
The Cosmic Ray Intensity Correlation with the Sunspot Number in LAAS Experiments

Atsutshi Iyono,¹ Nobuaki Ochi,² Yasuhiro Fujiwara,¹ Takeharu Konishi,³
Toru Nakamura,⁴ Takao Nakatsuka,⁵ Soji Ohara,⁶ Noboru Ohmori,⁴
Kazuhiko Okei,⁷ Katsuhiko Saitoh,⁸ Junpei Tada,⁷ Nobusuke Takahashi,⁹
Shuhei Tsuji,¹⁰ Tomonori Wada,⁷ Isao Yamamoto,¹¹ Yoshihiko Yamashita,⁷
and the Large Area Air Shower (LAAS) group

(1) *Dept. of Computer Simulation, Okayama Univ. of Science, Okayama Japan*

(2) *Simulation Science Center, Okayama Univ. of Science, Okayama Japan*

(3) *Dept. of Physics, Kinki Univ., Higashi-Osaka, Japan*

(4) *Fac. of Science, Kochi Univ, Kochi, Japan*

(5) *Okayama Shoka Univ., Okayama, Japan*

(6) *Fac. of Economy, Nara Univ. of Industry, Ikomagun, Japan*

(7) *Dept. of Physics, Okayama Univ., Okayama, Japan*

(8) *Ashikaga Institute of Technology, Ashikaga, Japan*

(9) *Dept. of Electronic and Information System Engineering, Hirosaki Univ. Hirosaki, Japan*

(10) *Dept. of Information Science, Kawasaki Medical School, Kurashiki, Japan*

(11) *Dept. of Information and Computer Engineering, Okayama Univ. of Science, Okayama, Japan*

Abstract

In order to study the correlation of cosmic ray intensity with solar activity (sunspot numbers), extensive air shower (EAS) data are analyzed for the data period of 1996-2002 in Large Area Air Shower (LAAS) project. The LAAS project has operated 5 arrays at sea level in a large part of Japan. These arrays cover the primary energy range more than 10^{14} eV, but their angular resolution is about 7 degree. Data on the basis of daily count rates in diurnal phase, are compared with the sunspot indices given by SIDC.