Charged Particle Flow Measurement for $|\eta| < 5.5$ with the PHOBOS detector

Inkyu Park for the PHOBOS Collaboration

Dept. of Physics and Astronomy, University of Rochester, NY 14627

Presented by: Inkyu Park

Abstract

The study of collective flow has become an important topic in ultra-relativistic heavy ion collisions due to its sensitivity to the initial geometry and the nuclear state in the early stages of the collision. The measurement of flow for charged particles in Au-Au collisions at $\sqrt{s_{NN}} = 130\text{GeV}$ using the Phobos detector at the Relativistic Heavy Ion Collider (RHIC) will be discussed. The measurement utilizes information from silicon pad detectors that detect charged particles in a region $|\eta| < 5.5$. Directed and elliptic flow values averaged over momenta and particle species are extracted using the azimuthal distribution of charged particles. Finally the dependence of flow size on pseudorapidity and on centrality will be discussed.

Preprint submitted to Elsevier Preprint *20 December 2000*