SNAKE RIVER SKIES

September 2009 Newsletter

Monthly Meeting

Our monthly meeting will take place on the 12th of September at 7:00 pm.

Once again and by popular demand (must be the candy) Jay Sneddon will be the presenter.

Meeting is in the Rick Allen Room of the Herrett Center.

Inside this issue:

Hello Everyone:

The weather this year has interfered with our plans to host a true dark sky night for just the club next to Berger Reservoir near Hollister. With summer winding down we thought we would try to have a club only-event before fall/ winter sets in. Thanks to Jay and Deb Hartwell, we are planning a barbecue and night viewing at their home on the 19th of this month.

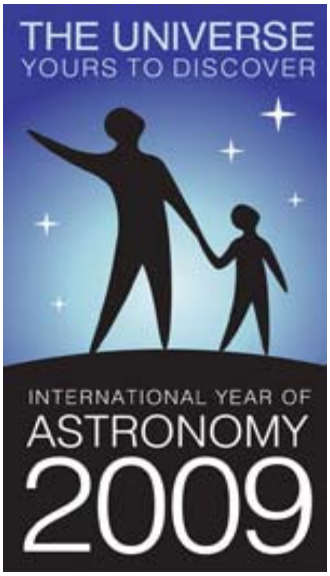
We still have hot dogs and hamburgers left over from our barbecue at the Herrett Center. Side dishes or desserts, pot-luck style would be greatly appreciated! Please bring your own beverages as well since we have none left from the picnic. Sunset should be about 8 pm, so if we start at 6:30 pm, we should be done eating

Dark Sky Night

by the time we want to set up scopes. Granted, it would be darker farther out of town, but the Hartwell's home is considerably darker than in town. Join us at the Hartwell Residence, which is located on Moonlight Drive near Kimberly. To get there drive east on Falls Avenue East, or Addison Avenue East and then either turn south or north onto 3400 east. Moonlight is about 1/2 mile in between Addison and Falls and runs back to the east. The Hartwell home is a nice two-story red brick near the end of Moonlight before the loop on the south side of the street. Their address is 3435 Moonlight Dr. Kimberly, ID

Hope to see everyone there!

Terry Wofford
MVAS President



THE NATIONAL PARKS: AMERICA'S BEST IDEA

On Sunday, September 27th Idaho Public Television will begin airing a six-part documentary series by Ken Burns about the National Parks, which was filmed over six years in some of Nature's most spectacular locales, the documentary is nonetheless the story of people from every conceivable background who were willing to devote themselves to saving some precious portion of the land they love for future generations to enjoy.

Why bring this up in an astronomy newsletter? The simple answer is dark skies: Craters of the Moon National Monument and Preserve is one of Idaho's best known dark sky locations, which is sadly being eroded away by light pollution. The World's first Dark Sky park was established in 2006 at Natural Bridges National Monument in southeast Utah. Work is still in progress to name Castle Rocks / City of Rocks as a International Dark Sky Park. Bringing this to everyone's attention will hopefully mitigate bad lighting and preserve dark skies. Tune in at 8:00 pm to watch the show. For more info visit www.idahoptv.org

Image: Milky Way over Owachomo Bridge at Natural Bridges National Monument. by Wally Pacholka used with permission.

Mount Wilson Observatory Calls for Help

As many of you know, Mount Wilson Observatory is operated by the Mount Wilson Institute, a 501(c)(3) non-profit corporation registered in California with offices on the Georgia State University campus in Atlanta. Our income derives primarily from site fees paid by the scientific projects here and some outreach activities. In normal years there are budget shortfalls that we cover out of a slowly diminishing reserve.

The 60" Reflector at Mt. Wilson. Image credit NASA

As a result of the events of the last week, we are going to be sorely pressed for resources to take care of cleanup and further preparation and mitigation activities. If you are interested in helping us with the process of transitioning back to normal operations, we welcome your tax-deductible donation in any amount. Donations can be sent to: The Mount Wilson Institute, Fire Recovery Program, P.O. Box 1909, Atlanta, GA 30301-1909.

Among upcoming expenses will be the removal of a number of trees that appear to have succumbed to the backfire operation. In addition we need to install fire water lines to hydrants at the Monastery that were capped due to a major leak located in that vicinity. We want to install steel fire shutters on the night Monastery building. To assist fire fighters in future situations like this, we must install clearly marked road and directional signs as well as a "Knox box" at our electric gate to provide gate codes and maps to arriving fire crews. To protect our water source from power failure, we must run power underground that was installed on vulnerable poles some years ago. There are safety issues for our personnel and visitors that must be addressed including: emergency lighting in the 100-inch and 60-inch telescope buildings and particularly in the shelter-in-place area in the Hooker telescope dome; several self-contained breathing apparatus sets; oxygen bottles for emergencies including heart attack; and, several sets of Nomex fire suits for our core staff. Our actual needs list is many times larger than what I have indicated here and involves a good deal of labor that will have to be supplemented by contractors and temporary help. Any assistance you can provide Mount Wilson Observatory at this remarkable time in its history will by deeply appreciated.

Founded in December 1904 by George Ellery Hale, Mount Wilson Observatory would quickly rise to dominate astronomy worldwide. It was successively home to the world's two largest telescopes as well as the most powerful facilities in existence for studying the sun. Those pioneering instruments and the brilliant scientists who used them revolutionized astronomy through such discoveries as:

Relocating the sun far from the center of the Milky Way galaxy. The magnetic field of the sun and its key role in solar activity

The 100-inch Hooker telescope remains in active scientific service, and the solar towers are daily collecting data representing the world's longest continuous record of the sun. The Observatory hosts several of the most technologically advanced facilities in the world for studying astronomical objects with unprecedented resolution and clarity.

The fire approaching Mt. Wilson as seen from the Mt. Wilson Webcam
Article source: Mt. Wilson Blog used with permission

Welcome to the Astronomical Society

Welcome to the club and hello. We hope you have a good time, enjoy the hobby, and bring good skies with you. We hold indoor meetings each month in the Rick Allen Room, Herrett Center at the College of Southern Idaho Campus in Twin Falls, ID, USA.

Our meetings start at 7:00pm on the second Saturday of the month. There will always be a very interesting program, class or presentation at these meetings, as well as good fellowship. There is always something new to learn.

Following our meetings we have a star party at the Centennial Observatory also at the Herrett Center. Our star parties are free and you don't have to bring your own telescope. Telescopes are also set up outside on the stargazer's deck.

Star Parties are year round, so please dress accordingly as the Observatory is not heated, nor air conditioned.

The CSI Campus is a non-smoking campus and we ask you to refrain from smoking while visiting the facilities at the college.

Wishing you dark skies and clear nights! MVAS Board.

September Calendar

1 **Venus 1.2° SSW of Beehive cluster (M44)** (32° from Sun, morning sky) at 23h UT. Mag. -3.9.

2 **Moon near Jupiter** (evening sky) at 19h UT.

4 **Full Moon** at 16:03 UT.

10 **Moon near the Pleiades** (morning sky) at 17h UT.

12 **Last Quarter Moon** at 2:16 UT.

13 **Moon very near Mars** (morning sky) at 16h UT. Mag. +0.9.

15 **Moon near Beehive cluster (M44)** (45° from Sun, morning sky) at 11h UT.

16 **Moon at perigee** (closest to Earth) at 8h UT (364,053 km; 32.9').

16 **Moon near Venus** (29° from Sun, morning sky) at 16h UT. Mag. -3.9.

17 **Moon near Regulus** (24° from Sun, morning sky) at 0h UT.

17 **Saturn at conjunction** with the Sun at 18h UT. The ringed-planet passes into the morning sky.

18 **New Moon** at 18:44 UT. Start of lunation 1073.

20 **Mercury at inferior conjunction** with the Sun at 10h UT. Mercury passes into the morning sky.

20 **Venus 0.45° NNE from Regulus** (28° from Sun, morning sky) at 13h UT. Mags. -3.9 and +1.4.

20 **Moon near Spica** (26° from Sun, evening sky) at 18h UT.

22 **September equinox** at 21:22 UT. The time when the Sun reaches the point along the ecliptic where it crosses into the southern celestial hemisphere marking the start of autumn in the Northern Hemisphere and spring in the Southern Hemisphere. With the autumnal equinox arriving this month, sky-gazers have about 12 hours of possible night-sky viewing.

24 **Moon very near Antares** (evening sky) at 6h UT. Occultation visible from E Asia and Japan.

26 **First Quarter Moon** at 4:50 UT.

28 **Moon at apogee** (farthest from Earth) at 4h UT (distance 404,432 km; angular size 29.6').

29 **Moon near Jupiter** (evening sky) at 22h UT.

All times Universal Time (UT). Mountain Time - 7 hours and – 6 for Daylight Saving Time.

Astronomical twilight begins in the morning when the sun comes to within 18º below the geometric horizon and ends in the evening when the sun sets 18º below the horizon. This is the traditional transition to and from the darkest sky conditions at a location; barring light pollution or the moon.

Image: Earth's moon is visible in this view above Earth's horizon and airglow Credit: ISS Crewmember / NASA

Jupiter is the first planet to come into view these autumn evenings, and Uranus and Neptune both present excellent targets for observers with binoculars and telescopes. Venus and Mars pair up in the east among the conspicuous stars of Taurus the Bull in the early mornings. Saturn has become lost in the evening Suns glare. On the 17th, the asteroid Juno passes just 4 degrees to lower left of Uranus. This month the constellations Lyra and Cygnus are seen almost overhead as darkness falls look for the ring nebula and the double-double. Alberio is also another good target as is the No. American Nebula Pegasus and Andromeda also highlight the evening skies. Look for M 31 and M 15.

The coat-hanger. Or Brocchi's Cluster.

Images: NASA

The new Meade ETX-LS 6” ACF telescope is now available for purchase at the Herrett Center Store. The revolutionary ETX-LS astronomical telescope features the most advanced electronics and optics ever applied to a consumer telescope. Contact Chris Anderson (208-732-6663) for more information about this exciting new telescope. The Herrett Center Store is a full line Meade Dealer. Special orders and display models are available. http://herrett.csi.edu/

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Leviathan of Parsonstown
Image source: Wikipedia Commons

10 Fun Facts about the Telescope

1. Dutchman Hans Lippershey invented the telescope in 1608.

2. Early telescopes were sold to the maritime merchants, who used them to spot approaching trade ships in hopes of beating out competitors. Telescopes gave rise to the first high-speed telecommunications networks: spyglasses that were used to relay semaphore signals from miles away.

3. 400-years ago Galileo was the first to turn the telescope skyward, leading to the discovery of Jupiter’s satellites and craters on the moon. Less cleverly, he also pointed his telescope at the sun, which may have triggered his later blindness.

4. Ireland’s “Leviathan of Parsonstown,” a 72” 40-ton reflecting telescope built by the Earl of Rosse in 1845, was the world’s largest for seven decades. But Ireland’s infamous wet weather kept it shut down most of the time. Almost every major observatory since then has been built in the clear, thin air of a remote mountaintop. India has set up the world's highest ground-based astronomical observatory (Hanle) with a new telescope perched on a mountain top 14,763 feet (4,500 meters) above sea level in the western end of the world's tallest mountain range.

5. To deliver the 100-inch mirror for the Hooker Telescope on Mount Wilson in California, nearly 200 men with ropes guided a truck along a tortuous, eight-hour drive to the top. But it was worth it. The Hooker Telescope proved that other galaxies exist and that the universe is expanding.

6. Today, using an Internet-based telescope such as the “Seeing in the Dark Internet Telescope” at New Mexico Skies, any amateur can command a robotic observatory while lounging at home. Most professional astronomers now work that way too, operating telescopes remotely with computers and rarely looking through an eyepiece. Or you could sign-up to use the Herrett Telescope at the Centennial Observatory if qualified.

7. Long time coming: NASA launched the Hubble Space Telescope in 1990, seven years late and $2 billion over budget. Hubble’s eight-foot light-collecting mirror had to be polished continuously for a year to an accuracy of 10 nanometers, about 1/10,000 the width of a human hair. Unfortunately, the contractors polished the mirror precisely wrong, off by a painful 2,200 nanometers. Since the problem was fixed in 1993 by installing corrective lenses, Hubble has become the source of roughly 32 percent of all published astronomy research papers.

8. Telescopes that pick up radio waves, not visible light, got their start in 1932 when engineer Karl Jansky noticed that the static plaguing his equipment varied on a daily schedule. His antenna was picking up celestial radio sources rotating in and out of view. In 1965 engineers Arno Penzias and Robert Wilson were also bugged by microwave static, this time from every part of the sky. After eliminating poop from roosting pigeons as the cause, they realized they’d discovered the cosmic microwave background, the Big Bang’s afterglow. See for yourself: Tune an old analog TV to an empty channel. Much of that “snow” is from the cosmic microwave background.

9. Gamma ray telescopes can detect light from the most violent explosions in the universe, probably caused by stars collapsing into black holes. If a gamma ray burst occurred within 6,000 light-years of us, we’d all be toasted.

10. Weirdest telescope ever? In the 1960s physicist Raymond Davis Jr. used 100,000 gallons of dry-cleaning fluid to detect invisible neutrino particles as they stream from the sun. The experiment was located nearly a mile **underground**, at the 4850 foot level of the Homestake Gold Mine in Lead, South Dakota. Davis’s bizarre telescope worked, revealing fundamental new physics and in December 2002 he received the Nobel Prize for his work.

India’s Hanle Telescope in the Himalayas.
Image source SPACE.com