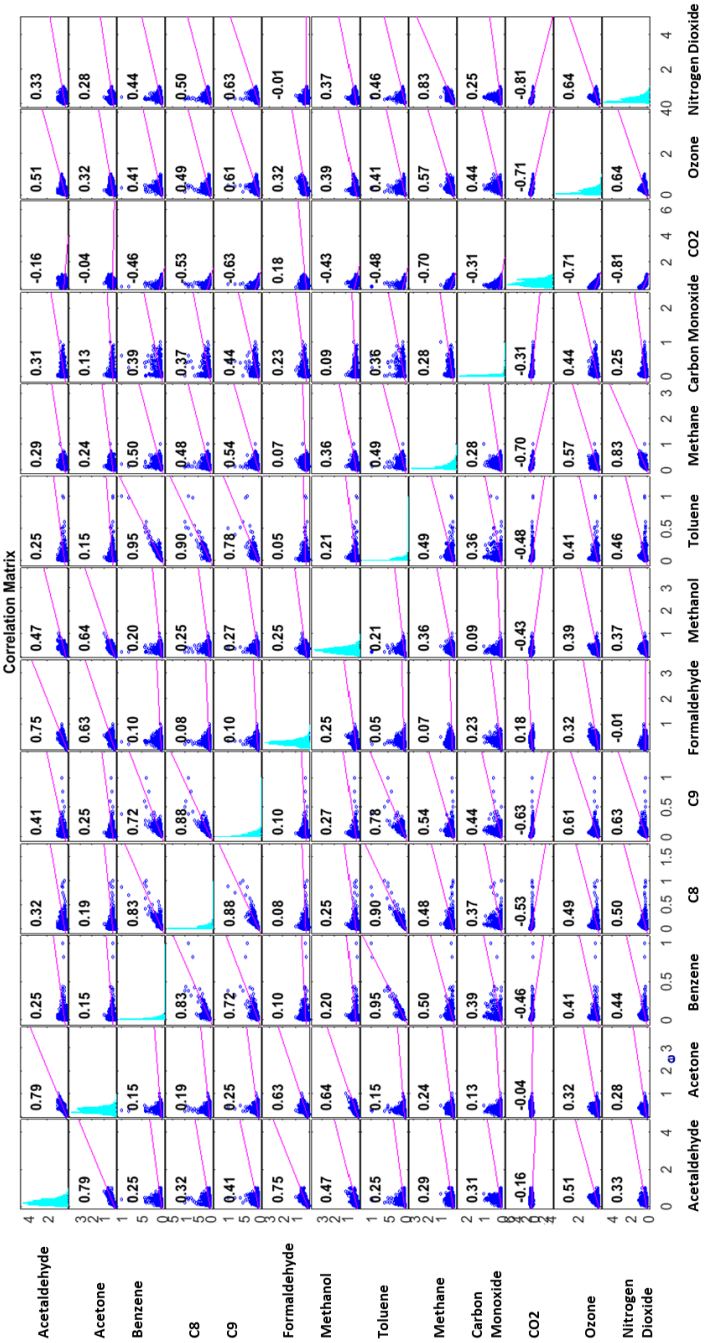
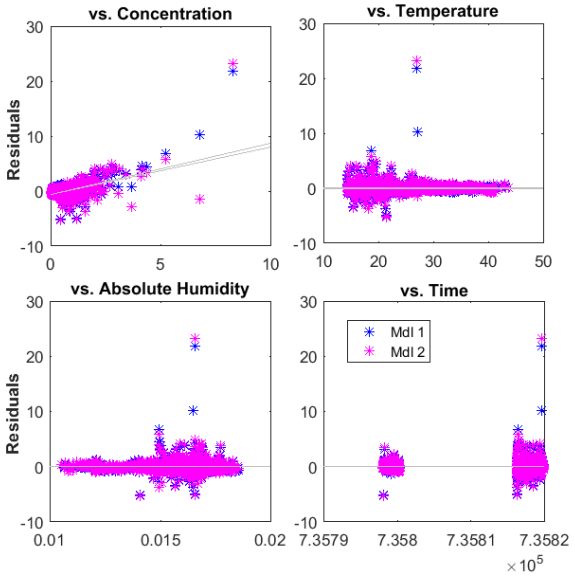
Supplemental Material

Figure S1 – Correlation plot for reference gases

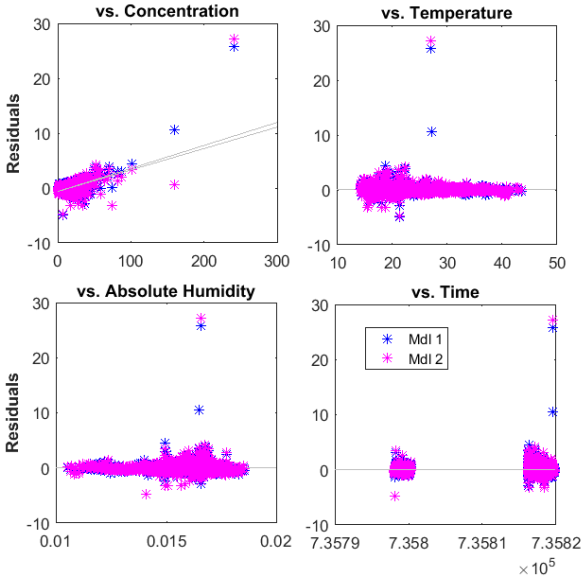


Figures S2 - Regression model residuals (from Section 3.1)

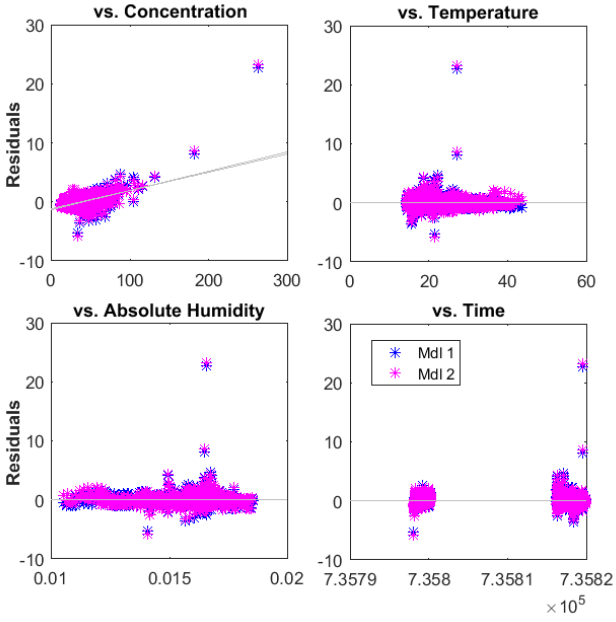
a (top left four panels) – models for benzene
b (top right four panels) – models for summed aromatics
c (bottom left four panels) – models for summed VOCs
d (bottom right four panels) – models for methane



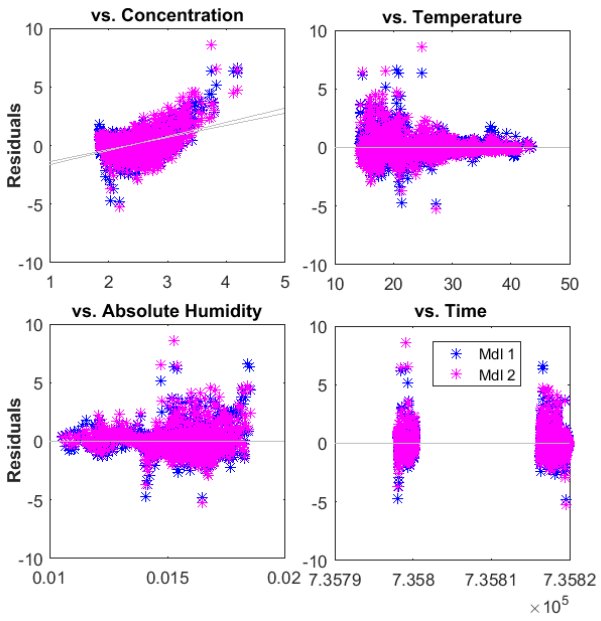
a.



b.

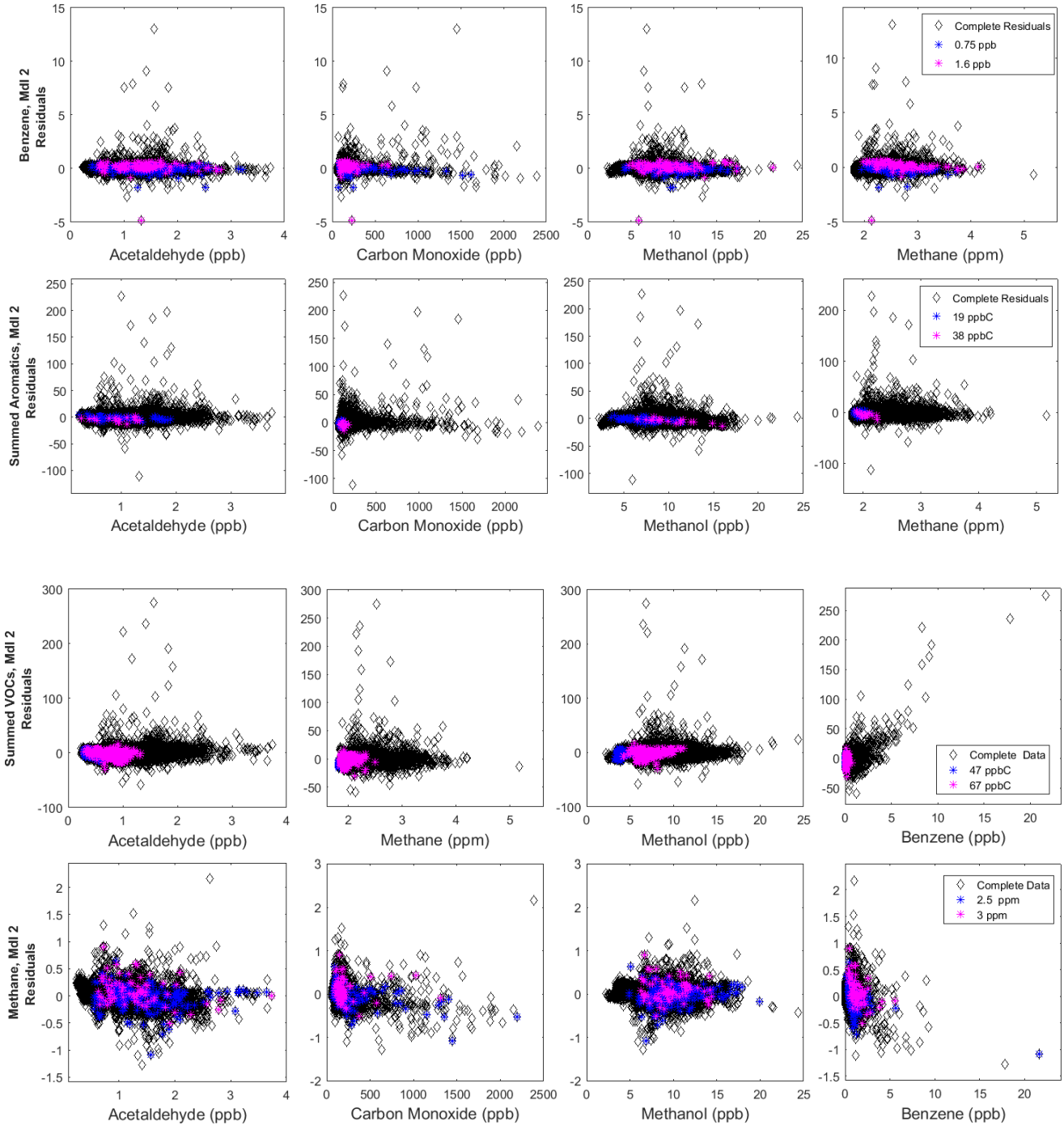


c.

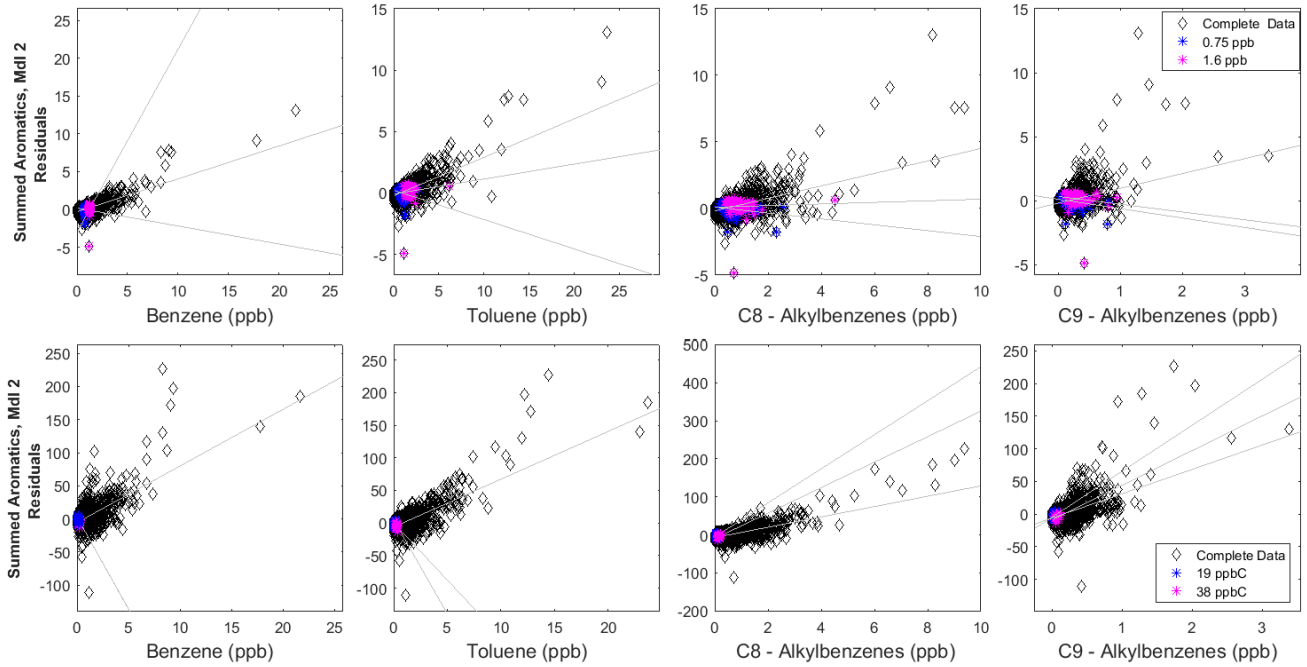


d.

Figures S3 – Additional residuals for models vs. target and non-target VOCs (Section 3.1.4)

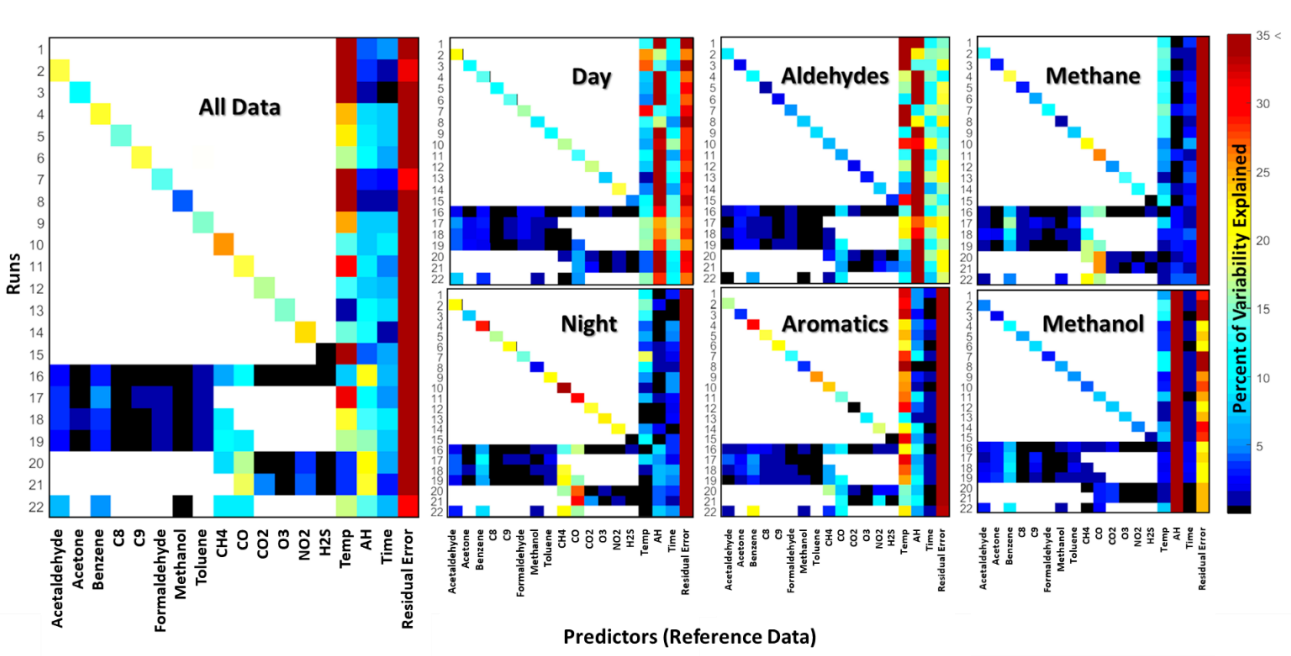


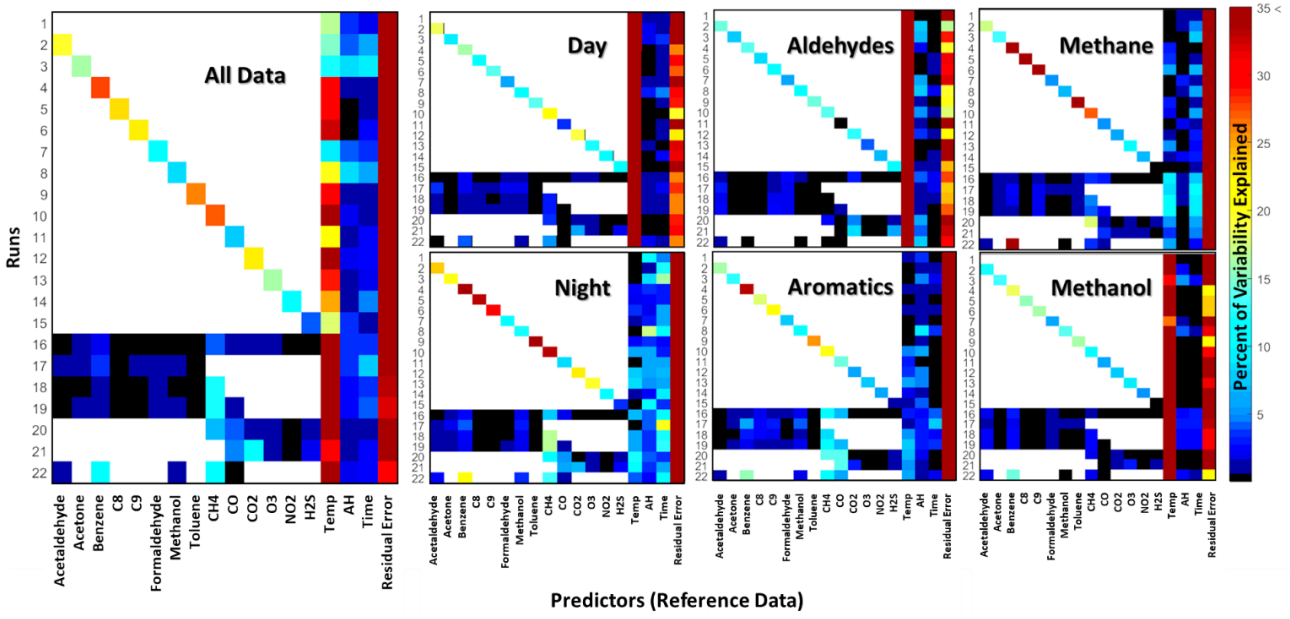
5



Figures S4 – ANOVA results illustrating the percentage of variance in the sensor signal explained by various predictors for complete data and subsets of data (top – Figaro 2600, bottom – Figaro 2602) (Section 3.2)

(White indicates that a predictor was not included in a run, and the VOC species subsets are defined in Figure S5)





S5 – Illustration of selected periods of different relative composition (Section 3.2)

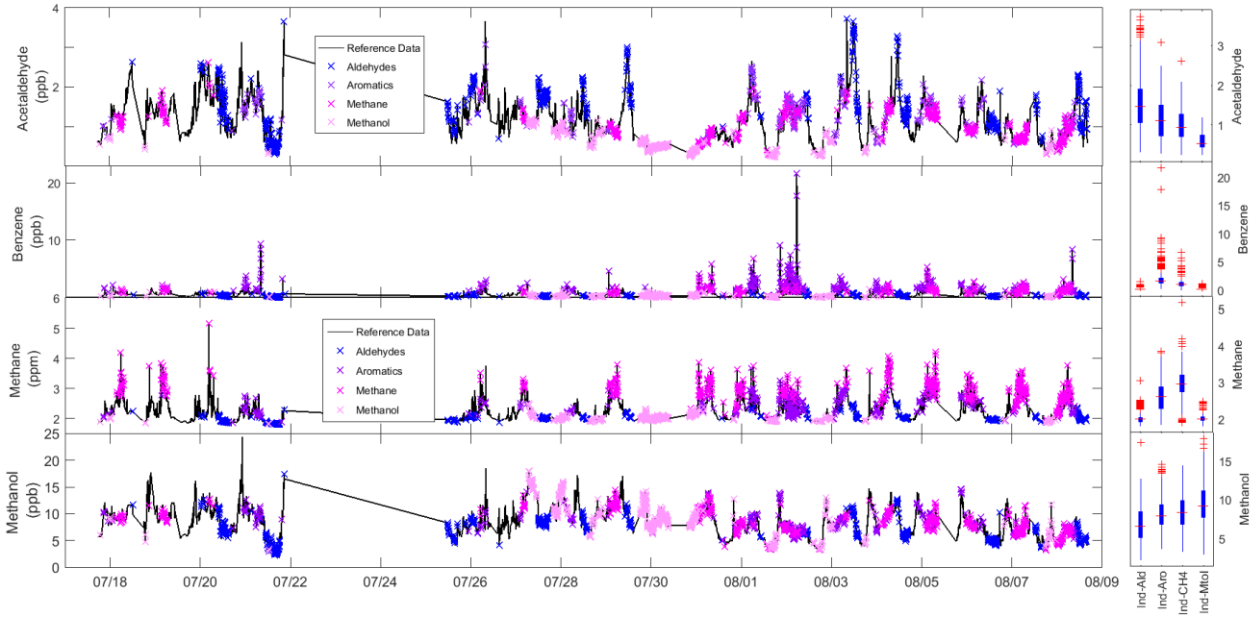
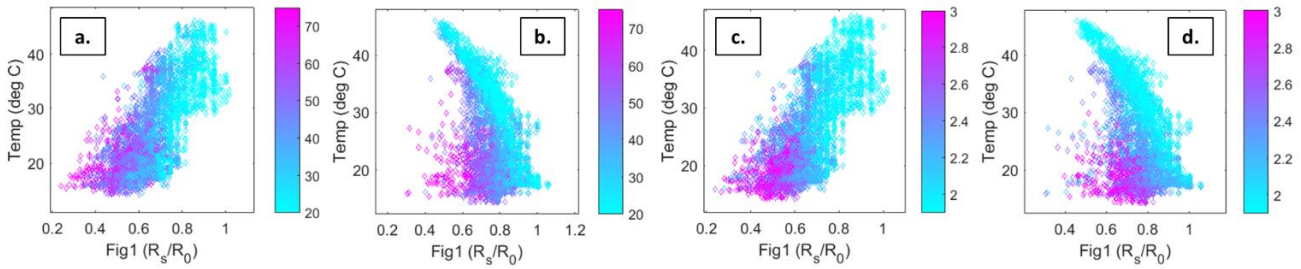
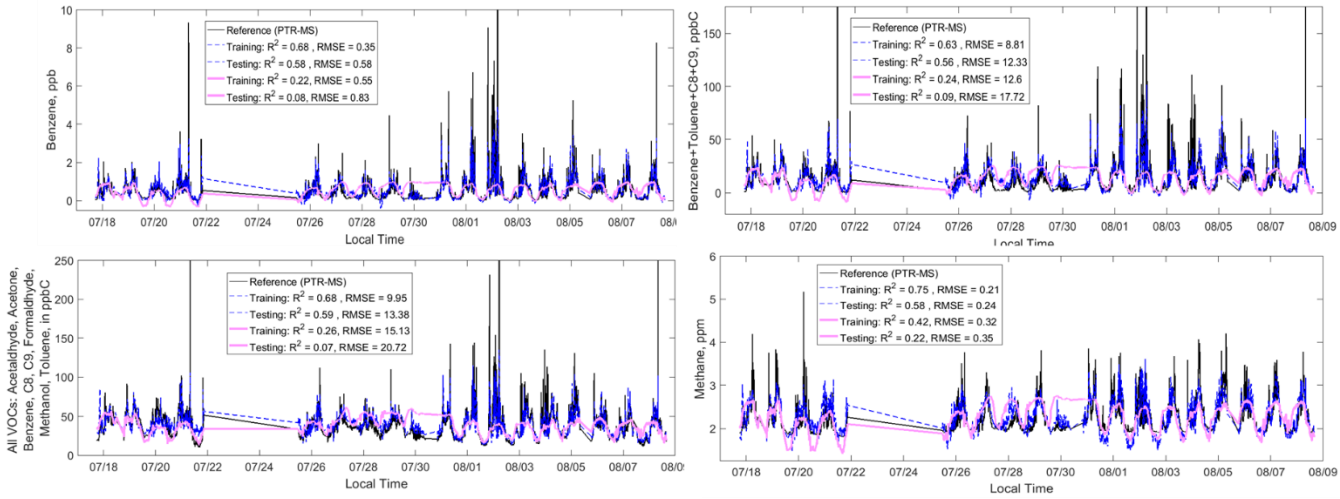


Figure S6: Sensor signal vs. temperature and pollutant concentrations (Section 3.2)

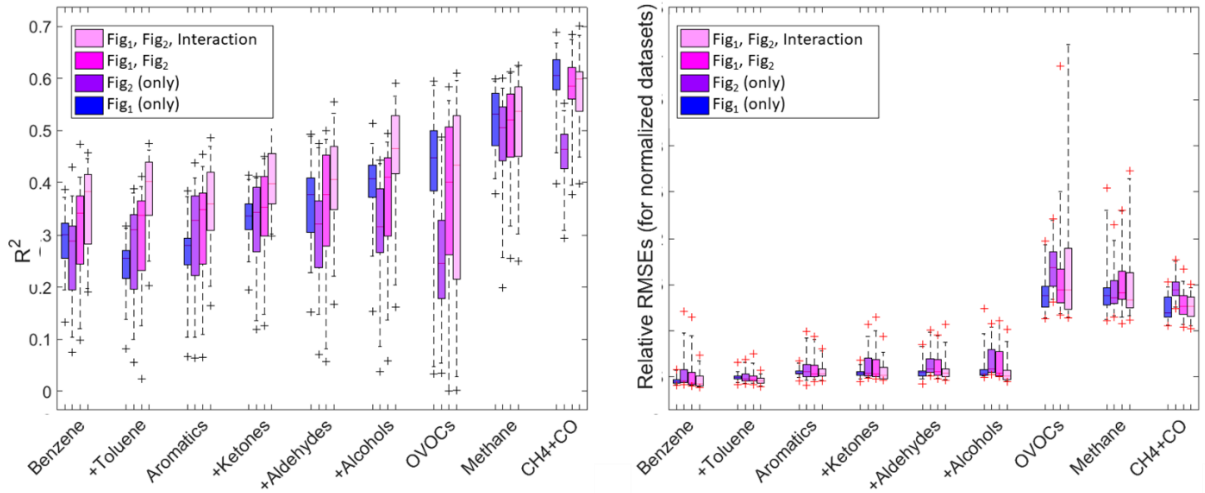


Figures S7: Regression analysis results, excluding VOC sensor signals (Section 3.2)

(training data before 7/20 & after 8/5, remaining data is testing)

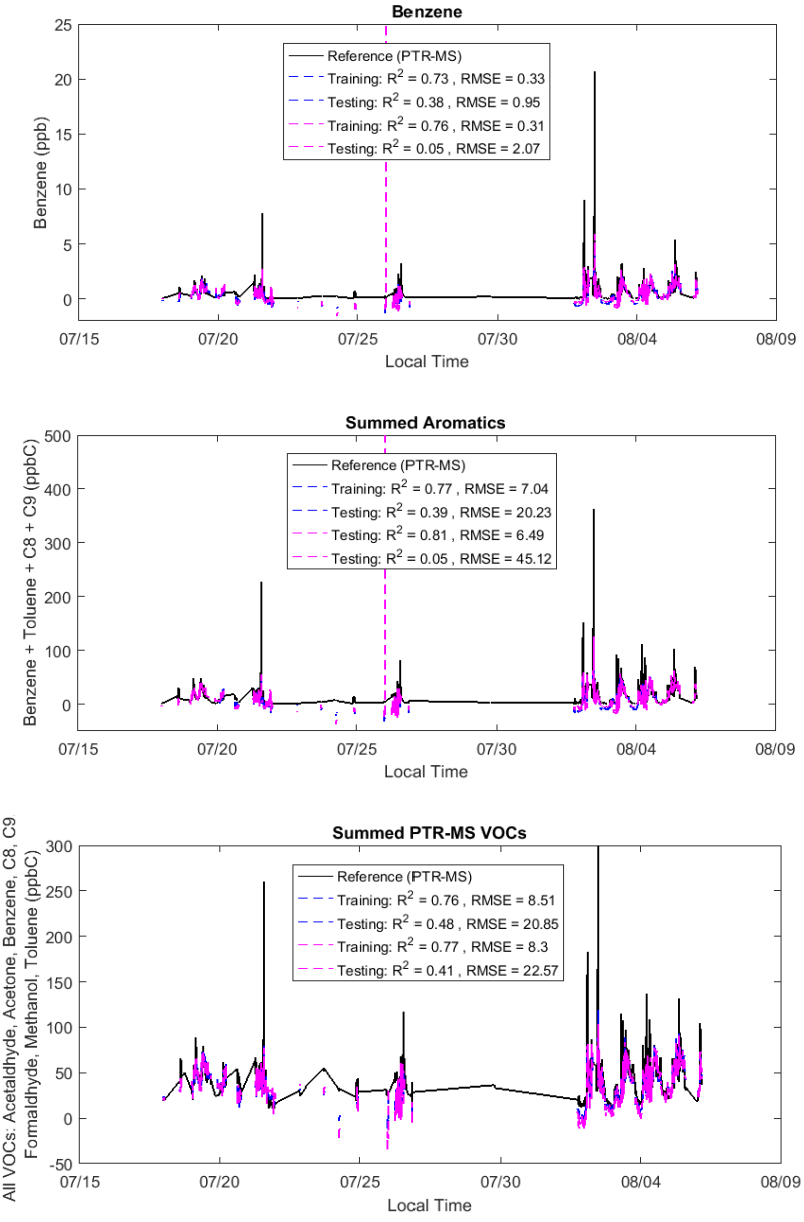


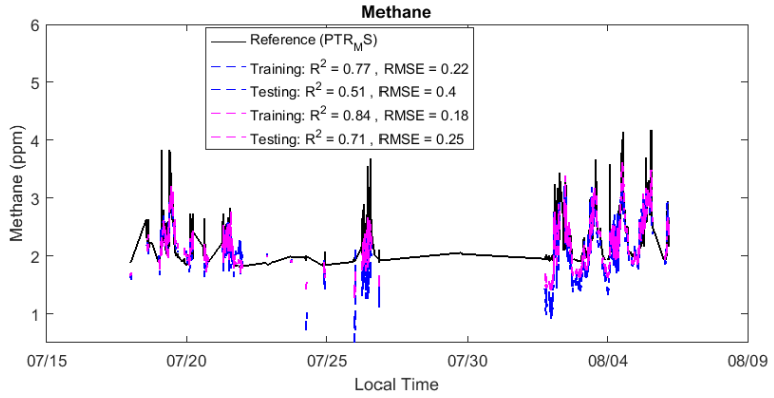
Figures S8: Bootstrap analysis for sensor set in secondary U-Pod (Section 3.2)



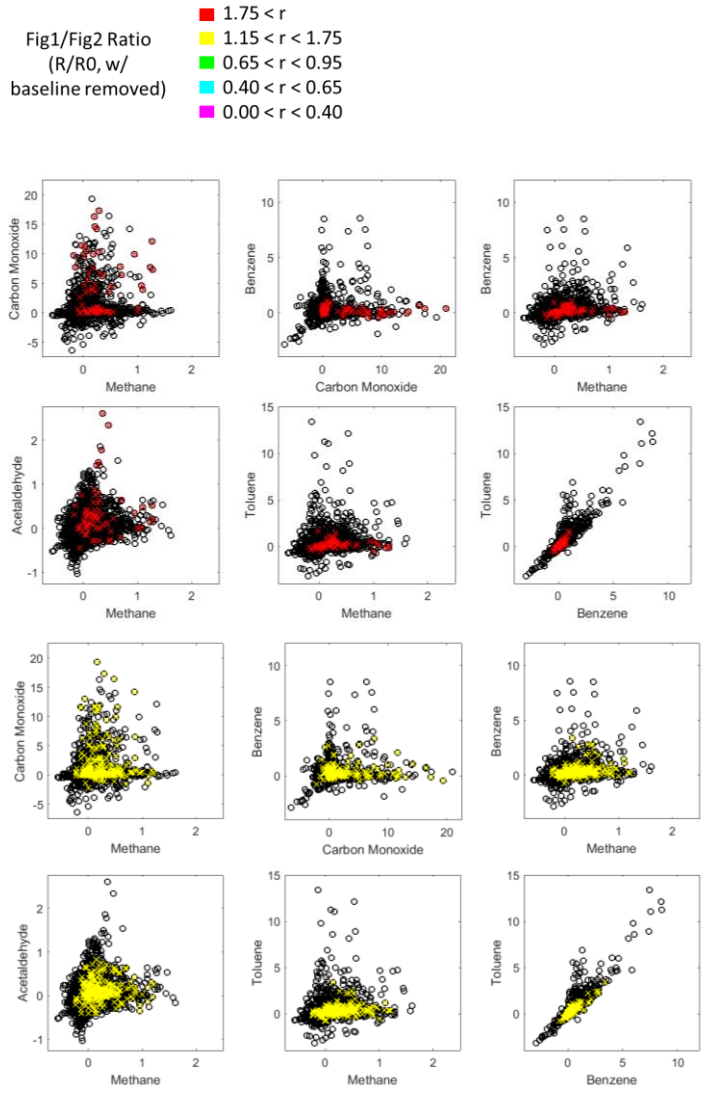
Figures S9: Regression analysis results for sensor set in secondary U-Pod

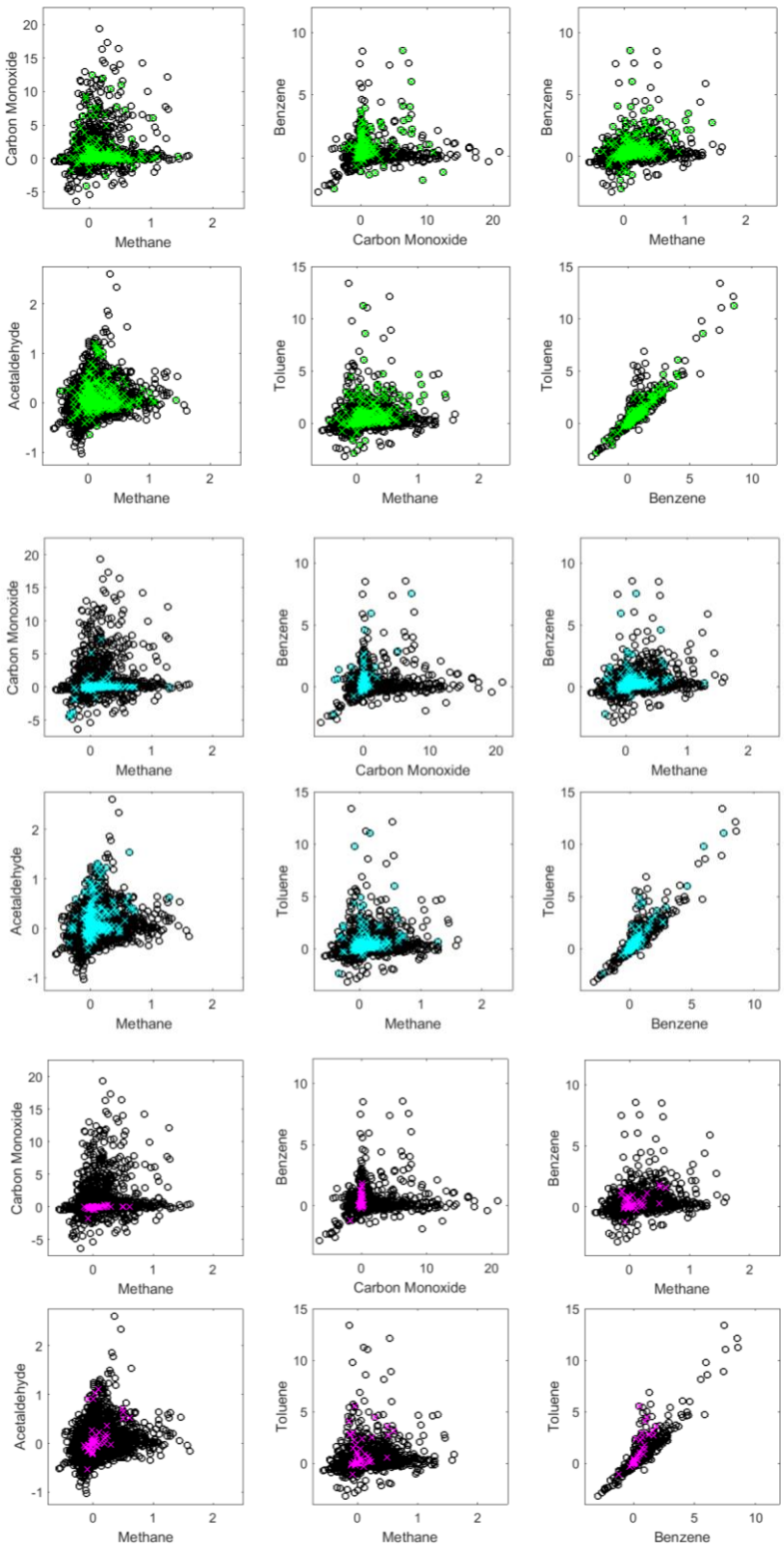
(training data before 7/20 & after 8/5, remaining data is testing)





Figures S10: Complete sensor ratio plots (Section 3.3)




Carbon Monoxide
Methane
Benzene
Carbon Monoxide
Benzene
Methane
Acetaldehyde
Methane
Toluene
Methane
Toluene
Benzene
Carbon Monoxide
Methane
Benzene
Carbon Monoxide
Benzene
Methane
Acetaldehyde
Methane
Toluene
Methane
Toluene
Benzene
Carbon Monoxide
Methane
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Carbon Monoxide
Benzene
Methane
Acetaldehyde
Methane
Toluene
Methane
Toluene
Benzene