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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Atmospheric observations and emission estimates of ozone-depletingchlorocarbons 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

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 CCl4 emissions could be related to industrial sources associated with chlorine production and processing

P9 L16ff What about the correlation of CCl4 with CHCl3. If there is co-production with CH2Cl2, there should also be co-production with CHCl3, please discuss.

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

P22. Table 2. The new Ozone Assessment has the lifetime of CCl4 as 32 years. Please correct and cite accordingly.

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