Winnicentrics

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

Upcoming Events

Next meetings
May 10, 2019
June 14, 2019

Members' Observing Night
May: TBA
June: TBA
Weather Permitting

May 4 New Moon

May 6-7 Eta Aquarids meteor shower

May 11 Astronomy Day (RASC Winnipeg at Indigo on Kenaston, 11 a.m.—4:00 p.m.)

June 3 New Moon

Deadline for the next issue is June 23, 2019

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, 92 Dysart Road. Free parking is available in the lot across the street. The theatre is on the lower (basement) floor of the College. Meetings are usually 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 for pizza and more conversation about astronomical subjects.

The July 2019 meeting will not be held at St. John's College but is instead a barbeque at either a member's house or at Glenlea. Check the RASC Winnipeg website (http://winnipeg.rasc.ca/) in summer months to confirm the dates and locations of meetings and social gatherings.

Meeting dates and places may be adjusted during exam times and during Bombers home games or other stadium events.

In this issue:

Meeting Agenda
Spruce Woods Star Party Update
Sacramento Mountains Spectroscopy Workshop
Members' Image Gallery
Science News
Telescope Donated to RASC Winnipeg
RASC meets with Nature Conservancy of Canada

Spruce Woods Star Party Update

The 2019 Star Party is from Friday, August 30 to Monday, September 2. Registration is now open. Highlights include:

- Swap Table
- Gerry Smerchanski's Bino Tour
- Amateur Telescope Making (Gord Tulloch)
- Where Did All the Heavy Elements Really Come From? (Samar Safi-Harb)
- Banquet

And, weather permitting, observing and astrophotography every night!

More information, including the full schedule, registration form and maps at:

https://winnipeg.rasc.ca/spruce-woods-star-party/

WHO, WHERE, WHEN?

Executive Council

Winnipeg Centre Officers & Volunteers

President: Bryan Stach

Vice-President: Dennis Lyons

Secretary: Cliff Levi

Treasurer: Abdul al-Manni

Past President: Brenden Petracek

Councillors:
Kaeren Anderson
Sam Giesbrecht
Darren Hennig
Bil Krosney
Ed Wright

National Representative: Dennis Lyons

SWSP Organizer: Silvia Graca

Webmaster: Kevin McGregor

Winnicentrics Editor: Kaeren Anderson

Observatory Director: Bryan Stach

Winnicentrics is published six times or more each year by the Winnipeg Centre, RASC. Winnicentrics is produced by and for the members of the Winnipeg Centre. Any opinions expressed are those of the author.

If you have comments, questions, or concerns about Winnicentrics, you can contact any of the councillors above.

Notices

Special thanks to all the RASC Winnipeg members who helped get the Glenlea Observatory ready for the spring flood season by moving equipment and supplies out of harm's way. Fortunately the river did not rise high enough to damage anything, and the site is back in use.

New member? We have a mentoring program. Whether your goal is to improve your knowledge of the night sky, set up a new telescope or explore astrophotography, help and advice is available. Contact Darren Hennig for details.

May 2019 Meeting Schedule

7:00 pm Beginner's Session
7:30 pm Announcements
What's Up? Upcoming events in the sky
What's New? New discoveries in astronomy
8:30 pm Break for Coffee and Refreshments
9:00 pm Featured Presentation by Philip A. Ferguson, Ph.D, P.Eng: *Canada's History in Space*

June 2019 Meeting Schedule

7:00 pm Beginner's Session
7:30 pm Announcements
What's Up? Upcoming events in the sky
What's New? New discoveries in astronomy
8:30 pm Break for Coffee and Refreshments
9:00 pm Featured Presentation by Jay Anderson: *How the Sky Moves*

Astronomical Events May–June 2019

The Planets

Mercury:
- Conjunction with Uranus May 8
- Conjunction with Mars June 19
- Greatest eastern elongation June 23

Venus:
- Conjunction with Uranus May 18

Mars:
- Near M35 open cluster on May 19
- Conjunction with Mercury June 19

Jupiter:
- At opposition June 10

Saturn
- Currently in Sagittarius and in the morning sky until mid-July

Uranus
- Currently in Aries and visible in morning sky from May 9

Neptune
- In morning sky, in Aquarius

The Sky

May 6-7 Eta Aquarids meteor shower

Sacramento Mountains Spectroscopy Workshop

By Gord Tulloch, RASC Winnipeg

Introduction

I thought it would be interesting to members to get a synopsis of this workshop, which brought together some of the luminaries of the amateur spectroscopy world (many of them from France, where amateur spectroscopy really originated and has a large following.) Amateur spectroscopy, like amateur photometry, is an excellent opportunity for amateurs to make real contributions to the sciences, where amateur / professional collaboration results in a more thorough understanding of our Universe.

Spectroscopy is essentially a technique where a prism or diffraction grating is used to split light from a telescope into its component colors, which can then be analyzed to learn more about the source. Generally spectra can be of low resolution which can indicate the temperature and composition of a star, or high resolution, which allows specific spectral lines to be examined to learn more about radial velocities and unusual emission or absorption. For example, Be stars (a hot topic at the workshop) emit in Hα and absorb, indicating the star is surrounded by a hot ring of gas that emits in that wavelength, turning the normal absorption line of the stellar spectra into a characteristic M shape.

Travel to the Workshop

The workshop was held in Las Cruces, NM, which is about 45 minutes north of the Texas border at El Paso. Flying to Las Cruces turned out to be a bit of a grind but that was due to limiting our flights as much as possible to WestJet to take advantage of a companion pass and dollars earned on our credit card. We flew from Winnipeg to Vancouver to Phoenix, then a cheap flight to El Paso on Southwest Airlines. After an overnight in El Paso (and some of the best authentic Mexican food we've ever had) we drove a rental to the beautiful Hotel Encanto de Las Cruces. The Hotel Encanto is Southern New Mexico's Premier resort hotel
and we really enjoyed our stay there, despite disappointing temperatures in the mid-teens centigrade for our entire stay. The next AAVSO Annual Meeting will be held at this hotel, so here's your chance!

YouTube Channel

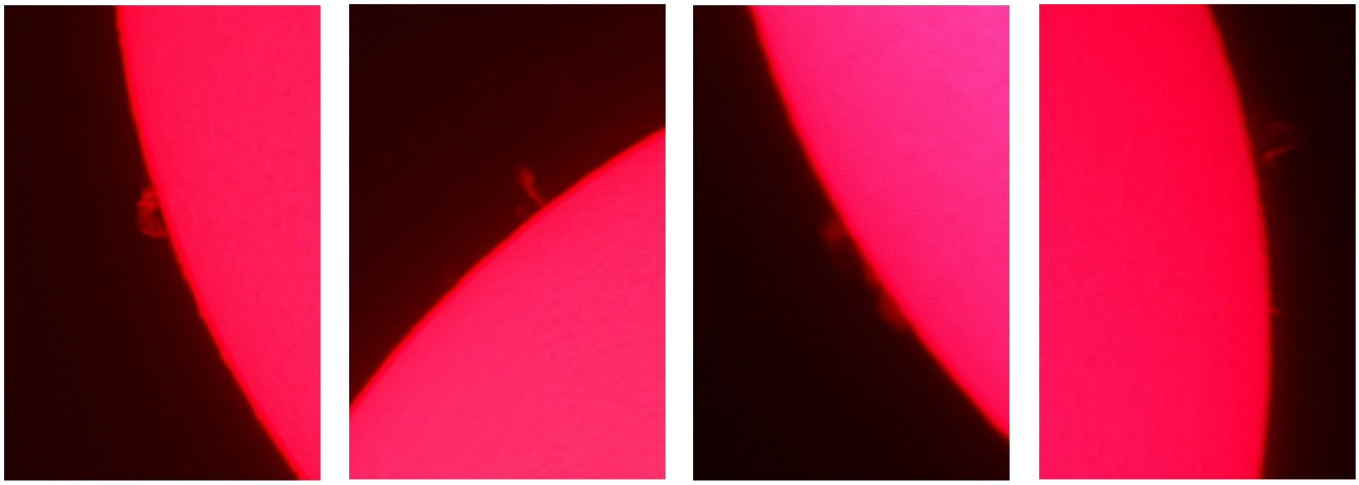
RASC Winnipeg meetings from January 2019 to the present are online at:

https://www.youtube.com/channel/UCI-5qhaejiUZHBnQdrbYDAA

If enough viewers subscribe to the channel, a more appropriate address using the RASC name can be obtained.

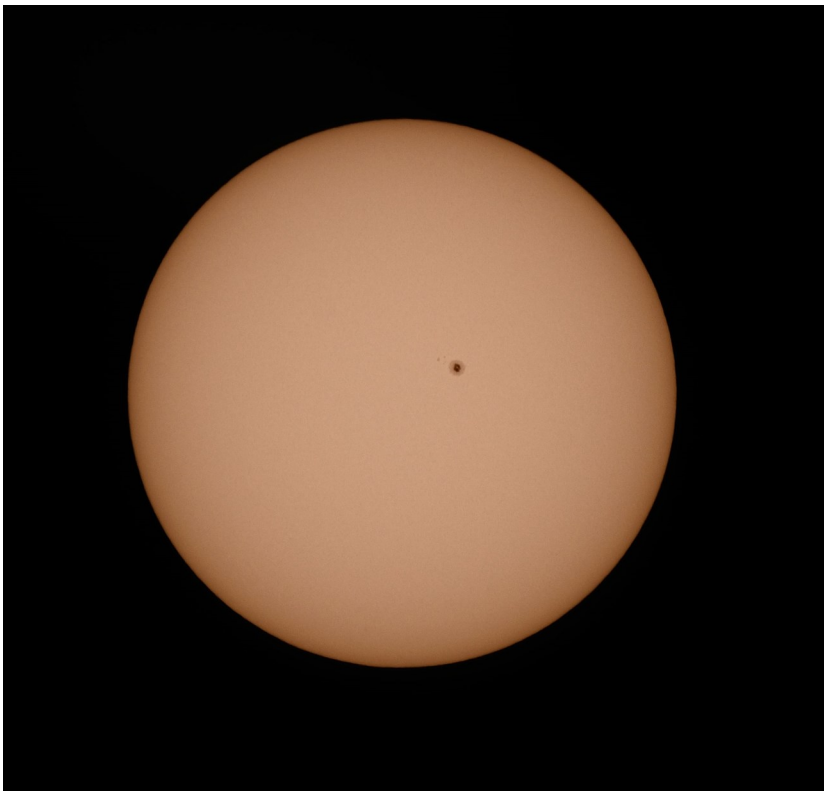
Richard Konrad: "This is a colour version of M42, which I took in the backyard. Unfortunately I only had 4 frames (4 min each) to work with. Hopefully I'll be able to take more before Orion sets this season."

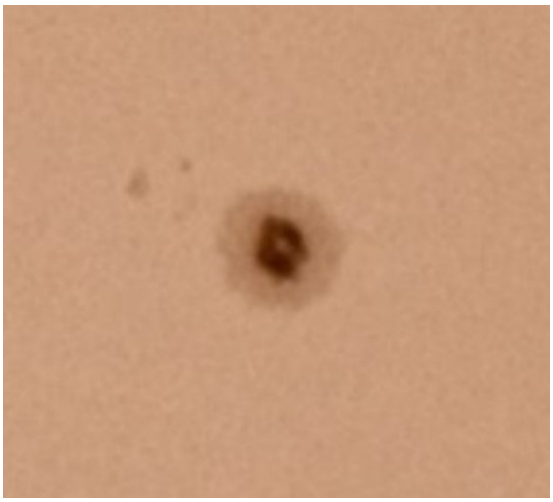
The Milky Way over Kaleida, Manitoba, photographed in April by Sheila Wiwchar. Taken with a Canon EOS 6D and 20 mm Sigma, f/1.4, 30 seconds at ISO 1600.



Stan Runge: "These were taken with a PST identical to the Club's loaner solar scope. Taken with my Canon T1i using the program BackyardEOS in planetary mode. They are the best 20% of 400 frame AVI movies. Stacked using the program AutoStakkert ."

Images by Brian Renaud: Nikon DSLR on TSA102. 1/1600 exposure at ISO 100. White solar filter on main objective. "It is a glass full aperture filter made by JMB Inc. Got it second-hand with the scope. Equals the Baader solar film and normally gives a white image. At 1/1600 sec exposure the image darkens on its own and picks up that orange hue. No processing by me except that I sharpened the image to enhance spot edges. "





I'm writing to you about Willard Elliott, who donated a Meade 125 ETX telescope to the RASC Winnipeg Centre. I never met Mr. Elliott in person, only his good friend Robert Proudlove in Steinbach when I picked up the telescope.

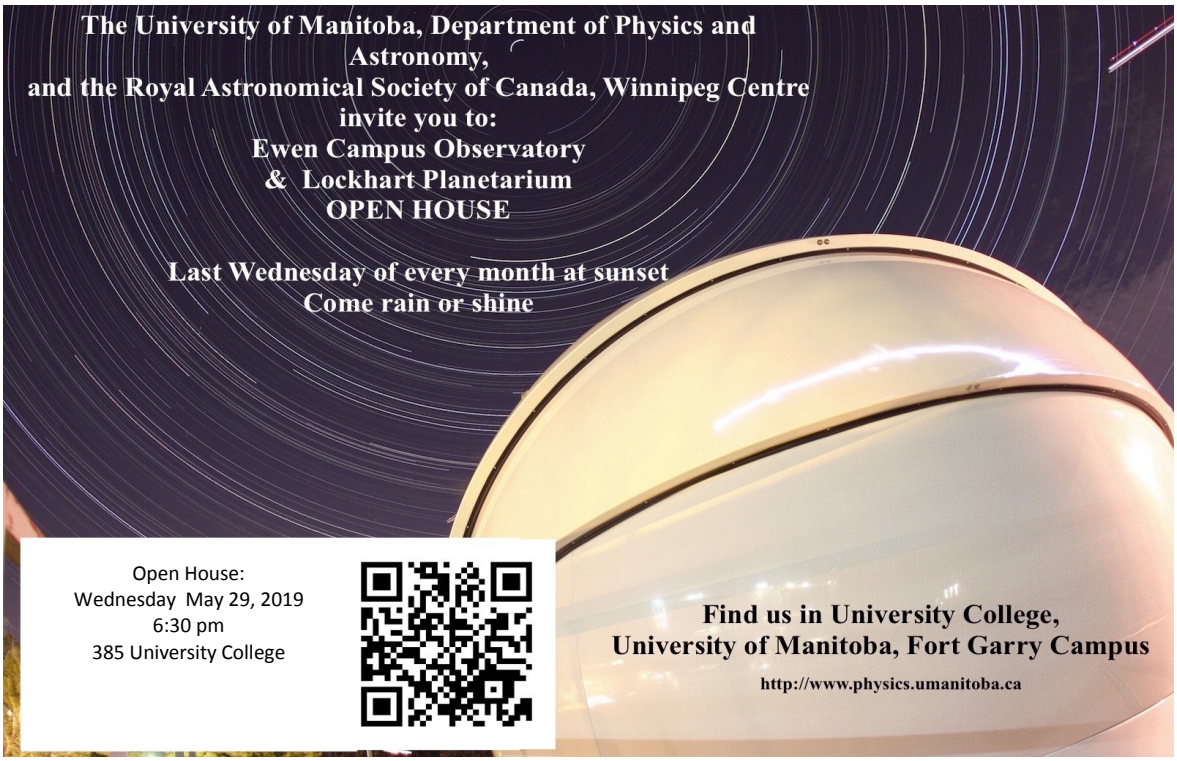
Willard Elliott was born on March 5, 1935 in the town of Pipestone, Manitoba. He had a wife, Sylvia. His one sister, Eleanor, lives in Nova Scotia. His career was in Electronic Engineering and he has worked for CBC and CKY in Brandon.

According to *Winnicentrics*, Mr. Elliott was a member of the RASC in Winnipeg back in 1989. He was also a member of the Ham Radio Club and Amateur Movie Club.

He is being well cared for at the Golden Door Geriatric Centre.

The telescope will be added to the loaner scope program, where everyone will be able to use it for one month. Thank you, Mr. Elliott!

- Bryan Stach



Some late-breaking news in astronomy

STEVE: A bit less of a mystery

In a new study published by the American Geophysical Union, analysis of satellite data suggests that the reddish-purple arc and green "picket fence" associated with STEVE (strong thermal emission velocity enhancement) are actually two different phenomena.

Similar to auroras, the picket fence effect is associated with electron precipitation. The arc, however, appears to be caused by heating of particles higher up and with no particle precipitation or ultraviolet emissions.

Link: https://news.agu.org/press-release/scientists-discover-what-powers-celestial-phenomenon-steve/

It's not STEVE, but this aurora does have a green picket fence at the top. Photo taken in early April at Kaleida, Manitoba by Sheila Wiwchar.

More gravitational waves, more black hole mergers?

After a year and a half offline for upgrades, the Laser Inferometer Gravitational Wave Observatory (LIGO) is back. LIGO detectors in Hanford, Washington and Livingston, Louisiana plus Italy's Virgo detector for a total of three observation sites, have spotted two new gravitational wave events that could indicate the merging of black holes. The first event on April 8, 2019 appears to be coming from a region 5 billion light years away, near Cassiopeia. A second signal was detected on April 12 but no details on the location have been released as of yet.

Link: https://www.space.com/ligo-observes-black-hole-merger-after-one-week.html

RASC / Nature Conservatory of Canada Information Night

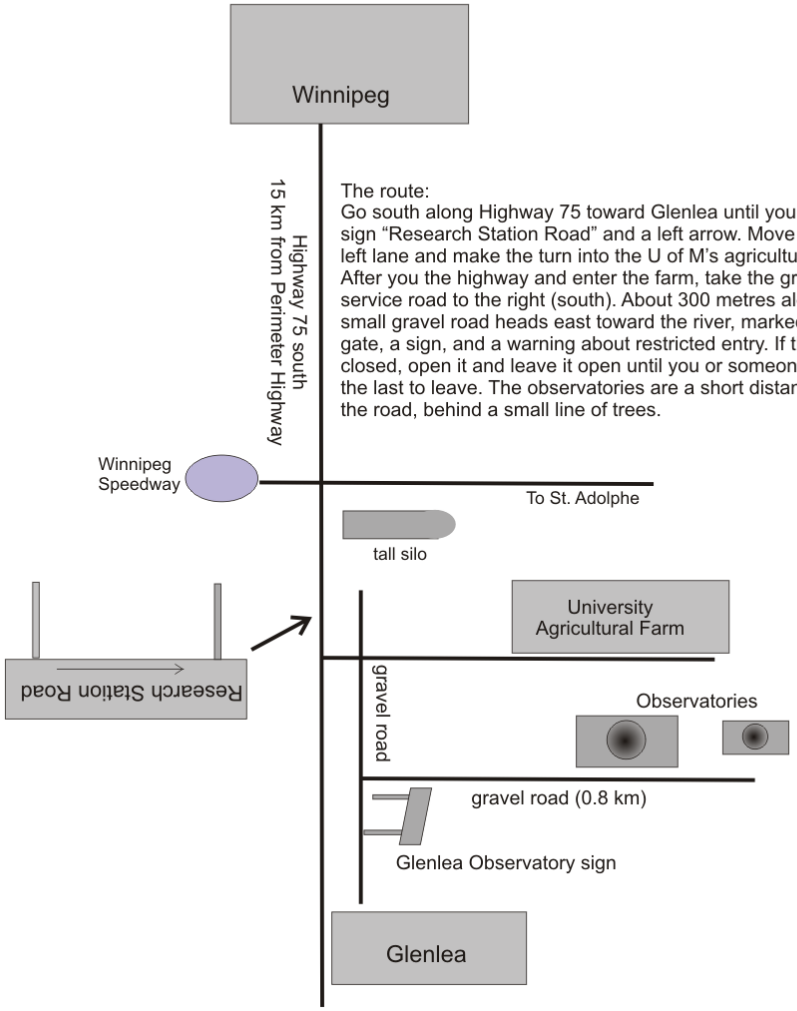
On April 27th RASC Winnipeg hosted a public information/star party with the Nature Conservancy of Canada at their Weston Family Tall Grass Interpretive Centre. The goal of the night was to complete one more step on having this beautiful area designated a Dark Sky Preserve.

The evening had talks about Dark Skies, the NCC, Star Lore and some introductory Astronomy lessons. RASC Winnipeg then presented an 8" Dob to Tim Teetart of the NCC for use at the interpretive centre. Unfortunately the skies were cloudy until we packed up to leave but a good night was had by all.

Many thanks to Gerry, Silvia, Stan, Lorraine and Bryan who helped make the night a success.

Dark Skies,
Dennis Lyons

Finding the Observatory



The Winnipeg Centre maintains a working observatory and warm room at the University of Manitoba's Research Farm. The observatory contains a 30 cm Meade telescope on a fork mounting. Members of the Centre may sign out the use of this telescope provided they have first taken a short instruction course on its use.

The Meade provides outstanding views of the night sky. Its large aperture collects more than 1800 times as much light as the human eye. It is capable of magnifying more than 500 times under favourable conditions.

The warm room provides a convenient place for members to take refuge from winter temperatures and summer mosquitoes, or to wait out a passing cloud. The building also provides desk space and lighting for planning a night's observing session. A cement pad in front of the warm room and observatory provides a convenient space to place members' telescopes while conducting personal observing programs.

Etiquette requires that you approach the observing site with your headlights off if that's possible on your model of car. Headlights should remain off, but you can still use your parking lights to drive. Proceed slowly, and be careful about parked cars along the road, or people walking. If you cannot turn off your headlights, make a cardboard or garbage bag mask to dim the lights. You might wish to turn around at the end of the road so that you are facing the direction back toward the highway at the end of the evening.

Remember to close the gate if you are the last one to leave.