SAC Neutrino Working Group

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Process

- Over last SAC cycle identified areas of interest among neutrino scientists at the lab
  - survey sent to scientist at the lab
  - discussions at the retreat
- Talked to S. Brice and S. Zeller about plan and areas of interest
- Revised and updated the list
- Charge individual(s) to be advocates
  - may form small groups
  - produce summary document for each area

Areas of interest

- Initial broad list of potential research areas -
  to be triaged for the Retreat based on relevance, interest, and capability
  1. Precision neutrino oscillations
  2. Tau appearance
  3. NSI long baseline
  4. Neutrinoless double beta decay
  5. Beam dump physics
  6. Phase2 DUNE detectors
  7. Tau neutrino cross sections
  8. D2 detector
  9. DUNE near detector facility
  10. Non-standard neutrino sources
  11. Dark sector searches

Charge for Advocates

1. Identify the goals (i.e. discovery, limit, potential) of this area of focus,
2. Briefly summarize the science case for the area of focus,
3. Briefly summarize current interest in the area of focus at Fermilab and in the community,
4. List the required capabilities to enable the goals.
   If capabilities are not yet clear, what is needed to identify or choose the critical capabilities.
   Describe how these capabilities enable specific scientific goals and answer the following questions:
   - What required capabilities should Fermilab bring to these efforts?
   - Does the expertise exist at the lab to deliver on these items?
   - What additional expertise would be needed at the lab, and what can be done to rectify the situation ?
     (Consider all needed resources, including facility construction/upgrade, R&D, computing new physics knowledge, etc.)

Next steps

- Sent requests with charge to potential advocates
- Meeting individually with each one to discuss details
- May refactor and revise list of interests once all advocates are identified
- Start interacting with technology groups early on