



# Snake River Skies

The Monthly Newsletter of the Magic Valley  
Astronomical Society  
August 2012



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

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## Membership Meeting

Saturday, August 14<sup>th</sup> 2012  
7:00 p.m. at the  
Herrett Center for Arts and  
Science CSI Main Campus



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## Membership Message

This month the Magic Valley Astronomical Society will once again join with the Centennial Observatory in presenting the fifth annual City of Rocks / Castle Rocks Star Party at the Ranch House near Almo, ID. This two-day event will take place the weekend of August 17<sup>th</sup> and 18<sup>th</sup> with some members arriving as early as Thursday night.

For those of you who do not wish or cannot make it to Castle Rocks, the same Saturday (August 18<sup>th</sup>) there will be a joint star party with the members of the Boise Astronomical Society at Carmela Vineyards.

Monthly members only star parties are still being encouraged and if you are interested please post something on the members list serve and let's get a star party rolling.

The speaker for this month will be once again Jim Tubbs. Jim will do an updated version of his spectroscopy talk and discuss the progress he's made, the mistakes he has made and the associated learning curve.



Patently waiting for darker skies at Castle Rocks S.P. Ranch House site.

Welcome to the society and hello. We hope you have a good time, enjoy the hobby and bring good skies with you.












We hold indoor meetings each month at the Herrett Center for Arts & Science College of Southern Idaho campus in Twin Falls, ID, USA. Our meetings start at 7:00 pm on the second Saturday of the month. There will always be a very interesting program, class or presentation at these meetings, as well as good fellowship. There is always something new to learn.

Following our meetings we have a star party (weather permitting) at the Centennial Observatory, also at the Herrett Center.

Our star parties are free and you don't have to bring your own telescope. Telescopes are also set up outside on the stargazer's deck. Star Parties are held year round, so please dress accordingly as the Observatory is not heated, nor air conditioned.

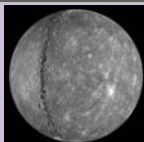
Wishing you dark skies and clear nights! MVAS Board


**Calendar for August**


Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1 Full Moon 	2	3	4
5	6	7	8	9 Last Quarter Moon 	10 Moon at Apogee 	11 Membership Meeting at the Herrett Center 7:00 pm  Monthly free star party at 9:15p at the Centennial Observatory
12 Moon at Greatest N. Declination +21.5° 	13	14	15	16	17 Castle Rocks State Park Star Party 	18 Castle Rocks State Park Star Party Carmella Winery Star Party 
19	20	21	22	23 Moon at Perigee 	24 First Quarter Moon 	25 Moon at Greatest N. Declination -21.4° 
26	27	28	29	30	31 Full Moon 	 New Moon on the 17 <sup>th</sup>



## Solar System



**Mercury**, the innermost planet in the solar system, went through inferior conjunction with the Sun in late July and now, over the next few weeks, brightens and climbs into view before sunrise. From August 10th to 31st, observers around 40° north will find Mercury 10° above the eastern horizon 30 minutes before sunrise. <http://www.reddit.com/r/starparty - date-month>



**Venus** is visible in the east shortly before sunrise all August. It is at peak brightness (magnitude -4.4) early in the month. Telescopes show Venus' crescent shrinking in apparent size and the phase slowly increasing throughout the month, but observers at mid-northern latitudes will find Venus' image to be blurred by turbulence low in the sky.



**Mars** is less than 3° from Saturn from August 13th through 17th, and the two planets remain quite close to each other throughout the month. Look for it about one hour after sundown, low in the southwest. Mars, Saturn and Spica (magnitude +1) form a "trio", a grouping of three celestial objects fitting within a 15° circle all month.



**Jupiter** is the highest of the planets at dawn and the second brightest (after Venus). It is the farthest removed from the others, remaining about 25° to the upper right of Venus all August. Look for Jupiter very high in the east before sunrise, with Aldebaran, the red giant star that marks Taurus the Bull's eye, floating close to it.



**Saturn** shines in the southwest as the stars come out and after dark, it moves lower to the west-southwest. A small telescope will reveal its system of rings which span 38", surrounding a disk about 16" in diameter. Can you notice the difference between the broader "B" ring and the thinner "A" ring? Look also for the Cassini Division separating them.



**Uranus** rises in the east around the time Mars and Saturn set in the west. The planet is an easy binocular target and can be glimpsed even with the naked eye under a dark sky. It glows at magnitude +5.8 in the northwestern corner of Cetus the Whale, just over the border from Pisces the Fish.



**Neptune** comes to opposition on August 24th and thus rises around sunset. However, it will take two or three more hours before the tiny, 2.5"-wide disk of this 8th-magnitude planet is high enough for telescopic observation. Neptune lies among the stars of Aquarius, in the same binocular field as 5th-magnitude 38 Aquarii.



**Pluto** The dwarf planet Pluto lies in northwestern Sagittarius and is highest above the horizon in the early evening. It glows at magnitude +14, and as a result, it is a challenge to spot.



**Asteroid** Despite its large size, Pallas looks like an ordinary field star glowing at 9th- magnitude. This month it moves from Pisces into Cetus, and you should be able to spot it through a small telescope.



**Comets** Throughout August, comet C/2011 F1 LINEAR should be visible as an 11th-magnitude object in the western sky as night sets in. Situated in the constellation Boötes and moving slowly southeastward, F1 LINEAR will keep observable in good condition for a long time, until autumn, when it may brighten up to 10th magnitude. Comet Petriew is now visible low in the dawn for observers at mid-northern latitudes. It shines at magnitude +11 and should be within the reach of a 6-inch telescope if you observe from a dark-sky site when the Moon is out of the sky.



**Meteors**, the Perseid meteor shower ranks among the most famous because it occurs during the warm nights of August. This year peak activity comes Saturday night, August 11/12, and although a waning crescent Moon rises shortly after 1 A.M. local daylight time, it will not have much impact.

## Planisphere for August



This Planisphere should be used as a guide for the month of August, mid-month, end of evening twilight (10:00 PM)

## Club Announcements

# City of Rocks Star Party 2012

Explore the wonders of the universe in some of the darkest, clearest skies in America.



## Castle Rocks State Park

Two miles north of Almo, ID (1 hr. S. of Burley)

**Friday, Aug. 17th & Saturday, Aug. 18th, 2012**



- 2:00-6:00 p.m. — **Solar viewing** (safe views of the Sun with filtered telescopes), Smoky Mtn. Campground, Castle Rocks State Park
- 9:30 p.m. — **Star party** (telescope viewing), Ranch House site, Castle Rocks State Park



Telescopes provided. Free admission—park day use fees apply.

Hosted by: Idaho Dept. of Parks & Recreation, Magic Valley Astronomical Society, and the College of Southern Idaho's Centennial Observatory

**Idaho Star Party™:** The dates of the Star Party will be September 14th and 15. The absolute final pre-registration deadline will be August 10th, 2012. Please write these dates on your calendars now.

The Boise Astronomical Society has secured Don Machholz, comet hunter and founder of the Messier Marathons, to be our guest speaker! To date, Mr. Machholz has 11 comets that officially bear his name. His presentations are sure to be interesting, informative, and impressive.

**Campsite Reservations:**

**All the BAS reserved campsites have been spoken for but if you wish to be on the waiting list in case a campsite comes open, please let a BAS officer or Planning Committee member know.** Assuming they are permitted that time of year, if you wish to have bonfires at your campsite, please reserve your own campsite with the Idaho Parks Department in the B loop of the Eagle Cove campground, or you can also reserve at the Broken Wheel campground.

**Registration:**

ISP Registration is NOT included with the campsite reservation. You must be registered to attend the ISP. Each person in your family must have an ISP badge to show you are registered and attend any event, so please be sure that everyone attending is listed on the form. One Registration is good for all members of your family living at the same address. One door prize number for one registration. If you want more chances at door prizes, you are allowed to register each person individually, if paid separately. Note that there is a separate individual drawing for children's door prizes. You must be present to win a door prize at either drawing.

The ISP registration forms are now available. You will get HALF OFF of your family registration fee if we have your registration forms with payment in our hands by the August 10th membership meeting. You also get a \$2 per person discount for the world famous Star-B-Que dinner if you order early on your form before 8-10-12. BAS is not a rich club and we can not afford to purchase extra shirts or hats to be sold at the event. Your ONLY opportunity to get an ISP shirt or hat will be on your pre-registration form. It is very important that everyone pre-registers for the Idaho Star Party™ so that we can plan for the amount of Star-B-Que food and get the shirt/hat orders to the printers in time to be made. No late registration forms will be accepted after 8-10-12 until you are at the actual event in September.

Registration form may be found at this link: [http://isp.boiseastro.org/ISP\\_Registration2012.pdf](http://isp.boiseastro.org/ISP_Registration2012.pdf)



Dr. Tyler Nordgren

**One of the last true dark skies in America...** On a clear, moonless night in Great Basin National Park, thousands of stars, five of our solar system's eight planets, star clusters, meteors, man-made satellites, the Andromeda Galaxy, and the Milky Way can be seen with the naked eye. The area boasts some of the darkest night skies left in the United States. Low humidity and minimal light pollution, combined with high elevation, create a unique window to the universe. Please join us for the following events.

### **Meteor Viewing Party - Saturday August 11, 2012**

Join Great Basin Dark Rangers for one of the best meteor showers to observe, producing up to 60 meteors per hour at their peak. After the Saturday night astronomy rangers will remain on hand for this wonderful night sky event.

### **Moon Occultation of the Planet Venus - Monday August 13, 2012**

On Monday August 13, 2012 Great Basin's Dark Rangers will be watching as the planet Venus goes behind the tiny crescent Moon. This program starts at 1:00PM (PDT) with the occultation beginning around 1:20PM. The park will have a telescope available to view this event.



## **Do You Know – Trivia Time**



Even though man has studied the heavens for thousands of years, we still know very little about the Universe we live in. And as we continue to learn more, we are consistently amazed, and sometimes confused, by what we learn. Here is a collection of amazing, interesting, and strange astronomy facts, in no particular order.

Scientists believe that we can only see about 5% of the matter in the Universe. The rest is made up of invisible matter (called Dark Matter) and a mysterious form of energy known as Dark Energy.

Neutron stars are so dense; that a soup can full of neutron star material would have more mass than the Moon.

The Sun produces so much energy, that every second the core releases the equivalent of 100 billion nuclear bombs.

Galileo Galilei is often incorrectly credited with the invention of the telescope. Instead, historians now believe the Dutch eyeglass maker Johannes Lippershey as its creator. Galileo was, however, probably the first to use the device to study the heavens.

Black Holes are so dense, and produce such intense gravity, that even light can not escape. Theoretical physicists predict that there are situations under which light can escape (which is called Hawking Radiation).

Light from distant stars and galaxies takes so long to reach us, that we are actually seeing objects as they appeared hundreds, thousands or even millions of years ago. So, as we look up at the sky, we are really looking back in time.

The Crab Nebula was produced by a supernova explosion in 1054 A.D. The Chinese and Arab astronomers at the time noted that the explosion was so bright, that it was visible during the day, and lit up the night sky for months.

Even though Mercury is the closest planet to the Sun, temperatures can reach -280 degrees F. Why? Since Mercury has almost no atmosphere, there is nothing to trap heat near the surface. So, the dark side of Mercury (the side facing away from the Sun) is very cold.

Venus is considerably hotter than Mercury, even though it is further away from the Sun. The thickness of Venus' atmosphere traps heat near the surface of the planet.

If you're up early, and have an unobstructed view to the east, be sure to look in that direction in the hour before dawn. You'll surely see the bright planets Venus and Jupiter, which returned to that part of the sky about a month ago and have put on a dazzling show for early-morning risers. If you look to the right of Venus and Jupiter along the eastern predawn horizon, you'll also find a familiar figure – a constellation that is *always* in this part of the sky on late summer mornings. It's the beautiful constellation Orion the Hunter – recently behind the sun as seen from our earthly vantage point – now ascending once more in the east before sunrise.



## Don't be a Lightning Rod



A lightning storm is one of the most dramatic shows of nature. You may feel like rushing outside to experience the blinding bolts, with the loud CRACKs and rumbles of surround-sound thunder following close behind.

But don't. Lightning is dangerous. Stay inside.

Each year there are around 25 million lightning flashes in the United States. That's a lot of chances to be a lightning victim. Although most people who are struck by lightning survive, many are badly injured, some permanently. But what causes lightning? And how can we stay safe?

Lightning starts inside a storm cloud. Strong winds inside the cloud toss ice particles and water drops around like underwear in a clothes dryer. The ice and water particles rub together, which builds up static electricity. Sometimes the same thing happens to your underwear in the dryer! But in a cloud, it's on a humongous scale.

The strong static electrical charge that builds up in the cloud "wants" to discharge. So it seeks out something with the opposite kind of charge, which is usually another cloud. But often it is the ground. The charge—in the form of a lightning bolt—travels along the easiest route to the ground. That usually means the nearest, tallest, or most conductive object—such as a tree or a lightning rod. Don't let that lightning rod be you! People have been struck by lightning while talking on a corded phone, while leaning on freezer in their garage, while working on plumbing in the house, while sailing, while camping, while playing golf (this one is a no-brainer!), and while doing any number of other activities outside. One poor park ranger just doing his job over the years was struck by lightning seven times!

Understanding how lightning behaves will help you keep safe before, during, and after a storm. If you cannot reach shelter inside, at least you will know, for example, not to stand under or near a tree or a metal pole or fence. Metal is a great conductor of electricity and invites lightning looking for a fast, easy way to the ground. Find out more about lightning and lightning safety at the NOAA/NASA SciJinks website at <http://scijinks.gov/lightning>. It is by the same people who bring you The Space Place (<http://spaceplace.nasa.gov>).

*This article was written by Diane K. Fisher and provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration. Image: The new laser guide star unit of the Allgäu Public Observatory in southwestern Bavaria, Germany, tests a powerful laser beam on August 18, 2011, while lightning also flashes in the background.*



The effects of lightning caused wildfires (an ever present danger throughout the western United States) at Bruneau Dunes State Park. The photos show grasses burned in the proximity of the pavilion where the Boise Astronomical Society will be hosting the annual Idaho Star Party™ this September All photos © 2012.07.12 by BAS VP Randy Holst, used with permission.



Bruneau Dunes Observatory was spared, but there is always cause for concern. Though difficult to see, the observatory is the building behind the trees on the left. The fire was just over the small ridge to the left (out of photo) of the observatory.



Very Special Announcements

**THE  
DarkSky  
GIVEAWAY  
IS ON!**

IDA members can enter to win a  
full set of TeleVue Ethos Eyepieces!

Not a member?  
Join and enter by  
8-31-12!

Visit [darksky.org](http://darksky.org)  
for details.



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



### **Astronomics is now in our new store!**

We are now in our new store, with the largest telescope showroom in the U.S. It will take several more weeks before construction is finished and our 4000 square foot 120+ telescope display is completely set up and organized, but our retail store is open now with about 75 scopes on display.

If you don't mind a little bit of a temporary construction mess for a while, come by and see us. We have scopes from Celestron, Meade, Explore Scientific, TeleVue, Questar, SkyWatcher, Astro-Tech, iOptron, Takahashi, and more set up for you to see and compare, plus mounts and accessories. We have 75-scopes on display now and about 50 more to come in the next few months.

While we are open now, the date for the official Grand Opening is September 29<sup>th</sup> at 9:00 AM. We plan for it to be an all-day affair, ending with a sidewalk astronomy/star party involving the local high school astronomy clubs and hopefully the OKC astronomy club or any other club that wants to make a showing. The Norman North Astronomy Club advisor has already committed to manning the solar scopes during the day for a sidewalk astronomy and man scopes at night for an outreach star party.

We will have in-store sales and door prizes. TeleVue, for one, has already donated over \$2000 worth of Ethos eyepieces in a carry bag as a door prize. Many manufacturers have agreed to come and talk about their products while displaying what they can do. TeleVue, Celestron, Meade, Lunt, Explore Scientific, and others are making their way down to Norman and I expect to see more and more door prizes pop up soon. We will update our website, CloudyNights.com, as well as our facebook page as soon as more information becomes available.

I know that some of you live extremely far away from Oklahoma and will not be able to make the trip. However, I would like to pass on a discount we provide astronomy club member that you all might not be aware of. Some people are not aware that *astronomics* owns the astronomy forum [www.cloudynights.com](http://www.cloudynights.com). As a thank you for the support the community has given us over the past 33 years, we offer a discount on almost all of our products. All we need is for astronomy club members who give us their club affiliation when they place an order over the phone or via the internet. Due to manufacturer restrictions the discount will not show up in the basket, but will be on the invoice that is mailed to you. As always, feel free to contact us about any questions you have about a potential discount or technical issues.

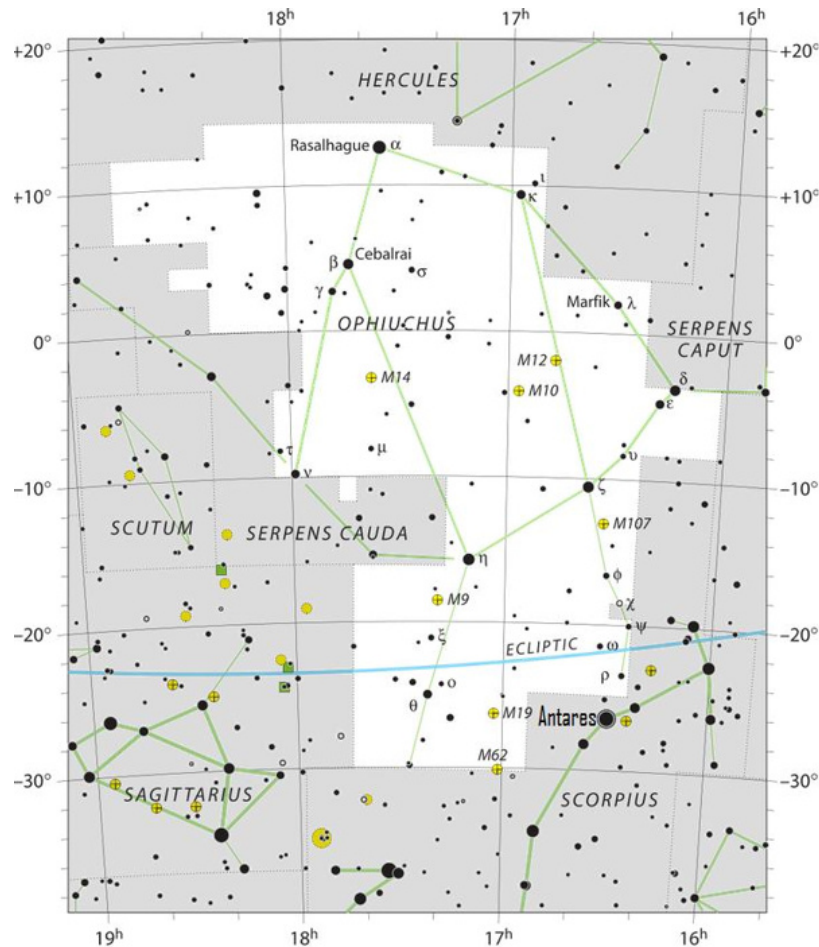
Clear Skies,

Michael Bieler  
Astronomics  
110 East Main St.  
Norman, OK 73069

## Looking Through the Eyepiece – Ophiuchus

The faint constellation Ophiuchus, the Serpent Bearer appears in the southern sky at nightfall and early evening, and descends into the southwest sky as evening deepens into late night. However, Ophiuchus may be hard to see in tonight's moonlight glare. If so, try your luck at the end of the first week in August, when the moon drops out of the early evening sky.

Look for Ophiuchus above the bright ruddy star Antares, the brightest in the constellation Scorpius the Scorpion. Ophiuchus' brightest star – called Rasalhague – highlights the head of Ophiuchus and is nowhere as bright as Antares, the star that depicts the Scorpion's beating heart. Ophiuchus will continue to be visible in the south to southwest sky (above Antares) on August and September evenings.



Ophiuchus is sometimes called the "13th" or "forgotten" constellation of the Zodiac. The sun passes in front of Ophiuchus from about November 29 to December 17. And yet no one ever says they're born when the sun is *in Ophiuchus*. That's because Ophiuchus is a *constellation* – not a *sign* – of the Zodiac.

On sky maps, Ophiuchus the Serpent Bearer is depicted as holding Serpens the Serpent, which is considered a separate constellation. According to ancient Greek star lore, Ophiuchus is Asclepius, the physician who concocted a healing potion from the Serpent's venom, mixing it with the Gorgon's blood and an unknown herb. This potion gave humans access to immortality, until the god of the underworld appealed to Zeus to reconsider the ramifications of the death of death.

Even today, the Staff of Asclepius – the symbol of the World Health Organization – pays tribute to the constellation Ophiuchus the Serpent Bearer. Will you see faint Ophiuchus, the overlooked zodiacal constellation, in the moonlit sky tonight?



## Bruneau Dunes Observatory



The Observatory is now open Friday and Saturday nights through October 13. Solar viewing begins at 6:30 pm. At 8:30 pm join park staff for an introductory astronomy presentation followed by sky viewing, through a variety of telescopes, until 11:30 pm. Volunteers are always needed to fulfill our clubs commitment at the park.



## Centennial Observatory and Faulkner Planetarium Events



Event	Place	Date	Time	Admission
Summer Solar Session #9	Centennial Observatory	Wednesday, August 1 <sup>st</sup> , 2012	1:30 to 3:30 PM	FREE
Summer Solar Session #10	Centennial Observatory	Wednesday, August 8 <sup>th</sup> , 2012	1:30 to 3:30 PM	FREE
Summer Solar Session #11	Centennial Observatory	Wednesday, August 15 <sup>th</sup> , 2012	1:30 to 3:30 PM	FREE
City of Rocks Star Party (5 <sup>th</sup> annual)	Castle Rocks State Park, Almo, Idaho	Friday, August 17 <sup>th</sup> & Saturday, August 18 <sup>th</sup> , 2012	2:00 PM to midnight	All events free; park day use fees apply
Summer Solar Session #12	Centennial Observatory	Wednesday, August 22 <sup>nd</sup> , 2012	1:30 to 3:30 PM	FREE
Summer Solar Session #13	Centennial Observatory	Wednesday, August 29 <sup>th</sup> , 2012	1:30 to 3:30 PM	FREE

### Faulkner Planetarium Schedule Late-Summer, August 7<sup>th</sup> – September 1<sup>st</sup>, 2012

Day	Time	Show
Tuesdays	2:00	Planet Patrol: Solar System Stakeout
	3:30	Two Small Pieces of Glass: The Amazing Telescope/Live Sky Tour
	7:00	Bad Astronomy: Myths and Misconceptions
	8:15	Lynyrd Skynyrd: Fly On Free Bird
Wednesdays	2:00	Planet Patrol: Solar System Stakeout
	3:30	More Than Meets the Eye/Live Sky Tour
Thursdays	2:00	Planet Patrol: Solar System Stakeout
	3:30	Two Small Pieces of Glass: The Amazing Telescope/Live Sky Tour
Fridays	2:00	Planet Patrol: Solar System Stakeout
	3:30	More Than Meets the Eye/Live Sky Tour
	7:00	Bad Astronomy: Myths and Misconceptions
	8:15	Led Zeppelin: Maximum Volume 1
Saturdays	2:00	Planet Patrol: Solar System Stakeout
	4:00	Two Small Pieces of Glass: The Amazing Telescope/Live Sky Tour
	7:00	Bad Astronomy: Myths and Misconceptions
	8:15	Pink Floyd: Dark Side of the Moon



## Membership Information



The Magic Valley Astronomical Society (MVAS) was founded in 1976. The Society is a non-profit [501(c) 3] educational and scientific organization dedicated to bringing together people with an interest in astronomy.

In partnership with the Centennial Observatory, Herrett Center, College of Southern Idaho - Twin Falls; we hold regularly scheduled monthly meetings and observation sessions, at which we share information on current astronomical events, tools and techniques for observation, astrophotography, astronomical computer software, and other topics concerning general astronomy. Members enthusiastically share their telescopes and knowledge of the night sky with all who are interested. In addition to our monthly public star parties we hold members only star parties at various locations throughout the Magic Valley.

MVAS promotes the education of astronomy and the exploration of the night sky along with safe solar observing through our public outreach programs. We provide two types of outreach; public star parties and events open to anyone interested in astronomy, and outreach programs for individual groups and organizations (e.g. schools, churches, scout troops, company events, etc.), setting up at your location. All of our outreach programs are provided by MVAS volunteers at no cost. However, MVAS will gladly accept donations. Donations enable us to continue and improve our public outreach programs.

Membership is not just about personal benefits. Your membership dues support the work that the Magic Valley Astronomical Society does in the community to promote the enjoyment and science of astronomy.

Speakers, public star parties, classes and support for astronomy in schoolrooms, and outreach programs just to name a few of the programs that your membership dues support.



Annual Membership dues will be  
\$20.00 for individuals, families,  
\$10.00 for students.

Contact Treasurer Jim Tubbs for dues information via e-mail: [jtubbs015@msn.com](mailto:jtubbs015@msn.com) or home telephone: 736-1989 or mail directly to the treasurer at his home address. 550 Sparks Twin Falls, ID 83301

Donations to our club are always welcome and are even tax deductible. Please contact a board member for details.

M-51 viewed in this newsletter was imaged with the Shotwell Camera and the Herrett Telescope at the Centennial Observatory by club members Rick Widmer & Ken Thomason. Unless otherwise stated all photos appear in the public domain and are courtesy of NASA.

Magic Valley Astronomical Society  
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"Telescopes are an individual thing and not practical for public use. However, everyone should have the experience of a good look at the moon for at least 5 minutes in their life time. It is a dimension and feeling that is unexplainable. Pictures or TV can't give this feeling, awareness, or experience of true dimension. A person will not forget seeing our closest neighbor, the moon. Norman Herrett in a letter to Dr. J. L. Taylor, president of the College of Southern Idaho, Twin Falls, ID, USA circa 1980.

### Membership Benefits

Sky and Telescope group rates. Subscriptions to this excellent periodical are available through the MVAS at a reduced price of \$32.95.

Astronomy Magazine group rates. Subscriptions to this excellent periodical are available through the MVAS at a reduced price of \$34.00

Receive 10% discounts on other selected Astronomy Publications.

For periodical info. and subscriptions Contact Jim Tubbs, Treasurer

Lending Library: Contact, the current board for information.

Lending Telescopes: The society currently has two telescopes for loan and would gladly accept others. Contact Rick Widmer, Secretary for more information.