

APPLICABILITY OF ANN IN THE ARGO-YBJ EXPERIMENT

Q.Q. Zhu (1), Y.H. Tan (1) and X.C. Yang (2) for the ARGO-YBJ Coll. (3)

(1) Institute of High Energy Physics, Academia Sinica, Beijing, 100039, China,

(2) Department of Physics, Yunnan Univ., Kunming, Yunnan, 560091, China,

(3) List for the ARGO-YBJ Collaboration,

`zhuqq@crhp1.ihep.ac.cn`/Fax: 0086-10-68218319

We report the applicability of Artificial Neural Networks (ANN) for the ARGO-YBJ data analysis, i.e. inner or outer shower core position identification and γ -proton separation, With the MC samples from Corsika, the results indicate that for primary protons the rejection of outer showers is more than 90% and the acceptance for inner events is about 70%. The quality factor for γ -proton separation is ~ 2 for all inner showers.