
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
The A.V.A.C. is a Sustaining Member of The Astronomical League*

Up-Coming Events

November 8: Full Moon

November 14: Monthly Club Meeting*

November 16: Last Quarter Moon

November 23: New Moon

November 30: First 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 would like to thank all of those members who were a part of our annual Club business meeting and elections. Your votes did count and we now have a new Executive Board in place for 2004. The Board will do an excellent job, I am sure. After the elections, Captain Bob Redman gave a great talk on space flight that was well received by all.

"Thank you" to the outgoing Executive Board for your many tireless hours of service to the AVAC. You have helped to make this an even better club than it was, as the new Board shall again. You have all worked tirelessly to make all of our events a tribute to our club. I feel very lucky to have had the opportunity to work with you.

Our new board members for 2004 are Terry Babineaux, President; Doug Drake, Vice President; Larry Ochsner, Secretary; Tom Koonce, Treasurer; and Mike Roberson, Director of Community Development. Gentlemen, congratulations! I wish you all the best and if I may be of assistance at any time, please do not hesitate to ask.

It has been an honor for me to be your President, and I would like to thank all of the club members for their support. I am the one who got the better deal, though, as I have gotten to know all of you.

Deb will be telling you about the Holiday party and I hope that you can all attend. We are still accepting donations for the raffle and silent auctions if you would like to donate items. The Greenhouse Café has been an excellent host for our parties and I hope that you will be able to see for yourself, if you have not yet attended our year-end parties.

Vice President's Report*Tom Koonce*

This month you have the last chance of the year to view two of the most awe-inspiring deep sky objects. Both objects are located in the constellation of Cygnus, seen in the western sky about 40 degrees above the horizon at 10:00 pm. Both the North American Nebula (NGC 7000) and the Veil Nebula (NGC 6960 / NGC 6992), a supernova remnant from thousands of years ago, are the focus of a deep sky hunt this month.

The North American Nebula is a diffuse nebula 1600 light years away and has an apparent size of 3 x 2.3 degrees and an apparent visual magnitude of 4.0. It's best seen from DARK skies with binoculars. This nebula is big. The most common reason why amateurs cannot spot this nebula is that they are using too much magnification. 40X is right on the edge of being too much power. 10X to 15X is about right. If the contrast of your sky is not pretty good, you're going to have trouble spotting this. Try it from Mt. Pinos or the King's Canyon site.

One of my favorite nebulae is the Veil Nebula, which is made up of two parts: an East and West Veil. It's called the Veil because of the graceful wisps of hydrogen gas intertwined and flowing like a bridal veil. This nebula lies 2500 light years away but is really large. You'll have to have good, dark skies to get the full visual effect because most nebulae have very low surface contrast. Moderate power (75X – 100X) is useful on this nebula, and then 'walk' your telescope along each section's length to study the subtle details of this masterpiece.

Both of these nebulas can be seen more easily if you'll use a particular kind of eyepiece filter called an O-III (pronounced Oh-three), shorthand for a filter that lets through only the light from ionized oxygen. If you do not already have one of these astro-treasures, you'll want to borrow one for now. I'm sure that after using the filter you'll be convinced that you'll want to get one for your own eyepiece case. It will dramatically improve your views of nearly all nebulae.

Locations: (2000.0)

North American Nebula:	NGC 7000	RA 20h 58.887m, Dec 44	26.067'
Veil Nebula: West	NGC 6960	RA 20h 46.457m, Dec 30	41.495'
East	NGC 6992	RA 20h 56.113m, Dec 31	27.819'

Dir. of Community Development*Debora Pedroza*

Hello and welcome to my favorite time of year- the fall. Speaking of the fall, we did fantastic at the Palmdale Fall Festival this year. We recruited new members, made \$585.00 on our opportunity drawing and generated a lot of excitement with our telescopes and sun spotter. Many folks stopped by our booth to gawk at our photos and to just chat. It never fails to amaze me just how many people, young and old, are fascinated with our solar system.

Our members generously donated their time, knowledge and enthusiasm. One could hear the sharing of stories as laughter rang out throughout both days. The club had excellent volunteer turnout- enough so that many of us got out our wallets and did some shopping at the festival. I extend a very warm thank you to each and every one of you who came out and made such a difference.

You all deserve kudos, however special kudos go out to Mary Andrus and Milt Sawyer, who donated two large space books to be given away to the kids; to Ken Jones for his absolutely astounding ability to sell raffle tickets; and to Tina Eldredge and Rich Harper for filling in when needed. I am so proud to be a part of this club.

Here is a look at what lies ahead on our calendar for November:

The Lancaster Museum/Art Gallery will be offering a new exhibit from November 8th through January 11th, 2004. This show is entitled, "Cosmic Adventures- Space, Science, and Technology." The AV Astronomy Club will participate in various events spread throughout this time frame. On Saturday, November 8th, the museum is holding a reception from 12 pm.-4 pm. Our club will be one of the main attractions on that day. We will be offering solar viewing and a look at the lunar samples.

We have been told that we can promote our club on that day with displays, handouts and the like. This is the time that we can get out there and really share with the community. Please come on out and be a part of the festivities and the promotion. All ideas are welcome for drawings, props or promos. Please see any Board member or me if you have ideas. Thank you in advance for your support.

The club has been asked to come out to Eastside Elementary School on Thursday, November 13th, at 6:30 pm. Tom Koonce will be doing a presentation called "The Life of a Star" and the club will offer night viewing immediately afterward. We need volunteers to come out and help provide telescope viewing. Please call or e-mail me.

The club is currently accepting reservations for our annual Holiday party, which is scheduled for Friday, December 12th, at 6:00 pm. at the Greenhouse Café in Lancaster. The cost is \$20.00 per person, which includes the traditional Christmas dinner, beverages and dessert.

Recently, the club sent out a mass e-mail concerning the availability to order club hats and shirts. Please contact Terry or me if you need any details.

Whew! That is it for now. Enjoy our fall season and take good care.

Doug Drake's *Planet Watch*



Moon

On Saturday, November 8, look and see the Moon rising in eclipse mode, just after the Sun sets in the west. We will see the Moon coming up in the east just as it comes out of eclipse.

Mercury and Venus

Look for Mercury- after November 21 and into the first part of December- between 30 to 45 minutes after sunset in the southwest. Mercury will be very dim just above the horizon and under Venus, which is very bright. This is a time you can use your binoculars to scope out Venus and Mercury.

Mars

November is still a good month to observe Mars as Earth speeds away from Mars. When December arrives Mars will look small in our telescope, so use November as your last chance. You will notice that Mars has moved more to the east, left though the constellation Aquarius, which is just left of Capricornus.

Uranus and Neptune

November is still a good month to see Uranus and Neptune. Uranus is just north of iota Aquarii. Look for the green blue disc. Neptune is harder to see because it is observed very small. Look for the blue dot just west of theta Capricorni.

Jupiter and Saturn

Jupiter rises between 2:00 and 2:30 in the morning this month in Leo the Lion, but better observation will happen next month as it rises earlier in the evening. Saturn provides good observation, but only after 2:00 in the morning. Saturn's rings are one of the most magnificent outer space structures we can observe with our amateur telescopes.

If you are interested in observing planets, stop and talk to me at the Club meeting or at a star party. Happy observing.

Sky-Q Quiz

The questions for this quiz were developed by Sheldon Schafer of the Lakeview Museum and of the Greensboro Astronomy Club, NC. (Answers are found at the end of the DSO)

1. On which day(s) of the year is the Sun directly overhead from locations in the continental United States?
 - a. March 21 and September 23
 - b. June 21
 - c. every day
 - d. never

2. On which day(s) of the year does the Sun rise due east?
 - a. March 21 and September 23
 - b. June 21
 - c. every day
 - d. never

3. How does the Sun produce its energy?
 - a. by reflecting light from other stars
 - b. by chemically burning its fuels
 - c. by fusing hydrogen into helium
 - d. by explosive chemical reactions near its surface

4. If the Sun were the size of a quarter, and the rest of space sized accordingly, where would the nearest star be?
 - a. about 3 feet away
 - b. about 33 feet away
 - c. about 3,300 feet away
 - d. more than 60 miles away

5. What is the brightest star in the night sky at any time?
 - a. Sirius
 - b. the North Star
 - c. Orion
 - d. Venus

6. Of the stars we normally see in the night sky, how many are part of the Milky Way galaxy?
 - a. just the brightest
 - b. all of the faint stars
 - c. all those visible
 - d. none of those visible

7. About how many stars are in our galaxy?
- 200 billion
 - 200 thousand
 - 2 million
 - 2,000
8. Why does our Sun look so different from the stars seen at night?
- because it really is much larger than they are
 - because it is much closer than they are
 - it is altogether different from them
 - it is much hotter than they are
9. What is the difference between an astronomer and an astrologer?
- not very much; in the long run, both study the stars
 - an astronomer predicts the future; an astrologer studies the stars
 - an astronomer scientifically studies the universe; an astrologer casts horoscopes
 - an astronomer studies the galaxy; an astrologer studies the planets
10. Which planet has a surface and atmosphere most like the Earth?
- Mars
 - Venus
 - Jupiter
 - Mercury
11. Which is most like the Sun in terms of composition?
- Mars
 - Venus
 - Jupiter
 - Mercury
12. Which planets are known to have rings?
- only Saturn
 - Mars and Saturn
 - Jupiter, Saturn, Uranus, and Neptune
 - Venus
13. Which of these planets is the smallest? (Hint: some old encyclopedias are out of date on this one)
- Mercury
 - Jupiter
 - Saturn
 - Pluto

14. Which best describes a comet?
- a. a large, dirty snowball surrounded by a thin veil of gas and dust
 - b. a flaming ball of gas
 - c. a star streaking across the sky
 - d. a rock burning up in the atmosphere
15. When can the Moon be seen in the daytime?
- a. only right after sunset
 - b. never
 - c. only during an eclipse
 - d. nearly as often as it can be seen at night
16. Which best describes a "falling star"?
- a. a large dirty snowball
 - b. a flaming ball of gas
 - c. a star streaking across the sky near the Earth
 - d. a tiny rock vaporizing as it enters the Earth's atmosphere
17. What is the Moon's period of revolution around the Earth?
- a. 1 day
 - b. 1 week
 - c. 1 month
 - d. 1 year
18. What is the Earth's period of rotation?
- a. 1 day
 - b. 1 week
 - c. 1 month
 - d. 1 year
19. What is the order of planets based on their size, largest to smallest?
- a. Jupiter, Saturn, Uranus, Neptune, Mars, Venus, Earth, Pluto, Mercury
 - b. Jupiter, Saturn, Uranus, Neptune, Venus, Mars, Earth, Pluto, Mercury
 - c. Jupiter, Saturn, Uranus, Neptune, Pluto, Earth, Venus, Mars, Mercury
 - d. Jupiter, Saturn, Uranus, Neptune, Earth, Venus, Mars, Mercury, Pluto
20. The first day of summer in the United States happens when:
- a. the Earth is closest to the Sun
 - b. the northern hemisphere is tilted toward the Sun as far as it will go
 - c. the Sun is directly overhead at noon
 - d. both a and c

* * Advertisement * *

I've been enjoying my astronomy hobby for a few years, but now am unable to spend any spare time at it, so I've decided to sell it all and reinvest in a few years, when hopefully I'll have more leisure time. I purchased some of the equipment through Crown Camera in Redding --and some from other sources.

www.astropalace.com/



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Did you know? ?

If the 94 inch primary mirror of the Hubble Space Telescope was scaled up to be the size of the entire United States, the total vertical dimensional variation would be just 2.5 inches!

? ? ?

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://astronomy-mall.com/>

(Astronomy Mall on the Web)

<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

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The speaker at the November club meeting will be our own Tom Koonce. He will be speaking on “The Life of a Star.”

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

Thanks for your generous support!

Sky-Q Answers: 1-d 2-a 3-c 4-d 5-a 6-c 7-a 8-b 9-c 10-a 11-c 12-c 13-d 14-a 15-d 16-d 17-c 18-a 19-d 20-b