



Supplement of

Impacts of anemometer changes, site relocations and processing methods on wind speed trends in China

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18 **Table S1. Number of stations left after applying each WMO criteria.**

Criteria	Number of stations left
Original	840
a) criteria 3	689
b) criteria 1 and 3	641
c) criteria 1, 2 and 3	601

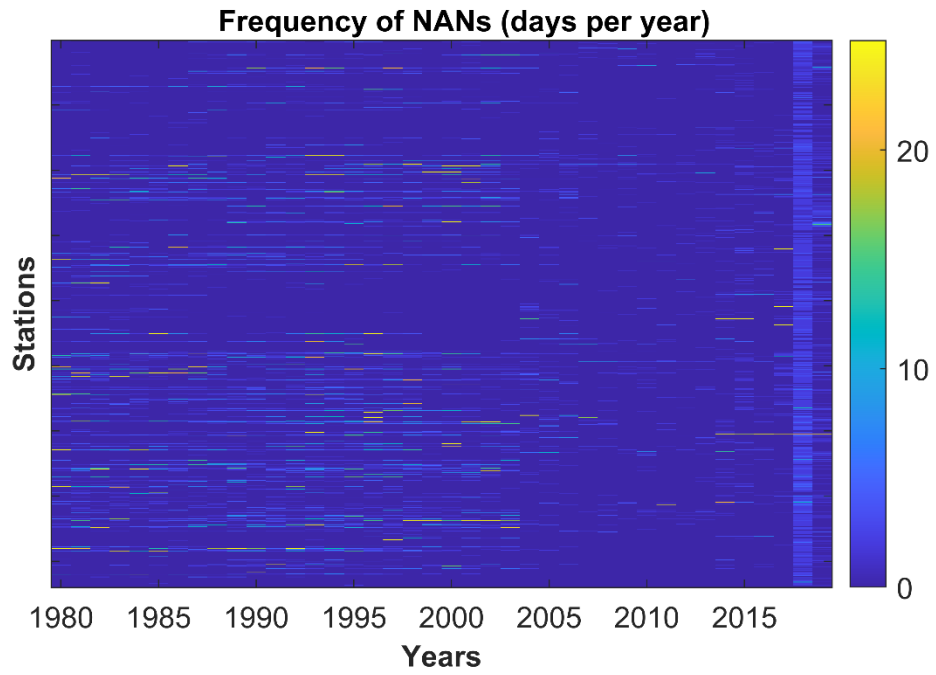
19 *The three WMO criteria used are: (1) <11 missing daily values in a month; (2) <5
20 consecutive missing daily values in a month; (3) complete monthly values for every
21 month during the study period.

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23 **Table S2. Relocated stations details.**

Change	Number of stations
Latitude or longitude	311
Altitude	218
Latitude or longitude or altitude	432

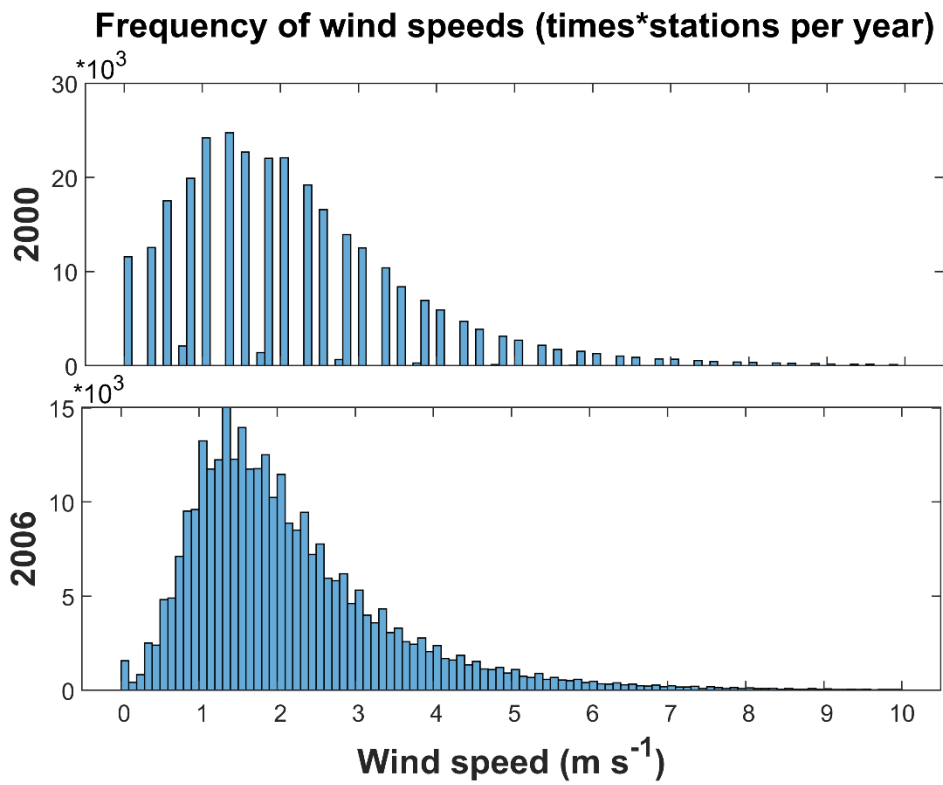
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26 **Figure S1. Frequency of NaNs (days per year) for 840 stations in CSD from 1980**
27 **until 2019.** Each row represents one station.

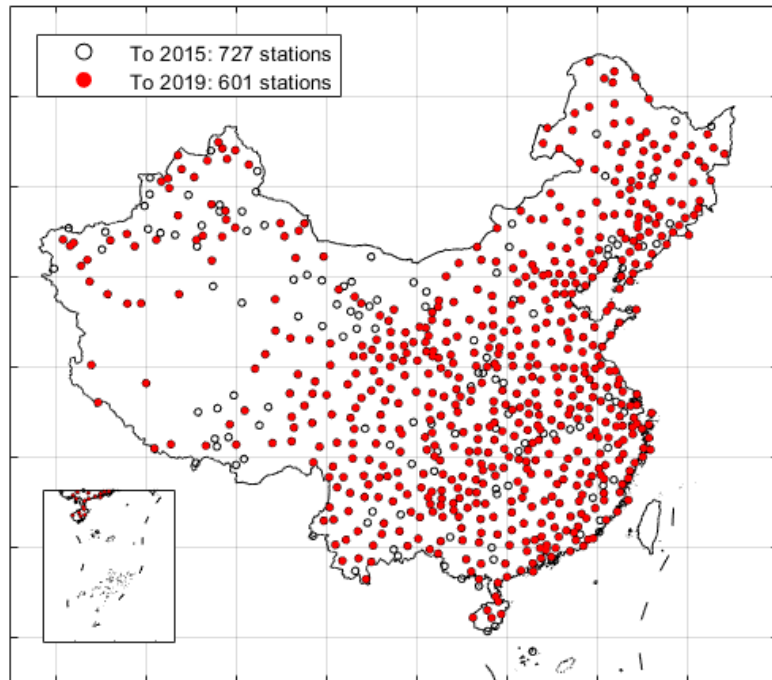
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30 **Figure S2. Change in wind speed data caused by updates in anemometer changes**
 31 **and processing methods.** Daily wind speed distribution of all stations in 2000 (old
 32 system) versus 2006 (new system).

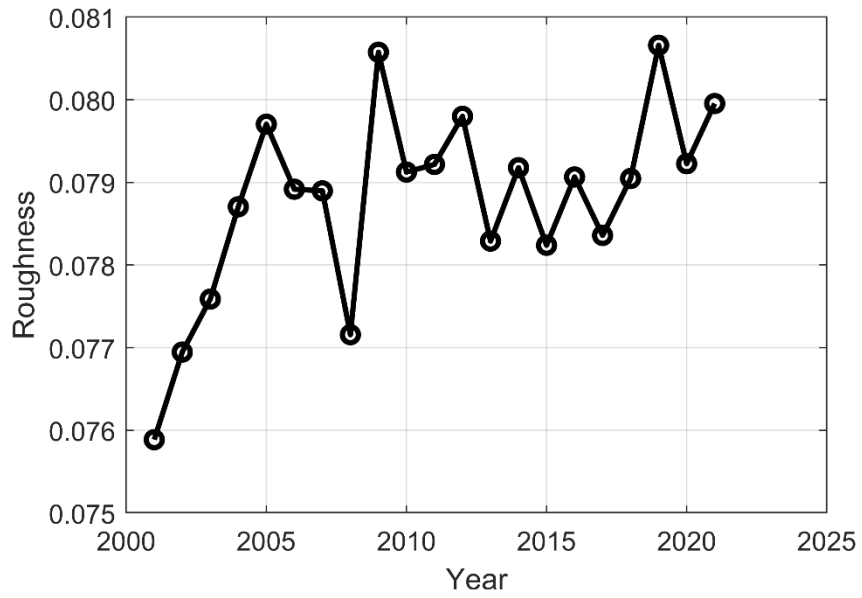
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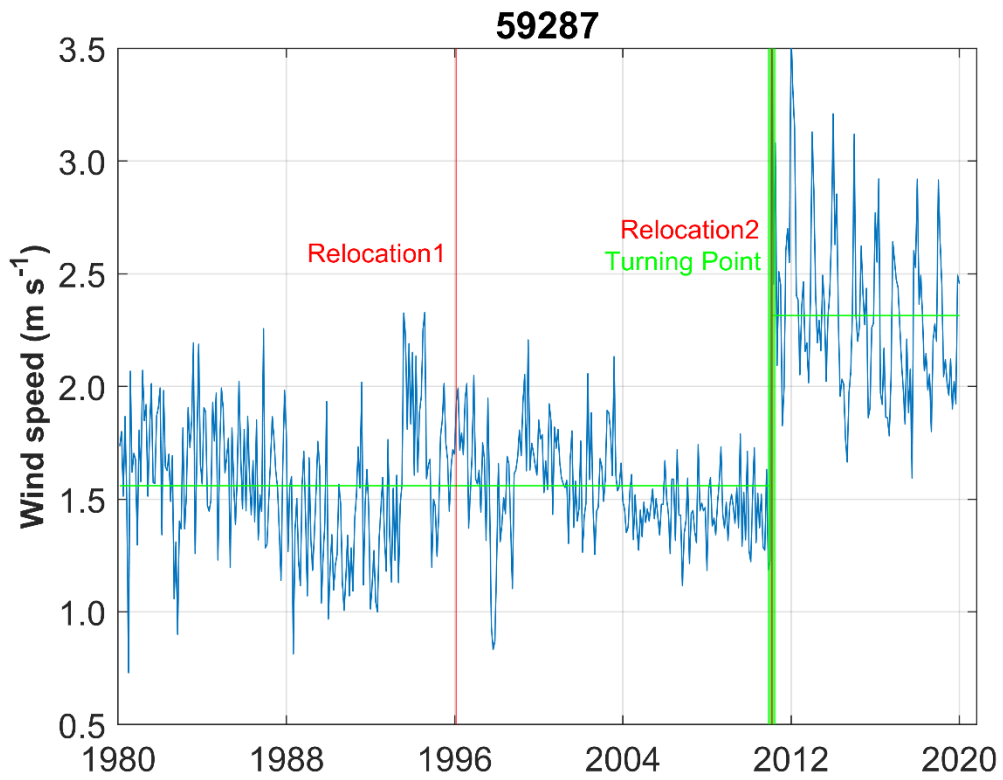
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35 **Figure S3. Distribution of stations that passed the WMO criteria.** The black hollow
36 circles are the 727 stations till 2015 and the filled red circles are the 601 stations till
37 2019. Maps information are from Department of Natural Resources standard map
38 service system of China.

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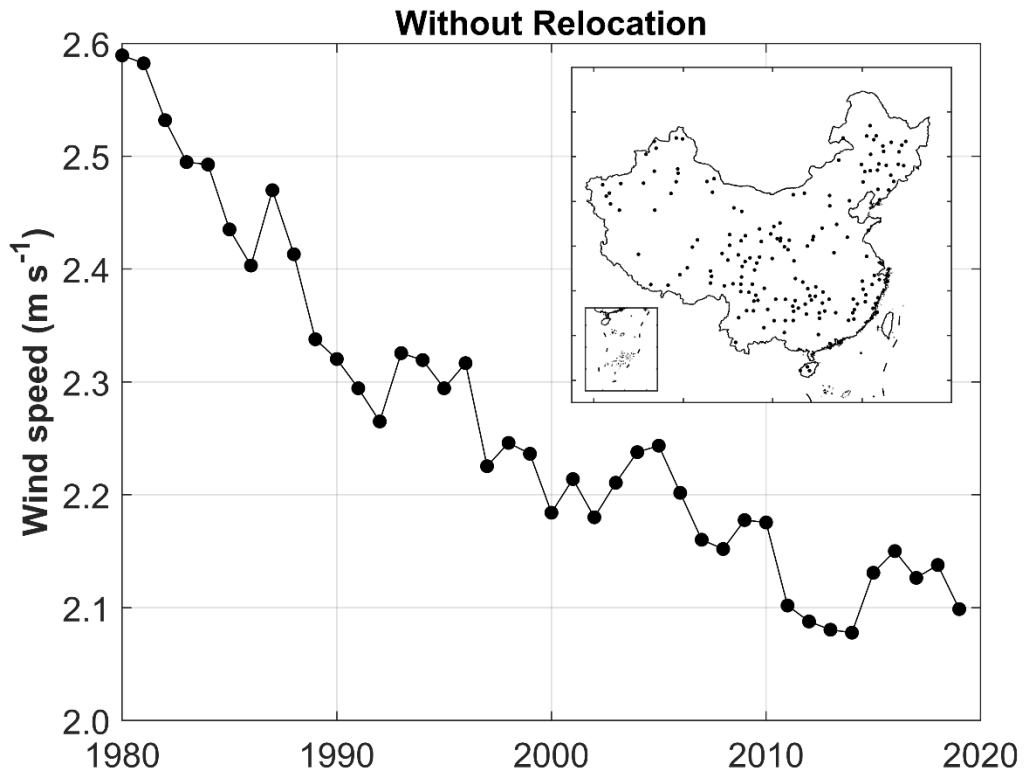
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41 **Figure S4. Surface roughness change around station 52974.** The roughness is
42 evaluated by u^*/U_h described in Chappell & Webb (2016).
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46 **Figure S5. Time series of Station 59287 (Guangzhou) and the two relocations.** The
47 blue line is the monthly wind speed. The two red lines are the relocations and the thick
48 green line is the detected turning point in 2011.

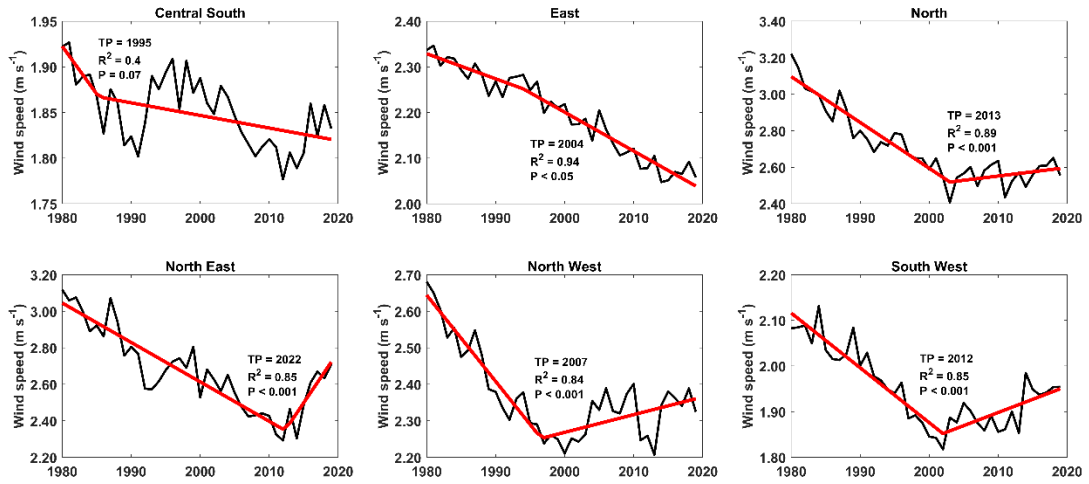
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51 **Figure S6. Averaged annual wind speed of 169 stations without relocation.** The
 52 inset shows the station distribution across China. Maps information are from
 53 Department of Natural Resources standard map service system of China.

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56 **Figure S7. Regional wind speed trends.** The regional division is consistent with
 57 Figure 2a in Liu et al (2022).

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