

Interactive comment on “Overview of mercury measurements in the Antarctic troposphere” by A. Dommergue et al.

J. Pacyna (Referee)

jp@nilu.no

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The reviewed paper is an excellent synthesis of information on the concentration levels of mercury in the Antarctic troposphere and an attempt to explanation of difficult and complicated tropospheric chemistry with mercury participation. To my knowledge this is the most detailed analysis presented so far of mercury measurement results in the Antarctic troposphere. This analysis is prepared on the basis of state-of-the-art measurements carried out by the authors of the paper as well as other researchers. An interesting question arises from this analysis about the origin of mercury measured in the Antarctic troposphere. Obviously, the authors point on sources located on the Southern Hemisphere and compare the impact of these sources with the impact of Northern Hemisphere emissions on the concentration levels in the Arctic. I wonder,

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whether sources, such as combustion of coal in South Africa, other African countries and Australia, as well artisanal gold mining and production in South Africa and Africa can be defined as contributors to the concentrations measured in the Antarctic troposphere? Do we have any meteorological data, such as wind trajectories to model in more quantitative manner potential impact of emissions from anthropogenic sources in Southern Hemisphere on air concentrations in Antarctica? Is it feasible to expect sources in Northern Hemisphere to contribute to the air contamination by mercury in the Antarctic?

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