



INSTITUTE OF  
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PHYSICS

# The Canadian Long Range Planning Process and SNOLAB

Carsten Krauss, April 29 2025

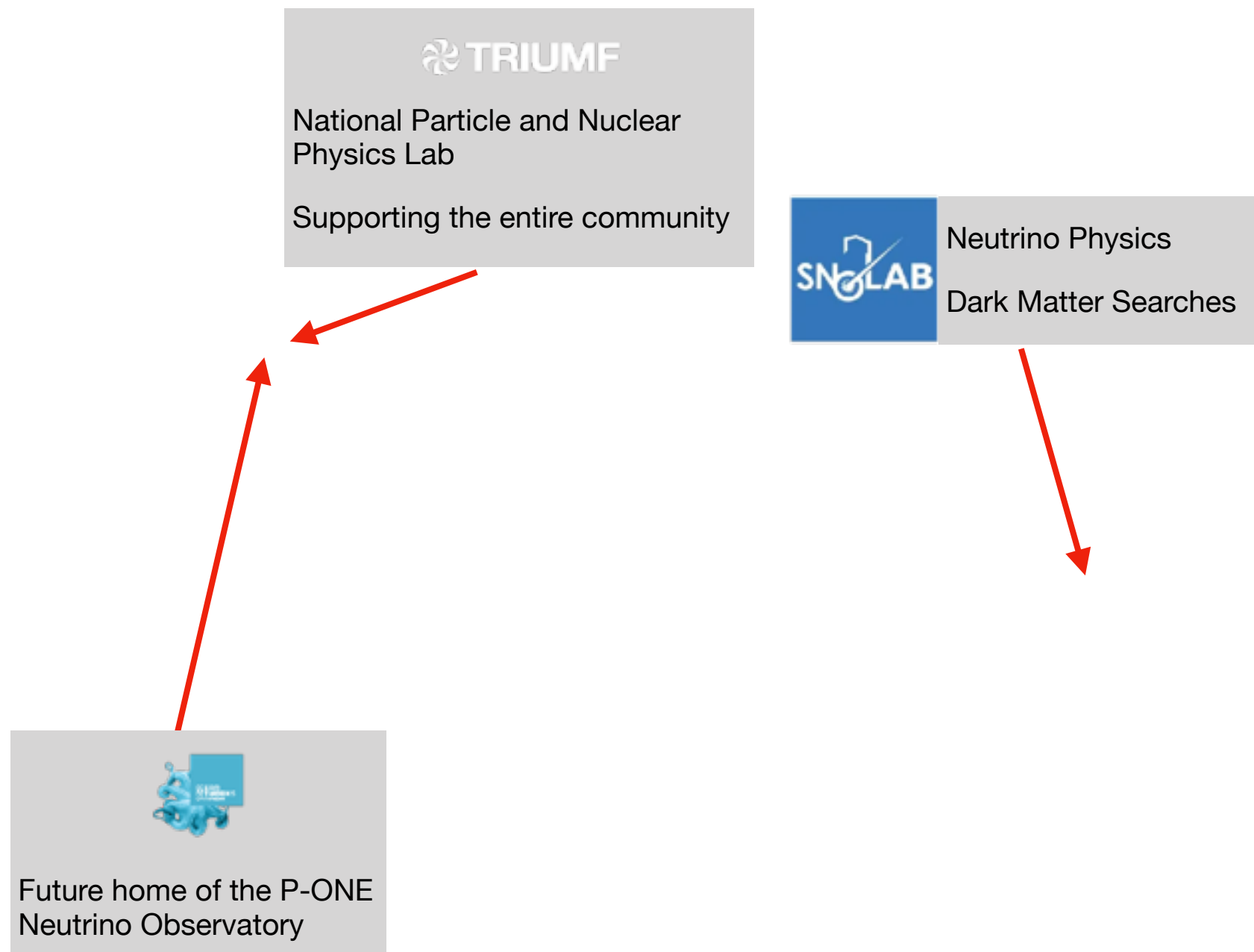


2025 Future Projects Workshop

# Outline

- The current Long Range Plan
- Charge
- Status, members
- CINP/IPP brief to the LRPC
- Timeline

# Canadian Labs and University Involvement



SCIENCE RECOMMENDATION  
1 – **CANADIAN INFRASTRUCTURE**

*We recommend fully capitalizing upon the unique science opportunities provided by the SNOLAB and TRIUMF infrastructure, and by the Perimeter Institute, in pursuit of the science drivers.*

FUNDING RECOMMENDATION  
10 – **SUPPORT FOR CANADA'S WORLD-LEADING CENTRES**

*Canada's large-scale centres for subatomic physics research have global stature, and provide competitive advantages in pursuing high-priority scientific programs.*

*We recommend maintaining strong support for Canadian centres (TRIUMF, SNOLAB, Perimeter Institute) so that they remain at the forefront of research worldwide.*

FUNDING RECOMMENDATION  
12 – **ARTHUR B MCDONALD INSTITUTE**

*The existence of the Arthur B McDonald Institute and its research support and outreach programs has added considerable value to the community. However, its CFREF funding is coming to an end.*

*We recommend that in addition to growth of the NSERC subatomic physics envelope to support operational costs, new mechanisms be identified to fund and maintain continuity of the research and technical support programs provided by the Institute.*

POLICY RECOMMENDATION  
15 – **SUPPORT FOR LARGE-SCALE SCIENCE ENDEAVOURS**

*Coordination of the capital costs and operational funding over the life-cycle of large-scale ( $\geq$  \$50M) science endeavours and infrastructure projects is difficult within the current ecosystem.*

*We recommend the formation of a new administrative structure to provide this coordination (as articulated in Recommendation 4.7 of Canada's Fundamental Science Review 2017: Investing in Canada's Future, <http://sciencereview.ca>).*

# Long Range Plan (2022-2026)

- To maximize international impact with limited investments, the Canadian community organizes 5 year planning exercises to prioritize funding decisions and to maximize impact

	FLAGSHIP PROJECTS WITH BROAD PHYSICS OUTCOMES	FLAGSHIP PROJECTS WITH STRATEGIC PHYSICS OUTCOMES
FROM QUARKS AND GLUONS TO NUCLEI	TRIUMF <u>ARIEL-ISAC</u> experiments, <u>EIC</u>	JLab 12 GeV program, Offshore <u>RIB</u> experiments
MATTER IN THE WEAKLY COUPLED UNIVERSE	<u>T2K/HK</u> , <u>IceCube</u> , <u>SNO+</u>	<u>DEAP</u> , <u>PICO-500</u> , <u>SuperCDMS</u>
BEYOND THE ELECTROWEAK ENERGY SCALE	<u>ATLAS(LHC/HL- LHC)</u> , <u>Belle II</u>	<u>ALPHA/HAICU</u> , <u>MOLLER</u> , <u>TUCAN</u>

# Charge (preliminary)

The Committee is asked to identify subatomic physics scientific ventures and priorities that should be pursued by the community on a 7 to 14 year horizon and that would enable Canadian global scientific leadership, taking into account the following factors:

- the optimization of the human and financial resources of the Canadian subatomic physics community in terms of research excellence and impact
- the alignment of research endeavours with the established expertise and strengths of the Canadian community
- the need to coordinate large projects and collaborations with Canada's international partners in a manner that maximizes scientific excellence and impact
- the concurrent requirement to maintain and further develop world-class domestic research programs and infrastructure

# Status

- The two co-chairs have been announced:
  - Alison Lister (UBC)
  - Paul Garrett (Guelph)
- The committee will have 10 voting members (including the co-chairs) and ex-officio (non-voting) members representing SNOLAB, TRIUMF, the McDonald Institute, Perimeter, NSERC, CFI, IPP, CINP and SAPES





# Timeline

- May 2025: LRPC co-Chairs are publicly announced, final ToR released membership of rest of LRPC is finalized, conflict of interest policy formalized
- briefs submitted to the Brief writing committees
- June 2025: first virtual meeting of LRPC to explain the committee mandate to members, process, timeline
- LRPC co-Chairs give a short presentation at CAP Congress CINF+IPP Joint
- CINF virtual Town Hall meeting, IPP virtual town hall meeting
- LRPC meets virtually to assign committee member tasks, and discuss any long-lead items, such as community surveys, alumni success story collection, impacts on economy, etc.
- November 2025: CINF+IPP submit their briefs to LRPC; depending on the process the LRPC wants to follow, there could be a virtual town hall where CINF+IPP give a presentation on most important recommendations
- January-April 2026: LRPC meets periodically (virtual) to discuss community briefs, and starts putting together a draft LRP report
- April 2026: LRP virtual Town Hall #1
- CINF+IPP give updates on any info not available previous summer, such as
  - new CFI awards and new NSERC results, results of major international reviews or other developments
- LRPC gives its viewpoint on Emerging Themes from CINF+IPP briefs, and what it thinks might be the most important issues to address in their report
- May-July 2026: LRPC meets periodically (virtual) to discuss recommendations and content of report
- June 2026: LRPC Co-Chair presentation at CAP Congress CINF+IPP Joint session, depending on how fast things progress, this could be an initial community view on the most important recommendations to appear in the LRP report
- August 2026: first draft of LRP report is released for community comment
- LRP virtual Town Hall #2
- September 30 2026: final version of LRP report is formally submitted to sponsors



# Summary

- Please contribute to the LRP, there will be plenty opportunities to make yourself heard.
- The funding agencies have a strong interest in improving their impact on Canadian subatomic physics, the Long Rang Plan can help us all to achieve that!



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# Questions?