

Interactive comment on “Emissions halted of the potent greenhouse gas SF₅CF₃” by W. T. Sturges et al.

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This is a very nice paper and a great continuation of the SF₅CF₃ story. I have a couple of comments.

1) I strongly encourage the authors to publish their measurement results, in particular the Cape Grim data (and maybe the emissions) in numerical form, for example as supplementary material. Easy and long-lasting access to such long-term records is important for upcoming work on greenhouse gases by other groups and for larger reports ('climate reports').

2) Like one of the reviewers mentioned, I was a bit irritated by the use of the expression 'super' greenhouse gas. Is this an official term, I have never heard of it. I think the paper

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is very strong, it doesn't need catchy terms like 'super' greenhouse gas.

3) In the analytical section, I'd like to see a statement/reference to what primary calibration scale was used and what the accuracy of that scale is.

4) p. 876, l 14ff. It is stated that the model doesn't produce a significant latitudinal gradient for the years 2005 onward. But what about the 1990s where the emissions seem to have grown rapidly. With all the emissions set to the northern hemisphere (if I understand p. 874 l 13ff correctly), the model should compute a significant latitudinal gradient for that period.

5) Even though Rosiek et al., 2007 make a similar statement as the authors of this paper (p. 875, l. 26) about agreement of various measurements, the term 'broadly consistent' seems to be rather stretched when comparing this work with that of Rosiek et al., 2007. The Krakow record shows no sign of flattening, it appears to be in mismatch with the Concordia Dome results, and the absolute concentration nearly reach 170 ppq, while the present study shows SH values around 150 to 155 ppq (Fig. 1 inset), which given the lack of an interhemispheric gradient, should be the same for the NH.

6) Minor: p. 870, l. 18: Reference 'Levine' without an 'e', 'Levin, et al., 2010' Ref Rosiek: Change page numbers from 235 to 235 – 242

I hope that some of these comments may further improve this already excellent paper.

Interactive comment on Atmos. Chem. Phys. Discuss., 12, 869, 2012.

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