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Interactive comment on "Solubility of iron and other trace elements over the Southern Indian Ocean" *by* A. Heimburger et al.

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Thank you very much for your constructive comments. We would like to present here a couple of comments to give a clarification on some points written in "General comments" section. This is not an answer to review #2.

GC 1)

"I think, authors should present all 14 rain TM data (not only calculated flux but also concentrations of TM, volume of collected rain water, period of each rain event)". We will add extra informations as requested for the three non contaminated rains, but we do not wish to publish data from the other rains: based on Ti/Al ratio, rains P6_09 to P5_08 are an image of the local soil and uncertainties associated to P6_08 and

P3_09 let a local contamination possible. Publish data on these rains will confuse readers because they do not bring relevant informations on long range transported wet deposition solubility but a behaviour of locally emitted dust during a rain event.

"Additionally, authors can compare the proportion of soluble fraction in their rain water sample to reported other oceanic and coastal data (in the Atlantic, and the Pacific)". Our purpose is not to present a review on rain solubilities, which is already well done by e.g. Mahowald et al. 2005 or Fan et al. 2006. We discuss in paragraph "3.4 Solubilities" on relevant values, which demonstrate that very high solubilities can be found far from continental sources over oceanic areas or in Antarctica.

GC 3)

"However, comparison of average values of all data set are not suitable for this evaluation. Because unit of the total deposition (ug m-2day-1) is different from the unit for wet deposition (ug m-2/(event basis)), these two values can not be compared directly. " We agree with this comment, we will complete the calculation paragraph "3.3 Rain event flux", average Al deposition flux is 54 μg/m^2/d, rain events are occuring with a frequency of 0.5 to 1 per day, this leads to an average deposition flux of 54 to 108 μ/m^2 per event. This can be now compared to the average deposition of 32 μg/m^2 per event measured in the rain waters.

Interactive comment on Biogeosciences Discuss., 10, 6065, 2013.