



Desert Sky Observer

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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

- January 6: First Quarter Moon
- January 10: Hubble Event at the SAGE
- January 13: **Monthly Club Meeting***
- January 14: Full Moon
- January 20: Executive Board Meeting
- January 22: Last Quarter Moon
- January 28: Dark Star Party at [Saddleback Butte](#)
- January 29: New Moon

* Monthly meetings are held at the S.A.G.E. Planetarium on the Cactus School campus 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*

Happy New Year to you and your family! I hope this New Year will provide a new start for us all. I'm going to make a new years resolution that I will spend more time observing with our new 14.5" StarStructure telescope. Can you believe it? Spending more time looking through your new telescope? I'll tell you more about this new telescope latter.

This year starts out with a new club board that will voluntarily serve your astronomy club needs. Our last year's board, did indeed, provide an excellent job. Starting at our January club meeting I will ask a few questions to see what you think of our club as it is today. Remember, when presenting your ideas be careful what you ask for because we might like your idea and ask you to become the committee chair to help lead us in achieving that idea. If the membership is for it, then you have 100% backing from your board to help make it happen.

Now about that new telescope... We now have a new 14.5" StarStructure Dobsonian reflector with a Zambuto mirror that has exceptional high grade optics and a 1/20 wave Protostar secondary. This telescope is fabricated with aircraft aluminum and design; it is laser aligned and very strong. The structure has excellent damping and we do not see the typical scintillation (I.E., jitter) you observe when focusing the eyepiece at high power. By the way, this telescope has a Thousand Oaks dew control system, and is voltage modulated, to keep the Telrad finder, secondary mirror and focuser free of any dew. Also included is a Feather Touch focuser, a ServoCAT motor drive system to drive each axis, and an Argo Navis computer system that can tell the telescope to track all astronomical objects including satellites and the space station. Mark your calendars to join our club star party at Saddleback on January 28; we will have a great time.

You're Pres, Doug Drake.

Vice President
Richard Hague

Heartfelt thanks to the Club officers for 2005. They did a great job as I'm sure all of us would agree. We had some very fine program speakers and our star parties and special events went off well. Each time we interfaced with the general public I got the impression they were pleased with what they were seeing whether it was the night sky, a solar experience or a planetarium show. Various organizations including schools, city administrations, special facilities, all have expressed their thanks and "will we do it again?" It has been a good year.

Congratulations to the new officers for 2006. We will try to continue the good work and we know you will help us at whatever events we schedule.

We have a speaker for our January meeting, Alex Meier, a chemist with a Ph.D. from Cal Tech and a great interest in astronomy. His talk is titled, "From Einstein to Strings, a Look at Some Ideas of Modern Cosmology and How We Know What We Know". Dr. Meier is currently with the nonprofit organization, Heavenword, where he develops science and math curricula and robotic astronomy programs (including a possible robotic telescope installation on Catalina Island www.heavenword.org/core.asp). The October issue of Astronomy magazine has some very good articles on cosmic inflation and string theory which might set the mood for Dr. Meier's talk.

We're working on some programs for our meetings this year that we hope you will enjoy. They will range from practical space and astronomy subjects to some that are more theoretical (waaay out there?).

Dick Hague,

Director of Community Development
Rose Moore

Happy New Year to everyone! First I would like to thank all the members of the AVAC; you all made me feel very welcome my first year as a member of this club! I would also like to thank the 2005 Board members for also welcoming me to the Board meetings I attended last year. I am now in this position following Terry, and it will be 'a hard act to follow'! But, I will try my best! I thank the past, and also the new, members of the Board for their support and suggestions. For the month of January, we have the Dark Sky Star Party scheduled at Saddleback for Saturday, Jan. 28th. The next Executive Board Meeting will be at Doug's home on Friday, Jan. 20th at 7 pm, and we will be discussing and begin planning upcoming events. If anyone has any suggestions or thoughts, please do not hesitate contacting me or the other Board members.

Rose Moore, Community Development Director

Hubble Comes To the SAGE

All AVAC members are invited to see the most recent image taken by the Hubble Space Telescope at the SAGE Planetarium on January 11 from 12 PM to 8 PM. You, your family and friends are all welcome to come at anytime. From 12 PM to 4 PM, the press and dignitaries will view the 4 foot by 4 foot image of the Orion Nebula. The Image is one of the largest ever taken by the HST, 18,000 Pixels by 18,000 Pixels. From 4 PM to 8 PM, students and parents from the Antelope Valley will be able to see the new mural-sized image, which shows the turbulent star birth cloud in exquisite and unprecedented detail. The image on display is a seamless mosaic of 104 individual Hubble images and reveals a tapestry of star formation with details never before seen. It is among the largest and most magnificent images ever taken by the Hubble telescope.

The new Hubble Space Telescope image will be on display through the club meeting on January 13.



A New View of the Andromeda Galaxy

By Dr. Tony Phillips and Patrick L. Barry

This is a good time of year to see the Andromeda galaxy. When the sun sets and the sky fades to black, Andromeda materializes high in the eastern sky. You can find it with your unaided eye. At first glance, it looks like a very dim, fuzzy comet, wider than the full moon. Upon closer inspection through a backyard telescope—wow! It’s a beautiful spiral galaxy.

At a distance of “only” 2 million light-years, Andromeda is the nearest big galaxy to the Milky Way, and astronomers know it better than any other. The swirling shape of Andromeda is utterly familiar, but not anymore. A space telescope named GALEX has captured a new and different view of Andromeda. According to GALEX, Andromeda is not a spiral but a ring.

GALEX is the “Galaxy Evolution Explorer,” an ultraviolet telescope launched by NASA in 2003. Its mission is to learn how galaxies are born and how they change with age. GALEX’s ability to see ultraviolet (UV) light is crucial; UV radiation comes from newborn stars, so UV images of galaxies reveal star birth—the central process of galaxy evolution.

GALEX’s sensitivity to UV is why Andromeda looks different. To the human eye (or to an ordinary visible-light telescope), Andromeda remains its usual self: a vast whirlpool of stars, all ages and all sizes. To GALEX, Andromeda is defined by its youngest, hottest stars. They are concentrated in the galaxy’s core and scattered around a vast ring some 150,000 light years in diameter. It’s utterly *unfamiliar*.

“Looking at familiar galaxies with a new wavelength, UV, allows us to get a better understanding of the processes affecting their evolution,” says Samuel Boissier, a member of the GALEX team at the Observatories of the Carnegie Institution of Washington.

Beyond Andromeda lies a whole universe of galaxies—spirals, ellipticals and irregulars, giants and dwarfs, each with its own surprising patterns of star formation. To discover those patterns, GALEX has imaged hundreds of nearby galaxies. Only a few, such as Andromeda, have been analyzed in complete detail. “We still have a lot of work to do,” says Boissier, enthusiastically.

GALEX has photographed an even greater number of distant galaxies—“some as far away as 10 billion light-years,” Boissier adds—to measure how the rate of new star formation has changed over the universe’s long history. Contained in those terabytes of data is our universe’s “life story.” Unraveling it will keep scientists busy for years to come.

For more about GALEX, visit www.galex.caltech.edu. Kids can see how to make a galactic art project at spaceplace.nasa.gov/en/kids/galex/art.shtml.



News and Headlines

New Mexico Spaceport a Reality

In early December, New Mexico Governor Bill Richardson and Sir Richard Branson, Chairman of Virgin Companies announced a partnership to build the world's first purpose-built spaceport.

http://www.space.com/news/060102_nm_spaceport.html

Meteoroid Impact on the Moon Recorded

Rob Suggs of NASA's Marshall Space Flight Center in Huntsville, US, and NASA astronomer Bill Cooke were testing a new 10-in telescope and video camera, assembled to monitor the Moon for space strikes. On their first night out, November 7, they observed one.

<http://news.bbc.co.uk/2/hi/science/nature/4570730.stm>

China's plans to send a spacecraft around the Moon

Luan Enjie, commander of China's "round the moon" project, said the Chang'e 1 Lunar Orbiter and a launch rocket are being assembled and tested, and the launch site and command system are also taking shape. The craft is still on schedule to be launched in 2007.

http://today.reuters.com/news/newsArticle.aspx?type=scienceNews&storyID=2005-12-29T132354Z_01_KRA948208_RTRUKOC_0_US-SPACE-CHINA.xml

Light Echoes Reveal Supernovas

Using recently discovered faint light echoes, astronomers have divined when three known supernovas occurred

It is not the first light echo ever seen. Astronomers have seen one around a well known dead star called [Cassiopeia A](#), but three at once. "Imagine seeing light from the same explosion first seen by Johannes Kepler some 400 years ago, or the one recorded by Chinese observers in 1006," said Christopher Stubbs of the Harvard-Smithsonian Center for Astrophysics (CfA). "These light echoes give us that possibility."

http://www.space.com/scienceastronomy/051227_science_tuesday.html

Transit of Mercury!!!

Plan ahead, tell everyone and get your solar Telescopes ready! Don't have one? Keep your eyes peeled at RTMC. We will be able to see the Nov. 8, 2006 transit of Mercury. Find out what is happening with the other planets at

<http://stardate.org/nightsky/planets/>

Venus will be shifting from the evening star to the morning star where it precedes the Sun and becomes the light bearer

Did you know? ? ?

Your new club President worked on the Apollo program.

? ? ?

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...

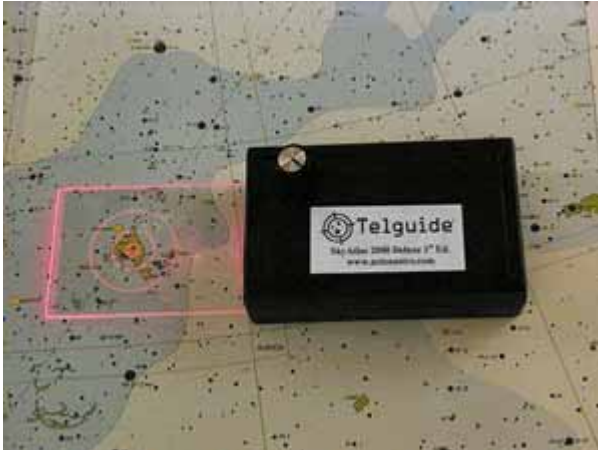
- Desert Sky Observer—monthly newsletter.
- The Reflector—the quarterly publication of the Astronomical League.
- The A.V.A.C. Membership Manual.
- To borrow club telescopes, binoculars, camera, books, videos and other items.

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.

Woodland Hills Camera: 5348 Topanga Canyon Blvd., Woodland Hills. 888-427-8766. www.telescopes.net



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, <http://www.actonast.com/>



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