ANNIE experiment - Update and status
AEM - April 11th, 2016

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Quick reminder

- ANNIE is the Accelerator Neutrino-Neutron Interaction Experiment

- Aims at measuring the production rate of neutrons from neutrino interactions in water

- Phase 1 $\rightarrow$ "Proof of concept" and background measurement

- Phase 2 (to be approved) $\rightarrow$ Physics run

- The main detector and the electronics have been installed in the SciBooNE hall in the past few weeks
The past two weeks - Electronics

- All the signal and HV cables of the different parts of the detector have been laid

- The electronics racks have been inspected (preliminary ORC) → Allowed to run unattended

- DAQ and HV systems have been running smoothly since

- Collaborators from ISU, Sheffield and Queen Mary are working on the software and firmware of those systems
The past two weeks - Light tightness

- Our signal → Small pulses of scintillation or Čerenkov light

- Need to lightproof the detector from outside light

- "Suspicious" spots covered with black tape and plastic bags

- Noise rate difference between lights on/off is now 25% and will be reduced

- Another series of tests will be performed after the water fill and the NCV installation
The past two weeks - First tests and results

- All PMTs have been tested, 1 out of 60 did not survive the installation
- Noise rates measurements have been performed
- DAQ system has been operated with the full detector (veto + water tank + Muon Range Detector)
What’s next?

• Water fill on Wednesday followed by commissioning with water

• Beginning of steady data taking

• NCV installation → Procedure is being developed closely with ES&H (Jim Priest, Angela Aparicio and Terry Tope)

• Shifts and monitoring procedures are being implemented
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Thank you for your attention!