



News Elements

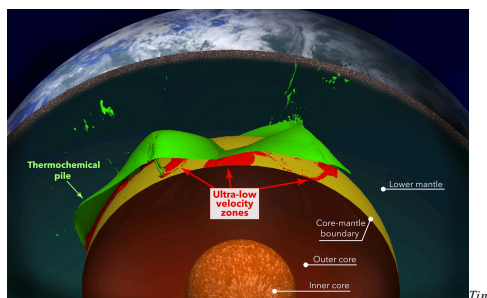
August 2017 Volume 6 Issue 3

Research Highlight Compositionally-distinct ultra-low velocity zones on Earth's core- mantle boundary

The Earth's lowermost mantle large low velocity provinces are accompanied by small-scale ultralow velocity zones in localized regions on the core-mantle boundary. Large low velocity provinces are hypothesized to be caused by large-scale compositional heterogeneity (i.e., thermochemical piles). The origin of ultralow velocity zones, however, remains elusive. Here we perform three-dimensional geodynamical calculations to show that the current locations and shapes of ultralow velocity zones are related to their cause. We find that the hottest lowermost mantle regions are commonly located well within the interiors of thermochemical piles. In contrast, accumulations of ultradense compositionally distinct material occur as discontinuous patches along the margins of thermochemical piles and have asymmetrical cross-sectional shape. Furthermore, the lateral morphology of these patches ... [read full article](#) *M. Li et al., 2017 doi: [10.1038/s41467-017-00219-x](https://doi.org/10.1038/s41467-017-00219-x), code: CltcomCU*

Elections: Nominations Open

Nominations are now open for this year's elections - 1 seat is open on the Executive Committee and 3 on the Science Steering Committee. Many thanks to EC member Omar Ghattas and SSC members



regions of compositionally distinct rock (red material, known as ultra-low velocity zones), collect at Earth's core-mantle boundary (tan surface), nearly halfway to the center of our planet. Small accumulations of this distinct rock collect near the margins of large thermochemical piles (green) that reside at the base of Earth's mantle.

Tiny



WEBINARS

October 12- Teras Gerya
November 9 - Max Rudolph
February 8 - Gabriele Morra
March 8 - Eri Mittelstaedt
April 23 - Sabine Stanley
May 10 -
[More info](#)
[Connect to webinar](#)

MEETINGS

Sept 18-22: CIG-LLNL Computational Seismology Workshop
Dec 11: CIG Business Meeting
Dec 11-15: AGU
2018
June 10-14: CGU joint with CIG

NEW RELEASES

ASPECT 1.5.0
HC 1.0.7
PyLith 2.2.0
VirtualQuake 3.1.0

click the icon for citation info

ALLOCATIONS

Stampede: 0/26470 SUs
Ranch: 10,000 GB
Maverick: 14,993 / 15,000 SUs

QUICK LINKS

Jed Brown, David May, and
Carl Tape for their contributions to
the community. Email the
Nominations Committee your
nominations for these key
governance positions [[email](#)].

[Submit Publications
Software](#)

CONTACT US

contact@geodynamics.org

Software Citation as Simple as abc

Wondering what those new icons on the CIG software pages are? CIG is slowly rolling out citation information for its repository holdings. Click on these icons to access the citation information for each software packages and their metadata. Navigate directly to the *attribution builder for citation* home page by clicking on the building block logo above. Remember $a \times b = c$ and do not forget to cite. Give your fellow researchers credit for their hard work!

2017-2018 Webinar Series

This year our series focuses on *Geodynamics in the Classroom*. Webinars focus on approaches to teach geodynamical modeling and the tools and methods used. Our first speaker is Taras Geryas, ETH Zurich who uses MatLab in the classroom. Check our [website](#) for talk details as the date approaches.

2017 CDM

The 2017 Crustal Deformation Modeling Workshop was held June 26–30 at Colorado School of Mines. This continued a series of workshops that began in 2002. 64 participants came together for the week for a combination of PyLith tutorials, science presentations, and discussions. Increasingly we see faculty who participated as graduate students or postdocs in earlier workshops send their own students and postdocs to this workshop. Nearly 80% of the participants had not participated in a previous Crustal Deformation Modeling workshop or PyLith tutorial. Thanks to co-sponsor SCEC and to the workshop organizers Brad Aagaard, Matt Knepley, Eric Lindsey, and Jeanne Sauber. [[workshop report](#)] [[presentations](#)] [[tutorial recordings](#)]

2017 ASPECT Hackathon

To further the development of the mantle convection code ASPECT and to grow and foster its user community, 21 users and developers of ASPECT worked side-by-side over a 10 day period this spring in Blue Ridge, Georgia. During the course of the hackathon, every participant contributed source code to the project. Together, users and developers added a total of almost 6000 lines of code, arising from 187 individual contributions, and including 40 new tests. These numbers are a significant increase over the previous hackathon. Many thanks to workshop organizers Wolfgang Bangerth, Timo Heister, Julianne Dannberg, and Rene Gassmoeller. [[summary](#)] [[full report](#)]

2017 CIG Business Meeting

CIG will hold its Annual Business Meeting on Monday, December 11 at the Hilton Garden Inn New Orleans Convention Center. The Hilton Garden Inn is just one block west of the convention center. The reception begins at 6pm followed by the business meeting at 7pm. Light hors d'oeuvres will be served. Results from the 2017 EC and SSC elections will be announced. See our website for more information and directions. [[more info](#)]

New AGU Fellows

Congratulations to Louis Moresi our newest American Geophysical Union (AGU) Fellow. Each year AGU elects as Fellows members whose visionary leadership and scientific excellence have fundamentally advanced research in their respective fields. The 61 2017 AGU Fellows will be honored at the upcoming 2017 Fall Meeting in New Orleans. [[press release](#)]