

ESPWG: Co-chairs Update

CESM ANNUAL WORKSHOP 2023

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Here we value respectful dialogue, please...

WELCOME!



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

Time	Topic	Speakers
Center Green Auditorium / North Bay		
YouTube Streaming: https://youtube.com/live/rSYCw46XRR0?feature=share		
1:30	Welcome and logistics	Co-chairs
1:40	Seasonal Predictability of Weather Type Frequencies Over the Contiguous United States	Erin Towler
2:00	Increase in MJO predictability under global warming	Danni Du
2:20	Future changes in seasonal climate predictability	Dillon Amaya
2:40	Disentangle the North American Monthly Precipitation Predictive Skill from Different Time-scales and Initial Conditions	Lantao Sun
3:00	BREAK	
3:30	The Logic and Ethics of Actionable Science: Recommendations for Responsible Use of Earth System Models for Applied Purposes	Monica Morrison
3:50	Climate Model Simulations of Wind and Solar Droughts: Impact of Model Resolution and Bias	R. Saravanan
4:10	Reduced Southern Ocean Warming Enhances Global Skill and Signal-to-Noise in an Eddy-Resolving Decadal Prediction System	Steve Yeager
4:30	An interpretable neural network approach to identifying sources of predictability on decadal timescales in the CESM2-LE	Emily Gordon
4:50	Predictability of the Pacific Decadal Oscillation: Remote and Local Drivers	Evan Meeker
5:10	Open Discussion	

ESPWG Posters:

Marybeth	Arcodia	Colorado State University	Assessing Decadal Variability of Subseasonal Forecasts of Opportunity Neural Networks trained with CESM2	ESPWG1
Kevin	Raeder	NCAR	The Latest from the Data Assimilation Research Testbed: Powerful New Assimilation Algorithms, Advances in Efficiency and Capabilities, New Model and Observation Interfaces, and Novel Results.	ESPWG2

ESPWG CSL Allocation (Nov 2022 - Oct 2024)

	Year 1	Year 2
Development	5M (0.85M)	17.2M
Production	17.4M (3.6M)	7.4M
Total	22.4M	24.6M

D1: S2D sensitivity studies (1.5M, 1.5M)
 – ocean ic spread, land initialization

D2: S2D CESM3-beta (0M, 3.2M)
 – test S2D hindcasts using CESM3

D3: S2S CESM3-beta (0M, 4.6M)
 – test S2S hindcasts using CESM3

D4: DA-CESM2 (0.6M, 0.6M)
 – test benefits of initialization using DA

D5: S2D-bias (2.9M, 7.3M)
 – explore online bias correction methods (including ML)

P1: S2S-2023 (0.6M, 0M)
 – extend S2S realtime forecasts through OCT 2023

P2: S2S-2024 (0M, 0.6M)
 – extend S2S realtime forecasts through OCT 2024

P3: S2S-LABO (3.7M, 3.2M)
 – rerun S2S set with “land all-but-one” initialization method

P4: S2D-2023 (1.2M, 0M)
 – update SMYLE & CESM2-DP to include initializations through NOV 2022

P5: S2D-2024 (0M, 0.7M)
 – update SMYLE & CESM2-DP to include initializations through NOV 2023

P6: CESM2-DP (8M, 0M)
 – expand CESM2-DP ensemble size to 15 from 10

P7: TBI SMYLE Pacemakers (3.5M, 0M)
 – {ATL, PAC, IND}-FEB with 10-mem, 12-mon, 1982-2021

P8: TBI Decadal Pacemaker (0M, 2.9M)
 – CESM2-DP as control
 – 1982-2020 (every other), 10-mem, 5-year

P9: VolRes-RE (0.44M, 0M)
 – contribute to WCRP-SPARC/DCPP Volcanic Readiness Exercise