



Sentry Operations

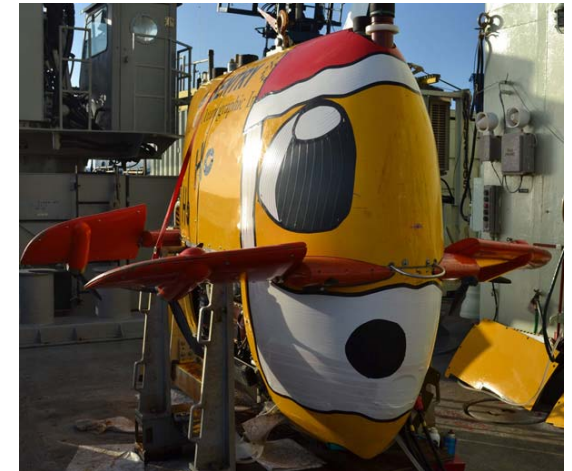
- **175 operating days**
- **6 cruises completed**
Hawaii, Gulf of Mexico, JdF
- **60 dives, 733 hrs**
- **Longest: 40 hrs**
- **Average: 12 hrs**
- **1,313 km of survey**
- **Vessels used:** *KoK, Atlantis, Falkor, Sikuliaq*





Sentry Highlights

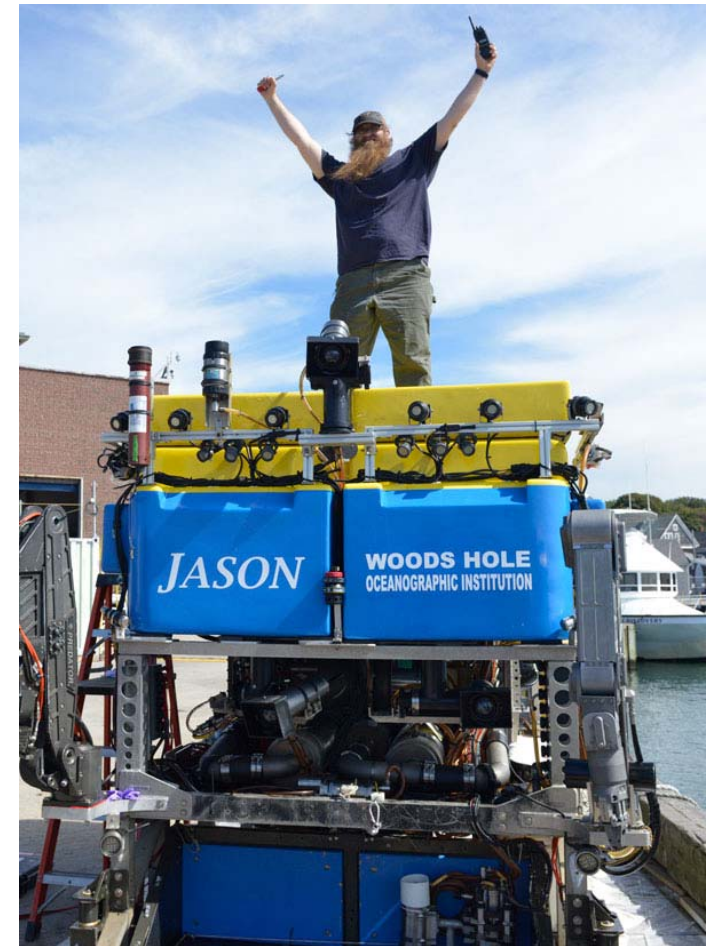
- Now four qualified ELs and a well-rounded staff overall
- New thrusters, multibeam, camera, and user interface, all fully online
- Several new data product pipelines and metadata improvements are underway
- Getting a two-stage battery upgrade for ~30% then ~50% more bottom time per cruise
- More than 70 dives since December 2013 DeSSC





Jason Operations

- **152 operating days**
- **6 cruises completed**
East Pacific Rise, North Pond/MAR, JdF, Hawaii
- **39 dives, 879 total hrs**
- **Longest: 104 hrs**
- **Average: 22.5 hrs**
- **Vessels used:** *Atlantis, Merian, Thompson, Brown, Kilo Moana*





Jason Highlights

Moyer -- Loihi

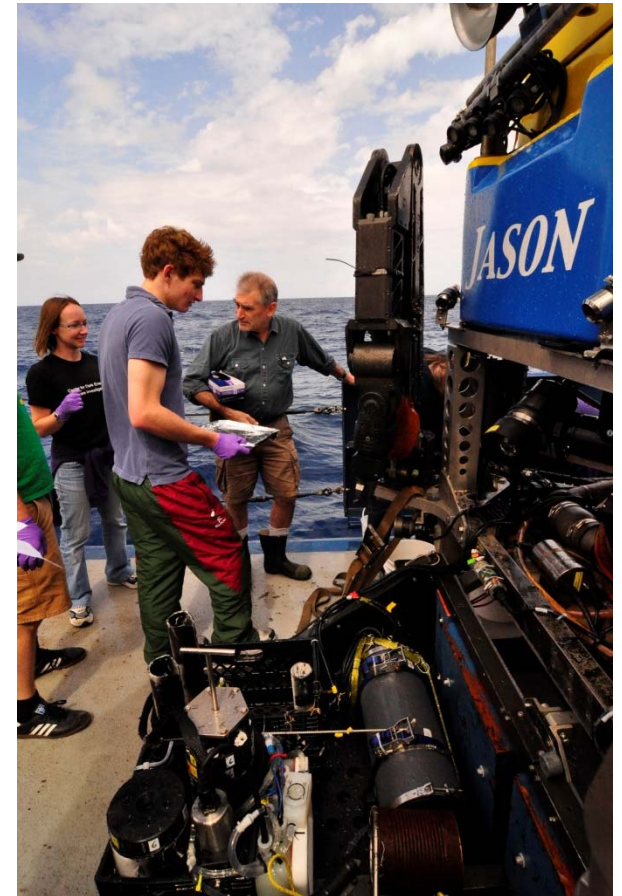
- “*Jason* operations exceeded expectations”
- “There was increased efficiency compared to similar operations in 2009, and bottom times were longer”

Seivert -- EPR

- 13 days of bottom time in 5 dives
- Fast turnaround
- Multidisciplinary ops, flexibility

Becker -- North Pond

- “All our proposed objectives were fully achieved”
- Successful ops on *Merian* with ship’s crane, *Jason* USBL
- Cork recovery work
- Multidisciplinary ops, flexibility





NDSF 2014 Vehicle Operations Summary

Alvin Operations



- **187 operating days**
- **8 cruises completed**
Gulf of Mexico, JdF, EPR
- **106 dives**
- **769 hrs submerged**
- **Longest: 9.5 hrs**
- **Average: 7.25 hrs**
- **Average bottom time: 5.0 hrs**
- **Dives lost:** *13 weather, 7 mechanical, 1 sickness*





NDSF 2014 Vehicle Operations Summary



Alvin Highlights

- *Alvin* 50th birthday
- Good response to the new sphere ergonomics
- Sub maneuverability has been greatly improved with the digital C/C system and the additional thruster forward
- Finished the qualification process for two pilots; will complete their boards by summer 2015
- Successful media events including UI and hosting film crews on two cruises
- Opportunity to operate and evaluate the sub in a range of weather environments

