ALVIN 6500m
Science Verification Expedition

National Deep Submergence Facility

Woods Hole Oceanographic Institution
SCIENCE VERIFICATION OBJECTIVES

1. Ensure operations of existing sub/science systems, validate and refine new systems, test abyssal con-ops, provide documentation and guidance to user community.

2. Include new users (e.g., early career) and regional researchers in science verification activities.

3. Evaluate revised and novel technologies that enhance abyssal science operations.

Rosa León Zayas
Willamette University

Emily Chin
Scripps Institute of Oceanography
SVE DIVE LOCATIONS

WOODS HOLE
SVE DIVE LOCATIONS

BERMUDA

PUERTO RICO TRENCH

MID-CAYMAN SPREADING CENTER
SVE DIVE LOCATIONS

PUERTO RICO TRENCH
SVE DIVE LOCATIONS

MID-CAYMAN SPREADING CENTER
SVE ACTIVITIES

ALVIN SYSTEMS VALIDATION

• Video systems
• In-hull event logging
• Instrument integration
• Data offload, processing, and delivery
• Propulsion
• Deep navigation

CONOPS VALIDATION

• Descent/ascent speeds
• Extended dive days
• Operator/science/crew fatigue

*TECHNOLOGY TESTING

• Sub-to-ship data/image comms
• Optical comms
• Pressure-tolerant gas-tight samplers
• Orpheus smart-lander

*TBD based on readiness and available funds
SVE PARTICIPATION

Stand-by for announcement of request for expressions of interest for volunteer participation (through UNOLS) in early 2021.

Anticipate 10-12 established Alvin users and 10-12 new users.

Questions?