



All times are given in local Icelandic time, which is UTC.

Details on remote participation will be provided later.

(O) – Online presentation

Monday, May 9, 2022

0900-0910 Andreas/Michael Welcome and logistics

From the sub-Arctic into the Arctic

Convenor: Anne-Marie Wefing

0910-0930 Mischa Seas /Colin Stedmon Separating annual, decadal and regional change in Sea Surface Temperature in the Northeastern Atlantic and Nordic Seas
0930-0950 Annika Drews (O) **might be cancelled** Role of the subpolar North Atlantic region in skillful climate predictions for high northern latitudes: Design of a pacemaker experiment and first results
0950-1010 Elina Efstathiou Modeling propagation of heat anomalies in the Nordic Seas
1010-1030 Zoe Koenig Observations of Atlantic inflow north of Svalbard
1030-1050 Rebecca Woodgate What might be driving the trend in the Bering Strait throughflow (and some intriguing implications for the Arctic)

1050-1120 Coffee Break

Convenor: Jed Lenetsky

1120-1140 Laramie Jensen New high resolution trace metal measurements in the Bering Strait and their implications for tracking Pacific Water circulation in the Western Arctic
1140-1200 Motoyo Itoh (O) Enhanced Pacific Summer Water heat transport through the Barrow Canyon into the Canada Basin in late 2010s
1200-1220 Bob Pickart Evolution of the Alaska Coastal Current as it traverses the Chukchi Sea
1220-1240 Milena Veneziani (O) The High-Latitude Application and Testing of Earth System Models (HiLAT) Project and its relevance to ASOF

1240-1350 Lunch Break

Nordic Seas and around Iceland (a session for Héðinn Valdimarsson)

Convenor: Steingrímur Jónsson

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| 1350-1400 | | Short Intro by Bob |
| 1400-1420 | Laura de Steur | An update on observed Arctic freshwater and sea ice export through Fram Strait |
| 1420-1440 | Øystein Skagseth | Arctic and Atlantic waters in the Norwegian Basin, between year ariability and potential ecosystem implications |
| 1440-1500 | Caroline Gjelstrup | Spatiotemporal patterns in upper and deep ocean stratification and its relation to heat, salt and mixing in the Nordic Seas |
| 1500-1520 | Ailin Brakstad | The impact of cold air outbreaks and lateral heat fluxes on dense water formation in the Greenland Sea from a ten-year moored record (1999-2009) |
| 1520-1540 | Stefanie Semper | Formation and circulation of dense water from a two-year moored record in Eggvin Offset, northwestern Iceland Sea |

1540-1610 Coffee Break

Convenor: Bob Pickart

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| 1610-1620 | | Short Intro by Steingrímur |
| 1620-1640 | Warsha Singh | Capelin spawning migration follows the Icelandic continental shelf edge and is dependent on suitable thermal pathways |
| 1640-1700 | Steingrímur Jónsson | Flow of Atlantic Water and heat to the continental shelf north of Iceland from 1994-2021 |
| 1700-1720 | Duncan Dale | Using anthropogenic radionuclides to trace ocean circulation around Iceland |
| 1720-1740 | Angel Ruiz-Angulo | Impact of Ocean Warming and Natural Variability on the Stratification and Mixed Layer Depth around Iceland |
| 1740-1800 | Kjetil Våge | Pathways of dense overflow water from the Greenland Sea to Denmark Strait |

1930

Social dinner at the restaurant Fjörúkráin in Hafnarfjörður; walking distance from MFRI <https://www.fjorukrain.is/restaurant>. More details see logistics document

Tuesday, May 10, 2022

Nordic Seas (continued)

Convenor: Michael Karcher

- 0840-0900 Theodoros Karpouzoglou Freshwater transport in the East Greenland Shelf
- 0900-0920 Anna-Marie Strehl A 70-year perspective of water mass transformation in the central Greenland Sea
- 0920-0940 Jie Huang (O) Revisiting the role of air-sea heat flux on the transformation of Atlantic Water along the rim current system in the Nordic Seas
- 0940-1000 Birgit Rønning Rinde Overturning in the Nordic Seas from 2002 to 2017 in the ASTE ocean state estimate

Arctic Ocean (continued)

- 1000-1020 Peigen Lin (O) Thinning of the cold halocline in the Beaufort Gyre.

1020-1050 Coffee Break

Convenor: Anna-Marie Strehl

- 1050-1110 Myriel Vredenburg (O) Year-round upper Arctic Ocean hydrography during the MOSAiC ice drift experiment in the context of historical observations
- 1110-1130 Anne-Marie Wefing Circulation times and new data on I-129 and U-236 across the Arctic Ocean
- 1130-1150 Benjamin Rabe (O) MOSAiC: an example case for regional coupled ocean-ice-atmosphere study using in-situ manual observations and distributed autonomous instrumentation
- 1150-1210 Vasco Müller (O) Properties of mesoscale eddies in the Arctic Ocean from a 1-km model simulation
- 1210-1230 Francesca Doglioni Large scale forcing of the Arctic sea level seasonality and implications for slope currents

1230-1400 Lunch Break

Convenor: Tom Haine

- 1400-1420 Wieslaw Maslowski Reconciling the ocean volume transports and heat convergence into the Arctic Ocean
- 1420-1440 Georgi Laukert Exploring the effects of potential large-scale hydrographic and biological changes in the Laptev Sea on future nutrient bioavailability in the Transpolar Drift
- 1440-1500 Michael Karcher Understanding the history of Pacific Water abundance in Fram Strait

Along the East coast of Greenland

- 1500-1520 Oliver Huhn (O) Tracing Submarine Meltwater from Northeast Greenland towards the South
- 1520-1540 Robert Sanchez Timing of freshwater export from Greenland fjords in a hierarchy of models
- 1540-1610 *Coffee Break*

Convenor: Michael Karcher

- 1610-1630 Renske Gelderloos Southeast Greenland fjord-shelf interaction at subinertial frequencies
- 1630-1650 Tiago Carrilho Bilo The East Greenland Coastal Current near Cape Farewell
- 1650-1710 Marion Devilliers Ocean response to a realistic Greenland Ice Sheet Melting in a climate model
- 1710-1730 Rebecca McPherson (O) Patterns and Drivers of Variability of Atlantic Water on shelf of Northeast Greenland

Davis Strait and Labrador Sea

- 1730-1750 Craig Lee An overview of the new Davis Strait program.

Evening

*Bus tour and some light hiking to Þingvellir or Reykjanes peninsula.
More details see logistics document*

Wednesday, May 11, 2022

Davis Strait and Labrador Sea (cont'd)

Convenor: Tom Haine

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| 0840-9000 | Astrid Pacini | Wind-forced upwelling along the West Greenland shelfbreak |
| 0900-0920 | Ruijian Gou (O) | The eddy formation off the west Greenland coast and eddy roles in the buoyancy budget of the Labrador Sea from a 1/60° numerical model |
| 0920-0940 | Paul Myers | Freshwater transport and exchange from the boundary currents of the Labrador Sea. |
| 0940-1000 | Lisa Leist
pres: Núria Casacuberta | Tracing Ocean circulation in the AR7W and OVIDE lines using Artificial Radionuclides |
| 1000-1020 | Qiang Wang (O) | The pronounced dynamic-sea-level drop in the North Atlantic subpolar gyre in the mid-late 2010s caused an extreme event of enhanced Arctic Ocean export west of Greenland |
| 1020-1040 | Jed Lenetsky | Understanding Davis Strait freshwater flux variability using observations and models |

1040-1110 Coffee Break

Convenor: Michael Karcher

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| 1110-1130 | Nicholas Foukal (O) | Moored measurements of the West Greenland Coastal Current along the Southwest Greenland Shelf |
| 1130-1210 | | Short updates on planned campaigns or projects <ul style="list-style-type: none"> • Foukal: Labrador Shelf mooring plans for summer 2023; • Woodgate: 2022+ Bering Strait plans; • Karcher: Arctic PASSION and the Atlantic DBO • de Steur: EU EPOC project (Explaining & Predicting the Ocean Conveyor) • Marander: MFRI plans |
| 1210-1300 | | Discussion on ASOF outputs; |

1300 Adjourn

For those who are still in the region on Wednesday afternoon there will be an option to visit the CarbFix project (<https://www.carbfix.com/>) at the Hellisheiði geothermal power plant, where atmospheric CO₂ is bound in carbonate bedrock. A geologist will guide us and is ready for scientific questions.

Departure from MFRI at 1430, CarbFix 1530 - 1700. Return to MFRI until 1830. Price will be EUR 35, plus ca. EUR 20-30 for transportation, depending on group size. More details see logistics document