



# Desert Sky Observer

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The A.V.A.C., Inc.  
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[www.avac.ac.org](http://www.avac.ac.org)

## Up-Coming Events

**January 02:** First Quarter Moon at 23h U.T.

**January 04:** The Earth is at perihelion at 09h U.T.

**January 09:** Full Moon at 20h U.T.

**January 10:** The Moon is at perigee at 09h U.T.

**January 16:** Last Quarter Moon at 13h U.T.

**January 24:** New Moon 13h U.T. and Moon at apogee at 19h U.T.

**February 09:** Monthly meeting.

**Anytime:** Observe.

*Note: U.T. (Universal Time) is Pacific Standard Time +8 hours.*

## President's Report

*Doug Drake*

Happy New Year to all of you and we hope this New Year, 2001, shall be the best ever. This time of the year is a busy and exciting time of the year. First we start off with renewing our club membership at the January meeting; please see the Treasurers Report of this newsletter. And, next is your new Board Members for 2001: Doug Drake, President; Terry Pedroza, Vice President; Tom Koonce, Secretary; Steve Trotta,

Treasury; Errol Van Horne, Member at Large. Your new Board is dedicated to the member needs of AVAC, you, and to enhance our community and children through the science of Astronomy and support the SAGE Planetarium. The underling themes are quality, education and fun. This New Year shall be more enhanced because we have a running good start from a very good year of last.

A most exciting event happens at the end of December 2000. The Cassini spacecraft, on its way to Saturn, is flying by Jupiter and detecting waves in the thin gas of charged particles that fills space between the Sun and Jupiter. These waves are low radio frequencies, which have been converted into sound waves to make the patterns audible. You can listen to what Cassini is picking up in a brief audio clip available at: [http://www.jpl.nasa.gov/cassini/acoustic Pictures of Jupiter](http://www.jpl.nasa.gov/cassini/acoustic/Pictures%20of%20Jupiter), taken by Cassini, are also available at: <http://www.jpl.nasa.gov/pictures/jupiter> I am looking forward to meeting each one of you and listen to your ideas and needs. This New Year we shall have available for you, to checkout from the club, one

of three telescopes, one binocular with tripod and one monocular.

Plus we have a beginning library books on Astronomy. And, to have even more fun we shall have programs for: The new Astronomer, Deep Sky Observation and Planet Observation. By the way; this New Year 2001, Mars shall ever be so close to us, Earth, in the late spring and mid summertime - wow I can hardly wait! See you at our January meeting, Doug.

## Vice-President's Report

*Terry Pedroza*

Hope everyone had a Merry Christmas and a Happy New Year!!!!!! I hope the last two star parties' of 2000 were excellent and everyone had a great time.

I would like to thank the 2000 Executive Board for a job well done. The excellent job that they did will make it much easier for the 2001 Executive Board. The new board members have some very large shoes to fill. I know that I will do my very best to live up to the standard of excellence that Brian Pearson has set for me, as I am sure

all of the new board members will in their new positions.

I would like to congratulate Matt Leone, Mathew Leone Jr., and Tom Koonce for reaching the milestone of seventy Messier Objects viewed. They will be a part of a very exclusive group of devoted Messier Observers.

I'm hoping to bring some very exciting speakers in this year and am working hard at getting our calendar filled for 2001. January's topic will be "An Introduction to Astronomy and Other Curious Things" presented by Fred Ley. Hope to see you all at the meeting. Clear Skies All, Terry.

### Editors Column

*Frederick N. Ley*

January 1, 2001 will conjure up many different thoughts to many people.

When I first saw the film 2001: A Space Odyssey in 1968, just a mere 32 years ago, I was so captivated by the realism of the film that I as left the theater I believed that what was depicted in the film would be set in place and be functioning in the year 2001.

In 1968 I was at the age of 11 when I saw the film. What I did not have a comprehensive grasp of at that time was the role that politics played in controlling the purse strings of space exploration. As the years rolled by, I could see the reality of 2001 being pushed further and further back.

Currently we have the International Space Station in Earth orbit. Additional modules will be added to it in the near future and it will be a positive step forward. The technology exists that could have realized a small colony on the Moon by now. But obstacles have prevented this from yet happening.

I feel that we need to have a catalyst to fire us up and to open up the purse strings that will allow us to make another aggressive dash

towards the Heavens as was done with the race to the Moon.

The planet Mars certainly fits the criteria for that next "race" to the Heavens and can greatly narrow the gap that exists between 1968 and 2001.

### Saturn's Clan Grows by Four

The space around Saturn may not be as crowded as New York's La Guardia airport, but yesterday astronomers announced the discovery of four more small Saturnian satellites. The new objects, all between 23rd and 24th magnitude, were first spied on September 23rd by moon-meisters Brett Gladman (Nice Observatory) and J. J. Kavelaars (McMaster University) using the 3.6-meter Canada-France-Hawaii Telescope. Follow-up observations in late November by other members of Gladman's team cinched the discoveries, which bring the planet's total up to 28. No firm orbits exist at this time, and for now they've been designated S/2000 S 7 through S/2000 S 10. Additional observations are planned later this month, but the moonlets probably occupy a mix of prograde and retrograde orbits. The team continues to track a few other prospects as well. "During the past year and a half, the number of known outer-planet satellites (or candidate satellites) of the giant planets has more than doubled," observes Brian G. Marsden of the IAU's Minor Planet Center. Details of the new finds appear on IAU Circulars 7538 and 7539. (Sky & Telescope)

### Our Sponsors

Al's Vacuum and Sewing: 904 West Lancaster Blvd. They can be reached at (661) 948-1521. Stop by and say hi to Matthew and Suzanne.

## Desert Sky Observer

Darkrooms Plus: 20 St. W. near Pep Boys in Lancaster. They can be reached at (661) 945-1444. Darkrooms Plus offers all club members a 10% discount on all purchases. Stop by and say hi to Dean or Hank.

King Photo: 749 W. Lancaster Blvd. They can be reached at (661) 948-8441. As a telescope dealer, they always support the AVAC. Stop by and say hi to Stokely or Paul.

QNET: 1529 E. Palmdale Blvd., Suite 200. They can be reached at (661) 538-2028. As an Internet provider, they are kind enough to provide us with a free website.

Vista Golf: 43517 N. 13th Street West, Lancaster. They can be reached at (661) 945-7003. Thanks for your generous support.

### 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 \$25.00 per year.
- Individual membership at \$20.00 per year.
- Junior membership at \$15.00 per year.

Membership entitles you to our monthly newsletter, the Desert Sky Observer, and to borrow one of the Club's two telescopes. We currently have an 8-inch and 10-inch Dobsonian reflector for loan.

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.



initially overlooked. In 6-inch and larger telescopes the nebula's green hue is evident, and in M42's heart you can easily see a tight grouping of four young stars called the Trapezium.

Next to Orion lies the constellation Taurus, the Bull. This winter the planets Jupiter and Saturn draw extra attention to Taurus's naked-eye star clusters, the dim, scattered Hyades and brighter, more compact Pleiades. Not far away lie two telescopic clusters that are concentrated piles of jewels. Look above Orion for pentagon-shaped Auriga, the Charioteer. M37, the brightest of the Auriga clusters, lies just east of the constellation. M35 lies at the westernmost foot of Gemini, the Twins.

### Planets in January

The full Moon gets eclipsed on January 9th, but the show is over before moonrise for most observers in North America. Only those in the northeastern U.S. and eastern Canada get to see the Moon with a deeply blackened right edge (due to the dark central part of the Earth's shadow shading it). Even they see it for only a little while as the Moon ascends in the darkening sky of dusk. Observers in Europe, Africa, and Asia get to see the complete total eclipse.

The lantern like glow of Venus kindles high in the west as twilight fades on January evenings. The planet doesn't set until almost four hours after the Sun. It reaches its greatest elongation (that is, greatest angular separation from the Sun) on January 17th. For a week before and after that date, study the phase of Venus in a telescope and see which night you think it is exactly half-lit. The crescent Moon is directly below Venus on January 27th and closer to the planet's lower left the next night.

Jupiter and Saturn are in the southeast as night falls. Jupiter is more or less between the Hyades and Pleiades clusters this month, with Saturn to the right of it. Jupiter doesn't rival Venus in brightness, but Jupiter does vastly outshine Saturn. These two giant planets continue to offer superb views in telescopes, and the Moon joins them on January 5th and 6th.

Mercury comes into sight late in January. Look for it in the west-southwest about 45 minutes after sundown, about 30 degrees -- three widths of your fist at arm's length -- to the lower right of Venus. A very thin Moon is below Mercury on January 25th and to the upper left of Mercury the next evening.

Mars is best seen high in the south at dawn. Watch it move rapidly away from the brighter star Spica during January.

### Map Instructions

The edge of the map represents the horizon all around you. Compass directions around the horizon are marked North, NE (northeast), East, SE, etc.

Check the dates and times in the caption to see when to use a particular map. Go out within an hour or so of the time and hold the map in front of you. Turn the map around so the edge marked with the direction you're facing (north, east, or whatever) is down.

The stars above this horizon on the map now match the stars you're facing. Ignore the rest of the map until you turn to face another direction.

The map's center is overhead. So a star halfway from the edge to the center can be found about halfway up the sky. That is, it will be halfway from horizontal to straight up.

Hints: Start by looking for only the brightest stars. They outshine faint ones more than the map suggests. Also, remember that star patterns will appear much larger in the sky than here on paper!

Planets are plotted where they'll be at the middle of the month. Our maps are drawn for viewers at 40° north latitude (for example, New York or Denver). (*Sky & Telescope*)