

**PARALLEL SESSION A : BENEFITS OF DOWNSCALING - A1: ADDED VALUE OF
DOWNSCALLING**

**Is There an Added Value from Regional Climate Modeling for Projected Change in Future
Northwest Pacific Tropical Cyclone Activities?**

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The majority of current approach for using dynamical model to project future seasonal tropical cyclone (TC) activity involves counting the number of TC-like vortices simulated in the model. It can be done using global climate model forced by observation or regional climate model forced by the same global model provided the thresholds used for TC detection and tracking are adjusted by the model characteristics and resolution. However, there could still be significant differences when comparing such two simulations, even though the regional model are forcing by the global model from lateral boundary and the same sea surface condition for lower boundary. Our study aims on using regional climate model to explore the added value of dynamical downscaling of TC activities over Northwest Pacific. In particular, we examined and compared the reliability of model to capture the TC-climate interactions including large-scale seasonal cycle, ENSO variability, and long-term trend.

Further, the similarity and difference of the future projected change in seasonal TC activities between global climate model and regional climate model would be highlighted. The detailed review on the potential contribution from the large scale environmental conditions for TC genesis and preferred tracking and how they differ in the two simulated future projection would be analyzed.

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