

OUTDOORS

MINNESOTA STARWATCH

November skies offer good shows

BY DEANE MORRISON
University of Minnesota

In November Saturn and Venus trade places, and we get a meteor shower that could be worth the late hour.

Saturn, an evening planet, is falling into the sun's afterglow just as Venus is emerging from it. On the 13th the two planets cross paths, but all month long they are much too close to the sun to see. Saturn drops behind the sun on the 18th, at which moment it becomes, officially, a morning planet. Venus, a morning star for most of the year, passed behind the sun in late October, and now we can look forward to its reappearance as an evening star.

In the southwest, Mars, the fastest of the outer planets, still has a few more months in the evening sky. Not so the Teapot of Sagittarius; this month it slips behind Mars, tips its spout, and dips below the horizon, leaving the Red Planet bereft of bright company until next year, when Venus comes calling.

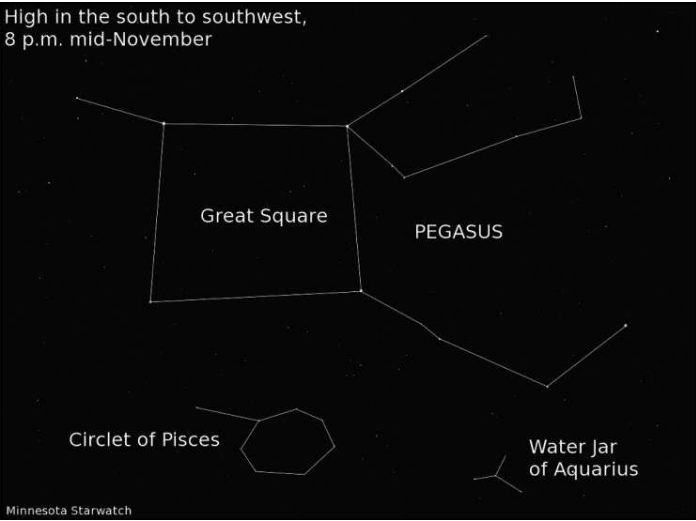
The Great Square of Pegasus is high in the south, moving into the southwest.

Northeast of the Great Square, between it and the M- or W-shaped form of Cassiopeia, a faint oval smudge marks the Andromeda galaxy. The Milky Way's closest large neighbor is now very nearly directly overhead, and November's dark skies but not-quite-winter temperatures make this a great time to see it. Binoculars will help.

November's full moon rises around sunset on the 6th, less than an hour after reaching perfect fullness. This beauty is the full beaver moon, named for the busy rodents now preparing their lodges for winter.

King of the morning, Jupiter rides high and brilliant in the south at dawn, above the bright star Regulus, in Leo. As Earth gains on the giant planet it rises earlier, and this month it begins coming up before midnight.

Jupiter has now put 90 degrees of sky between it and the sun, reaching a position called west quadrature. This is also the position occupied by the last quarter moon, and, as if on cue (but actually by coincidence), a last quarter moon appears below Jupiter the morning of the 14th. The



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moon reaches this precise phase at 9:16 a.m., just 12 hours after Jupiter does. But while this moon is waning and moving east, Earth's motion is sweeping Jupiter west with the stars. In a few short months the king of planets will be 180 degrees from the sun and, like a full moon, up all night.

The peak night for the annual Leonid meteor shower will be the 17th-18th; try looking between 11 p.m. and 3 a.m., when no moon will interfere. Meteors will radiate from the east, in the Sickle of stars near Jupiter. Leonids are bright and often leave persistent trails, but this year the shower's intensity is predicted to be closer to a light rain than a storm.

Standard time resumes at 2 a.m. on the 2nd. Set

your clocks back an hour. The University of Minnesota offers public viewings of the night sky at its Duluth and Twin Cities campuses. For more information and viewing schedules, see:

■ Duluth, Marshall W. Alworth Planetarium: www.d.umn.edu/planet

■ Twin Cities, Minnesota Institute for Astrophysics (during fall and spring semesters): www.astro.umn.edu/outreach/pubnight

Check out the astronomy programs at the University of Minnesota's Bell Museum ExploraDome: www.bellmuseum.umn.edu/ForGroups/ExploraDome/index.htm

Find U of M astronomers and links to the world of astronomy at <http://www.astro.umn.edu>.

Cash for cones

DNR Forestry purchasing black spruce cones

DNR STAFF REPORT

Littlefork is among the eight Department of Natural Resources forestry offices throughout northeastern Minnesota purchasing native black spruce cones from harvesters during October and November.

This fall, people can collect the ripe cones and sell them to the DNR at forestry offices in Blackduck, Cloquet, Deer River, Finland, Hibbing, Hill City, Littlefork and Tower.

Black spruce cones can net up to \$55 per bushel (9.4 gallons). The seed stock harvested from the cones will be used at the Badoura state nursery to grow seedlings for future reforestation projects.

"The Badoura tree nursery grew more than 5 million seedlings this year to help replant Minnesota's forestlands," said Craig VanSickle, program forester at the Badoura State Forest Nursery. "Our state forests provide millions of acres of wildlife habitat, as well as recreational spaces for

residents and visitors and an important renewable resource for the state's timber industry."

Ripe black spruce cones are generally blue-black to purple in color. Harvested cones should be picked individually and not as clusters, free of needles or other debris, be free of decay or fungus and not begun to open. For more information, visit <http://files.dnr.state.mn.us/forestry/ecs-silviculture/conecollection/blackSpruceConeCollection.pdf>.

Cones may be collected from state forest lands or private lands. Squirrel caches or the tops of recently harvested trees can sometimes provide easier harvesting. Persons interested in collecting and selling black spruce cones can contact one of the offices for additional collection guidelines and collection zone maps.

Cones harvesters are advised that several hunting and trapping seasons are now open and urged to abide by all applicable laws and safety precautions. Blaze orange clothing is recommended when recreating on public lands during hunting seasons.

NOTICE OF RANIER CITY ELECTION

Notice is given that the city election of the City of Ranier, Koochiching County, Minnesota, will be held on November 4th, 2014, in conjunction with the General Election.

Voting hours: 7:00 a.m. and 8:00 p.m.

Polling place: Ranier Community Building, 2099 Spruce Street

To fill the following offices:

2 Ranier Council Members..... 4 year terms

CITY OF INTERNATIONAL FALLS STATE OF MINNESOTA MAYORAL PROCLAMATION

*Proclamation declaring the week of October 19th to October 25, 2014
MINNESOTA MANUFACTURERS WEEK*

WHEREAS, The manufacturing industry is a dynamic part of Minnesota's economy, and promotion of this sector's strength, success and high quality of life is an integral part of Minnesota's economic development strategy; and

WHEREAS, Manufacturing directly and indirectly provides more than 826,000 high-skill, high-wage jobs, which significantly contribute to Minnesota's high standard of living and economic vitality; and

WHEREAS, Manufacturing has the second-largest total payroll among private-sector businesses in Minnesota, providing \$18.3 billion in wages; and

WHEREAS, Manufacturing produces \$43.7 billion in state economic impact or 16 percent of our gross domestic product; and

WHEREAS, Manufactured exports bring nearly \$20 billion into Minnesota's economy; and

WHEREAS, Manufacturing enjoys a long and rich tradition in International Falls and contributes importantly to a strong, broad-based economy that brings employment opportunities and vitality to the entire Borderland region.

NOW, THEREFORE, I, Bob Anderson, Mayor of the City of International Falls, Minnesota, do hereby proclaim that the week of October 19 to October 25, 2014, shall be officially observed as:

MINNESOTA MANUFACTURERS WEEK

in the City of International Falls, Minnesota, on this 20th day of October, 2014.

Robert W. Anderson

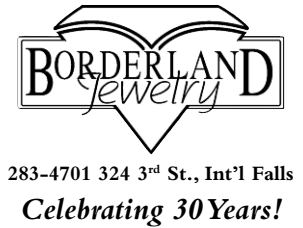
Robert W. Anderson, Mayor

ATTEST:

Kenneth R. Anderson, City Administrator



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ELECT Harley Droba — CENTER ★ WARD — City Council



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- U.S. Army Veteran (1996-2000)
- Two Guys Coffee (Cofounder)
- Int'l House of Bowling (Cofounder)
- UFCW Local 1189 Member
- Int'l Falls JayCees (Past President)
- IceBox Radio Theater (Past President)

Vote for Jobs • Vote for OUR Future
Paid for by Harley Droba for Council, Joe VanGuse: Treasurer, Int'l Falls, MN

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