

Supplementary

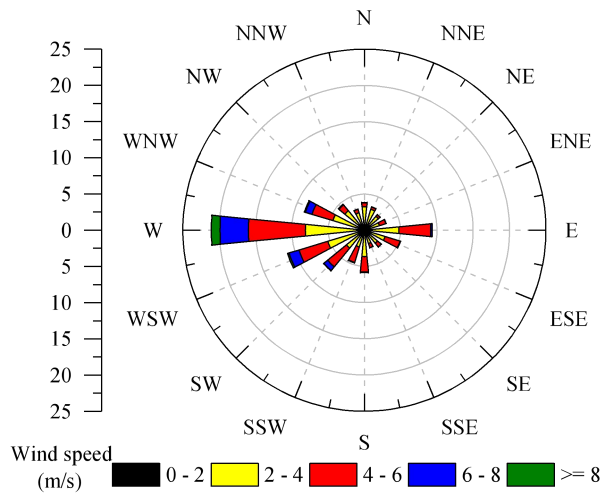
Supplementary Figure S1. Wind roses at station Potsdam in summer from 2010 to 2017.

Supplementary Figure S2. Scatter plot of the AOD observed by MODIS and sun photometer at FUB.

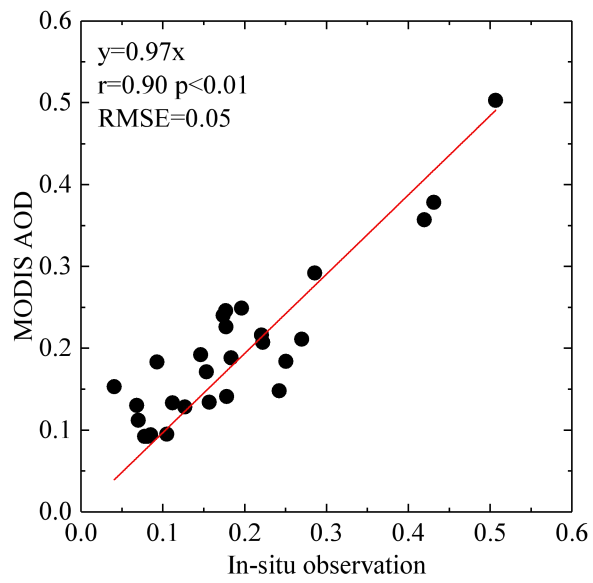
Supplementary Figure S3. Spatial distribution of the mean MODIS albedo during summer from 2014 to 2017.

Supplementary Figure S4. Diurnal variations of the aerodynamic resistance and Bowen ratio.

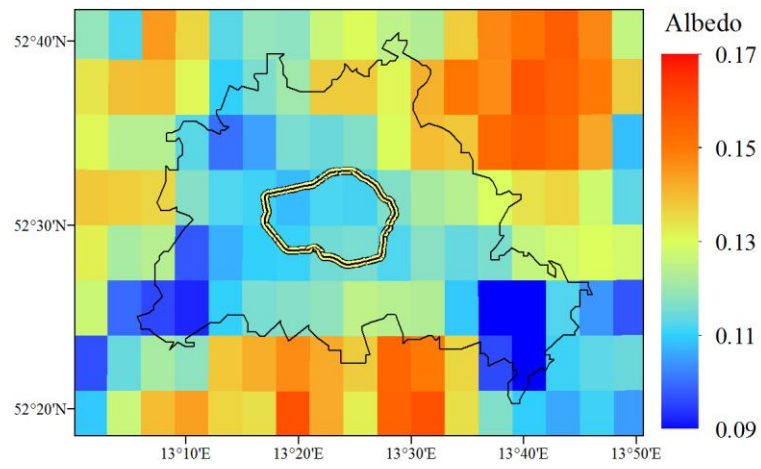
Supplementary Figure S5. Scatter plots of the absolute and relative urban-difference of incoming atmospheric longwave radiation and the AUHII under cloudless conditions.



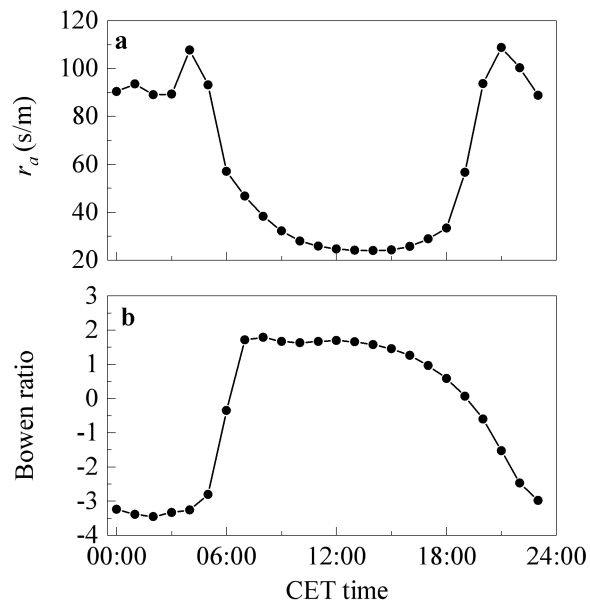
Supplementary Figure S1. Wind roses at station Potsdam in summer from 2010 to 2017. The bars refer to the frequency of how often wind came from the respective direction and the colors indicate how much the wind speed is observed in the indicated interval.



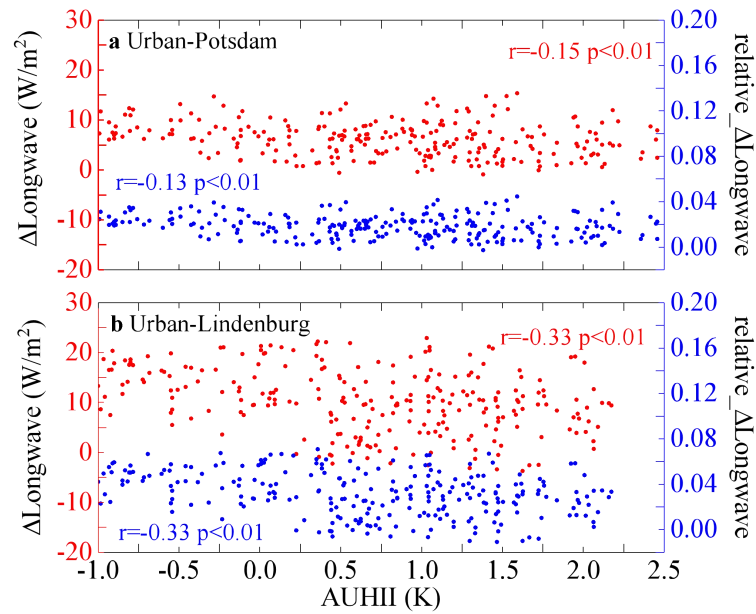
Supplementary Figure S2. Scatter plot of the AOD observed by MODIS and sun photometer at FUB.



Supplementary Figure S3. Spatial distribution of the mean MODIS albedo in June, July, and August from 2014 to 2017.



Supplementary Figure S4. Diurnal variations of the (a) aerodynamic resistance and (b) Bowen ratio in summer.



Supplementary Figure S5. Scatter plots of the absolute (red dot) and relative (blue dots) urban-difference of incoming atmospheric longwave radiation and the AUHII under cloudless conditions. Subplots (a) and (b) show the urban-Potsdam and urban-Lindenberg difference, respectively.