



- **General RVTEC Updates**
- Programs, Subcommittees, & Working Group Updates:
 - **SatNag** – Satellite Network Advisory Group
 - **SURFIT** – Shared Unified Research Fleet IT Support
 - **ARFSEC** – Academic Research Fleet Cybersecurity Program
 - **R2R** – Rolling Deck to Repository
 - **FAIR Data Working Group**
 - **Tech Training** – “What Went Well Wednesdays”
 - **RVTEC Wiki**
 - **MAC** – Multibeam Advisory Committee





RVTEC: General Updates

- RVTEC Website → Update coming imminently (late Spring 2026)
- RVTEC Annual Meeting will be hosted by University of Miami
 - November 16 – 20, Coral Gables Florida
- Exploring fleet needs to support increased continuous underway data collection
- Monthly managers meetings & many others for RVTEC related programs, subcommittees, and working groups



- **Cyber Infrastructure Working Group (CIWG)**
 - Technical consulting and liaison role
 - 2026 – combine technical and operator meetings into one
- **Next Generation Firewall**
 - Offering continued guidance and direction of Fortigate Next-Gen Firewall project
 - Aligning project goals with operator feedback and current internet solutions
- Advise and support of **RVTEC Cyber Monday** planning
- **Collaborate w/ CI Compass for Connectivity Monitoring on ARF Vessels**
 - Adopted by RV Sikuliaq and RV Thompson to date
- **Advisory role for NSF Program Directors**
 - Anchor Act
 - Safer Seas Act
 - Work with ARFSEC on a draft response to ONR regarding CUI on AGOR Vessels
 - Guidance on Thompson early adoption of OneWeb vs repair of VSAT antenna
- **Spin up of Shared Unified Research Fleet IT (SURF-IT) Support Service**



SURF-IT



Shared Unified Research Fleet IT Support

Distributed Team of IT professionals
Available to any UNOLS operator for help with:

- Cybersecurity
- Cyberinfrastructure
- Data Acquisition Systems
- Communications/Connectivity

At no cost to the vessel!

In the pilot year, SURF-IT has assisted 5 vessels
RV Hugh Sharp - FortiGate Firewall Install
RV Marcus Langseth - FortiGate Firewall Install
RV Atlantic Explorer - FortiGate Firewall Tuning
RV Pelican - Cyberinfrastructure Upgrades
RV Blue Heron - FortiGate Firewall Install

Consortium of IT staff from UAF, URI, and UW



ARFSEC



- Previously a contract with OmniSOC, now a joint project of OmniSOC and CACR at Indiana University funded by a Cooperative Agreement with the NSF.
- **Same staff, same mission:**
 - Provide the fleet with a cybersecurity program and services to assist ship operators to maintain safe and reliable operations, meet regulatory requirements, and provide platforms to enable scientists to conduct research on the world's oceans, the Great Lakes and polar regions.
- Contact us:
 - Email - arfsec@iu.edu

Cybersecurity for the U.S Academic Research Fleet

Joint project of OmniSOC, a part of REN-ISAC, and the Center for Applied Cybersecurity Research (CACR) at Indiana University, funded by Cooperative Agreement with

NSF



ARFSEC Categories of Cybersecurity Services

Operations & Technical Support

Technical systems that enable cybersecurity operations across the fleet.

- Log and network monitoring, analysis and alerting, still using OmniSOC.
- Deploy and maintain network honeypots.
- General technical cybersecurity consulting to ship operators.
- Network vulnerability scanning and reporting.

Awareness and Organizational Resilience

Strengthening fleet-wide cybersecurity culture and preparedness.

- Resources to prepare ship operators for Incident Response:
 - Developing policies and procedures.
 - Conducting tabletop exercises and cyber-incident drills.
- NSF Ship Inspections
- Community participation to share knowledge, support coordination, and gain insight into the cyberinfrastructure and threat landscape unique to fleet operations.
- Cybersecurity awareness training.

Governance, Risk, and Compliance

Address cybersecurity risk and reduce the burden of navigating cybersecurity regulations and requirements.

- Supporting ship operators in:
 - Assessing risk
 - Identifying and implementing mitigation strategies
 - Documenting compliance
 - Preparing for inspections.
- Support both the advancement of cybersecurity in service of operational and research missions, and the fulfillment of obligations imposed by external regulations and the ship operators' parent institution.



R2R & FAIR Working Group

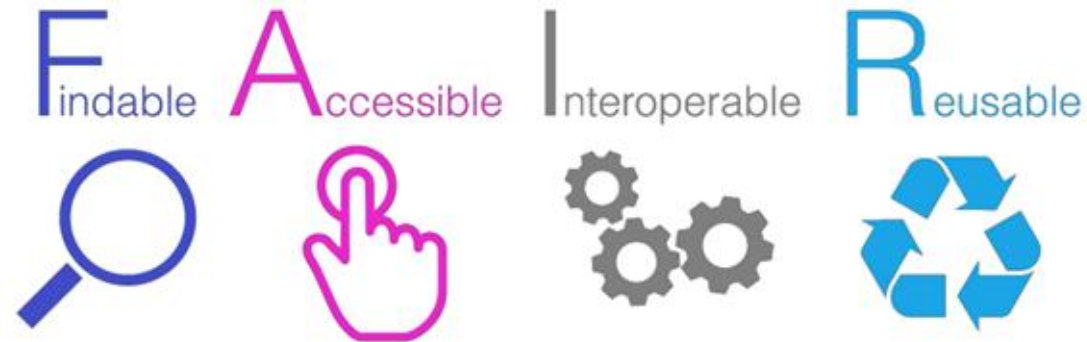


Primary focus of 2026: System Upgrade

- Transitioning from aging, project-owned hardware to a scalable, cost-effective, distributed infrastructure with workflow automation and management tools

Now serving Marine X-Band Radar / WAMOS data products from Bjoern Lund

FAIR Data Working Group



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- Overarching Goal - Develop guidance for the Academic Research Fleet (ARF) to align underway data collection, documentation, and distribution with the FAIR Principles
- Capturing format description documents with files
- Bringing together marine technicians, FAIR experts, and data managers to assess needs and develop device-specific plans and guidelines for moving the ARF towards FAIR principles at the time of data collection
- Contact: Shawn Smith srsmith@fsu.edu)



Tech Training Committee

What Went “Well” Wednesdays (WWWW) Webinars

- Past:
 - SBP-29 (Boe Derosier, USGS) - 07 Aug 2025 https://youtu.be/i_o8ZI83_WA?si=dXhmR36LaPzD0AsD
- Upcoming:
 - Difficult Conversations (OSU Ombuds) - 13 May 2026
 - Potential Tech Training Cruise

Assisting with coordinating other training activities, as needed by the community

- BIOS – WHOI joint training on CTD troubleshooting – July 2026, St. George’s
- Fiber Optic Troubleshooting and Termination Training – Winter 2026/2027, WHOI

Working on a webpage hosted on UNOLS

Supporting RVTEC Wiki Group



RVTEC Wiki

- Led by Bonny Clarke (URI), Rebecca Hudak (WHOI), Kristin Beem (OSU)
- Working groups divide tasks with SMEs meeting monthly
- MATE program engaged for improving effectiveness & providing feedback with the 'new tech' perspective
- RVTEC Training Committee showcasing training and WWW videos
- Collaborating with MFP to align instrument/sensor categories

<https://rvtecwiki.unols.org/doku.php?id=welcom>



Recent MACTivity: USARF Support 2025-26

Ship	System(s)	Arrays	Life Cycle	MAC Support (Most Recent)	2026 Plans
<i>Atlantis</i>	EM124 (g)	2021	Early	SAT*, QAT (2024)	QAT
<i>Healy</i>	<u>EM122</u> EM304	2010 / 2023 RX	Late	ANT, SAT*, QAT* (2025)	EM304 SAT
<i>Hugh R. Sharp</i>	EM2040	2024	Early	QAT (2016), SAT* (2025)	QAT
<i>Kilo Moana</i>	EM122 / EM710	2012	Late	ANT, QAT* (2025), spares planning	QAT
<i>Marcus G. Langseth</i>	EM122 (g)	2007 TX / 2010 RX	Late	ANT, QAT (2023), spares planning	QAT
<i>Nathaniel B. Palmer</i>	EM122	2015	Late	SAT, ANT, QAT (2015), spares planning	TBD
<i>Neil Armstrong</i>	EM124 / EM712	2024 (2016 710 RX)	Early	SAT*, QAT* (2025)	QAT
<i>Rachel Carson</i>	EM2040	2024	Early	SAT* (2024)	QAT
<i>Roger Revelle</i>	EM124 / EM712 (g)	2020	Mid	SAT*, QAT* (2025)	QAT
<i>Sikuliaq</i>	EM304 MKII / EM2042	2024	Early	SAT, QAT (2025)	EM2042 SAT
<i>Sally Ride</i>	EM124 / EM712	2016	Late	SAT, QAT (2025)	QAT
<i>Thomas G. Thompson</i>	EM124 (g)	2025	Early	SAT* (2025)	QAT



Lamont-Doherty Earth Observatory
COLUMBIA UNIVERSITY | EARTH INSTITUTE



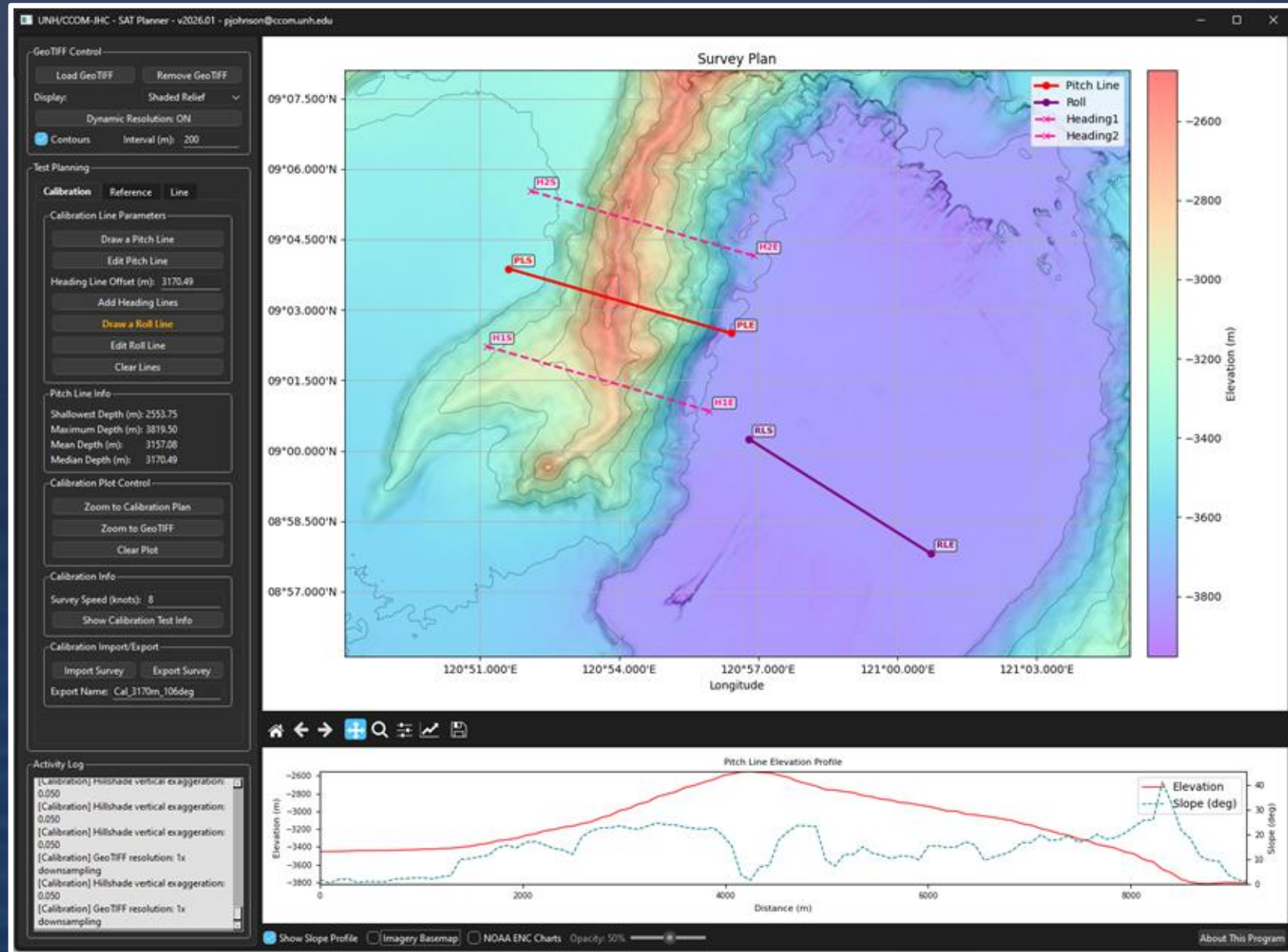
(g) indicates gondola installation
*Indicates remote support
Underline = recent install

Italic = pending replacement (2026+)
Green = testing in last year
ANT = Acoustic Noise Test (Gates)



Recent MACTivity: Software, training, and outreach

- MAC five-year proposal submitted; current grant ends in June
- Major assessment tool updates
- New **SAT Planner** app (at right) with built-in **GMRT Downloader**
- Echosounder Test Site Database
- Ocean Mapping Community Wiki
- RVTEC planning and training
- Sound Speed Manager updates
- Kongsberg-CCOM annual visit
- Non-routine support requests
- Outreach / collaboration with NOAA, CCOM, beyond USARF



QUESTIONS?

