



Comparison of different Calibration methods of a low cost disdrometer

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A low cost acoustic disdrometer is calibrated by using two different methods. The first method is the use of a drop tower. The second method consists of using field data from both a low cost disdrometer and a tipping bucket. From the data of a tipping bucket the theoretical drop size distribution of a rain event is derived. This drop size distribution and the total rain depth are used to determine the calibration constants of the low cost disdrometer. An a priori advantage of the first method is accuracy and controllability. An advantage of the second method is low cost and in situ calibration. The result of these two methods are compared and discussed.

The low cost acoustic disdrometer has been developed at Delft University to make it affordable to perform rain measurements with a very high spatial and temporal resolution. The disdrometer is tested on the campus of Delft University of Technology and in Zambia, Africa.