Desert Sky Observer

Volume 26 Issue 2 **February 2006**

NEWSLETTER OF THE ANTELOPE VALLEY ASTRONOMY CLUB, INC
P.O. BOX 4595, LANCASTER, CALIFORNIA 93539-4595
The Antelope Valley Astronomy Club, Inc., is a 501(c)(3) Non-Profit Corporation. Visit the Antelope Valley Astronomy Club website at www.avastronomyclub.org/ The A.V.A.C. is a Sustaining Member of The Astronomical League and the International Dark-Sky Association.

Up-Coming Events

February 5: First Quarter Moon
February 10: **Monthly Club Meeting***
February 12: Full Moon
February 17: Executive Board Meeting
February 21: Last Quarter Moon
February 25: Star Party, Matt Leone's Home
February 27: First Quarter Moon

* Monthly meetings are held at the S.A.G.E. Planetarium at the Cactus School in Palmdale on the second Friday of each month. The meeting location is at the northeast corner of Avenue R and 20th Street East. Meetings start at 7 p.m. and are open to the public. *Please note that food and drink are not allowed in the planetarium*

Club President Doug Drake

Well here we are now in February and looking for those clear dark and steady skies to observe those nebulas, clusters and faint galaxies. One of my friends, Matt and Suzanne Leone are inviting all of us to come over to their dark sky home, just north of Rosamond, for our February 25, 2006 sky party! That's fantastic, look at our web site, www.avastronomy.org, to find your way there. You will find directions as well as sky conditions.

We braved the cold weather for our January sky party at the Devils Punchbowl and found it to be a very delightful place for our sky parties. This is the first time we have had a sky party at Devils Punchbowl. I got there about 4:00PM and meet with Ranger Jack and we were cleared for our club to stay there for the night and that worker Jonathan would be there for us. We had a thin overcast with some breaks in the night sky and had fun getting together and setting our telescope up in the parking lot for observing. Jim was there with his Orion refractor, Larry with his Dob, a fellow, I'm sorry I didn't get the name, had a treble mishap on the way up. His Celestron telescope fell out of his truck and broke the dew cover. Needles to say we were quite apprehensive if the optics were still intact. That telescope is really beefy because every thing still worked, wow what a relief! Wendy and I were there with our new 14.5" StarStructure and got some views in. Mike and his wife brought their dog, the dog won out over their telescope and David brought his new Corvette, a very pretty blue racer. I had thought about asking David if he would trade the StarStructure telescope for his Corvette, but his car can't look at stars and the StarStructure can drive, so I didn't bother asking him.

Be sure to be at our next club meeting February 10, 2006, Friday, and listen to our great friend and club member Tom Koonce. His topic is "Planets Around Other Stars - Extrasolar Planet Detection Methods" and explains how scientists and amateur astronomers have detected well over a hundred and fifty planets around other stars. So be there or be square.

You're Pres, Doug Drake.

Vice President Richard Hague

Dick and his lovely wife are vacationing in Hawaii and unable to type in a column at this time, but they will be back for our next club meeting, February 10, 2006. We all wish both of them a very wonderful time throughout there vacation.

Director of Community Development Rose Moore

We have some upcoming events in the next few months, though no definitive public events for the month of February.

We are trying to coordinate a star party for a Brownie Troop in Palmdale, who will be attending one of Jeremy's public shows at the Planetarium this month. Also, we have been in contact with Jessica Santos with the Painted Turtle group, and because of some date conflicts in the next couple of months, we are going to wait till summer time for having an event for them. We will be contacting Jessica again in May to go over some dates for their star party event.

April 29th, Saturday, we are scheduled for a club star party, and are possibly going to combine this with an event for a group of home school children and their parents. This is dependent on whether we can book the Poppy Reserve for this event. The children's group would be separate from the club area.

We are tentatively looking at May 5th for a star party for the Vista San Gabriel School coordinated with Dan Molik.

If anyone is interested in participating in any of the events, please keep them in mind, and we'll let you know the dates as soon as the plans are made definite.

The Poppy Festival is the weekend of April 22nd and 23rd, Saturday and Sunday, and we are expecting the sponsor application from them shortly. We will be having a sign up sheet starting at the next meeting for people who are interested in helping out at this wonderful annual event! Is there a person who would like to volunteer as the committee chair person for this event to help coordinate? Please let me know!

Keep warm and Happy Valentine's Day!

You're Dir of Community Development,
Rose Moore

Snowstorm on Pluto

by Dr. Tony Phillips

There's a nip in the air. Outside it's beginning to snow, the first fall of winter. A few delicate flakes tumble from the sky, innocently enough, but this is no mere flurry.

Soon the air is choked with snow, falling so fast and hard it seems to pull the sky down with it. Indeed, that's what happens. Weeks later when the storm finally ends the entire atmosphere is gone. Every molecule of air on your planet has frozen and fallen to the ground.

That was a snowstorm - on Pluto.

Once every year on Pluto (1 Pluto-year = 248 Earth-years), around the beginning of winter, it gets so cold that the atmosphere freezes. Air on Pluto is made mainly of nitrogen with a smattering of methane and other compounds. When the temperature dips to about 32 K (-240 C), these molecules crystallize and the atmosphere comes down

"The collapse can happen quite suddenly," says Alan Stern of the Southwest Research Institute. "Snow begins to fall, the surface reflects more sunlight, forcing quicker cooling, accelerating the snowfall. It can all be over in a few weeks or months."

Researchers believe this will happen sometime during the next 10 to 20 years. Pluto is receding from the warmth of the Sun, carried outward by its 25% elliptical orbit. Winter is coming.

So is New Horizons. Stern is lead scientist for the robotic probe, which left Earth in January bound for Pluto. In 2015 New Horizons will become the first spacecraft to visit that distant planet. The question is, will it arrive before the snowstorm?

"We hope so," says Stern. The spacecraft is bristling with instruments designed to study Pluto's atmosphere and surface. "But we can't study the atmosphere if it's not there." Furthermore, a layer of snow on the ground ("probably a few centimeters deep," estimates Stern) could hide the underlying surface from New Horizon's remote sensors.

Stern isn't too concerned: "Pluto's atmosphere was discovered in 1988 when astronomers watched the planet pass in front of a distant star-a stellar occultation." The star, instead of vanishing abruptly at Pluto's solid edge, faded slowly. Pluto was "fuzzy;" it had air. "Similar occultation's observed since then (most recently in 2002) reveal no sign of [impending] collapse," says Stern. On the contrary, the atmosphere appears to be expanding, puffed up by lingering heat from Pluto's waning summer.

Nevertheless, it's a good thing New Horizons is fast, hurtling toward Pluto at 30,000 mph. Winter. New Horizons. Only one can be first. The race is on….

This artist's rendering shows how Pluto and two of its possible three moons might look from the surface of the third moon. View is towards the Big Dipper shown at top of image. Credit: NASA/ESA and G. Bacon (STSci)

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

News and Headlines

Comet Ejecta Fragments Captured in Stardust Aerogel
The image shows a particle impact on the aluminum frame that holds the aerogel tiles from the Stardust collector grid. The debris from the impact shot into the adjacent aerogel tile, producing the explosion pattern of ejecta frements captured in the material.
http://www.nasa.gov/mission_pages/stardust/multimedia/stardust-20060126.html

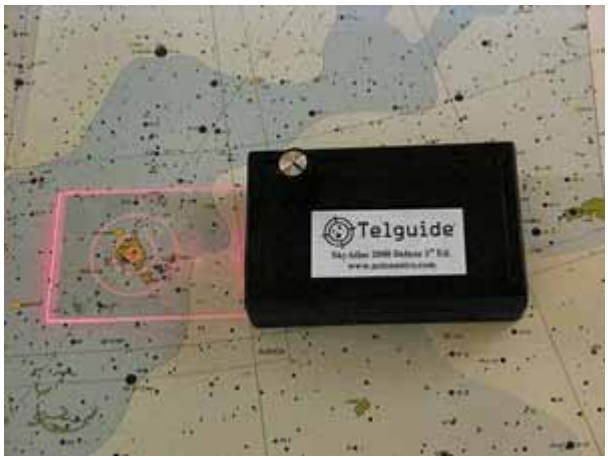
Student-Built Buoy Launches Ocean Studies
A student-built buoy, launched this month, will send back data on ocean temperatures that will be available to scientists and students around the world.
http://www.jpl.nasa.gov/news/features.cfm?feature=1020

Spirit Marks Two Years on Red Planet
On Jan. 3, 2004, the Spirit rover landed in Gusev Crater on Mars, kicking off a mission planned to last 90-days. Two years later, Spirit and fellow robotic explorer Opportunity, which landed Jan. 24, 2004, are still going strong.
http://www.nasa.gov/vision/universe/solarsystem/mer-20060103-images.html

Astronomers Had it Wrong: Most Stars are Single
For more than 200 years, astronomers thought that most of the stars in our galaxy had stellar companions. But a new study suggests the bulk of them are born alone and never have stellar company.
http://www.space.com/scienceastronomy/060130_mm_single_stars.html

New planet discovered in Milky Way
Scientists have discovered a planet more like Earth than any other found before, they said on Wednesday. It's 20,000 light-years away, just shy of the center of the Milky Way.
http://news.com.com/New+planet+discovered+in+Milky+Way/2100-11397_3-6031296.html

Study Confirms '10th Planet' Indeed Larger than Pluto
An object discovered earlier this year and considered by some to be our solar system's 10th planet is indeed larger than Pluto, a new study confirms.
http://www.space.com/scienceastronomy/060201_tenth_planet.html



The ***Telguide***.
Our own Steve Trotta has invented the Telguide to aid you in your galactic hunts.
For more information on how a Telguide can help you, click here.

Astrophoto of the Month

Leo Triplet in LRGB by Matt Taylor

Imaging: Meade DSI II/DSI Pro II & WO 66mm Triplet APO
Guiding: SBIG ST2000XM & Orion 100ED
Mount: Meade LXD650
Exposures: 12 x 10 minutes for Luminance, 12 x 5 minutes for color
Post Processing: Photoshop CS & AIP4WIN

Submit your "Astrophoto of the Month" to the following address by the 20th of each month:
newsletter@avastronomyclub.org

Astronomy Links on the Web

http://www.darksky.org/
(International Dark-Sky Association)
http://www.astro-tom.com/
(Tom Koonce's website)
http://www.noexitrecords.com/zerobox/astro.htm
(Tom Varden's website)
http://www.astropaws.com
(Terry Babineaux's astrophotos)
http://www.actonastro.com/
(Steve Trotta's website)
http://saturn.jpl.nasa.gov/multimedia/images/latest/index.cfm
(the latest Saturn pics from Cassini)
http://astronomy-mall.com/
(shop 'til you go broke)

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A.V.A.C. Membership Information

Membership in the Antelope Valley Astronomy Club is open to any individual.

The Club has three categories of membership.

- Family membership at $30.00 per year.
- Individual membership at $25.00 per year.
- Junior membership at $15.00 per year.

Membership entitles you to…

- Desert Sky Observer–monthly newsletter.
- The Reflector–the quarterly publication of the Astronomical League.
- The A.V.A.C. Membership Manual.
- To borrow club telescopes, binoculars, camera, books, videos and other items.

The Desert Sky Observer is available as a separate publication to individuals at a cost of $10.00 per year. Subscription to the Desert Sky Observer does not entitle the subscriber to membership in the Antelope Valley Astronomy Club and its associated privileges.

Our Sponsors

Al's Vacuum and Sewing: 904 West Lancaster Blvd. (661) 948-1521. Stop by and say "hey" to Matt and Sue and run from Michael.
QNET: 1529 E. Palmdale Blvd., Suite 200. (661) 538-2028. As an Internet provider, they are kind enough to provide us with a free website.
High Desert Broadcasting: General Manager, Vicky Connors (661) 947-3107; They assist us in advertising our Club.
Woodland Hills Camera: 5348 Topanga Canyon Blvd., Woodland Hills. 888-427-8766. www.telescopes.net

Thank you to our sponsors for your generous support!