CIG Business Meeting
December 11, 2007

CIG Activities in Mantle Convection

Scott King
Virginia Tech

Shijie Zhong
Univ. Colorado at Boulder

Eh Tan
CIG

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Workshops & Community-Driven Development

- Release of CitcomS 3.0.1 in Nov. 2007
  - Key features (a talk by Tan, Leng, Zhong and Gurnis at this meeting):
    - Compressibility.
    - All the previously available features including thermochemical convection, calculations of the geoid and stress, non-Newtonian rheology, ...
- Continuous development of the 1-D code (HC) led by Becker, Steinberger and others.
- Thermodynamics code by Lithgow-Bertelloni and Stixrude.
- Benchmarks for incompressible CitcomS (20 cases by Zhong at the CIG website since Dec 2006) and for 2-D compressible mantle convection (by the groups of King, van Keken, Tan, Moresi, and Zhong).

Workshops & Community-Driven Development, continued

- Training session at the Earthscope workshop at Monterey, CA, in Mar. 2007.

- Well represented at the workshop on adaptive mesh refinement in Boulder, Colorado in Oct. 2007.

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Current CIG Work

- Collaborate with Omar Ghattas' group at UT Austin on developing a scalable adaptive mesh mantle convection code.

- Maintain, speed up and scale up for existing CIG convection codes, but no major new development planned for these codes.

- Release of compressible CitcomCU in 2008 (Leng & Zhong).

- A 2-D code at CIG (Citcom or/and ConMan).

- Continue on 1-D codes (Becker), 2D compressible convection benchmark (King et al.), and thermodynamics code (Lithgow-Bertelloni & Stixrude).

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Long Term Plans

- Mantle convection with adaptive meshing refinement (identified at 2005 Boulder workshop). To work with <u>Wolfgang Bangerth at TAMU on deal.II and Omar Ghattas at UT Austin on scalable AMR codes</u>.

- 2008 Mantle Convection Workshop?

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