

Interactive
Comment

Interactive comment on “Distributions, long term trends and emissions of four perfluorocarbons in remote parts of the atmosphere and firn air” by J. C. Laube et al.

J. C. Laube et al.

j.laube@uea.ac.uk

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Author response

First of all we would like to thank you for your valuable comments which have helped to improve our manuscript. A table with trends, emissions and uncertainties inferred from the Cape Grim record was added to the supplementary information.

Comment

Also for now, there is not a single emission number mentioned in the text, which I find a bit disturbing.

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Author response

Quantitative information is now included in the discussion of the emission data:

“As displayed in Figure 8 for n-C4F10 and n-C5F12 we find that emissions continuously increased from 1978 (0.17 Gg/yr for n-C4F10 and 0.11 Gg/yr for n-C5F12), peaked in the mid 1990s (0.27 Gg/yr for n-C4F10 and 0.31 Gg/yr for n-C5F12) with a subsequent decline to 0.11 Gg/yr for n-C4F10 and 0.08 Gg/yr for n-C5F12. Please see the supplementary information for the complete numerical annual emissions data set.”

“In contrast we find reasonable agreement between the emissions of n-C6F14 from both approaches (Figure 9) with our estimates increasing from 0.16 Gg/yr in 1978 to 0.88 Gg/yr in 1997 followed by a decline to 0.23 Gg/yr in 2009. Finally, for n-C7F16 (also Figure 9) we find emissions increased from 0.08 Gg/yr 1978 to 0.23 Gg/yr in 2001 and stabilising at this rate thereafter.”

Comments

p. 4083, l. 9, 'predominantly'. Can you quantify this? Suppl material: Title and one author's initial don't match main paper.

Author response

At p. 4083, l. 9, 'predominantly' has been complemented by quantitative information: "(i.e. 99 %)". Finally, the title of the supplementary information was corrected.

Interactive comment on *Atmos. Chem. Phys. Discuss.*, 12, 4073, 2012.

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