Technical Issue: SBE 5T pumps NOT turning ON w/SBE 9+ UW unit
- Bench test – SBE 3 temp plugged into Cond1 Port (JB2)
- Deck unit LED Word Display, Channel F: '0010' OFF, '0011' ON
- Pump shorted – capacitors C2 and C4 had failed
- SBE 9+: burned transmitter board
  - CSAD card
  - Backplane PCB’s
  - Card holders

Faulty Pump Cable: diverted current to 9+ causing damage to internal 9+ components & pump capacitors.

RV Walton Smith:
- 155 days at Sea for 2017
- 110 Days on other Research Vessels
- Science Systems on 3 RCCL Vessels

The F.G. Walton Smith arriving in the port of Havana.
May 16, 2017
due from Vigor Industrial Nov 22
15 days at sea? student cruise scheduled after Christmas
no operational challenges; no operations
endless technical challenges
500 days in shipyard this weekend
Clifford A. Barnes

21 cruises, 106 days at sea
Rachel Carson

2003 Scottish build       72’ x 26’ x 14’ draft       14 day endurance       13 bunks
9 winches, including 2 slip ring winches       EK60, ES60, SL35 SONARs
  twin screw, twin propeller, bow thruster  wet & dry labs
r/v Atlantis

Woods Hole Oceanographic Institution

- Pito Deep - Jason
- Chile - Jason
- Costa Rica Seeps - Alvin & Sentry
- Rio Grand Rise
- Argentine Basin
- OOI Mooring Deployments
- Newport - East Pacific Rise
- Manzanillo
- Guaymas
- INSURV Inspection
- Alvin Navy Functional Inspection
1. Lifting bail hooked
2. ROV cleared water
3. Lifting bail broke at weld
4. Finding another lift point
Sally Ride Challenges

Transition to Operations
PSA Shipyard/DryDock
How do you Overboard?
- JASON
- OSU Piston Cores
- SSHD – Docking Head
Revelle Challenges

Super Busy!

JASON & more JASON

- 282 Sea Days '17
- Odd Over-boarding situations (see right)
- Participation in Pilot Expansion of 12-18Mbps+ Internet
  - Shared with multiple UNOLS Vessels
Flip Challenges

Heavy Use
78 Days in '17
Use of MRU on a platform that...flips
Sproul Challenges

Highest Number of Operating Days Since 2008

108 Days in '17

Variable Schedule

Short Notice cruises
Alaska

Underwater Camera to Monitor Overboard Instruments
- Failing cores or equipment? Install a camera to capture what went wrong/what went right
- OSU science party brought it on a coring cruise on a mc400 multicore
- Depth rating of 1750m strobe and GoPro housing- Groupbinc.com
- We purchased our own and made a versatile mount and will be able to use it on CTDs, coring gear, and possibly nets

Mexico

Shipyard
R/V SIKULIAQ
RVTEC 2017 Icebreaker Session
Large Lakes Observatory, University of Minnesota, Duluth
An Underway Data Acquisition Platform
Built to Solve Problems

- Modular
- Network Based
- Data Time Stamped Near Sensor
- Data Logging Separate from Data Visualization
- UDP Broadcasts Ported Across VLANs
Components

- Raspberry PI - Timestamp, Serial to UDP Device
- Data Logger - Linux LDS (Lamont Data System)
- NTP Server - Symmetricom
- LabView - Underway, Bridge View, Data Products,
- HTML 5 - Sensor Status, Underway
- MapServer - Web based GIS
- VM - UDP relay
- Raspberry PI - Serial Data Out
- Windows Virtual Com Port – (Future)
**R/V Sikuliaq**

**University of Alaska Fairbanks**

**College of Fisheries and Ocean Sciences**

https://www.sikuliaq.alaska.edu
Cruise ID          | SKQ201601T  
---                |------------
Date/time         | Thu, 15 Oct 2015 03:21:16 GMT  
Latitude          | 73° 57.342' N  
Longitude         | 155° 20.834' W  
Air Temperature   | -3.6 C / 25.5 F  
Relative Humidity | 107.4 %  
Barometric Pres.  | 1014.4 hPa  
Sea Surface Temp  | 0 C  
EM302 Depth      | 3854.32 m  

R/V Sikuliaq  
College of Fisheries and Ocean Sciences  
https://www.sikuliaq.alaska.edu
Successes

- Raw Data is Time-Stamped and Logged
- Multiple Means to Create Data Visualizations
- Data Streams Made Available to Science Supplied Systems
- Reformat Sensor Data to NMEA Standard Sentences When Needed
- SKQ201715S – OSU OOI Integration of Ship Sensor Data With Mooring Data
- Raspberry PI Proves to be a Robust Platform (500 Day + Uptime)
Problems

- Large Learning Curve
- Lack of Standard Data Ports for UDP broadcasts
- Does Not Fully Address All Science Needs. (Example, 1 Hz data from sounder while in 3000m of water?)
UNOLS Tech Pool
Elizabeth Ricci, Tina Thomas, Tony D’Aoust

- R/V Atlantic Explorer
- R/V Endeavor
- USCGC Healy
- R/V Marcus G. Langseth
- R/V Sally Ride
- R/V Kilo Moana
- R/V Atlantis

Polar bear and owl pictures shamelessly stolen from Croy Carlin
Moving the North Atlantic Bottom Trawl Survey from Bigelow to Pisces

One of the longest continuous fisheries time series in the world

- Propulsion motor problem on Bigelow
- Pisces same class, sound signature
- Change out warp wire
- Sent over specialized computers and sensors
- Sent over deck and bridge personnel to sail
- Sent over fish lab equipment
- Briefing / Safety Stand Down with both crews
Technical Issue: Setting up our CSP-D power supply on the R/V Barnes, February 2017

Solution: A wet ground for the mains input

Rachel Marcuson
(Jenny White, Tim Elfers)
USGS
Santa Cruz, CA
USCGC Healy

Operated by the USCG with the support of Base Seattle C4IT, Scripps Institute of Oceanography Shipboard Technical Support, and the Oregon State University Marine Tech Group
F/V DESTINATION INVESTIGATION

- 98’ Crabber out of Seattle
- Contact lost 11 Feb
- No Distress Call, Only EPIRB
- Searchers (USCG & Private) found debris

- Early July, NOAAS Fairweather found wreck Northwest of St. George

- Late July, USCGC Healy locates wreck, positively identifies with ROV, dredge-recovers crab pot
USAP Icebreaker
Schmidt Ocean Institute - Falkor 2017

- Shipyard (Portland, OR)
- ROV SuBastian first full year of science cruises
- 127 d/sci; 27 d/sci transit; 12 d/transit. One lost cruise, one lost science transit
- Mapped an area the size of Kentucky, YTD
- 22 ROV Dives, YTD
- Cruises with AUVs REMUS and Sentry
SoMAS Radar Yard - South P Lot
Revision 4 – 9/27/2016
Fencing: 8 feet high with barbed wire top. Privacy slats on all sides and on gates.

Power and telcom outlets at position “A”.

Pedestrian gate: 3 foot swing gate. Must swing in for safety.

Truck gates: 2 each 20 foot swing gate. Must open outwards 180 degrees. No center post (approx. 40 foot clear when both gates open).

11 parking slots long – 99 feet

MWR-05XP -truck

C-FMCW MWRP -MRR Ceilometer yard

KASPR Container
YARD REQUIREMENTS

- 120 feet 8 foot high fencing.
- 100A 208 volt electrical service.
- 2x20 foot vehicle swing gates.
- 3 foot pedestrian gate.
- 4 x quad 120 volt electrical outlets.
- 8 port fiber Ethernet switch.
Ka-band Scanning Polarimetric Cloud Radar (KaSPR)

- First system in a university
- State-of-the-art (DOE has two)
- 3-5 m range resolution
- Novel radar-radiometer

Power Requirements:
Main power: 208 VAC 60 Hz (single phase) with 100 amp capacity.

Telcom requirements: Two (2) each Gigabit Ethernet jacks, protected by "code keeper" while-in-use weather resistant covers.
3/7/2017 – all is ready
0700 - crane arrives.
Container Delivery
Less than 36 hours from an empty yard to measuring a snowstorm.
R/V Gulf Surveyor

Field Season Highlights:

- Hydrographic field course
- ASV testing
- Gas seep detection
- Bottom sampling
- Split aperture side scan sonar testing
- Physical Sciences Inc. drone testing
- Klein field testing
- BAE field testing

A 48-foot, twin screw, geared diesel, propeller driven catamaran built by All American Marine (Bellingham, WA) in 2015, and commissioned in January 2016.