

# Month-to-month Difference of the Western Pacific Subtropical High Simulated by CMIP5 Models

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The western Pacific subtropical high (WPSH) is an important circulation system of the East Asian summer monsoon (EASM). Most previous studies have focused on the variability of summer mean WPSH. Note that the WPSH also experiences subseasonal variation from early to late summer. In this study we examined the month-to-month shift of the WPSH in boreal summer, that is, from June to July and from July to August, simulated by CMIP5 Atmospheric General Circulation Models (AGCMs) and coupled models. Results show that climatologically AGCMs can reproduce the northward shift of the WPSH better than eastward retreat from July to August. Compared with AGCMs, coupled models can improve the month-to-month shift simulation to some extent, indicating that the air-sea coupling processes are also important in subseasonal timescale.

Keywords: western Pacific subtropical high, CMIP5 simulation, month to month variation