



Program for interactive EGU2020 sessions OS1.12/13

## 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 34.5°S 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 CO<sub>2</sub> 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.