

# CASCA Education and Public Outreach Committee Report

June 2015 – December 2016

Submitted by Michael Reid, Chair

## Important Considerations for CASCA Board

1. The EPO committee would like to contract out updates to the EPO portions of casca.ca to Jennifer West. This is particularly important for the Westar Lectureship page. See below for details.

## Retiring Committee Members

- Vice-chair: Joanne Rosvick (2005-16) Thompson Rivers University
- Eric Chisholm (2010-16) National Research Council
- Ian Short (2009-16) Saint Mary's University

## Current Committee Members

The current membership of the CASCA EPO Committee consists of:

- Chair: Michael Reid (2014-2017), University of Toronto/Dunlap Institute
- Julie Bolduc-Duval (2010-2016), Discover the Universe
- Jan Cami (2008-2017), Western University
- Robert Cockcroft (2014-2017), Western University (formerly McMaster University)
- **Paul Delaney (2016-2019), York University**
- Sara Ellison (2014-2017), University of Victoria
- Phil Langill (2014-2017), Rothney Astrophysical Observatory/UCalgary
- Lorne Nelson (2016-2019), Bishop's University
- **Sharon Morsink (2016-2019), University of Alberta**
- **Magdalen Normandeau (2016-2019), University of New Brunswick**

Listings in **bold** indicate new members of the committee as of fall 2016. Note that, in consultation with the Board, the EPO committee has retired the role of vice-chair.

## Major Activities, June-December 2016

### EPO Committee Telecons

The EPO committee held group telecons on August 3, October 3, and December 5. We will continue to hold regular telecons throughout 2017.

### Relaunch of the Westar Lectureship

The first of the renewed Westar Lectureship visits took place in November. The first selected lecturer was Dr. Christa Van Laerhoven from the Canadian Institute for Theoretical Astrophysics. Dr. Van Laerhoven traveled to Whitehorse, where she delivered her lecture and met with the local community. Joining her were two University of Toronto graduate students, Jielai Zhang and Heidi White. Together, the three of them delivered a workshop for teachers in Whitehorse. A more detailed report from Dr. Van Laerhoven follows below.

In the fall of 2016, the EPO committee launched a public call for new Westar Lecturers. Twenty-six applications were received, though a second call had to be issued to ensure that sufficient numbers of francophone, female, and minority applicants submitted applications. The EPO committee is in the process of selecting the successful applicants. We are also working on setting up an application process for prospective host communities.

#### Report on the Fall 2016 Westar Lecture, Whitehorse YT, by Christa Van Laerhoven

The public lecture and teachers' workshop were held on November 14 at the Whitehorse campus of Yukon College. Both the lecture and the workshop were very well received.

The workshop ran for the day and included a lecture on topics in solar system science, a hands-on introduction to Stellarium, a talk by a local First Nations elder, a walk-through of a custom-made series of inquiry based activities related to understanding seasons, and a Q&A session. Eight participants attended the workshop (an additional three people signed up for Discover the Universe, but did not attend the in-person workshop). The reviews received were overwhelmingly positive.

The public lecture, entitled "Keep Calm and Orbit On" was delivered in the evening and was attended by 15-20 people. This lecture focused on Dr. Van Laerhoven's recent work on stability of planetary systems.

The logistics for these events was greatly helped by partnership with the RASC: Yukon Center. The visit also benefitted from the presence of Dr. Van Laerhoven's husband who is local to the Whitehorse area. The astronomers were able to use his and Dr. Van Laerhoven's house as a base of operations and use their car as a means of transportation.

## Paid Developer for EPO Content on casca.ca

In 2014, the CASCA board agreed to provide funding to produce an EPO website for CASCA. Over the intervening two years, the committee's plans for online EPO have evolved. It is now agreed that, given the lack of resources available to maintain a dedicated website, cascaeducation.ca is not the best venue for CASCA public outreach. We have focused our efforts on developing an outreach reporting tool for use by the Canadian community. We originally anticipated having to pay a developer to build this tool, but it has instead been built for free by programmers at the University of Calgary.

However, now that the Westar Lectureship has resumed, the EPO Committee believes that it is in CASCA's best interest to retain the ongoing services of a web developer/designer for EPO purposes. The Westar sections of casca.ca will soon host a public-facing list of Westar lecturers. The list must be maintained on a regular basis and made to look appealing to the general public. We would like to hire a web developer on an occasional contract to develop and maintain this section of the site and to ensure that the English and French versions are kept synchronized. Jennifer West is the most likely candidate, given that she originally developed the website and could make updates efficiently. **We would like permission to request a quote from Dr. West for these services, and to approve her to start work if the quote comes in at less than \$1,000 per year.**

## Discover the Universe Launches Its First Two Curriculum Modules

In the fall of 2016, Discover the Universe (DU) launched its first-ever curriculum modules. These modules are intended to be used by teachers across Canada to deliver the Canadian astronomy curriculum in their classes. They were developed to meet the curricular requirements of both the pan-Canadian astronomy curriculum and the astronomy curricula of individual provinces. The first module, "Looking Up!", contains 8 sub-activities intended to get students actually observing both the daytime and nighttime skies. It's intended primarily for elementary school teachers, though many of the activities would be useful in higher grades. The second module, "The Solar Activity Cycle", is an inquiry-based module that encourages students to explore archival SOHO and SDO data to discover the solar cycle themselves. Both modules are available here:

<http://www.discovertheuniverse.ca/pages/ressources-968.htm> (English)

<http://www.decouvertedelunivers.ca/pages/ressources-968.htm> (French)

The first module has been demoed at science teachers' conferences in Ontario and Quebec and both of them are being supported with live webinars for teachers, in both French and English. CASCA funding for DU is acknowledged within the modules.

More modules are being developed for launch in 2017 and beyond. They are currently being co-developed by DU and the Dunlap Institute, with more partners expected to contribute soon.

## Discover the Universe and Dunlap Renew Their Relationship

In 2015, the Dunlap Institute agreed to provide the majority of the financial support for Discover the Universe. For 2016, DU was funded by a \$20,000 grant from CASCA and approximately \$80,000 from Dunlap. Dunlap has recently agreed to provide two more years of funding for DU, matching CASCA's two-year commitment. The Dunlap funding level will increase slightly over the 2016 level to allow for the development of a new DU website.

DU and Dunlap continue to explore new avenues for sustainably funding DU. A set of funding options have been worked out with the University of Toronto Advancement office and are being matched with prospective donors, grants, and foundations. DU and Dunlap co-authored a proposal to the Canada 150 fund for money to support the creation of an indigenous astronomy module. The funding decision will be announced during 2017.

## Workshop for teachers at CASCA 2016 in Winnipeg

A full-day workshop for local teachers was offered in Winnipeg on June 1st during the CASCA annual meeting. The audience included about 20 secondary school teachers and staff of the Manitoba Museum. Many presentations were offered during the day on news events of the year such as gravitational waves and the possible Planet Nine. Participants also had the honour of meeting Nobel laureate Dr. Art McDonald. The feedback received was extremely positive and provided useful comments on how to improve for future workshops.

Many people contributed to the success of this day: Julie Bolduc-Duval (Discover the Universe), Jennifer West (LOC), Mary Beth Laychak (CFHT), and members of the local RASC centre and of the Manitoba Association of Physics Teachers. We would also like to thank the sponsors, who provided the event at no cost to the teachers, including lunch and snacks: CASCA, Dunlap Institute and CFHT.