

Interactive comment on “Estimating drizzle drop size and precipitation rate using two-colour lidar measurements” by C. D. Westbrook et al.

Anonymous Referee #3

Received and published: 30 April 2010

This is an interesting paper. It clearly shows that much can be gained when sensors are combined in a clever manner. Drizzle is an important element of the hydrological cycle and atmospheric dynamical system. However, observation techniques that give us good estimates of the microphysics are scarce, and the dual wavelength lidar technique is therefore a welcome contribution.

The paper is well-written and addresses most issues adequately. Of course, more events have to be analysed to test the technique thoroughly, but what is discussed in this paper justifies the publication. A few remarks: - The Marshall-Palmer distribution is not valid for drizzle. That the results do not match is therefore no surprise. - In many papers drizzle is described with a log-normal distribution. Suppose this is used in the technique, will the results change much?

C301

Interactive comment on Atmos. Meas. Tech. Discuss., 3, 891, 2010.