

## ***Interactive comment on “Emission-dominated gas exchange of elemental mercury vapor over natural surfaces in China” by Xun Wang et al.***

### **Anonymous Referee #1**

Received and published: 7 June 2016

This paper argues the role and the large uncertainty of Hg emission from natural surfaces, very relevant topic in the study of Hg cycle. Particularly the authors analyze emission of elemental Hg<sup>0</sup> from natural surfaces in China, developing a specific mechanistic model for estimate these. It is very accurate and well described the Section 2.1, which will be useful for further scientific developments. The conclusions reached are interesting, and the methods described in a clear way.

I found this paper interesting and I believe it should be published. However, I believe it should be slightly revised. In particular:

Abstract, lines 23-25: I believe should be better described the fluxes, in this form there is confusion (even in lines 318-320). Need of Table 3 to understand well the sign (up or down) of the flows. The sentence should be simplified

C1

line 77: What is DOM?

line 331: Specify what it refers the percentage

line 336: The future projection is not clear. The sentence should be simplified.

line 835: Probably should be replaced "is" with "are"

figure 4: Set the y-axis in the interval [1,-11] in the two panels

In general the significant digits should be corrected (for example, line 250, tab1, etc)

Moreover, can the model (or the most relevant routines) to be made available in the supplementary information? It would be very useful for those who want to deepen or use these results

---

Interactive comment on Atmos. Chem. Phys. Discuss., doi:10.5194/acp-2016-314, 2016.

C2