

This meeting and next steps

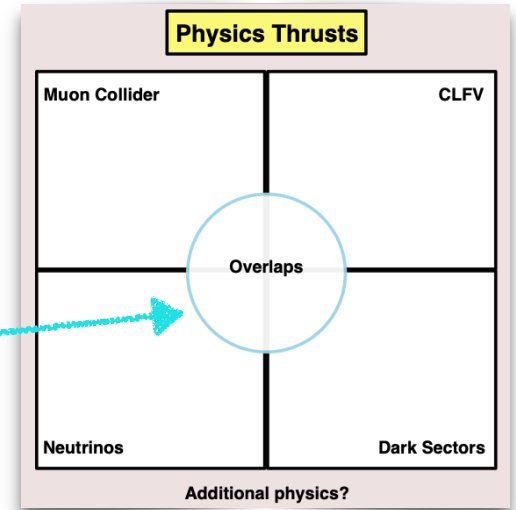
Two exciting days of talks and discussions

Physics thrusts

- Muon Collider; Muon program; Charged Lepton Flavor Violation (CLFV); Neutrino program; Dark Matter and Dark Sectors; New Physics ideas

Complementarity

- Additional potential physics programs and R&D
- Parallel session discussing accelerator topics



From N. Tran, Fermilab PAC meeting, June 2023

Next steps:

Next couple days
inputs on the P5 questions

Next few weeks
brief **report** on the findings of this workshop

To all our participants:

if you want to give input to the report, contact

- us organizers

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- discussion leaders

Questions

For the next couple of days:

We discussed several experiments:

- What is the role of ACE beams enabling the several experiments?
- Is the experiment uniquely enabled by the ACE upgrades?
- Can it be done somewhere else, or uniquely at Fermilab?
- What particular accelerator components or capabilities are necessary?

- Muon Collider
- Muon Collider - Aux experiments
- Neutrino Factory, etc
- Future short baseline
- Mu2e-II
- AMF
- PIP-II BD experiments
- Other neutrino experiments
- DarkQuest
- KPIPE
- Fermi and LongQuest
- REDTOP
- Muon beam dump
- M3
- Muonium physics
- DAMSA
- Nuclear reactor
- Spin program
- Muon EDM

More on the longer time scale

This was the first in a series of workshops to co-design physics case and technical design.

Continue development of ACE towards CD-0 in ~2 year timescale

Goals:

In view of the booster replacement study (report [here](#)), the Snowmass process (report [here](#)), the Proton Intensity Upgrade Central Design Group (PIU-CDG) [report](#),

- re-evaluate ACE Science program and design
- assemble community input and understand physics thrusts' complementarity and science priorities

Thanks!

Thanks to **my co-organizers**



N. Tran



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R. Harnik



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A special thank to our **workshop chair**, Nhan Tran

Thanks to all our **speakers, discussion leaders, and contributors**