

Takahashi, H. G., and J. M. B. Dado, 2018: Relationship between sea surface temperature and rainfall in the Philippines during the Asian summer monsoon. *J. Meteor. Soc. Japan*, **96**, <https://doi.org/10.2151/jmsj.2018-031>.

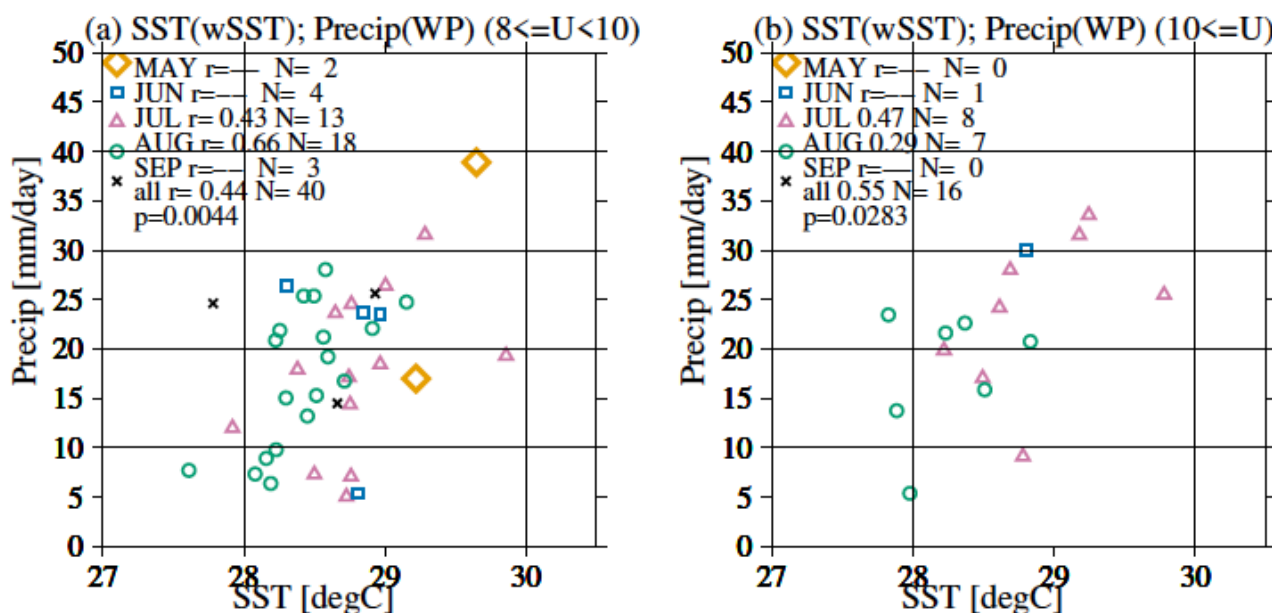


Fig. 1: Scatter diagrams indicating the relationship between SST over the wSST and rainfall in the WP, under the conditions that the 850-hPa zonal wind speed averaged (a) 8–10  $\text{m s}^{-1}$  and (b) 10– $\text{m s}^{-1}$ , over the wSST region. The symbols in each panel indicate monthly differences. Correlation coefficients and sample numbers are shown in the upper left corner. The correlation coefficient was omitted for categories with fewer than five data points.

- We offer a new perspective on a relationship between sea surface temperature (SST) over the windward region of the Philippines and rainfall in the western Philippines during the Asian summer monsoon season, which has been known as the negative correlation.
- A warmer local SST results in greater rainfall over the western Philippines under similar monsoon westerlies conditions, particularly during moderate and relatively stronger monsoon regimes (Fig. 1). This result is obtained after selecting only the moderate or relatively stronger monsoon days, because the positive effect of SST on rainfall is masked by the apparent negative correlation between SST and rainfall.
- The warmer SSTs being associated with less rainfall correspond to weaker cooling by weaker monsoon westerlies and the cooler SSTs being associated with more rainfall correspond to stronger cooling by stronger monsoon westerlies. The cooler SSTs are the result of stronger monsoon cooling and are not the cause of the greater rainfall, which is the apparent statistical relationship.