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Interannual variability of North Equatorial Current geostrophic transport across 137oE

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Interannual variability of the North Equatorial Current (NEC) geostrophic transport was studied by using repeated hydrographic observations of 37 years along 137^{o}E. It is showed that the interannual variability of the NEC geostrophic transport is highly correlated with sea surface temperature anomaly (SSTA) in Niño 3.4 region. The high correlation implies that the oscillator in the western Pacific Ocean proposed by Weisberg and Wang in 1997 may play essential role in it. It is also found that the NEC geostrophic transport is mainly controlled by wind forcing west of the dateline rather than the wind over the whole basin. A proxy transport series constructed from long term observations of SSTA in Niño 3.4 region indicates that in the past century, decadal-interdecadal modulation is significant in the variability of the NEC transport in western Pacific Ocean.