The authors thank Reviewer 4 for their constructive comments, which we have responded to individually. However, we would like to point out that it appears the reviewer did not receive our revised manuscript that was submitted in response to comments made by reviewers 1 and 2. The manuscript versioning is handled by the Journal, so we are not sure why this happened. In this case, several of the suggestions and critiques provided by Reviewer 4 were very similar to critiques provided by Reviewers 1 and 2 and were therefore answered in our 2nd draft. We have tried to highlight the sections that are responsive to those points. During that revision, many of the inconsistencies in symbol usage and grammatical errors were also corrected. This can also explain the lack of "red ink" in the 3rd draft which we now submit.

1. In order to show the advantages of the presented two statistical learning methods method, I suggest that the author add the data comparison with traditional bias corrections method.

Thank you for the suggestion to add a traditional bias correction method to highlight the advantages of the statistical learning. A typical bias correction would be for example to apply a constant offset to all calibration data between successive instrument calibrations. However, this would not address the periodic oscillations that are inherent in these measurements, as a consequence of the environment that they were exposed to. In this sense, a typical bias correction algorithm was determined to be insufficient from the beginning.

This comment does highlight an aspect that was missing from the first draft of the manuscript – a more complete literature review on bias correction. This is a critique that was also made by reviewer #2 and in response we added a review of bias correction methodologies in the Introduction. That text can be found in the Introduction, beginning around Line 51. This section goes on to explain (around line 77) why a standard drift correction is inadequate e.g. because the instrumental bias is equivalent to 100% or more of the dynamic range in the environmental signal of interest.

When we consider this and the reviewer's suggestions to shorten the manuscript, we have opted to forego including the additional figures and descriptions that would be required to depict the results from e.g. a constant offset drift correction.

2. The paper is too long and this makes the evaluation and interpretation of the main contributions of the paper obscure. I suggest to simplify it.

Please see response to point 3.

3. Authors could adjust the figures, and the non-essential figures should be displayed in supporting information, which helps to understand the main gist of the paper.

We have worked to shorten the paper by scrutinizing the use of Figures. We have moved two Figures from the earlier draft (Figures 7 and 11).