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## ***Interactive comment on “An instrumented sample holder for time-lapse micro-tomography measurements of snow under advective airflow” by P. P. Ebner et al.***

**P. P. Ebner et al.**

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**Comment 1:** *2.2 Sample holder design - Please add the information on weight of each sample holder. This information should be useful for readers because the authors indicated the limitation of weight of the sample holders.*

**Response:** Text added: "The total weight of the two setups is 550 g and 620 g."

**Comment 2:** *3. Calibration - L171-173 This sentence is hardly followed up. What is meaning of “first mm”? Please add a more detailed explanation.*

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**Response:** Text: "The saturation vapor density is reached in the pore space within at most the first mm of the snow sample, regardless of the temperature or flow rate. The velocity and snow types have only a marginal influence on the saturation."

replaced with: "The saturation vapor density is reached in the pore space within the first 1 mm of the snow sample, regardless of temperature or flow rate. For example, the minimum snow height for depth hoar snow (dh) is  $z_{\text{sub}} \approx 0.059$  mm and for decomposing snow (ds) is  $z_{\text{sub}} \approx 0.061$  mm."

**Comment 3:** *5. Experiments with snow - Please add the definition of  $\Delta T$  to the figure caption of Fig. 4.*

**Response:** Text added in Figure caption: "One minute averages of measured temperatures at the inlet  $T_{\text{in}}$  and the temperature difference  $\Delta T = T_{\text{in}} - T_{\text{out}}$  between inlet and outlet of the snow sample."

**Comment 4:** *3. Calibration - L136 snow should be s*

**Response:** Text: "where  $\varepsilon$  is the porosity,  $\rho_{\text{snow}}$  is the density of the snow sample"

replaced with: "where  $\varepsilon$  is the porosity,  $\rho_s$  is the density of the snow sample"

**Comment 5:** *3. Calibration - L163  $\sigma_s$  should be  $\sigma_p$*

**Response:** Text: ",  $\sigma_s$  is the average particle surface tension," replaced with: ",  $\sigma_p$  is the average particle surface tension,"

We thank the anonymous reviewer for his scrutiny and recommendations.

The authors

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Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., 4, 353, 2014.

**GID**

4, C106–C108, 2014

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