## Visualization for Geo Sciences <u>David Pugmire (ORNL)</u>

## VisIt and ADIOS

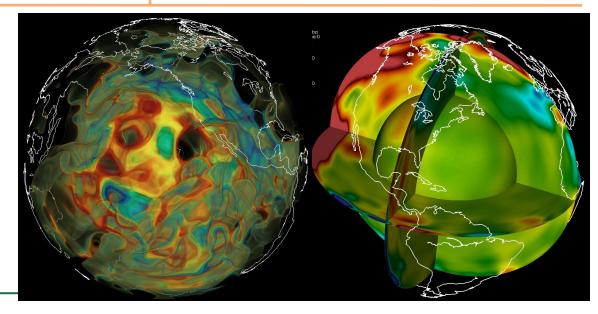
- Visit: Large data parallel visualization tool
  - Rich set of visualization and analysis plots and operations
  - Plug-in API allows for easy extension
- ADIOS: adaptable I/O framework
  - Provides portable, fast, scalable, easy-touse, metadata rich output with a simple API

## Result/Impact

- Developed a parallel SpecFM3D ADIOS reader for their data
- Providing comparative analysis with the mesh interpolation capability in Visit
- Parallel analysis and visualization possible now on whole earth geo science simulations

## **Future Directions**

- Development of feature detection and comparative analysis algorithms
- Development of geo-science centric rendering and analysis techniques
- ADIOS Visualization Schema for post processing needs





Visualization of data from SpecFM3D. Simulation by J. Tromp (Princeton)