December

The Street Astronomer's December Events

- Idaho's space and astronomy guide is your complete guide. Check it out at idahoskies.org
- Boise's astronomy television show, Boise Skies is broadcast over cable channel 11 (TVCTV). Check listings for times.
- Idaho's astronomy radio show, Idaho Skies, is broadcast over the Internet, Tuesday through Thursday at 10:55 AM and 6:55 PM. You'll find it at www.radioboise.org or check the blog at www.radioboise.org/idahoskies for transcripts and the podcast.
- Idaho Tripoli, Idaho's high power rocketry group meets on Wednesday the 6th at Hobby Town (corner of Cole and Ustick) at 6:00 PM.
- The Magic Valley Astronomical Society meets on Saturday the 9h at 7:00 PM. Meetings are held at the Herrett Center on the CSI campus in Twin Falls. MVAS holds a public star party after their meetings and admission is free.
- The Idaho Falls Astronomical Society meets on Wednesday the 27th at 7:30 PM. Meetings are held at the Idaho Falls Public Library.
- The Pocatello Astronomical Society meets on Wednesday the 27th at 7:30 PM. Meetings are held at the Pocatello Public Library.

December's Sun

In December, the sun continues rising later and begins setting later. The amount of daylight decreases by 21 minutes this month.

There are no solar eclipses this month.

Day	Rise	Set	Daylight
December 1st	8:00 AM	5:07 PM	9 hours, 17minutes
December 15th	8:13 AM	5:07 PM	8 hours, 55 minutes
December 31st	8:20 AM	5:16 PM	8 hours, 56 minutes

The winter solstice begins on the 21st at 5:22 PM. That marks the beginning of winter in the northern hemisphere. On the first day of winter the day is at its shortest and the night is at its longest.

December's Moon

There are no lunar eclipses this month.

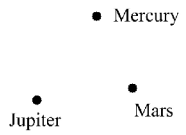
Full on the 4th, and often called the Moon before Yule.
Third Quarter on the 12th
New Moon on the 20th
First Quarter on the 27th

The moon is 227,374 miles away on the 1st, 251,293 miles away on the 13th, and 230,108 on the 27th (our second perigee of the month).

The moon passes through the Pleiades on the night of the 3rd. The moon's light will wash out the Pleiades a bit, but it will remain a nice event for your binoculars. You can begin watching this event as soon as it gets dark.

The moon and Saturn appear less than one degree a part on the morning of the 10th. Look high up in the south at 6:00 AM for the gibbous moon. To its lower right is the planet Saturn.

December's Morning Planets
The planets Mercury, Mars, and Jupiter form a tight cluster on the morning of the 9th. They're very close to the horizon, so you'll need a pair of binoculars to see them well. The three planets will fit within a circle 1-1/4 degree across and will be six degrees above the southeast horizon at 7:30 AM. For reference, the width of your binocular's field of view is about seven degrees and the width of your palm when your hand is outstretched is ten degrees. Don't wait much later then 7:30 AM to look for them as the sun is beginning to light up the horizon by this time. In binoculars they'll have this arrangement.



The three planets will remain very close together until the 11th. Watch them daily as they change their relative positions with one another.

December's Evening Planets
Venus is moving away from the sun this month and will appear in our evening skies by the end of the month. Over the next several months Venus will climb higher above the horizon.

Saturn begins rising at 11:00 PM early in the month and by 9:00 at the end of the month. Saturn is located in the constellation of Leo the Lion and near its brightest star, Regulus.

December's Meteor Shower
December's meteor shower is from the constellation Gemini and it reaches its peak on the evening of the 13th. The Geminid meteor shower is one of those meteor showers that's better before midnight. One reason is that that this year the third quarter moon will interfere after midnight. Besides, Gemini is already well up after sunset, so you don't

have to wait for the constellation to rise. The Geminids are nice to watch as they are on average brighter than most other meteor showers. To watch the shower, find a comfortable reclining chair and look up. Be sure to wear warm clothing, as it is the middle of December. Geminids will appear to originate from near the star Castor, the fainter of twin stars Castor and Pollux. You'll find the twin stars low in the north-northeast after it gets dark.

January

The Street Astronomer's January Events

- Idaho's space and astronomy guide is your complete guide. Check it out at idahoskies.org
- Boise's astronomy television show, Boise Skies is broadcast over cable channel 11 (TVCTV). Check listings for times.
- Idaho's astronomy radio show, Idaho Skies, is broadcast over the Internet, Tuesday through Thursday at 10:55 AM and 6:55 PM. You'll find it at www.radioboise.org or check the blog at www.radioboise.org/idahoskies for transcripts and the podcast.
- Idaho Tripoli, Idaho's high power rocketry group meets on Wednesday the 3rd at Hobby Town (corner of Cole and Ustick) at 6:00 PM.
- The Boise Astronomical Society holds their first meeting of the year on the 12th at 7:30 PM. BAS meetings are held at the Discovery Center of Idaho.
- The Magic Valley Astronomical Society meets on Saturday the 13th at 7:00 PM. Meetings are held at the Herrett Center on the CSI campus in Twin Falls. MVAS holds a public star party after their meetings and admission is free.
- The Idaho Falls Astronomical Society meets on Wednesday the 24th at 7:30 PM. Meetings are held at the Idaho Falls Public Library.
- The Pocatello Astronomical Society meets on Wednesday the 24th at 7:30 PM. Meetings are held at the Pocatello Public Library.

January's Sun

In January, the sun begins rising earlier and setting later. The amount of daylight decreases by 53 minutes this month.

There are no solar eclipses this month.

Day	Rise	Set	Daylight
January 1st	8:20 AM	5:16 PM	8 hours, 56minutes
January 15th	8:17 AM	5:31 PM	9 hours, 14 minutes
January 31st	8:04 AM	5:53 PM	9 hours, 49 minutes

Earth reaches perihelion, or its closest distance from the sun on the 3rd. We're only 91,399,551 miles away from the sun today. Because of the finite speed of light, you see the sun as it existed eight minutes and ten seconds ago.

January's Moon
There are no lunar eclipses this month.

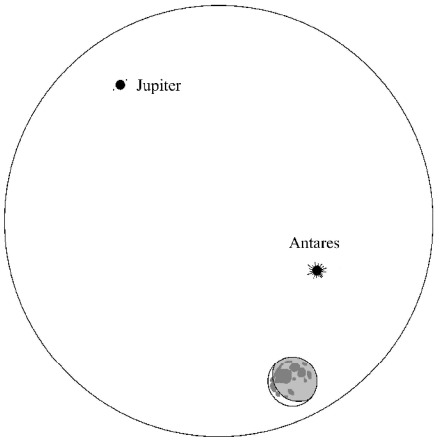
Full on the 3rd, and often called the Moon after Yule.
Third Quarter on the 11th
New Moon on the 18th
First Quarter on the 25th

The moon is 251,242 miles away on the 10th and 227,997 on the 22nd.

The alpha star of Leo the Lion, Regulus, is one degree from the moon's upper right on the evening of the 6th. That puts Regulus two lunar diameters from the moon.

Spica, the lucida of Virgo, is to the moons' upper right on the morning of the 12th. Spica will be 2-1/2 degrees from the moon, or five lunar diameters away.

On the morning of the 15th, Antares is less than 2 degrees above the very thin crescent moon and Jupiter is the bright star to the moon's upper left. The distance between the moon and Jupiter is 6-1/2 degrees, so all three objects will fit in the field of view of your binoculars. You'll need to see this between 7:00 AM (when they clear the horizon) and 7:30 AM (when the sun begins lighting up the horizon).



On the night of the 27th, the moon is between two of earth's closest star clusters, the Pleiades and the Hyades. The Pleiades are at the moon's lower right and the larger (and sparser) Hyades are at the moon's lower left. The moon and Pleiades will barely fit within the field of view of your binoculars, while the Hyades are too far away. So sweep your binoculars to see all three objects.

January's Morning Planets
Jupiter rises 2-1/2 hours before the sun at the beginning of the month and over 3-1/2 hours before the sun by the end of the month. Jupiter rises in the southeast.

January's Evening Planets
Venus is the Evening Star again. At 6:30 PM on the 20th Venus is four degrees above the horizon. The 45 hour old moon will be three degrees to its upper left. You'll need a flat west-southwest horizon and binoculars to see the moon and Venus. Venus is easier to find than the moon, so let Venus guide you to the thin crescent moon.

The moon points you to Saturn on the morning of the 6th. Saturn is the pale yellow star to the moon's left. The distance between them is three degrees, or six lunar diameters. Use a magnification of at least 50 power to see Saturn and its rings. A magnification over 100 power is not necessary nor is it recommended unless your telescope has good optics and alignment. While you've got Saturn in view, look for its largest moon, Titan. In your telescope Titan will appear to be the star to the upper left of Saturn, as illustrated below. Titan is about five ring diameters from Saturn.

Titan •

January's Meteor Shower
Quadrantids appear to radiate from a point low in the northeast just below the bowl of the Big Dipper. The shower is best observed after midnight, so you'll actually be watching it on the morning of the 4th. Expect to see 45 meteors per hour from this shower in dark skies. But don't expect to see bright meteors, most Quadrantids are faint. At its peak the number of meteors per hour may spike up to 200 per hour. The best way to watch this shower is to lie back on a lawn chair, inside a warm sleeping bag, and look straight up.

Astronomy Resources in the Treasure Valley

Been bitten by the astronomy bug? There's a cure closer than you might think. While the Idaho is not the home of a major observatory (yet), it still has a lot to offer the astronomically curious. Whether you're interest is only in catching the latest planetarium show or in making serious observations with a large telescope, there's something in Idaho for you. Idaho is home to five public planetariums (and one under construction), four public observatories, five astronomy clubs, and three annual star parties. In addition to these resources, you can find more in depth astronomy information in the Boise Skies newsletter on the Boise Astronomical Society website. The television version of Boise Skies is broadcast on cable channel 11 (Cable One) and as a radio program on Boise Community Radio (boiseradio.org) on Tuesday, Wednesday, and Thursday at 12:55 PM.

Idaho Planetariums

Albertson College of Idaho Observatory
John Jurcevic and Jim Dull, Observatory Directors
Caldwell, Idaho

459-5211

The BYU-Idaho Planetarium
Dr. Ellis Miller, Planetarium Director
Rexburg, Idaho
496-2248
http://www.byui.edu/planetarium/

The Discovery Center of Idaho Planetarium
Boise, Idaho
Susan Dittus, Education Director
343-9895
susan@scidaho.org.

The Faulkner Planetarium
Twin Falls, Idaho
Rick Greenawald, Planetarium Manager
732-6655
http://www.csi.edu/herrett/faulkner/welcome.html

The ISU Planetarium
Pocatello, Idaho
http://www.isu.edu/webdev/exports/splash/rendezvous.shtml

The T. C. Bird Planetarium
Boise, Idaho
Tom Campbell, Planetarium Director
322-3881
planet@boiseschools.org

The Whittenberger Planetarium
Caldwell, Idaho
Amy Truksa, Planetarium Director
459-5211
jbellon@albertson.edu

Idaho Observatories

Bruneau Dunes State Park Observatory
Bob Niemeyer, Interceptive Specialist
Bruneau, Idaho
366-7919
http://www.idahoparks.org/parks/bruneaudunes.html

Centennial Observatory
Chris Anderson, Observatory Manager

Twin Falls, Idaho
732-MOON (6666)
http://www.csi.edu/herrett/hcas_observatory.html

University of Idaho Observatory
Ehab Marji, Observatory Director
Moscow, Idaho
marj2117@uidaho.edu

Idaho Astronomy Clubs

Boise Astronomical Society
Fred Franz, President
Boise, Idaho
http://www.boiseastro.org

Idaho Falls Astronomical Society
Mike Hart, President
Idaho Falls, Idaho
http://ifastro.org

Magic Valley Astronomical Society
Phil Hafer, President
Twin Falls, Idaho
http://www.mvastro.org

Pocatello Astronomical Society
Dick Williams, President
Pocatello, Idaho
denndonn@allidaho.com

Snake River Astronomical Association
Ryan Showers, President
Jerome, Idaho
324-7606

Idaho Star Parties

The Craters of the Moon Star Party
Idaho Falls Astronomical Society
Craters of the Moon National Park
Usually held in June and September

The Idaho Star Party
Boise Astronomical Society
Bruneau Dunes State Park

Usually held in August or September

The Lava Hot Springs Star Party
Pocatello Astronomical Society
Lava Hot Springs
Usually held in August