

Interactive comment on “Seasonal patterns of atmospheric mercury in tropical South America as inferred by a TGM continuous record at the Chacaltaya Station (5240 m) in Bolivia” by Alkuin Maximilian Koenig et al.

Anonymous Referee #1

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The authors present mercury data made over nearly two years at a high-altitude site in Bolivian Andes. Using corollary data on meteorology, CO, CO₂, black carbon in combination with backward trajectory clusters several aspects of the data are discussed: seasonality, local influence, mercury emission by biomass burning, volcanoes, ocean, and artisanal small-scale gold mining, as well as influence by vegetation. The discussion of the elevated mercury concentrations during the second half of the measurements was attributed to ENSO and reserved for an upcoming paper.

The paper presents an important contribution to our understanding of atmospheric

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mercury cycle in the southern hemisphere. The analysis of the data is meticulous and lets no wishes open. The paper is well organised and written. The paper deserves to be published as it is, perhaps with consideration of some comments listed below:

Line 125: Amazon

Line 218: What is IQR?

Figure 2: “distance in degrees” is quite unusual. What it would be in km?

Figure 3: The meaning of the black dots is not mentioned in the caption.

Figure 6b: The meaning of data vertical lines is not clear.

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