

DOE Neutrino Program Plans

HEPAP Meeting Apr 7 2015

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DOE Process for Intermediate Neutrino Program

• P5 recommended:

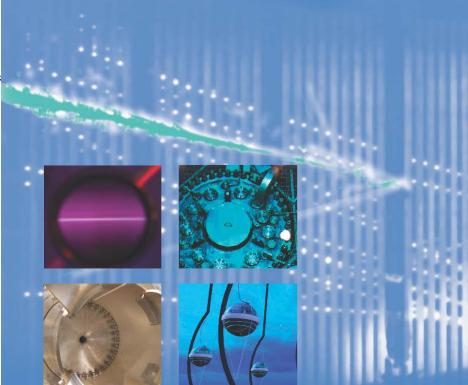
- LBNE(F) as the highest priority major project in the medium term
- A balanced and coherent program of short baseline neutrino experiments including small projects
- Plans for LBNF/DUNE are moving along well and the FNAL PAC has endorsed a plan for a coordinated FNAL short-baseline LAr program
 - LAr1ND, MicroBooNE, ICARUS in Booster beamline
 - Both a physics program and a technology R&D platform
- There are many other possible short-baseline neutrino experiments using other facilities, with and without accelerator beams
 - Many R&D efforts underway at various stages of maturity
- DOE is interested in understanding these various options and plans in more detail
 - The WINP workshop provided important community input regarding these options, necessary for formulating and executing a successful program based on the P5 strategy



WINP 2015

- The Workshop on the Intermediate Neutrino Program provided important community input to DOE HEP necessary to execute a successful program based on the P5 report strategy
- Report nicely summarizes the state of progress and key issues in several sub-topics





WINP2015

February 4-6, 2015 Brookhaven National Laboratory www.bnl.gov/winp

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BROOKHAVEN



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Workshop on the Intermediate Neutrino Program

Topics

Sterile Neutrinos Neutrino Mixing Neutrino Interactions Neutrino Properties Precision SM Tests Astrophysical Neutrinos Research & Development

DOE Process for Short-baseline Neutrinos

- The workshop gave us the opportunity to hear community ideas for near term (less than 5 year) small-scale experiments (total funding less than ~\$10M) that are:
 - Scientifically compelling
 - Competitive in the world program
 - Small enough in scope and technically ready
- WINP Workshop report detailed the science opportunities available that may be addressed by investments in such near term small-scale experiments
- Based on the WINP reports we are drafting a new funding opportunity announcement (FOA) for appropriate small-scale experiments later in FY2015, possible funding in FY2016
 - Specific objectives and requirements will be called out in the FOA



Other Elements of DOE Neutrino program

- There will be many good ideas that do not fit into the funding or schedule constraints discussed above and we are interested in those, as well
 - For example, there are also important issues to address in technology R&D for future experiments and theory support for the broad neutrino program
 - Reports from the working groups will be helpful in addressing these and other issues
- Possible funding for such efforts will be dealt with through the usual proposal process. There may be additional opportunities for partnerships or other collaborative funding.
 - E.g., DOE Nuclear Physics solicitation for Topical Collaborations in Nuclear Theory, including neutrino-nuclei interactions



Neutrino FOA Update

Now working on draft FOA

- Expect release in late May or early June
- Letter of Intent will likely be requested to speed review process
- Full proposals due in summer
- Reviews early fall
- Science focus on topics highlighted in WINP
- Emphasis on small-scale, near-term experiments that are "ready to go"
 - Contributions to established programs (e.g. FNAL SBN) outside of scope
 - Usual P5 criteria apply
- Expect awards to focus on experiment fabrication, installation, operations
 - Technology R&D and neutrino theory other possible topics
 - Additional guidance on critical R&D/theory milestones for LBN welcome
 - Future FNAL-based SBN proposals ok

