



TRIUMF REPORT

CAP CONGRESS

Jonathan Bagger
Director

June 6, 2019



TRIUMF's Strategic Plan

- Science and Technology
- People and Skills
- Innovation and Collaboration

See fiveyearplan.triumf.ca

Thank you for your help!



International Peer Review

Led by Julia Phillips, Vice President, Sandia National Laboratories (retired)

- Recommendations
 - Retain scientific diversity
 - Increase visibility, nationally and internationally
 - Diversify sources of support
 - Seek state-of-the-art facilities and processes
 - Strengthen internal communications
 - Develop 20-year vision



“Money follows vision”

GOALS: 2019-2020

Science and Technology

- Operate Safely and Effectively
- Construct ARIEL and IAMI
- Perform Breakthrough Science
- Renew Physical Infrastructure

Innovation and Collaboration

- Reform Governance Structure
- Support our Community
- Build IAMI Program
- Close Commercial Deals

People and Skills

- Live our Values
- Attract and Develop Talent
- Strengthen Internal Communications
- Enhance Academic Program

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Innovation and Collaboration

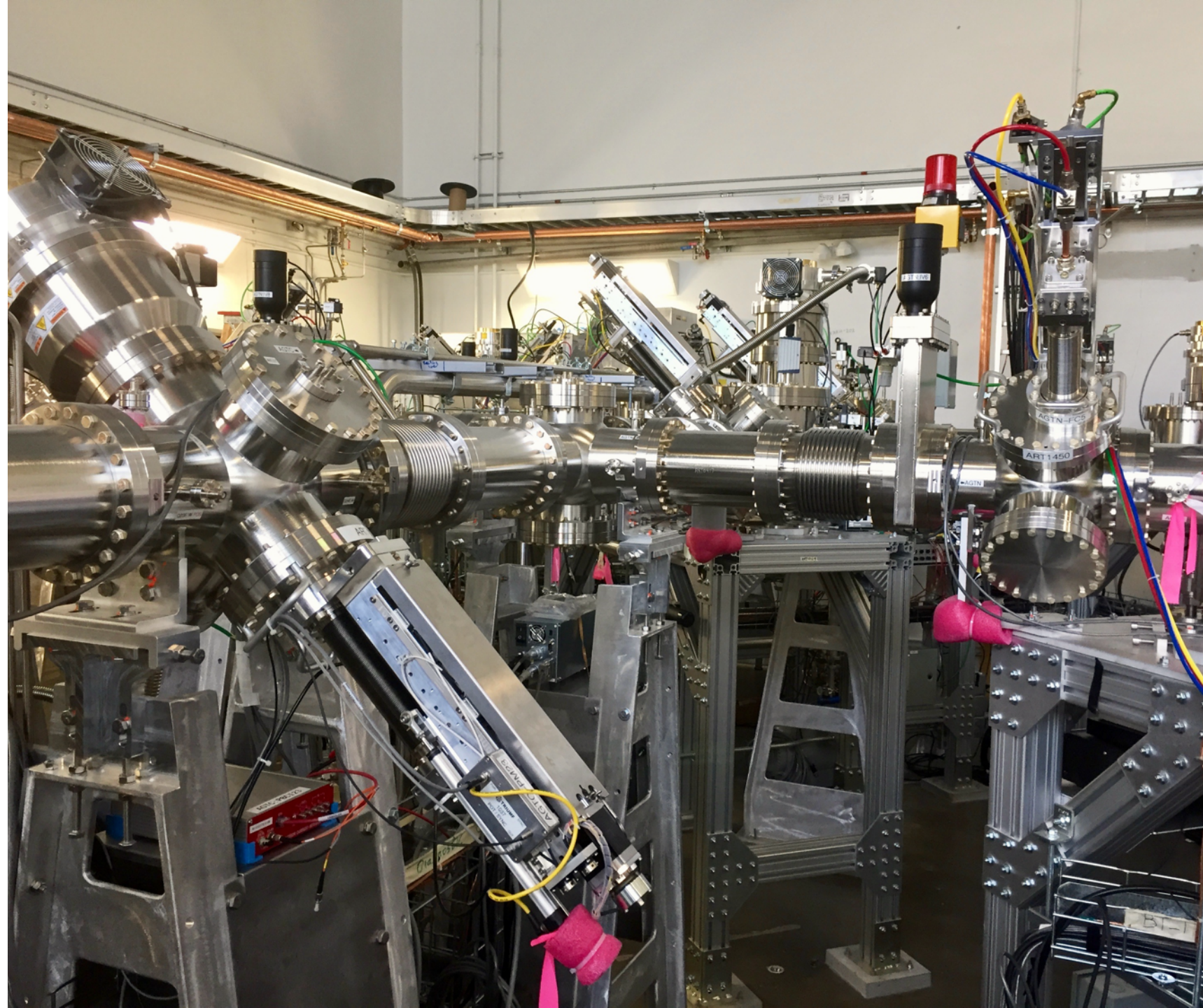
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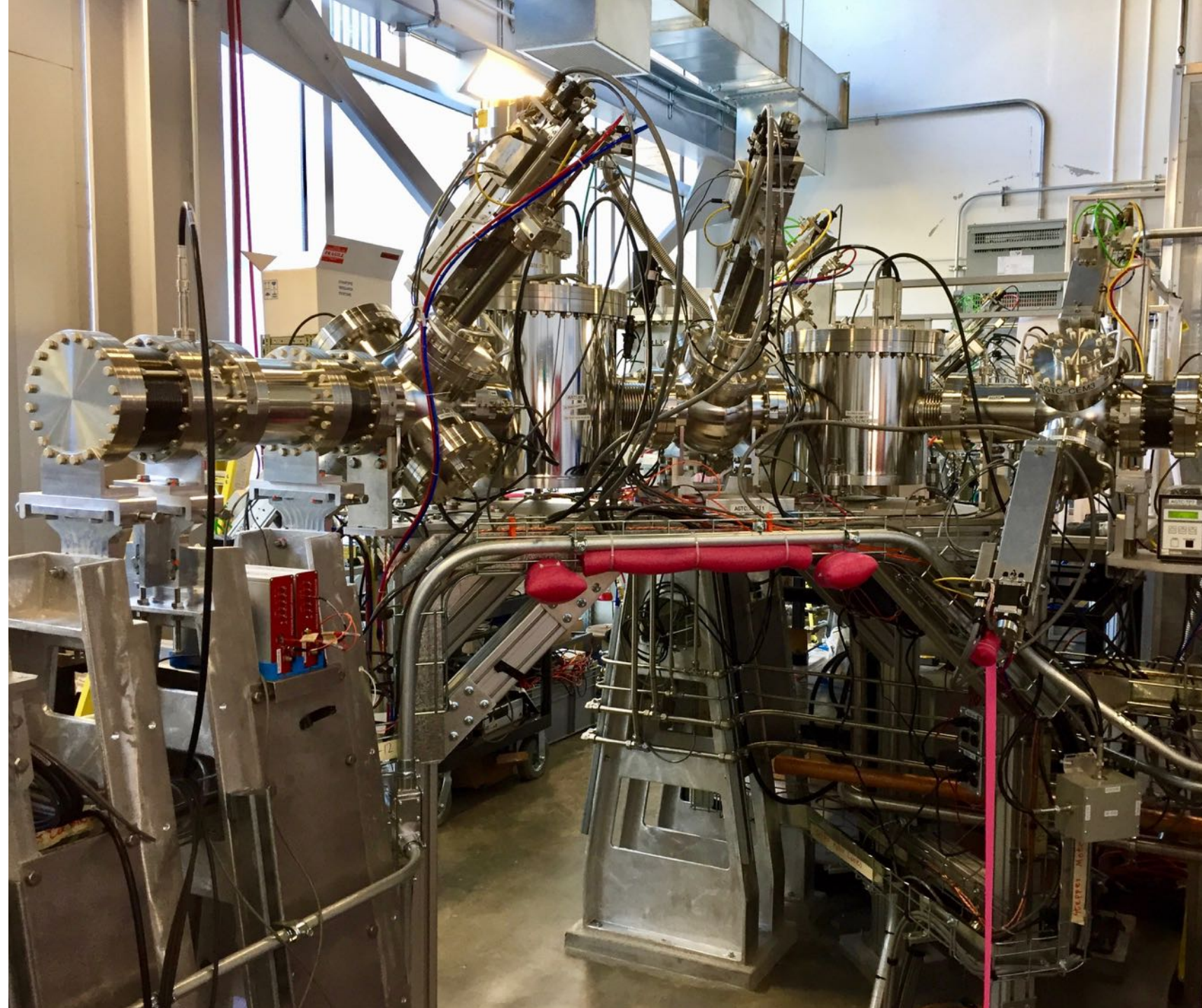
Construct ARIEL

Commissioning
has begun!



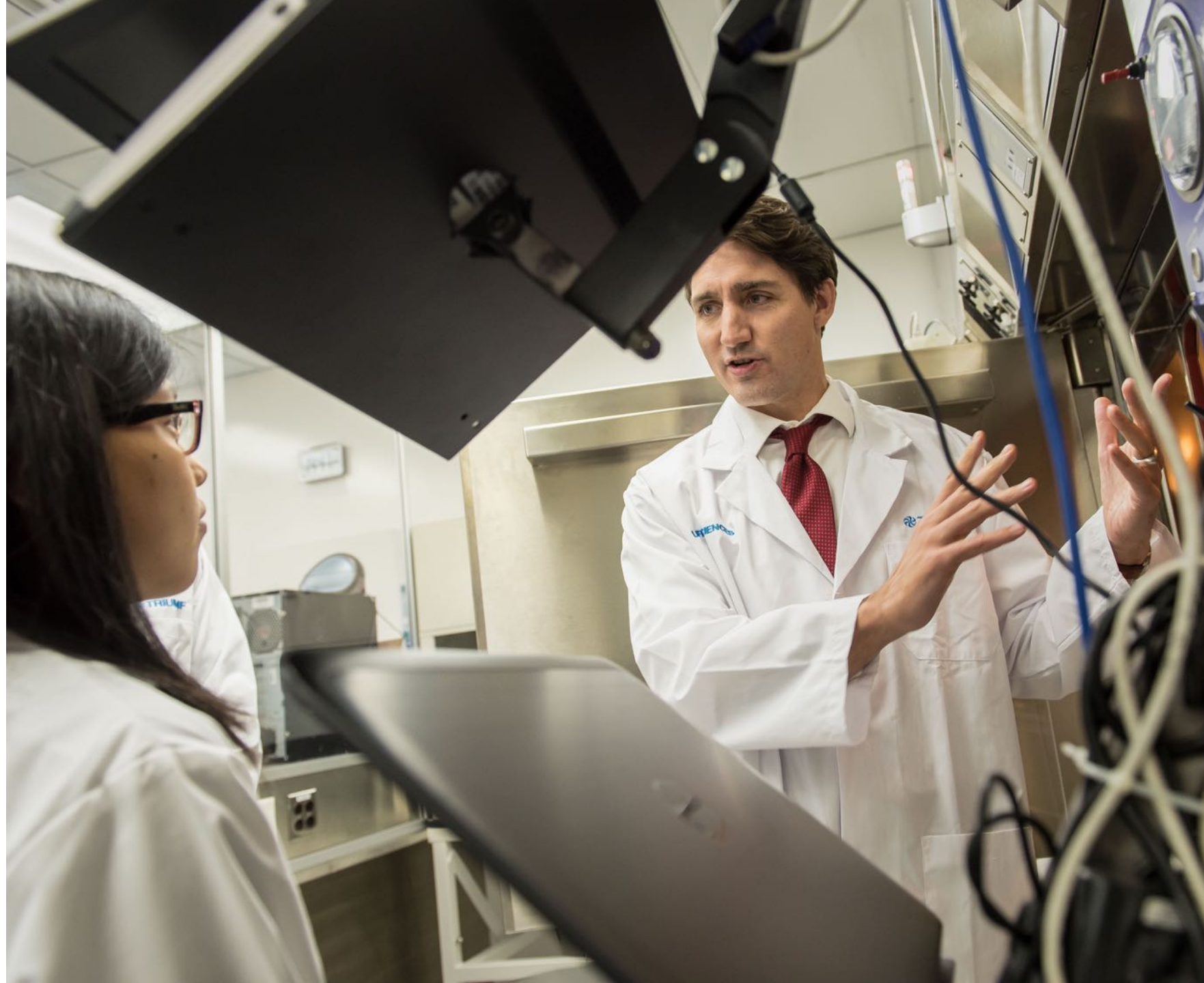
Construct ARIEL

Installation is
continuing ...



Construct IAMI

Project was
announced!



Construct IAMI

Ground was
broken



Construct IAMI

Early works
have begun!



Construct IAMI

Before



Construct IAMI

After



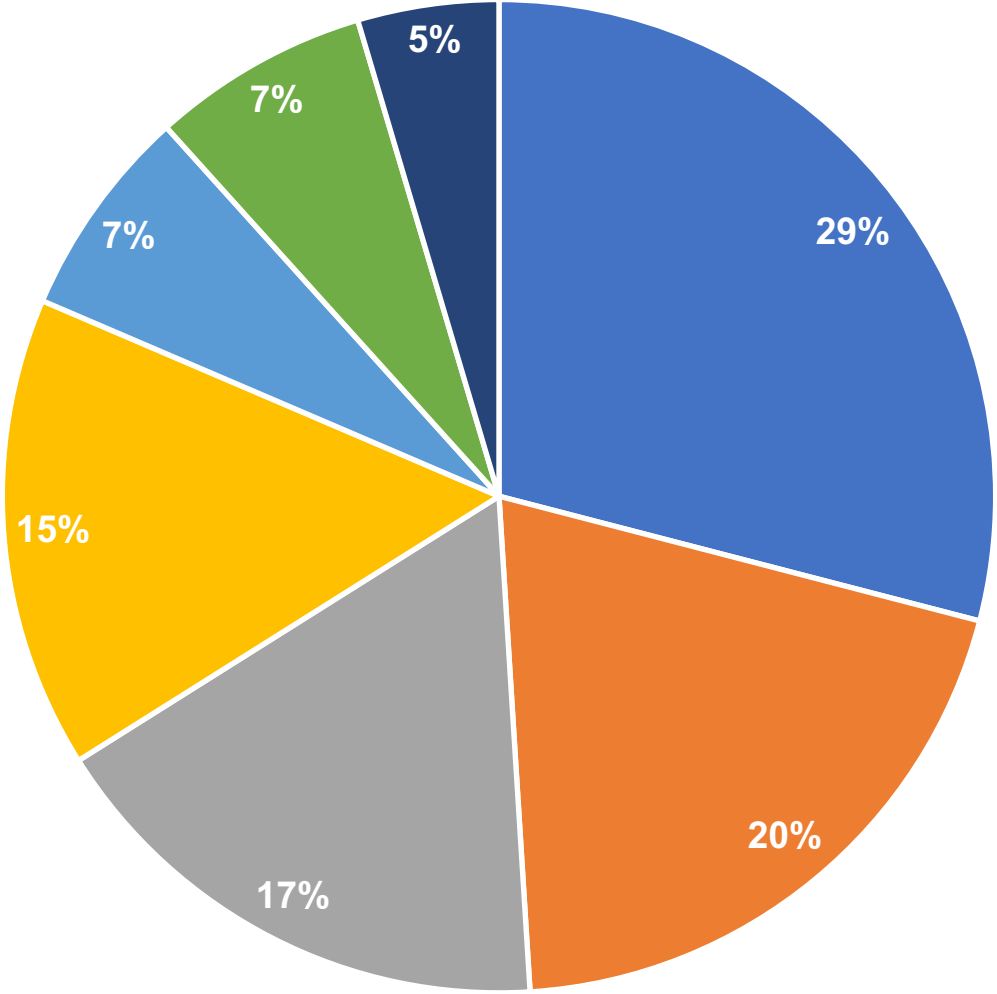
Breakthrough Science

Scientific Users and Visitors By Field (2018)

Multidisciplinary

CY 2018:

1002 Scientific Users
and Visitors



- Nuclear Physics
- Irradiation Services
- Materials Science
- Particle Physics
- Life Sciences
- Theory
- Accelerator

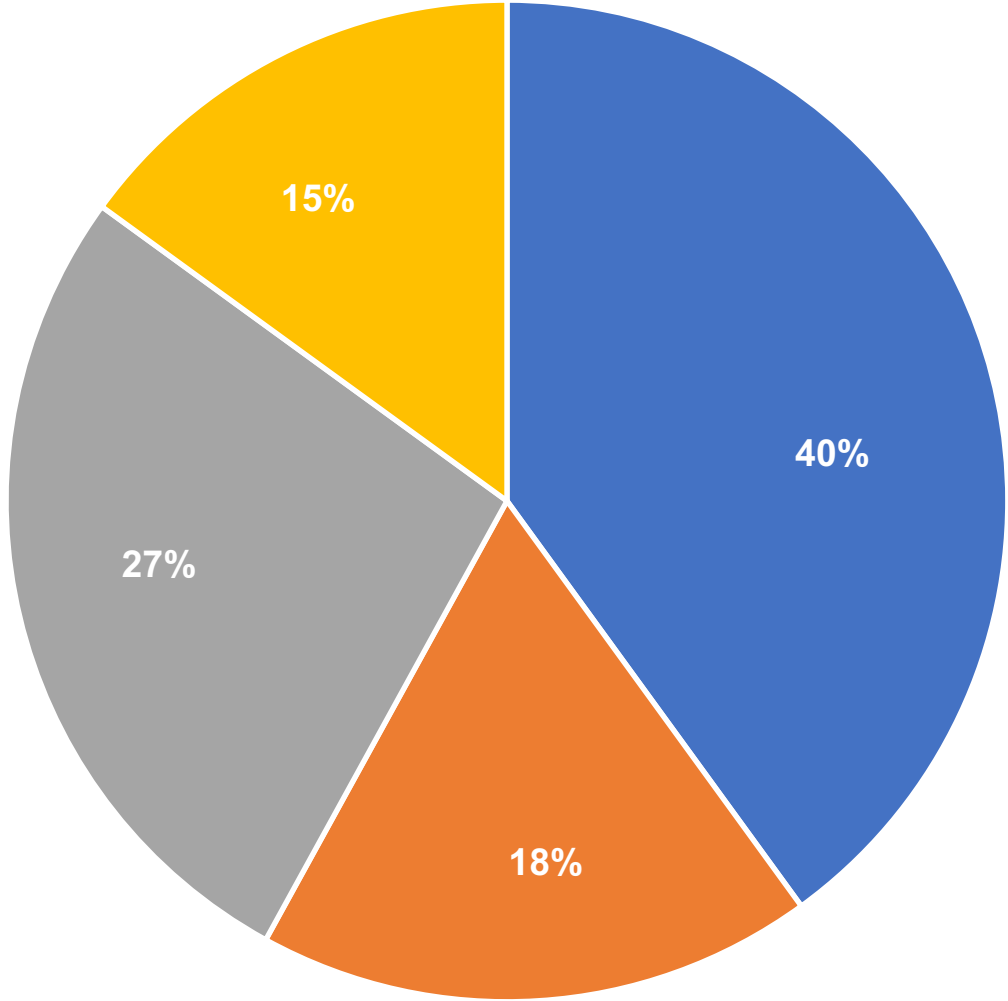
Breakthrough Science

Scientific Users and Visitors By Region (2018)

International

CY 2018:

1002 Scientific Users
and Visitors



■ Canada ■ Africa & Europe ■ Americas ■ Asia & Pacific

Breakthrough Science



SFU
SIMON FRASER
UNIVERSITY
ENGAGING THE WORLD

cap
Canadian Association
of Physicists
Association canadienne
des physiciens et physiciennes

**CAP Congress
Congrès de l'ACP** **2019**
June 3-7 juin
Burnaby, BC


in English:
<http://www.cap.ca/congress/2019>


en français:
<http://www.cap.ca/congres/2019>

Breakthrough Science



NSERC
CRSNG

Mitacs

Institutional eligibility!

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Attract and Develop Talent

Equity, Diversity, & Inclusion

EDI Action Plan will put TRIUMF into alignment with Tri-Council and Canada Research Chair goals by December, 2019. In particular, TRIUMF will


- Revamp hiring and promotion practices across the board
- Recruit women, indigenous people, and under represented individuals at polytechnic institutions and local colleges and universities
- Establish a Community Fund to support EDI initiatives
- Develop a transparent process for supporting to post-doctoral fellows and students who are not TRIUMF employees



UVic Indigenous Career Day


Attract Talent



International Women's Day




 TRIUMF
March 8 at 11:08 AM · 🌐

"I am a postdoctoral researcher in the radiofrequency (RF) controls group at TRIUMF. I first came to TRIUMF and Canada 10 years ago, during my undergrad, with the plan to stay for 1 year. Ten years later, it's needless to say - I like it here! I get to work on or with cutting edge technology, which is probably the biggest challenge at work as you can't simply look things up on Google or buy off-the-shelf equipment to fix a problem. I also get to work with highly skilled people from all over the world and across disciplines. While I am an RF controls engineer, I can get quick advice on problems out of my field from physicists, mechanical engineers, and technicians. It's really fun working with the people at TRIUMF and solving the constantly changing new problems. So, the biggest challenge is also my favourite part about work." - Dr. Ramona Leewe

[#InternationalWomensDay2019](#) [#IWD2019](#) [#BalanceforBetter](#)



  46

 Like  Comment  Share

 TRIUMF
March 8 at 9:14 AM · 🌐

"I can think of many times when I've witnessed support for women in STEM. Most are on a small scale, in everyday interactions: correcting gendered language, calling out a co-worker for assuming that a researcher or professor is male, doing the work of explaining why diversity hiring guidelines exist. None of it may seem to you like a big deal at the time, but I think it shifts the climate of STEM fields in the long run. And maybe even more importantly, small actions like these send a signal to any women who witness them that they're supported and welcome.


Taking action to bring about change on an institutional or societal level can seem daunting, but there are lots of very doable ways to make a difference. Be aware of your biases (we all have them!). In group meetings, step in if it seems like your female co-worker is getting cut off, or not being given credit for her ideas. Encourage the women around you to apply for things. Studies have shown that women are less likely than men to think themselves qualified for opportunities, so a little extra nudge can make a big difference."

Robin Hayes is a Ph.D. student on the ATLAS experiment, one of the detectors located in the Large Hadron Collider at CERN. Her work focuses on subatomic particles produced in high-energy collisions of proton beams and the role these particles play in filling in gaps in our understanding of matter and forces.

[#InternationalWomensDay2019](#) [#IWD2019](#) [#BalanceforBetter](#)



  67 8 Shares

 Like  Comment  Share

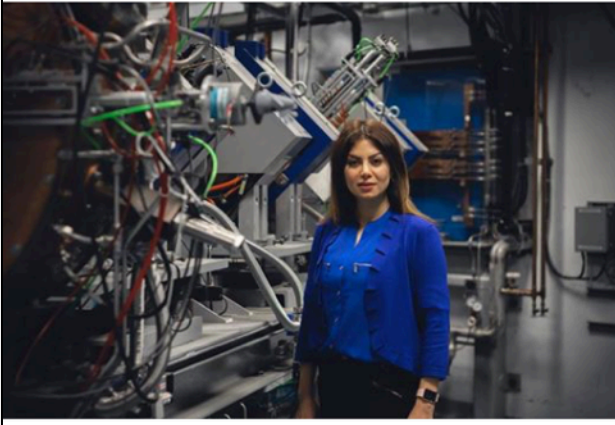
"Physicists and engineers at TRIUMF use their deep knowledge of large accelerators to upgrade existing accelerators and to create new ones, for Canada and for other institution all around the world. Working as a researcher and RF control engineer for the accelerator facility in such a center is so rewarding, as it involves helping other scientists who do research that ranges from the hunt for the smallest particles in the universe to the development of new technologies and medical isotopes. As an engineer and researcher at TRIUMF, I am so proud that my research is a part of the Canadian national lab, an organization that is pushing the frontiers in research to advance science, medicine, and business.



Throughout my engineering career, I encountered the challenges of being one of only a few women in a male-dominated environment. For one, I struggled to find a female engineer as my mentor. In my recent position as a research assistant, I've tried to apply my experience from academia and industry to help my colleagues and I also try to help other grad students who don't know how to apply their theoretical knowledge to their potential job.

My advice to all the young women considering a career in technology, science or engineering is to just believe in themselves and the infinite potential that each one of us have. To be themselves and to not let any setback or negative experience define their future. Of course there will be challenges that they may face on their way, especially for the ones who are willing to step out of their comfort zone and have a vision and plan to do something big, but those are just experiences that they can learn from as they take greater steps."

Mahsa Keikha is pursuing a Ph.D. in Mechatronics engineering. In her role as a researcher and RF controls engineer at TRIUMF, she works with the Low Level RF group, designing hardware and software to control a variety of systems.

[#InternationalWomensDay2019](#) [#IWD2019](#) [#BalanceforBetter](#)



  63 4 Comments 9 Shares

Academic Program

Strengthen Canada's STEM pipeline

- Our FYP aims to grow our work experience programs by 50%
- May 2018 External Review of undergraduate program recommendation:
 - “[TRIUMF’s] undergraduate program exposes students to a research and innovation program of a breadth that is unmatched in Canada”
- Program oversubscribed with an average of 100 applicants per position. With the help of funding partners, we hope to expand it across all aspects of the laboratory



Send us your students!

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Reform Governance



Owned and operated by a consortium
of 20 universities across Canada



Support Community

Unveiling the Universe on the road!

Inaugural event:

Queen's University in March



CATCHING GHOSTS
USING **NEUTRINOS** TO
UNVEIL THE **UNIVERSE**

Speaker: Dr. Stanley Yen, TRIUMF, UBC
March 23rd 7-8pm
Stirling Hall A
free registration:
unveiltheuniverse.eventbrite.ca

Presented by:
Arthur B. McDonald
Canadian Astroparticle Physics Research Institute

TRIUMF Queen's UNIVERSITY

Support Community

Targeted Alpha Therapy 2019

- April 1-4, 2019, in Ottawa
- 457 Participants from 27 countries
- Organized by TRIUMF and CNL



Canadian Nuclear Laboratories | Laboratoires Nucléaires Canadiens

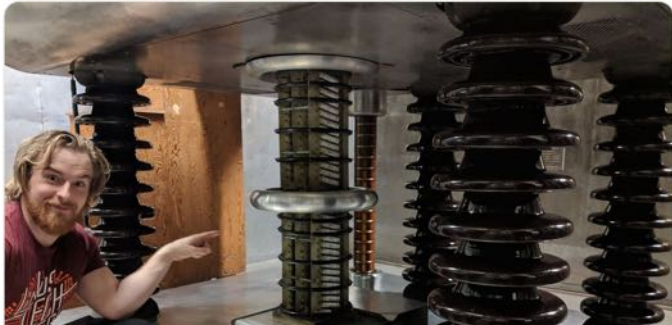
www.rarestdrug.com

Support Community



Linus Tech Tips @LinusTech · Mar 12

If you were wondering what a 300 000V power supply looks like – at TRIUMF:
Nuclear and Particle Physics Lab



Linus Tech Tips @LinusTech · Mar 14

Really need to get one of these signs for my office – at TRIUMF: Nuclear and
Particle Physics Lab



61 66

24 18 1.1K



Linus Tech Tips has produced
a YouTube feature on TRIUMF

Over 850,000 views so far!

Support Community

Science Week: August 19-23, 2019

- Monday IAMI Summer School
- Tuesday CANREB Workshop
- Wednesday ISAC 20 Symposium
- Thursday TRIUMF User Group AGM
- Friday Data Science & Quantum Computing Workshop

<https://www.triumf.ca/science-week-2019>



FEDERAL BUDGET 2019

2014: \$222 M

2019: \$292 M

Secures our future: +32%

\$292M allows us to move forward with our Plan

- Science and Technology
- People and Skills
- Innovation and Collaboration

BUT: We cannot do everything



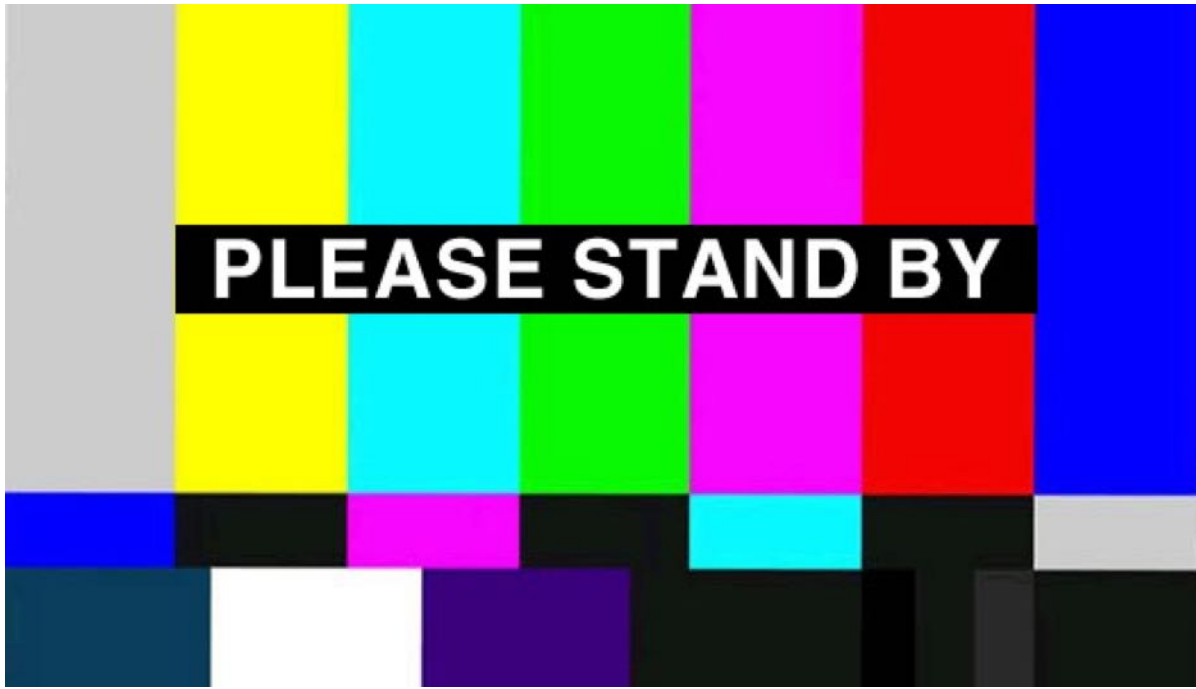
Proposed Budget

$$\$320\text{M} = \$222\text{M} + \$45\text{M} + \$3\text{M} + \$25\text{M} + \$25\text{M}$$

Awarded Budget

$$\$292\text{M} = \$222\text{M} + \$45\text{M} + \$25\text{M} \quad \text{or}$$

$$\$292\text{M} = \$222\text{M} + \$45\text{M} + \$25\text{M} \quad ??$$



TRIUMF BOM
ACOT
PPAC
ASSC

Digvir Jayas
Young-Kee Kim
Bob Kowalewski
Dean Karlen



Thank You!
Merci!

www.triumf.ca

@TRIUMFLab

