

This manuscript describes the deployment of low-cost ozone and CO2 monitors in Riverside, CA. Many groups are working on these sorts of low-cost sensors, but to date most papers have focused on calibration and sensor characterization. As the authors note in the introduction, few papers outline deployment of sensors to quantify variations in air quality. Therefore, this manuscript's description of a deployment of ~10 sensors represents a meaningful contribution to the field.

-Section 2.2 - The field calibration needs more explanation. What are the coefficients  $p$ ? Why is the functional form of the calibration for CO2 and O3 different? I am aware that this group has written previous papers on sensor calibration, but not all readers will be familiar with that work. A more thorough, stand-alone description of the calibration method is required.

-The comparison of calibration versus deployment performance is useful (e.g., Figures 5 and 6), as these illustrate that differences in O3 measured during the deployment period are "real". However, given that Fig 7 shows that most of the U-Pods are correlated, Figure 6 would be more effective if the raw (rather than absolute) concentration difference was shown.

-For cases in Fig 7 where deployment data cluster around the 1:1 line - how can authors be sure that this is true variation and not some sort of uncertainty? One might expect less scatter around the 1:1 line for training data than for deployment data. E.g., if 50% of the calibration data is randomly held out as a test set, what would these scatter plots look like for the held out portion of the co-location period?

-Figure 8 - I do not understand the point of this figure, and it needs to be discussed more thoroughly. My read on it is that D3 is systematically lower than D7 at all times of day.

-Figure 9 - Do all of the data forming the "claw shape" come from the same day? Or was this phenomenon observed across a number of days?

-The discussion of CO2 needs to be better integrated into the manuscript. At times it reads like the manuscript was written for ozone, and CO2 was an afterthought.

-Page 3, Line 4 - Where does the information on the number of monitors required for Riverside-San Bernarndino come from?

-Page 4 - Line 2 says that the study area was  $314 \text{ km}^2$  but line 4 and Fig 1 suggest a much smaller area. Please clarify.

-The discussion of auto-ranging for CO2, and how it was dealt with, are confusing. I cannot tell if that data was removed or somehow corrected. If corrected, what was the procedure?

-The manuscript has both an Appendix and an SI, which seems redundant. The plots in the Appendix should either be in the main text or in the SI.