Supporting Information for

SgriWind-CN: A Sub-Daily Gridded High-Resolution Near-Surface Wind Speed Dataset for China, Generated by an AI-Driven Integration of In-Situ Observations

Xueru Bai[1], Mingyuan Zhang[1], Jinlin Zha[1,*], Anning Huang[2], Xinsheng Zhu[3], Jian Tang[4], Deming Zhao[5], and Jian Wu[1]

[1]Key Laboratory of Atmospheric Environment and Processes in the Boundary Layer over the Low−Latitude Plateau Region, Department of Atmospheric Science, Yunnan University, Kunming, China

[2]School of Atmospheric Sciences, Nanjing University, Nanjing, China

[3]Nanjing Institute of Environmental Sciences, Ministry of Ecology and Environment of the People's Republic of China, Nanjing, China

[4]National Meteorological Center of China Meteorological Administration, Beijing, China

[5]Key Laboratory of Regional Climate and Environment for Temperate East Asia, Institute of Atmospheric Physics, Chinese Academy of Sciences, Beijing, China

Correspondence to: Jinlin Zha (zhajl@ynu.edu.cn)

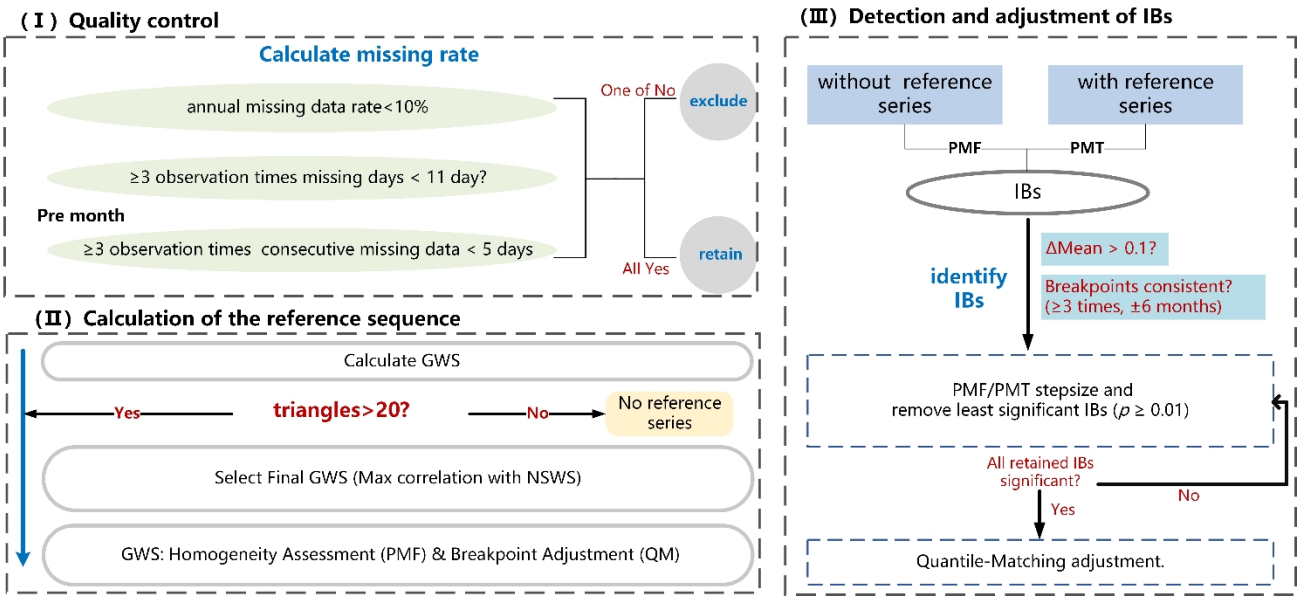


Figure S1. Flowchart of Quality control and homogenization processes.

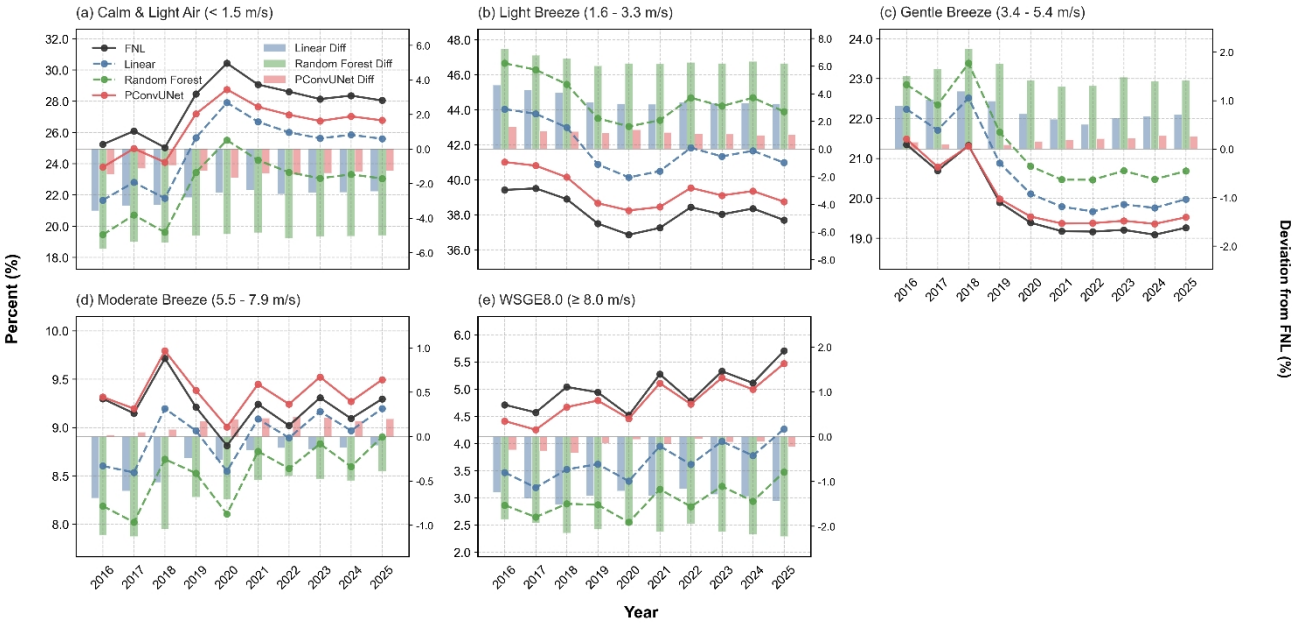


Figure S2. Comparison of the capability of different methods in capturing wind intensity events from FNL data over a decade. (a) calm and light air, (b) light breeze, (c) gentle breeze, (d) moderate breeze, and (e) WSGE8.0. The black and red solid lines represent the percentage of wind intensity in the original FNL data and PConvUNet model outputs, respectively. The blue and green dashed lines show the linear interpolation outputs and random forest outputs, respectively.