

Snake River Skies

The Newsletter of the Magic Valley Astronomical Society

www.mvastro.org

Membership Meeting

Saturday, April 11th 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



M-51 imaged by Rick Widmer &
Ken Thomason

President's Message

Colleagues,

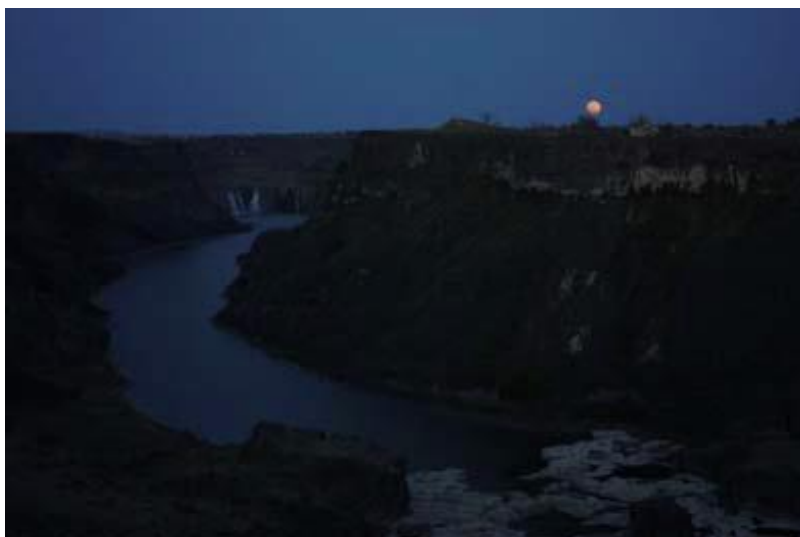
Amateur astronomers get into astronomy from various different angles. Some are into the science, some are into the technology, and some are into the aesthetics. After a successful March presentation from Chris Anderson on the Centennial Observatory's occultation reporting, this month, we're going to get to take a look at the aesthetics angle, as Jon Mills steps forward and presents some of his best astrophotography to us (Of course, such presentations are more than just aesthetics; the technical angle of astrophotography will also come out).

The rest of April is busy, meaning we need a bit of help. The largest need is the Herrett Center's Astronomy Day on Saturday, April 25. Chris will be sending out more requests for help later.

There are smaller needs as well. On Saturday, April 18th, there will be a star party at the Hagerman Fossil Beds National Monument. A small able bodied and willing crew of about four or five with telescopes will be needed. The Three Creek School will be needing a small crew, and there are rumors that they'd like to feed us, the following Friday, April 24. I realize this is the day before Astronomy Day. Also on Friday, April 24, will be another case of a small crew of three or four needed at the Hagerman Fossil Beds National Monument. I realize this is the day before Astronomy Day, but again, Hagerman needs only three or four there.

The April 24 star party is part of a larger effort to see if Hagerman falls under the Dark Sky Preserve category. Paul McClain has been out of the Dark Sky meter and has been getting some interesting readings. We hope to get more data as the month's progress.










Clear Views,
Rob Mayer, President



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

Calendars for March

Events Calendar

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			<div>1</div> <div>April Fool's Day</div> 	<div>2</div>	<div>3</div>	<div>4</div> <div>Full Moon Total Lunar Eclipse</div> 
<div>5</div> <div>Easter</div> 	<div>6</div>	<div>7</div>	<div>8</div>	<div>9</div>	<div>10</div>	<div>11</div> <div>General Membership Mtg. @ 19:00 Herrett Cntr.</div> 
<div>12</div> <div>Last Quarter</div> 	<div>13</div>	<div>14</div>	<div>15</div>	<div>16</div>	<div>17</div>	<div>18</div> <div>Hagerman Star Party Hagerman Fossil Beds</div> 
<div>19</div>	<div>20</div>	<div>21</div>	<div>22</div> <div>Earth Day</div> 	<div>23</div>	<div>24</div> <div>Three Ck. Star Party Murphy Hot Springs Airport</div> 	<div>25</div> <div>First Quarter</div> 
<div>26</div>	<div>27</div>	<div>28</div>	<div>29</div>	<div>30</div>		

Snake River Skies is the Newsletter of the Magic Valley Astronomical Society and is published electronically once a month.

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March Celestial Calendar and Trivia

- 4/1 The Moon is at apogee, subtending 29' 26" from a distance of 406,012 kilometers (252,284 miles)
- 4/6 Uranus is in conjunction with the Sun.
- 4/8 Saturn is 2 degrees south of the Moon; Jupiter is stationary.
- 4/10 Mercury is in superior conjunction.
- 4/12 Mars is at the ascending node today; the Curtiss Cross, an X-shaped Clair-obscure illumination effect located between the craters Parry and Gambart, is predicted.
- 4/15 Mercury is at the ascending node today; Neptune is 4 degrees south of the Moon.
- 4/17 The Moon is at perigee, subtending 33' 06" from a distance of 361,023 kilometers (224,330 miles); Pluto is stationary
- 4/18 Venus is at perihelion today; New Moon (lunation 1142) occurs at 12:57
- 4/19 Mercury is at perihelion today; asteroid 2 Pallas is stationary.
- 4/20 Asteroid 20 Massalia (magnitude 9.4) is at opposition.
- 4/21 The Moon is 0.9 degree north of the first-magnitude star Aldebaran (Alpha Tauri), with an occultation occurring in northwestern Russia, Scandinavia, the extreme northern British Isles, Iceland, Greenland, Canada, and the northwestern United States, at 11:00; Venus is 7 degrees north of the Moon
- 4/22 The peak of the Lyrid meteor shower (20 per hour) occurs tonight.
- 4/23 Mercury is 1.4 degrees north of Mars.
- 4/25 First Quarter Moon occurs.
- 4/26 The Lunar X (also known as the Werner or Purbach Cross), an X-shaped Clair-obscure illumination effect involving various rims and ridges between the craters La Caille, Blanchinus, and Purbach, is predicted; asteroid 3 Juno is 0.1 degree north of the Moon, with an occultation occurring in French Polynesia, northern Melanesia, Micronesia, northern Papua New Guinea, and eastern southeast Asia. Jupiter is 5 degrees north of the Moon.
- 4/29 The Moon is at apogee, subtending 29' 30" from a distance of 405,083 kilometers (251,706 miles)
- 4/30 Mercury is at its greatest heliocentric latitude north today

Christiaan Huygens (1629-1695) was born this month.

The first photograph of the Sun was taken on April 2, 1845. The Hubble Space Telescope was placed in orbit on April 25, 1990. The Compton Gamma Ray Observatory achieved orbit on April 7, 1991.

The Lyrid meteor shower peaks on the night of April 22nd-April 23rd. A typical zenithal hourly rate is about 20 meteors per hour but short outbursts have occurred occasionally. The radiant lies between the Keystone of Hercules and Lyra. For more on this year's Lyrids, see <http://earthsky.org/...d-meteor-shower> and <http://www.skyandtel...-2015-12142014/>

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 <http://www.heavens-above.com/>

The Moon is 11.6 days old, is illuminated 89.3%, and is located in Leo at 0:00 UT on April 1st. It's at its greatest northern declination of +18.3 degrees on April 22nd and its greatest southern declination of -18.2 degrees on April 10th. Latitudinal libration is at a maximum of +6.8 degrees on April 23rd and a minimum of -6.8 degrees on April 11th. Longitudinal libration is at a maximum of +6.5 degrees on April 23rd and -6.8 degrees on April 10th. New Moon occurs on April 18th. A total lunar eclipse visible from the Pacific Ocean and the western United States and Canada reaches its maximum at 12:00:16 UT on April 4th. Totality will be the shortest of the century. An article on the eclipse, the third in the current lunar tetrad, appears on pages 50 and 51 of the April issue of Sky & Telescope. Click on <http://earthsky.org/...on-april-4-2015> for further information on the eclipse. Visit <http://saberdoesthes...does-the-stars/> for tips on spotting extreme crescent Moons. Times and dates for the lunar light rays predicted to occur this month are available at <http://www.lunar-occ...o/rays/rays.htm>

The Sun is located in Pisces on April 1

Brightness, apparent size, illumination, distance from the Earth in astronomical units, and location data for the planets and Pluto on April 1: Mercury (-1.1 magnitude, 5.0", 95% illuminated, 1.34 a.u., Pisces), Venus (-4.0, 13.8", 78% illuminated, 1.21 a.u., Aries), Mars (+1.4 magnitude, 4.0", 99% illuminated, 2.36 a.u., Aries), Jupiter (-2.3 magnitude, 41.5", 99% illuminated, 4.76 a.u., Cancer), Saturn (+0.3 magnitude, 17.8", 100% illuminated, 9.35 a.u., Scorpius), Uranus (+5.9 magnitude, 3.4", 100% illuminated, 20.99 a.u. on April 16th, Pisces), Neptune (+7.9 magnitude, 2.2", 100% illuminated, 30.65 a.u. on April 16th, Aquarius), and Pluto (+14.2 magnitude, 0.1", 100% illuminated, 32.66 a.u. on April 16th, Sagittarius).

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

At midmonth, Venus sets at 11:00 p.m., Mars sets at 9:00 p.m., Jupiter transits the meridian at 8:00 p.m. and sets at 4:00 a.m., and Saturn rises at 11:00 p.m. and transits the meridian at 4:00 a.m. local daylight time for observers at latitude 40 degrees north.

Mercury reaches superior conjunction on April 10th and disappears from view for most of the month. It reaches perihelion on April 19th.

Brilliant Venus is positioned high in the west at sunset. It sets about three hours after the Sun in early April and three-and-one-half hours after sunset by month's end. Venus is at perihelion on April 18th. During the second week of April, the planet passes between the Hyades (Melotte 25) and Pleiades (M45) star clusters.

Venus and M45 are two to three degrees apart from April 9th to April 12th. Venus passes seven degrees north of the first-magnitude star Aldebaran on April 20th. Venus increases in apparent size from 13.8 to 16.6 arc seconds, while decreasing in illumination from 78 to 68% over the course of the month.

Mars is situated very low in the western sky during evening twilight, as it travels eastward through Aries. The apparent size of the Red Planet drops below four arc seconds in April. Mars is at the ascending node on April 12th. It disappears into the glare of the Sun by the latter part of April.

As April begins, Jupiter sets not long after 2:00 a.m. local time. The planet's retrograde (western) loop ends on April 8th. Jupiter shrinks in apparent diameter from 41.5 to 38.0 arc seconds and decreases in brightness from magnitude -2.3 to magnitude -2.1 during the course of the month. Io transits the planet beginning at 12:04 a.m. EDT on the morning of April 3rd. A shadow transit commences at 1:09 a.m. EDT. Io then passes 1.4 arc second south of Europa at 4:32 a.m. EDT and eclipses Europa for six minutes some 90 minutes afterwards. Europa partially occults Io at 11:51 p.m. EDT on the night of April 8th. Some two hours later Europa eclipses Io. Data on the Galilean satellite events is available at <http://skytonight.co...t/3307071.html#> and page 53 of the April issue of Sky & Telescope. Other Galilean satellite mutual events take place on April 12th, 14th, 18th, 19th, 21st, and 28th UT. For further information on these events, consult page 52 of the April issue of Sky & Telescope.

Saturn's ring plane is tilted more than 24 degrees with respect to the Earth this month. The planet shines at magnitude +0.1 and its rings span 41 arc seconds. Saturn is positioned 0.5 degree north of the fourth-magnitude star Nu Scorpii on April 1st. It lies 1.2 degrees north of the second-magnitude star Graffias (Beta Scorpii) on April 30th. On the morning of April 8th, the waning gibbous Moon passes two degrees north of the Ringed Planet. For further information on Saturn's satellites, browse <http://www.skyandtel...t/3308506.html>

Uranus is in conjunction with the Sun on April 6th and consequently is not observable from the northern hemisphere this month.

Neptune lies in the east at dawn. Southern hemisphere observers have a more favorable view due to the angle of ecliptic.

The dwarf planet Pluto is fairly high in the sky in northwestern Sagittarius during morning twilight.

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

Asteroid 44 Nysa travels north-westward through the constellation of Virgo towards Nu Virginis this month. The tenth magnitude asteroid is situated within five degrees of that fourth-magnitude star during the course of April. Asteroid 87 Sylvia (magnitude 12.7) reaches opposition on April 8th, asteroid 53 Kalypso (magnitude 12.5) reaches opposition on April 11th, asteroid 20 Massalia (magnitude 9.4) reaches opposition on April 20th, asteroid 64 Angelina (magnitude 10.9) reaches opposition on April 22nd, asteroid 19 Fortuna (magnitude 10.9) reaches opposition on April 23rd, asteroid 11 Parthenope (magnitude 10.0) reaches opposition on April 23rd, and asteroid 59 Elpis (magnitude 12.5) reaches opposition on April 24th. The faint asteroid 595 Polyxena (magnitude 12.3) occults an 8.9-magnitude star in Virgo on the night of April 14-15th from locations in Canada and the United States. Click on http://asteroidoccul.../2015_04_si.htm respectively for further information on this and other asteroid occultations taking place this month. Additional current information on asteroids can be found at <http://www.curtrenz.com/asteroids> and asteroidal ephemerides at <http://www.minorplan...14/index.html>

Comet C/2014 Q2 (Lovejoy) is fading, but is still a worthwhile target, as it continues its voyage northward through Cassiopeia. The comet passes a bit more than a degree to the west of the fifth-magnitude star 42 Cassiopeia on the night of April 14th. Browse <http://www.skyandtel...lovejoy-shines/> for a finder chart. Visit <http://cometchasing.skyhound.com/> and <http://www.aerith.ne...ly/current.html> for additional information on this month's comets.

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

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

The fifth-magnitude G-type main-sequence star 61 Virginis - <http://www.solstatio...rs/61vir2co.jpg> - is a sun-like star at a distance of 28 light years. It hosts three exoplanets and is visible to the naked-eye.

The famous eclipsing variable star Algol (Beta Persei) is at a minimum, decreasing in magnitude from 2.1 to 3.4, on April 1st, 4th, 6th, 9th, 12th, 15th, 18th, 21st, 24th, 27th, and 29th. For more on Algol, see <http://stars.astro.i.../sow/Algol.html> and <http://www.solstatio...ars2/algol3.htm>

Notable carbon star for April: V Hydrae (Hydra)

Top ten deep-sky objects for April: M65, M66, M95, M96, M97, M105, M108, NGC 3115, NGC 3242, NGC 3628

Top ten binocular deep-sky objects for April: M65, M66, M95, M96, M97, M105, M108, M109, NGC 3115, NGC 3242

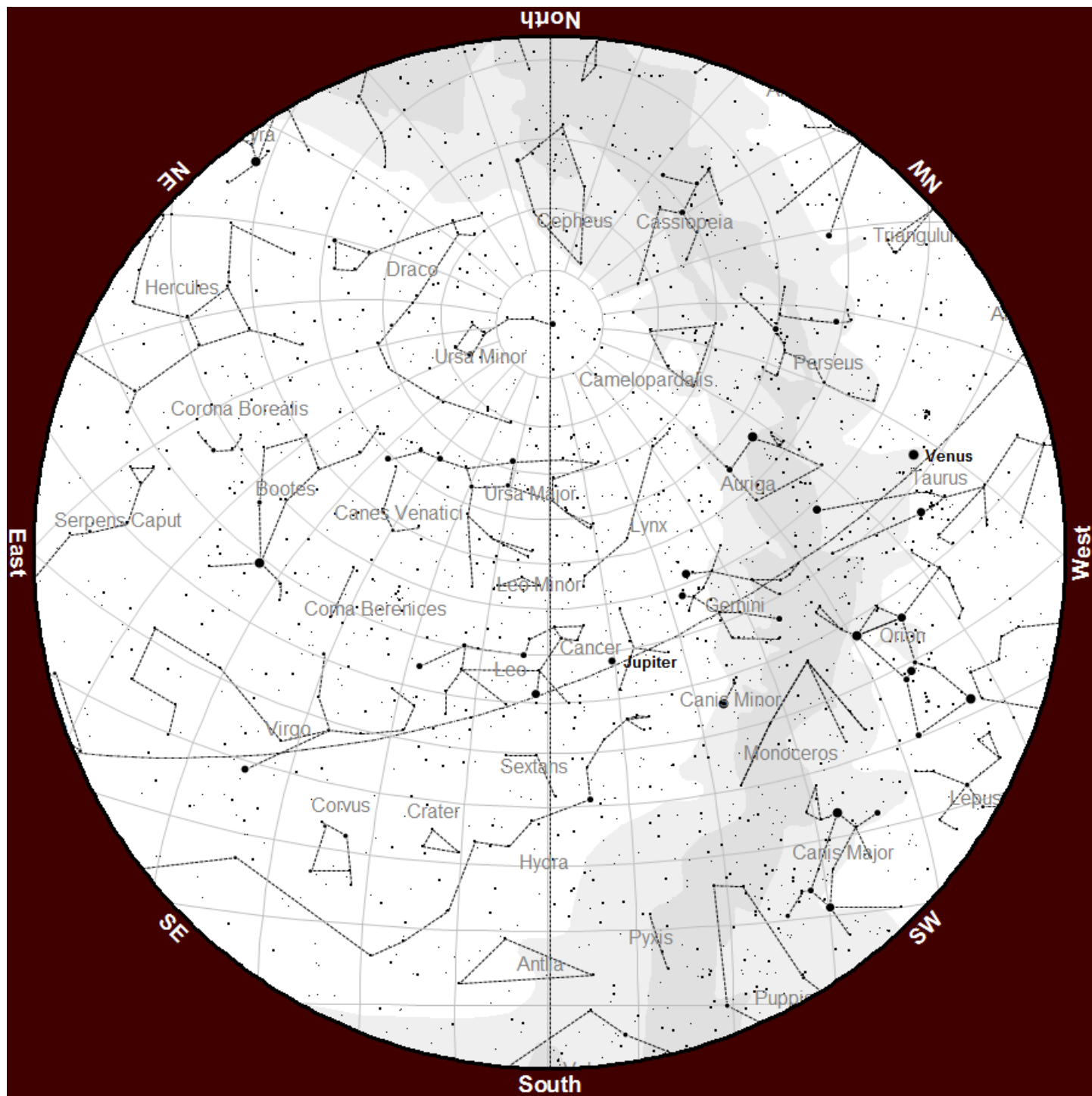
Challenge deep-sky object for April: Leo I (Leo)

The objects listed above are located between 10:00 and 12:00 hours of right ascension.



Leo I (Dwarf Galaxy) in the Constellation of Leo CC license used.

Planisphere for March



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

Be Safe – Get Out There – Explore Your Universe



Looking Through the Eyepiece

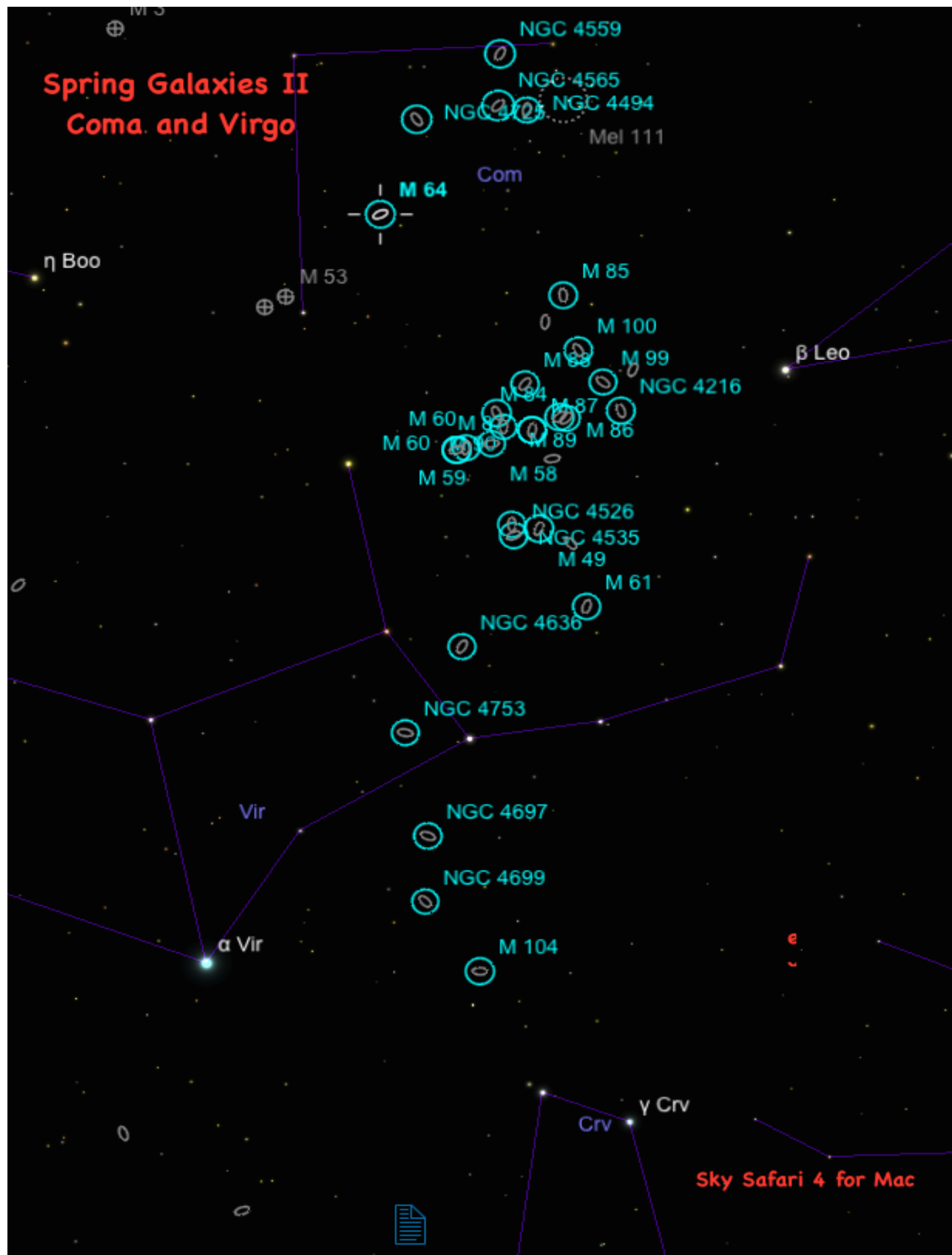
Bright Spring Galaxies – Part II Article by Steve Bell

For April, it is still spring and galaxies are in full bloom. This month Coma and Virgo are prominent in the eastern sky after dark and this list provides the 29 brightest galaxies in these two constellations.

Happy galaxy hunting.

Spring Galaxies II					
Const	Object	RA	Dec	Mag	Size
Com	M64	12 56 44	+21 40 58	9.3	10.3x5
Com	M85	12 25 24	+18 11 27	10	7.4x5.9
Com	NGC4254	12 18 48	+14 25 00	9.8	5.4
Com	NGC4321	12 22 54	+15 49 00	9.4	6.9
Com	NGC4494	12 31 24	+25 47 00	9.9	4.8
Com	NGC4501	12 32 00	+14 25 00	9.5	6.9
Com	NGC4559	12 36 00	+27 58 00	9.9	10.5
Com	NGC4565	12 36 18	+25 59 00	9.6	16.2
Com	NGC4725	12 50 24	+25 30 00	9.2	11
Vir	M104	12 39 59	-11 37 23	9.2	8.6x4.2
Vir	M49	12 29 47	+08 00 01	9.3	9.8x8.2
Vir	M60	12 43 40	+11 33 08	9.8	7.6x6.2
Vir	M86	12 26 12	+12 56 46	9.9	9.8x6.3
Vir	M87	12 30 49	+12 23 27	9.6	8.7x6.6
Vir	NGC4216	12 15 54	+13 09 00	10	8.3
Vir	NGC4303	12 21 54	+04 28 00	9.7	6
Vir	NGC4374	12 25 06	+12 53 00	9.3	5
Vir	NGC4486	12 30 48	+12 24 00	8.6	7.2
Vir	NGC4526	12 34 00	+07 42 00	9.6	7.2
Vir	NGC4535	12 34 18	+08 12 00	9.8	6.8
Vir	NGC4552	12 35 42	+12 33 00	9.8	4.2
Vir	NGC4569	12 36 48	+13 10 00	9.5	9.5
Vir	NGC4579	12 37 42	+11 49 00	9.8	5.4
Vir	NGC4621	12 42 00	+11 39 00	9.8	5.1
Vir	NGC4636	12 42 48	+02 41 00	9.6	6.2
Vir	NGC4649	12 43 42	+11 33 00	8.8	7.2
Vir	NGC4697	12 48 36	-05 48 00	9.3	6
Vir	NGC4699	12 49 00	-08 40 00	9.6	3.5
Vir	NGC4753	12 52 24	-01 12 00	9.9	5.4

Spring Galaxies II Coma and Virgo

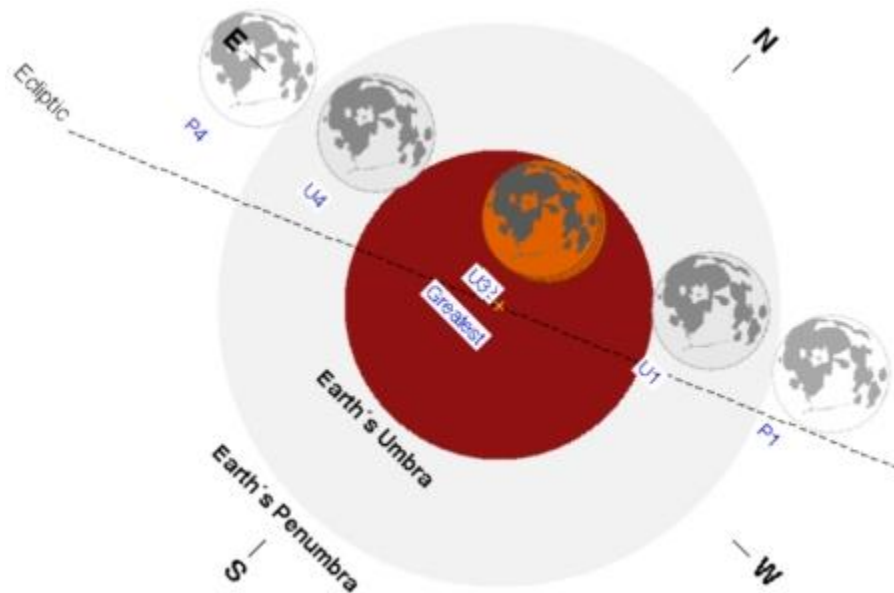


Sky Safari 4 for Mac

Lunar Eclipse Schedule

The Total Pre-Dawn Lunar Eclipse of Saturday, April 4th, 2015

This is the first of two total lunar eclipses visible from southern Idaho this year, the second being on Sept. 27th, 2015.



Adapted from a [diagram by NASA](#). Note that, although the moon's orbital motion will cause it to move to the upper left relative to Earth's shadow, it (and the shadow) will be moving to the lower *right* (towards the western horizon) due to Earth's rotation. Thus, from the start to the end of this eclipse, the moon will be getting lower in the sky relative to the local horizon, not higher (although there are other locations on Earth (e.g. Eastern Australia) which will see the moon rising throughout the eclipse).

Eclipse timeline (all times listed are in Mountain Daylight Time (UT-6 hrs.), and rise/set/twilight times are given for Twin Falls, Idaho, USA):

- 3:00 AM — **Centennial Observatory opens** for telescope viewing, weather permitting. Please dress warmly!
- 3:01 AM — **First penumbral contact (P1)**. The left edge of the moon begins to enter Earth's penumbral (partial) shadow, although the darkening is so subtle that it won't be noticeable until close to 3:45 AM.
- 4:16 AM — **First umbral contact (U1)**. Now distinctly darkened, especially on its left edge, the moon begins to enter Earth' umbral (full) shadow. Soon after, a growing "bite" appears to have been taken from the left of the moon's face.
- 5:39 AM — **Start of astronomical twilight**. Observers in dark locations will begin to see subtle brightening of the sky near the eastern horizon.
- 5:58 AM — **Total phase begins (U2)** (second umbral contact). The moon is completely immersed in Earth's umbra, appearing dark red-orange or orange-brown, depending on global atmospheric conditions. (A major volcanic eruption could render the eclipsed moon nearly invisible!)
- 6:00 AM — **Greatest eclipse**. The moon reaches its maximum excursion into the umbral shadow, appearing at its darkest for this eclipse. Because the moon barely dips into Earth's full (umbral) shadow, its upper right edge will appear noticeably brighter than the lower left, which is deepest into the shadow.
- 6:02 AM — **Total phase ends (U3)** (third umbral contact). The moon begins to emerge from Earth's umbra, with a bright sliver appearing the the top of the lunar disk.
- 7:15 AM — **Sunrise**, with the partially-eclipsed moon still (just barely) above the western horizon.
- 7:23 AM — **Moonset**, with the moon still missing a large dark "bite" from its lower right half.
- 7:30 AM — **Observatory closes**.
- The final phases of the eclipse will only be visible for locations west of Idaho (e.g. Alaska, Hawai'i, E. Russia, E. Australia)

Astronomy Program

at

Great Basin National Park

STARGAZING THROUGH TELESCOPES

**Saturdays
in
April and May
7:30pm**

**at the
Lehman Caves Visitor Center**

Join Great Basin's Dark Rangers at the Lehman Caves Visitor Center for a presentation and a night full of viewing stars, planets, galaxies and constellations.

Bring a jacket and a camp chair for comfort

Join us Tuesday, Thursday, and Saturday nights this summer.

Club Announcement

The 31st annual Idaho Star Party™, will be, September 11th and 12th of 2015. If you wish to reserve a site you must pay for it at the time that you reserve it and if you have any discount tags or stickers, I must have the numbers from the tags and stickers at the time you make your reservation. **No Exceptions.** Please read below if you plan to attend the Idaho Star Party™.

The new fee structure which started as of 1-1-2015.

2 NIGHT COST

\$71.48 NO TAGS OR STICKERS
\$61.48 STATE PASSPORT ONLY
\$60.88 RV TAG ONLY
\$50.88 BOTH Passport AND RV Tag
\$77.84 Out of State Guests

3 NIGHT COST

\$101.92 NO TAGS OR STICKERS
\$86.92 STATE PASSPORT ONLY
\$91.32 RV TAG ONLY
\$76.32 BOTH Passport AND RV Tag
\$111.46 Out of State Guests

Guest without any tags or stickers

Day one site \$24.00 tax \$1.44

Day two site \$24.00 tax \$1.44

Day one MV fee 5.00 ----- not a taxable item

Day two MV fee 5.00 ----- not a taxable item

Reservation fee 10.00 tax .60

Total \$ 71.48

Note: each extra day is 30.44 If the original reservation number is used through the club treasurer

Guest with 2015 valid Idaho State Parks Passport Sticker, but no Idaho RV tag/sticker
(sticker number must match plate number of motor vehicle on the site)

Day one site \$24.00 tax \$1.44

Day two site \$24.00 tax \$1.44

Day one MV fee waived ----- not a taxable item

Day two MV fee waived ----- not a taxable item

Reservation fee 10.00 tax .60

Total \$ 61.48

Note: each extra day is 25.44 If the original reservation number is used through the club treasurer

Guest with 2015 valid Idaho RV tag/sticker, but no Idaho State Parks Passport Sticker

Day one site \$24.00 tax \$1.44

Day two site \$24.00 tax \$1.44

Day one MV fee 5.00 ----- not a taxable item

Day two MV fee 5.00 ----- not a taxable item

Reservation fee waived tax waived

Total \$ 60.88

Note: each extra day is 30.44 If the original reservation number is used through the club treasurer

Guest with both 2015 valid Idaho State Parks Passport Sticker AND valid 2015 Idaho RV tag/sticker

Day one site \$24.00 tax \$1.44

Day two site \$24.00 tax \$1.44

Day one MV fee waived ----- not a taxable item

Day two MV fee waived ----- not a taxable item

Reservation fee waived tax waived

Total \$ 50.88

Note: each extra day is 25.44 If the original reservation number is used through the club treasurer

Out-of-State Guest

Day one site \$27.00 tax \$1.62

Day two site \$27.00 tax \$1.62

Day one MV fee 5.00 ---- not a taxable item

Day two MV fee 5.00 ---- not a taxable item

Reservation fee 10.00 tax .60

Total \$77.84

Note: each extra day is 33.62 If the original reservation number is used through the club treasurer

Barbara Syriac – Treasurer Boise Astronomical Society

<http://isp.boiseastro.org/>

Observatories and Planetarium

Bruneau Dunes Observatory – Bruneau, ID



You're invited to star gaze at the Bruneau Dunes Observatory! See the night sky as you've never seen it before. Observatory tours and solar viewing (through a specially adapted telescope) begin one hour before sunset, and are free of cost. Following that, visitors can view short orientation program and then have the chance to survey the heavens through the observatory's collection of telescopes. There is a viewing fee of \$3 per person (children 5 and under are free of cost) for this. The observatory is open to the public from early April through mid-October on Friday and Saturday nights only, weather permitting. For presentation times, call 208-366-7919, or check the kiosk when you arrive at the park.

See our video: https://www.youtube.com/watch?v=v_TnnWx75k0#t=226

Centennial Observatory at the Herrett Center College of Southern Idaho – Twin Falls, ID

Event	Place	Date	Time	Admission
Total Lunar Eclipse	Centennial Observatory	Saturday, April 4 th , 2015	3:00 to 7:30 AM	FREE
Monthly Free Star Party	Centennial Observatory	Saturday, April 11 th , 2015	8:45 PM to midnight	FREE
International Astronomy Day Solar Viewing	Centennial Observatory	Saturday, April 25 th , 2015	11:00 AM to 4:00 PM	FREE
International Astronomy Day Nighttime Telescope Viewing	Centennial Observatory	Saturday, April 25 th , 2015	9:00 PM to midnight	FREE



Faulkner Planetarium Show Schedule April 6th – 25th

SHOWS

	Astronaut (Astro)*					
	Black Holes: The Other Side of Infinity (Black Holes)*					
	Dynamic Earth: Exploring Earth's Climate Engine (Dyn Earth)*					
	Pink Floyd: Dark Side of the Moon (Dark Side)					
	Rock On Demand (ROCK)					
	Sea Monsters: A Prehistoric Adventure (Sea Monsters)					
	Solar System Odyssey (SS Odyssey)					
Tuesday						
				7:00		
				(Dyn Earth)*		
Friday						
				7:00	8:00	
				(SS Odyssey)	(ROCK)	
Saturday						
1:30	2:30	3:30	4:30	7:00	8:00	
(Astro)*	(SS Odyssey)	(Sea Monsters)	(SS Odyssey)	(Black Holes)*	(Dark Side)	

*Denotes a program that includes a live sky tour



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.