



Contribution ID: 59

Type: **Theory**

## A new shock capturing numerical scheme for ideal hydrodynamics

*Wednesday 24 September 2014 11:15 (20 minutes)*

We present a new algorithm for solving ideal relativistic hydrodynamics based on Godunov method with exact solution of Riemann problem with an arbitrary equation of state. Standard numerical tests are executed, such as sound wave propagation and shock tube problem. Low numerical viscosity and high precision are attained with proper discretization.

**Author:** FECKOVA, Zuzana

**Co-author:** TOMASIK, Boris (Univerzita Mateja Bela (SK))

**Presenter:** FECKOVA, Zuzana

**Session Classification:** Session 5

**Track Classification:** Relativistic hydrodynamic and collective phenomena