



Newsletter of the Pomona Valley Amateur Astronomers

Volume 20 Number 9

nightwatch

September 2000

President's Message for September

Another year of the Pomona Valley Amateur Astronomers stretches out before us like an interweave of the finest linen and woolen fiber. We will visit the institutions of astronomical research both old and new as well as hearing from the practitioners of our fine art, both professional and amateur. The gathering of the membership monthly under the stars shall continue forward and our public star parties will be sprinkled throughout the year. Many activities are going to become the staple of the well-heeled PVAA member.

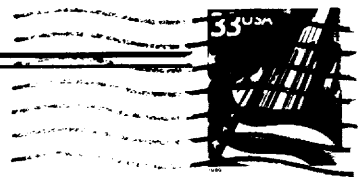
We are going up once again to Mt. Wilson to visit the grand old matron of astronomy for an evening and observation and camaraderie. The space is very limited and the experience is unique. Come to the general meeting to learn more about this evening activity.

I will reveal the date of the Cal State Northridge Solar Observatory tour during the next general meeting. The particulars for the visit will also be covered at that time. Attend the meeting and get on board for another fun PVAA tour.

We are going to have our annual Halloween public star party on two dates this year. On the weekend before Halloween we will gather at the First Baptist Church of Upland with our telescopes and regale the public with views of the heavens (and our modest promotional flyers). We will also be at the same location on Halloween evening to give a repeat performance for the 'trick or treaters'. Please support these events with your attendance and your telescope.

I went up to Table Mountain hoping to find a generous turnout of the membership on the scheduled star party evening. When I pulled up to the Ski Sunrise resort shortly

Amateur
astronomers
just get better
looking . . .



Janis Seaton

before 8 PM, I found one other member parked, awaiting my arrival. He set up his very nice 3" Unitron refractor on an alta azimuth mount while I whipped out my Dob. As the evening progressed, we compared views through each telescope on deep sky objects and the brighter stars. The view through the Unitron was actually very nice even considering the somewhat less than perfect condition of the eyepieces.....definitely a keeper. I really remember the comparative view of M22 side by side with my 13" Dob. Yes, one could see more with the Dob, but the cluster still was an inspiring sight in the refractor. I now think I should have a small refractor for those impromptu observing moments and when I want to challenge my observing abilities during the Messier marathon next year.

A couple came up all the way from Newport Beach to check out the stars with a small pair of binoculars. Their observing experience was much better than they could have imagined when we set the telescopes one after another on M8 M 57, and M11 and shared our celestial wonders with them. I think that everyone had a good time and I hope to see them again at our next star party.

Roy Schmidt

PVAA Events Calendar

Month	Star Party	General Meeting	Board Meeting
September	30	15	22
October	28	13	20
November	25	10	17
December	23	8	15

PVAA General Meeting
11 August 2000

Announcements

August Club Star Party. To be held at on August 26th, at Table Mountain.

A Trip to the **San Fernando Solar Observatory** at Cal State Northridge is being planned. Details will be announced in the next newsletter.

Mt Wilson Snow Cat Fund Donations are still being accepted. The club will match any member donations up to a maximum of \$250. Mail a check for your contribution to the Club P.O. Box, payable to PVAA.

November speaker is scheduled to be Bryan Penprase of Pomona College. There will be a possible field trip to their observatory after our meeting.

October **Public Star Parties** are scheduled for Sunday, October 29th and Tuesday, October 31st at the Upland Baptist Church on 8th Street. The Sunday party coincides with a church carnival, Tuesday is our usual Halloween date. Put the date on your calendars and bring the young astronomers of your acquaintance. A good time will be had by all.

Member News

Bob Branch reported to the Club on recent solar activity as the sun nears its 11-year peak in the solar cycle. The moderate activity of the last 1-2 weeks was up again on the day of our meeting, with possible effects noted on Earth for the next 24-48- hours. Some aurora were seen as far south as Los Angeles. Number of sunspot groups and the number of spots within the groups were relatively high. While some groups do not survive a single transit across the face of the sun, others have been observed to last as long as 3 solar rotations of 25-26 days - having a total life span of around 3 months. Roy alerted us to the upcoming Perseid Meteor shower, due to peak during the morning hours of Saturday, August 12th. Counts can reach 60-70 per hour. Catch the shower between moon set at 03:51 and the first signs of sunrise around 5am. Another item of note is the recent brightening of Dschubba - better known as Delta Scorpii. Its recent 0.5 magnitude jump in brightness made it now the second brightest star in Scorpius. Astronomers are still searching for the reason the magnitude has increased.

Dave Gardner gave us an update on the progress of the Venture Star - the next generation space shuttle. The X-33, a 1/2 scale model of the new shuttle, ruptured a hydrogen fuel tank during dynamic testing at March Air Force Base. The decision was made to reconstruct the tank of aluminum

instead of composite. This redesign will set the project back 2 years. It is being designed as a single-stage craft which will take its payload from Earth to orbit at 1/10th the cost of the current shuttle fleet.

What's Up

Roy's presentation this month focused on items he had observed from Table Mountain in the constellation of Aquila. Two items were NGC 6755 and 6756, less than 1 degree away. Also observed were NGC 6781 and NGC 7331, a galaxy that is one of the brightest objects not in the Messier catalog. A supernova was discovered in the galaxy in 1959 which became as bright as 13.4 magnitude. Nearby is Stephens Quintet, a gathering of galaxies. A 13" telescope saw 2 galaxies, the 22" located 3.

Keep your eyes open for planets Jupiter and Saturn as they return to the skies in the early morning hours.

..PVAA 24 HR. Hotline.

Get the latest news on the star party, club meetings, special events and astronomy happenings.call 909/985-1684

Visit or website at:

<http://www.cyberg8t.com/patrick/PVAA.htm>

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Presentation of the Evening

Our speaker for the evening was James Gibson, a retired professional astronomer. He began his career working for the Atomic Energy Commission after getting a degree in mathematics from the University of California, at Berkeley. His first job as a professional astronomer came when he was looking for a change of career and decided to try in a field in which he had an amateur interest. Mr. Gibson applied for an open assistantship at Lick Observatory and was accepted. His job here involved working on comet plates; trying to recover comets returning to the inner solar system. Next, he worked with spectroscopy at the Naval Observatory. Another project involved parallax, the observed change in position of an object when viewed from different positions against a distant background field of stars. This method is used to determine the distance of objects from the Earth. Plates were taken of the same objects in the evening and in the early morning sky and the difference in position observed was used in the calculations. Mr. Gibson also worked with photometry at Kitt Peak and has observed through the 40" Bethany at Yale. He felt one of the major advances during the 20th century in Astronomy was the development of known standards in photometry and spectroscopy with which new observations could be compared and accurate values given to these new objects. Another modern invention, which greatly increased the speed at which new observations could be processed, was the advent of the calculator - although earliest models were hardly hand held - they greatly increased calculation speeds over a pencil and paper along with the help of log tables!

Mr. Gibson did work to help determine the proper motions of nearby objects as compared to those determined to be far away. These measurements, when many were obtained, have helped determine the motion within our universe - something very hard to observe from within it. His work in Argentina was limited by the changing political climate in this country as first Campera and then Peron put restrictions on their work in the form of duties imposed on the import and export of their photographic plates. After one year, a political solution was reached and as long as plates received equaled plates shipped out, the flow of information continued without exorbitant cost. Argentine scientists took over the second phase of this project but even they have run into problems in recent years as Kodak decided to stop producing the photographic plates they use due to the very small market for these supplies in our digital age.

Due to the shift in technology away from photographic plates taken at large observatories toward CCD observations made possible by the availability of massive storage space, computing power, and sophisticated computer programs; the role of the amateur has increased. Professionals can spend more time filling out grant applications to obtain money for their research than actually observing at the telescope. More

government money is spent monitoring the integrity of the research, due to some highly publicized abuses. What can be seen and done by an amateur with a 28" scope, a CCD camera, and a good observing site is comparable to what could be seen at much larger telescopes by professionals in years past. Modern CCD cameras allow many more observing days than when Mr. Gibson was observing using photographic plates and had to quit when moonlight became too much of a distraction. CCD cameras just subtract out this background light and good results can be obtained for many more days in a month. Fortunately, the large observatories have also changed with the times and modernization has led to new types of observing for them.

Thank you, Mr. Gibson for sharing your experiences and insight into the changing world of professional astronomy.

Web Sites

Here is a list of sites where most of your astronomy queries should be answered:

- NASA www.nasa.gov
- Hubble hubble.stsci.edu
- Links to many resources www.space.com
- Articles on space www.universetoday.com
- Pix, news, research www.spacedaily.com
- National Optical Astronomy Observatories www.noao.edu
- Sign up for robotic telescope time at www.telescope.org/rti
- Digitized Sky Survey stdata.stsci.edu/dss

Claire Stover

ARTICLES WANTED

In the past couple of years the only people contributing articles to the NEWSLETTER have been the President, the Secretary and Ron Hoekwater.

This is the club newsletter, and I invite any member to contribute items of astronomical interest, especially personal observations and experiences.

I will try to fit them into the newsletter in a timely manner. Of course if I have too many items, there might be a delay in publication.

If any item is too controversial, I will bring to the Board of officers as to its fitness.

e-mail them to me at 'mugjug@mailexcite.com', or snail mail them to Ray Magdziarz, 259 Blue Mountain Way, Claremont, Ca. 91711