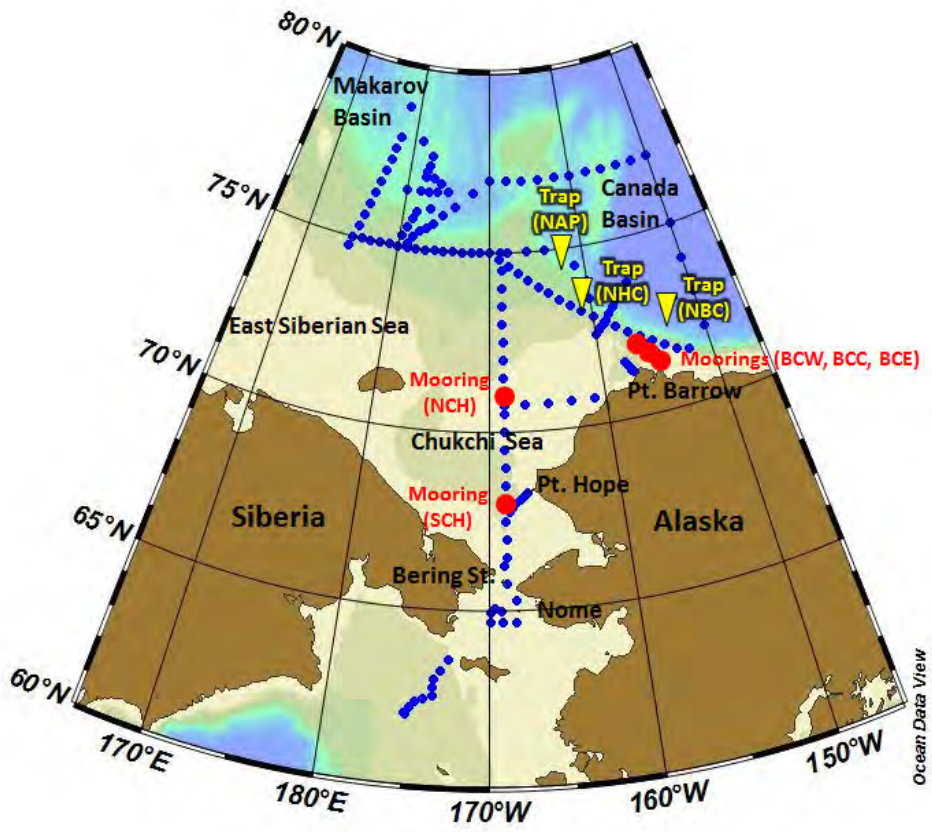


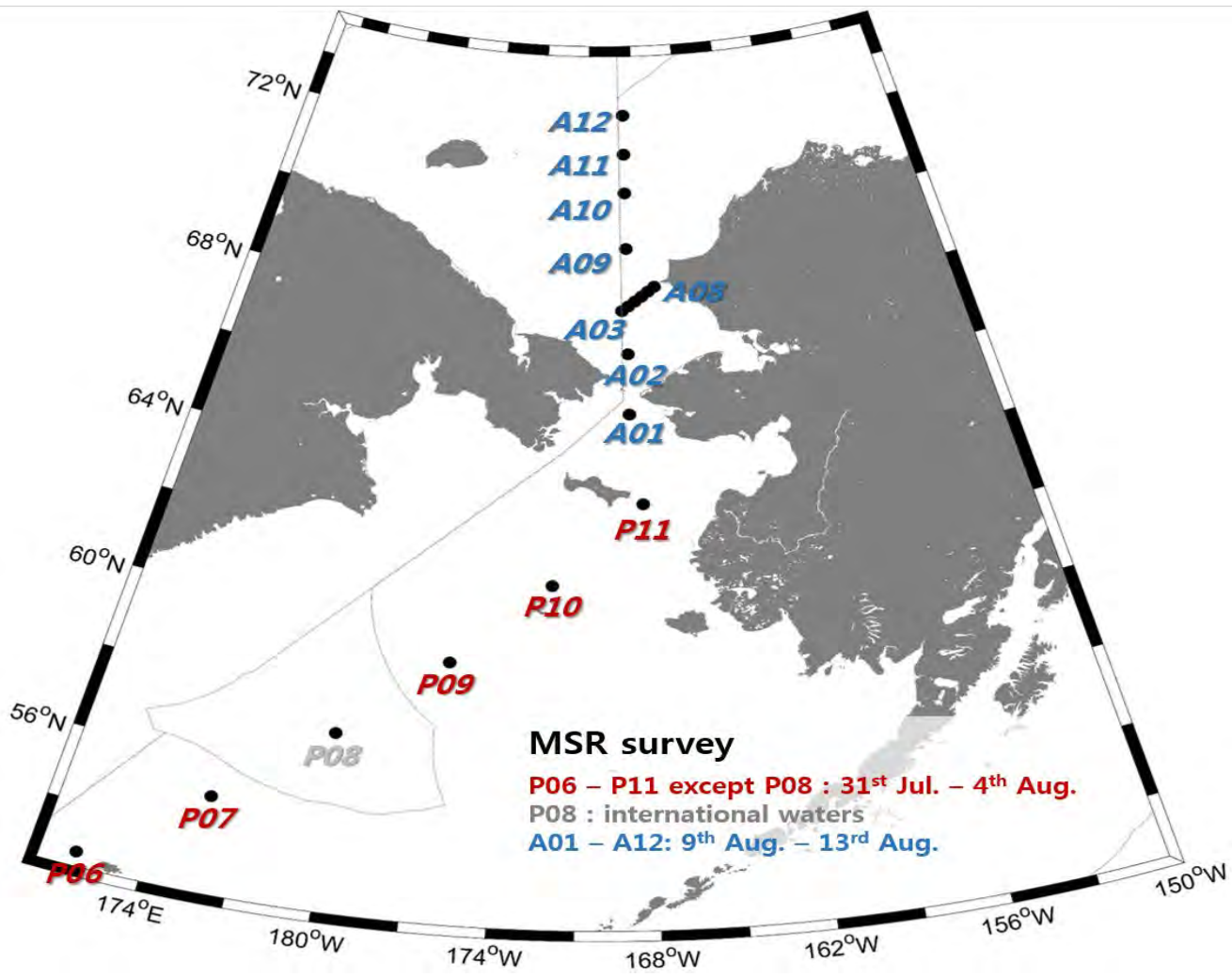
Table 1

Vessel	N - Bstrait - ● = demarcation line	S - Bstrait - ● = demarcation line	Dist fr Shore Chukchi	Planned Arrival Barrow	Heading fr Barrow/Dates	Dist fr Shore Beaufort	Planned Arrive Eastern Beaufort	Approximate Location for Research	Vessel Operator Contact	Research Contact
USCG Healy	Jul	Aug	>40 nm	None	None	NA	None	Chukchi Sea	David.Forucci@uscg.mil, 206 217 6648	Scot Tripp
USCG Healy	Aug	Sep	4 nm, Pt Hope and Pt. Barrow	None	None	NA	None	Chukchi Sea	David.Forucci@uscg.mil, 206 217 6648	rpickart.wholedu, (508)289-2858
USCG Healy	Sep	Oct	> 40 nm	None	None	> 40 nm	None	Canada Basin, Deep water	David.Forucci@uscg.mil, 206 217 6648	Pworchester@ucsd.edu, 858-534-4688
USCG Healy	Oct	Nov	> 40 nm	None	None	NA	None	Beaufort Sea	David.Forucci@uscg.mil, 206 217 6648	Badley, Mohsen [badley@udel.edu]
NOAA Oscar Dyson	None	11 May 2017-31 May 2017,	None	None	None	None	None	Aleutians and Bering Sea fisheries	Chiefops.mop@noaa.gov, 541 867 8703	EcoFOCI Spring Mooring Cruise 2017 (DY-17-04)
NOAA Oscar Dyson	None	07 Sep 2017-17 Sep 2017	None	None	None	None	None	Aleutians and Bering Sea fisheries	Chiefops.mop@noaa.gov, 541 867 8703	EMA/FOCI age-0 Groundfish and Salmon Recruitment Processes (DY-17-07 - Leg 2)
NOAA Oscar Dyson	None	21 Sep 2017-TBD	None	None	None	None	None	Bering Sea 70m Isobath near Pribolof Islands	Chiefops.mop@noaa.gov, 541 867 8703	EcoFOCI Fall Mooring Cruise 2017 (DY-17-08)
NOAA Fairweather	None	8 Jul 2017- 5 Sep 2017	None	None	None	None	None	St George Island, Yukon river delta, Port Clarence harbor entrance, north side of St Lawrence Island.	Chiefops.mop@noaa.gov, 541 867 8703	Western Alaska - Arctic (FA-17-02 - Leg 1-4)
Sikulialq	9 Jun 2017- 28 June 2017	9 Jun 2017- 28 June 2017	20 nm pt. Hope	None	NA	NA	NA	North Bering and South Chukchi seas	MStein10@alaska.edu, 907-224-4305	Seth Danielson, sldanielson@alaska.edu
Sikulialq	7 Aug 2017- 22 Aug 2017		5nm, Pt Hope, Wainwright, Barrow	None	NA	NA	NA	Chukchi Sea, West Beaufort Sea.	MStein10@alaska.edu, 907-224-4305	Laurie Juranek, ljuranek@coas.oregonstate.edu, 541-737-2368
Sikulialq	25 Aug 2017- 18 Sep 2017		40 nm	None	NA	40 NM	28-Aug	Shelf break North of Nuiqsut	MStein10@alaska.edu, 907-224-4305	carin@wholedu, 508-289-3457
Araon		31 Jul- 3 Aug,		NA	NA	NA	NA	Bering Sea and Chukchi Sea	Iridium- 8816 5146 5162 http://www.kopri.re.kr	
Araon	9 Aug 2017 - 27 Aug 2017	31 Jul- 4 Aug, 14 Aug	4nm, Point Hope	25-Aug	25-Aug	NA	NA	Bering Sea and Chukchi Sea	Iridium- 8816 5146 5162 http://www.kopri.re.kr	Sung-Ho Kang shkang@kopri.re.kr
Xuelong	27 July 2017- 2 Oct 2017		7m Point Hope, 17 m Cape Lisburne	NA	NA	NA	NA	Bering, Chukchi	F(tel)870-763677986 B(tel)870-341210310,F B(tel)870-773121916	xuren@pric.org.cn, Wei-Jun Cai, wcai@uga.edu
OSHORU MARU		23 Jun 2017- 27 Jul 2017	NA	NA	NA	NA	NA	Bering Sea, Bering Strait	Hokkaido University, Faculty of Fisheries Sciences	Dr. Atsushi Oki, ooki@fish.hokudai.ac.jp
YUSHIN MARU 2	NA	8 Jul 2017- 21 Sep 2017	NA	NA	NA	NA	NA	Bering Sea	INMARSAT-F ID: TEL: 76096920 FAX: 601028322 Email: kyodo-2ys@mailiner.com VHF: 163 Watch emergency Frequencies: K1Z	Dr. Phillip Clapham from the Alaska Fisheries Science Center, NOAA-NMFS, Department of Commerce Ms. Jessica Chance from the Alaska Fisheries Science Center
Mirai	NA	20 Jul-21 Aug	NA	NA	NA	NA	NA	Bering Sea	INMARSAT B, NSTAR TELEPHONE 343193916	Shigeto Nishino nishinos@amstec.go.jp
Mirai	25 Aug 2017- 25 Sep 2017	23 Aug 2017- 24 Aug 2017, 25 Sep 2017- 2 Oct 2017	4nm, Point Hope and Barrow			>40nm	NA	Arctic Basin, Shelf near Barrow and Pt. Hope	INMARSAT B, NSTAR TELEPHONE 343193916	Shigeto Nishino nishinos@amstec.go.jp
Sir Wilfred Laurier	15 Jul, 2017- 23 Jul 2017	9 Jul, 2017 - 14 Jul 2017	4nm, Point Hope, Wainwright and Barrow	22-Jul-17	22-Jul-17	4nm	23-Jul-17	Bering Sea and Chukchi Sea	Alain Barbier, 105, rue McGill, Montréal (Québec) H2Y 2E7, Alain.barbier@dfo-mpo.gc.ca, (514) 283-0527	Dr Jacqueline Grebmeier Research Professor Chesapeake Biological Laboratory University of Maryland Center for Environmental Science PO Box 38, 1 Williams Street Solomons, MD 20688, USA ph: 410-326-7334, fax: 410-326-7302, email: jgrebmei@umces.edu
R/V Ocean Starr	1 Aug 2017- 4 Oct 2017		5-11 nm Pt. Hope, 22nm Wainwright, 22nm Barrow	None	NA			Chukchi Sea.		Dr. Ed Farley, ed.farley@noaa.gov, 907-789-6085
Oceanus		29 Jul 2017- 1 Aug 2017	NA	NA	NA	NA	NA	Bering Sea	Stewart Lamerdin slamerdin@coas.oregonstate.edu (541) 867-0225	Dr. Hongsheng Bi, hbi@cbl.umces.edu, (410) 326-7249
Norseman II	7 Jul 2017- 15 Jul 2017	7 Jul 2017- 15 Jul 2017	NA	NA	NA	NA	NA	Bering Strait	Bart Campbell, bart@norsemanmaritime.com 206-403-3630	Dr Rebecca A Woodgate, woodgate@apl.washington.edu, (206)-221-3268
Norseman II	5 Aug 2017- 26 Aug 2017			NA	NA	NA	NA	Chukchi Sea	Bart Campbell, bart@norsemanmaritime.com 206-403-3630	U of A, U of Maryland
Norseman II	30 Aug 2017- 6 September		100 miles	NA	NA	NA	NA	100 mile NW point barrow	Bart Campbell, bart@norsemanmaritime.com 206-403-3630	Naval Research Lab



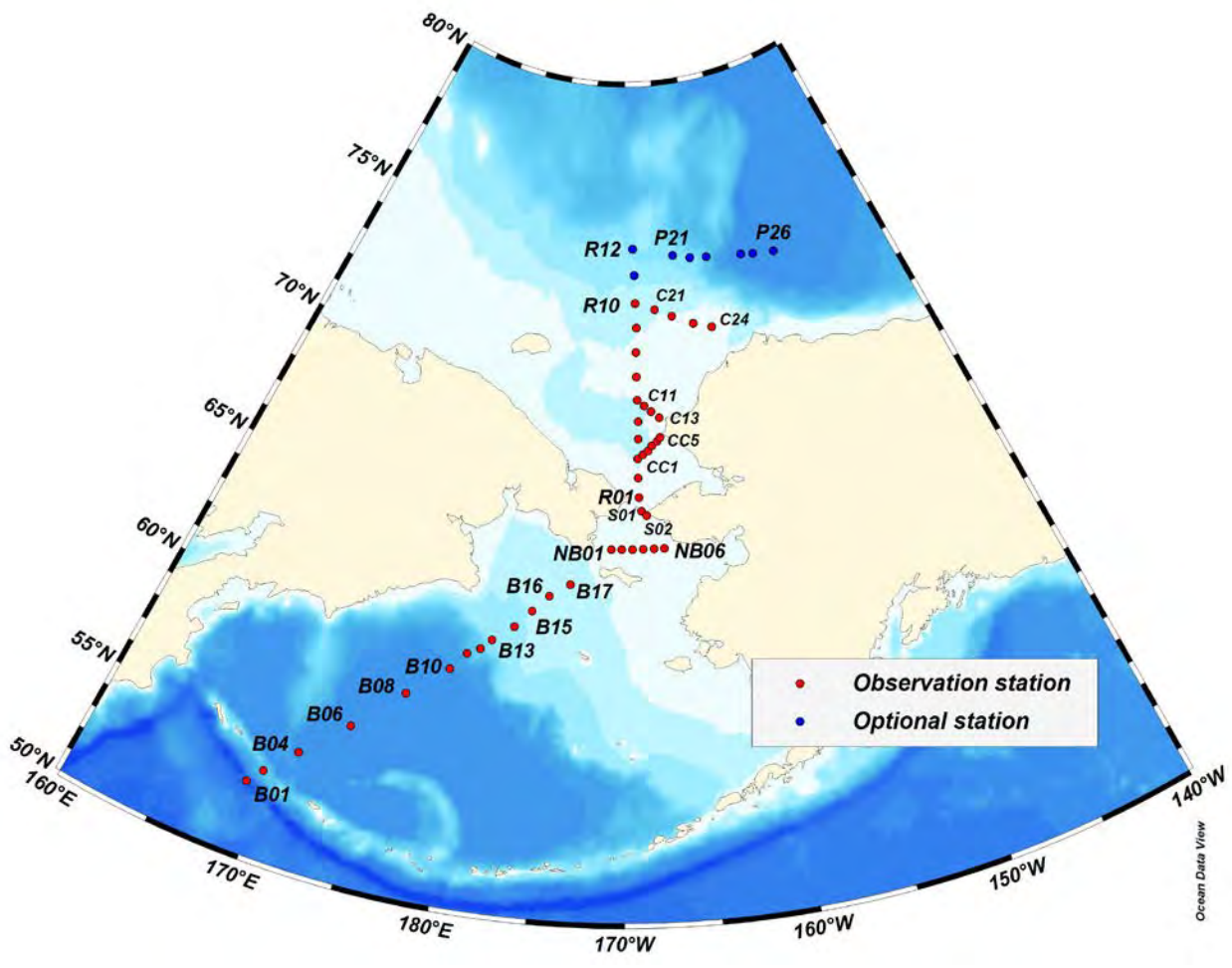
Mirai track

# 2017 ARAON Cruise Map

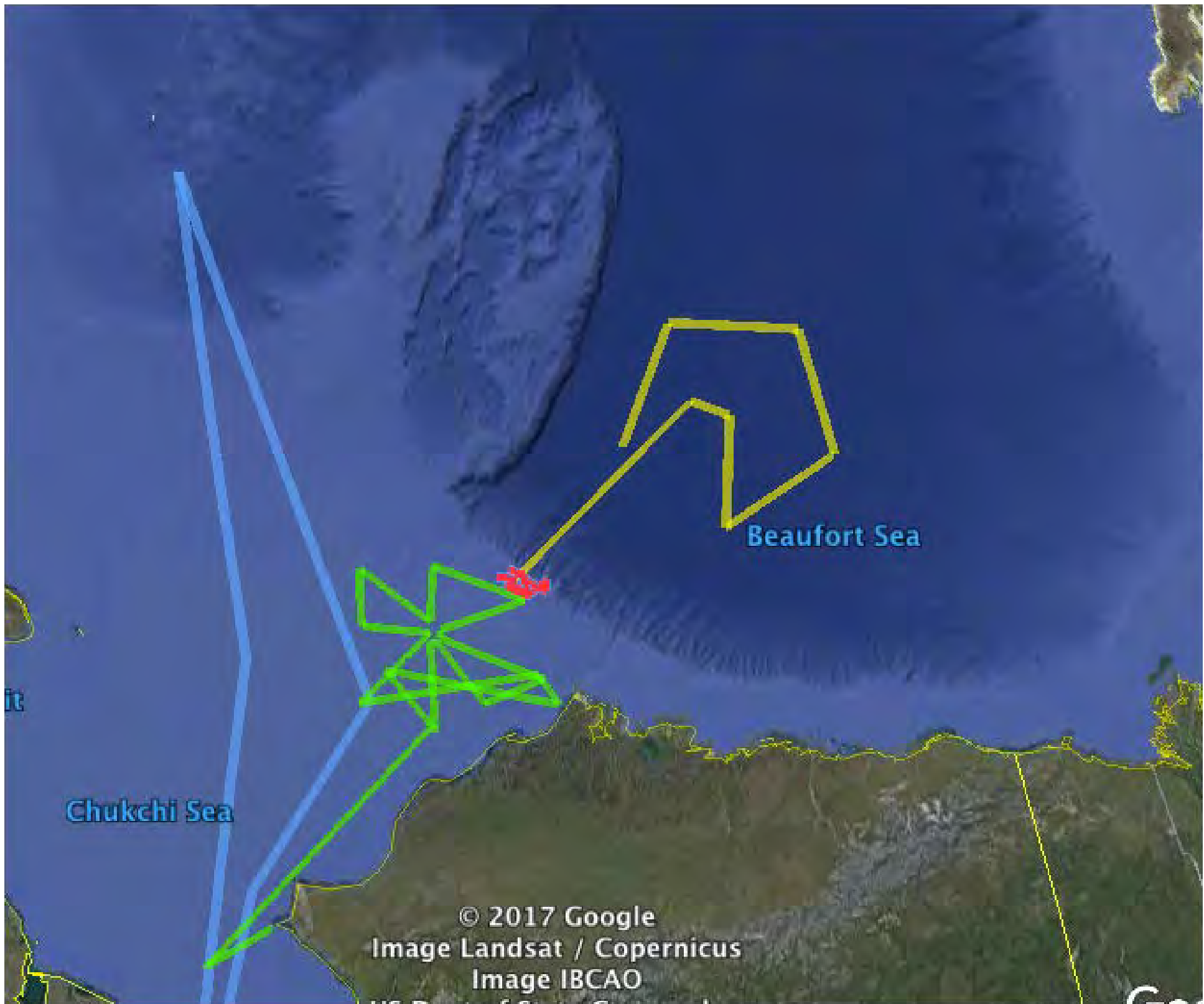


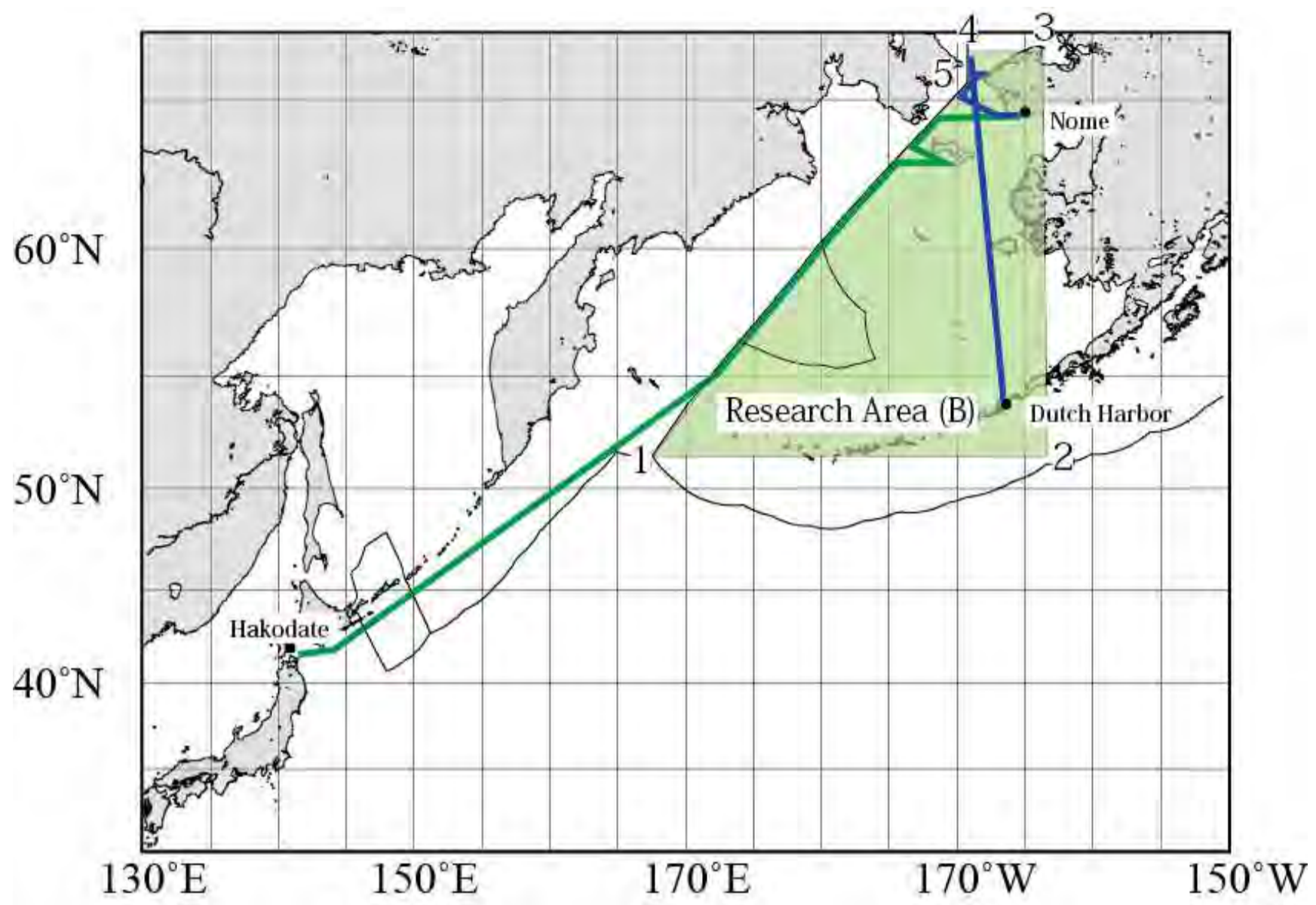
Araon track





Xuelong Track





OSHORU MARU

Whale sighting survey data collection: Eastern part of the Bering Sea (south of 66°N, north of Aleutian Islands, See Figure 1, the survey block for the 2017 cruise.

5.2 Attach chart at an appropriate scale (1 page, high-resolution) showing the geographical areas of the intended work and, as far as practicable, the positions of intended stations, the tracks of survey lines, and the locations of installations and equipment.

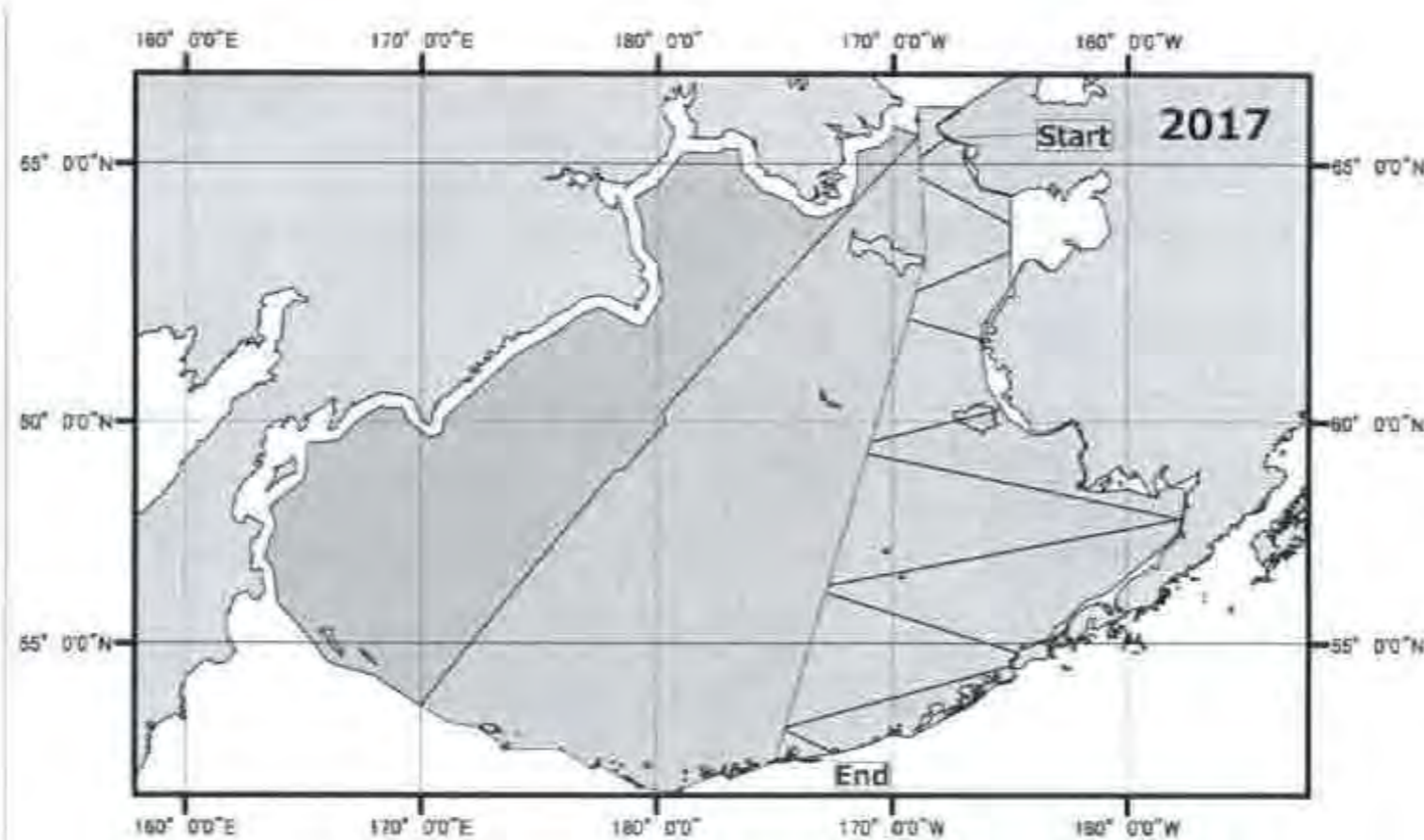


Figure 1. Proposed research area (blue colored area for 2017) and pre-determined tracklines with start and end points.

## 6. Dates

6.1 Expected dates of first entry into and final departure from the research area of the research vessel:  
 (Research area) July 16- Sep. 13, 2017  
 First entry into US EEZ: July. 8, 2017  
 Final departure from US EEZ: Sep. 21, 2017  
 During those periods, our proposed survey will be carried out in the EEZ of the United States of America.

6.2 Indicated if multiple entry is expected:  
 None at present

## 7. Port Calls

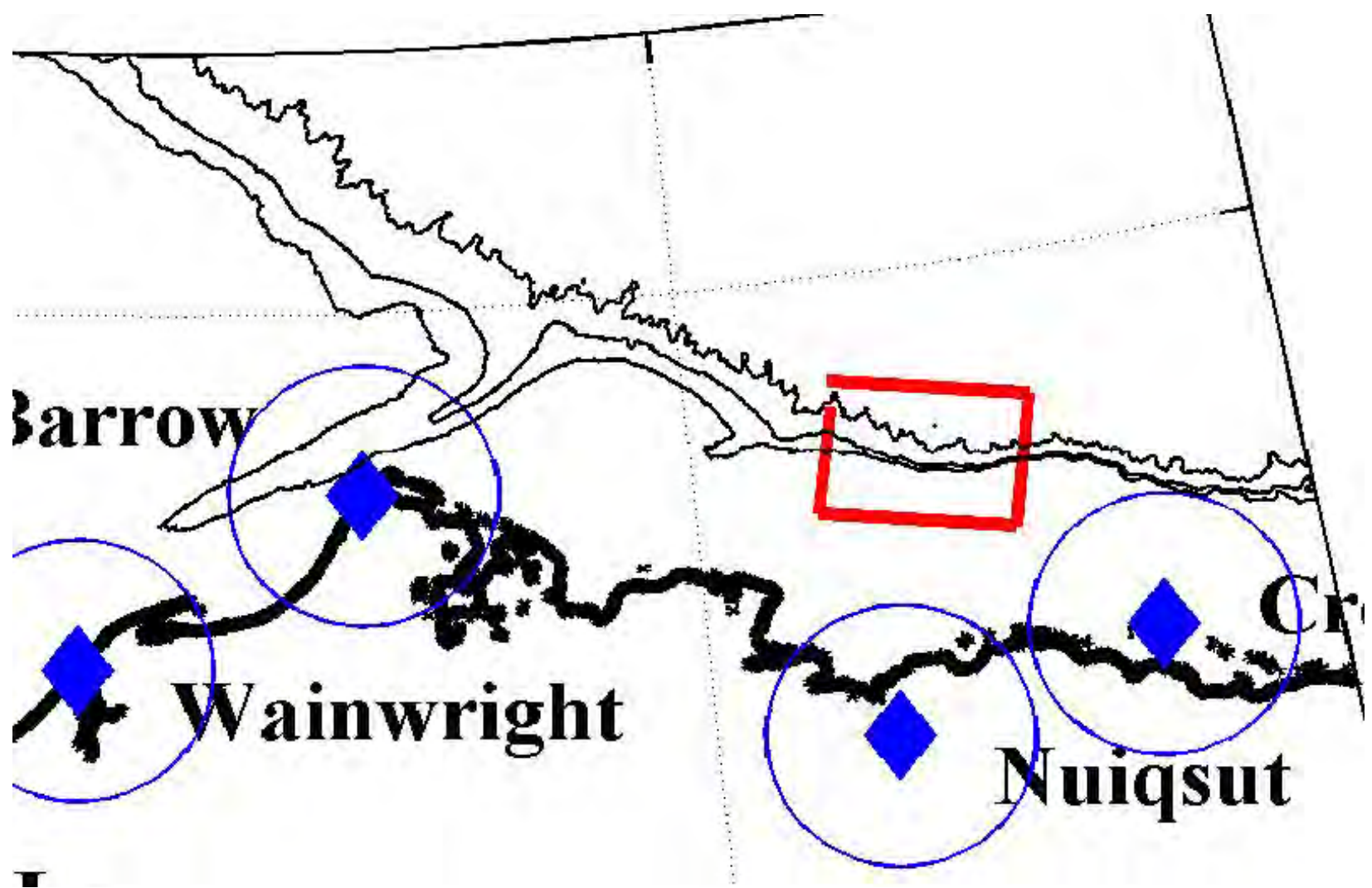
7.1 Dates and names of intended ports of call:  
 Dates : 13-16 July, 13-16 September  
 Dutch Harbor (Unalaska Island, Alaska)

7.2 Any special logistical requirements at ports of call:  
 Refueling, Meetings

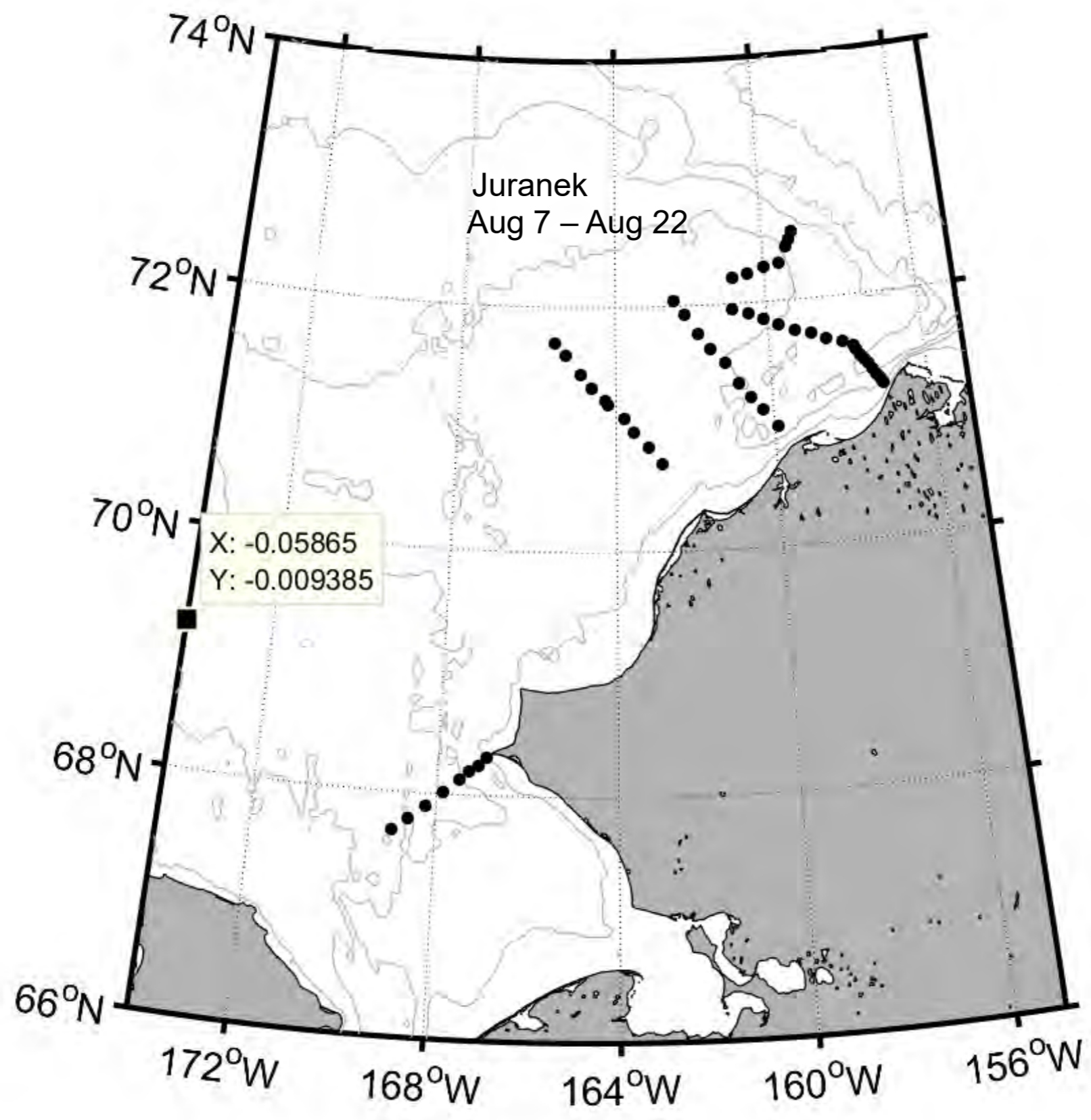
7.3 Name/Address/Telephone of shipping agent (if available):  
 Wilhelmsen Ships Service, as Agents only, Seattle, WA USA  
 Tele +1 206 652 4411 Mobile: +1 206 300 0628 | Fax: +1 206 774 0402  
 kevin.king@wilhelmsen.com  
 wss.seattle.shipsagency@wilhelmsen.com  
 Mr. Kevin King



YUSHIN MARU 2



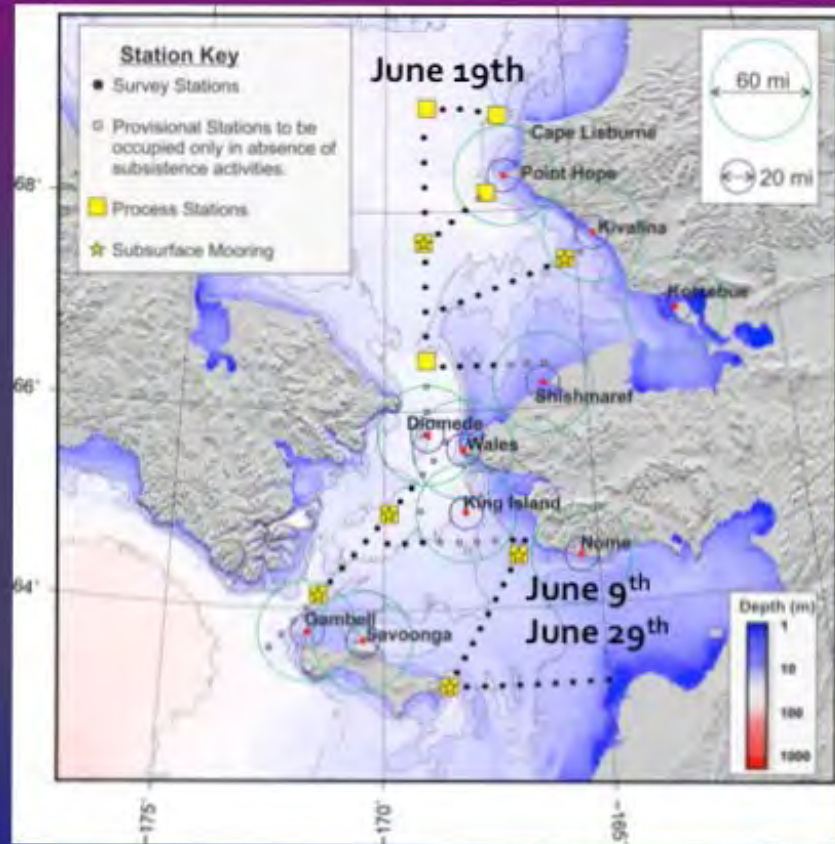
Sikuliaq Ashjian



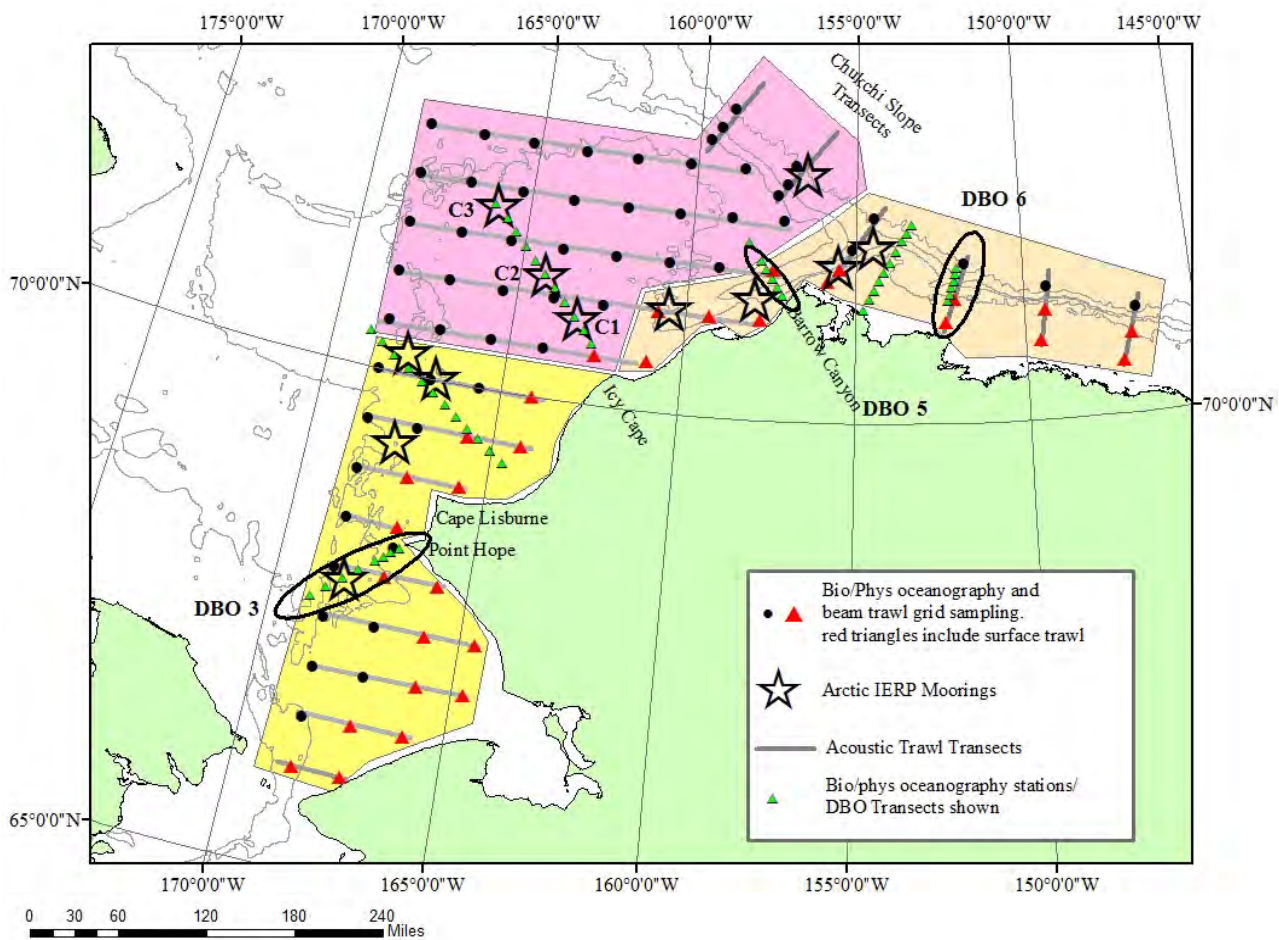
# Stations & Moorings

## Measurements:

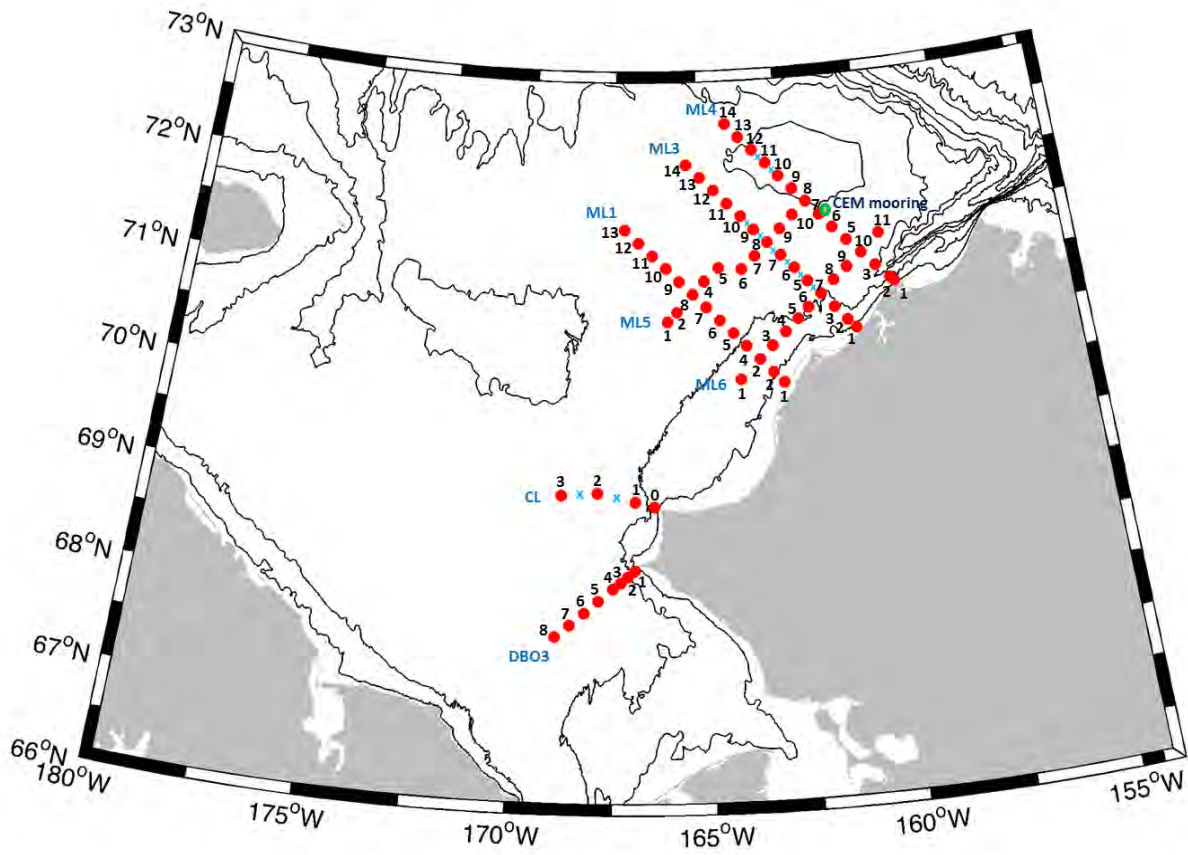
- Seawater physics & chemistry
- Phytoplankton
- Microzooplankton
- Macrozooplankton
- Sediment
- Bacteria
- Carbon/Nitrogen isotopes
- Suspended particles
- Underwater noise
- Midwater & benthic trawls



Sikuliaq Daneilson

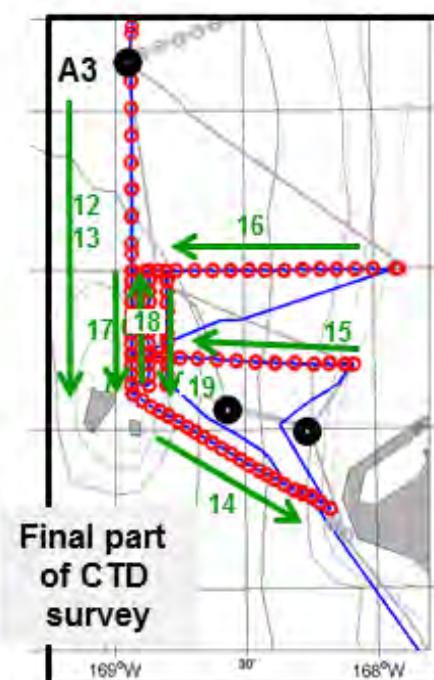
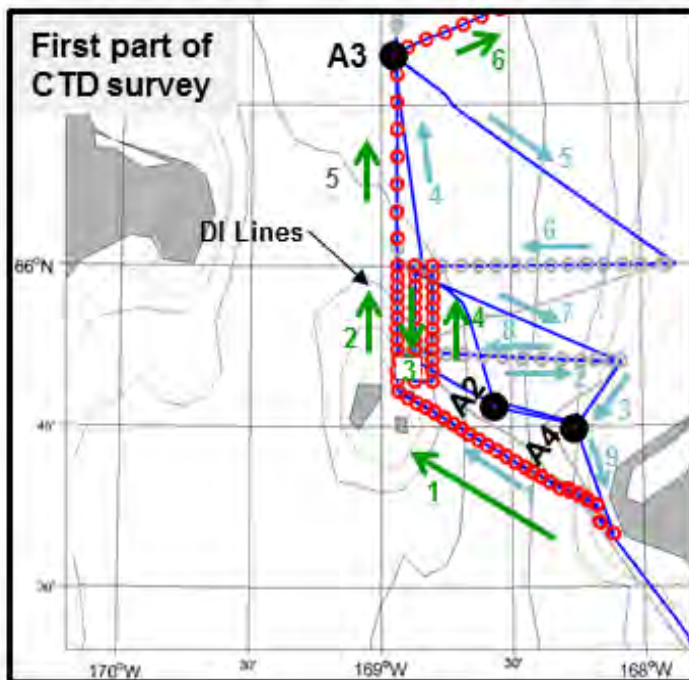
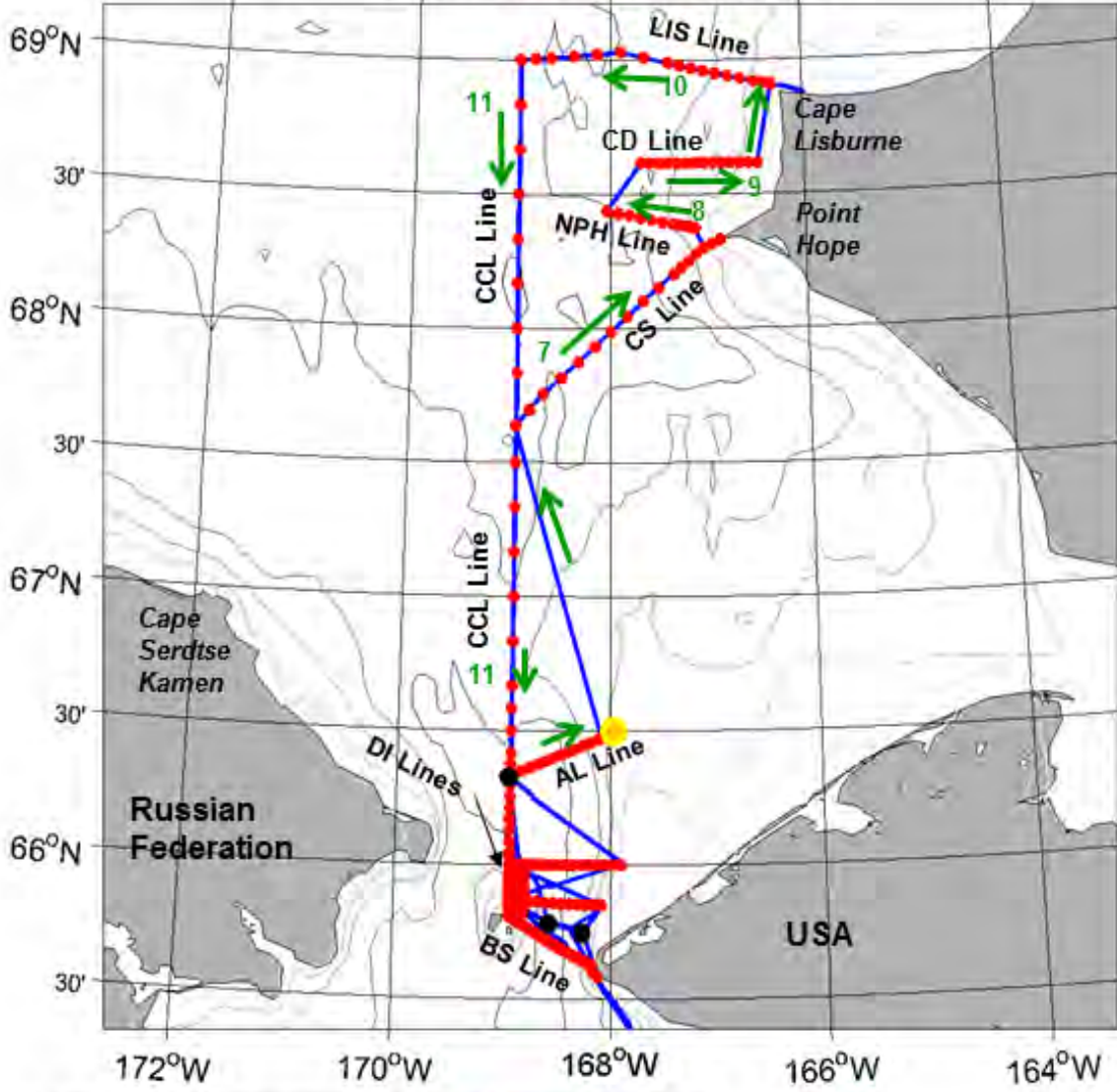


Ship TBD- Arctic IES Ed Farley



Norseman II AuG

BeringStrait 2016 - r=ctd,k=moorings,b=track



Norseman II Jul