

Forecast skill of intraseasonal oscillation events over the Maritime Continent in a global cloud-system-resolving model

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Forecast skill of the intraseasonal oscillation (ISO) events in Nonhydrostatic Icosahedral Atmospheric Model (NICAM) simulations during the Years of the Maritime Continent (YMC) JAMSTEC field campaign period is evaluated, in order to understand factors that control the behavior of the simulated ISO. Global 14-km (7-km) mesh 30-day (14-day) long simulation datasets during the 2015 (2017) boreal winter were analyzed.

In the 2015 ISO event under a peak El Nino condition, the ISO simulation crossing over the MC tended to be disrupted by dry environment over the MC. In the 2017 case under a La Nina condition, the model captured the amplification of the ISO event but with a tendency of overdevelopment, which was opposite to operational forecasts. The results suggests that adequate strength of coupling between convection and circulation was important to the successful simulation of the ISO.