

Interactive comment on “Fractionation and current time trends of PCB congeners: evolvement of distributions 1950–2010 studied using a global atmosphere-ocean general circulation model” by G. Lammel and I. Stemmler

Anonymous Referee #2

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Page 11702, line 25 “The trends observed at various Arctic sites are not in phase” Please explain the “Phase” you are taking about? Solid phase, liquid phase,

Page 11703, line 21-24 “Besides transports, cycling of organic substances in the model world includes the compartments air (gas, aqueous and particulate phases), ocean (dissolved, colloidal and particulate phases), soil, vegetation surfaces, snow, sea and land ice.” This sentence is unclear, is the transport not considered as the combination exchange between compartments and the compartment specific latitudinal (directed towards the poles)/ longitudinal movement? Maybe you mean “Pollutant transport in

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Page 11705, line 2-4 “To discern the impact of the physico-chemical properties on PCBs fate only, the four congeners were released into the environment using identical emissions” please refer to Breivik et al (2007) as you are supposed to apply the PCB 153 emission distribution to your model (previously mentioned)

Page 11705, line 13 “..distributions of the 4 PCB congeners (mapped for one. . . .” Just a minor issue: I suggest to use either number or letter format, not both in one sentence: suggestion “..distributions of the four PCB congeners (mapped for one. . .

References to be considered as additional reference: Kallenborn R., M. Oehme, D. D. Wynn-Williams, M. Schlabach and J. Harris (1998) Ambient air levels and atmospheric long-range transport of persistent organochlorines to Signy Island, Antarctica. The Science of the Total Environment, 5127, Vol 220, Iss 2 - 3: 167-180

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