

## **A possible factor for better representation of Asian summer monsoon**

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Reproducing realistic variability of the Asian monsoon is crucial in seasonal forecasting for the East Asian countries. Poor representation of the Asian monsoon is still a remaining issue to be solved in some operational seasonal forecast systems. JMA's operational model performs well over the western North Pacific, though what contributes most has not been well understood.

We conducted a set of experiments with the JMA's operational AGCM to examine the impact of a sub-cloud formulation for a cumulus convection scheme. The result shows that specification of the cloud base property is a key for this model in improving the Asian monsoon variability. As suggested by the Climate Model Intercomparison phase 5 (CMIP5) dataset, interannual variability in seasonal rainfall over the western North Pacific is poorly represented if its climatological amount is underestimated. The relevant processes, including convection-circulation feedback through enhanced low-level circulation, will be discussed.