# Snake River Skies

The Newsletter of the Magic Valley Astronomical Society

Membership Meeting Saturday, March14<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. Club Officers

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Magic Valley Astronomical Society is a member of the Astronomical League





M-51 imaged by Rick Widmer & Ken Thomason

### www.mvastro.org

# President's Message

Colleagues,

The weather is just starting to warm up, meaning activities are starting to warm up as well. First, in light of the fact that the last meeting fell on Valentine's Day, Chris Anderson will give his presentation on occultations on the March 14<sup>th</sup> meeting instead.

But the big event will be the following week. Schedules have lined up that it's time for the annual MVAS Messier Marathon at the Jerome Gun Club. Friday,

March 20 will be the primary day, with Saturday, March 21 as the weather backup. If you don't feel like bagging all 110, feel free to do what you can or want.

I'd also like to invite you to extend an invitation to anyone you know who has a telescope and just hasn't got out lately. That not only means MVAS members, but perhaps someone who got a Christmas gift and hasn't used it yet. We'd love to see you there.

Meanwhile, the College of Southern Idaho has a few activities to check out. First, on Wednesday, March 4<sup>th</sup>, the CSI Honors Department will present Christine McKinley and her presentation, "Physics for Rock Stars." According to the Honors Department, McKinley is not only a mechanical engineer, but has hosted shows on the Discovery and History Channels.

Then, on Friday, March 13<sup>th</sup> children in grades three to five will converge on the Herrett Center Museum for the annual Night in the Museum. It's likely volunteers will be needed, so we invite you to contribute if the call comes. Meanwhile, keep the pictures coming in.

Clear Views, Rob Mayer



Moon Rise over the Snake River Canyon & Shoshone Falls © Gary Leavitt MVAS

# **Calendars for March**

**Events Calendar** 

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5 Full Moon Worm Moon	6	7
8 Daylight Saving Time	9	10	11	12	13 Last Quarter	14
15	16	17 St. Patrick's Day	18	19	20 New Moon Vernal Equinox Messier Marathon	21 Messier Marathon Back-up date Jerome Gun Club
22	23	24	25	26	27 First Quarter Moon	28
29	30	31				

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# March Celestial Calendar

3/3 Jupiter is 5 degrees north of the Moon

3/4 Venus is 0.09 degree north of Uranus

3/5 The Moon is at apogee, subtending 29' 24" from a distance of 406,384 kilometers (252,516 miles)

3/6 Mercury is at aphelion today; asteroid 7 Iris is at opposition

3/9 Asteroid 3 Juno is stationary

3/11 Mars is 0.27° north of Uranus

3/12 Saturn is 2.0° south of the Moon

3/14 The Curtiss Cross, an X-shaped clair-obscure illumination effect located between the craters Parry and Gambart, is predicted to occur at 00:02

3/15 Venus is at the ascending node today

3/17 Mercury is 1.6 degrees south of Neptune

3/19 Neptune is 4 degrees south of the Moon Mercury is 5 degrees south of the Moon; the Moon is at perigee,

subtending 33' 25" from a distance of 357,584 kilometers (222,192 miles).

3/21 Uranus is 0.1 degree south of the Moon, Mars is 1 degree north of the Moon,

3/22 Venus is 3 degrees north of the Moon

3/25 The Moon is 0.9 degree north of the first-magnitude star Aldebaran (Alpha Tauri)

3/27 Mercury is at its greatest heliocentric latitude south today;

3/30 Jupiter is 6 degrees north of the Moon at 10:00

John Herschel (1792-1871), Percival Lowell (1855-1916), Albert Einstein (1879-1955), and Walter Baade (1893-1960) were born this month.

Titan, Saturn's largest satellite, was discovered on March 25, 1655 by the Dutch astronomer Christiaan Huygens. Sir William Herschel discovered Uranus on March 13, 1781. The first photograph of the Moon was taken on March 23, 1840. The rings of Uranus were discovered on March 10, 1977.

During the second and third weeks of the month, the zodiacal light is visible in the western sky after sunset from dark locations.

Information on Iridium flares and passes of the ISS, the Tiangong-1, the USAF's X-37B, the HST, and other satellites can be found at <u>http://www.heavens-above.com/</u>

The Moon is 10.0 days old, is illuminated 80.8%, and is located in the constellation of Gemini at 0:00 UT on March 1st. It's at its greatest northern declination of +18.2 degrees on March 26th and its greatest southern declination of -18.3 degrees on March 14th. Latitudinal libration is at a maximum of +6.8 degrees on March 27th and a minimum of -6.8 degrees on March 15th. Longitudinal libration is at a maximum of +7.2 degrees on March 25th and a minimum of -7.8 degrees on March 13th. New Moon occurs on March 20th. Large tides will happen on March 20th through March 23rd. The Moon will occult Uranus and Mars on March 21st and Aldebaran on March 22nd from certain parts of the world.

The Sun is in Aquarius on March 1st at 0:00 UT. It crosses the celestial equator at 22:45 UT (16:45 MDT) on March 20th, bringing spring to the northern hemisphere. Brightness, apparent size, illumination, distance from the Earth in astronomical units, and location data for the planets and Pluto on March 1st: Mercury (magnitude +0.0, 6.5, 65%, 1.03 a.u., Capricornus), Venus (magnitude -3.9, 12.0", 86% illuminated, 1.38 a.u., Pisces), Mars (magnitude +1.3, 4.2", 97% illuminated, 2.24 a.u., Cetus), Jupiter (magnitude -2.5, 44.5", 100% illuminated, 4.43 a.u., Cancer), Saturn (magnitude +0.4, 16.9", 100% illuminated, 9.82 a.u., Scorpius), Uranus (magnitude +5.9, 3.4", 100% illuminated, 20.93 a.u. on March 16th, Pisces), Neptune (magnitude +8.0, 2.2", 100% illuminated, 30.92 a.u. on March 16th, Aquarius), and Pluto (magnitude +14.2, 0.1", 100% illuminated, 33.17 a.u. on March 16th, Sagittarius).

In the evening, Venus, Mars, and Uranus can be seen in the west and Jupiter in the southeast. Jupiter is located in the southwest at midnight. Mercury is in the southeast, Saturn is in the south, and Neptune is in the east in the morning sky.

Mercury lies very low in the southeast at dawn. It reaches aphelion on March 6th, is 1.6 degrees south of Neptune on March 17th, is five degrees south of the Moon on March 19th, and is at its greatest heliocentric latitude south on March 27th.

Venus grows in apparent size to 14 arc seconds this month but decreases 8% in illumination to 78%. The brilliant planet passes 0.1 degree north of Uranus on March 4th, is at the ascending node on March 15th, and is three degrees north of the Moon on March 20th. The gap between Venus and Mars increases to 13 degrees by March 21st and 17 degrees by March 31st. Venus sets three hours after the Sun by the end of the month.

Mars is located in Cetus for the first two days of March and then enters Pisces. On March 29th, it passes into Aries. Mars subtends just four arc seconds by month's end.

During March, Jupiter decreases almost three arc seconds in angular diameter and dims by two-tenths of a magnitude.

Jupiter's retrograde or westward motion carries it to a position five degrees east of the bright open cluster M44 (the Beehive Cluster) by the end of March. On March 20th, Ganymede reappears from eclipse three arc minutes to the west of lo beginning at 2:43 UT (20:43 p.m. MDT). Galilean satellite mutual events take place on March 1st, 3rd, 6th, 8th, 10th, 13th, 14th, 15th, 16th, 17th, 20th, 24th, and 27th UT. For further information on these events, consult page 53 of the March issue of Sky & Telescope.

Saturn rises prior to 1:00 a.m. local time on March 1st. It reaches maximum altitude as dawn breaks. Saturn begins retrograde motion on March 14th. At mid-month, the planet's disc spans 17 arc seconds. Its rings are 39 arc seconds in diameter and are tilted by 25 degrees. Eight-magnitude Titan is positioned due north of Saturn on the nights of March 1st and March 17th and due south of the planet on March 9th and March 25th. In early March, tenth-magnitude lapetus is positioned at its farthest orbital point west of Saturn.

Uranus is just 0.09 degree south of Venus at 20:00 UT (13:00 p.m. MDT) on March 4th, the closest conjunction of two planets to take place this year. Uranus, Venus, and Mars form a planetary trio (i.e., three planets located within a circle five degrees in diameter) that night. On March 11th, Mars is 0.27 degree north of Uranus at 19:00 UT (12:00 p.m. MDT). The seventh planet disappears from view by mid-March.

Neptune reappears low in the morning sky in late March for observers in the southern hemisphere.

Pluto is not a viable target this month.

For more on the planets and how to locate them, browse http://www.nakedeyeplanets.com/

During March, asteroid 354 Eleonora heads northwestward through eastern Leo. Eleonora (magnitude 9.6) reaches opposition on March 5th. Asteroid 7 Iris (magnitude 9.1) reaches opposition on March 6th, asteroid 56 Melete (magnitude 12.5) on March 7th, asteroid 17 Thetis (magnitude 11.0) on March 7th, asteroid 67 Asia (magnitude 11.9) on March 19th, asteroid 44 Nysa (magnitude 9.5) on March 22nd, and asteroid 85 Io (magnitude 11.8) on March 31st.

Comet C/2014 Q2 (Lovejoy) has maintained its brightness remarkably well since perihelion and, while fading to sixth magnitude at the start of March, is still a fine target for binoculars and small telescopes, as it travels through Cassiopeia. It passes about one degree to the east of the bright open cluster NGC 457 (the Owl Cluster) in Cassiopeia on the nights of March 9th through March 11th and just 0.1 degree to the west of the third-magnitude star Delta Cassiopeia on March 15th. On the following two nights, the comet is located approximately one degree to the west of the open cluster NGC 663 on March 20th.

A wealth of current information on solar system celestial bodies is posted at http://www.curtrenz.com/astronomical

Browse <u>http://astrocast.tv/</u> for an informative video on astronomical events taking place this month.

It is possible to observe all 109 (or 110) Messier objects during a single night around the time of the vernal equinox, if the Moon phase and local latitude permits. For information on running a so-called Messier Marathon, browse <a href="http://messier.seds...n/marathon.html">http://messier.seds...n/marathon.html</a> and <a href="http://messier.seds...n/marathon.html">http://messier.seds...n/marathon.html</a>

Free star maps for March can be downloaded at <u>http://www.skymaps.com/downloads.html</u> and <u>http://www.telescope...thly-Star-Chart</u>

Notable carbon star for March: T Cancri (Cancer)

Top ten binocular deep-sky objects for March: M44, M48, M67, M81, M82, NGC 2571, NGC 2683, NGC 2841, NGC 2903, NGC 2976

Top ten deep-sky objects for March: M44, M48, M67, M81, M82, NGC 2654, NGC 2683, NGC 2835, NGC 2841, NGC 2903

Challenge deep-sky object for March: Abell 30 (Cancer)

The objects listed above are located between 8:00 and 10:00 hours of right ascension.



Planisphere courtesy of Chris Anderson, Observatory Manager, Herrett Center College of Southern Idaho, Twin Falls, ID

Be Safe – Get Out There – Explore Your Universe

# **Idaho Skies for March**

# Vol. 9 No. 3



This month look for the star Adhara in the constellation of Canis Major, the Big Dog. Canis Major has two fairly bright stars; it's brightest being the most brilliant star in the sky Sirius. Its next brightest star is named Adhara. If it weren't for Sirius, Adhara would stand out as a reasonably bright star on its own. Astronomers call Adhara Epsilon Canis Majoris, but since we're on informal terms with the stars, we can just call it Adhara.

Adhara is 432 light years away from Earth. Since Sirius is just less than nine light years away, Adhara is 50 times further away from the sun than Sirius, making the star significantly fainter in the sky. If Adhara were as close to us as Sirius, then it would appear close to nine magnitudes brighter to us than it does now. Meaning when viewed from the same distance, Adhara would be almost 100 times as bright as Sirius.

The spectrum of Adhara indicates the star has a surface temperature of 36,000 degrees, or nearly four times hotter than the sun. Including its ultraviolet radiation, Adhara emits 15,000 times more light than the sun. It's this luminous because Adhara is 12 times heavier than the sun, and more massive stars fuse their hydrogen fuel faster.

Look for Adhara tonight. It's the lower right star in Canis Major. You'll find the Big Dog almost due south at 10:00 PM in early March.

#### March 1 – 7

The moon approaches close to Jupiter on the night of the 2<sup>nd</sup>. In dark skies, you'll notice there's a fuzzy spot twice as far away for the moon as Jupiter, but slightly more to the right. The ancients were aware of this fuzzy patch in the sky, but it was only after Galileo turned a telescope heavenward that we learned this hazy patch was actually a cluster of stars. So get your binoculars out and make Galileo's discovery for yourself. The cluster is called the Beehive because of its resemblance to a swarm of bees around their hive. It should be noted that with a 93% Moon you will have some difficulty find the Beehive.

Turn your binoculars westward after 8:00 PM of the 3<sup>rd</sup>. The brightest star in the sky is Venus and if you place it a bit above the center of your binoculars, you'll be able to see two additional planets at the same time. The first planet to the lower right of Venus is Mars. The second appears as a much fainter star just above Venus. This is Uranus and it will be visible after it gets dark (but don't wait much later than 8:45). Uranus, Venus, and Mars form a line with the distance between





Uranus and Venus is 1/7<sup>th</sup> the distance between Venus and Mars. These planets are located on the other side of the solar system. Mars is about twice the distance away as is Venus and Uranus is 15 times farther away.

Overhead on the 3<sup>rd</sup>, the moon is close to the brightest star of Leo the Lion. The star is named Regulus, which is also the name of a famous Roman general who fought in the Punic Wars against Carthage. Regulus means "Little King", an appropriate name for the brightest star of a constellation representing the king of beasts. Regulus is one of the four Royal Stars, four bright stars that are more or less spread equally around the sky. The ancient Persians listed Aldebaran, Fomalhaut, and Antares as the other three Royal Stars. The Royal Stars are prominent stars visible at the time of the Equinoxes and Solstices.



On the 5<sup>th</sup>, the moon passes the second brightest star of Leo the Lion, Denebola. The moon and Denebola form a flat triangle with a large, but spread out star cluster, Melotte-111. This star cluster fill a binocular's field of view with stars and it forms a large portion of the constellation of Coma Berenice's, the Hair of Berenice. The cluster appears large partly because its stars are widely spaced and partly because it's close to our solar system, only 280 light years away. Originally, the Hair of Berenice's was the tuft at the end of Leo's tail, but that changed in 240 BC.



# March 8 – 14

The moon (rising after 11:00pm) passes close to a lonely, but bright star on the 8<sup>th</sup>. The star is a part of one of the largest constellations. Unfortunately, Virgo the Maiden consists of dim stars so it's not really visible except in dark skies. The star's name is Spica and it represents a stalk of wheat in Virgo's hand. It resides so close to the elliptic, the path that the moon and planets follow around the sky, that occasionally the moon passes right over it. Unfortunately, the moon doesn't this month. However, when it does, the star appears to wink out nearly instantly to our eyes. The rapidity of the disappearance of Spica indicates that the moon has no measurable atmosphere. For if the moon did have an atmosphere, then stars like Spica would fade out as a lunar atmosphere gradually bent their light rays away from Earth by refraction.



A widely spaced double star appears to the moon's lower left (around 2:00 am) on the 10<sup>th</sup>. Zubenelgenubi is the star and its name means Scorpion's Southern Claw in Arabic. The star has this name because the constellation of Libra the Scales once represented the claws of Scorpius the Scorpion. The stars are orbiting each other at a distance that's at least 140 times greater than the distance between Earth and Pluto. If you were visiting one of these stars, the other one would appear in the sky either 10 or 100 times brighter than Venus appears to us. That's certainly bright enough to cast shadows. Those with good eyesight and dark skies should be able to see that Zubenelgenubi is a double star without using the optical aid of binoculars.



Do you remember that Venus and Uranus were really close to each other on the 3<sup>rd</sup>? Well, its Mars's turn on the 10<sup>th</sup> to pass close to Uranus. With binoculars, look for the star to the upper left of Mars. That's Uranus.



If you can afford the time to star gaze at 5:00 AM on the 14<sup>th</sup>, then train your binoculars on the last quarter waning crescent moon. It's located in the constellation of Sagittarius the Archer and smack dab in the middle of the Milky Way. So all around the moon, you'll find star clusters and nebulae. Most will appear as small fuzzy clouds in your binoculars, but some of the star clusters will show stars immersed within their cloudiness.

# March 15 - 21

The moon is new on the 20<sup>th</sup>, so start looking for Earthshine on the morning of the 16<sup>th</sup> as you drive to work. Earthshine is that faint illumination of the dark portion of the moon by sunlight reflected off Earth. It's more noticeable through binoculars. In fact, through binoculars you should be able to make out some of the lunar seas, but please; don't use binoculars while driving.

# Photograph of Earthshine



Hey, spring begins on the 20<sup>th</sup> at 4:45 PM. That's when the sun passes above Earth's equator. Prior to this, the sun was located overhead for locations south of the equator. Now it's our turn for warmer weather. Please remember that Earth's distance from the sun has nothing to do with the seasons. I once watched a video showing college graduates trying to explain that the seasons were due to the eccentricity of our orbit

around the sun. Don't be like them.

The moon reappears in the evening, low in the western sky on the 21<sup>st</sup>. Look for Mars, the most noticeable star to the lower right of brilliant Venus. In binoculars, you should also see that the moon accompanies it. As it gets darker, look for Earthshine on the left side of the moon.





# March 22 - 31

The moon is making it's away across the evening sky and passes close to Venus on the 22<sup>nd</sup>. Look for the crescent moon to the left of Venus; you should still be able to see Earthshine through your binoculars.

That old moon really knows how to get around. On the 24<sup>th,</sup> it's immersed in the Hyades star cluster. The view should be quite nice through binoculars, with the thin crescent moon surrounded by a multitude of stars. It may not seem like it; but the Hyades star cluster spans an area much larger than the moon.

This becomes really apparent on the 24<sup>th</sup>. Since the moon is still a crescent, you should be able to easily photograph it along with the Hyades through a camera that has an optical zoom (as little as six times magnification should be enough). Be sure to use a tripod for the camera, you'll need an exposure several seconds long.

Orion the Hunter is arguably the most recognized constellations after the Big Dipper (which is really only part of the constellation of Ursa Major the Big Bear). On the 25<sup>th</sup>, you'll find Orion just below the moon. I want to direct your attention to Orion's belt, a line of three stars crossing the middle of Orion. Hanging down from the middle star is Orion's sword, and this is really where you should be pointing your binoculars or small telescope. The bright cloud in Orion's sword is the great Orion Nebula. This is a large cloud of glowing gas and dust that's in the process of giving birth to thousands of stars.



Astronomers refer to it as a stellar nursery. In binoculars, it appears as a white cloud sprinkled with a few stars. In a larger telescope, it has a



greenish cast from glowing oxygen gas. Hydrogen gas emits more light than oxygen, but our eyes are more sensitive to the green light of oxygen than to the red light of hydrogen, so the nebula only appears red in long duration exposures.

The moon is located at the feet of Gemini the Twins on the 26<sup>th</sup>. In really dark skies, you might notice that there's a faint fuzzy spot located above the moon and on the other side of Gemini's left foot. This is the star cluster M-35. So if you aim your binoculars at the moon, then scan straight up along the moon's

terminator and you'll run into this cluster. In binoculars, it still appears like a fuzzy cloud, but you should notice several stars immersed

within the cloud. A small telescope shows even more stars because the fuzz your binoculars shows is actually a collection of stars too faint to make out. M-35 covers an area as large as the moon.





The moon and Jupiter form a compact triangle with the Beehive star cluster on the 29<sup>th</sup>. Therefore, if you didn't get a chance to find this beautiful star cluster on the 2<sup>nd</sup>, here's your next chance. The three of them will just about fit within your binoculars at the same time, with the Beehive occupying the upper right edge.

This Month's Sources

2015 Calendar of Astronomical Events, http://AstroPixels.com Astronomy Calendar of Celestial Event for Calendar Year 2015, Coma Star cluster, http://en.m.wikipedia.org/wiki/Coma\_Star\_Cluster Night Sky Explorer Regulus, http://www.constellationofwords.com/stars/Regulus.html Royal Stars, http://en.m.wikipedia.org/wiki/Royal\_stars Zubenelgenubi, http://stars.astro.illinois.edu/sow/zubenel.html

Dark Skies and Bright Stars, Your Interstellar Guide

### Early Spring Bright Galaxies by: Steve Bell

Spring is galaxy season. Many think of Coma and Virgo as the primary areas for spring galaxies, but since the view is out of the plane of the galaxy, many other constellations have nice galaxy collections. Canes Venatici, Ursa Major and Leo have particularly large and nice galaxy menageries and are more accessible during early spring than either Coma or Virgo.

The list of thirty Messier and NGC galaxies below are the brightest and should be accessible with modest instruments. Happy hunting.

		Spring	Galaxies		
Const	Object	RA	Dec	Mag	Size
CVn	M106	12 18 58	+47 18 16	9.1	17.4x6.6
CVn	M51	13 29 52	+47 11 45	8.9	10.8x6.6
CVn	M63	13 15 49	+42 01 46	9.3	12.6x7.5
CVn	M94	12 50 53	+41 07 12	8.9	12.3x10.8
CVn	NGC4214/4228	12 15 36	+36 20 00	9.7	7.9
CVn	NGC4449	12 28 12	+44 06 00	9.4	5.1
CVn	NGC4490	12 30 36	+41 38 00	9.8	5.9
CVn	NGC4631	12 42 06	+32 32 00	9.3	15.1
CVn	NGC5005	13 10 54	+37 03 00	9.8	5.4
CVn	NGC5195	13 30 00	+47 16 00	9.6	5.4
Leo	m105	10 47 50	+12 34 55	10.5	5.3x4.8
Leo	m65	11 18 56	+13 05 31	10.1	9x2.3
Leo	m66	11 20 15	+12 59 26	9.7	9.1x4.1
Leo	m95	10 43 58	+11 42 13	10.6	7.3x4.4
Leo	m96	10 46 46	+11 49 12	10.1	7.8x5.2
Leo	NGC2903	09 32 12	+21 30 00	8.9	12.6
Leo	NGC2905	09 32 12	+21 31 00	10	13.3
Leo	NGC3384/3371	10 48 18	+12 38 00	10	5.9
Leo	NGC3521	11 05 48	-00 02 00	8.9	9.5
Leo	NGC3607	11 16 54	+18 03 00	10	3.7
Leo	NGC3628	11 20 18	+13 36 00	9.5	14.8
UMa	M101	14 03 13	+54 20 56	8.2	28.5x28.3
UMa	M81	09 55 33	+69 03 56	7.8	24.9x11.5
UMa	M82	09 55 53	+69 40 50	9.2	10.5x5.1
UMa	NGC2768	09 11 36	+60 02 00	10	6.3
UMa	NGC2841	09 22 00	+50 58 00	9.3	8.1
UMa	NGC3077	10 03 18	+68 44 00	9.9	4.6
UMa	NGC3184	10 18 18	+41 25 00	9.8	6.9
UMa	M109	11 57 36	+53 23 00	9.8	7.6
UMa	NGC5322	13 49 18	+60 12 00	10	5.5



# **Observatories and Planetariums**

### Bruneau Dunes Observatory - Bruneau, ID



The Observatory is now closed until April, the park remains open. Check out the Bruneau Observatory Video: <u>https://www.youtube.com/watch?v=v\_TnnWx75k0#t=226</u>

# Centennial Observatory at the Herrett Center College of Southern Idaho – Twin Falls, ID www.herrett.csi.edu

Event	Place	Date	Time	Admission
Telescope Tuesday	Centennial Observatory	Tuesday, February 24 <sup>th</sup> , 2015	7:15 to 9:00 PM	\$1.50 (Children 6 & under free) Free to all with paid planetarium admission
Monthly Free Star Party	Centennial Observatory	Saturday, March 14 <sup>th</sup> , 2015	8:15 PM to midnight	FREE
Bimonthly <u>Astronomy Talk</u> : "Einstein's General Relativity: The First 100 Years"	Faulkner Planetarium	Thursday, March 19 <sup>th</sup> , 2015	7:45 to 8:45 PM	Adults: \$2.50 adults Students (incl. CSI): \$1.50 (Children 6 & under free)
Astronomy Talk Night Telescope Viewing	Centennial Observatory	Thursday, March 19 <sup>th</sup> , 2015	8:45 to 10:45 PM	\$1.50 (Children 6 & under free) Free to all with paid astronomy talk admission
Earth Hour Telescope Viewing	Centennial Observatory	Saturday, March 28 <sup>th</sup> , 2015	8:30 to 9:30 PM	



# About the Magic Valley Astronomical Society

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

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.

### **Membership Benefits:**

Lending Telescopes: The society currently has three telescopes for loan and would gladly accept others please contact President Robert Mayer, for more information on these and other benefits.



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.