

## ***Interactive comment on “Evidence for a significant proportion of Secondary Organic Aerosol from isoprene above a maritime tropical forest” by N. H. Robinson et al.***

**N. H. Robinson et al.**

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### **1 Additional response to reviewer 1:**

After the initial submission of the responses to reviewers' comments, we decided that the resultant modifications to the manuscript were described in insufficient detail. We wish to clarify this here. We would like to expand on one response previously made to Reviewer 1 regarding comment 4.:

*4. In Figure 5 the text indicates that the points are for one flight. Is that one flight for each point? The paper indicates that there were 8 individual flights on line 151. Also*

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*in Figure 6 the points are averaged over 14 flights. Why were the other 6 flights not included in Figure 5?*

We have uploaded replacement altitude profiles calculated with the same data as that used in Figure 5. These adjusted profiles are consistent with the conclusions previously drawn. However, due to the reduction in amount of data used the “% Org at  $m/z$  82” profile has become too noisy and will be removed. This does not affect conclusions drawn previously. We will change the discussion of the profiles on by removing reference to the “% Org at  $m/z$  82” profile on page 25553, lines 17–23 which read:

**The fractional contribution of  $m/z$  82 to the total organic mass is greater at the top of the boundary layer than at the surface, with a maximum fractional loading of 1.7 times the low altitude fractional loading in the morning, and 2.5 times in the afternoon. There is an increase in this fractional contribution throughout the day, with measurements at low altitude showing an average increase of ~9%, which is similar to the change seen in the ground site diurnal profiles.**

and adding this statement to page 25553 line 16

**The averaged values of organic mass and  $m/z$  82 at the lowest altitudes are similar to those measured at the ground site at the same time of day.**

We will also change the caption of Figure 6 to read

**Average altitude profiles of (a)  $m/z$  82 signal, (b) gas phase MVK+MACR and (c) organic aerosol loading as measured from the FAAM research aircraft. Red lines from data before midday and blue points from data after midday, local time. Thick lines are median values and shaded areas (outlined with thin lines) denote interquartile ranges.**

Again, we thank the reviewer for pointing out this inconsistency.