



SCICEX 1 - 2014

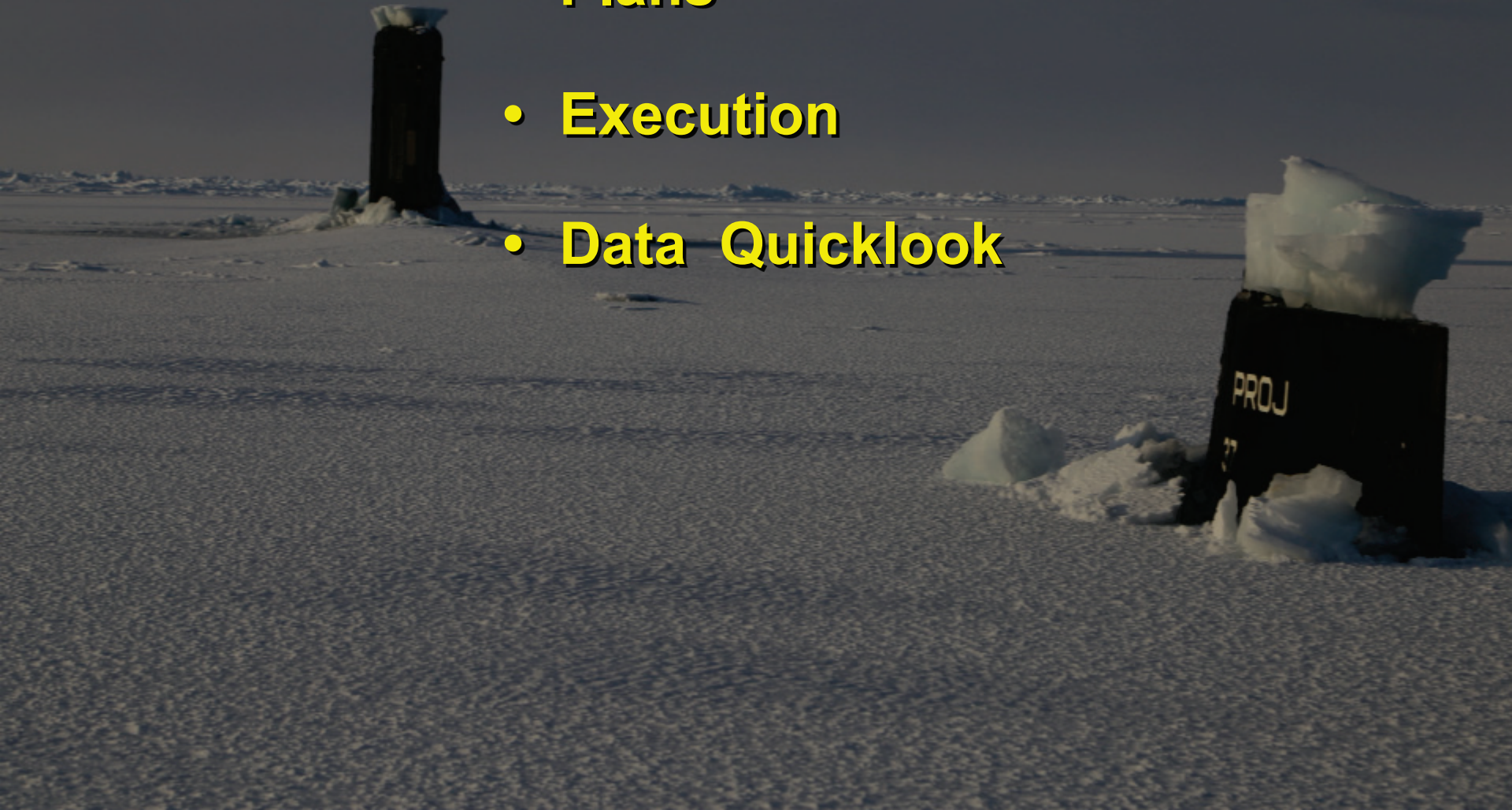


SCICEX Science Advisory Committee
20 May 2014



Topics

- Plans
- Execution
- Data Quicklook





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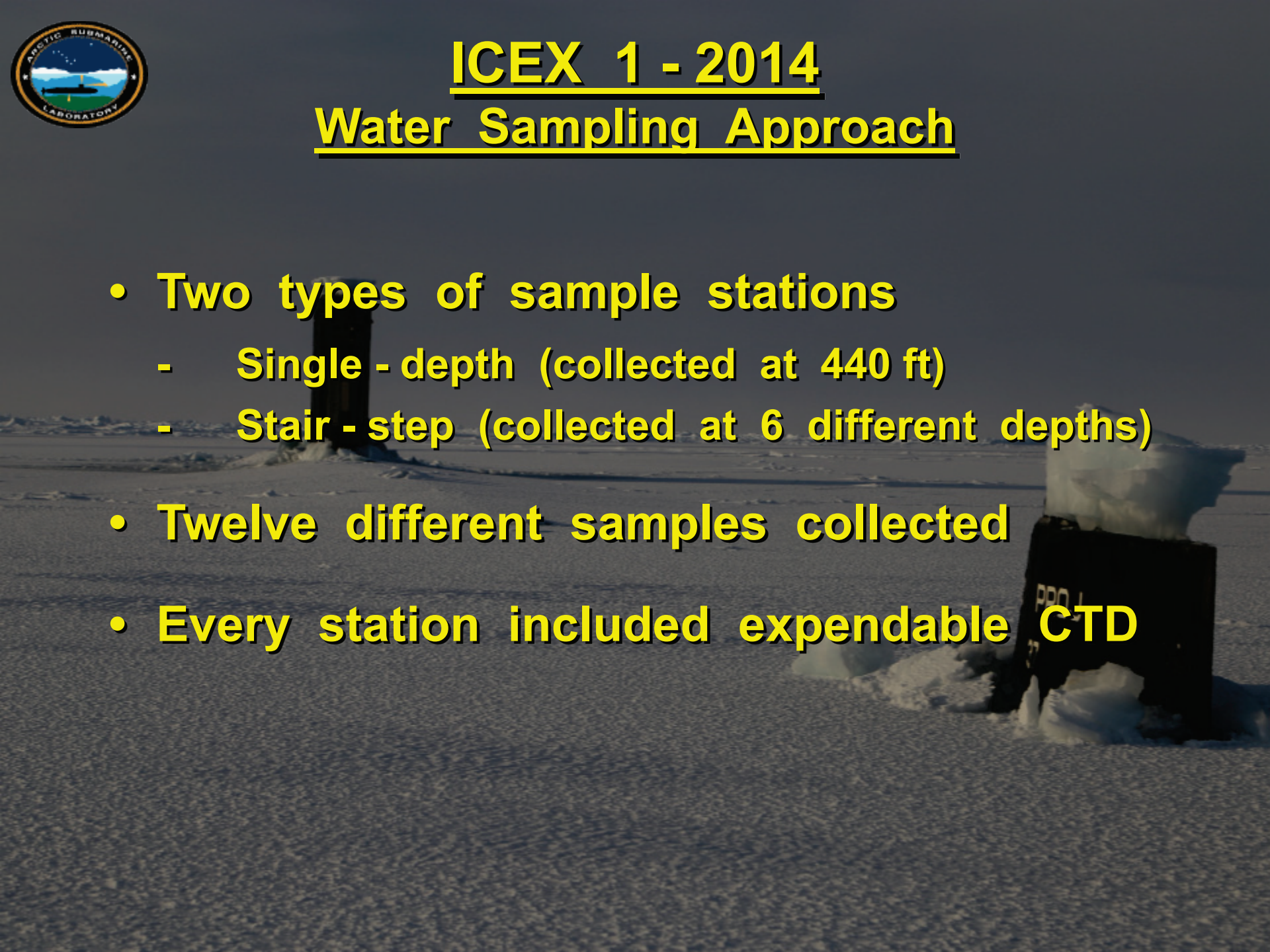
- **Participants**
 - **USS NEW MEXICO (East Coast)**
 - **USS HAMPTON (West Coast)**
- **Underway late February**
- **Operate at ice camp 18 - 22 March**
- **Both submarines have returned to port**
- **Data received at ASL week of 12 May**



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Planned Data Collection

- **Three phases**
 - Transit to ice camp
 - Transit to North Pole rendezvous
 - Departure transits
- **Throughout all transits**
 - Continuous navigation data
 - Continuous topsounder data
 - Continuous bathymetry data
 - Continuous hull-mounted CTD data
 - 26 stations for XCTD & water sampling



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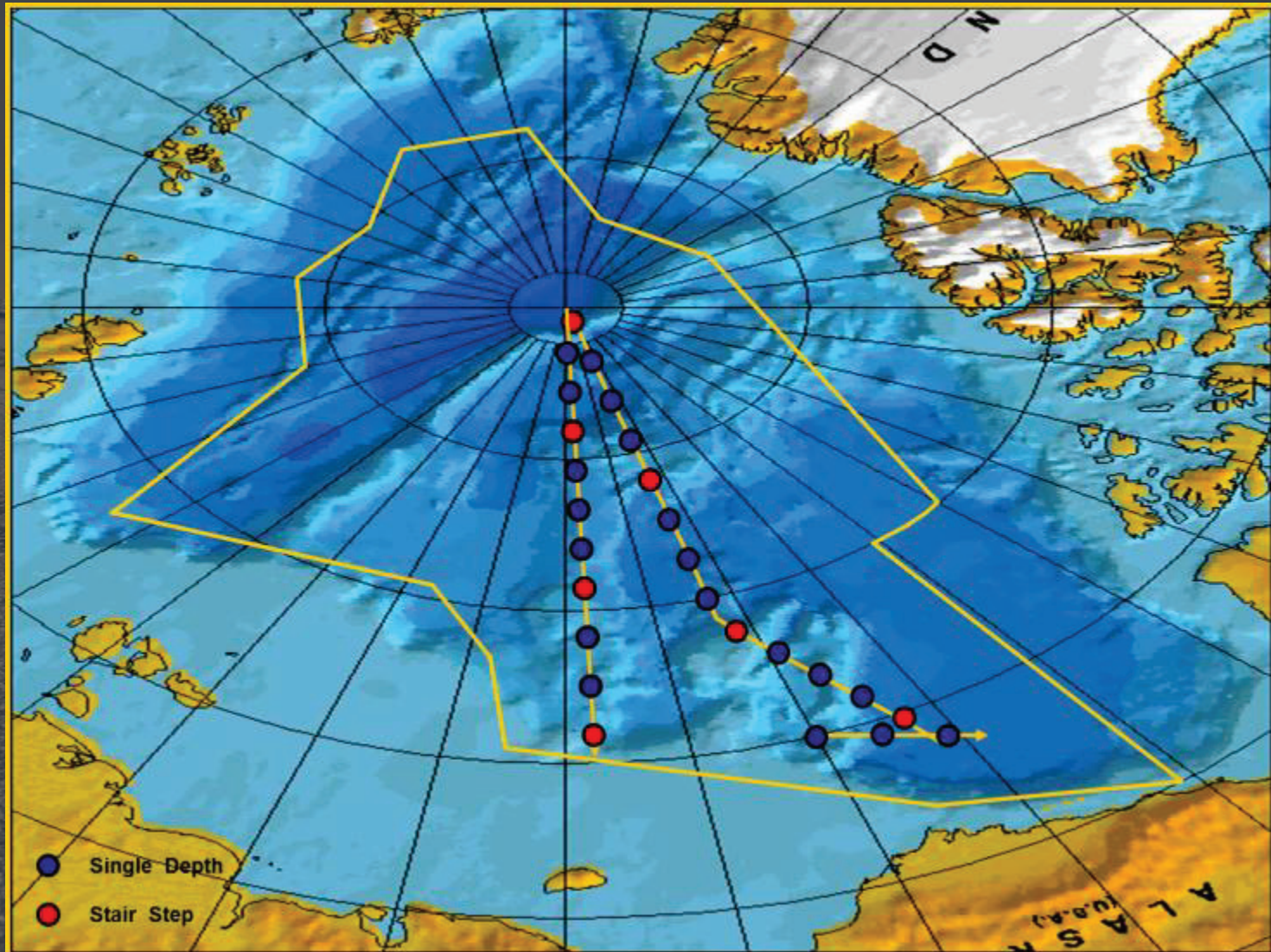
Water Sampling Approach

- **Two types of sample stations**
 - **Single - depth (collected at 440 ft)**
 - **Stair - step (collected at 6 different depths)**
- **Twelve different samples collected**
- **Every station included expendable CTD**



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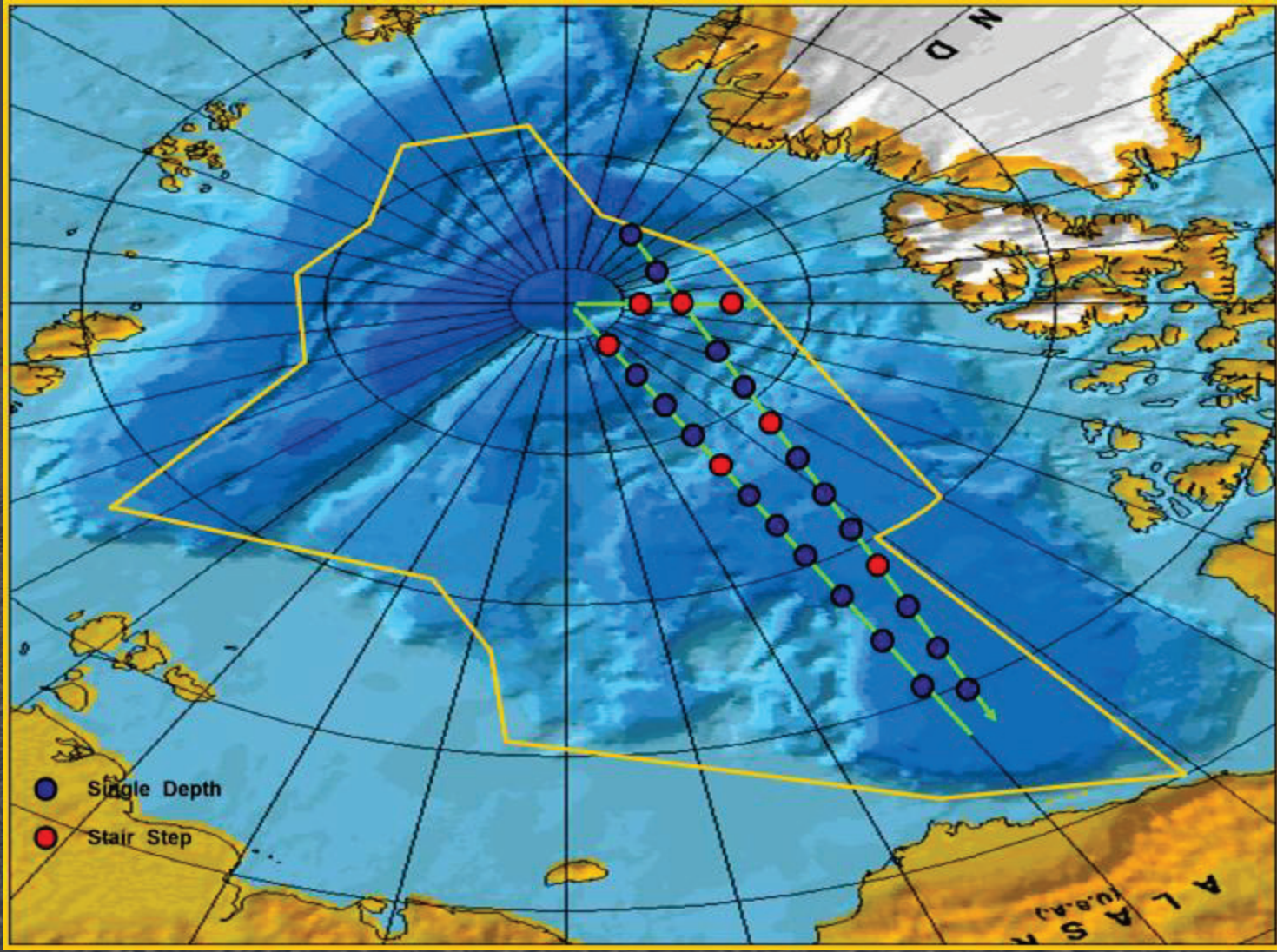
HAMPTON Track





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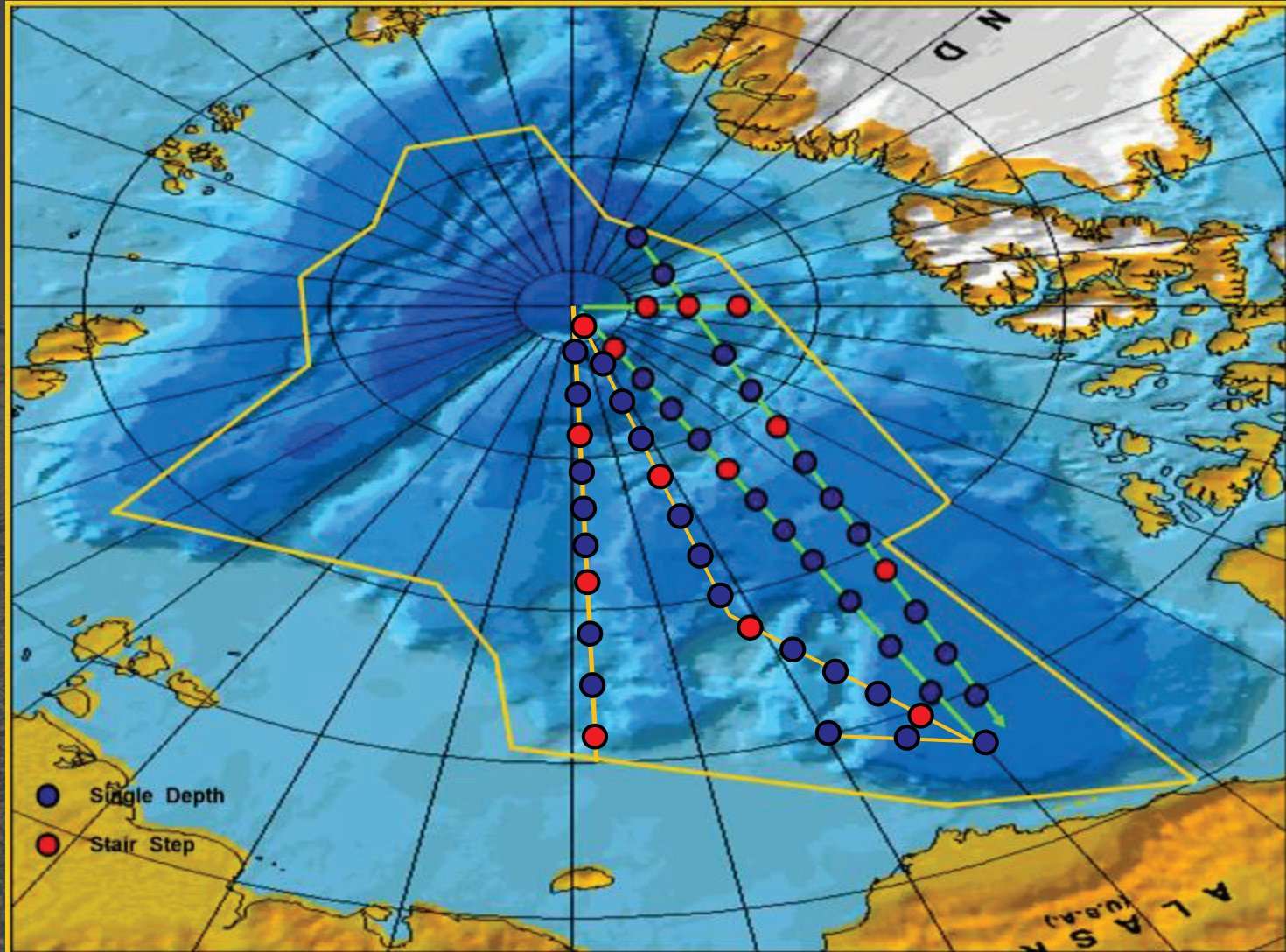
NEW MEXICO Track





ICEX 1 - 2014 Combined Tracks

4500 nm
350 hrs
52 stations

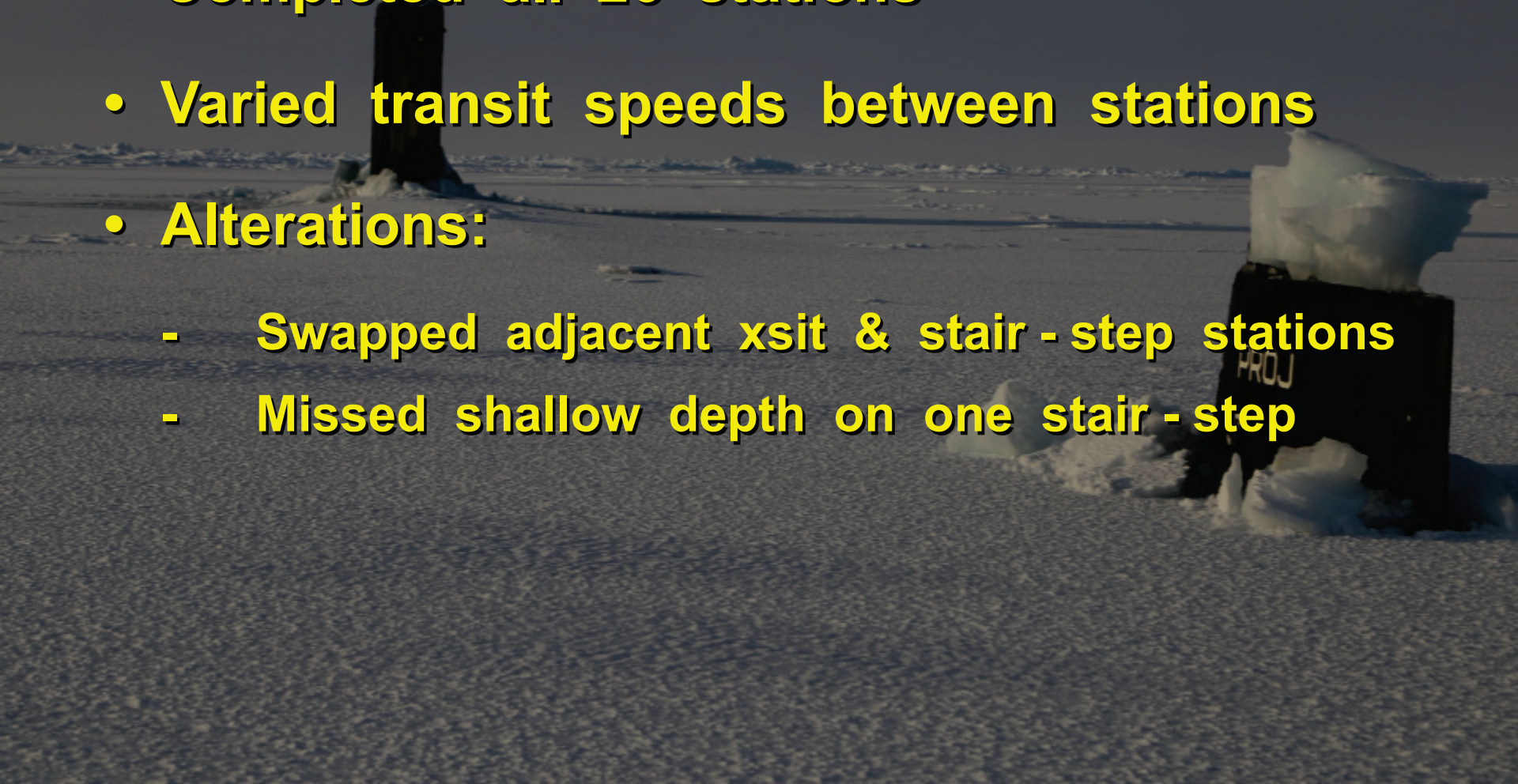


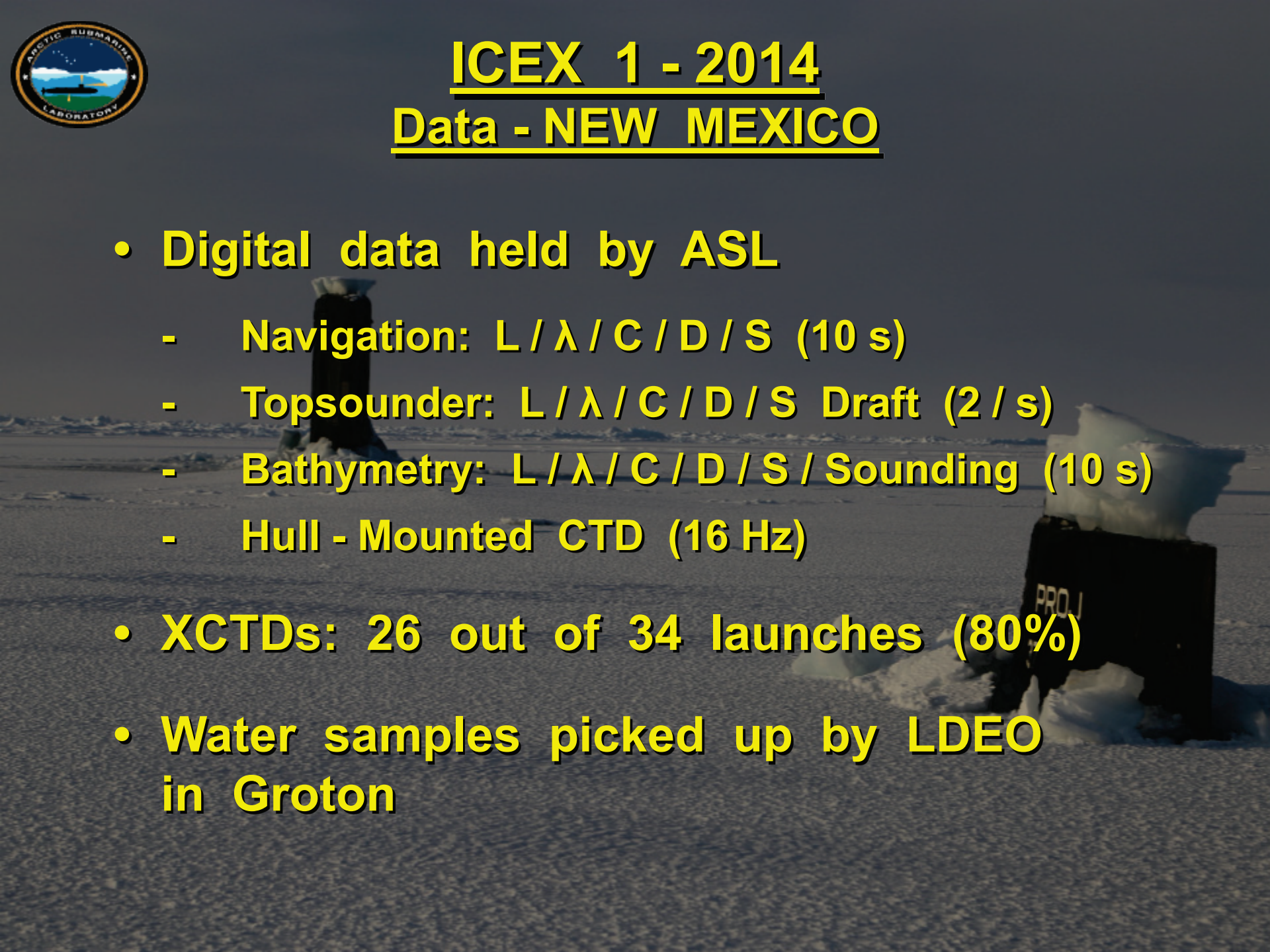


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Completion - NEW MEXICO

- Completed all 26 stations
- Varied transit speeds between stations
- Alterations:
 - Swapped adjacent xsit & stair - step stations
 - Missed shallow depth on one stair - step





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Data - NEW MEXICO

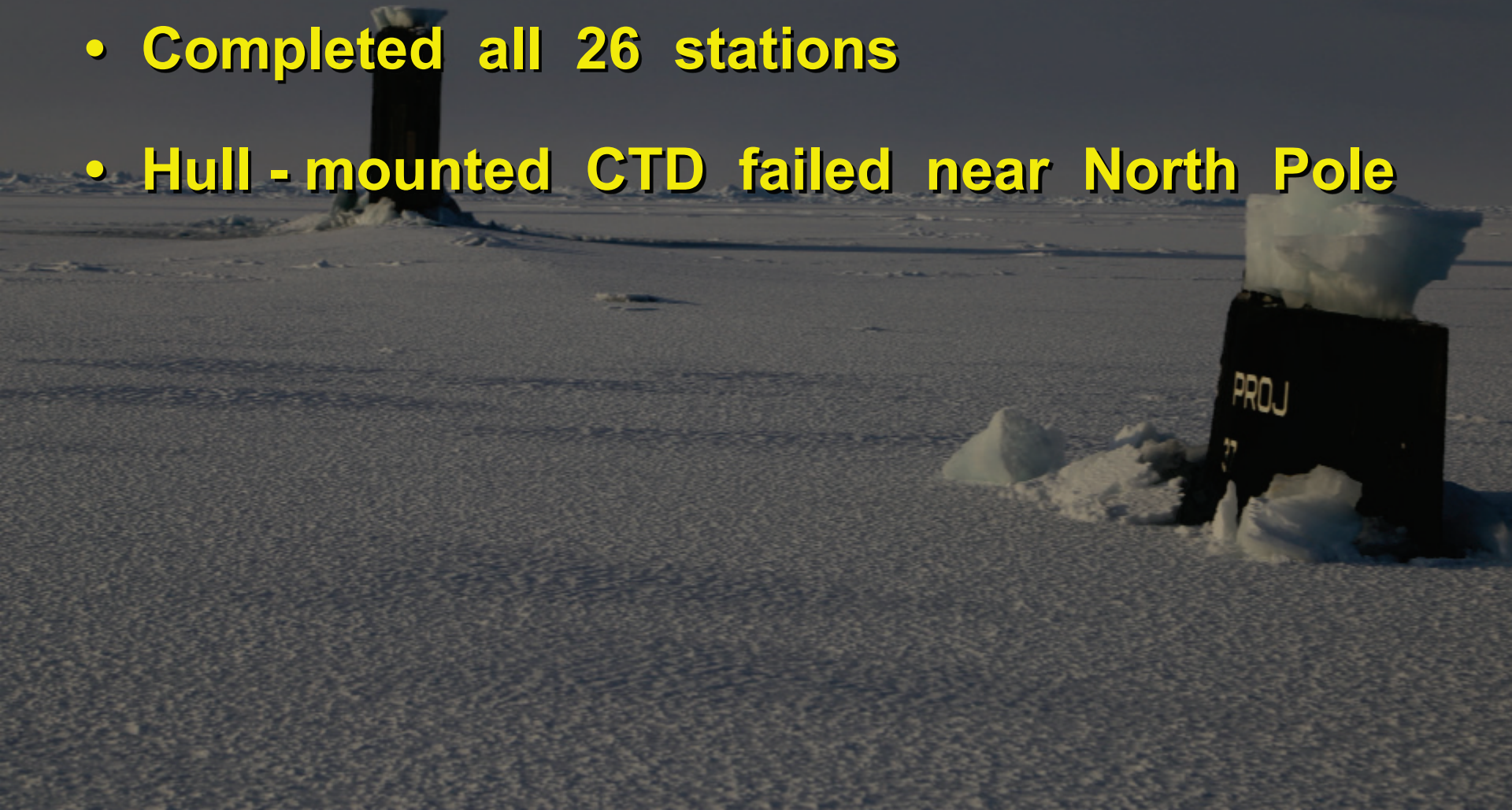
- **Digital data held by ASL**
 - **Navigation: L / λ / C / D / S (10 s)**
 - **Topsounder: L / λ / C / D / S Draft (2 / s)**
 - **Bathymetry: L / λ / C / D / S / Sounding (10 s)**
 - **Hull - Mounted CTD (16 Hz)**
- **XCTDs: 26 out of 34 launches (80%)**
- **Water samples picked up by LDEO in Groton**



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Completion - HAMPTON

- Completed all 26 stations
- Hull-mounted CTD failed near North Pole

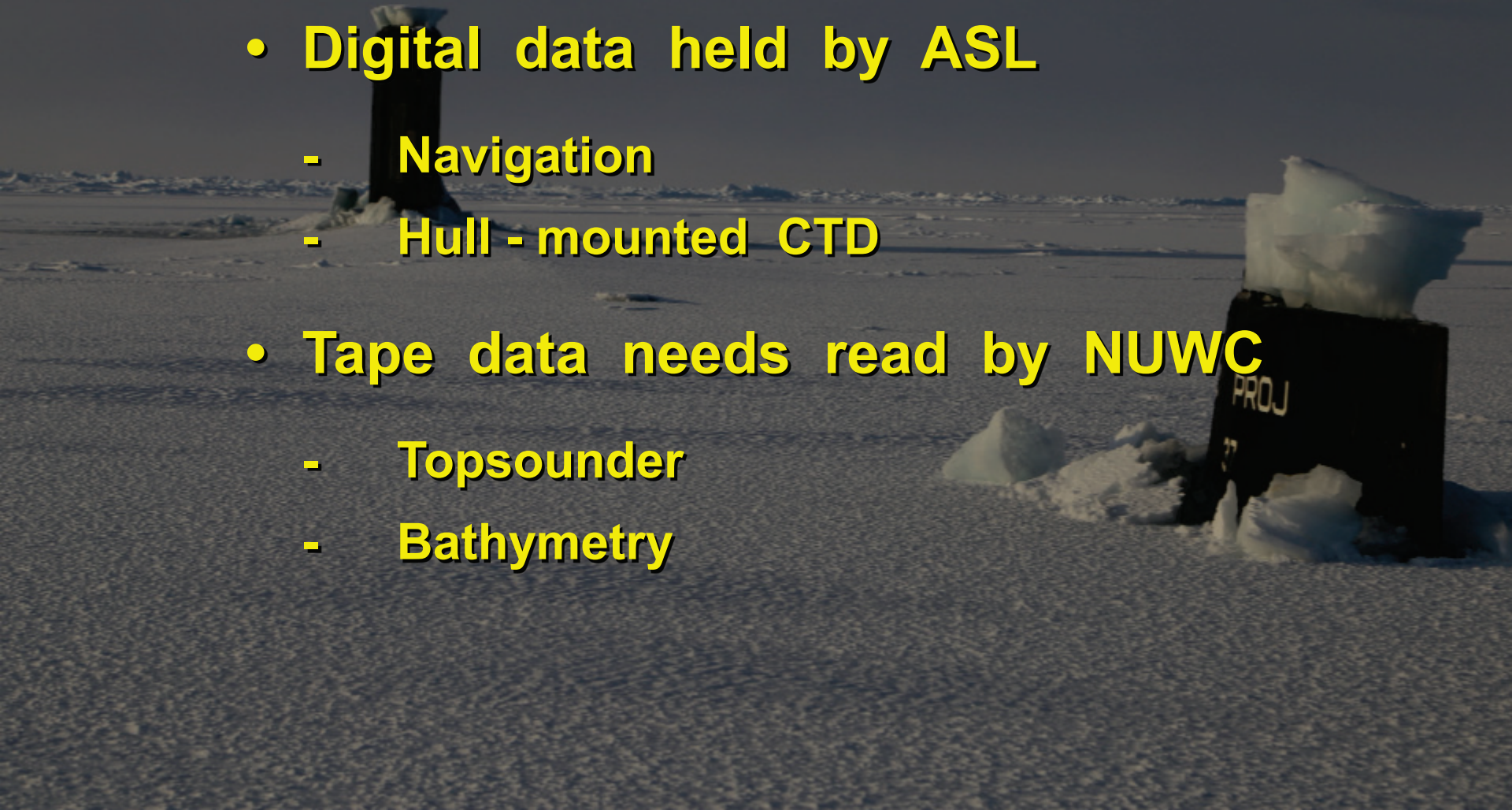




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Data - HAMPTON

- **Digital data held by ASL**
 - **Navigation**
 - **Hull - mounted CTD**
- **Tape data needs read by NUWC**
 - **Topsounder**
 - **Bathymetry**





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Data - HAMPTON

- **XCTDs**

- 26 launched / 1 failed (97% success)
- Interface box failed at 21st station (no trace)
- Remaining 5 stations collected via ship's system
- One comparison launch at camp

- **Water samples:**

- Frozen / chilled shipped in April
- Others shipping this week

