

CASCA Education and Public Outreach Committee Report

June – Dec. 2017

Submitted by Phil Langill, Chair

1. Committee Status

After a busy and productive stint as EPO committee Chair, Michael Reid stepped down at the end of his term this summer 2017. Phil Langill, University of Calgary / Rothney Astrophysical Observatory, has agreed to take on the role of Chair to the end 2018.

Mike has agreed to stay on as member, but departing the committee were Jan Cami (2008-2017), Western University and Sara Ellison (2014-2017), University of Victoria. I wish to extend a heart-felt thank-you to Jan and Sara for their time and commitment, and hope they return one day to this team.

Over the summer months, with the great help of Rob Thacker, VP CASCA Board, new members were found. The current committee members are;

- Julie Bolduc-Duval (2010-18) Discover the Universe / À la découverte de l'Univers
- Kelly Lepo (2017-20) McGill University
- Mike Reid (2014-18) University of Toronto
- Pierre Chastenay (2017-20) Université du Québec à Montréal / 2017 Qilak Award Recipient
- Robert Cockcroft (2014-18) University of Western Ontario
- Paul Delaney (2016-19) York University
- Sharon Morsink (2016-19) University of Alberta
- Lorne Nelson (2016-19) Bishop's University
- Magdalen Normandeau (2016-19) University of New Brunswick / Co-Editor of Cassiopeia

The EPO Committee's ex officio and Board Representative are Leslie Sage and Erik Rosolowsky, University of Alberta, respectively.

This is an amazing group of people with a vast amount of EPO experience and energy. I look forward to working with this team to help grow CASCA's EPO reach and effectiveness.

2. Major Activities, June – Dec. 2017

a) EPO Committee Telecons

The EPO committee held productive group telecons on June 5th, Oct. 25th and Dec. 11th. The outcomes of these discussions, and ongoing email communications, comprise the remainder of this report. Several items are on-hold, pending further direction from the Board. These are summarized below in Part 3.

b) CASCA EPO Reporting Form

At the Board Meeting at last summer's AGM in Edmonton, Magdalen and I made a short EPO progress report. We gave a brief introduction to the new, user-friendly, EPO event reporting form which the committee had developed under Mike's leadership, and which can be found here;

https://ucalgary.ca/rao/outreach_reporting_form

Initial use has been encouraging but, as usual, its use spikes when reminders are sent out via the CASCA membership exploder. As an example, we had excellent use of the form after the partial solar eclipse in August 2017.

On the last 2 pages of this report you will find a summary of the EPO that happened across the country that day, compiled by Robert. This data shows that ~360 CASCA led volunteers brought almost 43,000 people together that day to foster excitement about astronomy, space, and science. This is first-hand evidence that grass-roots astronomy outreach is being facilitated by CASCA members. Activity needs to be reported more regularly, however, and we would like to see CASCA members reminded on a more regular basis to use the form, and have the data compiled included on future EPO reports to the Board.

Committee members gave anecdotal accounts of other activity they knew about, and with the work done nationally by Planetaria and Science Centers, the RASC, and the FAAQ, and we believe this was the largest astronomically inspired gathering of Canadians in history, easily topping 200,000 people of all ages and ethnic backgrounds.

c) CASCA-Westar Lectureship (CWL)

Our CWL subcommittee, comprised of Julie, Lorne, and Paul, with the assistance of Jennifer West, have made updates to web pages and composed a general invitation message. The invitation is below in both languages, and links to pertinent pages on the CASCA website is within:

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La Société canadienne d'astronomie (CASCA) aimerait offrir à votre communauté ou organisation la possibilité d'accueillir une conférence Westar. Suivant ses engagements pour partager la science avec le public, la CASCA s'engage à fournir le financement nécessaire pour qu'un(e) astronome canadien(ne)

distingué(e) se rend dans votre communauté pour un séjour de deux jours où il/elle donnera une conférence publique gratuite et interagira avec les membres de votre communauté. De plus, en fonction de vos besoins et de leur expertise, le/la conférencier(ère) pourra également offrir d'autres activités gratuites telles que l'observation au télescope, des visites en classe ou une formation en astronomie pour les enseignants. La conférence Westar met en vedette nos incroyables chercheurs canadiens en astronomie, suscite l'enthousiasme et l'intérêt pour l'astronomie et la science, et offre des possibilités d'éducation pour le grand public et les enseignants de sciences.

Si vous souhaitez qu'un conférencier Westar visite votre communauté, nous vous encourageons à [visiter notre site web](#) et remplir le formulaire d'application. Les candidats retenus seront avisés le plus rapidement possible. Veuillez répondre aux questions aussi précisément que possible, car elles sont conçues pour nous aider à optimiser le processus de planification.

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The Canadian Astronomy Society (CASCA) would like to offer your community or organization the opportunity to host a Westar Lecture. As part of its commitment to share science with the public, CASCA will provide the necessary funding for a distinguished Canadian astronomer to visit your community for a two-day stay. He or she will give a free public lecture and interact with members of your community. In addition, depending on your needs and expertise, the speaker may also offer other free activities such as telescope observation, classroom visits, or astronomy training for teachers. The Westar Lecture showcases our incredible Canadian astronomers, inspires enthusiasm and interest in astronomy and science, and provides educational opportunities for the general public and science teachers.

If you would like a Westar speaker to visit your community, we encourage you to [visit our website](#) and fill out the application form. Successful applicants will be notified as soon as possible. Please answer questions as specifically as possible as they are designed to help us optimize the planning process.

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The webpage showcasing the 21 CASCA members who are hoping to facilitate the event is included in the links. Therefore, the EPO Committee feels everything is in place to begin the search for underserved communities, and deliver two CWL's in 2018.

The proposed plan for solicitations is twofold. First we would like to pass this invitation on to all CASCA members, and ask them to forward it on to underserved schools and organizations that are in their reach, and ask those to do the same. Second we would like to post the invitation to CASCA's social media platforms. When the application form is filled out and the SUBMIT button is clicked, the information is sent to the CWL sub-committee. The stipulation of 'underserved community' will be vetted by the sub-committee when they review the applications.

The EPO committee suggests soliciting applications starting immediately, with an application deadline of Feb. 28th, 2018. The matching of the lecturer to the community will commence directly and the selection will be announced March 31st, with the event happening before the end of the school year in June. The lecturer will subsequently be responsible for working with the community liaison to organize

their transportation and accommodation, as well as their activity agenda which focuses on the lecture and any other additional school or community interactions mutually agreed upon.

Oversight of the organizational progress between the lecturer and liaison will be provided by the CWL sub-committee. The lecturer will communicate directly with the CASCA Board Treasurer, currently Nicole St-Louis / Université de Montréal, regarding financial support and arrangements.

The next round of applications will be solicited starting July 1st with a deadline of Aug. 31st. The selection will be announced Sept. 30th with the event happening before the end of 2018. The EPO committee will assess all aspects of the CWL process as we proceed through 2018, and make modifications to streamline as needed.

d) CASCA EPO's Social Media Platforms

The following two decisions have been recently implemented. (i) The CASCA twitter account, originally visioned to be managed by a rotating contingent of CASCA members, became @AstroCanada-Majaess when Dan Majaess awesomely managed the account for the past ~2 years. It is now called @AstroCanada-CASCA and is managed jointly by Dan and Kelly. The CASCA webpages referencing this twitter account need to be upgraded. (ii) The AstronomyCanada.ca / AstronomieCanada.ca DNS names have been retained by CASCA for another year. These websites have not been upgraded for years and currently sit blank. The EPO Committee will work in the coming months to make recommendations to the Board about their future.

Two members of the EPO committee, Kelly and Phil, participated on the CASCA Board's ad-hoc sub-committee on CASCA's Social Media presence and strategy in Nov-Dec, 2017. Once these strategies are crafted and officially adopted by the CASCA Board, this EPO committee will especially benefit from updated social media tools. As mentioned above, we plan to use the existing @AstroCanada-CASCA Twitter account (and future Facebook / Snapchat / Instagram platforms) to solicit community participation in the CASCA-Westar Lectureship. These tools will also be central to the dissemination of information about education and outreach events for the public across the country.

The EPO committee requests from the Board a small advertising budget. For example, \$20 - \$50 worth of advertising on Facebook could significantly bolster participation at CASCA sponsored EPO events.

e) EPO Session and Professional Development Workshop for Teachers at 2018 CASCA AGM in Victoria

The EPO committee needs to begin coordinating with the LOC to plan an engaging EPO session. The EPO session at last year's AGM, which I was invited to chair, was well attended with many excellent talks. In our subsequent telecon meeting we discussed how the session might be improved for 2018. We will

suggest a panel-discussion forum be included to encourage a broader exchange of ideas among EPO enthusiasts.

CASCA, in collaboration with Discover the Universe and CFHT, is organizing two workshops during the AGM. A full-day workshop for secondary school teachers will happen during the main CASCA conference, and a shorter workshop for elementary school teachers will be offered during an evening. We hope to collaborate with local First Nations groups to include First Nations knowledge in the workshop for elementary school teachers as this is now a major component of the BC curriculum.

f) Discover the Universe - Update

Since the last report, Julie has continued to work very hard with DU. On top of the regular webinars and workshops, three initiatives are of particular interest:

- i) For the solar eclipse, DU partnered with Parks Canada, provincial parks and national outreach organizations such as Actua and Let's Talk Science to offer free eclipse glasses (distributed by the Dunlap Institute) and training for their staff through webinars. This initiative was very well received by these organizations and allowed thousands of Canadians to observe the eclipse safely.
- ii) A new 3-week workshop was developed and presented in November 2017. This workshop is geared towards secondary school teachers with content linked to the pan-Canadian gr.9 curriculum. Over 120 teachers participated in the first edition. DU now runs three different yearly 3-week workshops: one for elementary school teachers, one for informal educators and the new one for secondary school teachers.
- iii) DU now has a new website. This update will allow more automation with registrations and will free time for content creation. The look is also more actual and allows for mobile viewing. The previous website dated back to the beginning of DU in 2011.

3. Important Considerations and Asks for the CASCA Board

With reference to details above, the EPO Committee;

- a) would like to see CASCA members reminded on a more regular basis to use the EPO reporting form, and have the data compiled and included on future EPO reports to the Board.
- b) needs the official go-ahead from the Board to start the CWL in 2018.
- c) requests from the Board a small social media advertising budget, of at most \$200 / yr.
- d) suggests CASCA webpages referencing the AstroCanada-CASCA twitter account be updated.

== Contact Information / Coordonnées ==				== Reporting Information ==											
Last name	First name	Affiliation	Email	# of visitors	# of volunteers/staff	Goal/Audience of Events:									
						A	B	C	D	E	F	G	H		
1	Brunetti	Nathan	McMaster University Physics & Astronomy	750	15										
2	Percy	John	University of Toronto	500	1	Y									
3	Rogerson	Jesse	Canada Aviation and Space Museum	5,000	30	Y	Y	Y	Y	Y	Y	Y	Y		
4	Short	Ian	Saint Mary's University	450	6	Y	Y	Y							
5	Lovekin	Catherine	Mount Allison University	400	2	Y									
6	Kavelaars	JJ	NRC Herzberg	10	1	Y									
7	Normandeau	Magdalen	University of New Brunswick	300	10	Y	Y								
8	Jacob	White	University of British Columbia	5,000	20	Y	Y	Y							
9	Khalack	Viktor	Université de Moncton	350	15	Y	Y	Y	Y	Y	Y	Y	Y		
10	Young	Mitchell	Dept of Astronomy & Physics, SMU	500	10	Y		Y							
11	Lepo	Kelly	AstromcGill, McGill University	9,000	46	Y									
12	Hall	Melanie	Telus Spark Science Centre	3,300	30	Y	Y								
13	Chequers	Matthew	Queen's University Observatory	1,600	16	Y									
14	Harris	Gretchen	Univ of Waterloo (retired)	4	2	Y									
15	Nelson	Lorne	Bishop's University	425	9	Y									
16	Bridges	Terry	RASC Okanagan Centre and Okanagan College	2,000	12	Y	Y								
17	Patton	Dave	Trent University	150	1	Y									
18	Rosvick	Joanne	Thompson Rivers University	300	10	Y	Y								
19	Naud	Marie-Eve	Institut de recherche sur les exoplanètes	1,000	15	Y	Y								
20	Sato	Takashi	Dept of Physics, Kwantlen Polytechnic Univ.	1,000	9	Y	Y								
21	Shadick	Stan	University of Saskatchewan	500	3	Y	Y								
22	Pahud	Danielle	University of Manitoba / Physics & Astronomy	500	20	Y	Y	Y	Y						
23	Delaney	Paul	York University	1,500	40	Y	Y								
24	Carni	Jan	Western University	6,000	25	Y	Y								
25	Howse	Jennifer	Ucalgary - Rothney Astrophysical Observatory	2,400	16	Y									
TOTALS				42939	364										

A. Day-time observing / Observation de jour. A.

B. Other or Special Event (please add a comment) / Autre ou Événement spécial (expliquez dans les commentaires). B.

C. Public exhibition / Exposition publique. C.

D. Public talk / Conférence grand public. D.

E. School visit (K-3) / Visite scolaire - maternelle à la 3e année. E.

F. School visit (4-8) / Visite scolaire - 4e à 8e année (4e année à secondaire 2). F.

G. School visit (9-12) / Visite scolaire – 9e à 12e année (sec. 3 et plus, incluant cégep). G.

H. Planetarium visit / Visite au planétarium. H.

	Comments
1	August 21st partial solar eclipse.
2	I was part of the viewing of the solar eclipse, at the Ontario Science Centre. There were dozens of volunteers from the Science Centre, and the RASC Toronto Centre, and thousands of members of the public. I think I was the only CASCA member there; my colleagues were at the Canadian National Exhibition.
3	This was for a our Partial Solar Eclipse event on August 21, 2017.
4	Partial solar eclipse. Outdoor small telescopes with solar or H-alpha filters. Indoor VR display simulating totality.
5	400 is probably a lower limit on this eclipse party. We didn't count, but we gave away 200 eclipse glasses, and lots of people didn't get one.
6	Public eclipse viewing on beach front while on vacation.
7	Partial eclipse viewing. Two telescopes with neutral density filters, one H-alpha telescope, several pinhole cameras and a couple of hundred pairs of eclipse glasses from the RASC and from Sky News. Drop-in (drop by!). No registration required.
8	Eclipse viewing. Ongoing (repeating) talks on eclipses, solar viewing telescopes, pinhole viewing setup, handing out eclipse glasses.
9	We have shown to public solar eclipse using a small telescope and different experiments in physics and chemistry. Before the eclipse, a lecture for general public was presented.
10	Eclipse viewing event from Halifax, NS (~50% max coverage). Approximately 500 people attended, and viewed the eclipse with two 8-inch Dobsonian telescopes fitted with white light filters, one 3-inch special solar observing telescope with a built in H-alpha filter, and approximately 40 pairs of eclipse glasses. Concurrent with this viewing, the Engineering department ran a virtual reality simulation of being in the path of totality, attended by approximately 50 people from the eclipse viewing.
11	Solar Eclipse Viewing Event
12	Solar Eclipse 2017 in Calgary!
13	Partial solar eclipse
14	we took a pinhole camera and adapted binoculars to project the eclipse progress for friends and their grandchildren. It was a success with good weather the whole time. Our grown daughters, both at their offices in Toronto, made pinhole cameras and watched the eclipse from inside and outside - total number of people involved in that ~20 Not exactly an institutional event but great fun for all regardless.
15	Solar Eclipse Open House
16	This was our event in the morning of Aug 21 for the partial eclipse, in Kelowna (there was a separate event in Penticton, which hopefully will be reported separately). Our estimate of 2000 people has a large uncertainty, as we had no accurate way of counting people; however, it is the average of a few reasonable estimates. It was a very successful event. We handed out ~500 pairs of eclipse glasses (and of course ran out, but people were happy to share), we had a half dozen telescopes, including two Coronados, and we also gave people sheets of cardboard to project the solar image. Despite the long lineups, people were happy and grateful for the event. We also had a lot of publicity before and after the event: radio, TV, and newspaper. Shaw TV livestreamed the entire event (I can send links).
17	(none)
18	audience: general public and university staff/students to view solar eclipse. Note that our number is conservative since it was difficult to count everyone.
19	Éclipse solaire à l'UDEM (organisé en collaboration avec le Centre de recherche en astrophysique du Québec) http://www.exoplanetes.umontreal.ca/un-franc-succes-pour-lobservaion-de-leclipse-a-luniversite-de-montreal/
20	eclipse viewing event, in association with the Richmond Public Library, Richmond, BC.
21	Partial Solar Eclipse Viewing
22	Eclipse Viewing Party
23	Ensuring a safe viewing venue for the partial solar eclipse. A variety of additional science demonstrations were also included with solar viewing (telescopes, solar glasses, pinhole cameras, etc). Televised totality broadcast also shown on a large ("Jumbotron") stadium screen while local viewing continued.
24	Special Solar Eclipse Event. We had several telescopes set up (including solar telescopes), we had a station where people could make their own pinhole cameras, we showed a live feed from the path of totality, and we had a special Canada 150 exhibit highlighting Canada's heritage in Astronomy. 3,000 pairs of eclipse glasses were distributed, as well as 2,000 copies of the "Eclipse Gazette" with information about the eclipse. Attendance number hard to estimate, but everybody seems to agree it was well over 5,000 people with 6,000 probably still being a fairly conservative number.
25	The RAO set up a "pop-up observatory" on the main UofC campus. Sky was cloud free. Tons of media attention. Equipment and logistics all the perfect trifecta of astronomical outreach. 600 pairs of eclipse glasses tweaked. It was wasn't nearly enough. The size of the crowd was estimated by Doug Vaessen of Global TV, who came to do a live noon-time report.