

The changing effect of the CP and EP types of El Niño in the South China Sea

*ChunYi Lin¹

1. National Museum of Marine Science & Technology

El Niño events are one of the most principal impacts that affect the global climate, especially in the Tropical oceans. Previous studies have suggested the interannual variations on the traditional El Niño. However recent studies show the interannual variability connected with two type of El Niño, namely the Central-Pacific (CP) type of El Niño and Eastern-Pacific (EP) type of El Niño. During the CP type of El Niño, the maximum sea surface temperature anomalies are confined in the central equatorial Pacific. In order to focus on the influences on the El Niño events in the South China Sea thermal variability, we should consider various influences of the CP and EP types of El Niño.

In this study, surface wind, precipitation, sea level press, air temperature, sea surface temperature and multiple satellite datasets has been used to analyze the interannual variations in the South China Sea. We estimate various thermal variability and indentify how well the two types of El Niño are influences on climate changes in the South China Sea. The composite for the EP El Niño events indicates a strong increase in the sea surface temperature anomaly over the South China Sea region. During the EP El Niño, the strength of the SST anomalies increases by as much as 0.4°C. However the decrease SST can be found in most part of the South China Sea during the CP El Niño.

Keywords: heat content, CP El Niño, EP El Niño, South China Sea