

Dear Dr. Miyahara,

These reviewer comments will be very helpful for me in revising the paper. I tried to keep the paper as short as possible, with no unnecessary details, but maybe I thereby left out some details which actually are necessary?

I agree almost completely with reviewer 1. However, I think reviewer 2 is unnecessarily negative because (s)he has misunderstood some of the things I have written. There are also some other comment by this reviewer which I do not agree with.

2-3. I do mention the possibilities that the satellite and surface record could have real differences or that the satellite record by Christy et al could be wrong. This is acknowledged by most specialists already and doesn't need to be discussed in detail. The interesting hypothesis to test is the one which have not been tested before. If there are problems with the surface records in some regions, they could appear at any time.

Because they appear early in the century in one region, it cannot be assumed that this is the case for other regions.

4. Because of the need to be able to check for auto-correlation on the time series, I think I have at least one valid reason why 30+ years is needed.

5. I think Vincent gives a good description himself of the method he has developed. I find it unnecessary to repeat this. I think I should only need to give a detailed description of what I have added. Furthermore, I cannot possible give all adjustments made in the paper. Then it would be a book. I can easily supply all the data and logs through a ftp-site, though.

7. This method can also detect and correct for urban cooling. There is no problem with that. Only if a large number of stations have urban cooling is there a problem. That is why it is a good thing that urban cooling should be rare. And if it is common, it would be a problem for any method.

10-11. I explain at the bottom of page 5 and the top of page 6 that the meteorological year mean is calculated from corrected seasonal means while the calendar year mean is calculated from corrected monthly means. The corrections made before calculating the two means are different. The differences between the means are real and it can happen. Why monthly and seasonal corrections should not be able to be different I don't understand. A seasonal mean is, in this case, the average of three monthly means, which could make a difference.

Yours sincerely,
Lars Kamél