



The maintenance of climatological mean state of the western Pacific warm pool associated with currents based on CMIP5

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Based on the historical runs from 26 coupled climate mode of the Fifth Phase of the Coupled Model Intercomparison Project (CMIP5), the relationship between the equatorial currents and climatological mean of the western Pacific warm pool (WPWP) are investigated. The results show that there is high correlation between them. A strong south equatorial current not only can cause westward stretch of edge of the WPWP over equator, but also shrink the south part of the WPWP. A strong north equatorial countercurrent can enlarge the north body of the WPWP. The zonal-advective feedback and Bjerknes feedback play the key role in the mean state of WPWP.