



# THE OBSERVER

SAN BERNARDINO VALLEY AMATEUR ASTRONOMERS

Member of The Astronomical League

2009, International Year of Astronomy

<http://sbvaa.org/>

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Since 1958

July, 2010

## Meeting:

July 24, 2010

### Location:

San Bernardino County  
Museum, 7:00 p.m.  
Redlands, CA. California  
St. exit, I-10 Fwy.

Pre-meeting Dinner, 5:00  
p.m.,

***The Sizzler***  
***1800 So. Waterman***  
***Ave.***  
***San Bernardino, CA***

After the meeting telescopes  
will be set up for viewing  
and members will be  
available to answer  
questions. Bring your  
telescope to observe with us.

*No telescope is too humble,  
and beginners are always  
made welcome!*

After viewing the group will  
head for Coco's in Redlands,  
Tennessee exit, I-10 Fwy.

## Program

### Savor the Splendors of the Summer Sky!

A sky talk presented by Martin Carey & Chris Clarke

Martin Carey and Chris Clarke will act as “celestial chefs” to deliver a tantalizing repast of the delicious summer sky via a Power Point presentation.

Scanning along the sumptuous banquet table of the Milky Way, all manner of wonderful celestial goodies and tidbits are within reach of even the smallest telescopes. See how beautiful they really are and where you can find them! Discover the majesty of the age-old celestial figures, or constellations, that march across the heavens and learn of their hidden treasures.

With warm star filled nights, the summer sky is a real treat to behold and to truly savor!



## SBVAA Officers

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## Calendar of Upcoming Events

July 17, Outreach Moon Party at the Museum

July 24, Club meeting at the Museum

August 14, Club meeting & annual BBQ

August 21, Outreach Moon and planet party  
at the Museum

## A Couple of Summer Outreaches

By Chris Clarke

Well, to liven up our warm summer nights, we have a couple of public outreaches scheduled for the County Museum. On **Saturday, July 17**, we'll have a "moon party" which will feature a first-quarter moon as well as the planet Saturn. The detail along the lunar terminator will jump out in three-dimensional relief and will surely excite and impress our visitors. The sight of Saturn's rings being so tight will also cause viewers to shake their heads in wonder as they view the far off world.

Setup is at 8:00 pm and viewing begins at 8:30 and ends at 10:00 pm. On **Saturday, August 21**, we'll have another "moon party" that will feature many planetary guests as well! Visible that evening will be Mercury, Venus, Mars and Saturn, along with a bright waxing gibbous moon. Mercury will be in crescent phase and rather low in the west, while Venus will appear half-full in the telescope. Unfortunately, Mars is too far away to reveal any detail now, but lovely Saturn will be featuring its famous rings in a rarely seen fashion, appearing as "popsickle sticks" from either side of the cream colored world. Setup is at 7:30 pm and viewing will be from 8:00 to 9:30 pm.

We'll be setting up at the south end of the museum parking lot, on the asphalt. Scopes of all sizes and types are welcome—no scope is too humble! Even if you don't have one, come on down and enjoy the views. Those bringing scopes can always use a helping hand in setup and take down, too.

Sharing views through a scope can be one of the easiest and most pleasant aspects of being an amateur astronomer. Seeing our neighbors in space through an eyepiece can open the eyes and minds of our visitors, especially the children. Afterwards, many of us head on over to Coco's for further conversation and bit of refreshment.

So come on down--it's really a fun way to spend an evening!



## Upcoming Astronomy Events in SoCal

**July 10:** SCAE at OPT, Oceanside, CA. Swap meet during the day and a star party on Mt. Palomar at night. Hours are 1000 to 2300.

**July 17:** SCAE part 2. Astronomy expo, educational classes and drawings. Go to OPT's website for all the details.

**Aug. 5 - 8:** Julian Starfest, Julian, CA. This is the third one and is hosted by the San Diego Astronomy Association. Go to ***Julianstarfest.com*** for more info.

**Aug. 14:** Griffith Park Observatory public star party hosted by the Los Angeles Sidewalk Astronomers. 2:00 p.m. to 9:45 p.m. at the observatory.

*Who doth not see the measures of the Moon?  
Which thirteen times she danceth every year,  
And ends her pavan thirteen times as soon  
As doth her brother, of whose golden hair  
She borroweth part and proudly doth it wear.  
Then doth she coyly turn her face aside,  
That half her cheek is scarce sometimes descried.*

*"Orchestra"  
Sir John Davies, 1594*



## NASA Seeking Teachers for NASA/IPAC Program

Dr. Luisa Rebull, Caltech

I know that many of you are part of amateur astronomy clubs

with lots of teachers, planetarium staff, and other educators. We're currently soliciting applications for a program called the NASA/IPAC Teacher Archive Research Program.

The point, as succinctly as I can put it, is the following: The purpose of this program is to provide educators (mostly but not exclusively teachers) with an authentic research experience in astronomy. In exchange, we ask teachers to leverage this experience via providing professional development for their colleagues in their local school districts. It involves several trips to collaborate with scientists and present the research results, all of which are paid for by the program.

The kinds of educators we are looking for are those who already know the basics of astronomy, and are interested in learning exactly how astronomy research is conducted, from the inside!

The 2010 NITARP application (for a program to start in Jan 2011) is now available!

*[The application is a 7 page pdf file which contains an explanation of the program and enrollment details. Contact your newsletter editor if you are interested and I will send you the file.]*

Please distribute this to your friends and colleagues who might be interested, and/or consider applying yourself! If you have any questions, please let me know.

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## Confessions of a Late-night Eclipse Watcher

By Chris Clarke

Did anyone else happen to get up in the middle of the night to see the partial lunar eclipse on Saturday, June 26? Yes, the eclipse began about 3:15 am, with the disk starting to pass into the earth's inner shadow, or umbra. By 4:38 am, the moon had passed deepest into the shadow, with about 54% of the disk hidden in darkness. Ever since I saw my first lunar eclipse as a teenager, I've always gotten excited about these and tried to see every one that came along.

Even though the eclipse happened during the most inconvenient hours of the night, it was still worth getting up for. To see our brilliant "next door" celestial neighbor pass through the earth's projected cone of darkness is always a wonder to behold. Before we were able to see our world as a globe hanging in space, the ancient Greeks knew that the earth was a sphere, because only a sphere could project a circular shadow. This simple fact of light and geometry had easily explained the nature of our world long ago. Too bad most people couldn't accept that fact and clung to the silly belief that the earth was flat! Whenever I watch a lunar eclipse, I am still dumbfounded by the stubbornness of man.

Watching this eclipse, with just a pair of ordinary 7x50 binoculars, reminded me of my personal connection with my own world and the rest of the cosmos. My world was affecting another, if only by casting a shadow upon it. The part of the earth's shadow visible was from the southern hemisphere. I've never been to the south pole---but here I could see it's very shadow! The shadow had a very crisp edge and there was no color in the deeper areas of the umbra. Watching the curve of darkness slowly move across the moon's face was simply fascinating. My reverie was nearing its climax when low lying fog and clouds began to erase the moon from the sky. I'd just made it! In another hour, the sun would be up and the entire event but a memory.

Well, if you missed this eclipse, be patient, for you're in store for a real treat with something even

grandier! On the night of December 20/morning of the 21<sup>st</sup>, there is going to be a TOTAL lunar eclipse visible from this region. Totality will occur around midnight, and the entire series of partial phases will be visible all night long, beginning at 10:30 pm and ending at 2:00 am. The moon will then be passing through the shadow of the earth's northern hemisphere, with totality at 12:17 am.



*(Lunar eclipse sequence by Jeff Lansing)*

Depending on the transparency of the earth's atmosphere, which refracts some sunlight into the shadow and onto the moon, the moon at totality may exhibit all manner of colors, ranging from dusty gray to coppery orange to deep red.

The moon will truly ride high in the midnight sky, as a few hours later it will be the winter solstice. The eclipsed moon will shine above mighty Orion the hunter as well. This will truly be a time to enjoy the alignment of worlds and wonders of the universe—don't miss it!

Selling some of your gear? Advertise it here for free.  
Give the details to your newsletter editor for inclusion in  
the next issue.

## CALENDARS

The 2011 “Deep Space Mysteries” calendars from Astronomy Magazine are here. It will be available for sale starting with the club meeting on September the 25th. We have 20 for sale on a first come first served basis. The retail for this calendar is \$12.95 plus \$1.00 tax or \$13.95 altogether. Your cost, through the club this year, is \$8 a savings of \$6.

See Fidel, the club treasurer, at the back of the room to make your purchase. Reservations are accepted.



## Society for Astronomical Sciences



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### AMATEUR AND PROFESSIONAL ASTRONOMERS PRESENT SMALL-TELESCOPE RESEARCH RESULTS AT “SYMPOSIUM ON TELESCOPE SCIENCE”

The 2010 Symposium on Telescope Science saw over one hundred amateur and professional astronomers gather in Big Bear, CA to share recent research results, methods, and instrumentation related to small-telescope astronomical science. This year’s Symposium was a joint gathering of the Society for Astronomical Sciences (SAS) and the Center for Backyard Astrophysics (CBA). During two full days of technical presentations, the topics ranged from variable stars (of several different types) to asteroids to Jovian satellites, and included CCD photometry, video photometry, spectroscopy, polarimetry, and radar methods of observation. In addition, about fifty people attended the “day before” tutorial workshops on “Small-telescope Spectroscopy” presented by Olivier Thizy and “Calibrating CCD Imagers” presented by Richard Berry. Attendees were treated to new-product highlights from several of the sponsor companies, and quite a few impromptu networking discussions could be found surrounding the conference location. The event was rounded out by the traditional banquet and a wonderfully entertaining presentation by Chris Butler on “Our Little Corner of the Galaxy”.

Videos of many of the technical presentations from the 2010 Symposium can be viewed on the SAS website: [www.SocAstroSci.org](http://www.SocAstroSci.org).

The 2010 Symposium provided a window into small-telescope science, and some of the opportunities for collaboration between amateur and professional astronomers. This was the 29<sup>th</sup> SAS Symposium, and the progress on display bodes well for the future of small-telescope astronomical science!

**The 2011 Symposium will be held at Big Bear, CA on May 24-25-26, 2011.**

**About the SAS:** The Society for Astronomical Sciences facilitates collaborative astronomical research between amateur, student, and professional astronomers. SAS workshops provide amateur and student astronomers with solid grounding in observational procedures and data-reduction methods. The annual “Symposium on Telescope Science” is the premier forum for presentation of the results of small-telescope research and professional-amateur astronomical collaborations. For more information, see: <http://www.SocastroSci.org>

The Society for Astronomical Sciences is a non-profit corporation exempt under I.R.S. Code Section 501(c)(3).