

# Diurnal Precipitation in Northwest Luzon from Actual Observations and a Coupled Ocean-Atmosphere Model

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## ABSTRACT

In the Philippines, precipitation is the most important daily weather phenomenon but it has always been difficult and poorly forecasted. One such model is the Coupled Ocean/Atmosphere Mesoscale Prediction System (COAMPS) from the Naval Research Laboratory (NRL) Marine Meteorology Division (MMD), representing state-of-the-art analysis and short-term (up to 72 hours) forecast in both the atmosphere and ocean. However, the use of models is limited due to the errors and biases that may appear. Studies show that model tends to over and underestimate in simulating precipitation. Therefore, the objective of the study is to determine how well the COAMPS model in simulating precipitation over both ocean and land especially in the Northwest Luzon. Additionally, to ascertain the factors affecting the precipitation by separately dealing with light and heavy precipitation, convective and stratiform precipitation, and diurnal precipitation. The precipitation characteristics of the COAMPS model will be analyzed in comparison with ocean data (RSVP Cruise Actual Observation), land data (PAGASA weather Stations) and satellite data of Tropical Rainfall Measuring Mission (TRMM).

*Keywords: COAMPS, Mesoscale Model, Precipitation*