

## ATMOSPHERIC MUON MEASUREMENTS I: VERTICAL MEASUREMENTS

**S.Tsuji** (1), K.Himei (2), T.Katayama (2), N.Kawakami (2), T.Nakatsuka (4), N.Ochi (2), K.Okei (2), J.Tamura (2), M.Tokiwa (2), Y.Yamashita (2), I.Yamamoto (3) and T.Wada (2)

(1) Department of Information Sciences, Kawasaki Medical School, Kurashiki, 701-0192, Japan, (2) Department of Physics, Okayama University, Okayama 700-8530, Japan, (3) Okayama University of Science, Okayama 700-0005, Japan, (4) Okayama Shoka University, Okayama 700-8601, Japan.

tsuji@med.kawasaki-m.ac.jp/Fax: +81-86-462-1199

The atmospheric muon measurements at sea level were better than the ones we have presented before. We report more stable results of the absolute differential muon fluxes and the muon charge ratio in vertical, in the momentum range between 1.5 to 100 GeV/c. These results are compared with theoretical calculations and experimental muon measurements.