**IWTC-VIII and IWTCLP-III successfully held in Jeju, Republic of Korea (WGTMR)**

The Eighth International Workshop on Tropical Cyclones (IWTC-VIII) hosted by the Korea Meteorological Administration (KMA) was successfully held in Jeju, Republic of Korea in conjunction with the Third International Workshop on Tropical Cyclone Landfall Processes (IWTCLP-III) from 2-10 December 2014. The IWTC is one of WMO's momentous quadrennial workshop series organized by the World Weather Research Programme (WWRP) and Tropical Cyclone Programme (TCP). It is a special and unique gathering of tropical cyclone researchers, forecasters, and warning specialists from all regions affected by tropical cyclones. Discussions during the workshops resulted in a number of recommendations addressed to WMO, Tropical Cyclone forecasters, Research Community on needed actions with the goal of improving tropical cyclone forecasting and warning systems and reducing the associated risk and damages caused by tropical cyclones. The common theme of IWTC-VIII and IWTCLP-III is "Quantifying and Communicating Forecast Uncertainty". More than 200 participants joined in these two workshops. Current knowledge, forecasting and research trends on tropical cyclones from an integrated global perspective were examined and recommendations for future forecasting studies and research with special regard to the varying needs of different regions were also offered in the workshops. Plans are to publish the proceedings of the two workshops by May 2015.

**UPDRAFT endorsed by the SSC/WWRP (WGTMR)**

A new WMO/WWRP Research and Development Project (RDP) entitled "Understanding and PreDiction of Rainfall Associated with landFalling Tropical cyclones (UPDRAFT)" and proposed by the Key Laboratory of Mesoscale Severe Weather (LMSWE) of Ministry of Education, Nanjing University and the Chinese Academe of Meteorological Sciences of China Meteorological Administration (CMA), was endorsed by the 7$^{th}$ Scientific Steering Committee of the World Weather Research Programme. The overall goal of this project is to improve the understanding and prediction of rainfall associated with landfalling tropical cyclones based on observational data analysis, model evaluation, and model improvements. The project aims to identify the deficiencies of state-of-the-art operational numerical weather prediction models in predicting tropical cyclone rainfall, to advance the understanding of key physical processes that govern the rainfall intensity and distribution in landfalling tropical cyclones, and to develop optimal forecasting systems for predicting rainfall.

**Progresses on SCMREX (WGTMR)**

The 2014 field campaign in the on-going RDP entitled "Southern China Monsoon Rainfall EXperiment (SCMREX)" was successfully carried out with the intensive observation period (IOP) from 0000 UTC 1 May to 18 UTC 15 June 2014. Quality controls (QC) for the collected data and the retrieval algorithm application for measurements from the portable instruments have been completed. Preliminary

research results have been obtained, such as the convective evolution in the extreme rainfall event during the IOP, the influence of synoptic-scale uncertainty on the simulated MCSs errors, and the impacts of radar data assimilation on convective characteristics. A SCMREX workshop was held in Ningbo, Zhejiang China as a special session of the International Conference on High Impact Weather.

**Progresses on TLFDP (WGTMR)**

In the Typhoon Landfall Forecast Demonstration Project (TLFDP), forecasts of tropical cyclone tracks and rainfall from operational forecast agencies and deterministic NWP models during the period from 2010 to 2013 were evaluated to reveal the current capability of track forecast guidance over the western North Pacific. A new measure [Track Forecast Integral Deviation (TFID)] for the verification of tropical cyclone track forecasts was proposed, which is superior to the widely-used position error in terms of reflecting the accuracy of the whole track instead of just one position. A number of comments were provided to the WMO document - "Verification of tropical cyclone forecasts" (by JWGFVR), with special attention given to increase the visibility of related efforts in the western North Pacific region. Updated track and intensity forecasts by additional models including GFS, GFDN and COAMPS-TC were provided through the TLFDP website. Scientists from Viet Nam, Thailand, and DPRK had brief visits to Shanghai Typhoon Institute of CMA.

**Meeting of the 4$^{th}$ WMO SDS-WAS RSG for Asia held in Beijing (SDS-WAS)**

The meeting of the 4th WMO SDS-WAS Regional Steering Group (RSG) for Asia was held at the National Meteorological Center (NMC) of CMA, Beijing, China from 10 to 11 March 2015. The SDS-WAS Asian node RSG agreed to recommend the Asian-RC which is hosted by CMA to apply for the future RSMC-ASDF representative Asian node. The RSG agreed with the assessment of the Asian-RC technique report, and encouraged the members to further refine the report. The RSG welcomed the decision of each member to share the NRT output of model forecasts. An agreement was yet to be reached on the observational data exchange, which should specify a list of exchanged data and use regulation. The RSG expressed appreciation for the new Regional Node Center Web Portal which now has an updated and general structure for joint visualization and evaluation initiative, and further validation, model inter-comparisons and data sharing.

**Second Planning Workshop on the Beijing Field SURF (HIWeather)**

The second workshop for planning the Field Study of Urban Rainfall and Fog/Haze (SURF) was held in Beijing from 25 to 26 March 20115. The aim of this workshop is to plan the SURF-2015 observation field study of the Beijing urban-impacts on summer convective thunderstorms and regional haze. The progresses after first workshop were summarized, and new research activities in thunderstorms and lightning, urban impacts on thunderstorms, UHI and ozone chemistry, aerosol-impacts on clouds and precipitation, mobile lidar PBL measurements, and new urban land-surface model development were introduced. A tutorial of thunderstorm

microphysics and urban influences was also provided. The summer rainfall experiment will be carried out from 15th July to 15th August in 2015. The objective of SURF-2015 is “Towards a Better Understanding of the Beijing (Jing-Jin-Ji) Summer Urban Environment: Convection, Haze, Terrain, and Possible Interactions.”