

## EC-ESA JOINT ESSI Workshop: Polar Meeting Agenda\*, Big Hall, ESRIN

\*Note there are plenary sessions on Wednesday morning, Thursday early morning, and Friday late morning. These are also happening in the Big Hall. Please see the [main event programme](#) for details.

### Day 1: Wednesday 22nd November 2023

|  |                            |
|--|----------------------------|
| <b>Afternoon session 1</b>   | <b>14:20–16:00 (1hr40)</b> |
| <b>Welcome talk: ESA-EC Collaboration Opportunities Overview</b><br><i>Diego Fernandez</i> (ESA) & <i>Anneli Strobel</i> (AWI) (15 mins)   |                            |
| <b><u>The Arctic Ocean: Towards an integrated view</u></b> <span style="float: right;"><i>7-minute talks + 3 mins Q+A</i></span><br><i>Chairs: Eero Rinne</i> (UNIS) and <i>Amy Swiggs</i> (University of Northumbria) |                            |
| <b>Improving Copernicus forecasts of Arctic sea ice and icebergs with the ACCIBERG project:</b> <i>Laurent Bertino</i> (Nansen Center)   |                            |
| <b>Explaining and Predicting the Ocean Conveyor - the EPOC project:</b> <i>Laura de Steur</i> (Norwegian Polar Institute)  |                            |
| <b>Biological carbon pump and food web efficiency in the changing Arctic seas - ECOTIP project:</b> <i>Marja Koski</i> (DTU)   |                            |
| <b>Ecological and societal implications of cryosphere reduction: Insights from the FACE-IT project:</b> <i>Kai Bischof</i> (University of Bremen)  |                            |
| <b>Arctic sea ice thickness products; current status and future direction:</b> <i>Isobel Lawrence</i> (ESA), <i>Jack Landy</i> (UiT) and <i>Carole Belot</i> (NOVELTIS)  |                            |
| <b>Contribution of the ESA Arctic+Salinity Project to Arctic Ocean Monitoring:</b> <i>Estrella Olmedo</i> (Institute of Marine Sciences)   |                            |
| <b>Arktalas Hoavva- Highlights of Main Results and a Roadmap for the Future:</b> <i>Johnny Johannessen</i> (Nansen Center)   |                            |
| <b>Coffee 16:00-16:20</b>  |                            |

**Afternoon session 2**

**16:20–18:00 (1hr40)**

**The Southern Ocean in the changing Earth and Climate system** 7-minute talks + 3 mins Q+A

*Chairs: Isobel Lawrence (ESA) and Alessandro Di Bella (ESA)*

**ALtimetry for BATHymetry and Tide Retrievals for the Southern Ocean, Sea ice and ice Shelves - The ESA ALBATROSS project:** *Carole Belot* (NOVELTIS)

**Antarctic sea ice thickness from EO altimeters:** *Sara Fleury* (CNRS)

**Southern Ocean dynamic ocean topography and geostrophic currents from CryoSat-2:** *Ole Andersen* (DTU space)

**SO-FRESH project: First satellite Sea Surface Salinity maps for further understanding of the Southern Ocean dynamics:** *Verónica González* (Institute of Marine Sciences) & *Rafael Catany* (Argans)

**Synergy between EU and ESA activities: SO-CHIC and SO-FRESH:** *Alessandro Silvano* (University of Southampton)

**The CRICES project: improving our understanding of the physical, chemical, and biogeochemical interactions within the OIA system, our knowledge of polar and global climate, and the ability of society to respond to climate change:** *Carolina Gabarro* (Institute of Marine Sciences)

**The Polar Regions in the Earth System (PolarRES):** *Priscilla Mooney* (NORCE)

Discussion: ***The Arctic Ocean: Towards an integrated view & The Southern Ocean in the changing Earth and Climate system (30 mins)***

**18:00: Plenary drinks reception & posters, marquee**

## Day 2: Thursday 23rd November 2023

|  |                                    |
|--|------------------------------------|
| <b>Morning session 1</b>   | <b>9:00–11:00 (2hrs)</b>           |
| <b>Enhanced observations and understanding of Ice Sheets (part 1)</b><br><i>Chairs: Celia Baumhoer (DLR) and Martin Wearing (ESA)</i>  | <i>7-minute talks + 3 mins Q+A</i> |
| <b>The EC TIPACCs project:</b> <i>Svein Østerhus</i> (NORCE)   |                                    |
| <b>H2020 PROTECT project: summary of activities:</b> <i>Ruth Mottram</i> (Danish Meteorological Institute)   |                                    |
| <b>OCEAN:ICE - Studying the impact of Antarctica on the global ocean:</b> <i>Ruth Mottram</i> (Danish Meteorological Institute)  |                                    |
| <b>4DAntarctica – successes and future direction:</b> <i>Noel Gourmelen</i> (University of Edinburgh)  |                                    |
| <b>4DGreenland – successes and future direction:</b> <i>Louise Sandberg Sørensen</i> (DTU)   |                                    |
| <b>Advancements in monitoring surface processes of glaciers and ice sheets from microwave satellite data:</b> <i>Thomas Nagler</i> (ENVEO)   |                                    |
| <b>Supraglacial Hydrology:</b> <i>Mal McMillan</i> (University of Lancaster)   |                                    |
| <b>Estimating geothermal heat flux heterogeneity beneath Antarctic and Arctic ice sheets: challenges and opportunities:</b> <i>Fausto Ferraccioli</i> (OGS) & <i>Jörg Ebbing</i> (Kiel University) |                                    |
| Discussion: <i>Enhanced observations and understanding of Ice Sheets (40 mins)</i>   |                                    |
| <b>Coffee 11:00-11:30</b>  |                                    |
| <b>Morning session 2</b>   | <b>11:30–13:20 (1hr50)</b>         |
| <b>Enhanced observations and understanding of Ice Sheets (part 2)</b><br><i>Chairs: Geir Moholdt (Norwegian Polar Institute) and Louise Sandberg Sørensen (DTU)</i>                                | <i>7-minute talks + 3 mins Q+A</i> |
| <b>Advances in EO-based englacial temperature:</b> <i>Marion Leduc-Leballeur</i> (CNR-IFAC)  |                                    |
| <b>Subglacial Hydrology and sub-glacial Lakes:</b> <i>Nanna Karlson</i> (GEUS) & <i>Noel Gourmelen</i> (University of Edinburgh)   |                                    |
| <b>Understanding ice-shelf processes with EO - Polar+ Ice Shelves:</b> <i>Noel Gourmelen</i> (University of Edinburgh)   |                                    |
| <b>The EC ARCOS Project - Main EO technological challenges and adopted solutions:</b> <i>Massimo Sernicola</i> (e-GEOS)  |                                    |
| <b>Arctic PASSION Pan-Arctic Observing System of Systems: Implementing Observations for Societal Needs:</b> <i>Luisa Cristini</i> (AWI)  |                                    |
| <b>Updates and Future Plans of the Ice Sheet Mass Balance Intercomparison Exercise (IMBIE):</b> <i>Inès Otosaka</i> (University of Northumbria)  |                                    |
| Discussion: <i>Enhanced observations and understanding of Ice Sheets (50 mins)</i>   |                                    |

**Lunch 13:20 – 14:20**

**Afternoon session 1**

**14:20–16:00 (1hr40)**

**Utilising EO to assess glacier change and impacts**

*7-minute talks + 3 mins Q+A*

*Chairs: Inès Ootosaka (University of Northumbria) and Patrick Schmitt (University of Innsbruck)*

**An integrated glacier assessment: GLAMBIE:** *Michael Zemp* (University of Zurich)

**Results from the projects AlpGlacier, Glaciers CCI and C3S:** *Frank Paul* (University of Zurich)

**The AlpSnow Project – Innovative Methods and Products for Monitoring Physical Parameters of the Seasonal Snow Cover in Mountain Regions:** *Thomas Nagler* (ENVEO)

**Cryosat+ Mountain Glaciers:** *Livia Jakob* (EarthWave)

**Using EO data to improve glacier change projections for adaptation planning: insights from the H2020 PROVIDE project:** *Fabien Maussion* (University of Bristol)

**The European Project "Beyond EPICA":** *Chiara Venier* (CNR)

Discussion: **Utilising EO to assess glacier change and impacts (40 mins)**

**Coffee 16:00 – 16:20**

**Afternoon session 2**

**16:20–18:00 (1hr40)**

**Coordinating EO: Bring Polar Data into Action**

*Chair: Ola Grabak (ESA)*

*Eirik Malnes* (NORCE), *Øystein Godøy* (Norwegian Meteorological Institute), *David Arthurs* (Polar View), *Anca Angheloa* (ESA)

Speakers will give perspectives on how to bridge between data providers and data consumers in the polar context. Following a panel and audience discussion, recommendations for next steps will be identified.

**18:00: Plenary drinks reception & posters, marquee**

## Day 3: Friday 24<sup>th</sup> November 2023

### Morning session 1

9:00–11:00 (2hrs)

#### Preparing wrap-up of Polar Cluster Recommendations

*Chairs: Isobel Lawrence (ESA) and Martin Wearing (ESA)*

- Keynote: Polar Roadmap for Copernicus Service Evolution: **Maria Høegh Berdahl** (EC DG-DEFIS) (20 mins)
- Discussion Point: Coordinating EO with in-situ observations and infrastructure: **Veronica Willmott Puig** (AWI) & **Diego Fernandez** (ESA) (25 mins)
- Discussion Point: Connecting the use of process-based models, ice-sheet models and EO: future directions: **Anne Munch Solgaard** (GEUS), **Quentin Glaude** (U. Liege), **Ghislain Picard** (IGE) (25 mins)
- Discussion Point: Towards the next generation of EO products for Polar Science (methods, techniques, products/EO-based science): **Thomas Nagler** (ENVEO), **Mal McMillan** (U. Lancaster), **Livia Jakob** (EarthWave), **Sara Fleury** (CNRS) (25 mins)
- Discussion Point: How to maximise the impact of the ESA-EC partnership. **Diego Fernandez** (ESA) & **Pjotr Elshout** (European Polar Board) (25 mins)

**Coffee: 11:00-11:30**