Snake River Skies

The Newsletter of the Magic Valley Astronomical Society

www.mvastro.org

Membership Meeting
Saturday, February 14, 2015
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,

It's that time of year when obstacles appear in the sky. In particular, this year is loaded with fog. It got in the way of letting us see the dance of the Jovian moons late last month, and it's hindered our views of other unique shows. Still, members reported finding enough of a clear sky to let us see Comet Lovejoy, and some great photos by members are popping up on the Facebook page.
This month, however, is a great opportunity to see the benefit of something getting in the way. Our own Chris Anderson of the Herrett Center has been using the Centennial Observatory's scope to do work on occultation's, particularly with asteroids. This month's MVAS meeting on Feb. 14th will give him the stage to show us just how this all works.
The following weekend may also be the time the weather allows us to resume MVAS-only star parties. Feb. 21 is a great window for a possible star party; we'll announce the location if the weather permits. However, if we don't get that window, we'll fall back on what has become a MVAS tradition: Planetarium night at the Herrett Center. For the last two years, MVAS has spent an evening together in the planetarium. Check your E-mail for final details.

Clear Views,
Rob Mayer

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

February Overview

2/1 Mercury is at its greatest heliocentric latitude north today; Venus is 0.8 degree south of Neptune at 11:00
2/4 The astronomical cross-quarter day known as Imbolc or Candlemas occurs today; Jupiter is 5° north of the Moon
2/6 Jupiter (apparent size 45.3", magnitude -2.6) is at opposition.
2/11 Mercury is stationary at 7:00
2/12 The Curtiss Cross, an X-shaped clair-obscure illumination effect located between the craters Parry and Gambart, is predicted to occur at 21:07MST
2/13 Saturn is 2 degrees south of the Moon.
2/15 Asteroid 8 Flora (magnitude +8.8) is at opposition.
2/17 Mercury is 3 degrees south of the Moon.
2/21 Venus is 2 degrees south of the Moon; Mars is 1.5 degrees south of the Moon; Venus is 0.5° south of Mars; Uranus is 0.3° south of the Moon, with an occultation visible from Mexico, most of the United States, and northern Polynesia.
2/24 Mercury is at the descending node today; Mercury reaches greatest western elongation (27 degrees) at 16:00
2/25 The Moon is 1.0° north of the first-magnitude star Aldebaran (Alpha Tauri).
2/26 The Lunar X (the Purbach or Werner Cross), an X-shaped clair-obscure illumination effect involving various rims and ridges between the craters La Caille, Blanchinus, and Purbach, is predicted to occur; Neptune is in conjunction with the Sun; a double Galilean shadow transit (Europa's shadow follows Callisto's shadow).

Nicolas Copernicus (1473-1543), Galileo Galilei (1564-1642), and Clyde Tombaugh (1906-1997) were born this month.

Clyde Tombaugh discovered Pluto on February 18, 1930. Gerald Kuiper discovered the Uranian satellite Miranda (magnitude +15.8) on February 16, 1948. Supernova 1987A was discovered by Ian Shelton, Oscar Duhalde, and Albert Jones on February 23, 1987. PSR B1919+21, the first pulsar, was discovered by Jocelyn Bell Burnell and Antony Hewish on February 24, 1967.

The zodiacal light is visible in the western sky about 80 minutes after sunset from dark locations and is best seen from February 6th to February 20th.

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

At midmonth, Mercury is visible during morning twilight, Venus sets at 18:00, Mars sets at 18:00, Jupiter is visible for the entire night, and Saturn rises at 2:00 a.m. local time for observers at latitude 40 degrees north.

Mercury can be seen in the morning sky from February 6th to February 28th. It is stationary on February 11th and is three degrees south of the waning crescent Moon on February 17th. The speediest planet is at the descending node and reaches greatest western elongation on February 24th. Since Mercury (magnitude 0.0) is situated only four degrees above the southeastern horizon 45 minutes prior to sunrise, this is not a favorable apparition for northern hemisphere observers.

Venus is two degrees south of the waxing crescent Moon on the evening of February 20th. From February 20th to February 23rd, Venus (apparent size 11.8", magnitude -3.9) and Mars (apparent size 4.2", magnitude +1.3) are less than one degree apart. The Red Planet is over 100 times fainter. Venus passes 26 arc minutes south of Mars on February 21st, the closest of three conjunctions of the two planets occurring this year. A slender crescent Moon lies 14 degrees above the two planets on that date.

A very tiny Mars departs Aquarius and enters Pisces on February 10th. Mars and Venus are separated by less than two degrees from February 17th to February 26th. On the evening of February 20th, the Moon passes 1.5 degrees north of Mars for observers in North America.

Jupiter comes to opposition in Cancer at 18:00 UT on February 6th and will be visible for the entire night. On that date, the king of the planets shines at magnitude -2.6, spans 45.4 arc seconds at its equator, and is 36 light minutes or 4.34 a.u. from the Earth. Jupiter lies five degrees north of the Moon on the morning of February 4th. Mutual events of the Jovian moons visible from North America take place on February 2nd, February 4th, February 9th, February 11th, February 15th, February 18th, February 20th, February 22nd, February 24th, and February 27th. Over a six hour period on the night of February 26th/27th, four events involving Jupiter's satellites Io, Ganymede, and Callisto take place. Io occults Ganymede from 19:17 MST to 19:24 p.m. MST.

Saturn lies nine degrees northwest of the first-magnitude star Antares on the first of the month. By the end of February, Saturn is located 0.4 degree due north of the fourth-magnitude multiple star Nu Scorpii. At mid-month, Saturn's rings span 38 arc seconds and are inclined 25 degrees from edge-on. As the month ends, Saturn rises around 1:00 a.m. local time. Saturn is two degrees south of the Moon on the evening of February 12th. Eight-magnitude Titan lies north of Saturn on February 13th.

Uranus lies within some four degrees of Venus as February ends. It is occulted by the Moon on February 21st, an event that will be visible for most of the United States and Mexico.

Neptune is in conjunction with the Sun on February 26th and thus is not visible for most of this month.

The dwarf planet Pluto is not readily observable during February.

The bright comet C/2014 Q2 (Lovejoy) passes less than one degree east of the colorful second-magnitude multiple star Almach (Gamma Andromeda) and three degrees west of the edge-on spiral galaxy NGC 891 (magnitude +10.8) on February 4th. Unfortunately, moonlight from a nearly Full Moon will compromise observations of this Oort cloud comet. That will not be the case on February 18th, when Comet Lovejoy is positioned less than 0.5 degree west of the fourth-magnitude star Phi Persei. On February 20th, the comet passes just to the west of the planetary nebula M76 (magnitude +10.1

Asteroid 3 Juno shines at eighth-magnitude as it travels northwestward through Hydra. It enters Cancer at mid-month. At the end of the month, 3 Juno passes one degree southwest of Beta Cancri (magnitude +3.5). Asteroid 8 Flora (magnitude +8.8) reaches opposition in the Sickle of Leo (10h03m00s, +18°23') on February 15th. Other asteroids coming to opposition this month include 71 Niobe (magnitude +10.6) on February 4th, 89 Julia (magnitude +10.5) on February 5th, 58 Concordia (magnitude +12.3) on February 16th, 38 Leda (magnitude +11.5) on February 17th, and 76 Freia (magnitude +12.2) on February 28th.

Notable carbon star for February: BL Orionis (Orion)

Fifty deep-sky objects for February: NGC 2146, NGC 2403 (Camelopardalis); M41, NGC 2345, NGC 2359, NGC 2360, NGC 2362, NGC 2367, NGC 2383 (Canis Major); M35, NGC 2129, NGC 2158, NGC 2266, NGC 2355, NGC 2371-72, NGC 2392, NGC 2420 (Gemini); NGC 2419 (Lynx); M50, NGC 2232, NGC 2237, NGC 2238, NGC 2244, NGC 2245, NGC 2251, NGC 2261, NGC 2264, NGC 2286, NGC 2301, NGC 2311, NGC 2324, NGC 2335, NGC 2345, NGC 2346, NGC 2353 (Monoceros); NGC 2169, NGC 2174, NGC 2194 (Orion); M46, M47, M93, Mel 71, NGC 2421, NGC 2423, NGC 2438, NGC 2439, NGC 2440, NGC 2467, NGC 2506, NGC 2509 (Puppis)

Top ten binocular deep-sky objects for February: M35, M41, M46, M47, M50, M93, NGC 2244, NGC 2264, NGC 2301, NGC 2360

Top ten deep-sky objects for February: M35, M41, M46, M47, M50, M93, NGC 2261, NGC 2362, NGC 2392, NGC 2403

Challenge deep-sky object for February: IC 443 (Gemini)

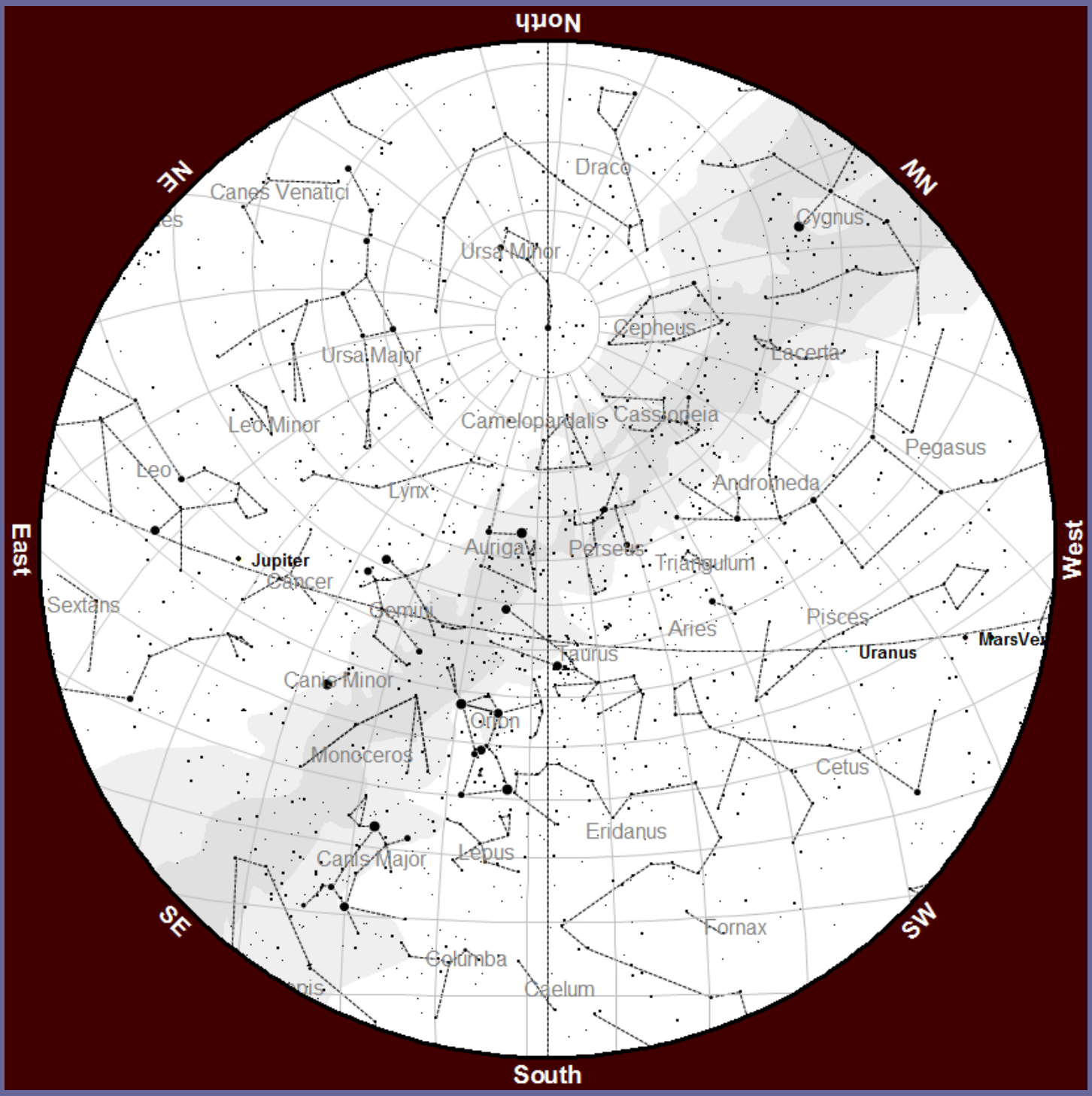
The objects listed above are located between 6:00 and 8:00 hours of right ascension.

IC-443 In Gemini

Calendar for February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2 Groundhog Day 	3 Full Moon (Snow Moon) 	4	5 Moon at Apogee Angular Size: 29’ 24” 	6	7
8	9	10	11	12 Lincoln's Birthday Last Quarter Moon 	13	14 Valentine's Day  Membership Mtg. @19:00
15	16 President's Day 	17 Moon at Perigee Angular Size 33’ 29” 	18 New Moon 	19	20	21
22 Washington's Birthday 	23	24	25 First Quarter Moon 	26	27 Moon at Greatest N. Declination +18.3° 	28

Planisphere for February



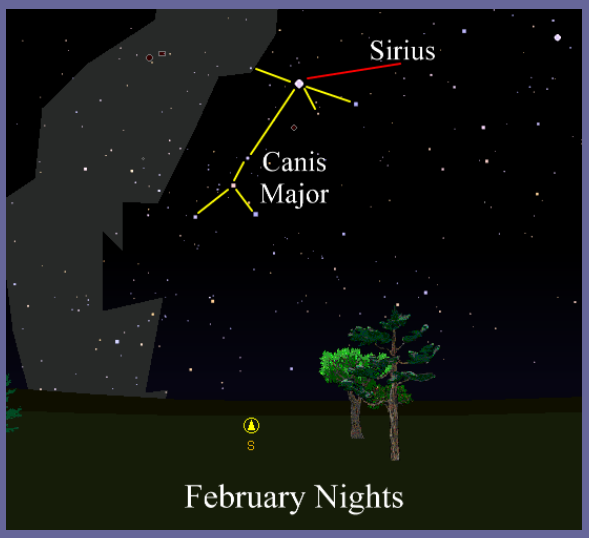
End of astronomical twilight (7:45 PM) at mid-month.
Planisphere courtesy of Chris Anderson, Production Specialist & Observatory Coordinator,
Faulkner Planetarium / Centennial Observatory College of Southern Idaho, Twin Falls, ID

Be Safe – Get Out There – Explore Your Universe

Idaho Skies for December

Vol. 9 No. 2

Idaho Skies is a column for beginning amateur astronomers and those interested in astronomy. Suggestions about the column are gladly accepted by the columnist, at nearsys@gmail.com



This month look for the star Sirius. Sirius is the Lucida of the constellation of Canis Major, the Big Dog and its half way up in the sky when you face towards the southwest during February nights. It's the brightest star in the heavens and only the planets Venus, Mars, and Jupiter can surpass its nighttime brilliance. Sirius is a bright white star that appears to throw off sparks of color when it's low to the horizon. That's because there's more atmosphere low in the horizon to refract its starlight. If you were born in 2006, then Sirius is your birthday-star this year because the light you see tonight left Sirius 9 years ago. The name Sirius comes from the Greek word for scorching. During the Dog Days of summer, which occurs in early August, the sun and Sirius are close together in the sky. The Greeks believed that the heat of Sirius added to the sun's heat, making these days especially hot.

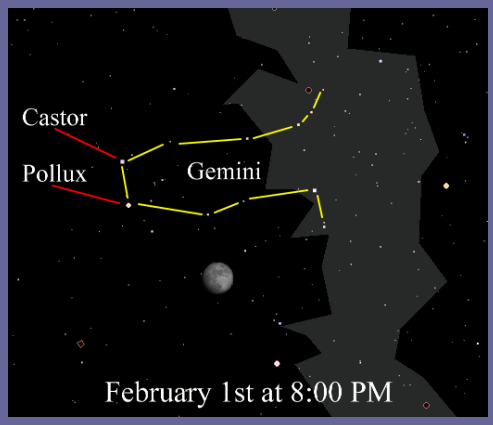
Sirius has a strange companion. Back in the early 19th century, astronomers discovered that the star wobbled back and forth as it slowly drifted across the sky. It was as if the gravity of a massive star was tugging on it. However, try as they might, no astronomer could discover a star close to Sirius to account for its wobbly motion. It wasn't until 1854 when Alvan Clark turned a new 18 inch refracting telescope to the star that he discovered a tiny spark of a star next to Sirius. The star was not really that faint, but its closeness to Sirius made it impossible to see with previously telescopes.

The companion to Sirius, called the Pup Star, orbits Sirius with a period of fifty years. From the amount of tugging Sirius experiences from this star, we know that the Pup Star has a mass equal to our sun. What's so surprising is that if we viewed the sun from nine light years away, we would easily see it with the unaided eye. However, the Pup Star isn't. What gives? Stars like the Pup Star have the spectrum of a very hot star. Therefore, every square foot of these stars is more intense than an equal area of our sun. The low total brightness but high surface intensity of these types of star tells astronomers that they must be very tiny, about the size of our planet. We call them White Dwarf stars.

Once each white dwarf was like our sun, moderately bright and moderately large. Once its nuclear fuel ran out, the star collapsed on itself because it could no longer support its weight using nuclear fusion. Only the repulsion between electrons keeps white dwarf stars from collapsing any smaller. The compression of a star into a white dwarf makes it incredibly dense. A billiard ball of white dwarf weighs as much as a tank, or about the same weight as 100 family cars.

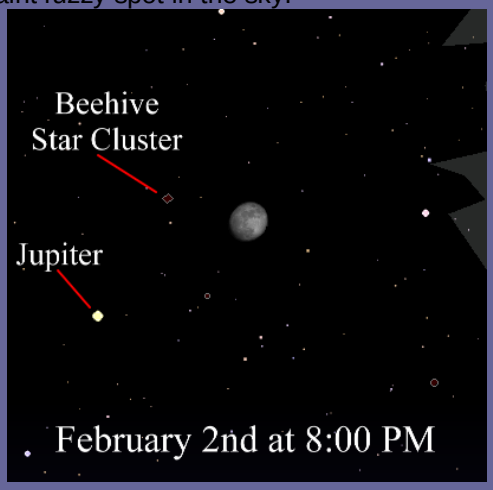
February 1 – 7

The constellation of the Gemini Twins reclines above the moon on the evening of the 1st. To identify Gemini, look for two horizontal rows of stars above the moon. Their brightest stars lie at their left end of the rows.

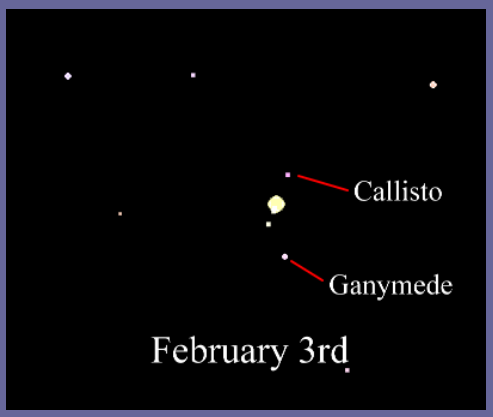


After it gets dark on the 2nd, look for the Beehive star cluster to the moon's left. The Beehive is among the largest of the star clusters in our sky and is located just outside a binocular's field of view from the moon. So place the moon just

outside the right side of your binoculars in order to find the cluster on the left side. In dark skies outside of towns you can see the cluster without binoculars as a faint fuzzy spot in the sky.

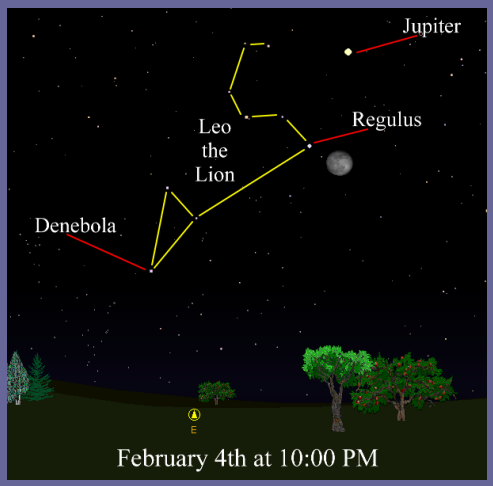


What's that bright star to the left of the moon on the 3rd? It's not actually a star it's the planet Jupiter. Jupiter appears to have a slightly off-white tint and it resists twinkling unlike the surrounding stars. If you have any sort of optical aid, even a pair of binoculars, then aim it at Jupiter. You'll see that there are two stars forming a straight line with Jupiter, which is between them. In binoculars, the bottom star is Callisto, Jupiter's second largest moon and the top star is Ganymede, the largest satellite in the solar system. Ganymede, a planet's satellite, is even larger than the planet Mercury.



The yellowish star to the moon's left on the 4th is Regulus. Regulus is the brightest star of Leo and Lion and it represents the lion's heart. You should be able to see a backwards question mark of stars above Regulus. This represents the back of Leo's head and mane.

Jupiter reaches opposition on the 6th. What's opposition? That's when Jupiter is located opposite the sun in our sky. The advantage of planets at opposition is that it places them at their closest to Earth. As a consequence, Jupiter rises at sunset and is its largest and brightest.

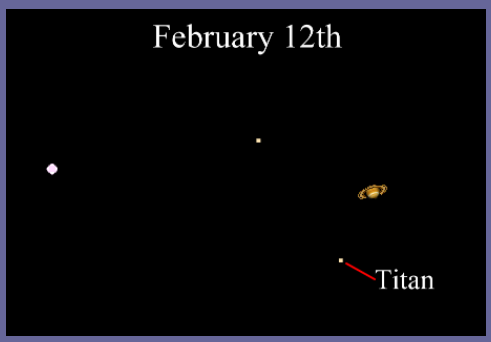


February 8 – 14

That star you see below the gibbous moon on the morning of the 9th is Spica. Spica is the brightest star of the constellation of Virgo the Maiden, a somewhat dim, but large constellation. You really need to leave the confines of Boise and other large towns in order to see this constellation.

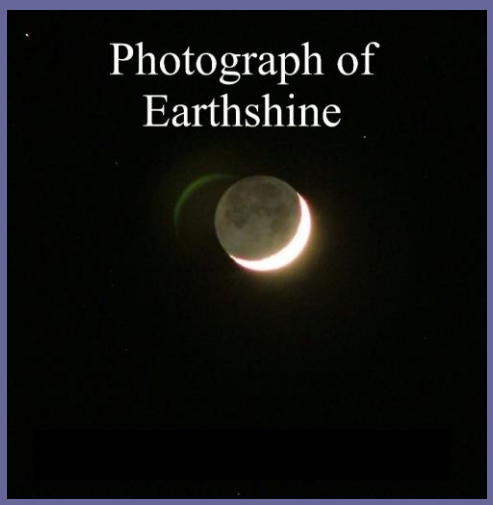
There are a few double stars that really stand out in binoculars. One of those goes by the name of Zubenelgenubi. The spacing between the pair of stars is so wide that some people can see both stars without optical aid. However, it's much easier through binoculars. You can see this double star for yourself on the morning of the 11th. Just look for the brightest star just below the moon.

Looking for Saturn? The ringed world is to the moon's left on the morning of the 12th. Point your telescope or even a spotting scope at Saturn and you'll be able to see its magnificent rings. A magnification of as low as 25 power is sufficient. In telescopes that invert images (most do), you may notice a star way to Saturn's left. That's just a star. However, closer to Saturn and to its lower left is a fainter star that's actually Saturn's largest satellite, Titan. Titan is the only satellite in the solar system that supports a substantial atmosphere.
In fact, this frigid atmosphere is denser than our own.



February 15 – 21

The moon is new on the 17th, so look for Earthshine on the mornings of the 15th and 16th. Earthshine is sunlight reflected off Earth and onto the moon. Through binoculars, you'll see earthshine faintly illuminates some of the lunar maria on the dark side of the moon.



Over 100 years ago, some, but not many astronomers, hypothesized that a planet existed beyond Neptune, the most distant planet known at the time. However, it turns out these hypothesizes where based on poor positional data of Neptune. One observatory looking for this unknown planet, which they called Planet X, was the Lowell Observatory in Flagstaff, Arizona. They hired Clyde Tombaugh, a Kansas farm boy to photograph regions of the sky at night and then scan them during the day to find what was literally a needle in a haystack. He scanned photographic plates looking for a single faint star out of millions that appeared to shift its position every night. This was very time consuming and required intense concentration and dedication. However, Clyde succeeded in detecting Planet X 85 years ago on the 18th.

Tombaugh had discovered a tiny world, only 1,400 miles across or 60% the size of the moon. On average, little Pluto is located 4.5 billion miles away from the sun or over 45 times farther from the sun that Earth. At this distance, the sun's gravity is so weak that it takes Pluto 247 years to orbit the sun and its surface temperature is -380 degrees F.

For over 60 years, Pluto was listed as one of the nine planets of the solar system. Some astronomers however began arguing that Pluto shouldn't actually be classified as a planet since asteroids aren't classified as planets either. Pluto they argued was actually part of a larger undiscovered icy asteroid belt surrounding the outer limits of the solar system. Because of the parameters used to describe the orbits of comets, we know many of them must originate within a region as distant from the sun as Pluto. It took time, but eventually astronomical observations eventually caught up to theory and found that Pluto's region of the solar system is packed with millions of small icy bodies waiting for their turn to enter into the inner solar system to become comets. One of those astronomers arguing that Pluto was part of a larger population has his birthday on the 26th.

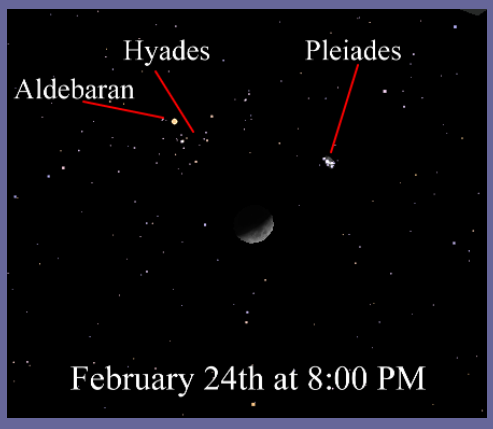
Get ready for more Pluto and perhaps some more arguments about its place in the solar system. This tiny world will make the headline on July 14th when it is visited by its first spacecraft, New Horizons.

The moon makes its evening appearance on the 20th. That evening however, you may first notice Venus. Just above Venus is the planet Mars and our moon. The moon will be an incredibly thin crescent, so Earthshine will be very easy to see once the sky gets dark. If you have a camera, you might want to try taking a few photographs. Do this by attaching your camera on a tripod and setting it for its highest optical magnification. Take a few photographs with different exposure times.

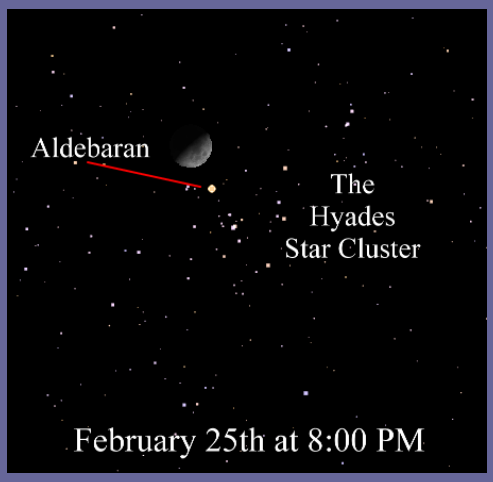
Venus approaches a bit closer to Mars on the 21st. That evening they will only be ½ of a degree apart. That's as wide as the moon appears. Be sure to look for Earthshine on the 21st, also.

February 22 – 28

The moon passes close to the Pleiades and Hyades star clusters on the 24th. These are the two largest and brightest star clusters in the Northern hemisphere. Both clusters and the moon will be attractive targets for your binoculars. While the moon is a better object for your telescope, the Pleiades and Hyades don't appear anywhere as nice through a telescope (except perhaps through a spotting scope). That's because most telescopes have too narrow of a field of view, and the field of view gets more restrictive as the magnification increases. Wide angle telescopes like rich field telescopes and spotting scopes are designed to provide wide angle fields of view while sacrificing magnification. There are many things in the night sky that are better at low power and very suitable for these types of telescopes.



The moon just clips the edge of the Hyades star cluster on the 25th. This will be a perfect sight for your binoculars.



Astronomer Kenneth Edgeworth was born 135 years ago on the 26th. He should be more famous since he predict that an undiscovered region of comets surrounded the outer reaches of the solar system. We often hear this belt of future comets called the Kuiper Belt. However, both Edgeworth and Kuiper didn't truly predict what astronomers eventually discovered. That's because they thought that Pluto was Earth-size and its gravity had scattered this icy belt out of the solar system. Astronomers Fred Whipple (US) and Julio Fernandez (Uruguay) actually did a better job predicting the existence of the outer icy belt of the solar system which astronomers began discovering in 1992.

This Month's Sources

2015 Calendar of Astronomical Events, http://AstroPixels.com
Astronomy Calendar of Celestial Event for Calendar Year 2015, http://www.seasky.org/astronomy/astronomy-calendar-2015.html
Kuiper Belt, http://en.wikipedia.org/wiki/Kuiper_belt
Night Sky Explorer
Pluto, http://en.wikipedia.org/wiki/Pluto
Ranger 8, http://en.wikipedia.org/wiki/Ranger_8

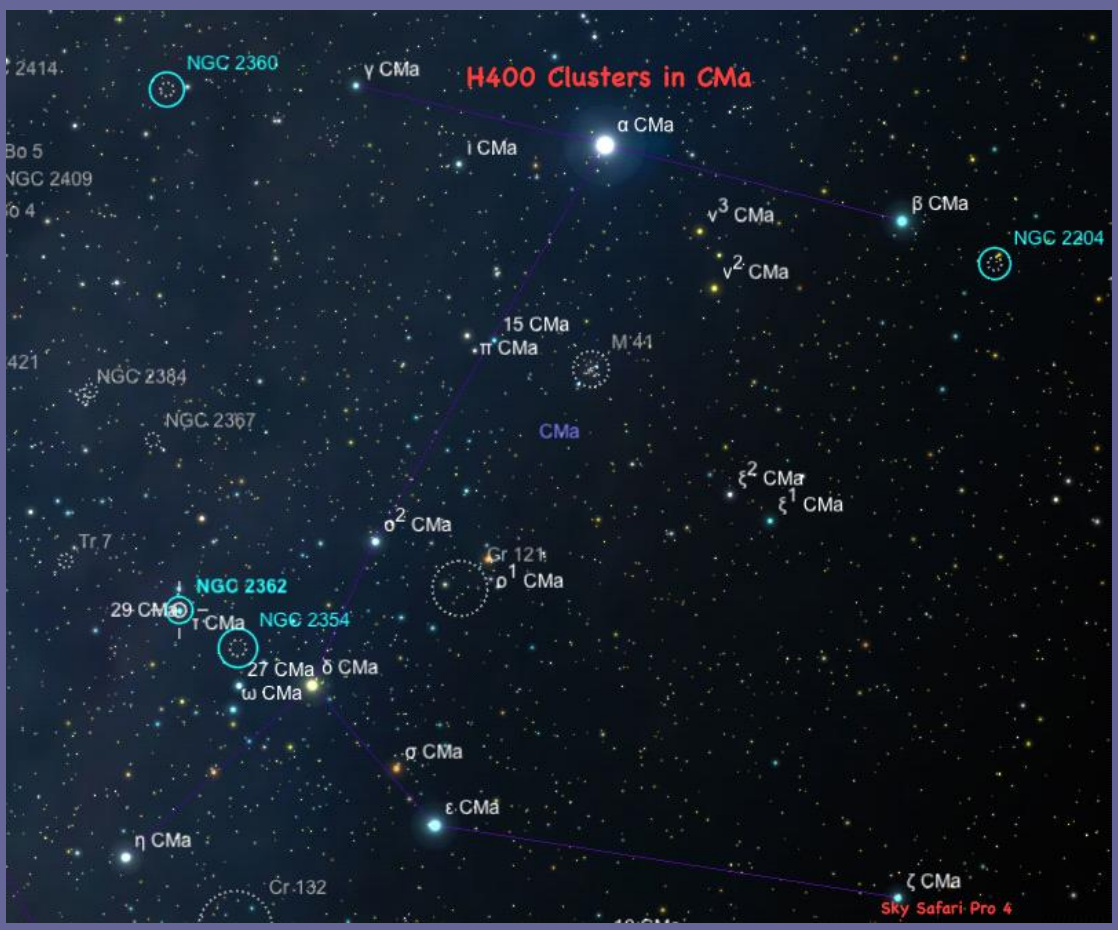
Dark Skies and Bright Stars,
Your Interstellar Guide

Looking Through the Eyepiece

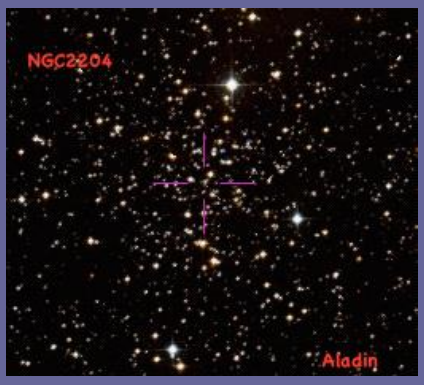
Some Big Dog Clusters - Article by Steve Bell, Boise Astronomical Society

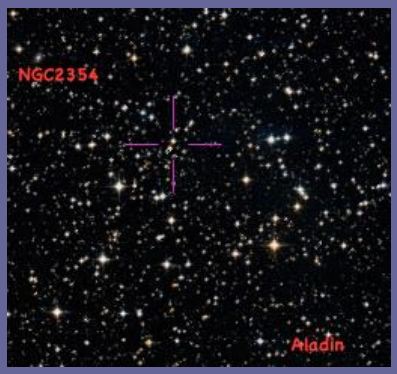
Canis Major is home to many open clusters in addition to the fine binocular object Messier 41. There are numerous NGC and other catalog clusters within its boundaries. The four targets for this article are the four Herschel 400 clusters in CMa. These are all bright, larger clusters and should be accessible in all scopes of 8" aperture and larger.

Cluster	RA	DEC	Mag	Size
ngc2204	06 15 42	-18 39 00	8.6	13
ngc2354	07 14 18	-25 44 00	6.5	20
ngc2360	07 17 48	-15 37 00	7.2	13
ngc2362	07 18 48	-24 57 00	4.1	8

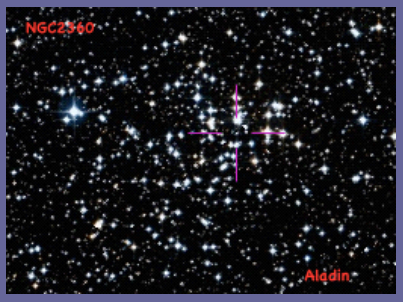


Lying about 1.8° slightly south of west from β CMa, **NGC 2204** is an old cluster of about 3 billion years age. It lies about 8600 light years from the sun. 2204 is a large, faint cluster that tends to merge into the fairly dense background star field. Through an 8" SCT at 83X it appeared large, faint and relatively unresolved.





Near the feet of the big dog, some 1.5 degrees ENE from δ CMa is NGC 2354. This cluster lies some 13.3 kLY from the sun and is around 134 million years old. 2354 is included in a pretty star field and it is somewhat difficult to determine the cluster's boundary. Through an 8" SCT at 83X it appeared very loose and irregular with bright stars standing out from a dimmer field.

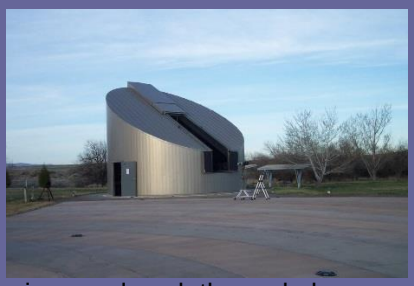


About 3.3 degrees E of ϒ CMa lies NGC 2360. This cluster is a Caroline Herschel discovery in 1783. It is 3700 light years from the sun and an older cluster at 2.2 billion years old. Through an 8" SCT at 83X it was moderately dense and rich, with 50 + stars and was visible in a 50 mm finder.

Centered on τ CMa, NGC 2362 is one of my favorite open clusters. It is a very young cluster at around 5 million years in age and is about 4800 light years away. The cluster formed from nebula Sh2-310 (Sharpless) nearby and nebulosity is obvious within the cluster. Through an 8" SCT at 83, 107 and 156X, this cluster surrounds τ CMa, it is moderately dense and contains about 20 blue-white stars with yellowish foreground providing color contrast. Nebulosity was apparent at all three magnifications without a filter.

Observatories and Planetariums

Bruneau Dunes Observatory – Bruneau, ID



The Observatory is now closed, the park, however; remains open.

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 10th, 2015	7:00 to 9:00 PM	$1.50 (Children 6 & under free) Free to all with paid planetarium admission
Monthly Free Star Party	Centennial Observatory	Saturday, February 14th, 2015	7:00 PM to midnight	FREE
Telescope Tuesday	Centennial Observatory	Tuesday, February 24th, 2015	7:15 to 9:00 PM	$1.50 (Children 6 & under free) Free to all with paid planetarium admission

Our Skies in January

Let's hope February has better weather.

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.

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.

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.