

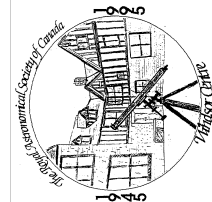
Lunar Eclipse Photos



Top Left: Susan Sawyer-Beaulieu
Top Right: Nancy Ng
Middle Left: Mike Mastronardi
Middle Right: Pete Barbaro
Bottom Left: Mahayarrahh-Starr
Livingstone



AURORA



February 2019

The Royal Astronomical Society of Canada - Windsor Centre

Volume 44, No. 5

Flyer

Next Meeting

Tuesday, March 19, 2019
7:30 p.m.

at
[Ojibway Park Nature Centre](#)
5200 Matchette Road

Speaker: TBA

Movie: "To Be Determined"

Upcoming Events

Zodiacal Light: Is visible from February 22 - March 8 in the West after sunset. You will need a dark site and clear horizon.

Mercury: Is at greatest elongation East on Tuesday February 26th. Look for it low in the Western sky after sunset.

The Moon: Will pass close to Jupiter (2 deg) on February 27, Saturn (2 deg) on March 1 and Venus (4 deg) on March 2. All will make nice photo ops in the morning sky.

Daylight Savings Time: Returns on Sunday March 10th at 2:00 a.m..

Jupiter: Watch for double shadow transits starting in late March.

Spring Equinox: Spring officially arrives for the Northern hemisphere at 5:58 p.m. EDT on Wednesday March 20th.

Monthly Meeting Minutes January 15, 2019

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

Windsor Centre **President, Mike Mastronardi** chaired the meeting. Mike called the meeting to order at 7:40 p.m. and welcomed members and guests to the Ojibway Park Nature Centre.

Mike invited members to review the **minutes of the November 20, 2018** meeting which were printed in the Aurora Flyer. A **motion to accept the minutes** of the November 20, 2018 meeting was made by Randy Groundwater and seconded by Dr. Susan Sawyer-Beaulieu. **MOTION CARRIED.**

Mike provided an overview of the meeting and introduced the Director of Observing presentation.

Director of Observing Report

Nancy Ng and Jessie Passa presented the DofO report and discussed the recent pass of comet **46P/Wirtanen** which made its' close pass of Earth on **December 16, 2018**. The comet is in a periodic orbit which will bring it back in 5.4 years but Earth will be farther away. Various **images of the comet** by Centre members were shown.

They then discussed the upcoming phases of the moon including a discussion of the **Total Lunar Eclipse on January 20** starting at 9:37 p.m. when the Moon enters the penumbra of the Earth's shadow. The darker umbral phase will begin at 10:35pm when the moon will gradually turn to a darker with **totality beginning at 11:40 p.m..** At 12:44 a.m. the moon will begin to leave the umbra and the total phase ends.

Most of the **planets** are visible before the sun rises in the **morning sky** with **Jupiter and Venus** appearing together in the Southeast sky. They are at their closest (conjunction) on **January 22**. Over the next 2 weeks they will remain close to each other and the **Moon will join them on January 30 and 31**. By February 13 **Mars** will have moved into conjunction with **Uranus** and the Moon will join the brightest star in the constellation Taurus which is Aldebaran.

On **January 3, 2019 the Chinese space program** accomplished a soft landing on the **far side of the moon**. In early May 2018 a relay satellite was launched to allow communication between Earth and the far side of the Moon. The **Chang'e** space probe is named after a mythological goddess known as Chang'e who 'lives' on the Moon. The space rover, **Yutu-2** is named after the goddess's pet, '**Jade Rabbit**'. The Chinese have a sealed biosphere located on the lander containing **plants, seeds and silk worm eggs**. The effects of gravity are being observed. Nancy and Jesse then showed a **few images** which have been sent back from the far side of the Moon.

Coffee break and the **50/50 draw**. **Nancy Ng** won and the 50/50 draw and donated her winnings back to the club.

Main Presentation

As has become a January tradition the main presentation was a movie and the recently aired **PBS NOVA episode about the New Horizons Spacecraft Mission to Pluto** was shown. Of particular interest was the coverage after the Pluto encounter which included the **Kuiper Belt** object **Ultima Thule** on January 1, 2019. The episode included images of Ultima Thule beamed back from New Horizons from earlier that day. They also covered the fascinating story of how they **redirected New Horizons** to this object that was not even known when the probe was launched from Earth and the painstaking task of **defining its orbit** to ensure the spacecraft encountered the object with a close enough pass to get reasonable images.

REMINDERS: Astro Luncheon at **SKIPPY'S RESTAURANT** every second Wednesday of the month, at noon. Located at 954 University Ave West, Windsor.

Mike thanked everyone for coming out to the meeting and reminded everyone that the **next regular membership meeting** would take place on **February 19, 2019 at 7:30 p.m..**

Meeting adjourned.

Recorded by Nancy Ng, RASC Windsor Centre

Hallam Observatory

The cost to operate Hallam Observatory is the single largest annual expense to the Centre. Costs include rent to lease the land (\$500), electricity (\$500), insurance (\$2,100), porta-john cleaning (\$600) and miscellaneous ad hoc expenses. By far the largest item has been the insurance cost of about \$2,100. We are pleased to let you know that we have received multiple quotes for our insurance renewal and have engaged The Co-operators Insurance company to provide coverage for our building and the equipment at Hallam observatory (liability coverage is provided by a RASC National policy). Our new policy is as good or perhaps slightly better coverage while our premium is substantially less than the amount we would have paid based on the recent renewal request. The new premium is approximately \$600 which is a savings of about \$1,500!!

Speaking of Hallam, once the weather warms up a bit there will be a few maintenance jobs required this year including cleaning and retreating the deck, cleaning and painting the dome and the recent wind has blown a few shingles off the roof of the warm room so we are looking into getting some shingles to redo the roof.

See John Marn if you would like to volunteer to help out with any of this work.