

Report: Redesigning the CASCA-Westar Lectureship (CWL)

By the CASCA EPO Westar subcommittee: Rob Cockcroft (chair), Frédérique Baron, Terry Bridges, and Christa Van Laerhoven, in consultation with members from CASCA and the community.

The Westar subcommittee wishes to sincerely thank all consultants who volunteered contributions to this redesign process. There were seventeen meetings between consultants and the Westar subcommittee. We have respected the wishes of all consultants who wanted to remain anonymous or who did not want the details of their meetings included in the report. We have also excluded minutes for meetings where we were unable to confirm the accuracy of the minutes (e.g., because we were unable to contact the consultant after the meeting).

Motivation

Over the past number of years, the CASCA EPO committee has been growing more aware that the CASCA Westar Lectureship has not been effectively or appropriately reaching communities nor has it been adequately preparing lecturers for their visits to such communities. These concerns have been formulated into one of the CASCA LRP 2020 recommendations: "We recommend that CASCA and its EPO committee revise and expand the CASCA-Westar Lectureship. The mandate of the CASCA-Westar Lectureship to support remote and under-served communities should be made explicit, and participants in the program should have training and support available to build connections with these communities."

A revitalized and reciprocal Westar program can also help to address other LRP 2020 recommendations, in particular in Chapter 7/Indigenous Engagement. For example: "We recommend that CASCA establish a new committee dedicated to facilitating engagement and relationships with Indigenous communities, and that can partner with existing groups working to promote STEM programs that embrace both Western and Indigenous approaches. The goals should be to listen to Indigenous communities, discover mutual interests, and identify opportunities to learn from and support each other. Potentially in partnership with the CASCA Education and Public Outreach Committee, this committee can forge partnerships with Indigenous organizations, support Indigenous education in astronomy and STEM, and can develop astronomical learning material in Indigenous languages in collaboration with relevant teachers and programs."

This report is the start of a response to the CASCA-Westar Lectureship recommendation, and includes the following:

- A timeline of events (page 2)
- An executive summary with more detailed recommendations (pages 3-8)
- Appendices (pages 9-11)

Timeline of Westar redesign process

<u>Date</u>	<u>Event</u>
Prior to 2021	The EPO committee suggests re-designing the Westar lectureship.
2021 Spring	The LRP 2020 final report is released and includes the following recommendation: "We recommend that CASCA and its EPO committee revise and expand the CASCA-Westar Lectureship. The mandate of the CASCA-Westar Lectureship to support remote and under-served communities should be made explicit, and participants in the program should have training and support available to build connections with these communities."
2021 Summer	EPO's Westar subcommittee prepares a proposal for how to redesign the Westar lectureship, which begins with a round of consultations from Indigenous astronomers, Indigenous educators, outreach and consultancy groups, and people previously involved in the Westar lectureship.
2021 Fall	Board approves the proposal.
2021 Fall	Westar subcommittee begins meetings with consultants. Each consultant is sent the attached two-page PDF. Meetings begin with a round of self-introductions, and the one-hour meeting includes conversations about the consultant's experiences that may relate to Westar and their thoughts on the Westar re-design.
2022 Summer (early)	Westar subcommittee prepares their report including the executive summary and list of recommendations, which is then submitted to each consultant who has the opportunity to respond with suggestions.
2022 Summer (late)	Westar subcommittee submits the report to the CASCA Board.

Goals for Westar

Recommendation #1: Westar should clearly communicate its goals internally within CASCA and externally to communities.

Recommendation #2: The CASCA-Westar Lectureship should be rebranded to remove the “lectureship” portion with a program name that is more inclusive.

- The Westar goals include sharing our enthusiasm for astronomy in a way that (1) benefits the communities that we are visiting, (2) is based on community-specific needs and wants, (3) includes appropriate representation, (4) brings appropriate gifts, honoraria (e.g., for Knowledge Keepers or Elders), demos, and equipment and not just knowledge to communities, and (5) avoids the model of inclusion via assimilation (i.e., the model of “bringing people into our tent”) but rather expands our model of astronomy to include other knowledge systems and other ways of knowing.
- In the shorter term, collaborate with Indigenous communities (rural and urban) as an initial priority, while actively thinking about decolonization and reconciliation (acknowledging that these words can seem empty, performative, and political – but we want to be authentic). In the longer-term, maintaining our outreach efforts to Indigenous communities but also including underrepresented and underserved communities in general (e.g., Africentric schools, 2SLGBTQIA+ youth groups, refugees, low-income communities).
- Focus on working with the youth through local schools, but also be willing to include wider communities where there is interest.
- Rebrand the program to become the “Westar Exchange” (rather than the previous “Westar Lectureship”) inviting possibilities for program co-creation, reciprocity, and building trust, while also acknowledging that knowledge must be appropriately recognized and protected and we should not be “extractive”; respecting the principles of data sovereignty outlined by Ownership, Access, Control, and Possession (OCAP®)¹. Other options in addition to “exchange”, include “(community) partnership”, or simply “program”.

Process – how should Westar interface with Indigenous communities?

Recommendation #3: Westar should reach out to and invite communities to participate, engage and consult with communities, offer multiple in-person visits supported by online meetings, start with a pilot grassroots local level program, and incorporate a program evaluation.

- Westar should reach out to and invite communities to participate, and not expect the reverse to happen (although Westar can still be open to this possibility). CASCA members should use connections through our home institutions’ various units (e.g., Indigenous Studies Department). We should ensure that we’re only engaging with communities that want to be engaged and we’re not contributing to engagement fatigue or approaching communities with colonial science practices. Westar should

¹ [OCAP®](#) is a registered trademark under the First Nations Information Governance Centre

work with communities from scratch to create a plan for the Westar program that is specific for that community. Where appropriate, Westar should also facilitate and encourage ongoing communication and visits between communities and visitors. CASCA members who engage with Indigenous Nations may also pursue Indigenous engagement training to better inform their engagement practices (e.g., <https://www.ictinc.ca/>) – see also recommendations below.

- Communities need to be consulted and engaged in conversation, starting with information sharing from both sides – from Westar: about the program, its intentions, and possible directions/interactions with the community; and from the community: existing connections to the night sky (is astronomy a luxury?), considering the needs of the communities, potential barriers, internet access (if using Zoom, etc.), and the impacts of COVID. Ongoing consultations are needed. The public participation spectrum (shown via [https://iap2canada.ca/Resources/Documents/0702-Foundations-Spectrum-MW-rev2%20\(1\).pdf](https://iap2canada.ca/Resources/Documents/0702-Foundations-Spectrum-MW-rev2%20(1).pdf)) also needs to be considered.
- The new Westar Exchange should start with a pilot program, working directly with a small number of communities at first. In all cases, the community can be engaged based on the relationship that they prefer – a personal one with one astronomer, or a relationship between CASCA and the community. There are several possible approaches, not mutually exclusive:
 - *Grassroots level*: build on personal connections that astronomers already have with Indigenous communities
 - *Education board level*: go through provincial school boards and education associations (e.g., CEPN in Quebec and FNMIEAO in Ontario).
 - *National level*: CASCA is a national organization, so contact other national Indigenous organizations (as [Inuit Tapiriit Kanatami \(ITK\)](#), the [Assembly of First Nations](#), and the [Métis National Council](#), and ask how they might like to be involved.)
 - *Westar-as-resource level*: Offer the resources of Westar (e.g., astronomers and funding) to other organizations that are already known to communities as trustworthy partners – e.g., [Connected North](#), [Astronomy in Indigenous Communities \(AIC\)](#), [Visions of Science](#), [Science North](#), Friendship Centres, [Verna J Kirkness](#) program, [IndigeSTEAM](#))
- Multiple in-person visits are very important and, where feasible, should be prioritized – but we should also offer Zoom visits, or be open to communication with Indigenous communities via phone call and fax where appropriate or where systemic barriers to internet access exist. A hybrid model may be a starting point to build from, where Zoom visits are arranged for introductory meetings, followed by the in-person visit for a few days, and then using Zoom again afterwards for follow-up and feedback.
- Westar program evaluation: There needs to be not only an organized system of initial contact and appropriate check-ins, but also a follow-up feedback collection both from the Westar visitors and from the communities visited. Communities should decide on the measurable/observable of a successful visit. Permanence of data also needs to be considered. This evaluation should be reported back to the general CASCA membership during the AGM and in an appropriate manner to communities.

Possible Westar visit activities and equipment/demos/gifts

Recommendation #4: CASCA-Westar astronomers should bring community-specific gifts, equipment and demos, design visits in consultation with the communities, and use honoraria where appropriate.

- Activities we could suggest to communities:
 - In keeping with the “exchange” theme, Westar could follow the AIC model where there are two-part visits: Westar visits the community (with appropriate representation and role modeling) and then we invite them to our astronomy facilities (e.g., observatories, planetariums) and/or home institutions. A third option is to include a teacher workshop offered by Discover the Universe. Widen networks if possible and have schools and communities visit one another, too.
 - Contribute to language preservation (e.g., collaborate to take observations and record what is seen in the community’s language, try learning some astronomy words in the community’s language)
 - Westar could help organize/provide funding for community science events (e.g., Wilfred Buck’s Tipis and Telescopes, telescope observing nights, fireside chats with astronomers, Dawson City-/Jasper Dark Skies Festival-style events)
 - Connect Indigenous schools with remote telescopes (e.g., SkyNet, or the RASC’s telescope in the Sierra Nevada)
 - Highlight interdisciplinary connections and what science can do (even beyond the curriculum) emphasizing how science can complement the knowledge already available in the communities. Schools are also interested in the possible career paths – so anticipating questions such as “what is the job of a scientist?” and “what do you do in your job?” is a good idea.
 - In terms of content, we could offer to co-create materials with a two-eyed seeing perspective, whilst also being prepared to talk about the most exciting, current topics in astronomy (e.g., Mars rovers, gravitational waves, JWST, exoplanets)
 - Enable communities to realize astronomy projects themselves by providing some of the equipment/demos/gifts mentioned below and offer appropriate training.
 - Do demos (rather than PowerPoints) with the kids – unless maybe in high schools. Leave some of the demos behind for the teachers. Kids just want to have a fun experiment; a speaker’s role/responsibility is to make the activities appropriate for the communities.
- Equipment / gifts – should be location dependent:
 - Prisms made of jello and lasers; impact craters using flour and cocoa powder; infrastructure; money; textbooks; computers; funding scholarships; visitor programs; (Galileo) telescopes; 3D printers; spectroscopic lamps/glasses; planetariums; robot kits; phases of the Moon with Oreo cookies
 - Be aware of the potential impression of wasting food and think of appropriate alternatives
 - Kit considerations: how expensive, how many, training videos, translation.

Operations – who does the work?

Recommendation #5: CASCA should hire a part-time staff position specifically to support the expansion of the CASCA-Westar program as mentioned in the original CASCA LRP 2020 recommendation. If this is not financially feasible, CASCA should offer Westar as a resource to other established outreach programs.

The above recommendation is relevant to the following LRP 2020 recommendation: "We recommend that CASCA hire a paid EPO coordinator, whose primary responsibility would be to oversee implementation and progression of the National EPO Pillars. This person would also serve as the CASCA Press Officer and social media manager, assisting CASCA members and their institutions in disseminating new scientific results to the media and to the public."

- Option 1: Westar as a CASCA flagship outreach program (preferred)
 - Creating an ambitious program to grow CASCA's capacity to reach communities across Canada is beyond the EPO committee's capacity. To do so in a genuine and meaningful way will require a part-time staff position, which could be incorporated into the role of a full-time CASCA national outreach coordinator. This coordinator position will need a careful selection process and would ideally be held by someone Indigenous, bilingual in English and French, someone who is situated in less centralized/more heavily populated regions such as southern Ontario/Quebec, and has outreach and/or teaching experience. Such a coordinator could consolidate and expand existing CASCA social media. Continuity of personnel is important for relationship building.
- Option 2: Westar as a resource to other established outreach programs
 - If CASCA is only able to aim for a smaller Westar program, we need to go through other established programs already mentioned (e.g., [Connected North](#), [Astronomy in Indigenous Communities \(AIC\)](#), [Visions of Science](#), [Science North](#), Friendship Centres, [Verna J Kirkness](#) program, [IndigeSTEAM](#)). This option could also be included into option 1.

Finances – how to fund the programs

Recommendation #6: CASCA-Westar astronomers are strongly encouraged to seek matching funds from their host institutes.

Recommendation #7: CASCA should seek external funding through grants and research organizations to support Westar activities.

Recommendation #8: CASCA should provide increased transparency about Westar funds.

- There are ongoing questions about the Westar funding that need to be addressed – both in terms of the original stipulations and the funding that we have immediately available (beyond the approximate \$10,000/year)
- We strongly encourage Westar visitors to seek matching funds from their host institute with the Westar committee helping with these requests (e.g., by providing a

background / justification letter), although this will not be a barrier for Westar supporting visits if such funds are not available.

- Potential external funding sources:
 - Individual universities and research organizations (e.g., iRex, Dunlap, HIA)
 - Grants (e.g., PromoScience, SSHRC Connection, IAU Office of Development)
 - Corporate sponsors
- Westar funds could be used to fund a part-time coordinator position (although this wasn't a universal sentiment, in part because this was a topic discussed only in later meetings, but was raised because funding a coordinator position would greatly reduce operating funds for actual visits).
- Westar programming should be set up in such a way as to accommodate different funding levels
- Fairly compensate junior astronomers (i.e., graduate students and postdocs) who are involved in the Westar programming.

Relevant LRP 2020 recommendation: "We recommend that CASCA and ACURA advocate to funding agencies such as NSERC and CFI that a portion of funding awarded for large grants (e.g., Innovation Funds, CREATE) be usable for EPO and communication activities."

Training for Westar participants from CASCA

Recommendation #9: CASCA should create two training opportunities: one for the general membership at the time of the CASCA AGM, and the other specifically for CASCA-Westar astronomers.

- CASCA members need to learn how to engage and listen to others, especially Elders in Indigenous communities. CASCA EDI training could occur on the day prior to the annual meeting (coordinating with the graduate student day), similar to AAS meetings. CASCA should invite and offer all training spaces to *local* Indigenous peoples (instead of non-Indigenous people).
- There are many, many specific examples provided by consultants regarding possible training – including always saying yes to invitations from communities (relationship building takes time and predetermined agendas don't always help), federal government training (e.g., "[Gender-based analysis PLUS](#)", which introduces policy from the lens of underrepresented groups and makes you think about intersectionality, cultural humility / safety, Indigenous corporation training, "how I am sure I'm not doing wrong?"), avoiding pan-Indigenization especially around protocols (e.g., it might not always be appropriate to offer tobacco), learning from others, remaining humble, telling personal stories as a way to connect, being prepared (but not expecting) a two-way knowledge exchange, remembering that Indigenous introductions are relational and therefore also personal, reframing public talks as appropriate for specific communities, reading, learning what to do if you see aggressions
- For training new Westar visitors: Hold a debrief after each visit to reflect on what went well, what could be improved, and in general to learn what information could be passed on to the next Westar visitor.

- Ask Westar visitor applicants to describe the work they have done to educate themselves on EDI topics; data-driven methods show that experiences in these areas increase the likelihood of success (they either know or are willing to learn more). We should actively seek junior CASCA members with an emphasis on diversity.
- Engage with [Two Worlds Consulting](#). This would cost approximately \$15k for strategic planning, which could include writing materials, facilitating meetings and help build relationships between CASCA and Indigenous groups, Indigenous-engagement training, etc. There is also value in doing this work in-house within CASCA to show our willingness to engage and our sincerity to “walk the talk” (and not just pay an external party to do this work on our behalf).

Relevant LPR 2020 Recommendation: "We recommend that CASCA and ACURA require their Board members, committee members and officers to complete training on Indigenous issues as a condition of their nomination, service, or employment. CASCA and ACURA should advocate for similar requirements for other national and international leadership positions in Canadian astronomy. Relevant Canadian- made training programs are readily available and their uptake would be an important first step. CASCA should also fund workshops, student activities and plenary sessions of CASCA Annual Meetings, in which relevant experts can provide training on Indigenous issues to the entire Canadian astronomy community."

Appendix 1: Relevant Documents**A) LRP 2020 White Papers:** (see https://casca.ca/?page_id=13801 for links)

- Hilding Neilson, Laurie Rousseau-Nepton, Samantha Lawer, et al: *Indigenizing the Next Decade of Astronomy in Canada*
- Julie Bolduc-Laval, Marie-Eve Naud, & Eleanor Haine-Bennett: *Astronomy and UNESCO's Sustainable Development Goals*
- Phil Langill, Frederique Baron, Julie Bolduc-Laval, et al.: *LRP 2020: CASCA's EPO Committee White Paper: Proposed National EPO Projects for CASCA*
- Nathalie Ouellette, Julie Bolduc-Laval, Rene Doyon, et al: *Astronomy Advocacy and Engagement*
- Kristine Spekkens, Brenda Matthew, Terry Bridges, et al: *Equity, Diversity and Inclusion in the Canadian Astronomical Society in the Next Decade*

B) LRP 2020 Solicited Reports:

- CASCA Education & Public Outreach Committee (EPOC)
- CASCA Equity & Inclusivity Committee (EIC)

C) Other Articles:

- Hilding Neilson: *No More Academic Pipelines: Rethinking Inclusion in Astronomy*, Cassiopeia, August 2021, <https://casca.ca/?p=16519>

Appendix 2: Two-page document sent prior to meeting with consultants (attached at the end of this report)