

Overview

Mission:

Stewardship of routinely-acquired environmental sensor data from U.S. academic research vessels

Support:

NSF +NOAA, ONR, SOI

Services:

- Publish master cruise catalog
- Organize, archive, and disseminate original field data+documents
- Assess data quality
- Create post-field data products
- Support at-sea event logging

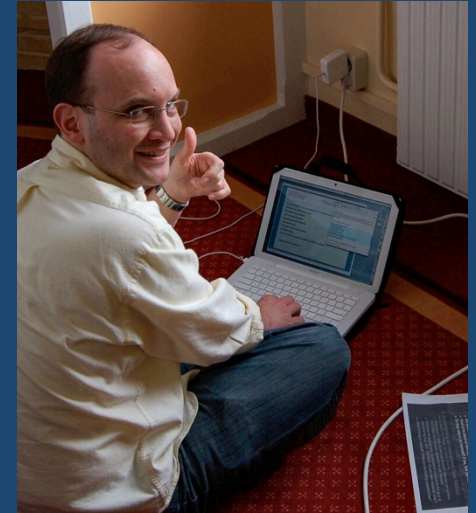


A blue and white research vessel.	A white research vessel with a blue hull.	A white research vessel with a blue hull.	A white research vessel with a blue hull.
<i>Alpha Helix (retired)</i>	<i>Atlantic Explorer</i>	<i>Atlantis</i>	<i>Blue Heron</i>
A blue and white research vessel.	A white research vessel with a blue hull.	A white sailboat.	A white research vessel with a blue hull.
<i>Cape Hatteras (retired)</i>	<i>Clifford A. Barnes</i>	<i>Corwith Cramer</i>	<i>Endeavor</i>
A white research vessel.	A white research vessel with a green hull.	A white research vessel with a blue hull.	A white research vessel with a red hull.
<i>Eltanin (retired)</i>	<i>F.G. Walton Smith</i>	<i>Falkor</i>	<i>Healy</i>
A white research vessel.	A white research vessel with a green hull.	A white research vessel with a blue hull.	A white research vessel with a blue hull.
<i>Hugh R. Sharp</i>	<i>Ka`imikai-O-Kanaloa</i>	<i>Kilo Moana</i>	<i>Knorr (retired)</i>
A red and white research vessel.	A white research vessel with a blue hull.	A white research vessel with a blue hull.	A white research vessel with a blue hull.
<i>Laurence M. Gould</i>	<i>Marcus G. Langseth</i>	<i>Maurice Ewing (retired)</i>	<i>Melville (retired)</i>
A red and white research vessel.	A white research vessel with a blue hull.	A white research vessel with a blue hull.	A white research vessel with a blue hull.
<i>Nathaniel B. Palmer</i>	<i>Neil Armstrong</i>	<i>New Horizon (retired)</i>	<i>Oceanus</i>
A white research vessel with a blue hull.	A white research vessel with a blue hull.	A white research vessel with a blue hull.	A red and white research vessel.
<i>Okeanos Explorer</i>	<i>Pelican</i>	<i>Point Sur</i>	<i>Polar Sea</i>
A white sailboat.	A white research vessel with a blue hull.	A white research vessel with a blue hull.	A white research vessel with a blue hull.
<i>Robert C. Seamans</i>	<i>Robert D. Conrad (retired)</i>	<i>Robert Gordon Sprull</i>	<i>Roger Revelle</i>
A white research vessel with a blue hull.	A white research vessel with a blue hull.	A white research vessel with a blue hull.	A white research vessel with a blue hull.
<i>Ronald H. Brown</i>	<i>Sally Ride</i>	<i>Savannah</i>	<i>Sikuliaq</i>
A white research vessel with a blue hull.	A white research vessel with a blue hull.	A white research vessel with a blue hull.	A white research vessel with a blue hull.
<i>Thomas G. Thompson</i>	<i>Vema (retired)</i>	<i>Thomas Washington (retired)</i>	<i>Wecoma (retired)</i>

R2R Staff Transitions

LDEO R2R

- Bob Arko - “Mr. R2R” will be missed
- Suzanne O’Hara - New Technical Director



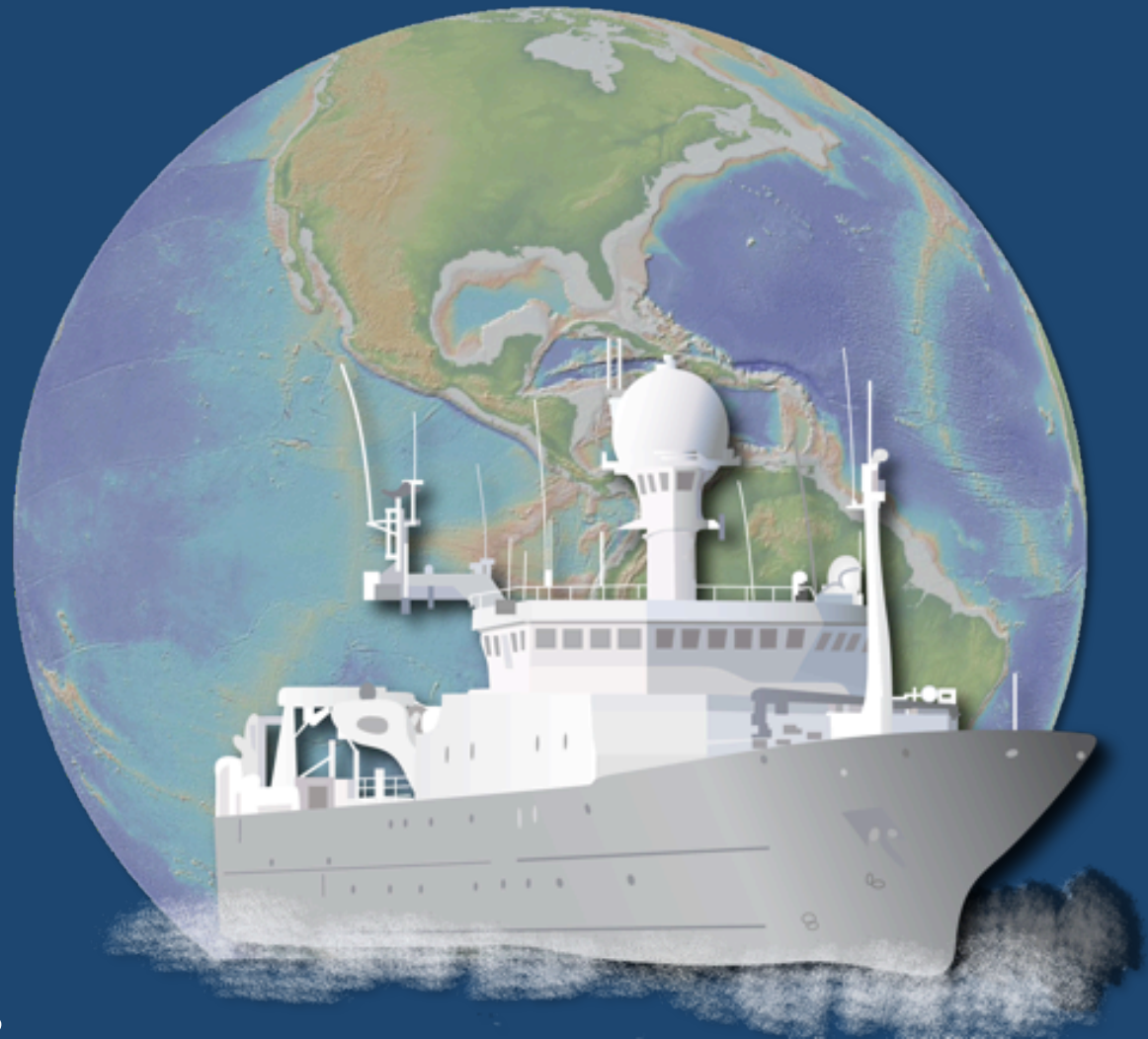
WHOI R2R

- Cyndy Chandler retired 2017, Enjoy Cyndy!
- Carolina Nobre moved on to Graduate School
- Laura Stolp - New WHOI PI
- Cindy Sellers and Laura have taken on CTD QA and DP and continue supporting R2R Science ELOG



Standard Products

- Processed Data
 - Shiptrack Navigation
 - Full Resolution
 - 1 Minute
 - Control Points
 - Underway Met/TSG
 - Underway Geophysics
 - Gravity
 - Magnetics
 - Bathymetry
 - CTD Profiles
- Documentation
 - ISO Cruise Summaries
 - Digital Object Identifiers
 - Dataset QA Reports
 - “Linked Data” Graph



Access to QA From Cruise Catalog

UNDERWAY DATA SETS (ORIGINAL FIELD DATA)

NOTE: The data set inventory below may not be complete. Please [Contact R2R](#) with questions or requests.

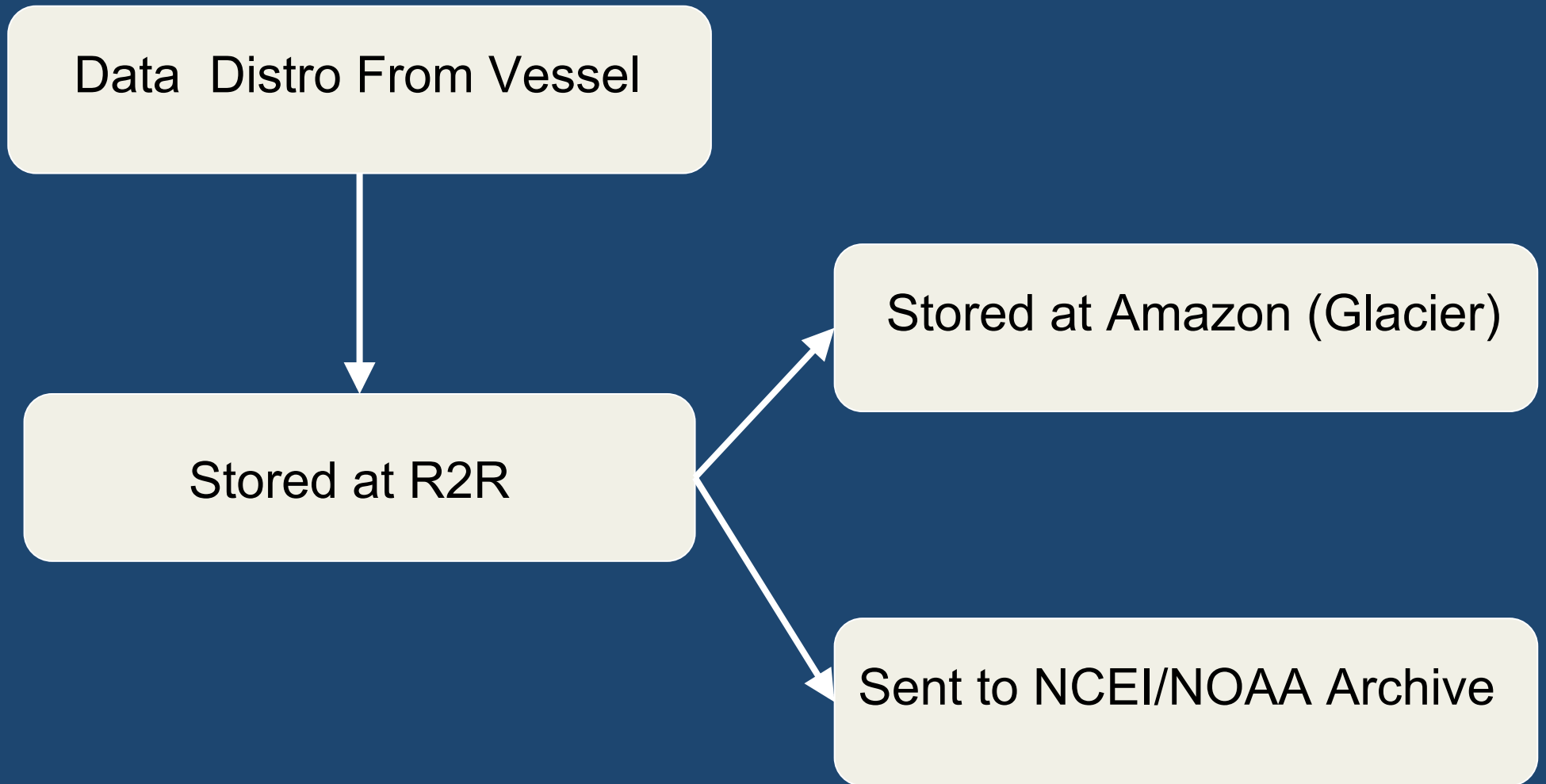
Device Type	Make-Model [Location]	Files	DOI	Quality Report	Download
adcp	Hawaii UHDAS	List	10.7284/101922		NCEI Link
gnss	Ashtech ADU2	List	10.7284/101914		R2R Link
gnss	Furuno GP-90D	List	10.7284/101913	● view	R2R Link
gnss	MX Marine MX421	List	10.7284/101920		R2R Link
gravimeter	Bell BGM-3	List	10.7284/101915	● view	NCEI Link
magnetometer	Marine Magnetics SeaSPY	List	10.7284/101911	▲ view	R2R Link
metstation	SIO MET-System	List	10.7284/101916		R2R Link
multibeam	Kongsberg EM122	List	10.7284/101921	● view	NCEI Link
singlebeam	Knudsen 320B/R	List	10.7284/101923	▲ view	NCEI Link

Click column headings to sort

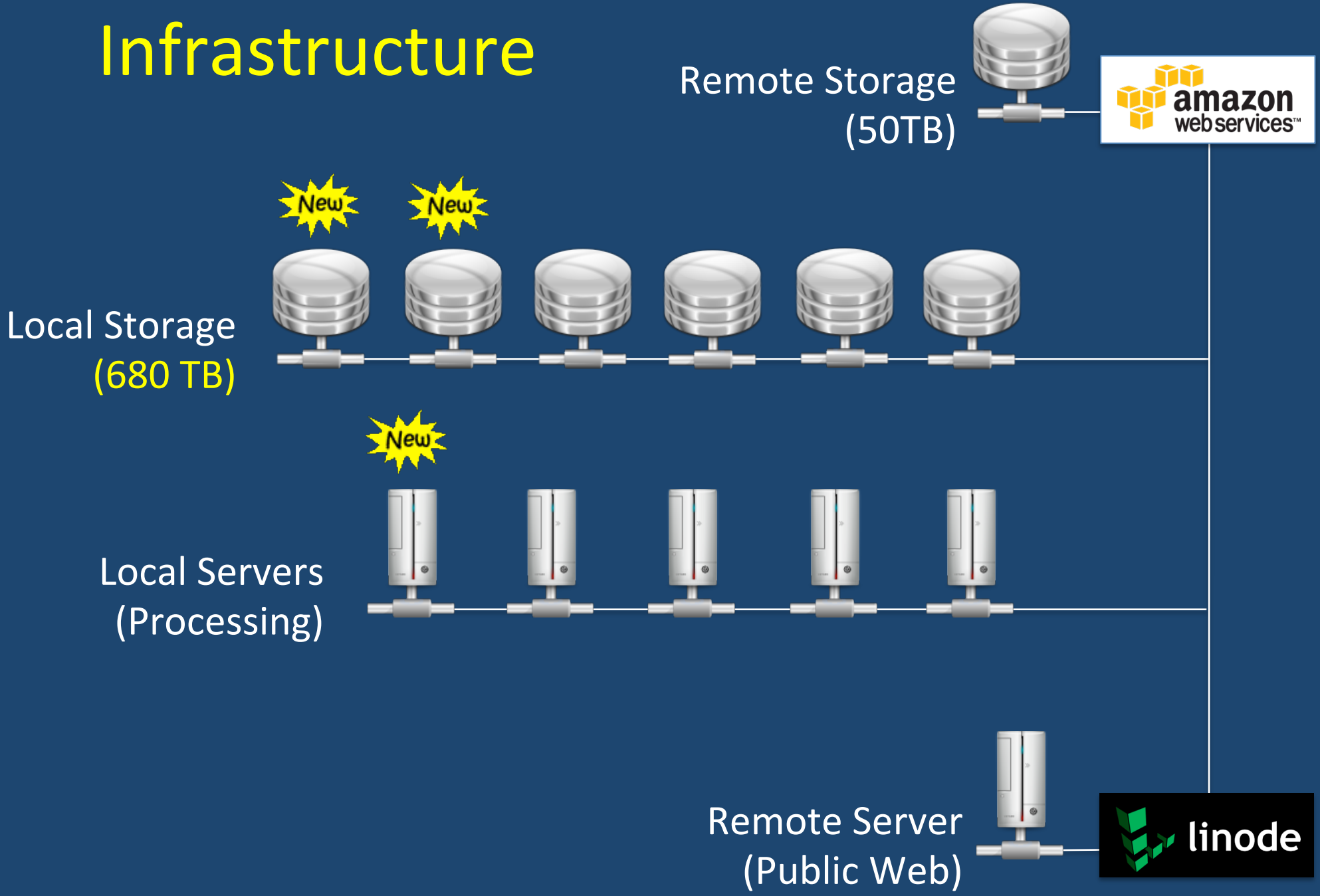
Rating	Device	Cruise	Vessel	QA Summary	acrosstrack beam N noise	acrosstrack beam noise	has minimum metadata	has surface sound velocity	mean across track slope	% expected data files	% files all valid altitude	% files all valid sonar draft	% files with amplitude	% files with bathymetry	% files with data records	% files with sidescan	% good bathymetry variance beams	% pings valid altitude	% pings valid water depth	% possible amplitude beams	% possible bathymetry beams	% valid navigation
●	Multibeam Kongsberg EM122	RR1002	Roger Revelle	QA Summary	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●



Data Distro Archiving



Infrastructure



Event Logger

Deployments June 2016- July 2017

Vessel	# Cruises	Affiliation
R/V Neil Armstrong	15	WHOI/UT/PSU/FFI
R/V Atlantis	6	OSU/Duke/UIUC/UW, WYOMING
R/V Endeavor	4	WHOI/BIOS/UT
R/V Roger Revelle	1	UW
R/V Hugh R. Sharp	2	WHOI/UW
R/V Sikuliaq	10	UW/OSU/UDEL/UAF/ USF/UMD_CES



Quality Assessment: CTD

File-level QA performed on raw data before release to R2R Cruise Catalog

HEX/DAT, XMLCON, HDR files evaluated on a cast-by-cast basis

Tests Include:

- 100% of files in manifest with correct checksum
- All raw files needed for processing are present
- Lat+Lon are within cruise bounds
- Date is within cruise bounds
- Informational
 - Number of stations
 - Number of stations w/ Lat+Lon for every data point
 - Number of stations with bottles fired





Real-time MET/TSG via SAMOS

Status

- Continue routine science QC for 8 university and 2 NSF polar Antarctic vessels via R2R

New in 2017

- Completed recruitment of *Sally Ride*
- Still seeking additional recruits (**Contact Shawn or Jeremy if interested**)
- Agreed with R2R Advisory Board to develop QC for fluorometer data (**Thanks for input!**)



Contributing to Global Synthesis Products

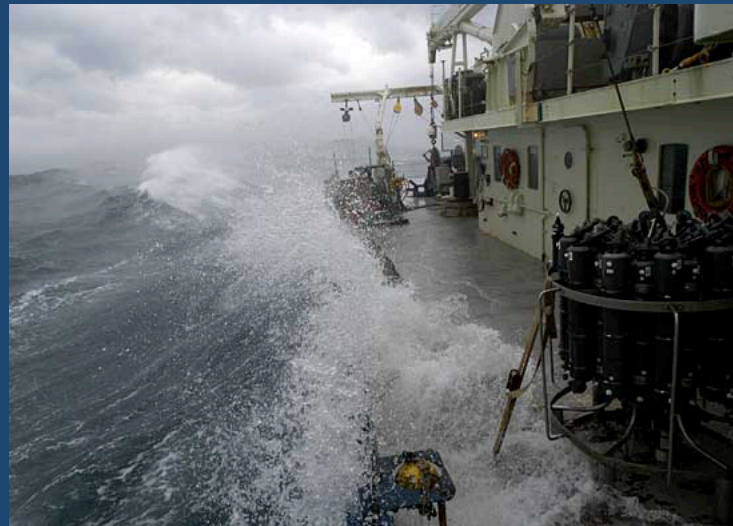
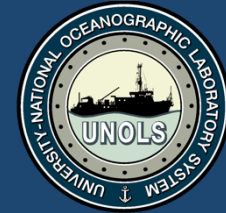
- Multibeam
 - NSF IEDA Global Multi-Resolution Topography (GMRT) synthesis
 - (Coming Soon) NOAA Multibeam Bathymetry Mosaic
- ADCP: NOAA Global Ocean Currents Database
- Real-time MET (SAMOS): International Comprehensive Ocean-Atmosphere Data Set (ICOADS)
- TSG: NOAA Global Thermosalinograph Database:
 - New Portal Coming Soon
 - SAMOS data already contributing, R2R cruise distro TSG in future
- CTD & XBT: NOAA World Ocean Database (R2R contribution coming soon)



RP Flip added to R2R



Acknowledgements



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