We would like to thank the referee for his/her positive review of our manuscript. We have adopted most of the points raised and modified the text accordingly in the revised version of the manuscript. Below we provide a detailed response to the specific comments made.

p.28767 l.10-13 : specify ocean and soil voc emissions p.28767 l.22: rather low: you may give a range

We have now merged this text and provided a range of the global emission fluxes given in the global emission inventories, plus referenced some specific studies which have measured BVOC emission estimates from the ocean.

p.28768 l.20-25 : rephrase – not clear

Now re-phrased.

p28772 l.16 : more robust: : : : please quantify

We now use ´closer to unity´.

p.28773 l.1 : report also terpenes chemistry

Added.

p.28774 l12 : specify which natural emissions you use

We now provide details of the biogenic CH4 emissions adopted in the model.

p.28776 l12-13 : repetition – please remove it

Now removed

p.28779 l16. The biggest difference: Please quantify

We now point the reader to the contents of Table 2.

p28781 l18-19: discribe/explain the vertical distribution of BVOC emissions in TM5

Specific details are now added.

p.28782 l18-21: repetition – remove it

Now removed

figure 8 caption: please give in parenthesis the abbreviations of the stations presented in the figure above

Added for both Figs. 8 and 9.

In figure captions you may give also the shape besides the color of the marks (e.g.

figure 10)

We have now included the shape of each symbol in the Figure caption.

Table A1 : you may distinguish the modified/additional reaction of the modified chemical scheme from the previous studies with TM5 or other models (e.g with italics/bold etc – if possible)

We feel that the reader can assess the improvements by referring to the TM5 benchmark paper of Huijnen et al., 2010, where adding italics has the potential to confuse the reader.

Table A1 reaction ALD2 + NO3 -> there is a '+' in the products

Now removed

The authors may rearrange the text by gathering all the paragraphs of model evaluation in one section, in order to avoid repetitions.

We do not wish to do this as we feel that by segregating the individual comparisons in different sections the reader can easily find any specific comparison more easily.