

FIRST LIGHT



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

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

Guest Speaker: Dr. Steven Morris

“Last Month’s American Astronomical Society Meeting”

RTMC 2006

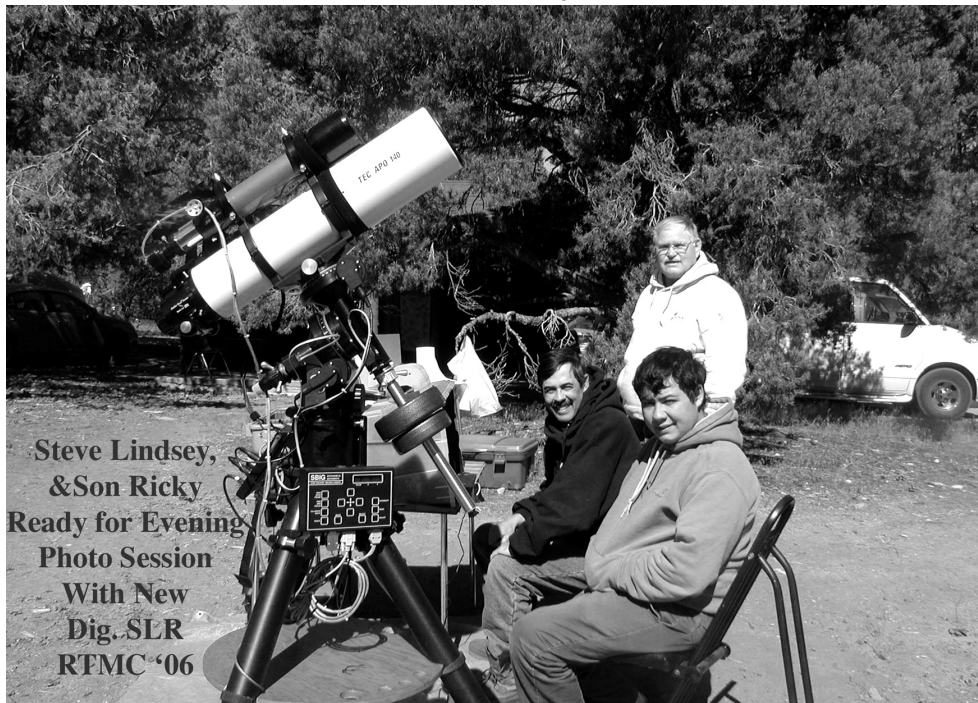


SBAS at RTMC May 2006

Several SBAS members made the trek up to Camp Oakes to attend the Riverside Telescope Makers Conference 2006. As always, a variety of topics were discussed at the various lectures and several workshops concentrated on astro-imaging techniques. Meade was demonstrating their new 20 inch telescope and their deep-sky imagers. At night they demonstrated how well the DSI worked for amateur astrophotography. Meade offered a series of lectures at their tent demonstrating the capabilities of their scopes and the DSI.

Meanwhile Celestron was demonstrating their new CPC series telescopes as well as their new SkyScout. This little handheld device is great for people new to astronomy. Just point it anywhere in the sky and it will identify the star or constellation it was pointed at. I was quite impressed with the tripod that the CPCs were mounted on. Similar to the older heavy duty Celestron Tripod, but with more bracing, this tripod served as an excellent base for the scope. Even with the wind gusting quite strongly during the Friday night star party, the view through the eyepiece showed little or no effects.

One interesting booth, which I don't recall having seen before, was hosted by the Stony Ridge Observatory. This observatory in the Angeles National Forest can be seen on the next ridge over from Mt. Wilson. Equipped with a 30 inch reflector, it is capable of both visual and photographic work.



Steve Lindsey,
& Son Ricky
Ready for Evening
Photo Session
With New
Dig. SLR
RFMC '06

Another interesting product was the Rigel Systems RS-Spectroscope. This device attaches to the eyepiece and is angle just right to bring the spectrum right in front of the eye. Capable of both visual and photographic observing, this device makes a fine addition to an astronomer's kit.

Coronado Instruments had a fine display of their solar telescopes. Of course, most people were attracted to the 90mm solar telescope. However, they also had an interesting demo of the Personal Solar Telescope. They had

two of these mounted side-by-side on one tripod. Initially, I thought it was for binocular viewing. However, it turned out that it was to demonstrate how doubling the filter increases the visible details. One scope was the basic PST while the other had an extra filter at the objective lens. It was quite amazing to see the difference between the two. While the basic PST showed a prominence and a bright plage, the one with double filtering showed more prominences and also greater detail across the face of the sun. Huge, dark, snakelike filaments could be seen twisted across the solar disk.

Friday night's star party was plagued by high winds and intermittent clouds. Even so, the temperature was quite comfortable. Several club members gathered for a club star party in a small clearing. This was very fortuitous as the surrounding trees blocked the worst of the wind and the thick brush prevented the blowing dust that so plagued the main telescope field. I tried working with the club's NexStar 8 and its new SkyAlign handcontroller. The handcontroller was quite nice in that it allowed for a much easier alignment than the usual two star alignments. A big plus was the huge database of objects it contained. However, the scope continued to be a problem. It appeared to frequently slip and gradually the precise alignment was lost

On Saturday evening the temperature plummeted as everyone gathered for the raffle drawings and the keynote speaker. Dr Mike Brown, Associate Professor of Planetary Astronomy at CalTech, gave a very interesting talk about the discovery of UB313, the first object larger than Pluto far beyond Pluto's orbit. Such a discovery caused a lot of discussion about what exactly is a planet. Dr. Brown gave an excellent summary of the arguments for and against calling UB313 (unofficially called 'Xena') a planet. In conclusion, he pointed out the 'planet', like 'continent' is a word that doesn't really have a precise definition and is more a cultural entity than a precise scientific term.

Saturday night's star parties tended to be cut short by the extremely cold temperatures. According to some, the temperature bottomed out at around 22° F. Whatever it was, it was definitely cold.

Sunday night's star party was slightly better, with higher temperatures and better sky conditions. However, the lack of a marine layer over the LA basin did tend to wash out the sky to a certain extent.

- Ken Munson

The June 2nd Meeting

The meeting began at 7:41 with President Ken Rossi asking all newcomers to introduce themselves. Several of the 43 people present were newcomers, and Ken reminded everyone that wearing the name-tags provided at the door will help members get to know each other better. He reported that the telescope recently donated to the Society will soon have its mirror tested for optical quality, and that we still need some volunteers to help refurbish the mounting.

Greg Benecke and a few others described the previous weekend's RTMC Astronomy Expo. Intermittent cloud, some poor seeing and temperatures down to 19 degrees Fahrenheit made this a less-than-ideal experience, but Greg noted that even so, the RTMC was still worth visiting. Not only are there some amazing telescopes to see and some bargains at the swap meet, you also get to meet some very interesting people among the thousand attendees. Over lunch, Greg found himself chatting with a person who guides one of the rovers driving across the surface of Mars! A few people also described some of their recent observing, and President Rossi suggested that any newcomers who are having trouble with recently-purchased telescopes should ask some of our more experienced members for help.

After a 15-minute break to let people socialize, David Pierce announced that the El Camino planetarium would be giving three public shows the next evening, and the observatory would be open as well. Ken then introduced the evening's speaker, John E. Hoot, who is the CEO and founder of Software Systems Consulting, an engineering design firm specializing in computerized robotics, instrumentation and signal processing hardware and software. He is also the designer and builder of the Hoot-Vega Radio Telescope in Benson, Arizona, and spoke to us on the "History of Radio Astronomy".

At radio wavelengths, the sky looks completely different from the visible sky we are used to. Interstellar dust clouds are transparent at radio wavelengths, and radio waves are generated by rotating molecules and precessing electrons, rather than by the electronic motions that create visible light. Karl Jansky detected the first extraterrestrial radio signal in 1933, and Grote Reber became the first radio astronomer in 1937. World War Two accelerated the development of VHF, UHF and microwave technology, largely in the service of improved radar systems. After the war, some of these systems went to the universities, to become the first generation of academic radio telescopes.

In the 1950's, the construction of big, steerable dishes ushered in the era of big science and big budgets for radio astronomy, following the lead of Hale and the big optical telescopes of the previous decades. In the 1960's, the single dish limit was reached with the construction of a 1000-foot-diameter radio telescope in a bowl-shaped valley at Arecibo, Puerto Rico. This decade also ushered in better receiver technology, including masers and the semiconductor revolution, and the discovery of the cosmic microwave background radiation. John Hoot played an audio recording of these microwaves, allowing us to hear some of the radiation created soon after the Big Bang, as the entire Universe went from being opaque to transparent.

Since the 1970's, very large arrays of radio telescopes have been built, using interferometry to increase resolution. The Wilkinson Anisotropy Probe has mapped the tiny variations in the cosmic microwave background radiation, to provide details of the Universe as it existed 14 billion years ago. In the near future, the Atacama Large Millimeter Array will extend radio astronomy far into the microwave band, and fiber optics will improve signal transmission. At very long wavelengths, extra-solar planets may be detectable.

John Hoot ended by pointing out that amateur radio telescopes are making contributions to modern astronomy, and there are a couple of organizations that cater to amateur radio astronomers. President Rossi thanked John for his efforts, and the meeting ended at 9:40.

- Dr. Steven Morris

Manhattan Beach Star Party

Despite the fact that both evenings of our planned star parties were clouded out, the Science Faire at Manhattan Beach Middle School was quite a success; and SBAS played a significant role. On Wed afternoon Joe Fierstein and Ron Rennie each made presentations to a room of about 50 students, parents and teachers. Joe's talk was entitled the "Scale of the Universe" based on our NSN tool kit "Our Galaxy Our Universe". Ron showed videos of his eclipse trip to Libya, his trip to the observatories in Australia, and the club trip to Goldstone; home of the 70 meter space tracking dish. Judging from the number of questions I would say that the interest was high and the talks well received. Matt Ota was also prepared to give a talk about Saturn, but unfortunately we ran out of time as the school had scheduled a speaker from Northrup Grumman by the name of Dr. John Russel who spoke about the work he and Ralph Ford (a former SBASer) did at Mauna Kea using the Keck Telescope and an instrument they designed to track the comet SW 3 and determine its chemical composition. This was a very interesting talk and Dr. Russel has agreed to talk to SBAS in the future. On Thursday Nora De Muth gave a talk about the Sun, which was also well received and was submitted to NSN. On Thurs night Ken Lehmer, not discouraged by the weather, set up his scope and gave an impromptu talk on the workings of a telescope. Bravo Ken! All in all 15 SBASers either participated or volunteered to participate in this two day event, but were thwarted by the weather. That's a great response and shows the strength of the club. Thanks to all and keep up the good work.

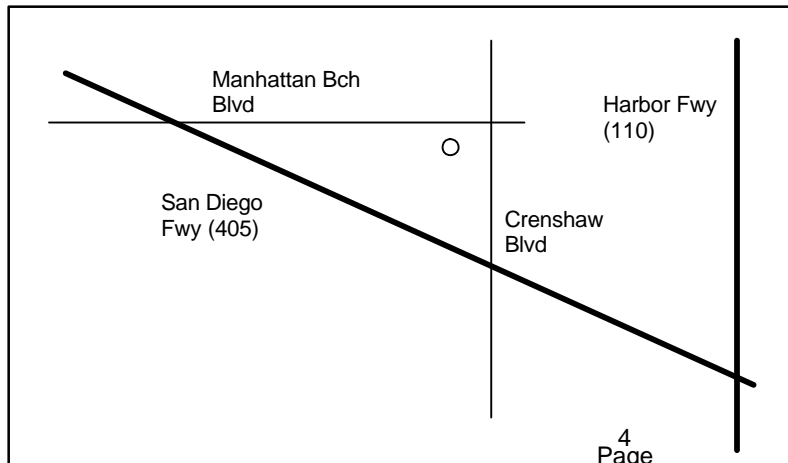
- Joe Fierstein

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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).

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 July 10th planning meeting will be held at 7:30 PM at the home of Ray Grace, 2706 Spreckels Lane in Redondo Beach (310) 370-1913. Take Hawthorne Blvd to 190th St., turn West to Inglewood Ave., then turn North (right) and proceed two blocks to Spreckels Lane and turn Right. If driving South on Inglewood Ave., Spreckels Lane is two blocks south past the light at Ralston Ave., and turn Left, to the 4th house on the right (South side). Parking is available on both sides of the street.

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! 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.

Welcome New Members!

The following people have joined SBAS in the last month:

Matthew Ota
Kanji Sahara
Steven Schrier

July – Comets & Asteroids

Comets Visible in June:

Comet	Mag	Constellation(s)
Honda-Mrkos-Pajdusakova	7.7 – 13.6	Tau-Gem-Cnc

Asteroid Occultations:

Date D M Y	Local Time		Durn m/sec	Star mag	Mag drop	Star No.	Planet	
	h	m					No	Name
3-Jul-06	3	27.2	4.5s	8.3	8.4	TYC 7399-00179-1	4834	Thoas

Planetary Occultations:

Date D M Y	Local Time		Duration min	Star Mag	Mag Drop	Star No.	Planet
	h	m					
27-Jun-06	1	49.71428	604m	11.5	0	2UCAC 27108893	Jupiter

Scopes for Sale

A classic Celestron 5" SCT scope is being offered for sale. The price is \$400 OBO. It comes as a complete set; scope, tripod, equatorial wedge, AC clock motor, 4 eyepieces, sun/moon/LPR filters, manual, carrying case and more. The scope is in excellent condition. For more information contact: Nancy Roy (310-378-5570).

A Nexstar 11 GPS is also available. It comes with lots of accessories, bobs knobs, Losmandy balance weights with rail attached, Standard finder, Hard Case, a couple of good eye pieces and a lot of other stuff. If interested contact John Pirrone (310-548-5185). He lives in Point Fermin and interested buyers are welcome to come and take a look. *Note: In the previous month's issue the phone number was in error.*



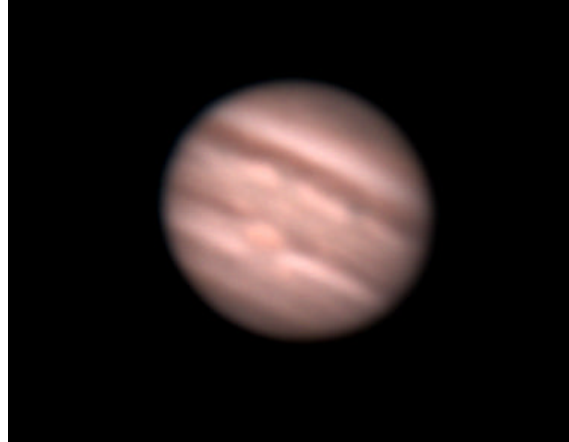
Observing Reports

Backyard Observing – On Tuesday, May 30th, I set up my telescope in the backyard to observe an occultation of a star by the planet Jupiter. Since the occultation wasn't scheduled to occur until around 11 PM, I spent the early part of the evening practicing with the Meade DSI again. I managed to get a few good pictures of Jupiter in white, yellow and blue light. Surprisingly, the picture with the blue filter turned out to be the best. Viewing conditions were very good that night. I then swung up to M63 and after several brief shots managed to get a 15 minute exposure that

clearly showed the galaxy's central core and disk and faint traces of the outer spiral arms. By this time, it was after 10 so I swung back to Jupiter and configured for visual observation. Surprisingly, there wasn't any sign of the star. Either the prediction was off or you really can't see a 10th magnitude star against the glare of Jupiter! Still, it was very satisfying to see such clear details on Jupiter.

- Ken Munson

Ridgecrest School – Saturday, June 17, had a good turnout at Ridgecrest School. Six club members arrived at or about sundown; Joe Fierstein with the club's 8" Nexstar, Ken Rossi with his 12" Dob, Arnie Stodolsky with his mighty 60mm travel scope, Ken Lehmer and family and friends with an 8" Nexstar, and Craig Gates and Ken Munson with their 11" Nexstars. We also had a few visitors Bill Chater and his grandson, Randy, spent some time with us looking through scopes and discussing remote telescope operation and photography. They also donated a telescope case for a 5" Nexstar! Another visitor, John Meadors, a seasoned observer but new to the club, worked with Ken Rossi to find a number of deep sky objects including M51, M57, M13 in Hercules, M97 in Ursa Major, M9, M10, M12, and M14 in Ophiuchus, and M4 and M80 in Scorpius. Everyone enjoyed the sight of Saturn and Mars in such close proximity. Mars was a pale ghost of the glory it had at closest approach but still fiery red as ever. Even faint, tiny Mercury was observed in the fading glow of sunset, a first for some club members! Although very distorted by the atmosphere, it showed a gibbous phase. At about 9:30 the International Space Station made a pass directly overhead. Jupiter attracted a lot of attention since the Great Red Spot was transiting at a most convenient hour of the evening! Ken Munson was able to get a picture of it using the Meade DSI. Unfortunately, the fog began to close in and by 10:30 we all had to leave as the fog showed no signs of departing.



- Ken Rossi, et. al.

Red Spot Junior

Discovered on February 24, 2006, by Philippine amateur, Christopher Go, a new red spot has emerged on Jupiter. Scientists speculate that the reddening of the new spot may be caused by the strengthening storm bringing up material from deep within the planet's atmosphere. The new red spot, officially labeled BA, is the product of three previous white, oval shaped storms that had raged for over 60 years. In 1998 two of the storms collided and merged, forming an even larger storm system. In 1999 the two remaining ovals approached each other and collided, taking a mere three weeks to merge into one gigantic storm. Only in February of this year, though, did it begin to turn red. Amateurs should keep a close watch on this system. It has been traveling in a band further south than the Great Red Spot, lagging about an hour behind. However, it has slowly been approaching its big brother. It is expected that sometime in July or August the two storms will approach each other. Although it is impossible to predict what may happen, it should be an interesting event. Amateur observers are urged to keep a close watch on the planet in the coming months.

Schedule of Coming Events

<p>7 July Friday Evening 7:30 PM</p>	<p>Monthly General Meeting Guest Speaker: Dr. Steven Morris Topic: Last Month's American Astronomical Society Meeting</p>
<p>10 July Monday Evening 7:30 PM</p>	<p>Monthly Planning Meeting See directions on Page 4.</p>
<p>15 July Saturday Evening</p>	<p>In Town Dark Sky Observing Session – Weather Permitting: Please contact Greg Benecke to confirm that the gate will be opened!</p> <p>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. Note: If you a visitor, not bringing a scope, it is requested that you park in the small parking lot on Northbay Rd.</p>
<p>20 July Thursday Evening 7:00 PM</p>	<p>Von Kármán Auditorium (Thursday) & Vosloh Forum at Pasadena City College (Friday) "Cassini Realtime Operations" by David Doody. Have a look behind the scenes as Cassini Mission Controllers send commands to the distant robot spacecraft. The audience is invited for a virtual visit to Cassini real-time operations.</p>
<p>22 July Saturday Evening</p>	<p>Out-of-Town Dark Sky Observing Session Contact Greg Benecke to coordinate a location for the dark-sky trip.</p>
<p>28 July</p>	<p>Southern Delta Aquarids Meteor Shower Peak</p>
<p>4 August Friday Evening 7:30 PM</p>	<p>Monthly General Meeting Guest Speaker: TBA</p>
<p>7 August Monday Evening 7:30 PM</p>	<p>Monthly Planning Meeting Location TBA</p>

South Bay Astronomical Society

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

Guest Speaker: Dr. Steven Morris

“Last Month’s American Astronomical Society Meeting”

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