

LABORATORI NAZIONALI DEL GRAN SASSO

SEMINAR ANNOUNCEMENT

Terry Tope

FERMILAB, Batavia, IL - USA

***“Cryogenic Detector R&D at
Fermilab: Engineering
Perspective”***

Interest in liquid argon time projection chambers (LArTPCs) for neutrino physics led to the start of a liquid argon R&D program at Fermilab in 2005. This talk will outline these activities from an engineering perspective. This program has developed a Materials Test Station (MTS) which is used to develop liquid argon purification techniques and to measure the effect of materials on the electron drift lifetime. An electronics test stand for TPC electronics development was created alongside the MTS. Current engineering efforts, directed towards fabrication of a 30 tonne liquid argon R&D facility with a cryostat that cannot be evacuated prior to filling, will be detailed. The MicroBooNE and Long Baseline Neutrino Experiments will also be discussed from an engineering perspective. The speaker would like to acknowledge the enormous and continuing contribution of ICARUS and other European programs.

**OCTOBER 20, 2010 – 11.00 AM
LNGS - “B. PONTECORVO” ROOM**