In Ars et al., the authors describe a new method for estimating gas emission rates from industrial facilities, by combining 1) tracer flux measurements, 2) Gaussian dispersion modelling and 3) a statistical inversion algorithm. The new method is evaluated using controlled methane/acetylene releases and compared to results from tracer flux. Four tracer placement scenarios are evaluated to demonstrate the improved accuracy of the method in situations where the tracer and the emission source are not perfectly collocated.

Resubmission review comments

Upon re-reviewing the paper, I am satisfied with the edits and responses to review comments. Given current uncertainties that were pointed out in review and were not addressed with additional experiments due to other limitations, I agree with changing the description from "method" to "concept". Provided the editors of AMT are amenable to publishing "concepts/frameworks", then this manuscript should be published subject to minor technical corrections.

All the suggested technical corrections are towards making clearer figures. The editing and revisions to the main text were excellent and I could not find any errors.

All figures: perhaps adding a descriptive word would help keep track of the different configurations. For example, configuration 1 could be relabelled 1: co-located tracer, 2: upwind tracer, 3: lateral tracer, 4: multiple sources.

All figures: check figure resolution, many appeared blurry to me

Figure 1: axis tick frequency in the methane plots is inconsistent between the top panel (configs 1, 2) and bottom panel

Figure 2: I found this difficult to interpret without a careful look. I would zoom in more on the tracer/methane locations. It also difficult to see black text on top of the map

Figure 3: This figure is in French, and should probably be translated to English.

Figure 5: axis labels too small, and blurry