

MOMENTUM DEPENDENCE OF THE VERTICAL MUON FLUX AND CHARGE RATIO MEASUREMENT

Pierre Le Coultre, on behalf of the L3 collaboration
LHP - ETH Zurich

1.2×10^9 cosmic ray muon events above 20 GeV have been collected with the L3+C detector at LEP, CERN, in 1999 and 2000. A preliminary momentum spectrum is presented and discussed.

The muon spectrometer of L3 consists of a set of high precision drift chambers installed inside of a magnet with a volume of 1000 m³ and a field of 0.5 T. Muon momenta are thus measured with a resolution of a few percent at 50 GeV. The detector is located under 30 m of overburden. The goal is to get the muon spectrum with a precision of 2.5 % in the range of 20 to 2000 GeV, and also the charge ratio and the angular dependence.