

FIRST LIGHT



Journal of the South Bay Astronomical Society - July 2002
on line at www.geocities.com/sbas_elcamino

Monthly General Meeting: Friday, July 12th, 7:30 PM

Guest Speaker: Brett Waterson (JPL)

"Planets Outside Our Solar System"

RTMC 2002



SBAS @ RTMC '02

Kneeling- Nina & Bill Whiddon, Joe Fierstein, Jerry Gmoser

Standing- Don&Marion Greif, Mark Braden, Sheila& Barry Titelbaum, Steve & Ricky Lindsey, Bill Eisele, Mike Mayerchak

Not shown- Miriam Fierstein & Dave Wright

SBAS @RTMC

The Riverside Telescope Makers Conference (RTMC) is held every year on the Memorial Day weekend at Camp Oaks in Big Bear. The camp has a well-equipped observatory and is at 7,600 ft. elevation which usually means clear, dark skies. This year however, the event coincided with the full moon, this and some low-lying clouds severely limited the viewing. It did not, however, dampen the enthusiasm of some 1,700 registered astronomy buffs including a number of SBAS members, some of whom are shown in the accompanying photo. Fortunately, the theme this year was "Solar Observing" and during the day the Sun did cooperate.

In addition, there were the usual collection of vendors, large and small, and plenty of opportunities to spend money and acquire new, or used equipment, some at bargain prices and some not. I was impressed by the quality of the speakers especially in the field of astrophotography. It is clear that the trend is toward digital even among the professionals. The keynote speakers were Robin and Dr E. Krupp of the Griffith Observatory.

The highlight of Saturday night was the door prize winner of a 12 inch Meade LX200 GPS telescope won by a young woman from the Antelope Valley Club. SBAS had to be satisfied with a "Sky-Cam", a video camera that fits in a 1.25 inch focuser won by Miriam Fierstein! If you are interested in astronomy as a beginner or pro, this is an event you shouldn't miss. Next year it will be a 3 day moon.

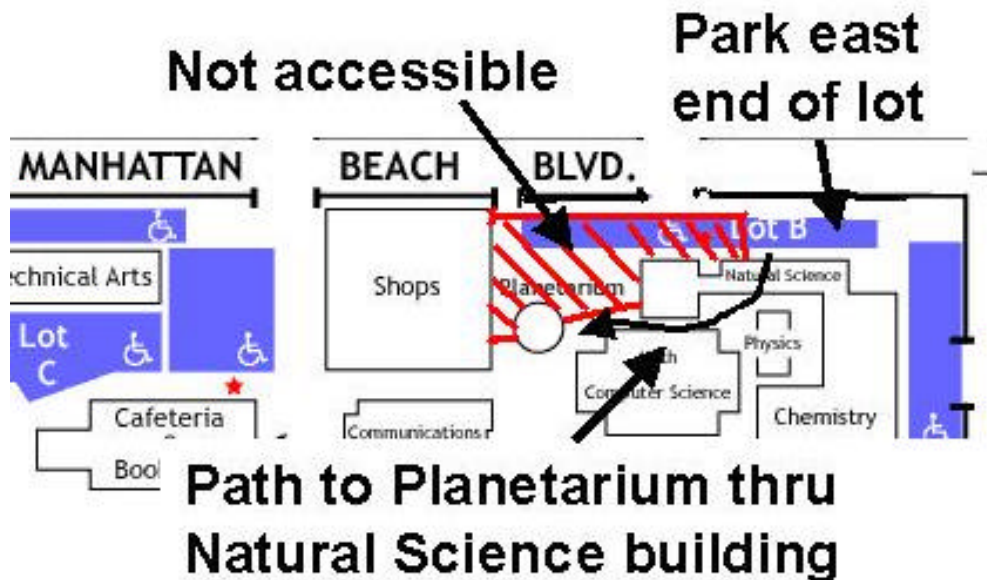
- Joe Fierstein

El Camino College Parking Notice

El Camino is getting ready to remodel the Chemistry and Physics buildings. They are installing trailers to use as classrooms in the westend of the parking lot we normally use. The grass and walkways are also blocked off.

We should park in the eastend of the parking lot and walk through the Natural Sciences building then by the Math Building to the Planetarium. I hope this map makes the directions clear.

- Dave Wright



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.

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 who are 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 15th at 7:30 PM at the home of Greg Benecke. From Crenshaw Blvd., head West on 182nd St. Shortly after going under the 405 overpass you will see a Fire Station on the right. Turn right into the cul-de-sac just after the Fire Station. From Prairie Ave., heading east on 182nd St., go one block past the second traffic light (Yukon Ave.) and make a left into the cul-de-sac just before the Fire Station. You are making the correct turn if you see a sign saying "Park Place" on the white fence on the Northwest corner next to the Fire Station. Greg's house is the first one on the left side of the cul-de-sac at 18161 Patronella Ave., Torrance.

SBAS Membership Benefits

Contact John Collins for subscriptions, at club rates, to "Sky & Telescope" at \$29.95 and \$29.00 for "Astronomy" magazines! Make your check payable to SBAS and mail 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

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! Do any members have a suggestion for the "wish list"?

"Friends of the Nexstar" is the group of members who have donated equipment or accessories for the SBAS telescope, and the planning committee has granted them the privilege of a waiver of the deposit & fee for borrowing the Nexstar8. Members include: Greg Benecke, Joe Fierstein, Dr. Steve Morris, John Evans and Dan Trimble.

SBAS Members \$ Buy \$ Sell \$ Trade \$ Listing:

❖ SBAS is offering a steamer trunk case for an SC 8" or less for *free!* Call Greg Benecke if you are interested.

Members send your advertisements to Laura Lucas!

SBAS Website News

Check out members' astrophotographs and website links created by our dedicated webmaster Alex Athas. Delbert Crawford has sent in photos of the June 10th annular eclipse and recent planetary alignments. Steve Lindsey has just posted some great photos, including a beautiful sequence of eclipse images on his own personal website: <http://home.earthlink.net/~stevellindsey/Eclipse02.html>

In-Town Observation Night

@Ridgecrest – Saturday, June 1st, we met at the Ridgecrest School gate and waited to see if the overcast weather would clear up. After about an hour of talking while we waited, Delbert Crawford and Mike Rivas left for home. Fifteen or twenty minutes later the sky started to clear up, so we went into the school and set up our telescopes. As soon as we were set up the clouds closed in again. Mike Rivas, who takes P.V. South to get to his home in San Pedro called Craig Gates on his cell phone to let us know that the south side of the hill was also overcast. There wasn't any hope left for viewing anywhere in the area on this particular night so we packed up and headed home. Those who went into the school to make the attempt to observe were Greg Benecke, Craig Gates, Shawn Belveal, Joe Fierstein and myself.

- **Jim Madison**

Dark-sky Observing Reports

@Big Bear Lake – Saturday, June 8th our out-of-town observing this month was a few miles east of Big Bear lake off Highway 38 in the Bloomflat OHV (off highway vehicle) recreation area. The turnoff is located at mile marker 41.00 on highway 38. This is a large meadow area sometimes used for grazing livestock. The rocky dirt road in is three miles of slow going over rocks, ruts and dust. Since this area is crisscrossed with dirt roads and unimproved camping spots there were people going in and out on motorcycles, pick-up trucks and SUV.s most of the day and part of the night. They were usually in the distance and did not disturb us.

From my house in Torrance the distance was 116 miles. Due to a couple of mechanical problems and stopping for food along the way we arrived just after dark, about nine thirty, even though we had left town at four. The wind started blowing as I was setting up and kept blowing and gusting all night until sunrise. The sky was clear and dark at this altitude of 7600 feet. The wind and air currents at higher altitudes blurred images until after midnight when things started to settle down. The daytime temperature was about 80 degrees and I don't believe it got below 50 degrees at night. The wind at ground level kept making it hard for us until we repositioned the vehicles to act as wind breaks.

In the early morning hours we were treated to some very good and sometimes spectacular views of the galaxies, star clusters, and nebulas that we can barely see from the south bay. Most notable was M13 the large globular cluster in Hercules. There was also a small nearby galaxy, NGC 6207, that was mentioned in the July issue of Astronomy magazine on page 54. We looked at M51 and M101 two spiral galaxies whose arms were barely visible even in the 17.5 inch Dobsonian. M104 the Sombrero Galaxy was too low on the horizon and behind my truck by time I got set up. M81 and M82, a pair of galaxies near the cup of the Big Dipper, came into the same field of view through the wide field 2 inch eyepieces we were using. The Andromeda Galaxy M31 and its two companion Galaxies M32 and M110 were visible in the eastern sky but not really at their best viewing position this time of the year. We all tried in vain to find the North American Nebula, NGC 7000 in Cygnus. Filters didn't help either. M27, the Dumbbell Nebula and M57 the Ring Nebula, came in much brighter in the clear air and dark sky on top of the mountain than I have ever seen them before.

On this trip on we had a 5 in., 8 in., 11 in., 12 in. and a 17.5 in. telescope to look through. Except for the wind and rough road to the site, this was an ideal spot for observing. The images seem to come alive when you get away from the fog and light pollution. The 17.5 Dobsonian is hassle to transport and set up, especially in the dark with the wind blowing. However the view through it makes it all worthwhile. Those of us that have used this scope before noticed a big improvement since the primary mirror was refigured by Joe Haberman and recoated by Newport Glass. Joe can often be found in Dr. Perry Hacking's telescope making lab at El Camino College. He is grinding and refiguring mirrors with the intention of some day making a living at it.

The SBAS astronomers and their family members who climbed the mountain and braved the elements were Greg Benecke, Mike Rivas, Craig Gates, Judy Gates, Craig's daughter Heather, and son-in-law Trent, Sylvia Madison and myself.

- Jim Madison

@Mojave National Preserve - I went to the Mid Hills Campground in the Mojave National Preserve. Located at 5600 feet and nestled among the Pinyon Pines, site 19 makes a great spot for stargazing. A large part of the reason for making the journey again was to show the park to my kids. We got there early in the afternoon and did a bit of hiking and clambering over rocks before settling down to dinner and bed. The park is located in a very desolate and isolated area far from any major city. Although the light dome from Las Vegas can be glimpsed over the ridge to the north, it's not much of a problem.

As sunset came on, I thought I was going to be disappointed again as clouds began brewing in the west. It was also quite windy. Although the wind never died down completely, the clouds all dissipated by 11:00 and the sky became incredibly dark. The southern Milky Way was so bright that I could see my faint shadow on the ground. In spite of the slight vibration of the telescope from the wind, I was able to do some incredible viewing.

I used an LPR filter to enhance contrast and had the best results ever. I was able to see the Veil Nebula in Cygnus, a faint gossamer cloud against the dark background, but the faint Crescent Nebula continues to elude me. Most of the night was spent going through Scorpio and Sagittarius. Having come from a more northerly latitude, I had never seen the full extent of those two. What an amazing view it was! Well worth the 4+ hours spent moving slowly through every known globular cluster, open cluster, and nebula. The clarity was so good that I was able to make out the dust lanes of the Trifid Nebula. NGC 6231, a dense knot of bright stars near Zeta Scorpii makes an excellent target in a small scope. The Swan, Eagle and Lagoon nebulas all showed more detail than I'd ever seen without a photo.

I had recently downloaded a catalog of common names of deep-space objects from NASA's Astronomical Data Center. I was going through it when I found the Bug Nebula (NGC 6302) in Scorpius. It's a tiny planetary nebula 83 arcseconds across its longest dimension. According to documentation I have, it's a magnitude 13. I'm sure it's got to be more than that though. Although very small, it was quite bright in my 5" telescope. I was on my way to more nebulas when my power cord snagged and pulled loose. Since it was 3:00 AM, 55 degrees, and I had left my coat at home, I decided that I'd had enough shivering for the night and went to bed.

- **Ken Munson**

Large Former Lake, Catastrophic Flood Identified on Mars

Geologists at the Smithsonian's National Air and Space Museum have discovered a large former lake in the highlands of Mars that would cover an area the size of Texas and New Mexico combined, and which overflowed to carve one of that planet's largest valleys. The findings appear in the June 21 issue of the journal Science.

The flood channel, Ma'adim Vallis, is more than 550 miles long and up to 6,900 feet deep, making it larger than Earth's Grand Canyon. "Imagine more than five times the volume of water in the Great Lakes being released in a single flood, and you'll have a sense of the scale of this event," said Ross Irwin, a geologist in the museum's Center for Earth and Planetary Studies (CEPS) and the paper's lead author.

Mars is now a cold desert planet but its many dry valleys could indicate that water once flowed on its surface. Recent results from the Mars Odyssey spacecraft have found evidence of water trapped in the near surface of the polar regions. "The size of this lake - 1,400 miles long - suggests Mars was warmer and wetter than previously thought," said Robert Craddock, a CEPS geologist and co-author of the paper.

Former lakes are considered the most likely places to preserve the record of any past Martian life. Calm water would allow sediments to be deposited slowly, preventing small organisms from being destroyed. The source of water to carve the flood channel had long been a mystery to scientists, who had known very little about Mars' topography prior to the Mars Global Surveyor mission, which has been orbiting Mars since 1997.

Detailed elevation data from the Mars Global Surveyor shows the large valley originated nearly full-size at a ridge, much like the spillway of a dam. Late in the lake's history, rising water levels overflowed the lake basin rim, releasing the huge flood as the river cut into this former dividing ridge. What remained was "some of the best geological evidence for a lake found to date on Mars, including clear indications of the former shoreline," Irwin says.

Two other smaller lake basins were identified in the region by paper co-author Alan Howard, a geologist at the University of Virginia. All three lakes shared the same water level prior to the flood, indicating the possibility of an ancient water table and suggesting the locations of other dry lake basins on Mars. Such information could be important in determining where to land robotic probes in coming years.

CEPS is the scientific research unit within the Collections and Research Department of the National Air and Space Museum. CEPS performs original research and outreach activities on topics covering planetary science, terrestrial geophysics, and the remote sensing of environmental change.

Website: www.nasm.si.edu/ceps/research/mars/irwin_lakes.htm

Schedule of Coming Events

<p>6 July Saturday 7:30 P.M.</p>	<p>In-Town Dark Sky Observing at Ridgecrest School</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. Drive with care to avoid steel pillars supporting basketball nets.</p>
<p>12 July Friday 7:30 P.M.</p>	<p>Monthly General Meeting: “Planets Outside Our Solar System”</p> <p>Brett Waterson is Dept. Mgr. of Space Interferometry at JPL and will speak about the “Origins” Program.</p>
<p>13 July Saturday</p>	<p>Out-of-Town Dark Sky Observing – New Moon (July 10)</p> <p>Potential date for session at “Mile 41” mile marker site on Hwy. 38 out of Redlands near Big Bear! Contact Greg Benecke for confirmation and directions.</p>
<p>15 July Monday 7:30 P.M.</p>	<p>Monthly Planning Meeting</p> <p>See page 3 for location and directions.</p>
<p>18 (JPL) 19 (PCC) July Thursday / Friday 7:00 P.M.</p>	<p>Theodore von Karman Lecture Series – Admission is Free!</p> <p>“Jupiter’s Moon Io: A World of Great Volcanoes” lecture is presented at the JPL von Karman Auditorium (JPL) and the Pasadena City College Forum (PCC). For more information, call JPL at (818) 354-0112.</p>
<p>2 August Friday 7:30 P.M.</p>	<p>Monthly General Meeting:</p> <p>Speaker for the evening must confirm the scheduled date with our Program Chairman.</p>
<p>3 August Saturday Evening</p>	<p>In-Town Dark Sky Observing at Ridgecrest School</p> <p>Refer to July 6th entry above for directions to this site.</p>
<p>5 August Monday 7:30 P.M.</p>	<p>Monthly Planning Meeting</p> <p>Location to be scheduled.</p>
<p>12 August Monday Evening</p>	<p>In-Town Dark Sky Observing</p> <p>The Perseids may be worth a night out – just after the new moon on August 8th.</p>
<p>22 (JPL) 23 (PCC) August Thursday / Friday 7:00 P.M.</p>	<p>Theodore von Karman Lecture Series – Admission is Free!</p> <p>“Voyager – 25th Anniversary” is the lecture is presented at the JPL von Karman Auditorium (JPL) and the Pasadena City College Forum (PCC). For more information, call JPL at (818) 354-0112.</p>
<p>31 August Saturday Evening</p>	<p>In-Town Dark Sky Observing at Ridgecrest School</p> <p>Refer to July 6th entry above for directions to this site.</p>

South Bay Astronomical Society

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*General Meeting at El Camino College Planetarium:
Friday, July 12th at 7:30 P.M.*

Guest Speaker: Brett Waterson (JPL)

“Planets Outside Our Solar System”

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South Bay Astronomical Society
c/o Microcosm, Inc.
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