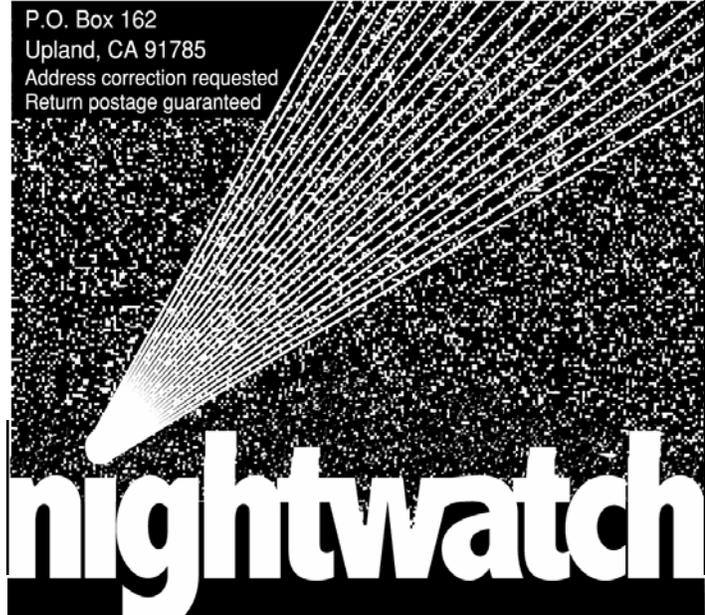


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nightwatch

Newsletter of the Pomona Valley Amateur Astronomers

Amateur
astronomers
just get better
looking . . .

**The general meeting will begin at
7:30 P.M. in Galileo Hall**

Volume 24 Number 11

nightwatch

November 2004

President's ADDRESS

In less than a month, PVAA will be holding its annual holiday dinner. In 2003 we added something new to the festivities. Bob Akers (VP of facilities) orchestrated and conducted a drawing in which many prizes were awarded. The grand prize was a nice pair of 10x50 binoculars, but everybody won something. It was a big hit with the attendees and added greatly to the evening's fun. This being the case, in 2004, we will again be having a drawing. The grand prize will be a \$100.00 gift certificate from Orion Telescopes. The holiday dinner will be held on Friday, December 3rd at Jouni's in Upland. For more information see the form in this newsletter.

Also, we are confirmed for our group tour of the Einstein Exhibit at the Skirball Cultural Center in Los Angeles. Our tour will begin at 3:00 PM on Saturday, January 15th, 2005. There is a \$10.00 per person charge for the tour of the exhibit. I will have more details at the November 19th general meeting or you may call me at home if you have questions.

I hope to see many of you at these two upcoming group events.

Ron Hoekwater

October General Meeting

Three visitors joined us at our meeting, one who had visited the Orange County astronomy group then decided to check our closer to home meetings and a married pair of teachers from two local colleges. We hope they all join us again.

Ron has scheduled a group tour on Saturday,

Star Party Sites

- (MBC) Mecca Beach Campground (see page 4)
- (CS) Cottonwood Springs campgrnd, Josua Tree Ntl. Pk
- (CC) Cow Canyon Saddle, Mount Baldy Village
- (MS) Mequite Springs campgrnd, Death Valley National Pk
- (CWP) Claremont Wilderness Park parking lot
- (KD) Kelso Dunes
- (WM) White Mountains
- (CGT) Calico Ghost Towm Campground

PVAA Events Calendar

Month	Star Party	Star Party	General Meeting	Board Meeting
Nov	MBC	13	19	11
Dec	CWP	11	3	16
Jan	MBC	8	21	13
Feb	CGT	5	25	17

January 15 at 3pm of the exhibit on the life and science of Albert Einstein at the Skirball Cultural Center in Los Angeles. We also have a star party coming up early next year, on Wednesday, February 16th at Sycamore Elementary School in Upland. Hopefully some of you can attend with your scope, binoculars, or just yourself to help teach the night sky to a new generation of observers.

In addition to collecting annual dues from members, our treasurer Ludd had two items for sale at special member's only prices. "Explore the Universe" was available for \$6 while the 2005 Deep Space Mysteries Calendar (retail price \$12) could be had for only \$8. Please contact Ludd to reserve a copy for yourself or see him at our next meeting.

John Stover spoke to us about our new Web site: www.pvaa.us. He reminded us to use the site for details on upcoming events – dates, times, and maps. You will also find a copy of our current newsletter along with any forms from the newsletter that you can print out and send in. A useful astronomy links page is coming soon. Please check out our new location and let John know if you have any ideas to make it better.

Lee Collins' What's Up covered a prominent feature just leaving our evening view – the Summer Triangle, along with the area around the Great Square of Pegasus. While the Triangle is made up of a trio of easy to locate stars of similar apparent brightness, one has an absolute magnitude quite a bit larger than the other two. While Vega is 25 light years from us and Altair is 17 LY away – Deneb lies 1,467 LY from Earth. A similar double, Almaak in Andromeda matches the well-known color double Albireo in the tail of Cygnus in the same part of the sky.

We are planning and taking reservations for our annual Holiday Party at Jouni's on Friday, December 3rd at 7pm. The cost will

again be \$20 per person and will include a raffle for all of those attending. Meal choices this year are Steak Kabobs, Parmesan Chicken, and Stuffed Shrimp. Please invite a guest or plan to attend yourself – join us for an enjoyable evening of getting to know each other, sharing seasonal cheer, and maybe even a bit of holiday music and song.

Featured Speaker

Mike Simmons was our speaker for the night. We were treated to a fascinating glimpse of Iran through Mike's pictures and stories from his visits to this country over the last several years. Mike was in Iran in 1999 to view the solar eclipse and has been back for visits since. He enjoyed the small town's

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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Programs.....Roy Schmidt.....909/980-1867
Speaker.....Walter Brown.....909/989-6535

enthusiasm for his visits as they put up banners to herald the arrival of Mike and his colleagues to their villages. The people were excited to meet the American visitors and anxious to share their hospitality and their thoughts with those from our country – a rare event for many.

Mike found a community enthusiastic to learn about the night sky. Their society is a relatively young one and, in contrast to many scientific fields in the United States dominated by young women rather than men. Another contrast was found in the equipment they had available to them, Mike estimated that the whole country had no more than 30 8" telescopes – not much more than could be found within our own astronomy club! A 20" telescope is the largest in the whole country – Ron's Star Splitter has that beat. What sky enthusiasts lack in equipment though, they seemed to make up for in interest and in the development of detailed manual methods of recording their observations, even by young students.

Many at our meeting were jealous of one aspect of astronomy in Iran. The observing site in one small town was on a hill at the outskirts of town, overlooking the homes below. When Mike asked how they dealt with the lights on observing nights, we were all pleased at the answer – why, they just turned off the power to the whole town for the night! Do you think we can try that approach next time we visit Cahuilla Park in Claremont or the Library in downtown Ontario?

Many of us chatted with Mike after the meeting, showing as much curiosity for the Iranian people as they showed for us. We were interested in finding out about opportunities to assist the star watchers there – much of our cast off equipment would be a treasured addition to the limited equipment they use to observe. We may find opportunities to share with our fellow stargazers in the future. Thank you, Mike for

an interesting and eye opening view of this country and its people - it deserves a closer look than most of us get from the evening news.

Claire Stover

November Speaker

November's speaker will be Citrus College professor of astronomy and PVAA member David Kary. He will speak on the exciting advances, which have been made in recent years, in the study of planets and planet formation around other stars.

COFFEE

I have been providing the coffee at the break, and I think the coffee tasted terrible. This month I have a new coffee maker, and I expect the coffee will taste better. So check it out. It couldn't be worse.

Ray Magdziarz

HELP

The PVAA needs volunteers for positions in the club.

Star party director

Publicity director

Greeter

Workshop director

If you think you could fill one of these positions see or call Ron Hoekwater.

John Jacobs

John Jacobs has moved again. He would welcome a call or visit from the members.

He now lives at 4877 Orange Blossom Lane in Chino, 91710. Telephone (909) 465-5516. Please call before you visit.

A REVIEW OF THE 2004 SEARCH FOR WATER ON MARS

In January of 2004, NASA successfully landed two rovers on Martian sites where there might once have been bodies of liquid water. Both rovers photographed the cold, rugged Martian landscape, using their tools to examine the rocks of Mars. And one rover has located solid evidence of standing water. Any existence of even fossil microscopic Martian life must involve the presence of standing water.

First Spirit landed in a 100 mile wide impact crater called Gusev. Roving off to explore nearby impact craters, it found red sand dunes and volcanic basalt, but little to indicate much water had ever pooled there. After photographing the broad Bonneville Crater, it set off on a record two mile trip up the newly named Columbia Hills (named after the tragic shuttle). Excellent photographic vistas of rows of distant mountains were taken from higher ground. Once it examined a rock with finger like hematite (a water related mineral) nodules. This exotic rock was unlike any ever seen on Earth, earning it the name of Pot-Of-Gold. Digging a trench in the hillside, Spirit discovered magnesium sulfate, a mineral associated with the percolation of acidic water. Then Spirit proceeded to climb to new hilly heights to hopefully see (like the fabled chicken) what's on the other side.

On the other side of Mars, Opportunity had more luck after landing on the state sized Meridiani Planum. Bouncing to rest inside a 70 ft. crater named Eagle, it immediately saw layered sedimentary rock exposed in the crater's walls. Sediments laid down by water eons ago had formed these outcroppings. They showed the cross-bedding effect of having been created in shallow water. They had the salt residue of rocks born in a salty, acidic lake. Leaving Eagle Crater the rover found the plains strewn with BB sized blueish hematite spheres. Soon nicknamed "blueberries", they are the concretions formed around chemical impurities in a body of liquid water as it evaporates. Opportunity roved a half mile, passing by strange fractures in the ground, to reach a large stadium-sized crater named

Endurance

At last, a post-card worthy Martian impact crater. The steep cliffs of its walls expose at least five layers of ancient seabed deposits. Close up photos taken on the rim show ancient ripples where water might once have flowed on the surface of this alien planet. Daringly, Opportunity entered Endurance Crater on a 25 degree angle using its rock grinder to crack open an extraterrestrial geology never before seen by any living being.

Designed to last for 3 months, the two rovers have already gone beyond their limits. Now, as Mars passes behind the far side of the Sun the extremely cold Winter comes to Mars. The rovers must rest, collect solar energy, and if they survive the freeze, they will continue their amazing explorations in Spring.

Lee Collins

CANALS ON MARS?

From his own Arizona observatory, with his own pricy telescope, with his own willful wealthy eye, high on his own Mars Hill, Percival Lowell saw it all...CANALS! His fantastical Victorian vision saw artful 1890's Martians defying their own downfall.

Life striving to survive!

Lowell's imaginative alien artisans had their inspired revival plan... water would flow from cold, icy poles to boldly save a dry, dying planet. Other stargazers drew a blank on Mars. they saw only far arid triangles of black, or two crazy moons, Fear and Panic hanging dead over dusty rust red dunes.

But Percival noted in essay,

"Martians made a new canal today."

He saw them lay down streams of salvation.

But don't we all pray to be saved?

Don't we all see what we want to see?

Deep space dreams behind out open eyes, an unknown race racing to stay alive, a mirrored face on the Martian surface, an omen of our own hopes.

Lee Collins

Winter's Bright Stars

Of all the stars in the night sky, which ones stand out to your eye? How about Antares, the red star that represents the "heart of the Scorpion"? Maybe Sirius the Dog Star? This brilliant blue-white star certainly stood out to the Greeks since the name comes from the Greek word for "scorching". Other candidates could be Betelgeuse, the red giant star representing Orion's shoulder, or Vega, the brightest star of the "Summer Triangle". Two stars really stand out because of their exceptional brilliance although most of us are only familiar with one of them. Sirius and Canopus are the two stars of exceptional brilliance.

While Sirius is well up in the sky for those

of us willing to brave the chilly winter evenings, Canopus is so far south that it cannot be seen from the northern United States. Fortunately, it can be seen from our vantage point in southern California. During the fall months one has to stay up way past their normal bedtime to see Canopus when it culminates and just peeks over the southern horizon. Its brilliance will surprise you and it may twinkle in various colors since it is so close to the horizon.

Although Sirius and Canopus appear to be of similar magnitude and color to our eyes, the two are as unlike as they could possibly be. Sirius happens to be one of our closest stellar neighbors, only 8.6 light years distant and shines about 26 times as bright as our Sun. Canopus, on the other hand, is

8th ANNUAL PVAA HOLIDAY DINNER PARTY

The 8th Annual PVAA Holiday Dinner Party will be held on **December 3, 2004**, at 7:00 P.M. The location is **Jouni's Cafe**, 922 N. Central Avenue, Upland.

The dinner cost is \$20.00.

The deadline for payment, along with your choice of dinner, **MUST** arrive at the PVAA mailbox by November 19, or be given to Ludd Trozpek before that date.

Please fill out your name on the reverse side of this page with your choice of dinner and mail it or give it to Ludd Trozpek with your payment of \$20:00 per person.

This year there will be door prizes for all, and a **Grand Prize** of a \$100 gift certificate from Orion Telescopes

a real stellar powerhouse. Canopus is much farther away at about 1700 light years from us. For Canopus to appear about as bright as Sirius, it must be very luminous. If the distance measurement is correct, Canopus must be around 200,000 times as powerful as our Sun. Imagine 200,000 Suns put together. It's really hard to comprehend that amount of energy since we really don't have any life experiences to put that kind of power within any frame of reference.

Canopus is not even the most luminous star in its constellation. Eta Carina is more luminous than Canopus but it is so remote that it cannot be seen at all with the unaided eye. If Canopus is so luminous, then it must be "burning" its fuel at a furious rate.

A mild star such as our Sun will shine steadily for many millions of years to come. Canopus will not last nearly as long. It is a cosmic flash in the pan. It will rapidly use up its fuel and will change drastically. Canopus is so massive that it will undergo a violent outburst called a supernova, blowing much of its material away into space and leaving remnants such as the Veil Nebula, which we all enjoy observing during the warm summer nights. It may even collapse into a black hole. It will probably take over a million years for this to occur, a very short time in the cosmic time scale. If we could travel in time and look millions of years into the future, our Sun would appear much the same as it does today, while Canopus would not.

Dinner Menu

The choices are:

	Member	Guest
1) French Shishkabob (Bacon wrapped Filet) _____	<input type="checkbox"/>	<input type="checkbox"/>
2) Chicken Parmesan _____	<input type="checkbox"/>	<input type="checkbox"/>
3) Stuffed Shrimp _____	<input type="checkbox"/>	<input type="checkbox"/>

The dinners will be served with salad, bread and butter, with cheesecake for desert.
The table will have Vegetables with dip and Sauteed Mushrooms.

Member name
