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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, 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 Darksky Association*



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## Up-Coming Events

**June 3:** Full Moon

**June 8:** New Members Class

**June 9:** Last Quarter Moon

**June 11:** Monthly Club Meeting\*

**June 17:** New Moon

**June 19:** Star Party, [Poppy Reserve](#)

**June 25:** First Quarter Moon

\* Monthly meetings are 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.

## President's Report

*Terry Babineaux*

The AVAC gave a presentation on comets last month at Redrock Canyon State Park. After the talk, we got a pretty good look at Comet NEAT (C/2001 Q4) using equipment generously provided by club members (unfortunately, the wind kicked up a little later, pretty much ruining what otherwise might have been a decent star party). During the course of the evening, I was approached by several people seeking information about our club. One in particular was very interested in joining. He told me that he had attended meetings of the group in Ventura along with ours. He found the Ventura group to be somewhat stodgy and was far more impressed with our approach.

To me, this is a very good sign. It says that our efforts in creating a friendly, open environment for the astronomy enthusiast are succeeding. Your Board representatives continually strive to make themselves available and hope no one will hesitate in approaching any of us with any questions or concerns.

But in order to grow, we can never sit still. I would encourage all of our members to talk up our club at every opportunity. The more people we can bring in, the more diverse and interesting our collective experience will be. The Board of Directors has had an active discussion going all year regarding proposals for a Board of Trustees and long term plans. Some of these long term goals involve creating a permanent observing site for our club, along with obtaining world-class equipment such as an H-Alpha scope for viewing of solar prominences. We've also discussed how our club should be perceived in the professional and education communities.

These things cannot be accomplished within a vacuum. The more people we have willing to invest a little sweat equity, the more quickly our goals can be honed and then met. Every individual

brings something to the table. Collectively, there is great wealth of experience in our group along with no lack of generosity in sharing that wealth.

Toward this end, our presentation this month will be "Ask the Experts." Club members accomplished in various disciplines of amateur astronomy will take the hot seat from which they will field questions and express their opinions. These presentations have been known to get somewhat heated and are always a lot of fun.

Hope to see everyone there.

### **Vice President's Report**

*Doug Drake*

I hope you were able to take time out to see comets NEAT and LINEAR last month. Comet watching can be very exciting, especially when you haven't had the opportunity to observe a comet before. This was the case with my lovely wife, Wendylee. She had seen pictures and heard about comets, as most of you have, but she had never seen one with her own eyes. We waited until an hour to an hour-and-a-half after sunset and spotted comet NEAT with our binoculars. We zeroed-in with our 90 mm short-tube refractor and a wide-view eyepiece. Boy, was it neat observing NEAT (huh, what did I say?).

Observing comets are neat even if the comet is not named NEAT. We observed the bright center (nucleus), the comma (surrounding ball of vapor) and the tail (caused by the solar light and wind pushing the vapor gas and particles away from the comet).

Exciting news for this month: you can still observe NEAT! When the sky is dark you should spot this comet just below the bowl of the Big Dipper with your binoculars. We all can find the Big Dipper and it shouldn't be very difficult, even for our beginners. You can also see comet LINEAR below Jupiter with your binoculars. This comet will swing around the Sun at a relatively close distance and may cause it to break up from the pull of the Sun's gravity, great solar light, and wind. If this does happen we will see LINEAR present a bright flare-up. Keep a watch and see if this happens.

For the June club meeting on June 11, we will have our annual "Ask the Experts." This has proven to be a success in the past, with experienced club members answering your astronomy and science questions. So please make sure you come to the June meeting loaded with questions... and direct the difficult ones to Matt Leone.

### **Dir. of Community Development**

*Michael Roberson*

We have had another fine month and look forward to even more to come. The open house at the Prime Desert Woodlands went well. Unfortunately, I could not be a part of it. I hate missing such opportunities to view the night sky with friends. This is one of the best things about having a club like ours: the open friendship and being able to share in great times of sky viewing.

We have coming up on the July calendar our club picnic, and I look forward to that. This is one of our biggest events of the year. Make plans to be there and enjoy all of the opportunities like the raffle, the drawings, camping and a great star party.

I hope you had a great time at the RTMC. I was not able to make this one either. Someday I will.

I hope to see everyone at our club meeting. We have had some great speakers come and share their knowledge with us and we should not take that for granted. So come with a smile, and be ready to learn something new.

## Doug Drake's *Planet Watch*



### Sun

Summer begins as the sun sets on June 20th. The sun passes through the summer solstice at this time and marks the beginning of summer in the northern hemisphere.

### Mercury

Take out your binoculars and observe Mercury just above Saturn between one half-hour to one hour after sunset on June 26th. You should be able to observe Mercury until the first week in July, but use your binoculars because Mercury will not be very bright.

### Venus

As most of you may know, Venus will cross between the sun and earth on June 8th, but we will not be able to observe this crossing from our North American location. It has been 122 years since Venus crossed between the sun and earth, but this type of crossing always occurs in eight-year pairs, which means that the next crossing will occur June 6th, 2012, and maybe we will be able to observe the 2012 crossing (?). After this second crossing it will be 105 years before the next occurrence. After Venus crosses the sun, the lady Venus becomes our beautiful morning star and we will begin to observe her 30 minutes before sunrise in the east. Look for her after June 15th.

### Saturn

Last chance to see Saturn this year. Saturn is slowly descending into the western horizon just after sunset. Look for Saturn the first part of this month because Saturn will move into the sun's twilight by June 19th. Flash: next month, July 1st, the Cassini spacecraft arrives at Saturn after a seven year trip and will begin orbiting observations.

### Jupiter

Jupiter becomes the new evening star in the west, just after sunset, as Venus becomes the new morning star. Jupiter will disappear into the western horizon at the end of August, so you have a couple of months left to observe Jupiter and its moons before it's gone.



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### News from the Astronomical League

We are proud to announce that **Suzanne Leone** has completed the observation of all 110 Messier objects and has been submitted to the Astronomical League for her Honorary Messier Pin. We are proud of the entire family- all four have now completed this milestone. Congratulations Suzanne and the Leone family!

### **Astrophoto of the Month:**



M83, four minute exposure, Lake Elizabeth CA.  
by Club President Terry Babineaux

Submit your "Astrophoto of the Month" to the following address by the 20<sup>th</sup> of each month:  
[newsletter@avastronomyclub.org](mailto:newsletter@avastronomyclub.org)



## Far-out Ideas

by Patrick L. Barry

Ever had a great idea for a new spacecraft propulsion system, or for a new kind of Mars rover? Have you ever wondered how such "dinner napkin sketches" evolve into real hardware flying real missions out in the cold blackness of space?

The road to reality for each idea is a unique story, but NASA has defined some common steps and stages that all fledgling space technologies must go through as they're nursed from infancy to ignition and liftoff.

Suppose, for example, that you've thought of a new way to shield astronauts from harmful radiation during long space missions. In the first stage, you would simply "flesh out" the idea: Write it down, check the physics, and do some quick experiments to test your assumptions.

If the idea still looks good, the next step is to build a "proof of concept." This is the "science fair project" stage, where you put together a nifty demonstration on a low budget- just to show that the idea can work.

For your radiation-shielding idea, for example, you might show how a Geiger counter inside a miniature mock-up doesn't start clicking when some radioactive cobalt-60 is held nearby. The shielding really works!

Once that hurdle is cleared, development shifts into a higher gear. In this stage, explains Dr. Christopher Stevens of JPL, the challenge isn't just making it work, but making it work in space.

"Some conditions of space flight cannot be adequately simulated here on Earth," Stevens says. Cobalt-60 doesn't truly mimic the diverse mixture of radiation in space, for example, and the true microgravity of orbit is needed to test some technologies, such as the delicate unfolding of a vast, gossamer solar sail. Other technologies, such as artificial intelligence control systems, must be flight tested just because they're so radically new that mission commanders won't trust them based solely on lab tests.

Stevens is the manager of NASA's New Millennium Program (NMP), which does this sort of testing- sending things to space and seeing if they work. In recent years, the NMP has tested ion engines and autonomous navigation on the Deep Space 1 spacecraft, a new "hyperspectral" imager on the Earth Observing 1 satellite, and dozens of other "high risk" technologies.

Thanks to the NMP, lots of dinner napkin sketches have become real, and they're heading for space. You can learn more at the NMP website, <http://nmp.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.*



### *Member of the Month*

This month's featured member is Mindy Peterson. Here's an excerpt of her astronomical fervor. For more of her interview, go to <http://www.avastronomyclub.org/focus.htm>:

**Question:** What is your earliest memory of an interest in astronomy?

**Mindy:** A class in high school.

**Q:** Who was the first person to interest you in astronomy?

**Mindy:** That same high school teacher.

**Q:** What was the first thing you remember really looking up and seeing?

**Mindy:** By naked eye - the Big Dipper. By telescope - A Messier object at a star party behind King's Photo (maybe M4).

**Q:** Describe your first telescope? How old were you? Was it a gift or a purchase?

**Mindy:** C-8; 2002; purchased from (club member) Errol Van Horne.



The *Telguide*.

Our own Steve Trotta has invented the Telguide to aid you in your galactic hunts. To purchase a Telguide, [click here](#).

### \* \* NOTICE \* \*

If you are interested in becoming the new International Dark Skies Association liaison for the AVAC, now is the time. If you do not want to take the job on, you can still help by e-mailing the Country of Los Angeles Department of Regional Planning. Please contact Terry Babineaux for more details.

## ***Did you know?***      ?

The space probe Voyager is now over 90 AU from the sun, the most distant manmade object in the universe.

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### ***Astronomy Links on the Web***

<http://www.astropaws.com>

(Terry Babineaux's astrophotos)

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

(Steve Trotta's website)

<http://www.noexitrecords.com/zerobox/astro.htm>

(Tom Varden's website)

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

(Tom Koonce's website)

<http://www.physics.sfasu.edu/astro/jupiter.html>

(Jupiter events)

[http://skyandtelescope.com/observing/objects/planets/article\\_304\\_1.asp](http://skyandtelescope.com/observing/objects/planets/article_304_1.asp)

(Check out Saturn before it's too late)

[www.avastronomyclub.org/](http://www.avastronomyclub.org/)

(us desert astronomy folks)

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### ***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 Babineaux (661) 724-1248 [president@avastronomyclub.org](mailto:president@avastronomyclub.org)

**Vice-President:** Doug Drake (661) 724-0849 [vice-president@avastronomyclub.org](mailto:vice-president@avastronomyclub.org)

**Secretary:** Larry Ochsner (661) 274-9006 [secretary@avastronomyclub.org](mailto:secretary@avastronomyclub.org)

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**Director of Community Development:**

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Brian Peterson (661) 273-1693 [newsletter@avastronomyclub.org](mailto:newsletter@avastronomyclub.org)

**Club Librarian:**

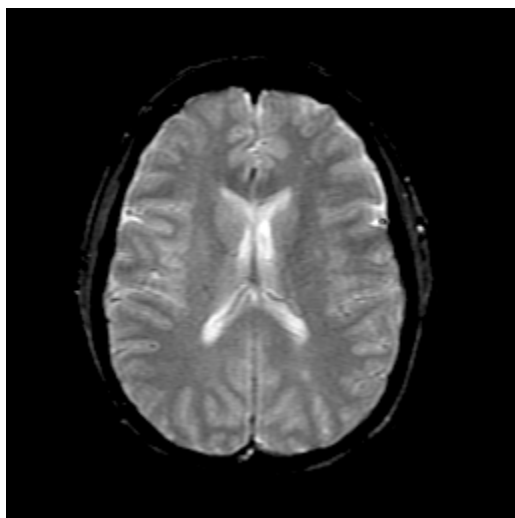
Herb Boyd (661) 274-8418 [library@avastronomyclub.org](mailto:library@avastronomyclub.org)

**Astronomical League & Club Historian:**

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**Webmaster of Club Site:**

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



**From the (way-too crowded) brain of Tom Koonce:**

In the spirit of my last month's "Cloudy Night Contest," the person to e-mail me ([takoonce@aol.com](mailto:takoonce@aol.com)) with the best mini-essay of 250 words or less on the subject of "Historically, Why Was a Solar Transit of Venus So Important?" will win a prize at the next month's meeting. An involved subject like this deserves a nice prize, don't you think? It will be. The paragraph must be received **on or before 9:00 pm on June 8, 2004**. Entries received after that time will be entered in the next contest, 122 years from now. The mini-essays will be judged by three distinguished panel members for technical content, grammar, and unique perspective. Good Luck!



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The Desert Sky Observer is always looking for ideas to improve. Send your ideas to Brian Peterson at [newsletter@avastronomyclub.org](mailto:newsletter@avastronomyclub.org) for consideration. If you find a mistake in the DSO, please click on the link here: <http://www.mythologic.net/end>

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## Getting Started in Astronomy

by Tom Koonce

The hobby of Astronomy is fun and awe-inspiring. It is fascinating to gaze up into the night sky and recognize the constellations, and which planets are visible. The beauty of the night sky is there for anyone who wants to explore it. But how do you get started?

"Getting Started" in amateur astronomy describes many of the concepts and physics the amateur astronomer needs when they first start out. All of the essentials are covered.

Stop by the next meeting of your local astronomy club. You'll meet many amateur astronomers who share your curiosity of the night sky. There's nothing like a chance to ask your questions of other amateurs.

The easiest way to start out in astronomy is with a clear evening and by using your eyes. No telescope is required. Go out in the evening with a small light and a copy of your favorite astronomy magazine turned to the section identifying the constellations. With a little patience, you will soon be picking your way through the patterns of stars in the night sky. With a little practice over several evenings, you will be able to quickly find your way among the stars, and probably know the names of a few of them.

After this, it's time to borrow a pair of binoculars. What a difference even a little magnification can make! It can be overwhelming to see so much detail. Here's a tip if you get 'lost' - just take your view away from the binoculars and use your eyes like you did when you started out, and then use the binoculars once more. Many amateurs prefer the view through binoculars and use them exclusively. You may want to read [Astronomy Magazine](#) or [Sky & Telescope Magazine](#). Both are great sources of information and can guide your learning. Read the page called [Astronomy Essentials](#). Make sure that these concepts are like second nature to you.

If you have decided at this point that a telescope is in your future, it's definitely time to ask the opinion of experts. Come to an [AVAC meeting](#), stop by and talk with the great people at King Photo, or look up the subject on the websites listed on the [Buying Telescopes](#) page BEFORE you buy. If you get the wrong telescope for what you want to do with it, you will be unhappy each and every time you go out. Talking with an expert first can really make the difference.

If you already have a telescope, it may need a 'tune-up.' If you have a [reflecting telescope](#) (mirrors) the optics have to be aligned precisely and often for good views of the sky. It's easy to do and members of the AVAC will be glad to tell you how to do this. If you have a [refractor](#) (lenses) no alignment is usually necessary. Clear Skies!

(the preceding was stolen from Tom's website without his prior knowledge. Oh well, he won't care.)

## *A Look Ahead...*



### **July Calendar**

**July 9:** Club Meeting

**July 17:** Club Picnic and Star Party (members only)

**July 24:** Take us out to the ballgame - AVAC goes to the Jethawks

### **Our Sponsors**

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

**ONET:** 1529 E. Palmdale Blvd., Suite 200. (661) 538-2028. As an Internet provider, they are kind enough to provide us with a free website.

**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)

**Thank you to our sponsors for their generous support!**