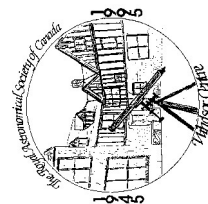


Hallam Views



The above photos nicely capture the feel of being out at Hallam Observatory for a night of observing. *Top Photo:* On the night of Tuesday April 13th just after 8:00 p.m. Nancy Ng captured the 1.7 day old moon as it was setting shortly after the sun in the West with a silhouette of the dome and warm red glow from inside the warm room of Hallam. *Bottom Photo:* About 10 days earlier on Friday April 2nd Jeff Peacock captured a series of exposures of the area around Polaris just above the dome and stitched them together into this star trail image showing the rotation of the Earth.



AURORA



Volume 46, No. 6

The Royal Astronomical Society of Canada - Windsor Centre

April 2021

Flyer

Next Meeting

Tuesday, May 18, 2021

via

Online Zoom Meeting
begins at 7:30 p.m.

Speaker: Doug Johnstone NRC/
DAO

Topic: TBD

Upcoming Events

Lyrid Meteor Shower: Peaks on **Thursday April 22nd** and the moon is just past First Quarter so look for meteors in the early morning hours after midnight when the radiant rises.

Mars: Is about a 1/2 degree from M35 on the night of Monday April 26th and will make a nice photo-op.

Eta Aquarid Meteor Shower: Peak on **Wednesday May 5** and the best view will be in the early morning hours of May 6th after the radiant point rises.

Moon: Will be passing less than a degree from **Venus on Wednesday May 12**; 2 degrees from **Mercury on Thursday May 13**; and 1.5 degrees from **Mars on Saturday May 15**. Each of these events get easier to see as the altitude of the Moon after sunset gets higher each day but this should make for an interesting series of observations and photos.

Monthly Meeting Minutes March 16, 2021

The monthly meeting of the **Royal Astronomical Society of Canada - Windsor Centre** was held via Zoom Online Meeting.

Windsor Centre **President, Mahayarrahh-Starr Livingstone** chaired the meeting. Starr called the meeting to order at 7:35 p.m. and welcomed the members and our guest speaker to the online meeting.

Starr invited members to review the **minutes of the February 16, 2021 general meeting** which were printed in the Aurora newsletter. A **motion to accept the minutes** was made by Susan Sawyer-Beaulieu and seconded by Sandy van Gaalen. **MOTION CARRIED.**

Peter Jedicke from RASC London. Peter will be giving a presentation on globular star clusters.

Steve Mastellotto opened the meeting with a reminder to members to send in articles to be **published in the Aurora**. Just looking for your adventures out under the night sky - perhaps a photo you've taken with a caption. **Committees may submit reports** that keep us informed on their activities. Starr reminded members that they are welcome to use the **grounds out at Hallam** to set up their telescope or to sit out on the deck. You do not need to be a key holder to enjoy the night sky. Steve also mentioned that **Rick Marion's family** are wondering if he possible lent his **large binoculars** to anyone and if so you may contact Steve.

Director of Observing Report, Juliana Grigorescu: Juliana began by asking members to share their activities during the past month. **Jeremy Hansen** with his parents, Monika and Rob informed us that they had been working on the **Messier Marathon** during a very late night at Hallam that stretched into the early dawn hours. This marathon is an attempt to view as many messier objects as you can in one night. Of the 110 celestial objects catalogued by Charles Messier Jeremy was able to observe **104 objects**. This is quite an achievement! Randy Drumm shared his **image of IC 2177**, the Seagull Nebula. This screaming red bird offered numerous interpretations from members. A powerful image of the **Cone Nebula** was shared by Steve Mastellotto. We enjoyed the star forming nebula **M43** which was the work of Brian Simpson. Galaxy season is upon us and Starr presented three **distant galaxies in Leo**. Many members have also been watching and photographing the progress of **Mars** as it passes below the **Pleiades**.

Juliana provided an update on the positions of the planets; **Venus** is still too close to the sun to be visible; **Mercury, Jupiter and Saturn** trail each other before sunrise at the ESE horizon; **Uranus** is visible for a short time in the western horizon and quickly follows the sun as it sets. We were informed that March is a great time of year to catch a glimpse of the **zodiacal light** after sunset or before sunrise. This phenomena is caused when sunlight is scattered by interplanetary dust that collects along the plane of the ecliptic. However you will need a very dark horizon to see this faint light. March 18th, 19th and 20th the waxing crescent **moon** will present a photo opportunity as it travels between the **Hyades and Mars/Pleiades** in Taurus constellation.

The **vernal equinox** will mark the first day of spring in the northern hemisphere on **March 20th at 5:37 a.m.** April 5th- 8th will bring the waxing crescent moon to visit the early morning planets, Jupiter and Saturn. You will need to be looking east between 5:30 a.m. and 6:30 a.m.. The rising sun will outshine this view by 6:45 a.m.. Juliana invited us to trace out the bright stars in the night sky that outline the **winter hexagon** asterism. Just look for the first magnitude stars of **Sirius, Procyon, Pollux, Capella,**

Aldebaran and Rigel. She also pointed out an equilateral triangle is formed by the planet Mars and the stars Betelgeuse and Aldebaran. Juliana provided a time-lapse video of the night sky over Australia. The Large and Small Magellanic Clouds floated below the Milky Way and the constellation of Orion presented as inverted to the view that we are used to in the northern hemisphere. Juliana finished by instructing us in how use the three glowing stars in **Orion's belt to guide us to Sirius**, the brightest star in the visible universe. The stars of **Orion's sword guide us to Canopus**, the second brightest star.

Main Speaker

Globular Clusters by Peter Jedicke, RASC - London; Peter offered a passionate presentation on globular clusters which for years have been an ongoing interest of his. He began with an image of **Messier 75**, a cluster found in the constellation Sagittarius that might often be overlooked. He acknowledged that some of us may think that globular clusters appear to all look the same and we were assured that this is not the case. As far back as 150AD, Charles Ptolemy described a bright cluster of stars in the constellation Centaurus as 'a star in the cloud on the Horses back.' Today this globular cluster is known as **Omega Centauri**. In the 18th century, William Herschel was credited with the discovery of many of the globular clusters associated with our Milky Way Galaxy and his son, Sir John Frederick William Herschel was the first to use the term 'globular cluster' to describe them. John Herschel also used a symbol for these clusters which was already in use in the scientific community as the symbol for the Earth. Historically when these clusters of stars were viewed from every direction they always appeared round and therefore were assumed to be circular in shape.

Peter revealed some of the work by American astronomer, **Henrietta Swan Leavitt** (1868-1921). While she examined the periods and brightness of numerous variable stars she found a connection between their **period and their luminosity**. This relationship would allow astronomers to create an accurate formula for determining **the great distances to objects in deep space**. This insight allowed another American scientist, **Harlow Shapley**, in 1918 to do ground breaking work on the size of the universe.

After presenting more intriguing astronomical history Peter shared some of his own telescope ownership history. While using these first simple telescopes he decided that faint nebulous objects and galaxies were not as captivating to him as the globular clusters were. He realized these clusters were 'just piles of stars' and were not complicated with the messiness of nebulae. Through a telescope some of the individual stars could even be identified. **While visiting the southern hemisphere** Peter remembered catching a view of **Omega Centauri**, the impressive cluster found in Centaurus constellation. He shared new information that today this globular cluster may be considered the **newest satellite galaxy to our Milky Way**. Peter discussed a process where we could discover the uniqueness of each globular cluster. He encouraged us to use a telescope and to look back and forth between a few clusters in one constellation. This would give us a quick comparison of how distinct each cluster really is. He also shared his list of globular clusters that are 'visible with a reasonable telescope.'

Mr. Jedicke stated that **research on stellar evolution** was possible with globular clusters because the enormous amount of stars and variable stars within them were essentially formed at the same time. This offers an exceptional research opportunity. He then shared a **colour magnitude diagram** which helped us visualize the different stages that stars pass through during their long lives. Peter ended his presentation with a list of reasons as to why he is so passionately drawn to globular cluster and the number one reason being '**they're beautiful**'. An enthusiastic Q&A session followed.

Meeting adjourned at 9:46 p.m. Recorded by Nancy Ng, RASC Windsor Centre