

- yearly (10^7 sec) charged current event rate in the absence of oscillations at 1300 km (1495 km) will be between 20000 to 40000 events for 1 MW of running. The exact number depends on the proton energy adapted for the running as well as the optimization of the beam spectrum.
- Cavern: Because of the size required for the detectors, a stable large cavity (or cavities) that can house $\sim 100kT$ of fiducial mass will be needed. From preliminary studies it appears that both Henderson and Homestake satisfy this criteria.
 - Cosmic ray rejection: Since the cosmic ray rate at the deep sites proposed for DUSEL detectors is very low, it will not be a major factor in detector design. A cosmic ray veto for such a detector might be needed for physics other than accelerator neutrino physics; for example, detection of solar neutrinos. But it is not required for the physics discussed here.
 - Background rejection: There are two main contributions to the in-time background from the beam: neutral current events, and electron neutrino contamination in the beam. It is expected that majority of the NC background at low energies will be from single π^0 events that will have to be rejected. In the case of using a wide band beam, there are two tools for signal extraction. Pattern recognition with good capability will be needed to reduce neutral current, especially single π^0 events. The oscillation pattern in the energy spectrum will also be used to extract the signal. The first oscillation node, in particular, will form a peak above 2 GeV with a well known shape. To allow such a signal extraction, the detector must have good energy resolution for neutrino energy. From the work reported here $\sim 10\%$ energy resolution above 0.5 GeV including Fermi motion effects will be needed.