FIRST LIGHT

Journal of the South Bay Astronomical Society – October 2006
on line at www.geocities.com/sbas_elcamino

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

Guest Speaker: Mona Delitsky

"Triton's Ionosphere: Chemistry and Composition"

The September 8th Meeting

Club president Ken Rossi called the meeting to order at 7:30 PM and welcomed new member Ken Nagai to the club. After a brief introduction of several visitors, Ken proceeded with announcements. An appeal was made for more email deliveries of the newsletter as this will greatly reduced club operating costs. Arnie Stodolsky mentioned a special Astronomy Magazine subscription rate. President Rossi talked about the renovation of the Torquato telescope and how work on it will be coordinated during the school year. Joe Fierstein gave a short presentation on some city planning in Rancho Palos Verdes that made finally provide a permanent site for the club's telescope dome. The site being considered is at Upper Pointe Vicente. Joe urged anyone with ideas to contact club officers so that they can be expressed to the RPV city council. Craig Gates put in a reminder that the "Astronomy for City Dwellers" class will be starting soon.

Pres. Ken Rossi Presents Dr Harrison With A Certificate of Appreciation
For His excellent Talk About The James Webb Space Telescope

After announcements, there was a discussion of recent observing sessions. Greg Benecke and Garth Magee made a mid-week trip to Mt. Pinos and were treated to a night of very good seeing. Ken Rossi and Arnie Stodolsky went to Mt. Pinos on the weekend and also had a good observing session. Ken Munson spoke of his trip up to the Angeles Crest where, while the seeing wasn't great, did provide more opportunity for experimenting with the Meade Deep-Sky Imager. Ken Rossi, Joe Fierstein and Ken Munson, with his nephew Dane Johnson, spent a Saturday evening over Labor Day weekend attempting to observe the SMART1 spacecraft impact on the moon. Unfortunately, the event proved just too short and faint to be seen by manual observing.

After a brief interlude, the evening's guest speaker was introduced. Jill Haney, a colleague provided the introduction of Michael Harrison. Mr. Harrison received a degree in Astrophysics at MIT and went on to get a degree in Quantum Chomo Dynamics. Realizing that jobs for specialists in quantum chromo dynamics were in short supply, he decided on a more practical career course. He became an intern at TRW 25 years ago and has since worked on a variety of spacecraft ranging from near-earth orbit to geostationary orbit. He now works for Northrup Grumman and is involved in work on the James Webb Space Telescope, the next great step in NASA's space-based telescope system.

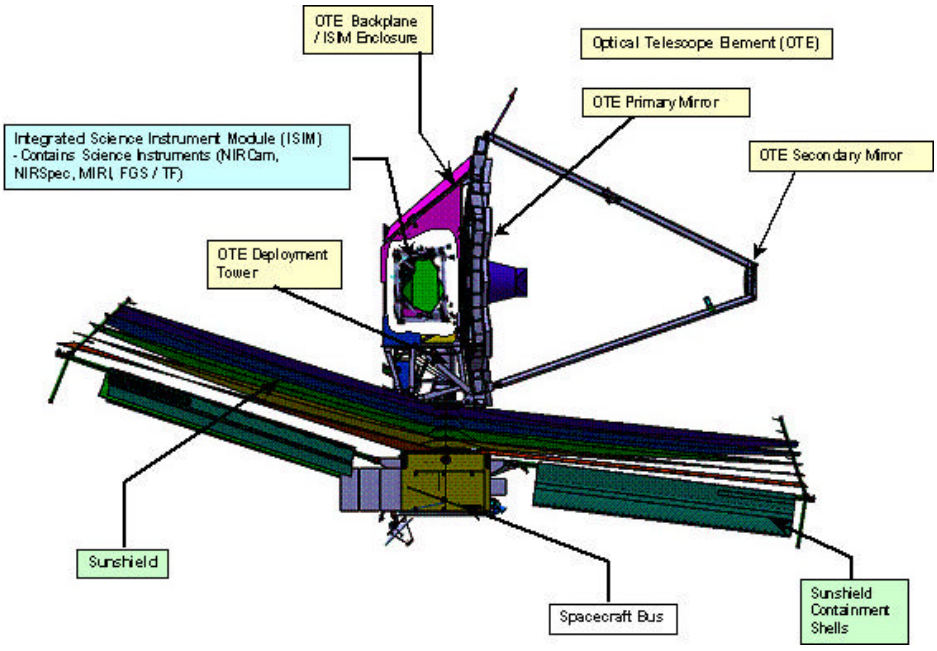
Mr. Harrison began his talk with an introduction to spacecraft and what they may be used for, and how NASA makes its decisions on which spacecraft missions get approved. A prime example of the use of satellites was weather observing. A single person or weather station can only measure the weather in one location. Weather balloons can make measurements of the weather at various altitudes but it would require many balloons to cover a large area. A single orbiting satellite, however, is equivalent to 400,000 weather balloons per year.

Since NASA has many on-going projects, certain budgetary decisions must be made as to which projects get support during any fiscal year. A government panel makes the decisions as to which earth-observing projects will provide the best investment for citizens, business and government. To this end, for earth observing missions, they have done a multi-spacecraft constellation;

Terra – spacecraft for observing earth's ground resources
Aqua- spacecraft for observing the oceans
Aura – spacecraft for observing the atmosphere

Mr. Harrison worked on the Aura project and presented a few slides on it. Aura is an important atmospheric research satellite aimed at determining the on-going activity around the hole in the ozone layer that was discovered over Antarctica. It is a 6000 pound spacecraft in a sun-synchronous polar orbit, i.e., it crosses the equator at specific, repeating times such that the same angles between the spacecraft, ground and sun re-occur. A bit of frustration occurred when a short video of data from the mission failed to play. This was later fixed by his colleague, Philip Corganis, and we were able to see images of the ozone hole. One of the primary objectives of the mission was to determine if the hole was growing or shrinking and if the pollution control standards that industrial nations have enacted were helping to reduce the hole. Although much more data remains to be collected, it does appear that our efforts to control atmospheric pollutants are helping to reduce the ozone hole.

Then came the main subject of the evening's talk, the James Webb Space Telescope (JWST). The objective of this mission is to observe the first stars, the first galaxies and the first solar system formations. Mr. Harrison presented a very good graphic that showed the evolution of the universe from the big bang to now. Earlier satellites have been able to detect the cosmic background radiation, the left over remnant of the big bang but ground-based and even space-based telescopes have only been able to see a certain distance back into time. According to Einstein's equations, as the universe expands, even the light will gradually be shifted ever more towards the red. Beyond a certain distance, the light will be shifted so far that no visual light telescope can detect it. It is this 'dark ages' between the formation of the cosmic background radiation and the first visible stars and galaxies that JWST is designed to explore.



In order to carry out this mission, the spacecraft will have some very special design requirements. The spacecraft will be placed in orbit at the Lagrange 2 point, directly opposite the sun from the earth. This point is 1 million miles away from the earth. The main telescope is 6.5 meters in diameter resulting 25 square meters of collection area, more than 7 times the size of the Hubble Space Telescope. Since this must fit inside a launch vehicle, the mirror is made up of 18 hexagonal beryllium mirror segments which can be folded up for launch and then deployed into the mirror shape. Each mirror is individually movable and an be adjusted to correct for errors. This should preclude the type of embarrassment that initially plagued the HST. The entire mirror is only one-third the weight of the Hubble mirror.

In order to detect the faint infra-red energies of the 'dark ages', the telescope most be protected from the heat of the sun. To this end a large, deployable sun shield made of Kapton, in three layers, will keep the telescope in shadow.

While this will keep the mirror itself extremely cold, the heat generated by the spacecraft bus and instrument packages would nullify that. Therefore, the instrument packages will be cryogenically cooled to make them as sensitive as possible to infra-red wavelengths. Unlike previous, infra-red observing spacecraft which tended to run out of coolant, the JWST will re-circulate the coolant. Therefore, coolant will not be the life-limiting factor in this mission.

Because of the need to keep away from the sun and the earth (both big heat sources), the spacecraft is limited to a fairly narrow field of view. The main axis of the spacecraft points towards the sun but the telescope points approximately 90 degrees from the main axis. The telescope is limited to about a 50 degree wide swath of sky that it could observe at any time. As the spacecraft orbits the sun, this will slowly allow it to observe the entire sky. Thus, astronomers must carefully plan their observing sessions with an eye to what is visible at any given time.

The JWST carries four science module packages: the Mid Infra-Red Instrument (MIRI), the Near Infra-Red Camera (NIRCam), the Near Infra-Red Spectrograph (NIRSpec), and the Fine Guidance Sensor (FGS). The Mid-Infrared Instrument (MIRI) is an imager/spectrograph that covers the wavelength range of 5 to 27 micrometers, with a possible spectrographic coverage up to 29 micrometers. The Near Infrared Camera (NIRCam) is an imager with a large field of view and high angular resolution. The NIRCam covers a wavelength range of 0.6 to 5 micrometers and has 2Kx2K detector arrays. These are analogous to CCDs found in ordinary digital cameras. The NIRCam is a science instrument but also an Optical Telescope Element wavefront sensor, which provides something similar to instant LASIK vision correction. The Near Infrared Spectrograph (NIRSpec) enables scientists to obtain simultaneous spectra of more than 100 objects in a 9-square-arcminute field of view. The Fine Guidance Sensor is a very broadband guide camera that is incorporated into the cryogenic instrument payload in order to meet the image motion requirements of the JWST. This sensor is used for both "guide star" acquisition and fine pointing. The guider is accurate to 0.005".

Mr. Harrison summarized his talk with a slide on the history of telescope development. Galileo's telescope was able to reveal objects about 100 times fainter than the human eyes could see. Hershel's telescope was able to see object 1000 times fainter than the eye could see. The HST increased this range to 1 million times (10^6) fainter than they human eye. The JWST is expected to increase this range to 10^8 times fainter.

As a final demonstration, after his colleague Philip Cojanis, got the animations working, he demonstrated the incredibly complex deployments that must happen in order for this telescope to function. After a round of questions from the audience, the meeting ended at 9:38.

- ***Ken Munson***

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Staggering Distance

By Dr. Tony Phillips

Tonight, when the sun sets and the twilight fades to black, go outside and look southwest. There's mighty Jupiter, gleaming brightly. It looks so nearby, yet Jupiter is 830 million km away. Light from the sun takes 43 minutes to reach the giant planet, and for Earth's fastest spaceship, New Horizons, it's a trip of 13 months.

That's nothing.

Not far to the left of Jupiter is Pluto. Oh, you won't be able to see it. Tiny Pluto is almost 5 billion km away. Sunlight takes more than 4 hours to get there, and New Horizons 9 years. From Pluto, the sun is merely the brightest star in a cold, jet-black sky.

That's nothing.

A smidgen to the right of Pluto, among the stars of the constellation Ophiuchus, is Voyager 1. Launched from Florida 29 years ago, the spacecraft is a staggering 15 billion km away. It has traveled beyond all the known planets, beyond the warmth of the sun, almost beyond the edge of the solar system itself.

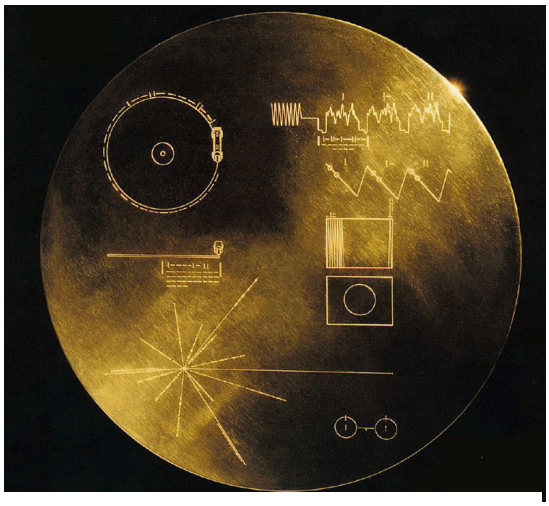
Now that's something.

"On August 15, 2006, Voyager 1 reached the 100 AU mark—in other words, it is 100 times farther from the Sun than Earth," says Ed Stone, Voyager project scientist and the former director of NASA's Jet Propulsion Laboratory. "This is an important milestone in our exploration of the Solar System. No other spacecraft has gone so far."

At 100 AU (astronomical units), Voyager 1 is in a strange realm called "the heliosheath."

As Stone explains, our entire solar system—planets and all—sits inside a giant bubble of gas called the heliosphere. The sun is responsible; it blows the bubble by means of the solar wind. Voyager 1 has traveled all the way from the bubble's heart to its outer edge, a gassy membrane dividing the solar system from interstellar space. This "membrane" is the heliosheath.

Before Voyager 1 reached its present location, researchers had calculated what the heliosheath might be like. "Many of our predictions were wrong," says Stone. In situ, Voyager 1 has encountered unexpected magnetic anomalies and a surprising increase in low-energy cosmic rays, among other things. It's all very strange—"and we're not even out of the Solar System yet."



In case it is ever found by intelligent beings elsewhere in the galaxy, Voyager carries a recording of images and sounds of Earth and its inhabitants. The diagrams on the cover of the recording symbolize Earth's location in the galaxy and how to play the record.

To report new developments, Voyager radios Earth almost every day. At the speed of light, the messages take 14 hours to arrive. Says Stone, "it's worth the wait."

Keep up with the Voyager mission at voyager.jpl.nasa.gov. To learn the language of Voyager's messages, kids (of all ages) can check out spaceplace.nasa.gov/en/kids/vgr_fact1.shtml .

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

New Dwarf Planets Get Names

Following the Aug. 24 resolution by the IAU to the effect that the solar system contains eight "planets" (Mercury-Neptune), with (1) Ceres, Pluto (cf. IAUC 255), and 2003 UB_313 (cf. IAUC 8577) to be considered representative "dwarf planets", the Minor Planet Center included Pluto and 2003 UB_313 (along with two other new potential dwarf-planet candidates) in the standard catalogue of numbered objects with well-determined orbits as (134340) and (136199), respectively (see MPC 57525). Following near-unanimous acceptance by both the Committee on Small-Body Nomenclature and the Working Group on Planetary-System Nomenclature (in consultation with the discovery team), the IAU Executive Committee has now approved the names Eris for (136199) and Dysnomia for its satellite (136199) Eris I [formerly S/2005 (2003 UB_313) 1; cf. IAUC 8610].

Scope for Sale

Meade model ETX90 Maksutov Cassegrain Telescope, Meade #497 Autostar Computer Controller ("Go-To"), Meade #883 Advanced Field Tripod

Accessories: Hard Carrying Case for the telescope, Soft Carrying Case for the Field Tripod, Meade 45 Degree Terrestrial Viewing Prism

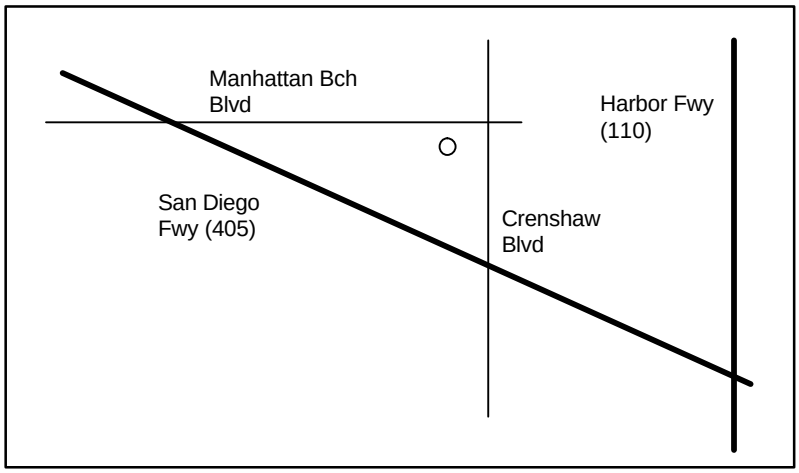
Sale Price is $300. Contact Gary Mancuso at 310-297-2806 during the day or at 310-821-8413 in the evenings

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 September 11th 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.

Elections

A year has now passed since the club constitution was ratified and club officers were elected for the very first time. Election time is fast approaching. If you'd like to become more involved in the operation of the club, then please come to the October meeting to help select candidates for the club officers. Nominations will be made and notices will be mailed out to club members. Voting will take place at the November meeting with the newly elected officers assuming office in January 2007. At this time, most board members will stand for re-election but please feel free to make nominations. Everyone, please get involved in making the SBAS a truly dynamic society!

Welcome New Members

Several new members have joined the SBAS in the last month. Join us in welcoming them to the club!

James Winterroth
Patricia Dobbins
Richard P. Leonard
Fred Klink

The SBAS Nexstar 8 Telescope

In May of 2000 Rick Hedrick, VP of Engineering at Celestron, presented SBAS with a gift of one of their newly introduced NexStar - 8 telescopes. In the 6 years that the club has had it the scope has seen a fair amount of use at star parties and also a great deal of upgrading. It was the original engineering model and as such had already seen quite a bit of use.

Celestron graciously took it back and reworked it to like new status. Since then they have given us excellent service by cleaning and collimating it when necessary all at no charge. On its last trip for service it was upgraded to 8i status and a 9x50 straight thru finder was added. Over the years a number of people have donated accessories for the scope turning it into a very versatile and modern instrument. The purpose of this article is to thank Celestron and all those members who have contributed and to encourage those of you who do not have a scope to try it. The club loans it to members in good standing for $5 a weekend or $10 for a whole week. If that isn't a bargain I don't know what is. So here is the list of donors and accessories.

John Evans	Orion Solar Filter
Dr. Steven Morris	JMI Carrying Case + 25mm Televue Plossel
Joe Fierstein	Orion Red Dot Finder + 9x50 Rt Angle Finder Scope +12mm Eyepiece w/illuminated reticle
Bill Eisele	12volt Battery w/Charger
Greg Benecke	Dew Shield w/Heater & Controller
Bill Chatter	Equatorial Wedge & Case for Celestron NexStar 5
Al Fader	Mead LPI Web Cam
SBAS	"StarAlign" Hand Controller +GPS attachment + Deluxe Tripod
Dan Trimble	Mead Flip Mirror for auto guiding
Nancy Roy- (Non Member)	Celestron Ultima 2x Barlow & Red Dot Finder

You can see from the list that the scope has been up graded to the very latest in technology. With the GPS attachment and the new StarAlign hand controller even a beginner can find things in the sky. So check it out and give it a try. Take a step up in your astronomy hobby. With thanks to Celestron and all those generous people.

If I missed anyone I apologize, but please let me know.

- Joe Fierstein

Transit of Mercury

On Wednesday, November 8, the planet (yes, it's still a planet) Mercury will transit across the face of the sun. This transit will be visible from the LA area starting at about 11:12 PM and lasting until about 4:00 PM. Joe Fierstein is working on organizing a public viewing event, possibly at Hesse Park in Rancho Palos Verdes. Anyone interested in helping out should contact Joe.

Space Week at Tulita Elementary

SBAS will be supporting Tulita Elementary School's Space Week activities with daytime lectures and a star party to be held on October 4 from 7 to 9 PM. The school is located at 1520 Prospect Avenue in Redondo Beach. Tulita's Space Week runs from September 25 through September 29, with a special visit by NASA astronaut, Paul Harris, on the 22nd. SBAS will provide the star party on October 4. Several members have already signed up to help out with telescopes and talks but more are always welcome. The school is located on Prospect Avenue in Redondo Beach approximately 5 blocks north of Pacific Coast Highway.

Our Condolences

The South Bay Astronomical Society would like to extend our condolences to Nora de Muth and her family on the untimely death of her brother.

October – Comets & Asteroids

Comets Visible in September:

Comet	**Mag**	**Constellation(s)**
Swan (2006 M4)	9.9 – 10.6	Cvn-Boo-CrB-Her

Asteroid Occultations:

Event Summary for Torrance

Local Time d m y	Hr	Min	Durn m/sec	Star mag	Mag drop	Star No.	Planet No	Alt Name
16-Oct-06	2	51.9	2.2s	10.8	5.5	TYC 1350-00083-1u	1502	Arenda
17-Oct-06	21	53.2	5.2s	9.8	4.9	TYC 6374-00638-1u	1116	Catriona
17-Oct-06	23	25.9	2.5s	7.2	7.7	HIP 4176	755	Quintilla
6-Nov-06	5	4.3	0.6s	10.3	6.5	TYC 0282-00414-1u	1813	Imhotep

Planetary Occultations:

None

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

Dues for the Calendar year: 2007

If your have just joined us this year, or if your membership expires on December 31, 2006, you can renew with the following schedule.

Pro-rated Schedule <---------- PLUS----------> 2007 standard year						
Membership Expires	Individual Rate/ Family Rate	Student Rate	Year 2007 Rate	Individual Rate/ Family Rate	Student Rate	New Expiration Date
Dec 06	$0.00	$0.00		$30.00	$25.00	12/31/0
Nov 06	$2.50	$2.08		$30.00	$25.00	12/31/07
Oct 06	$5.00	$4.17		$30.00	$25.00	12/31/07
Sep 06	$7.50	$6.25		$30.00	$25.00	12/31/07
Aug 06	$10.00	$8.33		$30.00	$25.00	12/31/07
Jul 06	$12.50	$10.42		$30.00	$25.00	12/31/07
Jan/Jun 06	$15.00	$13.50		$30.00	$25.00	12/31/07

You can renew your membership on a pro-rated schedule to adjust your membership term to the standard calendar year. Your expiration date is shown on the monthly First Light mailing label. Please renew by check to the South Bay Astronomical Society, PO Box 1937, Redondo Beach, CA. 90278. Payments are also accepted at our general meetings.

- Ray Grace, Membership Committee
310-370-1913

Observing Reports

Ridgecrest School – On Saturday, September 16th, we had a great turnout at the in-town observing session. Ten people showed up with scopes and family and friends. The evening started out with a comfortable temperature and clear skies, although smoke from the Day Fire could be seen hovering far to the north. The sky was a bit unstable early in the evening rendering Jupiter a wobbly blur. Conditions slowly improved for a time and it got good enough to be able to split the famous Double-Double of Epsilon Lyra.

SBAS At Ridgecrest Star Party 9/18/06
Gathered Around Arnie's Homemade 6in F9

The school seems to have set the big yard light that illuminates the playground to turn on shortly after sunset, but thankfully, it shuts off around 9 PM or so. However, another light on the side of a building proved very annoying. A fortuitously forgotten jacket left on the playground made a convenient cover to block it from view.

A number of targets were observed during the night, among them, Jupiter, Uranus and Neptune. Uranus was really nice as it was near opposition. It made a very nice green ball although no moons could be observed. A few visitors to the session were very impressed with sights of star clusters, red stars, double stars and a few of the brighter nebulae like the Ring Nebula.

Unfortunately, as promising as the evening started it wasn't to last. The Santa Ana winds died down shortly after sunset and the high-altitude smoke from the Day Fire began drifting south instead of being driven west and out to sea. A thin layer of haze began to obscure the sky and conditions deteriorated. The glare of city lights reflected off the smoke layer made further viewing impossible and we packed it in at about 10:30 PM.

- ***Ken Munson***

Cottonwood Springs – Club members, Craig Gates, Dan Trimble and Steve Lindsey made the trip out to the Cottonwood Springs Campground in Joshua Tree National Park for some real dark-sky observing. On Saturday, the Santa Ana winds had returned, driving the smog back towards Los Angeles (and hampering the fire fighters struggling with the Day Fire). The desert air was incredibly clear with visibility ranging out to about 100 miles in the horizontal direction! Unfortunately, the vertical direction, although very clear, was not very stable. There was a whole lot of twinkling going on!

NGC 253 – The Sculptor Galaxy

My nephew, Dane Johnson, accompanied me on the trip and, as he'd never spent a night with a telescope under dark skies, we took a visual tour of the universe for a while. We followed a list of deep-sky objects from the book "Deep Sky Wonders" by Walter Scott Houston. Among the objects we checked out were the Ring Nebula, the Veil Nebula, the Network Nebula, and a lot of very nice open clusters. M39 was especially beautiful, being made up of very bright stars. A really cute little open cluster, NGC 6811, was made up of fairly dense but faint stars in a triangular formation with a streamer of stars extending from the topmost point. Strangely, both of us couldn't help noticing its resemblance to a Hershey's Chocolate Kiss. After a brief struggle we managed to quash the urge to run off to the nearest shopping center to get some chocolate and continued our observing.

Around 10:30 PM I switched to photography with the Meade DSI. Among the night's targets were the Helix Nebula (not a good result), Hubble's Variable nebula

(excellent result), Uranus (just a blurry blob due to the unstable air) and the Sculptor Galaxy, NGC 253. The first image of the Sculptor Galaxy was really clear and amazing so I decided to go for broke and attempt my first deep-sky mosaic. It took a lot of patience and time but I finally managed to get three good images spanning the width of the galaxy that I was later able to stitch together into a mosaic. It turned out even better than I dared hope! The final image does show some areas where more improvement in skill and techniques could be made but I was really pleased with this one.

While leaving the telescope to finish its imaging run, I walked over to talk to Dan, Steve and Craig. Craig put his 14" Celestron on the Sculptor and even visually, one could make out a good deal of detail. Dan and I talked about imaging and I noticed he was then doing the Horsehead Nebula. It was looking very good on his equipment so I decided to give it a try. Surprisingly, I found it right away and it showed up nicely in the first test image so I started an imaging run. By this time, though, either the rising sun or maybe it was zodiacal light, was extending into the eastern sky and seemed to interfere with the imaging. I didn't manage to get more than about 15 minutes of total exposure time but, still, the Horsehead was visible! I'll count that as a small victory.

By this time, it was nearly 4 AM and, as the temperature had dropped to about 58 degrees, the light but steady wind had finally chilled me down. A bright meteor blazed across the sky from east to west and I took that as a nice way to end a very successful evening.

- Ken Munson

Schedule of Coming Events

4 October Wednesday Evening 7 – 9 PM	**Tulita Elementary School Star Party** 1520 S. Prospect Ave, Redondo Beach.
6 October Friday Evening 7:30 PM	**Monthly General Meeting** Guest Speaker: Mona Delitsky Topic: Triton's Ionosphere: Chemistry and Composition
9 October Monday Evening 7:30 PM	**Monthly Planning Meeting** See directions on Page 5.
12 October Thursday Evening 7:00 PM	**Von Kármán Auditorium (Thursday) & Vosloh Forum at Pasadena City College (Friday)** "Advanced Technology for Life Detection and Biology" by Tim Krabach. The search for life, along with the precursors and residues of life, is a key theme for science and technology activities at JPL. To prepare for future planetary missions to Mars, Europa and Titan, researchers at JPL are engaged in a broad set of science investigations here on Earth, and numerous advanced technology efforts to develop novel devices to detect life's signatures.
14 October Saturday Evening	**In Town Dark Sky Observing Session –** 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, 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.**
21 October Saturday Evening	**Out-of-Town Dark Sky Observing Session** Contact Greg Benecke to coordinate a location for the dark-sky trip.

Attachment: Board Nomination Form

SOUTH BAY ASTRONOMICAL SOCIETY
EXECUTIVE BOARD ELECTIONS
NOVEMBER 2006

CALL FOR NOMINATIONS

The SBAS Executive Board positions are open for nominations.
Those individuals placed in nomination for a Board Position will be chosen by member vote during the SBAS November General Membership Meeting at the El Camino College Planetarium at 8:00 PM
The Board positions open for nominations are listed below. Positions are for one year terms.
To place a member in nomination write the nominee's name next to the position desired.

President _____

Vice-president _____

Secretary _____

Treasurer/Astronomical League Representative _____

Current Board Members are the following individuals:

President	Kenneth Rossi
Vice President	Greg Benecke
Secretary	Deanna Chafe
Treasurer/Astronomical League Rep.	Arnie Stodolsky

South Bay Astronomical Society

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

Guest Speaker: Mona Delitsky

"Triton's Ionosphere: Chemistry and Composition"

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