

Abstract Submitted  
for the TSF11 Meeting of  
The American Physical Society

**Magnetohydrodynamic Verification Problem and Solution<sup>1</sup>**

JARED ROVNY, DAVID MILLER COLLABORATION, ROBERT RIEBEN COLLABORATION — A new magnetohydrodynamic (MHD) verification test problem has been developed. The problem consists of an infinite conducting cylinder of arbitrary but constant conductivity and uniform magnetic permeability that is rotating at constant angular velocity in an infinite vacuum background. Initially there is a uniform magnetic field everywhere. The two-dimensional time and space dependent solution for the magnetic field in the conductor and the vacuum regions will be discussed.

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Date submitted: 06 Sep 2011

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