DeSSC Highlights December 10, 2017 DeSSC Meeting



DeSSC membership

Current members

Craig Dawe (*MBARI*) Amanda Demopoulos (*USGS*) Dave Emerson (*Bigelow*) Brian Glazer (*Univ. Hawaii*) Nick Hayman (*UTIG*) Laura Lapham (*Univ. Maryland*) Anna-Louise Reysenbach, Chair (*Portland State U*) Cindy Van Dover (*Duke*) Scott White (*Univ, SC*)

Peter Girguis, (*ex-officio, Harvard*) Rob Munier (*ex-officio, WHOI*) Tim Shank (*ex-officio, WHOI*) Adam Soule (*ex-officio, WHOI*)

Select Highlights from 2017:

- Telepresence white paper (for Deep-sea Research)-Chris
 German lead
- Environmental monitoring for seabed mining... workshop ideas, time critical- Cindy van Dover lead
- Based on continued success---AGU, New Orleans Dec 9, New Users Program (32)
 - CSTW Successes from 2016 Atlantis/Alvin/Telepresence Expedition
 - Trish Gregg invitation for new users to apply for response cruise
 - Future NDSF Boot camp
- Annual DeSSC meeting at AGU, Dec 10. New- breakout session
 - "DESCEND to ACTION"

DESCEND 2 ACTION

- **Goal:** To build on the DESCEND2 report with timely actionable and new directions for future interdisciplinary programs in deep-sea research.
- Anticipated Outcomes: Stimulate and enable interdisciplinary collaborations and networks, gain insights into challenging problems in deep-sea research that we can rally around, identify steps (e.g., a series of workshops, a Research Coordination Network) for our community, identify heros willing and able to advocate for new opportunities.

The Grand Challenge

- You have unlimited resources; build an interdisciplinary team to address and implement an ambitious outstanding question (or problem) in deepsea science (i.e. don't be constrained by current capabilities!, think convergence).
- Each breakout group, about 10 people
 - 1 designated Chair... moves the discussion on, and keeps on track
 - Co-chair (a new user) to assist chair
 - Assign a rapporteur in your group. Rapporteur takes notes, and reports back in plenary

Example type questions:

- what is the geological, geophysical and biological connectivity, extent and dynamics of globally distributed seamounts?
- Questions about the poorly accessed polar regions, the biological and geological connectivity between arc volcanos and backarc basins etc etc.?
- What are the expressions of deeper earth volatile (esp. Carbon) exchange with the oceans and atmosphere that can be quantified with deep submergence?
- hadal environments?
- Can we develop an integrated dynamic model of the chemical, biological and geological interactions along deep ocean seamounts?