
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 Darksky Association



Up-Coming Events

- May 4:** Full Moon
May 8: AVAC presentation, Red Rock Park
May 11: Last Quarter Moon
May 14: **Monthly Club Meeting***
May 15: Prime Desert Woodlands Open House
May 15-16: JPL Open House
May 19: New Moon
May 22: Star Party, Mt. Pinos
May 27: First Quarter Moon
May 28-31: RTMC
Anytime: *Observe*

* Monthly meetings 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. Meeting starts at 7 p.m. Please note that food and drink are not allowed in the planetarium. Monthly A.V.A.C. meetings are open to the public.

President's Report

Terry Babineaux

Ask people what the opposite of love is and most will answer "hate." I believe that to be incorrect. The true opposite of love is apathy." "Love" and "hate" are more similar than different: both love and hate require strong emotional responses whereas apathy requires none at all (which certainly explains why personal relationships can be so difficult).

If you are a Frank Herbert fan, you know that "fear is the mind killer." I think we can expand on that a bit and say "apathy is the life killer." To my way of thinking, it really doesn't matter what issue you choose to champion nor what your chosen stance on that issue is. The importance lies in making oneself heard. If all of us strive to make a small difference in *something*, the world will be collectively that much of a better place.

A club like the AVAC provides an ideal platform from which a dent can be made in the problems of the world. The most significant issue facing us right now is, I believe, the Tejon Ranch project slated to begin construction in the Gorman area. Left untethered, this development will most likely ruin Mt. Pinos as an observing site. Setting aside environmental and quality of life issues (I myself enjoy living in a rural environment), the impact of such a development on the night can be relatively easily minimized. The problem is not difficulty or cost, but rather education: projecting light into the sky is an extension (albeit, a needless one) of one's command of the environment and is a terribly hard habit to break. Think, for example, of that horrible pyramid thing in Las Vegas or those nasty searchlights car dealerships like to use. Money can actually

be *saved* with proper lighting fixtures but the difficulty lies less in convincing people of that fact than it does convincing them that their lifestyle needs to be slightly modified. An unfortunate side effect of the American way of life is that we tend take mouthfuls larger than can be chewed and tend to grasp for things beyond our reach. Education is the key but it can be profoundly difficult getting people to change their ways.

Towards this end, I'd very much like to see someone in our club step up and become our new liaison officer for the International Dark Skies Association. This is an excellent opportunity for someone to help make a meaningful difference.

As for making a difference, a large number of people from our club were involved in last month's Poppy Festival. From printing flyers to standing in the sun and rain selling opportunity drawing tickets, all needed shoes were filled. I think we deserve a collective hand for this one.

Vice President's Report

Doug Drake

This is a very exciting month for all of us because we will be able to observe two comets: NEAT and LINEAR. You can observe comet LINEAR May 1st through May 3rd and observe comet NEAT starting May 4th. For our binocular fans, this event will allow you to use your largest binoculars to see the comets with their maximum tail extent. Use your binoculars and telescope together and spot in a comet with your binoculars and then zero in with your telescope. Remember to use your most wide-field eyepiece in your telescope. I'm hoping that the comets will not break up and we will get a good showing of both. I have put some details together for you that should help you observe each of them, but remember that the comets will be low to the true horizon so mountains and structures may cover them up. Try to find an observing place that affords you a good low view of the horizon.

The Moon will be full on May 4th when coming up out of the east at sunset. The Moon will be coming up later and later after this date and will have less sky glow effect, in the evening sky, as each day progresses. The 6th of May will be a good evening to start looking for comet NEAT.

Comet NEAT (C/2001 Q4) "The evening comet"

Look just above the horizon in the southwest at about one hour after sunset and scan the sky with your binoculars to see if you can find comet NEAT.

Hint: Comet NEAT will be just left of the brightest star Sirius, in Canis Major, on the night of May 5th. On May 15th the comet should be just left and slightly lower than Pollux and Castor in Gemini, the twins. Comet NEAT will change its position each night such that it will move up and slightly to the right.

May 4- Comet NEAT will be very low on the southwestern horizon but the full moon's glare will be coming up in the east.

May 6- Comet NEAT will be the closest to earth, about 29.8 million miles away.

May 7-10- Comet NEAT will be the brightest and the tail may extend 10 deg or more in a dark sky.

May 15- Comet NEAT will be at perihelion, or closest to the Sun.

Comet LINEAR (C/2002 T7) "The morning comet"

Look just above the horizon in the east and just before *morning* twilight between May 1st and May 6th. Comet LINEAR will change its position each morning such that it will move down to the horizon.

May 1st through May 3rd- Comet LINEAR will be very low on the eastern horizon. This is the best time to observe LINEAR since the Moon will not interfere with its glow.

Dir. of Community Development*Michael Roberson*

One of the biggest events of the year has passed, and I'm proud of how our club got the job done. The Poppy Festival went great. Saturday was slow and we got rained on, but we stuck through it. Sunday was much better and we made plenty of new contacts. We talked to several people who have an interest in astronomy, and maybe some will become new members soon. We also talked to several local school teachers who might contact us soon to come and do talks for their schools.

The city of Lancaster went out of their way to provide for us this year. We had a huge tent and electricity. We will look forward to working with the city again soon and their continued support of our club.

Our Dark Sky star party was cancelled on account of rain. I hope no one showed up at the Devil's Punchbowl and got left alone in the cold.

Some things to look forward to in the next few months include a night at the JetHawks baseball game. Please sign up for this event at our next club meeting, and we will get the tickets. We need at least 20 people to make this event happen. The next event to look forward to is the Mt. Wilson trip. Again, we need about 20 people to help keep the cost down. You don't want to pass up a chance to look through the 60 inch scope. On May 8th, we are invited to Red Rock Canyon State Park for a star talk and viewing. Doug Drake will be giving a talk that night, and we will be looking for the two comets that are coming into view. Just think about that: Not one, but TWO comets in the same night. You don't want to miss seeing those.

If you have an idea for the club to get involved with, please contact me with your ideas. We are always looking for people to help at events and a chance to bring the wonders of the night sky to the people of the Antelope Valley. Keep looking up!



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Doug Drake's *Planet Watch*



Venus

Watch Venus each week in the southwest and see Venus transform in the sunset sky. She will be her brightest on May 1st (the second brightest object in the night sky) and become less bright and transform into a thin crescent by the end of the month. She does this when she makes ready to leave us as the evening star and becomes our morning star in the months to come. This is one of the most satisfying Venus observations that we can make in amateur astronomy. Note: Use an ND filter to reduce Venus' brilliance. Venus will cross between the sun and our earth on June 8th but we will not be able to observe this crossing from our North American location. It has been 122 years since the last time Venus has crossed between the Sun and Earth.

Saturn

Saturn is between Gemini the twins and Orion the hunter. You can still see Saturn's beautiful ring structure, but you must observe Saturn just after sunset before the planet gets too close to the horizon. The light from Saturn now take about one hour and 20 minutes to get to us here on Earth. See if you can observe the largest moon of moons, "Titan." It is on the west side of Saturn on May 8th and on the east side of Saturn on May 24th. Note: You can use a small 3" telescope to observe this.

Jupiter

Jupiter is very bright and just below Leo the lion. Jupiter can be observed throughout the evening and well after midnight. Look for the Great Red Spot (GRS) on May 1st and 2nd. Note: This month Jupiter is the third brightest object in the night sky, so you may want to use an ND filter to reduce Jupiter's brilliance and use an 80A light blue filter (piggyback) to enhance the red spot and festoons.



AVAC Product Review by Terry Babineaux

Davis Instruments Wireless Vantage Pro

Though not strictly an astronomy-related piece of equipment, many amateur astronomers are interested in weather phenomena. A weather station can be used to predict good viewing conditions and to provide some indication of what is going wrong when they are not. If you are an astrophotographer, you'll want accurate temperature reading so you can calibrate your dark frames.

The Davis Wireless Vantage Pro consists of a control console and an Integrated Sensor Suite (or "ISS"). The console contains sensors for barometric pressure, indoor temperature and humidity. The ISS contains the wind sensors (anemometer and wind vane), and rain collector, plus sensors for outdoor humidity and temperature. A processor in the console processes the data from the sensors into a wide range of useful weather information, such as wind chill, heat index, rate of rainfall, etc. A physical connection is not needed between the ISS and the console: instead of using wires, the ISS contains a small radio which transmits the sensor data to the console. The transmitter is powered by a lithium battery which is charged during the day by a built-in solar panel.

The console unit provides the following information: barometric pressure; forecast; inside and outside temperature; inside and outside humidity; heat index; dew point; moon phase; rainfall for minutes, hours, days, month, year, and storm; wind direction and speed; wind chill; time and date; time of sunrise and sunset.

According to the manufacturer specifications, the unit bests competing units in terms of accuracy on just about every measurement parameter. However, the main selling point of the Vantage Pro is its update time. The unit transmits a packet of data every 2.5 seconds. This means that the unit can respond to quickly changing events such as wind gusts almost immediately. Competing units can take as long as 30 seconds (or more) to respond. Waiting to see how fast that last gust of wind was could otherwise seem to take forever! The ISS assembly is very rugged and is rated by the manufacturer for wind speeds up to 175 MPH. I have no way short of renting an airplane to test this- if the wind ever gets that strong, I'll have a lot more to worry about than the fate of my weather station!

A wired version of the Vantage Pro is available for about \$100 less than the wireless version. You'll have to run cable between the ISS and console if you go this route. Data communication is probably somewhat more reliable with the wired version. However, the wired version can also be affected by lightning strikes, especially if your ISS is mounted high in the air. Another club member who owns the wired version reports that a nearby lightning strike cooked the interface port on his computer. The wireless version is immune to such damage.

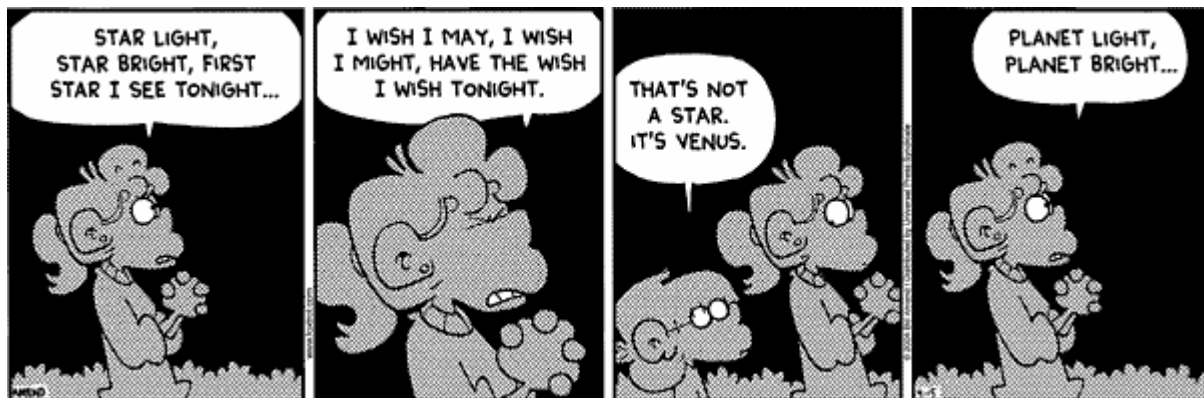
The Wireless Vantage Pro lists for \$535, but you can get a much better deal if you obtain your unit from a reseller such as those who commonly post on eBay. I got mine, a brand-new factory warranted unit, for less than the list price of the wired version. For more information, visit the Davis Instruments website at <http://www.davisweathergadgets.com/>

What I didn't like:

- Unit is sensitive to radio interference.
- Display is somewhat old-fashioned. Manual could be better.

What I did like:

- Don't need to worry about stringing cable.
- Rugged, professional construction.
- Fast update rate.
- Long battery life.
- Comprehensive, accurate, and timely collection of weather data.



Did you know? ?

The comet C/2001/Q4(NEAT) was discovered in August of 2001 and the comet 2002/T7(LINEAR) was discovered in October of 2002

? ? ?



Voyage to a Double Planet

by Patrick L. Barry and Dr. Tony Phillips

Download a "nine planets" screensaver for your computer with spectacular photos of our solar system, and you'll notice that one planet is conspicuously missing: Pluto. Icy and mysterious, Pluto is the only planet never visited and photographed by NASA space probes.

In fact, the clearest image we have of Pluto is a tiny, pixelated blob of light and dark patches taken by the Hubble Space Telescope in 1994. It is tantalizing, but not much more. Earth-based telescopes have succeeded, however, in discovering one amazing fact: Pluto is not a lone world, but a double-planet system. Its companion, measuring about half the size of Pluto itself, is named Charon.

Work is underway to launch a robotic probe to visit and photograph Pluto and Charon. The project, called New Horizons, will map both worlds. Sensors will chart surface minerals and ices, and catalog the gases that make up Pluto's wispy atmosphere.

"It's the second epoch in the exploration of the planets," says Alan Stern, the principal investigator for New Horizons at the Southwest Research Institute in Colorado. "We're going to the very edge of the solar system."

The probe is scheduled to launch in January 2006. Its journey will be a long one. Pluto is more than 30 times further away from the Sun than Earth is. Even with a speed boost from a flyby of Jupiter, the probe won't arrive at Pluto until July 2015. Afterward, the probe will venture on to explore the Kuiper Belt, a distant "halo" of small, frozen objects surrounding the solar system, from which comets originate.

Aside from sheer curiosity about these distant worlds, scientists are motivated by questions about the formation of the solar system. Orbiting in the deep freeze far from the sun, Pluto and Charon have undergone less change than the inner planets during the solar system's 4.5 billion year history. These two worlds will provide a glimpse into the past.

Pluto could also shed light on the origin of our own Moon. Earth, with its single, large moon, is unusual. The Pluto-Charon system is the only other pair like it in the solar system. In fact, some astronomers consider Earth and the Moon to be a double planet, too. So knowing more about Pluto and Charon could give clues about how the Earth-Moon system formed.

And, of course, the spectacular, up-close photos of Pluto and Charon are going to look great as a screensaver!

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



The *Telguide*.

Our own Steve Trotta has invented the Telguide to aid you in your galactic hunts. To purchase a Telguide, [click here](#).

Astronomy Links on the Web

<http://users.qnet.com/~terryb/astrophotography/galaxies.htm>

(Terry Babineaux's astrophotos)

<http://www.actonastro.com/>

(Steve Trotta's website)

<http://www.noexitrecords.com/zerobox/astro.htm>

(Tom Varden's website)

<http://www.astro-tom.com/>

(Tom Koonce's website)

<http://www.physics.sfasu.edu/astro/jupiter.html>

(Jupiter events)

<http://chandra.harvard.edu/index.html>

(The latest from the Chandra X-ray Observatory)

<http://www.astro.ucla.edu/~obs/intro.html>

(The sun from Mt. Wilson)

http://skyandtelescope.com/observing/objects/planets/article_304_1.asp

(Check out Saturn before it's too late)

www.avastronomyclub.org/

(Da Club)

Desert Sunset Star Party - May 13-16, 2004

The 2004 Desert Sunset Star Party will be held at the Caballo Loco Ranch, about 11.5 miles south of Three Points, AZ, on Rt. 286, and then east for 8 miles. This RV ranch is in a secluded area of Arizona with dark skies. The telescopes of Kitt Peak are in clear view to the west. The DSSP begins on Thursday night and runs through Saturday night. We will have a speaker on both Friday and Saturday evenings, along with door prize giveaways. Registration information will be posted on the DSSP website:

<http://chartmarker.tripod.com/sunset.htm>

QuasarChile Announces

Expert guided tours to Northern Chile designed for amateur astronomers are now available.

- Indulge your passion to visit one of the planet's premier observatories.
- Observe the Magellanic Clouds and the star clusters of the inner Milky Way through the darkest, clearest skies on Earth.
- Enjoy the outstanding natural beauty of Chile's northern deserts, volcanoes, and coastal regions.

We offer these personalized tours at affordable prices. Our tour of almost virgin Atacama highlands is an unforgettable experience that will provide you with an appreciation for the unique qualities of this remote part of northern Chile.

Please visit our website at: www.quasarchile.cl for more details.

If you are interested in becoming the new International Dark Skies Association liaison for the AVAC, now is the time. If you do not want to take the job on, you can still help by e-mailing the Country of Los Angeles Department of Regional Planning. Please contact Terry Babineaux for more details.

*** * WANTED * ***

Counterweight, 4-7 pounds with 3/4" to 1" hole (shaft size); contact Terry Pedroza, 718-3963

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The next Speaker...

... In May, SDSU Professor Peterson will return to our club to discuss "The Geological Case for Life on Mars."

From the brain of Tom Koonce:

Make as many words as possible out of "CONSTELLATION" that are 3 letters or more in length. All must be English words, no plurals, and no proper names. Send your list electronically to treasurer@avastronomyclub.org. The person with the most words will win a prize and an announcement will be made at the next meeting. Deadline for entries: May 10, 2004.

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.

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Our Sponsors

Al's Vacuum and Sewing: 904 West Lancaster Blvd. (661) 948-1521. Stop by and say “hey” to Matt and Suzanne.

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

Thanks for your generous support!

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The Desert Sky Observer is always looking for ideas to improve. Send your ideas to Brian Peterson at newsletter@avastronomyclub.org for consideration.

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