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# nightwatch

Newsletter of the Pomona Valley Amateur Astronomers

Amateur  
astronomers  
just get better  
looking . . .

As usual, the June General Meeting will begin at 7:30 p.m. in Galileo Hall on the campus of Harvey Mudd College

Volume 25 Number 7

*nightwatch*

July 2005

## President's Address

I am just back from White Mountain and I can report that it was terrific! I hope everyone is having as good of a summer as I am. Having spent several days in such a beautiful place makes me wish for you all to have at least one opportunity this summer to relax and view the heavens from a dark sky site.

Summer is also election season for PVAA. At our July 22<sup>nd</sup> General Meeting nominations for PVAA board positions and club offices will be accepted. Be thinking of who you might want to nominate. All of our current board members have consented to run again. Of course, you nominate anyone who is a current member. The elections will be held at our August 19<sup>th</sup> General Meeting. Try to attend both meetings if you can.

At the July 22<sup>nd</sup> meeting there will also be a short slide show featuring some of the highlights of my recent visit to Grandview Campground at White Mountain. If you are planning to attend the August 6<sup>th</sup> PVAA star party you may be interested in seeing this.

Anyway have a great rest of the summer and happy stargazing!

*Ron Hoekwater*

## Report on the June Meeting

### What's Up

Lee Collins pointed out the abundance of objects in the Scorpius-Lupus-Centaurus region. Here the Milky Way takes its dip below our horizon to head by the Southern Cross and reappear again in our sky below Canis Major.

Here is the Galactic Center, just above the Scorpion's tail. Here are a wealth of outstanding open clusters and globular clusters. The largest known globular, Omega Centauri is in Centaurus. It may contain 10 million stars and is so bright it was first given the Greek letter designation of a star. Nearby is Centaurus A, a strangely disturbed galaxy so radiant it is commonly referred to by its radio telescope designation. Hidden just below our horizon, near Crux (Southern Cross)

## Additional Star Party on July 30

Location: Cow Canyon Saddle

### Star Party Sites

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

## PVAA Events Calendar

| Month  | Star Party | Star Party | General Meeting | Board Meeting |
|--------|------------|------------|-----------------|---------------|
| July   | WM         | 9          | 22              | 14            |
| August | WM         | 6          | 19              | 11            |
| Sept   | LNDRS      | 3          | 16              | 8             |
| Oct    | CS         | 1          | 14              | 6             |

lies bright Alpha Centauri the closest star (4.2 ly) to our Sun.

Also, Dave Gardner gave his ongoing report on current technological news relating to astronomy.

**Speaker of the Evening**

Wally Pacholka of Orange County Astronomers told us how he has made a name for himself photographing starscapes with illuminated rock formations in the foreground. His photos of Mars framed by a red-orange arch in Nevada's Valley of Fire State Park won both a Time and a Life magazine "picture of the Year" award.

Previously, his portrait of Comet Hale-Bopp hovering above rocks in Joshua Tree National Park, garnered both Time's "Picture of the Year" and its "Images of the Century" honors. Also, he told us how he missed the Life 2001 "Picture of the Year" with his Leonid meteor shots. They went all the way to the production day, but were rejected when the layout manager changed the spread from a one page to a 2 page spread, which caused the dead center meteor to fall into the fold of the spread.

Wally, an accountant, told of his aggressively organized efforts to market his artistic photographs to the wider world. He feels his average guy in the desert looks at the night sky point of view was a good selling point. Very down to earth, not like a Hubble Telescope study. Time and Life found his work through Astronomy Picture of the Day website (antwrp.gsfc.nasa.gov/apod/astropix.html). Wally also has his own website if you want to check out his work (www.AstroPics.com).

He set up a display of his photos for sale on gift cards and in matted framed form. Many members bought examples of his work. All together quite an accomplishment for an amateur astronomer and photographer.

*Lee Collins*

**David Kary to Speak**

Our speaker at the July 22<sup>nd</sup> meeting will be our own David Kary. Mr. Kary is a professor of astronomy at Citrus College and a member of PVAA. His topic will be the four papers published by Albert Einstein in 1905.

Here is how he describes the presentation: In 1905, Albert Einstein published 4 major papers. For two of these papers he received Nobel Prizes. The other two introduced the special theory of relativity. Two revolutionary branches of physics, quantum mechanics and relativity, emerged from

these papers and completely changed the world for physicists (and the rest of us) over the last century. We'll look at these two bizarre pictures of the world, and how they have evolved in the hundred years since 1905.

Also, Lee Collins will present his "What's Up" feature. And Ron Hoekwater will present a short slide show on the Grandview star party.

*Ron Hoekwater*

**It's Summer Camp Time!**

Summer has arrived, along with southern California's nice cool nights and the bright summer triangle. Another summer tradition is Camp and the local Girl Scout Troops have a busy summer camp schedule planned as usual this year – teaching girls from ages 5 through 18 new skills. In addition to the traditional campfires, lanyards, s'mores and camp songs – the girls can choose camps which teach scrapbooking, canoeing, knitting, and star gazing. It is with that last subject that we have been asked to assist. No less than three separate Scout

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***

**PVAA Officers and Board**

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 Speaker.....Walter Brown.....909/989-6535

Camp organizers – volunteers themselves – have asked me if our Club can share its considerable knowledge and observing equipment with their campers during the coming months.

Would you like to help? Here are the opportunities coming up:

Wednesday, July 27<sup>th</sup> at dusk. McCoy's Equestrian Center at 14280 Peyton Dr, Chino Hills. Mad Science Camp. 1<sup>st</sup> – 7<sup>th</sup> grades.

Thursday, August 4<sup>th</sup> 7:30pm – 9:30pm. Schabarum Park, 17250 Colima Rd, Rowland Heights. Astronomy Badge Camp. 1<sup>st</sup> – 6<sup>th</sup> grades.

Saturday, August 13<sup>th</sup> dusk. El Potrero Girl Scout Camp near Lake Elsinore. (Nice dark sky site) Nature at Night Camp. 4<sup>th</sup> – 12<sup>th</sup> grades.

Maps will soon be posted on our club web site – [www.pvaa.us](http://www.pvaa.us) – or you may contact Claire for details. Please join us at these fun events – the girls love to learn about the sky and you don't need a telescope to assist. They can also learn how to find the North Star, what a planet looks like, and what the Milky Way really is. If we're really lucky, we may even be asked to join the campers in a s'more for dessert to finish off a fun evening!

Thank you.

*Claire Stover*

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### Clear Skies and Comet Impacts at Grandview

One of the very highest of high points in my observing year is always my trip up to Grandview Campground at White Mountain. This year was no exception. My time from Thursday, June 30<sup>th</sup> until Saturday July 9<sup>th</sup> was spent in the clear, clean, mountain air and under the breathtaking skies of the White Mountains. The first two days and nights up at Grandview the skies were great. There was not a cloud in sight. In the past I have seen some spectacular sunsets from Grandview. This year there was none of that, but this simply meant that the atmosphere was particularly dry and free of particles. On only two of the 10 nights spent at Grandview were there any clouds at all and on both of those nights it was completely clear before midnight. The steadiness of the seeing was

not terrific, especially as the planets visible (Saturn, Mercury, Venus, and Jupiter in the evening) were generally low in the west with Mars becoming visible in the morning, low in the east. But as I am most interested in observing deep sky stuff, I could scarcely have hoped for better viewing conditions.

The first night out I turned the scope on M 17. This object is known as the Swan Nebula or also as the Omega Nebula. Although I have seen it many times before, in these pristine skies M17 was like a new object. At high power the Swan revealed detail and structure that I had never seen before. It became several individual sections of nebulosity. With an O III filter it changed from the Swan into the Omega Nebula. It looked very much like the images that I have seen in books and magazines.

Next, I looked at the galaxy cluster in Hercules, Abell 2151. Grandview is the first place from which I was able to see this faint cluster and it has become one of my favorite objects to observe from there. Using a 9mm Nagler eyepiece (.3° FOV) there were 6 to 8 faint galaxies in the field everywhere I looked. The entire cluster spans about a degree or perhaps a little more. I also looked at Abel 2199, which is another galaxy cluster in the Hercules super cluster. Abell 2199 was the subject of an "Astronomy Picture of the Day" (<http://antwrp.gsfc.nasa.gov/apod/ap970122.html>).

A couple of nights later, while trying to decide what to look at, I thought that Lyra was well placed for observation. In Lyra everyone looks at M 57, the Ring Nebula. But, there are two other much less well-known planetary nebulas there. I decided to look for these. The first is NGC 6765. When I finally found it, it appeared as a faint, (12.9 mag.) one half arc minute oval glow in eyepiece. The second is PK64+15.1. This one is mag. 13.3 and showed up as a 15 arc second disk. Both were small and very difficult to see. In this case, the excitement of seeing them was much more intellectual than it was visual. When I arrived home, I found a website ([http://www.messier45.com/guide/pn\\_in\\_lyra/](http://www.messier45.com/guide/pn_in_lyra/)) devoted to the observing of very faint planetaries in Lyra.

The Crescent Nebula (NGC 6888) in Cygnus was another object I spent some time looking at. It is a small emission nebula 2 ½ degrees southwest of Gamma Cygni. With no filter it is a little difficult to spot but visible in the 22-inch. With an OIII filter it becomes quite obvious. In some ways it looks like a tiny "Veil Nebula."

After midnight the Saturn Nebula (NGC 7009) in Aquarius was well placed for viewing. It is a small however quite bright (mag. 8) bluish oval. The Saturn Nebula was one of the first discoveries of William

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Herschel, made on September 7, 1782. This remarkable planetary nebula is named because of its appearance, which resembles the planet Saturn with rings nearly edge-on. Lord Rosse gave it its name in the 1840s. Estimates of its distance range from about 2400 to 3900 light years.

Along with everyone else, I observed the comet Tempel 1 during the Deep Impact mission. On July 3<sup>rd</sup>, I started observing the comet at about 10:40 PM PDT and continued until about 12:10 AM PDT, when from my vantage point, it disappeared into the trees. This was the only time that I can remember being able to observe through my 22-inch Starsplitter while sitting down. In the eyepiece, the comet was near a faint star, which I used for comparison. At the beginning of the night the Comet appeared fainter than the star, but about 11:15 PM I noticed that it had brightened. By midnight it appeared about as bright as the star and as the comet's light was more spread out, it was probably brighter. The nucleus of the comet also brightened noticeably over the evening. At the website: <http://deepimpact.jpl.nasa.gov/mission/index.html> you can see images and learn more.

Every night there were many satellites visible. On several nights I saw half a dozen or more satellites before midnight. The International Space Station was seen passing over on at least 3 different nights. We also saw an Iridium flare pass near Jupiter and it was quite a bit brighter than that planet.

While camped up at Grandview, I met a group of amateur astronomers from Santa Monica. Among the instruments that they brought were a 5.9-inch refractor and a 22-inch Dob. One night we were seeing spiral arms in M 81, *with the refractor!* We all compared notes on our observations of the comet Tempel 1.

I visited with quite a number of amateur astronomers and others interested campers. Another group from Temecula was present. Several people, unaffiliated with any group, were out with telescopes. San Bernardino Valley Amateur Astronomers began arriving July 7 and were still there when I left.

During the daylight hours, I had as much fun as I did at night. I visited Law's Railroad Museum, which is kind of a reconstructed rail depot and ghost town north of Bishop on Highway 6.

I drove down through Wyman Canyon, visiting several prospectors' shacks along the way. Four-wheel-drive is recommended for this road. Winding through the canyon, the road crosses Wyman Creek at least 20 times. In some places the creek and the road are the same. For my van the problem was more one of ground clearance than of getting stuck. The road joins

Highway 168 near Deep Spring College.

I walked to the top of White Mountain, 14,246 feet. (White Mountain Peak is the third highest mountain peak in California.) Parts of the trail were still blocked by snow, but it was possible to make one's way around the drifts. At the top is a weather station: (<http://www.wrcc.dri.edu/weather/wmntn.html>).

The White Mountains are home to the Bristlecone Pines. I hiked along the forested slopes of the Schulman Grove among the world's oldest trees. Some of these trees are more than 4,000 years old. One, "Methuselah" is nearly 4,800 years old.

Well, I could write much more about my week and a half of adventures, but I won't. As I do every year, I had a great time up at Grandview. Unfortunately, I can not return to the White Mountains this summer. But you can! PVAA will be having its August star party at Grandview on Saturday the 6<sup>th</sup>. If at all possible, I recommend going for more than one day. There is so much to see in the Owens Valley, in

### Comet Bash 2005

"If a chunk of solid metal the size of a refrigerator hit whatever that thing is made of at over 20 thousand miles per hour, how big of a hole do you think it would make?"

Despite the fact that on the night of July 3, a school in Glendora is swarming with astronomers, astrophysicists, members of the star-crazed public, (and a lot of people who are just jealous that NASA has better telescopes than they do), most of those attending, including my mom and I, find it hard to conceptualize anything past "the size of a refrigerator". However, the smiling Planetary Society staff behind the ticket counter tell us that if we get the right number, we could win a prize. That would really be a long shot, I reply, since my estimate is off by at least a factor of 10. Meanwhile, Comet Tempel 1 shines rather brightly overhead (for a comet) because it has no idea what is about to happen.

In fact, the comet Tempel 1, previously described as "whatever that thing is made of" was about to be slammed into by a solid and slightly more high-tech refrigerator, known to most as the impactor of Deep Impact. The rest of Deep Impact was going to hang around nearby and take pictures of... well... whatever happens next. In the mean

time, here come the real astronomers.

To stick to the theme of destruction, Louis Friedman, the executive director of the Planetary Society, tells us what the Planetary Society's solar sail mission, Cosmos 1, was supposed to do, what it didn't do, and encourages us all not to buy secondhand rockets from the Russians. Then Apollo 9 astronaut and chairman of the B612 Foundation, Rusty Schweickart, reminds us how glad we are that we don't live on Tempel 1 by talking about the near-Earth asteroids – discovering thousands, doing... nothing. It is also brought to our attention that we are driving around the universe uninsured. But then Bill Nye, the Science Guy and Vice-President of the Planetary Society, armed with his trusty bottle of water, makes his entrance to remind us that if comets had not struck Earth, there would be no atmosphere, oceans, life, humans, and most importantly, no trusty bottles of water to make his entrances with. Then he remembers that the Planetary Society named him VP while he was out of the room getting a drink, gives up on the advantages of comets, and sits down by Rusty Schweickart to take questions.

When we all return from buying candy, chips, apple cider, ice cream sandwiches, and various other products brought to you by comet water, the NASA people talk for a while about how many nice pictures their telescopes and expensive cameras are supposed to take. Then the fun begins. Live pictures from Deep Impact's impactor and flyby fill the screen, with crater detail that makes even the astronomers with space telescopes goggle. After the impactor hits, pictures from the flyby show the growing cloud of glowing comet dust and debris, which seems to envelope the whole bottom half of the comet. Then for those who are still not paying attention, another live feed from the NASA control room announces that Deep Impact has been a success. We watch the pictures from the flyby until it decides it needs a break from all the excitement and proceeds to ignore the comet for the next half hour. Since it is almost midnight, my mom and I decide to follow suit and go home.

*Lucy Stover*

### *Triple Conjunction*

On Monday night, June 27<sup>th</sup>, after an enjoyable dinner at Mt. Baldy Lodge, my family and I joined many PVAA members including Larry, Ron, Lee, Jeff Felton, Anita, and Mary along with passersby and interested members of the public to see what we could find in the evening sky. We gathered in the parking lot at Cow Canyon Saddle, just southwest of Mt. Baldy Village. It had a clear view of the western horizon – lower than we can usually see, thanks to our altitude of 4,500 feet. Twilight viewing started off through Larry Pall's solar scope at 7pm. Those who had never seen the magnified sun before were amazed at all the activity they could see – several prominences were visible around the edge of the sun's disc along with the bumpy boiling look of the surface. It wasn't a smooth yellow ball like in kid's drawings after all!

Around 8pm, the stars of the night's show became visible – first Venus and soon nearby faint Mercury. Mercury benefited from its close association with sister planet Venus and was very easy to find in the sky. Within ½ hour, the third member of the Planetary Trio was viewable – Saturn way below its two siblings. Views of Jupiter and its moons high overhead rounded out the evening. Two recent visitors to our Club meetings joined us, too – Mike and his son Russell along with their 8" Dobsonian telescope. They shared beautiful views of Jupiter and M13. Since many of us had work or school the next day, the party began to break up a little after 10 pm and we all headed for home only ½ hour away. It was an enjoyable evening that was well attended and the viewing was great for being so close to town.

*Claire Stover*

### **The Triple Conjunction That Wasn't**

It was June 27, 2005. I was scanning the sky in the direction where I expected to see Venus and Mercury, and Saturn. The time was about 9 PM. I was using the image stabilized 10 power binoculars. The sky seemed to be clear, but after about 10 minutes of gazing, I gave up. I was in Denali National Park in Alaska, and the sky was as bright as it is in Claremont at 6 PM.

*Ray Magdziarz*

### Hello Fellow Music Lovers

By Larry Pall

No, this is not the wrong article in the wrong newsletter. I am talking to all of you that are amateur astronomers and music lovers. There are many of us that get that same good feeling hearing one of our favorite songs that we do when seeing a Globular Cluster or one of Jupiter's Moons transit for the first or one hundredth time. If you are one of these people, I am talking to you because PVAA is putting together a "Favorite Hits" cd which will consist of club members favorite songs. Here's how it works. If you would like to suggest one or more of your favorite songs for the cd, just email your request(s) to [teampall@yahoo.com](mailto:teampall@yahoo.com). Include the name of the song and the artist. All requests will be submitted to the Board of Directors for approval. All approved songs will then be properly purchased by me and compiled on the cd. The cd will list the song, artist and club member who requested it. Depending on the length of

the songs, we should be able to get 15 to 20 songs on the cd. Since we do not want to infringe on any copyright laws, the cd will not be for sale. However, a \$6.00 donation to the club would be appropriate if you would like a "PVAA Favorite Hits" cd.

Now lets talk about songs. There are several ways to do this since so many songs have been written about love and the stars, love and the moon, love and the sky, well you get the idea. We could suggest that all songs be astronomy related i.e. refer to a heavenly body or object, or have a spacey new age sound, or we could just have favorite songs. For the first "PVAA Favorite Hits" cd, lets make it one of your favorite songs with or without a celestial reference. I think this will help us get to know each other better. So don't hesitate to start now. If you have one or more songs you would like to share with other members of PVAA, submit you request right away and lets start tapping our feet to some good music.

**These are two of many cards created by students of Roynon Elementary School showing their appreciation of the Star Party the PVAA provided recently .**

