



Desert Sky Observer

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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

- October 4:** Lunar Club Party @ [the Riedhart's](#) 6:00pm
October 10: Annual Club Meeting @ [the Sage](#)*
October 11: [Palmdale Fall Festival](#)
October 12: [Palmdale Fall Festival](#)
October 13: Executive Board Meeting @ [the Pedroza's](#) (6:30)
October 25: Moon Walk and Star Party @ [Prime Desert Woodlands](#) (6:30pm)

* 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 Terry Pedroza

It's that time of year again, time to elect OUR new Executive Board members for next year. We have a list of very capable members whom have been nominated thus far for these positions. They are; Bill Riedhart, President; Jenn Riedhart, Secretary; Tom Koonce, Treasurer and Karole Barker as Director of Community Development. The office of Vice President is still open. Nominations for Executive Board members will remain open right up until the election at the Annual meeting on October 10th. There are no proposed Constitutional amendments proposed so it should be a fairly short annual meeting.

At our meetings it is expected that are OUR members will conduct themselves in a manner consistent with what one would expect at a public meeting. Please do not go in and out of the room while the meeting or presentation is in progress if it is not needed. Also please refrain from unnecessary talking while the meeting or presentation is in progress, it is not only rude and disrespectful to the speaker but also to those around you who are trying to listen. If these things happen I will be forced to ask that person or persons to please be respectful and if that does not work that person or persons will be asked to leave. This has never been an issue in the past and I fully expect that it will not be an issue in the future. Thank you in advance for your understanding and cooperation.

I have received information on an educational opportunity that I would like to pass along to our members that I will be attending if room and time permit. "Einstein, The Man and his Legacy" is a two-day class at UCLA that puts the emphasis on ideas not equations. The class will be November 1st and 2nd at UCLA 147 Dodd Hall. There is a fee for the class. For more information go to uclaextension.edu/einstein08

See you at the meeting,
Terry

***Vice President
Debora Pedroza***

Autumn has arrived and the breathtaking winter skies are just around the corner. As we take a look at the preview of the next 3 months' club meetings, we will no doubt see one of our favorite events as well as a brand new event slated to introduce our club to the community.

Our annual business meeting and the election of the executive board officers will be conducted at the October club meeting. We will also have a short demonstration of the Night Sky Network presentation titled, "The Universe In A Different Light" by Dick Hague. This is another skit that is so beautifully done. There is also a possibility that the planetarium will be up and running in its newly renovated format and if so, Jeremy is pretty excited to show that off!

In November there WILL NOT BE A BUSINESS MEETING held during our club meeting hours. Instead we will be holding a "Getting to Know the AVAC/Astronomy Faire event highlighted to draw community members to our fanfare and to officially kick-off the 9th Annual YEA Essay Contest. There will be more specific details in the November edition of the DSO but here is a short summary of what stations will be available for the public to see: telescopes, club library, mirror making, astro-imaging, meteorites, lunar observing, Roswell and his Baby and a chance to walk through our club trailer. There will also be tables with information on YEA, our observing programs and of course how to join our club.

The club will be holding one of our most anticipated events of the year on Saturday, December 13 at 6pm. Yes, it is our Holiday party and it will be held in the Spring Room at the Best Western Convention Center on Sierra Highway. This room is 3 times larger than the rooms we have previously used and it is beautiful. It is also set off by itself with a porch and pretty landscape. There will be more details to follow as how to reserve your tickets and the cost etc. For now ...just save that date!

See you in October because we need everyone to help make a difference at our annual business meeting!
Until then...take good care.

***Director of Community Development
Karole Barker***

We had a great turn out for the Prime Desert Woodlands on Saturday, August, 16th we had 97 people, which included club members. We do have upcoming events at Prime Desert Woodlands on Saturday September 27th, at 7:30 p.m., and on October 25th at 6:30 p.m., which I still need volunteers to bring out scopes that night. Please let me know if you can make it at PDW.

On Saturday October 4th @ 6:00 p.m. there will be a Lunar Club party at the Riedhart's.

In addition, the "Palmdale Festival" is right around the corner on October 11th & 12th. I still need volunteers for both days. Please let me or Terry know if you can volunteer for either day. I need to provide a head count to the city of Palmdale, so we have enough passes for the event.

Clear skies,
Karole

Our Time at PATS 2008

By Tom Koonce

PATS (Pacific Astronomy and Telescope Show) in Pasadena was organized to respond to requests that an indoor amateur astronomy event be tried in the LA area... an event that primarily showcases vendors and technical presentations. The event was hosted by the organizers of the RTMC in Big Bear. There were LOTS of vendors (70+) showing off the latest in amateur astronomy wares. Big ones like Celestron, Meade, Orion, Santa Barbara Instrument Group, TeleVue, and Vixen were there and many small ones like, well, in many cases I hadn't heard of them. It's nice to attend a show and be surprised.

I went on Saturday with discount tickets I had bought previously through the AVAC. Since it was the first time the event had ever been held, I didn't know what to expect, but I had read online that the famous Hubble Space Telescope repair mission astronaut Story Musgrave was going to be a featured speaker in the afternoon. I knew that I wanted to take my son down to meet him since he has to do a report on an astronaut later this school year. We left the house in the AV at 8:00 am and easily made it to the Pasadena Convention Center by the 9:00 am opening.

Click on images for larger view



Terry Pedroza, Karole and Shane Barker at our AVAC Booth for PATS 2008



Tom, Matthew, Bill and Jenny at our Sponsor's Booth - Woodland Hills Camera and Telescope

The place was packed. I read online that they had sold more than 800 tickets for the event on Saturday with people moving from one fantastic giveaway drawing to another. We registered for everything we could...



Matthew and Terry registering for an iOptron "Cube" Mount



Jenny Riedhart Was The Very Happy Grand Prize Winner at the Orion Booth!

...and luck was once again with AVAC members as they won high dollar eyepieces, a new telescope, a Meade MySky, hats, a green laser pointer and more!

Several of our members donated their time to work the event and earned free admission to the show! Outstanding support was provided by members including the Bashams, Riedharts, Barkers, Terry Pedroza and Darrell Bennett (and several others!)

My son and I had a great time, but the highlight was our time that we got to talk one-on-one with Story Musgrave. He gave my son advice about working hard for what you want in life and to just go for it. He autographed his book for Matthew and was very gracious.



Astronaut Story Musgrave Poses with Matthew



Bill, Terry and Tom (not pictured) at the "Doing Science With Your Telescope" Lecture

We attended several technical lectures including two that were very memorable to me – “Doing Science with Your Telescope” and of course, Story Musgrave’s keynote talk at the end of the day, “The Design, Development and Execution of the Hubble Repair Mission”.

This was the first ever year for this event, so there were some minor hiccups as the event unfolded, but they were truly small things. It was easy to tell that the RTMC Board had put on many, many big events and that their experience in doing so was paying off. While I will still be attending RTMC and this event does not ‘replace’ the activities and excitement of RTMC, this is a NOT TO MISS EVENT on the amateur astronomy calendar. We finished the day quite pleased with all of the new products that we got to see (like the new TeleVue 8 and 17mm Ethos eyepieces!), everyone we got to talk with, the people we got to network with, and the prizes that we won. We will definitely be back in 2009. Put it on your calendar for September 26-27, 2009. Hopefully we’ll be carpooling together!

Wish You Were Here,
Tom



Extreme Starburst

by Dr. Tony Phillips

A star is born. A star is born. A star is born.

Repeat that phrase 4000 times and you start to get an idea what life is like in distant galaxy J100054+023436.

Astronomers using NASA's Spitzer Space Telescope and ground-based observatories have found that the galaxy gives birth to as many as 4000 stars a year. For comparison, in the same period of time the Milky Way produces only about 10. This makes J100054+023436 an extreme starburst galaxy.

"We call it the 'Baby Boom galaxy,'" says Peter Capak of NASA's Spitzer Science Center at the California Institute of Technology in Pasadena, CA. "It is undergoing a major baby boom, producing most of its stars all at once. If our human population was produced in a similar boom, then almost all people alive today would be the same age."

Capak is lead author of a paper entitled "Spectroscopic Confirmation of an Extreme Starburst at Redshift 4.547" detailing the discovery in the July 10th issue of *Astrophysical Journal Letters*.

The galaxy appears to be a merger, a "train wreck" of two or more galaxies crashing together. The crash is what produces the baby boom. Clouds of interstellar gas within the two galaxies press against one another and collapse to form stars, dozens to hundreds at a time.

This isn't the first time astronomers have witnessed a galaxy producing so many stars. "There are some other extreme starburst galaxies in the local universe," says Capak. But the Baby Boom galaxy is special because it is not local. It lies about 12.3 billion light years from Earth, which means we are seeing it as it was 12.3 billion years ago. The universe itself is no older than 14 billion years, so this galaxy is just a youngster (Capak likens it to a 6-year-old human) previously thought to be incapable of such rapid-fire star production.

The Baby Boom galaxy poses a challenge to the Hierarchical Model of galaxy evolution favored by many astronomers. According to the Hierarchical Model, galaxies grow by merging; Add two small galaxies together, and you get a bigger galaxy. In the early years of the universe, all galaxies were small, and they produced correspondingly small bursts of star formation when they merged. "Yet in J100054+023436, we see an extreme starburst. The merging galaxies must be pretty large."

Capak and colleagues are busy looking for more Baby Boomers "to see if this is a one-off case or a common occurrence." The theory of evolution of galaxies hangs in the balance.

Meanwhile... A star is born. A star is born. A star is born.

See more breathtaking Spitzer images at www.spitzer.caltech.edu/Media/mediainages. Kids can play the new Spitzer "Sign Here!" game at spaceplace.nasa.gov/en/kids/spitzer/signs.

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

News and Headlines

NASA's Messenger Spacecraft Returns To Mercury

A NASA spacecraft will conduct the second of three flybys of Mercury on Oct. 6 to photograph most of its remaining unseen surface and collect science data.

http://www.spacedaily.com/reports/NASA_Messenger_Spacecraft_Returns_To_Mercury_999.html

Hubble Shuts Down, Repair Mission Delayed

If NASA had kept to its original schedule, astronauts would have made their fifth and final mission to service the Hubble Space Telescope back in August.

<http://www.skyandtelescope.com/news/home/29908104.html>

Dwarf-Planet Name Game

On September 17th, the International Astronomical Union announced that an object in the Kuiper Belt — the fifth solar-system body large enough to qualify as a "dwarf planet" — had been named. It'll be called Haumea (pronounced how-MAY-uh), after the goddess of childbirth and fertility in Hawaiian mythology.

<http://www.skyandtelescope.com/news/28646964.html>

MESSENGER's second Mercury flyby

On October 6, 2008, NASA's MESSENGER spacecraft flies by Mercury for the second time since its August 4, 2004, launch. Here's a wrap-up of Astronomy.com's coverage of this historic mission to the innermost planet.

<http://www.astronomy.com/asy/default.aspx?c=a&id=7430>

Treasure Hunting on the Moon: LRO and the Search for Water

A bottle of one of the most expensive brands of water costs \$40, and is presented in a frosted glass container decorated with crystal. On the moon, a bottle of water would run about \$50,000, and forget about that heavy crystal glass. That's because it costs around \$50,000 per pound to launch anything to the moon. Discovering water on the moon would be like finding a gold mine.

http://www.nasa.gov/mission_pages/LRO/news/water_search.html

Two Companions Found Near Dog-bone Asteroid

A team of astronomers led by F. Marchis, PI, at the SETI Institute and at UC-Berkeley, and P. Descamps from Paris Observatory announced recently the discovery of two moons around an intriguing asteroid. The main-belt asteroid 216 Kleopatra has two companions.

<http://www.space.com/searchforlife/081002-seti-dogbone-asteroid.html>

Best Ground-Based Image of Jupiter — Ever!

Everyone loves twinkling stars and moonlit nights—EXCEPT astronomers. But astronomers are crafty people, so they've come up with ways to mitigate the distortion that Earth's thick atmosphere causes for ground based telescopes (from which stars appear to twinkle). And now, a new image-correction technique has delivered the sharpest whole-planet ground-based picture ever.

<http://www.universetoday.com/2008/10/02/best-ground-based-image-of-jupiter-ever/>

We Need Your Help With AVAC Projects!!

As election time rolls around, have you ever asked yourself, “What can I do for the AVAC even though I don’t really have the time every month to be a Club Officer?” If so, there are several projects that you can choose from that will be of long-term benefit to the Club, and the best part is that they can be done on your own schedule! Some of the projects are simple and may take only a few hours to complete, and others may take a total of 20 hours. This time can be spread out over months if you’d like. Here are some ideas for projects you can choose from, *or bring your own idea to the next Board Meeting.*

1. **New Members Package.** Several years ago we put together a “New Members Package” on a CD that we handed out to every paid member. This (presently) web-based package really needs to be updated with current information, pictures, Constitution and Operations Manual, etc. Much of the information only needs to be edited. Contents can include: Letter of Welcome from the Club President; Dates, place and times of Club meetings, the Club website, and maps to our common observing sites; an annotated list of Beginner’s books, planispheres, charts and why they are good; A current listing of the Club’s library holdings, borrowing procedures and phone number of the Club Librarian; List of awards available from the Astronomical League; Star charts for the current year; directions to the Club’s observing sites and a list of what to bring; a list of club members who observe in their backyards and would welcome company; List of current committees and their chairpersons with phone numbers; Any odds and ends that may be useful to astronomy. **Total time needed 12 hrs.**

2. **Telescope Repair.** From time to time one of our club telescopes requires minor repair or cleaning. This is done in two steps and you can take on one or both. Part I: Coordinating with the Club Librarian, check out the damaged telescope and make an assessment of what it will take to fix it (cleaning optics, replacing missing parts, ordering a critical part). Write up the cost estimate and submit it to the Board. Part II: If you feel comfortable conducting the repair, the Board will approve the money to fix the telescope and then you can get the supplies to fix it and proceed. **Total time needed 2 to 10 hrs.**

3. **Annual Club Inventory.** Each year, the AVAC conducts an inventory of all of its library holdings. This is usually done in one weekend. Volunteer to help conduct the inventory, , write down updated information for the database, label new assets, and/or take identifying digital photos of the equipment, books, telescopes, etc. **Total time needed approximately 16 hrs. (One weekend)**

4. **Participate in one Public Outreach Event.** This usually involves the volunteer for one morning or afternoon at a local school. Typically we demonstrate solar telescopes to the kids and may talk about Meteors, the Moon, or other space-related topics. After doing one of these events and seeing the reaction by the kids, you’ll be back for more. **Total time needed 4 hrs. (One day)**

5. **Grant Writing.** Our Club has certain long range goals that include a Club Observing Site and perhaps a Community Astronomy Outreach Center. If you have written grants or would like to learn, this may be a project for you to take on. Part I: First an assessment of what grants are available, the dollar amounts involved and the deadlines for submittal would have to be made. A prioritized list of grants would be prepared. Part II: In conjunction with the Executive Board, Choosing from among the top priority grants, one would be picked, written and submitted. **Total time needed 20+ hrs.**
6. **Promotion of Astronomical League Observing Clubs.** The AL provides many fascinating observing challenges and they are adding new ones all of the time. This project involves picking a series of observing clubs from the AL listing and talking a different one at the Club meeting each month. Interesting details of the goals of each club might be shared. Current clubs include: ARP Peculiar Galaxy; Asteroid Club; Binocular Messier; Caldwell Club; Comet Club; Constellation Hunter Club; Deep Sky Binocular; Double Star Club; Globular Cluster Club; Herschel 400; Lunar Club; Lunar II Club; Master Observer Network; Messier Club; Meteor Club; Outreach Club; Planetary Nebula Club; Planetary Observers / Solar System Observers Club; Sky Puppy Club; Southern Sky; Binocular Club; Southern Sky Telescopic Club; Sunspotter Club; Universe Sampler Club; Urban Observing Club. **Total time needed 1 to 2 hrs.**

Members Astrophotography



This image was taken by Don Bryden at the Sierra Stars Observatory on Dec. 12th. The observatory's core instrument is a 0.61-meter (24-inch) F/10 Optical Mechanics Nighthawk CC06 telescope. The camera is a Finger Lakes Instrumentation ProLine camera. (Click on image for full view)

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) 728-0130 president@avastronomyclub.org

Vice-President:

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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 "hey" to Matt and Sue and run from Michael.

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

Astro-tom.com: Tom is dedicated to amateur astronomy. <http://www.astro-tom.com>

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

ActonAstro: Club Web space provided by <http://www.actonastro.com>

Al's Vacuum and Sewing

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