MUON COMPONENT IN GIANT AIR SHOWERS WITH ENER-GIES GREATER THAN 10^{18.5}EV OBSERVED BY AGASA

N. Inoue (4), M. Chikawa (2), M. Fukushima (1), N. Hayashida (1), K. Honda (3), K. Kadota (5), F. Kakimoto (5), S. Kakizawa (6), K. Kamata (7), S. Kawaguchi (8), S. Kawakami (9), Y. Kawasaki (10), N. Kawasumi (11), E. Kusano (12), A. M. Mahrous (4), K. Mase (1), T. Minagawa (1), Y. Morizane (2), M. Nagano (13), H. Ohoka (1), S. Osone (1), N. Sakaki (10), M. Sasaki (1), M. Sasano (14), K. Shinozaki (4), M. Takeda (1), M. Teshima (1), R. Torii (1), I. Tsushima (11), Y. Uchihori (15), T. Yamamoto (1), K. Yasui (2), S. Yoshida (1), H. Yoshii (16) and T. Yoshikoshi (9)

(1) Institute for Cosmic Ray Research, University of Tokyo, Chiba 277-8582, Japan, (2) Department of Physics, Kinki University, Osaka 577-8502, Japan, (3) Faculty of Engineering, Yamanashi University, Kofu 400-8511, Japan, (4) Department of Physics, Saitama University, Urawa 338-8570, Japan, (5) Department of Physics, Tokyo Institute of Technology, Tokyo 152-8551, Japan, (6) Faculty of Science, Shinshu University, Matsumoto 390-8621, Japan, (7) Nishina Memorial Foundation, Komagome, Tokyo 113-0021, Japan, (8) Faculty of Science and Technology, Hirosaki University, Hirosaki 036-8561, Japan, (9) Department of Physics, Osaka City University, Osaka 558-8585, Japan, (10) RIKEN (The Institute of Physical and Chemical Research), Saitama 351-0198, Japan, (11) Faculty of Education, Yamanashi University, Kofu 400-8510, Japan, (12) KEK, High Energy Accelerator Research Organization, Institute of Particle and Nuclear Studies, Tsukuba 305-0801, Japan, (13) Department of Applied Physics and Chemistry, Fukui University of Technology, Fukui 910-8505, Japan, (14) Communications Research Laboratory, Ministry of Posts and Telecommunications, Tokyo 184-8795, Japan, (15) National Institute of Radiological Sciences, Chiba 263-8555, Japan, (16) Department of Physics, Ehime University, Matsuyama 790-8577, Japan.

Muon component in air showers with energies greater than $10^{18.5}$ eV has been studied from data obtained by Akeno Giant Air Shower Array(AGASA). Average lateral distribution of muons and local muon densities at 600m and 1000m from air shower core have been analyzed as a function of primary energy. Related simulations with different primary compositions and particle interaction models have been also processed including actual experimental conditions. The characteristics of muon component in air shower and a possible chemical composition of primary cosmic rays will be discussed in this paper.