Review of the manuscript with title: "Ultraviolet Radiation modeling from ground based and satellite measurements at Reunion Island, Southern Tropics" from Lamy et al.

I suggest that the following comments have to be addressed before the manuscript is suitable for publication to the ACP.

General comments

There are still several syntactical, linguistic and editorial errors in the manuscript, especially in the abstract and paragraph 4.2.4. Thus, I suggest that the authors should try harder to improve it. In the following there are indicative recommendations for a number of corrections, but there are more that have to be done and additional work is necessary.

In the present study a standard SSA of 0.95 was used. Though, there are studies suggesting that the SSA in the UV may range between much lower values (e.g. ~0.6) and values close to unity. Although for very low values of AOT (such as those that are usual at Reunion Island) changing the SSA would not induce important changes in the model's output, I believe that it would be useful to quantify the possible errors/uncertainties due to the use of a standard SSA.

The differences between the simulated UVI for different ETS are surprisingly large. I believe that the dependence from ozone and SZA denotes very large differences between the UV-B wavelengths of the spectra from Dobber and Chance & Kurucz. Are there any other differences between these two spectra (e.g. different spectral resolution/analysis) which could induce such large differences in the simulated UVI?

Specific comments

Abstract

The text of the abstract should be rearranged so that its meaning is clearer. For example:

- The first two paragraphs of the introduction could be rearranged so that it is easier for the reader to follow them. The first paragraph should answer to the question: "why studying SUR is important?" while the second paragraph should answer to the question: "why studying SUR over the tropics – and in particular in the Reunion Island – is important?"
- After the first two paragraphs, there should be a general description of what has been done in this study, i.e. move the text of P2, L1-3 there.
- The discussion for the cloud filtering is also divided in two paragraphs (5 and 6). I suggest making this discussion in a single paragraph (i.e. move the relative information from the last paragraph since it is not one of the main findings of the study).

Some suggestions for technical corrections are the following:

P1, L4: Define SUR here instead of P2, L20

P1, L18: Delete "radiation"

P2, L4: “SUR was” instead of “ultraviolet radiations were”

P2, L5: “was based” instead of “based” and “while the second was based on applying” instead of “the second applying”

P2, L10: “were derived” instead of “came”

P2, L11: “using” instead of “with respect to”

1. Introduction

P2, L20: “However, large” instead of “Large”

P2, L21: Delete “As”

P2, L28: “depends” instead of “depending”

P3, L8: Do you mean “by absorbing and scattering processes in the atmosphere” instead of “by the atmosphere and scattering processes”?

P3, L23: “and” instead of “they”.

P3, L23: What caused the reduction of 15.2%?

P3, L24: “usually reduce” instead of “can reduce”

P3, L27: “role” instead of “part”

P3, L34: “integral” instead of “integration”

P4, L11: “projections” instead of “projection”

P4, L32: “parameters” instead of “parameter”

2. Datasets

P5, L20: rephrase

P5, L27-28: which one is the first paper and which one is the second paper?

P6, L1-8: I think that this information is not related with the present work and I suggest removing it.

P6, L12: The cloud observations are performed at a distance of 10 km from the location of the measurements, but where (i.e. east, west, …)?

3. Clear-sky filtering

For consistency I suggest using either “clear-sky” or “clear sky” throughout the entire manuscript.

P6, L19: “observations” instead of “observation”

P7, L6: “relative to” instead of “higher than”

P7, L8: “At around” instead of “Around”

P7, L13: Delete “with”

4. UV modeling

P7, L28: I suggest explaining in short why the used approximation is more accurate.

P8, L11: “performed” instead of “taken”

P10, L20-P11, L13: This paragraph is very badly written and confusing. I suggest rewriting it more carefully.

5. Model validation

P11, L15: Declare that you compare the observations with the model output.

P11, L17: I suppose that you mean the sensitivity of the model output on TO3. You should make it clear here.

P12, L6: what means “very clear sky”?

Figure 8: In my opinion, the equations are not necessary in the legends of figures 8(a) – 8(d) since there is an explanation of what is RAF_P and RAF_L. In the legend of figures 8(a) and 8(b), the value of RAF would be enough.

P12, L18: “This range of SZAs is” instead of “These ranges of SZA are”, “measurements” instead of “measurement”, “the annual” instead of “annual”, “lower” instead of “low”

P12, L20: “in figure” instead of “on figure”. This is applicable to the entire manuscript.

P13, L14: Writing that the agreement between the measured and modeled UVIs is the best when the SBUV dataset is used as input would be more accurate than writing that the results RTUV03 is the best. The fact that the agreement is optimal does not necessarily mean that RTUV03 is the best.

Figure 9: The title of the x-axis is below each sub-figure of fig. 9a, while at fig 9b it is only below the last sub-figure. For consistency I suggest removing the x-axis title from the five upper panels of fig 9a.