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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Projecting future HFC-23 emissions" *by* B. R. Miller and L. J. M. Kuijpers

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The paper describes the development of global emission scenarios for the strong greenhouse gas HFC-23. It expands the previous publication of Miller et al. (ACP, 2010) into 2035 – a period within which the dispersive usage of HCFC-22 will end and CDM projects will formally also have come to an end. I am very much in favour of publishing the manuscript in ACP after the minor corrections below have been addressed.

General: The Best Practice (BP) scenario assumes emissions to be virtually zero after installation of the incinerators. I do not really agree with this. In Europe all factories are equipped with incinerators and still emissions of several tens of tons (or more, see Keller et al., 2011) occur. So having an estimate of European HCFC-22 production using UNEP numbers would allow to make a reasonable estimate of real-world emissions of HFC-23, with the best practice scenario.

The conclusion is too long. It is mostly a repetition of the results discussed before. I think there is a potential to shorten this part considerably without losing any information.

Minor issues P. 23082, Line 5: I would include HFC-23 here, as the atmosphere itself will not evolve, but the substance. . . .to yield insights into how HFC-23 might evolve in the atmosphere with. . .

P. 23082, Line 23: possibly include 270 years?

P. 23083, Line 7: explain GHG (first appearance)

P. 23083, Line 22: Clean Development Mechanism (CDM) under the Kyoto Protocol and. . .

P. 23084, Line 2ff: please explain shortly why it cannot be expected that emissions will further decrease.

P. 23085, Line 23: . . .2008 (Fig.1).

P. 23090, Line 27: . . . virtually zero emissions: see comment above. I don't think that this will be feasible. If authors pull out information about this it would be very good for the argumentation to introduce this here.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 23081, 2011.