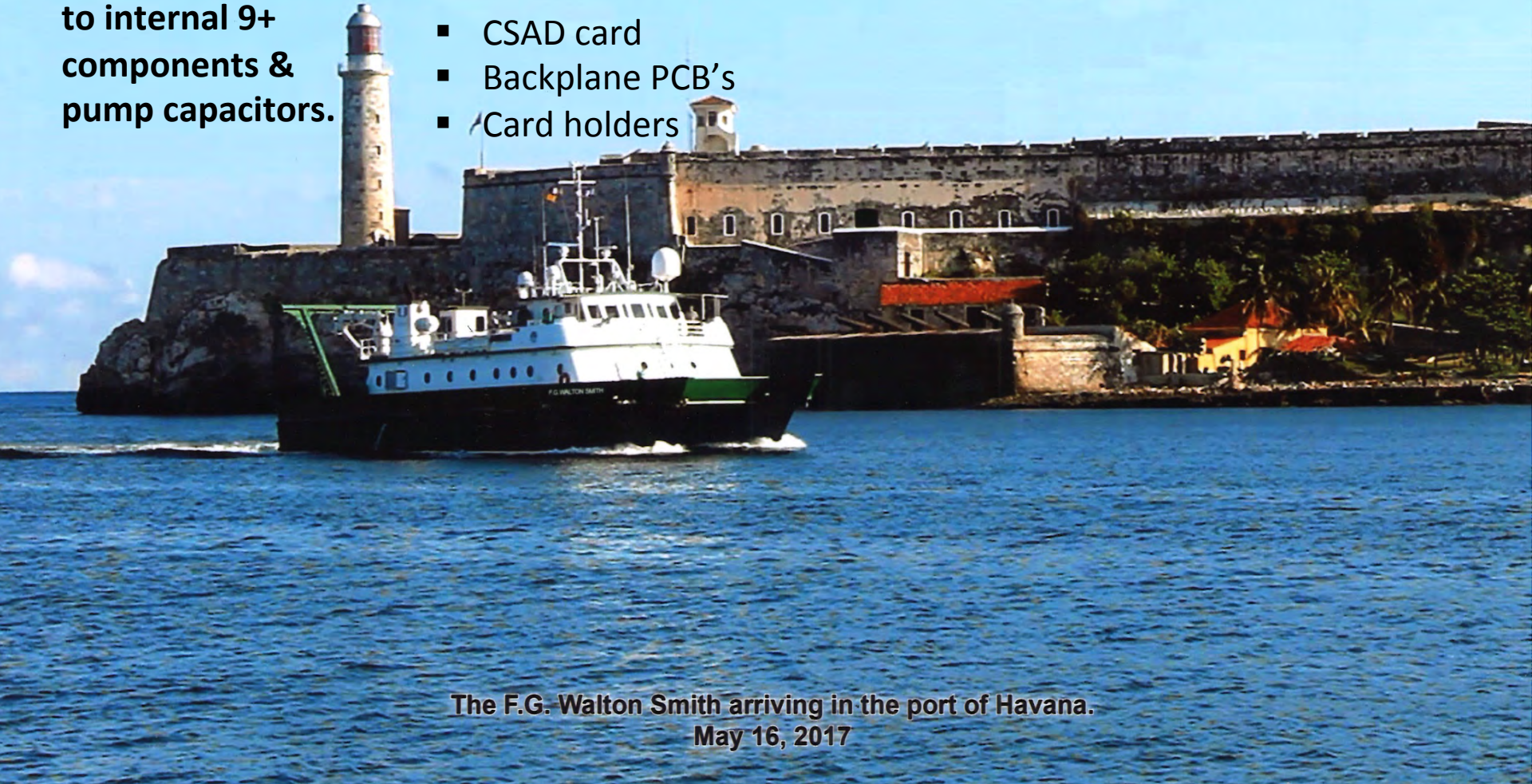
- **RV Walton Smith: 155 days at Sea for 2017**
- **110 Days on other Research Vessels**
- **Science Systems on 3 RCCL Vessels**

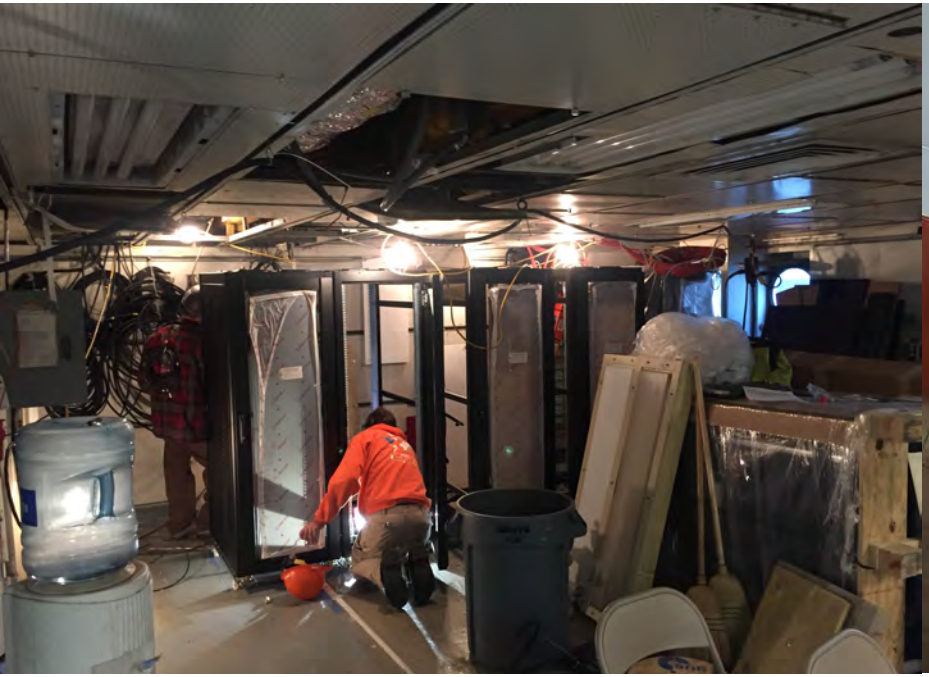
- Technical Issue: SBE 5T pumps NOT turning ON w/SBE 9+ UW unit
  - Bench test – SBE 3 temp plugged into Cond1 Port (JB2)
  - Deck unit LED Word Display, Channel F: "0010" OFF, "0011" ON
  - Pump shorted – capacitors C2 and C4 had failed
  - SBE 9+: burned transmitter board
    - CSAD card
    - Backplane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

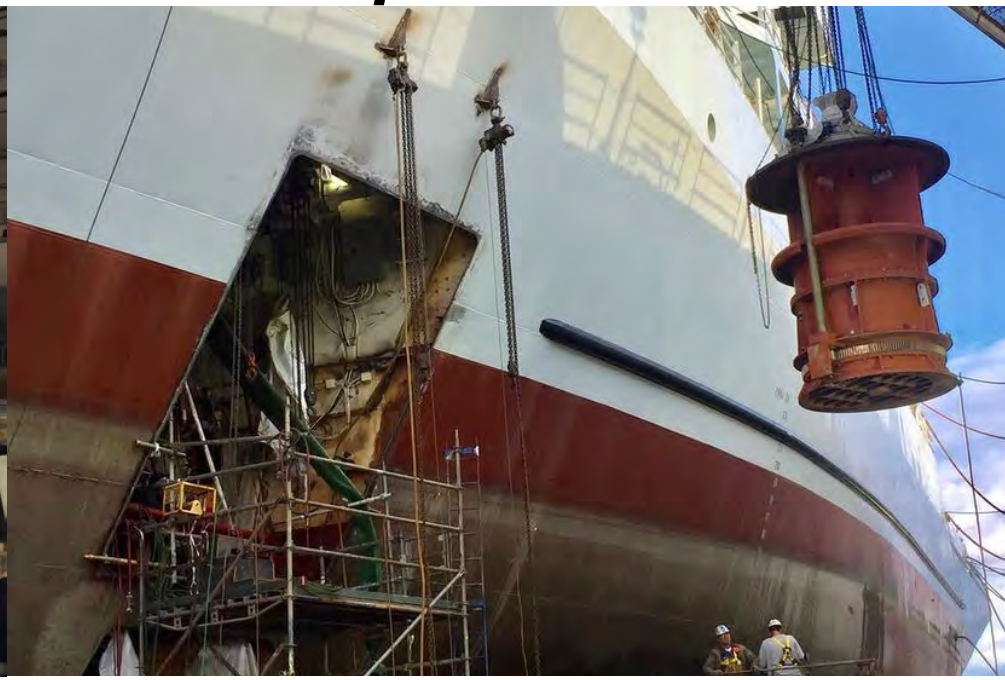
✓ **Faulty Pump Cable: diverted current to 9+ causing damage to internal 9+ components & pump capacitors.**



The F.G. Walton Smith arriving in the port of Havana.
May 16, 2017

Thomas G. Thompson





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

Bermuda Institute of Ocean Sciences

r/v Atlantis

Woods Hole Oceanographic Institution

Pito Deep - Jason

Chile - Jason

Costa Rica Seeps - Alvin & Sentry

Rio Grand Rise

Aregentine Basin

OOI Mooring Deployments

Newport - East Pacific Rise

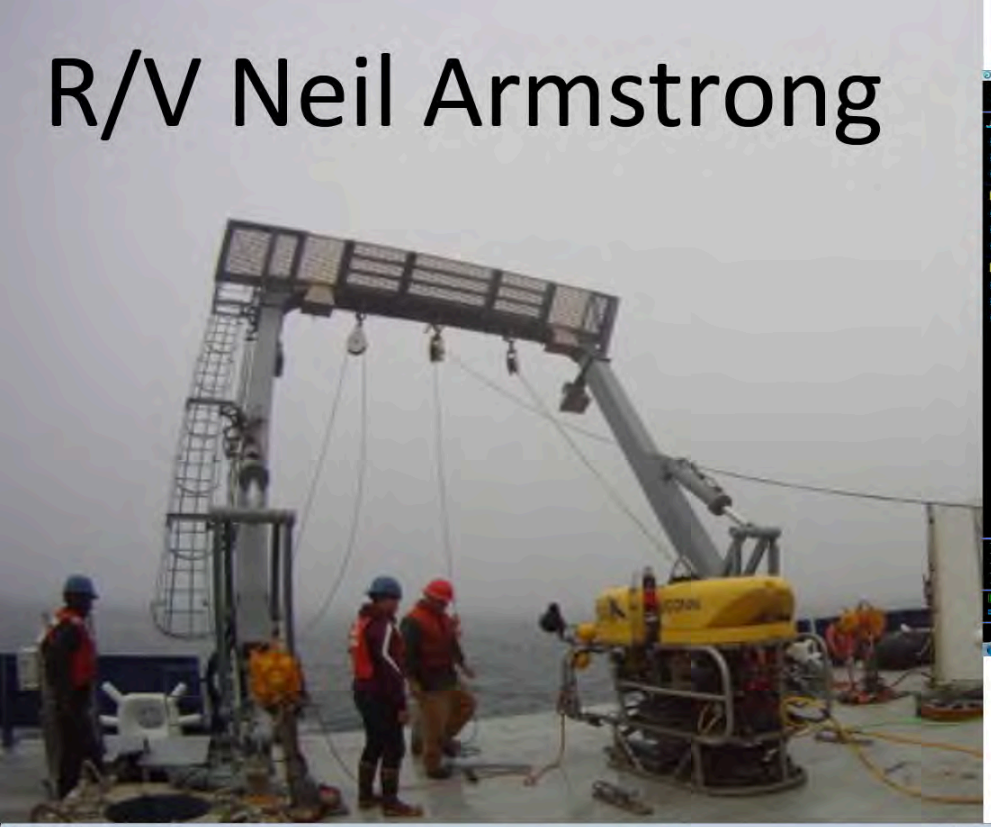
Manzanillo

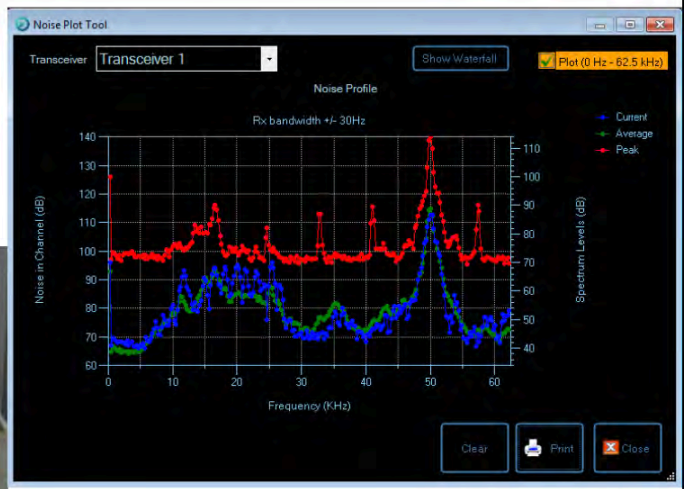
Guaymas

INSURV Inspection

Alvin Navy Functional Inspection

R/V Neil Armstrong

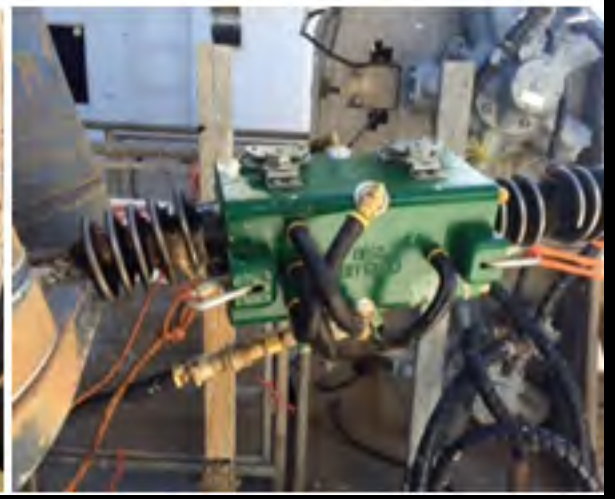




R/V Endeavor





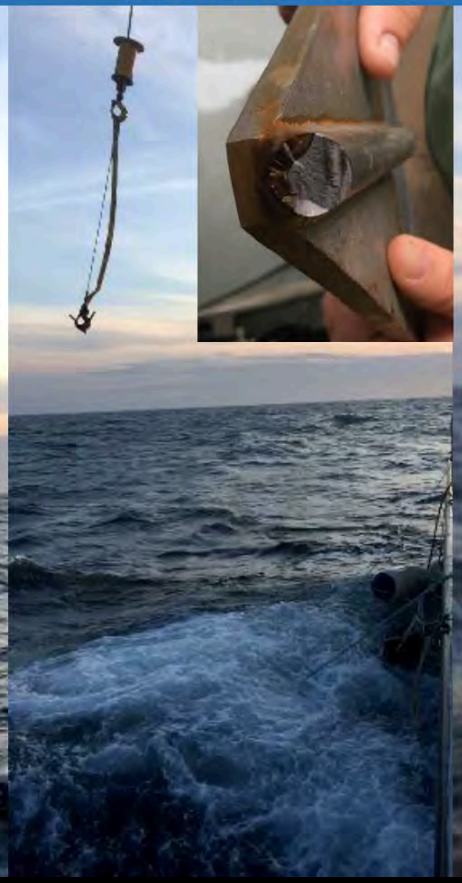
University of Delaware-R/V Hugh R Sharp

KG Fairbarn

1. Lifting bail hooked

2. ROV cleared water

3. Lifting bail broke at weld



4. Finding another lift point

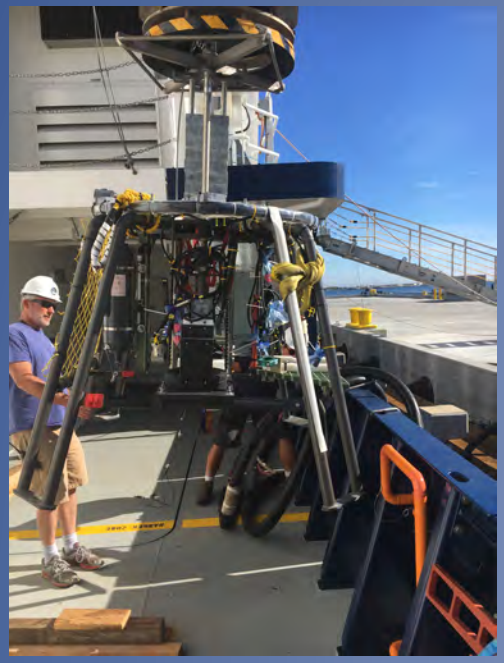
Sally Ride Challenges

Transition to Operations

PSA Shipyard/DryDock

How do you Overboard?

- JASON
- OSU Piston Cores
- SSHD – Docking Head

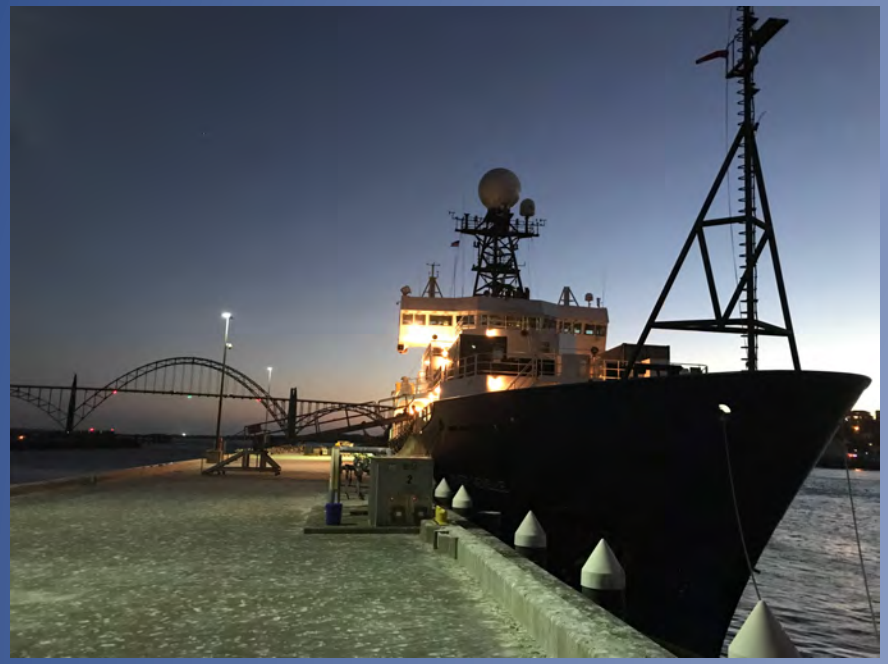


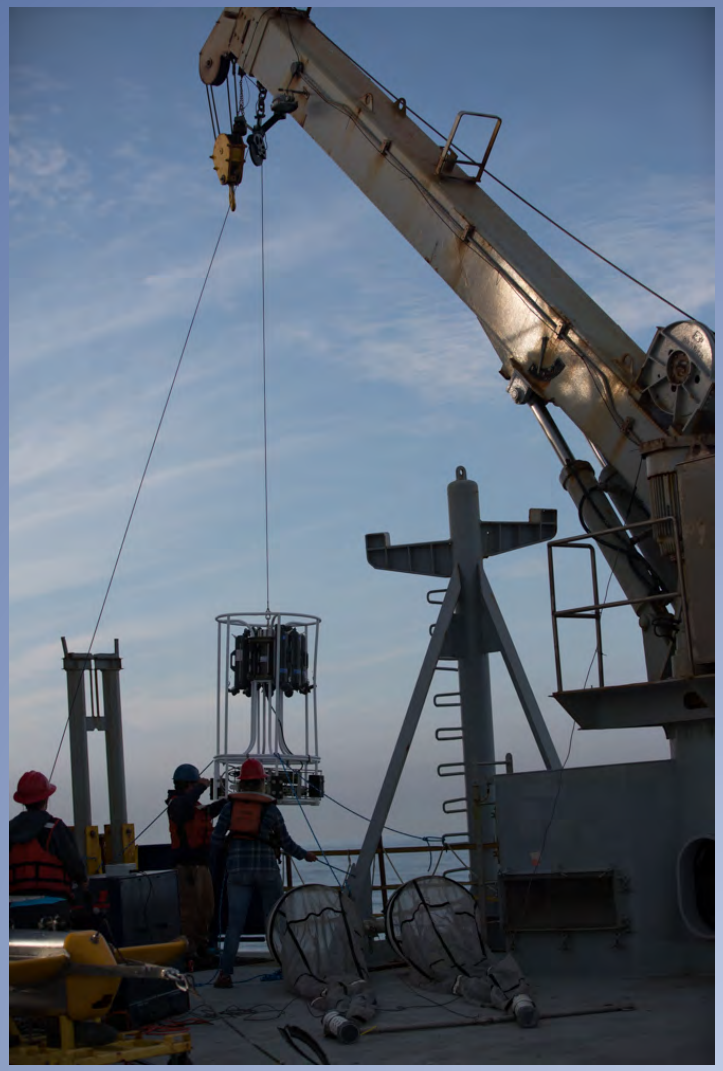
Revelle Challenges

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



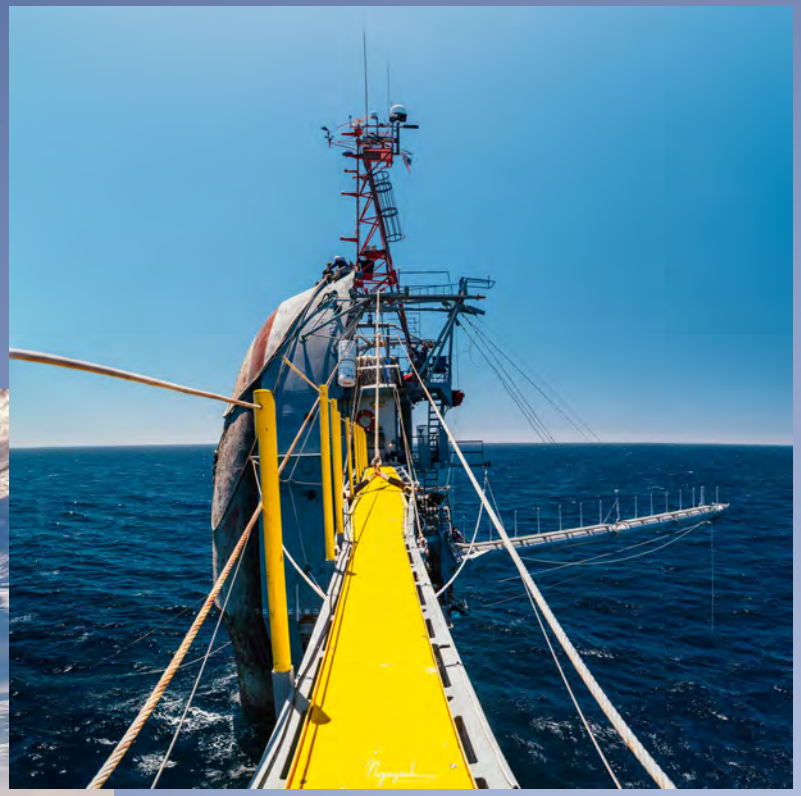


Flip Challenges

Heavy Use

78 Days in '17

Use of MRU on a platform that...flips



Sproul Challenges

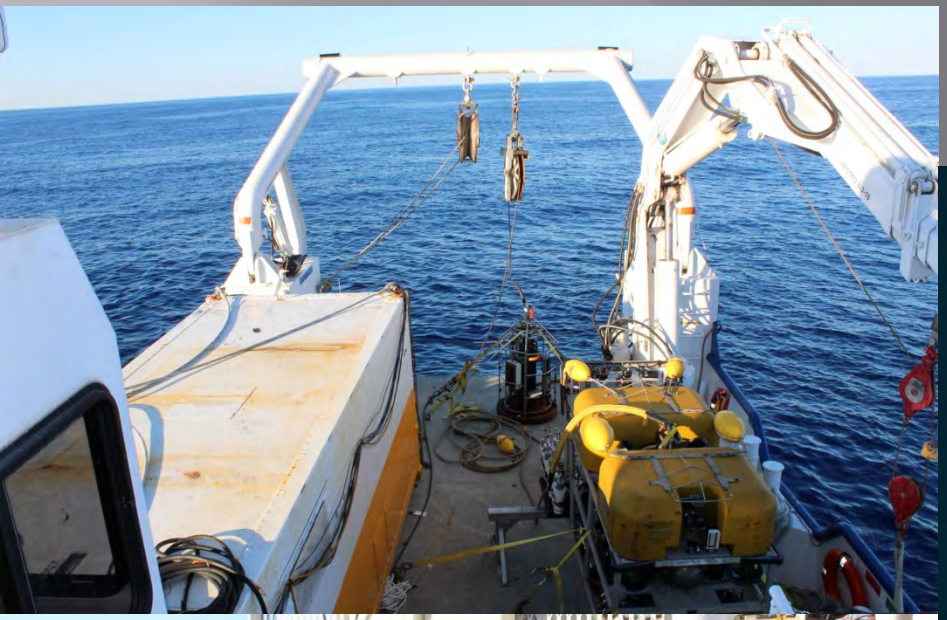
Highest Number of Operating Days Since 2008

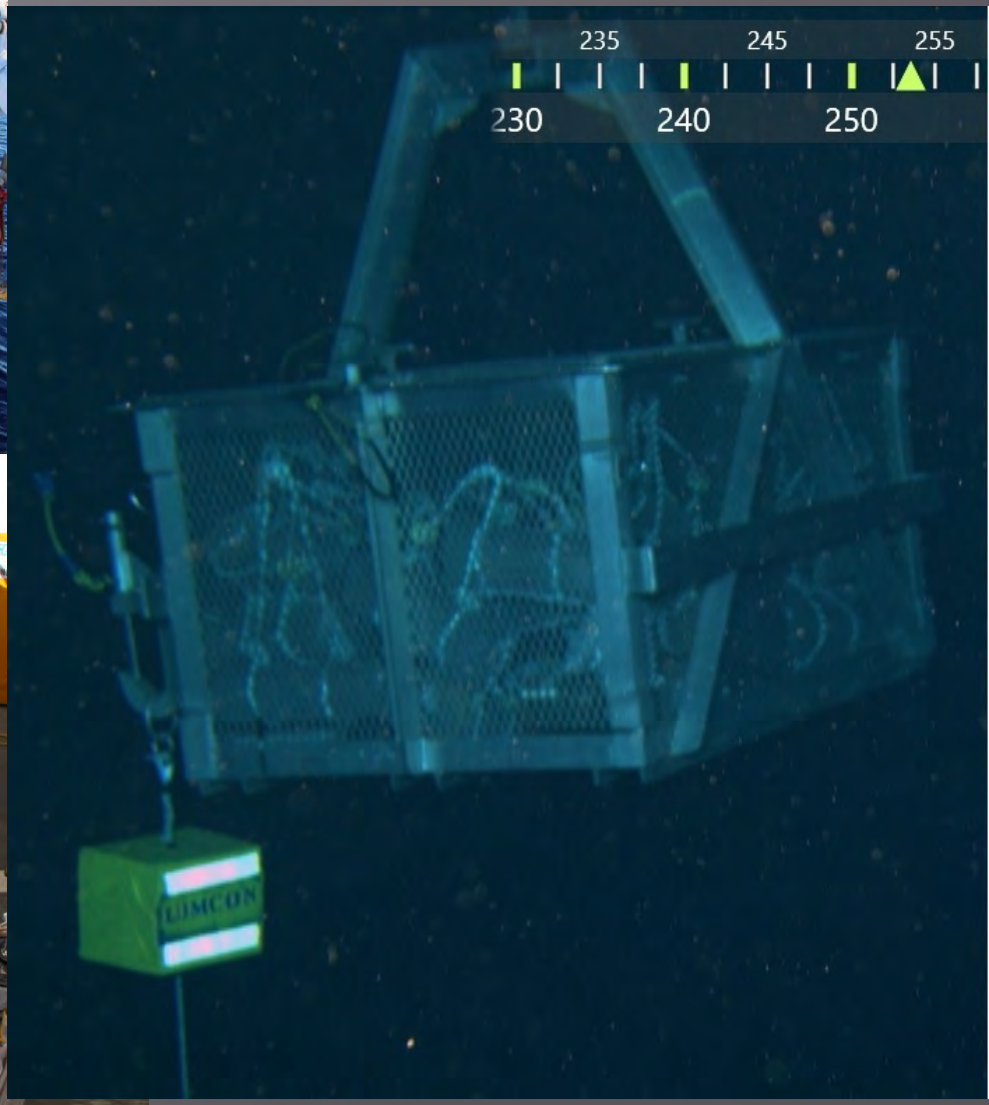
108 Days in '17

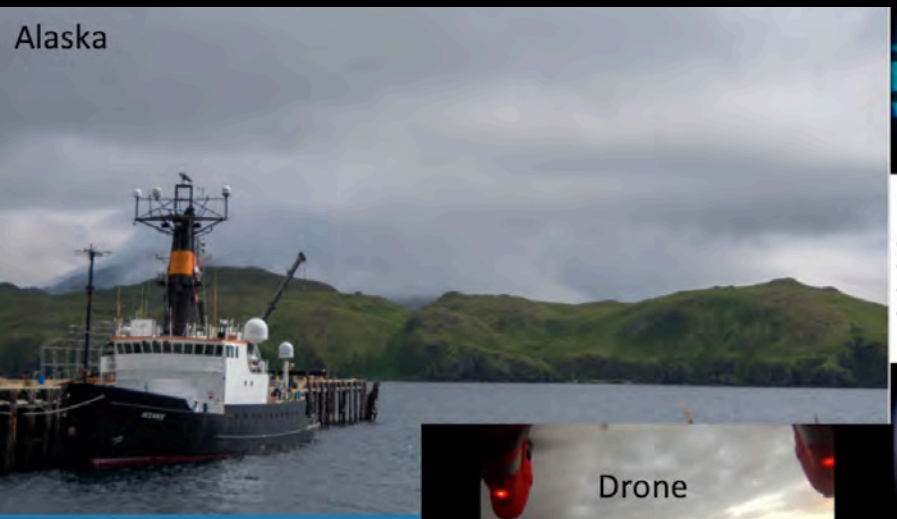
Variable Schedule

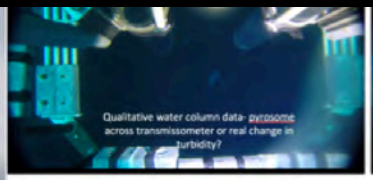
Short Notice cruises

LUMCON: *R/V PELICAN*









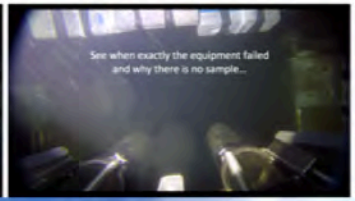
Oregon State University

RV Oceanus

Presenter: Andrew Woogen

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



R/V SIKULIAQ
RVTEC 2017 Icebreaker Session
Large Lakes Observatory, University of Minnesota, Duluth

UNIVERSITY OF ALASKA FAIRBANKS

R/V Sikuliaq

College of Fisheries and Ocean Sciences

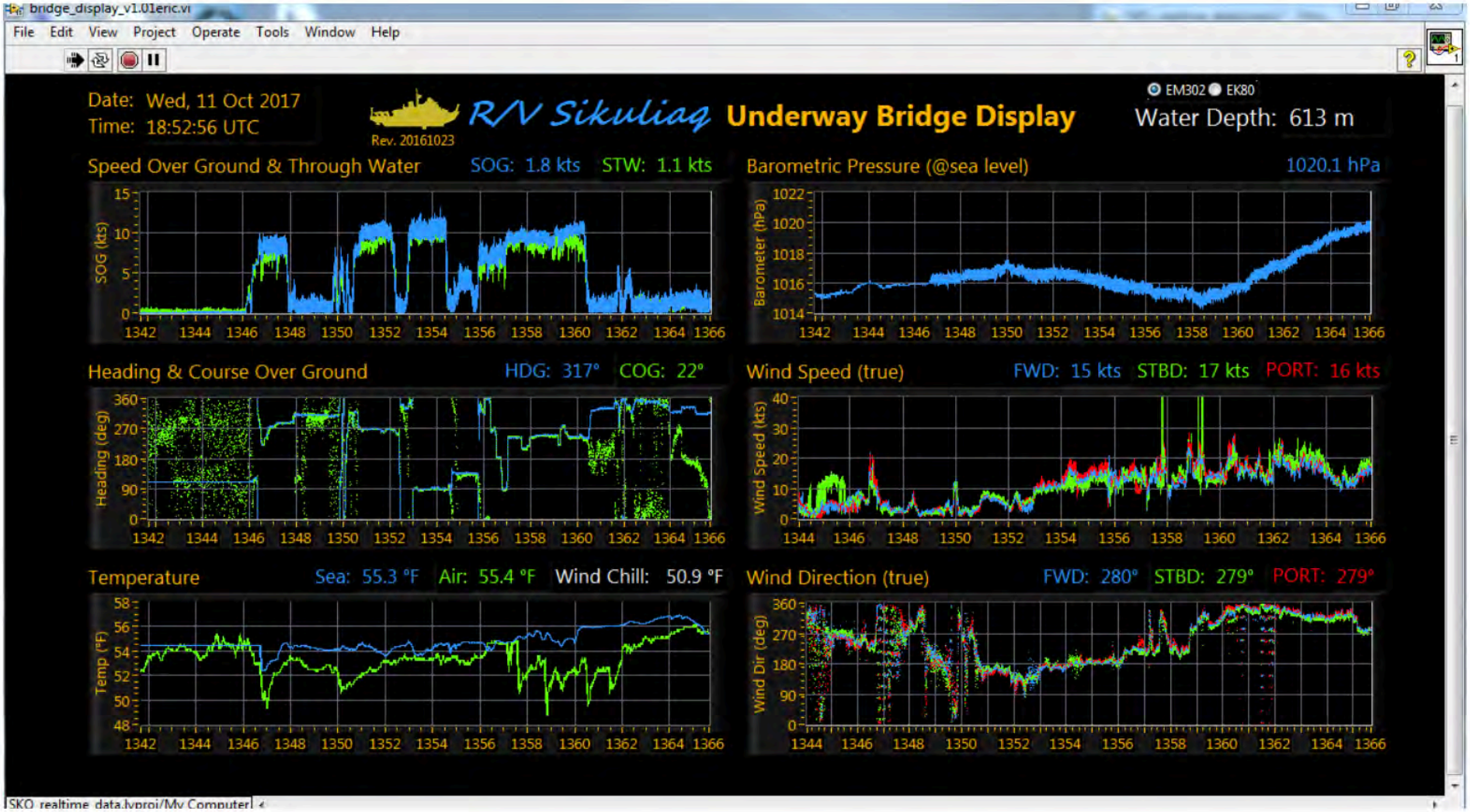
https://www.sikuliaq.alaska.edu

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)



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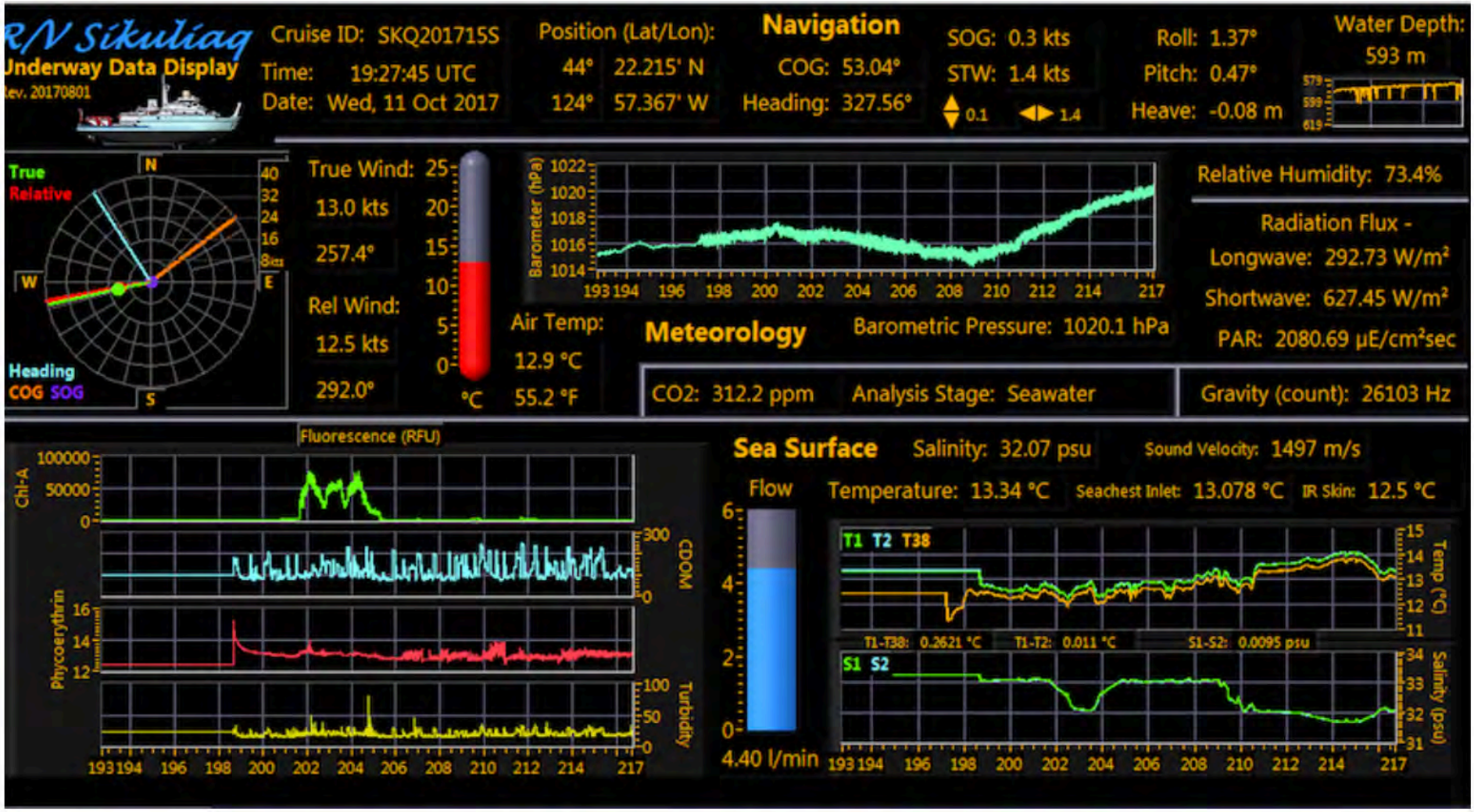
CFOS

UNIVERSITY OF ALASKA FAIRBANKS · Seward, AK · R/V SIKULIAQ

UNIVERSITY NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM · UNOLS

NSF



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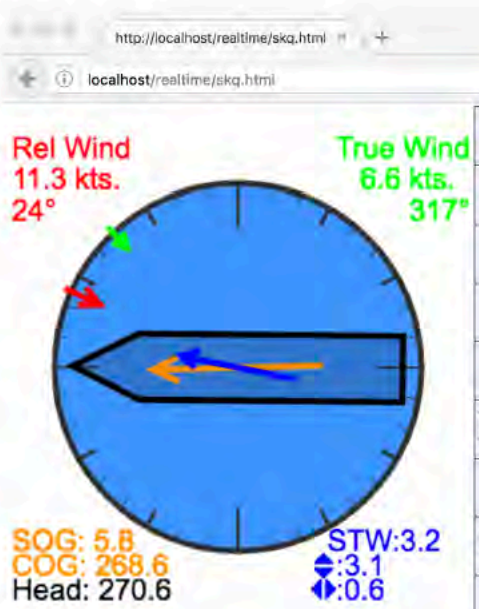
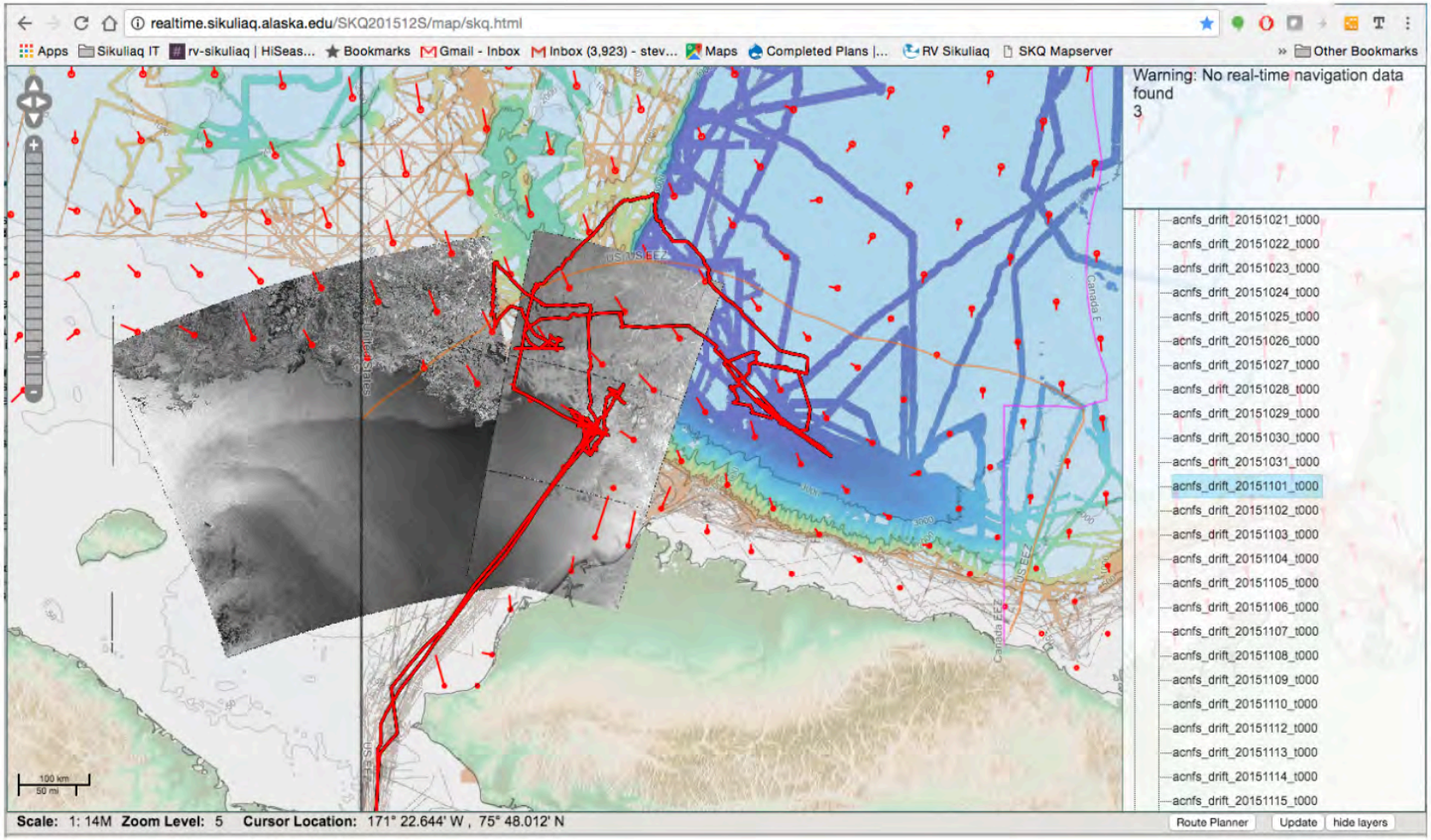


Cruise ID	SKQ201601T
Date/time	Thu, 15 Oct 2015 03:21:16 GMT
Latitude	73° 57.342' N
Longitude	155° 20.834' W
Air Temperature	-3.6 C / 25.5 F
Relative Humidity	107.4 %
Barometric Pres.	1014.4 hPa
Sea Surface Temp	0 C
EM302 Depth	3854.32 m



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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)

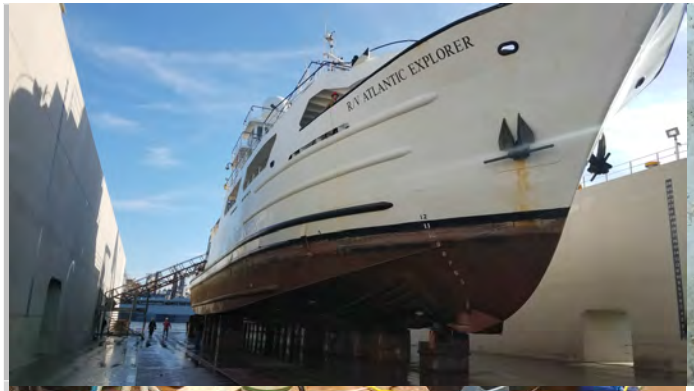
Problems

- 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

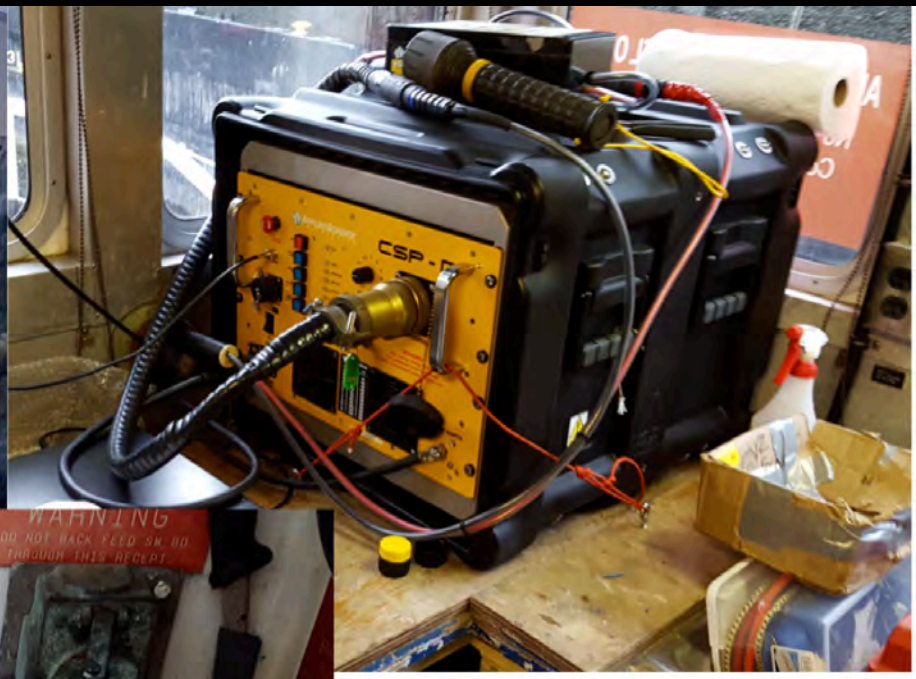
Moving the North Atlantic Bottom Trawl Survey from *Bigelow* to *Pisces*

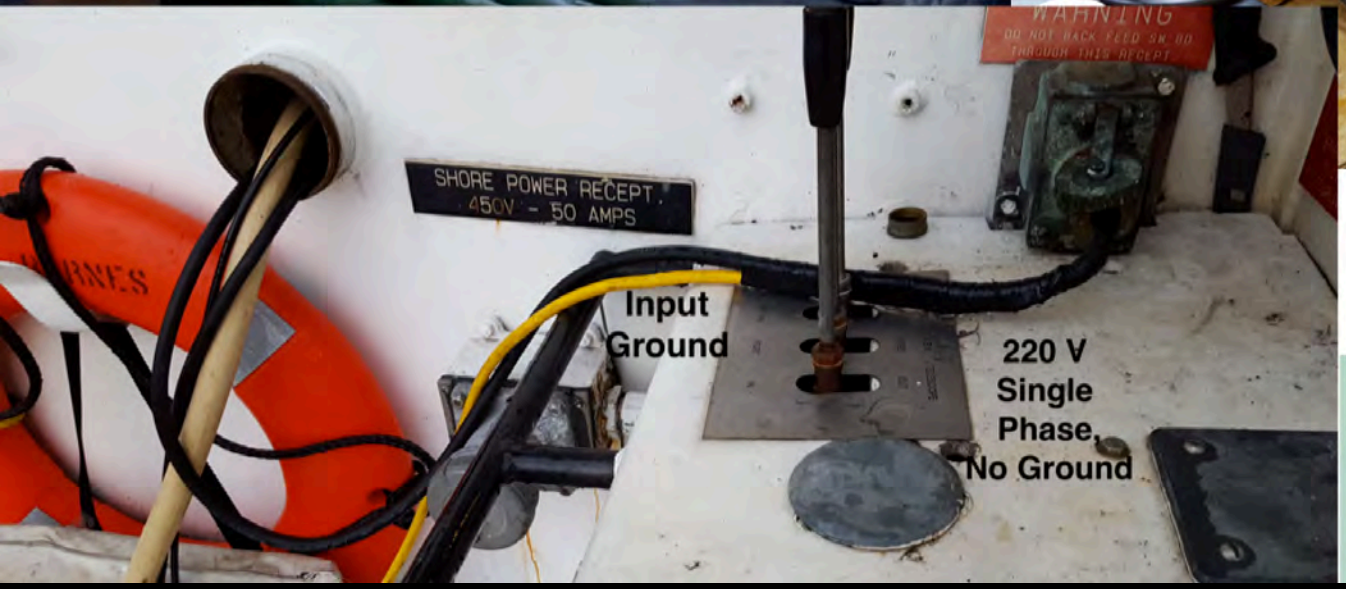
One of the longest continuous fisheries time series in the world

- 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

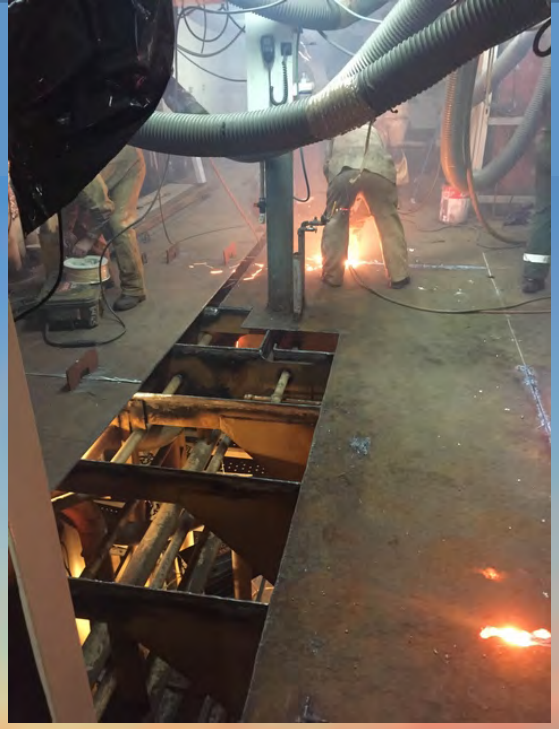
Operated by the USCG with the support of Base Seattle C4IT, Scripps Institute of Oceanography Shipboard Technical Support, and the Oregon State University Marine Tech Group

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

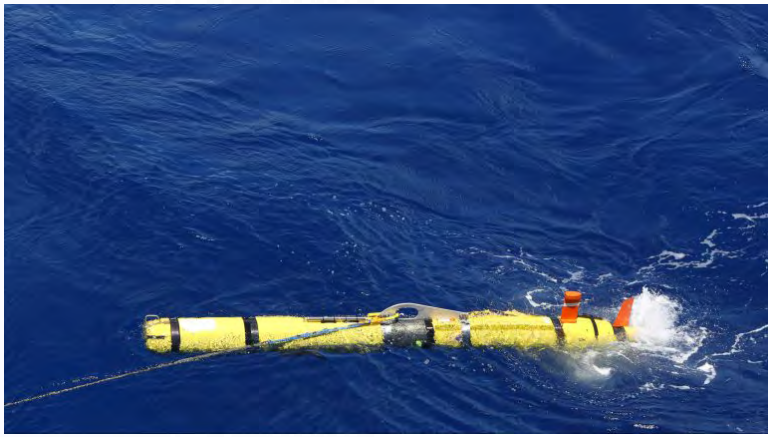
- Late July, USCGC Healy locates wreck, positively identifies with ROV, dredge-recovers crab pot



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



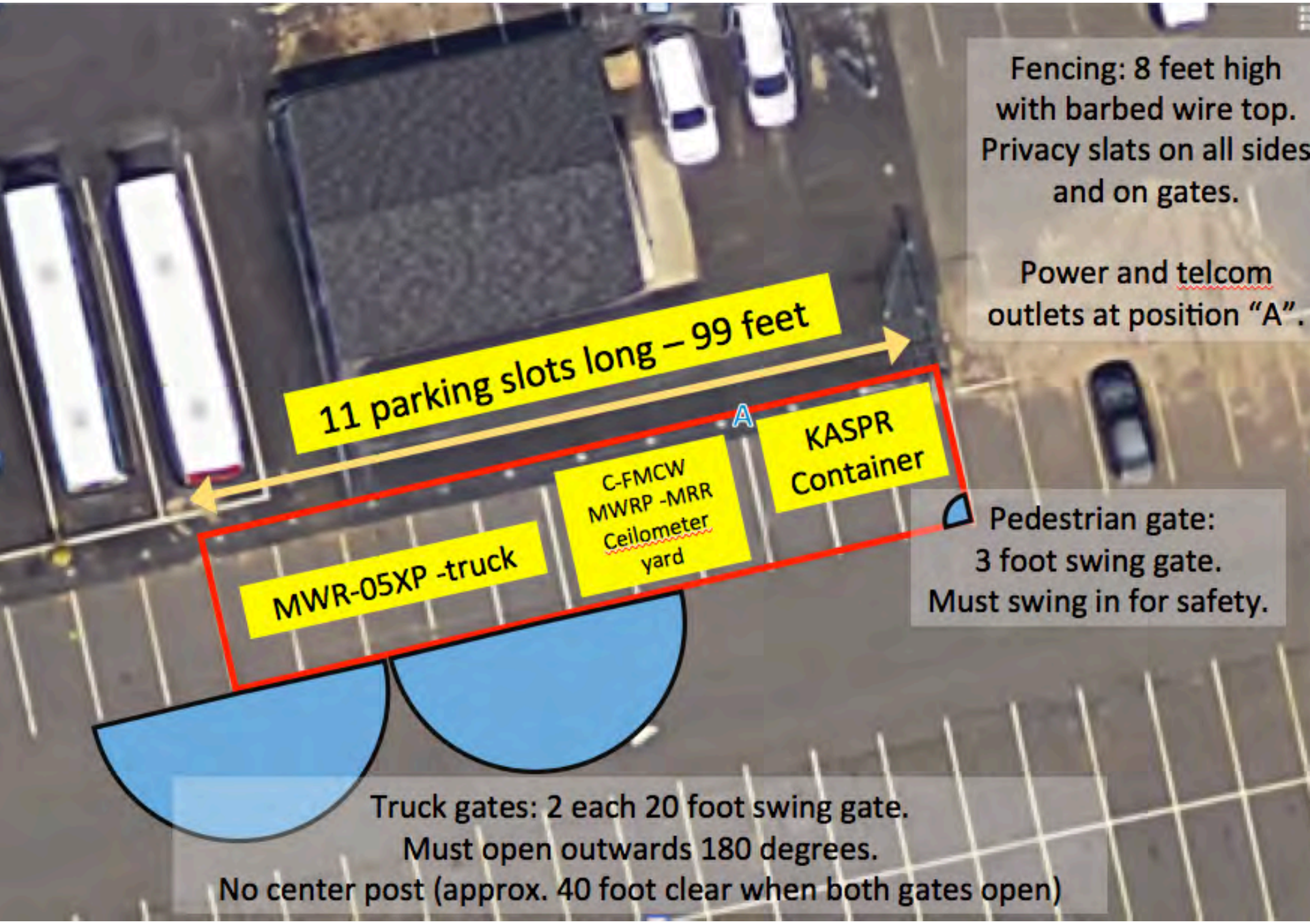
- Mapped an area the size of Kentucky, YTD
- 22 ROV Dives, YTD
- Cruises with AUVs REMUS and Sentry

SCHOOL OF MARINE AND ATMOSPHERIC SCIENCES
50
1967 - 2017
SOMAS.STONYBROOK.EDU
CELEBRATING FIFTY YEARS OF MAKING SCIENTIFIC RESEARCH COUNT

Stony Brook University
School *of* Marine and Atmospheric Sciences

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".
11 parking slots long – 99 feet
A
MWR-05XP -truck
C-FMCW
MWRP -MRR
Ceilometer
yard
KASPR
Container
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)

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.

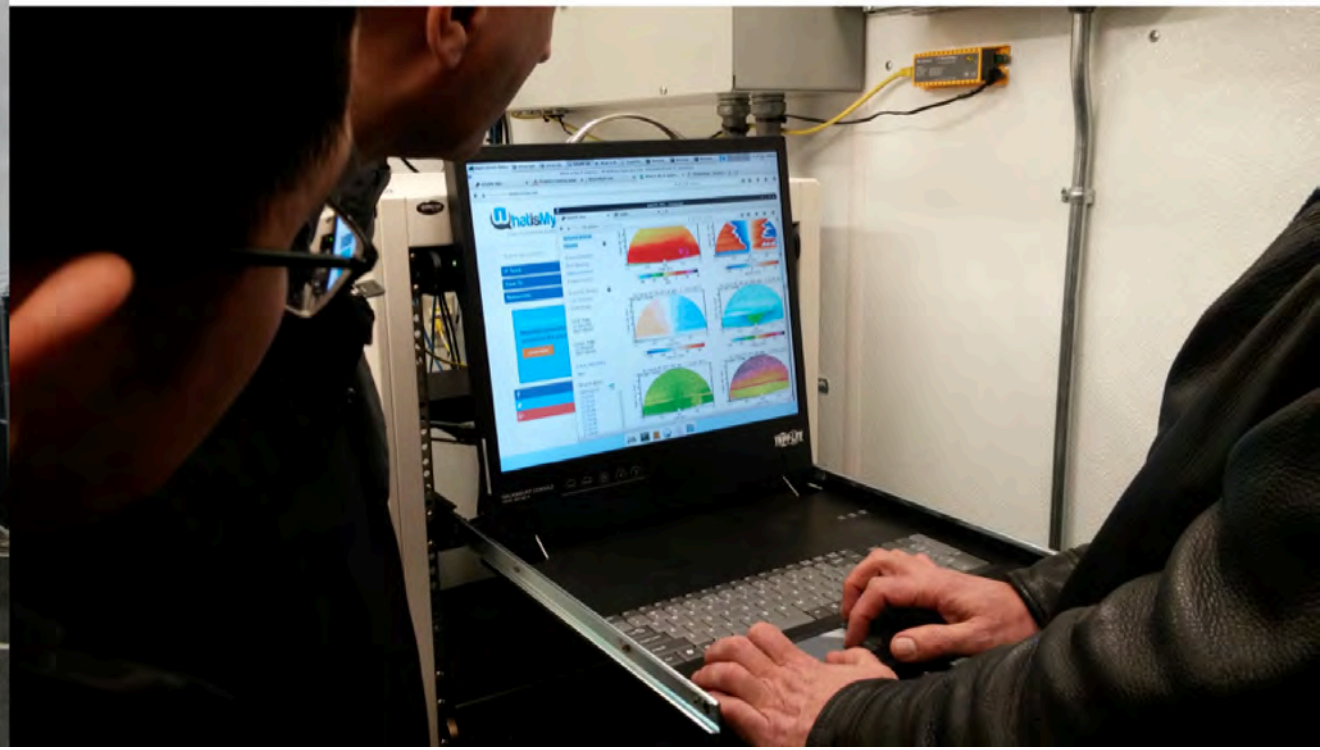
3/7/2017 – all is ready
0700 - crane arrives.


Container
Delivery

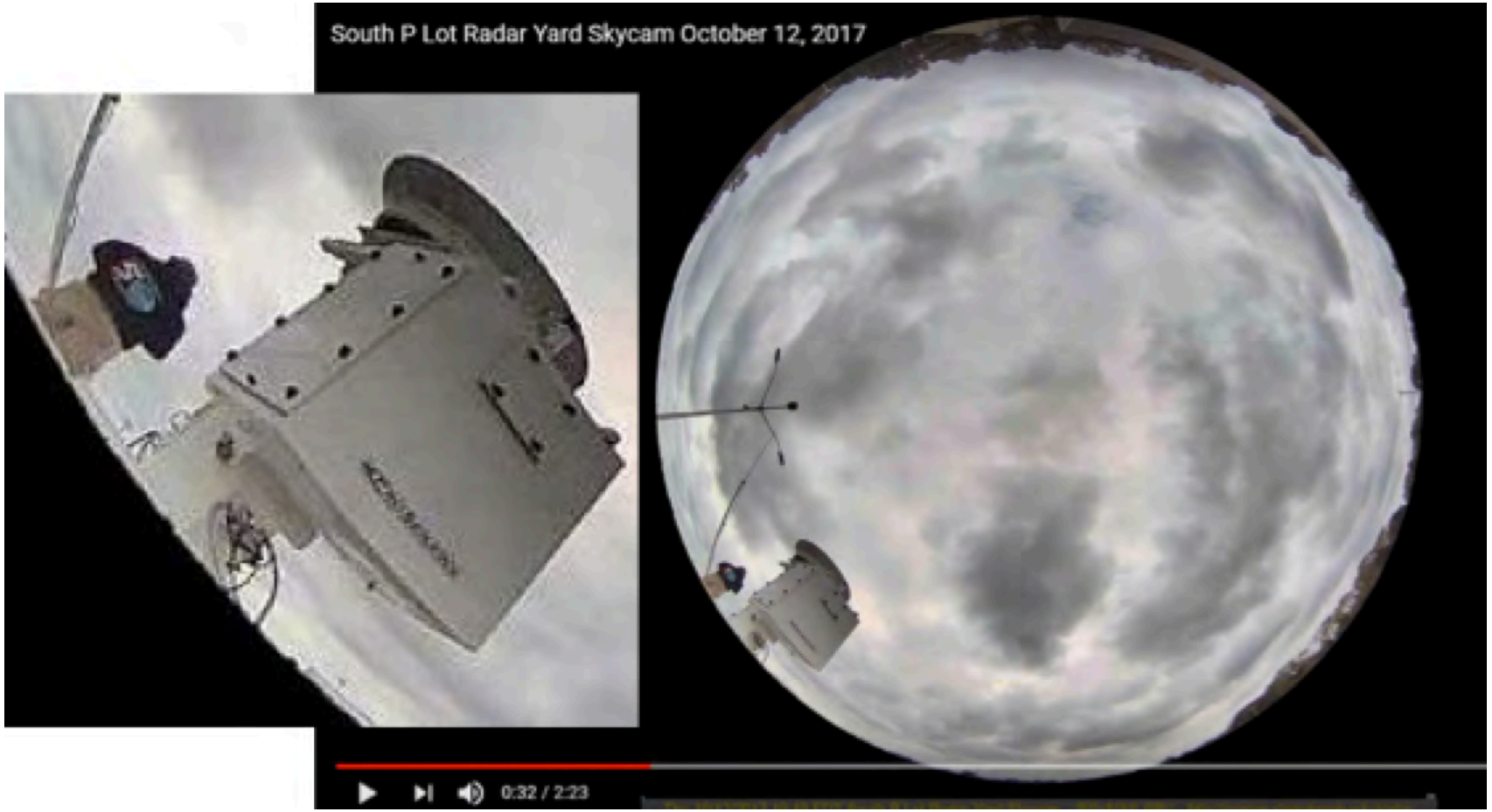

CATERPILLAR


ALL COUNTY
631-284-9487

Less than 36 hours from an empty yard to measuring a snowstorm.




KaSPR
W-band Cloud Profiling Radar
SkyCam
PARSIVEL Laser Disdrometer
MRR Micro Rain Radar
Microwave Radiometer
Atmospheric LIDAR
Stream Line XR


South P Lot Radar Yard Skycam October 12, 2017
0:32 / 2:23

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