

STARC Report AICC – Technical Issues



SLEP Update: Science Systems

STARC Staffing Model and personnel

STARC Maintenance Requests to SLFC

Forward Jackstaff Issues AWS24 & AWS25

Cyber security, uncertainty on impacts

2026 STARC Report AICC - Staffing



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2026 STARC Report AICC - Staffing



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STARC Report AICC – SLEP Science Items



Dockside 2025 - Completed

- Ice Grinder installation (LREPL/ISVS)
- Ocean/Trawl winch controllers (8) recapitalization

Drydock 2026

- EM-304-MKII Multibeam installation
- SBP-29 Sub Bottom Profiler installation
- 30/50KW UPS installation
- Winch network wiring recapitalization (LREPL)
- Ice Grinder wiring to MPCMS (LREPL)

Dockside 2027

- Rutter Sigma 6 Ice RADAR installation
- Polar Science Network recapitalization
- Science seawater duplex strainer installation

Dockside 2028

- Nothing scheduled yet

Drydock 2029

- Climate control chambers A/C equipment
- Scoreboard (2) replacement

Dockside 2030

- Winch room cable management
- Science Lab storage/power

Dockside 2031

- Science Berthing upgrade/reconfigure

STARC Report AICC – Requests to SFLC



Science Seawater System

- Pump repair
- Piping cleanout
- Pump spares on hand

HCO Shack Overhaul

- Overhead structure preservation
- Multi-cable transits
- Antenna and sensor mount renew

Lab Bench Renewal

- Main Lab
- Bio-analytical Lab
- Climate Control Chambers

Science Reefers and Climate Control Chambers

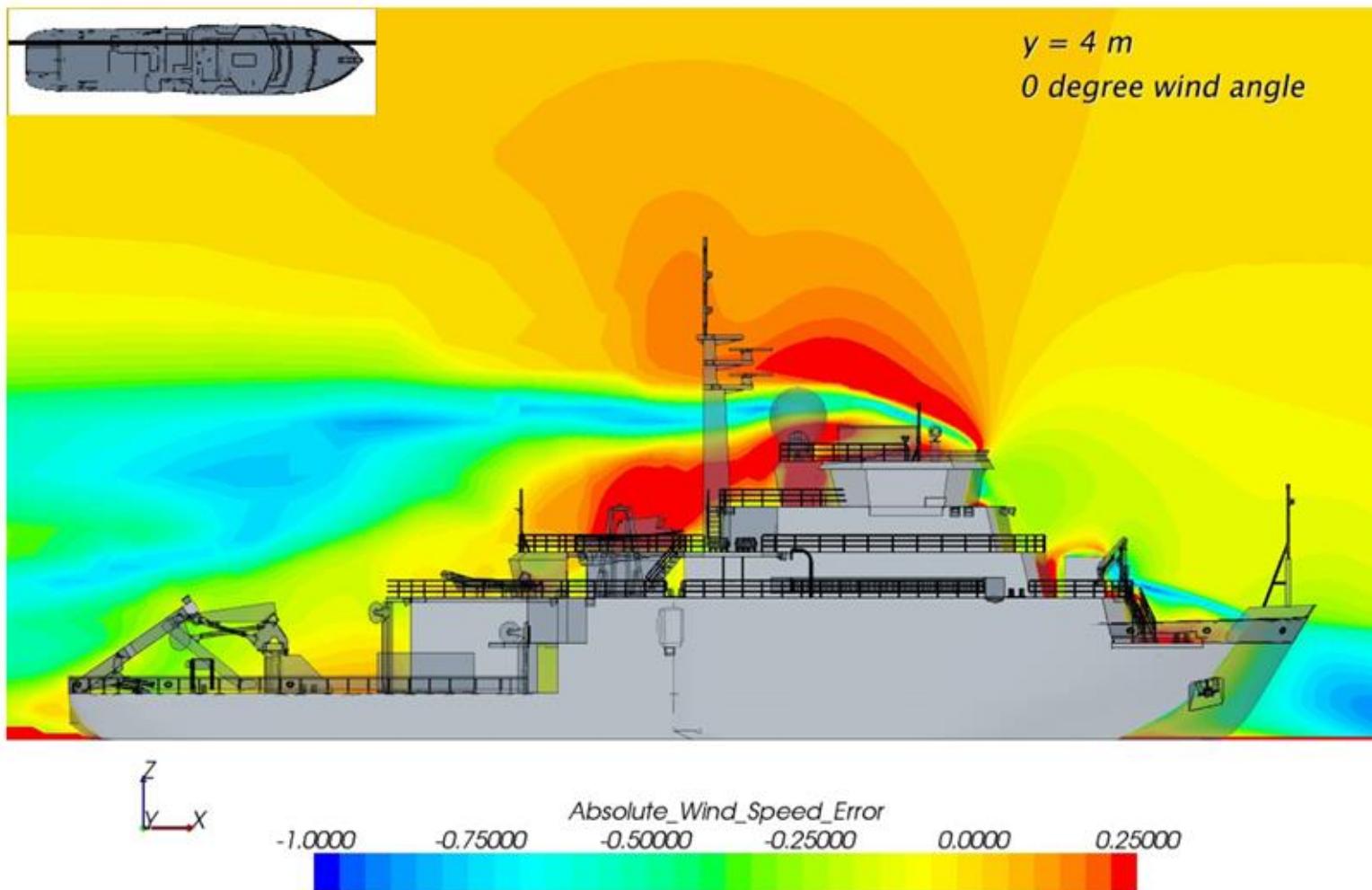
- Issues holding temperature
- Problematic storing samples after the mission
- Compressors and equipment is aging
- Super Low freezers difficult to maintain

STARC Report AICC - Forward Jackstaff



Absolute Wind Speed Error

ARRV CFD Modeling CD-adapco



STARC Report AICC - Forward Jackstaff



Multiple sensors and junction box on anemometer post



Additional junction box, and sea surface temperature sensor located on the bow.



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FWD Jackstaff

Future Considerations:

- Increased surface area for sensors
- Mounting points
- Flanges for expansion
- Dedicated cable routing
- Approved cable pass-throughs
- Guy-wires for additional support



STARC Report AICC - Forward Jackstaff

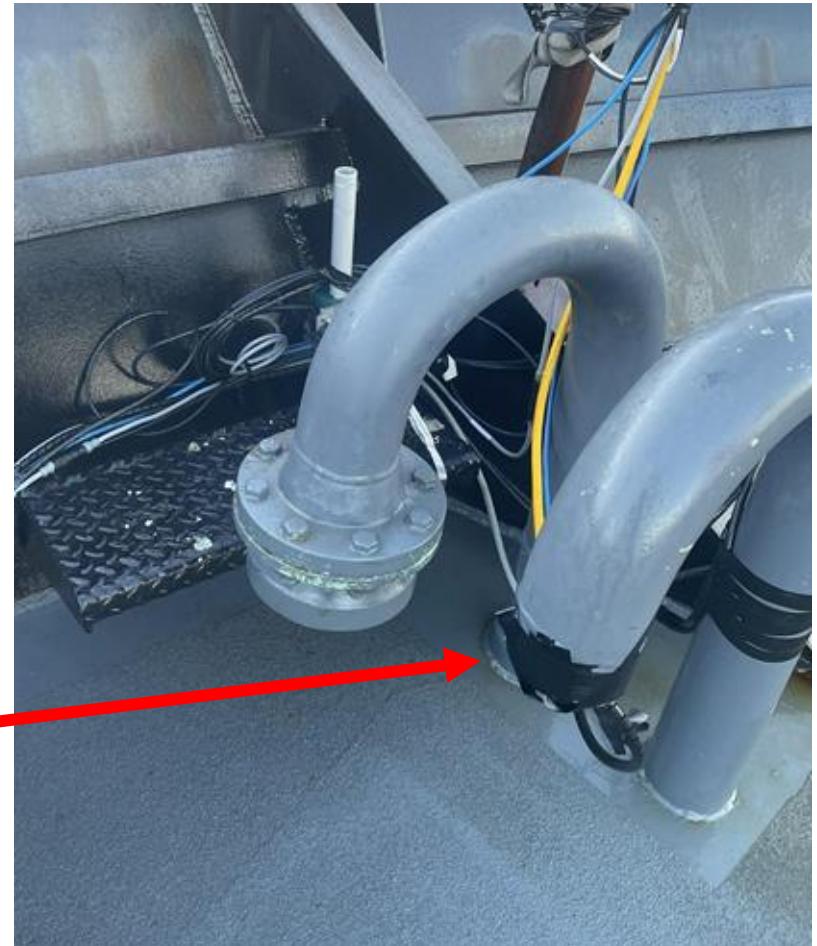


Current design

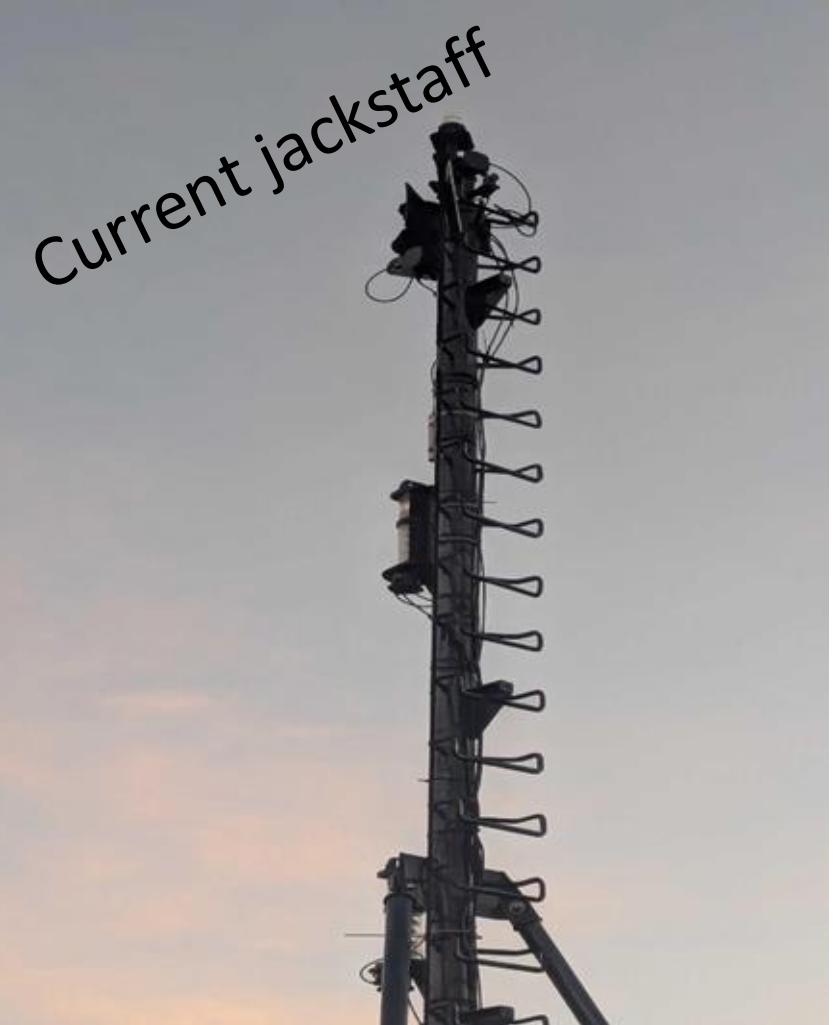
Limited space for additional sensors

Ship-induced vibration

Difficult cable management



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STARC Report AICC - Forward Jackstaff



What happened?

One inch rebar
snapped from
jackstaff

Why?

Poor design due to limited space.

Weakened by temporary sensors, vibration, corrosion

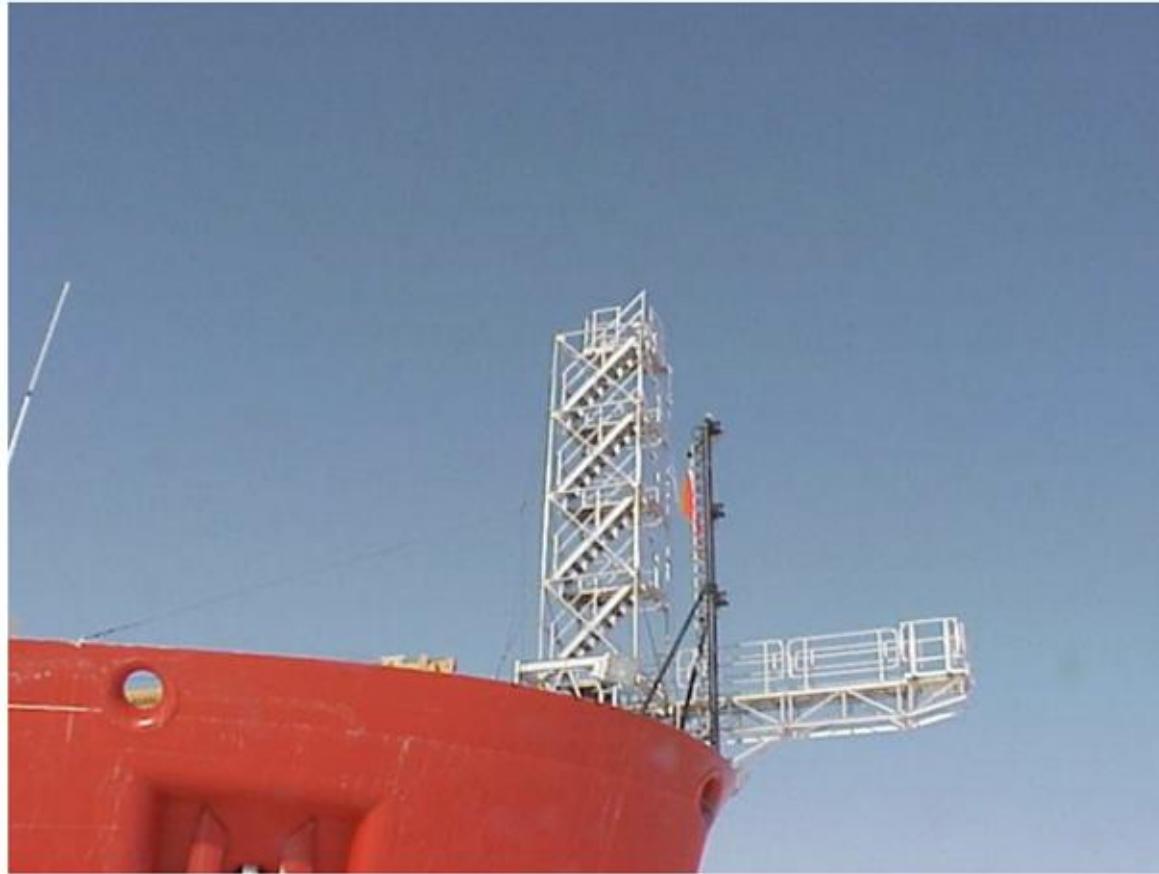
STARC Report AICC - Forward Jackstaff



No Design is Perfect!



STARC Report AICC - Original Design



Completed bow tower and catwalk



Installation in progress

STARC Report AICC - Cybersecurity



Data presence

Acquisition Hardware

Specialized Software

Remote Support



Healy's Computing Clusters