ference on Physics
ark Gluon Plasma

ICPAQGP-2010

Contribution ID : 9

Target Fragmentation in Interaction of 84Kr at Relativistic Energy

Content :

The Study of heavy-ion nucleus-nucleus collisions has received much interest in the recent research, firstly, because of the realization that these studies may reveal strong interaction dynamics and, secondly, because of the appearance of unusual states of nuclear matter under extreme conditions of temperature, density, and pressure in the inelastic collisions of relativistic heavy nuclei. The number of slowly emitted particles from the struck target nucleus is considered as a measure of the degree of the impact parameter or the degree of the excitation. The target evaporation particles of nucleus-nucleus interaction reveal the existence of nonstatistical fluctuations in the azimuthal plane of the interaction. The analysis of target fragmented particles in nuclear emulsion detector from relativistic high energy interactions initiated by 84Kr is investigated. A multiparticle correlation is observed between freshly produced newly created particles as well as target fragments. In this study we found that the multiplicity correlation between target fragments strongly depends on the energy of the incident projectile. We also study the multiplicity correlation between target fragments for different projectile but having nearly same incident energy and find some new physics based on target fragmentation.

In the present paper we report some new results based on the study of multiplicity correlation of the target fragments emitted in the 84kr interactions with nuclei of nuclear emulsion detector at around 1 GeV per nucleon.

Reference

[1] N.N. Abd-Allah., Can. J. Phys. 80, 119 (2002).
[2] S. S. A-Aziz, J. Phys. Conf. Seri. 111, 012059 (2008); A. Andronic et al., Phys. Lett. B 612, 173 (2005); M. A. Jilany, Eur. Phys. J. A 22, 471 (2004).
[3] Zhang Dong-Hai et al., Chin. Phys. B 19, 072501 (2010); Fu-Hu Liu, Chin. J. Phys. 40, 159 (2002).
[4] A. Abd El-Daiem, Amer. J. Appl. Scie. 6, 608 (2009); A. Abdelsalam and B. M. Badawy, J. Nucl. Radi. Phys. 3, 109 (2008).
[5] Yu –Liang Yan et al., e-Print Archive : Nucl-ex/080133 (2008); K. Abdel-Waged, Phys. Rev. C 59,
2792 (1999).

Primary authors : Mr. SINGH, Manoj (Research Scholar)

Co-authors : Dr. PATHAK, Ramji (Reader) ; Dr. SINGH, Venktesh (Lecturer)

Presenter : Dr. PATHAK, Ramji (Reader)

Session classification : --not yet classified--

Track classification : --not yet classified--

Type : --not specified--