

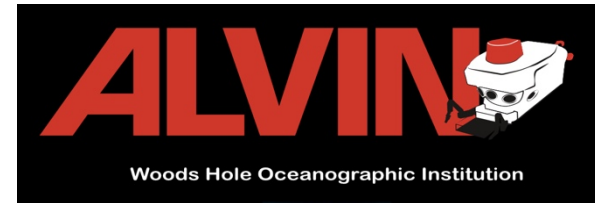
# NDSF Operator's Report

## NDSF Vehicle Operations Summary

**NDSF** NATIONAL  
DEEP SUBMERGENCE  
FACILITY



# Alvin Operations Summary



## 5 cruises (1 underway)

*Alvin/Sentry* engineering  
Popping Rocks  
SAB Deepwater  
Costa Rica Seeps  
Guaymas Basin

## 107 total operating days

14 Engineering cruise  
34 Kurz cruise  
18 Adams cruise  
25 Cordes cruise  
16 Teske cruise

## 69 total dives

9 Engineering (929 – 4,402 m)  
18 Kurz (2,917 – 3,937m)  
11 Adams (403 – 2,169 m)  
20 Cordes (407 – 2,200 m)  
11 Teske (2,007 – 2,016 m)



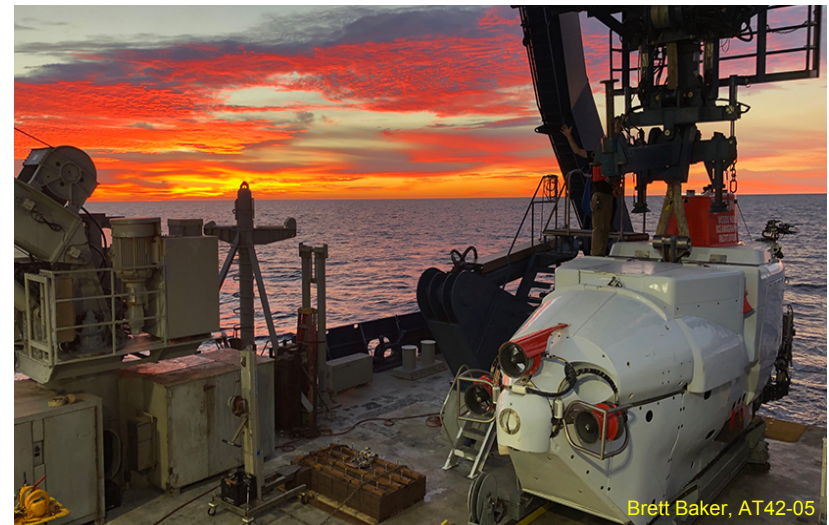
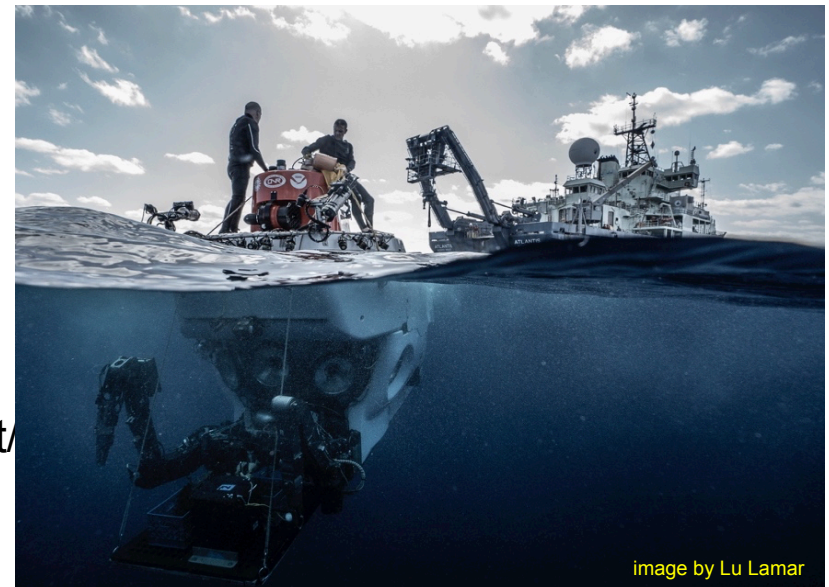
image by Lu Lamar

536 hours submerged  
408 hours on bottom  
6:00 hours average bottom time per dive



# Alvin Highlights

- New EL Todd Litke
- First solo dive – Danik Forsman
- Successfully implemented reduction in ascent/descent transit times
- Superb bottom times – avg > 7 hours
- Executed draft procedure for Alvin/AUV joint ops
- Challenging operations in Gulf Stream – demonstrate unique attributes of HOVs
- First test of new Alvin thruster (to full cert depth)
- New computers and touch screen interfaces
- Testing of DSPL 4K video camera



# JASON Operations Summary

- **75 dives over 9 cruises**
  - Brothers Volcano 5 dives (J2-1037 – 1041)
  - Jason Engineering I dive (J2-1042)
  - OOI\_RCA **58 dives** (J2-1043-1110)
  - Nooner Axial (J2-1104-1105)
  - Lang Lost City (J2-1106-1112)



Photos by Erik Olsen

## Bottom hrs:

- **Longest: 49.7 hrs**
- **Vessels used:** *Thompson, Revelle, Kilo Moana, and Atlantis*

# JASON Highlights

- New Control Vans received great feedback
- JASON program convened “Science ROV Cable Torque Workshop”
- Engineering Cruise successfully established single-body operation procedure
- Great success on the OOI-RCA cruises



Photo by Erik Olsen





# Sentry Operations Summary

- **103 operating days (~ Nov.28)**

- **6 cruises (1 underway)**

*Engineering, PoppingRocks2,  
Technology, Costa Rica seep,  
Guaymas, EPR 9N*

- **55 dives (~ Nov.28)**

- Max 30.5 hrs mapping survey

- **Vessels used:** *Atlantis, Atlantic Explorer*

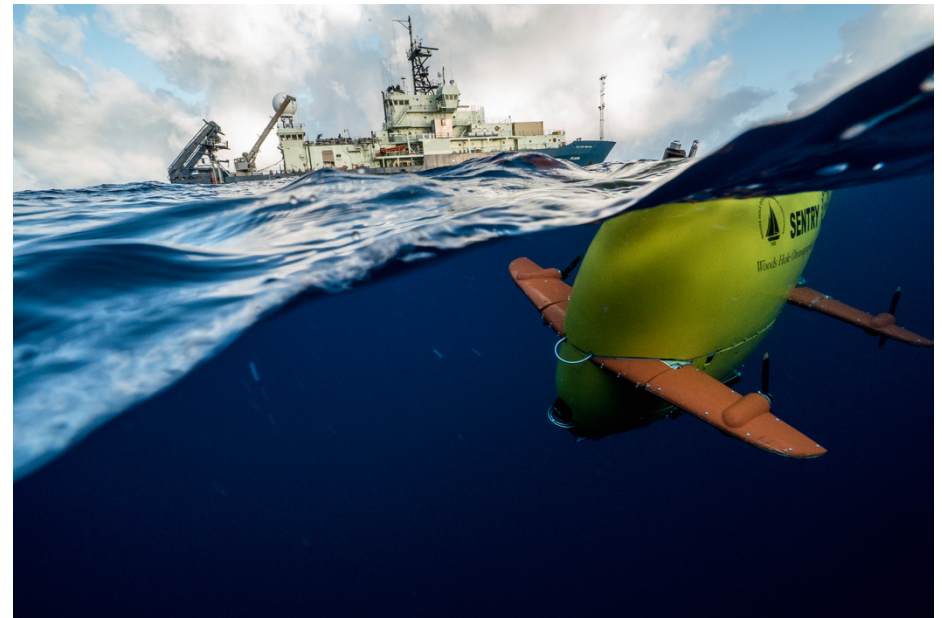
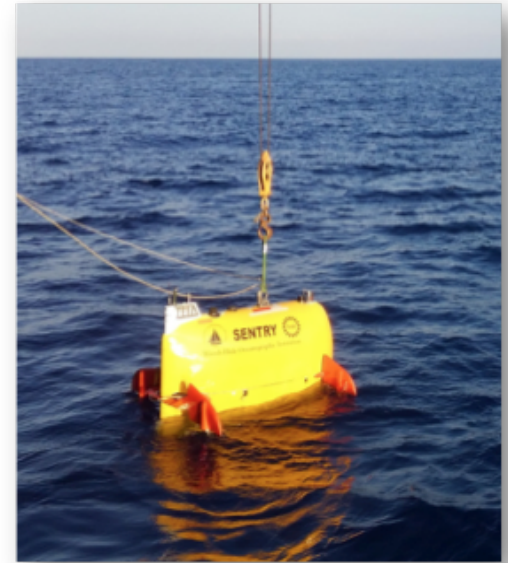


Photo by Lu Lamar

# Sentry Highlights

## AUV Sentry 500<sup>th</sup> dive on Oct. 17<sup>th</sup>!

- ROS software tested and qualified for science operations
- Syntactic foam (50 lb science payload increase)
- Improved surface communications link between ship and Sentry with new tail fin.
- Waveglider integration into Operations program
- Concurrent operations with Alvin
- Sidescan Processing software upgrade
- Multi-altitude water column chemical mapping



## Cross-platform highlights

- HOV *Alvin* - AUV *Sentry* cruise **live broadcast** from the R/V *Atlantis* top lab


**When:** Tuesday, Dec. 11  
Wednesday, Dec. 12  
Thursday, Dec. 13  
from 2:30 to 3:30 EST each day

**Where:** AGU booth in the W. E. Washington Convention Center, Hall D.

- R/V *Atlantis*, HOV *Alvin*, AUV *Sentry* Open House

**When:** Saturday, December 22<sup>nd</sup> 09:30-14:30 PST

**Where:** Terminal B Pier, San Diego



**DEEP-SEA EXPLORATION**  
IN THE 21<sup>ST</sup> CENTURY

**Tour the research vessel *Atlantis***

**Dive into Ocean Exploration**

- Tour the 274-foot research vessel *Atlantis*
- Meet *Alvin*, a deep-diving submersible, and the autonomous robot *Sentry*
- Chat with young scientists beginning careers in ocean science and engineering
- Learn what it means to be a modern-day explorer

**SAT. Dec. 22 2018**  
**9:30 AM – 2:30 PM PST**  
B Street Pier, 1140 N. Harbor Drive, San Diego, CA 92101

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Reserve your ticket for the R/V *Atlantis* & *Alvin* tour at [atlantis-tour.eventbrite.com](http://atlantis-tour.eventbrite.com)

ORGANIZERS: National Science Foundation, Office of Naval Research, Woods Hole Oceanographic Institution, Scripps Institution of Oceanography & Birch Aquarium at Scripps, National Oceanic and Atmospheric Administration, University-National Oceanographic Laboratory System, American Geophysical Union

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