

# ***FIRST LIGHT***



*Journal of the South Bay Astronomical Society - July 2003*  
on line at [www.geocities.com/sbas\\_elcamino](http://www.geocities.com/sbas_elcamino)

**Monthly General Meeting: Friday, July 11th, 7:30 PM**

**Guest Speaker: Prof. Gary Peterson (SDSU)**

**"Venus: Exploring the Inferno"**



Mike Rivas, Joe F. & Bill Eisele@ PV Farmer's Mkt 6/03

## ***What Happened To the Sun Spots?***

Once a year SBAS conducts an outreach program at the Farmer's Market in the Palos Verdes shopping center, usually in April around the time of Astronomy day. Normally, we attract a sizeable crowd by providing views of sun spots. This year we scheduled Sunday, June 22, and unfortunately the "June Gloom" shut us out until about noon, when the sun showed itself for a brief period before closing time. Despite the overcast skies we attracted a good

number of interested people. The main attraction being Mike Rivas' 12 inch Meade LX200. Many of the visitors already had scopes or some interest in astronomy and we collected more than a dozen signatures of prospective members! The club's new display panel also attracted attention. It consists of 3 panels, one of which was filled with NASA photos of the sun and sun related activities, another with the planets, and the third with club activities. In addition, Bill Eisele brought an interesting display depicting the solar wind and the effects of its magnetic field. All in all it was a worthwhile outing.

- *Joe Fierstein*

## ***Mt. Palomar Observatory Tour Date***

We have received confirmation on our next tour of the 200-inch Telescope scheduled for Saturday, **August 2nd at 12:00 Noon**. A signup sheet will be available at the July 11th General Meeting (or an email can be sent to me) to reserve a spot in the group, up to 30 people maximum. As I will not be attending this 2nd tour, we will need a volunteer to act as "group supervisor", making sure that the group is assembled and ready to go at 12:00 PM sharp!

- *Greg Benecke*

## ***Mt. Wilson Observatory Trip Rescheduled***

We have scheduled Thursday, **Sept. 25th**, one night before the New Moon, to use the Mt. Wilson 60-inch Telescope. Though a bit past the Mars opposition, the Mt. Wilson folks say in some ways it will be better as Mars will reach a higher altitude than it will at opposition. Of course, we will refund the \$36 paid by anyone who cannot make that date, so please notify me as soon as possible if you must cancel to give other members as much advanced notice on open spots. It should be noted, that in the event we do not have a full roster of 25, we may need to assess an additional amount for all confirmed attendees to cover the full \$900 rental for the night.

- *Greg Benecke*

## ***Congratulations to Vince Lloyd!***

Every year the Boeing Company, in support of the Griffith Observatory, sponsors a science writing contest. The winning articles are published in the "Griffith Observer", the monthly bulletin of the observatory. This year's 1st place winner is Vince Lloyd for his article "Who Measured the Distance to the Sun?". His article "The Precession of the Equinoxes" also won a prize and will be published in September. Last year, Vince demonstrated the precession of the equinoxes at an SBAS meeting using the planetarium projector. Little did we know that we were getting a preview of his prize-winning article!

Vince is an Astronomy Professor at El Camino College and a frequent contributor to our SBAS programs. He has often provided us with guided tours of the night sky using the planetarium's projector. His article about the distance to the sun reads like a who-done-it mystery. Many texts credit Aristarchos, a Greek astronomer of the 3rd century and although Aristarchos' solution was simple and elegant, involving the geometric relationship of the earth and sun at the time the moon is half-full, his calculation was off by a factor of 20. Perhaps we can persuade Vince to give us the solution to this mystery at some future meeting. In the meantime congratulations Vince!

- *Joe Fierstein*

## ***Red Rock Canyon State Park Last Chance Canyon Addition Planning Meeting***

Bill Eisele and Craig Gates went to the California City Council Chamber for the **June 14th** meeting. Our efforts are clearly having an effect. The California Parks Southern Sector's Superintendent started her opening remarks by recapping all of the different special interest groups that have supplied input to the process. The first one mentioned was astronomers! The current draft plan still shows the Redrock Inyokern Road viewing sites we use as being designated Primitive Zone, which would allow us unaltered use. The designation of this area seems to be non-controversial, unlike some of the other areas where no compromise is foreseen in the works between the two extremes of the pure conservationists and the off road vehicle proponents.

- *Greg Benecke*

## Your SBAS Committee

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## Monthly General Meetings



We normally meet on the first Friday of each month at 7:30 p.m. in the Planetarium at El Camino College. 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 Meetings

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 by any member or visitor wishing to attend. All are welcome!

We will meet on Monday, July 14th 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 Dr. to 3<sup>rd</sup> house on the right side from the corner – 7022 Willow Dr., Rancho Palos Verdes.

## ***SBAS Membership Benefits***

Contact John Collins for magazine subscriptions at club rates: "Sky & Telescope" \$29.95 and "Astronomy" \$29.00! Make your check payable to SBAS and mail the payment and your subscription / renewal form directly to SBAS, c/o Microcosm, Inc. at 401 Coral Circle, El Segundo, CA 90245-4622.

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)

## ***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!

## ***International Dark-Sky Association Membership***

The 2003 Membership Drive efforts put the official IDA membership count over 10,000, with a little help from the generous donation of Jean-Francois (J.F.) Simard, President and General Manager of Lumec, one of the IDA's lifetime members. Lumec gave 100 gift memberships for students to enable IDA to meet the 10,000 membership goal. The 2003 annual meeting held in March included the first meeting on night lighting's impact on wildlife and human health. The IDA's popular new shirt asks **Got Milky Way?** on the front and illustrates that beautiful night sky spectacle on the back. Visit the website <http://www.darksky.org> or call (520) 293-3198 for more information.

## ***The Orrery: Models of Astronomical Systems***

The Orrery is an informal, hard-copy newsletter that focuses on computer modeling and general use of computers in astronomy. Investigate orbit integrations, resonances, Trojan Point stability, and so on. Nearly every issue contains computer programs that the reader can use to duplicate or extend the investigations. The computer language of choice for The Orrery is BASIC, which a surprising number of hobbyists still use for astronomy programming, but there is also the occasional Excel spreadsheet or even MathCad worksheet. As editor, I am not averse to seeing contributions using Pascal, FORTRAN, C, or any other language that I can fathom. If anyone happens to have a bent for computer programming and tinkering with orbits, Kepler's laws, or any other form of calculation in astronomy, I would be interested in taking a look at any new articles contributed to The Orrery.

The newsletter itself is non-profit (subscriptions don't quite cover the cost of production and mailing -- but this is supposed to be a hobby, right?). You can get more of an idea of what we're about at this web page <http://members.attcanada.ca/~gneill/>

There you'll find an index to previous issues of the newsletter, and a (very small) set of down-loadable free samples. The contents of the first 23 issues were made into a hardcover book a while back, called "The Orrery: Computer Models of Astronomical Systems" by Caxton Foster (the first editor of The Orrery), and is available from Willmann-Bell. Although there are currently no plans to produce a second book, the possibility cannot be ruled out.

**- Greg Neill, Editor of "The Orrery Newsletter"**

# Observing Session Reports

**@Ridgecrest School** - The June 21 in town observing session was clouded out...

**@Mojave National Preserve** - I was finally able to take my new Nexstar 11 out to the desert for the first time since buying it back in March. I decided to get as far away from city lights as I could in Southern California and headed out to the Mojave National Preserve, a very bleak area of rugged mountains, sand dunes and old mines between I-40 and I-15. I went to the Mid Hills Campground which is located among Pinyon Pines at about 6000 feet. With LA 250 miles to the west, Las Vegas over 100 miles to the north, and Phoenix 200 miles east, it's about as dark as it can get. The southern sky is especially dark from this site. Viewing conditions were very good although there was some high altitude moisture that scattered some city light around. I setup the scope at about sundown and as the stars came out, I gave some nearby campers a quick tour of the sky. One little boy was so excited that I'm afraid his grandparents may not have gotten much sleep that night. I could still hear him talking excitedly about what he'd seen long after they'd gone back to their campsite.

I had a lot to look at and one of the first items was the Antenna Galaxies (PGC 37969), a pair of galaxies in collision. It looked more like an x-ray picture of someone's lungs to me. I've never seen an antenna that looked quite like that! Bernice's Hair Clip (NGC 4565) and the Sombrero Galaxy (M104) were especially magnificent. Using the 10mm eyepiece, I could easily make out the dark dust lanes in these two fine galactic specimens. I had some fun for a while checking out very small planetary nebulae. The Box Nebula (NGC 6309) was a real challenge, almost missed it completely when I slewed to it while the 40mm eyepiece was in the scope. I found a faint, tiny smudge and switched to the 10mm and the OIII filter and it showed up as a tiny rectangular object. NGC 6572 was another small planetary that was a challenge to find. I had to use the 6mm eyepiece to get the best view.

I spent a lot of time in the Scorpio-Sagittarius region looking at some old friends; the nebulae and globular clusters that dot so much of this region. It was truly stunning to see these familiar objects with the N11. I could not believe the number of stars I could see in objects like M11, M7, M6, M4 and M80. I used the OIII filter on the nebulae. Interestingly, the Lagoon and Swan nebulas were very vivid with the filter but the Trifid Nebula practically vanished. It showed far more detail without the filter. I can really see why this one friend of mine who has an 11-inch Dobsonian likes to hunt globular clusters. It's so amazing to find one and then jack up the power to see how good you can resolve it. It makes me wish I could understand the gravitation dynamics that form such objects.

It was while viewing globular clusters that I made the most interesting find of the evening. While viewing NGC 6440, a tiny globular cluster in Sagittarius, I noticed a small, very faint gray object nearby. I centered on it and used the 10mm eyepiece with the OIII filter to try to bring out more definition. There seemed to be some sort of structure to it but it was very hard to make out. I went back to it an hour later to see if it had moved but it hadn't, so alas, I hadn't found a comet. I had no idea what it was since it wasn't on the star maps I'd printed out from Starry Night. When I got back home, I checked it out and found it was NGC 6445, a faint planetary nebula, listed at mag. 13 in SNP, but listed as mag. 11 in the online NGC catalog. I checked out the photo of it on the Digitized Sky Survey and its no wonder it was so confusing to look at - that's one messed up little planetary! I got my first look at Mars, too. Unfortunately, the southern part of the sky was the worst area for thermal distortion, so I couldn't get a stable image. I was able to make out the polar caps very well, especially the southern one, and some coloration differences across the face of the planet. Hopefully, the sky will be better next time. Dawn comes early to the desert in summer and by 4:00 AM the sky was already turning pink, so I packed everything up and headed back to LA.

- **Ken Munson**

## ***A Day in the Life of an Amateur Astronomer***

**6:45AM** Alarm goes off awhile before the brain is capable of understanding it's time to get up. With clear skies last night the temptation at the eyepiece was just too great so I didn't get to bed until after 1 AM.

**7:19** With a shower and fresh clothes I begin to wake up just as I enter the garage. While picking up the newspaper in the driveway, I make a quick look around to see if I left anything outside. Check the back bumper of my car to make sure I didn't leave any eyepieces on it.

**7:45** Arrive at work, turn on the computer and check email. Although email correspondence is a big part of my daily work, 16 of the 21 new emails are from astronomy egroups. I'll have to ignore these non-work-related emails until break time.

**9:00** Read job-related emails and respond and/or begin necessary research to respond.

**9:15** Check Astromart by mistake when I accidentally clicked that link instead of the work-related link in my bookmarks.

**9:45** Click work-related link and read appropriate information.

**10:00** Email observing buddy to see if he's available for lunch.  
**10:05** Pick up Orion catalog by mistake when reaching for job-related trade publication.  
**10:45** Quickly put down Orion catalog and begin scanning index of trade publication.  
**10:50** Leave office to meet observing buddy for lunch.  
**11:00** Arrive in parking lot of restaurant. I'm a little early so pull out my PDA to check weekly meetings schedule.  
**11:01** Turn on PDA and am greeted with extremely dim display. Peel off red Rubylith colored filter to reveal Planetarium application running.  
**11:10** Standing in restaurant parking lot trying to find Venus as its location is indicated by Planetarium.  
**11:20** Locate Venus just as two other cars arrive in parking lot. Neither car is my observing buddy's. Occupants walk slowly toward restaurant looking back at me then looking up at the sky in the direction I'm looking. I think about asking if they want to see Venus but, considering the looks they're giving me, decide to keep quiet and just get back in my car.  
**11:45** Awakened by on-time observing buddy rapping on car window.  
**Noon** Go inside barbeque place for lunch.  
**2:00** Finish lunch and astronomy-related conversation.  
**2:10** Arrive in parking lot at work and step out of car to see if I can still spot Venus. Building occupants pay no attention to me scanning the sky – they know me.  
**2:30** Back at the ole desk and check email. 15 new emails. 12 are astro egroup posts. I'll get to them as soon as I finish with that stack of paperwork.  
**2:35** Start on that paperwork.  
**2:33** Find copy of last month's observing list in financial report. Scan list to note SEEN or NOT SEEN as best I can recall. Oh yea, NGC2158. Can't believe I was not previously aware of it in the field of view with M35. Let me take a quick look in Burnham's Celestial Handbook to see what's said there about it.  
**2:42** Find copy of Burnham's in office bookshelf between computer user manuals and personnel notebooks.  
**3:15** Check Dark Sky Clock. Hmmm clear skies tonight.  
**3:17** Email observing buddy.  
**3:20** Back to stack of paperwork on my desk.. Gotta update that spreadsheet  
**3:33** Accidentally click on Astromart link again.  
**3:50** Close browser and open spreadsheet.  
**3:51** Spreadsheet reminds me of the eyepiece calculator spreadsheet I found on the internet. Open eyepiece calculator spreadsheet. Man, that 16mm Nagler would give me a great field of view at higher magnification than my 18mm Ultima.  
**4:00** Open browser, surf to Astronomics to check price of 16mm Nagler.  
**4:10** Surf to Visa credit card account info to check balance.  
**4:12** The 18mm Ultima is a great eyepiece.  
**4:13** Update spreadsheet, compose email and attach spreadsheet. Send (and check) email.  
**4:14** Break-time! Better read these new egroup posts.  
**4:55** Where has time gone? Why all this work piling up? Oh well, I'll get it knocked down tomorrow.  
**5:00** Out of office and headed home. Check out the license plate of that car ahead... "M31OTA".  
**5:15** Arrive at home. Find new issue of Sky & Telescope in the mail. Yippee  
 No need to put up the scope and accessory case I left out in the living room – I'll be using it later.  
**5:45** Fire up computer and open Sky Map Pro. Print up some charts for those neat targets in S&T.  
**6:00** Wife calls me to dinner. "Just a minute. I want to check Astromart"  
**6:30** Set down to cold fish sticks and icy stare. Impish, knowing smile of familiarity from offspring who is eating his dessert.  
**7:00** Offer to clean off table in hopes of reclaiming human status.  
**7:15** Sit down on sofa with wife and make small talk to finish defrosting the room.  
**7:30** Announce that I think I'll step outside for a breath of fresh air. Announcement receives cordial reply. Good sign.  
**7:45** Sun setting. Must decide how to gather up telescope gear and justify absence from the family for a few minutes.  
**8:00** Walk back inside and ask wife, "Wanna take a look at Saturn?". Wife sucker for Saturn (and ONLY Saturn) so get positive response.  
**8:03** Scope stuff in driveway.  
**8:09** All set up and scope on Saturn. Call wife out.  
**8:15** Wife goes back inside after looking at Saturn and making appropriate remarks about how beautiful the planet is. Rest of night mine.  
**12:45AM** Bang tripod legs on wall while trying to sneak equipment back inside. Wakes wife. "What time is it?" I reply, "around 12, I just got up to go to the bathroom". **6:45** Alarm goes off...

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

<p><b>11 July Friday 7:30 P.M.</b></p>	<p><b>Monthly General Meeting:</b> Prof. Gary Peterson returns as our speaker for the evening on “Venus: Exploring the Inferno”. Gary is a Professor of Geology at San Diego State University and describes himself as an “Independent Planetologist”. He has made the long drive up from San Diego on several occasions to talk to us and he is always an interesting, informative and provocative speaker.</p>
<p><b>14 July Monday 7:30 P.M.</b></p>	<p><b>Monthly Planning Meeting</b> Refer to page 3 for location.</p>
<p><b>17 (JPL) 18 (PCC) July 7:00 P.M.</b></p>	<p><b>Von Karman Auditorium Lecture Series – FREE</b> “Searching &amp; Crawling: A Few JPL Research Robots” Robert Hogg, robotics engineer, JPL Autonomy &amp; Control Section: All about “Urbie”, a bathmat-sized robot designed to investigate potential human hazards, help search-and-rescue efforts and survey enemy territory. For more information call: (818) 354-0112.</p>
<p><b>19 July Saturday Evening</b></p>	<p><b>In-Town Dark Sky Observing at Ridgecrest School – Weather Permitting:</b> If the weather conditions are marginal, contact Greg Benecke to confirm that he will be opening the gate! 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. <b><i>Drive with care</i></b> to avoid steel pillars supporting basketball nets...</p>
<p><b>26 July Saturday Evening</b></p>	<p><b>Out-of-Town Dark Sky Observing – New Moon July 29</b> Contact Greg Benecke to arrange site location.</p>
<p><b>1 Aug. Friday 7:30 P.M.</b></p>	<p><b>Monthly General Meeting:</b> Our speaker will be Ms. Nagin Cox, Deputy Director of the JPL Rover Project.</p>
<p><b>2 Aug. Saturday 12:00 Noon</b></p>	<p><b>Mt. Palomar Observatory Tour</b> See details on page 2 for reserving a spot on the tour of the 200 inch Telescope!</p>
<p><b>4 Aug. Monday 7:30 P.M.</b></p>	<p><b>Monthly Planning Meeting</b> Location will be announced in the August newsletter.</p>
<p><b>23 Aug. Saturday Evening</b></p>	<p><b>In-Town Dark Sky Observing at Ridgecrest School – Weather Permitting.</b> Refer to July 19th entry for directions to the site &amp; instructions on weather conditions.</p>
<p><b>30 Aug. Saturday Evening</b></p>	<p><b>Out-of-Town Dark Sky Observing – New Moon Aug. 27</b> Contact Greg Benecke to arrange site location.</p>

# South Bay Astronomical Society

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*General Meeting at El Camino College Planetarium:  
Friday, July 11th at 7:30 P.M.*

*Guest Speaker: Prof. Gary Peterson (SDSU)*

*“Venus: Exploring the Inferno”*

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