Supplementary materials for

Validation of ERA5 boundary layer meteorological variables by the remote-sensing measurements in the southeast China mountains

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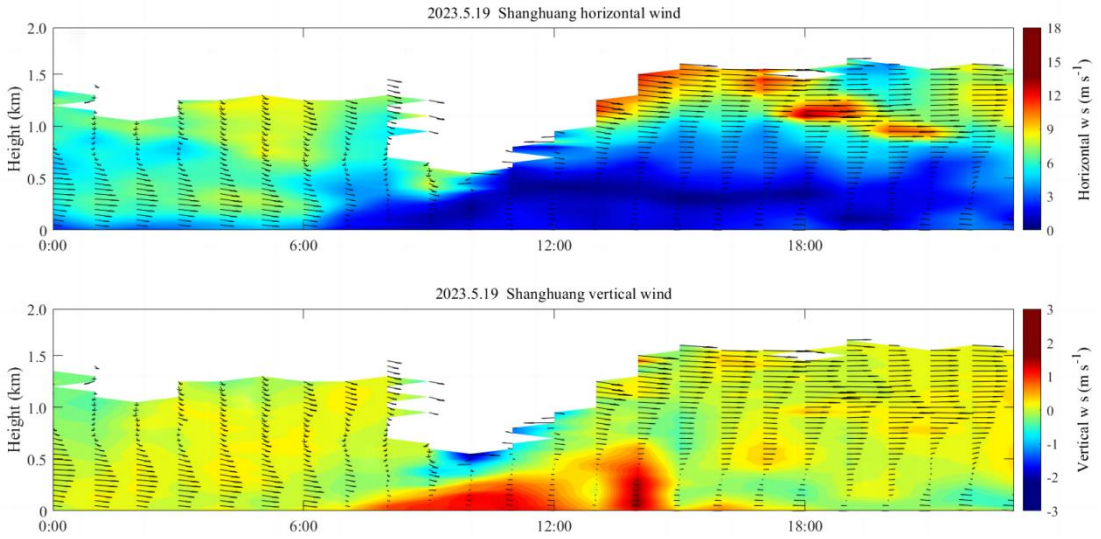


Figure S1. Horizontal and vertical wind speeds at the observation site under convective weather on 19 May 2023.

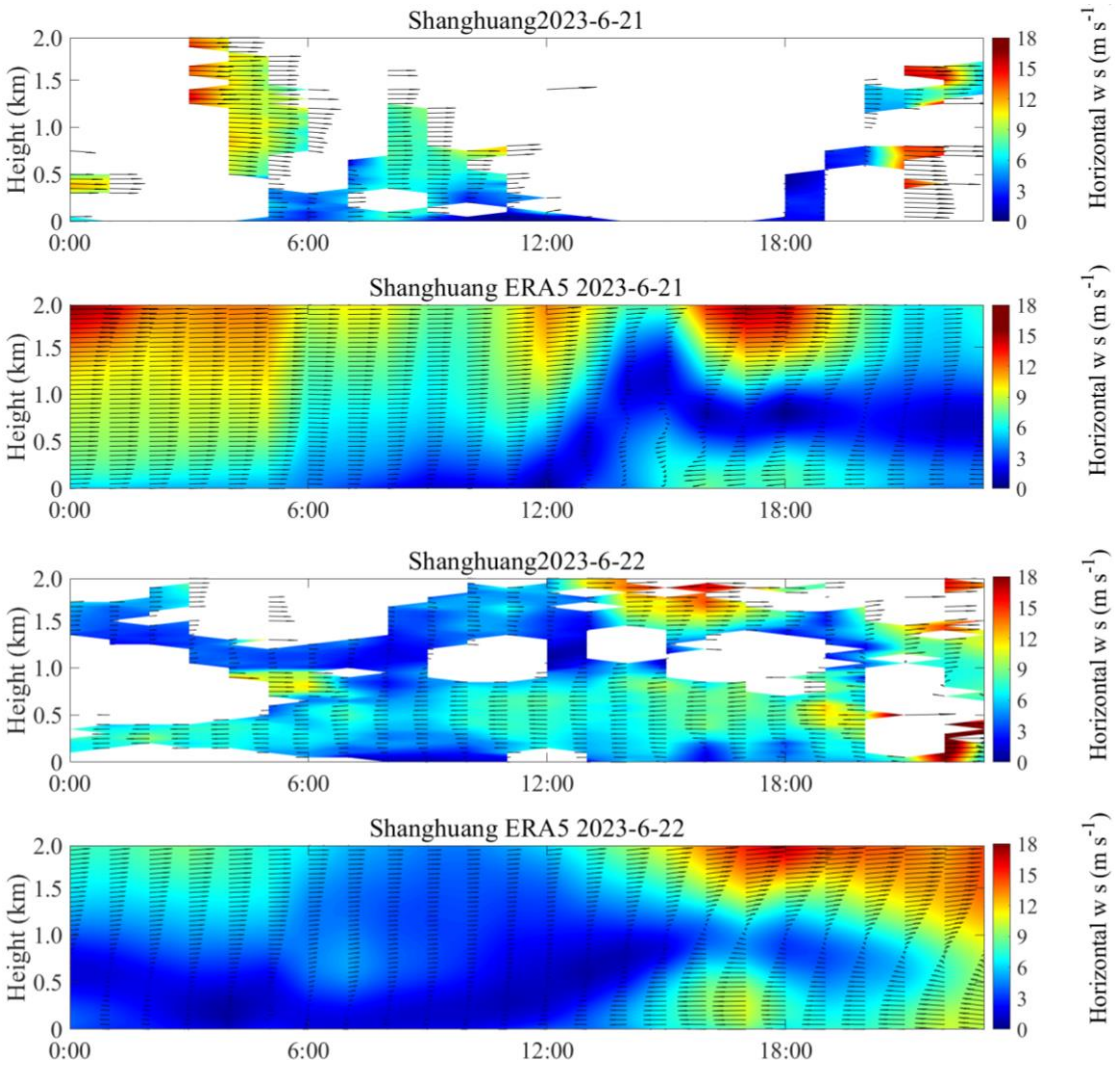


Figure S2. Comparison of observed horizontal wind speeds with ERA5 horizontal wind speeds under the influence of heavy rain on 21-22 June 2023.

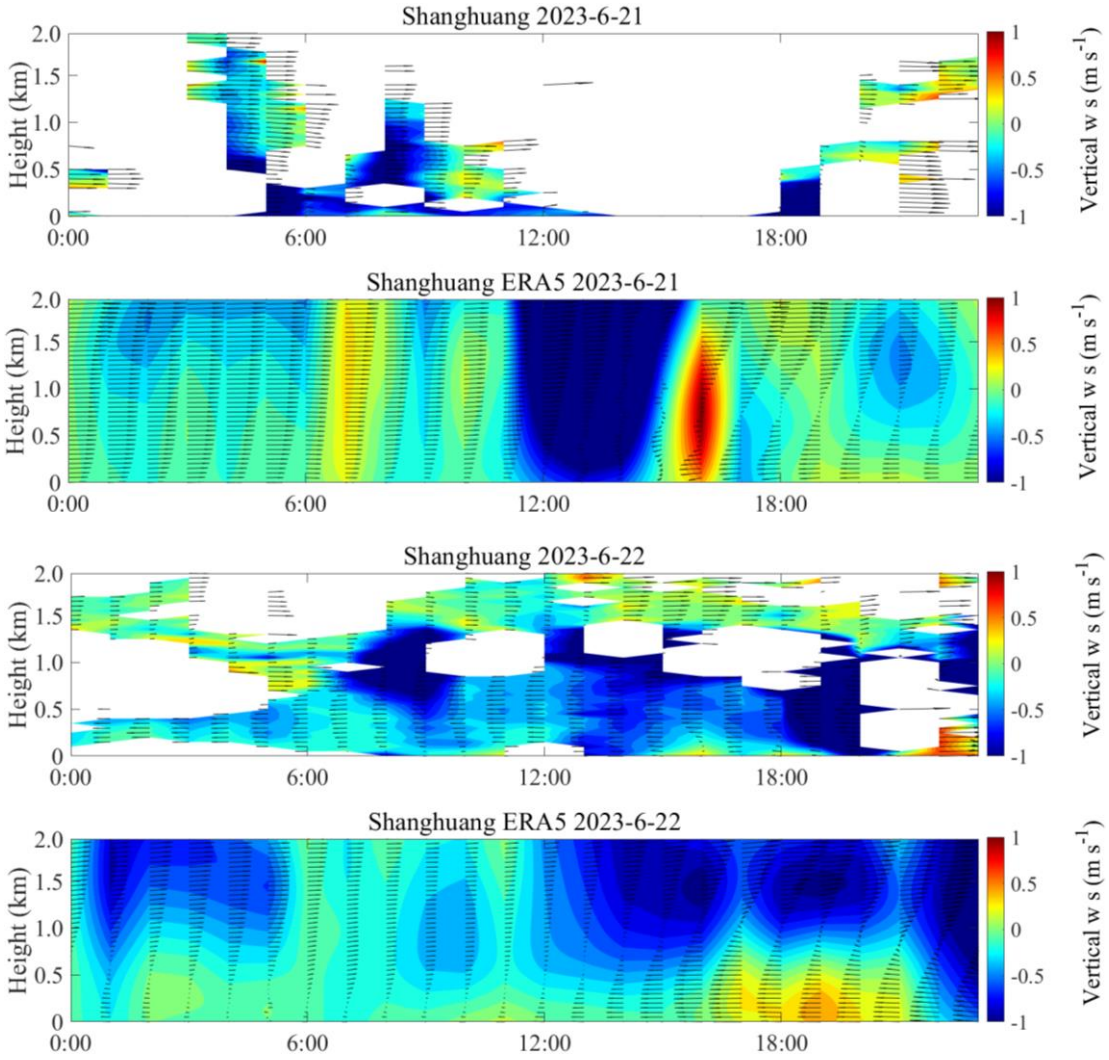


Figure S3. Comparison of observed vertical wind speed with ERA5 vertical wind speed under the influence of heavy rain on 21-22 June 2023.

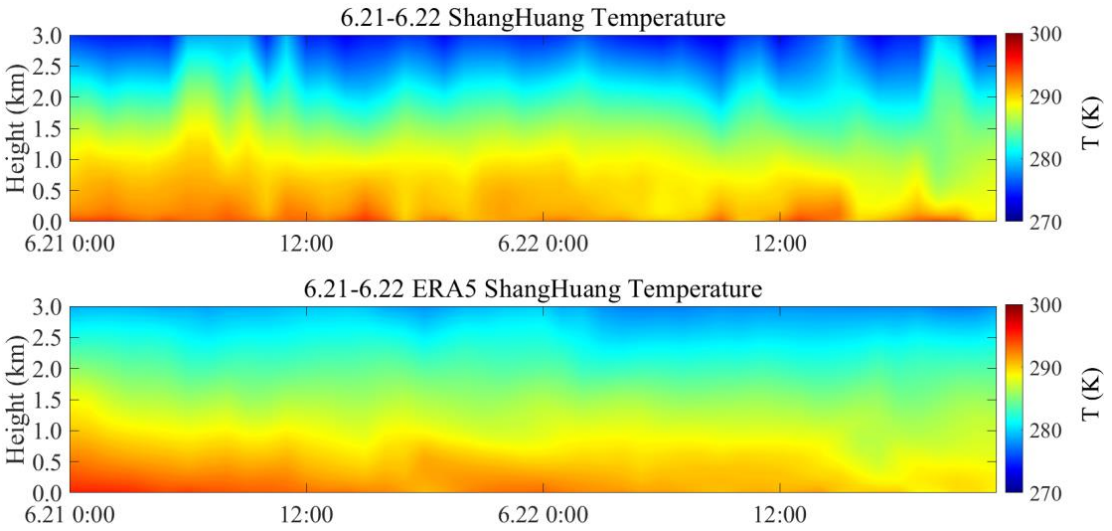


Figure S4. Comparison of observed temperatures with ERA5 temperatures under the influence of heavy rainfall on 21-22 June 2023.

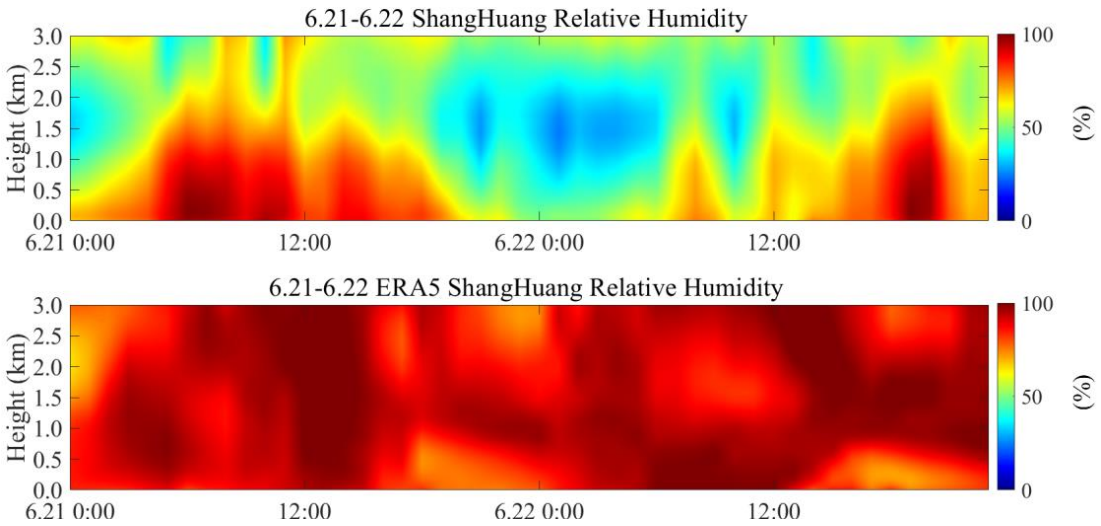


Figure S5. Comparison of observed relative humidity with ERA5 relative humidity under the influence of heavy rainfall on 21-22 June 2023.

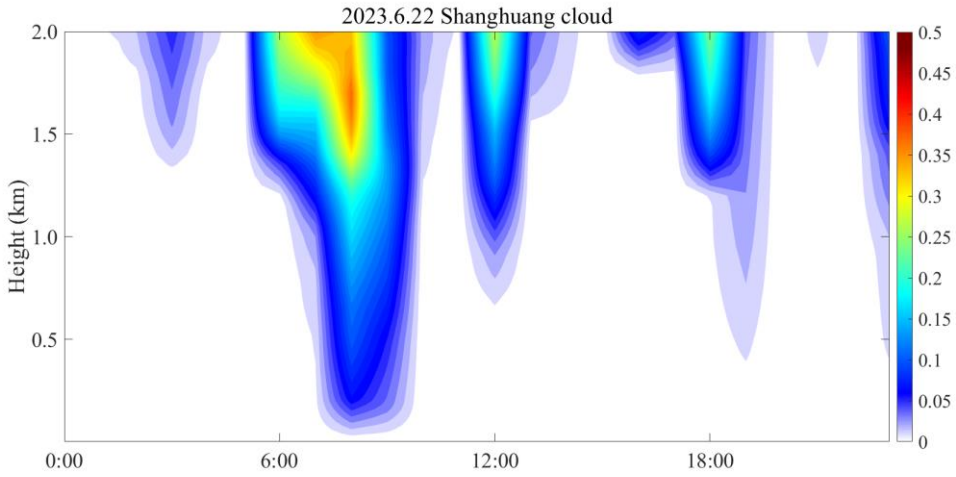


Figure S6. Liquid water content on 22 June 2023.

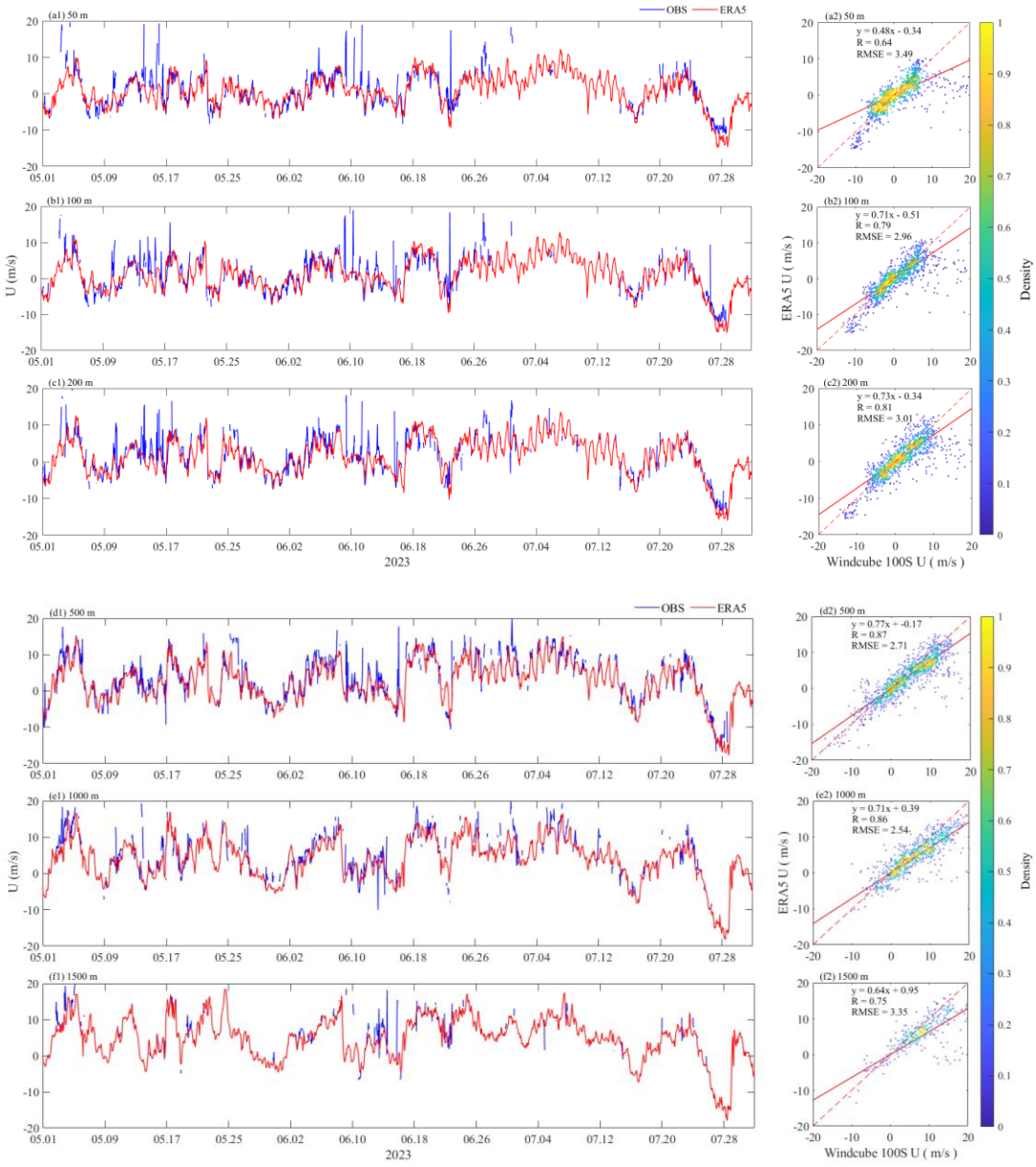


Figure S7. Time series and scatter plots of the observed horizontal u-wind components at various heights compared with the ERA5 reanalysis data values, with the red and blue lines representing the u-wind components from ERA5 and Doppler wind lidar, respectively.

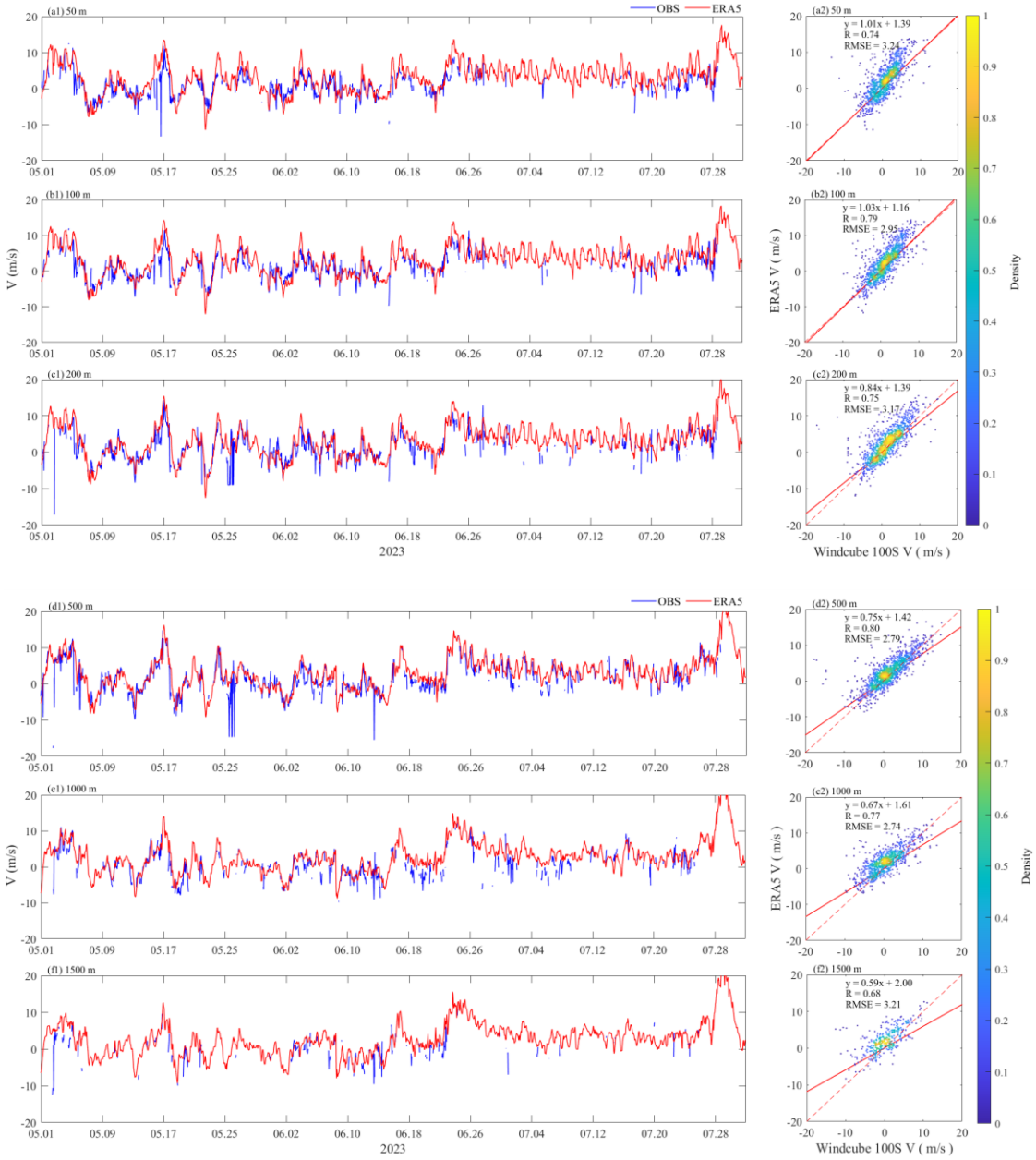


Figure S7. Time series and scatter plots of the observed horizontal v-wind components at various heights compared with the ERA5 reanalysis data values, with the red and blue lines representing the v-wind components from ERA5 and Doppler wind lidar, respectively.