



NDSF 2014 Vehicle Operations Summary

Alvin Operations



- **86 funded days**
- **4 cruises completed**
Gulf of Mexico
- **59 dives, 389 hrs submerged**
- **Longest: 9.5 hrs**
- **Average: 6.5 hrs**
- **Average bottom time: 4.92 hrs**
- **Dives lost:** *7 weather, 5 mechanical*





NDSF 2014 Vehicle Operations Summary

Alvin Highlights



- Ops Group and ship's crew re-train/qualify on the day-to-day science operations of the vehicle
- Evaluation of sub ergonomics, new window windows and science work area
- Opportunity to operate and evaluate the sub in a range of weather environments





NDSF 2014 Vehicle Operations Summary

Alvin Highlights (cont.)



- **Opportunity to evaluate overall battery capacity over a multi-cruise period**
- **Use of new digital propulsion control system in varied environments**
- **Use of new SubC still/HD video camera**
- **Command and Control software**



NDSF 2014 Vehicle Operations Summary

Jason Operations



- **64 funded days**
- **2 cruises completed**
East Pacific Rise, North Pond
- **15 dives, 505 total hrs**
- **Longest: 104 hrs**
- **Average: 40 hrs**
- **Data total: ~ 3.5 TB**
- **Vessels used:** *Atlantis, Maria S. Merian*





NDSF 2014 Vehicle Operations Summary

Jason Highlights



- **Seivert**
 - 13 days of bottom time in 5 dives
 - Fast turnaround
 - Multidisciplinary ops, flexibility
- **Edwards**
 - “All our proposed objectives were fully achieved”
 - Successful ops on *Merian*
 - Use of *Merian* crane
 - *Jason* USBL on *Merian*
 - Cork recovery work
 - Multidisciplinary ops, flexibility



NDSF 2014 Vehicle Operations Summary

Sentry Operations



- **80 funded days**
- **3 cruises completed**
Hawaii, Gulf of Mexico
- **42 dives, 468 hrs**
- **Longest: 20 hrs**
- **Average: 12 hrs**
- **871 km of survey**
- **Data total: ~ 7.9 TB**
- **Vessels used: *KoK, Atlantis***





NDSF 2014 Vehicle Operations Summary

Sentry Highlights



- **74 dives in the last 12 months**
- **Two perfect cruises – no major problems of any kind**
- **New camera**
- **120 cm flight**
- **New multibeam**
- **New thrusters**
- **New web site**
- **Substantially improved data structure and post-processing**
- **Microbial / larval sampling: AUV first, not just *Sentry* first**
- **Mapped part of Florida Escarpment – 1500 m tall, average slope > 70 deg**
- **191 days scheduled in 2014, including two private cruises**