

Interactive comment on “In-situ air temperature and humidity measurements over diverse landcovers in Greenbelt, MD Nov. 2013–Nov. 2015” by Mark L. Carroll et al.

Anonymous Referee #1

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Data access - the registration step required to access the data from ORNL DAAC violates the open access goals and policy of ESSD. It prohibits, for immediate example, an anonymous review. The authors need to make every effort to make this data truly free and open. This reviewer will urge rejection of the manuscript unless the authors provide a mechanism for anonymous access. The authors should consult with ESSD editors about alternate options. The manuscript should contain a doi link directly accessible from the abstract and the summary paragraph. Certainly other groups at ORNL (e.g. CDIAC) work successfully under a fully open access system.

This small data set, collected and described with reasonable skill, has strong potential utility if the authors can make it full accessible (above). Specific suggestions follow:

C1

Throughout:

Table capitalised but figure not?

Appendix A not really a separate Appendix. Number it as a separate table?

Page 2, line 42 - “ensure that the Center develops adaptation strategies”. Ensure that each NASA centre (e.g. Langley, Goddard, Marshall, etc.)?

Page 4, line 84 - figure 1 refers to GSFC, not to Greenbelt.

Page 4, line 86 - Homer et al., 2015. Not listed in the reference list!

Page 5, line 94 (Table 2) - The authors should map their land cover types to the Local Climate Zones (LCZ) of Stewart and Oke (Stewart, I.D. and Oke, T.R., 2012. Local climate zones for urban temperature studies. *Bulletin of the American Meteorological Society*, 93(12), pp.1879-1900.) The LCZ have specific utility for urban heat island effects and probably map very closely to what the authors have provided based on NLCD. Presumably downstream users could do their own mapping of these data to LCZ categories but to have the originating data providers take that step would prove more accurate and also put these data in a larger and potentially much more useful context.

Page 7, line 152 - Tell us a bit more about the Beltsville data? Appreciate the proximity but shouldn't the readers / users know the setting - agricultural? That setting does or does not match one at GSGC? Do any of the Beltsville data tie to US NWS? Does any of them have a WMO station number? With a small bit of additional effort the authors could at least identify the nearest 'certified' weather station data?

Page 8, line 162 - “each logger was deployed in a distinct land cover type” Not quite true because the authors already told us they deployed twelve sensors across five different land use type?

Page 12, Figure 1 - The flags prove very hard to read. I could not find 12 of them.

C2

Page 14, Figure 4c - Presumably the temperature offset to Beltsville reflects the urban setting of Goddard vs the agricultural setting of Beltsville. Knowing that land cover difference (see comment above) would help the reader understand this data.

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