

food, drinks, etc., is encouraged to contact Mike Mastronardi so that we can avoid duplication of items. Guests are also encouraged to dress for the weather and bring any other personal items you may want (lawn chairs, bug spray, etc.). Highlights of the night will hopefully include a flying drone demonstration by Past President, Rick Marion, and of course a good night of observing. Members and their families or special guests are invited to attend. This is not a public stargazing event.

Raffle Tickets for the beautiful framed **images of Jupiter and its moons**, taken by member **Mike Pataky**, are still available at the meeting from treasurer Greg Mockler, or at the annual picnic. They will also be available at the next general meeting in June, just before the draw takes place. You must be present at the draw at the June meeting to claim your prize. Otherwise, a new winning ticket will be chosen. There are 2 framed pictures, so there are two prizes to be drawn. The first winner will have his/her choice of the two images. This raffle is a fund raiser to help the club's general operations account.

Director of Observing Report

Juliana Grigorescu: Juliana began her report by speaking briefly about the constellations dominating the southern skies early in the evening in May - **Cancer, Leo, Virgo and Corvus**. She highlighted the current positions of the visible planets - **Venus** in Gemini in the low western sky; **Jupiter** in Cancer, slowly moving towards its encounter with Venus late next month; and **Saturn** with its wide-open rings appearing around midnight in the southeastern sky above Scorpius/Libra. She also talked briefly about the annual **Eta Aquarid meteor shower** which peaked two weeks before this month's meeting. The parent comet of these bits of debris is Halley's comet. At this year's peak, between 10-20 meteors per hour were expected to be seen from a dark site, but a gibbous moon probably interfered with that for most observers. Luckily, the meteor shower has a broad peak, so it might be possible to still a couple of remnants over the next few nights.

Juliana also went on to discuss a recent increase in **solar activity**, some information on the recent nice apparition of **Mercury** low in the evening sky, the current appearance of Jupiter and some of the transit events of the **Galilean moons** occurring in May and the upcoming conjunction of Jupiter and Venus. Juliana then made mention of slowly fading comet **Lovejoy Q2** which recently passed near Polaris. It was hovering at around magnitude +8 with very faint wisps of a tail still showing in small telescopes as it heads away from the Sun. She also showed some images taken by member Brian Thomas of the skies around his personal observatory. Juliana also did a short tour of some fine deep sky objects found in the early evening sky, a nice planetary nebulae such as the **Eskimo nebula (NGC 3292)** and a nice bright barred spiral galaxy in Leo, **NGC 2903**. Once the deep sky tour was done, Juliana went on to present information about the **Rosetta mission** to comet **67P Churyumov-Gerasimenko** and then the **Dawn mission** to dwarf planet, **Ceres**.

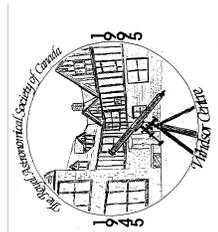
At the end of Juliana's report, Randy thanked her and closed the meeting.

Meeting adjourned at 10:15 p.m..

Recorded by Steve Pellarin, RASC Windsor Centre Secretary.



AURORA



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The Royal Astronomical Society of Canada - Windsor Centre

June 2015

Flyer

Next Meeting

Tuesday, September 15, 2015
7:30 p.m.

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

Speaker: **Dr. Bill Baylis**

Topic: **To Be Announced**

Upcoming Events

Summer Open House Nights at Hallam: The next open house nights at Hallam will be on **Saturday June 20th at 9:30 p.m., July 18th at 9:30 p.m., and August 22nd at 8:45 p.m..**

Summer Solstice: The Sun reaches its furthest point North of the Celestial Equator on **Sunday June 21st at 12:38 p.m. EDT** marking the start of Summer for the Northern Hemisphere.

Jupiter and Venus: will be less than a degree apart from June 28 through July 2 and closest on the **evening of June 30** when they will be 20 arc minutes apart.

Perseid Meteor Shower: Peaks overnight (at 2:00 a.m.) on Wednesday August 11/12. The timing of the peak and a New Moon favour observers in North American.

Monthly Meeting Minutes

May 19, 2015

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

Windsor Centre **President, Randy Groundwater**, chaired the meeting. Randy called the meeting to order at 7:36 p.m. and welcomed members and guests.

Randy invited those in the audience to review the minutes of the April meeting which were printed in the May newsletter that was available at the door. Art Rae made a motion to accept the minutes of the April 21, 2015 membership meeting, which was seconded by Tim Bennett. **MOTION CARRIED.**

Main Presentation

Randy then introduced our main presentation for the night - a special documentary by the producers of the excellent science TV series NOVA (on the PBS network) entitled, *The Invisible Universe Revealed*. This documentary honours the 25th anniversary of the beginning of operations of the Hubble Space Telescope in orbit above the Earth's atmosphere.

Twenty-five years ago, NASA launched one of the most ambitious experiments in the history of astronomy - placing a giant telescope into space, above the Earth's light-distorting atmosphere. In tribute to Hubble's many years of fascinating images and discoveries, the NOVA producers tell the remarkable story of the telescope that forever changed our understanding of the cosmos and our place in it. But amazingly, when the telescope first sent images back to earth, it seemed that the entire project was a massive failure; a one-millimeter engineering blunder had turned the billion-dollar telescope into an object of ridicule. It fell to five heroic astronauts in a daring mission to return Hubble to the cutting edge of science. In this video, we hear from the scientists and engineers on the front line who tell the amazing Hubble story of how the space telescope was initially planned out and built and then how they went about designing and carrying out the major repair to get it working optimally. It is fascinating to learn about all the difficulties that they faced - not only in designing new systems to fix the flaws and fitting them into a telescope that was not designed to incorporate large new equipment systems, but also the challenges of carrying out the repairs in the zero-g environment of space!

As we look back, it is amazing to think that this single telescope has helped astronomers pinpoint the age of the universe, revealed the birthplace of stars and planets, advanced our understanding of dark energy and cosmic expansion, and uncovered black holes lurking at the heart of galaxies. For more than a generation, Hubble's stunning images have brought the beauty of the heavens to millions, revealing a cosmos richer and more wondrous than we ever imagined. It has truly played a significant role in expanding the public's access to and appreciation/understanding of the universe around us.

After the video, a brief discussion ensued about the controversy surrounding the causes of Hubble's initial flaws. Tom Sobocan also brought to club's attention a collection of magazine articles and books that he had brought with him which discuss many of Hubble's discoveries, its problems and the history of its continuing life in space. Tom offered to share these resources with fellow members at the break.

Special Award Presentation

After the conclusion of the main presentation, members of the Windsor Centre's awards committee (Joody Ulrich, Paul Pratt and Paul Preney) made a special observing award presentation to member **Tim Bennett**. Tim was recognized with a national **RASC certificate** for having manually located and observed the '**top 400**' Herschel objects. As you may know, Sir William Herschel was a legendary German/English astronomer who made many incredible discoveries - including the discovery of planet Uranus and the discovery of infrared radiation. He also catalogued over 5,000 objects outside our solar system in a decades-long systematic survey of the night sky. The 'Herschel 400' is a subset grouping of the best of these distant and fuzzy objects. Finding even a few dozen of them is considered an observing accomplishment with a small to moderate-sized telescope. As Tim received his award, he noted that it had taken him ten years, several telescopes and observing from many locations (including Florida) to be able to complete his review of the entire group. Club members then congratulated Tim for his fine accomplishment.

Break and 50/50 Draw: Winner: \$5 - Peter Bondy donated it back to club.

Announcements

Randy asked long time member, Dr. Susan Sawyer-Beaulieu, to share some information regarding this year's major **club fundraising event** at the **Colchester Ridge Estate Winery (CREW)**. Susan informed the members that the **wine tasting/stargazing** event will take place at the winery (near the village of Colchester, off County Road 50) on **August 8th at 6:30 PM**, rain or shine. The itinerary for the event will include a main lecture by member Mike Mastronardi, with wine and hors d'oeuvres to follow and hopefully ending with a **short sky talk** and **several hours of observing under darker county skies** with club members' telescopes. Solar observing may be possible before the main presentation as well. The cost of the event is still being ironed out. Susan is **looking for volunteers** to bring telescopes and to otherwise help with this fundraising event for the club. Those interested in participating should contact her (susanssb@cogeco.ca) or sign up at the June meeting.

Other announcements included:

Canada South Science City is holding their monthly public speaker presentation at their building on Marion Road on Wednesday, May 20th at 7:30 p.m.. The talk is being presented by University of Windsor professor Dr. Denis Tetreault and is entitled, "Life in the Paleozoic: A Trilobite's Perspective". Admission is free.

Upcoming **Open House at Hallam Observatory** on **Saturday, May 23rd** commencing at dusk.

Next **Dark Sky Night at Point Pelee National Park - Saturday, June 6th**, at dusk - meeting in parking lot at the Visitor's Centre. The park will be open until midnight. This event **is not** being hosted by members of our club.

Annual RASC Windsor Centre Picnic will take place on **Saturday, June 13th** at Hallam Observatory. Things will start up at around 6:30 p.m.. The club will provide the BBQ hamburgers and hot dogs at no charge to participants, but we are taking a pot-luck approach to the rest of the food and beverages. Anyone attending that can bring