



GFDL's high-resolution seasonal climate prediction system: modeling, initialization, prediction and predictability

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This talk will review the recent advances of GFDL's high-resolution seasonal climate prediction system in terms of modeling, initialization, seasonal prediction, and predictability sources. Improving the model fidelity has improved GFDL's seasonal climate prediction. The high-resolution model substantially improves the regional climate prediction skill, and provides skillful seasonal prediction of extreme climate events such as statistics of extratropical storms, tropical cyclones as well as major hurricanes. Stratosphere plays important roles in predicting the extratropical surface climate, so accurately modeling and observing stratosphere could improve seasonal climate prediction. In the last part of the talk, the roles of atmospheric initial state in improving the short term seasonal climate prediction will be discussed, and we will focus on predicting the ENSO-teleconnected winter precipitation pattern over the western United States during the major 2015/16 El Niño event.