

Abstract Submitted
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A Two Dimensional MHD Code Using ALE Method for the Study of Pinch Dynamics¹ GANGHUA WANG, MINGXIAN KAN, CHENGWEI SUN, LONG XIE, HAILONG ZHAO, Institute of Fluid Physics, CAEP — A two dimensional MHD code MDSC (Magnetically Driven Simulation Code) is developed using ALE method for the study of pinch dynamics. The MHD equations are solved in an operator split fashion or time-splitting technique. The thermal, magnetic diffusions and Lagrangian hydrodynamics are computed with mixed differencing scheme of explicit and implicit. Finite differences are computed with a finite volume technique, and a first-order accurate convection scheme was used. Examples of different seed perturbations showed that the code is successful.

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