Volume 2 Issue 10

October 2001

Snake River Skies

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

Inside this issue:

Visit us at http://www.mvas.net

Club Officers:

Tom Gilbertson, President, palo@pmt.org
(208) 734-4383

Jay Sneddon, Vice President, jaysneddon@yahoo.com (208) 736-2447

Forest Ray, Treasurer, publicity 736-8678

Rick Widmer, Secretary, Webmaster, rwidmer@developersdesk.com

Write to MVAS, P.O. Box 5101, Twin Falls, ID 83303. Http://www.mvas.net

Yearly membership is $10 per person, $15 per family, $6 per student. Benefits include magazine discounts to Sky & Telescope and Astronomy, club activities, and Astronomical League benefits.

MVAS Next Meeting: Oregon Star Party Report & Constellation of the Month

The next Magic Valley Astronomical Society meeting will be held Saturday October 13, 2001, at the Herrett Center classroom on the campus of the College of Southern Idaho. We start at 7pm. A public star party follows immediately afterward.

The October meeting features Doug Jones telling us of his experiences at the Oregon Star Party, and Jay Hartwell will have another informative program on what to see in the night sky.

If you have questions about which telescope might fit best under your tree this Christmas, come check out some of the member telescopes. We astronomers love answering equipment questions and discussing the night skies.

See you there!

Halloween Idea: Trick or Treat Telescope Viewing! *by Jay Sneddon*

This Halloween, treat your ghoulish visitors with sights of Saturn and other stellar delights. Then reward your new admirers with Milky Way or Mars bars! Don't forget to bring a step ladder or a stool for the little ones.

I have done this trick several years in a row now and it seems to always provide a memorable evening for not just the kids, but the grownups also. A great opportunity to introduce the

From the President– Tom Gilbertson

JB Tarter

J.B. Tarter showed off his skills in photography and speaking in delivering a great program at our September meeting. J.B. talked about his experiences at the Summer Science Program he attended in Ojai California this past summer. J.B. had an interesting group of students to study with and intense amount of science to comprehend in a short time. We wish J.B. the best of luck in his future studies.

Thanks to all who attended the Fall Craters of the Moon Sky Viewing Event. We owe a special thanks to Mark Brandon of the Idaho Falls Astronomical Society, for coordinating the event. I was fortunate to be there Friday night and met with a couple of groups of Astronomers, one from Thiokol Utah, and another from the tri cities area of Washington. Unfortunately my fuel pump decided to go on strike while I was on a Saturday excursion to Driggs, Idaho and so I was unable to make it back for Saturday night, but I understand it was another good night for viewing.

The school viewing sessions are upon us and I owe thanks to Phil Hafer, and Rick Widmer in helping me present some constellations and telescope views to the Kimberly Middle School 6th graders. More events are coming up and I will be calling for volunteers as the need arises.

Be sure to come to our October meeting. Doug Jones will tell of his experiences at the Oregon Star Party, and Jay Hartwell will have another informative program on what to see in the night sky. The main purpose of this meeting is to discuss projects for next year

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What's Up in October? *(courtesy sky and telescope)*

Do you think autumn is here yet? The signs in the sky are everywhere.

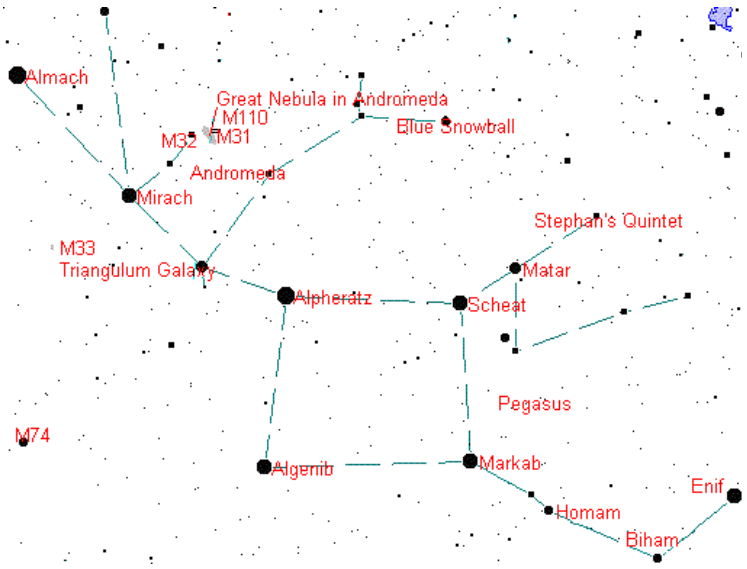
The Summer Triangle of Vega, Altair, and Deneb are still high in the sky but starting its long autumn slide to the west. Before long Sagittarius will sink below the southwestern horizon. The once-high Big Dipper is getting low along the northwestern horizon.

The eastern half of the sky, meanwhile, brings us such autumn constellations as high-flying **Pegasus**, the Winged Horse, and **Andromeda**, the Greek Maiden. The upside-down horse's body contains one of the most famous fall star patterns of all -- **the Great Square of Pegasus**. His neck stretches out to the west, ending at his nose, the star Epsilon Pegasi. Just 4 degrees (about a half fist width at arm's length) to the north-northwest from Epsilon lies M15, a fine globular star cluster for telescopes.

Just to the left of Pegasus is Andromeda, linked to the horse by a curving line of three similarly bright, equally spaced 2nd-magnitude stars. The first of these -- Alpha Andromedae -- is the northeastern star of the Great Square of Pegasus.

But most fascinating of all is an elongated smear of light bright enough to see with the naked eye in very dark country skies. It's labeled **M31** on our map and is better known as the Andromeda Galaxy. You can see it with binoculars, but you need a telescope to glimpse its two companion galaxies. M31 lies roughly 2½ million light-years away and is the most distant object you can see with your naked eye.

North of Andromeda lies **Cassiopeia**. East of it are Perseus and the bright star Capella. They're the vanguard of winter constellations and bright sights to come in the months ahead.



Planets in October 2001

Mars fades further, and its pumpkin hue is growing less prominent to the naked eye. Look for it in the south-southwest after dusk.

Saturn rises around 10 p.m. daylight saving time in early October; by month's end it rises around 7 p.m. standard time. Save Saturn for some late-night viewing with a telescope once it climbs high in the east, and you may be rewarded with a sharp image of the planet's globe and spectacular rings. Jupiter rises about two hours later than Saturn. By late night it shines brightly far to Saturn's lower left.

Venus and Mercury put on a remarkable show in the dawn late in October. They're both visible not long before sunrise. Mercury reaches greatest elongation from the Sun and pulls within about ½ degree of Venus (your little finger at arm's length will easily cover both) on October 29th. These two planets stay within 1 degrees of each other for 11 days starting on October 26th!

An Orionid meteor should zip across the stars every few minutes in the early hours of the mornings from October 20th to 23rd.

Ware's World—*Move over, CCDs — old-fashioned film isn't dead yet.*

By Robert Reeves, space.com

The observatory roof slowly rolled back, flooding the formerly dark room with sunlight. As my eyes adjusted to the sudden brightness, the gleaming white Meade 12-inch Schmidt camera seemed to awaken and beckon for a loving touch.

The Orion Nebula (M42) appears in a composite of four 60-minute exposures taken with a 6-inch f/9 refractor. *Courtesy Jason Ware*

One person who routinely does exquisite astrophotography is Jason Ware. He operates a 12-inch Schmidt camera from his Wild Duck Observatory, located a 90-minute drive north of his Dallas, Texas, home. From this 12 by 12-foot observatory, Jason enjoys 6th-magnitude skies while imaging not only the showcase objects and faint targets, but also wide-field groups of objects, making high-resolution images suitable for framing.

At age 37, Ware is a youngster in the field of advanced astrophotography where practitioners are typically older. Jason considers it an honor to use the large Schmidt. Noted mainly for his astrophotography, Jason is also an avid visual observer, having earned his Messier and Herschel certificates. But in astrophotography, where beginners are ecstatic to achieve any image at all, Ware has become such a perfectionist that he considers each of his twice-monthly photo sessions a success if he achieves only one publication-quality image. On average, he actually obtains three completely successful images per trip.

Unlike many of today's skyshooters, Ware does not digitally enhance his celestial pictures. Although he has recently started doing some digital imaging, most of Jason's work is prepared entirely the old-fashioned way, in a photographic darkroom.

Using the Schmidt

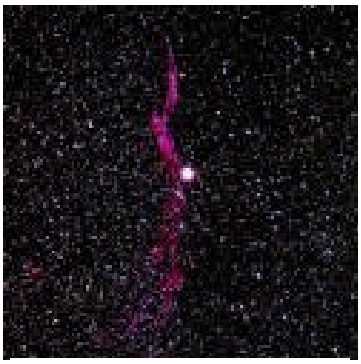
The 12-inch camera Jason uses is a true Schmidt design like the famous 48-inch Schmidt on Palomar Mountain in California. The camera possesses a focal length of 670 millimeters and operates at f/2.2. This produces a 4.5° by 5.5° field of view on a 6 by 7-centimeter negative using 120 format film.

To locate his target fields, Jason uses a transparent template which he lays over the pages of the Uranometria 2000.0 star atlas. Because the magnetically mounted Schmidt film holder can be rotated to any framing angle, multiple objects can be oriented as needed within the field.

Once the Schmidt is properly aimed at the desired celestial coordinates, an easy task with the LX-200 controls, the camera's large size often makes it awkward to reach the film loading door.

Stray light, even from feeble LED displays, can noticeably fog today's high-speed color emulsions. The film is most prone to fogging while loading the camera's film holder. Jason performs this operation in a light tight-box on one wall of his observatory, but he has found that circumstances can still conspire to fog the film unless precautions are taken.

Black tape is used to cover the LEDs on the telescope mount while other illuminated devices such as the music CD player, battery charger, and autoguider controls are covered. Jason even changes into all-black clothing to prevent stray light from reflecting off himself and onto the film holder while he is handling it. The latter results in a scene reminiscent of "Ninja Astronomer," but Jason's end results justify his efforts.



This image of the Veil Nebula was shot through a 16-inch SCT. Courtesy *Jason Ware*

The real secret of Jason Ware's astrophoto success is in the stack and copy technique to enhance the images. In this process, Jason actually shoots three identical images of each target. The two best exposures are then selected for negative stacking. For this process, each image is exposed to a point just short of where sky fog begins to show on the negative.

Today, film astrophotography is almost exclusively the domain of the amateur astronomer since the professional astronomer relies mainly on electronic data gathering. In fact, the best amateurs produce better celestial images than the professionals, given equal equipment. The exceptional images produced by astrophotographers such as Jason Ware prove that, in spite of the declarations of CCD aficionados, film is not dead in astronomy.

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From the President cont

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and what we can do to better serve the community in the education of Astronomy. Next years success depends on what ideas you have and how we can implement them. Officers will be nominated at this meeting and committees will be formed so please plan to attend.

The events of the past month have been weighing on all of our minds. As I was stranded five miles from Driggs with a vehicle that would not start a stranger I had never met named Jeff happened by. Jeff spent about an hour and one half trying to help me get my mechanical beast started, but to no avail. He towed me to town and when I offered him money in return he refused it. He refused it four times despite the fact that his vehicle seemed as worn out as mine did and he could have used the money. As frustrating as being stranded was I will always remember Jeff and the fact that people in Idaho often help each other expecting nothing in return. Jeff gave me have a better appreciation of the great life I have and the fact that we live in the land of the free and home of the brave. God bless America and a man from Driggs, Idaho named Jeff.
Tom Gilbertson, President MVAS

Tom Gilbertson Pres. MVAS

MVAS CLUB CALENDAR

NEXT CLUB MEETING:

Saturday October 13, 7PM. Herrett Center classroom. MVAS October Meeting. Featured talks include Doug Jones discussing the Oregon Star Party and Jay Hartwell presenting the constellation of the month. Star Party follows.

Saturday November 10, 7PM. Herrett Center classroom. Featured speaker will be Jan Stubbs with the topic "The History of Longitude".

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.