

SIMULATION STUDY OF THE LATERAL DISTRIBUTIONS OF THE HADRON, MUON, ALL CHARGED AND ELECTROMAGNETIC EAS COMPONENTS ON MT. ARAGADS ALTITUDE

J.-N. Capdevielle (1) and Kh. N. Sanosyan (2)

(1) Laboratoire de Physique Corpusculaire et Cosmologie, Collège de France, 11 pl. Marcelin Berthelot, F 75231 Paris, Cedex 05, FRANCE, (2) Cosmic Rays' Department, Yerevan Physics Institute, Alikhanyan Brothers' St. 2, 375036 Yerevan, ARMENIA.

capdev@cdf.in2p3.fr/Fax: (33) 1 43 54 69 89

Proton and iron induced showers in the atmosphere are simulated using the CORSIKA program (version 5.62) with the QGSJET model as generator for the hadronic interactions for the observation level of the Cosmic Ray Station on Mt. Aragads (3200m a.s.l.) in the energy interval $1.5 \cdot 10^5 \div 1.5 \cdot 10^7$ GeV. The lateral distributions of gammas, electrons, muons, hadrons and all charged particles as well as the distributions of number of gammas/electrons and electrons/muons ratios versus the shower core for both primary protons and iron nuclei are presented.

The energy dependences of densities of gammas, electrons, muons, hadrons and all charged particles as well as the energy distributions of muons for both primary protons and iron nuclei are presented.