AntiNucleus Production at RHIC

David Hardtke for the STAR Collaboration

Presented by: David Hardtke

Abstract

Light antinuclei are formed in relativistic heavy ion collisions via final state coalescence of antinucleons. The yields of antinuclei are sensitive to primordial antinucleon production, the volume of the system at kinetic freeze-out, and space-momentum correlations among antinucleons at freeze-out. We report here STAR results on $\bar{p}$, $\bar{d}$ and $\overline{^3He}$ production in 130A GeV Au+Au collisions. These results will be examined in a coalescence framework to elucidate the space-time structure of the antinucleon source. The prospects for using STAR to discover new antinucleus states will also be discussed.

Preprint submitted to Elsevier Preprint *20 December 2000*