

# **FIRST LIGHT**



*Journal of the South Bay Astronomical Society – November 2005*  
on line at [www.geocities.com/sbas\\_elcamino](http://www.geocities.com/sbas_elcamino)

**Monthly General Meeting: Friday, November, 4th, 7:30 PM**

**Guest Speaker: Paul Livio**

***“Choosing Eyepieces”***

## ***The October 7 Meeting***

President Greg Benecke opened the meeting at 7:40 with reports of recent observing sessions, and plans for upcoming events. Four visitors to the meeting were welcomed, for a total of 35 people in attendance.

The evening's speaker was Dr. Art Huffman from UCLA, speaking on "Relativistic Travel to the Stars". It may be our destiny to colonize the galaxy, but how can this be reasonably done, given the huge distances to even the nearest stars? Einstein's special theory of relativity contributes one possible solution in the form of time dilation; an astronaut moving at close to the speed of light can travel many light-years while aging very slowly, as measured by observers back on Earth. At a constant acceleration of 1 g, an astronaut could reach the Andromeda galaxy and be only 28 years older.

Of course, more than 2 million years would have passed on Earth during that time, so perhaps warp drive or some other currently-inconceivable technique would have been developed, and the astronaut would be met by our distant descendants. There are other problems with traveling in an ordinary spacecraft. For one thing, the amount of energy required would be enormous, and antimatter (the only truly efficient fuel) would be expensive, dangerous, and difficult to store. For another, at near-light speeds the few atoms per cubic meter in interstellar space become a large radiation hazard.

A possible solution to the fuel problem would be to collect hydrogen as you go, and use it as fuel for fusion reactions. Perhaps we will first send tiny unmanned probes, each with a mass as small as 20 grams. We might try biological solutions, such as suspended animation, or the transportation of fertilized ova to be "hatched" and raised at journey's end. Such possibilities seem remote, but our rapid technological advances can turn science fiction into science fact in as little as 50 years. Dr. Huffman pointed out that electricity, lasers and radioactivity went from laboratory curiosities to common use in half a century, so who knows what the future will bring?

Einstein's general theory of relativity suggests even more exotic possibilities, such as the use of space warps and timeholes to evade the limitation of traveling through space ("as the crow flies"). The general theory of relativity is still being developed, and it has not yet been harmonized with quantum theory or a unified field theory. Perhaps future refinements of this theory will provide a usable space-travel technique. Unfortunately, current modifications to the theory permitting rapid space travel also seem to imply time travel as well, leading to the well-known paradoxes that come from traveling into the past and changing history.

A lively question period followed, and the meeting ended at 9:40.

**- Steven Morris**

***ANNUAL SBAS CLUB DUES RENEWAL TIME IS HERE: DETAILS SEE PAGE 4***

## **Thank You SBAS!**

Once again, Lomita Math/Science Magnet School has been enriched by the South Bay Astronomical Society's members' generosity. Fifth Grade students were treated to views of the night sky by Tim Moore (14" SC Meade), Jim Madison (17.5" Dobsonian), Ron Renney (Binoculars with Mirror Mount), Craig Gates (Celestron Nexstar 11" SCT), Shawn Belveal (Meade LX90 8" SCT), Jaques Linder (Meade LX200 Classic 8" SCT), Greg Benecke (Celestron C8 Deluxe 8" SCT) and I put out my 25x100 Oberwerk Binos with Parallelogram mount. All in all, we had 8 instruments on the field on what had threatened to be a cloudy night. Luckily, we caught a break and the night was somewhat clear with huge city glow. Considering the amount of local light pollution, amazingly, our society members were able to serve up views of the moon, Uranus, Neptune, Andromeda Galaxy, Pleiades, Ring Nebula, Albireo and many other interesting sights. Mars stubbornly remained a watery reddish blob. The Lomita School Community sends a big thank you to the Society for your years of support of our students' astronomical education.

*-Kurt Stenzel, Science Coordinator, Lomita Math/Science Magnet School*

## **NASA Small Body Conference**

The solar system is full of objects and new discoveries take place almost daily. Some of these objects challenge our ability to name and categorize them. Are there nine planets? Eight? Ten? Dozens? Small objects of rock, metal and ice are extremely numerous and are puzzle pieces for the evolution of the solar system.

We are actively engaged in exploration of these objects. DEEP IMPACT successfully struck a comet nucleus in July, STARDUST is bringing back comet particles in January, DAWN is scheduled to launch in June to explore Main Belt asteroids, NEW HORIZONS will explore Kuiper Belt objects after its Pluto flyby, the European Space Agency's ROSETTA is on its way to asteroids and a comet, Japan's HAYABUSA sits just seven kilometers away from an asteroid, and ground based observatories are probing the object at the extreme edges of our solar system.

Please join scientists and engineers at NASA's Jet Propulsion Laboratory for an educator conference on these objects. The conference will take place all day Saturday, December 3 and half day Sunday, December 4 at JPL in Pasadena, California. The conference is open to all educators including museum staff. High school students and above may attend. Anyone under sixteen years of age must be accompanied by an adult (parent or teacher).

Check-in begins at 8:00 am. On Saturday the conference will begin at 8:30 am and conclude at 5:00 pm. On Sunday the conference will begin at 8:30 am end at noon.

The Jet Propulsion Laboratory is located in the foothills of the San Gabriel Mountains in north Pasadena. For directions please visit [http://www.jpl.nasa.gov/about\\_JPL/maps.cfm](http://www.jpl.nasa.gov/about_JPL/maps.cfm). Note that pre-registration is required. Walk-up registration will not be possible for this conference.

To register for this conference please send in the following information and a registration check for \$35 to cover materials costs, food (continental breakfast both days, box lunch on Saturday, and breaks) and incidentals:

Name, Title, School/Organization, Address, State, Zip, Citizenship (Please bring government issued photo ID), Age (only if under 18 years of age), Contact info for confirmation & last minute changes: E-mail address, Phone number

Make \$35 check payable to: Jet Propulsion Laboratory

Mail to: Small Bodies Educator Conference, Attn: Kimberly Johansen, Mail Stop 186-113, Jet Propulsion Laboratory, 4800 Oak Grove Drive, Pasadena, CA 91109, (818) 354-0112

Registration deadline is Wednesday, November 23, 2005 (the day prior to Thanksgiving).

For current mission information visit: <http://www.jpl.nasa.gov/missions/>

For JPL education news visit: <http://education.jpl.nasa.gov/>

*- Joe Fierstein*

## **Goldstone Tour**

Fifteen club members made the long trek out to the Mojave Desert near Barstow to visit the Goldstone Tracking Station. This site has been a prime location for nearly all American space missions since the early days of the space program. Today it continues to track missions all across the solar system and even beyond.



## **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" \$29.00! Make your check payable to SBAS and mail the payment and your subscription / renewal form directly to South Bay Astronomical Society, P.O. Box 1999, Redondo Beach, CA 90278.

Part of your SBAS membership dues goes toward membership in the Astronomical League. All paid members should be receiving the "Reflector", the league's newsletter, four times a year. As a member organization, we can participate in a number of award programs they offer. These are based on completing various observing challenges. Check out the Astronomical League website at [www.astroleague.org](http://www.astroleague.org)

## **Our SBAS Committee**

<b>President</b>	Greg Benecke	217-1512	BeneckeRUs@aol.com
<b>Program Chairman</b>	Joe Fierstein	377-9834	Joefiers@aol.com
<b>Treasurer</b>			
<b>Newsletter</b>	John Collins	---	<a href="mailto:Jcollins@runbox.com">Jcollins@runbox.com</a>
<b>Reproduction</b>			
<b>Astronomical League Rep.</b>	Bill Eisele	542-5070	Astronomy131@aol.com
<b>Astronomical League Liaison</b>	Alex Athas	---	sbas_elcamino@yahoo.com
<b>SBAS Website Webmaster</b>	Ken Munson	782-0873	kenmunson333@sbcglobal.net
<b>First Light Editor</b>	Greg Benecke	217-1512	BeneckeRUs@aol.com
<b>Observing Committee</b>	Craig Gates	376-6387	---
	Mike Mayerchak	831-9188	Mmayerchak@aol.com
<b>Executive Committee</b>	Mark Braden	540-2810	Bradenm@fnic.com

## Rocket Launch Pictures

Anyone wishing to see some pictures of the Minotaur rocket that lit the western skies last month can view member Delbert Crawford's photos at: <http://home.comcast.net/~dwcrawford/mntrl/index.html>.

## Annual Membership Renewal

Renew your SBAS membership – Keep this amazing newsletter coming plus meetings and observing trips! Renew your membership in the group that brings you great monthly programs, the company of fellow observers, and many chances throughout the year to share the excitement of the night sky with students and new friends. If you just joined us this year, then you can renew your membership on a pro-rated basis to adjust your membership term to the standard calendar-year schedule. Renewal cost as a function of when your membership expires, is as follows:

<u>Membership Expiration</u>	<u>Renewal Fee Due Now!</u>	
	<u>Individual/Family</u>	<u>Student</u>
Dec. '06 or later	\$ 0.00	\$ 0.00
Nov. '06	\$ 2.50	\$ 2.08
Oct. '06	\$ 5.00	\$ 4.17
Sept. '06	\$ 7.50	\$ 6.25
Aug. '06	\$10.00	\$ 8.33
July. '06	\$12.50	\$10.42
June '06	\$15.00	\$12.50
May '06	\$17.50	\$14.58
Apr. '06	\$20.00	\$16.67
Mar. '06	\$22.50	\$18.75
Feb. '06	\$25.00	\$20.83
Jan. '06	\$27.50	\$22.92
Dec. '05 or before	\$30.00	\$25.00

To renew, check your membership expiration date in the upper right corner of the mailing label on the back page of this newsletter. This is what our records show for your membership expiration date. Please renew, according to the schedule above, by check to: South Bay Astronomical Society, P.O. Box 1999, Redondo Beach, CA 90278. (Payments will also be accepted at our general meetings!)

## Monthly General Meetings



We normally meet on the first Friday of each month at 7:30 p.m. in the Planetarium at El Camino College. If the first Friday is on or close to a holiday, we usually defer the meeting until the second Friday of the month.

The Planetarium is on the south side of Manhattan Beach Blvd., one block west of Crenshaw Blvd. (near the center of the map at left). Click on the map to get a display that can be zoomed out for a regional view. The zoom display appears in a separate browser window, which can be closed to return to this page.

The domed roof of the planetarium is visible from the street. There is on-street parking, and we can often use campus parking: check inside to see if you need a FREE parking permit for your car. Park in northeast corner lot, temporarily, due to the construction project.

We enjoy the planetarium facilities through the courtesy of the El Camino College Administration, and have several faculty members of the Astronomy Department as members of our Club. Our meetings always include an informal opening, when new attendees are invited to introduce themselves and let us know about their interests in astronomy. Members share their latest news and observations at this time. The rest of the evening is devoted to guest speakers, who range from amateur astronomers to professional astronomers to representatives from local aerospace companies to college professors. We are fortunate to have all these talented people in our area, willing to come and talk to us.

## Monthly Planning 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 **November 7th** planning meeting will be held at 7:30 PM at the offices of Microcosm, 401 Coral Circle in El Segundo. Taking the 405 Fwy. north from Torrance, exit at El Segundo Blvd. and turn left. Take El Segundo Blvd. to

Douglas and turn left. Take Douglas to Coral Circle and turn right. Follow Coral Circle around the bend to the left and then straight ahead. Microcosm occupies the crook of the next curve to the left and the company name is on the upper part of the building.

## **Observing Reports**

### **Observing Report – Cottonwood Springs October 1**

I headed out to Cottonwood Springs Campground on Saturday afternoon. All the weather sites I usually check indicated that would have about the best viewing of anywhere in area. I became a little worried as I was passing through the Palm Springs area. A large thunderhead was building to the east. Fortunately, it must have gone elsewhere as there was no sign of clouds when I got to the campground.

Arriving just as the sun set, I hurried to set up the scope. By the time I finished, it was dark enough to do some alignments and I spent a fair amount of time fine-tuning my polar alignment. There were a number of other astronomers around and, the few campers who weren't were very courteous with their lights. The whole campground was dark by 8:30. There was a light breeze which shook the scope a bit but that was gone by about 9:30. The temperature was dropping out of the 90's most of the night, bottoming out at around 68 degrees by midnight. The sky conditions were a bit shaky at first but from 11:00 to nearly 3:00, the sky was really spectacularly stable.

A recent issue of Sky and Telescope had some articles about tuning your vision for astronomy. I was interested in their comments about the Lasik procedures as I have already had my eyes lasered. When doing Lasik, they shape the cornea to produce the best images under normal daylight conditions. I have found that, in darkness, I lose a certain amount of focusing ability due to my pupils being fully dilated. Car headlights and taillights are difficult to gauge distances to and street signs are often a blur until I get close. To correct that, I did have my optician prescribe some glasses to correct the focus and remaining astigmatism. They work great for driving. Out of curiosity, I tried them on during the night and checked out the sky. And yes, the stars were a bit sharper and some of the fainter ones became visible. It wasn't a huge difference but it was noticeable.

I spent the early part of the evening checking out the usual suspects in the Sagittarius/Scorpio area then moved up the Milky Way towards Cygnus. Along the way, I came across some nice objects that you usually don't hear about. NGC 6781 is a fairly large but faint (12<sup>th</sup> Magnitude) planetary in Aquila. It looks like a big bubble. According to Starry Night, NGC 6891 in Delphinus is supposed to be nearly at 12<sup>th</sup> magnitude. When I came across it, it looked a lot brighter than that. A small round ball, it looked to be closer to 9<sup>th</sup> magnitude. Subsequent research on it shows that different people have reported it at different magnitudes. Maybe it's a variable. NGC 6905, also in Delphinus, was a nice little gem. This small, faint planetary is nestled among a triangle of stars. Surprisingly for being so faint, even to my eye it looked like some parts were brighter than others. It gave me the impression of a miniature Trifid Nebula. NGC 6765 is a very tiny, very faint planetary in Lyra, situated in a line between M57 and M56. It's a slightly elongated patch of grey, not round like most of the planetaries I saw tonight.

A couple of hours were spent doing some photographic work with the Meade DSI. This night it really seemed to work well. Instead of the usual noise, I could see stars in the 'live' image. Thanks to a really superb polar alignment, I was able to designate a star for it to track and the scope kept it in the FOV during the entire exposure. The DSI neatly aligns, stacks and adds each new picture, using the designated star as an alignment guide. Since the computer and scope were talking and I wasn't a party to the conversation, I walked around and talked to a few of the other folks who were from the Claremont Astronomy club. The objects I photographed were the Ring Nebula, NGC 7331, Stephan's Quintet and NGC 6905. As I had thought when observing it, NGC 6905 does indeed have some variations in shading. Stephan's Quintet, alas, didn't turn out as good as I'd hoped. These are five galaxies in collision, all of them faint. They were a bit too low in the sky by the time I got to them.

After putting the camera away, the real work of the night began. I'd set myself a goal of trying to find 2Fers, i.e., two DSO's that can be seen together in the same FOV. It's easy to do that in a target-rich environment like the Virgo Cluster of galaxies. So I'd gone hunting in the more wide-open stretches of the sky looking for hard-to-see 2Fers. It took a couple of evenings on Starry Night to find several. Some would be easy but others would be a real challenge. Some easy ones were M38 and NGC 1907, two star clusters close together. M38 is so big, most people hardly notice NGC 1907. Likewise, with M35 and NGC 2158, which actually make a 3Fer because IC 2157 can also fit in the same FOV. A more challenging cluster pair was NGCs 7142 and 7129. NGC 7129 is a very small cluster with only a few stars but it has a noticeable wisp of nebulosity about it. Of course, M81 and M82 had to be on the list. The crowing achievement of the night was seeing a 5Fer! Five galaxies (NGCs 1399, 1404, 1387, 1379, and 1374), ranging from 12<sup>th</sup> to 13<sup>th</sup> magnitude were just barely visible stretching across the FOV. A sixth galaxy, NGC 1365, lay just outside of the FOV.

By the time I finished that exercise, it was after 2 AM and Mars was high in the sky. This was the best view of Mars I've had since one day in the close pass of 2003. The image was stable enough to make out a dark wavy band along the equatorial region and what appeared to be Sytris Major. I couldn't really make out a polar cap. It was interesting to watch the image change as the sky varied. For just a brief moment, every now and then, a burst of detail would emerge and then disappear. Once again, my orange filter provided the best detail.

After a quick look at a few other objects, including Hubble's Variable Nebula (apparently in a dim phase) I decided to call it a night after getting my first look at Saturn. It was still low and shaky when I spied it. I went to sleep but left the scope running, aimed at Saturn. Sure enough, when I got up after sunrise, Saturn was still there and visible even with the sun rising above the hills! A nice end to a very satisfying night!

## November – Comets & Asteroids

No near Earth asteroids visible; No visible comets at perihelion; No comets above magnitude 11 in November.

### Asteroid Occultations

#### Event Summary for Los Angeles

Date	Local		Durn	Star	Mag	Star	Planet
	y m d	h m					
6-Nov-05	4	41.2	38.2	10.6	2.6	TYC 2426-00050-1u	165 Loreley
10-Nov-05	21	4.4	6.1	10.3	2	TYC 0622-00932-1u	116 Sirona
12-Nov-05	5	2.5	30.3	10.9	0.8	TYC 1319-01855-1u	60 Echo
14-Nov-05	22	1.8	7	8.9	4.3	TYC 5227-00241-1	345 Tercidina
22-Nov-05	22	46.4	4	10.6	5.3	HIP 27394	3193 Elliot

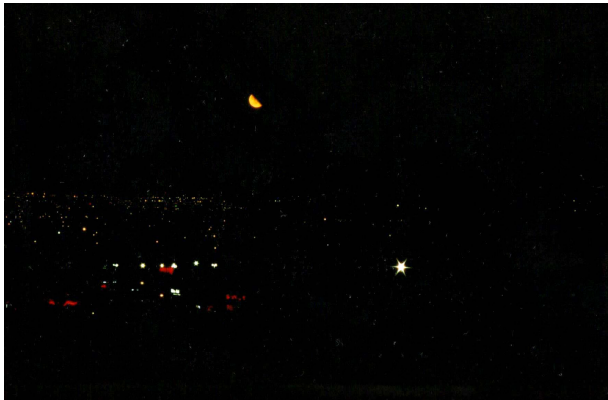
### *In Memoriam*

We are saddened to here of the passing of our member Bill Whiddon. Bill was among the founding members of SBAS . He was Observing Chairman for many years and an accomplished astrophotographer, sharing his stunning photos with SBAS on many occasions. He was the driving force within SBAS during the successful campaign to reduce the lighting on the Vincent Thomas Bridge. Although diagnosed with leukemia several years ago he kept up a vigorous schedule of work at TRW where he was program manager on many satellite programs. He also maintained his passion for eclipse chasing and recently he and his wife Nina traveled to Europe and the Antarctica to view the solar eclipses. Our sincere condolences to Nina and the rest of the Whiddon Family

### *One Small Light-Pollution Victory*

I purchased a 24-inch Dobsonian on an equatorial platform a couple of years ago, and have (slowly!) mastered its quirks. As I live near the intersection of Crenshaw Boulevard and Pacific Coast Highway, on the side of a hill that faces north, I knew before I began that the brightest constellations of lights would be formed by the streetlights burning through the Torrance night. Indeed, one of the reasons for buying “monster” telescope was to try to overcome the light pollution through sheer aperture.

However, several months ago a single light appeared in the east, outshining all other lights combined. It appears on the right of the photograph, far brighter than the last-quarter Moon, and casting distinct shadows on the wall of my neighbor's home. It was



easy enough to track down, at the top of a light pole in Rolling Hills Plaza at the corner of Crenshaw and PCH. It was meant to light up a parking lot and pizza parlor, but it had been installed without a thought given to the light spilling into the neighborhood beyond. Car drivers and patrons of the pizza parlor (which closes at 10 pm, while the light burns all night) would also benefit by not being blinded by the mega wattage of that fixture.

I decided to write to the management. The first letter sent in June went unanswered, but a second one sent in September



with the two pictures enclosed (taken on the morning of August 26) elicited a phone call from Jerry Elder, the security manager. Could he come over and have a look? Sure thing! He showed up on September 19, and turned out to be a friendly, easy-going fellow who admitted that the light was a stunner. As a life member of the International Dark-Sky Association, I was tempted to climb on my soapbox and point out the string of mercury lights plastered on the side of the AMC multiplex, visible to the left in the photograph. These lights do nothing for security, as the building is well-lit by the lights of the parking lot. They make the

building look ugly, and probably reduce security by making a crime difficult to see from other parts of the mall. It is painful to even look in that direction, while shielded lighting would save electricity and provide a real benefit. However, I restrained myself; my priority was that one floodlight.

And my efforts paid off! On September 29, I noticed that the light had been redirected. It wasn't gone, but it appeared no brighter than any of the AMC lights, which was all I could reasonably ask for. The moral of the story; it pays to write friendly letters. After all, the management of Rolling Hills Plaza was under no legal obligation to reduce the light trespass and light pollution they were generating. It was simply good-neighborliness on their part to go to the expense of bringing in the cherry picker to shift that light. Even in Los Angeles, where the battle for the skies may seem long-lost, there is still something that can be done.

- Steven Morris

**SOUTH BAY ASTRONOMICAL SOCIETY  
CONSTITUTION AND BY-LAWS  
REVISION B OF OCTOBER 16, 2005**

**ARTICLE I**

Name

Section I The name of this organization is the South Bay Astronomical Society (SBAS).

**ARTICLE II**

Purpose

Section I The purpose of this organization is to promote, through education, a knowledge and appreciation of astronomy. To accomplish this purpose, the members of the SBAS:

1. Coordinate their activities in astronomical observation, research, and craftsmanship.
2. Correlate these activities with the activities of other astronomical organizations, both amateur and professional.
3. Undertake projects to encourage an awareness of astronomy in the general public, with particular emphasis on education and developing a sustaining interest in astronomy among youths.

**ARTICLE III**

Offices

Section I The principal office for the transaction of business of this organization is located in the County of Los Angeles.

**ARTICLE IV**

**Membership**

Section I Membership in the SBAS is open to all persons who have an interest in astronomy.

Section II The SBAS has individual, family, and student memberships. Family membership includes all immediate members of a family living at a single address. Persons with a valid secondary school or college ID are eligible for student membership.

Section III There shall be one vote per paid membership.

**ARTICLE V**

Dues

Section I Dues for memberships are in amounts recommended by the Executive Board and approved by a two-thirds majority vote of a quorum. A notice of the meeting at which a vote on dues will be taken is to be given to the members at least one month before the meeting.

Section II Review of the dues structure and consideration of changes will normally occur at each annual meeting of the SBAS.

**ARTICLE VI**

**Officers**

Section I The elected officers of the SBAS are the President, Vice-President, Secretary, and Treasurer. The officers are elected from the membership for a one-year term by a majority of a quorum at the annual meeting of the SBAS and take office at the regular January meeting following elections.

Section II Vacancy in the office of the President will be filled for the remainder of the term by the Vice-President.

Section III Vacancy in the office of Vice-President, Secretary, or Treasurer, will be filled for the remainder of the term by appointment by the Executive Board upon approval of a majority vote of members present at a regular meeting of the SBAS.

Section IV One (or more) Member(s)-at-Large may be appointed at the discretion of the President with the approval of the Executive Board. The term of a Member-at-Large is one year from the date of appointment. The President may alter the term at his discretion with the approval of the Executive Board.

Section V No officer receives compensation from the SBAS.

Section VI An officer who consistently fails to perform normal duties and does not respond to ordinary communications from the SBAS shall be assumed to have resigned the office.

**ARTICLE VII**

Duties of Officers

Section I The President supervises the affairs of the SBAS and presides at its meetings. Will be chairman ex officio of the Executive Board. Assumes temporary responsibility for the duties of another officer in the event of the other officer's absence or resignation. Appoints a nominating committee to select officer candidates.

- Section II The Vice-President presides in the absence of the President. The Vice-President also serves as program chairman unless the President appoints a different program chairman.
- Section III The Secretary records the attendance and the minutes of the Executive Board. Handles the records and correspondence as directed by the President. The records are to be accessible to the Executive Board or to the membership upon reasonable notice. Will have custody of the agreements to which the SBAS is party. Reviews these documents periodically to insure continued compliance with their provisions when his term expires.
- Section IV The Treasurer has custody of all funds and securities of the SBAS, and receives and disburses funds under the direction of the Executive Board. Keeps records of the financial condition of the SBAS. Makes a full report at the annual meeting and presents a summary at regular meetings. The records are to be accessible to the Executive Board or the membership upon reasonable notice.
- Section V The Member(s)-at-Large will perform duties as assigned. May be a person or persons of stature, a professional astronomer or civic leader who can help further the purpose of the SBAS, whether or not he or she is a member of the SBAS.

#### **ARTICLE VIII**

##### Executive Board

- Section I The Executive Board is comprised of the four elected officers, Member(s)-at-Large, and the Permanent Committee Chairmen.
- Section II The Executive Board controls the property of the SBAS and has general power to conduct the business of the SBAS. The Executive Board meets, as necessary, upon the call of the President, or of any two other members of the Board. Reasonable notice must be given of any meeting. The minimum quorum for meetings of the Executive Board is three members.
- Section III The Executive Board is not to expend during a month more than twenty percent of the SBAS' financial assets as determined on the first day of that month without specific authorization by a majority vote of Executive Board members present.
- Section IV The Executive Board is not to commit the SBAS to debt.

#### **ARTICLE IX**

##### Meetings

- Section I The annual meeting of the SBAS is held in November each year at a date determined by the Executive Board. A notice of the annual meeting is to be mailed to the membership at least one month prior to the meeting. Such notice shall include candidates for office.
- Section II Regular meetings of the SBAS are held monthly or otherwise at the option of the President.
- Section III The minimum quorum to transact business for regular meetings is ten members, or is fifty percent of the membership if there are fewer than twenty in the membership.
- Section IV A simple majority vote of members present prevails in any vote except in a vote on amount of dues, an amendment of this constitution, or on dissolution of the SBAS.

#### **ARTICLE X**

##### Dissolution

- Section I The South Bay Astronomical Society can be dissolved only by a two-thirds majority of those members who respond to ballots sent by certified mail to their last known address. The ballots are to be sent by the Secretary upon the direction of the President. In the event of dissolution, any debt of the SBAS after sale of assets shall be paid by assessment of the members.
- Section II Upon the dissolution or winding up of the organization, all assets remaining after payment, or provision for payment, of all debts and liabilities of this organization shall be distributed to public educational institutions in the South Bay of Los Angeles County and or a nonprofit fund, foundation or corporation which is organized and operated exclusively for charitable purposes and which has established its tax exempt status under Section 501(c)(3) of the Internal Revenue Code.

#### **ARTICLE XI**

##### Amendments

- Section I This constitution may be amended by a two-thirds majority vote of members present. An Amendment is proposed by submitting to the Secretary a written statement of the proposed amendment signed by three members. A notice of the proposed amendment and of the meeting at which the proposed amendment will be considered is to be given to the membership. This notice is to be mailed by the Secretary at least one month prior to the meeting.

#### **ARTICLE XII**

##### **Political Limitation**

- Section I No substantial part of the activities of this organization shall consist of attempting to influence elections, and the organization shall not participate or intervene in any political campaign, except as described in Section II of this article.
- Section II The SBAS shall be a strong advocate for dark skies and sensible lighting laws that enhance the practice of astronomy.

#### **ARTICLE XIII**

##### Dedication Clause

- Section I The property of this organization is irrevocably dedicated to charitable purposes and no part of the net income or assets of this organization shall ever inure to the benefit of any director, officer or member thereof or to the benefit of any private persons.

#### **ARTICLE XIV**

##### ***Permanent Committees***

- Section I The permanent committees of the SBAS are:
1. Program Committee - Lead by Program Chairman. Plans general meetings and special events.
  2. Observing Committee - Lead by Observing Chairman. Plans in-town and dark sky observing sessions.
  3. Publications Committee - Lead by Editor. Publishes the organization's monthly news letter, promotional material and web communications.
  4. Membership Committee - Lead by Membership Chairman. Promotes new membership.
  5. Property Committee - Lead by Quartermaster - Maintains and loans out SBAS owned observing equipment.
  6. Publicity Committee - Lead by Publicity Chairman - Publicizes SBAS events and enhances public awareness of the SBAS.
  7. Outreach Chairman - Lead by Outreach Chairman - Promotes public education of astronomy

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

<b>4 November Friday 7:30 PM</b>	<b>Monthly General Meeting</b> Guest Speaker: Paul Livio talking on "Choosing Eyepieces"
<b>5 November Saturday Evening</b>	<b>In Town Dark Sky Observing Session: Public Mars Viewing</b> – 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 <u>not</u> drip anything you can park with your equipment. <i>Drive with care</i> to avoid steel pillars supporting basketball nets.
<b>7 November Monday Evening 7:30 PM</b>	<b>Monthly Planning Meeting</b> Refer to page 5 for details.
<b>17 November Thursday Evening 7:00 PM</b>	<b>Von Kármán Auditorium (Thursday) &amp; Vosloh Forum at Pasadena City College (Friday)</b>  "From Darkness to Light: The Exploration of the Planet Pluto" by Dr. Bonnie Buratti. Pluto, appearing as a small dot in even the largest telescopes, is the only planet not yet explored by a spacecraft.
<b>17 November Thursday</b>	<b>Leonid Meteor Shower Peak</b>
<b>26 November Saturday Evening</b>	<b>In Town Dark Sky Observing Session</b> See directions above.
<b>2 December Friday 7:30 PM</b>	<b>Monthly General Meeting</b> Monthly General Meeting: Guest Speaker – TBS
<b>3-4 December Saturday &amp; Sunday</b>	<b>NASA Small Body Conference</b> See article for information and directions.

# South Bay Astronomical Society

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

*Guest Speaker: Paul Livio*

***“Choosing Eyepieces”***

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South Bay Astronomical Society  
P.O. Box 1999  
Redondo Beach, CA 90278