

Interactive comment on “Perfluorocarbons in the global atmosphere: tetrafluoromethane, hexafluoroethane, and octafluoropropane” by J. Mühle et al.

J. Marks

jerrymarks@comcast.net

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p1 Table S.1 - I don't think that UNFCCC Annex 1 country data on PFC emissions (some of which as presented in the table is derived data) is relevant to global emissions measurement comparisons. Much, in some cases the majority, of the PFC emissions result from non-Annex 1 countries.

p2 line 22 - Statement starting "Until recently IAI..." is factually incorrect. I recommend the following as replacement.

"Chinese producers have only recently begun to participate in the IAI anode effect survey. Until the mid 2000s Chinese primary aluminum production was dominated by C1188

Horizontal Stud Soderberg (HSS) technology. Though the mid 2000s a transformation occurred in the Chinese industry. By the end of 2005 the China Non-Ferrous Metals Industry Association (CNIA) reported that all Chinese primary aluminum was produced by Point Feed Prebake technology."

p2 line 29 - While I recognize the strong interest in having some comparative data with the emissions data calculated from the atmospheric measurements I question the usefulness of the information in Supplement 2. It's based on long reach assumptions from which estimates of high uncertainty are made. There are a couple of problems of fact (I've made a cut at offering more accurate statements).

p3 line 31 (Table S.2) - I don't recognize some the data reported here even though it is referenced to IAI AE reports. I don't know if all the time series reported in line 1 represents updated IPCC 2006 methodology.

Of more value would be a table of detailed estimates of CF₄ emissions from the electronics/semiconductor industry over this same time period to supplement the data available from IAI.

p3 Table S.2 (line 34) - The logic behind the data in lines 4 and 6 is flawed from 1999 through 2004. CNIA only reported that by the end of 2005 all aluminum production had been turned over to PFPB. Before that time Chinese production was a mix of technologies. It's erroneous to calculate Chinese emissions based on a constant factor times the PFPB CF₄ emissions factor.

p 3 line 36 - See note regarding line 34.

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