## Effects of the Intra-seasonal Variability of the Monsoon Trough over SCS-Northwestern Pacific on the Tropical Cyclone Frequency

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By using Northwestern Pacific tropical cyclone data provided by Shanghai Typhoon Institute and the NCEP/NCAR reanalysis daily data (II) from 1979 to 2005, we analyzed the characters of the 10-20-day and 30-60-day climatological Intra-seasonal oscillations (CISO) of the wind and the relative vorticity for 27 years average in the region (40-180°E,10°S-40°N) from 1May to 31 October. We further study the effect of the CISO on the monsoon trough (MT) over South China Sea(SCS)-Northwestern Pacific MT and the tropical cyclone (TC) frequency. The principal concoctions are as follows: we get five MT models and they are SCS MT, SCS-Western Pacific MT, and reverse MT, the three streams MT and Western Pacific MT, respectively. Each model of MT is consistent with different period of summer monsoon. The low-frequency cyclones undergo five conversions from active period to in-active period in the region (105-160°E, 5-25°N) from 1May to 31 October. The phase locks of the low-frequency cyclones from the 10-20-day and 30-60-day intra-seasonal oscillations are favorable to the development of the monsoon trough, TCs easily form and the Cluster of TC usually appear at the same time. When the low-frequency cyclone of the 30-60-day oscillation is in inactive stage, the frequency of TC is very low.

## References

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