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Surface energy balance fluxes in a suburban area of Beijing: energy partitioning variability

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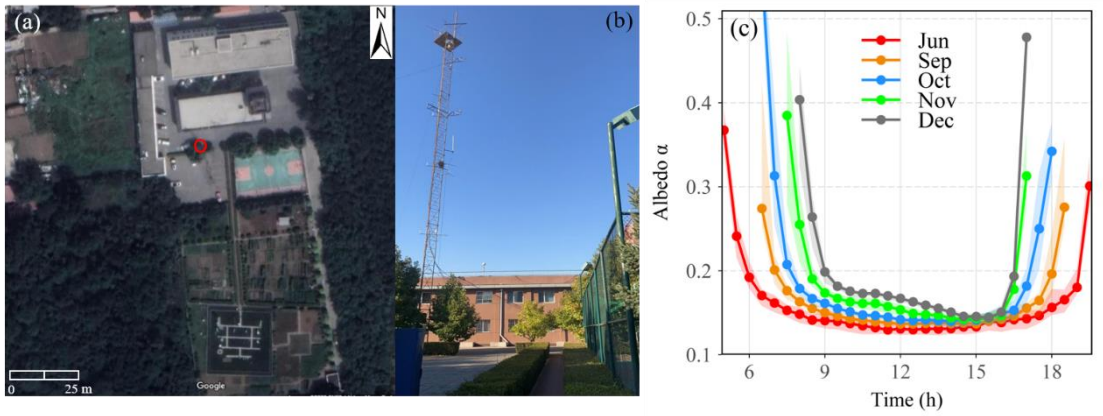

Figure S1: Study site (**a**) aerial view around MY flux tower (red circle, tower location) (© Google Earth 2022); (**b**) photo of flux tower and the building to the north of the tower; (**c**) median diurnal variations (points) and inter-quartile range (IQR) (shading) of albedo for June, September, October, November, and December 2013.

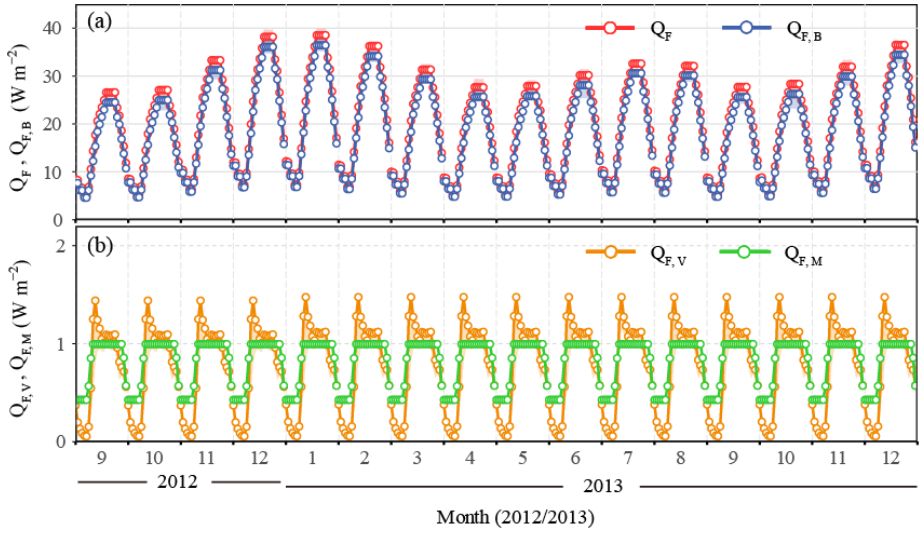

Figure S2: Monthly median diurnal pattern (points) with inter-quartile range (IQR) (shading) of (**a**) anthropogenic heat flux (Q_F) and heat released from buildings ($Q_{F,B}$), (**b**) heat released from traffic ($Q_{F,V}$) and human metabolism ($Q_{F,M}$).

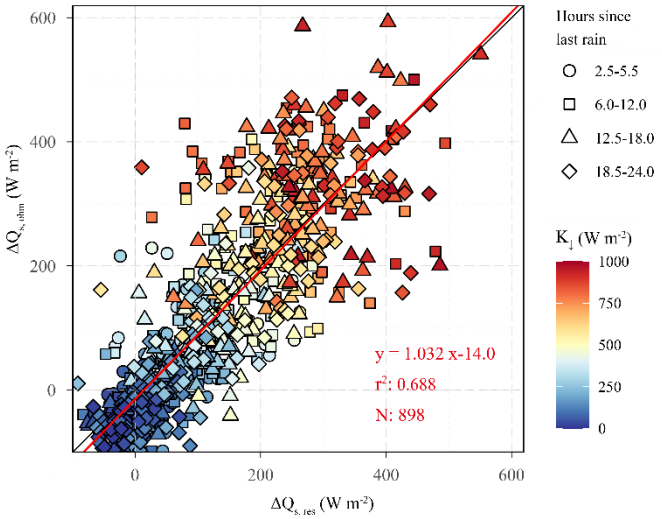

Figure S3: Daytime 30 min storage heat flux ($\Delta Q_{S,ohm}$ and $\Delta Q_{S,res}$) at Miyun by number of hours since rainfall (shapes) and incoming radiation value (colors) in spring and summer. r^2: coefficient of determination, *N*: evaluation data available.

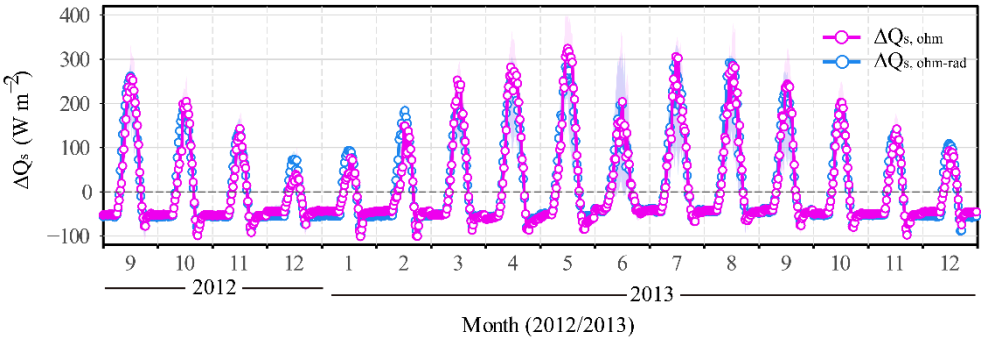

Figure S4: Monthly median and inter-quartile range (IQR) (shading) diurnal patterns of storage heat flux ($\Delta Q_{S,ohm}$ and $\Delta Q_{S,ohm-rad}$) at Miyun (September 2012 to December 2013) (Sect. 3.2). $\Delta Q_{S,ohm-rad}$: estimated ΔQ_S at MY by using land cover fraction of radiation source area.

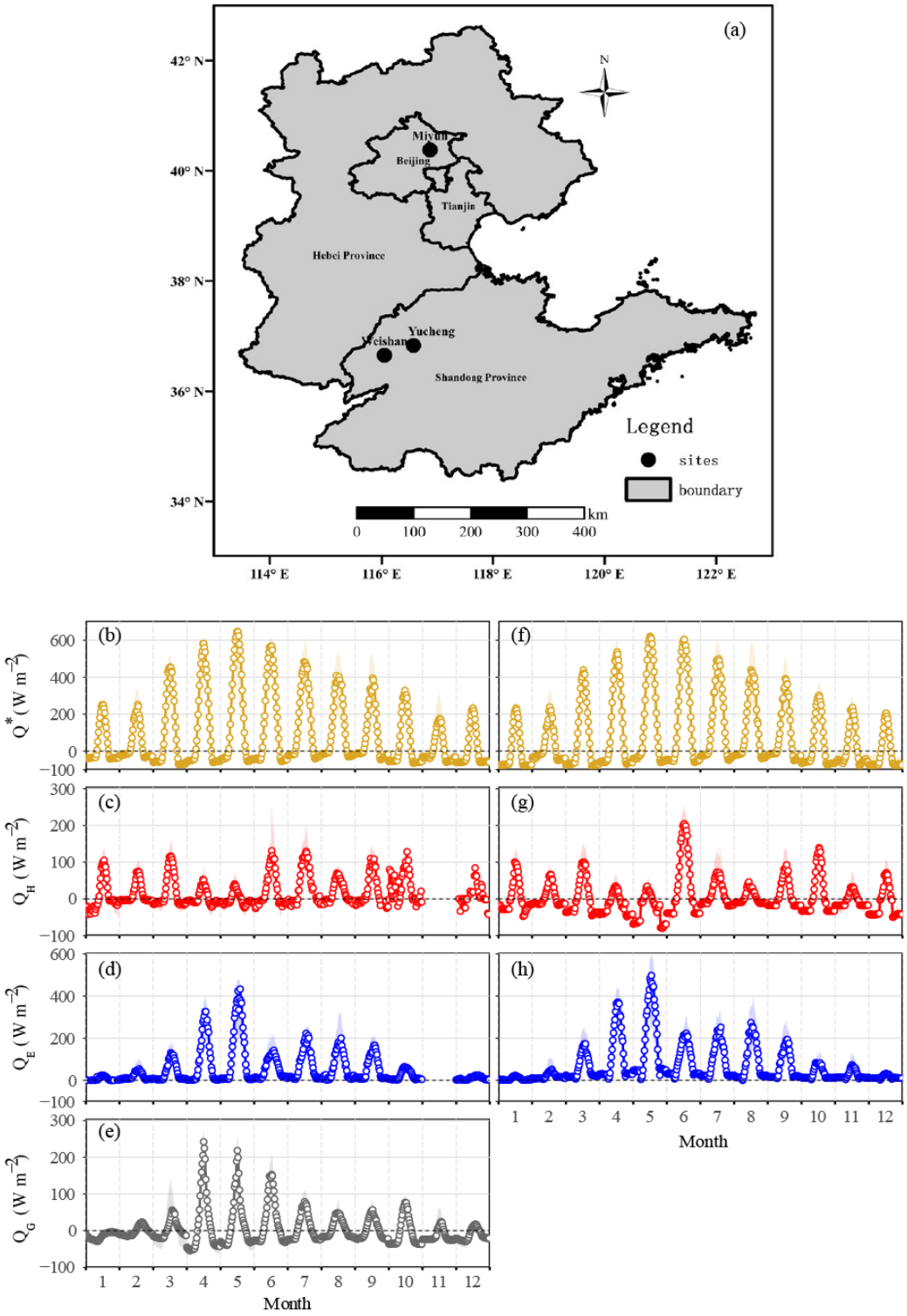

Figure S5: Location of Weishan and Yucheng stations and Miyun (**a**) and monthly median and inter-quartile range (IQR) (shading) diurnal patterns of net radiation (Q^*) (**b, f**), sensible heat flux (Q_H) (**c, g**), latent heat flux (Q_E) (**d, h**), soil heat flux (Q_G) (**e**) at Weishan (**b-e**) and Yucheng (**f-h**) in 2009.