Abstract Submitted
for the APR14 Meeting of
The American Physical Society

Nucleon and Baryons densities in heavy ion collisions at 1 to 3 GeV/A HAMOUD ALHARBI, MASAUD ALMALKI, National Center for Mathematics and Physics at KACST — Excited Baryons resonance production is investigated within the Ultra-Relativistic Quantum Molecular Dynamics model (UrQMD). The evolution of density at the collision center for different collision times was investigated. The maximum densities yields at maximum compression time was calculated at deferent projectile energies. Radial and angular distribution for nucleon density was calculated for each collision energy. Baryon resonances produced in relativistic heavy ion collisions are present for time much longer than the free Baryon lifetime would suggest, which means that there is a continues baryon reproduction. Our results was in qualitative agreement with previous calculations using Isospin dependent Quantum Molecular Dynamics (IQMD).

Hamoud Alharbi
National Center for Mathematics and Physics at KACST

Date submitted: 11 Jan 2014 Electronic form version 1.4