
Desert Sky Observer

Volume 23 Issue 1

January 2003



NEWSLETTER OF THE ANTELOPE VALLEY ASTRONOMY CLUB, INC
P.O. BOX 4595, LANCASTER, CALIFORNIA 93539-4595

*The Antelope Valley Astronomy Club is a California non-profit Corporation
Visit the Antelope Valley Astronomy Club website At www.avac.av.org
The A.V.A.C. is a Sustaining Member of The Astronomical League*



Up-Coming Events

January 2: New Moon

January 4: Dark Star Party, [Saddleback Butte](#)

January 10: Monthly Club Meeting*

January 10: First Quarter Moon

January 18: Full Moon

January 25: Last Quarter Moon

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 Pedroza

I cannot believe that 2002 is behind us and 2003 is already here. I hope that everyone had the merriest of holidays and the safest of New Years.

Thank you all for making the Antelope Valley Astronomy Club the great club that it is. This club is not made great by the President or by the Executive Board but by you, the members. You should all be proud of the club that you have created. I am proud of this club and honored to be your President. Thank you all.

For those of you that missed the Holiday party, you really missed out on a good time. There were forty members present and most took something home from the door prizes, raffle or silent auction. The food was great, the service was great and the company was second to none. I would like to thank those who had a hand in setting the party up. Without you, this would not have been the great success it was. Thank you!

Please remember that dues are due in January, and that those not paid up by February 28th will be dropped from the membership. Mary will be helping Mike at the front table in January to get everyone up to date. Speaker donation envelopes should be at the front table by January; please help with our speakers. They really do appreciate it.

Don't forget the dark sky star party on January 4th at [Saddleback Butte State Park](#). The winter constellations are gorgeous. See you all in 2003.

Awards Committee*Tom Koonce, 2002 Chairman*

We have been fortunate this year to have had such worthy candidates for the AVAC's highest award, the Keith Lawson Award. Given annually, "In Recognition of Outstanding Contributions to the Antelope Valley Astronomy Club and the Exceptional Pursuit of Amateur Astronomical Knowledge," the Awards Committee received numerous nominations this year. We would like to say "Thank you" to each member that took the time to write such warm recommendations along with their nominations. Each nominee was outstanding.

Because precedent had been set in 2000 for two recipients, before any candidates were considered in 2002 the committee took a vote on whether one or more than one candidate might be considered this year. The committee decided to limit current and future Keith Lawson Awards to a single recipient each year. This was a tough decision, but it was felt that it gave the award even more value and prestige.

Debora Pedroza has served for the past two years as the Director of Community Development (formerly known as the Member-at-Large). She has been responsible for organizing and directing the execution of the incredibly successful Youth Exploring Astronomy Essay Contest. She has organized so many community events that it's hard to count, as are the number of people who have found their personal introduction to amateur astronomy because of these events. The Awards Committee was proud to present Debora Pedroza as the Antelope Valley Astronomy Club Keith Lawson Award winner for 2002.

Congratulations Debora!!

Note: The Awards Committee is made up of an Executive Board-appointed Chairman and all other members of the committee are secret to prevent favoritism or hurt feelings to the extent possible.

A special raffle was held at this year's Christmas Party. On the way into the dinner, everyone was asked an innocuous question - Did they have a telescope? If they answered "No," their name was secretly entered into a raffle held at the end of the evening. The winner of a Meade ETX-90RA telescope, 26mm eyepiece and a tripod adapter was Tim Miller. Congratulations, Tim!



Debora Pedroza accepts the Keith Lawson award for her hard work for the club, presented to her by Tom Koonce and Terry Pedroza.



Awards Committee Chairman Tom Koonce presents Tim Miller with a ticket to the night sky - a Meade ETX-90RA.

Introduction to the Night Sky Class

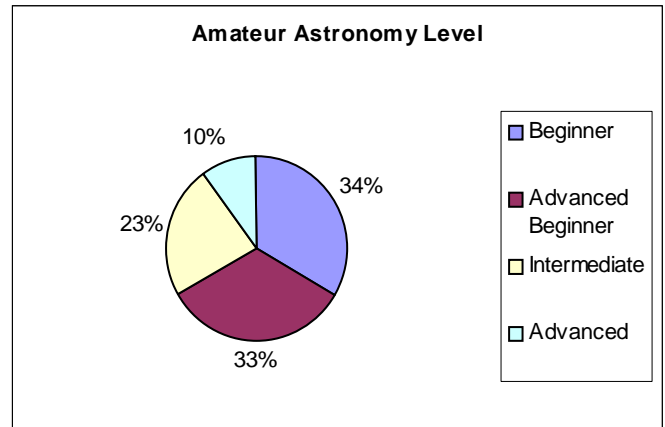
At 6:00 p.m., just before our club meeting on Friday, January 10, at the S.A.G.E. Planetarium, all new members who desire to check out a club telescope must attend an, "Introduction to the Night Sky" class where telescope basics and care will be discussed. The class has been recently reworked so that we can concentrate on the items that past attendees thought were the most important parts. If you would like to come, please e-mail Tom Koonce at takoonce@aol.com or call in the evenings at 661-943-8200 to reserve a space. Your help in RSVP-ing is appreciated greatly because seating is limited, and there are only enough handouts for the people that sign up. The second course, "Advanced Beginner Amateur Astronomy" will be taught before the February Meeting. You can start signing up now.

Survey of AVAC Members - Dec. 2002

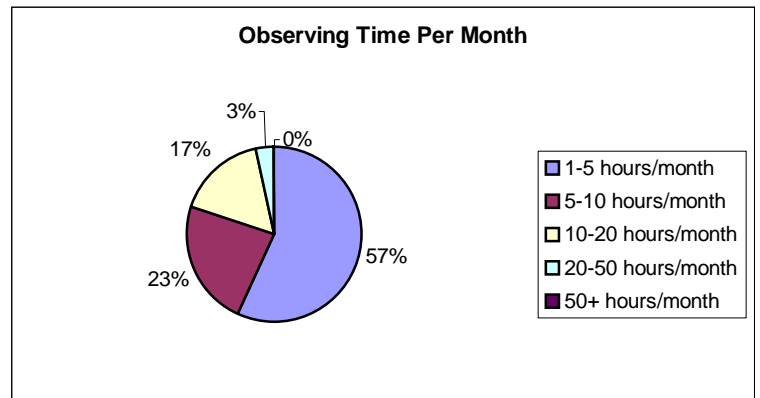
Tom Koonce

I took an informal three-question poll of all AVAC members with e-mail accounts and received a sizeable response. Thirty members responded (about 1/3 of our membership) and I found out some surprising results:

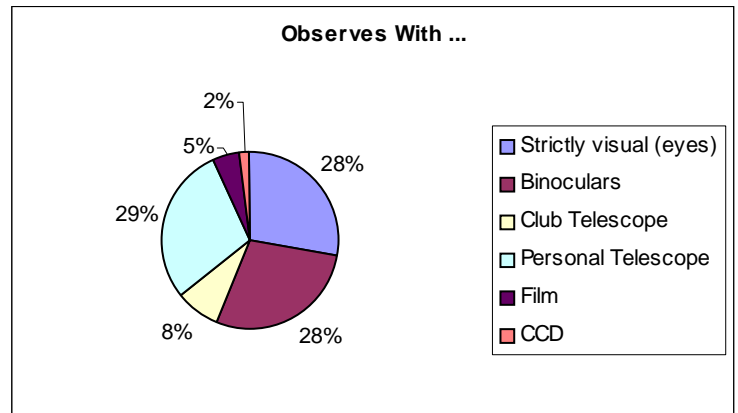
1. To the question, "What level of amateur astronomy describes yourself best?" the results were that about 2/3 of our membership consider themselves to be Beginners or Advanced Beginners. This is a significant majority. Our club will address the needs of all beginners with both introductory amateur astronomy classes and new 'Constellation Orientations' at every star party. We will also gear the upcoming AVAC Conference on Amateur Astronomy more towards the Beginner level.



2. To the question, "How much time do you observe?" I found that our time is precious... With just a short time spent observing each month, our members obviously enjoy the night sky for both relaxation and a bit of education. Our club should offer suggestions to our members how to get the most quality out of each evening they do get to observe.



3. When asked , “What do you use to observe with?” many of our members answered that they observe in multiple ways.



Two surprising results were brought to light: Nearly a third of us just enjoy using our eyes to gaze at the stars, and about the same number have a personal telescope that we use regularly. But more intriguing is that while over half of our members observe with their eyes or use binoculars, only a fraction of members use the Club telescopes. Nearly every month we have telescopes and eyepiece sets that remain to be checked out for your use at home. We also provide free telescope orientation classes. If you'd like to check out a club telescope but are unsure of the process, just give Terry Pedroza (661-718-3963) a call or myself, Tom Koonce (661-943-8200) and we'll even set up a special one-on-one class if you'd like. (All you might have to provide are some Astro-snacks 😊)

Doug Drake's *Planet Watch*



For this month the star of planets is Saturn, displaying it's awesome rings. We get a double bonus viewing Saturn right now because Saturn is in opposition (directly opposite the Sun, so it is closes to us in our orbit) and Saturn is in perihelion (closest to the Sun in it's orbit, thus making it even closer to Earth). Saturn hasn't been this close since about 1973; and yes, I was observing Saturn then and it still takes my breath away. The next time you see me, tell me how many rings you observed and how far around Saturn you can see the Cassini division. Did you see any bright spots on the globe?

Observe Jupiter around midnight so that it will be up high enough to get out of the turbulent atmosphere. Jupiter will be closest to us next month because Jupiter will then be in opposition. Jupiter is very dynamic and changes its face rapidly because it is rotating (spinning) between 9 1/2 and 10 hours per rotation. Check to see whether you can see shadows from one of Jupiter's moons gracing Jupiter's surface.

Venus is still the morning beauty in the East, just before sunup. Venus will be at greatest elongation (relatively the farthest away from the Sun, viewing from Earth) and will be at the greatest height in altitude. Notice two red-orange stars are to the upper right of Venus. The upper one is not really a star because it is Mars. The lower one is the star Antares, Mars' rival. You will not be able to view anything on Mars at this time, but just wait for this summer because Mars shall be all-time close.



Frisbees in Space

by Dr. Tony Phillips

When Pete Rossoni was a kid he loved to throw Frisbees. Most kids do- it's pure fun. But in Pete's case it was serious business. He didn't know it, but he was practicing for his future career in space exploration.

Grown-up Pete Rossoni is now an engineer at NASA's Goddard Space Flight Center. His main project there is figuring out how to hurl spacecraft into orbit Frisbee-style.

The spacecraft are small- about the size of birthday cakes. "This wouldn't work with big satellites or heavy space ships like the shuttle," notes Rossoni. But a cake-sized "nanosatellite" is just right.

Nanosatellites- nanosats for short- are an exciting new idea in space exploration. Ordinary satellites tend to be heavy and expensive to launch. The cost alone is a deterrent to space research. Nanosats, on the other hand, can travel on a budget. For example, a Delta 4 rocket delivering a communications satellite to orbit could also carry a few nanosats piggyback-style with little extra effort or expense.

"Once the nanosats reach space, however, they have to separate from their ride," says Rossoni. And that's where Frisbee tossing comes in.

Rossoni has designed a device that can fling a nanosat off the back of its host rocket. "It's a lot like throwing a Frisbee," he explains. "The basic mechanics are the same. You need to impart the spin and release it cleanly- all in about a tenth of a second." The spinning motion is important because it allows the science magnetometer to measure the surrounding field and lets sunlight to play across all of the nanosat's solar panels.

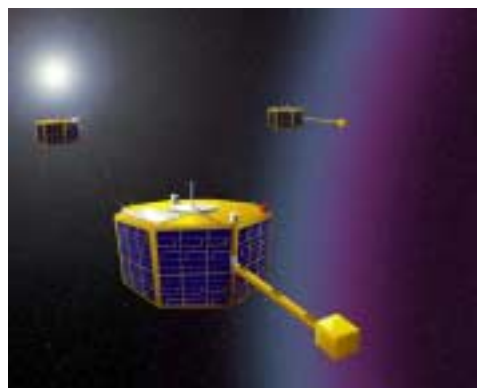
The ST5 nanosats are designed to study Earth's magnetosphere- a magnetic bubble that surrounds our planet and protects us from the solar wind. But their primary goal, notes Rossoni, is to test the technology of miniature satellites.

"We haven't done anything like this before," says Rossoni. Soon, however, the concept will be tested. A trio of nanosats is slated for launch in 2004 on the back of a rocket yet to be determined. The name of the mission, which is managed by JPL's New Millennium Program, is Space Technology 5 (ST5).

Can groups of nanosats maintain formation as they fly through space? Will their internal systems- miniaturized versions of full-sized satellite components- satisfy the demands of both the harsh space environment and critical science measurements? Is Frisbee-tossing as much fun in orbit as it is on Earth?

ST5 will provide the answers. Read about ST5 at <http://nmp.nasa.gov/st5> Budding young astronomers can learn more at http://spaceplace.nasa.gov/st5/st5_tortillas1.htm

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





Connect with QNet
an AVAC sponsor

Our Next Speaker

The speaker at the January Club Meeting will be Dr. David Meier of JPL. He will speak about astrophysics.

Did you know? ?

The spacecraft "Stardust" will fly within 100 km. of a comet in January of 2004 in order to collect data and particles.

? ? ?

* * For Sale * *

Starry Night Backyard program
paid \$54.00 including shipping
asking \$40.00 o.b.o.
Call Al Shoomliansky at 945-8900

* * * * *

Astronomy Links on the Web

<http://pages.prodigy.net/sstrott/>

(Steve Trotta's website)

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

(Tom Koonce's website)

<http://www.projectsandhobbies.com/howtolearnastronomy.htm>

(Getting started in Astronomy...)

<http://antwrp.gsfc.nasa.gov/apod/archivepix.html>

(Astronomy Picture of the Day)

<http://www.geo.mtu.edu/weather/aurora/>

(Aurora Borealis information)

<http://www.avac.av.org/>

(Hey, that's us! So go there!)

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: Terry Pedroza (661) 718-3963 res1atuo@verizon.net

Vice-President: Tom Koonce (661) 943-8200 takoonce@aol.com

Secretary: Lu Shoomliansky (661) 945-8900 lace.s@as.net

Treasurer: Mike Presswood (661) 949-8718

Director of Community Development:

Debora Pedroza (661) 718-3963 res1atuo@verizon.net

Newsletter Editor

Brian Peterson (661) 273-1693 cybrpete@sbcglobal.net

Club Librarian

Terry Pedroza (661) 718-3963 res1atuo@verizon.net

Astronomical League & Club Historian

Tom Koonce (661) 943-8200 takoonce@aol.com

Webmaster of Club Site

Steve Trotta (661) 269-5428 sstrott@prodigy.net

Our Sponsors

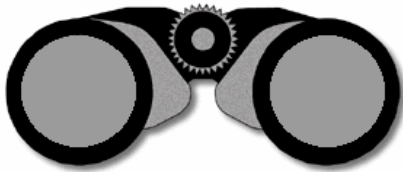
Al's Vacuum and Sewing: 904 West Lancaster Blvd. (661) 948-1521. Stop by and say "hey" to Matthew and Suzanne.

King Photo: 749 W. Lancaster Blvd. (661) 948-8441. As a telescope dealer, they always support the AVAC. Stop by and say "hey" to Stokely or Paul.

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.

Thanks for your generous support!

A Look Ahead...



February Calendar

February 1: Star Party and Talk at Prime Desert Woodlands

February 14: Club Meeting, S.A.G.E. Planetarium

March Calendar

March 1: Messier Marathon, [Crystalaire Country Club](#)

March 14: Club Meeting, S.A.G.E. Planetarium; John Dobson, speaker

March 29: Dark Star Party, [Crystalaire Country Club](#)

Christmas Party Photos





