

# Climate Variability & Change Working Group

## 30th Annual CESM Workshop June 10th, 2025

**Tuesday, June 10th, 08:30 am – 12:00 pm**

*\* All times are MDT; **Speakers:** Slot is 10 minutes so please speak for no more than 7 minutes leaving 2 minutes for questions and 1 minute for speaker changeover*

Time	Topic	Speakers
08:30	CVCWG update	Isla Simpson Aixue Hu Sarah Larson
08:40	Critical Impact of Land-Atmosphere Feedbacks on Midlatitude Wintertime Surface Temperature Variance	Kezhou (Melody) Lu
08:50	'LENS'ing through Internal Variability in Heat Waves	Prasad Shelke
09:00	Human-driven increase in North American Pacific Trough intensifies winter and spring heat extremes ( <b>virtual</b> )	Jhayron Perez-Carrasquilla
09:10	Early and Widespread Emergence of Regional Warming is Robust to Observational and Model Uncertainty	Jonah Shaw
09:20	Understanding anthropogenic aerosols and ocean warming as drivers for Southwestern U.S. current drought and its future outlook	Yan-Ning Kuo
09:30	Constant equilibrium climate sensitivity (ECS) across a wide range of climates in extra-long CESM simulations	Paul Curtis
09:40	Confronting climate models with long-term changes in the shape of the precipitation distribution from station observations	Angie Pendergrass
09:50	Exploring the Moisture Sources and Pathways for South American Rainfall Using Variable-Resolution CESM Simulations	Asiya Badarunnisa Sainudeen
	BREAK	
10:30	Simulated Antarctic sea ice expansion reconciles climate model with observation	Wei Liu
10:40	Underestimated Southern Ocean teleconnections caused by the double ITCZ problem	Yue Dong
10:50	Investigation of the drivers of sea surface salinity and North Atlantic climate using a stochastic model	Glenn Liu
11:00	Distorted MJO Propagation by QBO through Multi-Scale Interactions over the Maritime Continent	Kai Huang
11:10	Climate variability sensitivity to the parameterization of surface fluxes in CESM2	Charlotte DeMott

11:20	Organized Convection in ENSO Onset	Mitch Moncrieff
11:30	How do Atmospheric Rivers change under a warmer climate versus a climate engineered climate?	Kwesi Quagraine
11:40	G6-1.5K-MCB: Climate impacts in mid-latitude marine cloud brightening controller simulations	Haruki Hirasawa
11:50	Impact of Seasonality on Climate Outcomes for Mid Latitude Marine Cloud Brightening	Erin Emme

## Posters

	Influence of long-term trends in tropical Pacific sea surface temperature on Atmospheric River statistics in Western North America	Andrew Kwong
	Disentangling warming and circulation influences on hydroclimate using nudging experiments	Arianna Varuolo-Clarke
	How well can CMIP6 models represent the observed influence of the Pacific and Indian Ocean on the Indian Summer Monsoon rainfall?	Weiqing Han
	Migration of the regional ITCZ	Yaru Guo
	Tropical Pacific response to climate change: the role of the pre-perturbation Walker Circulation strength in determining the future state	Jacob Stuivenvolt-Allen
	External forcing induced decadal variability of marine heatwaves in the southwest Indian Ocean	William Kamp
	Assessing the Role of Climate Sensitivity and Initial Conditions on AMOC and Surface Temperature Using the IGSM-CESM Framework	Popat Salunke
	The Pencil Ocean Model (PenOM): A New 1D Ocean Model in CESM2	Jongsoo Shin
	Dynamical Downscaling of CESM-SAI Datasets for Assessing the Impacts of Climate Interventions	Kwesi Quagraine