DOE Neutrino Program Plans

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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
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.
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