



# Desert Sky Observer

Volume 27 Issue 4

April 2007



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/](http://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

**April 13:** Club Meeting

**April 14:** Dark Sky Star Party @ [Terry's house](#)

**April 14:** New Moon Walk and Star Party @ [Prime Desert Woodlands](#)

**April 16:** Board Meeting @ [Terry's house](#)

**April 21:** Poppy Festival

**April 22:** Poppy Festival

\* 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 20<sup>th</sup> 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**

At last month's meeting it was made very clear to me that the Antelope Valley Astronomy Club does more in the community than most clubs. Our speaker, Luisa Rebull, made the comment that she could not believe how many events we had scheduled for the following month. This of course got me thinking... Does the Antelope Valley Astronomy Club do too much; are we in jeopardy of burning out our club members?

At the Executive Board meeting I posed this question to the board, "Are we doing too much?" The overwhelming answer, YES! So, the board came to the decision that OUR Club will only participate in two days of outside events per month. Events that we have already scheduled we will honor, but other than those we will only schedule two per month.

It is my hope and prayer that the members of the Antelope Valley Astronomy Club will tell me at any time if they feel that we need to make a change in the way we are doing things. If you wish to remain anonymous, leave a note for me, but please let me know somehow. This is YOUR CLUB; I want to see it run the way that you, the members wish it. We members of the AVAC, are here because we enjoy this hobby and enjoy being with others of like mind. Let us not lose sight of that. We are here to enjoy ourselves, let us not forget that!

*Terry*

***Vice President******Shane Barker***

This month we will be having our annual Astronomy Fair. The following are the stations and people that will be set up.

Jeremy Amarant will be doing a comet nature and example construction.

Dick Hague will be doing a pocket solar system demo.

Matt Leone will be doing a Moon crater demo.

Matt Leone & Larry Ochsner will be doing a mirror grinding demo.

Terry Pedroza & Tom Koonce will each have an outside scope with some aspects of remote control.

Jeff Reichmann will have a meteorite station with examples.

Bill & Jenny Riedhart will be doing Dobsonian telescope building

Each member will give a brief explanation of their station and go for questions.

There might be last minute booths so come and check it out.

***Shane Barker***

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

First I would like to thank all the club members who have been coming out for our public and school events. You all help make them a success! Our successful event at Wilsona Elementary School on 3/23 turned out a much larger crowd then expected! Thanks to Jeff, Dick, Terry, Duane, and Frank for their support!! Upcoming events for April and May are:

Saturday, April 14th New Moon Walk and Star Party with Jeremy at 8:00pm at Prime Desert Woodlands

Saturday and Sunday April 21 & 22, 9am to 6pm, Lancaster Poppy Festival. We need more volunteers for the Poppy Festival, so if you have even just a few hours to help out, please sign up!

Friday, May 4th at 10am, Mojave Student Rocket Launch at Mojave Airport.

Saturday May 5th at 8:00pm, Full Moon Walk and Public Star Party at Prime Desert Woodlands.

Saturday, May 12<sup>th</sup> 6:30 PM Red Rock Canyon, Club Star Party.

Friday, May 18th starting at 8am Branch Elementary School Science Fair.

We need your help and smiling faces to make these a success, so please sign up at a club meeting or contact me!

Clear Skies!

***Rose M.***

## ***Committee Reports***

### ***Tom Koonce***

#### **Committee Reports:**

##### **Messier Marathon**

Tom spoke about Star Party etiquette and other rules for the upcoming event and passed out handouts for the upcoming Messier Marathon on Saturday, March 17, 2007. The location will be Saddleback Butte State Park Group Campsite. It will go from 5:00 pm through 5:00 am (weather permitting)

##### **Youth Exploring Astronomy Essay Contest (YEA)**

**Debora Pedroza – No report**

##### **Jeff Reichmann**

- On May 4, the Mojave Space Port will be hosting a model rocket day from 10:00 am – 12:00 pm. They've asked if the AVAC will set up solar telescopes and a display.
- June 1 - XCOR has invited the AVAC for a hangar tour and to see a test firing of a ultra-small rocket motor. Members will receive more info if they sign up on a sheet provided at each meeting.

##### **Lunar Observation Group**

Matt Leone announced that the first meeting of the Lunar Group will be March 25, at 7:00 pm, at Terry Pedroza's house at Avenue D and 90<sup>th</sup> W.

##### **Club Librarian**

Karole Barker announced that the Club's laptop is up and running. It's available to check out any item from the Club's library.

##### **Presentation: 7:35 pm**

**Guest Speaker: Dr. Louisa Rebull**, CalTech, speaking on the Spitzer Space Telescope and planetary formation. Dr. Rebull handed out pictures taken by the Spitzer Space Telescope as well as a DVD and posters about its contributions to Infrared Astronomy. A copy of Dr. Rebull's presentation can be found at: <http://spider.ipac.caltech.edu/staff/rebull>



## Early Bird Gets the Worm

or “Black Hole Breakfast”

by Dr. Tony Phillips

We all know that birds eat worms. Every day, millions of birds eat millions of worms. It’s going on all around you! But how often have you awakened in the morning, stalked out in the dewy grass, and actually seen a bird having breakfast? Even though we know it happens all the time, a bird gulping a worm is a rare sight.

Just like a black hole gulping a star...

Every day in the Universe, millions of stars fall into millions of black holes. And that’s bad news for the stars. Black holes exert terrible tides, and stars that come too close are literally ripped apart as they fall into the gullet of the monster. A long burp of X-rays and ultraviolet radiation signals the meal for all to see.

Yet astronomers rarely catch a black hole in the act. “It’s like the problem of the bird and the worm,” says astronomer Christopher Martin of Caltech. “You have to be in the right place at the right time, looking in the right direction *and* paying attention.”

A great place to look is deep in the cores of galaxies. Most galaxies have massive black holes sitting in their pinwheel centers, with dense swarms of stars all around. An occasional meal is inevitable.

A group of astronomers led by Suvi Gezari of Caltech recently surveyed more than 10,000 galactic cores—and they caught one! In a distant, unnamed elliptical galaxy, a star fell into a central black hole and “burped” a blast of ultraviolet radiation.

“We detected the blast using the Galaxy Evolution Explorer (GALEX), an ultraviolet space telescope,” explains Gezari. Her team reported the observation in the December 2006 issue of *The Astrophysical Journal Letters*. “Other telescopes have seen black holes devouring stars before,” she adds, “but this is the first time we have been able to watch the process from beginning to end.”

The meal began about two years ago. After the initial blast, radiation diminished as the black hole slowly consumed the star. GALEX has monitored the process throughout. Additional data from the Chandra X-ray Observatory, the Canada-France-Hawaii Telescope and the Keck Telescope in Hawaii helped Gezari’s team chronicle the event in multiple wavelengths

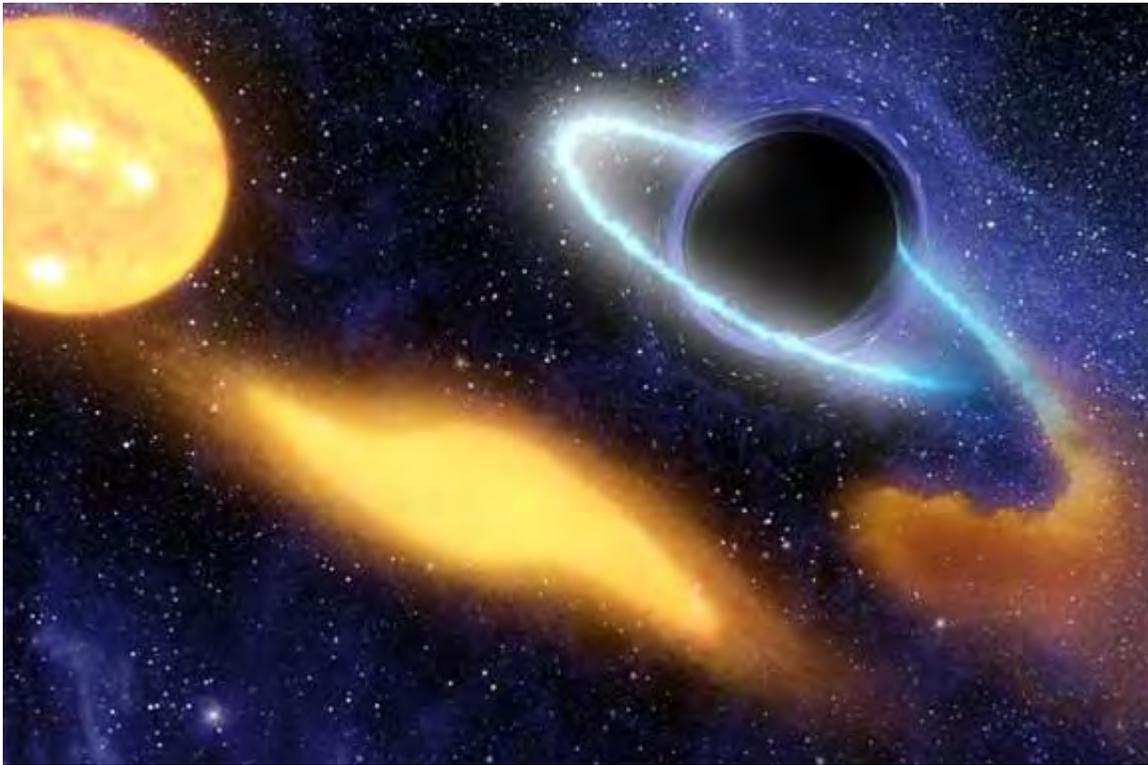
Studying the process in its entirety “helps us understand how black holes feed and grow in their host galaxies,” notes Martin.

One down, millions to go.

"Now that we know we can observe these events with ultraviolet light," says Gezari, "we've got a new tool for finding more."

For more on this and other findings of GALEX, see [www.galex.caltech.edu](http://www.galex.caltech.edu). For help explaining black holes to kids, visit The Space Place at [spaceplace.nasa.gov](http://spaceplace.nasa.gov).

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



*In this artist's concept, a giant black hole is caught devouring a star that ventured too close.*

### ***Did you know ? ? ?***

A black hole has such intense gravity that not even light can escape it, and hence the name. However, the material surrounding a black hole becomes extremely hot and very bright as it orbits the hole. This rapidly spinning disk releases energy, which can be 10 to several hundred times the energy released in thermonuclear fusion.

## *News and Headlines*

### **Red planet heating up**

Earth's dusty neighbor Mars is grappling with its own form of climate change as fluctuating solar radiation is kicking up dust and winds that may be melting the planet's southern polar ice cap, scientists said Wednesday.

<http://www.cnn.com/2007/TECH/space/04/04/mars.climate.reut/index.html>

### **ESA Prepares for a Human Mission to Mars**

Starting in spring next year, a crew of six will be sent on a 500 day simulated mission to Mars. In reality the crew will remain in a special isolation facility in Russia. To investigate the psychological and medical aspects of a long-duration mission, such as to Mars, ESA is looking for experiment proposals for research to be carried out during their stay.

<http://www.spaceref.com/news/viewpr.html?pid=22275>

### **Spirit Studies Rocks in Vicinity Of Home Plate**

Spirit remains healthy and spent much of the week studying a new rock target on "Mitcheltree Ridge" called "Torquas." Scientists are trying to understand what relationship Mitcheltree Ridge has to "Home Plate" -- for example, whether it is an extension of Home Plate or an entirely different rock layer, and whether it has similar composition or morphology.

[http://www.marsdaily.com/reports/Spirit\\_Studies\\_Rocks\\_in\\_Vicinity\\_Of\\_Home\\_Plate\\_999.html](http://www.marsdaily.com/reports/Spirit_Studies_Rocks_in_Vicinity_Of_Home_Plate_999.html)

### **Cassini Images Bizarre Hexagon On Saturn**

An odd, six-sided, honeycomb-shaped feature circling the entire north pole of Saturn has captured the interest of scientists with NASA's Cassini mission. NASA's Voyager 1 and 2 spacecraft imaged the feature over two decades ago. The fact that it has appeared in Cassini images indicates that it is a long-lived feature.

[http://www.saturndaily.com/reports/Cassini\\_Images\\_Bizarre\\_Hexagon\\_On\\_Saturn\\_999.html](http://www.saturndaily.com/reports/Cassini_Images_Bizarre_Hexagon_On_Saturn_999.html)

### **Space Station Astronaut Ready for Boston Marathon**

NASA astronaut Sunita Williams is ready to run the Boston Marathon, though her trek aboard the International Space Station will carry farther than most runners.

Williams, an ISS Expedition 14 flight engineer, has spent months aboard the orbital laboratory training for the April 16 race, despite the fact that she and her two crewmates routinely cover its 26.2-mile (42-kilometer) course in seconds as they orbit the Earth at some 17,500 miles (28,163 kilometers) per hour.

[http://www.space.com/missionlaunches/070404\\_exp15\\_williams\\_marathon.html](http://www.space.com/missionlaunches/070404_exp15_williams_marathon.html)

### **FBI Recovers Astronaut's Missing Medal**

A Presidential Medal of Freedom that was prepared for award to Apollo 13 astronaut Captain James Lovell, Jr., and which was missing since 1970, was recently recovered by the Federal Bureau of Investigation (FBI), the bureau's Chicago office announced on Tuesday.

[http://www.space.com/news/cs\\_070404\\_lovell\\_medal.html](http://www.space.com/news/cs_070404_lovell_medal.html)

### **101 Amazing Earth Facts**

We live on a sphere of extremes and oddities. In fact it's not really a sphere, but it is a wild planet, mottled with deadly volcanoes, rattled by killer earthquakes, drenched in disastrous deluges. But do you know which were the worst?

[http://www.space.com/scienceastronomy/101\\_earth\\_facts\\_030722-1.html](http://www.space.com/scienceastronomy/101_earth_facts_030722-1.html)

**Upcoming Calendar**

<b>Date</b>	<b>Day of the Week</b>	<b>Event</b>
April 5	Saturday	Support Jeremy Amarant's "New Moon Walk" at Prime Desert Woodlands at 7:00 pm.
April 13	Friday	Club Meeting, SAGE Planetarium, 7:00 pm, Annual "A Fair of the Stars"
April 16	Monday	Executive Board Meeting at Terry Pedroza's house. 6:30 pm
May 4	Friday	Rocket Launch Day, 10:00 am – 12:00 pm, Mojave Airport, Solar observing telescopes needed.
May 11	Friday	Club Meeting, SAGE Planetarium, 7:00 pm, Dr. Gary Peterson, San Diego State University, Planetary Geologist, will speak on "Triton."
May 12	Saturday	Red Rock Canyon star party, 6:30 pm.
May 14	Monday	Executive Board Meeting at Terry Pedroza's house. 6:30 pm
May 18	Friday	Branch Elementary School Science Fair. The school is located off of Forbes Ave. on base.
May 25-27	Friday-Sunday	Riverside Telescope Makers Conference and Astronomical Expo (RTMC), 12:00 Noon Friday through Sunday evening, Big Bear, CA. the AVAC is a sponsor of the event.
June 1	Friday	AVAC visit to XCOR. Friday, June 1 at 7:00 pm. AVAC will conduct a star party after the test firing of a rocket engine at the facility.
July 7	Friday	Mt. Wilson Trip. Reservations required.

**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](mailto:president@avastronomyclub.org)

**Vice-President:**

Shane Barker (661) 940-3312 [vice-president@avastronomyclub.org](mailto:vice-president@avastronomyclub.org)

**Secretary:**

Tom Koonce (661) 943-8200 [secretary@avastronomyclub.org](mailto:secretary@avastronomyclub.org)

**Treasurer:**

David Abrass [treasurer@avastronomyclub.org](mailto:treasurer@avastronomyclub.org)

**Director of Community Development:**

Rose Moore (661) 822-4580 [community@avastronomyclub.org](mailto:community@avastronomyclub.org)

**Newsletter Editor:**

Errol Van Horne (661) 273-7646 [newsletter@avastronomyclub.org](mailto:newsletter@avastronomyclub.org)

**Equipment & Library:**

Karol Barker (661) 940-3312 [library@avastronomyclub.org](mailto:library@avastronomyclub.org)

**Club Historian:**

Tom Koonce (661) 943-8200 [history@avastronomyclub.org](mailto:history@avastronomyclub.org)

**Webmaster:**

Steve Trotta (661) 269-5428 [webmaster@avastronomyclub.org](mailto:webmaster@avastronomyclub.org)

**Astronomical League Coordinator:**

Steve Trotta (661) 269-5428 [al@avastronomyclub.org](mailto:al@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!**

**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](http://www.telescopes.net)

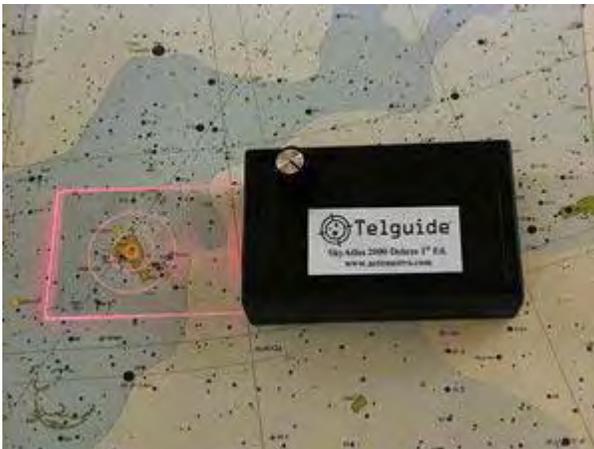
**Astro-tom.com:** Tom is dedicated to amateur astronomy. <http://www.astro-tom.com>

**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*

### WOODLAND HILLS Camera



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>