

Anonymous referee #2

We thank Reviewer 2 for his/her comments, questions and remarks, which we hope helped to improve the quality of the original manuscript. Please find below our responses to your comments. Reviewer 2's comments are in normal font, our answers are written with bold font.

1. Line 127 "used to temperature": used for temperature

L108: We agree with you. We changed the text as suggested.

2. Line 128 "used to surface": used for surface

L109: We agree with you. We changed the text as suggested.

3. Line 134 "flown on 3": flown on Nimbus 3

L116: We agree with you. We changed the text as suggested.

4. Line 134 "present two": had two

L116: We agree with you. We changed the text as suggested.

5. Line 159 "the remaining channel vertically": the remaining channel being vertically

L137: We agree with you. We changed the text as suggested.

6. Line 223 "too": please remove

L198: We agree with you. We changed the text as suggested.

7. Line 250 "thus retaining the": thus we retain the

L223: We agree with you. We changed the text as suggested.

8. Line 379 "so will never utilise the full range of SZA calculated for the standard RTTOV coefficients": therefore the the full range of SZA calculated for the standard RTTOV coefficients will never be used

L307: We agree with you. We changed the text as suggested.

9. Line 412 "moderate in the different sensors": moderate for both sensors

L336: We agree with you. We changed the text as suggested.

10. Figure 3 caption "3 starts": 3 stars

We corrected it.