

***Interactive comment on “Observation-based assessment of stratospheric fractional release, lifetimes, and Ozone Depletion Potentials of ten important source gases” by J. C. Laube et al.***

**Anonymous Referee #1**

Received and published: 22 December 2012

General remarks: This paper uses aircraft measurements of chlorine and bromine halocarbons in the mid- and high-latitude stratosphere to derive Fractional Release Factors (FRFs), stratospheric lifetimes relative to CFC-11, and Ozone Depletion Potentials (ODPs). All of these quantities are critically important to understanding stratospheric ozone depletion and for predicting the evolution of any future ozone recovery. The study presents an impressive amount of information derived from measurements of the ten source gases – CFC-11, CFC-12, CFC-113, CCl<sub>4</sub>, CH<sub>3</sub>CCl<sub>3</sub>, HCFC-22, HCFC-141b, HCFC-142b, H1211, and H-1301 - plus SF<sub>6</sub> used for stratospheric mean ages. It will be an important contribution to the growing body of knowledge on this topic and should be published in ACP, provided that the concerns

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noted in the Supplement can be addressed. Overall the paper is well written, with a detailed account of methodology and a clear presentation of results in tables and figures.

Please also note the supplement to this comment:

<http://www.atmos-chem-phys-discuss.net/12/C10978/2012/acpd-12-C10978-2012-supplement.pdf>

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Interactive comment on Atmos. Chem. Phys. Discuss., 12, 28525, 2012.

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