Abstract Submitted
for the APR11 Meeting of
The American Physical Society

GenASiS: A full GR-RMHD simulation framework: overview, goals, and preliminary tests PETR TSATSIN, Florida Atlantic University, REUBEN BUDIARDJA, CHRISTIAN CARDALL, EIRIK ENDEVE, Oak Ridge National Laboratory, PEDRO MARRONETTI, Florida Atlantic University, ANTHONY MEZZACAPPA, Oak Ridge National Laboratory — I present an overview of the General Astrophysics Simulation System (GenASiS). GenASiS is currently under development by a collaboration between researchers at the Oak Ridge National Laboratory (ORNL) and Florida Atlantic University (FAU) and features a high-resolution magnetohydrodynamics solver, a full general relativistic description of gravity based on the BSSN formalism, and will feature a two-moment multi-frequency neutrino radiation field evolution. We intend to use GenASiS to study core collapse supernovae, neutron star mergers, and their associated gamma-ray bursts.

Petr Tsatsin
Florida Atlantic University

Date submitted: 19 Jan 2011 Electronic form version 1.4