

Supplemental Material

Journal of Hydrometeorology Global Evaluation of Seasonal Precipitation and Temperature Forecasts from NMME https://doi.org/10.1175/JHM-D-19-0095.1

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Supplementary Materials for:

Global evaluation of seasonal precipitation and temperature forecasts from NMME

Tirthankar Roy^{1,2}, Xiaogang He^{2,3}, Peirong Lin², Hylke E. Beck², Christopher Castro⁴, and Eric F. Wood²

Civil and Environmental Engineering, University of Nebraska-Lincoln Civil and Environmental Engineering, Princeton University Woods Institute for the Environment, Stanford University Hydrology and Atmospheric Sciences, University of Arizona

Corresponding Author: Tirthankar Roy (roy@unl.edu)

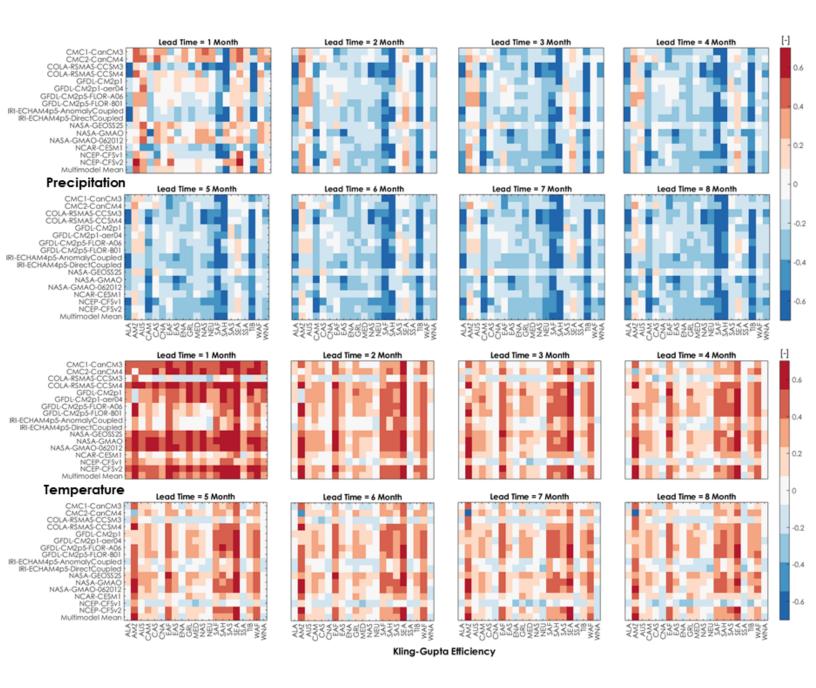
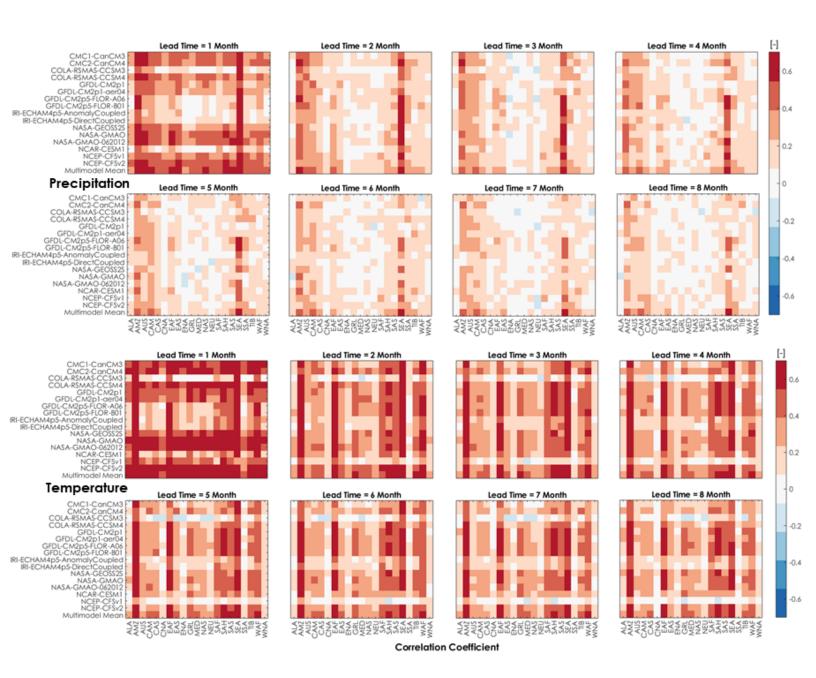
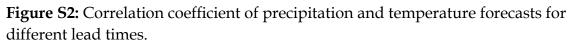


Figure S1: KGE statistics of precipitation and temperature forecasts for different models (y-axis) across different regions (x-axis).





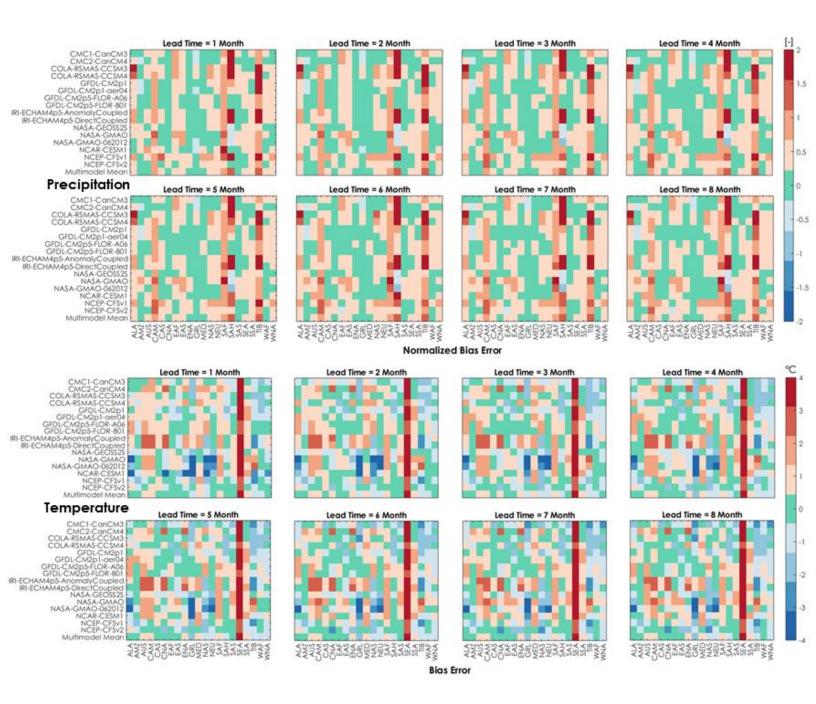
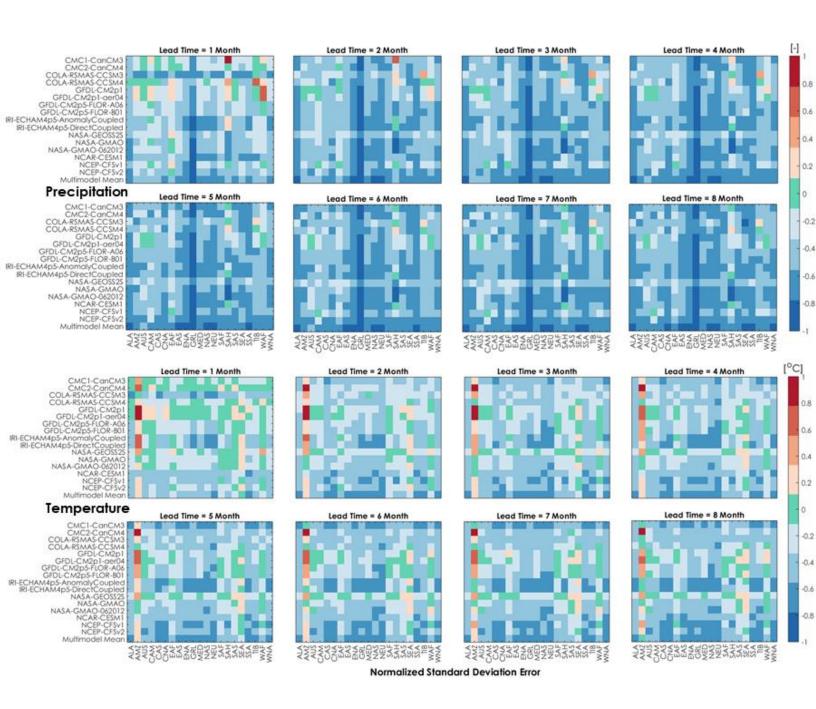
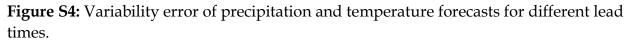
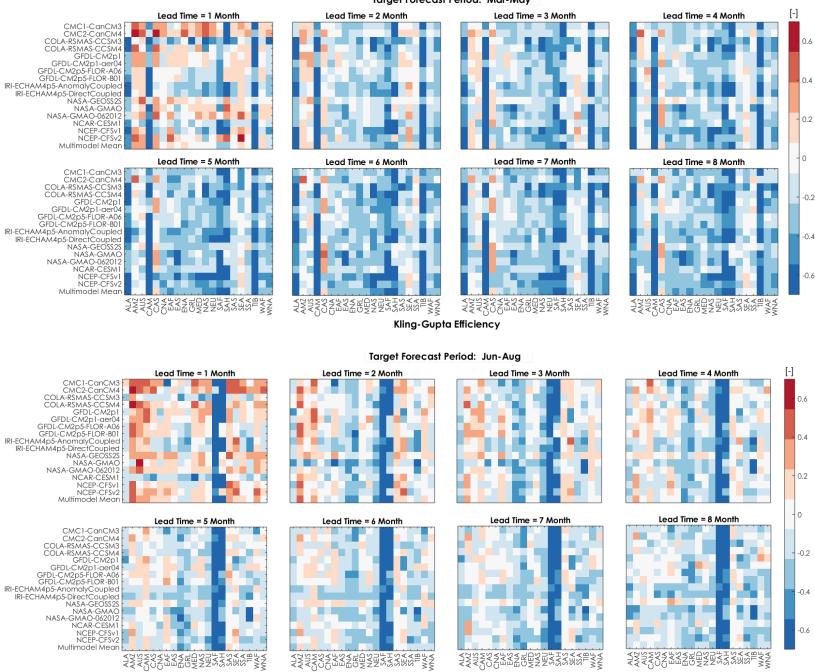


Figure S3: Bias error of precipitation and temperature forecasts for different lead times.







Target Forecast Period: Mar-May

7

Kling-Gupta Efficiency

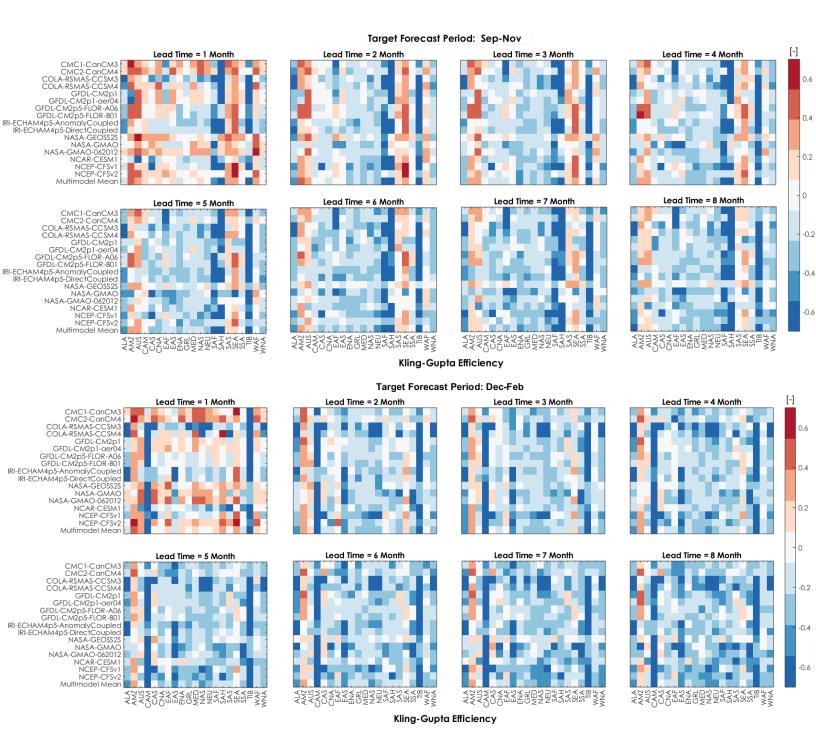
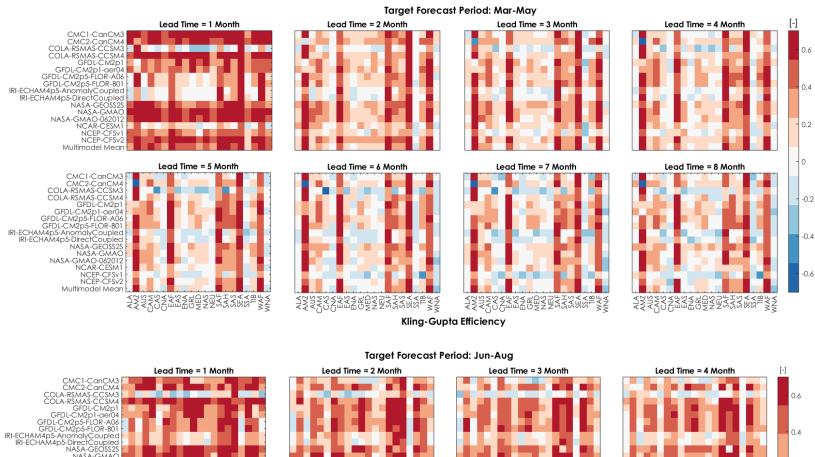


Figure S5: Seasonal breakdown of the KGE score for precipitation.



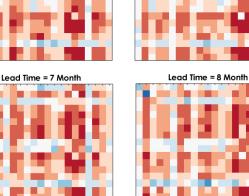
NASA-GMAC NASA-GMAO-062012 NCAR-CESM1 NCEP-CFSv1

NCEP-CFSv2 Multimodel Mean

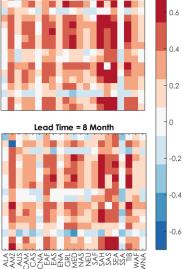
CMC1-CanCM3 CMC2-CanCM4 COLA-RSMAS-CCSM3 GFDL-CM2p1 GFDL-CM2p1-aer04 GFDL-CM2p5-FLOR-A06 GFDL-CM2p5-FLOR-801 M4p5-AnomalyCoupled

GFDL-CM2D>-FLUK-201 IRI-ECHAM4D5-AnomalyCoupled IRI-ECHAM4D5-DirectCoupled NASA-GE05252 NASA-GM20-062012 NASA-GM20-062012 NCAR-CESM1 NCEP-CFSv1 NCEP-CFSv2 Multimodel Mean Lead Time = 5 Month

WAR SSEAR COASS SAF



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Kling-Gupta Efficiency

Lead Time = 6 Month

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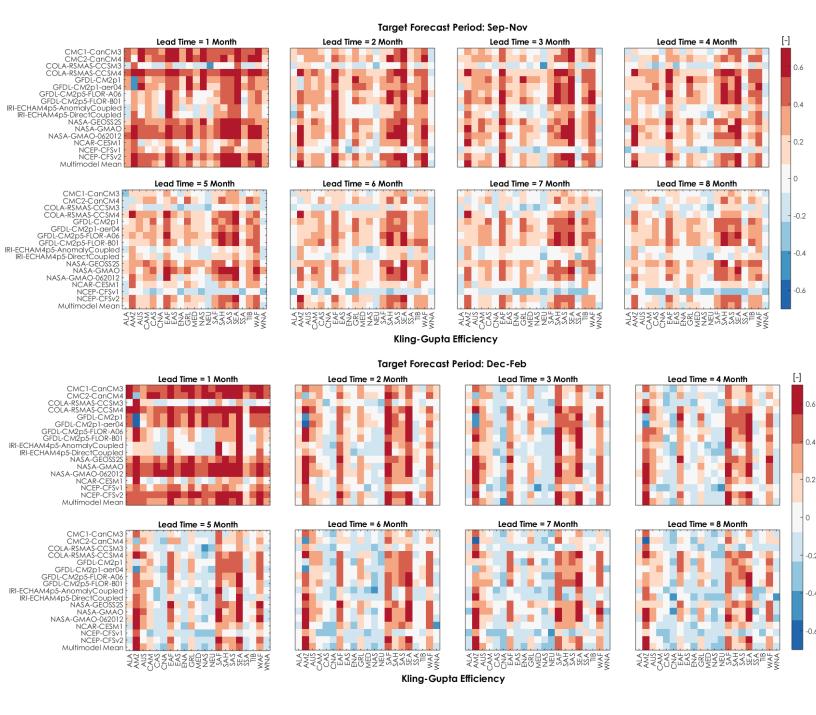


Figure S6: Seasonal breakdown of the KGE score for temperature.

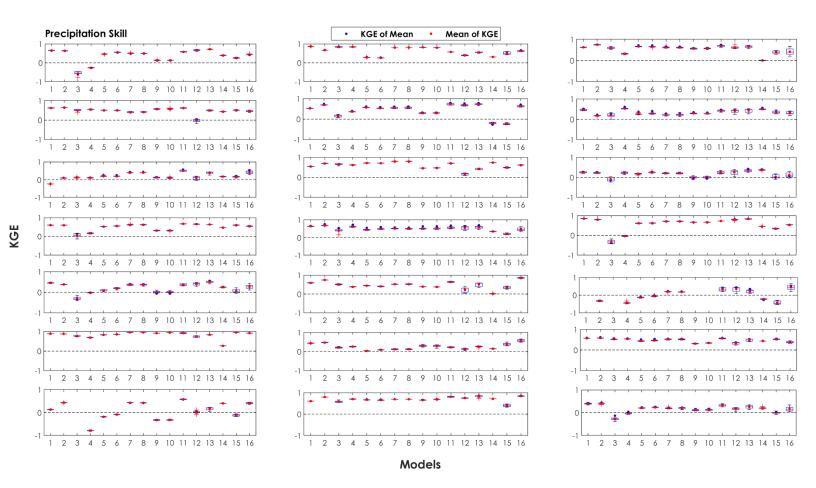


Figure S7: Comparison of the KGE statistic calculated in different ways. This figure shows the results for precipitation. Similar results were found in case of temperature as well (not included here). The models are numbered in the following way: CMC1-CanCM3 [1], CMC2-CanCM4 [2],COLA-RSMAS-CCSM3 [3], COLA-RSMAS-CCSM4 [4], GFDL-CM2p1 [5], GFDL-CM2p1-aer04 [6], GFDL-CM2p5-FLOR-A06 [7], GFDL-CM2p5-FLOR-B01 [8], IRI-ECHAM4p5-AnomalyCoupled [9], IRI-ECHAM4p5-DirectCoupled [10], NASA-GEOSS2S [11], NASA-GMAO [12], NASA-GMAO-062012 [13], NCAR-CESM1 [14], NCEP-CFSv1 [15], NCEP-CFSv2 [16].

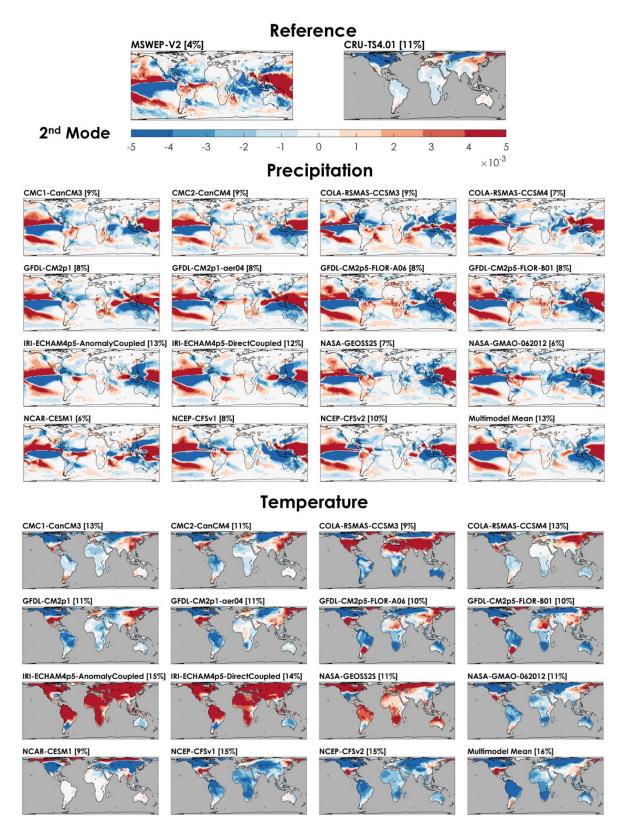
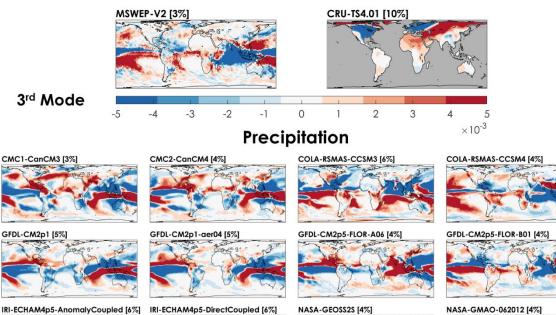
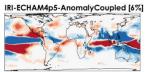


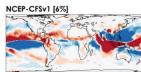
Figure S8: Comparison of the second EOF mode of variability from different models and the reference for both precipitation and temperature.

Reference

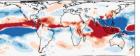


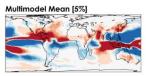


NCAR-CESM1 [4%]



NCEP-CF5v2 [6%]





Temperature

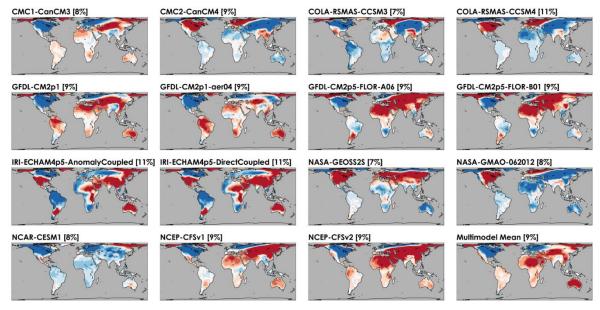


Figure S9: Comparison of the third EOF mode of variability from different models and the reference for both precipitation and temperature.