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Interactive comment on "Tropical troposphere to stratosphere transport of carbon monoxide and long-lived trace species in the Chemical Lagrangian Model of the Stratosphere (CLaMS)" *by* R. Pommrich et al.

Anonymous Referee #1

Received and published: 11 August 2014

Review of 'Tropical troposphere to stratosphere transport of carbon monoxide and long-lived trace species in the Chemical Lagrangian Model of the Stratosphere (CLaMS)', by R. Pommrich et al.

The paper describes the measurements, the model, and the comparison between these two. The paper is well written.

Major comments

1. There exist already several models that can simulate trace species in the considered

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domain. I recommend to describe explicitly what the main advantages are of CLaMS compared to other models.

2. It is important to have a good model, but even more important that there exist important research questions that can be assessed with the model. I recommend to mention such questions, in a rather specific way. Which questions are currently unresolved, that could be resolved with CLaMS, and why are these questions relevant?

Both major comments are about why it is important to have (an evaluation of) this model.

Minor comments

3. Why do you evaluate in Figures 2, 3 4, 7, 8, anomalies, rather than de signal itself? Wouldn't it interesting to evaluate the averages as well?

4. p. 5111 l. 13-15: 'at comparatively low numerical cost' is mentioned twice in this sentence.

5. The panels in Figure 4 are, at least for me, too small for comparison purpose.

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Interactive comment on Geosci. Model Dev. Discuss., 7, 5087, 2014.