

ALGORITHMS BASED ON ISOTROPIC AZIMUTHAL ANGLE DISTRIBUTION OF INTERACTION SECONDARIES

C.R.A.Augusto(1), S.L.C.Barroso(2), P.C.Beggio(3), A.O. Carvalho(2),
M.J.Menon(2), C.E.Navia(1), R.Oliveira(2), E.H.Shibuya(2) (Brazil-Japan
Chacaltaya Emulsion Chamber Experiment)

(1) Instituto de Física, Universidade Federal Fluminense, Rio de Janeiro, Brasil, (2)
Instituto de Física 'Gleb Wataghin', Universidade Estadual de Campinas, Campinas,
Brasil, (3) Laboratório de Ciências Matemáticas, Universidade Estadual do Norte
Fluminense, Rio de Janeiro, Brasil
shibuya@ifi.unicamp.br, fax:+55-19-3788-5512

A azimuthal angle distribution of events measured by Brazil-Japan Chacaltaya Emulsion Chamber Experiment shows that the secondaries produced by cosmic ray interaction particle are isotropic. Algorithms based on these observations were analytically calculated and their application to near 375 interaction events will be presented. One of these algorithms is equivalent to Duller-Walker plot and therefore it is possible to analyse the events as having structure of jet emission, through tests of their 'sphericity'. From the distribution of this ad-hoc defined sphericity it is possible to infer about the jet structure. Another appropriate combination of the calculated moments is used to get insights of superposition of interactions and/or production of more than one jet simultaneously.