



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

- June 3:** First Quarter Moon
June 9: Club Meeting*
June 11: Full Moon
June 16: Executive Board Meeting
June 18: Last Quarter Moon
June 24: Star Party at [Mt. Pinos](#)
June 25: New Moon

* Monthly meetings are held at the S.A.G.E. Planetarium on the Cactus School campus in Palmdale, 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 in June, and the weather is warming up and the skies are getting clear! Yea, that sounds good to me and especially to Wendy who doesn't tolerate the cold nights as I do. I can hardly wait for our next star party (Saturday, June 24) that takes us up to Mt. Pinos where the elevation of 8,600 feet brings us out of the smog with a clear and steady sky. The sky is still dark, but not as dark as it used to be because light pollution is slowly creeping in. You can find directions for getting there on our web site (<http://www.avastronomyclub.org>). It's a nice drive and you can stop in at Frazer Park and get something to eat, or take it with you up to the mountain. When you get to the top you will find a big parking lot with people like us that like to do nothing more than look at all those wonderful celestial objects in the night sky. I am looking forward to seeing you there. If you have any questions just call me (661-724-0849) and I'll try to answer them. By the way, it gets cold up there so don't wear short pants and flip-flops. I have a friend that dressed something like that the first time he was up there. Now, I won't mention any names, Terry, but he survived the night and now takes his wife, I won't mention her name either, Debora, and they keep going back to enjoy the good viewing and company. We all have fun and that's the way it should be.

There are a couple of events that are happening during this month of June:

1. On June 15 Mars passes right through M44, the beehive star cluster. Look low in the western sky just after sunset twilight. You may see some remarkable conjunctions between the stars and Mars.
2. On June 27 Mars, Saturn, Mercury and a thin crescent Moon are all in alignment. Again, look low in the western sky just after sunset twilight.

I'll see you at our club meeting (Friday, June 9) and if you have any good ideas to make our club a little bit better please tell me, or just stop and say hello.

Your Pres, Doug

Vice President***Richard Hague***

Our meeting for June looks to be an interesting one. Recall last year when a planned speaker bailed out on us at the last minute and we had to do something for the meeting in a hurry. Certain members took that as a challenge and quickly developed what we're now calling an "astronomy fair". It went well so we've decided to do something like it again this year. Here is a quick rundown of demonstration stations in our fair (President Doug calls it 'astronomy carnival'):

We will collimate a Newtonian reflector, demonstrate aligning an autostar 'scope on a basic alt-az mount, include a "telescope row" which illustrates basic 'scope types, show and explain "sun scopes" (h-alpha filter and an aluminized Mylar filter, plus the clubs sun spotter), demo mirror grinding/polishing, have a meteorite station with explanation of types as well as samples, explain comet nature and demo example construction, briefly talk about astrophotography with equipment and examples of photos, an out-of-doors scope with some aspects of remote control and inside viewing on a laptop, and ??

It will be handled as in a carnival, that is, no lock step going from station to station, just wander to what interests you. There will be a brief explanation at each station and then a go for questions. Some stations call for more and some less attention but you ought to be able to take them all in. The people doing the stations should be able to answer your questions and give you some ideas for your own viewing.

Venus Express Reaches Final Orbit: Less than one month after slowing into orbit, and after 16 loops around the planet Venus, the European Space Agency's Venus Express reached its final operational orbit on Sunday, May 7.

SETI Optical Telescope Inaugurated On April 11 a new era dawned in the search for extraterrestrial intelligence (SETI) with the dedication and beginning of operations of The Planetary Society Optical SETI Telescope in Harvard, Massachusetts. It is the world's first dedicated optical SETI telescope.

http://planetary.org/programs/projects/seti_optical_searches/bb_osei.html

Dick Hague

Director Community Development: Rose Moore

Many thanks to all the members who participated and helped out at the Club's events for April and May! For those who may be interested in a trip to Mt. Wilson, please get in touch with me about the date(s) you would prefer. Unfortunately, there are no Saturdays around the New Moon available for July, August, or September. The available dates are: Sunday, August 20th; Friday, August 25th; and Sunday, September 24th. I will also be sending out emails to club members, so that we're sure everyone is aware of the dates. Jessica Santos of the Painted Turtle Camp has been contacted, and has asked us to give her a call the first week of June when the new counselors are in place. No date has been set as yet for our astronomy event at the camp. We are looking possibly to participate in an astronomy talk for the (after) school kids in the summer sessions instead of doing an event before the end of the school year. There will be 2 sections of kids from the Palmdale school district who are looking forward to this. We will keep you posted on dates. The astronomy star party for Vista San Gabriel School will be rescheduled. Dan Molik and I will be in touch the end of summer. The application is in the mail for the Palmdale Fall Festival!

Clear skies to you all!

Rose Moore



Not a Moment Wasted

by Dr. Tony Phillips

The Ring Nebula. Check. M13. Check. Next up: The Whirlpool galaxy.

You punch in the coordinates and your telescope takes off, slewing across the sky. You tap your feet and stare at the stars. These Messier marathons would go much faster if the telescope didn't take so long to slew. What a waste of time!

Don't tell that to the x-ray astronomers.

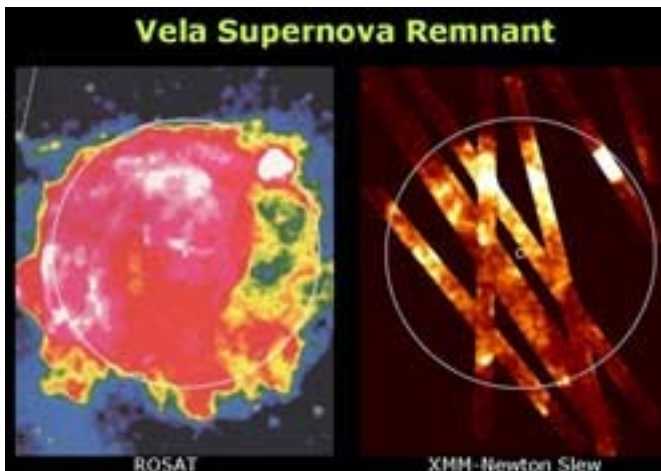
"We're putting our slew time to good use," explains Norbert Schartel, project scientist for the European Space Agency's XMM-Newton x-ray telescope. The telescope, named for Sir Isaac Newton, was launched into Earth orbit in 1999. It's now midway through an 11-year mission to study black holes, neutron stars, active galaxies and other violent denizens of the Universe that show up particularly well at x-ray wavelengths.

For the past four years, whenever XMM-Newton slewed from one object to another, astronomers kept the telescope's cameras running, recording whatever might drift through the field of view. The result is a stunning survey of the heavens covering 15% of the entire sky.

Sifting through the data, ESA astronomers have found entire clusters of galaxies unknown before anyone started paying attention to "slew time." Some already-known galaxies have been caught in the act of flaring—a sign, researchers believe, of a central black hole gobbling matter from nearby stars and interstellar clouds. Here in our own galaxy, the 20,000 year old Vela supernova remnant has been expanding. XMM-Newton has slewed across it many times, tracing its changing contours in exquisite detail.

The slew technique works because of XMM-Newton's great sensitivity. It has more collecting area than any other x-ray telescope in the history of astronomy. Sources flit through the field of view in only 10 seconds, but that's plenty of time in most cases to gather valuable data.

The work is just beginning. Astronomers plan to continue the slew survey, eventually mapping as much as 80% of the entire sky. No one knows how many new clusters will be found or how many black holes might be caught gobbling their neighbors. One thing's for sure: "There *will* be new discoveries," says Schartel.



Tap, tap, tap. The next time you're in the backyard with your telescope, and it takes off for the Whirlpool galaxy, don't just stand there. Try to keep up with the moving eyepiece. Look, you never know what might drift by.

See some of the other XMM-Newton images at <http://sci.esa.int>. For more about XMM-Newton's Education and Public Outreach program, including downloadable classroom materials, go to <http://xmm.sonoma.edu>. Kids can learn about black holes and play "Black Hole Rescue" at The Space Place, <http://spaceplace.nasa.gov/>, under "Games."

The image on the left is the Vela Supernova Remnant as imaged in X-rays by ROSAT. On the right are some of the slew images obtained by XMM-Newton in its "spare" time.

News and Headlines

The Case for Transmitting to Space

When talk turns to SETI, there's one question that's as common as catfish: "We're not broadcasting to the aliens; so what makes you think they'll be broadcasting to us?"

http://news.yahoo.com/s/space/20060525/sc_space/thecasefortransmittingtospace

Voyager II detects solar system's edge

Voyager II could pass beyond the outermost layer of our solar system, called the "termination shock," sometime within the next year, NASA scientists announced at a media teleconference Tuesday.

http://www.cnn.com/2006/TECH/space/05/23/voyager.2/index.html?section=cnn_space

SOHO will lead a fleet of solar observatories

New funding, to extend the mission of ESA's venerable solar watchdog SOHO, will ensure it plays a leading part in the fleet of solar spacecraft scheduled to be launched over the next few years.

<http://www.spaceref.com/news/viewpr.html?pid=19947>

Hubble Captures Quintuple Quasar Image

The Hubble Space Telescope has captured the first-ever picture of a group of five star-like images of a single distant quasar.

http://www.spacedaily.com/reports/Hubble_Captures_Quintuple_Quasar_Image.html

Spirit Continues Winter Studies

Spirit is healthy and making progress on a winter science campaign of experiments in Gusev Crater on Mars. Spirit has completed the first phase of a layer-by-layer soil study by collecting a mosaic of images with the microscopic imager and analyzing composition of undisturbed soil with the Moessbauer and alpha particle X-ray spectrometers.

http://www.marsdaily.com/reports/Spirit_Continues_Winter_Studies_Of_Soil_Sky_And_Terrain.html

ESA Camera Catches Comet Break-up

ESA scientists are using a new camera to monitor the continuing disintegration of 73P/Schwassmann-Wachmann 3, in an effort to attempt to see into the comet's interior.

http://www.spacedaily.com/reports/ESA_Camera_Catches_Comet_Break_up_In_The_Act.html

Did you know ? ? ?



A syzygy is where three celestial bodies find themselves positioned along a straight line—particularly when this occurs with the sun, moon, and earth. Also, situations where the planets are all on one side of the sun are often referred to as syzygies.

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.

A.V.A.C. Board Members

President:

Doug Drake (661) 724-0849 president@avastronomyclub.org

Vice-President:

Richard Hague (661) 724-1623 vice-president@avastronomyclub.org

Secretary:

Larry Ochsner (661) 274-9006 secretary@avastronomyclub.org

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Rose Moore (661) 822-4580 community@avastronomyclub.org

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Webmaster of Club Site:

Steve Trotta (661) 269-5428 webmaster@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)

Thank you to our sponsors for your generous support!

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

Astro-tom.com

Tom is dedicated to amateur astronomy.

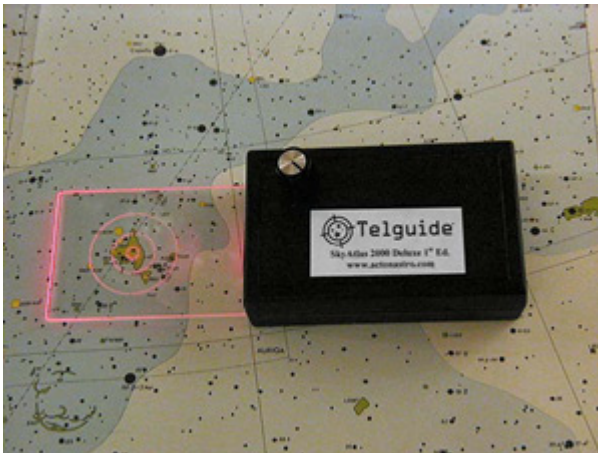
High Desert Broadcasting: General Manager, Vicky Connors (661) 947-3107; they assist us in advertising our Club.

Telguide

<http://www.actonastro.com>

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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.actonastro.com>