**Atmospheric
Measurement
Techniques
Discussions**

Interactive comment on "Observations of tropical rain with a polarimetric X-band radar: first results from the CHUVA campaign" *by* M. Schneebeli et al.

Anonymous Referee #3

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General comments The paper discuss the first results of a dual-polarization X-band radar recently deployed in Fortaleza in Brazil. The paper discuss the use of two atten-uation correction methods (i.e. ZPHI and EKF). For the evaluation of the algorithms they use ground validation sites of disdrometers. I agree with both reviewers that the title should change according to what they suggest. You should also discuss the ob-servations you use in this study. I should follow Reviewer #2 on this aspect. I am also agree with most of the comments of both reviewers and more specifically that we do not mention sensors that we are not presenting in the paper (as Reviewer #1 mentioned)

You should also consider the Zh and Zdr absolute calibration. This is an additive offset due to natural variability of the measurement. Since you have a disdrometer it is very easy to find it. You can adapt a similar approach done in Anagnostou et al. 2004.

Define your statistics, the number of samples you used. You should also discuss and be more elaborate in your case study. I did not understand how many storm cases you used. Please use a table if you use many

Specific comments

I am also curios if you have experience any problem to the polarization because of the radome.

I do not understand what method you used to estimate Kdp. Describe in one section the methodology of your methods. How many they are, one two?

Something peculiar is happening in Table 4. Why there is that big difference in the correlation of Zdr using ZPHI and EKF? I would like to see the scatter plots or the time series not only on ray. Do not put time on x-axis just plot them. I am curios to see the Zdr corrected from both methods via the disdrometer.

pg 1720 line 5-10, I lost track of what algorithm you will use for attenuation correction, the ZPHI algorithm or the Schneebeli and Berne algorithm? Also, for the calculation of Kdp. Please be more specific. Please rephrase your sentence.

Fig. 2 for the units of Zh I would use mmˆ6mˆ-3

A good idea is in Fig. 4a-d to over plot with maybe a dot at the range where the disdrometer is installed the respective value of the disdrometer.

Can you give the statistics of Fig. 5?

In Fig. 6 What azimuth you used for this time series?

Fig. 7 add the Zh frequency plot

In Figs. 12 - 14: include also the statistics of each method

Interactive comment on Atmos. Meas. Tech. Discuss., 5, 1717, 2012.