

FIRST LIGHT



Journal of the South Bay Astronomical Society - April 2005
on line at www.geocities.com/sbas_elcamino

Monthly General Meeting: Friday, April 1st, 7:30 PM

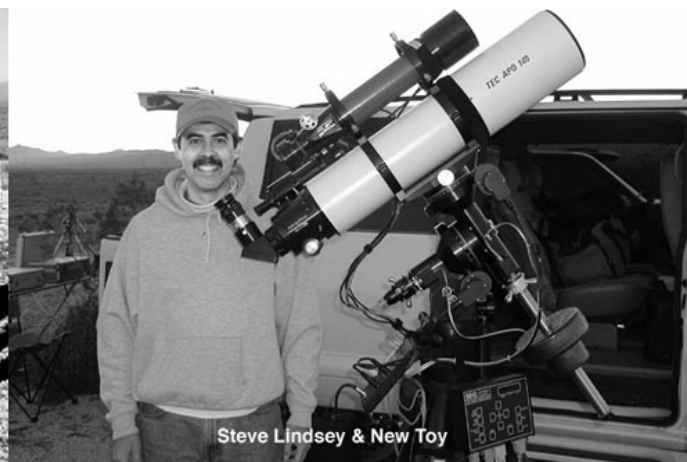
Guest Speaker : Mr. Ben Rodilitz (SiRF Technology Inc.)

“GPS Receivers and How The Network Works”

SBAS' 5th Annual Messier Marathon



Chris Ken Bill Greg Taylor Mark Kyle Craig Steve
SBAS @ Inyokern 3/12/05



Steve Lindsey & New Toy



Greg, Chris, Ken
Inyokern
3/12/05



Craig Searches The Heavens With His 11" SCT

SBAS' 5th Annual Messier Marathon Report

The 5th Annual SBAS Messier Marathon was started at the Redrock-Inyokern Road observing site. I say started because a better name for the evening might have been the Messier Blowathon. Joe Fierstein joined me for the drive and brought along the club's Nexstar. Steve Lindsey caravanned with us hoping for a night of photography with his new TEC apochromat. Craig Gates joined us with his trusty Nexstar 11. As the sun set the wind was strong enough to be of concern but we hoped for the best. For a time the wind was diminishing so it lulled us into believing

it would be a good night. We were ultimately joined by Bill Eisele (13 Inch Dob), Mark Straten (Nexstar 11) and his sons Taylor and Kyle, Ken Rossi (8 inch Newtonian on a GEM) and his son Chris. Larry Kenny was there with a group of his friends with some very big scopes, up to 25 inches. While I said I wasn't going to do the Marathon this year, I found myself trying to find the first object, M74, which I had failed to find in all four of my previous Messier Marathons. Unfortunately, the crescent Moon was only 5 degrees to the South of M74 and even resorting to digital setting circles on the 15 Inch Dob I was never able to say for sure that I could see it through the glare. So, using only the Telerad, I moved on to M77, then M31, M110, and M32, and I kept going. So without intending to do it, the Marathon was drawing me in.

For the most part the wind had died down with only an occasional strong gust. I did have to watch out for those because they will push a big Dob around with ease. As time went on the wind got stronger and was blowing more of the time than there were lulls. By 9:30 I had to give up and park the scope. I had only gotten 28 objects. Even the others with their smaller scopes were largely giving up. Steve had abandoned any thoughts of serious photography. We eventually maneuvered a couple of vehicles to provide some wind blocks, which helped. I did not pick up the Marathon but instead looked for interesting objects like galaxy clusters in Leo and Virgo and some irregularly shaped galaxies. Though I did not perceive much dust at my 6 foot altitude, there must have been a low layer of blowing dust. What started out as the normal buttery smooth motion of my Dob became rough and jerky as the night wore on. Illuminating the mirror showed it had picked up considerable dust. I went to bed early, about 4:00 AM.

- Greg Benecke

“Bad Weather” Reports

Ridgecrest School – March 5th was cancelled due to bad weather. The **Lomita Math & Science Magnet School Star Party - March 19th** Star Party was cancelled due to the weather, and then later in the evening - the sky cleared up! Unfortunately, the school didn't put up a sign to let people know of the cancellation, so we hope that our late-arriving members were not inconvenienced too much.

- Greg Benecke

Hubble's Top Five Scientific Discoveries - Night Sky Network Teleconference

March 29th at 6:00 P.M. PST (9:00 p.m. EST)

Since 1990, the Hubble Space telescope has circled 350 miles above the Earth going around once every 90 minutes. In that time (coming up on 15 years this April), the Hubble has been a key to unlocking some of the deepest secrets of the universe. Mario Livio, Ph.D., (<http://www-int.stsci.edu/~mlivio/>) is the former head of the Science Division of the Space Telescope Science Institute (<http://www.stsci.edu/institute/sd>). Now working in public outreach, Dr. Livio will be sharing the top five discoveries from Hubble, and after his presentation, Night Sky Network participants are invited to ask questions. The process to participate in the teleconference is simple and everybody in a Night Sky Network club is welcome to join. Members will need a username and password if they wish to download the PowerPoint or PDF versions of the presentation. Club coordinators can provide any club member a username and password using the club roster system. The web version of the presentation is not password protected.

Step 1: Download the Presentation. If you have PowerPoint or Adobe Acrobat you can step through the slides as Dr. Livio presents the details to us. The presentation is on the Night Sky Network web site under "Toolkit Downloads" - "Tele-Conference" section. Download the large PowerPoint version (35 MB) at:

<http://nightsky.jpl.nasa.gov/docs/LivioTop10.ppt> or download a smaller (4 MB) PDF file at:

<http://nightsky.jpl.nasa.gov/docs/LivioTop10.pdf>

If you have access to the web while on the call, you can view the presentation online at

<http://www.astrosociety.org/nsntelecon/march05.htm>. The presentation will be uploaded later this week.

Step 2: Participate in the Call. Anyone in the Night Sky Network can participate as individuals or in groups. Just dial in anytime to the number below after **5:45 P.M.** Pacific Time on Tuesday, **March 29th**. The toll-free conference call line is: 1-877-917-1549. You will be asked for the following: 1) Passcode: NIGHT SKY NETWORK 2) Call leader: MICHAEL GREENE and 3) Your NAME and the CLUB that you belong to. If you have any questions or are having any difficulties logging into the Night Sky Network, send an email to nightskyinfo@astrosociety.

- Joe Fierstein

Our SBAS Committee

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	Mike Mayerchak	831-9188	Mmayerchak@aol.com
	Mark Braden	540-2810	Bradenm@fnic.com

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 *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, **April 4th** at 7:30 PM at the home of Craig Gates, 902 N. Prospect in Redondo Beach. From 190th Street, turn north on Prospect and Craig's house is the second house on the east side (with the Hermosa Beach sign in the yard). There is ample space for parking in the driveway or on the street.

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

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!

April - Comets & Asteroids

Comets Visible:

Name	Magnitude	Constellation
2003 K4	10.0 – 10.8	Eri
Macholz (2004 Q2)	7.7 – 9.0	Dra-UMa
2003 T4	6.3	Aqr-Scl
Tempel 1 (9P)	10.7 – 9.7	Vir

Comets at Perihelion:

Date	Identification	Magnitude
Apr 3	2003 T4	6.3*

*Visible before dawn in the East

Near-Earth Asteroid Flybys:

Date	Identification	Magnitude	Distance
No visible near-earth asteroids.			

Asteroid Occultations:

Date/Time	Identification		
Apr 9 8:49 PM	Victoria TYC1316-22-1	5h 56m 36.1s	17d 10m 27s
Apr 25 11:57 PM	Lydia TYC1951-1161-1	9h 8m 24.4s	23d 22m 35s+

+This occultation should cause a 4 magnitude change in the brightness of the star, nominally a 9th magnitude star.

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

- Ken Munson

Asteroid Occultations

Since I've recently become interested in occultations, I have been checking the International Occultation Timing Association (IOTA) website for occultations visible from LA. So far, they haven't yet updated their site for 2nd quarter 2005. However, I managed to find on their website the software they use to do the predictions! Being many megabytes, it took a long time to download but turned out to be fairly intuitively obvious to use. I ran the software for the month of April 2005 and came up with several occultations of which I've listed what I thought were the two best.

The first one will be a bit of a challenge since the start is about 12th magnitude. However, there is a new moon for that weekend and the sky should be nice and dark. The occultation will cause about a 1 magnitude drop lasting for several seconds. The second one should be easier to spot even though it is on the night of a full moon. The star is 9th magnitude and the occultation should cause it to dim by at least 4 magnitudes! That should make it easy to spot even for a rookie occultation observer like me. Hopefully, the weather will cooperate a little more than it has the last few months!

- Ken Munson

Change in Arrival Time for Mt. Wilson Observatory Trip

SBAS returns to the Mt. Wilson Observatory for a full night of observing with the 60-inch Telescope on Saturday, **April 9th**, with a scheduled **6:30 PM** arrival time (due to Daylight Savings Time change) at the front gates, since Mt. Wilson staff will let us in the entrance gate about a half hour before sunset. If anyone cannot make the trip, please contact me immediately so that other members on the waiting list can have the opportunity to join the group!

Please make every effort in arrangements to carpool since parking at the observatory is limited. Traffic is always unpredictable, so allow plenty of time for the drive. **Directions:** Take the 110 North to the 5 North to the 2 North to the 210 East. Take the Angeles Crest Highway (Highway 2) exit and turn left. Continue up Angeles Crest Highway about 14 miles to Mt Wilson Road. You can only go right. Take Mt. Wilson Road about 5 miles to loop at the end. The gate to the Observatory grounds is at the far end of the loop. Park there and wait for the gate to be opened. If you arrive after the main group has entered, use the pay phone (cell phones do not work due to the interference from the radio towers) to call 793-3065. A docent will come to the gate to let you in. It may take a while - so be patient. Do not arm your car alarm as the interference from the radio towers can prevent you from turning it off.

Wear shoes appropriate for negotiating the stepladders for viewing. It can be cold overnight so bring warm clothing, preferably layered so you can adjust easily. You may bring a sleeping bag, blankets, air mattress and/or a folding chair. There are very few chairs there, so you should bring your own. Hot water is available for you to make hot coffee, tea, or chocolate that you bring along with snacks to keep your energy levels high through the night. Don't forget your flashlight - only **Red** light is allowed in the dome! Smoking is only permitted immediately outside of the dome entrance and subject to further restrictions by the Forest Service. Be very careful as dead leaves and pine needles are extremely flammable! No intoxicants are allowed. Do not bring personal scopes to the observatory. You may leave in the middle of the night, but you must be escorted to the gate by Mt. Wilson staff.

- Greg Benecke

Astronomical League Observing Clubs

Observing Clubs offer encouragement and certificates of accomplishment for demonstrating observing skills with a variety of instruments and objects. SBAS Members have the opportunity, as members of the Astronomical League, to actively pursue activities in a large variety of these clubs. Each Club offers a certificate based upon achieving certain observing goals. These are usually in the form of a specific number of objects of a specific group with a given type of instrument. Occasionally there are multiple levels of accomplishment within the club. There is no time limit for completing the required observing, but good record keeping is required. When you have reached the requisite number of objects, your observing logs are examined by the appropriate authority and you will receive a certificate and pin to proclaim to all that you have reached your goal. Additional information can be found on the website www.astonomicalleague.org.

Constellation Hunter Club Introduction

The Constellation Hunter Club has two certifications and pins: The Northern Skies and the Southern Skies. The purpose of these programs is to provide an orientation to the sky for novice astronomers. They require no special equipment (other than a planisphere and a reference for the brighter star names), and no prior knowledge. The objective is to provide a forum for the novice observer to become more familiar with the constellations and brighter stars, to begin to learn to navigate among the stars, and to provide a solid foundation for moving on to other observation programs such as the Messier Club.

Rules and Regulations

To qualify for the Astronomical League's Constellation Hunter Certificates and pins, you need only be a member of the Astronomical League, either through an affiliated club or as a Member-at-Large, and observe and sketch all of the constellations on the checklist that you are pursuing. No equipment is required other than a planisphere and reference information of the names of major stars and constellation boundaries. Binoculars, while not required, will give you a deeper look into the star fields that you sketch. You should not include these additional stars and objects on your sketches, but the view will give you an appreciation for all of the things that await you in the other Astronomical League Certification Programs. You should proceed constellation by constellation. For each constellation, you need to provide the following data:

1. Local date and time.
2. Latitude and Longitude of observation.
3. Constellation name.
4. Sky conditions: transparency, and seeing.
5. A sketch of all the stars visible to the unaided eye, out to the limits of the constellation's boundary. Named stars should be identified on the sketch. The sketch should include other objects that are visible within the boundaries of the constellation, including but not limited to: galaxies, open clusters, globular clusters, and nebulas.

Constellation Hunter Club - Northern Sky Observing

This is a list of all of the constellations that appear north of the ecliptic. The 39 constellations are listed in alphabetical order. Your observing plan should be based on those constellations that are visible on any particular night. You can generate this list using a planisphere. Information provided on each object is a check box, constellation name, right ascension and declination.

Constellation Hunter Northern Skies Observing Checklist:

<input type="checkbox"/> Andromeda	01 hr + 40 deg	<input type="checkbox"/> Leo Minor	10 hrs + 34 deg
<input type="checkbox"/> Aquarius	23 hrs - 10 deg	<input type="checkbox"/> Lynx	08 hrs + 46 deg
<input type="checkbox"/> Aquila	20 hrs + 4 deg	<input type="checkbox"/> Lyra	19 hrs + 35 deg
<input type="checkbox"/> Aries	03 hrs + 20 deg	<input type="checkbox"/> Monoceros	07 hrs 0 deg
<input type="checkbox"/> Auriga	06 hrs + 39 deg	<input type="checkbox"/> Orion	05 hrs + 5 deg
<input type="checkbox"/> Bootes	15 hrs + 40 deg	<input type="checkbox"/> Pegasus	03 hrs + 45 deg
<input type="checkbox"/> Camelopardis	06 hrs + 69 deg	<input type="checkbox"/> Perseus	04 hrs + 46 deg
<input type="checkbox"/> Cancer	09 hrs + 20 deg	<input type="checkbox"/> Pisces	01 hr + 10 deg
<input type="checkbox"/> Canes Venatici	13 hrs + 40 deg	<input type="checkbox"/> Sagitta	20 hrs + 20 deg
<input type="checkbox"/> Canis Minor	08 hrs + 5 deg	<input type="checkbox"/> Serpens Caput	17 hrs 0 deg
<input type="checkbox"/> Cassiopeia	01 hr + 60 deg	<input type="checkbox"/> Serpens Cauda	17 hrs 0 deg
<input type="checkbox"/> Cepheus	23 hrs + 75 deg	<input type="checkbox"/> Sextans	10 hrs 0 deg
<input type="checkbox"/> Coma Berenices	13 hrs + 20 deg	<input type="checkbox"/> Taurus	05 hrs + 20 deg
<input type="checkbox"/> Corona Borealis	16 hrs + 30 deg	<input type="checkbox"/> Triangulum	02 hrs + 32 deg
<input type="checkbox"/> Cygnus	21 hrs + 40 deg	<input type="checkbox"/> Ursa Major	11 hrs + 56 deg
<input type="checkbox"/> Delphinus	21 hrs + 10 deg	<input type="checkbox"/> Ursa Minor	15 hrs + 75 deg
<input type="checkbox"/> Draco	17 hrs + 60 deg	<input type="checkbox"/> Vulpecula	20 hrs + 25 deg
<input type="checkbox"/> Equuleus	21 hrs + 7 deg		
<input type="checkbox"/> Gemini	07 hrs + 22 deg		
<input type="checkbox"/> Hercules	17 hrs + 30 deg		
<input type="checkbox"/> Lacerta	23 hrs + 46 deg		
<input type="checkbox"/> Leo	11 hrs + 14 deg		

2005 Symposium on Telescope Science May 25-26

The Symposium on Telescope Science will be held Wednesday and Thursday, **May 25-26**, at the Northwoods Resort in the City of Big Bear Lake. This is a forum for astronomical researchers, of all levels, who are interested in providing and/or using astronomical measurements from electronic instruments to plan, discuss and share their work within the astronomical community. The Northwoods Resort is a new, and elegant mountain resort offering full amenities. There, you will be brought up to date on the latest techniques in CCD Imaging Photometry, and Spectroscopy. As in the past, the program will be separated into workshops and paper sessions. Sessions will include, Basic CCD Image Processing, General Papers, Workshops and Science Sessions. The program will start at 9:00 AM on Wednesday with morning and afternoon breaks and a break for lunch. There will be a banquet on Thursday evening. Registration information can be found on the RTMC website <http://rtmcastronomyexpo.org>

Speaker Topics:

Wednesday

The Fireball Network

DK CVn: A Dynamic Eclipsing Binary System

HD 23642 and the Distance to the Pleiades

Binary Star Modeling using Binary Maker 3

Update on the AAS Working Group for Professional-Amateur Collaborations

CCD Photometric Observations and Statistical Analysis of the W Uma Eclipsing Binary V523 Cas

Resurrection of a Research Telescope

Lowell Observatory's Discovery Channel Telescope

Binary Asteroids

Asteroid Phase Curves: New Opportunities for Amateur Observers

Thursday

NASA/PDS On-Line Archiving Facility (OLAF)

The Proper Asteroid Lightcurve Paper

Recent Arecibo & Goldstone Radar Imaging of Near-Earth Asteroids

Using a Distributed Observer Network to Characterize Transit Light Curves of Exoplanet TrES-1b

The Center for Backyard Astrophysics: Theory and Practice

Solar Sail Orbit Determination from Ground Observations: A Proposed Pro – Am Collaboration

An Experiment in relating CCD Differential Photometry Precision to Varying Degrees of Image Focus

Uncertainty Analysis in Photometric Reductions

The Magnitude and Consistency of Second-order Extinction at a Low-altitude Observatory Site

Asteroid Photometry: Tricky Business

Spectroscopic Monitoring of Be Type Stars

Implementation of a Fully Automated Spectrograph and First Data

AAVSO and SAS: A Marriage Made in the Heavens

2005 RTMC Astronomy Expo May 27-29

The 37th annual RTMC Astronomy Expo will be held **May 27-29**, Friday through Sunday, Memorial Day weekend. This year's theme is "The History of Astronomy". It will be held at YMCA Camp Oakes, five miles southeast of Big Bear City on State Route 38 at Lake Williams Road between mileposts 44 and 45. This location is about 50 miles northeast of Riverside in the San Bernardino Mountains. If you have any questions about the RTMC Astronomy Expo, go to our website <http://rtmcastronomyexpo.org> or contact: Robert Stephens, 8300 Utica Avenue, Suite 105, Rancho Cucamonga, CA 91730, (909) 948-2205 or email to: registrar@rtmcastronomyexpo.org

Keynote Speakers

Our Keynote Speakers this year will be Los Angeles documentary filmmakers **Todd and Robin Mason**. They will present an hour-long talk on some of the major technological and intellectual breakthroughs set against sheer human will that enabled the giant Hale telescope to work, entitled "Palomar's 200-inch Telescope: The Impossible Challenge."

For the past five years, the Masons have been working on a PBS television documentary entitled "The Journey to Palomar" about George Ellery Hale and his famous telescopes at the Yerkes, Mount Wilson and Palomar observatories. They have filmed at the Yerkes Observatory, as well as Mount Wilson and Palomar, and conducted on-camera interviews with top astronomers, historians and authors knowledgeable on the topic. They expect to complete the project some time this year.

Their presentation will also include an exclusive ten-minute preview sample from the documentary involving the first attempt to pour the 200-inch mirror glass for the Palomar telescope at Corning Glass Works in 1934 and a short slide show featuring 3D images of all three of Hale's observatories.

Astroimaging Contest Rules

This year we will have an astroimaging contest! All entries will be displayed in the Astroimaging Pavilion tent.

1. There will be four categories, using film or digital imaging.
 - a. Solar System
 - b. Deep Sky
 - c. Eclipses/Transits
 - d. Meteors/Atmospheric Effects
2. All images must have been taken between January, 2004 and May, 2005.
3. The print may not be larger than 16" x 20" or smaller than 8"x 10". Mat size may not be larger than 16" x 20".
4. No frames, glass, or plastic covers.
5. Attach a 3/4"x 3/4"hook (e.g., Velcro, Scotchmate) to all four corners on the back of the mat, 2" from the edge of the mat (this is so we can hang them from the tent's horizontal poles).
6. Each astroimager is limited to one entry per category.
7. The back of the mat should list the Subject/Title, Category, Name of Astroimager, City/State, and Phone Number. The name of the astroimager must NOT appear anywhere on the front of the entry. Only the Subject/Title may appear on the front of the entry. Detailed information on how the image was taken can also be included on a card attached to the back of the image.
8. Registration starts on Friday at 1:00 PM and ends on Saturday at 1:00 PM. Imaging entries should be brought to the table at the Astroimaging Pavilion tent. Entries will be numbered for balloting purposes.
9. Judging will begin at 2:00 PM Saturday and end at 2:00 PM Sunday. Ballots cast by attendees will be placed in a ballot box at the Info Booth.
10. Winners will be announced Sunday evening.
11. Certificates of Award will be presented to first place winners in each category. A Best of Show Certificate will be awarded to the image with the most votes overall.
12. All entries must be picked up by 9:00 AM on Monday, May 30, 2005.

Is SBAS Ready for Upcoming Night Sky Network ToolKits?

Model the universe: Our Galaxy, Our Universe ToolKits are shipping April 4th.

Get sucked in: NEW Black Hole Survival ToolKit scheduled release April 30, 2005. On the subject of gravity and black holes as an extreme form of gravity, this ToolKit explains:

1. How we survive in a galaxy full of black holes
2. How to survive an encounter with a black hole
3. How amateur astronomers can survive all the black hole questions they get!

To get ready, you might want to review NASA's Universe Forum on black holes:

<http://cfa-www.harvard.edu/seuforum/blackholelanding.htm>

Sneak preview: Telescope ToolKit for October/November. Do you ever get questions like: Why doesn't it look like the pictures in magazines? Can you see the flag on the Moon? What power is this telescope? Currently under development and scheduled for release in the late fall 2005, this ToolKit is on a subject near and dear to us all. Help us give it a name! Send your ideas to Marni Berendsen at mberendsen@astrosociety.org.

- Joe Fierstein

Schedule of Coming Events

1 April Friday 7:30 P.M.	Monthly General Meeting: Mr. Ben Rodilitz, Wireless Standards Manager for SiRF Technology Inc. that makes the chips that go into GPS receivers, is our speaker on the topic "GPS Receivers and How the Network Works".
2 April Saturday Evening	In-Town Dark Sky Observing at Ridgecrest School – Weather Permitting: 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. <i>Drive with care</i> to avoid steel pillars supporting basketball nets...
4 April Monday 7:30 P.M.	Monthly Planning Meeting Refer to page 3 for directions.
9 April Saturday Evening	Mt. Wilson Observatory Trip & Out-of-Town Dark Sky Observing – New Moon April 8th Arrival time changed to 6:30PM for Mt. Wilson Observatory Trip – details on page 5 repeated. Out-of-town dark sky site, please contact Greg Benecke to confirm the location.
17 April Sunday Morning	Astronomy Day – Solar Observing Join Joe Fierstein at the Farmers Market in the Peninsula Center for early morning solar viewing! Joe has also set up an Astronomy Display at the Peninsula Library for viewing April 18-23 .
30 April Saturday Evening	In-Town Dark Sky Observing at Ridgecrest School – Weather Permitting. Refer to April 2nd entry for directions to the site & instructions on weather conditions.
6 May Friday 7:30 P.M.	Monthly General Meeting: The speaker for the evening will be announced in the next newsletter.
7 May Saturday Evening	Out-of-Town Dark Sky Observing – New Moon May 8th Please contact Greg Benecke to confirm the location.
9 May Monday 7:30 P.M.	Monthly Planning Meeting The location of this meeting will be announced in the next Newsletter.
15 May Sunday	"Einstein" at The Skirball Center Join the SBAS group outing to see this extraordinary exhibit. Signup at the April General Meeting!
27-29 May Fri.-Sun.	2005 RTMC Astronomy Expo See pages 7-8 on RTMC's Astroimaging Contest Rules and the speaker's topics for the associated 2005 Symposium on Telescope Science which takes place May 25-26 .
28 May Saturday Evening	In-Town Dark Sky Observing at Ridgecrest School – Weather Permitting. Refer to April 2nd entry for directions to the site & instructions on weather conditions.

South Bay Astronomical Society

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*General Meeting at El Camino College Planetarium:
Friday, April 1st at 7:30 P.M.*

Guest Speaker: Mr. Ben Rodilitz (SiRF Technology Inc.)

“GPS Receivers & How The Network Works”

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