

Abstract Submitted
for the TS4CF08 Meeting of
The American Physical Society

Constraint conserving boundary conditions in general relativistic magnetohydrodynamics MICHAEL BESSELMAN, Brigham Young University — Astrophysically, we observe many compact objects, such as neutron stars, which in addition to being examples of strong field gravity, also carry a magnetic field. We are interested in simulating the evolution of such objects using general relativistic magnetohydrodynamics (GRMHD). An important aspect in these models is ensuring that physical constraints are everywhere satisfied during these computations. We describe our efforts to impose consistent boundary conditions to maintain the vanishing of the divergence of the magnetic field.

Michael Besselman
Brigham Young University

Date submitted: 16 Sep 2008

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