



Desert Sky Observer

Volume 26 Issue 11

November 2006



NEWSLETTER OF THE ANTELOPE VALLEY ASTRONOMY CLUB, INC
P.O. BOX 8545, LANCASTER, CALIFORNIA 93539-8545
*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

- November 05:** Full Moon
- November 08:** Mercury Transits Sun, [Prime Desert Woodlands](#)
- November 10:** Monthly Club Meeting*
- November 12:** First Quarter Moon
- November 17:** Board Meeting
- November 18:** Super Science Saturday at Joe Walker Middle School
- November 18:** Dark Star Party at [Poppy Reserve](#)
- November 20:** New Moon
- November 28:** Last Quarter 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

There I was, at a place I've never been before. As I looked out across the barren landscape I saw some Russian thistles, creosote bushes, a few rocks and wondered where in the heck am I? This could be Mars except Mars doesn't have Russian thistles and creosote bushes. And besides, I drove my truck there and my truck doesn't go fast enough to get out of the Earth's atmosphere, I know I've tried. The day was Saturday, October 21, 2006 and this was our club's October's star party site.

We, club members, drove to a place that none of us have ever been before; we were explorers and drove north of Barstow to find a dirt road just off Ft. Irwin road. The turnoff was Walker's Paradise Springs, just a little dirt road, and yes you can miss it and some of us did. You can tell when you miss it because further up the road are two army tanks at the entrance of Ft. Irwin, oops!

Well we all made it there and I think it took me about 2 hours to get there by taking the road up to Edwards AFB and then east on highway 58. We had one RV, two travel trailers, some cars and a truck. We set up telescopes and binoculars then waited for the Sun to set. While waiting, some members walked over to where there is a hot spring and a home. You could actually jump in and sit in a natural spa!

The Milkyway came out early after sunset and the sky was full of stars and all of us were enjoying our night sky view. We had a good observing session and saw some Orionid meteors streak through the night sky. You knew when you missed one because you would hear, "Wow, look at that" and by the time you turned around and looked the meteor was gone, they disappear really fast.

Here is a picture that Leon & Yvonne Waller took while we were at Walker's Paradise Springs:



Be sure to support Rose by signing up, at our November club meeting, for the Joe Walker Middle School, "Super Science Saturday," November 18, and the public star party at the Poppy Reserve. You can support the Poppy Reserve public star party and then go to the other end of the parking lot a join the club star party if you would like.

Don't forget the transient of Mercury across the Sun on Wednesday, November 8, at the prime Desert Woodlands, see Rose's article.

The best to you all,

Doug

Did you know ? ? ?

Earth weather is controlled by water, but Martian Weather is controlled by dust. Dust warms the atmosphere, creating winds that kick up more dust, sometimes creating global dust storms that engulf the planet for a month or more.

***Vice President
Richard Hague***



Astro-Photographer
Wally Pacholka

This lover of the night sky has had a passion to capture celestial events on film since a teenager growing up in a small town in Eastern Canada where the dark night skies could be viewed unhindered by city lights. Now fascinated by the beautiful southwestern deserts, his photographic images of the night sky have repeatedly been seen in some of the top publications worldwide. TIME, LIFE, Newsweek, National Geographic, Encyclopedia Britannica, MSNBC, and even NASA have repeatedly used his images for their realistic views of historical celestial events as seen over southwestern desert scenery. He is a three time winner of the TIME-LIFE “*Picture of Year*” award, where the very best images of world events are displayed in the year-end editions of these top publications.

Don't miss this meeting. It could be one of the best yet.

Dick Hague

***Director of Community Development
Rose Moore***

It's almost the end of the year and we have several events coming up this month for our club, starting with a daytime event for the public at Prime Desert Woodlands on Wednesday, Nov. 8th, for the Mercury transit across the Sun. This event will last several hours from 11:12am to 4:10pm. On Nov. 18th, Saturday, we will be at Joe Walker Middle School for 'Super Science Saturday'. Times are 9am to approximately 12:00 noon. Also that evening is a public star party at the Poppy Reserve. The club star party will be at the far side of the parking lot, for Club members only, and the public star party will be at the entry area.

We can use a few more volunteers for these events, so please email or call me or Doug to let us know if you would like to help out. These are our final public events for the year, so please come and participate and help make these a success!

Clear skies!
Rose



The Planet in the Machine

By Diane K. Fisher and Tony Phillips

The story goes that a butterfly flapping its wings in Brazil can, over time, cause a tornado in Kansas. The “butterfly effect” is a common term to evoke the complexity of interdependent variables affecting weather around the globe. It alludes to the notion that small changes in initial conditions can cause wildly varying outcomes.

Now imagine millions of butterflies flapping their wings. And flies and crickets and birds. Now you understand why weather is so complex.

All kidding aside, insects are not in control. The real “butterfly effect” is driven by, for example, global winds and ocean currents, polar ice (melting *and* freezing), clouds and rain, and blowing desert dust. All these things interact with one another in bewilderingly complicated ways.

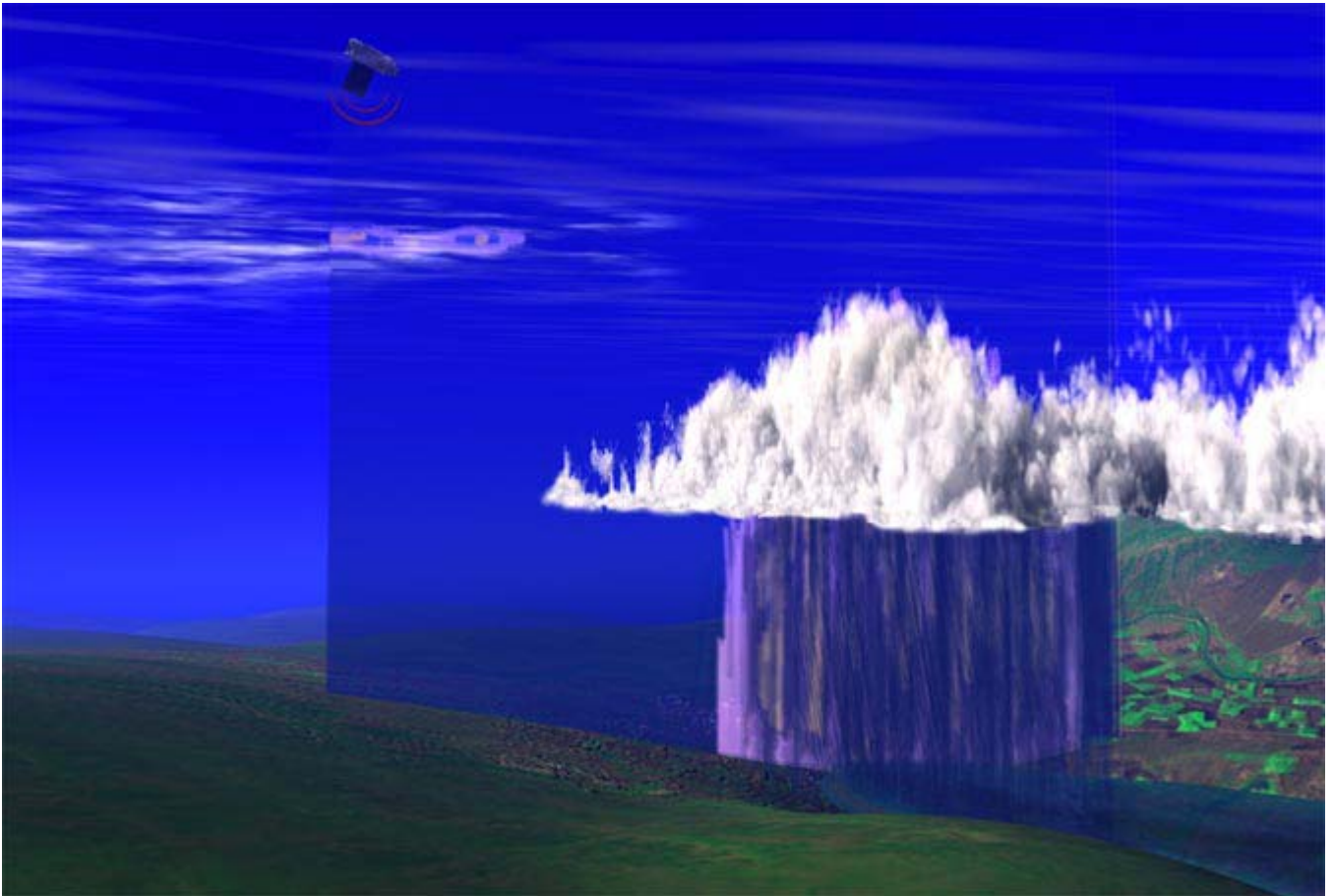
And then there’s the human race. If a butterfly can cause a tornado, what can humans cause with their boundlessly reckless disturbances of initial conditions?

Understanding how it all fits together is a relatively new field called Earth system science. Earth system scientists work on building and fine-tuning mathematical models (computer programs) that describe the complex inter-relationships of Earth’s carbon, water, energy, and trace gases as they are exchanged between the terrestrial biosphere and the atmosphere. Ultimately, they hope to understand Earth as an integrated system, and model changes in climate over the next 50-100 years. The better the models, the more accurate and detailed will be the image in the crystal ball.

NASA’s Earth System Science program provides real-world data for these models via a swarm of Earth-observing satellites. The satellites, which go by names like Terra and Aqua, keep an eye on Earth’s land, biosphere, atmosphere, clouds, ice, and oceans. The data they collect are crucial to the modeling efforts.

Some models aim to predict short-term effects—in other words, weather. They may become part of severe weather warning systems and actually save lives. Other models aim to predict long-term effects—or climate. But, long-term predictions are much more difficult and much less likely to be believed by the general population, since only time can actually prove or disprove their validity. After all, small errors become large errors as the model is left to run into the future. However, as the models are further validated with near- and longer-term data, and as different models converge on a common scenario, they become more and more trustworthy to show us the future while we can still do something about it—we hope.

For a listing and more information on each of NASA’s (and their partners’) Earth data-gathering missions, visit science.hq.nasa.gov/missions/earth.html. Kids can get an easy introduction to Earth system science and play Earthy word games at spaceplace.nasa.gov/en/kids/earth/wordfind.



CloudSat is one of the Earth observing satellites collecting data that will help develop and refine atmospheric circulation models and other types of weather and climate models. CloudSat's unique radar system reads the vertical structure of clouds, including liquid water and ice content, and how clouds affect the distribution of the Sun's energy in the atmosphere. See animation of this data simulation at www.nasa.gov/mission_pages/calipso/multimedia/cloud_calip_mm.html.

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

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)

News and Headlines

NASA to proceed with Hubble telescope repair

NASA Administrator Michael Griffin, speaking to cheering scientists who had feared Hubble's earlier demise, said a space shuttle would make one final maintenance trip, tentatively in 2008, to the orbiting telescope.

http://news.yahoo.com/s/nm/20061031/sc_nm/space_hubble1_dc

2009 named International Year of Astronomy

An International Year of Astronomy will unfold in 2009, marking the fourth centenary of discoveries by Galileo that changed perceptions of the cosmos, the International Astronomical Union (IAU) has said.

http://news.yahoo.com/s/afp/20061030/sc_afp/spaceastronomy

NASA's Spirit Rover Hits 1,000th Martian Day

NASA's Spirit rover hit the 1,000-Martian day of its mission on the red planet Thursday, but the mission continues for the hardy robot. To celebrate the Martian milestone, rover mission managers released the McMurdo panorama, a mosaic of some 1,449 individual images taken by Spirit's panoramic camera.

http://www.space.com/missionlaunches/061026_spiritrover_1000.html

Galaxy Cluster's Ring Hints at Cosmic Shockwave

A ring-like formation around a distant cluster of galaxies has yielded what may be the first glimpse of a shockwave spawned by either a cosmic collision or interstellar gas. The ring, made up radio signal-emitting arcs, surrounds a rich collection of galaxies known as Abell 3376.

http://www.space.com/scienceastronomy/061103_galaxycluster_shockwave.html

Strong Leonid Meteor Shower Expected Nov. 18

If you live in Western Europe or eastern North America, put a big circle on your calendar around Saturday, Nov. 18. If that night is clear, bundle up warmly and head outside because you may be able to catch a glimpse of an intense, albeit brief display of Leonid meteors.

http://www.space.com/scienceastronomy/061017_leonids_2006.html

Iconic observatory reopens

The Griffith Observatory, home for stargazers and a famous backdrop for such stars as James Dean and Arnold Schwarzenegger, reopened on Friday after a four-year, \$93 million makeover.

<http://www.cnn.com/2006/TECH/space/11/03/la.observatory.reut/index.html>

Deep Impact probe heading for new comet

The surviving portion of the Deep Impact space probe that watched as its other half smashed into a comet on July 4 is being sent on a mission to study another comet.

<http://www.cnn.com/2006/TECH/space/10/31/deep.impact.ap/index.html>

More pictures from Paradise Springs

Photos by Bill Riedhart. Full size versions can be viewed online at the clubs [photo album](#).



Kate Trotta, Doug Drake, and Mary Andrus chat while waiting for sunset.



Shane and Karole Barker are all set up. That's Milt Sawyer wandering aimlessly in the background.



Schmidt-Cassegrain row.



A panoramic view of the camping and telescope area.

A.V.A.C. Membership Information

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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Thank you to our sponsors for your generous support!

Al's Vacuum and Sewing: 904 West Lancaster Blvd. (661) 948-1521. Stop by and say "hi" to Matt and Sue.

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

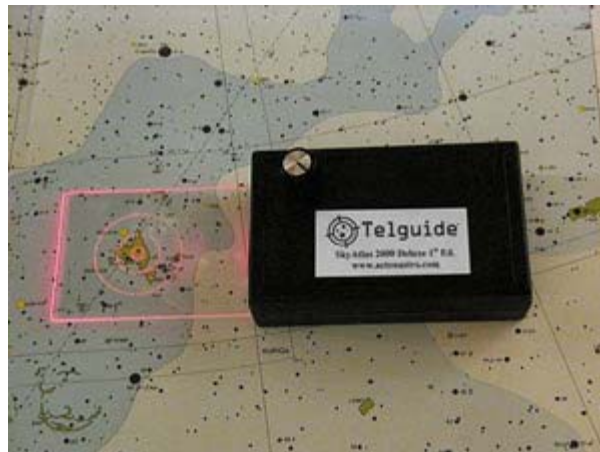
Telguide: A supper guide to use with your star chart. www.actonaastro.com

Astro-Tom: Tom is dedicated to amateur astronomy. www.astro-tom.com



Al's Vacuum and Sewing

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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.actonaastro.com>



A HARTWIG COMPANY with offices in Palmdale and Lancaster Errol Van Horne (661 305 8148) and Jim Jeffra (661 733 8363) offer residential and commercial real estate services to all club members and their referrals, which include a 15% donation to the Youth Exploring Astronomy Program, of any commission earned from those sources.