## **Extended Annual Report from London Centre for 2019**

Wrapping up our 97th year with pride, London Centre reports that twelve regular meetings were held, as well two Executive meetings, and 81 outreach events, most in partnership with Western University's Department of Astronomy. These events included regular open houses, monthly during the main school semesters and weekly through the months of May, June, July and August. The tally of visitors at all of these events comes to no less than 6220, and Outreach Coordinator Bob Duff recorded that London Centre members contributed 767 volunteer hours. Norm McCall served as President in 2019. For the first time in the same year, two Londoners were granted Service Awards by the Society, Mike Hanes and Rick Saunders, our two immediate Past Presidents. 11 issues of our club newsletter, "Polaris," were published. London Centre was represented by at least eight members at the 2019 General Assembly.

Pete Raine served as Director of the club observatories and Dale Armstrong as Chair of observing activities. Having been factory-refurbished in the fall of 2017 (because the corrector had hazed over), the Celestron 35cm in Observatory Two (OBS2) has continued to work well for the club, as has the 30cm Astrotech RC in Observatory One (OBS1). In 2019, an 8x40 optical finder was added to OBS1 to complement the Telrad and guide scope. During the year, it became apparent that the (solar-driven) power supply for the observatories was in need of an upgrade. Dennis Giasson did some of the required maintenance (to keep things running), while Norm McCall undertook a thorough survey of the possible upgrade paths that suited our requirements. On 2019-03-12, Everett Clark and Henry Leparskas conducted a night sky tour for members of the Space Society of London, which is based at Western U. In addition, Dale Armstrong ran a training session on 2019-06-08, which saw 6 more members learn how to use the Celestron 14 in OBS1. At the suggestion of former president Mike Hanes, monthly club observing sessions were announced in advance. Planned sessions on 2019-01-04 and 2019-08-02 coincided with clear skies, and drew a good number of observers. Over the course of the year, members reported (on the club Forums) a total of 25 observing sessions at the site, with people using either one of the two observatories, or simply observing out on the large, concrete observing pad with their own telescopes.

Most regular meetings were held in the classroom at the Hume Cronyn Memorial Observatory on the campus of Western U. We are grateful to Western U for providing us with meeting space. For most meetings, President Norm McCall presented astronomy news items, Vice President Dale Armstrong described recent observations made by members, and Librarian Bob Duff highlighted a selection of books from our collection. The main event was a briefing from our Guest of Honour, as follows. Afterward, the meetings continued in odd-numbered months at Kelsey's restaurant on Oxford Street, and in even-numbered months at East Side Mario's in the Masonville complex.

2019-01-18 **Jim Goetz**, RASC Kitchener Centre, "The RASC Remote Telescope Project at Sierra remote Observatory (SRO)"

2019-02-18 **Bjarni Tryggvason**, former CSA astronaut, "*Recent work on International Space Station projects*"

2019-03-15 Dr. Christopher Essex, Mathematics Dept, Western U, "Advanced Modelling"

2019-04-19 Dr. Elizabeth J. Tasker, PhD, Oxford U, "A Planet Not Our Own." Afterward, Elizabeth autographed copies of her book, "The Planet Factory," for members.

2019-05-17 **Nicole Mortillaro**, Editor of the Journal of the RASC, "*The Age of Discovery and Our Role in it*"

2019-06-21 Because the University's convocation event needed Cronyn Observatory, the London Centre meeting was held in the Physics & Astronomy Bldg, room 100. **Brian McCullough**, RASC Ottawa Centre, gave a briefing about "*Astronomical Sketching*"

2019-07-19 Tanmaye Vyas, amateur astronomy from India, "Space: Then, Now and Beyond"

2019-08-16 Ben George, graduate student, Western U, "The Lowest Mass Stars."

2019-09-20 **Steve Holmes**, Kitchener-Waterloo Centre, "Extra-Terrestrial Intelligence: Why Are We Alone?"

2019-10-18 Jennifer West, University of Toronto, "Radio Astronomy"

2019-11-15 Martin Houde, Astronomy Dept, Western U, "Superradiance and Fast Radio Bursts"

2019-12-20 Member's Night. Rick Saunders. "2019 Adventures at Star Parties," and Dale Armstrong, "Ten RASC Certificate Programmes"

The total lunar eclipse was the feature of an open house held at Cronyn Observatory 2019-01-20.

As in 2018, there was an Astronomy-On-Tap event held on 2019-03-22 at Forked River Brewing Company, hosted by London Centre member **Andrew Peters**. History displays were set up by **Mark Tovey**. **Peter Jedicke** served as Master of Ceremonies, **David H Levy** gave a well-received talk entitled "*Reading the Sky: a lifetime of comets and literature*," and there was a trivia contest organized by **Ben George** and other graduate students. A few dozen persons attended.

London Centre members participated in the national Science Rendezvous on 2019-05-11. Local events were organized by Western U and held at TD Stadium from 14:00 to 19:00.

On the morning of Saturday, 2019-06-22, **Brian McCullough** presented an astronomy sketching workshop at Western U, in the Physics Bldg. About a dozen members participated and Brian was his usual entertaining self.

Mike Hanes and Rick Saunders were celebrated for their contribution to London Centre at a backyard barbecue held 2019-06-28 at Norm & Bernie McCall's house. All of London Centre's previous Service Award winners were present to join in expressing the gratitude of London Centre to Mike and Rick. It was a pleasant day with partly clear skies, and Norm showed everyone the progress on his backyard observatory. Dave McCarter was also recognized for his many years of service as Outreach Coordinator for London Centre.

As part of global events for Asteroid Day, the open house on 2019-06-29 focussed on that topic.

Western U hosted a celebration for the 50th anniversary of the first human landing on the Moon at Cronyn Observatory and the neighbouring Spencer Engineering Building. London Centre members Ron Sawyer, Steve Gauthier, Mark Tovey and Peter Jedicke contributed display materials which were set up by Henry Leparskas. Mark and Peter joined Wester U researchers in making public presentations. As well, an informal workshop was held on Saturday 2019-07-27 in the classroom at the Cronyn Observatory to discuss questions and share resources related to anniversary. Four members participated in the workshop.

2019-08-15 **Jenna Hinds** came to London to give a presentation about astronomy teaching topics at a space educators' workshop, held at Althouse College on the campus of Western U. **Heather MacIntosh** described the local activities of London Centre to the workshop. Participants were invited to a special event at Cronyn Observatory after the teaching sessions.

2019-08-19 **Peter Jedicke** gave a talk called "*Big Telescopes*" to the Space Explorers' Camp at Cronyn Observatory.

2019-09-08 **Peter Jedicke** gave a slide presentation entitled "*Our Wonderful Heavens*" at Mount Hope Centre for Long Term Care.

2019-09-15 **Mark Tovey** organized history displays and discussed related topics with visitors in the grand auditorium of the former headquarters of London Life as part of *Doors Open London*.

On 2019-10-05, *International Observe the Moon Night* was celebrated at Cronyn Observatory. Meanwhile, a star night was held at St Thomas Elevated Railway Park, where **Joe O'Neil**, **Mark Pickett**, **Steve Imrie** and **Peter Jedicke** set up telescopes for the community.

2019-10-07 Some London Centre members attended a formal announcement of the opening of Western University's Institute of Earth & Space Exploration. The event was a reception held in the atrium of the International and Graduate Affairs Building.

There was a star night held at Tweedsmuir Public School for families of the community on 2019-10-09. **Norm McCall, Mohammed Mubeen** and **Mark Pickett** set up telescopes under clear skies and Peter Jedicke gave a slide presentation.

The transit of Mercury was celebrated under cloudy skies on 2019-11-11 at Cronyn Observatory.

2019-11-16 **Dave Clark** and **Everett Clark** hosted the annual Observer's Group pre-holiday potluck event, which is a traditional social highlight of the year in London Centre

Executive meetings were held 2019-05-22 and 2019-12-01 at Norm McCall's home.

We look forward to 2020 and we have started to think about plans for our 100th anniversary in 2022.

Submitted by

Everett Clark, Secretary