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Interactive comment on "Perdigão 2015: methodology for atmospheric multi-Doppler lidar experiments" *by* Nikola Vasiljević et al.

Anonymous Referee #1

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The manuscript presents a methodology for deriving wind speeds over large and small scales from a combination of windscanners. Recognizing the enormous effort this takes, the methodology is clearly explained here. Perhaps a point that is slightly less clear is the complexity of analyzing and presenting data from these large datasets. I don't think there is room for this also in this manuscript and hope it will be discussed in later work by these authors. The novel aspects of the paper are in the detailed methodology. A major omission lies in the discussion of the retrieval of wind field from the short and long-range scanners and the issues associated with each in complex terrain (pulse vs cw). This might just need a citation but it is an important issue. Another point that is not completely clear is how good or otherwise the agreement is between the wind fields derived from two scanners? Understanding this was only possible for a few hours – is it possible to plot the two locations/wind speeds together? This would

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Discussion paper

show a major step forward in the coupling both in terms of the physical (where did the scanners overlap and with what frequency) and the data comparison (i.e. do the two derived wind speeds agree in space). Did I miss the discussion of the issues of lidar operation in high temperatures ?– these might be really useful operationally. Figure 3. Please indicate the purpose of the shading. Figure 4. Please indicate the meaning of the thick lines. Please give a reference for the coordinate system (p4, l73). There are a few minor typos please check for those. Otherwise it is a useful contribution on a major innovation that can be published subject to these minor issues.

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