

# ***Interactive comment on “Contributions to OH reactivity from unexplored volatile organic compounds measured by PTR-ToF-MS – A case study in a suburban forest of the Seoul Metropolitan Area during KORUS-AQ 2016” by Dianne Sanchez et al.***

## **Anonymous Referee #2**

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This paper shows the results of the measurements of the total OH reactivity in the Tae-hwa Research Forest, southeast from the center of Seoul, South Korea. The authors indicate the existence of the missing OH sink and its sources. Due to the elucidation of the formation of the tropospheric ozone and SOA, this research is very important. In addition, this paper shows the detail results and discussions. Therefore, I recommend that this paper should be published if the minor revisions shows below is done.

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Discussion paper



«Comment» L.146-148: The mini tunable infrared laser direct absorption spectroscopy instrument (TILDAS) has applied to the measurements of HCHO, methane and so on. Is the TILDAS commercially available, or home-made? If the authors have already explain the detail of the TILDAS in some paper, the author should add a reference.

2.4. OH reactivity Calculation The authors grouped the 346 unidentified measured mass peaks into three categories. The authors should show the number of the unidentified peaks for each categories.

Figure 5(A) In general, anti-correlation between NO and O<sub>3</sub> have been observed due to the reaction of NO with O<sub>3</sub>. In addition, ozone is formed secondary, which is similar with some OVOCs. Therefore, I recommend that the diurnal variation of the OH reactivity for O<sub>3</sub> were distinguished with other pollutants.

(very) Minor: Font of the subscript of NO<sub>x</sub> is not unified. The authors should check it. In addition, the font of "k<sub>OH</sub>" and "r<sup>2</sup>" are not unified.

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