



Talk sense to a fool and he calls you foolish.
Euripides

Newsletter of the Pomona Valley Amateur Astronomers

Volume 28 Number 12

nightwatch

December 2008

November Road Trip

Our November star party was at Cottonwood Springs camp site. We had Ron, Laura, Bob and myself. There were a few clouds for the first few hours. By 9:00 pm the sky opened up in the north/east for good viewing. Ron had his 22" telescope, Bob had his 8" Meade and I had my 4.7" refractor. Ron and Laura showed up with a 13 foot trailer behind Ron's van. It was their first outing with it. The park camp grounds were about 2/3 full. We had a lot of people stopping by to look through our scopes. Orion was in good view that night, m42 looked very clear and sharp. Hope you all had a Merry Christmas and hope to see you at our next star party.

Jim Bridgewater

November General Meeting

Joining us at our November meeting were several of Dave Kary's Citrus College students, attending to learn more about Astronomy, their local Club, and – oh yeah – to earn some extra credit from their teacher! We were glad to have them in any case and hope they enjoyed their evening.

Many members wanted us to schedule another Club trip to spend the night viewing through the 60" telescope at Mt. Wilson. Some members have visited the telescope before and were eager for a return visit, for others this will be their first trip. There was enough interest that Ron said he would contact Mt. Wilson about reserving an evening, please see his article elsewhere in this newsletter for more details.

New member Gary Gonnella showed us some beautiful prints of photos he took during the Nightfall event in October at Borrego Springs. One shot was of the Orion Nebula and the other was the Andromeda Galaxy. The detail was just great, especially of the galaxy. See his photos at their best in the on-line Nightwatch.

The Club purchased some 2009 calendars from Astronomy and they are available at our cost of only \$7 each. They will be on sale at the Holiday Party, after you see if you are lucky enough to win one in the raffle and during the January meeting as well for only \$7. We have about 7 available but will order more if there is enough interest.

Featured Speaker

Citrus College professor, Dave Kary, was our speaker for the evening and we enjoyed a talk he first developed for a presentation at RTMC. One of the challenges of our hobby is for us to understand and then to explain to the public, the vast distances between objects in our universe. To children at an elementary school event a car trip to San Francisco or to Las Vegas, spending hours trapped in a car along endless stretches of freeway represents the longest distance many



**PVAA is going to
Mount Wilson
June 20, 2009**

**Contact
Ron Hoekwater
to place your
reservation
909/391-1943**

Get info about Mt. Wilson at <http://www.mtwilson.edu/60in.php>

Club Events Calendar

January 8, Board Meeting
 January 16, General Meeting - Bill Patton "Physiology of Vision"
 January 24, Star Party - Mecca Beach Campground - Salton Sea

February 3, Star Party - Ontario Library - Main Branch 7-9 pm
 February 5, Board Meeting
 February 13, General Meeting
 February 21, Star Party - Cottonwood Springs, Joshua Tree
 February 24, School Star Party -
 Hollyvale Elementary - Victorville

March 3 and 7, Claremont Class and Star Party with Laura Jaoui
 March 5, Board Meeting
 March 13, General Meeting
 March 21, Star Party - GMARS at Landers with RAS

April 1 and 4, Claremont Class and Star Party with Laura Jaoui
 April 2, Board Meeting
 April 2 - 5, 100 Hours of Astronomy public outreach.
 Details at www.100hoursofastronomy.org
 April 10, General Meeting
 April 25, Star Party
 April 30, Board Meeting

May 1 and 2, Claremont Class and Star Party with Laura Jaoui
 May 8, General Meeting
 May 22 - 25, RTMC
 May 28, Board Meeting

June 5, General Meeting
 June 20, Mount Wilson Trip - Contact Ron Hoekwater

July 2, Board Meeting
 July 10, General Meeting
 July 18, Star Party

PVAA Officers and Board

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Pg1 of them can imagine. Thinking of the almost 25,000 mile circumference of the Earth is incredible and just imagine – our moon is 10 times farther away than that. And yet, those huge-to-us distances are only our local neighborhood in a vast solar system within an extremely large Milky Way galaxy, itself inside the mind-boggling universe.

It is no wonder we use analogies that place planets at the sizes of beans and fruit and put our nearest stellar neighbor in New York. There is no way our minds can realistically imagine the huge distances otherwise – exponents and lines full of zeroes simply do not help us to grasp the truth of such immensity.

Dave helped us to break down the sizes around us into three scales. First is our Solar System with its four terrestrial and four Jovian planets. Those largest objects though are proving to be less interesting to some that their multitude of varied moons. The number of moons is growing rapidly; as evidenced by the difficulty I had in finding a good total. It stood at 139 as recently as four years ago but since then the number has grown to over 300 as moons have been found orbiting asteroids and even far-away Eris logs in with one of its own. Over 150 additional objects were found within Saturn's rings by the Cassini spacecraft so the total may grow larger still as orbits for those relatively small rocks are determined.

Next comes the realm of the stars. Those we can see individually are within our own galaxy, along with globular clusters and nebulae that are evidence of different stages of stellar evolution. New to this picture are exoplanets, hundreds of which have been found to date and about which new discoveries seem to be made daily. Just out from NASA today, in fact, is the finding of the presence of carbon dioxide in the atmosphere around Jupiter sized planet HD 189733b that orbits a star 63 light years away. Water vapor and methane were already discovered around this same planet. The discovery of all three compounds was made by the Hubble Telescope, now doing science not imagined when it was placed into Earth's orbit 17 years ago.

The final leap takes us to other galaxies, the closest of which, Andromeda, is 2 Million light years away. Galaxies themselves congregate within larger structures and our Milky Way is part of what is called the Local Group, made up of about 35 of our nearest neighbors. This Group itself is located on the edge of the 1300 – 2000 member Virgo Galaxy cluster.

We are now in the realm of using the number of sugar crystals in a 5- pound bag or the number of grains of sand on the beaches of the Earth to try and realize the huge numbers involved. Fortunately most of us are very happily occupied by the wonders on our small planet Earth and can keep ourselves endlessly busy in our small corner of the universe. If we want to stretch a bit our telescopes provide us the extra wonders needed to keep our eyes sharp and our brains nimble as we contemplate all that surrounds us.

Thank you Dave, for a great evening!

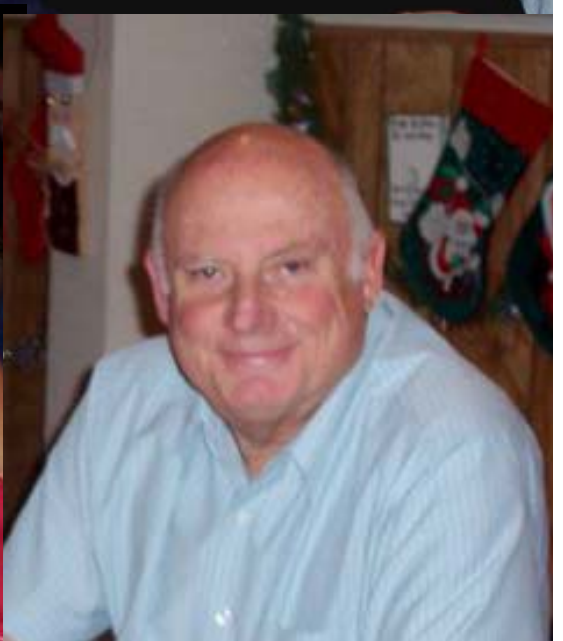
Claire Stover

References:

http://en.wikipedia.org/wiki/Local_Group
http://en.wikipedia.org/wiki/Virgo_cluster
<http://en.wikipedia.org/wiki/Moons>



PVAA Holiday Dinner Party
Photos by Ray Magdziarz



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