Xue, F., and F. Fan, 2019: Role of local air-sea interaction in a significant correlation of convective activity in the western Pacific warm pool between June and August. *J. Meteor. Soc. Japan*, **97**, 995-1008.
https://doi.org/10.2151/jmsj.2019-054

Plain Language Summary: A significant correlation of convective activity over the western Pacific warm pool between June and August is detected while the correlations between other summer months are not significant. The consistent anomalies in June and August usually occur during the years with strong warm pool convection. Moreover, two prerequisites are necessary for this consistent anomaly, i.e., a higher sea surface temperature (SST) over the warm pool during the preceding spring and a relatively weak El Niño and Southern Oscillation (ENSO).

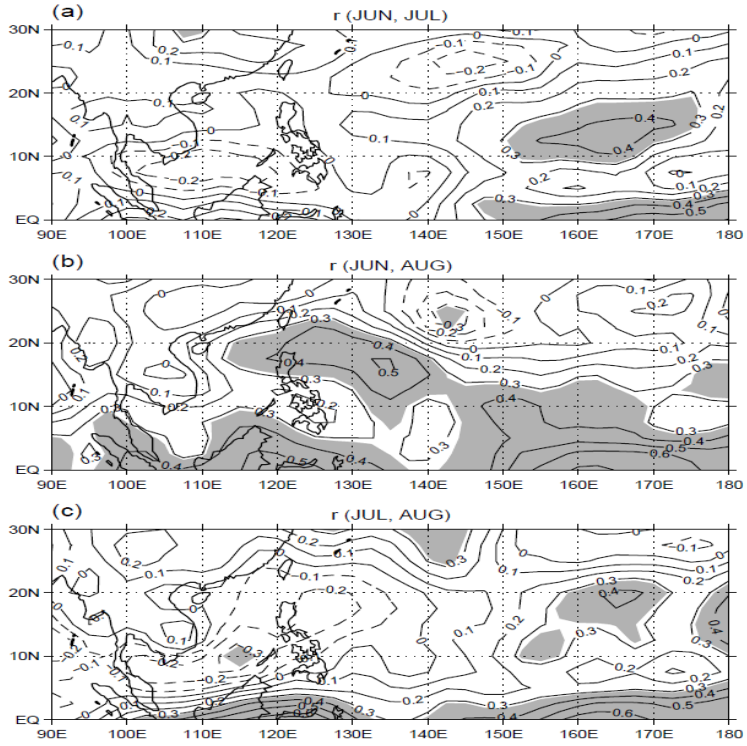

Figure 1. Correlation coefficient of OLR in the western Pacific, regions with a correlation coefficient above the 95% confidence level are shaded, (a) June and July, (b) June and August, (c) July and August.

- The significant correlation between June and August is only evident in the warm pool where deep convective systems are observed in summer.
- The local air-sea interaction plays a major role in regulating SST anomalies from June to August and forming the consistent warm pool convection anomalies in June and August.
- The ENSO forcing is less important though this correlation also depends on the intensity of ENSO.