

Interactive comment on “Measurements of natural deposition ice nuclei in Córdoba, Argentina” by M. L. López and E. E. Ávila

Anonymous Referee #1

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Essentially, the experimental technique here is to provide a known supersaturation environment for ice crystals to be activated in an aerosol sample. The crystals then fall onto a supercooled sugar solution bath and grow so they can be counted. The advantage of this cloud chamber system over the usual two plate diffusion chamber is that much lower temperatures can be achieved for the whole sample. This is not pointed out in the article. (The two plate system requires a temperature difference between the plates - to obtain high supersaturation at low sample temperatures is difficult.) This new technique also permits the bulk of the aerosol sample to be subjected to a fairly uniform supersaturation and temperature, whereas the two plate process involves a range of supersaturations across the chamber.

The introduction is written as if to readers with no knowledge of this subject - if this is

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indeed the expected readership, then the introduction section is appropriate.

The details of the most important measurement in these studies are not given. It is crucial that the measurement of RH is accurate, but there are no details of the device used to measure RH or its accuracy. Also, is RH measured inside the chamber or is it measured in the air to be injected, then the chamber RH is calculated from the cooling? If the device is inside the chamber, then reliability issues arise when measuring RH at temperatures below 0C.

This is a useful study involving a simple technique - if applied with care it has great promise.

There are various minor typographical errors.

Interactive comment on Atmos. Chem. Phys. Discuss., 12, 31699, 2012.

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