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Atmospheric Measurement Techniques Discussions

Interactive comment on "A gas chromatograph system for semi-continuous greenhouse gas measurements at Puy de Dôme station, Central France" *by* M. Lopez et al.

M. Lopez et al.

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Dear Pierre,

First of all, the authors would like to gratefully thanks the three anonymous referees for their thoughtful comments that helped to improve the quality and the flow of the manuscript. We carefully took into account and answered every comments. As underling, this manuscript gives a description of the measurement technique (gas chromatography) used for semi-continuous measurements of greenhouse gases in the atmosphere. We knew that the presented measurement technique is not innovative

and few studies have already published this technique. Nevertheless, our manuscript strongly focuses on comparison between different techniques involving several analyzers, flasks measurements and cylinder measurements. It shows that it is extremely important to diversify the methods to assess the uncertainties. Based on observed biases on our dataset, we described several tests and results which can be used to solve the problems and be useful for further study as the global greenhouse gas measurement network is currently growing fast. The dataset recorded at Puy de Dôme station and presented in our study is a key dataset for greenhouse gas measurements in France (location, altitude and long time series) and in consequence will be intensively used in inverse modeling. We also would like to point out that the knowledge of eventual biases in the measurements is essential for the quality of the inversion and the emission estimation. For these reasons, we think that Atmospheric Measurement Techniques is fully adapted to our paper and will be of interest for the scientific community.

Thank you for your consideration,

Sincerely,

The authors.

Interactive comment on Atmos. Meas. Tech. Discuss., 8, 3121, 2015.