

We apologize for the mistakes and thank the referee for the detailed constructive comments. We will work on the revised paper accordingly. The answers to the comments are given below.

Comment 1: 1. Page 12054, line 3. The citation Kulmala et al., 1999 is missing in the references.

Answer: We will add this reference (see below)
Kulmala, M., Hienola, J., Pirjola, L., Vesala, T., Shimmo, M., Altimir, N. and Hari, P.: A model for NO_x-O₃-terpene chemistry in chamber measurements of plant gas exchange, Atmospheric Environment, 33, 2145-2156, 1999.

Comment 2: 2. Page 12054, line 9. The citation Altimir et al., 2006 is missing in the references. The citation Altimir et al. 2006 is additional given at page 12060, line 14.

Answer: We will add this reference (see below)
Altimir, N., Kolari, P., Tuovinen, J.P., Vesala, T., Bäck, J., Suni, T., Kulmala, M. and Hari, P.: Foliage surface ozone deposition: a role for surface moisture?, Biogeosciences, 3, 1-20, 2006

Comment 3: 3. Page 12059, line 1. Instead of “::: per time and is defined according to Bonn et al. (2013) as:” please write “::: per time and is defined according to Bonn et al. (2013) as Eq. (1).” to integrate the hint of equation 1 in the text.

Answer: It is Page 12058 line 1. The deposition rate $k_{dep,wall}$ represents the amount of molecules which deposit on the foil surface of the cuvette per time and is defined according to Bonn et al. (2013) as Eq. (1).

Comment 4: 4. Page 12060, line 27 and Page 12061, line 1. Instead of “The net-signals were used to calculate the electrical surface conductance G in S.” please write “The net-signals were used to calculate the electrical surface conductance G in S, Eq. (3).” to integrate the hint of equation 3 in the text.

Answer: The net-signals were used to calculate the electrical surface conductance G in μS , Eq. (3).

Comment 5: 5. Page 12062, line 22. Add at the end of sentence the hint to equation 4 as: “::: as follows (see e.g. Teklermaria and Sparks, 2004), Eq. (4).”.

Answer: The fluxes were determined from the differences of trace gas mixing ratios of the reference and sample cuvettes as follows (see e.g. Teklermaria and Sparks, 2004), Eq. (4):

Comment 6: 6. Page 12063, line 10. Give a hint in the text to equation 5 and write: “The deposition velocity V_d (mms⁻¹) of O₃ and PAN was calculated following Eq. (5).”.

Answer: The deposition velocity V_d (mm s⁻¹) of O₃ and PAN was calculated following Eq. (5).

Comment 7: 7. Page 12063, line 16. Give a hint in the text to equation 6 and write: “The stomatal conductance of water vapor $g_{s,calc}$ (H₂O) (mmolm⁻²s⁻¹), Eq. (6) was determined:::”.

Answer: The stomatal conductance of water vapor $g_{s,calc}(H_2O)$ ($\text{mmol m}^{-2} \text{s}^{-1}$), Eq. (6) was determined from the ratio between the water flux E ($\text{mmol m}^{-2} \text{s}^{-1}$) and the Air-to-Leaf-Vapor-Pressure-Deficit VPD (Pa kPa^{-1}):

Comment 8: 8. Page 12063, line 18. Integrate a hint to equation 7 in the text: “::: where VPD is given according to von Caemmerer and Farquhar (1981) as Eq. (7).”

Answer: where VPD is given according to von Caemmerer and Farquhar (1981) as Eq. (7)

Comment 9: 9. Page 12064, line 1 and 2. Integrate a hint to equation 8 in the text: “The stomatal conductances of O_3 and PAN were determined following Eq. (8) from::: .”

Answer: The stomatal conductances of O_3 and PAN were determined following Eq. (8) from the stomatal conductance to water vapor multiplied by the ratio of the diffusion coefficients of the respective trace gas (O_3 , PAN) and H_2O :

Comment 10: 10. Page 12064, line 10. Integrate a hint to equation 9 in the text: “::: and Sparks (2004) by following Eq. (9):

Answer: The leaf internal O_3 and PAN mixing ratios were determined according to Teklemariam and Sparks (2004) by following Eq. (9):

Comment 11: 11. Page 12064, line 13. Integrate a hint to equation 10 in the text: “::: was calculated according to the equation scheme of Teklemariam and Sparks (2004), Eq. (10):”

Answer: Measured leaf conductance $g_{s,meas}$ ($\text{mmol m}^{-2} \text{s}^{-1}$) to O_3 and PAN was calculated according to the equation scheme of Teklemariam and Sparks (2004), Eq. (10):

Comment 12: 12. Page 12064, line 15. The writing of (Lasik et al., 1989) is wrong; correct is (Laisk et al., 1989) as given in the references. The same writing error was found at page 12078 in line 10 and line 14.

Answer: Page 12064, line 15: For O_3 and PAN, $vmr_{int, leaf}$ is assumed to be closed to zero (Laisk et al. 1989).

Page 12078, line 10: For the calculation of $g_{s, meas}$ we assumed that $vmr_{int, leaf}$ (O_3) was close to zero (Laisk et al., 1989, Doskey et al., 2004) as well as for PAN (see Sect. 2.2.5, Eq. (10)).

Page 12078, line 14: That O_3 is rapidly decomposed in cell walls and plasmalemma has already been reported by Laisk et al. (1989).

Comment 13. 13. Page 12065, line 4. Integrate a hint to equation 11 and 12 in the text: “:::the inlet and outlet of the cuvette, Eq. (11) and Eq. (12):”

Answer: Inside an empty cuvette the inner mixing ratio was defined as difference between the inlet and outlet of the cuvette, Eq. (11) and Eq. (12):

Comment 14: 14. Page 12065, line 6. Integrate a hint to equation 13 in the text: “::: defined as follows, Eq. (13):”

Answer: The mixing ratio difference between both cuvettes was defined as follows, Eq. (13):

Comment 15: 15. Page 12065, line 8. Integrate a hint to equation 14 in the text: “By combination of Eqs. (11)-(13) we received Eq. (14):”

Answer: By combination of Eqs. (11) – (13) we received Eq. (14):

Comment 16: 16. Page 12065, line 13. Integrate a hint to equation 15 in the text: “ :: difference between both cuvettes could be simplified as Eq. (15):”

Answer: Given that the inlet mixing ratios between both cuvettes are identical ($vmr_{diff,in} = vmr_{sample,in} - vmr_{ref,in} = 0$), the mixing ratio difference between both cuvettes could be simplified as Eq. (15):

Comment 17: 17. Page 12066, line 21. Give a hint to equation 16 in the text: “ :: was determined in Eq. (16) by the standard:::”

Answer: The relative precision at each position was determined in Eq.(16) by the standard deviation (1σ) divided by the mean value.

Comment 18: 18. Page 12067, line 2. Integrate a hint to equation 17 in the text: “ :: the Gaussian error propagation (Bevington and Robinson, 2003), Eq. (17):”

Answer: The random errors of F , $g_{s,calc}$, $g_{s,meas}$ and V_d were calculated using general representation of the Gaussian error propagation (Bevington and Robinson,2003), Eq. (17):

Comment 19: 19. Page 12078, line 8 and 9. The citation Fares et al. 2010 is not given in the references.

Answer: We will add this reference (see below)
Fares, S., Park, J. H., Ormeno, E., Gentner, D. R., McKay, M., Loreto, F., Karlik, J. and Goldstein, A. H.: Ozone uptake by citrus trees exposed to a range of ozone concentrations, *Atmospheric Environment*, 44(28), 3404-3412, doi:10.1026/j.atmosenv.2010.06.010, 2010

Comment 20: 20. Page 12080, line 24 and 25. The given citation Bevington and Robinson is from 2003 not 2002.

Answer: We will correct this reference (see below)
Bevington, P. R. and Robinson, D. K.: *Data Reduction and Error Analysis for the Physical Sciences*, 3rd edn., McGraw-Hill, New York, ISBN: 0-07-247227-8, 2003.

Comment 21: 21. Page 12084, line 27. Citation: the name Spaks is wrong in the reference, correct is: Teklemariam, T. A. and Sparks, J.P.: Gaseous fluxes of peroxyacetyl nitrate (PAN) into plants leaves, *Plant Cell Environ.*, 27, 1149-1158, 2004.

Answer: We will correct this reference (see below)
Teklemariam, T. A. and Sparks, J. P. (2004): Gaseous fluxes of peroxyacetyl nitrate (PAN) into plant leaves, *Plant Cell and Environment*, 27(9), 1149-1158.

Comment 22: 22. Page 12085, Table 1, line 2. The citation Wang et al. (1995) is not given in the references. Table 1, line 3. The citation Van Hove et al. (1998) is not given in the references

Answer: We will add both references (see below)
Wang, D., Hinckley, T. M., Cumming, A. B. and Braatne, J.: A comparison of measured and modeled ozone uptake into plant leaves, *Environmental Pollution*. 89(3), 247-254, 1995.

Page 12085, Table 1, line 3 → Van Hove et al. (1999)

Van Hove, L.cW.cA., Bossen, M. E., de Bok, F. A. M. and Hooijmaijers, C. A. M.: The uptake of O₃ by poplar leaves: the impact of a long-term exposure to low O₃-concentrations, Atmospheric Environment, 33, 907-917. 1999