



Snake River Skies

The Monthly Newsletter of the Magic Valley Astronomical Society
March 2012



<http://www.mvastro.org>

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Membership Message

Hello again,

At our meeting last month we discussed possibilities for a Messier Marathon. The Herrett Center is not planning a public event this year since this hasn't been very well attended event by the public.

Chris Anderson pointed out that the Observatory would be available for members to check out for themselves as long as there are at least two signed up with security and have let him know in advance.

Boise's club is planning their marathon at Bruneau on March 23rd and 24th.

What we discussed was using the Jerome Gun Club again this year. The gun club is centrally located, has restrooms, and is the least likely place to have mud that time of year. Rob Mayer brought up the topic of trying to actually get some people qualified for a certificate. There are certificates for lower numbers of objects now, not just for the full list. We discussed the dates and the 23rd and 24th would be the best for not having the moon in the way, but the following weekend would have a better chance of getting a higher number of objects. We thought we might plan for both weekends and see how the weather cooperates. This would be a non-public event so we can concentrate on our own observations, but we encourage you to bring anyone who has had an interest and would like to join us. Please see the calendar page for further details. See page 5 for information on a Messier Marathon Certificate from the ALCOR.

We will have a final plan by the general meeting, that will take place on Saturday, the 10th. We will meet at the Herrett Center at 7:00 pm. See everyone there.

Terry Wofford
MVAS President

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.







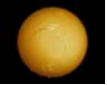






Our star parties are free and you don't have to bring your own telescope. Telescopes are also set up outside on the stargazer's deck. Star Parties are held year round, so please dress accordingly as the Observatory is not heated, nor air conditioned.

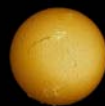
Wishing you dark skies and clear nights!

MVAS Board

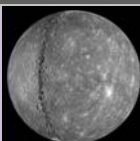


March 2012

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1  Moon at Greatest North Declination +22.2°	2	3
4	5	6	7	8 Full Moon (Crow Moon Algonquin) 	9	10 Membership Meeting at the Herrett Center at 7:00 pm Moon at perigee
11 Daylight Saving Time 	12 Commonwealth Day 	13	14 Last Quarter Moon Moon at Greatest South Declination -22.0° 	15	16	17 St. Patrick's Day 
18	19 Vernal Equinox  Sun-Earth-Day	20	21	22 New Moon 	23 Astronomy Talk "Staring into the Sun" 8:00 pm at the Herrett Center	24 Messier Marathon Jerome Gun Club 
25	26 Moon at Apogee 	27	28 Moon at Greatest North Declination +21.9° 	29	30 First Quarter Moon  Messier Marathon Jerome Gun Club If previous date is clouded out.	31 "Earth Hour" Night Telescope Viewing 8:30 – 9:30 Centennial Observatory 



Solar System



Mercury will be visible early in the month on the western horizon after sunset. It will be at its highest around the 5th when it will shine at magnitude -0.4 and sets 1.5 hours after the Sun. Start to look around 15 minutes after the sunset. Mercury changes size and position quickly. Mercury will be at great east elongation, 18° on the 5th.



Venus will be in the southwestern sky just after sunset all month. It will be blazing at magnitude -4.4 at midmonth and hard to miss. It will reach its greatest elongation from the Sun (46°) on the 27th. For the northern hemisphere this is when Venus will be highest in the sky. During the month Venus will shrink in phase slightly but grow in diameter slightly. Venus-Jupiter conjunction on the 13th within 3°.



Mars will be a must see target this month. It will reach opposition on the 3rd when it will be at its biggest and brightest in two years. It will be at magnitude -1.2 and will appear 13.9" across at opposition. The best time to observe Mars will be around midnight when it will be highest in the sky. Mars will be in Leo but it should not be hard to find. Mars will be at closest approach (0.674 AU) on the 5th at 10:00h



Jupiter will still be a good target this month. Catch it this month because it will be quickly fading in the months ahead. In March it will be sitting pretty high in the sky as it gets dark. It will be bright at magnitude -2.1. Jupiter will inch closer to Venus until around the 11th when the two planets are around 3° apart for around 4 days. A nice grouping of Venus-Jupiter-Moon will occur on the 24th – 25th



Saturn will be in Virgo. It will rise about 10PM. This means the best time to observe it would be a few hours after midnight when it will be due south high in the sky. It will rise earlier as the month goes on. It will be shining brightly at magnitude 0.4 midmonth. It will sit around 6° from Spica. Saturn's famous rings will be tilted open around 15°. This is as wide as they have been for years.



Uranus will be only a marginal target for observing in the early evening early this month. It will sit 4° above Mercury. At magnitude 5.9 it will be hard to pick out of the sunset glare.



Neptune will be too close to the Sun to see this month. It will be very low on the morning eastern horizon.



Pluto will likely be a tough target to see this month. Always a difficult target, it will be sitting in the eastern sky in the Milky Way above Sagittarius before dawn. It will rise a couple hours before sunrise but will not be high in the sky when dawn breaks.



Asteroid 5 Astraea, which lies at the border between the two constellations of Leo and Virgo shines around 9th magnitude. As such, it is outside the range of most binoculars, but locating it with a 4-inch telescope from your backyard will be straightforward.



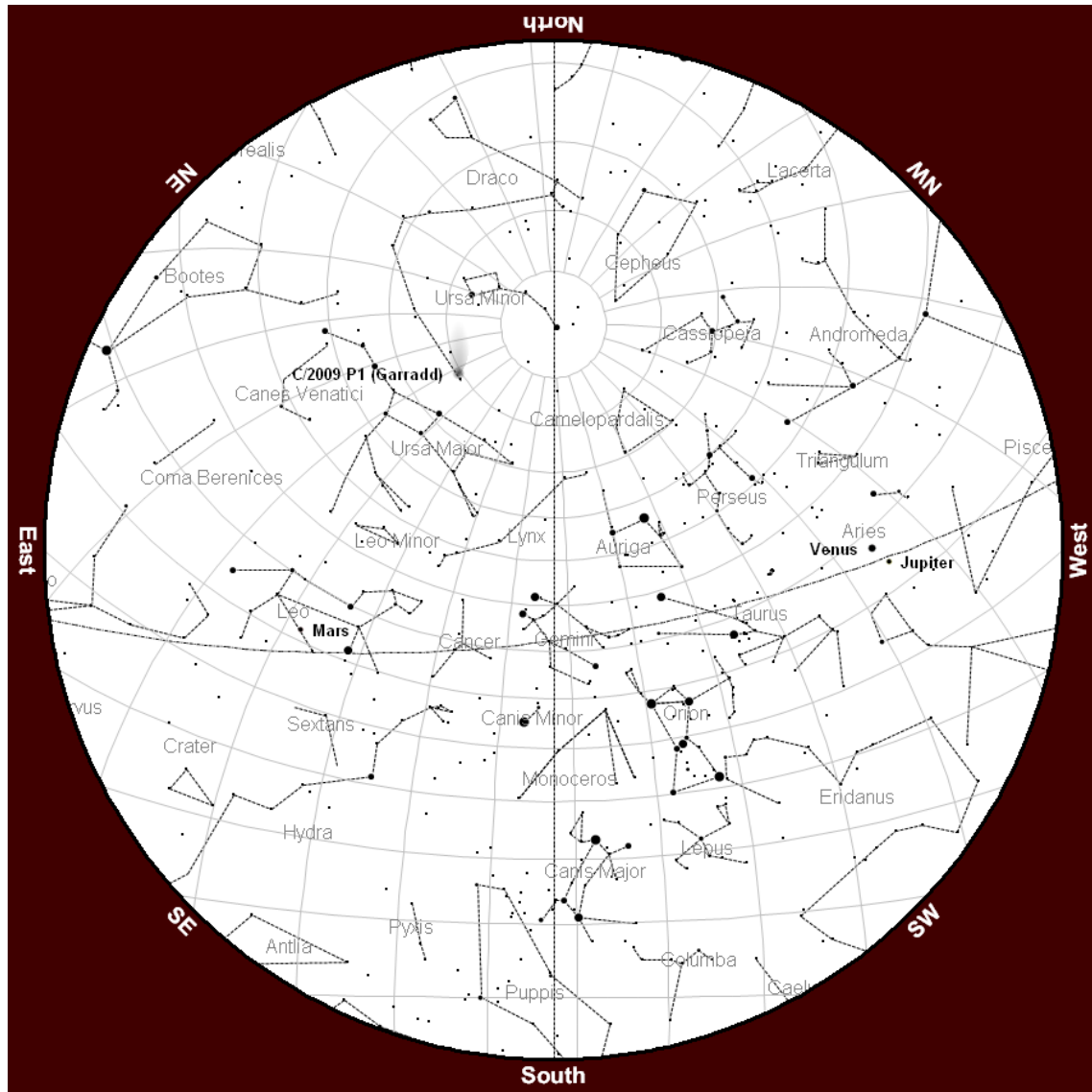
C/2009 P1 Garradd can be found in the constellation Ursa Minor, but by mid- month it passes the border into neighboring Ursa Major. According to recent reports, it should glow at 7th magnitude. This "dirty ice ball" appears as a bright, round fuzz ball roughly 10' across, with little hint of a tail.



Virginids Meteor Showers are a vast complex of a dozen or so radiants that become active in late January and persist until mid-April, without reaching a definite peak. Meteors from this stream appear at a slow speed (about 20 miles per second) from a large radiant that measures 15° by 10° in size. Throughout March, the radiant is located in the northwestern part of Virgo and rises around 9 P.M. local daylight time. However, it is best placed for observing well after midnight, when activity should pick up.



Planisphere for March



This Planisphere should be used as a guide for the month of March. Best observing time begins at 21:30 hours local time.



Do You Know – Trivia Time

Do you actually know your constellations versus the muscles of the human body? Using the names below figure which a muscle, or constellation? Challenge yourself to see if you can figure it out. You'll find the answers on page 9.

Anconeus
Aquila
Buccinator
Camelopardalis
Cetus
Circinus
Corvus
Delphinus
Equuleus

Eridanus
Gracilis
Iliacus
Lepus
Masseter
Multifidus
Musca
Pectineus
Plantaris

Platysma
Popliteus
Puppis
Pyramidalis
Pyxis
Reticulum
Risorius
Saptarshis
Sartorius

Scutum
Soleus
Stapedius
Supinator
Temporalis
Trapezius
Triangulum
Volans
Vulpecula



Message from Your ALCOR Representative

If you are considering participating in a new observing club, I'd like to point out two relatively new programs. The Binocular Double Star Program was designed to be completed with relatively common binocular sizes (7X50) and larger. There are several pairs to be viewed with the naked eye, and you need not use the same binoculars for the whole list. You need to have a working knowledge of the constellations, but this list can be accomplished by most novices. I also like the elegant simplicity of the list and its requirements.

The Analemma Club is a solar observing program that requires tracking and plotting the position of the Sun each day throughout the year. This program has five tasks to accomplish:

1. Build an apparatus suitable for monitoring the sun's position. Plans can be found here:
<http://www.analemma.org/constructanalemma.html>
 2. Calculate their observing latitude and tilt of the Earth's axis
 3. Sketch or plot the path of the Sun on the Celestial Sphere
 4. Calculate the Equation of Time
 5. Calculate the eccentricity of the Earth's orbit
- If you like geometry and arithmetic this can be a fun daytime project for you.

I am also pleased to announce that Robert Mayer has been working hard on completing a couple of ALCOR observation clubs. There is also an observation club for the Messier Marathon. If you are interested here are the details for your observations.

The Messier Program

The Astronomical League offers special recognition in the form of a Messier Program Certificate for those that have observed most or all of the Messier objects. To qualify you must either be a Member-at-Large or be a member of an astronomical society which is affiliated with the League. To obtain an award you must observe the following rules:

Rule 1:

Visually observe 70 Messier objects and keep a record of your observations. Your notes must include:

- a. Date of observation;
- b. Time of observation;
- c. Seeing conditions;
- d. Aperture size of telescope;
- e. Power used;
- f. A short description of the Messier object.

Rule 2:

Have your notebook or record examined by an officer of your Society or a suitably qualified second party.

Rule 3:

When you have observed the balance of the Messier Objects, have your notebook or records examined again and a letter forwarded to the ALCOR representative who is in charge of the Messier program.

Thank you,

Jim Tubbs, Treasurer / ALCOR Representative

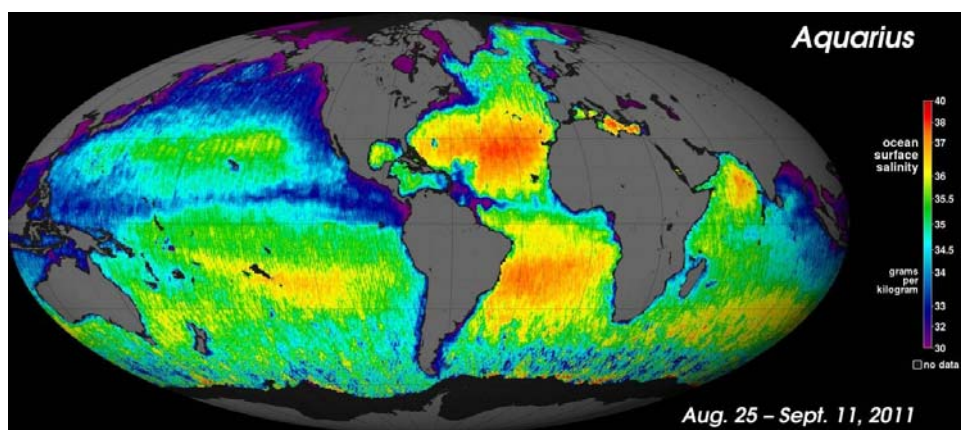
The Hidden Power of Sea Salt, Revealed

Last year, when NASA launched the Aquarius/SAC-D satellite carrying the first sensor for measuring sea salt from space, scientists expected the measurements to have unparalleled sensitivity. Yet the fine details it's revealing about ocean saltiness are surprising even the Aquarius team. "We have just four months of data, but we're already seeing very rich detail in surface salinity patterns," says principal investigator Gary Lagerloef of Earth & Space Research in Seattle. "We're finding that Aquarius can monitor even small scale changes such as specific river outflow and its influence on the ocean."

Using one of the most sensitive microwave radiometers ever built, Aquarius can sense as little as 0.2 parts salt to 1,000 parts water. That's about like a dash of salt in a gallon jug of water. "You wouldn't even taste it," says Lagerloef. "Yet Aquarius can detect that amount from 408 miles above the Earth. And it's working even better than expected." Salinity is critical because it changes the density of surface seawater, and density controls the ocean currents that move heat around our planet. A good example is the Gulf Stream, which carries heat to higher latitudes and moderates the climate. "When variations in density divert ocean currents, weather patterns like temperature and rainfall are affected. In turn, precipitation and evaporation, and fresh water from river outflow and melt ice determine salinity. It's an intricately connected cycle."

The atmosphere is the ocean's partner. The freshwater exchange between the atmosphere and the ocean dominates the global water cycle. Seventy-eight percent of global rainfall occurs over the ocean, and 85 percent of global evaporation is from the ocean. An accurate picture of the ocean's salinity will help scientists better understand the profound ocean/atmosphere coupling that determines climate variability. "Ocean salinity has been changing," says Lagerloef. "Decades of data from ships and buoys tell us so. Some ocean regions are seeing an increase in salinity, which means more fresh water is being lost through evaporation. Other areas are getting more rainfall and therefore lower salinity. We don't know why. We just know something fundamental is going on in the water cycle." With Aquarius's comprehensive look at global salinity, scientists will have more clues to put it all together. Aquarius has collected as many sea surface salinity measurements in the first few months as the entire 125-year historical record from ships and buoys. "By this time next year, we'll have met two of our goals: a new global map of annual average salinity and a better understanding of the seasonal cycles that determine climate." Stay tuned for the salty results.

Read more about the Aquarius mission at aquarius.nasa.gov. Other NASA oceanography missions are Jason-1 (studying ocean surface topography), Jason-2 (follow-on to Jason-1), Jason-3 (follow-on to Jason-2, planned for launch in 2014), and Seawinds on the QuikSCAT satellite (measures wind speeds over the entire ocean). The GRACE mission (Gravity Recovery and Climate Experiment), among its other gravitational field studies, monitors fresh water supplies underground. All these missions, including Aquarius, are sponsors of a fun and educational ocean game for kids called "Go with the Flow" at spaceplace.nasa.gov/ocean-currents.



Caption: Aquarius produced this map of global ocean salinity. It is a composite of the first two and a half weeks of data. Yellow and red represent areas of higher salinity, with blues and purples indicating areas of lower salinity. This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



A Call for Volunteers

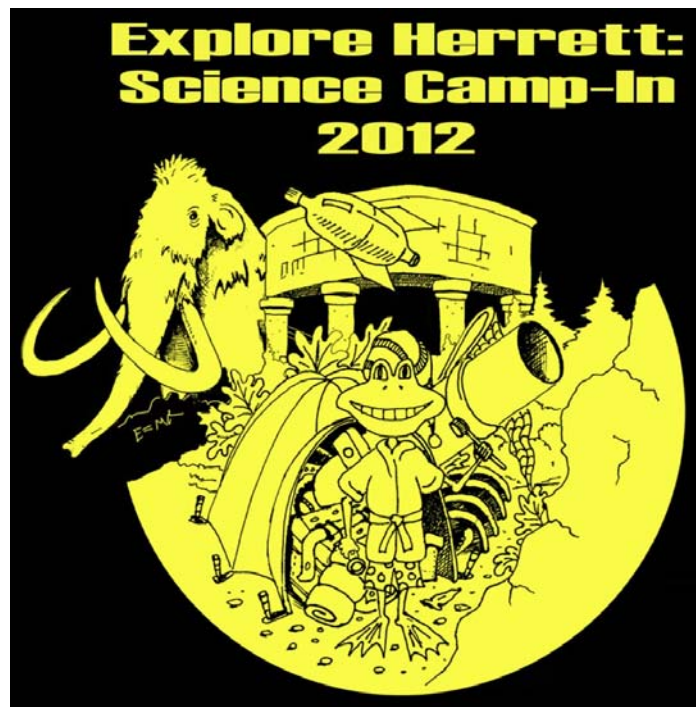
Friday, March 2nd is the Herrett Center's annual overnight ("camp-in") for kids in the 3rd through 5th grade. As usual, part of the program will be offering twelve dozen kids the opportunity to view the skies through telescopes in the observatory (weather permitting, of course). Starting around 10:00 PM they'll come up in six groups of around 25 each (including their group leaders), with each group spending about 20 minutes in the observatory. Over the course of about 2.5 hours we try to get as many eyeballs past as many telescopes as possible. The best way to do this is to have multiple telescopes set up, with each pointing to a target and staying on it. Targets will include Jupiter (setting behind the trees after about 10:30), the Moon (71% waxing gibbous), Mars (just before opposition), Saturn (after 11:00 or so), Comet Garradd (mag. 7.1), and the usual goodies this time of year (M42, M45, Mizar/Alcor, etc.).

We have plenty of telescopes here, so you don't have to lug a scope and worry about it being manhandled, and you need not be certified on the 24". We'll even feed you a meal (sub sandwich, chips, fruit, cookie, fruit drink) when it's all done.

If you are willing to help out, please notify Chris Anderson at your earliest convenience.

Thanks for all you do to share the universe with our community!

Chris Anderson, Coordinator
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Centennial Observatory and Faulkner Planetarium Events



Centennial Observatory

Event	Place	Date	Time	Admission
Monthly Free Star Party	Centennial Observatory	Saturday, March 10 th , 2012	7:30 PM to midnight	FREE
Bimonthly Astronomy Talk: "Staring into the Sun"	Rick Allen Room	Friday, March 23 rd , 2012	8:00 to 9:00 PM	\$2.50 adults \$1.50 students (incl. CSI) Children 6 and under free
Astronomy Talk Night Telescope Viewing	Centennial Observatory	Friday, March 23 rd , 2012	9:00 to 11:00 PM	\$1.50 per person Children 6 and under free or FREE with paid astronomy talk or planetarium admission
Earth Hour Telescope Viewing	Centennial Observatory	Saturday, March 31 st , 2012	8:30 to 9:30 PM	FREE

Planetarium Show Schedule March 6th – 24th, 2012

Day	Time	Show
Tuesday	7:00	The Search for Life in the Universe
Friday	7:00	The Search for Life in the Universe
	8:15	U2
Saturday	2:00	Dark Matters/w Live Sky Tour
	4:00	Oceans In Space/w Live Sky Tour
	7:00	The Search for Life in the Universe
	8:15	Pink Floyd: Dark Side of the Moon

March 27th – March 31st, 2012 (Spring Break week for Magic Valley, Pocatello, and Boise area schools.)

Day	Time	Show
Tuesday	2:00	Lifestyles of the Stars/Live Sky Tour
	3:30	The Search for Life in the Universe
	7:00	Lifestyles of the Stars/Live Sky Tour
Wednesday	2:00	Lifestyles of the Stars/Live Sky Tour
	3:30	The Dinosaur Chronicles
Thursday	2:00	Lifestyles of the Stars/Live Sky Tour
	3:30	The Search for Life in the Universe
Friday	2:00	Lifestyles of the Stars/Live Sky Tour
	3:30	The Dinosaur Chronicles
	7:00	Lifestyles of the Stars/Live Sky Tour
	8:15	U2
Saturday	2:00	Lifestyles of the Stars/Live Sky Tour
	4:00	The Search for Life in the Universe
	7:00	Lifestyles of the Stars/Live Sky Tour
	8:15	Pink Floyd: Dark Side of the Moon



Do You Know – Trivia Time Answers

Name	Muscle or Constellation	Notes
Anconeus	Muscle	Assists in extension of the forearm
Aquila	Constellation	'Eagle'
Buccinator	Muscle	Compresses the cheeks against the teeth (blowing air)
Camelopardalis	Constellation	'Giraffe'
Cetus	Constellation	'Whale'
Circinus	Constellation	'Compasses'
Corvus	Constellation	'Raven'
Delphinus	Constellation	'Dolphin'
Equuleus	Constellation	'Little Horse'
Eridanus	Constellation	'River'
Gracilis	Muscle	Aids in hip and knee flexion
Iliacus	Muscle	Flexes and rotates thigh outward from the body
Lepus	Constellation	'Hare'
Masseter	Muscle	Elevates the jaw
Multifidus	Muscle	Stabilizes vertebrae during spinal movement
Musca	Constellation	'Fly'
Pectineus	Muscle	Flexes, draws thigh and rotates it in toward the body
Plantaris	Muscle	Flexes knee and draws foot downward at the ankle
Platysma	Muscle	Draws the corners of the mouth down and widens it
Popliteus	Muscle	Unlocks the knee (rotates the tibia)
Puppis	Constellation	'Stern'
Pyramidalis	Muscle	Tenses the tissue that runs down the middle abdomen
Pyxis	Constellation	'Compass'
Reticulum	Constellation	'Reticle'
Risorius	Muscle	Draws back the angle of the mouth
Saptarshis	Constellation	Big Bear – The Hindu Name for Ursa Major
Sartorius	Muscle	Flexes, rotates and brings thigh outward from the body
Scutum	Constellation	'Shield'
Soleus	Muscle	Draws foot downward at the ankle
Stapedius	Muscle	Controls the amplitude of sound waves reaching the ear
Supinator	Muscle	Turns forearm 'palm-side' up
Temporalis	Muscle	Elevates and draws back the jaw
Trapezius	Muscle	Holds the arm in place and assists in rotation
Triangulum	Constellation	'Triangle'
Volans	Constellation	'Flying Fish'
Vulpecula	Constellation	'Fox'



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 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 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.

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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.