Geophysical Research Abstracts
Vol. 17, EGU2015-4420, 2015
EGU General Assembly 2015

Preliminary Results from the Field Experiment of OPACC

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The project for the Observation, Prediction and Analysis of severe Convection of China (OPACC) is a 5-year project funded by the Chinese Ministry of Science and Technology Foundational Research (973) Program from January 2013, and it focuses on studying convective weather systems characteristic of the China region. Field observation is the key component of OPACC, which aims to obtain detailed observations of the internal structures, dynamics and microphysics and their evolution of typical convective systems during summer monsoon period in China, as well as their mesoscale environment.

An observational experiment was conducted from June 1 to July 31, 2014 in the Changjiang-Huaihe River basin region that included 11 intensive observing periods (IOPs). During the IOPs, 6-hourly soundings were launched in order to catch the environment of convection. Special research instruments deployed include three C-band polarimetric radars, an S-band polarimetric radar and disdrometers. Observations from the operational networks, including those from rather dense operational S-band Doppler radars in the region, and from automated surface weather stations at up to 1-minute intervals, were collected. In the presentation, a brief summary of the field program will be given. The dynamical and microphysical structures of isolated convection, embedded convection and organized convection observed by polarimetric radars will be presented and compared to other studies of tropical and midlatitude convection.