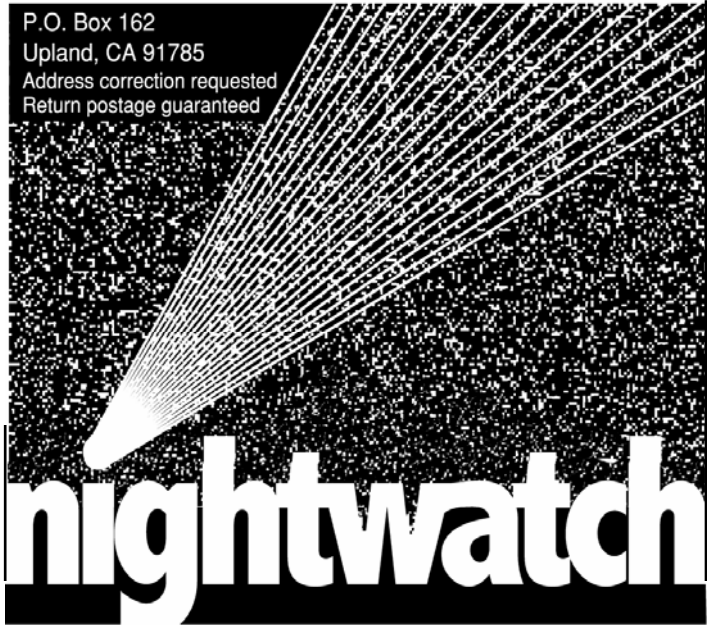


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Newsletter of the Pomona Valley Amateur Astronomers

Amateur
astronomers
just get better
looking . . .

Volume 23 Number 7

nightwatch

July 2003

President's Message

Our speaker this month will be Allen Hwang. Allen is a member of the Riverside Astronomical Society. He is an avid amateur astronomer and astrophotographer. His astrophotos are absolutely beautiful and some of them have been published in popular astronomy magazines. If you wish to see some of Allen's astrophotos, then visit his website, "Starlight" at: <http://home.earthlink.net/~parsec32/>. It is a real treat!

Allen is putting together a presentation on the Crab Nebula. The Crab Nebula (in Taurus) is the remnant of a super nova, witnessed by the Chinese in 1054 CE. At its brightest, this "guest star" became about 4 times brighter than Venus, or about mag -6, and was visible in daylight for 23 days. It may have been recorded by some Native American peoples as well. There are no records of observations from Europe. (As Western theology dictated that the heavens are perfect and unchanging.) Because the church had said that a "new star" couldn't exist, apparently no one saw it. There is a pulsar at the center of the nebula which generates enough energy to keep it radiating and therefore visible in our telescopes.

It is July and elections are nearly upon us! During the July general meeting, nominations for club offices will be accepted. Elections will be held during the August meeting

Ron Hoekwater

Mount Wilson Mars Trip

On Wednesday, September 3rd, PVAA will be on Mount Wilson observing Mars with the 60-inch telescope. If you wish to be there, in the dome with this historic instrument, for the closest approach of Mars in tens of thousands of years, act now. Mail a check (\$60.00 for members, 75 for non-members) to the club's PO box. Or you may make payment personally to our treasurer, Ludd Trozpek. Only the first 25 to pay will be going. Mount Wilson does not allow more than 25 guests in the dome. Don't be left out. Sign up early.

PVAA Events Calendar

| Month | Star Party | General Meeting | Board Meeting |
|-----------|------------|-----------------|---------------|
| July | 26 | 11 | 3 |
| August | 23 | 8 | July 31 |
| September | 27 | 12 | 5 |
| October | 25 | 10 | 3 |

June Star Party

This month I was able to take a few days vacation around the time of our PVAA star party. This allowed me to make it into a two-night affair. I went out on Friday afternoon. Upon arrival at the campground, in Joshua Tree National Park, I was pleasantly surprised to find Ray and Irene Magdziarz already there and setup. We amateur astronomers had the campgrounds almost completely to ourselves. There was a group from South Bay and various others with scopes scattered around the campground. It is always nice to have others with whom to share the observing and also the daylight hours between the nights of observing.

The weather at Cottonwood Springs is not as hot as it is in the Coachella Valley below. At night it is downright pleasant. During the day it was 104° F. Warm, but not unbearable. The sky was clear. It was a bit breezy (not an all together bad thing when the temperature is over 100°) during the day, but it was calm after dark. At night the transparency was good and the seeing was steady.

On Friday night Ray and I spent the first half of the night showing some of the more spectacular Messier objects to three curious young men who happened to be camped nearby. They were fascinated, having never before seen the sights that the large amateur instruments of today can reveal. Eventually they retired and so after midnight we had the telescopes and the entire sky to ourselves.

Mars popped over the hill and into view at 11:45 PM. I waited a few more hours for it to rise high in the heavens. The last few hours before and during the early morning dawn were spent on this intriguing planet, in some ways so like Earth. (Astronomical twilight arrives in Cottonwood, this time of year, at about 4:00 AM.)

On Saturday evening, we were joined by Bob Akers and a young companion, Daniel Mello. Daniel was a student at Condit Elementary School (where I work). Over the course of the night, Bob gave young Daniel a concentrated lesson in observational astronomy. Daniel stayed alert, snatching frequent peeks through the eyepiece, until nearly sunrise. After viewing many of the brighter deep sky objects and a geosynchronous satellite, Mars was again the highlight of the morning. I hit the sack around 4:00 AM.

Sunday morning, after packing up our gear, Bob, Daniel, and I met at the TA Truck Stop in Coachella for the traditional breakfast bar break, before driving home. A good meal and pleasant conversation were the perfect ending for two enjoyable nights spent under the desert skies of Cottonwood Springs.

Our next star party is on Saturday, July 26th, at a site to be announced. We are going to try to choose a suitable, nearby location this time.

Ron Hoekwater

August Elections

At the July meeting, the floor will be open for nominations for the officers of the club.

The club needs more diversity in the officers. If you would like to have more say in the running of the club, if you are not happy with the way things are being done, here is a chance to do something about it.

The board of officers meets once a month to discuss the running of the club.

..PVAA 24 HR. Hotline.

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

Visit or website at

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

PVAA Officers and Board

Officers

President.....Ron Hoekwater.909/391-1943
Vice President..Joe Hillberg.....909/985-5617
Secretary.....Claire Stover....909/988-9747
Treasurer.....Ludd Trozpek...909/624-3679
VP Facilities.....Bob Akers.....909/946-0228

Board

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Ray Magdziarz.....909/626-8303
Alberto Barba.....909/223-3424
Larry Pall.....909/949-2323

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Nightwatch.....Ray Magdziarz....909/626-8303
Membership...Ludd Trozpek 909/624-3679
Publicity.....Dorene Hopkins..909/983-5584
Programs.....Roy Schmidt.....909/980-1867

June General Meeting

Announcements

We still have space for our September 3rd trip to Mt Wilson. Please mail your money (\$60 for members or \$75 for non-members) to our PO Box or bring to the next meeting.

Three visitors joined us at our meeting in June – Mike Sanchez, Craig Matthews, and Jerry Mc Cullough. We hope to see them again at future Club events.

What's Up this month featured the area of the sky around the center of our galaxy. Bob Akers then showed us photos from several of the last Riverside Telescope Makers Conferences. Between the exhibits, vendors, and amateurs showing off their equipment, it looked like a terrific place to find others interested in our hobby and to locate that hard to find item missing from our star gazing arsenal. All this and a wonderful camping spot with great views of the sky at 7000 feet. If this sounds fun to you too, please mark Memorial Day 2004 on your schedules and plan to attend RTMC next year.

Featured Event

Tim Thompson spoke to us on Astrophysics, Cosmology, and the Age of the Universe. He reviewed current estimates on the age of the universe derived using three widely different methods. The first looks at globular clusters and determined their age, on the assumption that the universe would not be younger than the oldest object in it. The luminosity of the stars in a globular cluster are observed then the cluster's age is gauged by the stage of its star's evolution. This method gives an age of the oldest globular at 12.6 billion years so this is a lower limit on the age of the universe.

The second dating technique looked at the cosmic background radiation left over from the Big Bang. Using this route to calculate back to when the universe began expanding based on how much thermal radiation is left gives us an age of about 13.4 Billion years.

The last bit of evidence comes from a calculation of the Hubble Constant, derived from a plot of the distance a galaxy is from us versus its relative velocity. This calculated figure has been declining from around 400-600 in earliest observations (which would give an age to the universe of only 1 billion years) to the current values of 62-82 which yield an age of between 11.5 and 15 billion years.

The convergence of these three results around a similar

age for the universe between 11.5 and 15 billion years lends credibility to the fact that we may finally coming close to the "right answer" to this often asked question.

Claire Stover

A Cool Night and a UFO

June's star party was held at Cottonwood Springs Campground, Joshua Tree National Monument. I have always looked forward to stargazing at JT during this time of the year. It's a wonderful thing to be looking at the center of our galaxy, attired in T-shirts and shorts. Not only was the temperature wonderfully warm all night, but there was no wind- something a little less predictable.

I had offered Daniel Mello, the son of one of our long time friends, a chance to see the heavens unlike anytime prior, and I was hoping JT would deliver. His expectations had been building ever since the public starparty held in a Claremont park.

Upon arrival at loop "B", a conspicuous vacancy rate signaled that we were indeed in the "off season". Even early evening the people shuffling out to greet us, looked as if they were actors from the movie "Night of the Living Dead". They confirmed the high daytime temps, having been there for an additional day. I felt thankful, that I had missed the mirages, the sweltering heat, the circling Vultures, etc, as I hastily set up my 12.5 in. Dob, 90 mm Meade refractor, and bino mount supporting 15x70's.

I set up next to Ron Hoekwater's 22 in. Starsplitter, and proceeded to start down my list of "targets". I helped my young visitor, Daniel, find his way around the night sky by starting him with a star chart and a red light. Within 30 mins. Daniel was tracking the sky with the same ease as one following a LA road map. I started my list with Pluto, but at mag. 13.8, my patience and eyesight failed me. Although, I had mapped it well using my home PC software, a chart supplied from LA Astronomical Society stated that given the naked eye limits of that evening, I was only 1 magnitude way from my scope's maximum viewing limits! Nearby though, in Ophiuchus, I was able to see an easier object, the 72 mile across asteroid Victoria. This 8.4 mag. object is about 9/10ths the distance to the Sun to the Earth (one AU). English astronomer JR Hind discovered this object way back in 1850. We spent some time attempting to locate "Box Nebula" (NGC 6309), before moving on to the splendid Globular star cluster M4. M4 is located near the star Antares, in Scorpius, and has the distinction of containing a particular Neutron star (1821-24), that apparently is spinning on its axis 300 times a second. Also in Scorpius, was Globular M80. M80 poses somewhat of a problem to astronomers because even though it is very old as Globulars will be, it contains an exceptional number of blue hot (young) stars. Popular belief explains that these stars are the result of collisions/ interactions with other stars in this

star rich, densely packed region.

Daniel, scanning the skies with the binocular mount, excitedly located the star cluster M22, centrally positioned in Sagittarius. Then we revisited M22 with the 12" Dob, using about 150 power...there were Ah's!

M10, back in Orphiucus, presented an amazing sight from an estimated distance of 16,000 light years. M9, M14, M12, M107, are all globular clusters, and are "required stops" when scanning Orphiucus. One finds considerable variance in the distances listed for most Globular star clusters. As the age of the universe is revised, so are the age and distance of these ancient Globulars.

Starting at the north, we looked at the favorites M81, M82, NGC 4565 M51, M101 (galaxies) and swept around to Globulars M3 and M5. I spent the rest of the evening in Sagittarius and Orphiucus and upward through the Milky Way.

Lagoon Nebula (M8) and the nearby Trifid Nebula (M20) are some of the most spectacular objects around, especially when seen through nebula filters. Somewhat further up and back towards the east is my favorite object, Omega Nebula or the "Swan" Nebula (M17). Charles Messier described it as "A train of light without stars". Although we now know that it isn't without stars (has about 35), it does resemble the departing headlights of a train or a car. I could easily see why De Chéseaux once described it as having the tail of a comet!

From all around the darkened campground, one heard the sounds of people comparing their telescopic views, the audible musing over the flipped pages of charts or books, punctuated by the sound of the whirring of small electric "slewing" motors.

It was past these prime observing hours, that a mystery emerged. I was searching around in the eastern portion of Orphiucus, looking for NGC 6356, when I observed a "star" appear and just as quickly disappear. Thinking I was tired and "just seeing things", I choose to linger in the area. In about 15 seconds my eye detected another very faint flicker of light in the same area...but then there was another flash. A brilliant flash as viewed from a telescope captivated my attention. I spent the next 10 mins trying to determine if there was a pattern to the flashes...none! Was the object moving...it appeared to be, but very slowly? Ray Magdziarz was still up and so I figured a pair of experience eyes was called for. Ray added that he detected a slight change in the color, but he too couldn't see a regular pattern to the flashes. What was this thing? It was in the strictest sense a "UFO" and that's what we started calling it. In the darkness we called over to Ron Hoekwater to "come check out the UFO".

I learnt something that evening. If nearby amateur astronomers hear someone talking about seeing a

UFO, you probably will witness the same excitement as someone yelling "Gold" at Sutter's Creek! Out of the darkness guys young (my once sleeping visitor) and old, strangers far and wide- all waiting in line "to take a look". One person was certain that it was not reflecting light- it was actually producing it! Others suggested that it was "moving up and down". In the end, the only thing that several agreed on was, that the object was very nearly geosynchronous (Ron thought completely so). We determined this by the fact that although this object appeared to be moving through the stars, it never seemed to move out of the field of view in our Dobsonian telescopes (fixed views from earth, with no clock drives). It seemed that periodically the view had to be re-centered slightly upward, suggesting that the object was moving, if ever so slowly. I felt certain that what we were seeing was the reflection of Sunlight off of an oddly shaped, perhaps crumpled, piece of spinning space junk. Large surfaces were yielding bright flashes, small surfaces reflecting small flashes.

Those of us still up moved on to looking at Mars. Even from last month, slightly more detail emerges.

I finally decided to pack up and go before El Sol started roasting us. We concluded our outing with the traditional TA truck-stop breakfast.

We still don't know at this time what the UFO was, but it was seen by at least a half dozen people, through two different telescopes!

It wasn't located that far from Scorpius, so I'm always reminded of the famous Sci-Fi line spoken by the aliens (usually dressed in aluminum), "We're from Antares."

Bob Akers