Polar-amplification-MIP (PAMIP) Virtual workshop tentative agenda
March 30-April 1, 2021
Boulder, CO USA

Tuesday, March 30, 2021 08:00 – 10:30 (Mountain Daylight Time)*	
	Session 1: Polar amplification and Arctic-midlatitude connections Chair: Clara Deser
08: 00	**Welcome and Logistics** Speaker: Clara Deser (NCAR)
08:05	**Opposing influences of ozone depleting substances and anthropogenic aerosols on Arctic warming over the last 65 years in NCAR CESM2** Speaker: Hyo-Seok Park (Hanyang University)
08:10	**Polar Amplification in CESM is dominated by extra-polar forcing and resultant feedback** Speaker: Lei Wang (Purdue University)
08:15	**Polar amplification in paleoclimates - can paleo observations constrain CMIP6 model simulations?** Speaker: Dan Lunt (University of Bristol)
08:20	**Observed statistical connections overestimate the causal effects of Arctic sea-ice changes on midlatitude winter climate** Speaker: James Screen (University of Exeter)
08:25	**Subseasonal relationship between Arctic and Eurasian surface air temperature** Speaker: Hye-Jin Kim (Seoul National University)
08:30	**Warmer and less icy Arctic leading to more violent weather in mid-latitudes** Speaker: Yungi Hong (Gwangju Institute of Science and Technology)
08:35	Q&A session
08:45	Break

* 23:00-01:30 (the following day) Korea Standard Time (+9); 22:00-00:30 (following day) China Standard Time (+8); 16:00-18:30 Central European Summer Time (+2); 15:00-17:30 British Summer Time (+1); 10:00-12:30 Eastern Daylight Time (-4); 09:00-11:30 Central Daylight Time (-5); 08:00-10:30 Mountain Daylight Time (-6); 07:00-09:30 Pacific Daylight Time (-7).

	Session 2: Arctic-midlatitude linkages
	Chair: Clara Deser
09:00	**Evaluations of atmospheric variability in the PAMIP simulations**
	Speaker: Gang Chen (University of California, Los Angeles)
09:05	**Exploring remote and local drivers of blocking activity changes in PAMIP simulations**
	Speaker: Evangelos Tyrlis (Max Planck Institute for Meteorology)
09:10	**Influence of internal variability: how to ensure results are robust?**
	Speaker: Yannick Peings (University of California, Irvine)
09:15	**Identifying changes in atmospheric variability due to Arctic sea ice loss with machine learning**
	Speaker: Melissa Gervais (Pennsylvania State University)
09:20	**Enhanced NH jet stream waviness induced by remote forcing from the tropics vs the Arctic**
	Speaker: Qinghua Ding (University of California, Santa-Barbara)
09:25	**Impact of Barents-Kara-Sea sea ice reduction on the variation of East Asian trough in late winter**
	Speaker: Mian Xu (Lanzhou University)
09:30	Q&A session
09:40	Break
10:00	Break-out groups *(all groups consider the same set of questions)*:
	What are the open questions and how do we make progress on understanding: • Mechanisms of polar amplification • Atmospheric circulation response to polar amplification • Causality in Arctic-midlatitude linkages and inferences from observations
	Chairs: Gang Chen, Yannick Peings, Melissa Gervais, Qinghua Ding
10:30	Adjourn for the day

Wednesday, March 31, 2021 08:00 – 10:30 (Mountain Daylight Time)

	Session 3: Arctic-midlatitude linkages: sensitivities and observational constraints
	Chair: James Screen

08: 00	Synthesis report of the breakout groups from the previous day (rapporteur TBD)
08:05	**Warm Arctic, cold Siberia pattern: how deep is the projected Arctic warming?** Speaker: Gudrun Magnusdottir (University of California, Irvine)
08:10	**Resolution dependency of response to Arctic sea ice decline in PAMIP** Speaker: Tido Semmler (Alfred Wegener Institute)
08:15	**Modulation of the winter atmospheric response to Arctic sea-ice loss by the Pacific decadal oscillation** Speaker: Guillaume Gastineau (LOCEAN, Sorbonne Université)
08:20	**Linkages between Arctic and mid-Latitude weather and climate: unraveling the impact of changing sea ice and sea surface temperatures** Speaker: Ralf Jaiser (Alfred Wegener Institute)
08:25	**Dynamical and thermodynamical contributions to the mid-latitude atmospheric response to Arctic sea ice decline** Speaker: Svenya Chripko (CERFACS)
08:30	**Observationally constrained multi-model atmospheric response to future Arctic sea ice loss** Speaker: Doug Smith (Met Office)
08:35	Q&A session
08:45	Break
	Session 4: Arctic-midlatitude linkages: role of the stratosphere Chair: James Screen
09:00	**Investigating the stratospheric response to Arctic sea-ice loss in PAMIP's transient coupled experiments** Speaker: Yu-Chiao Liang (Lamont-Doherty Earth Laboratory)
09:05	**Impacts of Arctic stratospheric polar vortex on the East Asian Trough** Speaker: Jiankai Zhang (Lanzhou University)
09:10	**Role of the QBO in response to Arctic Sea Ice Loss** Speaker: Rosie Eade (Met Office)
09:15	**Interaction between sea-ice loss, ENSO and QBO state** Speaker: Amber Walsh (University of Exeter)

09:20	**Uncertainty in the winter atmospheric response to Arctic sea ice loss: the role of stratospheric internal variability** Speaker: Lantao Sun (Colorado State University)
09:25	**The role of the basic state, the stratospheric pathway and internal variability in the atmospheric response to sea ice loss** Speaker: Michael Sigmond (Environment and Climate Change Canada)
09:30	Q&A session
09:40	Break
10:00	Break-out groups *(all groups consider the same set of questions)*: What are the open questions and how do we make progress on understanding: • Factors influencing the response to Arctic sea ice loss • The role of stratosphere-troposphere coupling • Observational constraints Chairs: Gudrun Magnusdottir, Tido Semmler, Rosie Eade, Michael Sigmond
10:30	Adjourn for the day

Thursday, April 1, 2021 08:00 – 10:30 (Mountain Daylight Time)

	Session 5: Influence of polar amplification on global climate: role of ocean-atmosphere coupling (I) Chair: Doug Smith
08:00	Synthesis report of the breakout groups from the previous day (rapporteur TBD)
08:05	**Air-sea Interactions and the atmospheric response to Arctic Sea Ice Loss** Speaker: Elisa Manzini (Max Planck Institute for Meteorology)
08:10	**Multi-model assessment of the decadal and longer oceanic response to Arctic sea ice reduction** Speaker: Rym Msadek (CNRS/CERFACS)
08:15	**Global climate impacts of Arctic sea ice loss: the role of ocean circulation** Speaker: Wei Liu (University of California, Riverside)
08:20	**Are ocean-atmosphere responses to sea ice loss and greenhouse forcing separable?** Speaker: Paul Kushner (University of Toronto)

08:25	**The coupled climate response to Antarctic sea ice loss** Speaker: Holly Ayres (University of Reading)
08:30	**The relative roles of Arctic and Antarctic sea-ice loss in the climate response to greenhouse warming** Speaker: Stephanie Hay (University of Toronto)
08:35	Q&A session
08:45	Break
	Session 6: Influence of polar amplification on global climate: role of ocean-atmosphere coupling (II) Chair: Doug Smith
08:55	**The midlatitude response to polar sea ice loss and polar amplification: Idealized slab-ocean aquaplanet experiments with thermodynamic sea ice** Speaker: Tiffany Shaw (University of Chicago)
09:00	**Does Ekman coupling explain the damping of the ITCZ shift in fully coupled Arctic sea-ice loss experiments compared to the same forcing in a slab-ocean model set-up?** Speaker: Tien-Yiao Hsu (University of California, Irvine)
09:05	**Artificial heating of the Arctic in sea ice loss simulations** Speaker: Mark England (Scripps Institution of Oceanography)
09:10	**Design and execution of the long-coupled simulations of PAMIP Tier 3** Speaker: Alexandre Audette (University of Toronto)
09:15	Q&A session
09:25	Break-out groups *(all groups consider the same set of questions)*: What are the open questions and how do we make progress on understanding: • Ocean's response to Arctic and Antarctic sea ice loss • Role of ocean-atmosphere coupling in the global climate response to polar sea ice loss • "Tug of war" between GHG-induced tropical warming and polar warming • Constraining the sea ice in the coupled PAMIP experiments Chairs: Elisa Manzini, Rym Msadek, Paul Kushner, Mark England
09:45	Break
10:05	Synthesis report of the breakout groups (rapporteur TBD)

10:10	**Closing discussion and next steps**: Identify 2-3 PAMIP research priorities and group papers (led by Clara Deser)
10:30	Workshop Adjourns