

# ***Interactive comment on “Atmospheric observations and emission estimates of ozone-depleting chlorocarbons from India” by Daniel Say et al.***

## **Anonymous Referee #1**

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Review of Atmospheric observations and emission estimates of ozone-depleting chlorocarbons from India, submitted to ACPD

General remarks: This is a well-written sound study on Indian emissions of long-lived and short-lived chlorocarbons from India. This has been a notoriously undersampled region of the world so far and therefore even if there is only 1 month of measurements available, this should be published. I therefore suggest publishing the manuscript in ACP, taking into account the suggestions from below.

P 1 Line 8: This has only been 1 month of measurements not 2.

P 2 Line 8: There have been updates to this numbers in Carpenter et al. (2014) and in

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Liang et al. 2018.

P 2 Line 17: ODPs

P 2 Line 19: What about the new Chapter 1 of the Ozone Assessment (Engel and Rigby, 2019)

P 2 Line 21 and 22: Hossaini et al and Fang et al is plural therefore, show and estimate

P5 L25ff. Somehow it is unusual to use different a priori estimates for the individual compounds. especially questionable in this respect is the use of top-down estimates as an a priori which should be independent of top-down estimates. I suggest that you use the AGAGE-12-box based method for all compounds.

P9 L13 The focus on chloro-alkali plants is a misinterpretation of the literature. It is the total of the production of chlorine related products (chloro-alkane production and chloro-alkali plants). Citation from the conclusion of Hu et al.; Our findings suggest that the majority of US CCl<sub>4</sub> emissions could be related to industrial sources associated with chlorine production and processing

P9 L16ff What about the correlation of CCl<sub>4</sub> with CHCl<sub>3</sub>. If there is co-production with CH<sub>2</sub>Cl<sub>2</sub>, there should also be co-production with CHCl<sub>3</sub>, please discuss.

P11. L13 ...long-lived chlorocarbons...

P22. Table 2. The new Ozone Assessment has the lifetime of CCl<sub>4</sub> as 32 years. Please correct and cite accordingly.

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