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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Carbon Dioxide and Methane Measurements from the Los Angeles Megacity Carbon Project: 1. Calibration, Urban Enhancements, and Uncertainty Estimates" *by* K. R. Verhulst et al.

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I had a question about the use of the "annual averages" which was for example 2009.9 +/- 116.4 ppb CH4 at one site. My assumption would be the standard deviation is calculated on a set of annual averages, but it seems to be the standard deviation of the 1-hour data (or similar). Shouldn't this be referred to as the mean 1-hr average?

Some additional minor comments:

Eq. 1 gives the equation for Scal [as used in Section 6.1.5] not S

Eq. 11: the overbar should extend over the squared - otherwise the square root and squared cancel

The variable names are a little confusing on first read. There are six terms: uncorrected values, corrected values, and the assigned tank values + each of these with the "cal" subscript. Three possible ideas to help clarify: - Page 9 / L29 sentence should end with "of the calibration standard" - Supplement: there is a reminder what Xassigncal means, but a reminder of the meaning of Xassign and Xcorr would also be helpful - Figure A3: "uncorrected" instead of "raw" so one knows for sure it is referring to the same thing

Page 27: unclear what "fitted curve residuals" refers to

Figure S2 caption: "same suite of tanks as Figure S1"

Page 27 /L18-26: Could be reworded for clarity (the point about CH4 standards being stable is made three times)

Figure 7: This is an interesting idea for a graph but unfortunately it is difficult to make out the details, especially for the CH4 plot. Also items in the legend are all uppercase which is not consistent with other usage

I am not sure the use of overbars in Table 8 and its caption is fully consistent

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