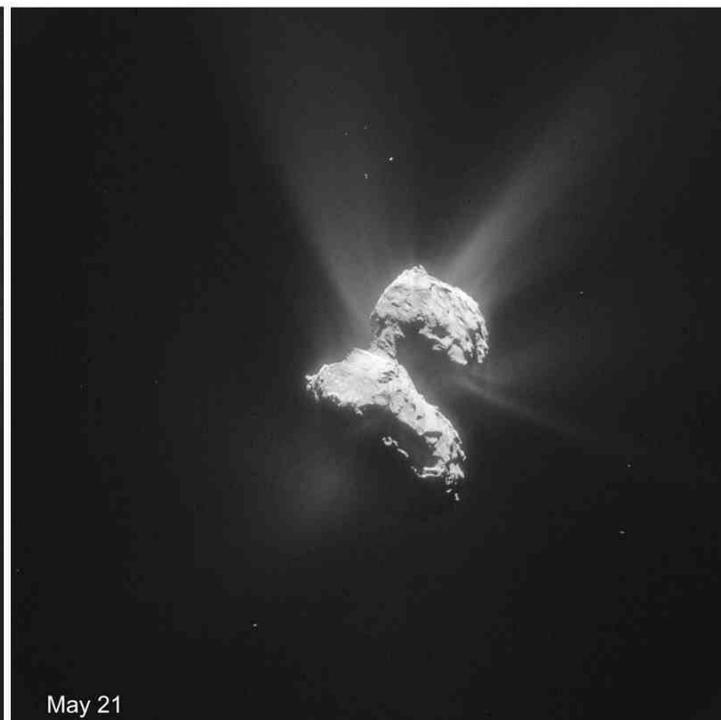
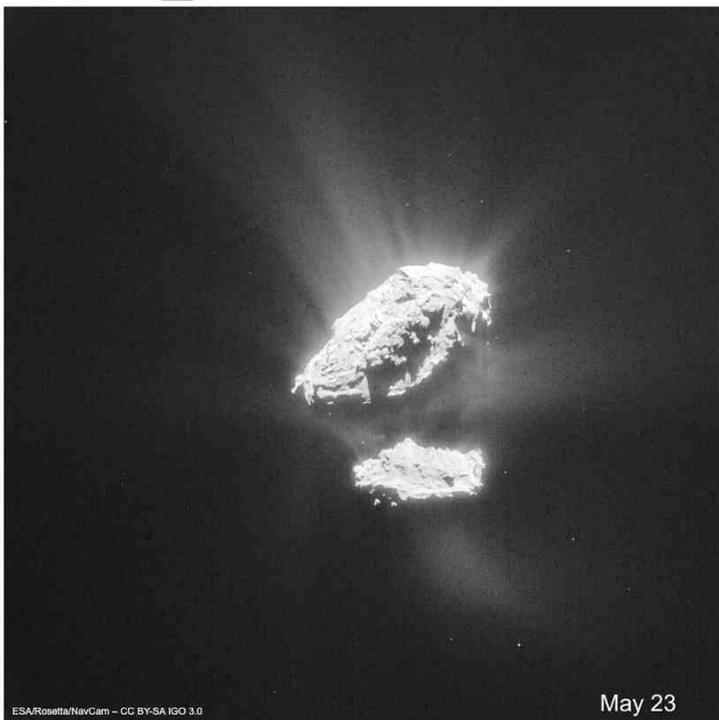




Winnicentrics

Newsletter of the Winnipeg Centre of the
Royal Astronomical Society of Canada



On the right, a May 21 image of Comet 67P/Churyumov-Gerasimenko taken by the Rosetta spacecraft shows the activity all around the nucleus, but most notably around the head, with many distinct, bright jets streaming from the surface. Intricate patterns of activity are also cast around the neck and against the shadow of the small lobe. A fainter cloud of activity is also visible below the shadowed underside of the comet's large lobe. In the left image, taken 2 days later, a diffuse glow appears to emanate from a portion of the small lobe that is hidden from sight in this image. These images have been enhanced from the original. Jay Anderson

The next meeting of the Winnipeg Centre (June 12, 2015) will take place at the observatory at Glenlea, weather permitting, where we will hold our annual potluck BBQ. The large tent will be set up in case of rain, and the observatory and warm room will be available. Family members are welcome. The June BBQ has no set time, but members gather after about 5:30 and continues until dark if observing conditions permit. Bring something to barbeque and any contributions that you wish to make to the dinner. Mosquito repellent is recommended.

The Glenlea Observatory can be reached by travelling south on Highway 75 (Pembina Highway) to the University of Manitoba's Glenlea Research Station (Bruce D. Campbell Farm & Food Discovery Centre). The Station is 15 km south of the Perimeter Highway at St. Norbert. Once you reach the Research Station, turn left (east) into the site and then immediately turn right (south) to travel along the service road that runs parallel to the highway. About 500 m farther on you will encounter a gravel road that leads to the observatory (toward the river), which will be visible in the distance. Because of road construction between St. Agathe and St Adolphe, you will probably have to turn onto the service road before or after the usual access point at the farm. One place to do this is at the turnoff to St. Adolphe (Highway 210); the other is to go past the observatory and make a left turn at the town of Glenlea. In both cases, simply continue south or north on the access road to reach the observatory road.

June Meeting Schedule



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Out at Gleanlea, Manitoba on May 22, 2015
Photo by Kevin Galka (Winnipeg)

What kills galaxies so that they can no longer produce new stars?

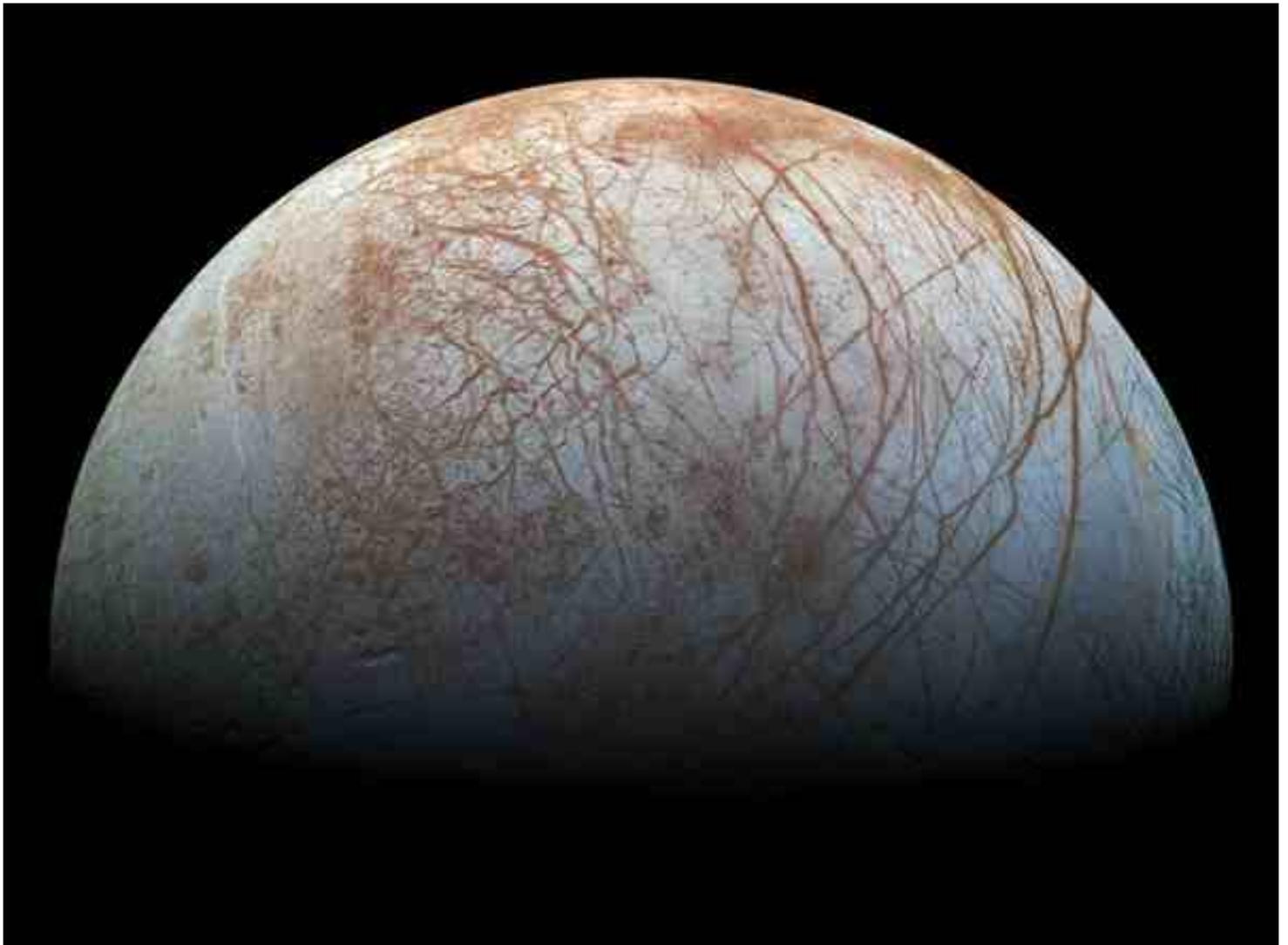
A new study from the University of Cambridge and the Royal Observatory Edinburgh finds that the primary cause of galactic death is strangulation. Galaxies are cut off from the raw materials needed to make new stars. Researchers have found that levels of metals contained in dead galaxies make it possible to determine the cause of death. The researchers speculate that there are two types of galaxies in the universe: "alive" galaxies which produce stars and "dead" galaxies which don't produce stars. Alive galaxies (Milky Way Galaxy) are rich in cold gas (hydrogen) that are needed to produce new stars. Dead galaxies have low amounts of cold gas. Researchers have two hypotheses for galactic death: the cold gas is suddenly removed from the galaxies by internal or external forces; or the supply of cold gas is stopped. Using the Sloan Digital Sky Survey, researchers analyze metal levels in 26,000 galaxies in our corner of the universe. If the cold gas is suddenly removed then the metal content of a dead galaxy would be the same as just before it died. If the cold gas is stopped then the metal content would keep rising and eventually stop as star formation would continue until the cold gas was completely used. The researchers were able to determine the cause of death by statistical analysis of the difference of metal content of alive and dead galaxies. The researchers then test their results using stellar age difference between alive and dead galaxies and found an average age difference of 4 billion years.

www.astronomy.com/news/2015/05/cause-of-galactic-death-strangulation



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Researchers have discovered that the dark material on the geological features of Europa (Jupiter's moon) is likely sea salt. Sea salt from a subsurface ocean interacting from the rocky seafloor. This could be important in determining whether the moon could support life. The chemical composition of the sea salt that has been coloured due to radiation is unknown. Europa is bathed in radiation created by Jupiter's powerful magnetic field. To better identify the dark material, researchers create a simulated patch in a laboratory to test possible substances. The samples collected when exposed to radiation changed colour. The longer exposed to radiation resulted in a darker colour. The colour variation could help determine the ages of the geologic features and material that exist on Europa. No telescope near Earth or on Earth can view Europe in enough detail to identify the geologic features. Researchers suggest this could be accomplished by spacecraft visiting or close to Europa.

<http://astronomy.com/news/2015/05/nasa-research-reveals-europas-mystery-dark-material-could-be-sea-salt>



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Milky Way near Domain, Manitoba (below)
Photo by: Sheila Wiwchar (Winnipeg)

Astronomers have discovered the most luminous galaxy ever found using NASA's Wide-Field Infrared Survey Explorer (WISE). The galaxy (WISE J2246-0526) belongs to recently discovered extremely luminous infrared galaxies (ELIRGs). Being smaller than our own Milky Way Galaxy, the WISE J2246-0526 puts out more than 10,000 times more energy than our own galaxy. It is suspected that the galaxy has a giant black hole at its belly. Visible UV and x-ray light is released when gas is heated and then released from the giant black hole. It is hard to see with optical telescopes due to the over 99% infrared light escaping from this galaxy. Researchers plan to determine the mass of the central black holes in these infrared galaxies.

<http://www.sci-news.com/astromony/science-most-luminous-galaxy-02828.html>



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5x3min iso3200 canon60da william star71 heq5
near Domain, Manitoba (below)
Photo by: Sheila Wiwchar (Winnipeg)

Exoplanet weather has been detected by Canadian astronomers. Weather patterns could be detected by a team of Canadian astronomers using data from NASA's Kepler Space Telescope. Clouds and winds can still be detected on far away gas giants. The telescope can detect minuscule changes in the intensity of light coming from a star and planets. The team is studying six planets that are extremely close to their stars and that complete an orbit under six Earth days. These planets are tidally locked to their stars the way the moon is tidally locked to the Earth. They rotate with the same side always facing the star in perpetual daylight. The other side face away in the same way the Moon always face away from the Earth. On four of the planets, the researchers found that clouds gather at the edge of the shadow between the dark and light side. On the other two hotter planets, the strong winds were blowing the heat toward the evening side of the planet.

<http://www.cbc.ca/news/technology/exoplanet-weather-detected-by-canadian-astronomers-1.3076178>
For more information: <http://arxiv.org/abs/1407.2245>



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September 10 – 13

The **Spruce Woods Star Party**

is Manitoba's annual gathering of amateur astronomers; a three night affair under pristine dark skies where you will be treated to sky tours, astronomy talks, swap table, telescope tours and other activities!

Register early and save! Simply mail the attached registration form with your payment and if you have any questions the SWSP Committee would be happy to assist!

Arcturus173@hotmail.com

Silvia Graca – SWSP Registrar

Our presenters for this year:

Friday: Sky Tour with Gerry Smerchanski

Saturday: James Edgar: Synthesis of Elements in Stars

Sean Ceaser: Finding Messier Objects

Alan Macklem: Exotic Observatory Tour

The weekend begins on Thursday night (September 10, 2015) and ends on Sunday morning (September 13, 2015) with a breakfast.

The Spruce Woods Star Party (SWSP) is a place where amateur and professional astronomers gather to observe the night sky in one of the darkest skies of Manitoba in Spruce Woods Provincial Park. It is an overnight excursion where RASC members will camp amongst approximately 60 to 80 participants; three nights will be spent under the stars in a wide open field where you can camp and set up your equipment in one spot. There is no electricity but we have a cabin nearby where you can recharge all your batteries.

You are responsible for providing your own food, drink and camping supplies so be sure to check out what camping supplies are necessary in order to have an enjoyable camping experience!

The Spruce Woods Star Party attracts beginners as well as serious observers and astrophotographers; the star party's main focus is astronomy, so any kind of light and traffic is strictly controlled during the star party.

Activities include astronomy talks and workshops during the day, a guided sky tour under the stars and a catered meal at the Glenboro Community Centre.

You are also free to do your own thing! During the day there are many activities and places to explore in and around the park, such as the unique Spirit Sands with its beautiful shifting sand dunes or the numerous beautiful trails that follow the Assiniboine River and its river bank forests. Enjoy the wildlife, birdwatching, hiking, canoeing and so much more!



Spruce Woods Star Party (SWSP) 2015 Registration

September 10 - 13



Name:	
Address:	
E-mail:	
Valid RASC Membership: (To join the RASC go to Winnipeg.rasc.ca or contact Silvia at arcturus173@hotmail.com)	
Your accompanying family members (names):	

Events Registration Check :

Friday Night	Sky Tour with Gerry Smerchanski	
Saturday Afternoon	Workshops & Speakers	
Saturday Night	Banquet	
Monday Morning	Continental Breakfast	

Indicate how you will be camping in observing area :

Tenting		
Camper	Indicate Camper Length?	
Extra Unit	Describe Extra Unit	
Generator	Must park in designated area please check with SWSP organizer	
Private Camping	Please contact park directly at 204-948-3333.	

PAYMENT OPTIONS

Event	Cost	Amount	Total
Total Weekend Package for one (workshops, talks, camping, banquet, Sunday continental breakfast):	\$50 before August 31 \$70 after August 31		
Add a Family Member to the Total Weekend Package:	\$25 each		
Events & Camping package (no banquet and no Sunday continental breakfast) for one person:	\$35 before August 31 \$50 after August 31		
Events & Camping package (no banquet and no Sunday Continental Breakfast) for the whole family:	\$50 before Aug. 31 \$70 after Aug. 31		
Banquet Only: (add 6 dollars per child age 3 – 12)	\$25		
	TOTAL		

Mail your cheque and this form to:
 Silvia Graca
 8 Monterey Road Winnipeg, Manitoba R2J 1X1

Make cheques payable to RASC Winnipeg Centre



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Upcoming events

June 2, 2015
Full Moon

June 9, 2015
Last Quarter

June 12, 2015
RASC Monthly
Meeting

June 16, 2015
New Moon

June 24, 2015
First Quarter

July 2, 2015
Full Moon

July 8, 2015
Last Quarter

July 17, 2015
RASC Monthly
Meeting

July 16, 2015
New Moon

July 24, 2015
First Quarter

July 31, 2015
Full Moon

August 7, 2015
RASC Monthly
Meeting

Regular meetings of the Winnipeg Centre are held in the Robert B. Schultz lecture theatre in St. John's College at the University of Manitoba. The theatre is on the lower (basement) floor of the College. Meetings are held on the second Friday of each month from 7 p.m. to 10 p.m. After the meetings, members who wish to do so usually retire to "The Hub" in University Centre for more conversation about astronomical subjects.

The June meeting is not held at St. John's College but is instead a barbeque at either a member's house or at Glenlea. Meeting dates and meeting places may be adjusted during exam times and during Bomber home games or stadium events.

The July and August meetings will have to be moved because of conflicts with Bomber games. Emails will be sent out when the replacement dates have been confirmed, but they are likely to be changed to July 17, 2015 and August 7, 2015 respectively.

The RASC is hosting "Summer Lite" Meetings for both July and August and will start at 7pm and go until 9pm. We will be having our members talk about their favorite images they have taken over the past year. Please note that we will not be hosting the beginners talks until September.

Please note that there will be one newsletter for July and August that will be sent out in July.

University of Manitoba, Department of Physics and Astronomy &
The Royal Astronomical Society of Canada, Winnipeg Centre present

Ewen Campus Observatory
& Lockhart Planetarium

OPEN HOUSE

First Thursday of every month at sunset
Come rain or shine!

Resumes in September

Find us in University College,
University of Manitoba, Fort Garry Campus

<http://www.physics.umanitoba.ca/>

UNIVERSITY OF MANITOBA

THE ROYAL ASTRONOMICAL SOCIETY OF CANADA
WINNIPEG CENTRE

July and August Meeting Schedules

Winnipeg Centre

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Jay Anderson

Vice-President:

Brenden Petracek

Secretary:

Brian Stach

Treasurer:

Stan Runge

Past President:

Andrea Misner

Councillors:

Jennifer West

Kevin Galka

Kris Keller

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Silvia Garca

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Dennis Lyons

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Silvia Garca

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