Supplement of Atmos. Meas. Tech., 15, 6127–6144, 2022
https://doi.org/10.5194/amt-15-6127-2022-supplement

Atmospheric Measurement Techniques
Open Access
EGU

Supplement of

Algorithm for vertical distribution of boundary layer aerosol components in remote-sensing data

Futing Wang et al.

Correspondence to: Ting Yang (tingyang@mail.iap.ac.cn)

Text:

Text S1: The verification of relative humidity from ERA5.

Figure: Figure S1

Text S1: The verification of relative humidity from ERA5.

In order to verify the reliability of the relative humidity (RH) from ERA5, we compare it with the sounding data from the University of Wyoming (http://weather.uwyo.edu/upperair/bufrraob.shtml). The comparison is presented in Fig. S1, and it can be seen clearly that there is a good consistency between the RH from ERA5 and sounding with the correlation coefficient above 0.9. The Root Mean Square Error (RMSE) is about 11%. We need to be aware that there wouldn't be a complete agreement. The measurement mechanisms of different data sources are the primary error. Besides, the distinction in locations and sampled height of the two data sources also contribute to the error.

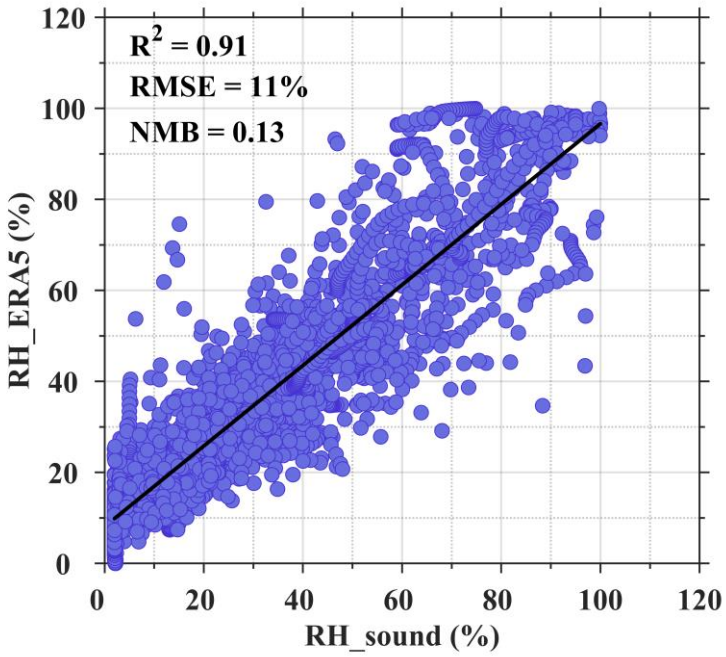

Figure S1. The comparison of RH data between ERA5 and sound. The correlation coefficient (R), root mean square error (RMSE) and normalized standard deviation (NMB) of the two are texted in the figure.