

## ***Interactive comment on “Technical Note: A simple theoretical model framework to describe plant stomatal “sluggishness” in response to elevated ozone concentrations” by Chris Huntingford et al.***

### **Anonymous Referee #1**

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The authors present a convincing and thoroughly justified and explained simple theoretical approach for the calculation of stomatal sluggishness following plants' exposure to ozone for consideration in ESMs. It remains to be seen whether this phenomenon is of significance for the modelling of the global carbon cycle (the impact of ozone on vegetation is unquestionable, but much more experimental evidence is needed to demonstrate that ozone-induced sluggishness occurs across various vegetation types, species and indeed cultivars under various climatic conditions) and the suggested approach might in the long run be considered too simplistic if a more sophisticated biochemical approach for the effect of ozone on abscisic acid and the inclusion of ABA in ESMs will become available, but for the time being - i.e. as an interim solution -

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the presented model framework is a thought-provoking suggestion that will further the respective scientific debate and enable modellers to potentially add more precision to the calculation of ozone effects on the terrestrial carbon balance. Hence, I strongly support the publication of this technical note.

Three minor comments (of formal nature):

Page 2, line 6: delete "is" Page 3, line 22: e.g. should be within the following brackets  
Page 4, equation 1: describe what "d" in  $dgl$  and  $dt$  stands for

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Interactive comment on Biogeosciences Discuss., <https://doi.org/10.5194/bg-2018-206>, 2018.

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