6500m Alvin Science Verification Expedition

Update

Adam Soule | URI-GSO | Ocean Exploration Cooperative Institute

Alvin

Organizing Team

Adam Soule

Anna-Louise Reysenbach

Jeff Seewald

Dorsey Wanless

Jeff Marlow

Tim Shank

Rosa-Leon Zayas (new user)

Objectives

1. Test critical science systems.
2. Provide future users with first-hand experience.
3. Produce documentation (e.g., Alvin Cruise Planning Guide)
4. Promote diversity in deep sea science.
5. Conduct opportunistic science.

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Application Process

- Application form developed in collaboration with UNOLS office
- 106 completed applications (26 experienced users, 68 new users, 10 ‘other’)
- Review process underway by organizing team
- At-sea participants (total 16 to 22, COVID-dependent) will be divided amongst experienced and new users.
- Spots reserved for PR and Cayman scientists

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Cruise Plan

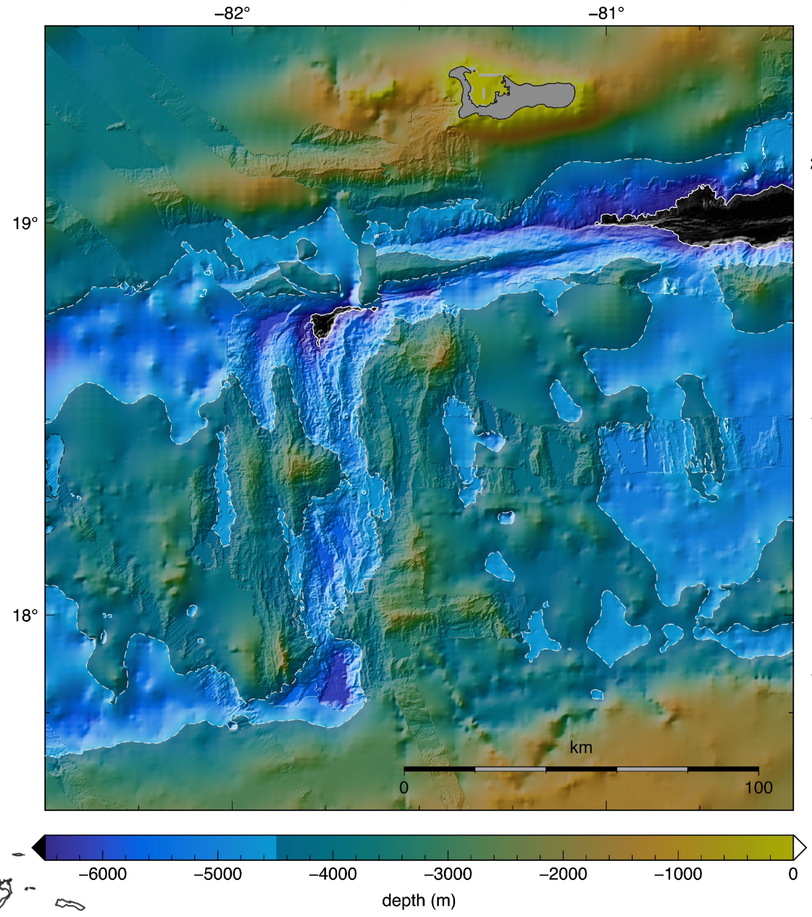
Morehead City, NC (October 28)

Mid-Cayman SC

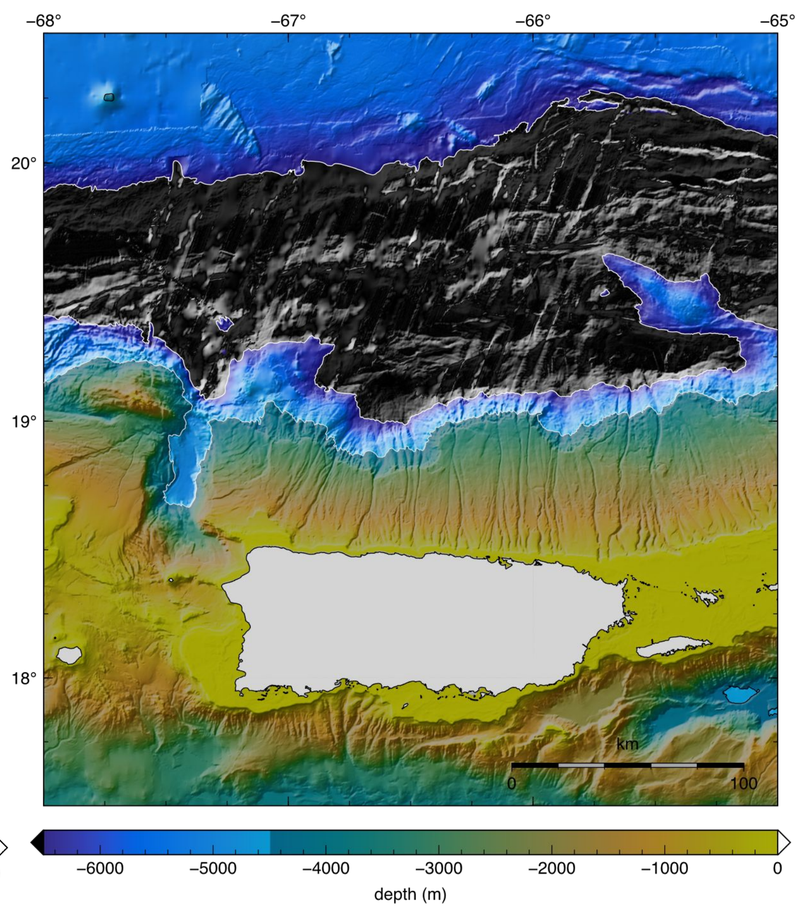
PR Trench

San Juan, Puerto Rico (October 07)

Mid-Cayman SC



PR Trench



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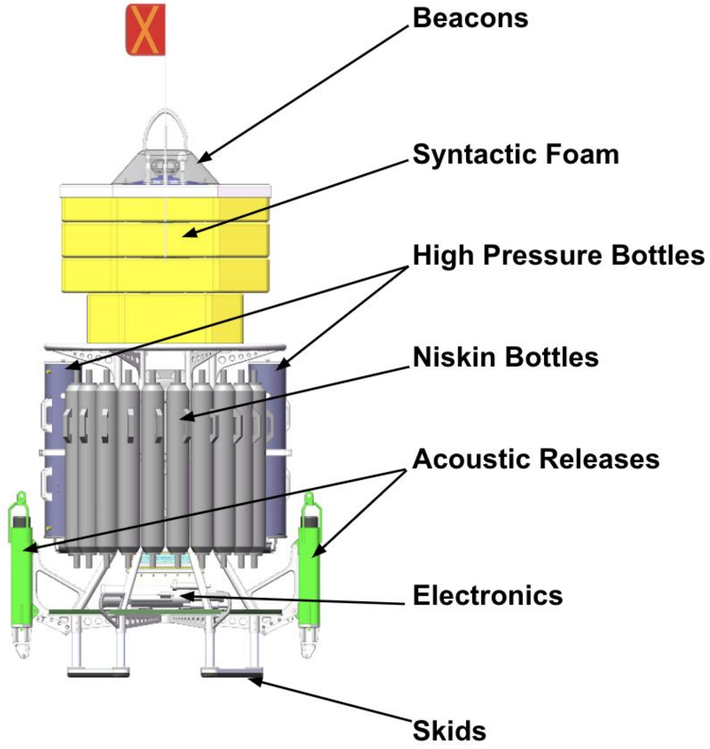
Tools & Technology

Alvin systems to be tested:

Imaging, Navigation, Event Logging, Data Transfer, Sample collection/storage, Dive Ops (extended day).

Augmenting technology:

Deep Autonomous Profiler (DAP) CTD and lander will extend observations and sampling to hadal depths (eDNA, passive acoustics, time-lapse imaging)



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Remote Participation

- High ship-to-shore bandwidth
- Remote participation in post-dive and dive-planning meetings
- Potential live-stream of in-dive Alvin data + image snapshots
- Remote engagement with classrooms, science centers, media

Education and media engagement strategy is TBD, but many of the applicants expressed an interest in contributing.

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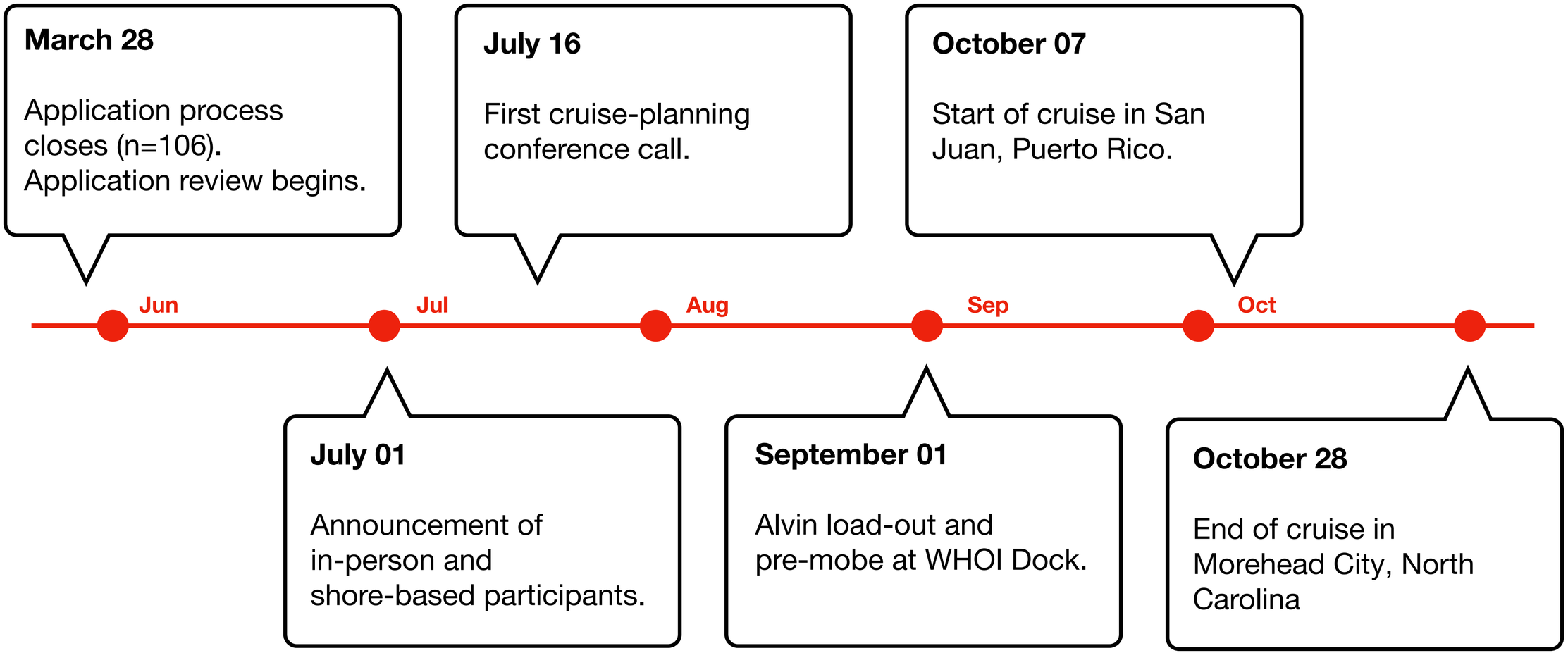
Timeline