Comment on essd-2022-164
Anonymous Referee #1


General comment
The manuscript by Duan et al describes a significant database of eddy-covariance and micro-meteorological measurements in a typical East Asian monsoon region of China. The data quality control for EC data is introduced in detail, and the manuscript also presents the variations of each variable at diurnal, daily and monthly scales, to some extent, indicating that the data accuracy is reasonable. This dataset will contribute to multiple research fields, including studying land–atmosphere interaction, improving the boundary-layer parameterization schemes, evaluating remote sensing algorithms, and developing climate models in the typical East Asian monsoon region. The manuscript is well written and documented, and I suggest it will be published after some revision.

Major comments:

[1] The description of the time used is unclear in the data file. Is it local time or UTC?

[2] For long term data sets, sensor calibration is important, especially for radiation measurements. The sensor calibration in the current Manuscript may need to be supplemented.


Minor comments:
Line 20: “four component radiation components” should be “four radiation components”.

Line 43: replace the word “influence” with “influenced”.

Line 45: change the word “both co-exist” with “both of them co-existed”.

Lines 69–72: the sentence is better to modified as follows: “Although China Meteorological Data Service Center (http://data.cma.cn/en, last access: 30 April 2022) has provided some meteorological data in recent years, EC sensors have not been commonly equipped in those meteorological stations, making it difficult to obtain heat and CO₂ flux data at some specific places or periods (Flerchinger et al., 2009).”

Line 151: change “Kljun et al. (2015) footprint model” to “the footprint model proposed by Kljun et al. (2015)”.

Line 174: add the word “and” before “P is the air pressure (hPa)”.

Line 178: “Where” should be “where”. Figure 7e: The unit of albedo should not be “W m⁻²”.