

## ***Interactive comment on “A new merge of global surface temperature datasets since the start of the 20th Century” by Xiang Yun et al.***

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The characterization of Berkeley Earth station counts presented in this paper (e.g. Table 1) are grossly incorrect and in all cases too small.

GHCN and CRUTEM are sources used in the construction of the Berkeley Earth data set, so it would hardly be reasonable to expect the numbers to ever be smaller than GHCN.

A quick review suggests the following Berkeley Earth station counts (as of Feb 2019) for locations having at least 15 years of data during the interval 1900 to 2017:

Global 27564, Northern Hemisphere 24782, Southern Hemisphere 2780, Africa 983, Asia 4185, Australia 1029, Europe 3971, N. Amer. 14587, S. Amer. 862, Antarctic 48

C1

I note that these numbers are often twice as large as reported in Table 1 and sometimes more than 10 times larger. I also suspect the characterization of Berkeley Earth presented in Figure 2 (b & c) is incorrect.

Consequently, the textual discussion about C-LSAT having the most stations is also generally incorrect.

I do not know why the figures reported in this paper regarding Berkeley Earth are so inaccurate. I do not believe that they are simply out-of-date as I do not believe that there was ever a time when the values reported in this paper would have been correct. Rather, it appears that there has been some problem with the handling or analysis of the data. We would be happy to assist the authors in identifying the source of the problem.

Sincerely,

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C2