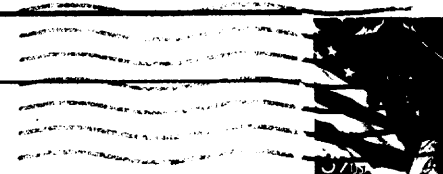


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Amateur
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looking



nightwatch

Newsletter of the Pomona Valley Amateur Astronomers

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

Volume 26 Number 8

nightwatch

September 2006

President's Address

Our August star party at Cottonwood Spring was well attended. The nighttime temperature was comfortable and the conditions for observing were great. Everyone there seemed to have a good time. I know that I did.

Over the next few months PVAA will be having star parties at a variety of sites. I want to encourage club members to participate in these events.

In September we will be at Kelso Dunes. This will be my third visit to this observing site. Kelso Dunes is an impressive dark sky location. There is a small light dome to the northeast (which I presume to be Las Vegas) but, Death Valley and White Mountain are the only sites that I have observed from which suffer from less light pollution.

During the day you might want to consider an excursion into the dunes. A hike to the top and back takes about two hours. The 600-foot high Kelso Dunes were formed in stages over the last 25,000 years. The dunes grow whenever the climate becomes dry. The wind is not currently carrying sand to the dunes.

If you have the time, while at Kelso Dunes two other area attractions are worth a visit, Mitchell Caverns and "Hole in the Wall." The two sites are farther east along the 40 freeway, about 60 miles from Kelso Dunes and are within minutes of each other.

Mitchell Caverns are the only limestone caves in the California Park system and well worth a visit when you are in the area. One can only enter the caverns as a member of a guided tour. The tour takes about 1½ hours.

"Hole in the Wall" is collection of volcanic rock

September Program

At our September 8th meeting Tim Thompson will describe his recent trip to observe at the Caltech Submillimeter Observatory, on Mauna Kea. The talk "will mostly be about the experience of observing, with little in the way of science (except to describe why we do submillimeter wavelength astronomy)." Mr. Thompson has a BS and MS in Physics from California State University at Los Angeles. He has worked at Jet Propulsion Laboratory since 1981.

Star Party Sites

- (MBC) Mecca Beach Campground
- (CS) Cottonwood Springs campground, Joshua Tree Natl. Pk
- (CC) Cow Canyon Saddle, near Mount Baldy Village
- (MS) Mesquite Springs campground, Death Valley National Pk
- (CWP) Claremont Wilderness Park parking lot
- (KD) Kelso Dunes
- (WM) White Mountains (Grandview)
- (CGT) Calico Ghost Town Campground
- (LNDRS) Riverside Astronomical Soc. Landers site

PVAA Events Calendar

Month	Star	Star	General	Board
September	9/23 (KD)		9/8	9/28
October	10/21(CS)		10/6	10/26
November	11/18 (MBC)		11/3	11/30

formations produced by eruptions over millions of years and the subsequent eroding action of wind and rain. There are picnicking and campground facilities.

If you missed the August star party, in October we return to Cottonwood Spring. I have observed from Cottonwood more than any other site. It is not as dark as it once was, but it is still pretty good; especially considering that it is only a little more than two hours away. In dozens of visits to Cottonwood the weather has only prevented me from doing any observing once. It seems to be clear at Cottonwood even when everywhere else is cloudy.

Several hikes from .5 to 5 miles are available from the Cottonwood campground. In August I hiked to Mastodon Peak. From the peak one can see the Salton Sea. Along the trail to Mastodon Peak one passes some of the mines that once operated in the area.

The November star party is one that I am really looking forward to. Through an arrangement with the park rangers, made by Frank Busutil, we will be allowed into a part of the park closed to the general public. No car headlights, no campfires, no bright lanterns for us. Salton Sea is at least as dark as Cottonwood and during the chilly months it is considerably warmer.

The Salton Sea is a great area for birding. The Sony Bono Wildlife Refuge borders on the Salton Sea, but one can bird watch from anywhere around the lake.

The first time I observed from the Salton Sea, I went to see the "mud volcanoes." The Salton Sea is in a seismically active area. Whatever is going on below ground, the heat is being exploited by a number of geothermal power plants. There are active mud pots near some of the geothermal power production. Many of them looked like little volcanoes. You could see the warm mud slowly boiling up out of the mouth of the cone. The biggest ones were about 6 feet high. The smallest were only a few inches. From some, mud was slowly oozing down the side of the cone. It looked remarkably like brown lava. Others had blobs of mud flying up out of the "caldera" every several seconds. The mud is forced to the surface by the release of CO₂ and other gases from deep within the Earth. Seeing the mud pots was an enjoyable experience.

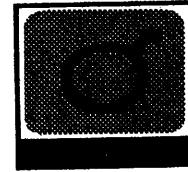
I believe that now the mud pots that I saw are closed to the public. They were on private property. However, I think that there are other mud pots which are still open to the public. One would have to check with the park ranger.

I hope that many of you will attend one or more of these upcoming star parties. Observing the heavens is great fun, but each of these sites has much more to offer which can further enhance the star party experience.

Ron Hoekwater

"Imagination is as vital to any advance in science as learning and precision are essential for starting points."

Percival Lowell



PVAA e-mail

The club would like to have the e-mail addresses of those members interested in being informed of events which occur at times which are not able to be put into the newsletter. Those interested in getting this information, send your e-mail address to Ron Hoekwater at astro.ron@juno.com

PVAA 24 HR. Hotline.

Get the latest news on the star party, club meetings, special events and astronomy happenings. call 909/596-7274

Visit our website at www.pvaa.us

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Cottonwood Spring Star Parties

I had so much fun at the August 19th PVAA star party, at Cottonwood Spring that I went back a week later and did it again. The transparency on Saturday, August 19th was excellent and I am told that it was even better on Friday night.

I arrived at about 5:00 PM on Saturday evening. When I pulled in Frank and Barbara Busutil and Jim Bridgewater were already setup. Another group (The Cottonwood Springs Astro Ass'n) was also there. Later Bill Vaskis arrived after an adventure that involved keys locked in trunk. Mike and Bennett Hardy were also there with an 8-inch Dobsonian. A family from the Netherlands came over to visit and look through the telescopes. We also had a visitor from Turkey (who now lives in Ontario) come out specifically to observe with us. We all enjoyed looking through each other's scopes and showing many of the Messier objects and the brighter NGC objects to our visitors. After midnight I spent some time looking at Uranus and Neptune with a couple of guys who brought an 8-inch Schmidt-Cassegrain. Unfortunately I can't remember their names.

On Friday August 25th Laura Jaoui and I went back to Cottonwood. There we met Brad Knoll, an electrician who built his own go to system for his 10-inch Dobsonian. It is really quite impressive. On Saturday Craig Matthews and his friend Don arrived. Craig brought his new 12-inch Meade LightBridge.

The highlight of the second weekend for me was observing G76, which is a globular cluster in M 31, the Andromeda Galaxy. This was the first time that I had observed a globular cluster in another galaxy through a telescope (except with the 60-inch telescope on Mount Wilson). It was actually pretty easy to see at 14th magnitude. G76 is one of the 3 brightest globulars in M 31. It was kind of like observing Pluto. The problem is not seeing the object, the problem is first figuring out where to look and second figuring out exactly which faint little speck it is.

We also looked at NCG 604 in M 33, the Triangulum galaxy. NGC 604 is a nebula similar to the Orion Nebula but much larger. Whereas the Orion Nebula contains 4 bright stars at its center, NGC 604 contains over 200. NGC 604 is also 100 times larger than the Orion Nebula. To be visible in a scope it has to be pretty bright since at 2.7 million light-years distant, it is about 1700 times farther away than the Orion Nebula. So we saw both a globular cluster and a nebula in a galaxy other than our own. That was exciting.

On Saturday we had time for hike. There is nothing more exhilarating than a 2.5-mile hike on a 100+ degree day in the middle of the desert. Well maybe there *is* something. Anyway it was fun. We visited an old mine, saw the view from Mastodon Peak,

and rested for a while at Cottonwood Spring.

Both Joshua Tree star parties were great fun and everyone had a good time. The star party for September is on the 23rd at Kelso Dunes. There are directions on the website: www.pvaa.us.

Ron Hoekwater

**August 9th Star Party at Ontario City Library
and**

August 12th Star Party at Potrero Girl Scout Camp

On a delightful August evening, Wednesday, August 9th, members of the club, including Raul Martinez, Joe Hillberg, Claire Stover and Ray Magdiarz, revealed the night skies to a total of 93 individuals at the Ontario City Library.

Due to urban skies the most viewed objects were solar system objects Jupiter and the moon, to the delight of those who attended. One public member even brought his own telescope which members helped him align and added more observing power bringing the total to six scopes at the event.

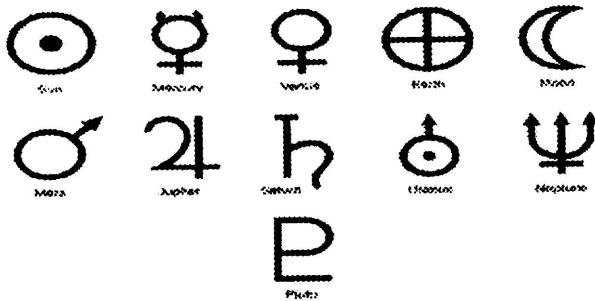
The members received many enthusiastic questions and kudos from the public for providing this city based event.

On August 12th the members changed gears and went to the nearby mountains above Lake Elsinore, Ca. to help 67 girl scouts and their leaders view the night skies. After a dinner provided by the scouts telescopes were set up. As President Ron Hoekwater began talking to the girls about the Perseid meteor showers, as if on demand, a beautiful long streamed meteor shot over the group to the delight of the scouts and all in attendance.

With such a dramatic entrance to observing, the scouts were really intrigued by the various sky objects and wonders. Sights of the double star Alberio, clusters in Scorpius and globular clusters in Sagittarius capped off the night along with s'mores which the scouts provided.

Sherry Martinez

Symbols of the Planets - and now possibly a dwarf planet—Pluto



Planet Symbols

The symbols for the planets, Moon and Sun (along with the symbols for the zodiac constellations) were developed for use in both astronomy and astrology. The astronomical symbol for the Sun is a shield with a circle inside. Some believe this inner circle, or "boss" represents a central sun spot. The symbol for Mercury represents the head and winged cap of Mercury, god of commerce and communication, surmounting his caduceus (staff). The symbol for Venus is designated as the female symbol, thought to be the stylized representation of the hand mirror of this goddess of love. The symbol for Earth shows a globe bisected by meridian lines into four quarters. The symbol for the Moon is a crescent. The symbol for Mars represents the shield and spear of the god of war, Mars; it is also the male or masculine symbol. The symbol for Jupiter is said to represent a hieroglyph of the eagle, Jove's bird, or to be the initial letter of Zeus with a line drawn through it to indicate its abbreviation. The symbol for Saturn is thought to be an ancient scythe or sickle, as Saturn was the god of seed-sowing and also of time. The symbol for Uranus is represented by combined devices indicating the Sun plus the spear of Mars, as Uranus was the personification of heaven in Greek mythology, dominated by the light of the Sun and the power of Mars. The symbol for Neptune is the trident (long three-pronged fork or weapon) of Neptune, god of the sea. The symbol for Pluto is a monogram made up of P and L in Pluto (and also the initials of Percival Lowell, who predicted its discovery).

From NASA <http://solarsystem.nasa.gov/multimedia/display>

Pluto—Planet or Dwarf Planet?

The strangest, least-known, and farthest planet from earth is Pluto. Decades of searching for this planet failed until, in 1930, Clyde Tombaugh, after looking at thousands of star images, discovered the new planet while working at the Lowell Observatory. The name Pluto was chosen because the mythical Pluto's brothers were Jupiter and Neptune and the 1st 2 letters, which form the astronomers' symbol for the planet, P and L, are the initials of Percival Lowell, the luckless founder of the observatory.

Pluto is such a small planet, has such a peculiar orbit--it actually comes closer to the sun than Neptune--that some astronomers would like to treat it as something other than a planet, perhaps a runaway moon belonging to Jupiter or Neptune.

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Clyde W. Tombaugh discovered Pluto on February 18, 1930. Pluto has yet to be reached by a spacecraft. It is hoped that the new Horizons spacecraft, will reach the planet July 14, 2015. Pluto is mainly made up of ice, with a surface composed of nitrogen, methane and carbon monoxide.

It has an unusual 90,613 day orbit and is one of the largest objects in the Kuiper Belt.

