

# FIRST LIGHT



Journal of the South Bay Astronomical Society – February 2006  
on line at [www.geocities.com/sbas\\_elcamino](http://www.geocities.com/sbas_elcamino)

**Monthly General Meeting: Friday, February, 3rd, 7:30 PM**

**Guest Speaker: Ron Obert**

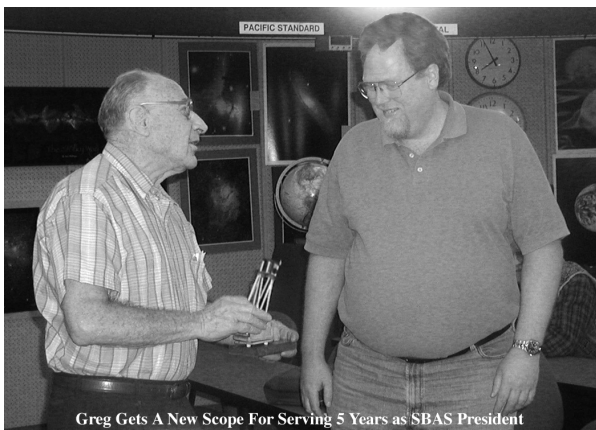
***“Cosmology: From its Fundamentals to its Heart in an Hour”***

## ***SBAS Wins a Prize!***

It has just been announced that our club, the South Bay Astronomical Society, has won a drawing by the NASA Night Sky Network! The NSN is a nationwide coalition of amateur astronomy clubs bringing the science, technology and inspiration of NASA's missions to the general public. Member clubs share time and telescopes to provide the public with unique astronomy experiences at science museums, observatories, classrooms, and under the real night sky. Clubs that are part of the NSN are encouraged to log their outreach activities, such as star parties, school presentations, etc. with the NSN. Clubs that log five or more activities a year are placed into a drawing for prizes. Winners were selected at random from among over 1855 events logged on the Network website in 2005. The award is donated by the Astronomical Society of the Pacific. Our winning entry was a “Science Night” activity at Montemalaga School in February of 2005. For our efforts the club has been awarded a Coronado Instruments Personal Solar Telescope!



## ***The January 6 Meeting***



Our new club president, Ken Rossi, started the meeting at 7:37 by introducing the new members of the Executive. Joe Fierstein reviewed the 14-year history of our club and noted the valuable contributions made by the previous presidents Jim Wertz, Ron Rennie and Greg Benecke. Joe then presented the outgoing president Greg Benecke with a plaque of appreciation and a scale model of a Dobsonian telescope as a gift.

The night's lecture was “Deep Impact: Your First Look Inside a Comet” by Kenneth P. Klaasen, a co-investigator of NASA's Deep Impact project. Comet Tempel 1 was discovered on April 3, 1867 by Ernst Tempel, and orbits the Sun once every 5.5 years. The Deep Impact spacecraft was launched a year ago, and

reached this comet on July 4. The mother ship sped past the comet at a rate of 10.2 kilometers per second, sending back pictures and spectroscopic data.

The mother ship also relayed back the pictures taken by the impactor, a 360-kg spacecraft released by the mother ship and sent crashing into the comet. This collision released approximately 10 million kilograms of dust, significantly brightening the comet as seen from Earth. Kenneth Klaasen showed a few remarkable movies of the impact as seen by both spacecraft, and discussed some of the scientific results that have been found from the data collected.

For example, the comet has a mean radius of 3.0 kilometers and a rotational period of 1.70 days. Its density is only 30% that of water, so Whipple's description of comets as "dirty snowballs" seems pretty accurate. From the spectra, the comet was found to contain water, carbon monoxide, carbon dioxide, hydrogen cyanide and various hydrocarbons. Hundreds of circular features that look like impact craters were seen on the surface, but two large smooth surfaces were also seen, which are quite puzzling. Perhaps some volatile melted and flowed across the surface, but no one knows for sure.

At the end of the lecture, several of the 40 people in attendance had questions. After they were answered, Ken Rossi presented the speaker with a certificate of appreciation, and the meeting ended at 9:20.



- Steven Morris

## NASA Space Place

### Snowstorm on Pluto

by Dr. Tony Phillips

There's a nip in the air. Outside it's beginning to snow, the first fall of winter. A few delicate flakes tumble from the sky, innocently enough, but this is no mere flurry.

Soon the air is choked with snow, falling so fast and hard it seems to pull the sky down with it. Indeed, that's what happens. Weeks later when the storm finally ends the entire atmosphere is gone. Every molecule of air on your planet has frozen and fallen to the ground.

*That was a snowstorm—on Pluto.*

Once every year on Pluto (1 Pluto-year = 248 Earth-years), around the beginning of winter, it gets so cold that the atmosphere freezes. Air on Pluto is made mainly of nitrogen with a smattering of methane and other compounds. When the temperature dips to about 32 K (-240 C), these molecules crystallize and the atmosphere comes down.

"The collapse can happen quite suddenly," says Alan Stern of the Southwest Research Institute. "Snow begins to fall, the surface reflects more sunlight, forcing quicker cooling, accelerating the snowfall. It can all be over in a few weeks or months."

Researchers believe this will happen sometime during the next 10 to 20 years. Pluto is receding from the warmth of the Sun, carried outward by its 25% elliptical orbit. Winter is coming.

So is New Horizons. Stern is lead scientist for the robotic probe, which left Earth in January bound for Pluto. In

2015 New Horizons will become the first spacecraft to visit that distant planet. The question is, will it arrive before the snowstorm?



***This artist's rendering shows how Pluto and two of its possible three moons might look from the surface of the third moon. Credit: NASA/ESA and G. Bacon (STSci)***

"We hope so," says Stern. The spacecraft is bristling with instruments designed to study Pluto's atmosphere and surface. "But we can't study the atmosphere if it's not there." Furthermore, a layer of snow on the ground ("probably a few centimeters deep," estimates Stern) could hide the underlying surface from New Horizon's remote sensors.

Stern isn't too concerned: "Pluto's atmosphere was discovered in 1988 when astronomers watched the planet pass in front of a distant star—a stellar occultation." The star, instead of vanishing abruptly at Pluto's solid edge, faded slowly. Pluto was "fuzzy;" it had air. "Similar occultations observed since then (most recently in 2002) reveal no sign of [impending] collapse," says Stern. On the contrary, the atmosphere appears to be expanding, puffed up by lingering heat from Pluto's waning summer.

Nevertheless, it's a good thing New Horizons is fast, hurtling toward Pluto at 30,000 mph. Winter. New Horizons. Only one can be first. The race is on....

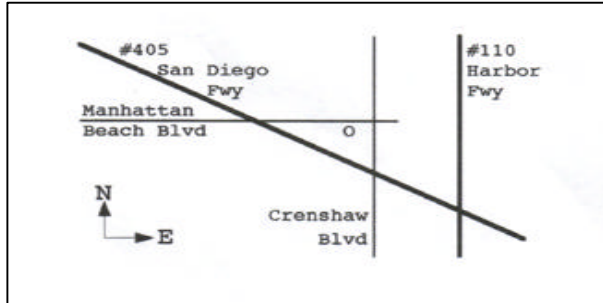
Find out more about the New Horizons mission at <http://pluto.jhuapl.edu> . Kids can learn amazing facts about Pluto at [spaceplace.nasa.gov/en/kids/pluto](http://spaceplace.nasa.gov/en/kids/pluto).

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

## **Our SBAS Committee**

<b>President</b>	Ken Rossi	515-1586	<a href="mailto:ken_a_rossi@yahoo.com">ken_a_rossi@yahoo.com</a>
<b>Vice-President</b>	Greg Benecke	217-1512	<a href="mailto:beneckerus@aol.com">beneckerus@aol.com</a>
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<b>Astronomical League Liaison</b>			
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	Craig Gates	376-6387	- - -
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	Joe Fierstein	377-9834	<a href="mailto:Joefiers@aol.com">Joefiers@aol.com</a>
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	Joe Fierstein	377-9834	<a href="mailto:Joefiers@aol.com">Joefiers@aol.com</a>
<b>Outreach Committee</b>			

## 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 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 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 **February 3<sup>rd</sup>** planning meeting will be held at 7:30 PM at the home of Joe & Miriam Fierstein. Take Hawthorne Blvd. south past Pacific Coast Hwy. up the hill passing Silver Spur Rd. and Highridge until you get to the light at Eddinghill Dr., then turn right and go downhill to the 'T' intersection at Golden Meadow where you turn left up 2 blocks and turn left on Willow Tree Dr. to 3<sup>rd</sup> house on the right side from the corner – 7022 Willow Dr., Rancho Palos Verdes.

## 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 John Collins for magazine subscriptions at club rates: "Sky & Telescope" \$32.95 and "Astronomy" \$34.00! 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](http://www.astroleague.org)

## **February – Comets & Asteroids**

### Comets Visible in February

Name	Magnitude	Constellation
2005 E2(McNaught)	9.1	Psc

### Asteroids: Occultation Event Summary for Los Angeles

Local Time			Durn	Star	Mag	Star	Planet	Alt
D	M	Y	secs	mag	drop	No.	No	Name
4-Feb-06	4	57.8	3.5	12.1	2.6	TYC 7389-01290-1u	602	Marianna
5-Feb-06	2	26	4.9	11.4	2.6	2UCAC 35203988	764	Gedania
7-Feb-06	20	47.8	7.5	12.5	1	TYC 1825-00544-1u	127	Johanna
8-Feb-06	5	38.2	3.2	11.6	2	TYC 6821-01618-1u	35	Leukothea
8-Feb-06	17	37.7	3.4	11.7	3.2	TYC 0595-00426-1u	156	Xanthippe
9-Feb-06	5	13.9	3.3	9.5	6.5	TYC 0251-01180-1u	884	Priamus
9-Feb-06	20	5.1	18.4	11.6	2	TYC 0739-01933-1u	490	Veritas
11-Feb-06	5	38.2	3	9.5	5.4	TYC 6812-00741-1u	886	Washingtonia
11-Feb-06	22	6.1	6	11.9	4	TYC 0269-00147-1u	2207	Antenor
12-Feb-06	21	45.8	19.3	11.8	2.1	2UCAC 42394192	598	Octavia
18-Feb-06	22	44.2	11.4	11.2	1.4	TYC 4920-00903-1u	85	Io
23-Feb-06	0	8.2	3.4	10.8	7.9	TYC 1915-00115-1u	2782	Leonidas
24-Feb-06	22	31.2	5.1	11.7	4.4	TYC 1860-00958-1u	982	Franklina
25-Feb-06	5	57.3	3.3	10.9	3.1	TYC 6822-01838-1u	639	Latona
25-Feb-06	6	24.2	6.9	11	1.4	TYC 7391-02081-1u	13	Egeria
26-Feb-06	2	58.3	4	7.9	8	TYC 1382-00760-1	1298	Nocturna
27-Feb-06	6	15.2	3.4	12.2	2.1	TYC 6819-00999-1	231	Vindobona

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

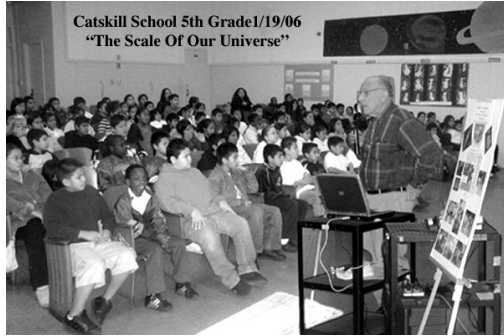
## **Montemalaga Star Party**

SBAS members will be supporting the Montemalaga School's "Star Party" on Wednesday evening, February 23<sup>rd</sup>. They would like us to be set up by 6:00 PM as the Science Night will be running from 6-8 PM. We will be setting up on the lower field unlike previous years. The school will be providing two pizzas for SBAS members who are providing their support for the star party. Pizza will be served at about 5:30. There is usually a good turnout for this star party so members are encouraged to join us with their scopes. The school is on the top, back side of the hill with no street lights so viewing should be great. DIRECTIONS: Take Hawthorne Blvd south to the top of the peninsula. Turn right at Grandvia Altimira (there's a 7-11 on the corner). Go 5 blocks to Via Visalia and turn right. Go to the bottom of the small hill, 3 blocks, turn right on Via Nogales. The school is on the left side of Via Nogales.

## **Deepsky Software**

For those who ordered the Deepsky Software, the disks have arrived and will be available for delivery at the February meeting.

## Catskill Ave School Star Party



On January 19, SBAS members arrived at the Catskill Ave. Elementary School for a Star Party. Joe Fierstein, Arnie Stodolsky, and Jacques Linder did a short presentation on "The Scale of the Universe" during the day and then set up scopes on the playground for some lunchtime viewing of sunspots. The main show began at 6 PM with the arrival of even more scopes supplied by Greg Benecke, Ken Lehmer, Bill Eisele, Jerry Stone, Tim Moore and Ken Munson for the night's party.

The weather cooperated and the sky cleared up beautifully, allowing

the students to see, Mars, Saturn, star clusters, nebulae and even a couple of distance galaxies. There were upwards of 150 students from the 5 Fifth Grade classes that attended. Each student was given a "Passport to Space" from which they had to see at least one object in each of the three categories: in our solar system, in our galaxy and outside our galaxy. The student and even their parents joined in this activity with great enthusiasm. Each passport had at least 3 slots per category. Many of the passports were filled out completely, i.e., all slots filled in. The party was a great success with lots of enthusiastic youngsters eager to ask questions and see these distant objects.



### Astronomy for City Dwellers



Explore the Night Sky Using the Latest in "GOTO" Computerized Telescopes. Learn the Constellations, View Planets, Galaxies and Star Clusters.

No Experience Required

6 Tue Evenings 7 to 9 PM  
February 7 to March 14

To Register Call PV Adult School  
(310)-541-7626 Ex 708

*Instructor: Joe Fierstein*

### Astronomy for City Dwellers

Once again, it's time for folks new to astronomy to get a little practical experience at the hobby. At least they can experience as much as can be done from inside the city. That's always a good place to start! Check out Joe Fierstein's class via the Palos Verdes Adult School.

### A Thank You to the Club

Dear Club Members,

Thank you so much for the telescope, tripod, and eyepieces that I received from the club. I am honored to be the recipient of such a wonderful gift. With this telescope, I will observe and learn more about the night sky and have fun all at the same time.

So far I have looked at the moon, but I plan to do much more over the upcoming weeks. Some of the things that I plan to look at are the Andromeda Galaxy, the moon in its waning stage, and the different shapes of globular clusters. I also hope to observe Mars, the Milky Way, Venus, and the rest of the planets.

In the past, the club has helped me earn my Cub Scout Astronomy pin, which is required for my Arrow of Light Badge. This badge lets me be promoted into Boy Scouts. In the future, I will work on my Boy Scout Astronomy Merit Badge. I will also share my love of astronomy with my friends.

I appreciate the kindness of the members in the club. The amazing things I have learned from the members have

taught me to look at the sky in a totally different way. A special thanks to Joe Fierstein for his knowledge and enthusiasm. Again, I would like to say thank you for all that you have taught me.

Sincerely,

Will Lehmer

## **Scope Accessories**

Rigel Systems is offering some scope accessories for sale at the next club meeting. If you'd like to order some, call (310)-375-4149.

<b>Rigel System Scope Accessories</b>	
<b>Item</b>	<b>\$ Each</b>
9mm KE 1.25" EP	\$15.00
12mm Ke 1.25" EP	\$15.00
25mm Ke 1.25" EP	\$15.00

## **Observer's Handbooks**

Two copies of the Observer's Handbooks are still available. They are \$16.95 each. Contact Greg Benecke at the next general meeting on February 3<sup>rd</sup>.

## **Observing Reports**

**Jan. 8<sup>th</sup> Backyard Observing** – Even though the moon was bright I decided to set up the scope in the backyard and practice some more with the Meade DSI. The targets this time were going to be the moon and planets. One would think the moon would be an easy target. Not so easy! It still takes a bit of work to find the right settings to get a decent picture. This time I also did a bit of experimenting by switching in and out the focal reducer and a Barlow Lens. With the Barlow and minus the Reducer, I was able to get a bit of surface detail on Mars. Unfortunately, once again when Saturn finally rose high enough to try photographing, I had lost the battle against the marine layer. My poor battery was drained trying to fight off the dew and fog was quickly moving in so I had to shut down.

**- Ken Munson**

**Jan 20<sup>th</sup> Ridgecrest School** - The seeing was fairly steady allowing 200 plus power on Saturn. The air was dry. We had a fair turnout. Craig Gates with his 11" SC, Arnie Stodolsky with an 8" SC, Joe Fierstein with a 4" alt/az computer driven Newtonian, Tim Moore and his 14" SC, Steve Pedersen with a pair of binoculars, and myself with the 8" Newtonian.

Will Lehmer (see above) got the opportunity to enjoy his new scope and demonstrated it to some fellow classmates. In addition to the 5th grade class from Silver Spur School we had several other visitors including Gerald Nixon and his children Amy and Stephen who came all the way from Lakewood.

Among the various objects, besides Saturn, observed that night were M36, M37, and M38 in Auriga, M42 in Orion and M45 in Taurus.

**- Ken Rossi, Arnie Stodolsky and Joe Fierstein**

## ***Schedule of Coming Events***

<b>3 February Friday Evening 7:30 PM</b>	<b>Monthly General Meeting</b> Guest Speaker: Ron Obert Topic: Cosmology: From its Fundamentals to its Heart in an Hour
<b>6 February Monday Evening 7:30</b>	<b>Monthly Planning Meeting</b> See directions on Page TBD
<b>18 February Saturday Evening</b>	<b>In Town Dark Sky Observing Session – Weather Permitting:</b> 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, 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. <i>Drive with care</i> to avoid steel pillars supporting basketball nets. <b>Note: If you a visitor, not bringing a scope, it is requested that you park in the small parking lot on Northbay Rd.</b>
<b>22 February Wednesday Evening</b>	<b>Monte Malaga School Star Party</b> See directions on page 5.
<b>23 February Thursday Evening 7:00 PM</b>	<b>Von Kármán Auditorium (Thursday) &amp; Vosloh Forum at Pasadena City College (Friday)</b>  <b>“Atmospheric Science on Venus, Jupiter, Saturn and Titan”</b> by Kevin Baines. For centuries the surfaces and dynamic atmospheres of many planets, have been obscured at depth by thick clouds and smog, hiding the secrets of bizarre weather systems and alien surfaces. However, today, the wonders hidden at depth and on the surfaces of a variety of planets are being revealed by a number of recently-launched interplanetary spacecraft using a novel observational technique.
<b>24 February Friday Evening</b>	<b>Cornerstone Elementary School Star Party</b>
<b>25 February Saturday Evening</b>	<b>Out-of-Town Dark Sky Observing Session</b> Contact Greg Benecke for directions.
<b>3 March Friday Evening 7:30 PM</b>	<b>Monthly General Meeting</b> Guest Speaker: Ken Munson Topic: History AND Astronomy
<b>6 March Monday Evening 7:30 PM</b>	<b>Monthly Planning Meeting</b> Location TBD.

# South Bay Astronomical Society

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*General Meeting at El Camino College Planetarium:  
Friday, February 3<sup>rd</sup> at 7:30 P.M.*

*Guest Speaker: Ron Obert*

*“Cosmology: From its Fundamentals to its Heart in an  
Hour”*

\* \* \* \* \*

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