NSF Report MSROC December

Dr. Gail Christeson Division of Ocean Sciences Marine Geology and Geophysics

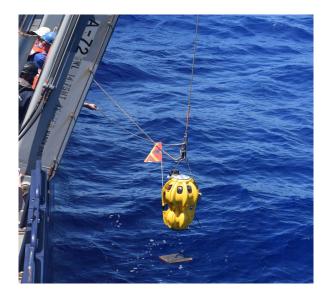
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Brief BIO: Gail Christeson

- BS Texas A&M, PhD MIT/WHOI Joint Program
- Research scientist University of Texas ~28 years
- Research Background: Study crustal structure using coincident seismic reflection and refraction data, integration with drilling data where possible
- Joined NSF as a Program Director in December 2021









Update on NSF Ocean Sciences & MGG

 New Division Director Jim McManus started July 2022. Research background marine chemistry, marine sediments.

• MGG

- Debbie Smith retired May 2022
- Active search for a program director with focus on paleoclimate
- Program Directors:
 - $\,\circ\,$ Gail Christeson geophysics
 - Kevin Johnson petrology, hydrothermal
 - Dan McCorkle paleoclimate, paleoceanography
 - \odot Joe Carlin marine sediments



NSF Marine Geophysics FY22, FY23

Example funded field projects

- Seismic active source (includes high-res) projects: Carolina Trough/Blake Plateau, North Carolina landslides
- Seismic broadband projects: Galapagos triple junction, Cocos Plate, South Pacific subduction initiation
- Seafloor geodesy: Cascadia/Alaska community experiment, North Island NZ, Axial Seamount
- Magnetotelluric: Pacific Haxby lineations
- Magnetics: Jurassic Quiet Zone
- Vents: Axial Seamount (hydrothermal), Puget Sound (methane)

NSF Marine Geophysics FY22, FY23

Example non-field projects

- Vp/Vs model for young oceanic crust from OBS data
- Oceanic plateau formation from magnetic anomalies and machine learning
- Cascadia subduction zone integrated analyses from MCS data

Trends

- Seafloor geodesy (community pool of 48 transponders came online in FY22)
- Multidisciplinary seismic/EM/dredging



Regional Framework Plan

- MSROC establishes a regional plan for operations in order to maximize efficient use of marine seismic facilities (MSROC Terms of Reference)
- Maps out areas of operation several years in advance based on community interest and input
- NSF is accepting proposals to use the R/V Langseth in the <u>Atlantic</u> <u>and adjacent seas</u> in the 2022-2024 timeframe.
- Final schedules are determined collaboratively between the PIs, operators, UNOLS, environmental compliance authorities, and NSF.



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