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SNO External Muon System THOMAS WALKER, Massachusetts Institute of Technology, SNO COLLABORATION — The SNO (Sudbury Neutrino Observatory) muon reconstruction algorithm reconstructs simulated events in good agreement with the track coordinates given by the Monte Carlo generator. However, no source of known muon tracks was previously available for an independent verification. The July 2006 installation of the SNO External Muon System (EMuS) provided a means for external verification of SNO's tracking algorithm. This tracking detector consists of 4 planes of wire chambers (2 each in the x and y directions) triggered by 3 large scintillator paddles. Each plane contains 32 active wires housed in 7.5 cm diameter tubes. The detector has an active area of 5.5 square meters. In 96 days of livetime 30 cosmic ray muons were recorded by both detectors. Using the SNO reconstruction track for each muon as a seed, the most likely path through EMuS is determined and compared to the standard muon tracking algorithm. We see good agreement between the EMuS and SNO tracks.

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