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A conservative MHD scheme on unstructured Lagrangian grids for Z-pinch hydrodynamic simulations

Fuyuan Wu, Rafael Ramis, Zhenghong Li

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## Highlights

- A Lagrangian MHD 2-D algorithm for Z-pinch simulations in axisymmetric geometry is presented.
- Unstructured grids with staggered variables are used.
- Conservation of mass, momentum, and energy is guaranteed.
- Magnetic field diffusion is treated by a Symmetric-Semi-Implicit SSI algorithm.
- The algorithm has been incorporated to the radiation-hydrodynamics code MULTI-2D to allow ICF studies.

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