

The study on the dynamic influence factors of the interdecadal variability of the subtropical high in the Western Pacific Ocean based on the information flow method

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The subtropical high in the Western Pacific (WPSH) is one of the most important weather systems. It is the most important large-scale circulation system in low latitude. Its location and intensity directly affect the weather system in East Asia. Its abnormal activities often lead to disastrous weather in East Asia. Our paper deals with the complexity and uncertainty of the decadal variations of WPSH based on the information flow method. The eastern equatorial Pacific SST, the equatorial western Pacific SST, the equatorial Indian Ocean SST, eastern qinghai-tibet plateau geothermal flux of qinghai-tibet plateau, the main body of regional geothermal flux, geothermal flux in southern qinghai-tibet plateau region, the qinghai-tibet plateau in the western region of geothermal flux can be chosen as influence factors. By using the information flow method, the causal relationship between each factor and the interdecadal variability of the index of WPSH is calculated. On this basis, more important factors are screened out, and the interaction facts and mechanism between them and the interdecadal variability of WPSH are analyzed.

Keywords: western Pacific subtropical high, dynamic influence factors, information flow, SST near the equator

