

The Observer

SAN BERNARDINO VALLEY AMATEUR ASTRONOMERS

Member of The Astronomical League

<http://sbvaa.org/>



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Since 1958

May, 2012

Meeting:

May 12, 2012

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

Spaceship Earth

A video titled, "Spaceship Earth," will be featured at the May meeting. The program is an episode of the acclaimed **Universe** Series that aired on the History Channel. It describes and illustrates the formation and evolution of a most remarkable planet in the universe! See how the earth formed, how the oceans and atmosphere developed and then learn of the conditions that occurred for the development of life. Filled with many beautiful vistas and dynamic animations, this show takes a good look at the history and future of our home in space.



(Photo by Astronaut William Anders, NASA)

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Calendar of Upcoming Events

May 1, Outreach at Barton School, San Bernardino

May 12, Club meeting at the Museum

May 19, Star party, Johnson Valley

May 23-28, RTMC

June 9, Club meeting at the Museum

June 15-17, GRANDVIEW Star Party

June 30, Outreach, Moon Party

Partial Solar Eclipse on May 20

By Chris Clarke

For the first time in about a decade, there will be a solar eclipse visible from Southern California. For our location, it will be a partial eclipse, with approximately 85% of the sun's disk covered by the new moon. From Asia and the Pacific, it will be an annular, or 'ring' eclipse, with the slightly smaller lunar disk leaving a bright ring of the sun's disk visible. When the moon is closer, it can completely cover the sun, creating a total eclipse.

This event will occur late in the day on Sunday, May 20. The moon will make first contact with the sun at 5:25 pm. Maximum coverage occurs at 6:38 and the eclipse ends at 7:43 pm. Local sunset is 7:48. We'll be able to observe the eclipse right up until sunset. At maximum, the sun will appear like a large crescent and the sky will be slightly darkened.

As with any solar observing, please be extremely cautious and careful with regard to viewing. Use proper solar filters only! If in doubt, don't use it, as your eyesight is one of the most precious senses you have.

RTMC

May 23rd to the 28th will be the dates for the 44th annual RTMC. As before, it will be held at 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.

Longitude 116° 45' 15" West

Latitude 34° 13' 50" North

Altitude 7250 feet (2210 meters)



Club Meeting Dates for 2012

~~February 11~~

~~March 10~~

~~April 14~~

May 12

June 9

July 14

August 11 (ann. BBQ)

September 8

October 20

November 17

December (tbd) ann. holiday dinner

Partial Lunar Eclipse Visible June 4

By Chris Clarke

On the early morning of Monday, June 4, the full moon will pass into the earth's shadow, creating a partial lunar eclipse. Beginning at 3:00 am PDT, the moon will contact the umbra, or darker inner shadow. From then on, the moon will slowly pass through the umbra, with the lower part of the moon's disk noticeably darkened.

At 4:03 am PDT, the moon will be deepest in the shadow, with about 37% of moon obscured by the shadow. The moon will appear as if a large bite had been taken out of it. From then on, the moon will slowly move out of the shadow and the eclipse will end at 5:06 am PDT.

Local sunrise is at 5:38 am and twilight will be underway as the moon passes out of the shadow and the eclipse ends. The moon will be low in the southwest, in the head of Scorpius, during the eclipse. Unlike solar eclipses, observing a lunar eclipse poses no hazard. To enjoy it best, just use a pair of binoculars.

RARE Transit of Venus to Occur on June 5

By Chris Clarke

On Tuesday, June 5, we will be treated to an extremely rare sight, the transit of Venus across the solar disk. From S. California, we will be able to observe the start (ingress) and middle part of the transit before the sun sets at 7:00 pm. Venus touches the sun's edge at 3:09 PDT. From then on, we can watch Venus traverse across most of the sun, until it sets, still in progress. Mid-transit is 6:30 pm PDT.

Transits of Venus only happen with a frequency of about once a century and in pairs, separated by eight years. The last transit was in June 2004, and prior to that, happened in 1874 and 1882. The next pair of transits will occur in December, 2117, and December, 2125, *so be sure to catch this one!*

Venus is large enough to be seen with the naked eye, using proper solar filters. It will appear as a tiny dot, like a sunspot. Through a telescope, it will be very noticeable. Please exercise extreme caution when doing any viewing of the sun. Use only proper filters for naked eye or telescope viewing! Do not risk your eyesight, unless you know exactly what you are doing!



(Image from the 2004 transit of Venus)

Afton Canyon, Solo

By Cliff Saucier

After bad weather for months, at least on the star party weekends, things got dramatically better. Crossing over Cajon Summit I was in heaven. Some of the most transparent skies I've seen in a couple of years. As I'm dropping into the desert, from the Oak Hills you could see great detail all the way out across the valley. Colors vivid, and the Sidewinder Mountains, out past Lucerne toward Barstow, appearing sharp and crisp, a mini Joshua Tree. Bell Mountain and the Oro Grande areas were undiminished by any atmospheric haze. The miles flew by. Getting to the Canyon, I set up on the mesa at the Afton group camping area, and ate a little while I was waiting for darkness to fall and the show to begin. A handful of campers were down below in the main campground, a group of photography students shooting star trails as a background for the meteor shower, including a fool that kept using bright lights all night. Probably was made nervous by the coyotes that made quite a racket as it was getting dark. So glad not to be down there. The group camping area has always been good to us.

I mostly waited for true darkness to use the scope, letting the mirror cool. Then started my galaxy quest with M51. Good, but I've seen it better. Then the trio in Leo. M81 and 82, nice and bright. Not wanting to roam too far into unfamiliar territory that would entail getting out the star charts, I stayed for the time being with the favorites. A long in the dark without even red light really gets the old night vision turned way up, an advantage to being alone. It's surprising what a difference that makes! Omega Centauri in the binos. Nice! I was getting ready to turn serious and start in on the Virgo Cluster (M104 was most memorable), when a hot wind started to blow. The stars went from being BB's to swollen golf balls, and the fifteen mile winds were manhandling the scope pretty much whenever it felt like it. Clear Skies had predicted some wind before and after midnight, and this was only watched for Lyrid's, the minor night. Only a few were to be cross the whole sky! Learned Ophiuchus and Serpens, then Warm all night, not even had stopped and the Milky Way in some of the summer objects, wonderful with light shimmering Swan was next, then the Veil, showed that the seeing just Probably Friday night was the on the tail end of the good at three-thirty, not tired, but I sleep. Traffic was great both be a nice spot. It's too bad that Oak Glen. Finally a good night,



(Photo by Robin Hennen)

ten-thirty. I took to my chair and meteor shower peaking that seen, but they were the kind that a little more of the stars in napped from midnight until two. needing a sweatshirt. The winds was simply stunning. Gathering the Ring was particularly all through the central area. The but looking at M13 and M11 wasn't as good as earlier. best night, with me coming in stuff Saturday night. Turned in can't drive home without a little ways. Afton Canyon can really everyone else was occupied in bordering on great.

22nd Anniversary of the Hubble Space Telescope's Launch Into History

From The Huffington Post



The Hubble Space Telescope launched on April 24, 1990, ushering in a new era in space exploration.

From its low-earth orbit, the telescope can take pictures without interference from the planet's atmosphere, snapping photographs in visible light, ultraviolet and near-infrared wavelengths.

Named for astronomer Dr. Edwin Hubble, who established the notion that the universe is expanding, the images the telescope has produced over the past 20 years have similarly changed the course of astronomy, "[turing] astronomical conjectures into concrete certainties" according to the Hubble Space Telescope website.

Its landmark discoveries include more accurately gauging the age of the universe--13 to 14 billion years--and unveiling the existence of dark energy, "a mysterious force that causes the expansion of the universe to accelerate."

The Hubble has also detected gamma ray bursts from giant, collapsed stars, found protoplanetary disks where new planets are forming, and captured images of galaxies in different stages of evolution.

Most recently, the telescope documented the first-ever auroras above Uranus.

In celebration of the 22nd anniversary of the telescope, the Hubble science team released a mosaic image of stars forming in the Tarantula nebula.

In 1929 Dr. Edwin Hubble determined that "the farther a galaxy is from Earth, the faster it appears to move away." This formed the basis of the Big Bang theory, the prevailing cosmological model of the development of the universe.

While the telescope was launched in 1990, scientists soon discovered an imperfection in its main mirror that compromised its performance. This was fixed by astronauts in 1993.

Clipped from *The Huffington Post*