Astronomy compels the soul to look upwards. ***Plato***

Newsletter of the Pomona Valley Amateur Astronomers

Volume 29 Number 10 ***nightwatch*** **October 2009**

President's Address

By the time you read this the Pacific Astronomy and Telescope Show will be over. I hope many of you were able to attend. While at PATS I heard Scott Kardel speak about the Palomar Observatory (which many PVAA members visited recently). What a fascinating topic! I was inspired to finally watch "The Journey to Palomar." This is the PBS special which was broadcast about a year ago and is available from Netflix or for sale from PBS. The 200-inch telescope on Palomar Mountain was the culmination of George Ellery Hale's lifetime of devotion to science. The 200-inch "Hale" telescope was not completed until ten years after Hale's death. It was the last of four great telescopes built by Hale, the first three being the 40-inch refractor at Yerkes Observatory in Wisconsin, the 60-inch telescope on Mount Wilson (which PVAA was able to observe with in August), and the 100-inch "Hooker" Telescope also at Mount Wilson Observatory. Observers such as Harlow Shapley, Edwin Hubble, Walter Baade, and Allan Sandage used Hale's telescopes to revolutionize our understanding of the Universe, laying the foundation of modern astronomy.

"The Journey to Palomar" also tells the human story of George Ellery Hale, who drove himself to exhaustion in pursuit of his goals, and of the others who contributed to some of the greatest accomplishments of 20th Century science and technology. I highly recommend this program.

Another thing that I highly recommend is the PVAA Holiday Party. This year our Holiday Party will be held in the Banquet Room at Sizzlin Skillets on Foothill Boulevard in Upland on Friday, December 11th. This is our first year at Sizzlin Skillets after many years at Jouni's. Unfortunately space is somewhat of an issue so we will have to limit attendance to the first 40 to sign up. As always there will be plenty of fun and a drawing with prizes for everyone.

I hope to see you at a meeting or star party soon. Happy stargazing!

Ron Hoekwater

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

PVAA Officers and Board

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Membership ...Ludd Trozpek.....909/624-3679
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Club Events Calendar

October 2, General Meeting
October 17, Star Party Cottonwood Springs
October 22, Board Meeting
October 24, Solar Star Party - Village Venture - Claremont 9 -5
October 24, Star GATE at Townsend Jr. High School, Chino
October 26, Monday – Orange County Braille Institute
October 28, Ontario Library Main Branch, 7 – 9 PM

November 6, General Meeting
November 11 – 15, Nightfall - http://www.rtmcastronomyexpo.org/nightfall.htm
November 14, Star Party – Mecca Beach at Salton Sea
November 19, Board Meeting

December 11, Friday – Holiday Party
December 12, Star Party – Claremont Hills Wilderness Park
December 17, Board Meeting

January 9, Star Party – Mecca Beach
January 19, Main Branch, Ontario Library, 7 – 9 PM
January 21, Board Meeting
January 29, General Meeting

February 13, Star Party – Death Valley
February 23, Colony Branch Library Ontario 6 – 8 PM
February 18, Board Meeting
February 26, General Meeting

March 13, Star Party
March 18, Board Meeting
March 26, General Meeting

April 10, Star Party
April 15, Board Meeting
April 23, General Meeting

May 6, Board Meeting
May 12 - 16, RTMC
May 21, General Meeting

June 12, Saturday – Mt. Wilson 60" viewing
June 17, Board Meeting

Landers "GMARS" Star Party

The September PVAA star party was held out in Landers at the Riverside Astronomical Society's GMARS observing site. RAS has been very kind, allowing PVAA to join them at their dark sky observing site numerous times. I was told that our members are welcome anytime.

I arrived a little late, after dark. One of the RAS members greeted me and directed me to where Rob Sweet and several friends were set up. I joined them while they figured out some of the finer points of operating a brand new Orion 10-inch computerized Dobsonian. At this time a few clouds were still interfering with the observing but we were able to look at the Ring Nebula, M 13, and a few other objects.

As the sky cleared, I wandered off and found Gary Thompson, Bob Griffin, and Jim Bridgewater. We chatted for a while and they told me Shawn Griffith was there. I went over to where he was set up and discovered that he was surrounded by 5 telescopes including a new 16-inch Meade Lightbridge. Later we used the Lightbridge to look at the Crab Nebula, Orion Nebula, and Horsehead Nebula.

I ran into Alex McConahay. He was assisting someone new to the art of digital astrophotography with a few helpful hints. We talked for a while about the GMARS site. RAS is going to be starting a new project, an expansion of the number of observatories and observing pads on the property.

The RAS had their 22-inch Dob "Cappella" set up and available to anyone willing to climb the ladder and take a look. Wayne "Mr. Galaxy" Johnson was visiting. With the assistance of Mr. Galaxy, we saw M 31, M 33, NGC 147, and NGC 185. When I got home a Google search revealed that some would be usurpers are now attempting to lay claim to that prestigious title, but we all know who the original, the one and only Mr. Galaxy is.

While walking around I met up with Cliff Saucier. He joined us in August, up at Mount Wilson for 60-inch observing session. Cliff has a nice 18-inch Obsession telescope. I heard that Bill Connelly and maybe Ken Crowder were out at Landers that night too, but somehow I didn't run into them.

About 3:30 AM I headed for home. I was plumb tuckered out. It had been a most enjoyable night.

Our next star party is Saturday, October 17th at Cottonwood Springs. The StellarVue group will also be there so it should be a ton of fun. The weather at Cottonwood is generally comfortable this time of year so why don't you join us.

Ron Hoekwater

PVAA Goes Back to School

This has been quite the busy summer for Club events with field trips to both Mt. Wilson and, Mt. Palomar. We've also been occupied with star parties for both Boy and Girl Scouts, patrons of the Ontario Library, and visitors to Griffith Park. I hope those of you interested in these events were able to squeeze some into your schedules. If you haven't been able to make it yet, please don't give up; check the Club calendar in the Nightwatch or look at our frequently updated calendar on line and get out there with our fun group to assist. September means back to school and our star party planner, Craig, is busy booking events so we can share our knowledge of the skies with local school children. Observing equipment is useful but not required. You can talk about the stars and the planets while people are waiting in line for telescopes, and sharing constellations is always enjoyed. The club has both binoculars and telescopes that members can borrow – take advantage of this benefit of Club membership. Oh, and a plug for our treasurer too – please get your renewal checks to Ludd at our next meeting or mail to our PO Box so we can quickly get past that housekeeping chore for another year and get back to the fun of viewing the night sky.

Claire Stover

September Featured Speaker

Tonight we learned from Michael Janssen of JPL about Juno, a spacecraft scheduled to launch from Earth in August of 2011 and arrive at our solar system's largest planet five years later. It will pass by the Earth once, getting a gravity assist to help speed the craft on its way. Jupiter and its moons have been popular objects in our telescopes this summer and some of the larger Dobsonians can easily see bands of color in the high clouds of the atmosphere. A few people even had good enough viewing conditions after the July appearance of the dark spot to see this evidence of another impact on Jupiter, the first seen since Shoemaker-Levy 9 in 1994. Even under city lights at the Ontario Library, Gary's 13" Dob showed the shadows of three moons as they passed by in front of the planet as viewed from Earth.

Though Jupiter looks small even in the 60" at Mt. Wilson, it is 11 times the diameter of the Earth and contains 70% of the planetary mass of our solar system. Galileo discovered the four largest moons in 1610, and the inner three have orbits with an interesting characteristic. For every orbit of Ganymede – third out from the planet – Io completes almost exactly 4 orbits and Europa two. This special relationship is called Laplace orbital resonance. A similar resonance exists farther out in our solar system as Neptune orbits the sun three times for every two orbits completed by Pluto. Speaking of Pluto, one of the reasons it didn't make the planetary cut is that part of the new definition of a planet is that it clears the area around its orbit – a special case of 1:1 resonance. When two bodies share nearly the same orbit, an object we consider to be a planet will eject other bodies in its orbit. Since Pluto at $1/6^{th}$ the mass of our moon isn't large enough to do this, it now falls into the category of minor planet.

Juno will be traveling to Jupiter using the "green" propulsion of solar power, since politically it would have been difficult to get a nuclear powered craft off the ground. It will reach beneath the clouds using microwave and infrared instruments to determine the composition and hopefully some history of the planet. There are 31 orbits planned for the spacecraft, with the most important science objectives scheduled first in case the full set of studies cannot be completed. One of the challenges of the mission was in designing the orbits to avoid Jupiter's powerful radiation belts. The planet's magnetosphere is 14 times as strong as that of Earth, so lengthy contact with them would shorten the life of the mission. Plans are for highly elliptical orbits which will take Juno close to the planet and below the strongest radiation on one side then swing out past the strongest part of the field on the other side of the planet. This carefully orchestrated ballet should keep Juno as safe as possible so it is able to gather as much data as it can while the electronics of the craft are still operational Thanks to Dr. Janssen for an interesting talk. We will be eager to watch the launch of Juno in two years and see what interesting discoveries come from the mission to the challenging environment of our huge solar system neighbor.

Claire Stover

References:

http://www.planetfacts.net/Jupiter-Facts.html

http://juno.wisc.edu/

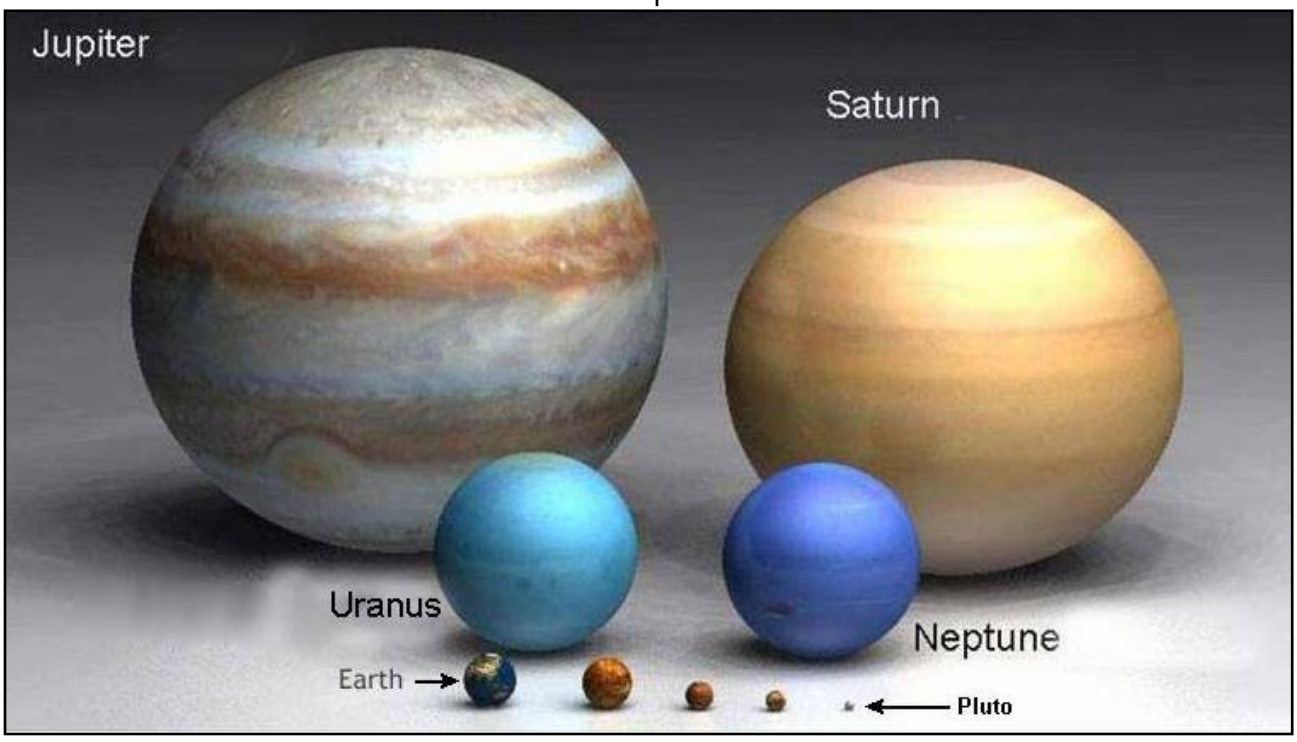
http://en.wikipedia.org/wiki/File:Galilean_moon_Laplace_resonance_animation.gif

http://en.wikipedia.org/wiki/Laplace_resonance

http://www2.jpl.nasa.gov/galileo/ganymede/discovery.html

http://en.wikipedia.org/wiki/Jupiter

http://www.sciencedaily.com/releases/2001/03/010329075139.htm



Annual Holiday Dinner

As we pass the Autumnal Equinox and begin, hopefully, to swing towards cooler weather here in Southern California it is time again to get our club Holiday Dinner on your calendars. The dinner this year will be on Friday, December 11th from 6:30 – 9:30 PM. We have a change of venue and will be gathering in the banquet room of the Sizzlin' Restaurant (formerly Sizzler). The restaurant is located on the north side of Foothill Blvd, just east of Euclid in Upland – near the former Chick's Sporting Goods location.

You will be able to order anything you like off the menu so no need to choose your meal ahead of time. More good news – you don't have to pay ahead for the event either and the Club will be covering the cost of our raffle prizes! We would like a count of who plans to attend, though, so we plan ahead and have ENOUGH prizes. As usual, you are welcome to bring a guest, spouse, or significant other to join us. There will be a signup sheet at our next few meetings or you may email me at secretary@pvaa.info to let me know if you will attend and the size of your party.

Thanks and hope to see you in December!

Claire

It's a Bird, It's a Plane

In a rare escape from astromomy, Tony Cook took this picture of the space shuttle Discovery on its way to Edwards Air Force Base. "Discovery was visible briefly from the Griffith Observatory as it darted through a 15° wide hole in the clouds," reports Tony.

Project Bright Sky Update

I wanted to take time to thank you all for your help with Project Bright Sky.

Here are the dates for the next PBS events:

October 26th A night with the moon and Jupiter Star party
Orange County Braille Institute, Anaheim
5:30 PM - 9:00 PM

March 24 2010 Desert Adventure Star Party
Rancho Mirage Braille Institute
Joshua Tree National Park, Cottonwood Springs Group Area
Times TBA

Happy Skies to all of you.

Frank

Reports from Paseo Colorado Mall

PVAA members were invited to do "Sidewalk Astronomy" on September 11&12 in Pasadena.

Claire Stover - "We had fun on Friday - especially once the clouds finally cleared and we could see Jupiter. We ended up staying until about 11:30 PM."

Gary Thompson - "I went Saturday and set up in the center of the open area where they have the Fountain Court. I was the only one there, but I had ***a lot*** of people check out Jupiter. I stayed until 9:30pm"

Welcoming Mathew Wedel to the Club

During our visit to Mt. Wilson last month, Matt's interest in binocular astronomy was re-fired by the loan of some image stabilized binoculars. He spent an evening of the next weekend stargazing with his 10x50s. He reports that it was "one of the best experiences of my observing career". With a tripod in his driveway he "nabbed a fair number of Sagittarius Messiers".

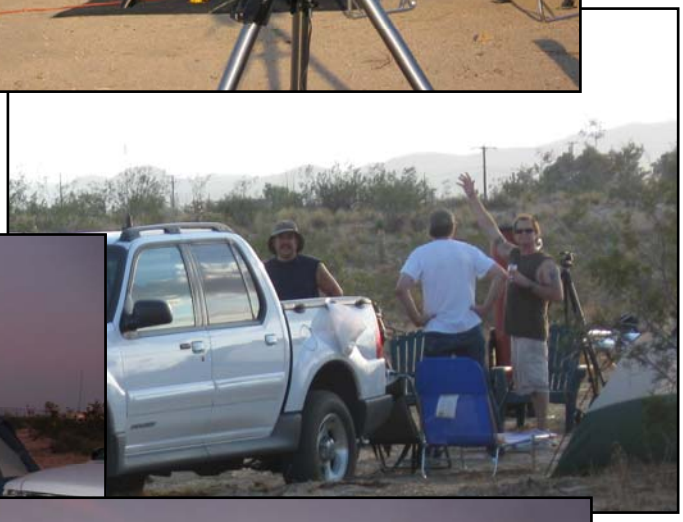
You can read his complete report at :

http://10minuteastronomy.wordpress.com/2009/08/23/observing-report-lehi-utah-or-when-binoculars-beat-a-telescope/

We hope to see Matt at our next meeting

Photo of Matt Wedel at Mt.Wilson

PVAA at Landers



Photos by Jim Bridgewater

PVAA at PATS in Pasadena

Photos by Sherry Martinez