STARC Report to AICC

USCG Base Seattle

November 13 – 14, 2014

NSF STARC Grant

Collaboration with OSU
New 5-year award

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Annual Maintenance

Met & Sea Surface Instruments
CTD & Sensors
Rosette Carousel
Water Bottles
Lab Clean Water Systems
Underway pCO2 System
Bell BGM-3 Gravimeter

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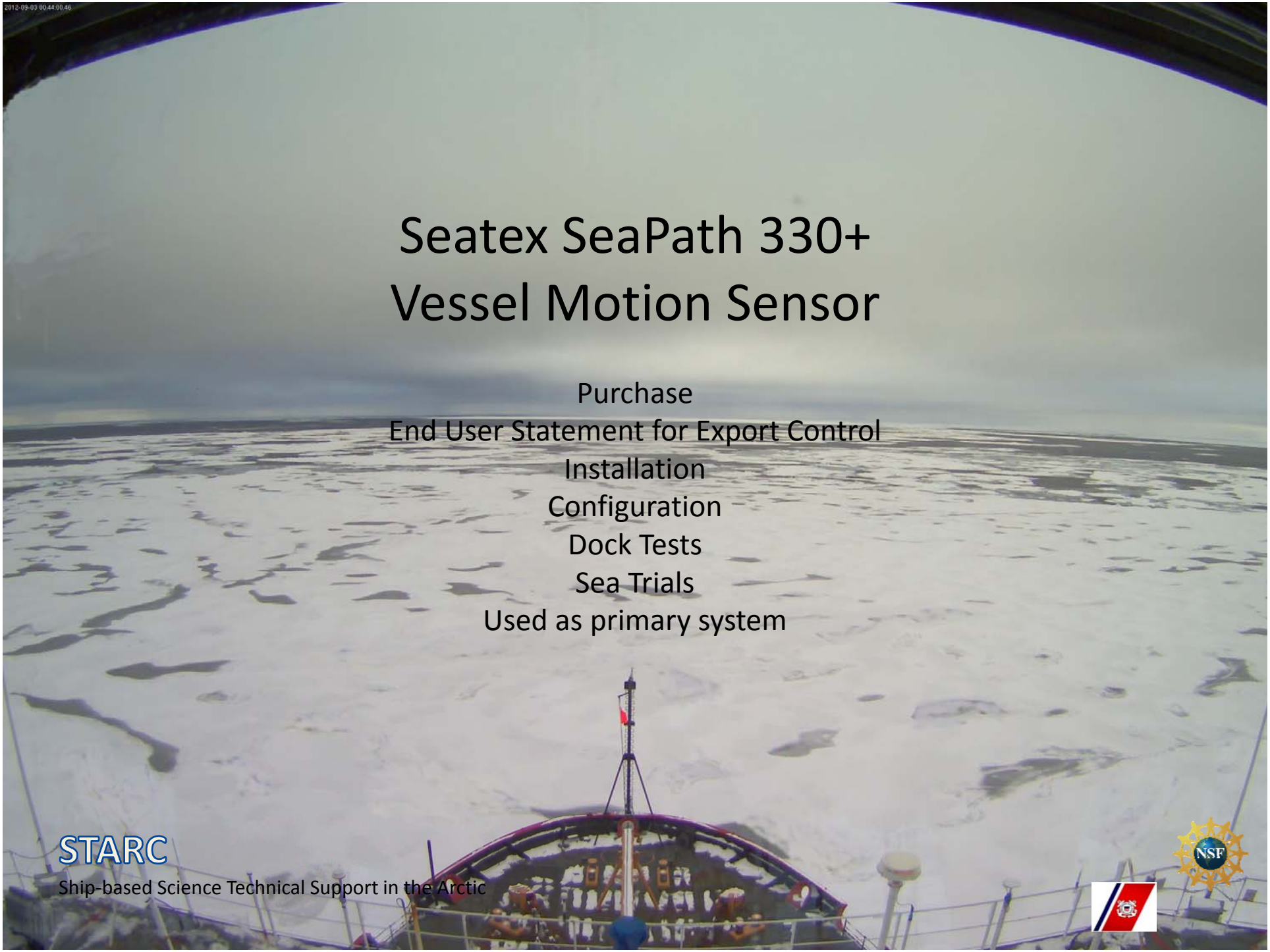

Seatex SeaPath 330+
Vessel Motion Sensor

Purchase
End User Statement for Export Control
Installation
Configuration
Dock Tests
Sea Trials
Used as primary system

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University of Hawaii Mosaic Software

Purchase of IMAC
Initial installation at SIO
Flew Roger Davis to Seattle for final installation
Dock Tests
Sea Trials
Ran successfully through season

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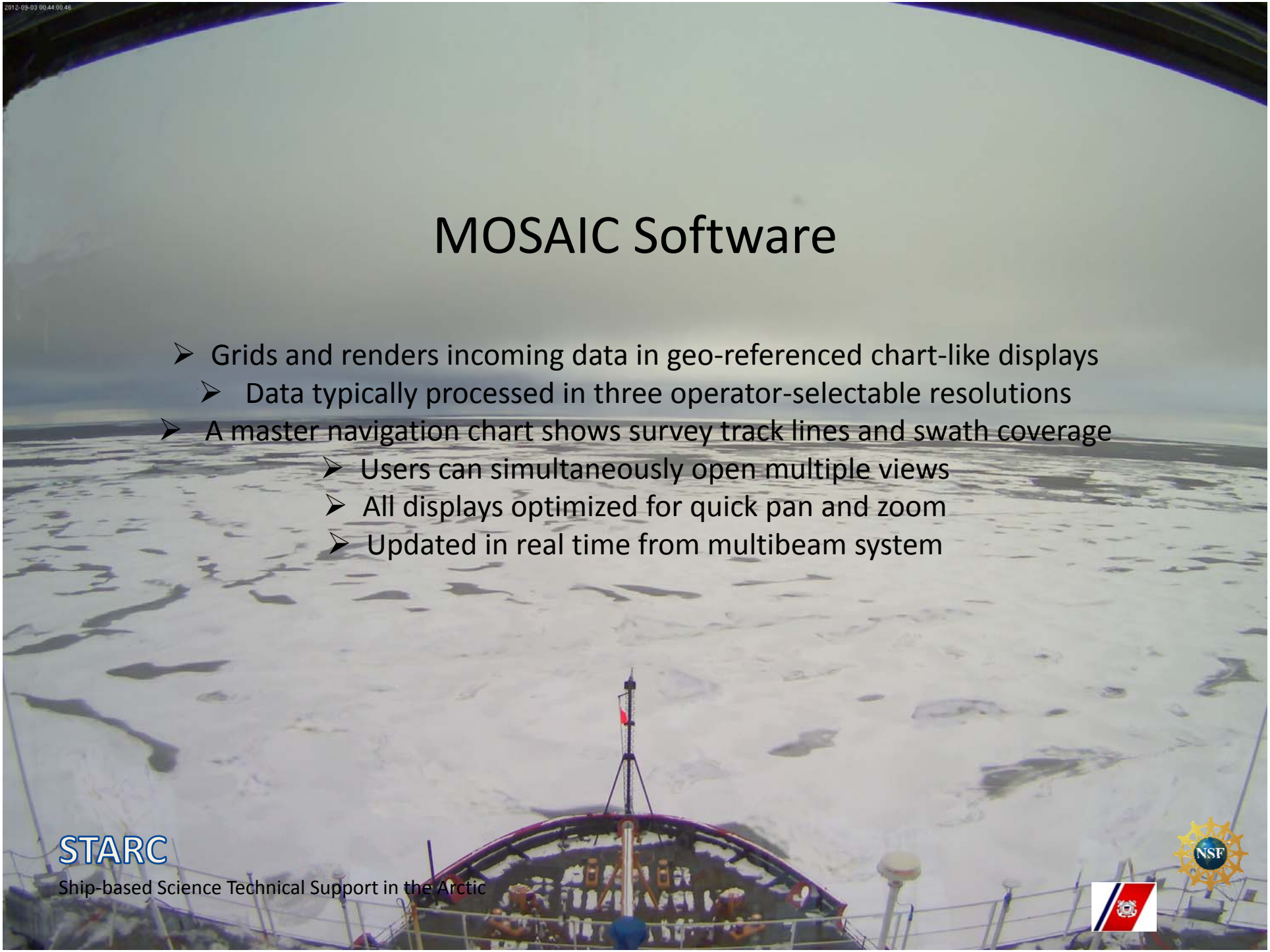

MOSAIC Software

- Grids and renders incoming data in geo-referenced chart-like displays
  - Data typically processed in three operator-selectable resolutions
- A master navigation chart shows survey track lines and swath coverage
  - Users can simultaneously open multiple views
  - All displays optimized for quick pan and zoom
  - Updated in real time from multibeam system

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Arctic Field Safety Risk Management (ARM) Workshop

February 4 – 5, 2014
Arlington, VA
(NSF)

O'Gorman presented
Sutherland participated

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Risks and Mitigations Of Ship Based Science in the Arctic

- Logistic
- Environmental
- Technical
- Political
- Arctic Diving Operations
- Lessons Learned

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Arctic Encounter Symposium

February 7 – 8, 2014
University of Seattle School of Law

Sutherland participated

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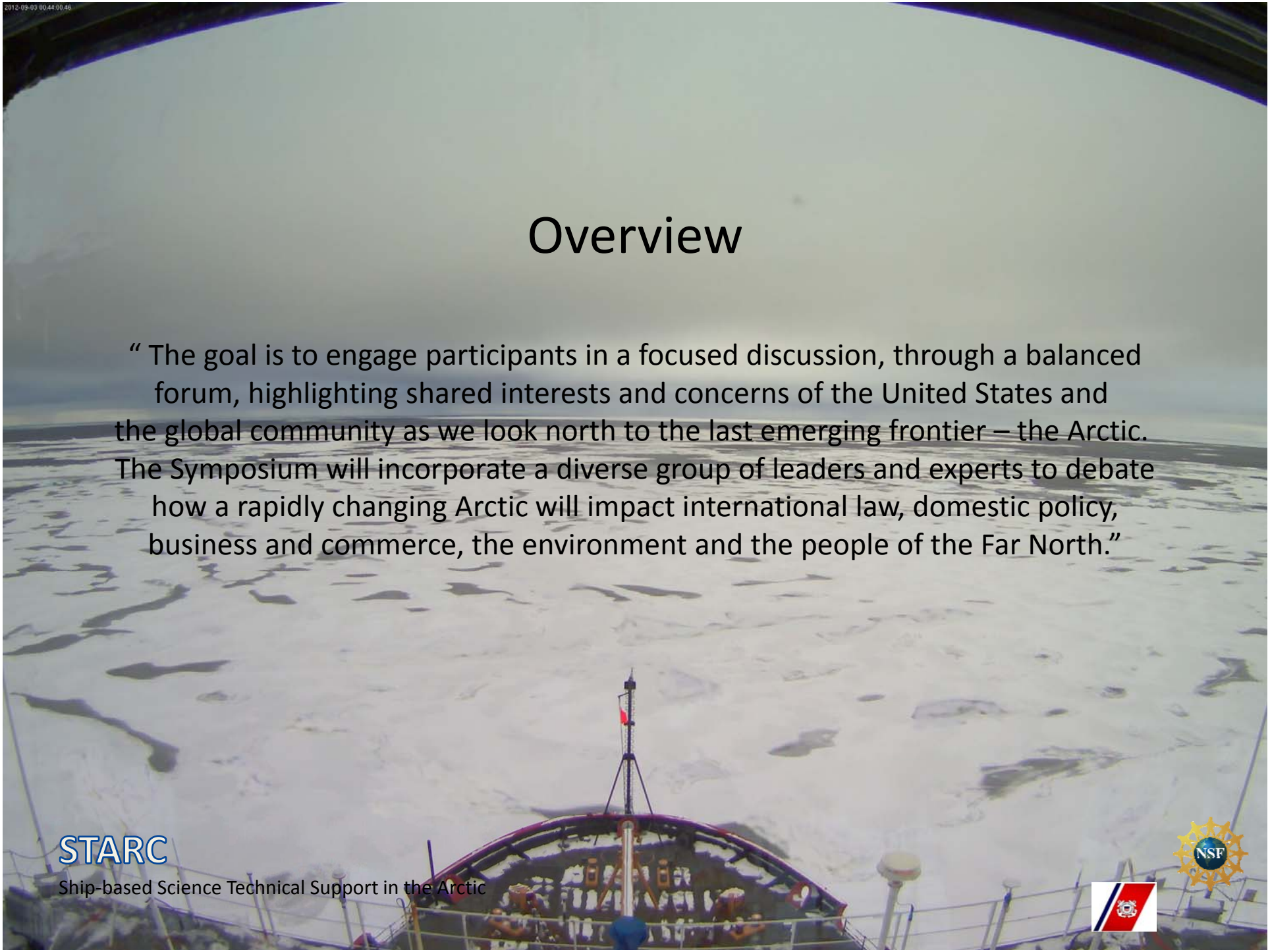

Overview

" The goal is to engage participants in a focused discussion, through a balanced forum, highlighting shared interests and concerns of the United States and the global community as we look north to the last emerging frontier – the Arctic. The Symposium will incorporate a diverse group of leaders and experts to debate how a rapidly changing Arctic will impact international law, domestic policy, business and commerce, the environment and the people of the Far North."

USCGC HEALY
Mid-Life Workshop

February 11 – 13, 2014
USCG Base Seattle

Hiller presented
Sutherland participated

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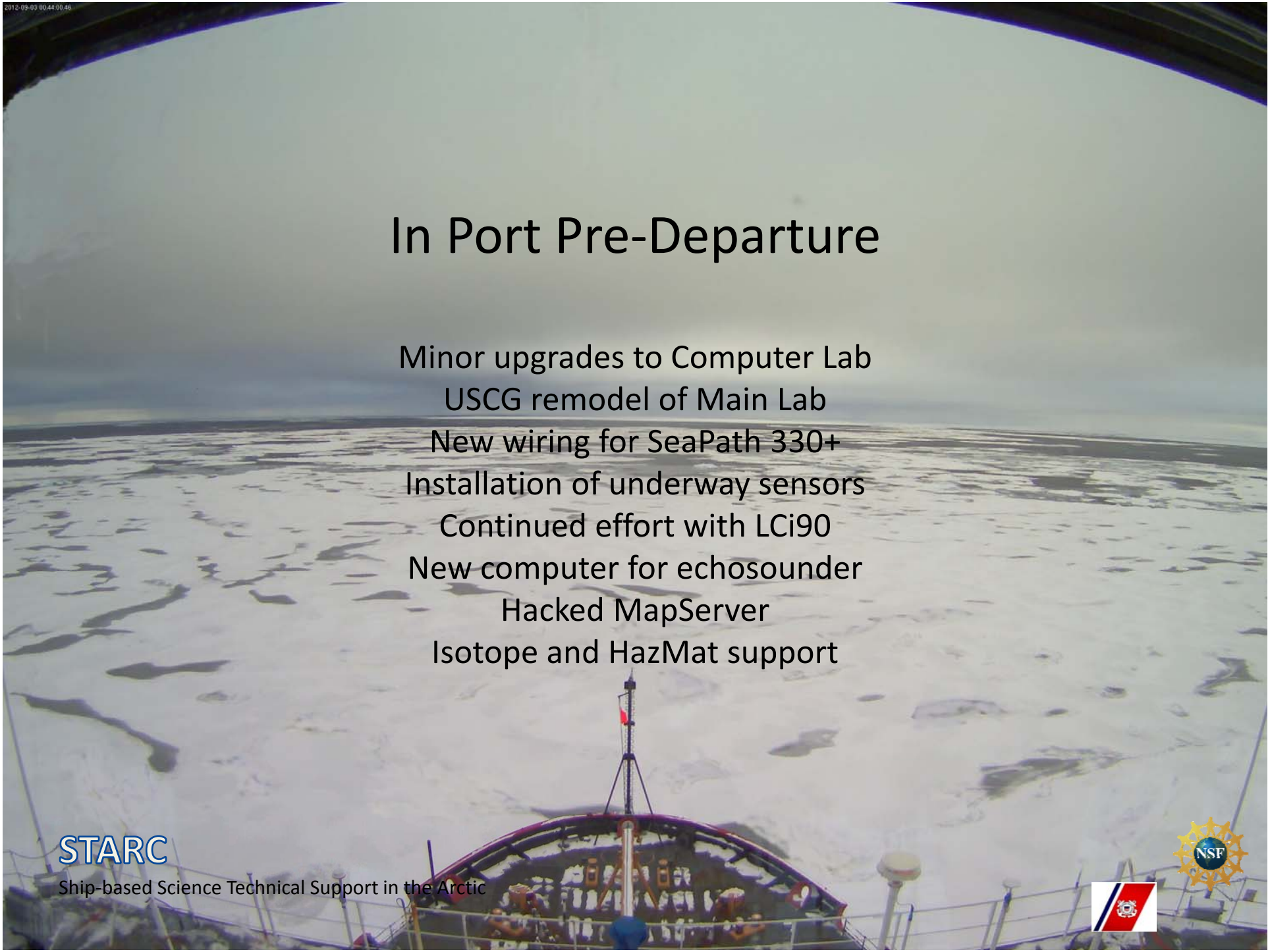

In Port Pre-Departure

Minor upgrades to Computer Lab
USCG remodel of Main Lab
New wiring for SeaPath 330+
Installation of underway sensors
Continued effort with LCi90
New computer for echosounder
Hacked MapServer
Isotope and HazMat support

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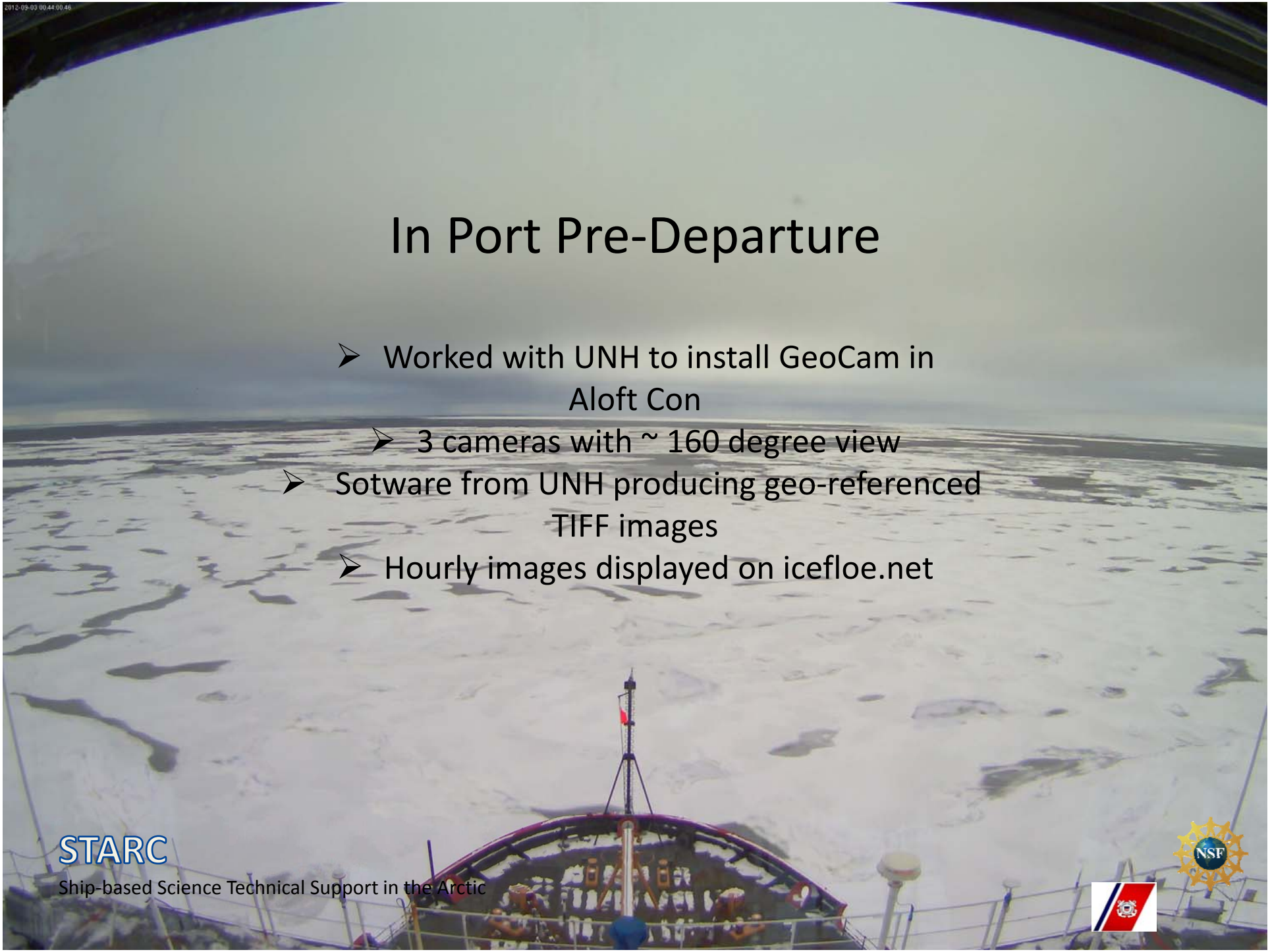

In Port Pre-Departure

- Worked with UNH to install GeoCam in Aloft Con
- 3 cameras with ~ 160 degree view
- Sotware from UNH producing geo-referenced TIFF images
- Hourly images displayed on icefloe.net

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Sea Trials
Mar 31 – Apr 4, 2014
2 – OSU Techs
2 – SIO Techs

Groomed Science Systems
EM122 Calibration
Check Winch Data Systems

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Transit to Alaska
May 4 – 10, 2014

STARC techs on board to prep for first cruise

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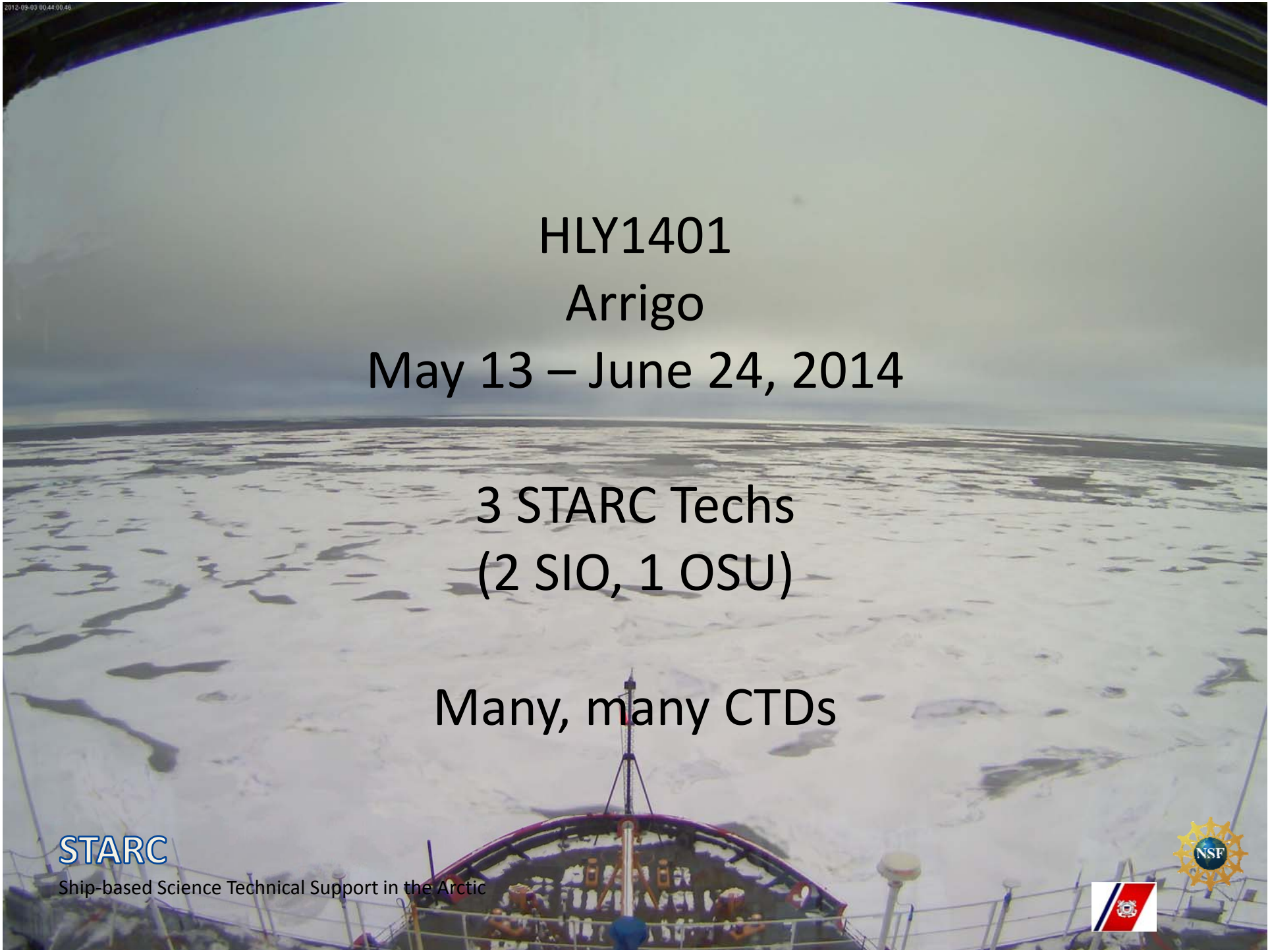

HLY1401
Arrigo
May 13 – June 24, 2014

3 STARC Techs
(2 SIO, 1 OSU)

Many, many CTDs

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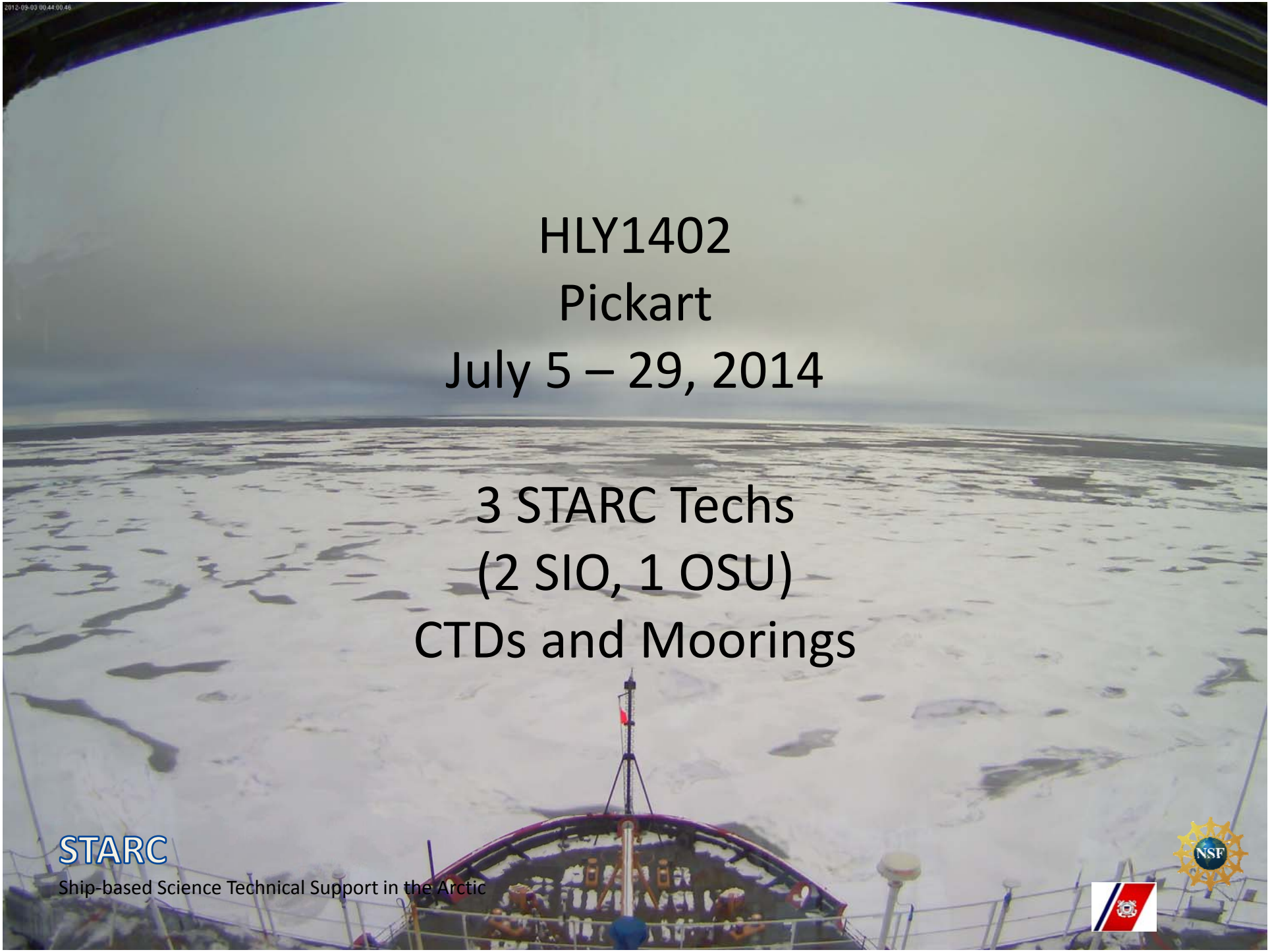
HLY1402
Pickart
July 5 – 29, 2014
3 STARC Techs
(2 SIO, 1 OSU)
CTDs and Moorings
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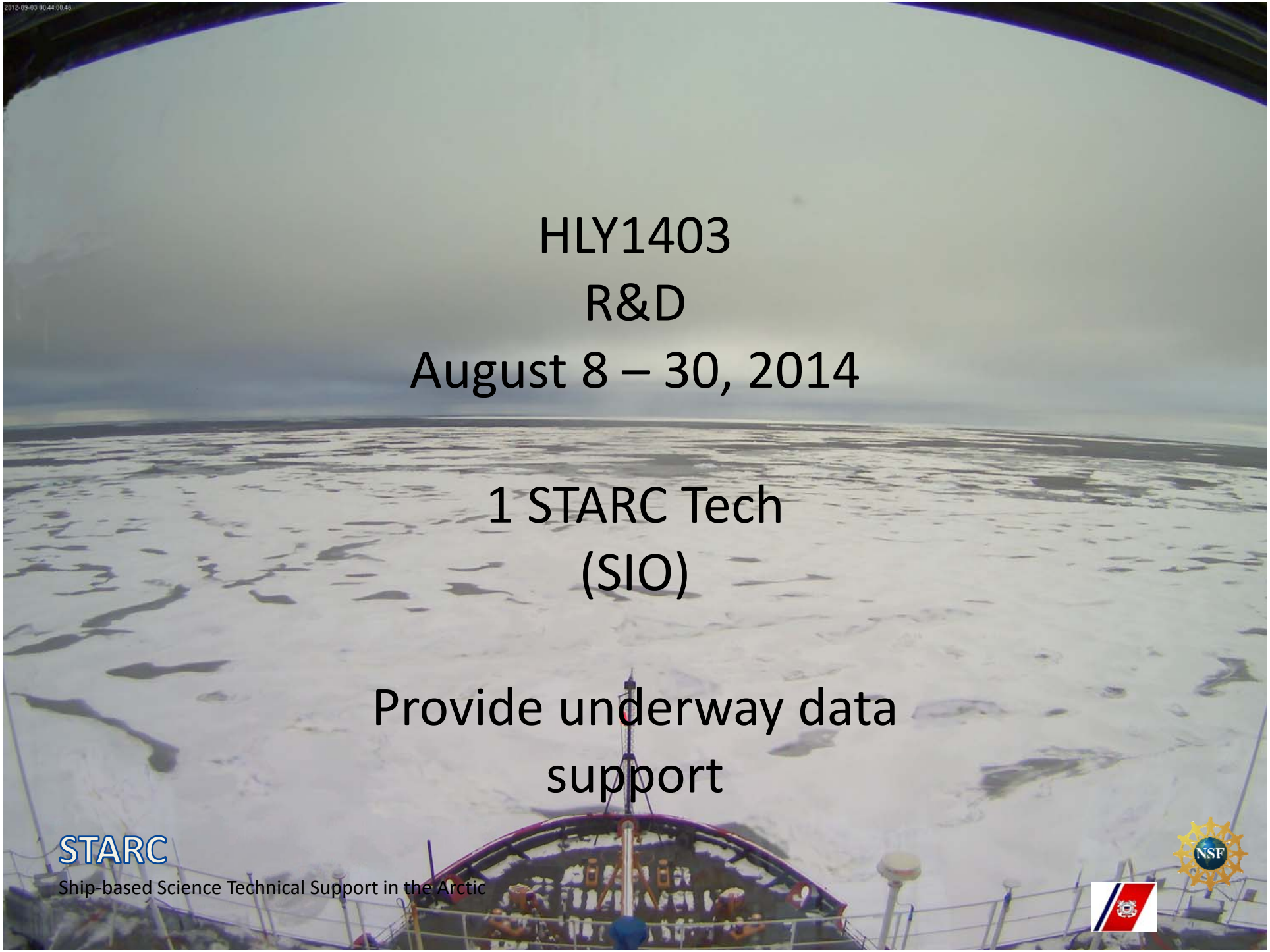

HLY1403
R&D
August 8 – 30, 2014

1 STARC Tech
(SIO)

Provide underway data support

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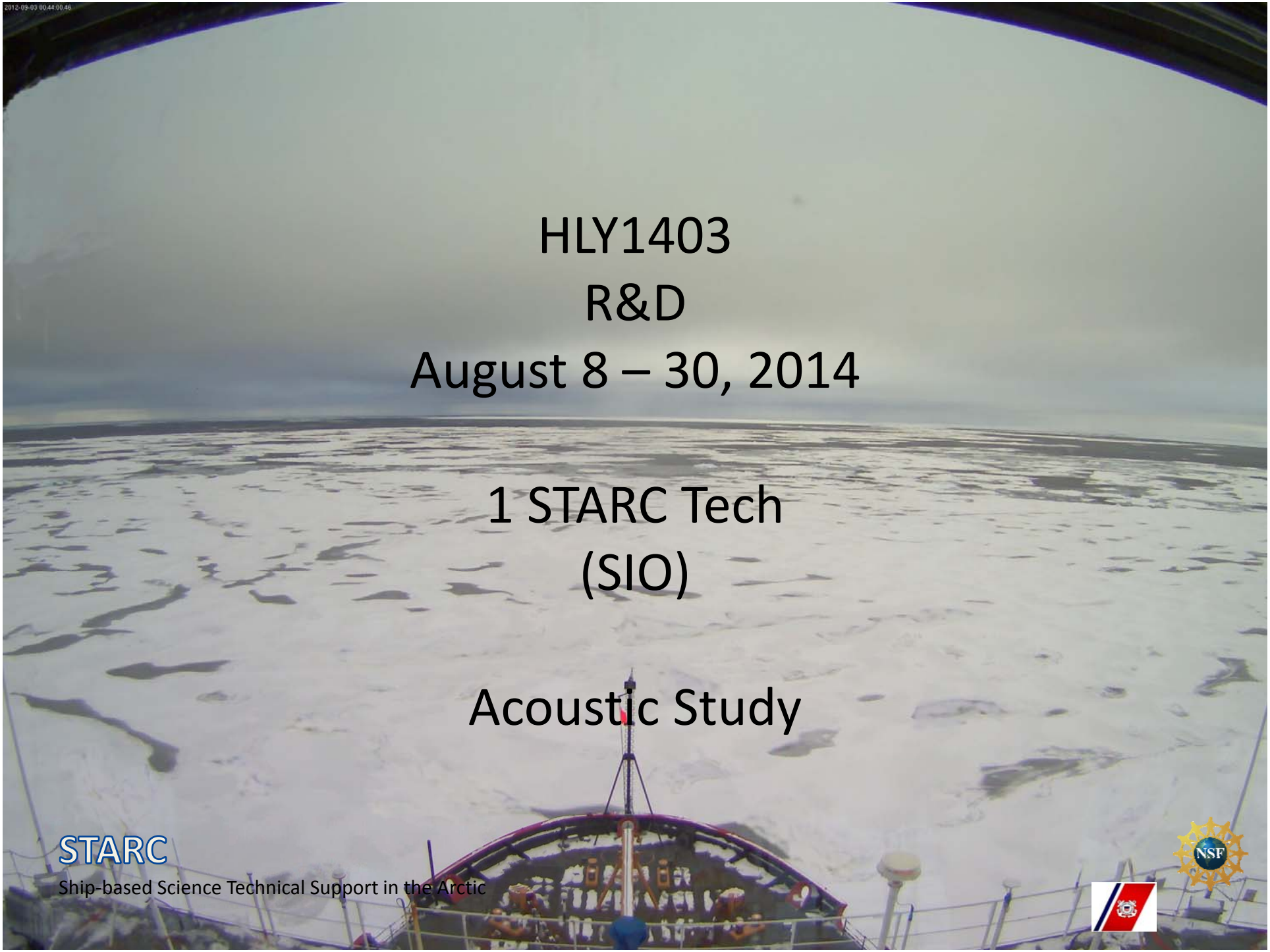

HLY1403
R&D
August 8 – 30, 2014

1 STARC Tech
(SIO)

Acoustic Study

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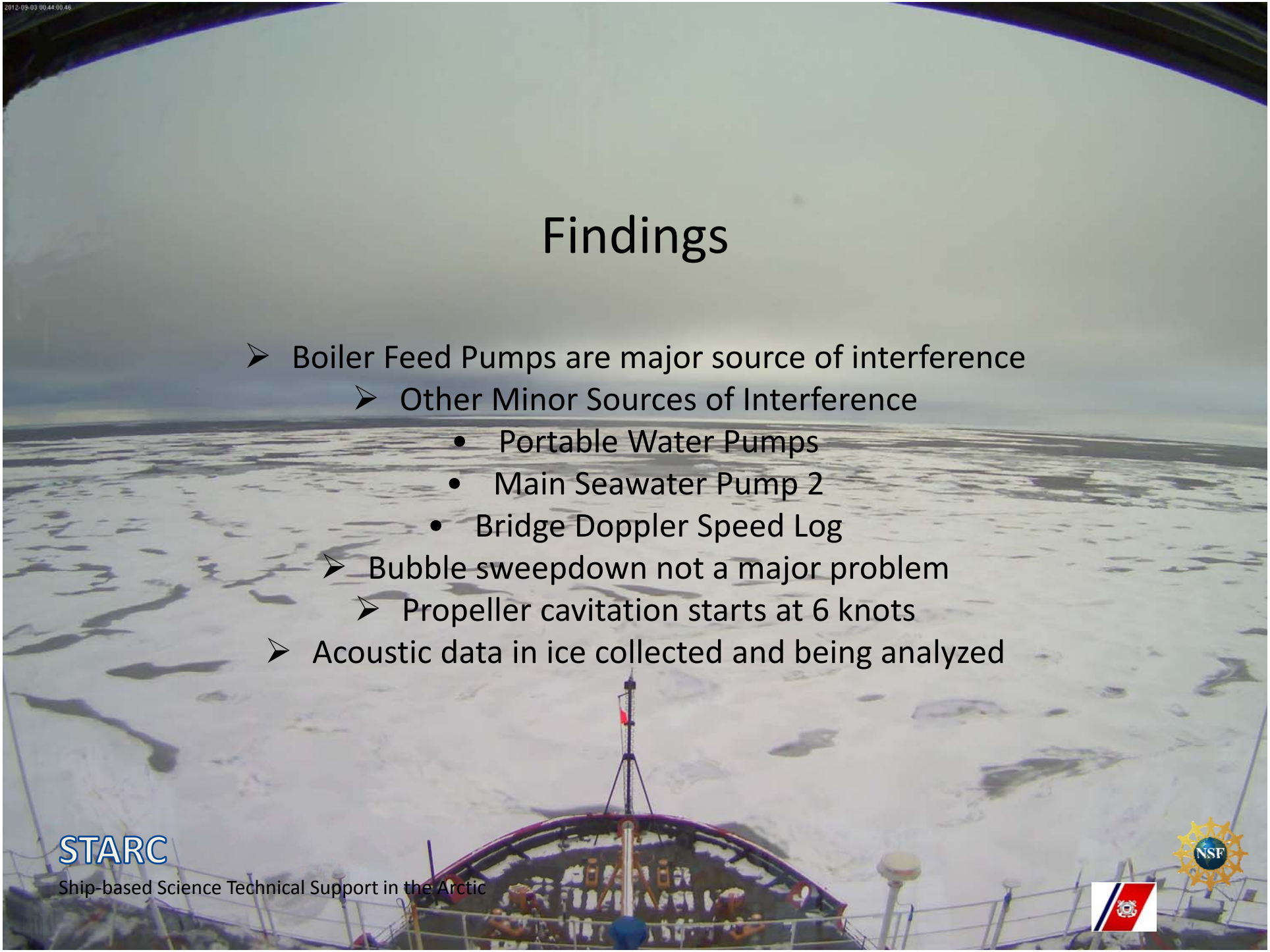

Findings

- Boiler Feed Pumps are major source of interference
- Other Minor Sources of Interference
  - Portable Water Pumps
  - Main Seawater Pump 2
  - Bridge Doppler Speed Log
- Bubble sweepdown not a major problem
- Propeller cavitation starts at 6 knots
- Acoustic data in ice collected and being analyzed

Transit Alaska to Seattle
Sep 1 - 11, 2014

1 STARC Tech
(OSU)

Provide underway data Support US Navy Acoustic Range

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Range Findings
Sep 1 - 11, 2014

- Ship noise measured at 4.6, 8, 11, 16 knots
  - Ship noise lowest at 4.6 knots
  - Ship noise greatest at 16 knots
- 5 & 10 degree rudder movement did not increase noise

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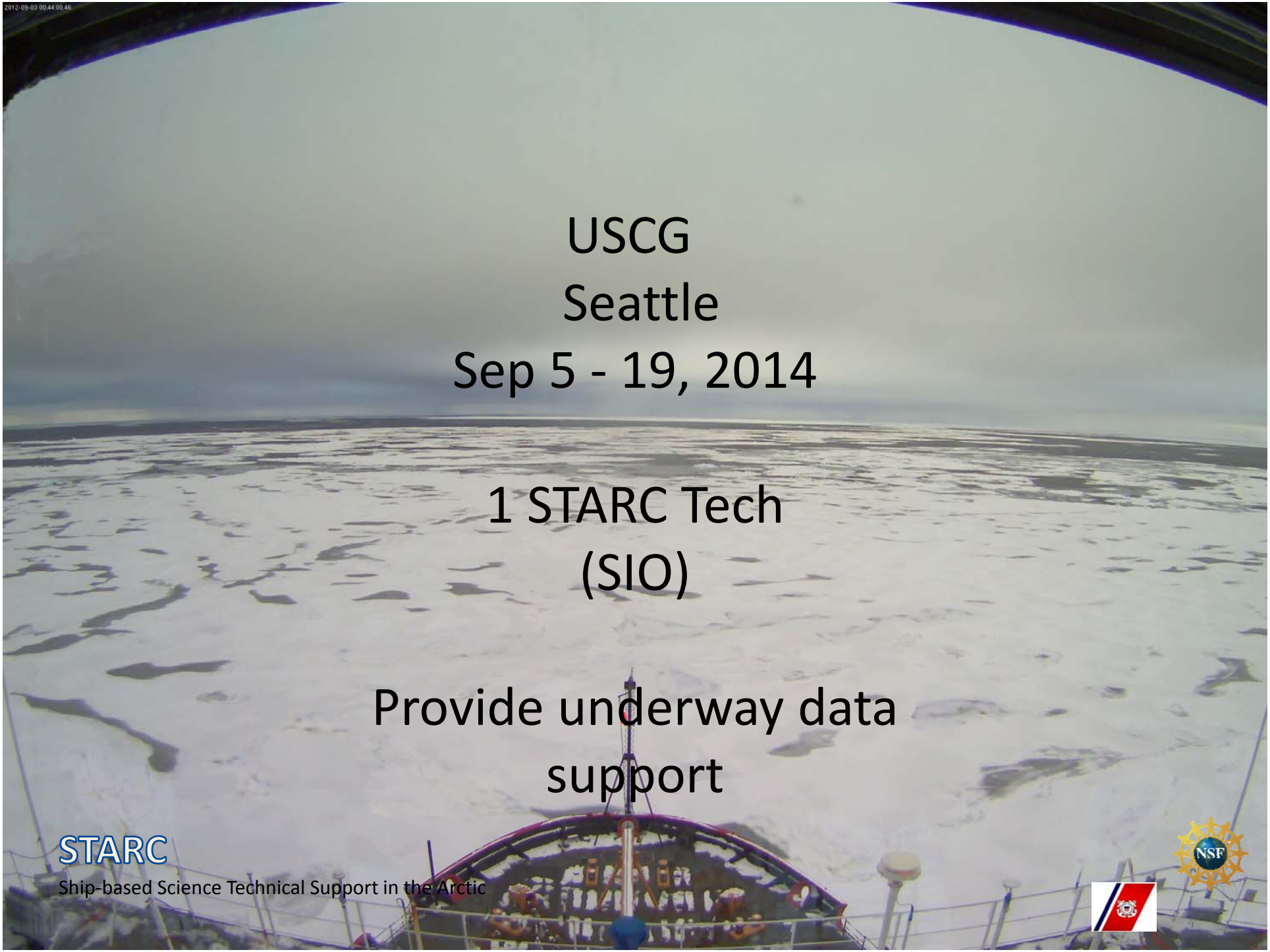

USCG
Seattle
Sep 5 - 19, 2014

1 STARC Tech
(SIO)

Provide underway data support

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Planning for 2015

Van Relocation on bow

MapServer replacement

- IFREMER Globe
- GeoServer (CSIRO)

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