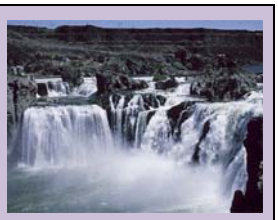
Snake River Skies

The Monthly Newsletter of the
Magic Valley Astronomical Society
February 2013



www.mvastro.org

Membership Meeting

Saturday, February 9th at the Herrett Center
Guest Speaker
Richard Beaver, BAS
Visit to the
Kennedy Space Center
7:00 pm

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President's Message

Colleagues,

The upcoming schedule looks quite promising. Richard Beaver, who teaches astronomy at Boise State University, will talking about his tour at the Kennedy Space Center. Also a member of the Boise Astronomical Society, Beaver will be speaking to us Saturday, Feb. 9.

Right now, there have been no finalized plans yet for a members-only Star Party this month. However, the recent change in the weather is opening up some options, and recent astronomical developments have us considering others. Discussions about astrophotography opportunities with asteroid 2012 DA14 in February and Comet PANSTARRS in March are on the table. Stay tuned through either Facebook or MVAS' e-mails.

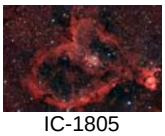
Now would also be a good time to get people thinking about the March meeting. We will be initiating a new activity simply called "Show and Tell." Simply put, if there's something you've been doing, something you'd like to show off, something you'd like to get started on, or something you'd like to talk about, contact me and I'll schedule you in – whether for five minutes or 25 minutes. Please hurry, for someone's already signed up for a 15-20 minute spot.

As always, I look forward to hearing from all of you. We've seen some great photos posted in Facebook and over the mailing list by members, and reports came back to me that the club's planetarium activity last month had a great turn-out. I won't be surprised if these great things continue to happen.

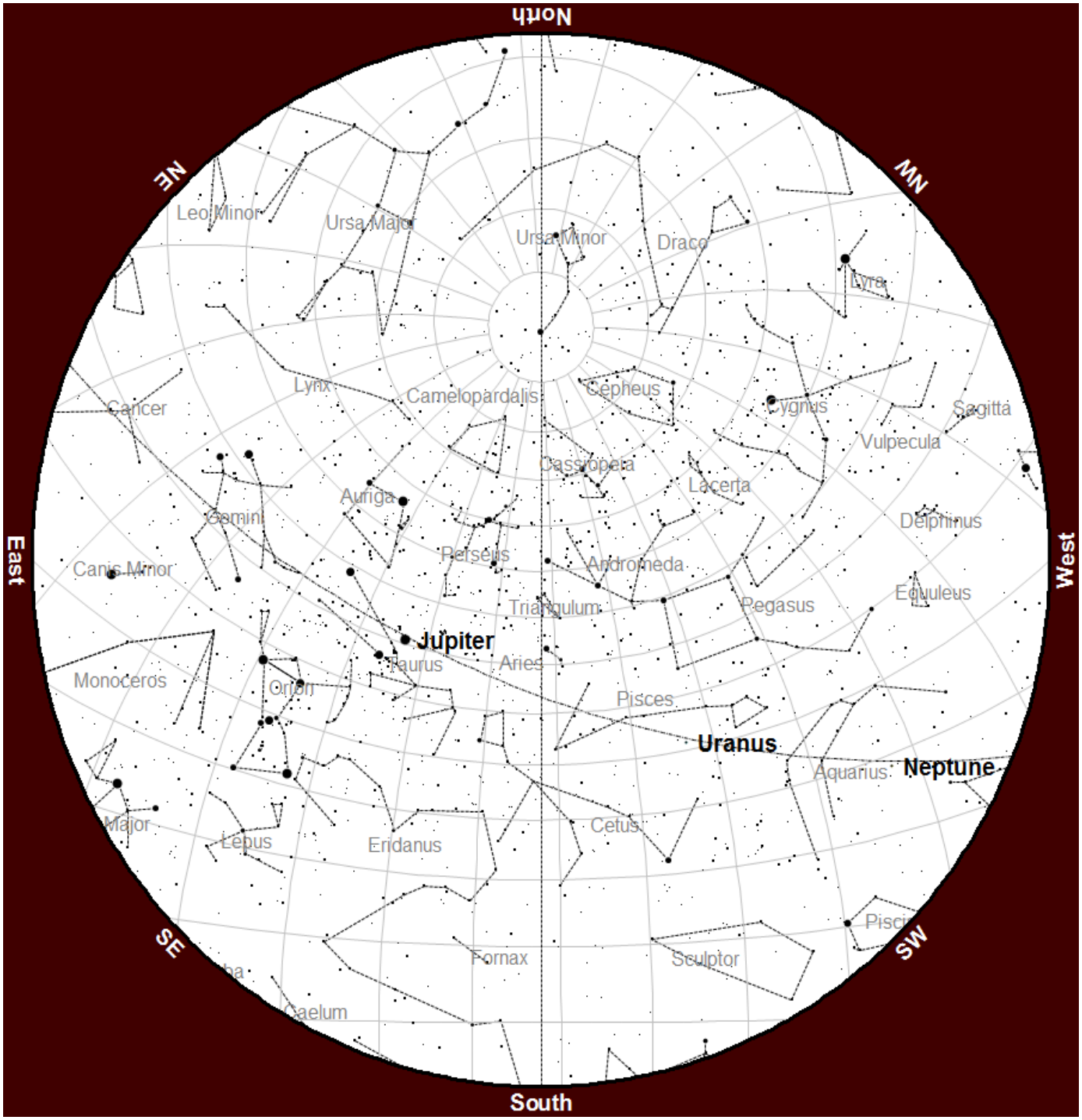
Best Wishes,
Robert Mayer

In this Issue

Calendar for February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2 Groundhog Day 
3 Last Quarter Moon 	4	5	6	7	8	9
10 New Moon 	11	12 Lincoln's Birthday Mardi Gras 	13	14 Valentine's Day  IC-1805 Heart Nebula	15 National Flag of Canada Day	16
17 First Quarter Moon 	18 	19	20	21	22 Washington's Birthday 	23
24	25 Full Moon 	26	27 Zodiacal Light visible at evening twilight next 2-weeks 	28		

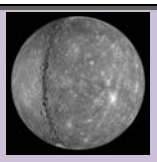
Planisphere for February



Planisphere should be used as a guide for the month of February, mid-month, end of astronomical twilight (6:45 PM)

Planisphere is provided as a courtesy from Chris Anderson, Coordinator, Centennial Observatory, Herrett Center for Arts & Science
College of Southern Idaho, Twin Falls, ID

Solar System Highlights



Mercury, the innermost and smallest planet of the solar system, hugs the western horizon right after sunset. Spotting it could prove quite challenging, but if you plan ahead and observe from a location with a good horizon without obstructions (such as trees or buildings), you should be able to see it. The best chance is around mid-month; greatest elongation occurs on the 16th and this is when Mercury is highest in the sky.

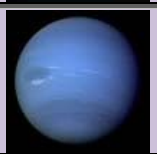
Venus is lost in the solar glare as it moves from the morning sky to the evening sky. It will return to view in early May, low above the western horizon just after sunset.

Mars The steady orange beacon low in the west in the early evening is our planetary neighbor, Mars. As enticing as the planet looks to the naked eye, through a telescope, its tiny disk will disappoint all but experienced observers and imagers.

Jupiter reached opposition to the Sun in December 2012, when it was closest to Earth and at its largest and brightest. The gas giant still stands high in the southeast after sundown, remains visible well after midnight and looks stunning through a telescope. It shines at magnitude -2.4 and resides in Taurus, close to Aldebaran, the brightest star in the constellation and one of the brightest in the nighttime sky.

Saturn rises in the east around 1 A.M. local time and by the beginning of dawn it is fairly high in the south. A small telescope will reveal Saturn's system of rings which span 37", surrounding a disk about 17" in diameter. The rings are tilted 20 degrees to our line of sight, the widest open they have been in seven years.

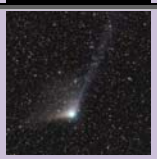
Uranus is technically at the threshold of vision at magnitude +5.9, and can be found among the stars of the constellation Pisces immediately after dark. For a proper identification, however, you will need binoculars and a current finder map. A good telescope and a power of 100x or more are needed to make the planet's disk obviously nonstellar.



Neptune glimmers very low in the west after sundown, in the background of Mars. It remains visible only until about mid-month, as it heads to conjunction with the Sun on February 21. The outermost planet is magnitude +8 and its small disk, just 2.4" in diameter, looks distinctively non-stellar at modest magnification.

Pluto The dwarf planet lies in northern Sagittarius and stands 15 degrees high in the southeast shortly before dawn. Pluto glows dimly at magnitude +14, which means you will need an 8-inch telescope to have a decent chance of spotting this glimmer of light.

Asteroid 4 Vesta is in the early evening, when Taurus the Bull - the constellation through which the asteroid tracks – is highest above the southern horizon. Aldebaran (Alpha Tauri) serves as a good guidepost for following the slow nightly motion of 7th-magnitude Vesta, but it may take a few nights of telescopic observing before you notice the asteroid's movement.



Comets 273P/2012 V4 Pons-Gambart : This primordial snowball is fairly high in the eastern sky during morning twilight. Glowing at 9th-magnitude, the comet will be well within the reach of a 6-inch telescope at low power under a dark sky. On the first days of February, 273P/2012 V4 Pons-Gambart is located in eastern Ophiuchus close to NGC 6633. Comet C/2012 K5 LINEAR is highest above the horizon in the early evening and is now fading rapidly.

Meteors Virginids are a vast complex of a dozen or so radiants that become active in late January and persist until mid-April, without reaching a definite peak. Meteors from this stream appear at a slow speed (about 20 miles per second) from a large radiant that measures 15 degrees by 10 degrees in size. Throughout February, the radiant is located midway between Leo and Virgo.

Idaho Skies for February

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 streetastro@gmail.com. Check the Idaho Skies Twitter page for notices and images at www.twitter.com/IdahoSkies.

This month look for the star Procyon. Procyon is the Lucida of the constellation of Canis Minor, the Little Dog. It's located in the southeast and to the upper left of Sirius, the brightest star in the skies. If you were born in 2002 then Procyon is your birthday star this year because the light of Procyon you see tonight left the star 11.4 years ago. The name Procyon comes from the Greek meaning, Before the Dog. This name is in reference to the fact that Procyon rises shortly before Sirius, the Dog Star, for mid-latitudes. Companion stars orbit both Procyon and Sirius and both companion stars are white dwarfs.

White dwarfs are aged stars that have consumed their supply of nuclear fuel of hydrogen and helium. Without the energy released from the fusion of hydrogen to support their weight, gravity compresses the stars into spheres the size of planets (about 100 times smaller that they use to be). A cubic centimeter of their compressed matter weighs about a ton. Imagine the weight of a car in a single teaspoon. White dwarf stars consist primarily of the carbon ash left behind from their glory days. With enough pressure, carbon atoms link up into a crystalline form know as diamond. Therefore, it's possible that many white dwarf stars are giant diamonds in the sky.

Physicists call the matter of white dwarves degenerate. It's only the reluctance of electrons to be squeezed into one another that keeps these stars from collapsing further. However, if you add more mass to white dwarfs, they would "burn the ash" in their cores into even heavier elements like silicon and iron, and then end their lives as stars collapsed into even smaller objects like neutron stars and black holes. Over billions of years, white dwarfs cool from white, to yellow, then to orange, red, and finally to black. Probably no white dwarf in the universe has had enough time to cool to a black dwarf.

February 1 – 7

For the first half of February, the Zodiacal Light will be visible in the west after dark. To find this illusive glow, head out to a dark site where there is no light in the west. Then an hour after sunset, look for what appears to be the glow of dusk. In this case, the glow will rise upwards and tilt towards the south slightly. It may remind you of a glowing pillar of light.

The brightest star to the moon's right on the morning of the 2nd is Spica. Spica is the alpha star of the constellation of Virgo.

On the morning of the 3rd, you will find the moon close to the planet Saturn. Indeed, they will be so close that you can see together in your binoculars. You will need to go outside after 3:00 AM and look for Saturn above the moon.

Also on the 3rd, you'll find a star even closer to the moon than Saturn. In this case, the star is to the left of the moon. This is a real star and the second brightest star of Libra, the Scales. This star has two interesting points that you might like to know. First is its name, Zubenelgenubi. Don't let the name of the scare you away, it is pronounced as follows, Zu - ben – el - - Ge – nubi. Second, the star is a double with such a large separation between the two companions that people with good eyesight can detect them as a pair. Use your binoculars and you can easily tell Zubenelgenubi is a double star. The light from this pair left 77 years ago, or in 1936.

The moon is also last quarter on the 3rd. The first and last quarter moons are great binocular objects. The view is even better through in a telescope, even a small one.

Here's a tougher target. Not long after sunset on the 7th and the 8th, you can see Mars and Mercury next to each other very low in the west-southwest. You need a very flat west, so you might want to try observing them from Bogus Basin. At 7:00 PM, as the sky is getting dark after sunset, look at the horizon with your binoculars. The pairs of planets will appear very close to the horizon, only about equal to the width of your thumb on an outstretched hand above the horizon. The sky will be dark blue, so you'll need to use binoculars if you are to have luck finding this pair.

February 8 – 14

The moon is new just after midnight on the 10th. This is why the Zodiacal Light is visible for the first half of February. The innermost planet, Mercury, is climbing higher in the western sky for the next week.

Look for it and the two-day old moon on the evening of the 11th. The very thin crescent moon is only 45 hours old and a little bit above Mercury. Since the moon and Mercury won't be very far from the sun, they will be close to the horizon as the sky gets dark. Use binoculars and scan the west-southwest sky at around 7:00 PM. By 7:30, the pair will have descended too close to the horizon for your binoculars to find them.

February 14th is the 50th anniversary of the launch of the first geosynchronous communication satellite, Syncom 1. Syncom 1 was a squat cylinder covered in solar cells and topped by an antenna. After entering a temporary low altitude obit, technicians checked out the satellite and then commanded its rocket motor to fire. However, rather than altering its orbit and entering geosynchronous orbit, all communication with the satellite was lost. After searching the sky with radio, the satellite was discovered in the wrong orbit. Further testing was not possible.

Geosynchronous orbits exist because the orbital period of a satellite increases as its altitude above Earth increases. A satellite in an orbit 22,300 miles above Earth requires 24 hours to complete a single orbit. Since Earth rotates once about its axis in the same time, the satellite appears to "hang" above a fixed spot on Earth. You can imagine how this simplifies pointing an antenna at a satellite. Arthur C. Clarke wrote about this effect in the magazine Wireless World in 1945.

Fritz Zwicky would be 115 years old on the 14th. Fritz was a Swiss astronomer at Cal Tech. He determined that supernovas (a term he coined) lead to neutron stars. More importantly, he discovered that stars orbit their home galaxies too fast for the galaxy's gravity to hold them in orbit. He reasoned that either we were observing galaxies in the process of breaking up (very unlikely given the number of observable galaxies) or that galaxies contain more matter than the number of stars would lead us to believe (also a seemly impossible conclusion). Astronomers and physicists eventually named this unseen matter, dark matter and it is currently a subject of intense search. Calculations based on the rotation rates of galaxies and the formation of the universe indicates that around 80% of the matter in the universe is invisible to us. Imagine that. Virtually no one listened to Fritz when he first discovered this discrepancy between the apparent mass of galaxies and the rotation rates of the stars within them.

February 15 – 21

Your best chance to see little Mercury occurs on the evening of the 16th when the planet is its farthest from the sun. Astronomers call this condition the planet's greatest eastern elongation of the planet. Mercury will be reasonably bright, but low in the west-southwest sky. Begin searching for the planet at 7:00 PM from a location with a low and clear western horizon.

The moon passes between star clusters and a planet on the night of the 17th. Look high in the sky after dark and you will see the Pleiades to the moon's upper right, the Hyades to the moon's left, and our solar system's grandest planet, Jupiter above the moon. This should be an attractive sight through your binoculars.

The brightest and second largest asteroid appears close to the moon on the night of the 18th. The Dawn spacecraft recently visited the asteroid Vesta and now you can inspect it yourself in binoculars. Vesta will be 1/3 of the distance between the moon and Jupiter on the night of the 18th. Check the Idaho Skies Twitter account for a sky chart that will help you find this protoplanet and relic from the formation of the solar system.

Nicolaus Copernicus was born 540 years ago on the 19th. One of the first people to shake up human understanding of our place in the universe, Copernicus was a Polish cleric and astronomer. He studied law and medicine as a young man before returning to Poland. A well educated 15th century man like Copernicus was familiar with the model of the universe proposed and perfected by the Greeks like Aristotle. We call this model of the solar system the geocentric model, so called because Earth is at the center of the universe all the objects in the universe orbit Earth. It was obvious to the Greeks that the world was large and massive. Therefore, it only made sense to believe that it was the center of the universe. The motions of the sun, moon, and other planets seemed to support this assumption.

Copernicus developed justifications for putting the sun in the center of the universe, or what is called the heliocentric model of the universe. He was not the first to do so however; the Greek Aristarchus proposed this model nearly 1500 years earlier.

By Copernicus' time, astronomers had long recognized the inability of the geocentric model to make accurate predictions of the positions of the planets. Astronomers were therefore ready for Copernicus' arguments for a sun-centered universe. There was not universal agreement among astronomers however. Copernicus' ideas made sense from a mathematical perspective because moving the sun to the center of the universe simplified the motions of the planets. For example, it naturally explained why Mercury and Venus never appeared very far from the sun and why the other planets were brighter

at opposition. Copernicus' work didn't fully account for the appearance of the planets motion across the sky. The reason being that astronomers still believed their motions were perfect circles rather than the ellipses they truly are.

The Copernican Revolution upended notions of the central importance of humans in the universe. Today we realize our little world is but one speck in a universe vastly larger than we can conceive.

February 22 – 31

Tick, tick, tick little star… Ms. Jocelyn Bell was monitoring quasars with radio telescopes in the 1960s with the help of your academic advisor, Antony Hewish. On February 24, 1967, a chart recording from one of her radio telescopes detected a regular radio pulse, one that repeated nearly once per second with astounding regularity. That level of precision in radio astronomy was unheard of and could potentially be the signal from an extraterrestrial civilization. In time, radio telescopes detected more of these signals and astronomers were able to determine that they originated from rapidly spinning neutron stars. We now call them pulsars.

Radio pulses occur when a radiation-emitting spot of the surface of a neutron star points towards Earth. Every time the neutron star's rotation swings that spot past our line of sight, our radio telescopes detect a quick beep.

Neutron stars are the collapsed remnants of stars too heavy for their electrons to hold them up. As a result, electrons and proton are squeezed into neutrons and the neutrons prevent the stars total collapse into nothing. Since the volume inside an atom is over 99% empty space, a star collapsing into neutron star shrinks from a diameter of around 1,000,000 miles to only 20 miles. The star's original slow rotation rate increases tremendously in an effort to conserve the star's angular momentum. This rapid rotation can change a star that rotates once per month into a neutron star that rotates hundreds of times per second. Jocelyn Bell did not receive a Nobel Prize in Physics for her discovery. However, her academic advisor did.

The moon is full on the 25th. The full moon in February is called the Snow Moon for good reason. Brrrrr!

This Month's Sources: This column is a compilation of other peoples' notes. I would like to say thank you to the following sources of knowledge this month.

Fritz Zwicky, http://en.wikipedia.org/wiki/Fritz_Zwicky
Jocelyn Bell Burnell, http://en.wikipedia.org/wiki/Jocelyn_Bell_Burnell
Nicolaus Copernicus, http://en.wikipedia.org/wiki/Nicolaus_Copernicus
Observer's Handbook 2013, The Royal Astronomical Society of Canada
Space Calendar, http://www.jpl.nasa.gov/calendar/
Syncom-1, http://nssdc.gsfc.nasa.gov/nmc/spacecraftDisplay.do?id=1963-004A
White Dwarf Stars, http://imagine.gsfc.nasa.gov/docs/science/know_l2/dwarfs.html
Zubenelgenubi, http://stars.astro.illinosi.edu/sow/zubenel.html

Dark Skies and Bright Stars,
The Street Astronomer

Image: Full Moon rising above the Snake River Canyon
Pillar Falls (foreground) and Shoshone Falls (back) visible. MVAS © 2012 by Gary Leavitt

Guest Article By Bailey Neilson

What are we? And where are we? We are living beings, living on planet Earth. If life ever gets too serious, here's something to remember. Scientists say we have evolved from monkeys. And like spaceships, the planet holds the necessities to contain life and then some. So you can say we are talking monkeys on an organic spaceship. My interest in space, like many other people, started out with the moon. It's my middle name literally. One of the first things that come to mind is how did it get there? Throughout history, space has been a place of foreign concepts, with many questions being asked along the way such as: 'How do we know and how much more is there?', 'Where did we come from?' and 'Are we alone?'

Our knowledge of the universe is very extensive, but how much do we really know? With technology, telescopes and satellites, we have been able to see far beyond our world and on to the next. This technology has allowed us to see what our eyes cannot. But even with the new technology we haven't seen everything. The universe is still expanding, new stars, galaxies, and planets are being formed every day, but it takes years to find them. There are many space objects we may never find. The knowledge we possess is constantly being questioned. Each day new things are found, posing different questions. One of the first questions is typically how was it made and where did it come from?

Scientists have come to the conclusion that the universe along with everything in it was created by the big bang. The big bang was an explosion of energy. All of the matter in the universe was in a single compact area. Our galaxy which our solar system travels in was created by condensing matter. About four and a half billion years ago the sun was formed but before that another star was in its place. After the star went super nova, our solar system started to form. The matter that was in the star has created everything in our solar system, the planets the sun and most of the natural satellites (moons). With that, part of the initial question, where did we come from, is answered. But many still remain like: If the big bang created us, then did it create others?

The size of the universe is still unknown to us, and what may be beyond it, so what are the possibilities we are the only living beings? A large controversy in the astronomic society has been whether or not there are other life forms out there. And if there are, how would we communicate with them? An accepted solution among astronomers is to send messages in numbers. A common connection between every living life form is mathematics. But with a combination of science-fiction movies and over told UFO stories, other life forms are typically thought of as a threat to the human existence, but would they be?

Thousands of years of curiosity have turned up many questions. Many of which are still unanswered. How much more is there to learn? What caused the big bang? Are we alone in the universe? And who are we? For now we are humans, living on our planet Earth. There are many years of research ahead of us to find out what the future has in store for us.

Deep Sky Highlight

Monoceros is a constellation of the equatorial region of the sky, representing the mythical single- horned beast, the unicorn. It is overshadowed by the brilliance of neighboring Orion but nevertheless containing several interesting deep sky objects for amateur telescopes. One of these deep sky showpieces is NGC 2261, more commonly known as "Hubble's Variable Nebula". Discovered by Sir William Herschel in 1783 and named for Edwin Hubble, NGC 2261 is a fascinating reflection nebula associated with the variable star R Monocerotis.

R is usually lost in the high surface brightness of the structure of the nebula, yet the whole thing varies in brightness by as much as two magnitudes with no predictable timetable - perhaps due to dark masses shadowing the star. Although you can spot NGC 2261 through a 3-inch telescope, you will need at least a 10-inch scope at 200X to give this object some contrast.

NGC 2261

Partnering to Solve Saturn's Mysteries By Diane K. Fisher

When you see spectacular space images taken in infrared light by the Spitzer Space Telescope and other non-visible-light telescopes, you may wonder where those beautiful colors came from? After all, if the telescopes were recording infrared or ultraviolet light, we wouldn't see anything at all. So are the images "colorized" or "false colored"?

No, not really. The colors are translated. Just as a foreign language can be translated into our native language, an image made with light that falls outside the range of our seeing can be "translated" into colors we can see. Scientists process these images so they can not only see them, but they can also tease out all sorts of information the light can reveal. For example, wisely done color translation can reveal relative temperatures of stars, dust, and gas in the images, and show fine structural details of galaxies and nebulae.

Spitzer's Infrared Array Camera (IRAC), for example, is a four-channel camera, meaning that it has four different detector arrays, each measuring light at one particular wavelength. Each image from each detector array resembles a grayscale image, because the entire detector array is responding to only one wavelength of light. However, the relative brightness will vary across the array.

So, starting with one detector array, the first step is to determine what is the brightest thing and the darkest thing in the image. Software is used to pick out this dynamic range and to re-compute the value of each pixel. This process produces a grey-scale image. At the end of this process, for Spitzer, we will have four grayscale images, one for each for the four IRAC detectors.

Matter of different temperatures emit different wavelengths of light. A cool object emits longer wavelengths (lower energies) of light than a warmer object. So, for each scene, we will see four grayscale images, each of them different.

Normally, the three primary colors are assigned to these gray-scale images based on the order they appear in the spectrum, with blue assigned to the shortest wavelength, and red to the longest. In the case of Spitzer, with four wavelengths to represent, a secondary color is chosen, such as yellow. So images that combine all four of the IRAC's infrared detectors are remapped into red, yellow, green, and blue wavelengths in the visible part of the spectrum.

Download a new Spitzer poster of the center of the Milky Way. On the back is a more complete and colorfully-illustrated explanation of the "art of space imagery." Go to spaceplace.nasa.gov/posters/#milky-way.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

This image of M101 combines images from four different telescopes, each detecting a different part of the spectrum. Red indicates infrared information from Spitzer's 24-micron detector, and shows the cool dust in the galaxy. Yellow shows the visible starlight from the Hubble telescope. Cyan is ultraviolet light from the Galaxy Evolution Explorer space telescope, which shows the hottest and youngest stars. And magenta is X-ray energy detected by the Chandra X-ray Observatory, indicating incredibly hot activity, like accretion around black holes.

Centennial Observatory and Faulkner Planetarium Events

Event	Place	Date	Time	Admission
Monthly Free Star Party	Centennial Observatory	Saturday, February 9th, 2013	7:00 PM to midnight	FREE
Telescope Tuesday	Centennial Observatory	Tuesday, February 12th, 2013	7:00 to 9:00 PM	$1.50 per person Free - children 6 & under Free to all with paid planetarium admission
Telescope Tuesday	Centennial Observatory	Tuesday, February 26th, 2013	7:30 to 9:00 PM	$1.50 per person Free - children 6 & under Free to all with paid planetarium admission

Faulkner Planetarium Schedule
January 15th through March 23rd, 2013

Day	Time	Faulkner Planetarium Show Schedule Beginning 1/15 - 2/17
Tuesday	7:00	Star Signs/Live Sky Tour
Friday	7:00	Star Signs/Live Sky Tour
	8:15	Pink Floyd: The Wall
Saturday	2:00	WSKY: Radio Station of the Stars/Live Sky Tour
	4:00	The Greatest Wonders of the Universe
	7:00	Star Signs/Live Sky Tour
	8:15	U2

Day	Time	Faulkner Planetarium Show Schedule Beginning 2/17 – 3/23
Tuesday	7:00	Two Small Pieces of Glass/Live Sky Tour
Friday	7:00	Two Small Pieces of Glass /Live Sky Tour
	8:15	Led Zeppelin: Maximum Volume 1
Saturday	2:00	The Dinosaur Chronicles
	4:00	How To Build A Planet
	7:00	Two Small Pieces of Glass /Live Sky Tour
	8:15	Pink Floyd: Dark Side of the Moon

Whittenberger Planetarium / Public Show - College of Idaho – Caldwell, Idaho

Day	Time	Show
Wednesday	7:00	Mars and Mercury

Bruneau Dunes Observatory

The Observatory is currently closed.

Trivia Time

Arriving on the Martian surface on January 25th 2004, it was never supposed to last this long, mission managers at NASA said they would be pleased if it lasted for 90 days.

Instead, it's been 3,201 days, and still counting. The rover has driven 22.03 miles, mostly at a snail's pace, from one crater to another, stopping for months at a time in the frigid Martian winters. The six motorized wheels, rated to turn 2.5 million times, have lasted 70 million in total, according to NASA, and are all still working.

NASA Scientists were so excited about landing in a crater that they called the landing a "hole in one"; however, they were not aiming for the crater (or even knew it existed). Later, the crater was named *Eagle crater* and the landing site designated "Challenger Memorial Station"

Telescopes For Sale

Folks, it has come to the newsletter editor's attention that there are a few telescopes for sale in the Magic Valley as well as the Treasure Valley. As a courtesy to the parties whom are selling their respective scopes and equipment, I would ask that you contact them directly. Thank you. David Olsen, Editor

First: Located in Boise, Idaho
Celestron 14" (2001 model?), wedge mount on pier
9x50 Finder Scope with illuminated reticle
Eye pieces: 32mm Erfle 2"; 55mm Televue 2"; 12.5mm Celestron MicroGuide 1.25"; 10.5mm Televue 1.25"; 19mm Widefield Teleview 1.25"; 30mm Bausch & Lomb 1.25" with Rich Field Adapter; 12.7mm Celestron Aspen 1.25"; 26mm Meade Plossle 1.25"; 2" eye piece w/o markings.
Focal Reducer Celestron f 6.3
Sky Glow Ultra Block Filter
Celestron Star Diagonal 1.25"
2" Diagonal
Barlows 2X and 3X 1.25"
Computer Equipment to go with the Go-To system
Total asking price for the above $6,000.00
Orion Starshoot Pro Deep Space Imaging $800.00
Meade Deep Sky Imager II Color CCD Camera $600.00
Meade Autoguider CCD Pictor 201XT $150.00
Astrovid StellaCam $450.00

Make an appointment to see the equipment with either Susan Niemeyer at 375-7147, or with Rob Niemeyer at 921-1700, email robniemeyer@rocketmail.com.

Second: Located in Ketchum, Idaho
Meade 14" LX200GPS SMT Telescope System $3500
EQ Wedge, Various Eyepieces, numerous accessories, and possibly an observatory shack.
Televue 76 telescope $1200. Price for everything $5000.
Contact Dane Urbany at 208-471-0493, or email daneur<at>hotmail.com
Details on the Meade scope may be found at this link: http://www.opticsplanet.com/meade-14-lx200gps-telescopes.html
Details on the Televue 76 may be found here: http://www.televue.com/engine/TV3b_page.asp?id=25

Third: Located in Filer, Idaho
Meade 8" LX200 Classic Schmidt-Cassegrain f/10: This telescope was purchased new in Feb., 2001. The price is negotiable. In trying to place a price on the package, I came up with a value of $1200. It is in the original packing box. The telescope is complete and includes the following components and accessories:

- Meade Standard Field Tripod
- Original Instruction Manual
- Front and Rear Dust Caps
- 120 Volt AC and 12 Volt DC Power Supplies
- 8 X 50 mm Finder Scope W/ Quick Release
- 90 Deg. Eyepiece Lens Adapter
- Meade Onboard Computer Tracking System
- Meade Super Plossl 40 mm Eyepiece
- Meade Super Plossl 26 mm Eyepiece
- Orion 12.5 mm Lanthanum Eyepiece
- Meade 2X Telenegative Eyepiece Extender
- Orion #5656 Skyglow Ultra Block Filter, SCT
- Orion #5658 Skyglow Filter, SCT
- Orion #5560 Variable Polarizer, 1.25 inch
- Orion Lens and Accessory Case, Metal, 18"X13"X6"
- Red LED Flashlight
- Red LED Headlamp
- Three Red LED Flashing Warning Lights for Tripod

Contact Dick Shotwell, 208-326-5284 or Cell—208-308-1047

Fourth: Located in Nampa, Idaho, the Boise Astronomical Society is selling their 18” JMI Telescope. This scope is similar to the JMI the Herrett Center has and is currently using. The scope comes with several accessories and has a trailer for ease of travel and set-up. This 18" f4.5 telescope has a split ring mount and drive, so it will track like an equatorial mount. The computer and drive are "push-to". The trailer is equipped with an inverter, so it can be plugged in to household AC, or run off of the supplied battery. 32mm 2" Meade Plossl, 26mm, and 15mm 1.25" plossl. Telrad,.. and More! Asking price includes the trailer $7995 Contact the newsletter editor for more details.

Scope set-up in trailer.

Fifth: The starter scope (in need of some TLC)
Meade Model 390 Alt-Az mount with tripod and slow motion controls.
25mm eyepiece
Diagonal
sun/dew shade
Contact: Norma Bartholomew
514 10th Ave. East
Jerome, ID 83338
(208) 324-4515

Membership Information

The Magic Valley Astronomical Society (MVAS) was founded in 1976. The Society is a non-profit [501(c) 3] educational and scientific organization dedicated to bringing together people with an interest in astronomy.

In partnership with the Centennial Observatory, Herrett Center, College of Southern Idaho - Twin Falls; we hold regularly scheduled monthly meetings and observation sessions, at which we share information on current astronomical events, tools and techniques for observation, astrophotography, astronomical computer software, and other topics concerning general astronomy. Members enthusiastically share their telescopes and knowledge of the night sky with all who are interested. In addition to our monthly public star parties we hold members only star parties at various locations throughout the Magic Valley.

MVAS promotes the education of astronomy and the exploration of the night sky along with safe solar observing through our public outreach programs. We provide two types of outreach; public star parties and events open to anyone interested in astronomy, and outreach programs for individual groups and organizations (e.g. schools, churches, scout troops, company events, etc.), setting up at your location. All of our outreach programs are provided by MVAS volunteers at no cost. However, MVAS will gladly accept donations. Donations enable us to continue and improve our public outreach programs.

Membership is not just about personal benefits. Your membership dues support the work that the Magic Valley Astronomical Society does in the community to promote the enjoyment and science of astronomy.

Speakers, public star parties, classes and support for astronomy in schoolrooms, and outreach programs just to name a few of the programs that your membership dues support.

Annual Membership dues will be
$20.00 for individuals, families,
$10.00 for students.

Contact Treasurer Jim Tubbs for dues information via e-mail: jtubbs015@msn.com or home telephone: 736-1989 or mail directly to the treasurer at his home address. 550 Sparks Twin Falls, ID 83301

Donations to our club are always welcome and are even tax deductible. Please contact a board member for details.

M-51 viewed in this newsletter was imaged with the Shotwell Camera and the Herrett Telescope at the Centennial Observatory by club members Rick Widmer & Ken Thomason. Unless otherwise stated all photos appear in the public domain and are courtesy of NASA.

Magic Valley Astronomical Society
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"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.

Membership Benefits

Sky and Telescope group rates. Subscriptions to this excellent periodical are available through the MVAS at a reduced price of $32.95.

Astronomy Magazine group rates. Subscriptions to this excellent periodical are available through the MVAS at a reduced price of $34.00

Receive 10% discounts on other selected Astronomy Publications.

For periodical info. and subscriptions Contact Jim Tubbs, Treasurer

Lending Library: Contact, the current board for information.

Lending Telescopes: The society currently has three telescopes for loan and would gladly accept others. Contact Rick Widmer, Webmaster for more information.