Atmos. Meas. Tech. Discuss., 4, C958–C960, 2011
www.atmos-meas-tech-discuss.net/4/C958/2011/

Atmospheric Measurement Techniques Discussions

Interactive comment on "A thermal infrared instrument onboard a geostationary platform for CO and O_3 measurements in the lowermost troposphere: observing system simulation experiments" *by* M. Claeyman et al.

M. Claeyman et al.

clam@aero.obs-mip.fr

Received and published: 29 June 2011

A thermal infrared instrument onboard a geostationary platform for CO and O3 measurements in the lowermost troposphere: observing system simulation experiments.

Answer to the referee #3 :

The authors thank also the reviewer 3 for the report provided. The remarks have been taken into account in the revised paper. Below, we answer point by point the different comments.

Full Screen / Esc

Printer-friendly Version

Interactive Discussion

Discussion Paper

"Overall this is an interesting paper that quantitatively compares the ability of two proposed geostationary infrared sounders to improve air quality forecasts. The paper focuses on ozone and carbon monoxide in the lower most troposphere, 0- 3 km, over Europe. The two instruments compared are essentially a high spectral resolution (0.05 cm-1) instrument (GEO-TIR) and a low resolution (0.6 cm-1) one (GEO-TIR2). As I like high resolution instruments, I am pleased that the conclusion is that the higher resolution instrument gave more improvement in the forecasts, and points to the value of such an instrument in geostationary orbit. I have a few comments and corrections:"

We thank the referee for these positive comments.

"1. Pg. 820, line 7. The authors need to add that MAGEAQ was not selected. The two cited references are rather unhelpful. Is there anything better to cite? "

We now add a statement indicating that MAGEAQ was not selected. We keep the references, as this what is available as of now.

"2. Pg. 824, line 6. I agree that the NESR is the correct metric to quote, but could the authors quote a “typical” signal-to-noise ratio for the bands in question? As no spectra are displayed inthe paper it is hard to judge what the quoted numbers mean in a geophysical sense."

We now quote typical SNR values in a new Table (see response to referee # 1 for p. 824 Lines 5-10).

"3. Pg. 833, line 5. Missing figure number."

done

"4. Pg. 842, line 4. “help better detect”"

done

"5. Pg. 846: many of the references are not very helpful in that they are reports, book chapters, conference abstracts, etc. that are not very readily available. Even the web

AMTD

4, C958–C960, 2011

links given for Clerbaux et al. 2008a and WHO 2005 do not work. Any updates (e.g. ACP for ACPD papers) or alternate, more accessible, references would be good."

We have updated the references. Wherever reports, book chapters and/or conference abstracts are appropriate references, we keep them.

Interactive comment on Atmos. Meas. Tech. Discuss., 4, 815, 2011.