

*Supplementary Materials for*

**Investigation of near-global daytime boundary layer height  
using high-resolution radiosondes: First results and  
comparison with ERA-5, MERRA-2, JRA-55, and NCEP-2  
reanalyses**

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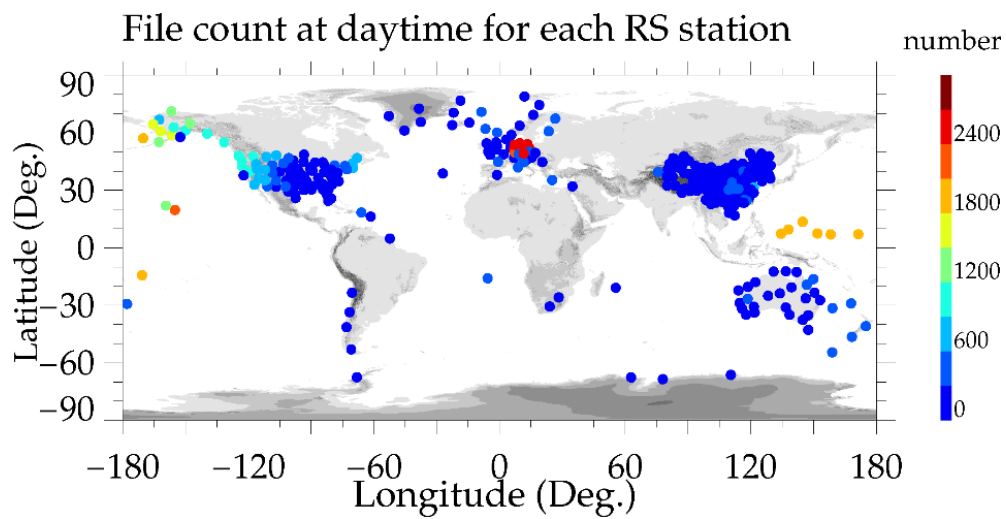
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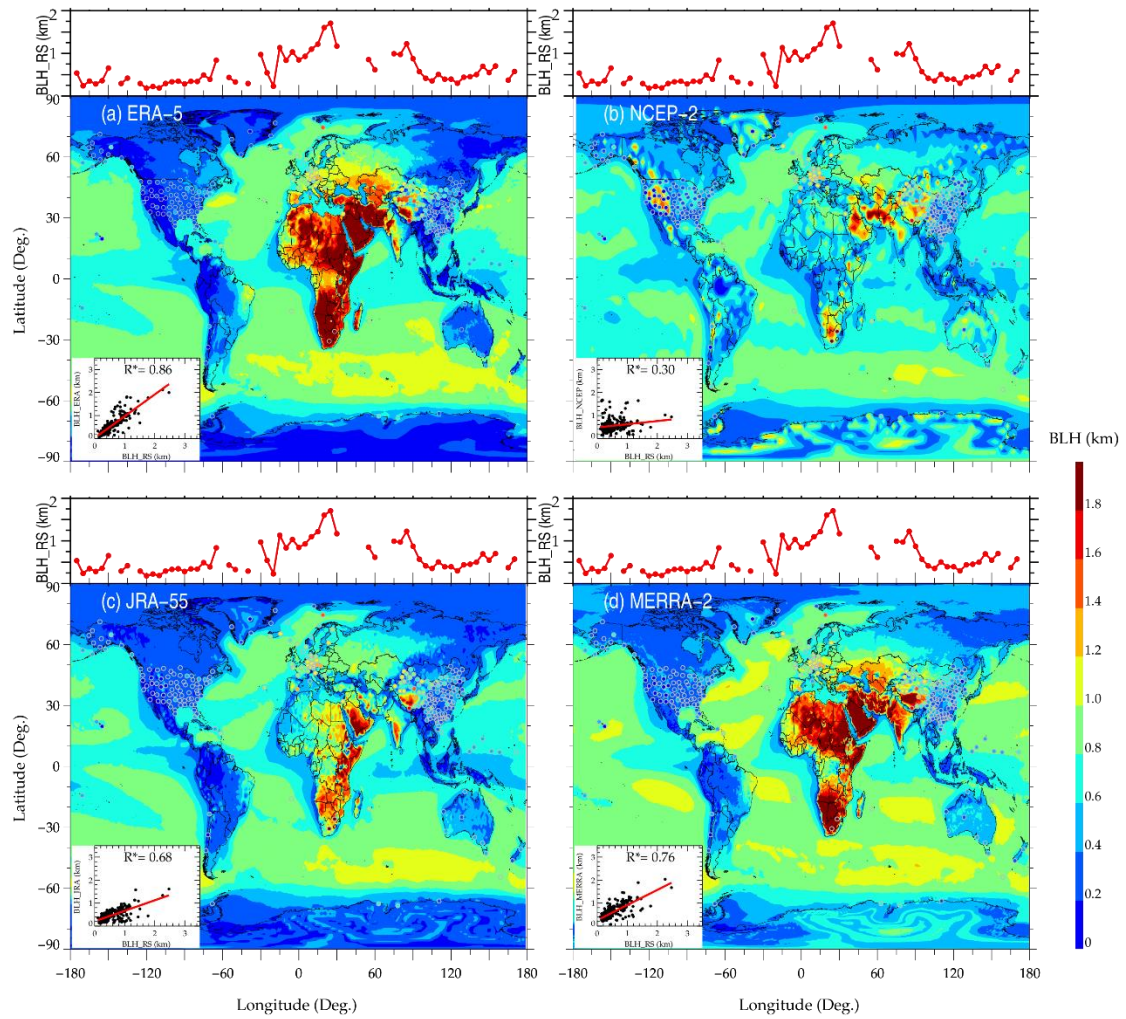
**This supplementary file contains Figures S1-2**

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**Figure S1.** Profile count of radiosonde station in the daytime.



**Figure S2.** Ensemble mean BLH estimated from ERA-5 (a), NCEP-2 (b), JRA-55 (c), and MERRA-2 (d) reanalysis data at 1200 UTC during the years 2012-2019. The dots with gray marginal lines in each map denote the mean BLH derived by sondes at 1200 UTC. The station with less than 10 profiles are not included for further analysis. The 2D scatter plot in the left bottom of each panel illustrates the correlations between reanalysis-derived and sonde-derived BLHs at 1200 UTC, where the star superscripts indicate that the correlation coefficients are statistically significant ( $p < 0.05$ ) and the red lines denote the least-squares regression line.