Abstract for an Invited Paper for the HAW05 Meeting of The American Physical Society

Double Beta Decay Options in SNO

AKSEL HALLIN, Queen's University

The heavy water experiment in SNO will complete data taking at the end of 2006. We are preparing a proposal for an experiment in which we will replace the heavy water with liquid scintillator, to measure low energy solar neutrinos, geo-neutrinos, reactor oscillations and double beta decay. We plan to measure double beta decay by dispersing isotopes into the scintillator volume. Large masses are possible, which allow us to set effective mass limits at a sensitivity <100 meV. I will report on the various techniques and isotopes that we are considering.