

TRIUMF Outreach – Select Highlights and Overview of Activities in Recent Years

November 14, 2018

Select Highlights

1) Unveiling the Universe public lectures series presented with Science World

- Presentations geared towards families
- 2018 being our 50th anniversary, this year the series featured three TRIUMF speakers, with all tickets selling out for each event (tickets are free but must be reserved online in advance); **these events fill a venue of 400**
- 2018 series talks included:
 - “We are made of star stuff” by Dr. Reiner Kruecken, February 13, 2018
 - The Record Keepers of the Universe by Dr. Monika Stachura, May 9, 2018
 - Catching Ghosts: Using Neutrinos to Unveil the Universe, by Dr. Stan Yen, October 23, 2018

2) Girls and STEAM (Science, Technology, Engineering, Art & Design, Mathematics) Symposium and Showcase at Science World

- New initiative held on November 3, 2018
- **300 registered attendees** for the event – **girls between the ages of 12-14**, with **100 of those girls coming from schools and communities designated as under-served**

3) Expanding outreach across Canada

- #discoverTHIS: The Mother of Invention (TRIUMF’s first public outreach event in Ottawa) took place on October 3rd, 2018 at the Canada Museum of Science and Technology
 - Hosted by science writer and journalist Tim Lougheed, past president of the Science Communicators and Writers of Canada
 - Conversation style format, featuring a TRIUMF PhD student, a TRIUMF Research Scientist, TRIUMF Innovations’ CEO, and a TRIUMF industry partner
 - **135 registered guests**
 - During the event, also donated historical artifact to museum: one of 12 sectors of a 1:20 scale TRIUMF cyclotron magnet model, circa 1969

Overview of Activities in Recent Years

Public talks

- Series:
 - [Unveiling the Universe public lectures series](#) presented with Science World
 - Presentations geared towards families
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 - 2018 series talks included:
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 - [Saturday Morning Lectures](#) series with University of British Columbia and Simon Fraser University (SFU)
 - In 2004, Chris Waltham and Stan Yen partnered on their interest to create a science lecture series geared for high school students. In Stan’s words, “a whole generation of high school students and members of the public have had the opportunity to hear about physics-related research at the cutting-edge, and hopefully many of them will have been inspired to pursue further studies in the areas covered by these lectures, ranging from medicine to earthquakes to the workings of the universe”
 - Over 14 years now, this commitment to outreach has achieved significant public engagement milestones:
 - From 2004 to 2010, this commitment averaged 6 events per year
 - **Since 2011**, 10 events have taken place three times a year at both TRIUMF and SFU’s Surrey campus
 - This equates to **215 science talks given**, to somewhere in the universe of **10,000 members of our community**
 - New 3-month pilot:
 - Young Researchers Lecture Series
 - Talks in our neighbourhood at Tapestry and Wesbrook Community Centre

- Peer review model for science communication professional development of our trainees
- Special talks, including:
 - [Science Literacy Week: Everything We Don't Know About The Universe Explained](#)
 - Talk featuring PHD Comics creator Jorge Cham and particle physicist Daniel Whiteson at Vancouver Public Library, hosted in partnership with Science World
 - **~200 attendees**
 - [TEDxEQUAD 2017 Bridging the Gap](#)– TRIUMF’s Jason Holt
 - Independent TEDx event hosted by Emily Carr University of Art + Design
 - [Perimeter Institute Public Lecture Series](#): TRIUMF’s Paul Schaffer
 - Perimeter’s flagship in-person and digital lecture series
 - [Nerd Nite Vancouver](#) with TRIUMF’s Grant Minor
 - Public presentation – local version of an international series

Public events

- #discoverTHIS series ([Roundhouse Community Arts & Recreation Centre](#), [MakerLabs](#), [Canada Museum of Science and Technology](#) in Ottawa, Ontario, Canada)
 - Hosted by a journalist
 - Conversation style format
 - Topics have included curiosity, beermaking, the process of innovation
 - Model to be taken on the road
 - **Audience between 100-250 community members per event**
 - Tickets are free but must be reserved in advance. **All local events sold out**

Community festivals

- [Wesbrook Village Festival](#) (>6000 people/event)
- [Community Science Celebration at Science World](#) (>11,000/event)
- [University Neighbourhoods Association Annual Barn Raising](#) (~600/event)
- [ATLAS MasterClass](#)
 - Coordinate sessions at TRIUMF and Simon Fraser University (SFU)
 - In **April 2018, 26 registered students at TRIUMF, 19 registered students at SFU** (capacity for both venues)
 - Overhauled program administration in 2017

Public tours

- ~**5000/people** per year includes general public, school visits, summer camps, industry groups, and more
- Continuous improvements to tour experience and administration
 - E.g. implemented new digital scheduling software, Acuity, in fall 2017
 - Updated TRIUMF lobby – ongoing
 - Developed *How Particle Accelerators Work* installation in lobby – also pop ups that we take to events

Special tours

- Select examples: [Obscura Day 2016](#), Creative Mornings, [field trip for Science Writers and Communications of Canada annual conference 2018](#)

Special programs

- [Girls and STEAM](#) (Science, Technology, Engineering, Art & Design, Mathematics) Symposium and Showcase at Science World
 - New initiative held on November 3, 2018
 - **300 registered attendees** for the event – **girls between the ages of 12-14**, with **100 of those girls coming from schools and communities designated as under-served**
- [Leaning Out of Windows \(LOoW\)](#)
 - A collaborative four-year Social Sciences and Humanities Research Council-funded research project involving Emily Carr University of Art + Design (ECUAD) and TRIUMF
 - Each year involves a new phase of the project – and a new theme.
 - Includes collaborations with interactions and collaborations with artists and members of the TRIUMF community (including trainees), followed by exhibitions
- Special studio class with ECUAD – Black Holes and Other Energy Transformations
- [BC Science Outreach Workshop](#) (annual event)
 - Typically, TRIUMF representatives sit on the organizing committee
 - BC science outreach community assembles for annual workshop on best practices, emerging trends, and professional development; attendees are **100-200 outreach professionals from across BC**
- [Global Physics Photowalk](#), 2014 (local competition only), 2015 (TRIUMF photo won jury prize in international competition), 2018 (TRIUMF photo placed second in both jury and people's choice competitions)

- Photography competition coordinated by the Interactions Collaboration (communications resource for the particle physics community)
- TRIUMF has hosted between **15-20 amateur and professional photographs for each event**
- Winning photos featured in trade and major media: [WIRED UK](#), [CERN Courier](#), [Symmetry](#), [Maclean's magazine](#)
- Developed traveling exhibition following Photowalks which was showcased at partner organizations including Science World, the Roundhouse Community Centre, and Tapestry
 - Will soon develop exhibition for 2018 Photowalk images
- Innovation150 and [Innovation150 Expo](#)
 - Special programming part of Canada 150th birthday celebrations – Canada150
 - Partnered with organizations across the country for national In Every Class contest and converged at inner city school in Hamilton, Ontario for a hands-on science showcase which included **11 pop-up science exhibits for grades 5 – 12 students**
 - Reached **1,700 youth from 5 inner-city schools** (the high-school we were at, plus students bussed in from 4 sister elementary schools)
 - Participated in Innovation150 tour, bringing our outreach presence to regional Lower Mainland school, reaching over **1000 high school students**
 - Contributed content to special Innovation150 website
- Artists-in-residence
 - Blaine Campbell
 - Visual artist, [photographic study of detectors at TRIUMF](#)
 - Attracted [national media attention](#) and work featured in numerous high-profile exhibitions
 - Davis Harris
 - Explored question, [“Can one make art that is credible to both art and science?”](#)
 - Developed sound pieces
 - Provided workshops on art and science to TRIUMF community

Supporting development of collaborative initiatives

- [Dark Matter Day](#) (Interactions Collaboration)
 - TRIUMF was in conversations to help found first Dark Matter Day and shares resources across its network to help catalyze events across the country
- [BC Science Charter](#)

- TRIUMF is a founding member and participants regularly in vision and direction-setting workshops and discussions
- [Science World's Symbiosis: The STEAM Learning Ecosystem](#) (*new initiative*)
 - TRIUMF is a supporter, with discussions ongoing as to how we will specially play a role in alignment with our new Five-Year Plan