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**Evaluation of Retrieved Cloud Microphysical Properties**

**between Himawari-8/AHI and Aqua/MODIS Observations**

**Abstract**

In October 2014, Japan launched Himawari-8 which is the most advanced geostationary orbit satellite in the world. Advanced Himawari Imager (AHI) that provides high quality 16-channels reflectance/radiance data at 10 minutes temporal resolution, which is the new generation sensor on-board Himawari-8 and Himawari-9. Therefore, the cloud microphysical parameters could be retrieved from AHI’s high temporal and spatial resolution.

One of the applications is using the data to investigate the rapid evolution of deep convection. South China Sea (SCS) is at the west of Pacific warm pool where has not only strong convections all year round, but also the interaction of multiple scales from weather to climate. This study will focus on SCS and deeply investigates the convections system of summer monsoon onset in May 2016. We start with the evaluation of retrieved cloud microphysical parameters against Moderate-resolution Imaging Spectroradiometer (MODIS) cloud products. This could ensure the quality and the limitation of the cloud information from AHI’s retrieval in the region. Some preliminary analysis of deep convection, such as cloud top features and their diurnal variability will be shown as well.

**Keywords**

Cloud optical thickness 雲光學厚度

Cloud droplet effective radius 雲滴有效半徑