

#### Membership Meeting Saturday, Sept. 13<sup>th</sup> 2014 7:00pm at the Herrett Center for Arts & Science College of Southern Idaho. Public Star Party Follows at the Centennial Obs.

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Magic Valley Astronomical Society is a member of the Astronomical League

# Snake River Skies

The Newsletter of the Magic Valley Astronomical Society July 2014

Message from the President – Robert Mayer

Colleagues,

The diversity of our field offers plenty of opportunities, and that diversity was clearly apparent last month and will be even more so this month. For example, those who went to the City of Rocks Star Party at the end of August didn't let the rough and cloudy weather shut us off from the beauty of the Milky Way, as Sagittarius still gave out plenty of opportunities Saturday evening for visitors to go "Ah" and telescope operators to teach about the science of what people were seeing. Whether they were from a young family at the nighttime session or a retired farmer during the solar session, there were plenty of opportunities to answer questions. Similar opportunities will continue into September, with Craters of the Moon Fall Star Party and the Idaho Star Party at the Bruneau Sand Dunes.

Our own volunteers are working on a jaunt down to Three Creek, sometime around Sept. 19th. Be sure to check your e-mails.

Closer to home, our own Gary Leavitt helped us at the August meeting on how we can better catch the aesthetic side of astronomy with his presentation on astrophotography, and this month we'll shift gears back to the scientific side thanks to a presentation from Jim Tubbs at our regular meeting Saturday, Sept. 13th. Jim has been taking on a unique area of astronomy, that of the Wolf-Rayet star, and hopes to offer some insight into this challenging member of our universe. We look forward to hearing from him.

September is also Astronomy Talk month, so here's an invitation to head over to the Herrett Center on Sept. 25 to hear Chris Anderson give us the latest news on Rosetta. It looks like we have plenty to choose from.

Clear Views,

**Rob Mayer** 

In this Issue	
President's Message / Board Members Contact	Page 1
Table of Contents / Celestial Trivia and Events	Page 2
Calendar	Page 3
Planisphere	Page 4
Solar System at a Glance	Page 5
Club Announcements	Pages 6-9
Looking Through the Eyepiece Article – Dolphin Treats by Steve Bell	Pages 10-11
Observatories and Planetariums	Pages 12
About the Magic Valley Astronomical Society	Page 13

# **Celestial Trivia and Events**

Karl Harding discovered asteroid 3 Juno on September 1, 1804. E. E. Barnard discovered Jupiter's fifth satellite, fourteenth-magnitude Amalthea, using the 36-inch refractor at the Lick Observatory on September 9, 1892. On September 19, 1848, William Bond discovered Saturn's fourteenth-magnitude satellite Hyperion, the first irregular moon to be discovered. Neptune was discovered by Johann Gottfried Galle on September 23, 1846, using Urbain Le Verrier's calculations of its position.

The zodiacal light, or the false dawn, is visible about two hours before sunrise from a dark site during the latter part of September.

Brightness, apparent size, illumination, distance from the Earth in astronomical units, and location data for the planets and Pluto on September 1st: Mercury (magnitude -0.2, 5.4", 83% illuminated, 1.25 a.u., Virgo), Venus (magnitude -3.9, 10.1", 97% illuminated, 1.65 a.u., Leo), Mars (magnitude +0.6, 6.8", 87% illuminated, 1.37 a.u., Libra), Jupiter (magnitude -1.8, 32.1", 100% illuminated, 6.15 a.u., Cancer), Saturn (magnitude +0.6 , 16.2", 100% illuminated, 10.24 a.u., Libra), Uranus (magnitude +5.7, 3.7", 100% illuminated, 19.08 a.u. on September 16th, Pisces), Neptune (magnitude +7.8, 2.4", 100% illuminated, 29.01 a.u. on September 16th, Aquarius), and Pluto (magnitude +14.1, 0.1", 100% illuminated, 32.40 a.u. on September 16th, Sagittarius).

Notable carbon star for September: LW Cygni

Challenge deep-sky object for September: Abell 78 (Cygnus)

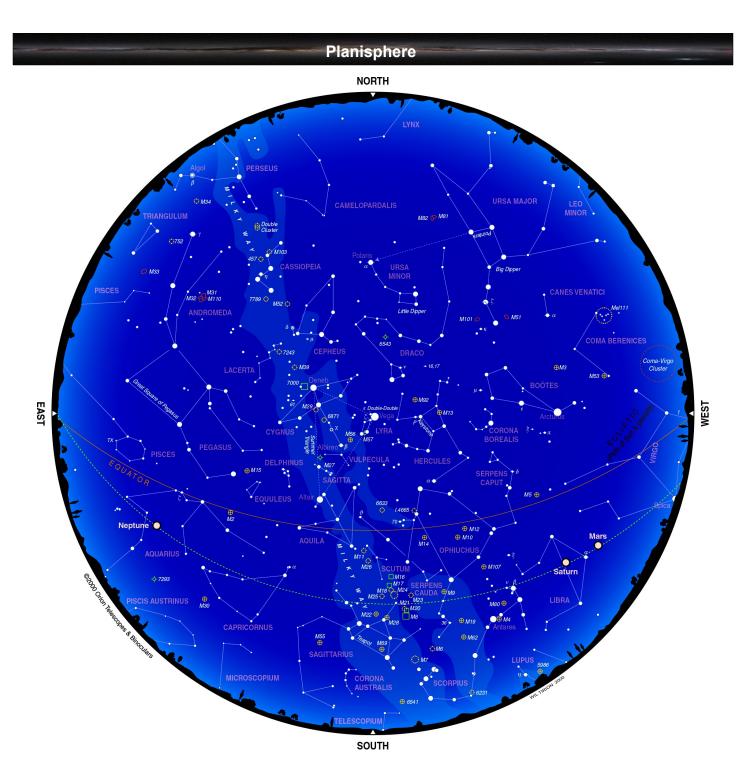
Forty-five deep-sky objects for September: M2, M72, M73, NGC 7009 (Aquarius); M30, NGC 6903, NGC 6907 (Capricornus); B150, B169, B170, IC 1396, NGC 6939, NGC 4343, B361, Ba6, Be87, Cr 421, Do9, IC 1369, IC 4996, IC 1516, LDN 906, M29, M39, NGC 6866, NGC 6871, NGC 6888, NGC 6894, NGC 6910, NGC 6960, NGC 6992, NGC 7000, NGC 7008, NGC 7026, NGC 7027, NGC 7039, NGC 7063, NGC 7086 (Cygnus); NGC 6891, NGC 6905, NGC 6934, NGC 7006 (Delphinus); NGC 7015 (Equuleus); M15 (Pegasus); NGC 6940 (Vulpecula)

Top ten binocular deep-sky objects for September: IC 1396, Garnet Star, M2, M15, M29, M30, M39, NGC 6939, NGC 6871, NGC 7000

Top ten deep-sky objects for September: IC 1396, M2, M15, M30, NGC 6888, NGC 6946, NGC 6960, NGC 6992, NGC 7000, NGC 7009

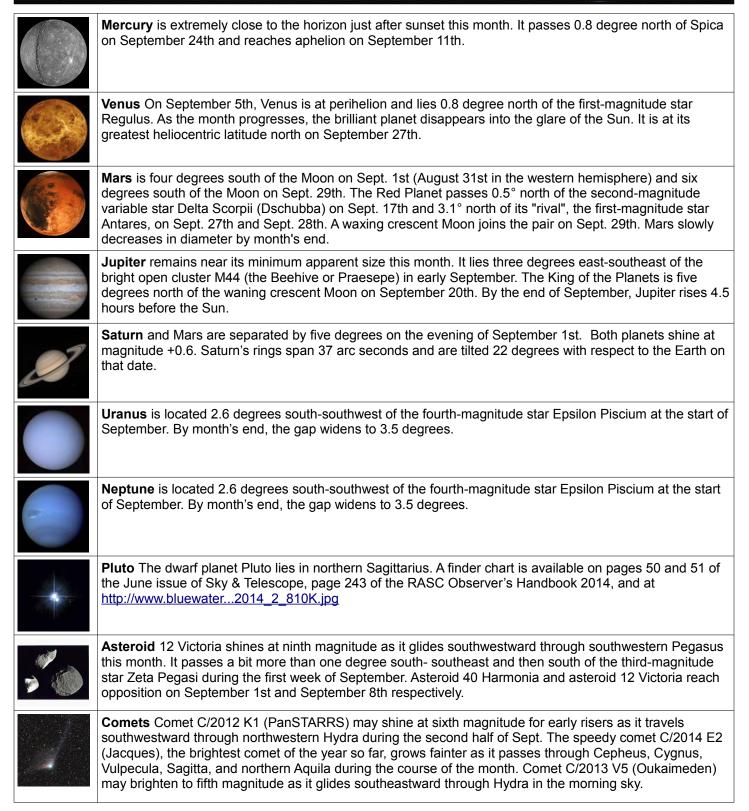
Calendar						
September 2014						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1 Labor Day	2 First Quarter Moon 51% Visible	3	4	5	6
7	8	9 Full Moon 100% Visible	10	11	12	13
14	15	16 Last Quarter Moon 46% Visible	17	18	19 Idaho Star Party at Bruneau Dunes S.P.	20 Idaho Star Party at Bruneau Dunes S.P.
21 Idaho Star Party at Bruneau Dunes S.P.	22	23 Autumnal Equinox	24 New Moon	25	26	27
28	29	30				

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This Planisphere is available in a larger format online using this link: <u>http://www.telescope.com/assets/images/starcharts/2014-9-starchart\_col.jpg</u> Be Safe – Get Out There – Explore Your Universe!

# Solar System at a Glance





The Idaho Star Part welcomes noted astrophotographer (and Idaho resident) Thomas Davis. Mr. Davis has published many high quality astrophotos in popular magazines like Astronomy.

The ISP offers excellent conditions for astronomy and abundant daytime family recreation with a friendly atmosphere. Attendees are encouraged to bring their telescope equipment and personal observing projects to enjoy under southern Idaho's dark skies.

#### Star Party Overview

The Idaho Star Party will run Friday, September 19 through the morning of Sunday, September 21. Registration check-in will begin on Friday at 3:00 P.M. to 6:00 P.M. Then again on Saturday Registration will begin from 11:00 A.M. to 1 P.M. Boise Astronomical Society will have Speakers giving their presentations Friday and Saturday. Also Saturday we will feature Children's Programs, and the drawing for Door Prizes. The Idaho Star Party will have our serious viewing on Friday and Saturday Evening, after the other events. Cleanup will happen as soon as people roll out of their sleeping bags on Sunday morning, around 10:00 A.M. Checkout for the campgrounds is 12:00 P.M.

#### Schedule of Events (subject to change)

#### Friday, September 19, 2014

- 3-6pm Registration/Check-in
- 7pm Speaker Steele Reese Education Center (You must have your name badge for entry)
- 8:30pm Serious Observing at Observatory and Eagle Cove Campground

#### Saturday, September 20, 2014

10:30am to Noon	Children's Program - Eagle Cove Pavilion
11:30am to 12:30pm	Solar System Guided Nature Hike - Eagle Cove Pavilion
11am to 1pm	Late Registration - Eagle Cove Pavilion
11:30am to 1pm	Equipment Trade - Eagle Cove Pavilion

Speaker - Steele Reese Education Center (You must have your name badge for entry)
Children's Door Prizes - Eagle Cove Pavilion
Group Photo - Eagle Cove Pavilion
Star-B-Que - Eagle Cove Pavilion
Door Prize/Raffle Drawings - MUST BE PRESENT TO WIN PRIZES, exception is the Meade OTA Drawing.
Public Star Party - Eagle Cove Campground
Serious Observing - Eagle Cove Campground

## Food and Dining



The Star-B-Que will be held on Saturday (tickets required). Last year, the food committee cooked up an excellent meal. More information will be available as we get closer to the Star Party.

Other than the Star-B-Que, you will need to bring your own food to the ISP.

Many choices in restaurant dining are available in Mountain Home, about 25 minutes from the park.

#### Camping

There are three camping options within the Park; Broken Wheel, Eagle Cove Loop A and Eagle Cove Loop B. Broken Wheel is the oldest of the camp sites and the farthest from the Star Party activities. This section has trees for shade and many viewing obstructions. Reservations for these sites must be made through the Bruneau Dunes State Park web site.



The Boise Astronomical Society board has reserved all Eagle Cove Loop A campsites and both cabins for ISP 2014, September 19 and 20. These camp sites have been spoken and paid for. If you have not yet reserved a camp spot you will need to go the the Bruneau Dunes State Park web site and reserve a site through them in either Eagle Cove Loop B or Broken Wheel. The Eagle Cove Loop B sites are as close to the Pavilion as Loop A and provide good open viewing. They must be reserved through the Bruneau Dunes State Park web site.

#### Things to Bring

You can prepare in a number of ways to help you and everybody else get the most out of the ISP.

# Do Bring:

- Mosquito Repellent and Sunscreen this is very important
- Drinking Water (Water is plentiful at the campground and observatory, but be sure to have some for any outings that you may take. Hydration is an important consideration in planning events at Bruneau.)
- A sweatshirt and a warm jacket (It can get downright chilly at night!)
- A small flashlight with a red filter.

#### Do Not Bring:

- Dogs that are not 100% under your control at all times
- Coleman lanterns (bright lights damage night vision for viewers)
- Large or unfiltered flashlights (same as above)
- Anything that makes excessive noise between the hours of 10:00 p.m. and 10:00 a.m. This includes generators
  and amplified music systems. Our goal is to provide a peaceful environment during prime observing and sleeping
  hours.

#### Part I: OBSERVING PRE-PLANNING

With 5-10 minutes of internet browsing will maximize your observing experience. Try out these links.

First check the weather at the observing site by clicking on: Clear Sky Chart http://cleardarksky.com/csk/

Then check for bright satellite passes, Iridium flashes, or space station passes at: Heavens Above

Then consider the phase of the moon and rise/set times: www.moonconnection.com

And if you're serious about logging in specific objects, here are two recommended programs to use:

Starry Night Software and Sky Safari (for Mac) http://bit.do/Njwb

#### Part II: STAR PARTY COMFORT

These are intended to be lessons learned. You may assume that these are listed because at one point I didn't know any of this and did something really dumb and learned my lesson. The Boy Scout Motto is "Be Prepared." ...Sage advice for any amateur astronomer.

#### Staying Warm

Bring warm clothes, boots and a hat. It gets cold, even in the summer in most places - especially on mountain tops where we like to hang out. Cheat a bit when it comes to dressing warmly. Bring a couple of heat packs that you can get at most sporting goods shops. These small packets heat up to about 150 degrees F and work by oxidation. They are completely safe and although are advertised to stay warm for 6 hours, I have often had them last for double that amount. Put one in the pocket of your shirt under your jacket and you'll be toasty. The packets cost about \$1 each and are worth every penny. They also come in Toe Warmer size.

Your feet are an important part of your observing experience. Get a very warm pair of boots. The heat flows right out of your feet and into the pavement if your boots are not insulated well. Get the boots a bit oversize for extra socks (and the toe warmer heat packs). You're not hiking in these things, you're pretty much standing in one place.

Bring an old large blanket or drop cloth to put under your scope. The first advantage to doing this is that it will keep the dust down around your scope and you'll have a lot less cleaning to do the next day. Another is that you'll be able to find that black lens cap you accidentally dropped much more easily. It's also a lot easier on your knees if your eyepiece is low to the ground and you have to kneel. I always seem to find the weeds with the stickers to kneel on. This also cuts down on dew and condensation.

#### Power

Bring extra batteries and charge your Power Pack before you go out. If you have a Telrad, a LED flashlight, map light, or if your scope is a battery powered GOTO scope, it's only a matter of time until you've hauled everything out on a nice dark evening, you're set up and ready to observe only to find out that something's out of juice. If it's not you, you can be the person who saves your observing buddy's evening by giving them a battery or two.

#### **Furniture**

Consider bringing out a table to put your charts and eyepieces on. Sturdy is good. Others have tried one of those roll-up camping tables and had poor luck with them. Some astronomer's started out with a half card table from Target for about \$20. It worked OK, but I found that I liked something just a bit bigger like a folding table, so I got a molded plastic one at COSTCO for \$29 and it's been a real workhorse.

The fold-up camping chairs that are sold now are great for relaxing before it really gets dark. They're also good for stretching out in the sleeping bag to watch meteor showers. Recommend are the ones with a footrest and at least one drink holder. You can get these inexpensively at Target, Walmart, etc. in the Spring.

#### <u>Safety</u>

The fact is that we go to great lengths to find the remotest, darkest skies, away from lots of people. But there are still the RARE issues with animals, and even possible unexpected medical problems. By taking a couple of responsible steps these are of little concern.

Observe with a partner or a group. There's more safety in numbers.

Let someone know where you'll be observing from, and when you expect to call it an evening and head home.

If you're observing from a State Park, or National Park, drop by the Ranger Station and let them know that you'll be out and where you're setting up. Usually they'll keep their eyes open for you - and on many occasions, one or two rangers have stopped by and had some hot coffee while looking through the telescope for a bit.

Take a cell phone with you. You can also use it to call up your observing buddies and tell them all about the fabulous viewing they're missing at that moment. Sites such as Granite Creek (near Idaho City) does not have cellular coverage, so you should always have a back up calling plan.

Put your car keys in a zippered jacket pocket or attach them to your tripod. Seeing them safely locked in your car is not necessarily a happy feeling...at three a.m.

Always look up and know exactly where the Star Party is going to be and get there before the Sun goes down. It's too embarrassing... too humiliating to learn you are in the wrong spot and by yourself. If this is the case call someone.

Consider the drive time to the site and back. Plan to sleep if necessary to avoid an accident.

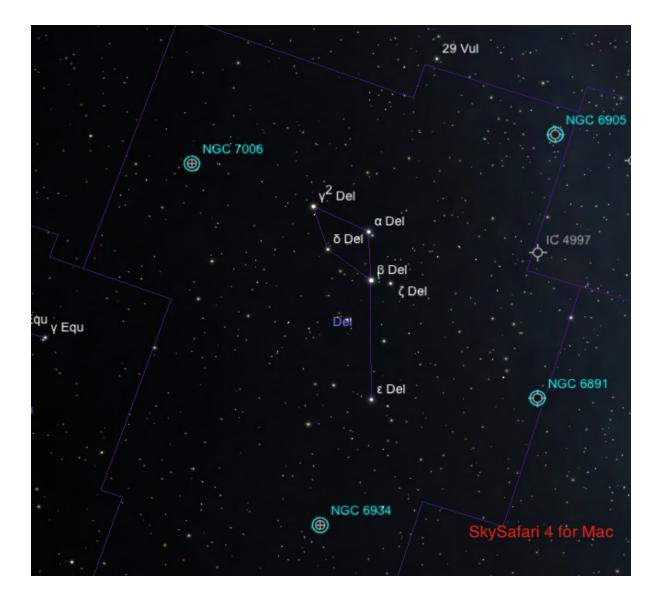
#### Part III: ASTRONOMY ITEMS NOT AN ALL INCLUSIVE LIST

- D Telescope / Tripod / Mount / Truss Rods / Counterweights / Ground cover / Power cables
- □ Extra batteries / Power supply / Battery charger
- □ All equipment cases
- Eyepieces
- Binoculars
- Camera / Mounts / SD Cards / Cables / Film
- □ Chair for the Telescope
- Observing table / Chair
- Dew shield / Dew heaters
- Red flashlight / Headlamp / White flashlight / Headlamp: to use when breaking down cleaning up.
- Telrad & Batteries
- Laptop / Laptop screen filter / Serial / USB cables / Smartphone
- Green Laser Pointer (Use with Caution)
- □ Step-Stool
- Sky Charts / Satellite / Comet Predictions / Astronomy Books
- Observing Journal / Target list for the night
- D Toolbox / Tools: Allen wrenches, crescent wrench, pliers, screwdrivers
- Reading glasses
- Coat / Hat / Gloves / Warm Shoes / Pocket Heaters / Blanket
- Snacks / Food / Water / Hot Beverage / Pot-Luck item: When having a pot-luck.
- □ Small first aid kit / Medicines you need
- Eating utensils (potlucks, Star-B-Que) / Napkins / Trash bags
- Anything YOU think would make you more comfortable during your observing sessions!

# Looking through the Eyepiece Dolphin Treats by Steve Bell

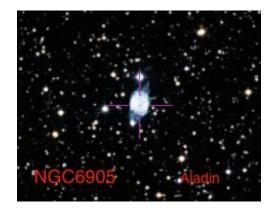
Riding high in the southwest on September nights, the small kite-shape of Delphinus, the Dolphin, is conspicuous southeast of Cygnus. While it does not have the plethora of deep sky objects within the boundary of Cygnus, it is home to four objects worth observing in backyard scopes, two globular clusters and two planetary nebulae.

Object	Туре	RA	Dec	Mag	Size
NGC6891	P Neb	20 15 12	+12 42 00	12.0	1.2
NGC6905	P Neb	20 22 24	+20 07 00	12.0	1.7
NGC6934	Globular	20 34 12	+07 24 00	8.9	5.9
NGC7006	Globular	21 01 30	+16 11 00	10.6	2.8





**NGC 6891:** The more difficult of the two planetaries, this one requires high power. Through an 8" SCT at 294X, the central star came and went. The PN was about 1/30 FOV at 214X. UHC filter did not enhance visibility. This planetary can be difficult to distinguish from a star at lower power.



**NGC 6905:** This PN is much "easier" than 6891, being very visible without a filter through an 8" SCT at 147X. A UHC filter enhances the nebula, but makes the central star invisible. Without the filter the central star winks in and out of visibility. With the filter, the nebula increases in size and becomes more circular (to the west). This PN has a very nice star field, resembling a miniature Hercules.



**NGC 6934:** This small but bright globular cluster is visible in 50mm and larger finders. Through an 8" SCT at 107 and 147X, it appears circular with a broad, bright core. At 147X it occupied about 1/16 FOV with a broad bright core with an abrupt transition. It was grainy but not really resolved.

# **Observatories & Planetarium**

#### Centennial Observatory - Herrett Center - Twin Falls, ID



#### herrett.csi.edu/observatory

Event	Place	Date	Time	Admission
International Observe the Moon Night	Centennial Observatory	Saturday, Sept. 6 <sup>th</sup> , 2014	8:30 to 10:30 PM	FREE
Monthly Free Star Party	Centennial Observatory	Saturday, Sept. 13 <sup>th</sup> , 2014	8:45 PM to midnight	FREE
Bimonthly <u>Astronomy Talk</u> : "The Rosetta Comet Orbiter and Lander Mission"	Faulkner Planetarium	Thursday, Sept. 25 <sup>th</sup> , 2014	7:30 to 8:30 PM	Adults: \$2.50 adults Students (incl. CSI): \$1.50 (Children 6 & under free)
Astronomy Talk Night Telescope Viewing	Centennial Observatory	Thursday, Sept. 25 <sup>th</sup> , 2014	8:30 to 9:30 PM	\$1.50 (Children 6 & under free) Free to all with paid astronomy talk / planetarium admission

### Earl & Hazel Faulkner Planetarium – Herrett Center – Twin Falls, ID

Call, or Check Our Website for Current Shows and Times herrett.csi.edu/planetarium 208-732-6655



The Bruneau 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.

# About the Magic Valley Astronomical Society

Magic Valley Astronomical Society P.O. Box 445 Kimberly, ID, USA 83341 www.mvastro.org

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

Donations to our club are always welcome and are even tax deductible. Please contact a board member for details. M-51 (On this page) 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.



#### Membership Benefits:

Sky and Telescope group rates. Subscriptions to this excellent periodical are available at a reduced price of \$32.95. Astronomy Magazine group rates. Subscriptions to this excellent periodical are available 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 Telescopes: The society currently has three telescopes for loan and would gladly accept others. Contact President Robert Mayer, for more information.