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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Long-term monitoring of persistent organic pollutants (POPs) at the Norwegian Troll station in Dronning Maud Land, Antarctica" *by* R. Kallenborn et al.

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Dear Editors, dear Dr. Bengtson-Nash,

We very much appreciate the comments and the constructive contributions of Dr. Bengtson-Nash to our manuscript. Here our reply. Week numbers: We considered the recommendation of Dr. Bengtson-Nash carefully and revised all figures and the respective text in the new version manuscript. We still consider week/year presentation an appropriate way to present temporal distribution (also for the illustration of seasonal patterns). However, for the interested reader, the comparison with dates (sampling

start) will most probable be easier to read.

Page 6230, "Fresh DDT signatures" We are well aware about the possible contribution of newly applied technical DDT in Malaria infected regions (Africa, Asia) to the atmospheric DDT levels in Antarctic ambient ai. Therefore we performed (as suggested) a series of FLEXPART food print sensitivity simulations on sampling weeks where the p,p′- /o,p′-DDT ratios indicates potential "fresh DDT signatures" (figure 3: 07.07.2007; 07.08.2007, 14.08.2007). However, no clear indication for direct atmospheric transport was found based upon our FLEXPART evaluation. Therefore, we state only in the revised text that direct contribution from fresh DDT sources are consider as significant contributions to the overall DDT levels in the Troll atmosphere (as supported by the here presented pp/op-DDT ratios in fig 3). However, the air mass modeling (food print sensitivity modeling) does not reveal rapid and direct long-range transport events during the here investigated monitoring period.

Interactive comment on Atmos. Chem. Phys. Discuss., 13, 6219, 2013.