

Preparation of IPP Brief for the Subatomic Physics Long Range Plan

Discussion

12 June 2020

video-conference

Guidelines for Contributions to IPP Long Range Planning Brief

First Draft: Due June 30, two weeks prior to the July 15 & 16 IPP Town Hall meeting, where they will be summarized

Final Draft: Due July 28

IPP Council (old+new: 2019/2020 + 2020/2021) will prepare the IPP Brief –
Final document due by LRP Committee by 1 Dec 2020

Following past practice, IPP will distribute a draft to the IPP Community in early autumn for feedback - will hold a second Town Hall after that to provide a forum for final collective feedback and input.

Note that these submissions will also be used to assist IPP to advocate for the field in general.

Template for Contributions to IPP Long Range Planning Brief

Section 1: Plans for the project in the period 2022-2027

(up to 5 pages + table of Canadian collaborators)

- 1) Physics and other research goals for the project;
- 2) Canadian hardware or software interests and contributions to the project;
- 3) Relationships with international partners including relative size of Canadian team within the collaboration;
- 4) Expected HQP training; include numbers and roles in the project
- 5) Equipment and/or infrastructure needs – including cost estimates and time profile, whether NSERC or CFI will be requested for funds, other partners;
- 6) Computing requirements – CPU and storage, time profile;
- 7) Expected calls on technical support and/or infrastructure from TRIUMF, SNOLAB or the MRS facilities; and
- 8) Relationships with other projects being conducted by Canadian subatomic physicists – either physics or technical.

Table 1: Canadian grant eligible members on the project, their institution, and their FTEs

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Section 2: Equity, Diversity and Inclusion Considerations (1 page)

Describe the existing and planned policies and practices for the Project to support:

- 1) an equitable, diverse and inclusive team environment; and
- 2) the recruitment of a diverse group of HQP and an inclusive training environment.

Section 3: Plans for the project from 2028 to 2036 (up to 2 pages)

- 1) Physics and other research goals for the project;
- 2) Information about resource requirements associated, for example, with upgrades in the period from 2028 to 2036;
- 3) R&D plans (e.g. detector, accelerator) for efforts that extend into 2028 to 2036;
- 4) Relationships with other projects being conducted by Canadian subatomic physicists – either physics or technical; and
- 5) Relationships with international partners

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Section 4: Broader Societal Impact (up to 2 pages + table of HQP trained)

- 1) Profiles of a sample of HQP that have been trained in past. Use this section to highlight a few exceptional examples of HQP training and list all HQP trained in Table 2 (see below),
- 2) Role of the project in fostering physics education in general;
- 3) Public education and outreach associated with the project;
- 4) Application of particle physics research and connections of the project to industry, including existing or potential economic impact that the project may have; and
- 5) Plans to further facilitate greater economic and broader societal impact of the project and the field in general.

Table 2: List of HQP that have been trained on the project over the past 10 years or less. Include name (if possible), dates of training, role in project, what they are doing now

Currently expecting input from

SuperCDMS
PICO
HyperK
T2K
ATLAS
Belle II
IceCube
EXO/nEXO
DEAP
NA62
SNO+
VERITAS
DUNE
MoEDAL
MOLLER
ALPHA
TUCAN
LEGEND-1000
ILC
MATHUSLA
P-ONE
DS-20K
Chiral Belle: Accelerator R&D
RD50 - detector R&D
Scintillating Bubble Chamber (SBC)
Photon to Digital Converter R&D
Silicon Photonics-based low power cryogenic (+ room temp) data communication system.
Hadron Structure, QCD and Physics BSM: Atlantic Canada Theory Group

IPP Town Hall: July 15 & 16

Will have presentations from all groups submitting briefs as well as from some more theorists – some already lined-up - and the Astroparticle Physics Planning

PLEASE ENGAGE IN THE IPP LRP PROCESS