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astronomers
just get better
looking . . .



nightwatch

Newsletter of the Pomona Valley Amateur Astronomers

**Pay club dues at the General Meeting
or by mail. \$30 individual / \$40 family.**

Volume 27 Number 8

nightwatch

August 2007

President's Address

With the assistance of Bill Dean, in January 2006 PVAA attempted to have a solar star party for the general public. Unfortunately, it was cloudy the day of the event. Since then I have wanted to try again. Over the last several weeks things have finally fallen into place for this to happen. We will be having our "Fun under the Sun" PVAA public solar star party from 10:00 AM until 2:00 PM on Saturday, October 27th outside of the Brackett Observatory on the campus of Pomona College. Our speaker last month, Dr. Bryan Penprase, has obtained permission for our use of this observing site.

Bill Dean will be bringing Coronado H-alpha and calcium scopes, including a 90mm H-alpha scope that I can hardly wait to get a look through. He will also have video equipment. It makes it much easier to explain to people what they are seeing when you can point to it. Also several people can look at the same time. Dr. Penprase has said that he will also bring an H-alpha scope. Several PVAA members have Coronado solar telescopes and a number have solar filters for looking at the Sun in white light. I'm hoping that those of you who do have these scopes will plan on attending this event.

If the weather is more cooperative this time, we will have an excellent opportunity to introduce more people to our club and to amateur astronomy. And we will have a lot of fun too.

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Upcoming Star Parties

On September 8th our club star party will be in the Mount Baldy Ranch RV Campground at Cow Canyon Saddle. To get there take Mount Baldy Road into the village just past the school. Turn left on Glendora Ridge Road. After about a mile, at the top of the hill there is a turnout on the right. That is Cow Canyon Saddle. Drive through the gate down the dirt road. The campground is a few hundred yards on the right hand side. Be sure to check in at the Headquarters building. We will be on the hill at the south end of the campground.

This will be our second star party at this site. The first went very well. In the campground it was quiet and unlike at the turnout, there was no traffic after dark. For as close to town as it is this is a very good place to observe. The site is dark enough to see the Milky Way.

In October our star party will be at the RTMC Astronomy Expo event Nightfall in Borrego Springs. More info is available at this website: <http://www.rtmcastronomyexpo.org/nightfall.htm>. A few of our members attended this event last year and reported back that it was great. The people of RTMC Astronomy Expo always do a terrific job putting together their events. Nightfall is October 11-14. If you plan to stay in a motel you should reserve your room early.

August 2007 Star Party at Cottonwood Spring Campground

This star party was to witness the Perseid meteor shower. Irene and I arrived about 4:30 PM Friday. Loop B was closed so we had to find a site in loop A. On the way there, the temperature was as high as 109 degrees F, but Cottonwood Spring campground was a cooler 93 degrees. Before we got our tent up, Frank Busutil and his wife, Barbara took the site next to us.

I don't go to too many star parties, but this was a meteor shower on the night of the new moon, and should be pretty good. I also wanted to try out my Meade 8-inch SCT that I removed from its fork, and placed on a LX75 German Equatorial mount. It runs with Autostar Suite. I also wanted to try out my Canon DSL camera on the telescope. It can be mounted on top of the optical tube for wide-angle shots, or in place of the eyepiece as an 80-inch telephoto lens.

As it got darker, the telescope was aligned, and set for the Meade tour of the sky. As each object was selected by Autostar, it appeared somewhere in the 26-mm eyepiece. That was pretty good. Then I tried my camera. In the meantime, Irene was looking for meteors and saw several. I saw one accidentally. The night was very clear, and as usual I got lost among all of the stars. My best photos were of M57, the Ring Nebula, using 30-second exposures and the 80-inch focal length of the SCT. I tried one exposure of 6 minutes and got star trails. Around midnight Irene went to bed, but I stayed up til 3 AM. I saw the Pleiades (M45) Mars and Orion rising in the East.

Saturday morning started out nice and cool, but it got hot. So hot that my Telrad peeled off of my SCT tube. I will have to tie it down as well as use the double adhesive tape. Claire Stover and Joe Hillberg arrived in late afternoon and Ron Hoekwater in early evening. It was so hot that people sat wherever there was shade. Frank and Barbara found shade near the restroom with Jim Bridgewater who arrived early Saturday morning. That was the only source of shade around.

When the sky darkened, Frank had his telescope/camera and TV monitor running for everyone to see. We had a few visitors, and the campground was filling up. In fact, cars were going by all night.

The Milky Way spanned the whole sky both nights. As the time went by we all gathered together and just scanned the sky, with pleasant conversation. There seemed to be more sporadic meteors than Perseids. But a few of them made people say WOW! Around 11 PM a bunch of young adults arrived looking for the PVAA. After midnight, since I didn't see any meteors, I went to bed. Claire and Joe were up past 2 AM, and the young adults nearby kept Irene and me awake with their conversation. Sunday morning, the campground was almost empty. When Irene and I left, there were about 4 sites occupied. This experience showed me that I have to practice more in my back yard, or locally to get to know my equipment better for my next star party.

Ray Magdziarz

August's Speaker

Our speaker on August 31st is Morris "Mojo" Jones. He is co-founder, with his wife Jane, of the Old Town Sidewalk Astronomers in Monrovia, California, <http://www.otastro.org/>.

Mojo and Jane have received numerous awards from local and regional amateur astronomy organizations for their education and outreach activities, their favorite being designation of asteroid 22338 Janemojo in their honor. In 2005, they tallied 10,000 views delivered to members of the public with their telescopes and educational programs.

The presentation, entitled "You Are Here" includes a brief travelogue of some of the many places in the western U.S. parks that Mojo and Jane have given this presentation, and the Bryce Astronomy Festival.

We have a generation of kids growing up in cities for whom the words "Milky Way" have lost their meaning. As visitors to the national parks, many have taken the initiative to travel to a very special place, and have a chance to see the sky of their ancestors. This presentation will introduce you to the Milky Way, what it is, how to see it, and where you are in it. The talk will include some of the fascinating objects that you'll be able to see in telescopes or binoculars tonight that are part of our Milky Way and even "other Milky Ways" in our celestial neighborhood.

A New Venture Astronomers from Three Counties Come together for a unique star party

In the past, PVAA has been providing Star Parties for the Los Angeles Braille Institute's adult blind clients. On August 19th we conducted a unique star party for the Jr. Blind of America Foundation. Amateur astronomers from PVAA, Orange County Astronomers and the Ventura County Astronomical Society gathered at Camp Bloomfield in the Malibu Hills for the event. Claire Stover and Laura Jaoui kicked off the night with a tactile presentation of astronomical objects. Blind campers and their sighted families were treated to images from the Hubble Space Telescope which included one of the objects visually observed that evening, Jupiter. Tactile Solar Images were available from SOHO and other space equipment. The visually impaired campers were particularly interested in a huge tactile Planisphere on which the campers were able to feel many constellations. Tactile lunar models were also very popular. Claire and Laura had enough astronomical tactile materials to fill 3 large tables and accommodate over 50 blind campers. These kids were "glued" to the astronomical sensory experience being provided. Thank you to Ruth Paglienary, from UC Berkeley and Jane Houston Jones from JPL for providing our tactile materials.

As the sun set Chet Bart from VCAS gave a great talk with tremendous visuals on many astronomical objects found in our sky. Once again the kids and their parents were fascinated. Chet is A JPL Solar System Ambassador and his vast experience was very much appreciated.

This evening we were honored to have present Chris Buchen, Judi Schoeffler and Peg from OCA . These very dedicated amateur astronomers will be coordinating Project Bright Sky visual astronomical activities for blind individuals in the Orange County area. Chris did double duty with his 8" SCT at the star party. Judi and Peg assisted Chris at his telescope and will be involved in our 4-week lunar course to be held at the Orange County Braille Institute this September.

VCAS provided some other distinguished and very seasoned amateur astronomers for this star party. With telescopes ready to use and knowledge ready to share, we were very happy to have the

Barts, Jim and 2 another husband and wife teams join us.

PVAA brought out some very dedicated astronomers, the Stover family, Laura Jaoui, Joe Hillberg and myself. All brought a special expertise to a wonderful night.

When darkness came upon us our visual observing of bright sky objects began. Tonight we had 8 telescopes and 10 telescope operators to handle a crowd of about 90- 100 observers. Of this number, 40 or so were legally blind campers ranging in ages young children to teenagers. The skies and air temperature were perfect with virtually no wind. We enjoyed a 6-day Moon along with Jupiter and 3 of its moons with a fourth popping out from behind the planet as the night progressed. Operating the telescopes we had Laura, Claire, Joe and myself from PVAA. The Barts, Jim and two others from VCAS operated a myriad of telescopes. Our set of distinguished telescope operators was completed by the OCA participants, Chris, Judi and Peg.

This was a night under the stars where amateur astronomers from organizations which cover three counties all came together to provide a unique visual and sensory astronomical experience to a group of blind kids, their parents and a staff of camp counselors in a very unique manner. Some of the blind kids were heard talking about how they would like to pursue astronomical and other science ventures in their immediate and distant futures. Could one of the blind kids at our summer star party some day be part of a team to explore Mars? Why not?

Frank Busutil

Project Bright Sky...

Visual Astronomy opportunities
for blind individuals.

PVAA Events Calendar			
Month	Star Party	General Meeting	Board Meeting
September	8 CowCanyon	28	20
October	13 RTMC Nightfall	26	18
November	10	16	8

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Please let your friends and neighbors know about this event and please try to be there.

August is election month. Be sure to mail in your ballot or better yet vote at the August general meeting.

We have two board members who will not be running for reelection. Sherry Martinez has been the Nightwatch editor for two years and has helped to organize the public star parties at the Ontario Public Libraries. Spencer Crump was willing to take a position on the PVAA board when we were having trouble finding anyone to take that seat. He contributed some good ideas on how to improve the club and make it a more valuable resource for the members. I would like to thank them both for their efforts in making this a better club.

Finally, August is also membership renewal month. Please pay your club dues at the meeting or mail them to club the PO Box. Individual membership is \$30.00. Family membership is \$40.00. Checks should be made to PVAA.

Happy stargazing everyone!

Ron Hoekwater

General Meeting

We were joined by one returning member, Jerry, who belonged to the Club over 10 years ago, when David Chandler – of Planisphere fame – was the president of the club. A report was shared on our experience at the July camp for blind kids in the Malibu hills and we heard that another star party was coming up for this group on Sunday, August 19th. Soon after, on August 21st, we will be hosting a star party for group of Cub Scouts in Chino. I hope some of you were able to join us at these events

July Speaker

Our July speaker was Dr. Bryan Penprase. He spoke to us about using the spectra of light from quasars to study the clouds and faint galaxies located between us and these energetic objects. While the clouds and galaxies don't emit enough radiation for us to see them directly, they do absorb the light from more distant quasars and the absorption lines we see in their spectra show the chemical composition of each of these clouds and galaxies the light passes through. Another tool Dr. Penprase has utilized in his research is gravitational lensing. A massive object

relatively close to us can be used to view the light of a farther distant object as the galaxy's gravity bends the distant light into small arcs around itself. This method can help us see further away and thus further back in the past to observe the universe closer to the time of the Big Bang.

The word quasar is a contraction of "quasi-stellar radio source" and is the active nucleus of a very distant young galaxy. Their high red-shift indicates they are very distant and must therefore have a high intrinsic brightness for us to see them at all. Current scientific consensus is that quasars are compact discs of matter which surround the central super massive black hole of the young galaxy. They can emit energy equal to the output of hundreds of average galaxies combined.

New research indicates that quasars burn so brightly only when they have a fresh source of fuel. It may come from another galaxy merging with its galaxy, providing the hydrogen and helium fuel which falls into the black hole to power the quasar and send light the thousands of light-years across the universe to reach us.

Gamma ray bursts are the most luminous objects we can currently see. They are brief flashes of gamma rays, lasting from milliseconds to some minutes, followed by emissions in the X-ray, UV, visible, IR, and radio frequencies. The goal of gamma ray burst studies is to detect the gamma rays then immediately turn other land and space based telescopes toward the bright object so the total radiation profile emanating from it can be measured and studied.

The bursts seem to be a concentrated emission of energy from the collapse of a rapidly rotating high-mass star into a black hole or from the collision of two neutron stars orbiting one another. All those observed have come from outside of our own galaxy and most are from billions of light years away. The light from these objects is used not only to study the phenomenon itself but to observe its home galaxy as its light passes through the stars and dust clouds of that galaxy on the way to our telescopes.

Thank you to Dr. Penprase for his very interesting and thought provoking talk as we all stretched our minds back to the study of spectra we learned in Physics classes and our imaginations back to the start of the universe.

Claire Stover