AURORA
The Royal Astronomical Society of Canada - Windsor Centre
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January 2017

A Sampler of Astronomically Related Haiku Poetry by C. Joady Ulrich

I fell a tree
And gaze at the cut end-
The moon of tonight.

Matsuo Basho (1644 - 1694)

Of late the nights
Are dawning
Plum-blossom white.

Yosa Buson (1716 - 1784)

Haiku poetry originated and evolved in Japan during the sixteenth and seventeenth centuries. It was primarily developed into its mature form by the prominent Japanese haiku poet Matsuo Basho In the 1600's. A haiku consists of three lines whose words have a total of 17 syllables. The 5-7-5 pattern means that there are 5 syllables for words in the first line, 7 in the second line and 5 in the third one. The few words that are used in this style of poetry usually make for an "in the moment" direct focus on what is being written about, yet there still can be wonderful expressions of beauty and significance given. Fine examples of haiku are those quoted above from Matsuo Basho and Yosa Buson. The haiku from Basho is based on the 5-7-5 format in Japanese. I assume the same is so for Buson's haiku.

In more recent years, the interest in haiku poetry has spread outside of Japan. I once read in Sky and Telescope one of these brief poems about a meteor. I would encourage you to write a haiku to perhaps fulfill something of the creative ability within you. If you do, let me know what you come up with.

I began writing haiku consistently starting six years ago. Below, I've included some of them that relate to astronomy to share with you.

Ascending Moon 2010

Seen in still blue sky,
Rising, the brightening Moon,
Again encouraged.

Beehive Star Cluster 2011

In magnified view,
Cluster spray of strong white stars,
Shining spring wonder.

The Planet Venus One Spring Evening 2012

In deepening blue,
White pearl planet as bright spark,
A second of joy.

The Hazy Crescent Moon 2014

Bowing crescent Moon,
Now softened by thin cloud's haze,
Nature's kind comfort.

On One Clear Night 2010

The bright Milky Way
Lit by precision set stars,
Impressed with order.

Planetary Clock 2012

Bright Venus at nine.
Thin crescent Moon at centre,
Jupiter at five.

While Seeing the August Moon 2014

Calmness in midnight,
Bright gibbous Moon low in sky,
Soothed by quiet peace.

A Discovery Noted 2015

Early detected,
Craters, new view from Ceres,
Excited with awe.

(Continued on page 5)

In This Issue

Calendar of Events

Our next meeting…

Tuesday February 21, 2017
7:30 p.m.
at
Ojibway Park Nature Centre
5200 Matchette Road

Main Speaker…

Dr. Susan Sawyer-Beaulieu

Topic…

"Getting Into Solar Imaging"

Activities...

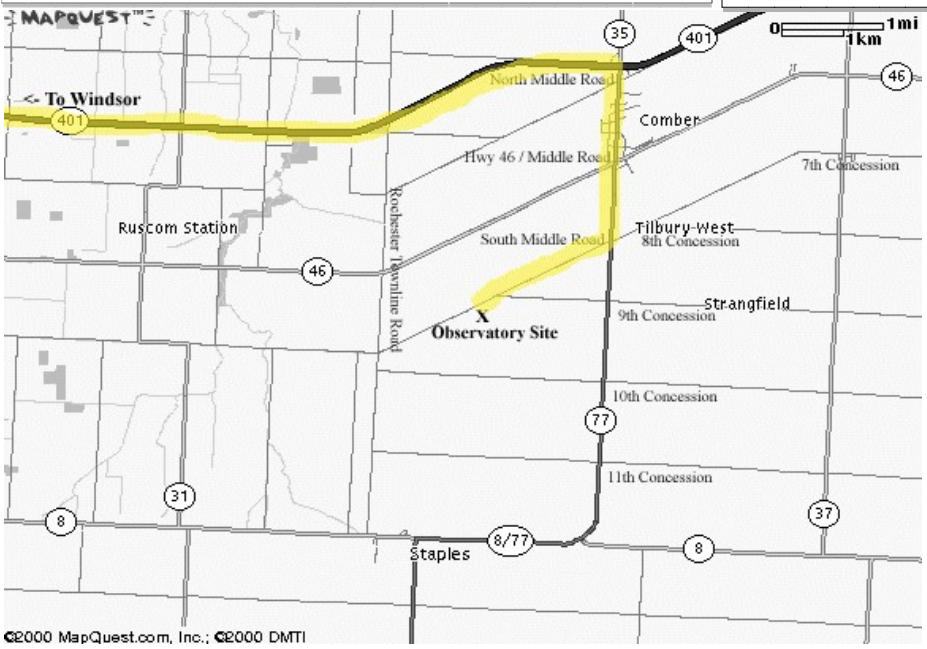
Moon, Venus and Mars: Form a tight triangle in WSW after sunset on Tuesday January 31. A nice photo-op.

Open House Night at Hallam: The next open house night at Hallam is on Saturday February 4th at 7:00 p.m..

Council Meeting: The RASC Windsor Centre Council will be meeting on Tuesday February 14th beginning at 7:30 p.m..

Venus Greatest Brilliancy: On Thursday February 16th Venus will reach magnitude –4.8 the brightest for this for this apparition.

Moon, Jupiter and Spica: Another photo-op occurs on the morning of Wednesday February 15th when the Gibbous Moon, Jupiter and Spica form a tight grouping. The trio rise just after midnight and are due south at sunrise.



Hallam Observatory Site

Directions: The map at left shows the Comber area and it includes the major highways (401, 77, 8 and 46) that are in the area of the observatory.

The most direct route from Windsor is "highlighted" on the map which is to take Highway 401 East to Highway 77 South to South Middle Road. Turn right onto South Middle Road and go about 1 kilometer and just after the point where Concession 9 joins it (it is hard to see this intersection) you will find the observatory site on the South side (left) of the road. 3989 South Middle Road.

If you hit the Rochester Townline Road (you come to a stop sign) you have gone too far.

Submissions

Aurora is published monthly except for July, August and December. The September, October, January, March and May issues are full newsletters (usually 6 pages) with a number of member submitted articles. The November, February, April and June issues are short flyers (2 pages).

Submitted articles can be of any length from a paragraph to multiple pages. I can scan pictures and/or diagrams (both prints and film) to support your article and the originals will be returned to you.

Submission deadline is the 1st of the month.

Editor: Steve Mastellotto Email: mmastellotto@cogeco.ca

Membership

The Windsor Centre of The Royal Astronomical Society of Canada meets on the 3rd Tuesday of every month (except July and August) at the Ojibway Park Nature Centre. In addition to regular meetings the centre hosts a number of observing nights, a picnic and a December social. Members receive a copy of the Observer's Handbook, a subscription to SkyNews magazine and access to the Centre's library and telescopes. Optionally the RASC Journal is available in print form—online version free.

Annual Membership Fees: Please see the RASC website at **www.rasc.ca** for current rates.

Contact Greg Mockler at (519) 326-7255 or visit our website at: http://www.rascwindsor.com for more information.

November 2016 Meeting Minutes by Dan Perissinotti

The monthly meeting of the Royal Astronomical Society of Canada - Windsor Center was held at the Ojibway Park Nature Centre on Tuesday November 15, 2016.

Windsor Centre **President, Randy Groundwater**, chaired the meeting and called the meeting to order at 7:33 p.m. and welcomed members and guests to the Ojibway Nature Centre. Randy invited the members to review the minutes of the October 18, 2016 meeting which were printed in the November newsletter.

A motion to accept the minutes of the October 18, 2016 membership meeting was made by Dr. Susan Sawyer-Beaulieu, seconded by Dave Panton. **MOTION CARRIED**.

Randy Groundwater welcomed everyone to the meeting and gave a brief overview of the agenda for the night.

Director of Observing Report

Randy introduced Steve Mastellotto to give the D of O Report.

Activities since the October membership meeting were brought forward, with a record turnout at the Open House events. Many photos and observations were discussed. Occultation of Aldebaran occurred the night after the October meeting, egress occurred about an hour after.

November has the potential to be exceptionally clear. This is due to a high pressure system, named El-Niño. It held off the normal wet weather standard for this time of year, however December and January are scheduled to be quite wet/snow covered and cloudy.

Touching base on the supernova that took place in the constellation Sagittarius, Steve displayed a map of its location and some detail on its maximum brightness (8th mag.). Unfortunately, there were no views within our membership.

A Super Moon took place on November 13, 2016. The term Super Moon is given when a full moon is observed at perigee (closest to the Earth). This month's Super Moon's distance to Earth was, 356,508 km, second closest since January 26, 1948 at 356,461 km.

Upcoming events include, an Open house on December 3rd (day after our December Social) and January 7th. Leonid meteor shower on November 17th. Geminid meteor shower on December 13th (moon light will interfere). Planet locations and their viewing capability was shown. Highlights included Venus, it will be shining bright in the western evening sky, and Mars passing within a few arc minutes of Neptune on New Year's Eve.

Deep sky observing, Steve concentrated on Andromeda and Pegasus. Within Andromeda there is a double star that is very easy to located, Gamma Andromedae, aka, Almach (similar in colour and size to Albireo). Galaxies, M31, 32 and 110, NGC891, and planetary nebula NGX 7662 (Blue Snowball), are all targets to look out for. Within Pegasus, Globular cluster M15, and for the galaxy hunter, NGC 7331 and Stephan's Quintet.

Break and 50/50 draw: $8.00 went to Dave Panton who donated his winnings back to the Centre.

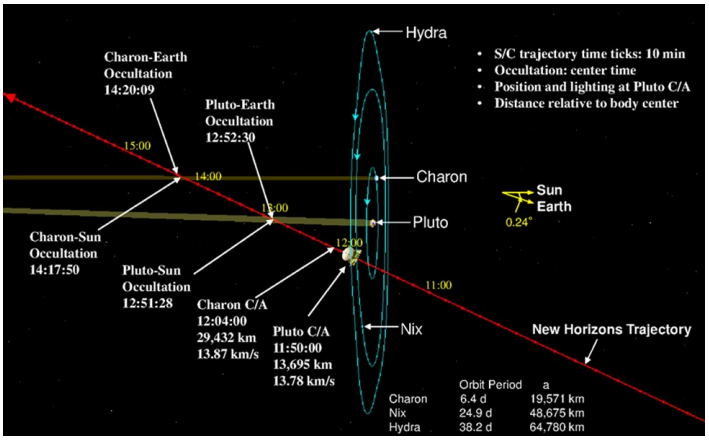
Main Presentation

Randy introduced Steve Pellarin to give a presentation on **NASA's New Horizons mission to Pluto**.

Steve provided a history of the hunt for the 9th planet including astronomers looking at the unpredictability of Neptune's orbit. Pluto, a Kuiper Belt object was discovered in 1930 by Clyde Tombaugh in Virgo as a 14th magnitude object. Not much else was known of the planet for more than 48 years. In 1978 Charon was discovered, until the Hubble Space telescope in '90-'95, there were no significant studies on the planet. In 2005 the HST team discovered two new moons, and later in 2012 found two more.

The New Horizons launch took place on January 19, 2006, arriving (closest approach) on July 14, 2015. Upon arrival and passing, New Horizons gathered more information such as size, 2376km dia., less dense than predicted, more complex surface features, and less ice compared to rock. There was an extensive study done on the composition of the dwarf planet's atmosphere when Pluto eclipsed the sun. Same was done with its companion, Charon, though it was found to lack a measurable atmosphere. One major discovery of Charon was a large equatorial rift. Measured to be the second largest canyon in the solar system, being vastly deeper and wider than the Grand Canyon. Pluto's biggest questions from the studies was its geological age. It has an extensive geophysical history. The Sputnik Planitia (large white/gray region) shows signs of being an impact region with tall water-ice mountains along its edges. Darker red/brown regions within the plant's surface and around the Sputnik Planitia are areas with a thin layer of Tholins. These are areas that have been irradiated by solar UV interacting with organic compounds within the atmosphere and surface.

New Horizons mission has been expanded to study other KBO objects, first encounter happening in 2019. Heliopause transit will happen around 2020-21.



The November meeting was also **our Annual General Meeting** and **Past President Rick Marion** ran us through the election of the 2017 Executive and Council. See page 5 for the results.

Randy thanked everyone for coming out to the meeting and reminded everyone that the next regular membership meeting would take place January 17th, 2017 at 7:30 p.m..

Meeting **adjourned at 10:08 p.m..**

At The Eyepiece: Monoceros by Mike Ethier

Once again I am going to talk about a few objects in Monoceros. Last January we walked through a number of open clusters and double stars centered on NGC 2244, star hopping our way to several other groups. Also called the Rosette Nebula, this is a fascinating area for casual sweeping as well as pinpoint examination. I enjoy doing both. Monoceros follows Orion in the sky, so it rises late in January, earlier in February. It can also be observed into March, early in the evening. And like many intensely rich areas of the sky, the constellation is relatively unknown except for a few of the brightest objects. That is a shame, as Monoceros has a number of minor clusters well worth seeking out. It also features Messier 50, a bright and appealing open cluster.

This month we will begin with the Messier Object of the Month, and then move on to a second very fine cluster. What is the best way to observe M50? Point the scope and use your eye, of course. But I'm thinking about a different way to approach and appreciate it. I know it's cold out there on winter nights, and observing time may be more limited. But if time permits try the following and see if it works for you.

Messier 50 by Siggi Kohlert (Germany). 200mm f/4 Newtonian with Canon 40Da. 11 x 5 minute exposures.

Begin at the preceding (west) end of the constellation, not far from the border with Orion. Open cluster NGC 2215 makes for a good eye opener. About 25 members, all fainter than mag. 11, crowd into an area of 8'. A fine double star precedes the cluster. In the 12" at 150x, small stars are sprinkled across the field of view. Move on next to open cluster NGC 2225-2226, following 2215 by about 5' of RA and south a little more than 2 degrees. This is not so small a group, and can be appreciated in an 8" scope. Why the two NGC numbers? From what I have been able to find out, the small and dense central area is 2226, while the wider field is 2225. In a dark sky with a 12" scope, this is quite a nice group.

If you are not too cold yet, try for three NGC clusters just north preceding M50, a short star hop away. These are open clusters 2302, 2309, and 2311. Though I like all of them, 2311 looks pretty special at high power in the 12". If you are too cold, then head straight for M50.

Messier 50: 16'; Vis. mag. 5.9; br. star mag. 9; About 80 stars: I have had the good fortune to observe this cluster many times, and with three different apertures. In Space Eye, my 2" refractor, M50 is a large hazy area at 30x, with 3 or 4 stars easily resolved. At 60x, and especially 75x, stars resolve to the center, and I can enjoy a very fine view. There is still a lot of background haze. Moving up to Deb's 6" scope at low to medium magnifications, the cluster is already a real gem, with most, if not all, members resolved. In the 12", especially if a few warmup clusters have been observed, this one is a real treasure. It's easy to count at least 80 stars, though some of the fainter ones may not be associated. The cluster is a wonder to behold at 60x in a 12" mirror, even in a light-polluted sky! The brightest star is orange, and has a bright double star nearby. A chain of bright stars outlines a large, open smile shape, with lines of stars passing perpendicular to it and thru its denser core. The core lies near the center of the smile. 100x shows 100+ stars, including many faint ones. The cluster is very rich, with 125x and 150x filling the viewfinder with stars, though there is a darker area between the orange star and the rich center. 200x takes the viewer into the very center, and becomes something like a Star Trek adventure. A fabulous cluster! Many people pass quickly over this one in March, as they try to view all Messier objects in the March marathon. It would be a shame not to appreciate this beautiful cluster all on its own.

Our final object for this month is located at the far southeast end of Monoceros, and is a cluster that many veteran observers have never seen. For one thing, it is a bit tricky to reach by star hopping, though well worth the journey. In a 6" scope, it is easy to overlook open cluster 2506 (10'; br. star mag. 11; 75 stars). From a dark sky, however, the unresolved ball of haze behind several bright stars is unmistakeable. At medium to high power, some of the faint members in that haze begin to resolve, hinting at a very rich area. An 8" scope resolves enough members to warrant an excursion. In the 12" scope, my breath was taken away. 60x shows a really dense central area. 120x resolves many of the fainter stars, and 150x shows the central knot well. However, bright foreground stars make resolving this group very challenging. In a really dark sky, this cluster is a treasure!

I hope you are able to get out and enjoy some of those winter skies. Happy observing!

Astronomy Haiku (continued from page 1)

On Observing a Single Bright Star 2015

Twinkling low in sky,
Bright star, above city's glow,
A joy just to see!

Observing the Great Orion Nebula 2015

An eyepiece filled view,
Great soft white swirls over black,
Impressive in sight.

The Steadfast Sun 2015

Clear day's bright disk view,
The Sun -- always streaming light,
Gratefully noted.

Jupiter 2° by the Moon 2016

Placed at 9'o'clock,
Jupiter by near full Moon,
Beautiful spring sight.

Note: The photograph included with this article of the Moon was taken by David Marchand, who was a member of the RASC - Windsor Centre.

2017 Executive and Council of the RASC - Windsor Centre

Executive

President	Randy Groundwater
1st Vice-President	Mike Mastronardi
2nd Vice-President	Rick Marion
Secretary	Dan Perissinotti
Treasurer	Greg Mockler
National Council Rep.	Mike Mastronardi

Councilors

Elizabeth Ismail	Melissa Martin
Steve Mastellotto	Nancy Ng
Steve Pellarin	Paul Pratt
Paul Preney	Tom Sobocan
Dr. Susan Sawyer-Beaulieu	C. Joady Ulrich
Mahayarrahh Starr-Livingstone	

Appointed Officers

Honorary President	Dr. William Baylis
Past-President	Rick Marion
Alternative National Council Rep	Tom Sobocan
Librarian	***Open Position***
Recording Secretary	Dan Perissinotti
Public Education Director	Elizabeth Ismail
Public Relations Director	Rick Marion
Directors of Observing	Steve Mastellotto
	Nancy Ng
	Brian Thomas
Light Pollution Abatement Dir.	***Open Position***
Hallam Observatory Director	John Marn
Aurora Editor	Steve Mastellotto
Webmaster	Steve Mastellotto

Hallam Observatory Fee

A reminder that the Hallam Observatory annual access/key fee of $60 is now past due (October 1st). Please see our Treasurer Greg Mockler at the regular membership meeting to pay for your key. If you no longer wish to have your own access to the observatory please turn in your key to Steve Mastellotto.

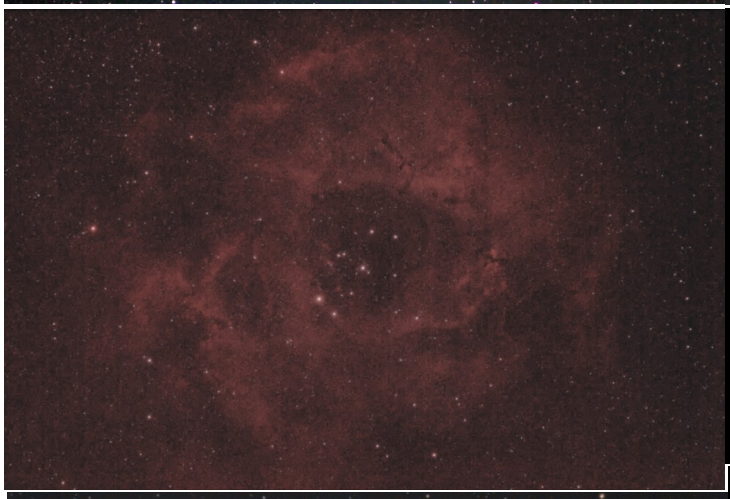
Key access to Hallam Observatory is available to all RASC Windsor Centre members in good standing who have been members for at least 1 year and complete a training session on the observatory equipment. Note that an additional $10 key cutting fee applies.

Calendars Reminder

RASC Windsor Centre - Greg reports that there are still a handful of 2017 calendars featuring the astrophotography of Windsor Centre members. The remaining calendars will be available from our Treasurer, Greg Mockler for $20 at the regular membership meeting while supplies last. We will not be ordering any more for 2017.

Member Astrophotos






Top Left: M27 The Dumbbell Nebula by Brian Simpson from his backyard using his Celestron 8" SCT. This interesting image was part of a test Brian was conducting using an ASI174MM cooled video camera that he borrowed from work. It is a monochrome camera and Brian only had a cheap set of RGB filters. This was his first attempt to build an RGB image from monochrome filtered captures. He used 72 x 15 second subs for luminosity and 27 x 20 second subs for Red Green and Blue. ***Top Right:*** M42 The Orion Nebula by Pete Barbaro using an Orion 110 ED Refractor and his Nikon D5100 at ISO 1600 and 43 x 31 second subs. ***Middle Left:*** NGC 2244 The Rosette Nebula by Pete Barbaro using the same setup as above and 21 x 31 second subs. ***Middle Right:*** NGC 253 The Silver Coin Galaxy by Brian Thomas using a Celestron 9.25 SCT scope and an Astro-modified Canon 5D at ISO 1600 and 27 x 3 minute subs. ***Bottom Left:*** M1 The Crab Nebula by Pete Barbaro using a Celestron 8 SCT, LPR filter, Nikon D5100 at ISO 1600 and 110 minute exposure. ***Bottom Right:*** The November 14 "Super Moon" by Pete Barbaro, using his C8 @ f/6.3, Nikon D5100 at ISO 200 and 1/800th of a second exposure.