

SNOWMASS COMMUNITY SUMMER STUDY, JULY 20, 2022

**NEUTRINO FRONTIER:
PANEL DISCUSSION ON CONNECTIONS,
PROGRESS, AND PLANS**

PANELISTS

- Sergio Bertolucci (University of Bologna)
- Joseph Lykken (Fermilab)
- Reina Maruyama (Yale University)
- Lia Meringa (Fermilab)
- Jason Newby (Oak Ridge National Laboratory)
- J. Pedro Ochoa (University of California at Irvine)
- Ron Ray (Fermilab)

QUESTIONS ABOUT DUNE

- What is the total cost for DUNE/LBNF? What is included in that cost? Why is the cost higher than originally anticipated?
- When does DUNE start taking data? When does DUNE start taking data with the beam? What is the continued motivation for DUNE if other next-generation neutrino oscillation experiments start earlier than DUNE?

QUESTIONS ABOUT BREADTH IN NF

- Are there experiments/topics/R&D in addition to DUNE that the community is particularly excited about? Are there additional infrastructure needs for the success of the broad program?
- How healthy is the NF theory effort? Are there particular theory/phenomenology efforts missing that are needed to support the planned NF research program?
- What is the status of US-funding for next-generation $0\nu\beta\beta$ experiments? What are the prospects for observing $0\nu\beta\beta$ if the ordering is normal?
- What connections with other fields/frontiers represent opportunities? Are these opportunities being exploited? Are there gaps that merit more attention? Is anything falling through the cracks?
- What is the role of the national labs in the NF? How well are the labs working together and with universities to coordinate efforts?

QUESTIONS ABOUT FERMILAB

- What is the status of the accelerator upgrade (PIP-II)? What are the options/plans for the Booster replacement?
- How will Fermilab prioritize resources in the coming decade, given commitments to ongoing FNAL experiments, participation in programs outside NF (CF, EF, AF, etc), and LBNF/DUNE?
- What are Fermilab's goals and plans for improving the DEI climate, both at the lab and as a leader in the field?

QUESTIONS ABOUT INTERNATIONAL COLLABORATION

- How large is the community that might be interested in participating in the US NF program who are not yet doing so? What would be needed to engage this group? Are there barriers (real or perceived) that reduce international participation in the US NF program?
- Are there NF experiments/initiatives that the US is not currently participating in where US participation would be welcome, desirable, fill a funding/expertise gap, etc?

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MORE QUESTIONS?

- Please use the Google doc to submit further questions:
https://docs.google.com/document/d/1wwqffXi3Q5GefsHRMW-7I_7ZbwV8EcK_dBoFkObmfhM/edit?usp=sharing