



University of Chicago



# ANNIE- EOI Discussion; A Brief Update on the Reconstruction; Time table;

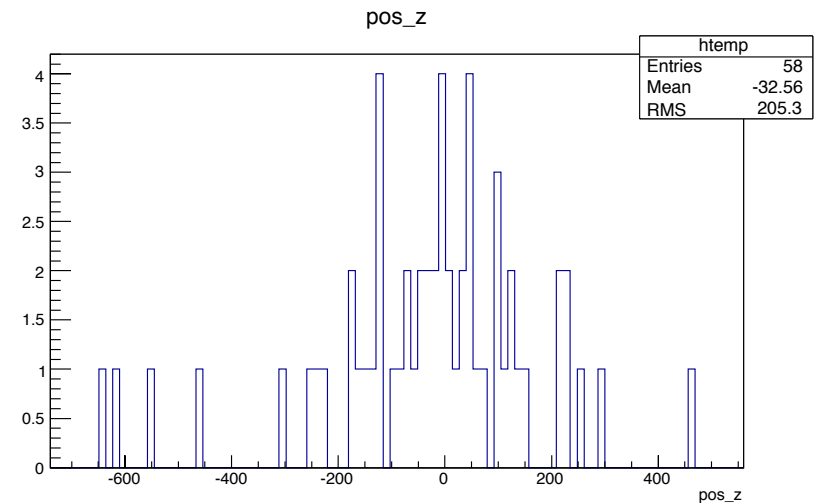
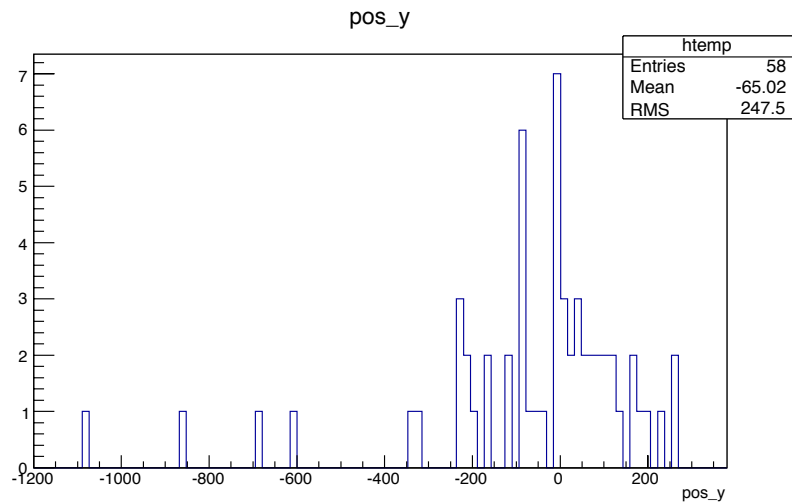
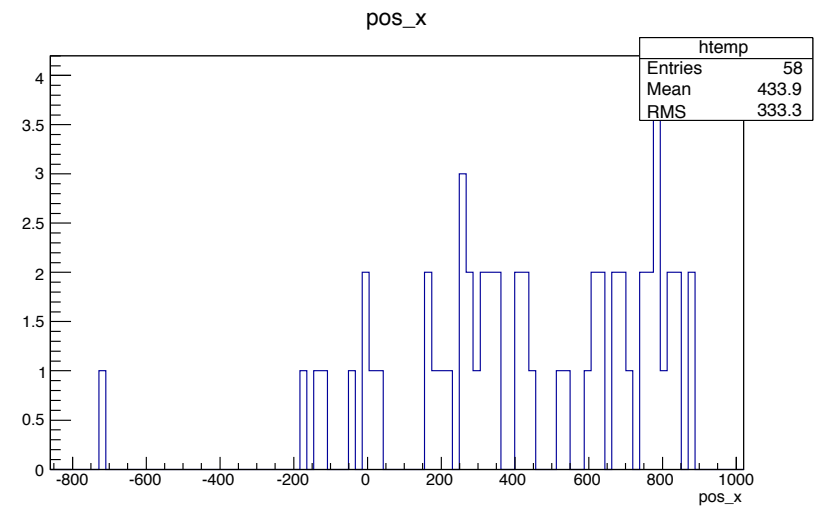
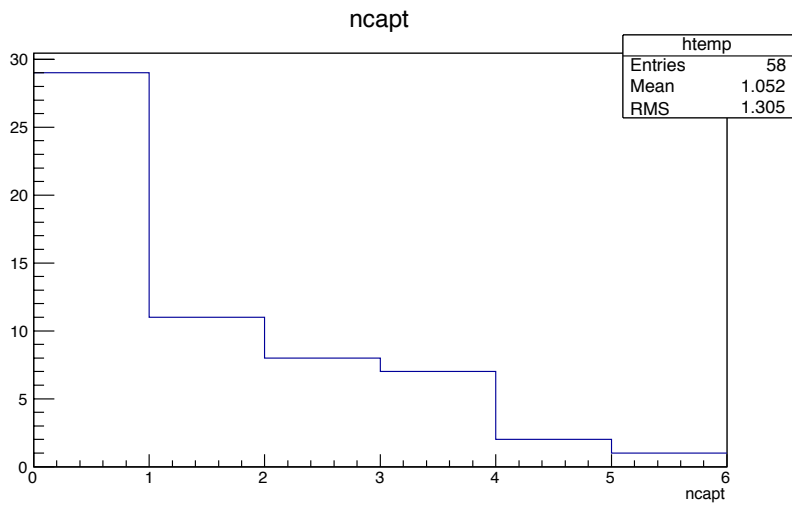
Nov 13, 2013

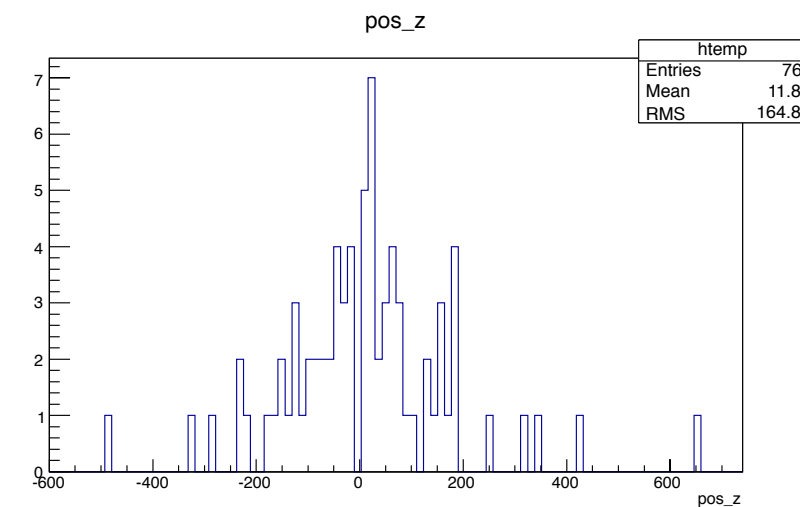
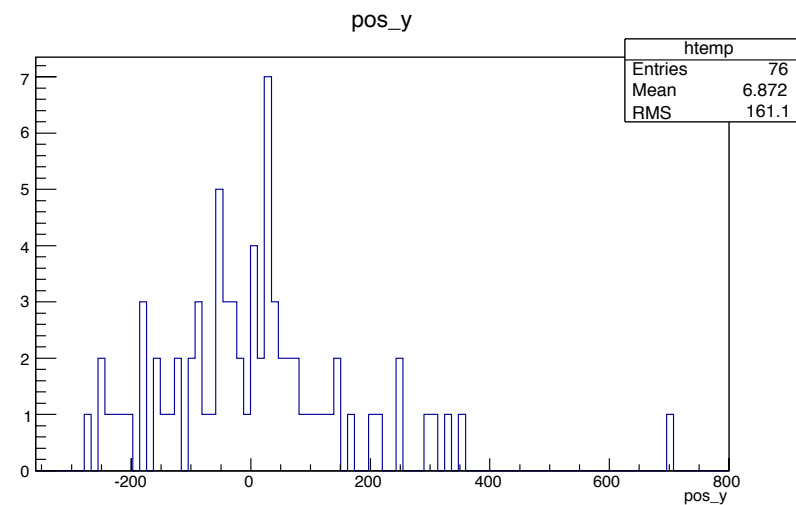
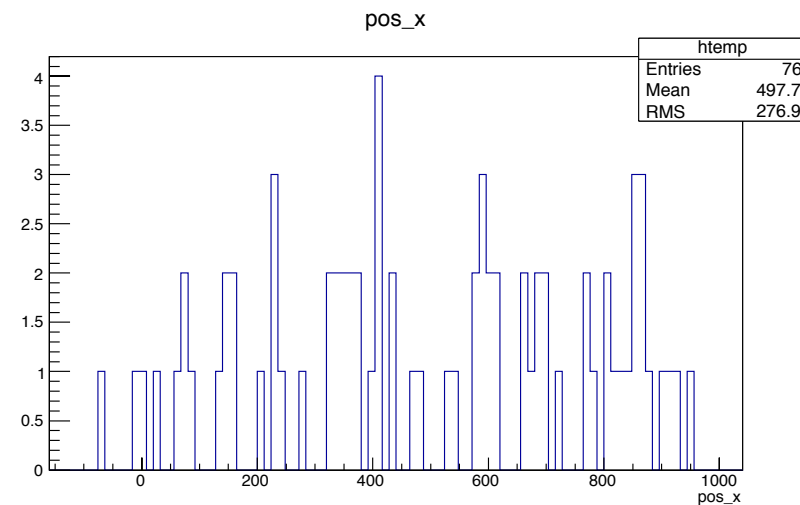
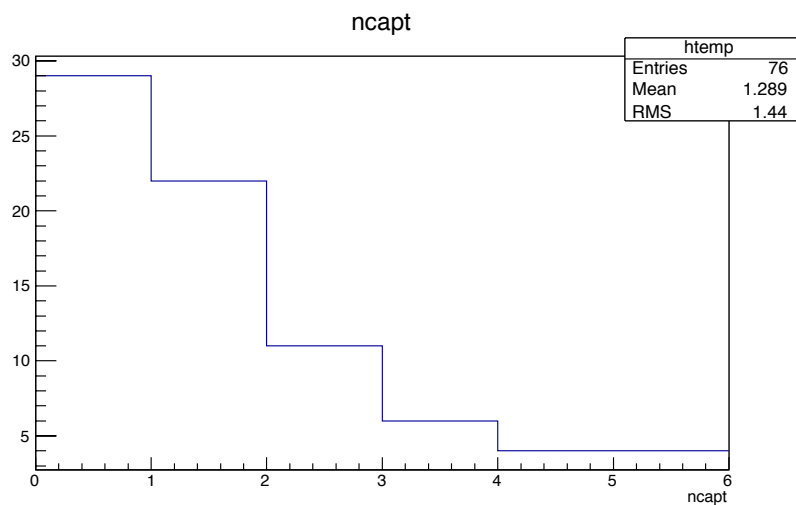
## Open questions for the EOI

- What is the distribution of neutron energies predicted by Nuance + Geant?
- How far do neutrons of a given energy travel from the interaction point?
- What size fiducial cut is necessary to contain these neutrons?
- Comparison of neutron yield vs  $q^2$  for different MC
- What are the exact characteristics of the atmospheric bkgd events in the SK PDK plots
- Are there other handles on these backgrounds?
- How could this be important to the neutrino interaction community?

# Captures from single mono-energetic neutrons

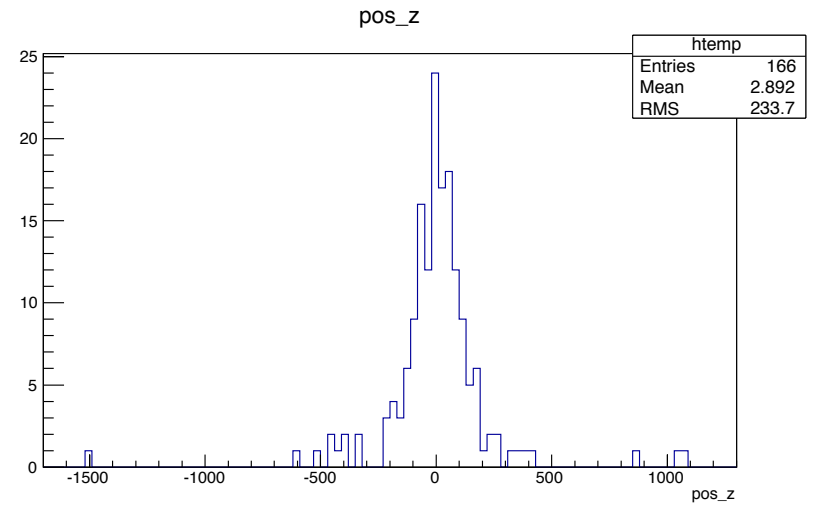
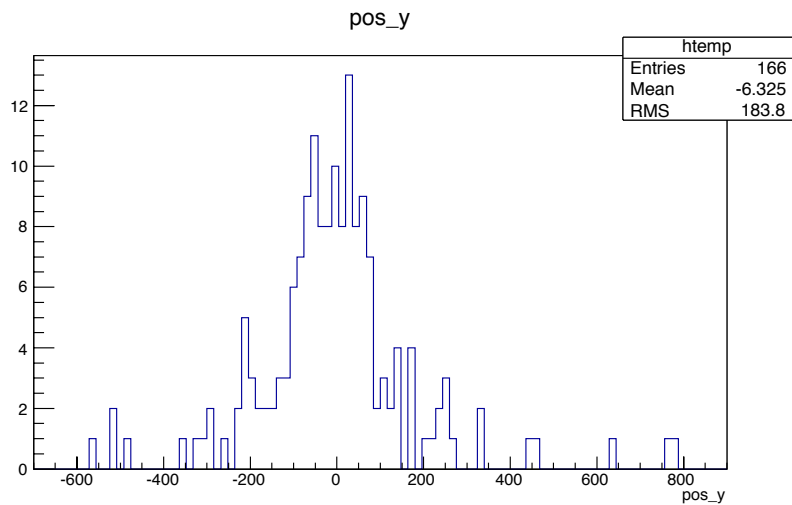
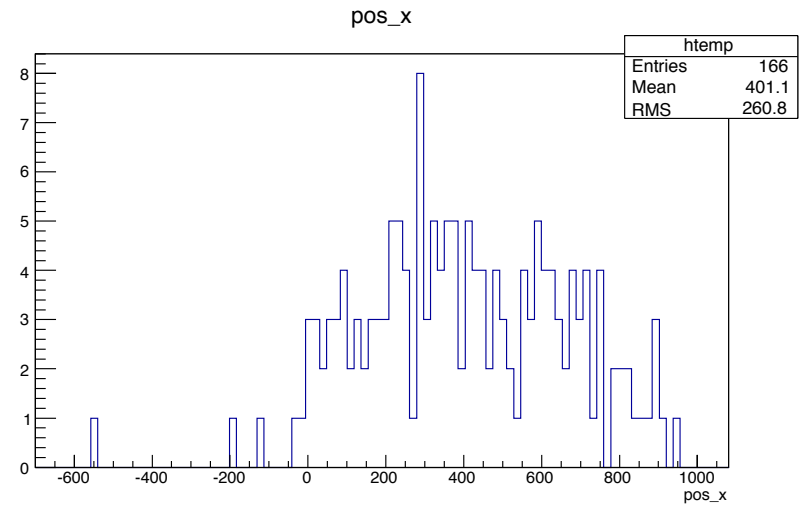
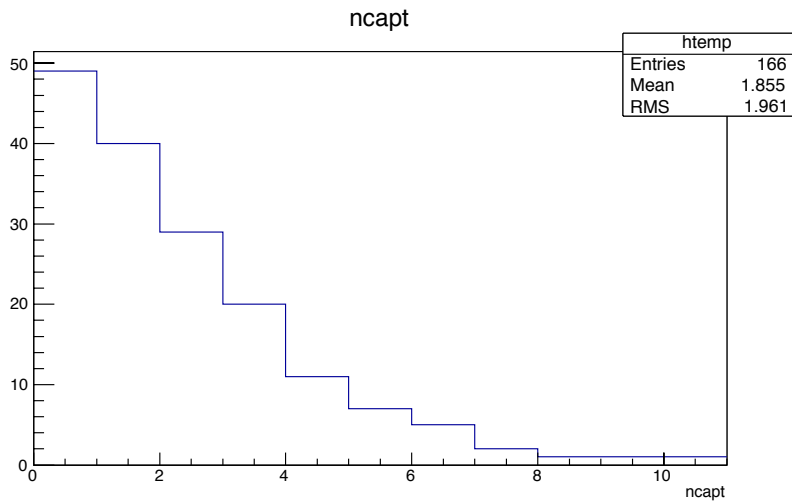
400 MeV





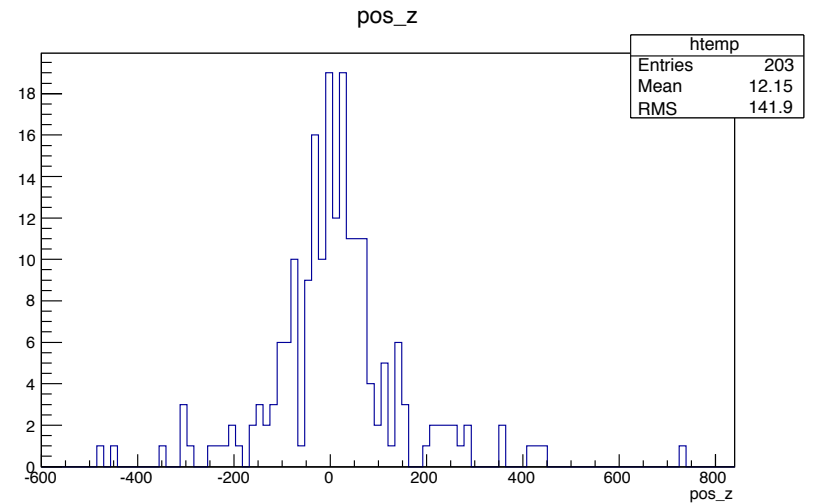
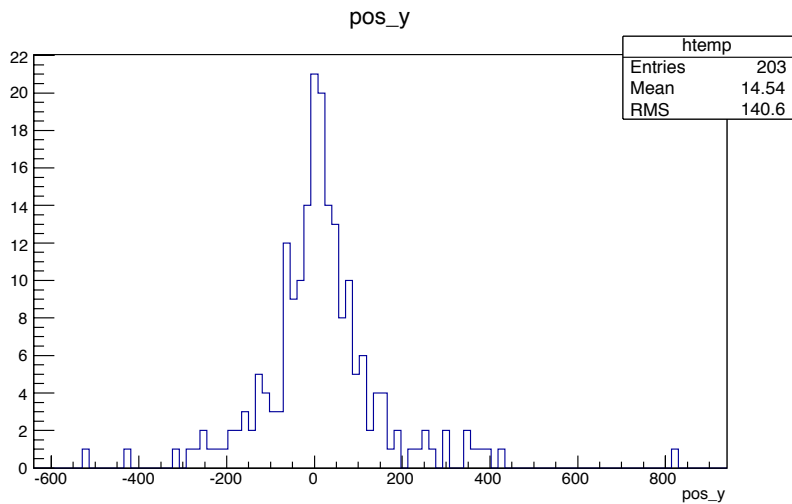
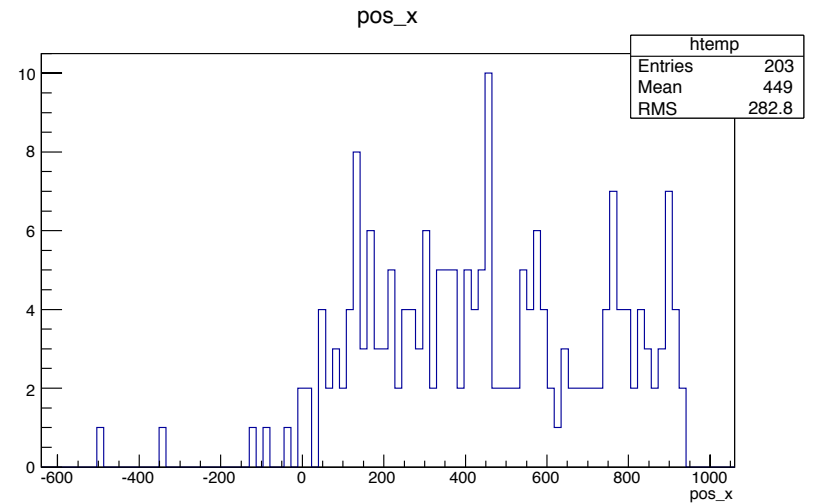
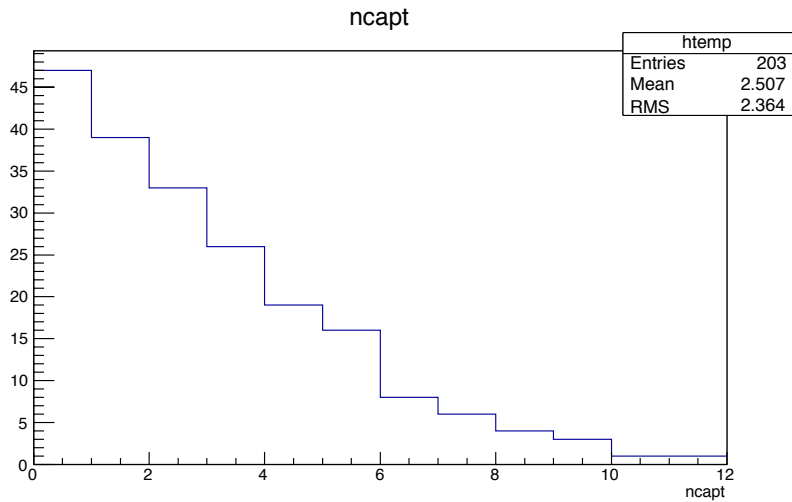
# Captures from single mono-energetic neutrons

705 MeV

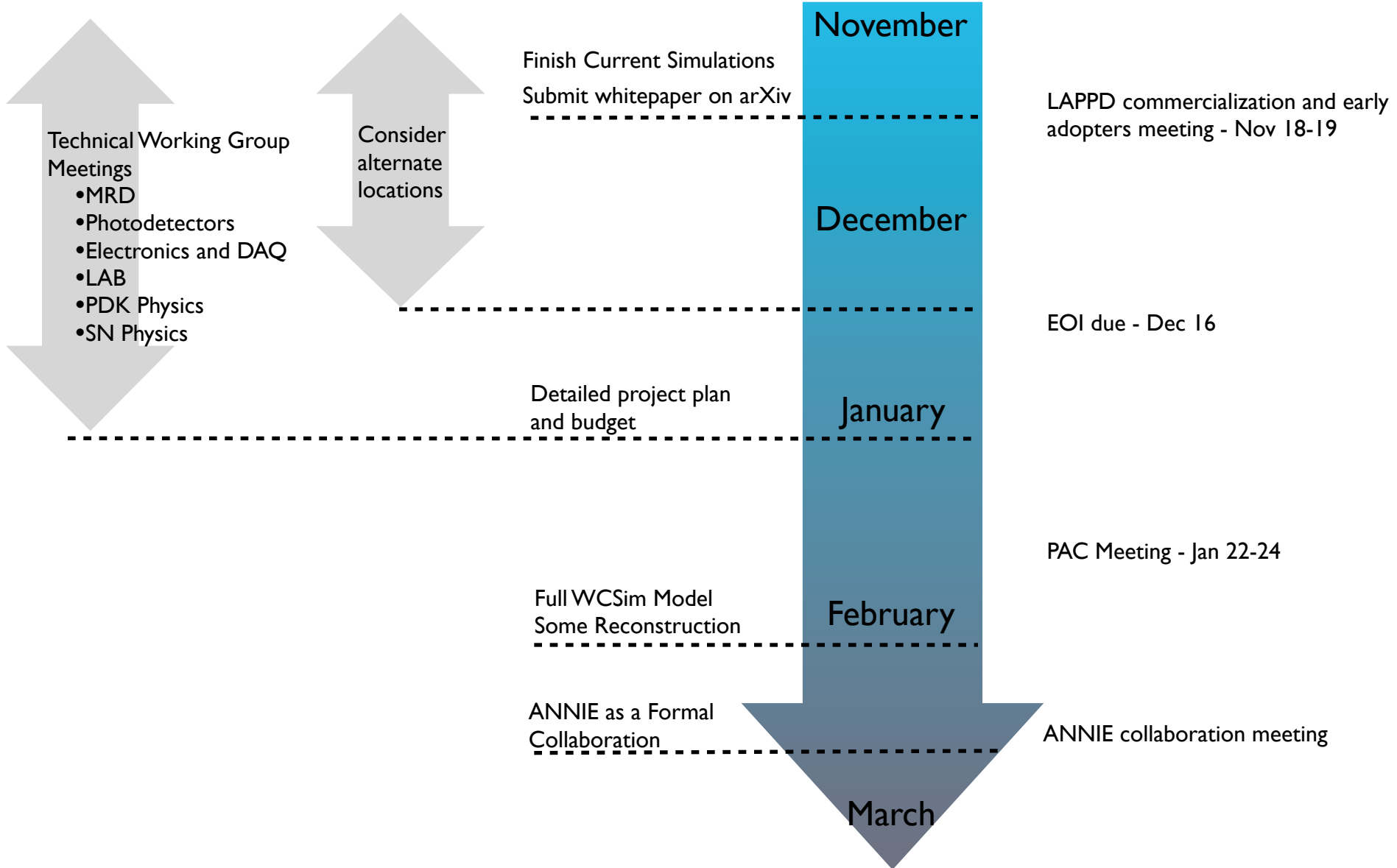


# Captures from single mono-energetic neutrons

900 MeV



# Proposed Roadmap for the Next Several Months



ANNIE meeting - Nov, 2013

