

### **COLA Refereed Publications 2013**

1. Arsenault, K. R., P. R. Houser, G. De Lannoy, and P. A. **Dirmeyer**, 2013: Impacts of snow cover fraction data assimilation method complexity on modeled energy and moisture budgets. *J. Geophys. Res.*, 118, 7489–7504, doi: 10.1002/jgrd.50542.
2. Cai, M., and **B. Huang**, 2013a: A new look at the physics of Rossby Waves: A mechanical-Coriolis oscillation. *J. Atmos. Sci.*, **70**, 303-316.
3. Cai, M., and **B. Huang**, 2013b: A dissection of energetics of the geostrophic flow: reconciliation of Rossby wave energy flux and group velocity. *J. Atmos. Sci.*, **70**, 2179-2196.
4. **Cash**, B. A., X. Rodó, J. Ballester, M. Bouma, R. Dhiman and M. Pascual, 2013: Malaria epidemics highlight influence of the Tropical South Atlantic on the Indian monsoons. *Nature Climate Change* doi:doi:10.1038/nclimate1834.
5. Chen, G., J. **Lu**, and L. Sun, 2013: Delineating the eddy-zonal flow interaction in the atmospheric circulation response to climate forcing: Uniform SST warming in an idealized aqua-planet model. *J. Atmos. Sci.*, doi: dx.doi.org/10.1175/JAS-D-12-0248.1 (early online release).
6. **Chen**, H. and E. K. **Schneider**, 2013: Comparison of the SST forced responses between coupled and uncoupled climate simulations. *J. Climate*, published online, DOI: 10.1175/JCLI-D-13-00092.1.
7. **Chen**, H., E. K. **Schneider**, B. P. Kirtman, and I. **Colfescu**, 2013: Evaluation of weather noise and its role in climate model simulations. *J. Climate*, 26, 3766-3784, DOI: 10.1175/JCLI-D-12-00292.1.
8. **Colfescu**, I., E. K. **Schneider**, and H. **Chen**, 2013: Consistency of 20th century sea level pressure trends as simulated by a coupled and uncoupled GCM. *Geophys. Res. Lett.*, 40, 3276-3280, DOI: 10.1002/grl.50545.
9. **DelSole**, T. and X. Feng, 2013. The “Shukla-Gutzler” method for estimating potential seasonal predictability. *Mon. Wea. Rev.*, **141**, 822–831.
10. **DelSole**, T., L. Jia, and M. K. Tippett, 2013a: Decadal prediction of observed and simulated sea surface temperatures. *Geophys. Res. Lett.*, 40, 2773–2778.
11. **DelSole**, T., L. Jia, and M. K. Tippett, 2013b: Scale-selective ridge regression for multimodel forecasting. *J. Climate*, 26, 7957–7965.
12. **DelSole**, T., A. Kumar, and B. Jha, 2013c: Potential seasonal predictability: Comparison between empirical and dynamical model estimates. *Geophys. Res. Lett.*, 40, 3200–3206.
13. **DelSole**, T., X. Yan, P. A. **Dirmeyer**, M. **Fennessy**, and E. **Altshuler**, 2013d: Changes in seasonal predictability due to global warming. *J. Climate*, **27**, 300–311.
14. **Dirmeyer**, P. A., 2013: Characteristics of the water cycle and land-atmosphere interactions from a comprehensive reforecast and reanalysis data set: CFSv2. *Climate Dyn.*, 41, 1083-1097, doi: 10.1007/s00382-013-1866-x.
15. **Dirmeyer**, P. A., Y. **Jin**, B. **Singh**, and X. **Yan**, 2013: Trends in land-atmosphere interactions from CMIP5 simulations. *J. Hydrometeor.*, 14, 829–849, doi: 10.1175/JHM-D-12-0107.1.
16. **Dirmeyer**, P. A., Y. **Jin**, B. **Singh**, and X. **Yan**, 2013: Evolving land-atmosphere interactions over North America from CMIP5 simulations. *J. Climate*, 26, 7313-7327, doi: 10.1175/JCLI-D-12-00454.1.
17. **Dirmeyer**, P. A., S. **Kumar**, M. J. **Fennessy**, E. L. **Altshuler**, T. **DelSole**, Z. **Guo**, B. **Cash** and D. **Straus**, 2013: Evolution of land-driven predictability in a changing climate. *J. Climate*, 26, 8495-8512, doi:10.1175/JCLI-D-13-00029.1.
18. Feng X., T. **DelSole**, and P. Houser, 2013. Comparison of statistical estimates of potential seasonal predictability. *J. Geophys. Res.*, **118**, 6002–6016.

19. **Guo, Z.**, and **P. A. Dirmeyer**, 2013: Interannual variability of land-atmosphere coupling strength. *J. Hydrometeor.*, **14**, 1636–1646, doi: 10.1175/JHM-D-12-0171.1.
20. **Hazra, A.**, and **V. Krishnamurthy**, 2014: Space-time structure of diabatic heating in monsoon intraseasonal oscillation, *J. Climate* (in review).
21. **Hu, Z.-Z.**, **A. Kumar**, **B. Huang** and **J. Zhu**, 2013: Leading Modes of the Upper Ocean Temperature Interannual Variability along the Equatorial Atlantic Ocean in NCEP GODAS. *J. Climate*, **26**, 4649-4663, doi:10.1175/JCLI-D-12-00629.1.
22. **Hu, Z.-Z.**, **A. Kumar**, **B. Huang**, **W. Wang**, **J. Zhu**, and **C. Wen**, 2013: Prediction skill of monthly SST in the North Atlantic Ocean in NCEP Climate Forecast System Version 2. *Climate Dyn.* **40**, 2745-2756. DOI: 10.1007/s00382-012-1431-z.
23. **Jang, Y.**, **D. M. Straus**, 2013: Tropical Stationary Wave Response to ENSO: Diabatic Heating Influence on the Indian Summer Monsoon. *J. Atmos. Sci.*, **70**, 193–222.
24. **Kinter III, J. L.**, **B. Cash**, **D. Achuthavarier**, **J. Adams**, **E. Altshuler**, **P. Dirmeyer**, **B. Doty**, **B. Huang**, **L. Marx**, **J. Manganello**, **C. Stan**, **T. Wakefield**, **E. Jin**, **T. Palmer**, **M. Hamrud**, **T. Jung**, **M. Miller**, **P. Towers**, **N. Wedi**, **M. Satoh**, **H. Tomita**, **C. Kodama**, **T. Nasuno**, **K. Oouchi**, **Y. Yamada**, **H. Taniguchi**, **P. Andrews**, **T. Baer**, **M. Ezell**, **C. Halloy**, **D. John**, **B. Loftis**, **R. Mohr**, and **K. Wong**, 2013: Revolutionizing Climate Modeling – Project Athena: A Multi-Institutional, International Collaboration. *Bull. Amer. Meteor. Soc.*, **94**, 231-245.
25. **Kirtman, B.**, **D. Min**, **J. M. Infanti**, **J. L. Kinter III**, **D. A. Paolino**, **Q. Zhang**, **H. van den Dool**, **S. Saha**, **M. Pena Mendez**, **E. Becker**, **P. Peng**, **P. Tripp**, **J. Huang**, **D. G. DeWitt**, **M. K. Tippett**, **A. G. Barnston**, **S. Li**, **S. D. Schubert**, **M. Rienecker**, **M. Suarez**, **Z. E. Li**, **J. Marshak**, **Y.-K. Lim**, **J. Tribbia**, **K. Pegion**, **W. J. Merryfield**, **B. Denis**, **E. F. Wood**, 2013: The US National Multi-Model Ensemble for Intra-seasonal to Interannual Prediction. *Bull. Amer. Meteor. Soc.* <http://dx.doi.org/10.1175/BAMS-D-12-00050.1>.
26. **Krishnamurthy, L.**, and **V. Krishnamurthy**, 2013a: Decadal scale oscillations and trend in the Indian monsoon rainfall. *Clim. Dyn.* doi: 10.1007/s00382-013-1870-1.
27. **Krishnamurthy, L.**, and **V. Krishnamurthy**, 2013b: Influence of PDO on South Asian summer monsoon and ENSO-monsoon relation. *Clim. Dyn.* doi:10.1007/s00382-013-1856-z.
28. **Krishnamurthy, V.**, and **C. Stan**, 2013: South American monsoon system in a coupled model with super-parameterized convection. *Clim. Dyn.* (in review).
29. **Krishnamurthy, V.**, **C. Stan**, **D. A. Randall**, **R. P. Shukla**, and **J. L. Kinter III**, 2013: Simulation of the South Asian monsoon in a coupled model with an embedded cloud resolving model. *J. Climate* <http://dx.doi.org/10.1175/JCLI-D-13-00257.1>.
30. **Kumar, S.**, **P. A. Dirmeyer**, **V. Merwade**, **T. DelSole**, **J. M. Adams**, and **D. Niyogi**, 2013a: Land use/cover change impacts in CMIP5 climate simulations– A new methodology and 21st century challenges. *J. Geophys. Res. Atmos.*, **118**, 6337–6353.
31. **Kumar, S.**, **J. L. Kinter III**, **P. A. Dirmeyer**, **Z. Pan**, **J. Adams**, 2013b: Multidecadal Climate Variability and the “Warming Hole” in North America: Results from CMIP5 Twentieth- and Twenty-First-Century Climate Simulations. *J. Climate*, **26**, 3511–3527.
32. **Kumar S.**, **V. Merwade** **D. Niyogi**, **J. L. Kinter III**, 2013c: Evaluation of Temperature and Precipitation Trends and long-term Persistence in CMIP5 20<sup>th</sup> Century Climate Simulations. *J. Climate*, **26**, 4168–4185. doi:<http://dx.doi.org/10.1175/JCLI-D-12-00259.1>.
33. **Mahmood, R.**, **R. A. Pielke Sr.**, **K. G. Hubbard**, **D. Niyogi**, **P. A. Dirmeyer**, **C. McAlpine**, **A. M. Carleton**, **R. Hale**, **S. Gameda**, **A. Beltrán-Przekurat**, **B. Baker**, **R. McNider**, **D. R. Legates**, **M. Shepherd**, **J. Du**, **P. Blanken**, **O. Frauenfeld**, **U. S. Nair**, and **S. Fall** 2013: Land cover changes and their biogeophysical effects on climate. *Int. J. Climatol.*, doi: 10.1002/joc.3736, (early release).

34. Maloney, E. D., S. J. Camargo, E. Chang, B. Colle, R. Fu, K. L. Geils, Q. Hu, X. Jiang, N. Johnson, K. Karnauskas, J. L. **Kinter** III, B. Kirtman, S. **Kumar**, B. Langenbrunner, K. Lombardo, L. N. Long, A. Mariotti, J. E. Meyerson, K. C. Mo, J. D. Neelin, Z. Pan, R. Seager, Y. Serra, A. Seth, J. Sheffield, J. Stroeve, J. Thibeault, C. Wang, B. Wyman, S.-P. Xie, and M. Zhao, 2013: North American Climate in CMIP5 Experiments: Part III: Assessment of 21<sup>st</sup> Century Projections. *J. Climate*, **27**, 2230–2270.
35. Miyamoto, Y., M. Satoh, H. Tomita and J. L. **Kinter** III, 2013: Gradient Wind Balance in Tropical Cyclones in global nonhydrostatic model simulations. *Mon. Wea. Rev.*, **142**, 1908–1926.
36. Mueller, B., M. Hirschi, C. Jimenez, P. Ciais, P. A. **Dirmeyer**, A. J. Dolman, J. B. Fisher, Z. **Guo**, M. Jung, F. Ludwig, F. Maignan, D. Miralles, M. F. McCabe, M. Reichstein, J. Sheffield, K. Wang, E. F. Wood, Y. Zhang, and S.I. Seneviratne, 2013: Benchmarking products for land evapotranspiration: LandFlux-EVAL multi-datasets synthesis. *Hydrol. Earth Sys. Sci.*, doi:10.5194/hessd-10-769-2013.
37. **Palipane**, E., J. **Lu**, G. Chen, J. L. **Kinter** III, 2013: Improved Annular Mode Variability in a Global Atmospheric Model with 16-km Horizontal Resolution. *Geophys. Res. Lett.* **40**, 4893–4899, doi:10.1002/grl.50649.
38. Pan, Z., X. Liu, S. **Kumar**, Z. Gao and J. L. **Kinter** III, 2013: Inter-model variability and mechanism attribution of central and southeastern U.S. anomalous cooling in the 20<sup>th</sup> century as simulated by CMIP5 models. *J. Climate*, **26**, 6215–6237. doi: 10.1175/JCLI-D-12-00559.1
39. Rodo, X., M. Pascual, F. J. Doblas-Reyes, A. Gershunov, D. A. Stone, F. Giorgi, P. J. Hudson, J. L. **Kinter** III, M.-A. Rodriguez-Arias, N. C. Stenseth, A. P. Dobson, 2013: Climate Change and Infectious Diseases: Can We Meet the Needs for Better Prediction? *Climatic Change*, **118**, 625–640. doi: 10.1007/10584-013-0744-1.
40. Sheffield, J., S. J. Camargo, R. Fu, Q. Hu, X. Jiang, N. Johnson, K. Karnauskas, J. L. **Kinter** III, S. **Kumar**, B. Langenbrunner, E. Maloney, A. Mariotti, J. E. Meyerson, D. Neelin, Z. Pan, A. Ruiz-Barradas, R. Seager, Y. L. Serra, D.-Z. Sun, C. Wang, S.-P. Xie, J.-Y. Yu, T. Zhang, and M. Zhao, 2013: North American Climate in CMIP5 Experiments. Part II: Evaluation of 20<sup>th</sup> Century Intra-Seasonal to Decadal Variability. *J. Climate*, **26**, 9247–9290.
41. Sheffield, J., A. Barrett, B. Colle, R. Fu, K. L. Geils, Q. Hu, J. L. **Kinter** III, S. **Kumar**, B. Langenbrunner, K. Lombardo, L. N. Long, E. Maloney, A. Mariotti, J. E. Meyerson, K. C. Mo, D. Neelin, Z. Pan, A. Ruiz-Barradas, Y. L. Serra, A. Seth, J. M. Thibeault, J. C. Stroeve, 2013: North American Climate in CMIP5 Experiments. Part I: Evaluation of 20<sup>th</sup> Century Continental and Regional Climatology. *J. Climate*, **26**, 9209–9245.
42. **Shukla**, R. P., S. Rai and A. C. Pandey, 2013: Southern and tropical Indian Ocean SST: A possible predictor of winter monsoon rainfall over South India. *Atmos. Climate Sci.*, **3**, 440–449.
43. Sun, L., G. Chen and J. **Lu**, 2013: Sensitivities and mechanism of the zonal mean atmospheric circulation response to tropical warming. *J. Atmos. Sci.*, doi: dx.doi.org/10.1175/JAS-D-12-2098.1 (early online release).
44. Tippett, M. K. and T. **DelSole**, 2013: Constructed analogues and linear regression. *Mon. Wea. Rev.*, **141**, 2519–2525.
45. Wallace, J. M., J. **Shukla**, B. Hoskins, G. North, L. Bengtsson, J. L. **Kinter** III, E. Sarachik, B. N. Goswami, and S. Rayner, 2013: Scientific Context for Human-Induced Climate Change: Summary Report of a Workshop International Centre for Theoretical Physics, Trieste, Italy August 6–7 2012. *Eos Trans. Amer. Geophys. Soc.* (submitted).
46. **Wei**, J., P. A. **Dirmeyer**, D. Wisser, M. J. Bosilovich, and D. M. Mocko, 2013: Where does the irrigation water go? An estimate of the contribution of irrigation to precipitation using MERRA. *J. Hydrometeor.*, **14**, 275–289, doi:10.1175/JHM-D-12-079.1.

47. **Xu, L.**, and **P. Dirmeyer**, 2013: Snow-atmosphere coupling strength. Part I: Effect of model biases. *J. Hydrometeor.*, **14**, 389-403, doi:10.1175/JHM-D-11-0102.1.
48. **Xu, L.**, and **P. Dirmeyer**, 2013 Snow-atmosphere coupling strength. Part II: Albedo effect versus hydrological effect. *J. Hydrometeor.*, **14**, 404-418, doi:10.1175/JHM-D-11-0103.1.
49. Yang, X., A. Rosati, S. Zhang, T. L. Delworth, R. G. Gudgel, R. Zhang, G. Vecchi, W. Anderson, Y.-S. Chang, T. **DelSole**, K. Dixon, R. Msadec, W. F. Stern, A. Wittenberg, and F. Zeng, 2013. A predictable AMO-like pattern in GFDL's fully-coupled ensemble initialization and decadal forecasting system. *J. Climate*, **26**, 650–661.
50. Zhang, S., M. Winton, A. Rosati, T. Delworth, and **B. Huang**, 2013: Impact of enthalpy-based ensemble filtering sea ice data assimilation on decadal predictions: simulation with a conceptual pycnocline prediction model. *J. Climate*, **26**, 2368-2378.
51. **Zhu, J.**, **B. Huang**, M. Balmaseda, J. L. **Kinter** III, P. Peng, Z.-Z. Hu, and L. **Marx**, 2013: Improved reliability of ENSO hindcasts with multi-ocean analyses ensemble initialization. *Climate Dyn.*, **41**, 2785-2795.
52. **Zhu, J.**, **B. Huang**, Z.-Z. Hu, J. L. **Kinter** III, L. **Marx**, 2013: Predicting US Summer Precipitation using NCEP Climate Forecast System Version 2 initialized by Multiple Ocean Analyses. *Climate Dyn.*, **41**, 19141-1954.
53. **Zhu, J.**, and J. **Shukla**, 2013: The role of air-sea coupling in seasonal prediction of Asian-Pacific summer monsoon rainfall. *J. Climate*, **26**, 5689-5697, doi: 10.1175/JCLI-D-13-00190.1.
54. **Zhu, J.**, G.-Q. Zhou, R.-H. Zhang, and Z. Sun, 2013: Improving ENSO Prediction in a Hybrid Coupled Model with an Embedded Entrainment Temperature Parameterization. *Int. J. of Climatol.* **33**, 343-355, DOI: 10.1002/joc.3426.
55. Zuo, Z., S. Yang, Z.-Z. Hu, R. Zhang, W. Wang, **B. Huang** and F. Wang, 2013: Predictable patterns and predictive skills of monsoon precipitation in Northern Hemisphere summer in NCEP CFSv2 reforecasts. *Climate Dyn.*, **40**, 3071–3088, DOI 10.1007/s00382-013-1772-2.

