

SCICEX Phase 2

Science Advisory Committee Meeting

27 & 28 January 2011

AGENDA

Thursday, 27 Jan

Morning:

- State of SCICEX
- ICEX2011
- SCICEX Data collection

Afternoon: Data management

Friday, 28 Jan

Morning:

- Program sustainability
- SAC and IAC Membership



SCICEX Phase 2

Science Advisory Committee Meeting

27 & 28 January 2011

Objectives

- Outline plan for data management, setting stage for Part II of science plan
- Work with IAC to outline needs for program sustainment and a plan to address these needs



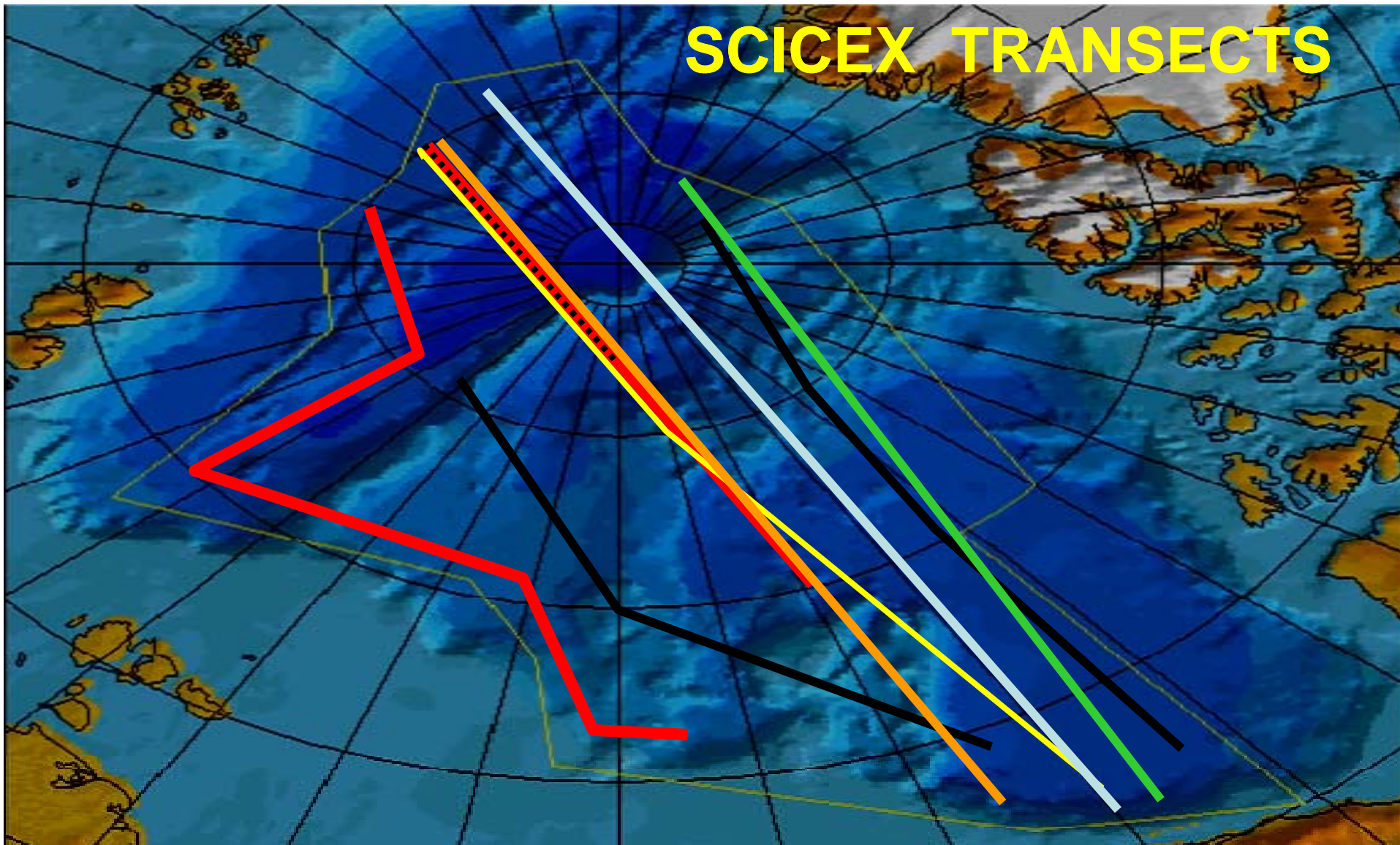
SCICEX

SCience ICe EXercise

“The overall goal of SCICEX is to improve understanding of Arctic Ocean processes and their role in the Earth’s climate system by dual use of nuclear submarines, thus fully capitalizing on existing national platform capabilities. This Agreement is intended to mutually support the objectives of both the civilian and military communities.”

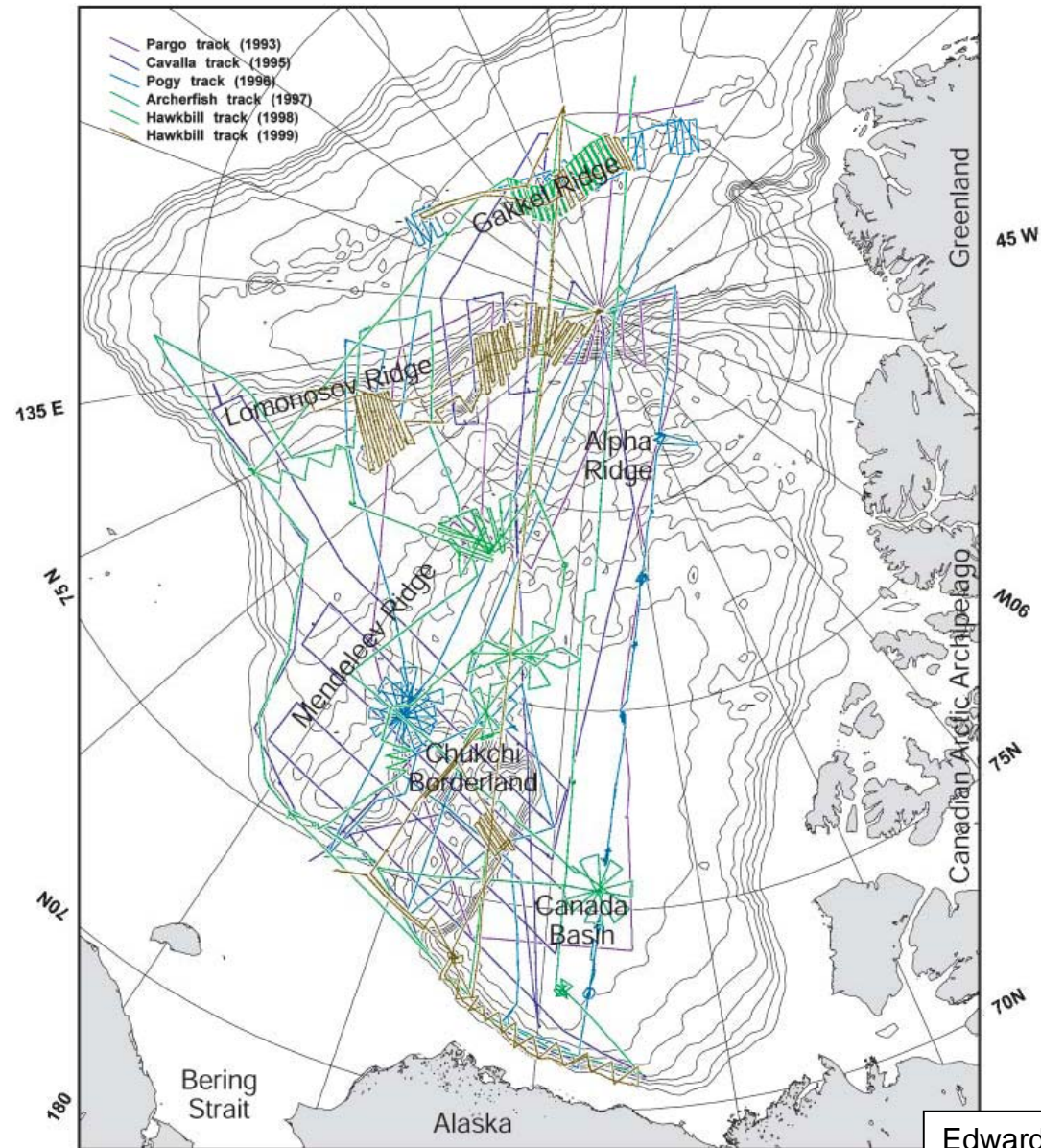


SCICEX TRANSECTS



- 1993
- 1995
- 1996
- 1997
- 1998
- 1999
- 2000
- 2001
- 2003

SCICEX Tracklines: 1993 -1999



Edwards and Coakley, 2003

SCICEX

- Unique program
- Key insights on characteristics of Arctic Ocean
 - Seafloor
 - Ocean
 - Ice cover
- Region remains of high interest
 - Bellwether of climate change
- Possible increase in operational activities
- Strong motivation to maximize utilization of SCICEX agreement



SCICEX

Twist: Transition, in 1998, from dedicated to accommodation cruise (SAM)

SAM: SCICEX data collected during a classified mission

Challenge: Little to no advance opportunity for planning

Solution: Scientifically endorsed planning matrix (aka SCICEX Science Plan)



SCICEX Phase 2

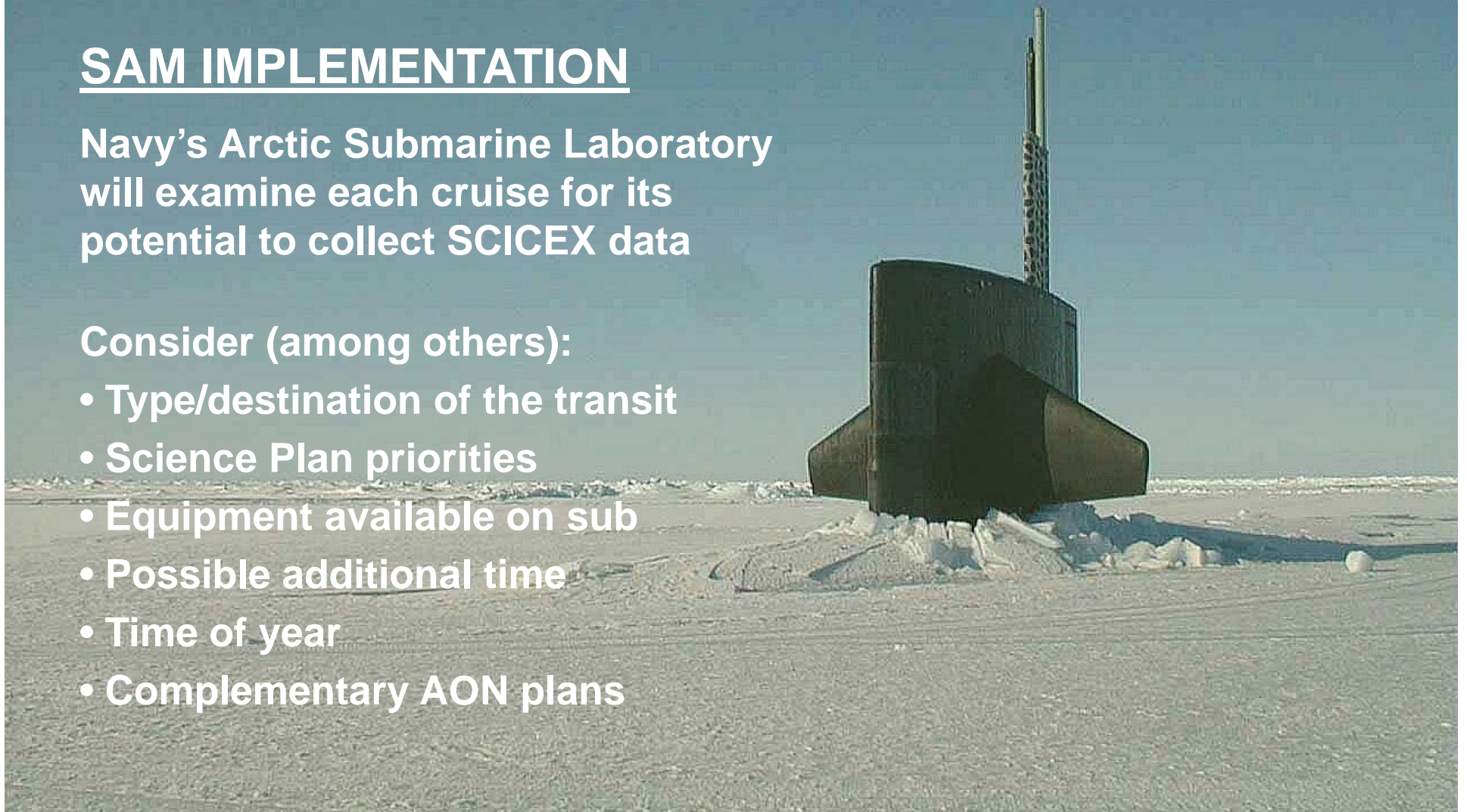
Accommodation Cruises

SAM IMPLEMENTATION

Navy's Arctic Submarine Laboratory will examine each cruise for its potential to collect SCICEX data

Consider (among others):

- Type/destination of the transit
- Science Plan priorities
- Equipment available on sub
- Possible additional time
- Time of year
- Complementary AON plans

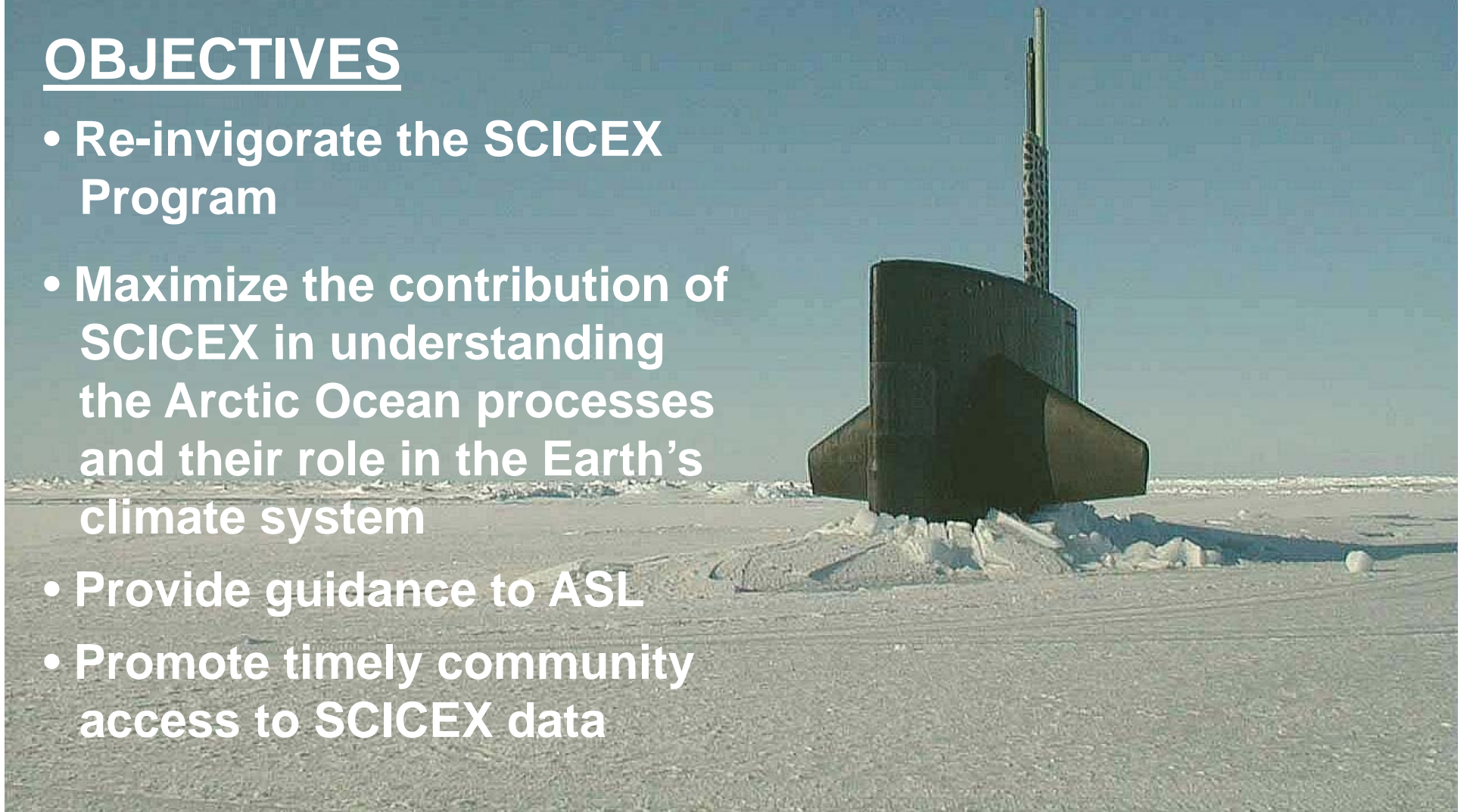


SCICEX

SCICEX Science Advisory Committee

OBJECTIVES

- Re-invigorate the SCICEX Program
- Maximize the contribution of SCICEX in understanding the Arctic Ocean processes and their role in the Earth's climate system
- Provide guidance to ASL
- Promote timely community access to SCICEX data



SCICEX

SCICEX Interagency Advisory Committee

OBJECTIVES

- Actively support objectives of SCICEX SAC
- Promote SCICEX program
- Develop plan for sustaining SCICEX, including the collection and dissemination of data



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Accommodation Cruises

State of SCICEX

- Report from SAC (Richter-Menge)
- Report from IAC (Jeffries)
- SCICEX data collection
 - XCTD (Boyd)
 - Water sample protocol (Sambrotto & Smethie)
 - Ice thickness (Wensnahan & Tucker)
 - ICEX 2011 (Gardner & R-Menge)
 - Arctic Bathymetry (Edwards)



SCICEX Phase 2

State of SCICEX

SAC Report

- Publication of science plan, Part 1, July 2010 (Yeah!)
- Implementation of science plan: ICEx2011
- Increasing visibility
 - SCICEX brochure & bookmark
 - SCICEX acknowledge and reported in Navy TFCC's Arctic Roadmap
 - NSIDC Website
 - Template for UK Navy

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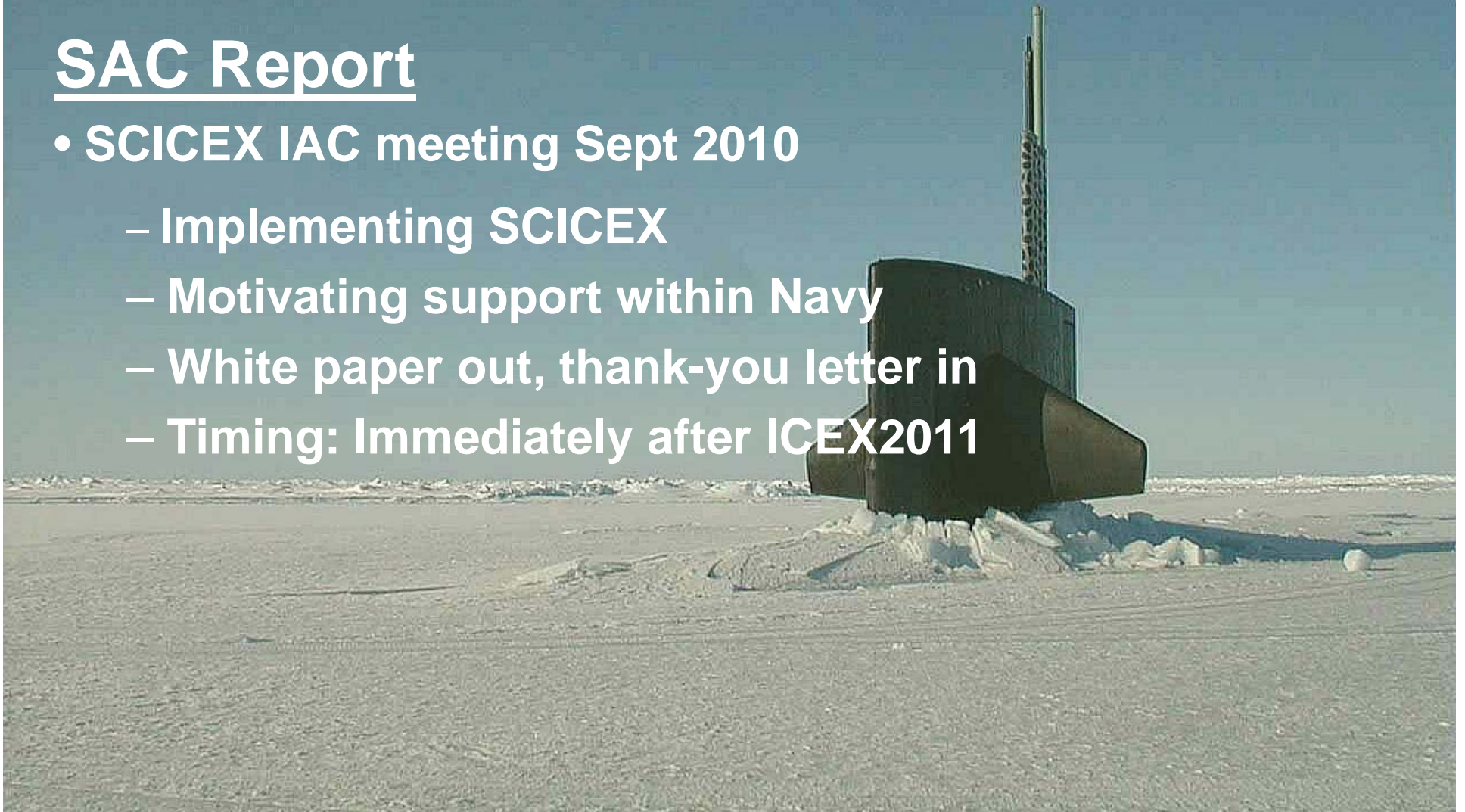


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State of SCICEX

SAC Report

- SCICEX IAC meeting Sept 2010
 - Implementing SCICEX
 - Motivating support within Navy
 - White paper out, thank-you letter in
 - Timing: Immediately after ICEx2011



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State of SCICEX

SAC Report

- **Data management: Shift of responsibility**
 - Previous:
 - LDOE: New data from sub to archive (ala R2R) & host SCICEX web site
 - NSIDC: Data archive
 - Current:
 - LDOE: Adapt R2R product for sub data
 - NSIDC: Data archive & host SCICEX web site



SCICEX Phase 2

State of SCICEX

SAC Report

- Agency support
 - NSF:
 - NSIDC: Data archive
 - ONR:
 - Boyd: XCTDs
 - Sambrotto & Smethie: Water sample protocol
 - Wensnahan: Ice draft
 - Navy Research Lab (Gardner & Brozena): Airborne ice thickness measurement



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State of SCICEX

SAC Report

- **Challenges**

- Expected reduction in frequency of ICEX
 - Every 3 years
 - Reduction in ASL budget

- **Non-PI driven program**

- **Requires sustained support for:**

- Basic equipment and lab work
- Data transfer and derived products
- Data archive
- Web site



SCICEX Phase 2

State of SCICEX

IAC Report



ICEX2011

- Camp deployed late Feb 2011
- Staffed until end of March
- 200 mi out of Prudhoe Bay
- SCICEX support:
 - Sampling protocols
 - XCTDs
 - Water sampling
 - Ice draft sonar validation
 - Cross basin transect



SCICEX Phase 2

Implementation

ISSUES

- Establishing SCICEX as priority
- Notification of SCICEX data collection event
- Encouraging and supporting new initiatives
- Non-PI driven program
- Requires sustained support for:
 - Basic equipment and lab work
 - Data transfer and derived products
 - Data archive
 - Web site

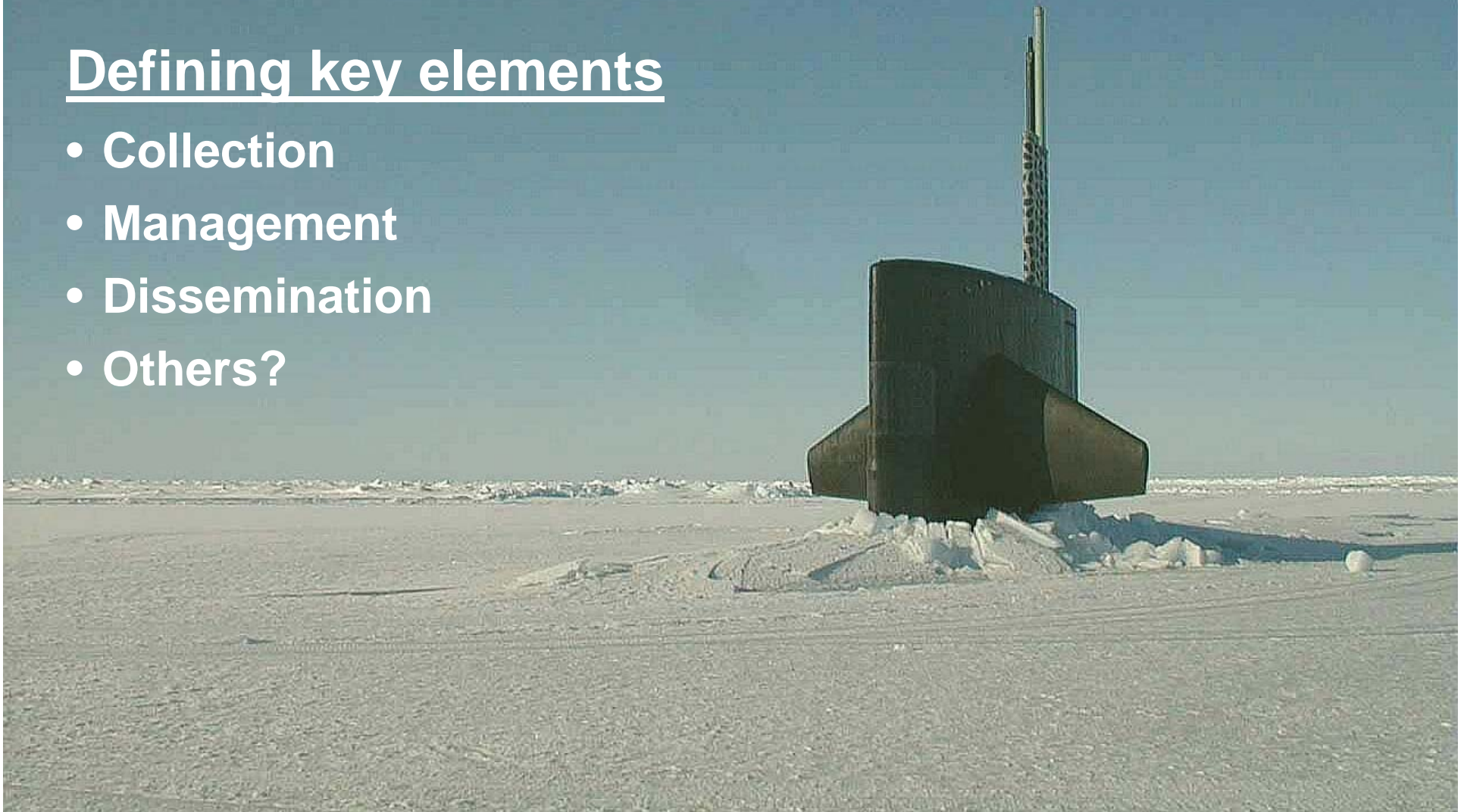


SCICEX Phase 2

Data management

Defining key elements

- Collection
- Management
- Dissemination
- Others?



SCICEX Phase 2

Implementation

ISSUES

- **Derived products**
 - Navigation
 - Ice draft
 - CTD
 - XCTD
 - Bathymetry
 - Water samples
 - Chemistry
 - Biology
- **Quality control**

