

Decadal change of Asian Monsoon and the Global Monsoons Modeling Inter-comparison Project (GMMIP)

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Abstract

The Asian monsoon, as part of the global monsoon system, exhibits decadal variations. Prediction of the monsoon rainfall change in the coming decades is of deep societal concern. Climate models are useful tools in climate variability and climate change studies. However, the performance of the current state-of-the-art climate models is very poor and needs to be greatly improved over the monsoon domains. Recently, the Global Monsoons Modelling Inter-comparison Project (hereafter **GMMIP**) has been endorsed by CMIP6. It aims to improve our understanding of physical processes in global monsoon systems and to better simulate the changes of global monsoons by performing multi-model inter-comparisons. The contributions of internal variability (IPO-Interdecadal Pacific Oscillation, AMO-Atlantic Multidecadal Oscillation) and external anthropogenic forcing to the historical evolution of global monsoons in the 20th and 21st century will be addressed. After presenting a short review on the decadal changes of the Asian monsoon, this talk will provide an overview of GMMIP project.