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Title: Seasonal prediction over East Asia for Winter 2013-2014

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Abstract:

Seasonal forecasting is a progressing research and linked to a great variety of practical applications from different socio-economic sectors and also related to weather risk and security issues. The skill of seasonal forecasts in the extra-tropics is limited by substantial internal atmospheric variability that is largely unpredictable beyond the deterministic predictability limit of about two weeks (Lorenz, 1982). To resolve this problem, ensemble forecast method is proposed and ensemble method using slightly different initial data has been used to minimize the noise which includes results of model for seasonal prediction with the use of numerical model (Leith, 1974). In this study, we have adopted icosahedral-hexagonal grid model to simulate regional climate condition due to insufficient temporal/horizontal with reasonable computing resources (Majewski et al., 2002).

To predict winter season (DJF2013-2014) a series of prediction has performed with current SST anomalies. A series of prediction experiments has been integrated for the ensemble analysis with the use of time lag method on the PKNU-Hamel cluster system consisted with 128 CPUs. Based on the model simulation for this winter prediction, we can predict the change of temperature and precipitation comparing normal year over the detailed region of not only Korean peninsula but also East Asia and Mongolia.

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