

***Interactive comment on “Transpacific transport of Benzo[a]pyrene emitted from Asia: importance of warm conveyor belt and interannual variations” by Y. Zhang et al.***

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We thank Dr. Sato for the valuable comments.

We have conducted an extensive literature search for PAHs monitoring results for our model evaluation, but here we only present those studies which have reported repeated monitoring results for a long time period because we can calculate the correlation coefficients. According to these comparisons, we found our model reasonably complies with these monitoring results conducted in the western North Pacific, and is able to capture episodic transport events in the eastern North Pacific. We are also glad that the mean level of our modeled BaP concentration is comparable with the observed

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values in East Asia and western North Pacific Ocean as Dr. Sato mentioned.

It's a good suggestion to model BeP, one of the isomers of BaP, and compare it with that for BaP, because of its longer residence time in the atmosphere than BaP. This definitely is worth to implementing into our model in the future works. However, the detailed emission inventory of BeP is not currently available. Zhang and his coworkers (2008b, 2009 in the manuscript) have only estimated the emission of the sixteen parent PAHs listed in the priority list of U.S. EPA.

As for the error of our map in Fig. 1, we are greatly thankful to Dr. Sato's correction, and will be corrected in the manuscript.

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