MiniBooNE Experiment

Fernanda G. Garcia[a], for the BooNE Collaboration

[a] *Fermi National Accelerator Laboratory*

There are three reported indications for neutrino oscillations. The most compelling evidence comes from disappearance experiments. The atmospheric experiments study neutrinos produced by cosmic rays in the earth's atmosphere where there is a difference in the flux of muon neutrinos (ν_μ) entering the earth from above or below. There is also evidence from solar neutrinos experiments which observe fewer electron neutrinos (ν_e) than expected from solar models. The only experiment so far which was able to detect an excess of ($\overline{\nu_e}$) from a predominant $\overline{\nu\mu}$ beam came from an accelerator experiment, LSND at Los Alamos.
MiniBooNE is a neutrino oscillation experiment being built at Fermilab. The experiment will search for $\nu_\mu \rightarrow \nu_e$ oscillations in order to make a conclusive statement about the yet unconfirmed evidence for oscillations presented by the LSND experiment. The experiment will start running in June 2002.
In this talk I will describe the experiment, the current status and show some preliminary data.