


## 2010 AGU Fall Meeting

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ID# ED44A-02

Location: 102 (Moscone South)

Time of Presentation: Dec 16 4:15 PM - 4:30 PM

### **Hot or Not? Using Seismic Observations of Mantle Discontinuities to Examine Thermal and Chemical Variability in the Earth (*Invited*)**

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Introductory geoscience textbooks often depict Earth's mantle as a predictable, relatively uniform place occasionally interrupted with subducting slabs and upwelling plumes. These variations from the norm are generally discussed in terms of temperature, if at all, and discussions of chemical variations are often omitted. Seismic observations of variations in mantle discontinuity structure can be brought into the undergraduate geoscience curriculum at a variety of entry points to emphasize the joint influence of both temperature and chemistry in a variety of tectonic settings. Strategies for incorporating primary literature and deep Earth research into undergraduate courses will be discussed using a sample activity comparing mineral phase changes and mantle discontinuities beneath both ocean islands and ridges.

#### **Contact Information**

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