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The Community Earth System Model (CESM) project of NSF NCAR produces and disseminates initialized ensemble prediction system frameworks and hindcast datasets that
facilitate subseasonal to decadal (S2D) Earth system predictability research by the broad
geoscience community. The evaluation and refinement of CESM prediction systems, including the exploration of the origins, impacts, and potential to reduce hindcast error, is
thus a highly distributed effort that collectively feeds back to inform the priorities of CESM
and its Earth System Prediction working group. Prediction system error is a complex convolution of initialization error, observational uncertainty, model misrepresentation of
processes that operate across timescales, and inherent predictability limits. Examples of how
these sources of error have been explored in CESM S2D systems will be discussed, with an
emphasis on insights that stem from frontier high-resolution climate modelling efforts. The
proposed path forward for improved climate forecasts will emphasize coordinated efforts that
advance fundamental understanding of how predictability processes are represented in
climate models.
Presentation file
Yeager-Stephen.pdf
Meeting homepage
S2S Community Workshop
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