

## ***Interactive comment on “Reanalysis comparisons of upper tropospheric/lower stratospheric jets and multiple tropopauses” by Gloria L. Manney et al.***

### **Anonymous Referee #1**

Received and published: 4 July 2017

Review of Manney et al.

This paper provides a comprehensive study of the dynamics of the UTLS regions as encapsulated in the jets and multiple tropopauses occurring in this region. The paper provides useful information to the atmospheric sciences community. The discussion of the performance of the reanalyses further provides information on their ability to represent the dynamics of the UTLS region. I recommend acceptance for ACP once the authors address the specific comments below.

Specific comments

P. 5

L. 23 and elsewhere: Is the standard convention ms<sup>-1</sup> or m/s? Same for similar ratios

(and see caption for Fig. 13).

P. 6

L. 9-11: Perhaps rephrase, as the meaning of this sentence is not fully clear to this reviewer.

L. 18: As a percent of what?

P. 8

L. 29: Why is this unsurprising?

P. 10

L. 18: Omit superfluous “the”.

P. 14

Sect. 4, Summary and conclusions: This is an editorial decision, but I would suggest the authors consider splitting this section into two, a summary and a conclusion sections with the latter being succinct.

P. 23

Fig. 1: Not clear to this reviewer which contour line corresponds to each percentage. I suggest the authors make this clearer in the figure, maybe by attaching the percentage to the contour (same for other figures, e.g., Fig. 2). I also suggest the authors consider providing information in the caption what the colours indicate, e.g., red/blue indicate positive/negative differences. Same for other figures.

P. 28

Fig. 6: The authors should clarify in the caption the differences between Figs. 5 and 6.

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Interactive comment on Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2017-400>, 2017.