

Mantle Convection

Major Science Questions

- Incorporating Plates
- Interpreting Earth Heterogeneity
 - Tomography
 - Geochemical
- Earth History
 - Magma Ocean
 - History of Continents
 - Core Formation
- Coupling to Climate

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Infrastructure from CIG

- Adaptive Mesh Refinement
- Better Advection Schemes (Lagrangian, 3rd order)
- Nonlinear Solvers
- Structures to incorporate or assimilate data into models
 - Historical
 - Geochemical
 - Tomographic
 - Structural
 - Adjoint Methods
- Effect of Earth Shape

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Community Organization

- Partnership with Other Communities
 - mineral physics, tomographic, paleo-, geochemical
- Achieved using visiting scientists, postdocs, workshops

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