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Atmospheric Measurement Techniques Discussions

# *Interactive comment on* "Performance evaluation of an all-fiber image-reject homodyne coherent Doppler wind lidar" *by* C. F. Abari et al.

**C. F. Abari et al.**

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1- Referee's comments:

"In the case of 1.5-mcm all-fiber coherent Doppler lidar the noise is not white and there is a large noise peak at frequency corresponding to zero radial velocity. Because of this the estimation of small velocities of the wind from measured lidar data can be problematical. In paper of Arabi et al. (2014) the method that solves this problem has been proposed. In this manuscript the authors preset atmospheric experiment results that illustrate the advantages of this method (estimation of the radial velocity from imaginary part of the cross-spectrum between I and Q signal component) compared to the method where the radial velocity is estimated from the power spectral density



of the signal. The paper is well written and may be of interest to experts in the field of atmospheric and coherent optics. I recommend publication of this paper in journal "Atmospheric Measurement Techniques". Remark: In the manuscript a lot of acronyms and it would be convenient for a reader, if the author will add a list of these acronyms."

2- Author's response:

Dear Viktor Banakh,

I, on behalf of all co-auhtors, would like to express my many thanks to you for having gone through the paper and providing your valuable feedback. I agree with you that there are quite a few abbreviations in the paper; this turns out to be a common occurrence in papers where a few technologies are discussed/compared while bridging different scientific areas. I have not seen adding an abbreviation list to a journal paper as a common practice. However, following your suggestion I have prepared and uploaded a single PDF file containing the list of acronyms and their definitions. Since I am not sure if adding the list as an appendix to the paper is motivated by AMT I will leave the decision to the editor, Gerhard Ehret, to make the final decide.

Best, Cyrus F Abari

3- Changes to the manuscript: None, unless deemed necessary by the editor.

Please also note the supplement to this comment:
http://www.atmos-meas-tech-discuss.net/8/C2830/2015/amtd-8-C2830-2015-supplement.pdf

Interactive comment on Atmos. Meas. Tech. Discuss., 8, 3729, 2015.