



Snake River Skies

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

MVAS Next Meeting: Club Elections and Raffle, Meeting at CSI Canyon 119

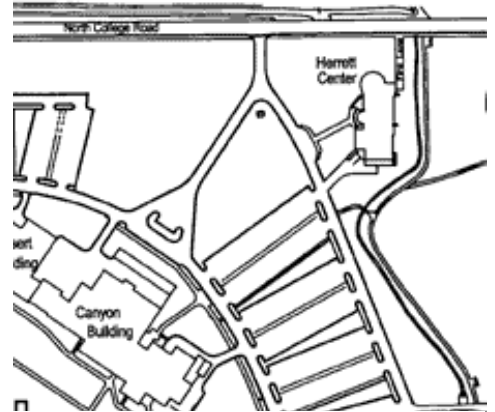
Our next club meeting will be held Saturday December 8th at 7pm in the CSI Canyon building Room 119. Because of a scheduling conflict with the Herrett Center Classroom, our meeting will be temporarily moved this month only. Our regular January meeting will be back in the Herrett Center Classroom.



We will be having our annual club elections and raffle. Each club member gets a free raffle ticket. Extra tickets will be sold for \$1 each. Rick Greenawald and Chris

Anderson will host the MVAS Game Show with a chance for you and your guests to earn more raffle tickets. We will draw for prizes at the end of the meeting.

A public star party follows as usual at the Herrett Center. See you there!



How to get to Canyon 119:
The Canyon Building is right across the parking lot from the Herrett Center. Canyon has several satellite dishes on its grounds. As you enter Canyon, take a left and follow the hallway till you find 119. Signs will be posted to direct you.

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](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.

From the President—Tom Gilbertson

Be sure to come to our popular fun night and annual meeting December 8, 2001 at the Room 119 the Canyon Building on the CSI Campus. There is a wood workers show at our normal meeting place at the Herrett Center thus the reason for our change of meeting place. There are a number of great raffle prizes that have been donated by local businesses and a fun trivia contest.

At this meeting we will have an **election of officers for 2002** and review of dues for next year. Nominations are

- Jay Sneddon, President
- Phil Hafer, Vice President
- Rick Widmer, Secretary-WebMaster
- John Dean, Treasurer
- Melanie Burtis-Watson, Assistant Star Party Coordinator
- Forrest Ray, Publicity Chairman.



We will discuss raising the basic annual dues to \$20.00 for both Individual and family membership and new \$100.00 Sponsor membership.

We had a good showing of MVAS members who made our second field trip of the year to the Bruneau Sand Dunes. With the coordina-

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Solar Eclipse December 14th—Come See It at the Herrett Center



On **December 14th**, less than a year after the United States and Canada were treated to a Christmas morning eclipse of the Sun, the partial phases of another solar eclipse will touch much of North and Central America.

We invite you all, weather permitting, to join us outside the Herrett Center for the

partial solar eclipse. **The eclipse begins at 1:32pm and ends at 2:48pm.** Mid eclipse is at 2:10pm when approximately 8% of the Sun's surface will be obscured by the Moon. We will have the Hydrogen-alpha filter set up. For the uninitiated, the Hydrogen-alpha filter allows us to safely

observe the prominences on the Sun's limb. Prominences are the eruptions of huge pillars of gas from the Sun's surface.

This time the eclipse is annular, meaning the Moon's disk appears slightly smaller than the Sun's and a ring of brilliant sunlight remains visible to observers who see the Moon passing directly in front. The centerline for visibility of this annular phase falls primarily across the central and eastern Pacific Ocean, touching land only in Costa Rica and Nicaragua just prior to sunset.

The partial phases of this eclipse will be visible throughout most of southern Canada and all of the U.S. except northeastern New England and northern Alaska. The centerline passes 300 miles south of the Hawaiian Islands, so a deep partial eclipse will be visible to islanders.

Lunar Eclipse December 30th

The fifth and final eclipse of 2001 takes place during the morning hours of December 30th. This deep penumbral eclipse of the Moon will be visible throughout North America. First and last penumbral contact occurs at 01:25am and 5:33am Mountain Time respectively. At maximum eclipse (3:29 MT) the Moon passes just north of Earth's dark umbral shadow. During this time observers should be able to detect subtle shad-



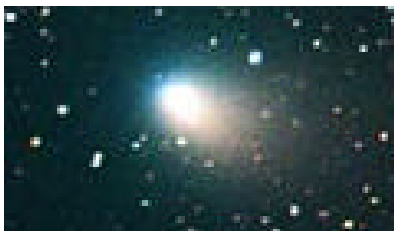
Geminid Meteor Shower December 13–14

The complete absence of moonlight augurs well for the Geminid meteors, which are due to peak on Thursday night, **December 13–14**. This shower sometimes surpasses even the Perseids of August. As many as 75 slow, graceful Gem-

inids might be seen per hour under ideal conditions. They tend to be bright and appear yellow. Rates increase steadily for several days before maximum, then drop off quickly. A productive Geminid watch can begin as early as 10 pm because the shower's radiant (near Castor) is already fairly high in the sky by then.

Comet Linear

This is the last month to catch Comet Linear before it dips into the Southern Horizon. The comet has reached magnitude 7 and is visible in binoculars.

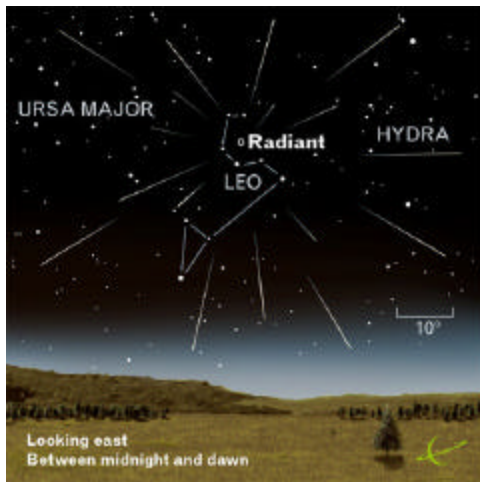


Leonids Create Celestial Fireworks

This year's Leonid meteor shower treated observers to thousands of colorful, bright, and exploding meteors.

by Vanessa Thomas

This year's Leonid meteor shower was the show to see. As Earth flew through a debris trail left by Comet Tempel-Tuttle in 1767, those who journeyed outside and looked up to clear, dark skies were wowed by endless shooting stars, long-lived dust trails, and bright, colored fireballs that sometime exploded and lit up the night.



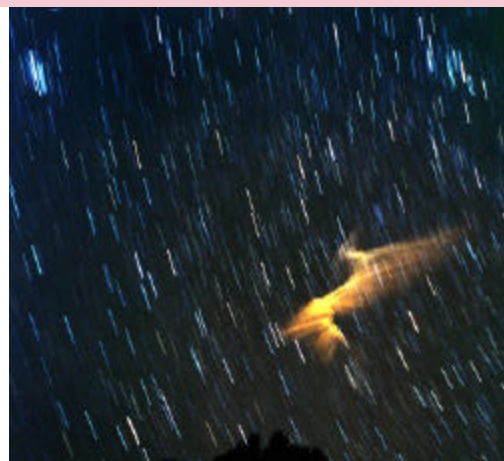
Although the 2001 Leonids did not reach the several-thousand-per-hour peak rates some scientists predicted, many observers around the world witnessed more than a **thousand meteors per hour** during the height of the celestial show. With a moonless sky early Sunday morning, hourly rates often topped one hundred. But for meteor watchers in the United States and Canada, the peak arrived around 5 a.m. EST. Japanese observers reported several meteors per second during a second peak visible from eastern Asia and Australia.

During outbursts, observers witnessed a constant barrage of meteors while several flashes often zipped by at once. "There were literally meteors flashing across every part of the sky," reports *Astronomy* and *Astronomy.com* contributor Phil Harrington, who observed the shower from eastern Long Island in New York. **"It was impossible to record them or even estimate the numbers,** but it was not unusual to see them at a rate of nearly one per second."

The shower featured frequent fireballs, some much brighter than Jupiter and Venus. Many observers watched bolides

A Leonid meteor streaks south of Orion.
Mark A. Brown

streak across the sky and explode. The brightest Leonids even cast shadows on the ground, a sight Harrington describes as "almost like celestial flashbulbs popping in the sky."



While most meteors were a typical white, some dazzled witnesses by turning color — often green or orange. Some Leonids left dust trails that lingered for several minutes. Oregon observer Rob Abramovitz explained that one trail looked like a Chinese dragon after it was bent by upper atmospheric winds.

Wind gives this lingering Leonid meteor trail a new shape.
John Chumack

Those with clear skies continued to see several meteors per minute until dawn. Some bright meteors extended the show even as dawn washed away the stars.

Experienced meteor watchers believe this year's show was **the best Leonid display since the storm of 1966** when observers saw up to 150,000 meteors per hour. Scientists expect Earth to sweep up even more Leonids in 2002 than it did this year, but unfortunately, a full moon will brighten the sky and prevent us from seeing many of them.



This 2.5-minute exposure was taken in suburban Virginia with a Pentax K-1000 camera with a 28mm lens at f/3.5 and using Kodak Gold ASA800 film. Note Orion to the left of the frame and the Pleiades south of the meteor just above the treetops.
Mark Wilson



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Magic Valley Astronomical Society
P.O. Box 5101
Twin Falls, ID 83303
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From the President cont

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tion of Rick Widmer, Bruneau Sand Dunes staff Kevin Meyer and Bob Niemeyer made a special presentation for us at the Observatory Auditorium. The day started out very cloudy and it seemed there was only a dim chance we would get a glimpse of the Leonid meteor shower due to peak at 3:00 a.m. November 18.

Like a scene from a movie the skies magically cleared at about 2:35 am and for those die-hards who were able to fight off sleep deprivation there was an incredible show of meteors. There would be pauses in the action of up to 40 seconds, but I counted on average one meteor for every 3 seconds with many of multiple bursts. Sky trails, fireballs, and even some meteors that would light up the ground were the order for the next 2 hours. We owe a special thanks to the Park Staff for putting on a great evening and maintaining a fine facility for us Astronomy nuts.

Thanks for being a member of the Magic Valley Astronomical Society and look forward to seeing you on December 8.

Tom Gilbertson, President MVAS

MVAS CLUB CALENDAR

NEXT CLUB MEETING:

Saturday December 8th, 7PM. CSI Canyon 119 classroom. MVAS December Meeting. Club elections, games and raffle. Raffle tickets are \$1 with lots of great prizes to win! Each member gets a free raffle ticket. Star Party follows.

Friday December 14th, Solar Eclipse at the Herrett Center.
1:30pm - 3:00pm

Wed-Thurs December 12-13, Geminid Meteor Shower.

Sunday December 30th (early morning hours), Lunar Eclipse.

Saturday January 12th, 7PM. MVAS January Meeting at the Herrett Center Classroom.

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.