

Interactive comment on “Impact of pitch angle fluctuations on airborne lidar sensing ahead along the flight direction” by Alexander Sergeevich Gurvich and Victor Alexeevich Kulikov

Anonymous Referee #2

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General Comments: This study deals with the impact of the pitch angle fluctuations on airborne lidar sensing along flight direction. The authors formulated the criteria that allow the recognition of signal variation and provided an example from the onboard lidar data obtained during a DELICAT framework, indicating that a noticeable pitch angle fluctuation impact is presented. The manuscript is well written and can be published in Atmospheric Measurement Techniques journal, however I would suggest to the authors to take the following comments in to consideration. Minor Comments: 1. The abstract provides a detailed information however it would be nice to provide also some values from their results. 2. Page 4, line24: Please consider providing reference at the end of this line. 3. Page 13, line 15: The authors are kindly requested to define

if it is full or half angle the corresponding angular beam value that is provided in the manuscript. 4. Page 13, lines 26: I would kindly suggest to the authors to provide the latitude/longitude points with less decimal numbers if possible. Please correct this through the entire manuscript. 5. Page 13, line 30: The authors mention that they choose the spatial window 4-14 km for their experimental study, because it is almost free from other noise factors. Please comment more on this decision. 6. One line later at the same page (Line 31) they state that the data from Figure 6a are provided with no pitch angle fluctuation and in Figure 6b with pitch angle fluctuation. The authors are kindly suggested to state (in the manuscript and in the corresponding caption of Figure 6) much this fluctuation is. 7. Figure 6: For reasons of clarity it would be useful for the reader if the color bars of this figure were within the same limits. I would kindly suggest to the authors to provide the z axis with the same min max values and interval.

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Discussion paper

