

Wang, C., L. Wu, H. Zhao, Q. Liu, and J. Wang, 2021: An abrupt slowdown of late season tropical cyclone over the western North Pacific in the early 1980s. *J. Meteor. Soc. Japan*, **99**, 1413–1422.  
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**Plain Language Summary:** Tropical cyclones (TCs) induced disasters are largely controlled by their translation speed, which was previously supposed to be linked to their surrounding steering flows. Here we find that, for the western North Pacific, variations in translation speed are not consistent with that of individual TCs controlled by steering flow. In contrast, changes in the subtropical TC track ratio play a foremost role due to the much higher translation speed of TCs influencing the subtropical region than that of TCs traveling across the tropical region. Thus, changes in TC translation speed should be examined in regions where the magnitude of translation speed is generally uniform distributed. The result highlights the important role of TC track in the global/regional change of TC translation speed and is important to understand the current change in TC translation speed.

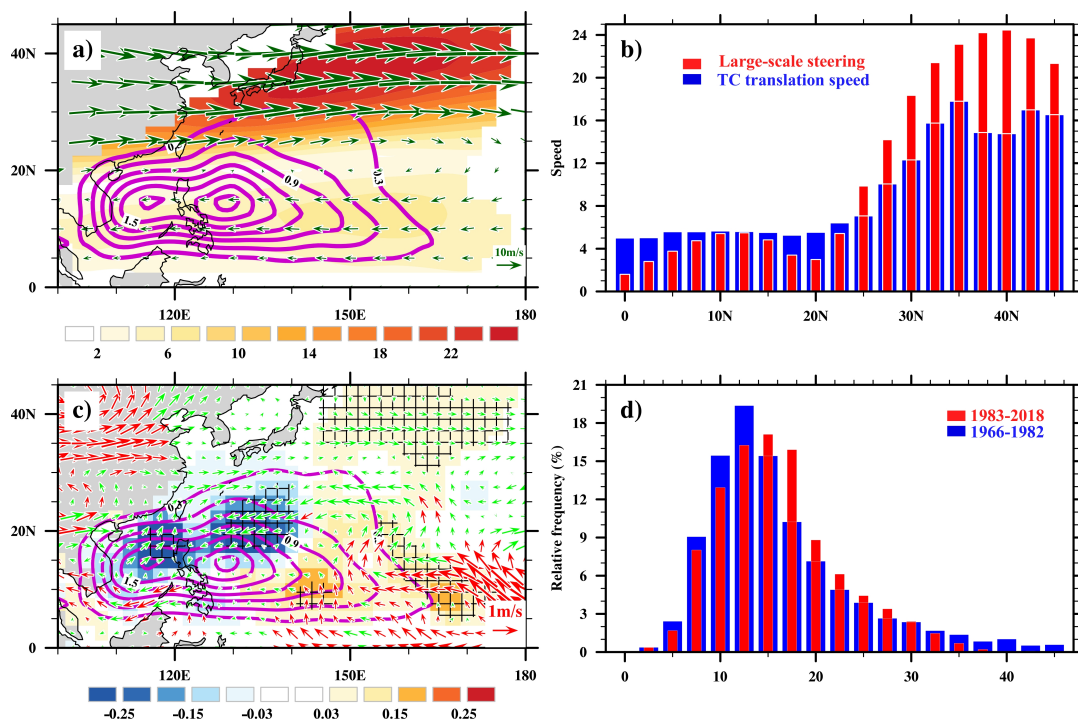


Figure 1 Climate mean large-scale steering flows (vectors), steering speed (shadings) and TC track frequency (contours), (b) latitudinal distribution of climate mean large-scale steering (red bars) and TC translation speed (blue bars), (c) mean TC track frequency (contours), the composite difference in TC track frequency ratio (shadings) and large-scale steering flow (vectors) between 1966-1982 and 1983-2018, (d) latitudinal distribution of relative track frequency during 1966-1982 (blue bars) and 1983-2018 (red bars).

### Highlights:

- Basin-wide tropical cyclone (TC) translation speed over the western North Pacific (WNP) in the late season (October-December) experienced an abrupt decrease in the early 1980s.
- The decrease in the subtropical TC track ratio contributes to the slowdown in TC motion over the WNP due to the much higher TC translation speed in the subtropical WNP.
- The decrease in the subtropical TC track ratio mainly attributes to an anti-cyclonic circulation over the WNP that appears to be driven by the Atlantic Multi-decadal Oscillation.