

**Editors comment #2 of paper acp-2014-546; An evaluation of ozone dry deposition in global scale chemistry climate models by Hardacre et al.**

Dear author, co-authors,

I have read your response to the comments I made in the previous round and started to check in detail the revised paper. It seems that you have made a lot of changes in your manuscript and you have especially made the effort to indeed include the CASTNET deposition dataset to further evaluate the multi-model simulated ozone fluxes. As you will see I have provided a list of additional, mostly minor comments but where I actually stopped doing so at page 8 since I realized that most of my comments are referring to sentences that are full with typos. I would like to invite you to once more again provide a carefully checked version of the ms where these typos have been removed.

Laurens Ganzeveld

Page 3: “Avnery et al. (2011a) with losses from three major crops estimated to be 11–18 billion USD2000 annually in the year 2000 (Avnery et al., 2011a) and”

Sentence is not correct (adding found..) and you can according to me leave out the second-time reference to Avnery et al., 2011a

Page 3: “at the biosphere–atmosphere and ocean–atmosphere interfaces”, suggestion to change this to “Earth’s surface-atmosphere interface” since in the current sentence you actually exclude the role of cryosphere-atmosphere exchange (and bare soil-atmosphere interface unless we see the desert areas also as a part of the biosphere)

Page 4: “with some modifications (e.g., Ganzeveld and Lelieveld, 1995; Wang et al., 1998; ValMartin et al., 2014)”. Check if the references should be listed according to increasing/decreasing reference year. This comment is not restricted to these specific references here but to all references in the ms.

Page 5; “...CTMs and CCMs. While dry deposition has been studied in detail in individual models (e.g., Ganzeveld et al., 1995; Tuovinen et al., 2004, 2009; Zhang et al., 2002)”. You included these examples of studies on the evaluation of individual model analysis of ozone dry deposition where the examples you included are, if I am correct, referring to studies with CTMS where the Ganzeveld et al. 1995 study was done with an CGM.

Page 6; suggest to change to “...O<sub>3</sub> surface layer concentration respectively”

Page 7: “...~~m~~monthly average flux”

Page 7: “that reported an average O<sub>3</sub> dry deposition flux or where long term measurement data was independently made available for this study.” I would anyhow suggest to change this to: “that reported long-term average O<sub>3</sub> dry deposition fluxes”

Page 8: “As CASTNET deposition fluxes are derived using modelled deposition

velocities rather than directly measured fluxes, we discuss the results separately from out comparisone with fluxes measured at European and North American sites.”. As you can see there is some typos in this sentence. I would also suggest to move this sentence to directly after the first sentence of this paragraph, lines 7-8, followed by some more of these details on the CASTNEX O3 flux inversion.

Page 8: “2004 (Wild, 2007; )-(Stevenson...

Page 8: “From global ozone budgets in 33 CTM (9 models similar to those used in this study),  $1003 \pm 200$  Tg yr<sup>-1</sup> from 21 models contributing tot he ACCENT model intercomparison Stevenson et al. (2006) (9” This is another example where the sentence is apparently all mixed up. You really need to once more again check carefully your document. It is full with typos and in this way I cannot accept the paper for publication.