THROUGH-GOING MUONS IN THE SUDBURY NEUTRINO OBSERVATORY

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We present initial physics results from observing through-going cosmic ray muons in the Sudbury Neutrino Observatory (SNO). Most of these events are very high energy downward muons produced by meson decay in the atmosphere. These yield information on the rate, energy spectrum and atmospheric interactions of cosmic rays. The remainder are horizontal and upward muons produced by the interaction of atmospheric neutrinos in the rock surrounding SNO. We are uniquely able to see neutrino-induced muons coming from above the horizontal. The angular distribution of these muons is sensitive to neutrino oscillations.