

Interactive comment on “Commentary on using equivalent latitude in the upper troposphere and lower stratosphere” by L. L. Pan et al.

Anonymous Referee #1

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This paper reveals some important weaknesses in the equivalent latitude – potential temperature coordinate system in the region of the UT/LS. The authors do a nice job of pointing out several potentially misleading aspects of aggregating trace gas measurements in this coordinate system. They do this while also recognizing that for some applications the equiv. lat. vs. theta coordinate system may still be useful. Overall the paper is well organized and written and the figures are very clear. The paper is appropriate for ACP and could be published as is. I have only a couple of very minor comments listed below for the authors to consider.

Section 6: In the discussion of Figure 10 the reference to the “greater” 6 pvu contour as the one used for the tropopause is not accurate. Each 6 pvu contour has the same value so one isn’t greater than the other. In this case I think you would be better off

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referring to it as the longer contour or just the contour that encloses the pole. And in reference to the 6 pvu contour enclosing the intrusion calling it the shorter contour, rather than the “smaller” contour. Same for the caption of Figure 10.

Pg. 33108, line 19: add “have” before “been”.

Interactive comment on Atmos. Chem. Phys. Discuss., 11, 33095, 2011.

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