CWBGEPS downscaling analysis in East Asia

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Abstract

The Taiwan Central Weather Bureau global forecast system (CWBGFS) has been in operation 45 days 20 ensemble member prediction on resolution T319L60 model since 1 July 2017. The ensemble perturbations are given by singular vector total energy norm. Moreover, the Stochastically Perturbed Parameterization Tendency (SPPT) process is added in this ensemble prediction system from 19 July 2018.

The preliminary downscaling analysis is achieved for long term week 3-4 downtown specific area prediction. The long term ensemble prediction system seems to catch the significant circulation pattern changing like cold surge or low frequency pattern. The novel downscaling methods are studying such as machine learning or neural network for expanding the usage of the ensemble prediction system.