

MUON MEASUREMENT WITH AN ICE CHERENKOV TANK AT THE SOUTH POLE

Xinhua Bai (1), T.K. Gaisser (2), Glenn Spiczak (2) and Todor Stanev (2)
(1) Bartol Research Institute, Univ. of Delaware, Newark, DE 19716, USA.

An $1.2m^3$ ice Cherenkov detector was installed within the array of the South Pole Air Shower Experiment (SPASE) during the 2000-2001 austral summer. The penetrating muon rate was measured for three different incident angles with a scintillator muon telescope incorporating the tank as absorber. The freezing process was monitored and the detector was calibrated with the penetrating muons. The calibration is compared to a GEANT simulation of the detector. We are also running the detector with the trigger from SPASE. Results of these measurements will be presented.