

***Interactive comment on* “Technical Note: Ensuring consistent, global measurements of short-lived halocarbon gases in the ocean and atmosphere” by J. H. Butler et al.**

**Anonymous Referee #2**

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This technical note presents the outcomes of a meeting where the atmospheric and oceanic halocarbon communities discussed strategies to improve current weaknesses in halocarbon measurement and inter-calibration procedures. Two ways forward were identified: i) circulation of large cylinders, and ii) sending samples in small containers to each laboratory simultaneously. Both strategies present a considerable number of potential problems, option ii) is chosen. The reviewer agrees with the paper's main message that it is necessary to establish guidelines and increase the efforts to improve the current measurement calibration discrepancies. Therefore, this technical note fits well within the scope of BGD however I suggest some major revisions of the manuscript before publication.

## General comments:

- The paper makes a rather important point however it fails in providing further evidence and a thorough case to convey this important message. - To this reviewer further discussion over the pros and cons of the two suggested strategies is missing. Certainly, the reasons (as outlined on the current version of this manuscript) given by the authors to choose strategy ii) are not compelling enough.

## Other comments:

- The authors mention the marine boundary layer and the lower stratosphere as the areas of interest. Given the considerable number of observations of halocarbons made in the upper troposphere, should this region of the atmosphere be included in the discussion of this manuscript? - The initial comparisons will focus on bromine and iodine species, what about chlorine species?, reasons are not presented as for why chlorine species are not included in the initial target species. - Although short-lived species are defined in the text (i.e. lifetimes less than  $\sim$  six months) it would also help to have a clear definition of long-lived and very short-lived species. - Page 11288, line 21 “sizeable fraction of oxidation” ?, please be more precise as to what oxidation processes you refer to.

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Interactive comment on Atmos. Chem. Phys. Discuss., 9, 11287, 2009.

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