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# 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 is a California non-profit Corporation  
Visit the Antelope Valley Astronomy Club website At [www.avac.av.org](http://www.avac.av.org)  
The A.V.A.C. is a Sustaining Member of The Astronomical League*



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## Up-Coming Events

**October 2:** First Quarter Moon

**October 10:** Full Moon

**October 10:** Monthly Club Meeting\*

**October 11-12:** Palmdale Fall Festival

**October 18:** Last Quarter Moon

**October 25:** New Moon

**October 25:** Star Party, [Kings Canyon](#) (The Club's observing site)

**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 20<sup>th</sup> 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.

## ***In Memory of Holland***

Holland Fountain left us all behind on Wednesday, September 24<sup>th</sup>. His battle with cancer was brief, but his warm heart, gigantic smile and that hearty laugh will long remain in our hearts and memories. Club meetings and star parties will be less entertaining without Holland, always dressed in shorts no matter the temperature. To say that he will be missed by our club is a terrible understatement. Please remember his wife, Joyce, in your prayers.

## **President's Report**

*Terry Pedroza*

Well, it's that time of year again! Time to vote for your new Executive Board. Please, don't miss this meeting. We need everyone to vote, as every vote counts.

Each membership receives one vote; your family membership gets one vote, not one for each member of your family. Mike Leone didn't like the way his family was going to vote last year, so he joined with his own membership so he could have his own vote. Way to go Mike! Deb and I have our own memberships so that we may vote separate and both hold an office on the Executive Board. I hope this clears up any confusion that might arise concerning the voting.

This year we are not voting on any amendments to our constitution, so the meeting should not run as long as in previous years. With this in mind, we have arranged for a speaker- Bob Redman- to give a presentation after the business meeting, just as we do for the other meetings throughout the year. This should be a very good presentation, so please plan to attend. See you all at the meeting!

**Vice President's Report***Tom Koonce*

I would like to thank Deborah Pedroza, who will be taking over teaching the Introductory and Intermediate Astronomy classes that are given prior to club meetings. Deborah will be starting in October. The Intro class is required for any member if they'd like to check out club equipment, including club telescopes. Deborah brings her tremendous people skills and amateur astronomical knowledge to the front of the class. We are lucky to have her!

Thank you also to Club President Terry Pedroza, Youth Group Chairman Doug Drake, SAGE Planetarium Director Jeremy Amarant, Messier Group Chairman Matt Leone, and astrophotographer Tom Varden for their participation in the September Club Meeting Q&A Session. These members are extremely knowledgeable amateur astronomers and their time was appreciated by all members in attendance.

The Mars Star Party at the Poppy Reserve was an overwhelming success. At least 30 members' telescopes and several members' binoculars were set up for the general public—primarily to view Mars, but many other deep sky objects were shown, as well. The south polar cap was clearly visible, and despite an occasional moderate breeze, surface features were visible to the patient observer. Club members answered numerous questions about our universe from 800 people who drove out for a look during Mars' closest approach in over 50,000 years. Our club also helped people set up visitors' telescopes and explain their operation to their owners. We had a whole bunch of fun! See you at the next Star Party.

**Dir. of Community Development***Debora Pedroza***WHAT:** The Palmdale Fall Festival**WHEN:** Saturday, October 11 (9am-8pm)  
Sunday, October 12 (10am-5pm)**WHERE:** McAdam Park  
38115 30th St. East, Palmdale**WHO:** YOU!**HOW:** Working preferred shift(s) doing job tasks of your choice. Tasks include selling opportunity drawing tickets, giving out club information, manning a telescope equipped for solar viewing and operating the very popular sunspotter.**WHY:** Because we love astronomy and we will not rest until EVERY interested person is introduced to the wonders of our club! We have had fabulous success in the past doing the Fall Festival because our club members have been so generous with their time and enthusiasm. I know that we will continue our trend in making a difference in our community. You can volunteer by sending me an e-mail or calling me personally so that we can set up the times you would like to help.

Thank you in advance and take good care.

## Doug Drake's *Planet Watch*



### Saturn

Saturn can be observed after midnight near Pollux and Castor, the Gemini twins, which are just east of Orion. This year Saturn's rings will start showing a little less face-on because the rings passed through full face last year. We will be able to watch the rings, in succeeding years to come, as the rings become edge-on. I have seen, sometimes, that you lose sight of the rings altogether when the rings become edge-on. Keep watching Saturn's rings each year and see this phenomenon occurring.

### Jupiter

Jupiter can be seen vividly in the morning eastern sky before sunrise. Look for the crescent moon to pass Jupiter on the morning of Wednesday, October 22nd.

### Uranus and Neptune

Uranus and Neptune can still be seen. Look for them in Capricornus. Note that ruddy Mars will be just east of Capricornus. Uranus should show a small green-blue disc with a magnification power of 200x or more. If you can't get your telescope up to 200x then try to get as close as you can. Uranus is just north of iota Aquarii; look for the green-blue color. Neptune is harder to see because it is observed very small right now. Look for the blue dot just west of theta Capricorni.

### Mars

Mars is still here with us for good observing. You must be patient, though, because our night sky will blur and distort the image. It's not your telescope, rather the night sky which causes your observation disappointment. Try to pick between one and two hours after sunset when the sky usually settles down during this brief period. This is why most observatories are located on tops of mountains- to get up and out of the atmospheric sky blur and to a darker sky location. A No. 21 Orange or No. 25 Red filter helps filter out sky distortion.

Ask me if you have questions about planetary viewing. Happy viewing.



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## The Final Messier

by Sarah Prestel

I have finally finished the Messier qualifications to receive the certificate and pin for my completion of finding all 110 Messier objects. It took me a year to locate all of the 110. But what took the longest was the final 19, and especially that last one which I had to track down and pinpoint to complete my expedition.

It was a beautiful night up at Mt. Pinos when 18 of my last 19 objects were found. I was so excited and bummed all at the same time. One more! One more object to be found, but it was behind the trees when I went looking for it that night. I begged my dad to take me out again the next night so I could locate my only remaining item, M95. So, supporting me and eager for me to find my last Messier, he took me out to the Poppy Fields.

That night was a bright night with the moon beams overflowing the sky. I wasn't so sure I would be able to see this galaxy. Every time I went looking for it I could not see it, even though I knew where it was, located in the bottom of Leo. With the moon shining intensely, I could not find it. I asked my dad if he could find it, and he, too, had no luck. Until, not giving up but surely my hope was fading, I looked into the eyepiece and to my astonishment and surprise, there it was, M95 - the galaxy!!! I stood there in disbelief. How could all this time go by and I not see it? I looked and looked but could not find, in anticipation of, this faint, little, puff ball galaxy in a vast and limitless sky when all I had to do was let my dad play with the scope to find it. I shouted out with glee, "I found it! I found it!" It was right there in the bottom of the eyepiece's field of view just waiting for me to catch sight of it. All this time it was mocking me and now being caught. Now I can say I found all 110 Messier objects.

After celebrating with a hug, my dad and I packed up and headed off to tell the whole world- well, my Mom (and neighbors who couldn't help to hear my scream), that I had at last found my final Messier! Looking back at my accomplishment, I kind of miss all that intense hunting of galaxies, nebulas, and clusters. It makes me want to discover more of what's out there. I had the time of my life searching for things I never knew existed, never knew could be seen through a little telescope. Now, a new challenge awaits.

Thanks to my dad, mom, and Sam for all their support and long nights to help me finish!

**Did you know?**                      ?

The rotation of the sun is approximately 25 days at the equator and 30 days at the poles.

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## **(un)Fasten Your Seatbelts**

by Patrick Barry and Dr. Tony Phillips

The "fasten seatbelts" light turns off, and you get up to ask the stewardess for a pillow. It's going to be a long flight. Only a kilometer ahead in the cloudless sky, a downward draft of sheering winds looms. When the plane hits these winds, the "turbulence" will shake the cabin violently and you could be seriously hurt.

You don't know about those winds, of course, and neither does the pilot. Today's weather satellites can't see winds in clear skies. They rely on the motions of clouds to infer which way the winds are blowing.

"Believe it or not, their best indication of wind sheer right now is warnings from aircraft that have gone through it ahead of them," says Bill Smith of NASA's Langley Research Center.

But a new satellite technology being pioneered by NASA and NOAA could improve this shaky situation. It's called GIFTS, short for "Geosynchronous Imaging Fourier Transform Spectrometer." GIFTS is an infrared sensor that can detect winds in cloudless skies by watching the motions of atmospheric water vapor. Water vapor is mostly invisible to the human eye, but it reveals itself to GIFTS by the infrared radiation it absorbs

Smith is the lead scientist for EO-3, a satellite designed to test out this new technology. Slated for launch in 2005 or 2006, EO-3 will carry GIFTS to Earth's orbit, where it can produce three-dimensional movies of winds in the atmosphere below.

These wind data will not only improve safety, but also help the airlines save money. Knowing the winds along a flight route allows airlines to adjust the plane's fuel load accordingly, thus reducing the weight that the engines must lift. Saved fuel means saved money and less pollution.

GIFTS can help planes avoid another potentially lethal problem, too: Ice forming on their wings. If a cloud contains "supercooled" water droplets whose temperature are below freezing, those droplets will form ice on the wings of planes that pass through it. By looking at about 1,700 different frequencies of the light coming from clouds, GIFTS can measure the temperature of the cloud top and determine whether it contains water droplets that could cause aircraft icing. With information from GIFTS in hand, pilots can simply avoid clouds that appear dangerous.

Once EO-3 demonstrates the accuracy of GIFTS, airlines will be able to capitalize on this potential to make flying a cheaper and safer experience.

Learn more about the GIFTS instrument and other advanced technologies being tested on the EO-3 mission at <http://nmp.jpl.nasa.gov/eo3>.

Kids can go to The Space Place to play a data compression game related to EO-3 at [http://spaceplace.nasa.gov/eo3\\_compression.htm](http://spaceplace.nasa.gov/eo3_compression.htm).

*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.noexitrecords.com/zerobox/astro.htm>

(Tom Varden's website)

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

(Steve Trotta's website)

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

(Tom Koonce's website)

<http://mars.jpl.nasa.gov/>

(everything Mars exploration)

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

(Getting started in Astronomy ...)

<http://www.astroleague.org/>

(The Astronomical League's homepage)

<http://www.jpl.nasa.gov/>

(JPL's website)

<http://astronomy-mall.com/>

(Astronomy Mall on the Web)

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

(Weather not covered on the Weather Channel)

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

(Hey, that's us! So hop to it!)

**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](mailto:res1atuo@verizon.net)

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**Club Librarian**

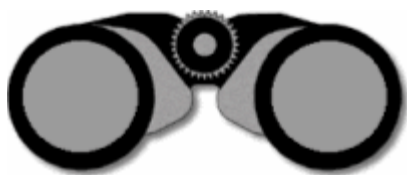
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**Webmaster of Club Site**

Steve Trotta (661) 269-5428 [sstrott@prodigy.net](mailto:sstrott@prodigy.net)

***A Look Ahead...*****November Calendar**

November 14: Club Meeting

November 22: Dark Sky Party

**December Calendar**

December 12: Annual Christmas Party

**Our Sponsors**

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

**Darkrooms Plus:** 20th St. W. near Pep Boys in Lancaster. (661) 945-1444. They offer all club members a 10% discount on all purchases. Stop by and say “hey” to Cathy or Hank.

**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](http://www.telescopes.net) Please welcome our newest sponsor.

***Thanks for your generous support!***