Interactive comment on “Emissions of organic carbon and methane from petroleum and dairy operations in California’s San Joaquin Valley” by D. R. Gentner et al.

Anonymous Referee #1

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General Comments about “Emissions of organic carbon and methane from petroleum operations in California’s San Joaquin Valley”

This paper provides a useful summary of the measurements of reactive gas phase organic compounds during the Calnex project. Their objectives stated in section 1 were to examine the magnitude, chemical composition, and spatial distribution of organic carbon emissions from petroleum and dairy operations in the San Joaquin Valley by using (1) Measurements at ground sites and aircraft (2) making a statistical source footprint using measurements (3) compare relative abundance of emissions from petroleum and dairy sources with other significant anthropogenic sources in the same region (4) com-
pare petroleum and dairy source emissions to motor vehicle emissions for comparison to the CARB inventory. This paper adds additional characterization of emissions in an important region with air quality issues.

I recommend this paper for publication with minor updates as follows: Some of the key points discussed in section 3.4 (Implications for air quality and emissions inventories) should be included in the abstract (quantitative assessments of the emission inventories). In addition, further discussion of the exactly how the information provided in the paper can be used in an emissions inventory (perhaps a table to replace or augment the discussions on pp. 28251 (lines 5-30) and 28252 (lines 1-9) on p 28252. How would a person developing an emission inventory in the SJ Valley use the results?

A few Editorial Corrections are noted below:

p. 28227, line 9 (missing period at end of sentence) p.28227, line 26 (missing period at end of sentence) Some of the fonts in figures 7, 8 and 9 are too small and are hard to read.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 28225, 2013.