

POLARIS



Newsletter of the London Centre, RASC

November 2019

Due to my idiocy the article for November disappeared. When I find the USB stick it is on I'll update this.

RASC London Centre Library

Books of the Month

November 2019

By Robert Duff

As always, these “Books of the Month” are available for loan to members, to be returned at the following monthly meeting. The books for November 2019 are as follows:

Accessory to War: the Unspoken Alliance Between Astrophysics and the Military, by Neil deGrasse Tyson and Avis Lang. – New York; London: W. W. Norton & Company, c2018.

Clyde Tombaugh: Discoverer of Planet Pluto, by David H. Levy. – Cambridge, Mass.: Sky Publishing Corp., c2006.

In Search of Time: Journeys Along a Curious Dimension, by Dan Falk. – Toronto: McClelland & Stewart, c2008.

For a complete listing of our RASC London Centre Library collection please click on the **Library** menu at the top of the RASC London Centre main Web page: <http://rasclondon.ca/>

If there is anything you wish to borrow from the Library, please feel free to contact me by telephone at (519) 439-7504 or by e-mail at rduff@sympatico.ca

Slide Presentation, Mount Hope Centre for Long Term Care, Sunday, November 3rd, 2019

Written by Robert Duff, as Reported by Peter Jedicke

RASC London Centre member Peter Jedicke gave his digital slide presentation “*The Discovery of Our Galaxy*” to 14 people at Mount Hope Centre for Long Term Care in London on Sunday, November 3rd, 2019, 10:30 a.m. Peter answered questions after his presentation and the event lasted about one hour.

Cronyn Observatory Public Night & Exploring the Stars Events, October 8th—November 6th, 2019

By Robert Duff

Exploring the Stars, 27th London Guides, October 8th, 2019

Mostly clear skies greeted 31 visitors (20 children and 11 adults / leaders) from the 27th London Guides for Exploring the Stars at Western University’s Cronyn Observatory, Tuesday, October 8th, 2019, 6:30—8:30 p.m. Graduate student Viraja Khatu gave the digital slide presentation “*Our Solar System*” and fielded questions. She followed this with the “*Constellations*” activity with the Guides assembling and learning to use 31 “*Star Finder*” planispheres distributed to all the visitors.

RASC London member Heather MacIsaac was there as a graduate student TA and showed the Guides Jupiter through the big 25.4cm refractor in the dome, using the 17mm Nagler eyepiece (258X). RASC London Centre was represented by Paul Kerans and Bob Duff. Paul set up the RASC London Centre’s home-built 30.5cm Dobsonian (18mm Radian eyepiece, 83X) on the observation deck and showed the Guides Saturn, the 3-day-past-first quarter gibbous Moon and Jupiter. Bob showed the Guides the Moon through the observatory’s Meade 8-inch (20.3cm) Schmidt-Cassegrain, using the 20mm Plossl eyepiece (100X), and then Saturn, using the Meade 2X Barlow lens together with the 20mm Plossl eyepiece (200X).

Bob called everybody’s attention to an International Space Station (ISS) pass predicted for 7:58—8:03 p.m. (19:58:03—20:03:56) and travelling west northwest to southeast, reaching a maximum altitude of 51 degrees above the southwestern horizon at 8:01 p.m. (20:03:56). The ISS pass was enjoyed by everybody on the observation deck. (See: *ISS – Visible Passes* for London, Ontario, on *Heavens Above*: <http://www.heavens-above.com/>)

The Guides and their leaders were gone by around 8:30 p.m. after an enjoyable evening learning about astronomy and constellations and observing through telescopes.

Exploring the Stars, 5th St. Thomas Girl Guides, October 15th, 2019

Cloudy skies with some light rain greeted 23 visitors (16 children and 7 adults) from the 5th St. Thomas Girl Guides for Exploring the Stars at Western University's Cronyn Observatory, Tuesday, October 15th, 2019, 7:00—9:00 p.m. Graduate student Viraja Khatu began the digital slide presentation "*The Scout / Guide Astronomy Badge*" but was interrupted by a brief power failure. She did not continue with the slide presentation but instead brought everybody downstairs into the basement where she completed the presentation for the Guide badge requirements using the pictures on the wall of the "*Black Room.*" Viraja then did the "*Spectroscopy Demonstration,*" with the Guides putting on *diffraction grating* glasses to view the spectra of 4 gas discharge lamps, including hydrogen, helium, neon and mercury. Viraja then brought everybody back upstairs and did the "*Kitchen Comet*" activity on a table set up at the front of the lecture room, making a comet with dry ice and other materials.

RASC London member Heather MacIsaac was there as a graduate student TA and telescope operator in the dome. Since the weather was cloudy with possible rain, the dome remained closed. When everybody arrived upstairs in the dome, Viraja introduced RASC London Centre member Bob Duff who gave a brief talk on the history of the observatory and some of the technical aspects of the big 25.4cm refractor. He explained the Schmidt camera and Cassegrain reflector telescope piggy-backed on the big refractor and called their attention to the 2 clocks on the east wall of the observatory and explained the difference between Standard and Sidereal Time. He then showed them the RASC London Centre's home-built 30.5cm Dobsonian and explained the difference between a reflector and refractor telescope. Bob then fielded some good questions from the Guides.

The Guides were gone by around 9:00 p.m. after an interesting and enjoyable evening learning about astronomy, spectroscopy, comets and telescopes, despite the cloudy sky.

Cronyn Observatory Public Night, Saturday, October 26th, 2019

Cloudy skies and rain greeted 23 visitors (including one youth) to Western University's Cronyn Observatory Public Night, Saturday, October 26th, 2019, 7:00—9:00 p.m. Graduate student Hadi Papei presented the digital slide presentation "*The Search for Earth 2.0*" on the large TV screen newly installed in the lecture room and fielded questions. Graduate student Viraja Khatu was telescope operator, but since clouds and rain ruled out opening the dome, she did the "*Spectroscopy*" and "*Transit*" demonstrations on the downstairs "*Black Room.*" RASC London Centre was represented by Henry Leparskas, Bob Duff and Mark Tovey. Henry was there from 6:30—7:30 p.m. and spent 60 minutes setting up the "*Period Rooms*" before Mark arrived around 7:30 p.m. Bob arrived around 7:20 p.m. and counted 18 visitors, including one child, in the lecture room around 7:29 p.m. There were 23 visitors in total for the evening.

Downstairs in the "*Black Room*" Viraja Khatu gave demonstrations of the "*Transit Demonstration,*" with the "*Transit Demo*" model—showing how the transit detection method worked for finding extra-solar planets, and the "*Spectroscopy Demonstration,*" with the visitors putting on *diffraction grating* glasses to view the spectra of 4 gas discharge lamps, including hydrogen, helium, neon and mercury. Mark Tovey gave tours of the "*1940s Period Room,*" a

recreation of Dr. H. R. Kingston's 1940 office, with his brass refractor and the *Sotellunium*—a mechanical eclipse demonstration model built by W. G. Colgrove—on display; and the “1967 *Period Room*,” recreating the early control room of the Elginfield Observatory to celebrate the 150th anniversary of Confederation—Canada 150. The “*W. G. Colgrove Workshop Period Room*” was open for visitors' inspection. The 3 “*Period Rooms*” were designed by RASC London Centre member Mark Tovey.

Bob gave a telescope talk in the dome, to a group of some 15 visitors, on the history of the observatory and technical aspects of the big 25.4cm refractor, using the 17mm Nagler eyepiece (258X) for demonstration. He called their attention to the Schmidt camera and Cassegrain reflector piggy-backed on the main telescope, opening and closing the shutter on the Schmidt camera to demonstrate how it worked. Bob also rotated (but did not open) the dome to demonstrate how it worked and explained the 2 clocks on the east wall and the difference between Standard and Sidereal Time. He gave talks to each of 2 smaller groups of 3 and 2 visitors respectively, and hauled out the RASC London Centre's home-built 30.5cm Dobsonian and explained the difference between a reflector and refractor telescope.

The visitors were gone by around 9:00 p.m. after an enjoyable and interesting evening learning about the search for extra-solar planets similar to the Earth, spectroscopy, the technical aspects of the big 25.4cm refractor in the dome and the history of the observatory.

Exploring the Stars, 2nd Thamesford Girl Guides, October 30th, 2019

Cloudy skies and rain greeted 39 visitors (26 children and 13 adults) from the 2nd Thamesford Girl Guides for Exploring the Stars at Western University's Cronyn Observatory, Wednesday, October 30th, 2019, 6:30—8:30 p.m. They were welcomed by graduate student Viraja Khatu. There was at first a compatibility issue with Viraja's MAC laptop computer connecting to the large TV screen on the wall of the lecture room. RASC London member Everett Clark arrived and substituted the HDMI TV cable connector from the TV screen's black box and this solved the problem. Viraja presented the digital slide presentation “*The Scout / Guide Astronomy Badge*,” with the title slide “*The Basics*,” and showed the slide “*Come Watch! The Transit of Mercury*” at the end of her presentation before fielding questions. She followed this with the “*Constellations*” activity, distributing 40 “*Star Finder*” planispheres, and showing the Guides how to assemble and use them to locate stars and constellations in the sky.

Bringing the Guides and their leaders upstairs into the dome, Viraja introduced RASC London members Bob Duff and Everett Clark. Bob gave a talk on the history and technical aspects of the big 25.4cm refractor, using the 17mm Nagler eyepiece (258X) for demonstration. He called their attention to the Schmidt camera and Cassegrain reflector piggy-backed on the main telescope, opening and closing the shutter on the Schmidt camera to demonstrate how it worked. Viraja divided the Guides into 2 groups partway through Bob's talk and took one group downstairs for the “*Spectroscopy Demonstration*” in the “*Black Room*.” Bob continued with the remaining group, rotating (but not opening) the dome to demonstrate how it worked and explained the 2 clocks on the east wall and the difference between Standard and Sidereal Time. He also showed them the RASC London's home-built 30.5cm Dobsonian (18mm Radian eyepiece, 83X) and the observatory's Meade 8-inch (20.3cm) Schmidt-Cassegrain (20mm Plossl

eyepiece, 100X), both set up on the dome floor, and explained the difference between a reflector and refractor telescope.

Downstairs in the “*Black Room*” Viraja gave 2 demonstrations of the “*Spectroscopy Demonstration*,” one to each of the 2 groups of Guides, with the visitors putting on *diffraction grating* glasses to view the spectra of 4 gas discharge lamps, including hydrogen, helium, neon and mercury. The Guides were gone by around 8:30 p.m. after an enjoyable evening learning about astronomy for their badge requirements. Everett departed around 8:00 p.m. and Viraja and Bob closed down the observatory shortly after 8:30 p.m.

Exploring the Stars, 1st Thamesford / 1st Kintore Cub Scouts, November 6th, 2019

Cloudy skies with some light rain greeted 17 visitors (10 children and 7 adults) from the 1st Thamesford / 1st Kintore Cub Scouts for Exploring the Stars at Western University’s Cronyn Observatory, Wednesday, November 6th, 2019, 6:30—8:30 p.m. Graduate student Jeff Vankerkhove presented the digital slide presentation “*The Scout / Guide Astronomy Badge*,” with the title slide “*The Basics*,” and fielded questions. He followed this with the “*Crater Experiment*” activity, inviting the Cubs to a table set up at the front of the lecture room where various size objects were dropped into a pan filled with flour and chocolate powder to demonstrate impact cratering.

RASC London Centre member Bob Duff arrived around 7:05 p.m. and set up the observatory’s Meade 8-inch (20.3cm) Schmidt-Cassegrain on its tripod, which Jeff had already set up on the floor of the dome. Bob installed the 20mm Plossl eyepiece (100X) and directed the 20.3cm Schmidt-Cassegrain so as to view out the door to the observation deck towards 2 flashing white lights on the communications tower in south London. He also set up the RASC London Centre’s home-built 30.5cm Dobsonian (18mm Radian eyepiece, 83X) inside the dome for demonstration.

When everybody arrived upstairs in the dome, Bob gave a talk on the history and technical aspects of the big 25.4cm refractor, using the 17mm Nagler eyepiece (258X) for demonstration. He called their attention to the Schmidt camera and Cassegrain reflector piggy-backed on the main telescope, opening and closing the shutter on the Schmidt camera to demonstrate how it worked. Bob rotated (but did not open) the dome to demonstrate how it worked and explained the 2 clocks on the east wall and the difference between Standard and Sidereal Time. He also showed them the 30.5cm Dobsonian and the 20.3cm Schmidt-Cassegrain and explained the difference between a reflector and refractor telescope. He invited the Cubs to view the 2 flashing white lights on the communications tower in south London through the 20.3cm Schmidt-Cassegrain.

Taking everybody downstairs into the “*Black Room*,” Jeff demonstrated the “*Spectroscopy Demonstration*,” with the Cubs putting on *diffraction grating* glasses to view the spectra of 4 gas discharge lamps, including hydrogen, helium, neon and mercury. Jeff also gave them a brief tour of the “*1940s Period Room*,” a recreation of Dr. H. R. Kingston’s 1940 office, showing them the *Sotellunium*—a mechanical eclipse demonstration model built by W. G. Colgrove—and the 3D printer replica of the Dresden meteorite. Bob talked to some of the visitors and Jeff opened and

showed a couple of visitors the “*1967 Period Room*”—a recreation of the early control room of the Elginfield Observatory to celebrate the 150th anniversary of Confederation—Canada 150. Jeff and Bob showed one visitor “*W. G. Colgrove Workshop Period Room*” before everybody departed. The 3 “*Period Rooms*” were designed by RASC London member Mark Tovey.

The Cubs and their leaders were gone by around 8:30 p.m. after an interesting evening learning about astronomy and telescopes despite the cloudy, rainy weather.