



# CU Physics Department Colloquium

Monday, October 29, 2007 428 Pupin Hall 4:15 PM

Geralyn Sam Zeller, Los Alamos National Laboratory

## “MiniBooNE: Not Just for Neutrino Oscillations Anymore”

The MiniBooNE experiment at Fermilab has amassed the world's largest sample of neutrino scattering events in the 1 GeV energy range; a sample that includes both quasi-elastic scattering and single pion production processes. Although the primary motivation for MiniBooNE has been the now-reported search for muon neutrino to electron neutrino oscillations, there has been recent regained interest in neutrino interaction physics. Such low energy neutrino cross section measurements have not been updated for decades, having been first measured in bubble chamber experiments. New measurements are sorely needed and yield important constraints for neutrino oscillation experiments, including MiniBooNE. With an order of magnitude larger statistics than historically available, study of the MiniBooNE events is already providing new insight into low energy neutrino scattering on nuclei. In addition to these neutrino results, preliminary findings will also be shown from a new MiniBooNE antineutrino data sample collected in the past year.



Hosted by Janet Conrad

