

# Particle Physics Faculty Meeting

- Agenda
  - News/Updates
  - Committee updates

# Director Search

- Search completed
- Announcement in preparation, made public next week ?

# PSD

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- Thanks for providing feedback on computing clusters, personnel outside the country and CFI
- From PSD Mixer

## CFIs (project initiation sheets Jan 31<sup>st</sup> )

- ATLAS: Tier-1 computing
- HyperK
- PIENUXe
- nEXO
- Radioactive molecules
- Pan-Canadian Quantum Computer Network
- DarkLight@ARIEL
- P1 ocean
- POLARIS
- BL1A renewal and new capabilities
- Active target for ISAC
- Superconducting RF

# DarkLight

- Open collaboration meeting tomorrow

## DarkLight Meeting Feb. 2021





chaired by Douglas Hasell (Massachusetts Institute of Technology (MIT))

Friday, 12 February 2021 from **12:00** to **16:00** (Canada/Eastern)  
at **Zoom**

<https://ca01web.zoom.us/j/68910977232?pwd=S3RNOEg0Q28wbEx1dTRpTEZYQUxZz09>

**Description** This is an open collaboration meeting for a proposal to install the DarkLight experiment at ARIEL/TRIUMF. General presentations will be given and there will be time for technical discussions as well. Participation from people who are interested but not yet members of the collaboration is encouraged. There will also be some discussion about funding opportunities for NSERC and CFI (in Canada).

### Friday, 12 February 2021

- |               |   |
|---------------|---|
| 12:00 - 12:30 | <b>Introduction 30'</b><br>Speaker: Prof. Richard Milner (MIT)<br>Material: <b>Slides</b>    |
| 12:30 - 13:15 | <b>DarkLight @ ARIEL 45'</b><br>Speaker: Prof. Jan Bernauer (Stony Brook University and Riken BNL Research Center)<br>Material: <b>Slides</b>  |
| 13:15 - 13:45 | <b>GEM Trackers 30'</b><br>Speaker: Michael Kohl (Hampton University)<br>Material: <b>Slides</b>   |
| 13:45 - 14:00 | <b>Spectrometer Design 15'</b><br>Speaker: Ernie Ilhoff (MIT-Bates)<br>Material: <b>Slides</b>   |
| 14:00 - 14:30 | <b>ARIEL Accelerator Overview 30'</b>   |
| 14:30 - 15:00 | <b>Canadian Participation 30'</b>   |
| 15:00 - 15:45 | <b>General Discussion for Path Forward 45'</b>  |

# TRIUMF From PSD Mixer

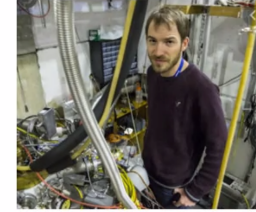
## TRIUMF News and People

- New BAEs:
  - Stephan Ettenauer (nuclear physics, radioactive molecules)
  - Chloe Malbrunot (particle physics, fundamental symmetries)
    - Both will start Jan 2022
- New Search: Nuclear Theory BAE
  - Chair of Search Committee: Gail Mclaughlin (North Carolina State)
- New Joint TRIUMF-SFU position: Bernd Stelzer (particle physics)
- New TD post docs:
  - Michael Shamma (University of California, Riverside)
  - Jokiniemi Lotta (University of Jyväskylä)

2021-01-29



2021-02-11



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Discovery,  
accelerated

Discovery,  
accelerated

# TRIUMF 20-year vision plan

- Suggested to launch a general community survey later this months and have it open for around 3-4 weeks
- Submission deadline for the Topical Groups extended to Monday, May 31, 2021
- **Instead of a traditional survey, Planning Group would like to use a new platform called Thought Exchange**
- Will include an introductory section to the activity such that we include links to more detailed questions on Specific Topics which will point to pages on a web-page
- Will roll out the Thought Exchange activity in two steps
  - Step 1: All members of the Topical Groups and Planning Group will engage in the exchange, add ideas and vote on ideas for about 1 week
  - Step 2: broad distribution within TRIUMF's stakeholder community



A Thoughtexchange is being organized to increase feedback data available in support of the *20-year Vision* exercise outcomes.

#### Thoughtexchange allows:

- A confidential participation process to submit one's own responses and rate other's responses to questions or prompts so that everyone can see how ideas resonate within the community.
- A transparent escalation of results so thoughts with greater community support can be more easily surfaced and highlighted.

## Provisional timeline for activities

### Community process to run for 2 weeks

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Dates*	Action	Supports
Jan. 27	Input on Questions posed to community	Thoughtexchange integration
Feb. 12	Launch Thought exchange to Planning Group and Topical Group members	Initial data capture >100 respondents
Feb. 19	Release to TRIUMF community	Final data capture <1,000 respondents
Mar. 8	Conclude Thoughtexchange	End activity; data to be extracted, analyzed, and fed back into planning process

*\* dates are estimates and subject to change*



# TRIUMF 20-year vision plan

- Particle Physics Topical group specific questions:
  - Which type of international particle physics projects or research directions should TRIUMF pursue and what should be its role in contributions to these?
  - What on-site particle physics projects or research directions should TRIUMF pursue. What new opportunities do you envision?
  - How should TRIUMF collaborate with its member universities as well as other Canadian research institutes such as SNOLAB and the Perimeter Institute to drive particle physics and talent development in Canada?
  - What role should TRIUMF play in developing and providing scientific support infrastructure such as detector R&D and construction, accelerator technologies, and technical support? What new opportunities do you envision, are there areas that should be strengthened?
  - Are there new theoretical or computational directions that could help drive the experimental program?

# TRIUMF 20-year vision plan

- Overlap with Quantum Technologies, Fundamental Physics with AMO techniques
- & Scientific Computing
  - The national digital research infrastructure strategy is expected to continue in the Compute Canada tradition of concentrating the hardware and management of data storage, advanced research computing, research software and networking in a small number of large data centres. What role do you think TRIUMF needs to play within this strategic framework so specialized needs by the community are fully met?
  - What would the computing platform to enable innovation in your field of research look like, and how will it evolve? For instance, do you envision using a cloud computing platform and associated services, or would want to develop computing systems where your research community would control all aspects of it?
  - Do you anticipate a need for large-scale computing resources in your future research and would your future research benefit from using modern computing technologies and architectures such as parallel computing, GPU acceleration, FPGA?
  - What is your perspective on TRIUMF establishing a quantum computing user facility and a centre of excellence in quantum information science and AI applications? What applications for Artificial Intelligence and Quantum Computing do you foresee in your research area?

# Reminders

- LRP townhalls next week focus on Education and Careers and Community
  - Especially grad students and research staff
  - Feedback on questions - deadline tomorrow
  
- NDRIO survey, deadline February 22<sup>nd</sup>

# New: PSD Return to Work Committee

- Discuss goals and ideas of a new hybrid approach to work at TRIUMF
- Take into consideration the needs of the PSD and how we can incorporate both remote and on-site work long-term
  - Annika Lennarz
  - Sarah Dunsinger
  - Martin Alcorta Moreno
  - Daniel Yates
  - Patrick de Perio
  - Barry Davids
  - Oliver Stelzer-Chilton
  - Allayne McGowan

# New: Particle Physics EEC

- Recent interest in carrying out more Particle Physics experiments onsite
  - E.g. Next generation PIENU/PIENUXe, Darklight with Ariel, LFV muon decay
- New Particle Physics EEC
  - Approve proposals that have sufficiently high scientific merit and a realistic chance, based on the readiness of beams and experimental facilities
  - The purpose of the review is to advise TRIUMF on the scientific merit and technical feasibility of the experiment
  - Technical feasibility with respect to the beam is reviewed separately by the Beam Readiness Review Committee -> pre-proposal evaluation

# New: Particle Physics EEC

- Questions from last meeting
- Would experiments who need beam for detector testing also apply through the EEC?
  - It depends on the number of shifts they need, in general it would be at the director's discretion, if it is a longer campaign one could consider having those go to the EEC
- When would UCN switch over from the SAP-EEC
  - We would have UCN present at the first meeting as an introduction
- How is conflict with CMMS and NP dealt with
  - The likely conflict would be with CMMS if a PP experiment wants beam delivered at the existing beam times at M9, M15, or M20. For that the pre-proposal committee looks at the needs and identifies that this is possible
- Could this be used to also evaluate experiments that take place offsite (as a per-review)
  - No, we would not do that
- What is the relation with the PMOG and Gate-0 approval
  - The EEC approval should precede the Gate reviews...

# New: Particle Physics EEC

- Committee:
  - Natalie Roe (LBNL) chair
  - Concettina Sfienti (Mainz)
  - Deborah Harris (York/FNAL)
  - Ralf Kaiser (Glasgow)
  - Natalia Toro (SLAC)
  - Dave McKeen
  - Makoto Fujiwara
  - OSC (ex officio)
- Call for proposals going out soon
- First EEC end of March/early April
- Expect to meet once a year

# Budget

- Starting this fiscal year's budget, Particle Physics will have a small budget of \$3k
- Meant for expenses that are for general Particle Physics items to the benefit of the department that cannot be covered in any other accounts



# Discover our Lab

- As announced in the townhall, web page is live
  - <https://www.discoverourlab.triumf.ca>
- Not all Particle Physics efforts are well covered
- Communications:
  - The page is based around general public-level outreach, and at present is built primarily on the latest site tour guide narrative, which is itself primarily focused on the work taking place on site
  - The website project does provide an opportunity to expand beyond that constraint, developing content and/or media to highlight and promote even more TRIUMF activities to the public
  - There is interest in communications to develop more visual material, so please get in touch!

# SMM contributions

- From Allayne
- **Please note that these reminders are changing this year and will work on a 6-week cycle, according to department.**
- **Jan. 11:** Particle Physics a slides to Jens by Jan. 15
- **Jan. 18:** Nuclear Physics a slides to Jens by Jan. 22
- **Jan. 25:** CMMS a slides to Jens by Jan. 29
- **Feb. 1:** Scientific Computing à slides to Jens by Feb. 5
- **Feb. 8:** Sci-Tech a slides to Jens by Feb. 12
- **Feb. 15:** Theory a slides to Jens by Feb. 19
- ...and then restart the cycle.
- Topics include: Science Highlights (accomplishments and publications), Projects and Updates and Proposals, Grants, Community News, People News.
- **Particle Physics turn on Feb 22<sup>nd</sup> !**
- Thanks to Mark Hartz to collecting/assembling the slides for Particle Physics!

# Covid

- How are the groups doing
- Any concerns?



**AOB**

2021-02-11

## Committee Updates

- Director Search
- IPP/MISnomass/Snowmass
- 20-year vision
- DND Planning
- Seminar/Colloquia
- Safety
- Space
- 5S
- Academic
- Summer schools
- Health & Wellness
- Data Science
- Diversity committee
- Return to Work Committee

## Next Meeting

- March 11<sup>th</sup>