



SNAKE RIVER SKIES A PUBLICATION OF THE MAGIC VALLEY ASTRONOMICAL SOCIETY

August 2008

Monthly Newsletter

Society Meeting

The next Magic Valley Astronomical Society membership meeting will be the annual 'member only' family picnic. The picnic will be held at the Kinney Court, Herrett Center for Arts & Science at 7:00 pm. The public star party follows the picnic.

More inside.

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Pomerelle Mountain Star Party

Dark skies are good, high altitude dark skies are even better! The Board of Directors once again cordially invites you, your family, friends and others you may wish to invite, to our annual Pomerelle Mountain Ski Resort Star Party on Saturday, the 23rd of August 2008. On top of the mountain you may experience some of southern Idaho's pristine skies; an area where objects will seemingly jump right out at you. This year promises to be an even bigger event than last year. The events will begin with a solar observing session and concurrently a pop bottle rocket construction and launching. There will be some smaller activities as well, which are similar to the events at the Herrett Center for Astronomy Day. Chris Anderson has agreed to do another talk. Then we will traverse the mountain via the chair lifts

for mountain top night viewing. Schedule of events for Pomerelle:

- Water bottle rockets and solar observing from 3pm-6pm.
- Open for dinner 6pm-7pm
- Chris's talk: 7:30-8:30pm
- Lifts open at 8:30
- Night viewing 9pm-12am

Attended by over 132 people last year, the visitors were enthralled by the views of the night skies.

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The Society Newsletter

No doubt you have noticed a change in the newsletter since the reintroduction a mere two months ago. I would like to place a call of sorts to the society membership for any article submissions. This is, after all, your newsletter and if you would like to write an arti-

cle, suggest a topic for an article or otherwise make an entry for the club newsletter then by all means please contact me.

DavidOlsen at filertel dot com. Thank you.

Membership Dues

\$20 per person,

\$20 per family,

\$10 per student,

\$100 per sponsor

the visitors were enthralled by the views of the night skies. Following a small crowd of solar observers, the number of visitors kept growing for the astronomy talk. Entertained by Chris Anderson in the early evening on the subject of "Black Holes, The Weirdest Things in the Universe" a layman oriented presentation that answered the questions: 'What are they?', 'Where do they come from?', 'Where are they?' and 'How do we find them?'

Then Chris pointed out some black hole weirdness like spaghetti-fication. (Yes, that really is a word.) The best description of last years events was noted by Mrs. Deb Hartwell; "I'm just delighted that it all turned out, we had a great crowd, and I thoroughly enjoyed the dinner, the talk and the ride up the lift — and the GLORIOUS VIEWS from the top. The skies were best of all!" We had a wonderful evening.

No wonder—at an elevation of 8,000' Pomerelle Mountain offers some of the best stargazing in southern Idaho. Objects like M31 stand out like the proverbial sore thumb. The hardest part and lesson learned was the event last year was held on the same night as the star party and public observing at the Centennial Observatory. Terry Wofford decided to leave the activities and provide coverage at the Centennial Observatory. The board has since made the decision to not hold any of these events on the same nights as the public star parties. Since there were some minor problems last year, especially with the top of the lift safety lighting; a new approach and telescope placement will be offered this year.

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southern Idaho.*

The top of the mountain at Pomerelle is dusty, and a drop cloth or tarp (ground cover) is strongly recommended. Red safety lighting will be used instead of the white light from last year. This will definitely improve everyone's night vision. Hopefully there will be no need for the generator either. The advertisement for this event again promises to bring people from far away. By word of mouth we had attendees from as far away as the Ogden, Utah area and no doubt we will have similar attendance as we have been pre-planning for the better part of a year.

We most certainly could use as many telescopes and society members as possible. Perhaps you have been patiently waiting for another event...Perhaps you need a better reason for attending...Perhaps it started raining the day you loaded your telescope...Maybe your dog does not like the site...You are just in a poor mood...You suddenly decide that you don't really like looking at beautiful stars, nebulae and galaxies anymore...You want to go live in the bigger cities, and need the money for gas and toilet paper...Whatever your reason we can understand, but why not make this the year that you attend the star party at Pomerelle?

Did you Know?

With an annual snowfall of 500", Pomerelle is usually one of the first Idaho ski resorts to open and you will enjoy virtually no lift lines during the season.

Source: visitid.org

Correction

Last month the newsletter featured information about the Idaho Star Party. Incorrectly, it was mentioned that the Star-B-Que was a catered event. Boise Astronomical Society Member, Barbara Syriac, informs the editor, "We stopped doing the catered Star-B-Q and we do it in house now." The main reason was the cost involved for having a caterer come in and cater an event such as this. The menu is the usual simple fair of Burgers, Hotdogs, grilled Chorizo's, Salads, and Drinks.

Annual Picnic

The third annual society members picnic will be held once again on the Kinney court of the Herrett Center for the Arts and Science. We will provide the BBQ's, hamburgers, hotdogs and the drinks. You bring whatever side dish, dessert you would like to bring. Please bring your family. The picnic takes the place of our regular meeting. See you there.



Peering into Celestial Windows, by Jim Tubbs

Growing up on a farm south of Gooding, I remember leaning against the corral railings and marveling at the wonders of the night sky. By that time, we had already landed men on the moon. I felt much like the future Luke Skywalker. All that adventure awaiting me in the vast depths of the universe, and I was stuck (sometimes quite literally) in foot deep manure.

My first telescope was a 3" cardboard tube Newtonian. That first night I pointed it skyward, looked through the eyepiece, and...saw...stars looking exactly the way they looked to my naked eye. The moon looked spectacular, but we'd had already been there, and I wanted to go further. After that night I used my telescope to read the logos on the sides of the semi-trucks that drove between Gooding and Wendell.

Over the next 35 years, a lot of changes occurred in my life, but my yearning to explore the deep reaches of space never went away. A few years ago, I purchased a Meade 4" Newtonian telescope for my son, who was then about 9. After an impatient wait of several weeks for the weather to clear, we took it out for first light. In time I had Saturn in the eyepiece, and though small, it was breathtaking. I ended up having more fun with the telescope than my son. I began saving money and a year and half later purchased a Meade LX200GPS 8". With the purchase of my LX200, I began my exploration in earnest. I had already seen the Orion Nebula in my 3", so I waited with great impatience for the season to bring Orion back into view. I was not disappointed. I marveled at the difference between a 3" and 8" mirror. I aimed my scope and the Andromeda Galaxy. Wow...much brighter, but not much detail. I studied Jupiter, and I remember one particular night I observing the transit of one of Jupiter's moons. That was an exciting, but accidental discovery. I knew I had to go deeper yet if I was to find joy in my explorations, so I began saving



my money for a camera. Like many, my wish list is not usually in sync with my bank account, so I made up a list of future purchases, and attempted to prioritize them in such a way as to gain maximum use before having to make the next purchase.

The first item, of course, was the camera. I'm quite partial to Meade equipment, and so I set my eyes upon Meade's DSI line of cameras. At that time, Meade offered the DSI color, DSI pro, DSI II color and DSI II pro. The difference between the color and pro models was the pro had a more sensitive chip that was grayscale, and thus required color filters. Since there was a \$200-\$300 difference between the DSI color and pro models, I opted for the color. With a price tag of \$199 it was a good deal. In retrospect, I probably would have been better off with one of the pro models, as my interest has been moving me towards astrophotometry work, and the DSI color really isn't suitable other than for learning the basics of photometry. Meade's DSI line comes complete with a suite of programs. Envisage is used to capture images. It will automatically stack images, allowing the user to control the minimum quality level for each sub-image. It also allows the creation of frames to be used in an animation, such as the rotation of Jupiter. Exposure times range from .0001 sec to 1 hour. Once dark frames are taken, they can be automatically applied to the images. Flats need to be manually applied using other software such as Meade's Image Processor. The manual implied that a rank beginner, on the first night out, using the default settings, would in a very short time have an image good enough to upload and show off. I can confidently state "It ain't so!" The software is easy to use, but there is still a pretty steep learning curve, mostly due to the fact the manual leaves much to be desired. Serving as a log, I have kept a binder of my pictures, from the very first one to my most recent. There is absolutely no comparison between the two, and I still have much to learn.

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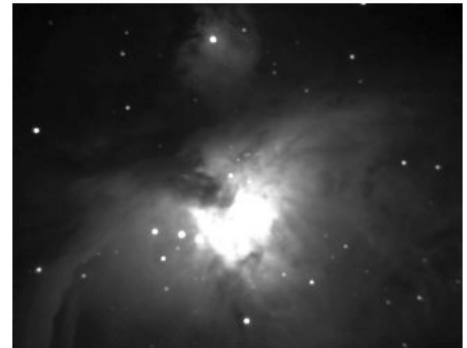
Still, each decent image is a thrill to me. I am not taking pictures in order to have pretty pictures. I am taking pictures because the camera allows me to peer much deeper into space than I am able to do with the naked eye and an eyepiece. My eyes simply aren't what they used to be. The camera allows me to study the heavens up close and without physical hindrance. Pretty pictures are a bonus.

One of the best investments I made was the addition of a focal reducer. I purchased Meade's f/3.3 reducer after researching other's experiences. Without a reducer, the field of view in the DSI color is 8 arc-minutes by 6 arc-minutes. That means when imaging the Orion Nebula centered on the trapezium, all I can get is the core of the nebula. Magnification wise, the camera roughly equals (on my scope) a 10mm eyepiece, giving approximately 200x magnification. When imaging planets and planetary nebula, the camera works well with a Barlow 2x.

The reducer shipped with a t-mount and two adapters, a 15mm and a 30mm, that thread to the t-mount. I mostly use the 30mm adapter which gives me a FOV of about 18 arc-minutes by 14 arc-minutes (estimated). With this I am able to image most of the Orion Nebula as commonly seen in pictures. The f/3.3 reducer will not work for eyepiece viewing, unless you want to create a visible black hole in the center of your view. Threading both the 15 and 30 mm adapters to the t-mount results in fairly excessive coma around the edges of images, so using the 30mm is a nice compromise between maximum FOV and quality. Thanks to Meade's capture program, Envisage, I am able to take images over a fair amount of time and not worry about the rotational effects typical of an Alt/Az mount. Envisage has a neat feature called "drizzle". Drizzle has several purposes – with auto guiding, Envisage will move the telescope by very small amounts and over sample the image. Using this technique, Envisage can effectively double the size of the object being photographed, double the FOV, and increase the

amount of data used to create normal sized images. This is not simple software scaling, but is more like the digital zoom of most consumer digital cameras. A second essential feature of drizzle is the ability to select two stars for calibration. The first star is used by Envisage to calibrate each sub-image so they stack properly. With the second star, Envisage can then de-rotate sub-images to compensate for the Alt/Az mount. The system works very very well, but the software seems to have some practical limits as to how much de-rotation it can accomplish. For example, if I take a series of images of a globular cluster in the southern sky over a 20 minute period, everything works as expected, and the globular shows no sign of rotation. On the other hand, if I attempt to image the Bubble Nebula in the Northern sky, the rotation around the celestial pole becomes so severe that after about 20 minutes, Envisage can no longer de-rotate and properly stack the images. By this time, I was ready for the next purchase which was an equatorial wedge. The wedge eliminates all issues of rotation.

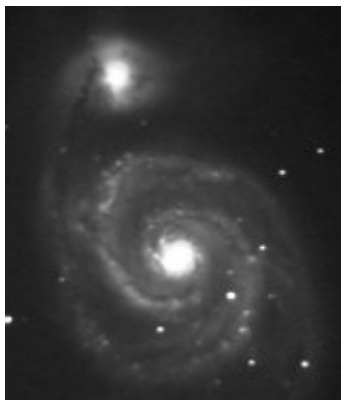
Orion Nebula with f/3.3 focal reducer installed.



I can now take longer sub-images without rotation occurring while the shutter is open. The wedge I purchased was a Meade wedge designed only for their 8" scopes. I was a bit disappointed to find that adding the wedge introduced a bit of instability to the overall mount since I am using the heavy field tripod that came with the scope. My scope is now a bit more susceptible to vibration. Even a gentle breeze is enough to make long exposures very frustrating. The wedge also requires very precise alignment if individual images are to be greater than 15 seconds in exposure. So far, the best I have been able to achieve are 30 seconds sub-images.

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With that, I was able to create a very nice image of the Whirlpool Galaxy.



scope. In the same, moving the scope to another location, such as for a star party, requires re-aligning from scratch. With a pier in place, and with declination permanently set, I'll be able to refine the alignment so that I can take much longer exposures without having an auto guiding setup.

All in all, I have been quite pleased at what I have been able to do with relatively inexpensive equipment. Down the road, I'm planning to replace my DSI Color with Meade's new DSI III Pro. I will never get to set foot on the Moon, but that's okay. I've already traveled to other Galaxies!

Next on my purchase list will be a pier mount in the backyard. Nothing is more frustrating than spending several nights tweaking the alignment, only to have the wife drag the hose around the base of the tripod and move the

Getting to Pomerelle

From Twin Falls drive past Burley. Pomerelle is off I-84 (Exit 216) then drive S. on Hwy. 77 - 3 miles to Declo - another 8 miles to Albion - thru Albion and 6 miles to Howell Canyon Road turn-off. The Pomerelle sign is located at Howell Canyon turnoff and the resort is 6 miles up paved canyon road. From Burley use Hwy 77 to go to Albion

From Pocatello take I-86 through to I-84 junction and then continue on west to Exit 216.

From Salt Lake City take I-84 North to Boise, use Exit 245 for Sublett and go into Malta, in Malta follow signs to City of Rocks National Reserve in Almo and then continue north to Howell Canyon Rd. Watch for the signs.

Trivia

On August 12th 1977, the Space Shuttle Enterprise, OV-101, made its first atmospheric test. An early Space Shuttle Orbiter, the Enterprise, never flew in space but was used for approach and landing tests at the Dryden Flight Research Center and

several other launch pad studies in the late 1970s. It rode into the skies "piggybacked" on a Boeing 747.

OV-101
Enterprise



Photo Credits:

Pg. 1 Pomerelle by Pamela Olsen

Pgs 3-5: Various deep sky objects by Jim Tubbs a) Horsehead nebula b) Great Orion nebula c) Whirlpool Galaxy.

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Shuttle Enterprise courtesy of NASA Dryden Flight Research Center, Edwards, California August 1977. NASA material is not protected by copyright.

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[HTTP://www.mvastro.org/](http://www.mvastro.org/)

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City of Rocks / Castle Rocks Star Party

The star party was held on the last weekend in July and was a success. The skies were some of the most perfect that any of us could have ever experienced. We had a good turn out of club members and even some non members who participated by bringing their telescopes and enjoying the night sky. The park service said this was the best attended event they have ever had in the history of the park. With over 75 in attendance for both the solar observing and the night viewing, the other events hosted have not been as well attended, said park service hostess, Juanita Jones.

Those in attendance included park employees, visitors and of course club members. We had about a dozen telescopes total including the non-members. One family was from Chamonix, France, and even though they had limited English skills, the Dad was able to talk with Chris Anderson and then translate for his family. Based upon this success, the park service would like us to make plans to attend next year. Easily one of the best of the night was the Veil Nebula. The Veil, is a large, relatively faint supernova remnant in the constellation Cygnus. Chris used the 18" JMI and an OIII

filter to show the audience the delicate lace work of this beautiful nebula. There were a few minor setbacks, such as, the lights on cars as they approached and parked which swept across the telescope field. We are making plans to reduce this problem in the future. A thank you goes to Chris Anderson, Terry Wofford and Jim Tubbs who went ahead of the main group for the solar observing session. Another item to note is the inclusion of a clear sky clock for the Almo, ID area. We are not sure who takes the credit for this. The park service would like to make this a "dark sky park" as well.