1100-65-13 **Ilija Jegdic*** (i_jegdic@yahoo.com), Department of Mathematics, University of Houston, Houston, TX 77204-3008. *Analysis of a Large Time Step and Overlapping Grids method for hyperbolic conservation laws.*

We propose a new method for approximate solving of hyperbolic conservation laws. The method is based on a finite volume method and its significance is twofold. First, we introduce a novel idea for a large time step, which allows us to march faster in time. Secondly, we consider overlapping grids which is an important issue for many practical applications. We prove that in one spatial dimension, the method converges to the entropy solution of the conservation law. We also present numerical simulations for Burger's equation and for the Lax shock tube problem for Euler gas dynamics equations. (Received December 08, 2013)