

Interactive comment on “New evidence for atmospheric mercury transformations in the marine boundary layer” by Ben Yu et al.

Anonymous Referee #2

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This study reported the isotope compositions of total gaseous mercury (TGM) and particulate bound mercury (PBM) in the marine boundary layer (MBL) during summer and winter seasons. The results are novel and very interesting. It has significant contributions to the research field and improve the understanding of Hg transport and transformation in MBL. The manuscript is also written clearly and well organized. Therefore, I suggest a publication of this manuscript in ACP with minor revisions. My minor comments and questions: 1. Line 202-204, what do the authors mean by “contribution of Hg(II) in wet deposition to both PBM and TGM”? How Hg(II) in wet deposition contribute to PBM and TGM? Do you indicate the sources of Hg(II) in wet deposition were not directly from PBM or TGM? 2. A general comment that conclusions should be made with caution when comparing statistic slopes derived from different studies. As

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the air samples are usually mixtures from different sources, and not all sources are well quantified and constrained.

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