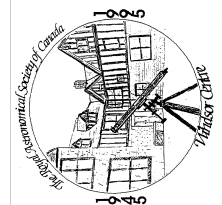




M82 by Steve Mastellotto. LRGB image created by combining separate monochrome images taken through Clear, Red, Green and Blue filters. One-hour of exposure each for the R, G and B channels and 3 hours for the Luminance channel. Image processed using PixInsight software.



# Aurora



June 2017

The Royal Astronomical Society of Canada - Windsor Centre

Volume 42, No. 9

## Flyer

### Next Meeting

Tuesday, September 19, 2017  
7:30 p.m.

at

[Ojibway Park Nature Centre](#)

5200 Matchette Road

Speaker: Steve Pellarin

Topic: "Dark Matter"

### Upcoming Events

**Summer Solstice:** The Sun will be at its furthest point North of the Celestial Equator on **Wednesday June 21st at 12:24 a.m. EDT** marking the start of Summer for the Northern Hemisphere.

**Perseid Meteor Shower:** Peaks in the afternoon of **Saturday August 12**. The moon rises about 11:00 p.m. so the best time to look is between sunset and moonrise. The Windsor Centre will be hosting a **Dark Sky Night at Point Pelee** overnight on August 12/13 on the West Beach so come out and view some Perseids.

**Total Solar Eclipse:** On **Monday August 21st** the Moon will pass between the Sun and Earth and cast its shadow on the United States from Oregon to South Carolina. **Windsor** will see a partial eclipse beginning at about **1:04 p.m.**, **maximum eclipse will occur at 2:28 p.m. and it will end at 3:48 p.m.** At maximum eclipse in Windsor the percent of the Sun's diameter covered by the Moon (or the magnitude) will be 0.831 and 79.3% of the area will be covered.

## Monthly Meeting Minutes May 16, 2017

The monthly meeting of the Royal Astronomical Society of Canada - Windsor Centre was held at the Ojibway Park Nature Centre.

Windsor Centre **1<sup>st</sup> Vice President Mike Mastronardi** chaired the meeting in Randy's absence. Mike called the meeting to order at 7:34 p.m. and welcomed members and guests to the Ojibway Park Nature Centre.

**Motion to accept the minutes** of the April 18, 2017 meeting was made by Steve Mastellotto, seconded by Susan Sawyer-Beaulieu. **MOTION CARRIED.**

Mike provided a brief overview of the meeting and introduced the first speaker.

### Director of Observing Report

Nancy Ng started off with the **recent events** leading up to the May meeting. Upcoming **planet and moon** viewing include May 16, Moon and Pluto conjunction. May 22, Moon and Venus conjunction. June 9, Moon and Saturn make a closest approach. On June 15 **Saturn is at opposition** within the constellation Ophiuchus. Saturn will be visible at 9:00 p.m. in the Southeast.

**Comet C/2015 V2 (Johnson)** will be visible and at greatest brightness on June 5, with a magnitude of 7.1. It is located high in the Southeast sky, in Bootes.

Nancy has put a call out to the general membership to **help out and volunteer some time** at the Hallam Observatory for our private observing sessions.

Prior to the coffee break, Mike presented a book written by **Neil deGrasse Tyson – Astrophysics for People in a Hurry**. Written in plain English it is a quick read about the basics on Astronomy.

### Main Presentation

**Mike Mastronardi** welcomed **Tom Sobocan**. Starting with the lyrics of “**Moonshadow**” by **Cat Stevens**, Tom dove into photos of past solar eclipses. The importance of **needing safety glasses** while looking at the eclipse was mentioned. Glasses can be purchased, or one can create

a pair with some film if you can still find it.

A map of the August 21<sup>st</sup> eclipse was shown and discussed. The map can be viewed online by following this address: <https://s-media-cache-ak0.pinimg.com/originals/6f/c7/2e/6fc72eb04feb338dbd067ac71144f08c.jpg>. Along with the map, a chart with major cities listed was provided. It included timeline for the **beginning partial phase, start and end of totality, and final contact when the partial phase ends**.

The total time for the eclipse will be approximately **90 minutes**, starting around 10:15 a.m. along the west coast, and ending around 2:45 p.m. on the east coast. The totality phase of the eclipse will last **approximately 2 minutes and 40 seconds**.

Comparing a lunar eclipse and solar eclipse: A solar eclipse takes place during the day, when the moon orbits in front of the sun's path causing a shadow to be projected onto the earth. **Solar Eclipse order: Sun, Moon, Earth.** A lunar eclipse occurs at night, when the earth's shadow is projected onto the face of the moon. **Lunar Eclipse order: Sun, Earth, Moon.**

**For Windsor, Ontario, a partial solar eclipse will occur.** This is when the moon's disc is covering the sun's disc without encompassing the entire disc. Another type of eclipse that does not cover the full disc of the sun is an Annular solar eclipse. This occurs when the moon covers the sun's disc but due to its distance from the earth, there is a visible ring of the sun still showing around the moon.

Solar eclipses can be predicted by what is called a **Saros Cycle**, which is named from a Greek word meaning ‘**to repeat**’ this is roughly **18 years, 11 days and 8 hours**. Both the solar eclipse of August 11, 1999 (Northern Europe) and August 21, 2017 (Continental United States) are both part of Saros Cycle 145.

Some highlights of eclipse phases are: **Baily's Beads, Chromosphere, Corona, Diamond Ring, Prominences, and Shadow Bands.**

Mike thanked everyone for coming out to the meeting and reminded everyone that the **next regular membership meeting** would take place **June 20<sup>th</sup>, 2017 at 7:30 p.m.**

Mike adjourned the meeting at 9:43 p.m..

Recorded by **Dan Perissinotti, RASC Windsor Centre Secretary**