

Response to the Reviews

July 4, 2019

1 Response to the Referee's Report 1

The paper has been revised substantially and previous comments have been addressed properly. Please consider the following technical corrections (page/line).

We would like to thank the referee for their interest in our work. The comments have been very beneficial. As suggested by the referee, the following corrections have been made.

9/13: I suggest replacing the sentence: Both modelled UVI and UVIOMI are not able to reproduce ground-based measurements of UVI for this period. with: Both modelled UVI and UVIOMI are biased low with respect to the ground-based measurements of UVI for this period, due to the altitude difference of the monitoring site.

Corrected.

9/16: replace explained with explain

Corrected.

14/23: replace effects with factors

Corrected.

15/5: It sounds unreasonable that 80% change in AOD results on only 2% Change in UVI. I suggest adding after the sentence With fixed TOZ (EXP3FAOD), the 80% decrease of AOD result in a 2% increase of UVI. This small effect is due to the small absolute values of the zonally averaged AOD.

Corrected.

2 Response to the Editor

Many thanks for your updated manuscript and addressing the comments and concerns of the reviewers. I am happy to proceed to publication subject to technical corrections. In addition to the technical corrections suggested by reviewer 2, I would also ask the authors to consider their figures:

We are grateful to the Editor for the valuable suggestions provided. As suggested by the Editor, the following modifications have been made.

1. Please ensure that the colours in the line plots are appropriate for colour-blind people. For example, see the resources at <http://colorbrewer2.org/>

Colours have been checked for colour-blind people. The figures were mostly made with NCL, therefore we used the colormap provided by NCL. (https://www.ncl.ucar.edu/Document/Graphics/ColorTables/Aid_in_color_blindness_cat.shtml)

2. For Figure 6 in particular, consider how much more the axes are emphasised (through their thickness) than the data you are trying to show. Can this be improved?

Axes and grid for Figure 6 and 4 have been shrunk.