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Atmospheric Measurement Techniques Discussions

Interactive comment on "Confronting the Boundary Layer Data Gap: Evaluating New and Existing Methodologies of Probing the Lower Atmosphere" *by* Tyler M. Bell et al.

Anonymous Referee #2

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Review of "Confronting the Boundary Layer Data Gap: Evaluating New and Existing Methodologies of Probing the Lower Atmosphere" By Tyler M. Bell, Brian R. Greene, Petra M. Klein, Matthew Carney, and Phillip B. Chilson The accurate sounding of the atmospheric surface layer and boundary layer with good vertical resolution remains a challenge for the lower atmospheric research community. The traditional measurement techniques like radiosondes, microwave radiometers, lidar often inadequate to produce desired boundary layer sounding data. In this paper, the authors present an improved version of the CopterSonde used for the boundary layer soundings. Additionally, a systematic and detailed comparison study of CopterSonde data with the data collected using the traditional sounding systems provides the strength and weaknesses of the cur-

rent approach that utilizes the in situ and remote sensing measurements. The paper is well written and timely. I recommend the manuscript for publication in the Atmospheric Measurement Techniques. Comments 1. Please include a table of CopterSonde sensor details, such as accuracy and range. 2. Getting insitu profiles of surface layer over the oceans is very difficult than the land-based observations. I wonder whether the CopterSonde conducted observations over the ocean? If yes, please include an analysis of the data in the current manuscript. 3. Figures 9 and 11: These figures needs redo to get a better picture of the vertical variabilities.

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2019-453, 2019.