

Outline the major capabilities and limitations of computer simulation of Warm Dense Matter

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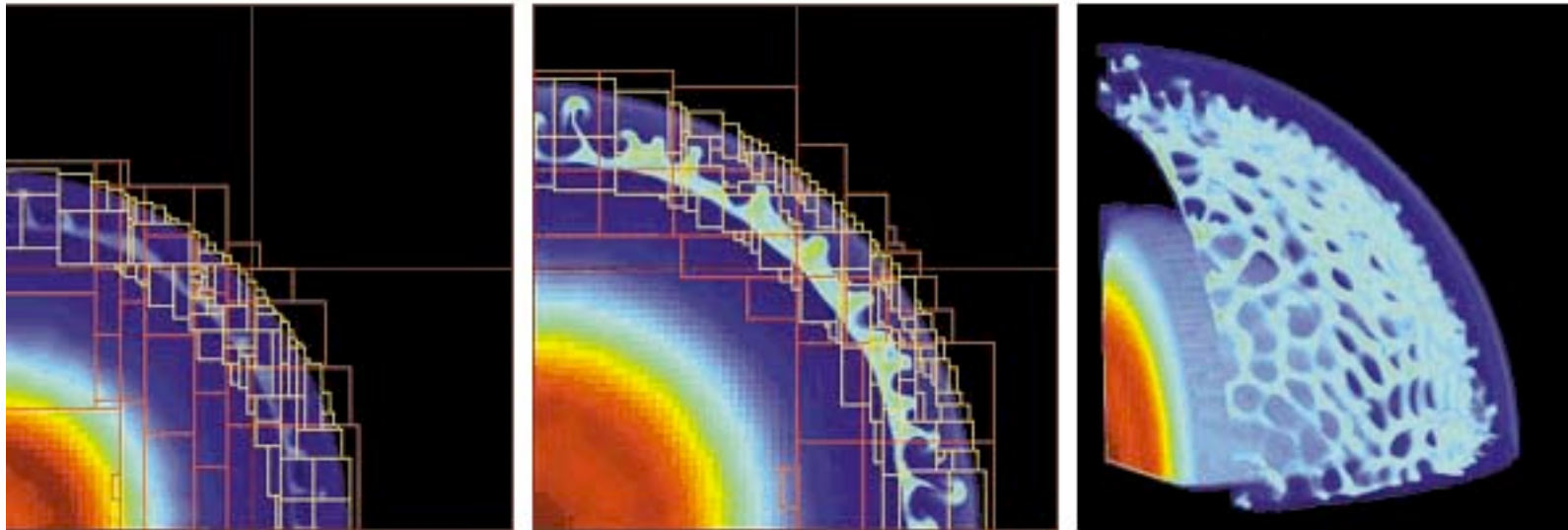
Issues for the panel and working group

- Physics models
- Numerical techniques
- Regimes of applicability
- Benchmarking
- Availability

Future requirements

Hydrodynamics Modeling for HEDP and Astrophysics

- Extension of adaptive mesh and sharp interface modeling software being developed under DOE SciDAC and NASA funding.
- Apply these methods to conditions and material models relevant to HEDP applications, for example two-phase systems and high inhomogeneous systems (foams).
- Methods are based on ones pioneered by Colella that are widely used in computational astrophysics, so that results would be readily transferable.
- All software would be open source and thus available to the broader academic and international scientific communities.



Colella