

Interactive comment on “Aircraft measurements of microphysical properties of subvisible cirrus in the tropical tropopause layer” by R. P. Lawson et al.

R. P. Lawson et al.

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Specific comments:

p.6259, l.10-12: Note that out of more than 8,000 1 Hz measurements, the 2D-S only detected 17 particles larger than 100 microns. The sample volume of the CPI is an order of magnitude smaller than the 2D-S. In SVC, the CPI is limited by its ability to provide good sampling statistics for the large tail of the particle size distribution.

p.6261, l.12: It is explained in the manuscript that the CPI was operable on more missions than the CAPS and the 2D-S. Thus, it is a better choice to identify regions of SVC. However, the 2D-S is a better instrument for making quantitative PSD's. These are two separate events. 1) Identify all regions of SVC; 2) Quantify the PSD in regions

with SVC when the 2D-S was operating properly.

p.6263, l.17-20: The paper does not claim that atmospheric chemistry nor water vapor is responsible for the difference between the 1973 and 2006 measurements. It merely states that there are mixed organics and sulfates in 2006 and possibly high water vapor, and that in 1973 measurements of air chemistry and accurate measurements of water vapor were not available. We do not claim that either Heymsfield's nor our CR-AVE measurements are representative of SVC. We only state that we made the measurements.

Regarding Figs. 1 and 2. It is our opinion that the ability to view the primary instrumentation used in this study is worthwhile. However, we will let the editor decide this one.

Minor Comments and Typos:

p.6257, l.8: It is sufficient to state '. . . with base above 15 km . . . '. correction made - thank you

p.6258, l.4: Missing dot behind '(FSSP)'. correction made - thank you

Interactive comment on Atmos. Chem. Phys. Discuss., 7, 6255, 2007.

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