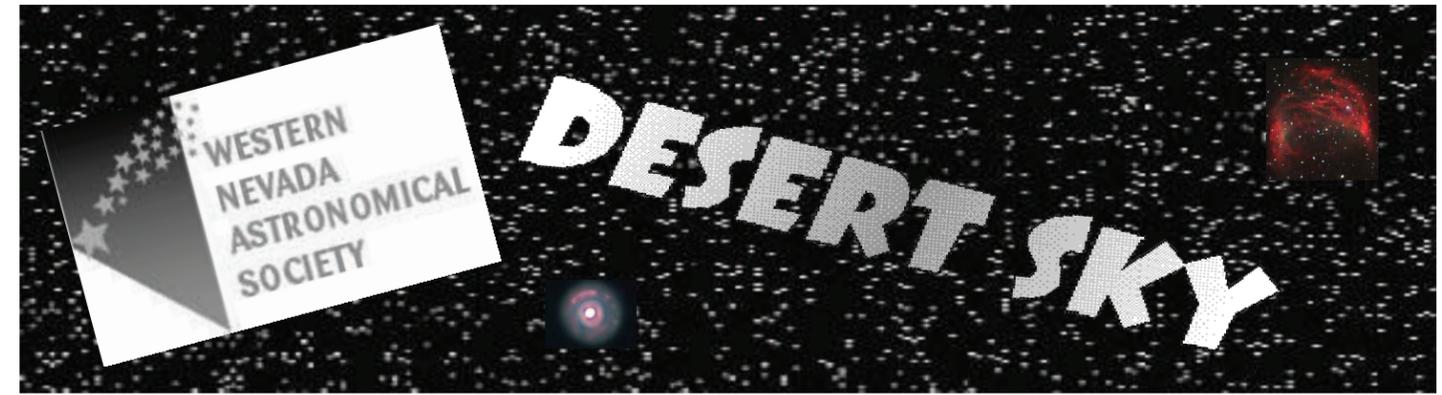


WNCC Foundation (WNAS)  
2201 West College Parkway  
Carson City, NV 89703



Volume 5, Number 2

March/April 2006

## President's Corner



We are truly living in a "Golden Age" of astronomy. Just like Galileo Galilei's "first light" experience with his simple refracting telescope, that produced an early explosion of new knowledge of the solar system, today's astronomers are awash with new discoveries almost daily. Space telescopes such as Spitzer, Hubble, and Chandra are capable of seeing obscure objects that just ten years ago would have been deemed impossible. Spitzer's Infrared tele-

scope has recently imaged an individual extrasolar planet for the first time. The Hubble telescope has taken the deepest exposures in the cosmos some 10 billion light years away (Hubble's Ultra Deep Field). The Chandra X-Ray telescope takes x-ray images of high energy regions of the universe near super nova remnants (exploded stars). Now, the Swift telescope measures Gamma Ray Bursts on the average of one per day. These burst events are the most cataclysmic events known. The oldest science, astronomy, is now among the newest and most dynamic pursuits of knowledge anyone could imagine. You are all invited to the Observatory to learn, participate, and be involved in your area of interest in astronomy. See you at the Observatory.

### Inside the Newsletter

Ask Jack	2
WNAS Information Board	2
WNAS Meeting Minutes	3
Objects in the Sky	3
Space Notes	3



### WNAS Officers

**President**  
Robert Collier  
collier@wncc.edu

**Vice President**  
Jack L. Davis  
jackldavisdo@excite.com

**Treasurer**  
Dana Luterick  
gjl1959@775.net

**Secretary**  
Barry Morgan  
Barry-morgan@sbcglobal.net

**Newsletter Editor**  
Brian Guerin  
zapkgbg@msn.com

**Webmaster**  
Leland Wong  
llw1345@cs.com

**Director-JCD Observatory**  
Robert D. Collier  
collier@wncc.edu

**WNAS web site:**  
<http://western-Nevada-astronomical-society.com>

## Events Calendar

	SUN	MON	TUE	WED	THU	FRI	SAT
March				1	2	3	4 Star Party
	5	6 First Qtr Moon	7	8	9	10	11 Star Party
	12	13	14 Full Moon	15 BOG, WNAS Mtg	16	17	18 Star Party
	19	20	21	22 Last Qtr Moon	23	24	25 Star Party Dark Skies*
	26	27	28	29 New Moon	30	31	

### Dates to Remember:

#### MARCH, 2006

6th First Qtr Moon Rise, 10:13  
14th Full Moon Rise, 18:06  
15th BOG Mtg, 18:00  
15th WNAS General Mtg, 1900  
22nd Last Qtr Moon Rise, 01:33  
29th New Moon Rise, 05:55

**March 15th WNAS General Membership Meeting 7:00 p.m.**

#### APRIL, 2006

2nd Daylight Savings Time Begins  
5th First Qtr Moon Rise, 11:50  
13th Full Moon Rise, 22:00  
20th Last Qtr Moon Rise, 02:17  
20th BOG and WNAS Ops Board Mtg, 1900  
27th New Moon Rise, 05:47

\* These are the best dark sky weekends for observing faint objects.

April							1 Star Party Dark Skies*
	2 DST Begins	3	4	5 First Qtr Moon	6	7	8 Star Party
	9	10	11	12	13 Full Moon	14	15 Star Party
	16	17	18	19	20 Last Qtr Moon, BOG/ OPS Meeting	21	22 Star Party
	23	24	25	26	27 New Moon	28	29 Star Party Dark Skies*
	30						

## Virginia City Middle School Science Fair



On February 23rd the Virginia City Middle School hosted it's annual Science Fair. The event was attended by a large number enthusiastic students and parents. There were teachers and volunteers on hand to encourage interest in and to answer the many questions presented by the students. Most of the Science Fair was conducted inside the gymnasium, but lurking just outside in the cool night air were two WNAS volunteers with a 12" Dobsonian telescope. Without a doubt this was the most interesting exhibit at the Science Fair.

WNAS volunteers Red Sumner and Dana Luterick spent the evening showing off the night sky to well over a hundred students. It was a wonderful night for viewing Saturn and as always first time observers simply could not believe their eyes, many commenting that it looked like a photograph. Adding to the evening observations was an overhead pass of the International Space Station (ISS).

## Ask Jack

This is the memberships column to ask questions about WNAS activities, the JCD Observatory and the field of astronomy. Please submit questions to the Editor at [www.zapkgbg@msn.com](mailto:www.zapkgbg@msn.com) or at the next WNAS membership meeting on **March 15th**.

**Q: What is meant by Albedo in astronomy?** Sunlight that falls on a body in the solar system is partially absorbed and partially reflected. The reflected fraction is known as the albedo and is expressed as a decimal number. A high albedo doesn't mean an object appears bright in our sky. For example, the albedo of Mars is .15, yet despite its brightness, the albedo of the moon is only .07. Stated simply, that means the surface of the moon is inherently darker than that of Mars.

**Q: Where and what is the Kuiper Belt?** In 1951, the astronomer Gerard Kuiper suggested that there might be billions of small, icy objects just beyond the orbits of Neptune and Pluto. These objects would be spread out over so large a volume that they wouldn't tend to collect to form actual planets, but would give a possible explanation as to why there are so many short period comets. Since they tend to be of about magnitude 23, these objects were too dim to be detected until 1992. Since then, several hundred Kuiper belt objects have been found.

**Q: We often hear the term Escape Velocity, what exactly does it mean?** If an object leaves Earth's atmosphere at about 11 km/seconds (7 miles/second or about 25,000 miles/hour), it will escape the earth's gravity. This speed is called the escape velocity of the Earth. Below this speed, it will eventually come back to Earth. Other celestial bodies have different escape velocities.

## WNAS Information Board - Past and Future Events

First off, I would like to remind all members that **March 15th** will be the next general membership meeting of the WNAS. **Normally the Membership meetings are on the third Thursday of the month, this one is an exception.** This meeting will be on the third Wednesday in March!! We hope to see a good crowd and it would be great if everyone could arrive by 7:00 pm at the Observatory.

For those of you that may have noticed the WNAS website was down for several weeks and should be up and running again by the publication of this newsletter. There was an innocent error made in the processing of our domain payment. Hopefully once up and running there will be no further problems. Leland Wong has requested to be relieved of managing the WNAS Website, Ryan Collier has graciously accepted this role.

We have set the following Saturday nights for **Novice Training Classes: May 6th, June 3rd, July 1st and Sept. 2nd** These are one night events and are in conjunction with the normal Saturday night star parties. We ask participants to arrive an hour before dark. Observatory volunteers will present a lecture on the use of telescopes and what interesting objects/constellations are in that evenings night sky. After the lecture, volunteers will take participants out to the observation deck and let them find some of the wonders of the universe.

The Jack C. Davis Observatory would like to thank Phillip Dennis of Carson City for donating a Celestron GPS 8" Telescope and a Meade 125 ETX. I'm sure both telescopes will get much a great deal of use and bring years of enjoyment to many future observers. Thanks again from the JCDO Board of Directors.

On January 28 the JCDO conducted a very successful Mentor Night Program. About 40 adults and kids attended. Robert Collier, Walt Dillard and Jack L. Davis gave lectures on subjects ranging from the Observatory, VLT (Very Large Telescope) Project in Atacama, Chile and a demonstration of Starry Night. An excellent video on the Sun and Planets completed the program.

## Objects in the Night

Can you identify the celestial objects in the Desert Sky logo? See page 3.



Cartoon provided by permission of Jack Kramer

**Note from the Editor:** Some of the pictures may not come out as clear as we would like in the newsletter, go to our website for the best resolution.

## WNAS January General Meeting Minutes

This was one of WNAS's most interesting meeting to date. Robert Collier opened the meeting on time at 7:00 pm at the Jack C. Davis Observatory. The meeting started with a review and approval of the last meetings minutes, followed by the treasury report by Dana Luterick. Robert gave the membership a review of all that was happening with the Observatory. Progress on subjects such as the Takahashi C-400 imaging sessions, the final equipment purchases for the Takahashi BRC-250 and the formatting problems with the NASA satellite link were given to the membership for discussion. The January 28th Mentors program was mentioned as was the recent probe launches to Pluto.

There was one very exciting piece of new business discussed during the meeting. Carson Magazine is planning an article, to come out this spring, on the WNAS and JCDO. Photo sessions for the article were held at JCDO in late January, Robert Collier, Brian Guerin and Jack L. Davis attended, expect to see one or two of us in the article.

Old business topics discussed:

1. Progress on the light blocking wall on the JCDO observation deck is mired in "Red Tape" for the time being, hopefully something will be resolved by the end of summer.
2. The issue of closing the Observatory overhead doors (incase of power failure) has been resolved with a manually system for closing the doors. An electric drill with batteries has been purchased for this purpose.
3. Ryan Collier will take over for Leland Wong as the WNAS webmaster.
4. A list of "cool" astronomy websites was handed out.
5. Robert Collier will contact Dale Etheridge about "On Orbit" publication.

This concluded the business portion of the meeting and we moved on to more exciting events. Red Sumner gave an interesting and informative presentation on the use of planispheres. Jack L. Davis followed this with a talk about current constellations and their mythological origins. Thanks to both for a great performance!

The presentations were followed by a Q & A session, any open comments from the membership. One open comment pertained to the late mailing of the Newsletter, the officers do apologize and will make a concerted effort to mail them earlier from now on. Meeting adjourned at 8:35 pm.

## Space Notes - Inhabiting the Moon



While the Earth is tilted at an angle of 23 degrees, the moon is only tilted at just over 1 degree.

In 1994 NASA's Clementine spacecraft identified some peaks in the north polar region that are illuminated all the time in the lunar summer.

Last year the European Space Agency's Smart-1 found a continuously illuminated site about 15 kilometers from the north pole. Even though most of the moon is dark in that region during winter. This means there's possibly a crater wall tall enough for sunlight to strike it's rim. Such perpetually sunlit areas would be good places to start our exploration

of the moon. You could install solar power stations at the peaks of these craters and use the energy to run small rovers and landers. With an average temperature of -30 degrees Celsius and far less temperature variation than the rest of the lunar surface, a solar collector placed at the peak of these crater walls could provide enough energy to maintain a habitat at a very comfortable 20 degrees Celsius.

These are also places, like the bottom of some craters near the poles, that are in perpetual shadow. This raises the possibility that water could be located or exist in these shaded areas of the moon. With the availability of the Sun's energy and the possible existence of water, we may have found the ideal and most hospitable place to begin our exploration of the moon.

It begins to sound almost homey, doesn't it? Notes from Stargeezer

Objects in the Night Sky answers: Left center - Eskimo Nebula in Gemini, Upper right - Medusa Nebula in Gemini