

## CESM POLAR CLIMATE WORKING GROUP WINTER WG MEETING

February 23 and 24, 2023

### February 23

\* All times are MST; **Speakers:** please leave 5 min at the end of your slot for questions.

| Time  | Topic  | Speakers                     |
|-------|--|------------------------------|
|       | <b>Joint LIWG / PCWG Session - Thursday, February 23</b>   |                              |
| 09:00 | Welcome.   | Co-chairs                    |
| 09:10 | Large effects of ocean circulation change on Greenland ice sheet mass loss under mid-of-the-road greenhouse gas scenario (Remote)  | Miren Vizcaino               |
| 09:30 | Response of the Greenland Ice Sheet to temperature overshoot scenarios (Remote)  | Michele Petrini              |
| 09:50 | High-resolution, fully-coupled simulations of the Greenland Ice Sheet in a future, strong warming scenario (In Person)   | Ziqi Yin                     |
| 10:10 | Improved Bare Ice Albedo over the Greenland Ice Sheet using Physically Based Bare Ice Albedo Radiative Transfer Methods (Remote)   | Chloe Whicker                |
| 10:30 | Break  |                              |
| 11:00 | Large-scale wind-driven Greenland melt influences sea-level rise projection uncertainties (Remote)   | Daniel Topal                 |
| 11:20 | Identifying High Latitude Atmospheric Rivers with Machine Learning (In Person)   | Christine Shields            |
| 11:40 | Transformation of the Sea-Ice "Cover" in the New Arctic - Insights Into Melt Progression From ICESat-2 High-Resolution Data Analysis With the DDA-bifurcate-seaice (In Person) | Ute Herzfeld (or Huilin Han) |
| 12:00 | Adjourn for lunch.   |                              |
|       | <b>PCWG Afternoon Session - Observed Conditions</b>  |                              |
| 13:00 | Welcome  | Co-chairs                    |
| 13:10 | Record Arctic Cyclone of January 2022: characteristics, impacts, and predictability (Remote)   | Melinda Webster for Ed BW.   |
| 13:30 | Lead fractions from SAR-derived sea ice divergence (In Person)   | Louisa von Albedyll          |
| 13:50 | Spatial scale of surface albedo and melt pond fraction during summertime in the Central Arctic Ocean (In Person)   | Radiance Calmer              |
| 14:10 | Break  |                              |

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|-------|--|---------------------|
|       | <b>PCWG Afternoon Session - Climate Dynamics 1</b>   |                     |
| 14:30 | Atmospheric drivers of temporal variability in melt pond coverage and albedo: A model-observation synthesis (Remote) | Melinda Webster     |
| 14:50 | Arctic near surface air temperature is warmer in CESM2, is this a good thing? (Remote)                               | Elin McIlhattan     |
| 14:50 | Large Scale Climate Modes as Drivers of Low-Frequency Regional Arctic Sea Ice Variability (In Person)                | Chris Wyburn-Powell |
| 15:10 | Understanding Arctic Precipitation: How and When Does it Change in CESM2? (In Person)                                | Sean Leister        |
| 15:40 | <b>Adjourn for the day</b>   |                     |

## February 24

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| Time  | Topic   | Speakers             |
|-------|---|----------------------|
|       | <b>Model Development</b>  |                      |
| 09:00 | Welcome   | Co-chairs            |
| 09:10 | On the design of sea ice thermodynamic parameterizations with machine learning (In Person)  | Lorenzo Zampieri     |
| 09:30 | Progress Towards an Icepack Model Case Study for the MOSAiC Expedition (In Person)  | David Clemens-Sewall |
| 09:50 | Towards CESM3: Snow physics, waves, and fast ice, oh my. (In Person)  | David Bailey         |
| 10:10 | Break   |                      |
|       | <b>PCWG Session - Climate Dynamics 2</b>  |                      |
| 10:30 | The role of ocean heat transport versus surface heat fluxes in driving Arctic warming and sea-ice decline (Remote)                | Dylan Oldenburg      |
| 10:50 | Processes controlling the seasonally varying emergence of forced Arctic longwave radiation changes (In Person)                    | Jonah Shaw           |
| 11:10 | Sea Ice Perturbations in CESM2 Aquaplanet Simulations: Isolating the Physical Climate Responses From Model Interventions (Remote) | Mark England         |
| 11:30 | Discussion  |                      |
| 12:00 | <b>ADJOURN</b>  |                      |