

We thank Referee#1 for their comments regarding our manuscript. Below we provide our answers (shown in Blue) to their comments (shown in Black), and where changes were made to the manuscript, the modified text is given (Blue Bold).

Review of paper entitled „A new high transmission inlet for the Caltech nano-RDMA for size distribution measurements of sub-3 nm ions at ambient concentrations”, By Franchin et al.,

In this article author claim that they have developed a “new high transmission inlet for the Caltech nano-radial DMA (nRDMA)” that increases the transmission efficiency to 12 % for ions as small as 1.3 nm in mobility equivalent diameter (corresponding to $1.2 \times 10^{-4} \text{ m}^2 \text{V}^{-1} \text{s}^{-1}$ in electrical mobility). Which is very good step in the area of ion/aerosol measurements, because it is very difficult to measure the ion/aerosol in the smaller category. I am very much appreciating the author contribution in this regards. I will be very useful for the field experiments. I recommended for the publication in AMT with minor suggestions.

CLOUD 7 measurement campaigns at CERN may be describing one small paragraph. It will be good for general readers.

We added a brief explanation at Page 6, Line 8.

“The CLOUD (Cosmics Leaving Outdoor Droplets) aerosol chamber is located at CERN, in Switzerland. It has been used for several aerosol nucleation studies (Kirkby et al., 2011, Almeida et al., 2013, Riccobono et al., 2014). During the CLOUD 7 campaign a-pinene and sulfuric acid nucleation studies were carried out.”

On page 2 lines 13-14, it is not clear by which method author calculated the particle diameter with corresponding mobility. Have you calculated by Tammet, 1995 method or someone else? Have you considered single charge particle ? Please clarify at this stage or remove the particle size mentioned only the electrical mobility. Which is more than sufficient. It is mentioned in section 2.3 but it is need to be mentioned here also for clarity.

We added a sentence at page 4 (5852) line 10. **“All diameters reported here are Millikan-Fuchs equivalent mobility diameters Makela et al., 1996}. As the diameter is not a well-defined concept at very small sizes, we choose to indicate next to the diameter the particle electrical mobility, which is the measured quantity.”**

On page 3, line 8, Siingh et al., 2013 and Kamra et al., 2015 may be cited.

Citation added.

Mirme and Mirme [2013] may be added on page 4, lines 10-15.

Citation added.

If possible please use only the electrical mobility instead of particle diameter because for lower size especially cluster ion is very much complicated for representing in the size, it depends on environmental conditions.

We added the corresponding mobility each time a new mobility diameter was introduced.

Resolution of figures 4 and 5 is not good, please given high resolution figures.

We added figures at higher resolution.

Figure 8, if x-axis is in logthemic scale then it is clearer.

The size range is quite limited, we prefer to keep the linear scale .

a,b,c,d is clear in Figure 10. Also not clear the trace of NAIS and nRDMA-PSM. Please make it clear.

We clarified the Fig. 10 as suggested by the referee changing the color of the NAIS trace from black to grey.

NAIS can measures the ions below 0.5 nm (Please refer, Mirme and Mirme (2013), Siingh et al., 2013, Kamra et al., 2015), but author mentioned for NAIS “NAIS negative ion spectrum between 1 and 50 nm”. Please correct it. Please also correct it in the text.

The NAIS can measure from 0.8 to 42 nm in Fuchs-Millikan mobility equivalent diameter. We added the corrected size ranges in the caption.

The MS written well and I found very exciting improvement for the measurements of ion (specially cluster ions).

Atmospheric ions and new particle formation events at a tropical location, Pune, India, A.K. Kamra, **Devendraa Siingh**, A.S. Gautam, V. P. Kanawade, S. N. Tripathi, A.K. Srivastava, Quarterly Journal of the Royal Meteorological Society, Doi: 10.1002/qj.2598, Published online 8 June, 2015

Siingh D., Gautam A.S., Kamra A.K.,Nucleation events for the formation of charged aerosol particles at a tropical station Komsaare K., - Preliminary results, Atmospheric Research, 132-133, October 2013, DOI:10.1016/j.atmosres.2013.05.024, 239-252

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