**Interactive comment on** “Trace gas measurements from infrared satellite for chemistry and climate applications” by C. Clerbaux et al.

Anonymous Referee #1

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General comments

The paper gives a well-written overview of the possibilities of passive infrared nadir measurements from space, specifically using the IMG and the IASI instrument. The retrieval of many trace gases is discussed with a thorough knowledge of the subject. Although, the innovative aspect of this paper seems limited to me, I think the paper would still be worthwhile publishing.

I have two specific comments, which probably can strengthen the paper.

1) section 3.2.4. CO,O3 (or section 4.3) Worthwhile to mention in this section would be how IMG measurements of CO compare with the extensive data set of MOPITT. Although they are not measured in the same period, a qualitative comparison could be given in terms of accuracy, spatial resolution and range.
2) Table 2 Although the measurement uncertainty is given in Table 2, an indication of the bias (if known) in the measurements would also be helpful to gain insight in the possibilities measuring each gas. When using the data, other than for trend studies, the bias is a more useful figure.

Interactive comment on Atmos. Chem. Phys. Discuss., 3, 2027, 2003.