

Comments to the manuscript (acp-2019-1070) of Kramer et al.:

General comments:

The manuscript describes an interesting analysis of nitrous acid (HONO) emission under real-world driving conditions from vehicles in a UK road tunnel. The manuscript needs some improvement by the authors based on the comments given below prior to publication in Atmospheric Chemistry and Physics.

Special comments:

Introduction, page 1, line 29:

References:

.....*Villena et al., 2011* change to *Villena et al., 2012*, (please see Reference, page 22, line 13)

Introduction, page 3, line 11, 20.....:

General a range of numbers should be specified as "a to b" and not "a - b". And add for all given physical quantities one space between number and unit (please see guidelines for authors, mathematical notation and terminology).

E.g. please change.....ranging from 0.16-1.00%.... toranging from 0.16 to 1.00 %....

Introduction, page 3, line 34:

Data taken at site in North Kensington, London during 2012 as part of Clean Air for London (ClenarLo)....., please add the reference *Bohnenstengel et al., 2015*

Introduction, page 4, line 11:

Supplementary table S1: Why are for the motorcycles and in particular buses in comparison with cars and light and heavy goods only the total number of licensed vehicles are listed? Buses and coaches have often a diesel engine and the contribution of diesel fuelled vehicles to the total number of vehicles will be higher than 44%.

Experimental, page 4, line 27:

Please used SI units, e.g. please change 52 kph to 52 km h⁻¹ and please check also all other units in text and in figures!

(please see guidelines for authors, mathematical notation and terminology)

Experimental, page 5, line 22:

Please change ...0.9 L/min to 0.9 L min^{-1}

(please see guidelines for authors, mathematical notation and terminology).

Experimental, page 6, line 6:

Statistical errors are given in \pm range, please add for all statistical errors \pm , e.g. changewere 0.8 ppbv.....to were $\pm 0.8 \text{ ppbv}$(see also line 8, 9, 12...)

(please see guidelines for authors, mathematical notation and terminology).

Result and discussion, page 7, line 2

In figure 2 also the diurnal cycle of NO is shown, but not mention or discuss in the paper. In contrast to the shown diurnal cycle of NO the NO_x diurnal cycle is discuss but not shown in figure 2, why?

Result and discussion, page 10, line 13

How was the uncertainty of the wind speed measurements (see also table 1) ? Better than $\pm 0.3 \%$?, if not please change the given wind speed from 3.89 m s^{-1} to 3.9 m s^{-1} .

Result and discussion, page 14, line 25

Please change... Liang et al. estimated.... to Liang et al. (2017) estimated....

Result and discussion, page 15, line 4, 5, 9...

References Carslaw et al., 2016 Matthaios et al., 2108 and Grange et al., 2017 are mention in the text but not listed in the references list, please add these references to the list and check all others!!!

References

The reference list contains some typos, some reference are unlisted and should be carefully checked by the authors. For example:

References, page 20, line 41

Rappengluck, B. change to Rappenglück, B.....

Figures and Figure captions:

Some displayed measurement data have no error bars e.g. figure 6, S1 and S7, why? Are the errors of the measured data are taken into account by the calculation of the regression parameters (e.g. slope and intercept)

Please check the mathematical notation and terminology.

e.g. figure 3a, y-axis, please change number of vehicles/hour....to.... number of vehicles h^{-1}