Contribution ID: **25** Type: **Poster**

Phenomenological approach to multiple particle production (2)

Tuesday, 29 June 2010 16:30 (1 hour)

In our previous presentation we showed how well the rapidity density distributions and the transverse momentum (p_{T}) distributions at sqrt{s}=22.4, 546 and 1800 GeV are described by our phenomenological formulation.
Based on the energy dependence of the values of the parameters, which are obtained by fitting the calculated distributions to those of the experiments, we examine how the present formulation describes the energy dependence of the p_{T} average, that of the multiplicity and the local p_{T} average along the rapidity y* in the forward region, obtained by UA7 Collaboration at sqrt{s}=630 GeV.
Extrapolating the energy dependence of the parameters into higher energies, we discuss the multiplicity, inelasticity and the pseudo-rapidity density distribution at sqrt(s)=1.4 x 10^{3} GeV (LHC energy) and 4.5 x 10^{5} GeV (10^{20} eV
in the laboratory energy), together with predictions by several models of multiple particle production.

If this is a contributed presentation, please indicate preference for Oral (O) or Poster (P):

O

Primary author: Dr OHSAWA, AKINORI (Institute for Cosmic Ray Research, University of Tokyo.)

Co-authors: Prof. SHIBUYA, Edison H. (Instituto de Fisica Gleb Wataghin, Universidade Estadual de Campinas); Prof. TAMADA, Masanobu (School of Science and Engineering, Kinki University.)

Presenter: Dr OHSAWA, AKINORI (Institute for Cosmic Ray Research, University of Tokyo.)

Session Classification: Poster Session I

Track Classification: Accelerator data