

Interactive comment on “Results from the validation campaign of the ozone radiometer GROMOS-C at the NDACC station of La Réunion Island” by Susana Fernandez et al.

Anonymous Referee #2

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Dear Editor

The paper describes the validation of the new GROMOS-C radiometer dedicated for observations at 3 mm wavelengths including the O₃ lines at 109.559 and 110.836 10 GHz, and the CO line at 115.271 GHz. A detailed description of GROMOS-C is given in Fernandez et al., (2015).

I think the presented validation is very ambitious where the retrieved profiles of O₃ measured at 110.836 GHz are compared to data from three totally independent instruments. Furthermore stratospheric wind profiles are compared to the results from the WIRA instrument and this will encourage groups to try this concept with their existing radiometers.

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The paper is rather concise but clear and easy to read. The results are very good and the validation show that the data from all four of the involved instruments are very close to each other.

My opinion is that the paper indeed fulfill the requirements of the ACP and I recommend publication if the minor corrections presented below are considered.

Section 2.1 The authors mention that O3 at both 109.559 and 110.836 10 GHz can be observed. Why would one want to use the weaker 109.559 GHz line?

Please shortly describe the window with very low losses (material, thickness)

Figures

Figure 5 It would be illustrative to add the forward model spectra and the retrieved baselines in the upper three plots.

Figures 4, 6, 8, 9 and 10 The major altitude scale is pressure in all figures in the paper and I believe this is the correct thing to do. It would however be clarifying to add an approximate altitude scale in km to the right of figures 4, 6, 8, 9 and 10

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