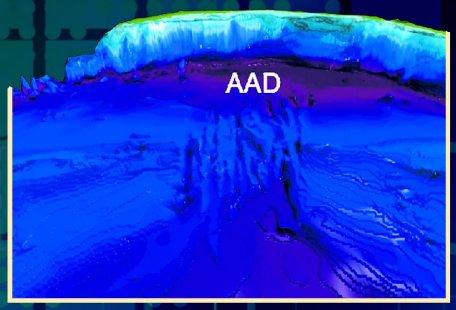
# Geostream Surge Theory


Plate Tectonic Interpretation of the Australian-Antarctic Discordance as a Cool Spot with Less Mantle Upwelling

**Significance:**
This project should lead to an enhanced ability to model and predict the El Niño phenomenon and other climatic changes.

The project uses a new theory, Surge Tectonics, to interpret seafloor geomorphology and the underlying geodynamics. This is important because the new interpretation leads to new conclusions about tectonic modulation of short-term climate changes like the El Niño phenomenon. The advantages of visualizing the geodynamics is to make the differences in interpretation between theories easier to comprehend for people who are not familiar with tectonic interpretations of seafloor geomorphology or tectonic theories. The complex terminology used in tectonic discussions is more clearly conveyed in a visual model.The size of the problem is global, and global modeling would be the eventual goal. The animations were created using Alias|Wavefront's Maya 3.0 software.




Bathymetry Image of the Australian-Antarctic Discordance Looking from the South Towards Australia, NAVOCEANO DBDB-5 min grid

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**Michael B. Adams**

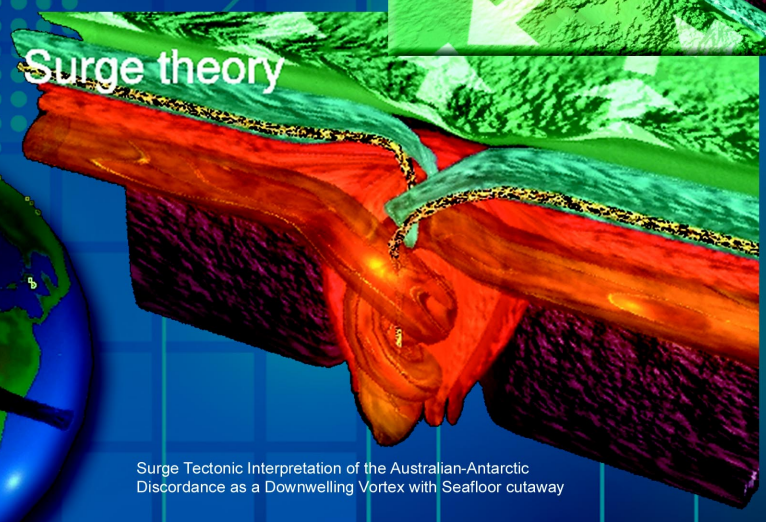
**Agencies Involved:**
Naval Oceanographic Office

Logicon

DoD High Performance Computing Modernization Program

**HPC Computer Resource:**
SGI Computers at NAVO MSRC

Surge Tectonic Interpretation of the Australian-Antarctic Discordance as a Downwelling Vortex with Seafloor


Global View of Vortex Interconnections at the Outer Core

Surge Tectonic Interpretation of the Australian-Antarctic Discordance as a Downwelling Vortex with Seafloor cutaway