

## ***Interactive comment on “Scavenging of black carbon in mixed phase clouds at the high alpine site Jungfraujoch” by J. Cozic et al.***

### **Anonymous Referee #1**

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This was a very boring paper to read. The authors have no consideration for the reader. Well a reader can quit reading at any moment and find something more interesting to do; unfortunately the reviewer is expected to finish reading the paper. After many attempts I have finally succeeded.

The authors describe in detail the measurement they performed concerning scavenging of black carbon in mixed phase clouds. The results are described in a very professional way, without any trace of excitement for the work performed. The description will be some time useful to others who will decide to do a similar work in slightly different conditions.

The absorption coefficient measurement by three instruments (Fig. 2) looks quite bad;

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the slope of one of the linear fits is 1.48 instead of being close to 1 for a good agreement. In spite of that the authors conclude, “these graphs show a very good agreement between all three types of instruments”.

The authors should mention that the performance of each instrument very probably depends on the type of black carbon in question. The results of the three instruments might agree for one type of black carbon and disagree for another one; the “correction” factor (Eq. 2) may vary from one location to another.

Graphics on Figs. 5, 6 and 7 is not explained. What is meaning of various boxes and lines? If the lines represent errors of measurements than for example Fig. 5 shows no effect of the LWC on the scavenged BC fraction; all variability is within the error of measurement. A similar comment applies to Fig. 6 (left hand panel).

Basically, the paper describes the work done. However, my opinion is that the paper would be much more readable if it would be only 4 to 5 pages instead of 18 pages long. I might be useful to write a short clear paper presenting the results and put methods and detailed discussion into an appendix.

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Interactive comment on Atmos. Chem. Phys. Discuss., 6, 11877, 2006.

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