



Snake River Skies

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

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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: Phillip Anderson on Cosmic Sources of Radiation

The next Magic Valley Astronomical Society meeting will be 7PM Saturday May 12th.

Phillip A. Anderson, Executive Director of the Idaho Academy of Science, will present "Understanding Radioactivity and Radiation", with an emphasis on cosmic sources of radiation and why it is important to Astronomy. Mr. Anderson

will be demonstrating radiation instruments and other devices.

We will also introduce our club telescope loaner program and discuss upcoming club activities.

MVAS meets every 2nd Saturday at the Herrett Center, College of Southern Idaho campus.

Saturday May 19th— MVAS trip to Bruneau Dunes Observatory

Join us Saturday May 19th for a visit to the Bruneau Dunes Observatory at Bruneau Dunes State Park, about 30 miles South of Mountain Home. The observatory houses a 25" Obsession telescope and several Astronomical instruments. The Park will provide an astronomical program beginning at dusk.

We will leave the Herrett Center parking lot at 6:30pm if you need a ride or would like to offer rides.



From the President— Tom Gilbertson

Thanks to Rick Greenawald and Chris Anderson for providing a great Astronomy Day rocket launch. Unfortunately the sky was less than cooperative for the sky viewing, but there were still an impressive number of kids who assembled the rockets. It was interesting to see how many different designs the rockets took from the same list of materials.

The secret "second coulee" Herrett Center rocket was the star performer. Chief Launch technician Rick Greenawald only suffered one case of drenched pants when a launch mishap occurred as a result of a premature string pull. **Thanks to Phil Hafer, and John Dean** for their help in rocket assembly and rocket launch operations. Also thanks to Forrest Ray and Ken Thomason for bringing their solar filtered telescopes

and trying to catch the sun between the clouds. Jay Sneddon did a great job giving the evening program on the history and latest information on the Pluto mission.

Tyler Shropshire has agreed to accept the Board's newly created **Loaner Scope manager** position. Tyler is working up some rules and will be training on our club loaner scope. Tyler has shown a great deal of initiative in learning Astronomy and has been a great addition to our club.



We have almost survived the first and most cloudy part of the year. Clear skies are coming and so are some great astronomy events. Be

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Pioneer 10 Lives On

After 8½ months of silence, Pioneer 10 is once again in touch with its handlers here on Earth. Ground controllers heard from the spacecraft for about 90 minutes on April 28th while tracking it with NASA's 70-meter receiving dish in Spain. The long-distance call came down "sweet as could be — a nice, strong signal," says Lawrence Lasher, Pioneer project manager at the Ames Research Center in California.

The breakthrough came after weeks of failing to pick up Pioneer's feeble signal by merely listening for it. Lasher now believes that the spacecraft can no longer maintain a stable transmission frequency. To sidestep this malfunction, the Spanish station beamed a single-frequency carrier signal to the spacecraft, which then echoed it back to Earth (after a round-trip travel time of 21.8 hours).

Ground controllers used this same two-way communication scheme when they last heard from Pioneer 10 on August 6, 2000. Keeping in touch with the 29-year-old craft has become very difficult because it is now 11.7 billion kilometers from Earth and because onboard power is barely adequate to run the 8-watt transmitter. Although its mission officially ended in 1997, Pioneer 10 has avoided a complete shutdown because Ames engineers are using the weakening radio beacon to test a new tracking method based on chaos theory.

Lasher plans other communication sessions in the coming weeks to assess Pioneer 10's condition and to beam up some housekeeping instructions. Commanding the space-

craft came a halt last year when the last of the project's decades-old PDP computers failed, complicating efforts to keep Pioneer's antenna pointed toward Earth. But since then critical command sequences have been transferred to a modern desktop system. "We're in business again," Lasher says. According to James A. Van Allen, whose Geiger-tube telescope

is the sole experiment still sending back data, Pioneer 10 could reach the boundary marking true interstellar space within a few years. Even though the odds are long, he and Lasher hope the spacecraft will still be functioning well enough to announce its arrival there.

—J. Kelly Beatty

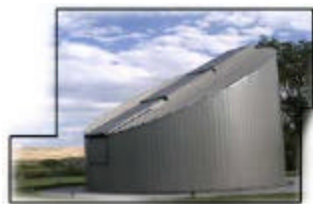
(From <http://www.skypub.com/news/news.shtml#pioneerlives>)



Jupiter, as recorded by Pioneer 10 on December 2, 1972, 44 hours before the spacecraft passed just 133,000 km from the planet. The Great Red Spot hugs the day-night terminator at left, and the moon Io (upper right) is casting the round, black shadow. Pioneer's scanning camera took red and blue images of the scene, then green was added to produce this color view. Courtesy NASA/Ames Research Center.

From the President, cont

sure to come to our next meeting May 12 and hear Phil Anderson talk about “**Understanding Radioactivity and Radiation.**” As Executive Director of the Idaho Academy of Science, Phil has contributed greatly to science education in our State. Phil has also been very supportive our club and is a member of MVAS.



Bruneau Dunes Observatory

May is also the month of our second annual trip to Bruneau. Last year we had a little bad weather for our Bruneau trip. OK it was more than just a little bad weather we had a major rainstorm. This year the odds are in our favor and on **May 19**

we plan to travel to Bruneau. The Boise Astronomical club and the staff at the Bruneau Sand Dunes have done a great job providing a first rate observatory for public viewing. Those that wish to camp can do so. Those wanting to bring a telescope are also welcome, and those wishing to car pool please contact me at 734-4383, or mail me at palo@pmt.org and we will make arrangements for a time, meeting place,

and vehicles.

In preparation for the **June Craters Star party** we will have a presentation on Mars at our June meeting June 9. Remember the Craters event will be the nights of June 22-23 and June 23-24. This is a lot of fun and a great way to meet amateur astronomers from other parts of the state and country.

We owe a special thanks to **Jay Hartwell** for providing the help for the Messier object viewing. This month will be objects in “the Great Bear.”

Thanks for being a member of the Magic Valley Astronomical Society.



Traveldome seen at last years' Craters of the Moon Star Party

May's Stargazing Delights—*from Sky and Telescope*

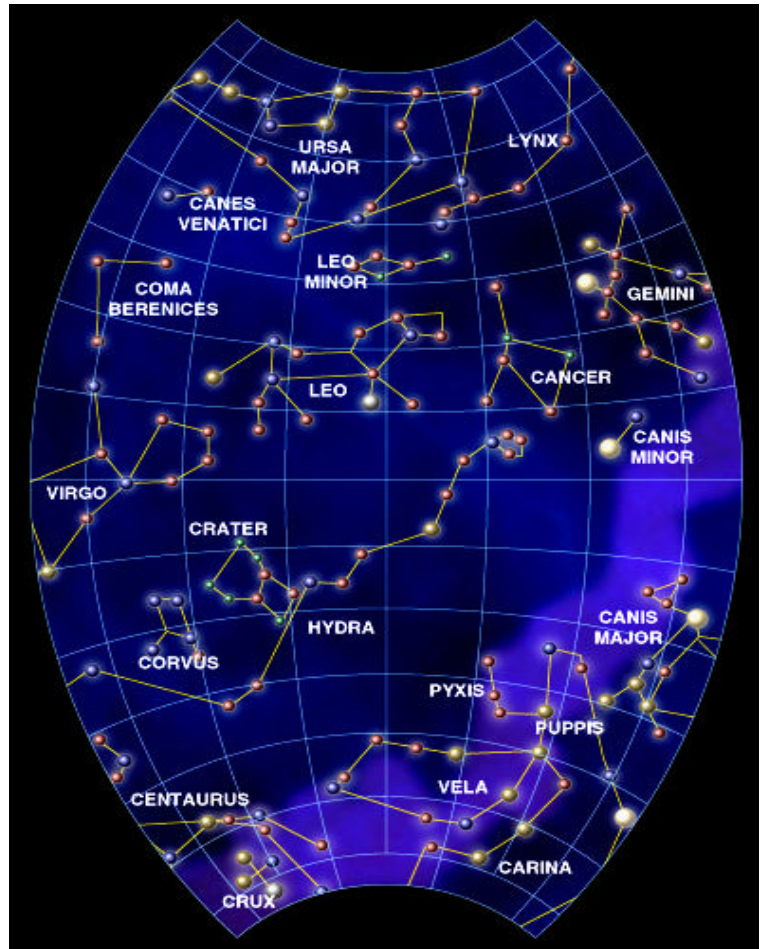
Midspring evening skies feature bright stars soon to set in the west and northwest (Procyon, Capella, and Pollux and Castor) and bright stars that have recently risen in the northeast to southeast (Vega, Deneb, and Antares). In between are the star patterns of the Big Dipper (north), Leo, the Lion (west), and the bright stars Arcturus and Spica (south). Some of the best sights of May evenings, however, are the dimmer, more mysterious ones.

There's nothing dim about the familiar outline of Leo, the Lion. If you have a moonless country sky or binoculars and scan up and to the left from the right triangle of stars that marks Leo's hindquarters, you'll find a lovely sight. A large, delightfully irregular sprinkling of rather dim stars called the Coma Star Cluster is scattered here. It's part of the constellation Coma Berenices, the hair of Queen Berenice.

Orange-colored Arcturus, in Boötes, the Herdsman, outshines all other stars now in the sky. Far to its lower right shines Spica, the brightest star in Virgo, the Virgin. Down to Virgo's lower right lies Corvus, the Crow -- a surprisingly conspicuous, oddly shaped boxy pattern looking nothing like a bird.

In the mostly dim swath of sky between Corvus and the Big Dipper's handle, small telescopes can pick out dozens (in larger amateur telescopes, hundreds) of tiny blurs of light. They're galaxies, and you'll need highly detailed star charts to locate most of them.

In the middle of this region is the great Virgo Galaxy Cluster, centered roughly between the stars Beta Leonis and Epsilon Virginis. It lies about 50 million light-years away. One of the best and brightest of spring's galaxies and an outlying member of the Virgo Cluster is located near the Virgo-Corvus border. This is **M104**, the Som-



M104 in Virgo

brero Galaxy. Although M104 is detectable in very small telescopes, you typically need a 6-inch or larger telescope in a dark country sky to glimpse the marvelous band of dark dust that outlines the "brim" of the Sombrero.

Craters of the Moon Star Party - June 22-23rd, 2001



MVAS member Kris Irish at the 2000 Craters of the Moon Star Party

Join us June 22-23rd for our semiannual Craters of the Moon Star Party, sponsored by the Craters of the Moon National Monument, the Magic Valley Astronomical Society and the Idaho Falls Astronomical Society.

The star party starts at dusk Friday and Saturday in the Caves area, five miles inside the monument. There is no charge for the party but all park fees apply. The public is invited.

52 camping sites are available first come first served. Water and restrooms are available at the campground. The Caves observing area has restrooms but no power or water. A camping spot costs \$10 per night.



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May Sky cont

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Planets in May

Jupiter, having its last hurrah in the evening twilight, pairs up with Mercury, which is having its best evening appearance of the year. Saturn is also near them, but it's becoming harder to spot. Look low in the west-northwest as dusk fades. Jupiter is the brightest; that's your landmark. To its lower left sparkles Aldebaran. Saturn is more than twice as far to Jupiter's lower right and can be seen only during the first part of the month. On May 15th and 16th Mercury is just to the upper right of Jupiter. By month's end Jupiter has dropped deep into the twilight glow, while Mercury stands to its upper left.

Mars is now magnificent! It greatly outshines all the stars and glows with an imposing fiery hue. On May 12th, turn binoculars or a very-wide-field telescope on Mars well after midnight, but before moonrise, and you'll see the Lagoon Nebula only about 2 degrees (less than a half binocular field) to the left of the planet. All month look for the white polar caps of Mars in a scope at high power and note how the planet's dark markings change noticeably in just an hour or two as Mars rotates. **The red planet hasn't been this big or bright in telescopes in 13 years.** Next month it gets even better!

Venus shines in the east at dawn.

MVAS CLUB CALENDAR

NEXT CLUB MEETING:

Saturday May 12th, MVAS Club Meeting. Phillip A. Anderson, Executive Director of the Idaho Academy of Science, will present "Understanding Radioactivity and Radiation" with an emphasis on sources of cosmic radiation.

Saturday May 19th, MVAS Bruneau Dunes Observatory trip. Bruneau Dunes State Park.

Saturday June 9th, MVAS Club Meeting. Topic will be MARS!

June 22-24th, Craters of the Moon Star Party, Craters of the Moon National Monument

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

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.