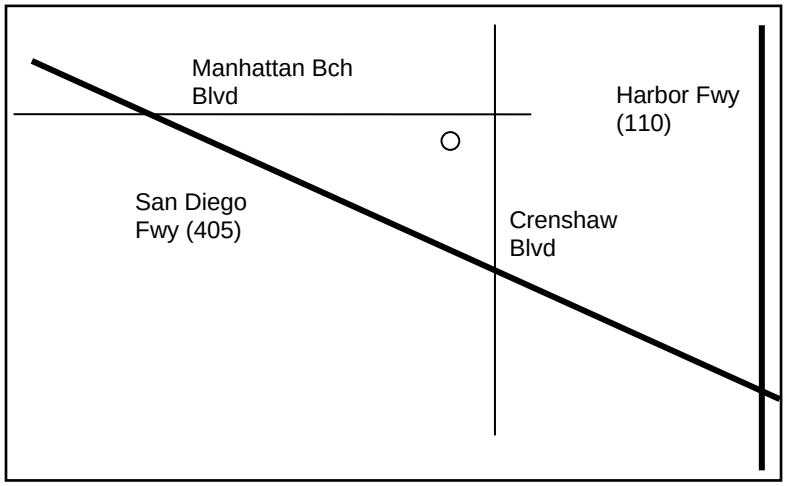

Monthly General Meetings

We normally meet on the first Friday of each month at 7:30 p.m. in the Planetarium at El Camino College (16007 Crenshaw Bl. In Torrance). 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 March 10th 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.

SBAS YAHOO GROUP

Join our own YAHOO group for up-to-the-minute club news; see astro photos taken by members and be part of the growing online community of the South Bay Astronomical Society. A YAHOO userid is needed (free) then click on GROUPS and search for SBASTRO. Use the JOIN function and you will get notification from the Group's administrator that your application has been accepted. This group is limited to SBAS members. You can specify to have emails sent to your normal email address when you signup. The Executive Board is working to use this vehicle more and more this coming year to deliver information to our members. 25% of our membership has joined. Don't be left out. If you need assistance or have any questions, contact any Board member.

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!

Note: S&T subscribers at the club rate renew their subscriptions by mailing their renewal notice and check or calling the 800# on the renewal notice.

Only new subscribers or subscribers converting their subscription to the club rate need to contact Arnie or send a check to the PO Box. Astronomy subscriptions and renewals still go through Arnie or via the PO Box.

March – Comets & Asteroids

Visible Comets:

Comet	Mag	Constellation(s)

Asteroid Occultations:

Date	Local Time		Duration	Star Mag	Mag Drop	Star No.	Planet	
	Hr	Min	sec/min				No.	Name
28-Feb-08	21	5.7	2.1s	9.8	6.2	TYC 1394-01224-1	2264	Sabrina
1-Mar-08	18	1	1.4s	10.4	6.6	TYC 0710-01641-1	4600	Meadows
10-Mar-08	21	3.4	2.0s	9.9	6.5	TYC 1869-01884-1	1464	Armisticia
27-Mar-08	18	36.6	2.6s	10.3	4.1	TYC 1799-00974-1	896	Washingtonia

Planetary Occultations:

Local Date & Time			Durn	Star	Mag-Drop	Star	Planet
Date	Hr	Min	sec/m	mag	V	No.	Name
23-Mar-08	0	36.8	433s	0.7	0	TYC1883-01734-1u	Mars

Near-Earth Asteroids:

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

Lights Out America

Last October, a small group of people convinced the city of San Francisco to turn their lights out for just one hour as protest of light pollution. This year they've designated March 29th as a night to try to convince cities all over America to turn their lights out. This date was chosen to coincide with the Australian organization\ World Wildlife Fund's 2nd annual Earth Hour. To get more information on the event and the organizations check their websites: www.lightsoutamerica.org and www.earthhour.org.

Mt Wilson Trip April 5, 2008

For those you have signed up for the Mt Wilson 60-inch observing session, it is time to pay for the evening. If we have 25 members, the cost will is $60.00 per person. If we have fewer than 25 the cost would increase. With a minimum of 15 members, the cost will be $100.00 per member. To confirm your reservation members and guests, please send a check for $60.00 to Arnie Stodolsky at the club P.O. address by the next club meeting, March 7, 2008. If more than 25 want to go, current members on the list would have first priority, followed by guests.

- Ray Grace

Observing Reports

Angeles Forest - I decided late Monday to run out to my house in the Angeles Forest and try my luck at finding the near-earth asteroid TU24, which on this evening only would pass close to the earth. I read that it would be moving about seven times as fast as the moon across the sky. So I hoped to find it based on it's relative movement against the background of stars. This would be challenging since it was predicted to be around magnitude 11, and was not even plotted in my Starry Night computer program.

I arrived a little late before 9 PM and quickly setup my Nexstar 11 on my driveway under what turned out to be clear and cold and dark sky by the time I arrived, as the storms were just clearing out in the mountains that day. The asteroid was falling in the northwest sky, so I was racing against the clock under moderate to poor seeing conditions. I read that due to the asteroid's proximity, parallax would an issue. So I logged onto the JPL site and generated coordinates for the object in 10 minute intervals for my exact location at 3100 feet.

My first attempt was a failure to find anything. After nearly an hour of trying to find it, I realigned my scope synchronizing off a nearby reference star's coordinates, confirming that it was pointing accurately to the coordinates entered. I rechecked the JPL coordinates, confirming that I was using the right time when reading the printout. Finally, I determined which direction in the eyepiece that the object would be moving. Then I pointed to the next set of coordinates and waited for a couple of minutes staring in the eyepiece. Then about 11 PM and right on time I noticed movement in one object nearing the center of the eyepiece! It was only noticeable as it approached another star. Otherwise, it was hard to detect in the wide-angle eyepiece.

I spent about 20 minutes around 11 PM tracking the 11 magnitude asteroid moving across the field of other 11 magnitude stars. It took 2-3 minutes to cross the field-of-view in my 200 power eyepiece. Movement was definitely noticeable when staring through the eyepiece. I was fortunate to find TU24, as it had moved fairly low in the sky by this hour. Fortunately the seeing conditions had improved somewhat. The effort turned out to be a worthwhile and unique observation for me.

- Garth Magee

Torrance - The Los Angeles Times newspaper is not usually a font of astronomy news, but in late January it reported that asteroid 2007 TU24 would pass the Earth at a distance 1.5 times the distance from the Earth to the Moon. An asteroid that is usually too dim to be seen may become visible when it passes this closely, and its motion across the sky can be obvious through the eyepiece, if you can find it.

I turned to the homepage of Sky & Telescope magazine, which had a link to JPL's HORIZON Web site, which printed out the asteroid's position over time as seen from Torrance. It is important to obtain an ephemeris calculated for your locality when observing near-Earth asteroids, as the location of the object against the background of stars can differ by several degrees among observers at different locations on the Earth's surface. It is also important to use an ephemeris that was calculated taking the effects of the Earth's and Moon's gravitation into account, rather than just downloading the asteroid's orbital elements for use in a planetarium computer program, as the orbital elements can change significantly as the asteroid's motion is perturbed by the Earth-Moon system.

There were clouds and haze on the evening of January 29, but the sky was clear enough to give it the old school try. And there it was! In my 24-inch telescope it was a faint but noticeable dot, clearly moving against the stars of Perseus in the northwestern sky. Only 800 feet in diameter, it could be seen as an 11th-magnitude point of light moving at more than three degrees per hour against the background of stars. It certainly helped that I had plotted its predicted positions in my copy of the Millennium Star Atlas, making it a lot easier to find among the multitude of stars. SBAS members Joe and Marian Locascio dropped by to see the asteroid, and afterwards took in the sights of Saturn with its rapidly-narrowing ring system, the Orion Nebula and the double star Polaris. The telescope started to dew up, and we called it quits at 10:30.

- Dr. Steven Morris

Feb 20 Lunar Eclipse – Ridgecrest School. Weather: Poor, cloudy and damp. Winds: blustery and cold**.** Joe Fierstein and I set up a couple telescopes in the small parking lot off of North Bay Drive. The sky was clouded over in all directions. Dennis Robertson, Ken Rossi and Craig Gates arrived, and after 20 minutes Ken Rossi and Craig decided to head for home and hopefully better skies. At the time it sounded like a good plan. The event was listed in the local newspapers, and a few of the neighbors began showing up. Two telescopes were set up. At 6:30 the Moon briefly broke out of the clouds, for about a minute, giving us just enough time to point in the general direction of our guide star, the Moon. Between 7:00 and 8:00PM there were breaks in the clouds allowing a hit and miss viewing of the eclipse. We had 25 to 30 visitors present. Joe did a great job explaining everything that was going on, how telescopes work, and the frequency of lunar eclipse. We had a number of students from daughter-in-law Palos Verdes Intermediate School Science Class along with there parents attend the session. The students had a class project report form with questions dealing with both the eclipse, as well as the hardware and educational requirements for astronomy. There were questions about the red-orange color, and the difference between a solar and lunar eclipse. One excited young boy announced that he could see craters on the moon. Most of the parents enjoyed the observing opportunity and even asked if they could come back for more during our in town sessions. Joe's hand out worked great. By 8:30PM the visitors were gone, so we packed up and headed home. I got home at 9:00PM to a clear sky and a bright full moon.

- Ray Grace

Schedule of Coming Events

1 March Saturday Night	**In Town Dark Sky Observing Session at Ridgecrest Middle School–** 28915 NortbBay Rd. RPV, Weather Permitting**:** Please contact Greg Benecke to confirm that the gate will be opened! 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 (3rd stop sign from Hawthorne Blvd.), 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.
7 March Friday Night 7:30 PM	**Monthly General Meeting** Speaker: Dr. Michelle Thaller Topic: The Spitzer Telescope and Exoplanets
8 March Saturday Night	**Out-of-Town Dark Sky Observing Session** Contact Greg Benecke to coordinate a location.
10 March Monday Night 7:30 PM	**Monthly Planning Meeting** See directions on page 3.
20 March Thursday Night 7:00 PM	**Beckman Auditorium at CalTech (Thursday) & Vosloh Forum at Pasadena City College (Friday)** **Enceladus: The Newest Wrinkle from Saturn's Tiger-Striped Moon.** Dr. Amanda Hendrix. Only two moons in our solar system are thought to have liquid water, and evidence collected by the Cassini spacecraft during multiple flybys suggests that Saturn's moon, Enceladus, could have liquid water reservoirs that erupt in Yellowstone-like geysers.

South Bay Astronomical Society

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

Guest Speaker: Dr. Michelle Thaller

"The Spitzer Telescope and Exoplanets"

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South Bay Astronomical Society
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