INTEGRATED EARTH DATA APPLICATIONS
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Data Management Plan

Primary Investigator: William W. Chadwick
Institution: Oregon State University
Project: Collaborative Research: Event Response to an Eruption at Axial Seamount (RAPID)
Co-PIs: Dave Butterfield, Jim Holden
NSF Division: OCE **Solicitation Info:** Marine Geology & Geophysics and Biological Oceanography
Submission Date: 06/01/2015

Overview: This RAPID proposal is mainly to add 3 days to a research cruise to Axial Seamount that is already funded (award OCE-1356839) and scheduled on R/V Thompson in August 2015. This proposal would enable event response activities related to an eruption at Axial Seamount that began on April 24, 2015.

Data description: The data we will collect as part of this event response includes: (1) EM302 multibeam sonar bathymetry, (2) CTD data, (3) Sentry AUV CTD and multibeam data, (4) rock samples (if a new lava flow is located and sampled), and (5) vent fluid and microbial samples.

Description of existing data and samples: New data and samples will be compared to previous time-series data.

Data analysis summary: Multibeam data will be processed, cleaned, gridded and compared with earlier datasets. CTD data will look for temperature, optical, and chemical anomalies. Rock samples will be used for radiometric dating and for geochemistry. Vent fluid samples will be analyzed for chemistry and microbial samples will be sequenced for DNA/RNA.

Includes field work? Yes
Description of field work: If funded, this will add 3 days onto an R/V Thompson cruise in August 2015.

Expected data product #1
Data type: Processed Data
Responsible investigator: William W. Chadwick
Product description: Multibeam bathymetry
Intended repository: MGDS
Timeline for data release: Sixty days after acquisition/analysis

Expected data product #2
Data type: Observational
Responsible investigator: William W. Chadwick
Product description: Water Column CTDO Data. We expect that this 'underway data' collected using the ship's CTD system with light transmission and oxygen sensors will be made available immediately after the cruise through NSF's Rolling Deck to Repository system, and also will be archived at NODC.
Intended repository: NODC
Timeline for data release: Immediate Release

Expected data product #3

Data type: Observational
Responsible investigator: David Butterfield
Product description: ROV Sample Metadata. A table of all chemistry and microbiology samples collected by ROV during the research cruise, with location, temperature, sample type, and custody information.
Intended repository: BCO-DMO
Timeline for data release: Sixty days after acquisition/analysis

Expected data product #4
Data type: Observational
Responsible investigator: David Butterfield
Product description: Water column sample metadata. A table of all chemistry and biology samples taken with the ship's CTD rosette, including location, depth, sample type, and custody information.
Intended repository: BCO-DMO
Timeline for data release: Sixty days after acquisition/analysis

Expected data product #5
Data type: Processed Data
Responsible investigator: David Butterfield
Product description: Water column mooring MAPR data. After mooring recovery (2016 or 2017), MAPR data will be downloaded and processed. After processing and quality control, CSV files of time-series pressure-temperture-light attenuation-oxidation/reduction potential are produced.
Intended repository: BCO-DMO
Timeline for data release: Two Years from acquisition/analysis

Expected data product #6
Data type: Observational
Responsible investigator: Ken Rubin
Product description: ROV manipulator grabs of lava rock samples. Samples will be archived at U. Hawaii. Samples will be registered with IGSNs and data/metadata will be submitted to SESAR.
Intended repository: SESAR
Timeline for data release: Sixty days after acquisition/analysis