Volume 2 Issue 7

July 2001

Snake River Skies

A monthly publication of The Magic Valley Astronomical Society, member Astronomical League

Inside this issue:

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MVAS Next Meeting: Computers and the Cosmos, Sat July 14th

The next Magic Valley Astronomical Society meeting is 7PM Saturday July 14th Frost classroom at the Herrett Center, College of Southern Idaho. A public star party follows.

"Computers and the Cosmos" by Jay Sneddon will be presented. Mr. Sneddon explores how computers grew our cosmic understandings as much as astrophotography. How astronomers use computers and we amateurs can use computers to assist us in our stargazing. Some Astro related Internet sites will be featured.

Forrest Ray will present a brief "What's Up in the Sky?" preparing us for the monthly Herrett Center Star Party that follows.

From the President– Tom Gilbertson

From left: MVASers Chris, Rick, Kenny, and Zack ready to go at Craters of the Moon.

Thanks to all who helped and participated in the **June Craters of the Moon Sky Gazing**. Thanks also to Paul Verhage and Chris Anderson for presenting programs at the amphitheater on Saturday night. Although there was some tenuous moments Saturday night with the intermittent rain showers the skies cleared about 1:30 am on Sunday morning and stayed clear until the early dawn. It was great to see **Scott Curtis** and the views of deep sky objects through his very impressive equipment.

A Utah girl awaiting sunset at Craters.

The Idaho Falls group did a great job supporting the event and also brought an impressive array of equipment. Friday night's crowd is the largest I remember and shows how popular this event is becoming.

Scott Curtis and his amazing Meade 16" SCT at Craters. Scott uses a crane to lift the scope out of his truck. The views are predictably spectacular.

If you have some time between the busy summer activities you might log onto **www.astronomyforum.net**. Chris Green has done a great job setting this site up and there are a number of interesting topics to review. Especially helpful is an "ask the professional" section. Want the latest information on Equipment? There is always an active discussion regarding the best refractors, binoculars, or other equipment. Coming events include a **high altitude balloon**

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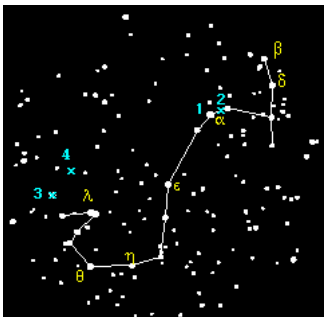
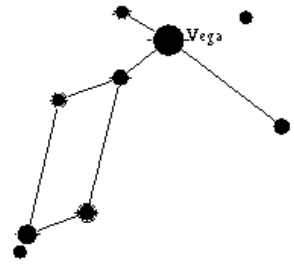
July Sky Highlights *from Sky and Telescope*

The warm nights of July are a good time to look high overhead and low along the horizon for glittering delights. Up high is bright Vega in its little constellation Lyra, the Harp. Down in the south the sinuous shape of Scorpius, the Scorpion, catches our eye. This summer, brilliant Mars lies in Scorpius, not far from the bright orange-red star that marks the Scorpion's heart. This is Antares, considered by the ancients to be the "rival of Mars." Its color and brightness are reminiscent of the red planet.



The constellation Scorpius

The tail of the Scorpion curves back north, allowing observers as far north as 45 degrees latitude to catch a glimpse of the two bright, side-by-side stars making up the Scorpion's "Stinger." To their upper left are two huge open star clusters, M6 and M7. From a dark-sky site these are clearly visible to the naked eye, and they make impressive sights in binoculars and small telescopes.



The constellation Lyra

Look very high in the east for blue-white Vega, the brightest member of the huge Summer Triangle. One of the stars very near Vega, Epsilon Lyrae, is a double composed of two equally bright components. You can resolve this pair through binoculars -- and a good telescope used at high power on a steady night shows that each of these stars is double as well. Epsilon is thus known as the "Double-Double."


M57, the Ring Nebula

You'll definitely need a telescope to spot one of Lyra's other wonders. Between the two bright stars at the bottom of the pattern is M57, the Ring Nebula. With a 4- or 6-inch telescope you can plainly detect what looks like a tiny, faint smoke ring among the stars. M57 is a so-called planetary nebula, formed when a dying star blows off its outer layers to form a shell of luminous gas.

Hubble's Best View of Mars

The Hubble Space Telescope (HST) has taken its best ever image of Mars. The picture shows frosty, white, water-ice clouds and swirling orange dust storms above a vivid rusty landscape. The image was taken on 26 June when Mars was approximately 68 million kilometres (43 million miles) from Earth - the closest the Red Planet has been to Earth since 1988.

Hubble can see details as small as 16 km (10 miles) across. Unlike the orbiting Mars Global Surveyor, which takes detailed images of small regions, **Hubble can provide an instant global view** of the planet.

Astronomers say the **large amount of seasonal dust-storm activity** is especially striking. One large storm system can be seen churning high above the northern polar cap, with a smaller dust-storm cloud nearby. Another large dust storm is spilling out of the giant Hellas impact basin in the southern hemisphere.
Although Hubble has observed Mars before, it has never seen such detail because **the Red Planet has never been so close since the HST was launched in 1990**.

The biennial close approaches of Mars and Earth are not all the same. Mars' orbit around the Sun is markedly elliptical; the close approaches to Earth can range from 56 million km (35 million miles) to 101 million km (63 million miles).

The Mars opposition of 2001 (this event sees the Earth lie directly between the Sun and the Red Planet) serves as **a prelude for 2003** when Mars and Earth will come within 56 million km (35 million miles) of each other. That will be the closest they been since 1924 and will not be matched again until 2287.

Comet LINEAR Now Visible Worldwide

After hiding out in the far-southern sky while at its brightest, Comet LINEAR (2001 A2) is now visible before dawn to skywatchers everywhere. According to many observers reporting to Charles Morris's Comet Observation Home Page, LINEAR has been as bright as about magnitude 4.2 in the last few days — and dimly visible to the naked eye as a tailless fuzzball.

On Saturday morning, June 30th, Northern Hemisphere observers will find the comet moderately well up in the southeastern sky before the first light of dawn, in the constellation Cetus. To locate it, find its position at your date using the ephemeris here and plot the position on a star chart. Or use the ready-made chart here. Binoculars will help in locating the comet, especially through light pollution.

In the next 10 days the comet climbs much higher in the early morning sky, crossing Pisces and entering Pegasus. By July 11th it is well up in the east as early as midnight or 1 a.m. local daylight saving time and very high before dawn — though by this time it may have faded to roughly magnitude 5.0. It remains in Pegasus for most of the rest of July as it fades into the distance, possibly losing 1 magnitude every 10 days.

- from Sky and Telescope

A Groundbreaking Light-Pollution Law

A streetlight before (left) and after installation of a full-cutoff fixture. The change is radical. Instead of seeing a dazzling bulb glaring sideways into your eye, you just see well-lit ground below — and sky above. Courtesy David Oesper (Outdoor Lighting Associates).

Connecticut has become the first state to require nearly all new and replacement streetlights within its borders to have "full-cutoff" fixtures that keep light from glaring sideways or up into the sky. The sweeping new law applies not just to state-owned highways but to every road and street in Connecticut's 169 cities and towns — where roughly 98 percent of the state's 189,000 streetlights are located.

Roadway lighting is estimated to cause 35 to 50 percent of the artificial skyglow that hangs over populated regions. As existing fixtures wear out they will gradually be replaced with full-cutoff ones, a process that will take 15 or 20 years but was designed to cost essentially nothing. Full-cutoff streetlights are now available at the same prices as older designs.

The law is intended to conserve electricity and to reduce visibility-hindering sideways glare as well as to save the stars. It passed both houses of the state legislature unanimously after six years of work by a few light-pollution activists. "It was a perfect illustration of overcoming skepticism and lack of awareness by educating, educating, educating," says Bob Crelin of Branford. "Once you explain to people what this is about, they say, 'Oh yeah, of course, that makes total sense.'"

Activist Cliff Haas of Rocky Hill adds, "The beauty of it is that we get the glare out of the community. Any light that is eye-friendly will also be sky-friendly." Four other states have passed pollution regulations for lights that are state-owned, and action is pending in 11, but Connecticut is the first to address the much larger issue of municipally owned lights in one package at the state level.

- from Sky and Telescope

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Magic Valley Astronomical Society
P.O. Box 5101
Twin Falls, ID 83303
http://www.mvas.net

From the President cont

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launch at CSI. The test launch is scheduled for July 28 at the expo center and high altitude launch to coincide with the Perseid meteor shower August 11, our August meeting night.

One of two 24" telescopes in use at this year's June Craters of the Moon Star Party. The owner was advertising it for sale for $7800. The reason it is for sale? He prefers his more portable 18".

Be sure to keep the **Idaho Star Party** in mind, the weekend of August 18 and 19. The Boise Astronomical Society does a great job putting this event on and the site is a short drive away.

As you can tell there are a lot of events and things to see in the night sky. Take some time this summer and make the most of these events.

Tom Gilbertson, President MVAS

MVAS CLUB CALENDAR

NEXT CLUB MEETING:

Saturday July 14th, 7PM. Jay Sneddon presents "Computers and the Cosmos". A Public Star Party follows.

July 20-21, Montana StarWatch, Ruby Reservoir, Montana.

Saturday August 11, 7PM. MVAS August Meeting.

August 17-19th, Idaho Star Party, Bruneau Dunes State Park

Saturday September 8th, 7PM. MVAS September Meeting

September 14-15, Fall Craters of the Moon Star Party.

The Magic Valley Astronomical Society meets the second Saturday of each month at the College of Southern Idaho, Herrett Center Classroom at 7pm. Star Party at the Herrett Center follows. Visit us at http://www.mvas.net Please submit web site materials to mvas@mvas.net We welcome photos and other materials.