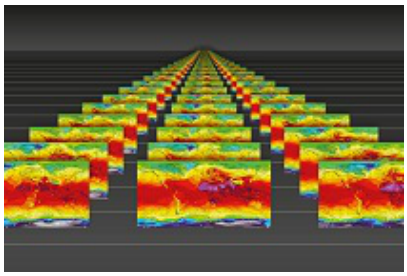

Contribution ID: **68** Type: **Oral presentation**

Use of TIGGE/Global Ensembles in Tropical Cyclone Research and Operational Forecasts

Wednesday, 3 April 2019 14:00 (15 minutes)

Current status on the use of TIGGE/Global ensembles in tropical cyclone (TC) research and operational forecasts is presented. First, the current status on the use of global ensembles in TC track, intensity and genesis forecasting at operational tropical cyclone forecasting centres over the world is presented based on a questionnaire survey conducted by the World Meteorological Organization (WMO) HIWeather Project and the WMO World Weather Research Programme (WWRP) Predictability, Dynamics and Ensemble Forecasting (PDEF) working group in 2018. The result of the questionnaire show that ensemble forecasts are seen to be particularly important in track and genesis forecasting, but that there are still hurdles limiting the pull-through of the use of probabilistic ensemble forecast information in to operational warnings. Second, the North Western Pacific Tropical Cyclone Ensemble Forecast Project (NWP-TCEFP), which is a Research and Development Project (RDP) of WWRP, is introduced as an example of having achieved a research to operation (R2O) transfer using TIGGE. With this successful R2O transfer, TC track and genesis forecast products by multiple global ensembles are provided to the Typhoon Committee Members in real time. Third, the result of literature search for papers using TIGGE, which has been conducted under a PDEF activity every year, is presented. This survey confirmed that TC is the most studied research area with TIGGE. Finally, recent TC studies using TIGGE are introduced. Those include the optimization of TC track uncertainty cone with multiple global ensembles, development of TC genesis guidance with TIGGE and initiatives toward improving TC intensity and structure forecasts.

Primary authors: YAMAGUCHI, Munehiko (Meteorological Research Institute, Japan Meteorological Agency); TITLEY, Helen (Met Office); MAGNUSSON, Linus (ECMWF)

Presenter: TITLEY, Helen (Met Office)

Session Classification: Prediction and verification

Track Classification: Workshop on Predictability, dynamics and applications research using the TIGGE and S2S ensembles