Comment on essd-2022-164
Anonymous Referee #2

The authors produce a long-term eddy-covariance data set from two wheat-rice rotation cropland sites and two suburb sites in a typical East Asian monsoon region of Eastern China. They present and evaluate the general meteorological data, radiation data, turbulent fluxes, and CO₂ fluxes. The descriptions of the sites and methods are clear. They provide a valuable dataset, and the results are publishable. Therefore, I would like to suggest some adjustments that may help improve the study.

Major comments:
As a descriptive manuscript related to the field monitoring data, it should present the details about the instruments and data process as much as possible. For example, what are the operating range, accuracy, and precision of the sensors used? How to process the data gaps in the datasets? Was in-filling performed on these gaps?

Minor comments:

Lines 123–125: The installation height of the four-component net radiometers at SX-cropland and DS-suburb sites were the same. Please write them together as follows: “The four-component net radiometers (CNR-4, Kipp & Zonen B.V., Delft, the Netherlands) were mounted at 1.5 m for SX-cropland and DS-suburb, 3 m for DT-cropland, and 26.5 m above ground level (AGL) for XZ-suburb sites, respectively.”
Similarly, the installation heights at four sites for air humidity, air temperature and surface air pressure were the same. Please combine them.

Line 169: change “$\lambda ET$” to “$\lambda E$”.

Lines 277–280: the sentence is better to be modified as follows: “Take the Year 2016 as an example, $\lambda E$ dominates the land–atmosphere heat flux exchange at two cropland sites (SX-cropland and DT-cropland). However, the dominant consumer of the $R_n$ fluctuated between $\lambda E$ and $H$ at two suburb sites (XZ-suburb and DS-suburb), which could subsequently modulate the local climate.”

Lines 260 and 263: “DT-Cropland“ should be “DT-cropland“.

Figure 1b: change the label “SX-croand“ to “SX-cropland“.