

From K to Fugaku: activities toward extended-range prediction using NICAM/NICOCO

*宮川 知己¹

*Tomoki Miyakawa¹

1. 東京大学 大気海洋研究所

1. Atmosphere and Ocean Research Institute University of Tokyo

After the global cloud-resolving model NICAM successfully reproduced the Madden-Julian oscillation (MJO) on the Earth Simulator (Miura et al. 2007), it became one of the major issues for high performance computing atmospheric science to make the most of the MJO signal for the realization of extended-range prediction (> 2 weeks). The computational power of the K computer enabled ensemble experiments of MJOs using NICAM, and it has been shown that the prediction of MJO is possible for about a month (Miyakawa et al. 2014). In the post-K program, a full 3-dimensional ocean component has been coupled to NICAM, which is viewed as a key piece upon utilizing the MJO signal to improve disaster prediction, such as Typhoon development.

In this talk, I will summarize the related efforts on the K computer and the remaining issues to be addressed on Fugaku, scheduled to start full-scale operation in 2021.

キーワード：全球雲解像モデル、マッデン・ジュリアン振動、海洋結合

Keywords: global cloud resolving model, Madden Julian Oscillation, ocean coupling