



Rolling Deck to Repository (R2R)

RVTEC Report

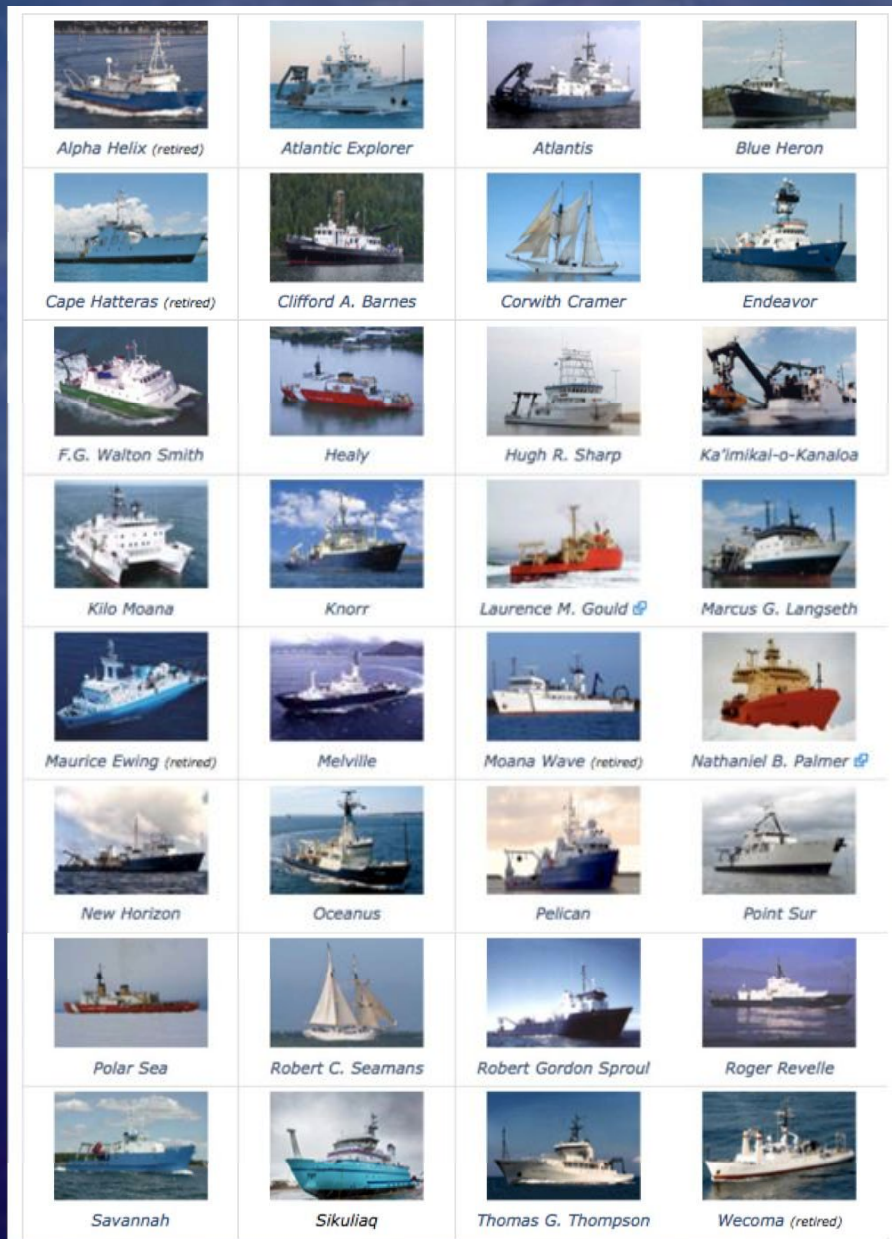
R2R Program

Mission:

1. Provide uniform stewardship of underway data* from the US academic research fleet

* routinely-collected
original data
from resident sensors

2. Provide suite of standard cruise products and services



25 in-service participating vessels
~400 primary sensor systems

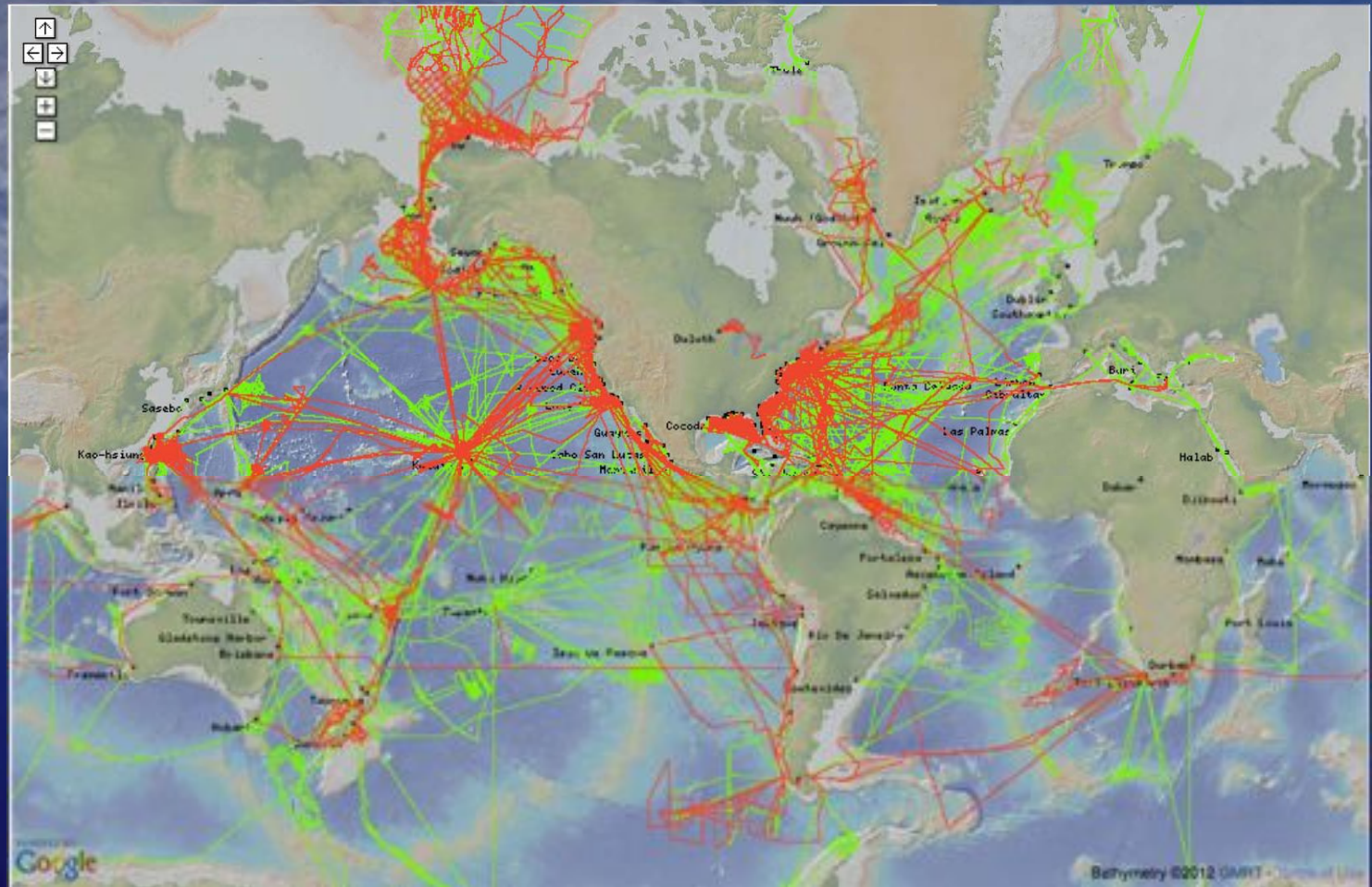
Cruise Catalog

Past Year
(Oct 2012 –
2013):

517 Cruises

from

22 Vessels



— 1,787 New cruises since R2R launch in 2009

— 1,479 Additional / pre-2009 cruises received from vessel operators
or other databases (LDEO, SIO, WHOI)

3,266 Total cruises

Give thanks.

Quality Assessment

In production:
Nav
MET/TSG
Multibeam
Grav
Mag

On deck:
CTD

*Goal: QA raw
Sea-Bird files,
produce new
processed set.*

In development:
ADCP

In planning:
Subbottom

The screenshot shows the R2R Quality Assessment Dashboard. The 'QA Dashboard' menu item is circled in red. Below the search filters, a table lists GNSS filesets for the vessel 'Melville'. The 'QA Summary' button in the table is also circled in red, with a red arrow pointing to a detailed QA test results window.

R2R Quality Assessment Dashboard

SEARCH BY:

Vessel: Melville Cruise: All

Device Type: GNSS Go-->

GNSS Filesets for Melville

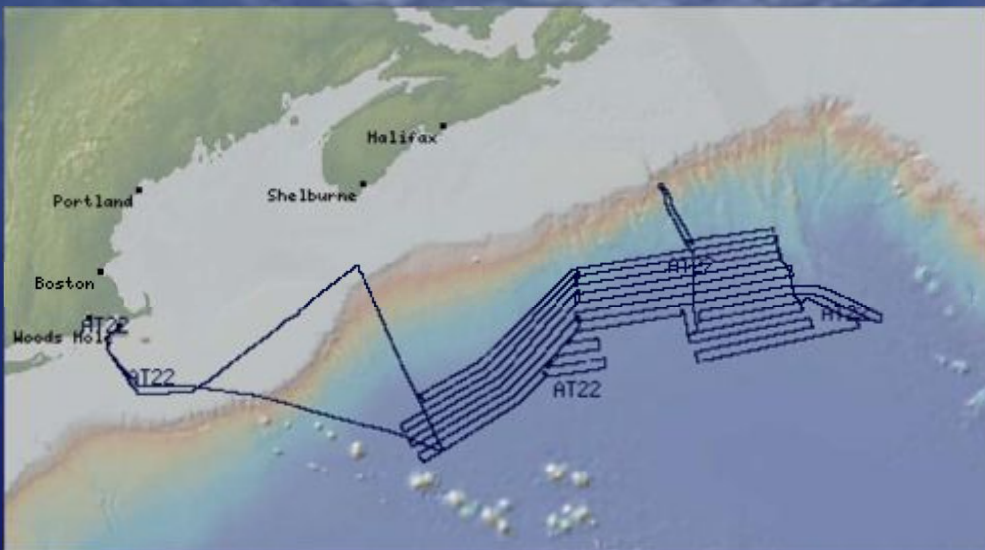
Total Filesets: 106 View: QA Overview

Rating	Device	Cruise	Vessel
🟢	GNSS Furuno GP-90D	MV0902	Melville
🟢	GNSS Furuno GP-90D	MV0904	Melville
🟢	GNSS Furuno GP-90D	MV0906	Melville
🟢	GNSS Furuno GP-90D	MV0907	Melville
🟢	GNSS Furuno GP-90D	MV0909	Melville
🟢	GNSS Furuno GP-90D	MV1001	Melville

QA Tests

- Percent completeness: 100.00 percent
- Longest epoch gap: 7 s
- Percent records out of sequence: 0.00 percent
- Percent records with bad gps quality indicator: 0.00 percent
- Percent unreasonable speeds: 0.32 percent
- Percent unreasonable accelerations: 1.09 percent

Nav Products

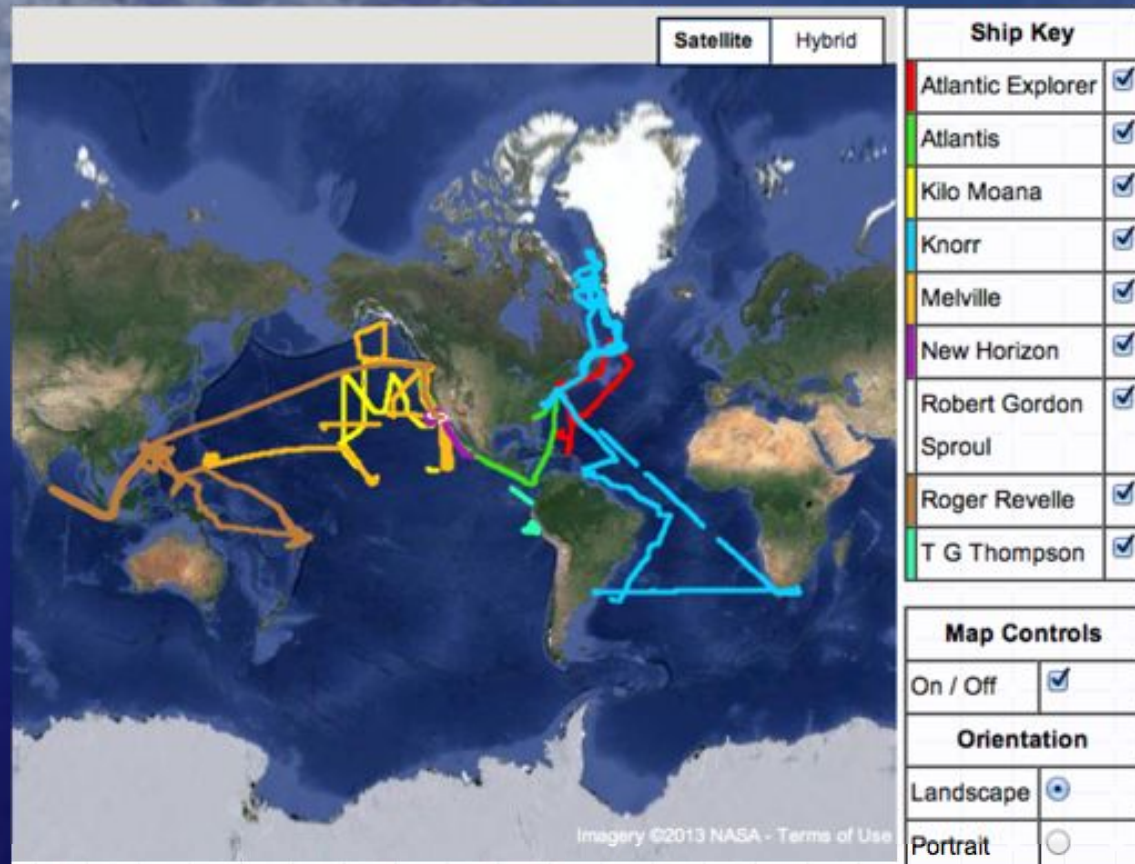


*R/V Atlantis cruise AT22 (Scotian Shelf Survey, August 2012)
Basemap: GMRT*

- Published quality-controlled products for 1429 cruises to date
 1. full-resolution
 2. one-minute
 3. control points
- Upgraded file format to include COG/SOG and embedded metadata
- Annual report to Tech Managers on QA of primary navigation system

Real-time MET/TSG

- 10 university RVs recruited to date
- Daily automated Quality Control
- Data archived monthly at NODC
- *Endeavor* using SAMOS 2.0, but comms problems arose in 2013
- Original data file QA operational



Data quality subscription service:

<https://samoss.coaps.fsu.edu/html/subscription/>

Event Logger

- Goal: Create a digital record of all sampling events recorded during a cruise
- Based on ELOG (Open Source weblog application)
- Deployed on 50+ cruises to date, incl. 16 cruises on 8 vessels in 2013
- Config file is customized for each cruise (or reused from a similar cruise)
- Deployment modes: “science-owned” or “ship-owned”



Polar Vessels

Goal: Unified R2R Cruise Catalog for all major NSF-supported vessels (UNOLS, USAP, USCG)

- New co-funding from ARC to continue support for *Healy*
- Support from ANT to start basic cataloging of *Palmer* and *Gould*



New Projects



- Ocean Data Interoperability Platform (ODIP)

Develop EU-US-AU partnership +testbed to increase data sharing, standards, best practices across international borders



- EarthCube “OceanLink”

Develop new Web technologies to link ocean data “end to end” from original field data to global syntheses +publications

Big picture: Increase the visibility, value, and reuse of data from the academic fleet.



(Photo: Ellen Roosen, WHOI).

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