

1 ***Author's Reply to comments from the referee #2***

2

3 We would like to thank the referee #2 for his/her careful reading and comments. Listed below  
4 are our replies to the referee's comments and suggestions. We will revise our manuscript  
5 accordingly.

6

7 <Referee> Some parts could be shortened (introduction and parts of section 3)

8 <Reply> We will revise introduction and section 3 to be more concise.

9

10 <Referee > According to Fig. 3 standard gases to not pass through the Nafion dryer unit. Was  
11 the Nafion dryer checked for CO losses?

12 <Reply> A previous study by Nedelec et al. [2003] thoroughly tested a Nafion dryer for CO  
13 measurements, and reported no CO losses with a gas filter correlation (GFC) method,  
14 which is the same detector with ours. We believe there is no significant CO loss  
15 through the Nafion dryer.

16

17 <Referee> Fig. 4 shows a very nice linear relationship between GFC and VURF, but an offset  
18 of 16.11 ppb. Was the automatic zero measurement once per hour also used during  
19 this experiment, and if yes: Why do you see this offset? Such an offset would be very  
20 significant for ambient data.

21 <Reply> The offset is not 16.11 "ppb" but 16.11 "mV". This offset signal resulted from the  
22 GFC background signals. Since this is not essential, we will remove the equation and  
23 we will add the sentence "1 mV of residual GFC signal corresponds to about 2 ppbv"  
24 in the caption instead.

25

26 <Referee > Page 4520, Lines 2-4: Please state if the slope and intercept were significantly

1 different from 1 and 0 or not. Overall, this is a very good correlation between the two  
2 methods.

3 <Reply> Thank you for your indication. We will add the explanation of the fitting curve in the  
4 revised manuscript.

5

6 <Referee> Page 4515, Line 16: ‘... a hydrophilic CO oxidizing agent’: If it is hydrophilic, it  
7 should absorb some water and consequently change the humidity. Please check.

8 <Reply> Thank you for your keen eyes. We confirmed that SOFNOCAT is “hydrophobic”.

9

10 <Referee> P 4520, Line 9: ..and also no significant growth of CO in the flask, which is  
11 equally important.

12 <Reply> We will revise the sentence as indicated.