



A qualitative evaluation methodology of forecast skill of KIM (Korean Integrated Model) by a weather forecaster

Sang-Hoon Yeon, Eun-Hee Lee, and Young Cheol Kwon

Korea Institute of Atmospheric Prediction Systems, Seoul, Republic of Korea (sh.yeon@kiaps.org)

Korea Institute of Atmospheric Prediction Systems (KIAPS) has been developing a next generation global model, KIM (Korean Integrated Model) since 2011. Next year, development of KIM will be finished and officially used for an operational model of KMA (Korea Meteorological Administration). In the final stage of development, various evaluation methods have been performed and the results of the evaluation are given to the development staffs for feedback. Because the final end users of KIM will be weather forecasters, it also needs to perform subjective evaluation from forecaster's point of view. This will give forecasters comprehensible information about some specific bias or trend of model predictions and also be able to apply to the development process. The qualitative evaluation method – a methodology to evaluate forecast skill of a model by a weather forecaster on condition of assumed situation just like real-time operation - has two main processes to compare and contrast model prediction and observation. The first step is to evaluate synoptic pattern between model output and analysis in the region of East Asia and Korea. The second step is to evaluate precipitation surrounding the Korean peninsula against observations. On a daily basis, model predictions at the 00UTC have been evaluated by KIAPS weather forecaster since June, 2016. Through the qualitative evaluation by the weather forecaster, we could find that KIM has an over-estimated trend for low pressure system prediction on the southern sea of Korean peninsula. The new attempt to evaluate forecast skill of model through the viewpoint of weather forecaster has been successfully performed and found several kinds of systematic errors through the whole process of qualitative evaluation. The detailed results of the qualitative evaluation will be presented on the forecast verification session of EMS 2018.