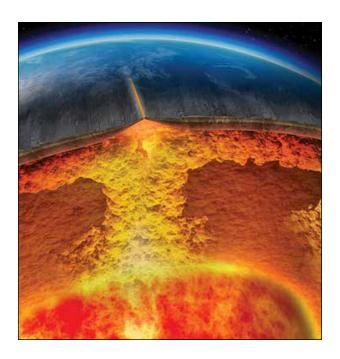
# PLATE CLIMATOLOGY THEORY

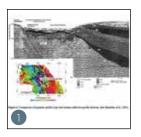
························.J.E. Kamis and P.E. Kamis··············



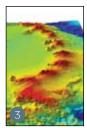
The overall theory contends that both ancient and present day periods of active earth Tectonics and Volcanism can be correlated to and are the root cause of many periods of active climate change and climate related events. Changes in the intensity or frequency of these geological forces has lead to and is currently still altering the amount of heat, fluid and chemicals introduced into both the oceans and atmosphere. This effect has been largely hidden from scientific investigation because it occurred/occurs primarily from two under explored/under monitored regions; deep ocean seafloors and beneath polar ice caps. These geological forces have caused, or have had and are still having a direct, measurable, and very significant affect on many climate related events such as but not limited to: El Nino's, sub-glacial melting in Antarctica, sub-ice sheet melting in the Arctic Ocean, plankton blooms, coral reefs, and major ocean currents. To describe this new theory, the term "Plate Climatology" is proposed.

## HOW GEOLOGICAL FORCES AFFECT POLAR REGIONS

## **ANTARCTICA**











The West Antarctic Rift Is Currently Emitting Substantial Heat and Chemically Charged Fluid

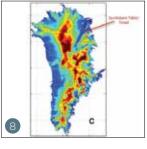
- Extensive and Interconnected Sub-Glacial Freshwater System Exists
- Sub-Glacial Hot Springs
- Sub-Glacial Plankton Blooms
- Mount Erebus has Come to Life
- North Ocean Extension of Rift has Active Seamounts
- Only Glaciers Overlying Rift are Melting
- Ice Cores in West Antarctic Rift Show Ash Layers of Recent Thermal Activity/Eruptions

Entire Ice Sheet has Expanded for 35 Years Except Selected Regions Above the Rift, Which Conflicts with an Atmospheric Global Warming Origin of Local Glacial Melting

## **ARCTIC OCEAN**





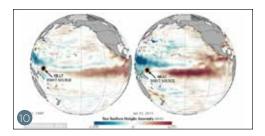


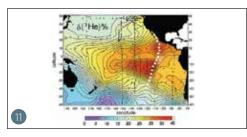


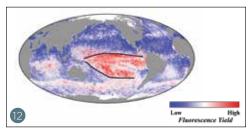
- Mid-Arctic Ocean Rift Pulses Heat, Fluid, and Gas Melts Basal Ice Sheet
- Although Gakkel Ridge is not Overly Seismically Active it Contains Active Hydrothermal Vents
- 1999-2000 Gakkel Ridge Heat, Fluid, and volcanic extrusion Caused 2000-2007 Accelerated Arctic Ocean Ice Sheet Melt Rate
- Gakkel Ridge Seismicity Resulted in 1000 Mile Methane Pulse
- Rift System Heat and Chemically Charged Flow is Affecting Greenland and Svalbard Islands
- Arctic Ocean Cooling Except Above Gakkel Ridge
- Recently Observed Mega-Turbulence May be from Geological Heat and Fluid Flow
- Recently Observed Basal Ice Sheet Plankton may be from Geological Heat and Fluid Flow
- Clearly Changes in Ice Sheet Extent Not Related to Just Atmospheric Trends

## HOW GEOLOGICAL FORCES AFFECT "ENSO"

### EL NINO'S

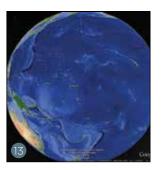


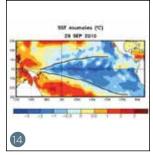




- Originate at Fixed / Non-Moving Point Source
- All El Nino's Originate at Identical Fixed/Non-Moving Point Source
- Point Source is Known Geologically Active Area
- Point Source is Known Deep Heat Source Area
- No Relationship to Modern or Historic Atmospheric temperature Trends
- SST Anomalies are Unique
- SST Anomalies Infer Intense/Concentrated Energy Source
- Hydrothermal Vents are Mini-Ocean Analogs
- Continental Volcanic Eruptions Are Land Analogs
- No El Nino's at Other Locations
- HE Concentration Alters at Point Source
- Plankton Blooms Originate at Point source
- Mega-Plumes are Known to Exist
- La Nina's Originate at Identical Point Source
- High Fluid Flow from Geological Source is a Key Factor

## LA NINA'S





- Originate at El Nino Fixed/ Non-Moving Point Source
- Both El Nino's and La Nina's Caused by Here-to-Fore Undefined Major Geological Feature Here Proposed - Deep Ocean Mega-Fluid Flow System (DOMFFS)
- Same Geological Heat and Fluid Pulse as El Nino, and Represent the Non-Heated Seawater Phase of a DOMFFS Pulse
- DOMFFS are Long-Lasting, Mega Fluid Flow Systems

## **MEGAPLUMES**







- Prove That Geological Induced Heat and Fluid Flow can Quickly Alter the Entire Ocean Column
- Demonstrate Deep Ocean Forces are a Greatly Under-appreciated Ocean/Climate Driver
- Demonstrate That Heat and Fluid Flow from Rift and Rift Associated Geological Features Have Significant Rate, Duration, and Magnitude

## **CREDITS**

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