Atmos. Meas. Tech. Discuss.,
doi:10.5194/amt-2016-299-RC1, 2016

Atmospheric Measurement Techniques Discussions
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Interactive comment on "Vertical Velocity Variance Measurements from Wind Profiling Radars" *by* Katherine McCaffrey et al.

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Received and published: 1 December 2016

General comments 1) This article presents a solid and well organised study of the measurement of large-scale and small-scale vertical velocity variances by wind profiling radars (WPR) during XPIA campaign by statistical comparison with in situ sonic anemometers measurements. The final purpose is clearly indicated: to identify the best WPR configuration and post-processing methods to measure accurate variances at different scales. 2) The title not adequately describes an important part of the work devoted to the analysis of sonic anemometers data. Authors should amend the title to include reference to sonic anemometers. 3) The results are properly illustrated in sections 4 to 8 but some figure descriptions in sections 4 and 5 are too long, detailed or redundant, which makes the text more cumbersome. Authors need to find a way to better synthetize the comparative results (maybe using tables). 4) Despite some

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improvements suggested above, I recommend publication of this paper after minor revision.

Specific comments Lines 32-33: Better rephrase this point in the text. Lines 37-39, 44-45: More references are required in the introductory part to support some statements. Lines 167-168: Add a few words here to better explain your choice. Line 203, Equation 8: Define wr', R0, Theta. Did authors try to get statistical comparative results at discrete levels? In other words, do all height levels follow the same trend?

Technical corrections Line 280: 0.729 instead of 0.724

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