

A depolarisation lidar based method for the determination of liquid-cloud microphysical properties” by D. P. Donovan et al.

Response to reviewer 2 (G. Roy).

We thank the reviewer for his thorough review. Our specific responses are detailed below.

P9930, line 7: ‘It is also useful to consider the altitude range to consider’. Should be rephrased.

Response: The text has been changed to “It is also useful to consider the altitude range of the signals to treat”.

P9935, line 20: ‘Large Eddy Simulation’ change for Large Eddy Simulation (LES)

Response: The suggestion has been adopted.

P9950, in the conclusion maybe you should redefine what are LWC, N,LES

Response: The suggestion has been adopted.

P9956, line 5 to 15; this concept is usually refer to as the reciprocity theorem and was demonstrated by Katsev et al.: J. Opt. soc. Am. A 14,1338 (1997) ... ; see: Clauss Weitkamp, Lidar Range-Resolved Optical Remote Sensing of the atmosphere, ch 3 by L. Bissonnette.

Response: We thank the reviewer for pointing this out. The following text has been added in this section (as well as the two suggested references): “The underestimation may be accounted for if we consider the contribution from the various types of paths involving 2 or more scatterers by appealing to the reciprocity theorem [Katsev et al. (1997), Bissonnette (2005b)]

P9983, ‘Example fit results are shown on ...’

Response: Fixed

P9990; there is an extra parenthesis in the equation

Response: Fixed