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Interactive comment on "A generalised background correction algorithm for a Halo Doppler lidar and its application to data from Finland" *by* A. J. Manninen et al.

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The authors are grateful for the question. It helps to clarify one of the main points of the paper.

The question is following. There is common conclusion on decreasing the velocity estimate uncertainty because of increasing data availability due to the correction algorithm on p.11152 of the paper. Can it be demonstrated in more detail based on lidar data used in Fig.13? How much does the uncertainty of velocity estimates obtained from data used in Fig.13 decrease after correction?

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Answer) The data availability is increased due to the decreased SNR threshold that can be applied after the background correction. The uncertainty of the velocity estimate depends on the SNR, therefore improvement in SNR can increase or decrease the uncertainty as it depends on the correction. This is addressed in Sect. 4.4

Interactive comment on Atmos. Meas. Tech. Discuss., 8, 11139, 2015.

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