EGU2020 Southern Ocean sessions

Date/Time: Thu, 07 May 2020, 14:00 to 18:00 CET (followed by an online open bar)
Place OS1.12: https://meetingorganizer.copernicus.org/EGU2020/displays/36195
Place OS1.13: https://meetingorganizer.copernicus.org/EGU2020/displays/36180

Registration for virtual (video) coffee break and open bar:
https://forms.gle/mzgyByeJoYP3oYdRA

Please look at the displays prior to the interactive text chat, since there will be no live presentations but an opportunity to ask questions to the presenters.

A quick feedback form for the organizers: https://www.menti.com/mpnunjsn78

Schedule overview

Interactive text chat: The Southern Ocean in a changing climate: open-ocean physical and biogeochemical processes (OS1.12)
14:00-14:06 Highlight by M. Meredith on IPCC SROCC
14:06-14:30 Physics I — Sea ice, convection, waves, and ACC
14:30-14:50 Physics II — Mesoscale, overturning, and SAMW
14:50-15:10 Biogeochemistry I — Nutrients
15:10-15:30 Biogeochemistry II — Carbon
15:30-15:45 Paleoclimate
15:45-16:15 Joined online coffee/tea break (registration required)

Interactive text chat: Under cover: ice-ocean interactions from the boundary layer to the Southern Ocean (OS1.13)
16:15-16:50 Connection with Ice Shelves and the Open Ocean
16:50-17:20 Sea ice Interaction with Ice Shelves and Ocean
17:20-18:00 Turbulent Ice Shelf-Ocean Boundary Layers
18:00- Joined online open bar (registration required)
Detailed program of interactive chat (text only)

**OS1.12 Highlight (14:00-14:06; Chair: Alex)**

Michael Meredith ([D2737 | EGU2020-164]):
*Causes and consequences of Southern Ocean change: the IPCC SROCC assessment*

**OS1.12 Physics I — Sea ice, waves, convection, and ACC (14:06-14:30; Chair: Alex)**

Thomas Rackow ([D2738 | EGU2020-20837]):
*Antarctic sea ice decline delayed well into the 21st century in a high-resolution climate projection*

Marzieh H. Derkani ([D2739 | EGU2020-12247]):
*Evaluation of the numerical wave model (WaveWatch III) for wave simulation in the Antarctic marginal ice zone*

Luke Roberts presented by Katharine Hendry ([D2744 | EGU2020-18595]):
*A new method for characterising the Antarctic Circumpolar Currents using Argo float temperature and salinity profiles*

Daan Boot ([D2747 | EGU2020-5944]):
*A new convective model for the Maud Rise Polynya*

Roman Tarakanov ([D2745 | EGU2020-1957]):
*Jets of the Antarctic Circumpolar Current in the Drake Passage Based on Hydrographic Section Data*

**OS1.12 Physics II — Mesoscale, overturning, and SAMW (14:30-14:50; Chair: Lavinia)**

Simon Josey ([D2740 | EGU2020-7580]):
*New insights into concurrent air-sea heat flux forcing of Subantarctic Mode Water formation from mooring observations in the Southeast Indian and Southeast Pacific sectors of the Southern Ocean*

Ivana Cerovecki ([D2749 | EGU2020-12128]):
*Strong atmospheric surface pressure anomalies drive a see-saw in Subantarctic Mode Water formation*

Yu Hong ([D2750 | EGU2020-4670]):
*Variability of the Subantarctic Mode Water volume in the South Indian Ocean during 2004-2018*

Gaston Manta ([D2748 | EGU2020-5883]):
Overturning Circulation and mesoscale eddies in the first GO-SHIP section at 34.5ºS across the South Atlantic during January 2017

**OS1.12 Biogeochemistry I — Nutrients (14:50-15:10; Chair: Lavinia)**

Ivy Frenger ([D2751 | EGU2020-8015](#)): Reshuffling of Nutrients in the Southern Ocean

Francois Fripiat ([D2752 | EGU2020-3957](#)): Nitrate isotopic constraints on routes of nutrient supply to global ocean pycnocline

Jenna Balaguer ([D2753 | EGU2020-3950](#)): Limitation by iron and manganese on phytoplankton communities in the Drake Passage.

J. Scott P. McCain ([D2754 | EGU2020-5855](#)): Iron and manganese colimitation in the Southern Ocean examined with a proteomic allocation model

**OS1.12 Biogeochemistry II — Carbon (15:10-15:30; Chair: Ivy)**

Lydia Keppler ([D2742 | EGU2020-18205](#)): Seasonal carbon dynamics in the Southern Ocean based on a neural network mapping of ship measurements

Lavinia Patara ([D2756 | EGU2020-10767](#)): The role of changing Southern Ocean circulation for the uptake and storage of CFC-12, anthropogenic CO2 and oxygen

Patrizia Giordano ([D2758 | EGU2020-22442](#)): Long time-series of export fluxes in the western Ross Sea (Antarctica)

Andres Rigual-Hernandez presented by Alba González Lanchas ([D2759 | EGU2020-19394](#)): Coccolithophore contribution to carbonate export to the deep sea in the Australian-New Zealand sector of the subantarctic Southern Ocean

**OS1.12 Paleoclimate (15:30-15:45; Chair: Ivy)**

Margaux Brandon ([D2743 | EGU2020-10433](#)): Variations of the Carbonate Counter Pump in the Southern Ocean during the Mid-Brunhes event and their contribution to the global biospheric productivity

Karl Stein ([D2757 | EGU2020-1755](#)): Timing and magnitude of Southern Ocean sea ice/carbon cycle feedbacks over the last eight glacial cycles
Sophie M. Alexander (D2760 | EGU2020-7505):
Ocean productivity and bottom water oxygenation across the onset of the Cenozoic cooling trend

**OS1.12/13 joined online coffee/tea break (15:45-16:15)**
Bring your own drink and display your favorite coffee place in the background. We will break-out into smaller groups.

**OS1.13 Session OS1.13 (16:15-18:00)**

**OS1.13 Characteristics of Polar Seas and connection with ice shelves and the open ocean (16:15-16:50; Chairs: Leo, Louis)**

Raquel Flynn (D2761 | EGU2020-21107):
Productivity and carbon export potential in the Weddell Sea, with a focus on the waters near Larsen C Ice Shelf

Katherine Hutchinson (D2768 | EGU2020-112):
Water Mass Characteristics and Distribution Adjacent to Larsen C Ice Shelf, Antarctica

Roberto Grilli (D2772 | EGU2020-2984):
Subsea Water Isotope Sensors: A novel tool for continuous and in-situ analysis

Chengyan Liu (D2770 | EGU2020-2319):
On the modified Circumpolar Deep Water upwelling over the Four Ladies Bank in Prydz Bay, East Antarctica

Ria Oelerich (D2763 | EGU2020-463):
Cross-Slope Observations in the Bellingshausen Sea, Southern Ocean

Ute Hausmann (D2767 | EGU2020-22464):
The role of tides in ocean--ice-shelf interactions in the southwestern Weddell Sea

**OS1.13 Sea ice and its interaction with ice shelves and the Southern Ocean (16:50-17:20; Chairs: Nadine, Xylar)**

Lucile Ricard (D2765 | EGU2020-17820):
Impact of the Mertz Glacier Tongue calving on the emergence of polynyas in the d'Urville Trough, East Antarctica

Pierre-Vincent Huot (D2780 | EGU2020-19677):
Investigating the dynamics of an Antarctic coastal polynya using a regional climate model

Isabelle Giddy (D2777 | EGU2020-9934):
The Seasonality of submesoscale variability in the Antarctic Seasonal Ice Zone

F. Alexander Haumann (D2782 | EGU2020-22008):
Sea-ice Induced Southern Ocean Subsurface Warming and Surface Cooling in a Warming Climate

Sönke Maus (D2762 | EGU2020-6039):
Microstructure and solutal boundary layer at the sea ice - ocean interface

**OS1.13 Turbulent Ice Shelf-Ocean Boundary Layers (17:20-18:00; Chairs: Irena, Xylar)**

Ryan Patmore (D2769 | EGU2020-10388):
Assessing z-level modelling of the ice shelf - ocean boundary layer

Leo Middleton (D2781 | EGU2020-9112):
Onset of Double-Diffusive Convection in the Ice Shelf/Ocean Boundary Layer

Louis-Alexandre Couston (D2776 | EGU2020-19054):
Ice melting in a turbulent stratified shear flow

Carolyn Branecky Begeman (D2774 | EGU2020-10848):
Toward a new ice-shelf melt rate parameterization with large-eddy simulations

Peter Davis (D2771 | EGU2020-50):
Turbulence Observations in the Grounding Zone Region of Thwaites Glacier

**OS1.12/13 joined online open bar (18:00-)**

Bring your own drink and display your favorite bar in the background. We will break-out into smaller groups.