Comparison of influence between two types of cold surge on haze dispersion in Eastern China

Supplementary material

Shiyue Zhang[1], Gang Zeng[1], Xiaoye Yang[1], Ruixi Wu[2], Zhicong Yin[1, 3]

[1] Key Laboratory of Meteorological Disaster of Ministry of Education (KLME), Collaborative Innovation Center on Forecast and Evaluation of Meteorological Disasters (CIC-FEMD), Nanjing University of Information Science and Technology, Nanjing, 210044, China

[2] Meteorological Bureau of Jiading District, Shanghai 201815, China

[3] Southern Marine Science and Engineering Guangdong Laboratory (Zhuhai), Zhuhai, 519080, China

Correspondence to: Gang Zeng (zenggang@nuist.edu.cn)

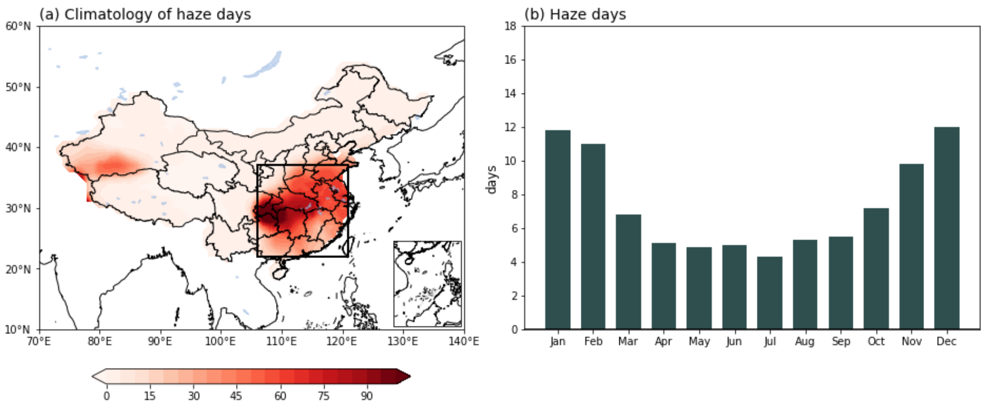

Figure S1. (a) Spatial distribution of the annual haze days (day) in China averaged from 1980 to 2017. (b) Monthly variation of the regional-averaged haze days in the area of 22°N-37°N, 106°E-121°E.

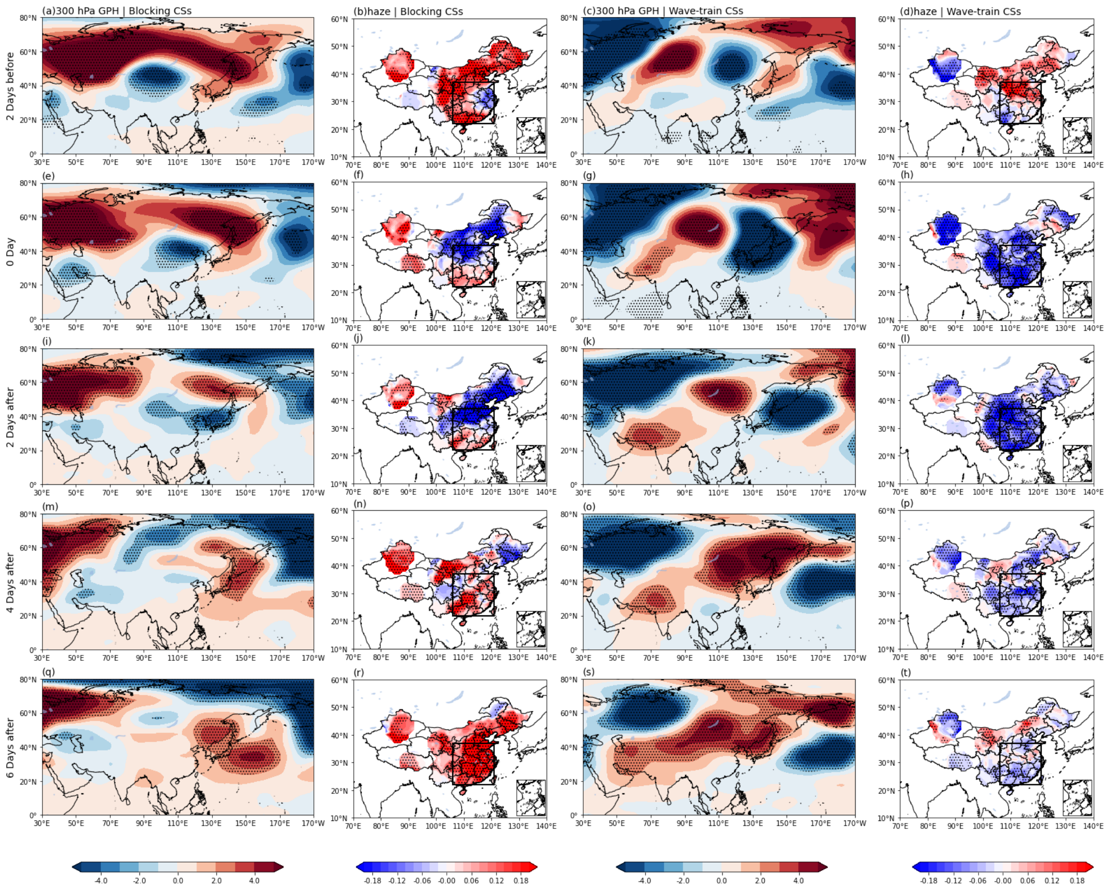

Figure S2. Composite of GPH anomalies (shading; gpm) at 300 hPa from -2 days to 6 days for blocking CSs outbreak (a, e, i, m, q), and wave-train CSs outbreak (c, g, k, o, s), and the related spatial distribution of PM2.5 (shading; μ gm^{-3}) (b, f, j, n, r and d, h, l, p, t) from 2014 to 2019.

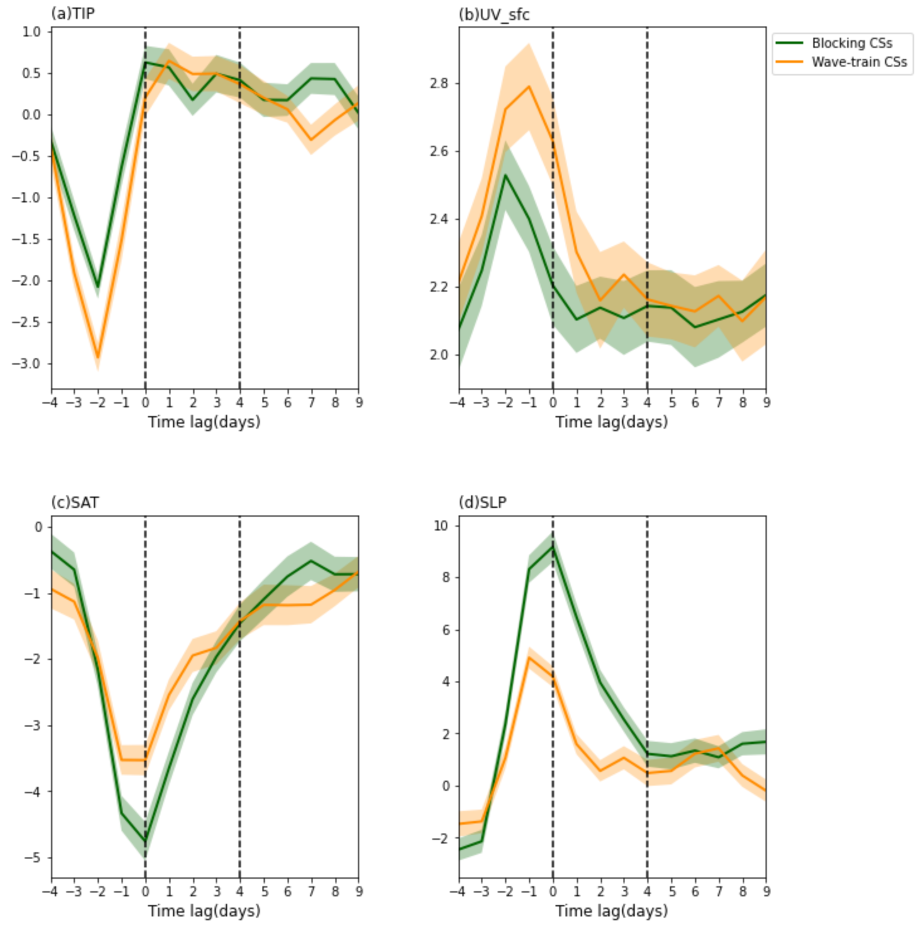

Figure S3. Mean (a) TIP anomalies (K), (b) UV_sfc anomalies (m s^{-1}), (c) SAT anomalies (K), and (d) SLP anomalies (hPa) in EC during 9 days before and after the outbreak of the blocking CSs (blue lines) and wave-train CSs (red lines) over 90°E–130°E and 40°N–65°N, respectively. Shading represents plus/minus one standard deviation among the CSs.