

The Observer

SAN BERNARDINO VALLEY AMATEUR ASTRONOMERS

Member of The Astronomical League

<http://sbvaa.org/>



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Since 1958

April, 2013

Meeting:

April 20, 2013

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

“Astronomy Day”



Come share the sky!



SBVAA Officers

President:

Vice President:

Treasurer: Fidel Hernandez 909-864-0615

Secretary - Educational Outreach: Chris Clarke
909-384-8539 Work
909-875-6694 Home

Star Party Coordinator: Tom Lawson
909-8828198

SBVAA Webmaster: Steve Miller 626-859-7776

Newsletter Editor: Jim Sommer 909-792-3587

Calendar of Upcoming Events

April 13, Star Party at Johnson Valley: Alternate is Public outreach at Wildlands Conservancy, Oak Glen

April 20, Club meeting at the Museum & Astronomy Day

May 11, Star Party at Johnson Valley

May 18, Club meeting at the museum

May 24 - 27, RTMC at Big Bear

June 7 - 9, "**GRANDVIEW**" at Ferguson Campground

June 15, Moon Party outreach at the Museum

April 20 is Astronomy Day---Meeting and Outreach all in one!

By Chris Clarke

The club will have a short meeting beginning at 7:00 p.m. and will then hold an outdoor viewing event for the general public. The public is also invited to the meeting. We'll observe from 8:00 to 9:30 at the south end of the parking lot. The moon will be a waxing and gibbous, high in the south and Jupiter will be in the west.

Bring your scopes and share the wonders of the solar system with eager and inquisitive folks.

In the event we are clouded out, a video on the Cassini Mission to Saturn will be offered.

Hope to see you all there!



April 13, Outreach at Wildlands Conservancy, Oak Glen

By Chris Clarke

Well, it's time for our first outreach of the season and it will be out at The Wildlands Conservancy in Oak Glen on Saturday night, April 13. Sunset is around 7:15 and viewing will begin right after dark. There will be a skinny lunar crescent along with Jupiter in the west, plus all the wonderful goodies of the winter and spring skies.

Being in a dark location, we can show people deep sky objects like M35, M42 and lots of the brighter galaxies in Leo, Coma and Virgo, plus M51, M81 & M82 near the Big Dipper. We'll see lots of folks, so we'll need lots of scopes! No matter what the size of your scope is, it will be a welcome addition to the 'telescope field.' The deep sky objects will really amaze the first-time viewers, whether they are children or adults.

Join us for a fun night under the stars!

Astronomy at Eureka Dunes, Death Valley

By Steve Peeters

Recently Death Valley National Park teamed up with the International Dark Sky Association to be designated as the world's largest dark sky park. This got me to thinking that within a five hour drive from home is one of the darkest skies in north america! A good portion of death valley falls into what light pollution maps show as black, which is the best possible area for astronomy. One such area is a primitive campground at the Eureka Dunes in the northwest corner of the park. I decided on taking a three night trip to the area.

To get there, I first drove over Cajon Pass and then up US 395 to Big Pine. From there I headed east on the same road that goes to Grandview. After a couple of miles I reached a fork, the left fork goes towards Grandview and the right goes to Death Valley National Park. Taking the right fork puts you on Death Valley Road, commonly referred to as Big Pine Road. The first twenty-three miles of it are paved, after that it turns into a gravel road with some larger rocks mixed in. Once the pavement ends I continued on for seven additional miles to reach the the turn off for the Eureka Dunes. I turned right onto S. Eureka Dunes Road (also unpaved) and drove an additional 10 miles to reach the camp area. The campground has ten sites all with large cement tables, and, one pit toilet. It is listed as primitive because there is no running water. Not only that but there is no TP in the toilet room and no trash cans in the camp, fortunately I'd brought my own supply of these. One wonderful feature of this camp area is a beautiful view of the Eureka Dunes, some of the highest sand dunes in North America.

As I was driving a minivan over some pretty rough washboard roads I took along a can of fix-a-flat, some tire plugs, and, a manual foot pump. I did this as insurance against having to use my temporary spare tire which is one of those donuts (not a full sized tire). The idea of the precautions was that if I took them, I wouldn't need them-- WRONG. On the way in I got a flat and used the fix-a-flat and the plug kit. I had to re-inflate the tire once I repaired it and I had it halfway pumped up when some off roaders arrived and were kind enough to pump it up the rest of the way with an air compressor. I proceeded on to the camp area, arriving about an hour before sundown at 6:00 P.M. At this time I was the only one in the campground. After the long drive and the flat tire experience I was pretty tired. So, for my first night, after setting up my tent and unloading my car I decided to use only my 20 X 90 binoculars, leaving my 15" Dobsonian for the next two nights. This night, like the next two, was clear with a very light breeze and moderate temperatures, not terribly cold. Not long after dark the zodiacal light became apparent. You didn't have to look hard to see it, it was very noticeable. Using the big binoculars, I observed the great nebula in Orion, the belt of Orion, the double cluster, Mel 111, the pleiades (complete with reflection nebulae around the stars), M3, and, the Beehive. A new object I had not looked at before was an asterism in Ursa Minor called the Engagement Ring, with Polaris as a diamond solitaire. During the evening I took three Sky Quality Meter readings: a 21.73 at 9:08, a 21.80 at 10:00, and, a 21.89 at 10:30. These readings indicate the darkness the sky for objective comparisons to other nights and locations. Anything over 21.75 is considered excellent so these readings were quite good. Prior to going to bed I scanned the milky way with my big binoculars enjoying multitudes of stars. I turned in at about eleven o'clock.

After a good nights sleep I spent a leisurely day around camp. I enjoyed breakfast and some coffee then set up my telescope. Later, I sat in the shade of my tent's awning and read a novel I had brought along. The temperature in the shade was quite pleasant, probably about 75 degrees. As I read I was facing the road and every hour or so I would see a vehicle pass by.

Monday night came and shortly before sundown two people arrived for the night. As it was not really dark yet the little bit of white light they used was not a problem. About an hour after sundown they came over to ask if they could look through the telescope. I was delighted to share with them. They were staying for two nights and they came out to hike up to the top of the tallest dune, about 700' high, and to see the comet PanStarrs. One thing that impressed me about them was that they used a red flashlight, not wanting to ruin their night vision. After a short talk about some constellations and the prominent zodiacal light we looked at a lot of eye candy which I found to be pretty thrilling. This is because my scope was acting like it was quite a bit larger than its fifteen inches, maybe 20 or 22 inches, due to the very dark sky. Looking at my old friends through what seemed like larger aperture, was like having a bigger scope to get acquainted with. At 10:30 P.M. I took a SQM reading of 21.85. At this time I went over by the hood of my silver car and my head cast a shadow on the hood; next I called over my guests and we all commenced waving our arms around over our heads and seeing the shadows dance on the car hood. When shadows are cast by starlight you know you're at a really good site! My guests (Stan and Julie) and I viewed M42, M81, M82, the pleiades, the crab nebula, M35, the double cluster, and, Jupiter. M81 really blew me away because for the first time I saw two very distinct spiral arms, one coming off of each end, just as it would appear in a good photograph. Around 11:00 P.M. Julie and Stan called it a night. It was great showing them around the sky. This is so nice to do at a dark site where one can see much more than in urban locations.



Alone in the dark I commenced more viewing. One of my goals of the trip was to see the link between the spiral arm of M51 and its companion galaxy. With a little effort and using averted vision I accomplished this goal. During the night my best SQM reading was 21.87 at 1:00 A.M. I was struck by the brightness of the leo trio galaxies. Another real treat was the Rosette Nebula scene with a full ring of nebulosity around its open cluster, whereas in the past I've only seen the brighter bottom portion of this ring. Also, the Christmas Tree nebula showed nice lenticular strands of nebulosity that I hadn't noticed before. Other rather amazing sites were M101, with clearly visible spiral arms and Saturn looking splendid with its rings nicely exposed. Another object that provided a good view was the barred spiral galaxy NGC 4565. Later, just as on the previous night, prior to retiring I spent time scanning the milky way with my big binoculars, but this time it was 3:45 A.M. so I was looking at the summer Milky Way, rather than the winter Milky Way and to me the summer Milky Way is superior to its winter sibling. I viewed the lagoon and the Trifid Nebula together, the Swan Nebula, the Sagittarius star cloud, the North American Nebula, and, made sweeps that brought out uncountable numbers of stars and areas of our galactic dust lanes. Just before going to bed I took one last look out my tent door at the beautiful sky and milky way. While lying in bed I realized the roof of my tent, being white canvas, was dimly illuminated by the stars, whereas the sides of my tent, being green were not. I thought about how I hadn't spent much time out in really dark areas since I was

considerably younger (late teens to early thirties) when I backpacked in the High Sierras and the Rockies. One forgets what a truly dark sky is like. Also, I found that the quiet of the area was astounding, dramatically quieter than living in a populated area. Getting reacquainted was terrific.

The next day I got out of bed at about ten in the morning and spent a leisurely day at my tent site. Late in afternoon I hiked up onto one of the taller dunes and stayed for awhile. The late day light on the dunes casts some amazing shadows and makes for some good pictures. When I arrived back in camp I met up with a new arrival in the campground who was looking for the comet PanStarrs. I started in on it too and we found it about six degrees south of the one day old crescent moon. We got a great view of it through the big binoculars, in fact surprising to me was that the view through the big binoculars was better than the view through my telescope. The fellow that looked at it with me was a guy named Jared from Fontana. He had used a 6" reflector years ago when in high school, so was somewhat acquainted with the constellations and remembered the locations of some of the more prominent objects. I talked-up our club to him, along with RAS, and, RTMC; hopefully we'll see him around in the future. Later, Julie and Stan joined us; they had been off looking at the comet through 10 X 50 binoculars, which yielded a nice view of the comet and the thin crescent moon in the same field of view.

For the evening we looked at some different objects than the night before. One that had interested me, but I hadn't seen before was Kimble's cascade near the open cluster NGC 1502. Once 1502 was in my eyepiece I looked through my 80mm finder, with a four degree field of view, it gave me a beautiful display of the cascade. Another was NGC 2362 an open cluster in Canis Major known as the Jumping Bean Cluster. It has a bright star in it and by tapping your telescope tube this star jumps around. When my three guests retired around 9:30 P.M. I went after some more obscure objects. One was the planetary, IC 418 with a nice colored core, most people say it is red, but to me it looked lavender. Another another planetary nebula was the Ghost of Jupiter, with an eerie bluish disc. On previous occasions it never stood out so boldly. An especially good view was had of the Sombrero Galaxy, with the tall part of the hat very bright. Right after viewing it I took SQM reading and got 21.90, this was around eleven o'clock. Based on the two previous nights I figured that this was pretty much as dark as it was going to get. As I had to drive home the next day I started covering up my equipment for the night. As I put things away I got the distinct impression that it was getting darker. At 11:30 I took another SQM reading and got 21.95! This amazed me so much that I took two more readings and both of these confirmed the 21.95. Had I known this was going to occur I think I would have stayed up later, but being tired out from my all-nighter of the previous night I went to bed.

Late into the night, I was sleeping soundly when awoken by some calling sound outside my tent. Half asleep I thought what I heard was some sort of bird. Asleep as I was I thought it might be a chicken or two. (Go figure, what would chickens be doing in a wild part of death valley?) The next morning Stan and Julie came over and asked if I had heard the fox around 2:00 A.M. I had forgotten all about the late night visitor until they mentioned it. They were quite certain about what entered the campground and said they had seen some tracks near their vehicle. We started looking around my campsite and also saw fox tracks. The fox present in death valley is the Kit Fox -- pretty cool to have heard one!

The trip was very satisfying and I definitely plan to return to this area to enjoy more great nights. Just getting out in a natural setting is a real uplift for the spirit. I hope that other club members will also seek out some truly dark sites, the rewards are well worth the effort.

For Sale

Monolux achromatic refractor. f/11.6, 60 mm, serial number 4369.

This is a “classic” scope from the golden years of Japanese small refractors. Includes a .965” diagonal, yoke alt/az mount on wooden tripod and several Huygens EP’s. (Not a plastic toy.)

Go to: www.astronomyhints.com/review_Monolux for a review of similar scope.

Contact Carl Lawson to make offer at:

Lawson_C@roadrunner.com

or call (909) 320-7205

Scope similar to photo below



Plan Ahead

2nd Annual Arizona Science & Astronomy Expo

November 16 & 17, 2013, Tucson, Arizona.

Last year’s inaugural expo was outstanding with top speakers and a massive vendor hall. For 2013, two stellar speakers have already signed: **Alex Filippenko**, world renowned astrophysicist and professor of astronomy, and **Timothy Ferris**, astronomer and author of twelve best selling books.

November 16th and November 17th 2013. Being held at the Tucson Convention Center Tucson AZ.

Mt. SAC Community College Position

Julie Bray-Ali

jbray-ali@mtsac.edu

Our college will have astronomy tech position. I am not sure if anyone from your group may be interested in the position, but I would like a help with spreading the word that we have a position. The position is Astronomy Tech, but the huge part of the job is to take care of our new observatory on campus.

<https://hrjobs.mtsac.edu/postings/2346>

[Go to the listed URL above for a complete job description. Julie’s e-mail address is in the header above or you can contact Human Resources at Mt. SAC.]