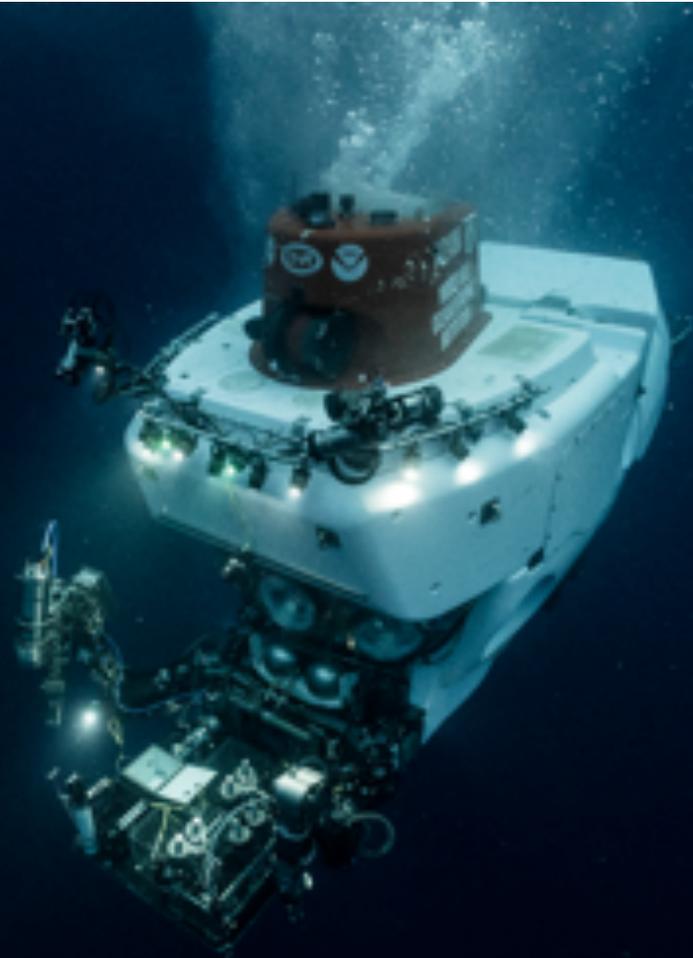


ALVIN 6500m

Science Verification Expedition



NDSF 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.



Rosa León Zayas
Willamette University



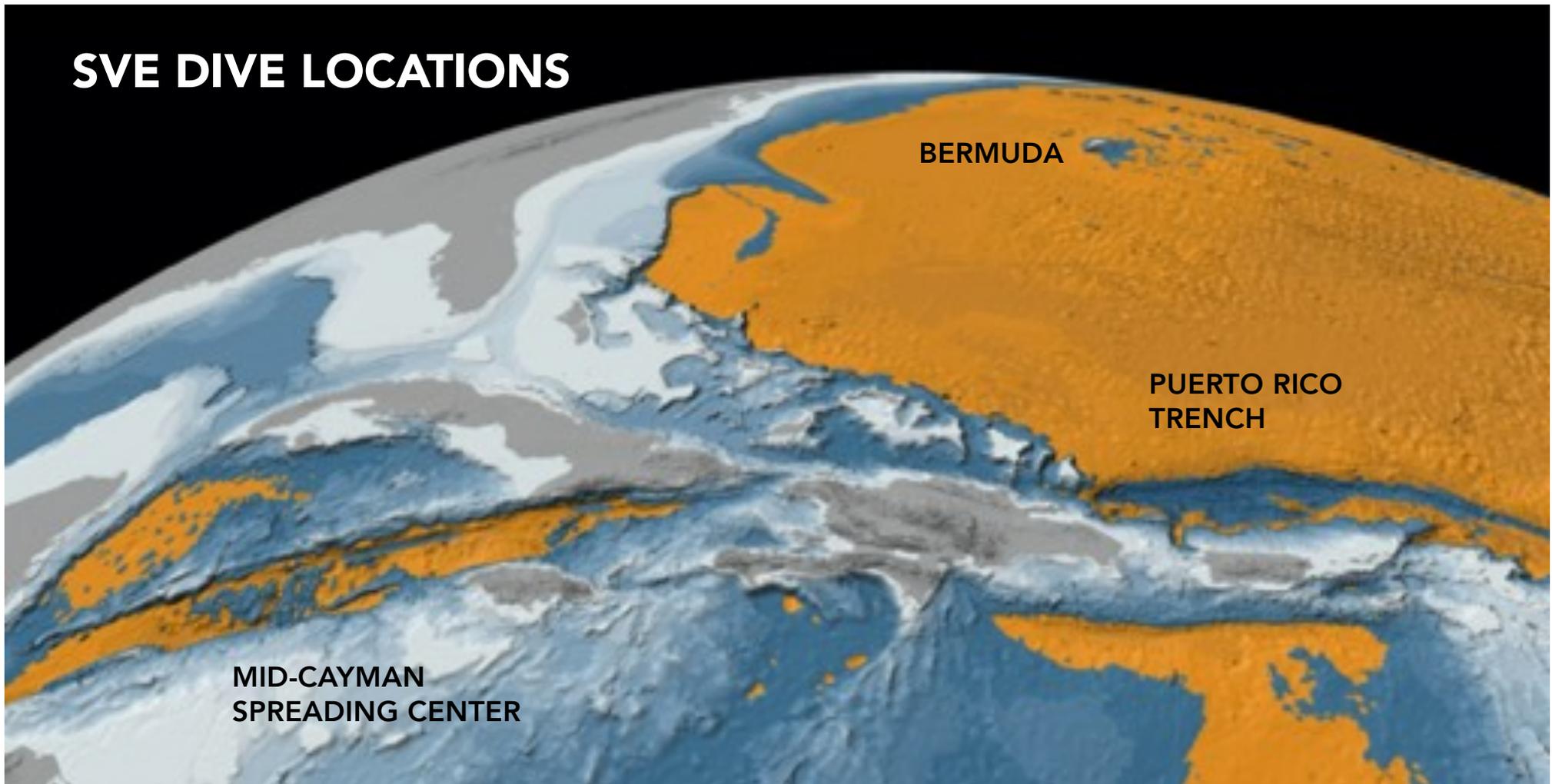
Emily Chin
Scripps Institute of
Oceanography

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

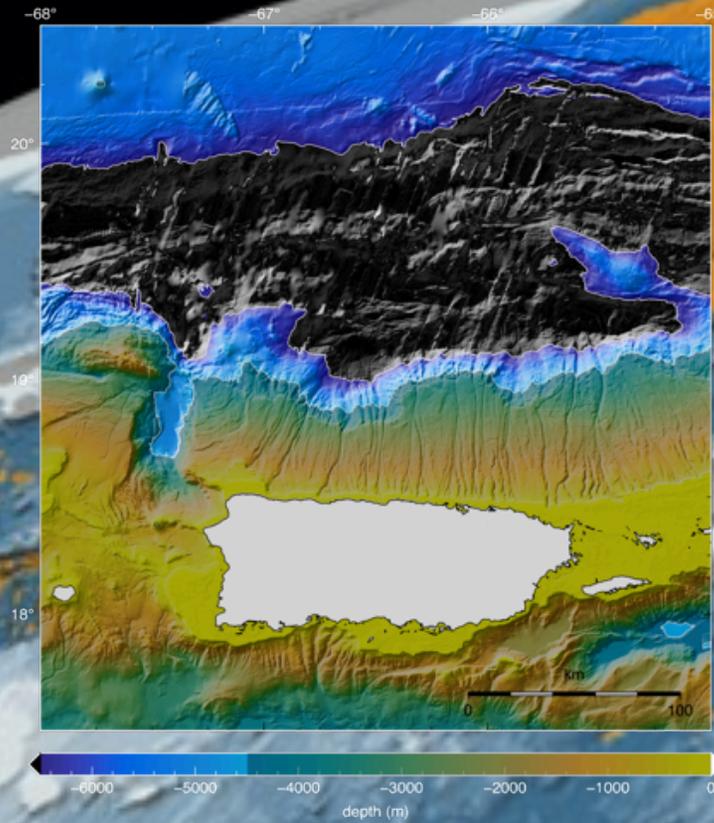
SVE DIVE LOCATIONS

↑
WOODS HOLE

SVE DIVE LOCATIONS

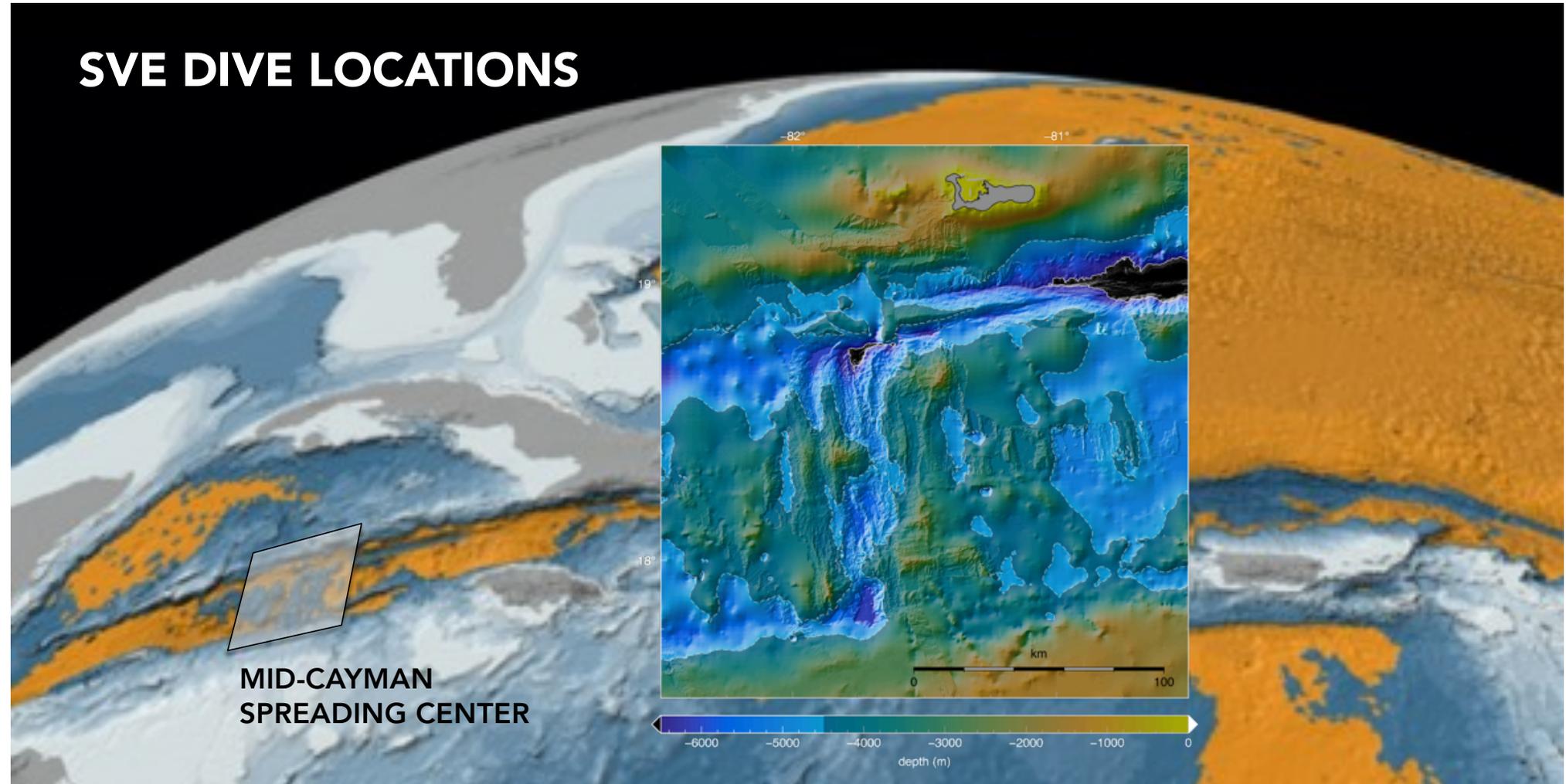


SVE DIVE LOCATIONS



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?