Abstract Submitted
for the APR05 Meeting of
The American Physical Society

The Day-Night Effect and MSW Analysis for the Salt Phase of SNO KATHRYN MIKNAITIS, Center for Experimental Nuclear Physics and Astrophysics, University of Washington, SUDBURY NEUTRINO OBSERVATORY COLLABORATION — The Sudbury Neutrino Observatory (SNO) has recently extended its analysis of data from the dissolved-salt phase of the experiment to the full 391-day salt data set. In addition to measurements of the total ^{8}B solar neutrino flux, solar neutrino flavor change, and the solar electron neutrino energy spectrum, the recent analysis includes day and night measurements of the electron and total solar neutrino fluxes. A day-night asymmetry in the electron neutrino flux is a prediction of the MSW model for solar neutrino oscillations for some values of the fundamental neutrino parameters, due to the matter effects in the earth. The day-night analysis for the salt phase of SNO will be presented, as well as a discussion of the implications of SNO's salt phase measurements in a global analysis to determine solar neutrino parameters Δm^2 and $\sin^2\theta$.

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Date submitted: 14 Jan 2005 Electronic form version 1.4